



Confidential Fortune 20 Company

1987 Data Center Selection/ Review/Upgrade



Project Business Objective

Harden a newly acquired data center's critical electrical and mechanical infrastructure with focus on system reliability and maintainability.

Project Summary

In search of a new corporate data center, FEA was commissioned to perform facility reliability reviews of prospective data centers. Once the Alpharetta property was selected, FEA used its reliability review as the foundation for a design that would improve the data center's reliability, maintainability and expandability to meet our client's corporate mission. Acting as prime professional, FEA led a team of design professionals providing complete architectural and engineering design services.

The final design insured maintainability through inclusion of redundant generators, double-end substations, wrap-around UPS maintenance bypass switchgear and dual power paths down to the PDU level. This allowed maintenance of virtually every breaker without interruption to the critical load. Mechanical systems were also fully maintainable and permitted isolation when required, due to maintenance, upgrades or equipment failure, without impacting the critical cooling apparatus.

FEA's electrical and mechanical engineers lead a comprehensive testing regimen designed to ensure that all equipment provided the intended function when operating as a coordinated system. The eight-week effort served as the basis for ongoing maintenance and operational procedures, activities that FEA is continuously involved in.

Deliverables

- // Incoming Service
 - Upgraded to 12.47 kV, Scalable to Dual Primary
- // Standby Generation System
 - 6.3 MW N+1
- // Power Distribution
 - 12.47kV to 480 Volt Double-Ended Substations
- // UPS Power
 - Two (2) 2,250kVA, N+1 UPS Systems
- // Power distribution to 75,000 Square Foot Raised Floor
- // Chiller Plant
 - 2,700 tons N+1
- // Chilled Water Piping Distribution
- // Over 10,000 square foot building addition for new Generator Plant and Switchgear
- // BAS, SCADA, EPO, Fuel Oil system upgrades