

KAWNEER

# PROJECT PROFILE



## Joseph R. Biden, Jr. Railroad Station

Wilmington, Delaware, USA

### ARCHITECT

Bernardon Haber Holloway  
Architects PC  
Wilmington, Delaware, USA

### WINDOW INSTALLER

Graboyes Commercial Window Co.  
Philadelphia, Pennsylvania, USA

### GENERAL CONTRACTOR

Shoemaker Construction Co.  
West Conshohocken, Pennsylvania, USA

### FEATURED PRODUCTS

Traco TR-9000 – 4" Double Hung  
Tilt Thermal Aluminum Window  
Traco TR-9500 – 4" Fixed Thermal  
Aluminum Window  
Traco TR-7900 – 3-1/4" Fixed  
Thermal Aluminum Window  
(with some curves)



## PRESERVING THE HISTORY OF A CITY LANDMARK

During his 36 years in the Senate, Vice President Joe Biden rode Amtrak every day from Wilmington, Delaware to Washington, D.C. and often talks about his experiences on the trains – the people he met and the importance of trains in America. To honor the vice president and his dedication to the railroads, the Wilmington Amtrak train station was renamed the Joseph R. Biden, Jr. Railroad Station. The station renaming occurred on the heels of an extensive two-year, \$37.7 million renovation project, which included \$20 million in federal stimulus money and was one of the first American Recovery and Reinvestment Act (ARRA) projects to be released by the federal government.

Originally designed by renowned architect Frank Furness to celebrate America's industrial strength, the newly named Joseph R. Biden, Jr. Railroad Station began operating in 1907. The station has become an icon of Wilmington, which meant that preserving its history was a top priority during the renovation. Bernardon Haber Holloway Architects PC, based in Wilmington, was selected to design the renovation and take on the challenge of integrating modern technology while retaining the station's historic charisma.

According to Amtrak, the Wilmington Station is the 12th busiest station in the Amtrak system. After the renovation/restoration was completed, the architecture firm received a prestigious 2011 Brunel Award for their work on the station. The award was given by the Watford Group, an international volunteer association consisting of railway architecture and design professionals.

### Design Highlights

The original Amtrak station incorporated historic architecture and building elements, including its windows, which needed to be updated to preserve the building and its character. The renovation included detailed restoration of various parts of the station, including the lobby's grand staircase and the historic men's and women's waiting rooms, as well as construction of a larger concourse equipped with a new passenger display system and improved safety features.

### Challenges

- The greatest challenge was to integrate modern technology while retaining the history of the station. The \$20 million in federal stimulus money required the project team to address the Secretary of the Interior's Standards for Rehabilitation, which meant a great deal of attention focused on restoring the building's façade.

- The project team found the building's windows to be challenging, with the sightlines, thicknesses of frames and muntins.
- In addition to having to follow stringent requirements for the historical replication of the original windows, there were unusual color requirements that not only specified that the interior color had to differ from the exterior color, but also the exterior panning and window frame color had to differ from the window sash color.

### Solutions

- After much discussion with the state preservation office, the architectural team was able to replace the windows that were exposed to weather with custom-made historic-quality aluminum windows that feature 1" double-pane insulating glass with low-E coating. The original windows that were protected against weather were kept and restored.
- The TR-9000 – 4" Double Hung Tilt Thermal Aluminum Window, TR-9500 – 4" Fixed Thermal Aluminum Window and TR-7900 – 3-1/4" Fixed Thermal Aluminum Window (with some curves) were used in various locations throughout the Joseph R. Biden, Jr. Railroad Station. These windows provide thermal performance and attain outstanding condensation resistance.
  - + TR-9000 windows are easy to maintain and clean and offer standard 1" insulating glass.
  - + TR-9500 windows also offer standard 1" insulating glass as well as frame corners designed for strength and durability, adding to the longevity of the renovation work and, ultimately, the station.
  - + Traco's TR-7900 windows also provide strength and versatility by accommodating deeper panel depths, which helped contribute to the historic nature of the building.
- Traco product engineers developed the custom extrusions and fabrication techniques needed to install the new aluminum windows in a way that replicated the station's old wooden windows.

### Featured Products

TR-9000 – 4" Double Hung Tilt Thermal Aluminum Window; TR-9500 – 4" Fixed Thermal Aluminum Window; and TR-7900 – 3-1/4" Fixed Thermal Aluminum Window (with some curves)

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