

NU Radio Communication Service Facility - Power Street Substation Hudson, NH

Project Description:

Location

Hudson, NH

Owner

Northeast Utilities

Duration

2009

Construction Cost

\$2 million

AI Engineers, Inc. (AI) provided civil/site engineering services for a Radio Communication Service Facility located at the Power Street Switching Substation in Hudson, NH for Northeast Utilities (NU). The tasks included survey base-mapping, preparation of site plans and acquisition of the Town of Hudson's Planning & Zoning Commission's permit applications for the installation of a new 120' radio communication service tower, service support building and utilities. The proposed facility will be located on a 21.5 acre parcel that includes a service road and utilities to the existing substation.

A variance was required for the fall zone calculation and a special exception for the tower height. The variance obtained was for 50' based on the distance beyond the property line onto the adjacent Lockwood condominium property. The special exception, obtained, was for 40' and represented the tower's height exceeding the maximum allowable height of 80'. The proposed location of the tower was chosen to be situated on the highest available elevation. The height of the tower needed to be above a tree line in order to transmit signals effectively.

The project also consisted of a 10-foot by 20-foot accessory building, an 8.5 kW natural gas-fired generator and a small gravel apron for temporary parking of service vehicles.

The purpose of this radio service facility is to be able to provide radio communications to remote electrical system devices for critical rapid electrical service restoration and reliability. Radio communications to PSNH's vehicle fleet is also critical for rapid storm restoration and everyday operations such as first responders at building fires to shut off electricity to allow firefighters to do their job.

Salient Features

- Site Layout
- Permitting