



The historic Indian Motorcycle factory converted into new, affordable apartments with high-performance windows

The Mason Square Apartments II at Indian Motorcycle project offers low-income residents affordable rental housing without compromising aesthetics, performance or comfort. Part of a local area redevelopment program in Springfield, Massachusetts, the adaptive reuse and renovation project converted the former motorcycle factory into 45 apartments including one, two and three-bedroom units.

Vacant for decades, the 55,000-square-foot, five-story, brick building's tall, arched windows had been boarded up for years. Today, these 4-by-8-foot openings feature Diamond Windows & Doors' high-performance, double-hung windows with Technoform's warm-edge insulating glass spacers. Beyond contributing to the building's energy efficiency and the residents' comfort, the windows were thoughtfully designed to match the property's historic architecture.

Mason Square Apartments II is located in the McKnight National Historic District of Springfield at 837 State Street. The property also is listed on the U.S. National Park Service's National Register of Historic Places.

Originally built in 1890, the building is famously known as the Indian Motorcycle's former manufacturing mill facility. The company is credited with producing one of the first motorized bikes, and is considered to be the premier manufacturer of motorcycles in the racing industry. Their employees' efforts, and the motorcycles they made, contributed to providing agile transportation to U.S. troops in World Wars I and II. The motorcycles were distributed nationwide until the 1950s, and in 2011, the brand was reintroduced.

Mason Square Apartments II's owner and developer, First Resource Development Company, recognized the need to preserve the building's architectural legacy. In addition,



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it celebrated the property's significance to the community by incorporating "at Indian Motorcycle" as part of the official name.

"With every project we are mindful of neighborhood history; we are committed to building on the positives that each unique history conveys to a community," said First Resource's president Gordon Pulsifer. "We also look to the future as a catalyst for improvement and change."

To retain the building's historic aesthetic and enhance its modern performance, First Resource worked closely with The Architectural Team and NEI General Contracting. Existing masonry was repaired, and the former factory's massive interior timber beams were retained. The large window openings also were preserved, and approximately 1,300 new, high-performance, double-hung units from Boston-based Diamond Windows & Doors were installed.

"This was an historic project requiring the windows to pass muster with National Parks and Massachusetts State Historic Agencies," explained Technoform's Matt Fralick.

"Diamond was chosen due to our expertise in replicating the historic look and feel of the building and specifically, the windows," said Erik Tseng, Diamond's project manager. "We were also able to engineer the opening/window interface to reduce labor costs and provide a significant enhancement to energy performance and building envelope performance."

Diamond Windows & Doors' installed its 8000 Series Commercial double-hung windows. Technoform's 1/4 inch-wide rigid bar, plastic hybrid stainless steel (PHSS) warm edge spacers provided the important thermal break between the panes of glass in the insulating glass unit (IGU), to minimize unwanted heat loss.

Along with increased energy performance, the spacer also improves condensation resistance. Fralick added, "Minimizing condensation lowers the opportunity for mold and mildew, which supports good air quality, health and wellness."

Honoring the building's architectural heritage, the aluminum frames were painted black to resemble old steel-framed factory windows from the early 20th century. Complementing the frame color and overall appearance, Technoform supplied its spacer in black.

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Fralick noted, "The dark spacer in the dual-glazed IGUs maintain the monolithic appearance of the original windows."

The high thermal performance of the new windows supports First Source's energy efficiency goals, helping the buildingowner save on heating and cooling costs, as well as providing Mason Square's residents with year-round interior comfort.



The total renovation and rehabilitation costs of Mason Square Apartments II was funded through a combination of public and private financing, institutional low-income housing tax credits, and federal and state historic preservation tax credits. At a groundbreaking celebration in June 2019, MassLive.com reported that local officials including Mayor Domenic J. Sarno and State Representative Bud L. Williams, praised First Resource and Pulsifer for bringing new life to the area. Williams called it an historical day and expressed his hope that the project will serve as a catalyst for other developments in the surrounding area.

Project: Mason Square Apartments II at Indian Motorcycle

Location: 837 State Street, Springfield, Massachusetts

Architect: The Architectural Team, Inc.

Owner/Developer: First Resource Development Company

General contractor: NEI General Contracting

Glazing contractor: Hannah Environmental & Energy, Inc.

Glazing system manufacturer: Diamond Windows & Doors MFG, Inc.

Product: Technoform's PHSS warm edge spacer



photo courtesy of Diamond Windows

Pictured above: Existing masonry was repaired, and the former factory's massive interior timber beams and large window openings were preserved.

Pictured below: Completed exterior. Aluminum frames were painted black to reflect the early 20th century.



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