



Client: Rutgers, The State University of New Jersey

Project: Rutgers University RUNet 2000 Telecommunications OSP Design

Location: Throughout New Jersey

Background

The State University of New Jersey, welcomes over 50,000 students every year. It is one of the nation's leading universities with 7 campuses located in New Brunswick, Piscataway, Newark and Camden, New Jersey. In order to maintain their leading university status, they needed to create a comprehensive and advanced data, video, and voice communications infrastructure that would meet the challenges facing Rutgers in the Information Age.

In order to maintain its top tier university status, Rutgers recognized the need to improve its communication infrastructure and network capabilities. Soon after, the university published a Strategic Plan entitled, A Vision For Excellence, which clearly specified that in order to achieve the goals stated within the document, a robust, reliable network infrastructure was deemed necessary. From this idea, RUNet 2000 was born.

Solution

To help move Rutgers towards their goals, Matrix Design Group, provided an engineering and design solution coupled with project management and construction services for the implementation of the Rutgers RUNet 2000 project, the largest project of its kind at an American university, to meet the communications needs of the university well into the next century.

The design included 100 miles of on-campus duct bank and overhead fiber optic backbone systems across six (6) main campuses. The backbone completion phase included 340,000 feet of underground conduits, 150 manholes, and 50 aerial poles. In addition to all Rutgers' residence halls, the RUNet system was connected to all campus academic buildings, libraries, sports arenas, campus centers, student centers and recreation centers.

Utilizing advanced Global Positioning System (GPS) technology, Matrix prepared as-built mapping of the entire system. More than 750 buildings were located with associated database information embedded in the subsequent graphic elements. Detailed data dictionaries were designed based on client requirements to ensure continuity, system performance and functionality. All final mapping is geo-referenced into the appropriate coordinate system to create a university wide telecommunications GIS layer. Subsequent projects included connecting fiber optic cabling to the universities alternative energy windmills, electrical transmission points, and additional new construction buildings.

Matrix has helped Rutgers provide technology-based innovation in research and instructional programs, administrative procedures, and information systems through a robust, reliable network infrastructure capable of handling the needs of their faculty, staff and students.

Project Goals

Provide technology-based innovation in research and instructional programs, administrative procedures, and information systems

Build a robust, reliable network infrastructure capable of supporting client/server administrative systems

Assist in positioning Rutgers in the top quartile of research universities

Upgrade network to permit high-speed data transport, interactive video transmitting, and improved voice applications

Link Rutgers academic and residential buildings through an integrated data, voice and video network

