

## R A N D

## Garage Structural Repair

225 East 43<sup>rd</sup> Street

Persistent leaks in the parking garage led to extensive water damage, including badly deteriorated concrete and steel reinforcement. The repair work (inset) was phased so the vehicle rental facility could operate without interruption.

**PROPERTY**

Four-story mixed-use building in Midtown Manhattan, built in 1950. The cellar and ground-level house an Avis vehicle rental facility.

**PROJECT OVERVIEW**

RAND performed a leakage investigation of the parking garage and found extensive water damage, including spalling concrete on the vehicle entrance ramp, cracks in concrete beam encasements, and corroded steel reinforcement in the concrete slab. There were also flaws in the basement draining system. Based on the findings, RAND recommended a structural repair and waterproofing program.

**SCOPE OF WORK**

RAND specified and administered the following work items:

- Severely deteriorated concrete slab partially demolished and replaced
- Concrete sidewalk and masonry foundation wall reinforced
- Corroded steel framing refurbished and reinforced
- New waterproofing systems installed
- Work was phased to allow for uninterrupted operation of the vehicle rental facility

RAND's Expediting Team obtained all of the necessary permits from the Buildings Department and the Department of Transportation.

**SPECIAL INSPECTIONS**

As the Special Inspections Agency, RAND performed and provided oversight and direction for the following Special Inspections:

- Structural Safety—Structural Stability
- Concrete—Cast-in-Place
- Structural Steel—Welding
- Structural Steel—Erection & Bolting
- Sprayed Fire-Resistant Materials
- Concrete Test Cylinders
- Concrete Design Mix

**ENGINEER**

RAND Engineering & Architecture, DPC

**CONSTRUCTION COST**

\$81,000