



Section 02: Existing Building Systems

2.01: Structural

The structural system at the Hauptman-Woodward Medical Research Institute consists of structural steel columns, beams and flanges. The structural members are sized larger than required to provide extra rigidity and prevent unnecessary vibration within the critical lab space. The floors are comprised of a 4.5" slab on deck construction with blended fiber reinforcement. The foundation is 5" slab-on-grade, atop 4' poured concrete footings. The atrium consists of a King-Truss roof support system that supports a 4" slab on deck roof assembly in addition to the atrium skylights.

2.02: Lighting/Electrical

The primary distribution system at the Hauptman-Woodward Medical Research Institute is a 480/277V, 3 Phase system, rated at 2000A. The electrical service is installed in the main electrical room, which is located in the center of the ground-floor parking garage. Luminaires are predominantly 120V or 277V, with a variety of fixtures providing task and accent lighting throughout the building.

In addition to the main distribution system, a 450kW/563kVA emergency generator provides power to lab-critical and life support systems within the building, such as fire suppression, alarms, the atrium smoke control and ventilation systems, as well as certain laboratory equipment.

2.03: Telecommunications

The Hauptman-Woodward Medical Research Institute is equipped with a public address system that will allow user access via telephone headsets to zone speakers throughout the building. In addition, a sound reinforcement system was implemented in the lecture hall and seminar rooms in the event that sound amplification is required. Wireless microphones were supplied and local inputs for computer and media devices were provided to assist in presentations at the institute. In addition, a data network system is installed to meet the needs of the facility now and in the future. An interbuilding backbone system connects the main telecom room to satellite rooms and provides the sharing of resources such as printers, internet and data storage devices. A



telephone cabling system is also provided to ensure that data and telecommunication is available throughout the building and that users have easy access to telephones, internet and data stations. Telecom outlets are positioned throughout the building so that each workstation can be equipped with all necessary technology.

2.04: Transportation

The large atrium invites people into the space and promotes access to all three floors of the building. A grand staircase that runs from the ground to the third floor is a focal point within the space. Two elevators, one in the atrium and another at the rear of the building, provide vertical transportation in addition to three fire-rated stairwells throughout the building. The hydraulic lobby elevator has a maximum load of 2500 lbs, and hoists at a maximum speed of 125fpm. The service elevator at the rear provides a maximum load of 5000lbs, and provides access to all three floors as well as the mechanical penthouse level at a speed of 100fpm. On the exterior, there is a parking bay on the first floor that can accommodate 10 automobiles. These spaces are reserved for department and administrative heads. Adjacent to the parking bay is additional parking that can accommodate all other faculty and visitors to the building.

2.05: Fire Protection

The Hauptman-Woodward Medical Research Institute is equipped with a wet-pipe fire protection system that employs automatic sprinklers in the event of a fire-related emergency. Sprinklers are connected to a piping system containing water and connected to a water supply such that water will discharge immediately from sprinklers that detect fire. The system is equipped with fusible link or bulb-type sprinkler heads, as required per each space, and the system is separated by floor and into two distinct zones: laboratory space and office space.