



A busy intersection in the heart of New Brunswick has a smoother traffic flow thanks to this rehabilitation project.

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TRANSFORMING NEW BRUNSWICK

Creating accessible upgrades to a busy New Jersey intersection

By Bruce Klein and A.J. Lombardo, Contributing Authors

► **WITH NEARLY 56,000 RESIDENTS**, New Brunswick is a bustling municipality in Central New Jersey that combines the vibrant spirit of a college town with a thriving healthcare industry.

It's home to Rutgers University and Robert Wood Johnson University Hospital, an RWJBarnabas Health facility. Not long ago, the intersection where Albany Street, Easton Avenue and French Street meet was choked by traffic.

A rehabilitation project was necessary to make it adaptable to the needs of the public. Led by T&M Associates, the construction team planned and redesigned this heavily used intersection. The rehabilitation cost \$4.8 million.

While construction began in October 2021, the project went through an extensive planning process with discussions for how to best implement improvements starting in 2017.

In the initial design meetings, local officials envisioned shifting from a three-way intersection to a more efficient four-way junction, harmonizing Spring Street with Easton Avenue.

At the heart of this transformation were two key roads — Easton Avenue and Route 27. North of the intersection, Albany Street boasted two lanes, while south of it, French Street narrowed down to a single lane. The plan also divided Spring Street into two, with a connecting spur forming the four-way intersection.

A notable feature was the introduction of a triangular island between Albany Street and the Spring Street, offering potential space for bus traveler shelters.

Concerns came with the initial layout of the thoroughway, as it was a slip lane bringing drivers from Easton Avenue to South French Street. Despite the stop sign, drivers still neglected to come to a complete stop, posing a safety hazard for pedestrians using the crosswalk.

To improve the intersection, the project team factored various moving parts and managed challenges brought forward by stakeholders. As the design engineers, we spent the next few years transforming this intersection for efficient use.

The team removed the island in the northwest quadrant, eliminated the island and associated signal equipment, and made sure pedestrian travel increase did not have a significant impact on signal operations. An additional sidewalk area was added in the intersection's northwest quadrant and provided pedestrian refuge areas. A past recommendation from Roadside Safety Audit shifted the Albany Street bus stop past the intersection.

Improvements to traffic flow include updated signs and markings, as well as narrowing Easton Avenue's northbound lane from 16 feet to 14 feet. The outer southbound left/right turn lane also was expanded from 12 feet to 14 feet, making it bicycle-friendly in both directions.

These adjustments aim to discourage passenger drop-offs in the northbound lane near the New Jersey Transit New Brunswick train station. The redesign also had to keep those with visual impairments in mind. The Joseph Kohn Training Center, part of the New Jersey Commission for the Blind and Visually Impaired, utilizes the intersection as a training site.

The center provided input based on the guidelines of the Americans with Disabilities Act (ADA) Standards for Accessible Design. Individuals from the center offered valuable insights into ADA standards and how the intersection could better align with their training methods.

The center highlighted the effectiveness of features like audible tones, tactile arrows and vibrating cues in line with evolving ADA guidelines. Curb ramps, curbs, and sidewalks also were replaced

with ADA-compliant features to establish an accessible route along the roadways and to doorways within the project limits.

During the two-year construction, we were mindful of activity in the surrounding area as work progressed, avoiding any unnecessary disturbance to the community.

Emergency access for ambulances could not be interrupted. Construction was required to pause during sports activities at nearby Rutgers University as to not interrupt parking or traffic flow in the area, and local businesses, restaurants and commercial enterprises were guaranteed to be able to operate as usual.

The project's success hinged on agility and collaboration. RWJBarnabas Health also began building the Jack & Sheryl Morris Cancer Center in 2021. The Robert Wood Johnson University Hospital is already heavily trafficked, with 27,867 inpatient adult admissions annually. When the hospital shut down certain roads for construction, we shifted our focus to other areas so that the intersection updates could continue.

We kept local businesses in the loop throughout the process. We provided detailed staging plans and pedestrian detours to minimize disruption to local businesses. Ramps were placed strategically to ensure uninterrupted access to these locales. This proactive approach fostered goodwill and understanding, turning potential roadblocks into opportunities.

While we were updating the intersection, New Brunswick was in the middle of another transformation: the HELIX Health + Life Science Exchange Innovation District was being built by SJP

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ROAD REHABILITATION

Properties in collaboration with New Brunswick Development Corporation (DEVCO). In the coming years, Nokia Bell Labs will call the HELIX home, bringing more than 1,000 employees to the area. The HELIX project is adjacent to Rutgers University and the train station.

We coordinated with DEVCO to install an extension of Spring Street. The team constructed a four-way intersection, replacing the previous T-intersection, a significant enhancement from the previous one-way setup. This improved access to Spring Street directly from Albany Street. It was crucial to coordinate with stakeholders, too. PSE&G was completing a fiberoptic cable upgrade for the hospital, so fiber had to be in the ground prior to any paving could be completed.

Since a portion of the road goes under the rail bridge connecting the New Brunswick train station, the team coordinated with New Jersey Transit and Amtrak. Acknowledging the historical significance of the New Brunswick train station, the design incorporates elements that preserve its beauty and respect its importance. While the building did not have to be touched, elements around it were updated, considering ADA standards while maintaining the station's character.

Built in 1903 by the Pennsylvania Railroad, it calls on elements from Georgian architecture, associated with colonial houses and institutional structures of the 18th century. The

station accommodates Amtrak intercity passengers and the New Jersey Commuter rail and Rutgers University shuttle buses. The historic brick paver design, featured around New Brunswick, was installed in front of the train station. Coordination was done so that pedestrians did not struggle to access the train station during the project.

The collaboration with Amtrak on the overpass involved a certification process, highlighting the need to keep the road elevation consistent with bridge height requirements.

Today, the intersection stands transformed, a vibrant symbol of our commitment to the community. The project received recognition from the New Jersey Alliance for Action's Distinguished Engineering Award program.

The improvements have led to a safe intersection for the blind and visually impaired in addition to other pedestrians. It also delivers safer access to the nearby hospital and adjacent Rutgers University campus. Overall, it is a significant improvement to the community as it moves forward on future redevelopment projects. **R&B**

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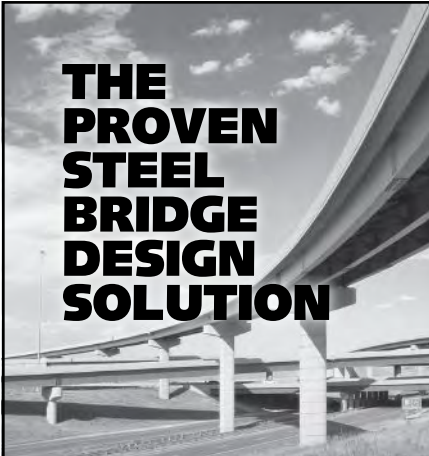
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