

AWARD OF MERIT

PARKING STRUCTURES CATEGORY

Poff Federal Building

ROANOKE, VIRGINIA

SUBMITTED BY CONCRETE PROTECTION & RESTORATION INC.—BALTIMORE, MARYLAND



The Poff Federal Building, located in Roanoke, Virginia, is a 14-story high-rise building that houses 400 to 500 government employees and offices for the General Services Administration (GSA) and the Circuit Court. Weathering over the last 40+ years had taken its toll on the parking garage. Visual spalling and deterioration of the concrete sparked concerns regarding the structural integrity of the garage and was a portion of a major renovation to the facility.

The garage repairs were split up into two phases, each phase being approximately half of the garage. In order to keep the building fully functional and the project on schedule, protective measures were implemented to allow for continued use of the garage and office building.



The existing 32,000 sf (2,975 m²) upper level of the parking garage consisted of an elevated 6 in (150 mm) concrete slab with an additional 6 in (150 mm) asphalt topping. In order to complete the concrete repairs, the asphalt topping and 3 to 3.5 in (75 to 90 mm) of concrete slab surface was removed using hydrodemolition. Exposed rebar was cleaned, rebar that was severely corroded and had reduced sectional area was replaced, and an additional mat of rebar was installed. A concrete overlay was installed to match the previous elevations.

In addition, 508 lf (155 m) of full beam replacement was completed and six columns were replaced due to extensive concrete spalling and corrosion in the existing reinforcement. The underside of the beams that support the upper level of the parking structure were protected with a corrosion inhibitor treatment and a traffic membrane system and expansion joint were installed on the upper level of the garage. The owner was also able to incorporate security enhancements to the garage/facility during construction while repairing the garage for continued use.

Poff Federal Building

OWNER

Hoar Construction

Birmingham, AL

PROJECT ENGINEER/DESIGNER

MTFA Architecture, Inc.

Arlington, VA

REPAIR CONTRACTOR

Concrete Protection & Restoration Inc.

Baltimore, MD

MATERIALS SUPPLIERS/MANUFACTURERS

Boxley Materials Company

Blue Ridge, VA

HD Supply

Atlanta, GA