

Newport Pell Bridge

Moveable Barrier for Managed Lanes | Unanchored Median Safety Barrier



ROAD ZIPPER™

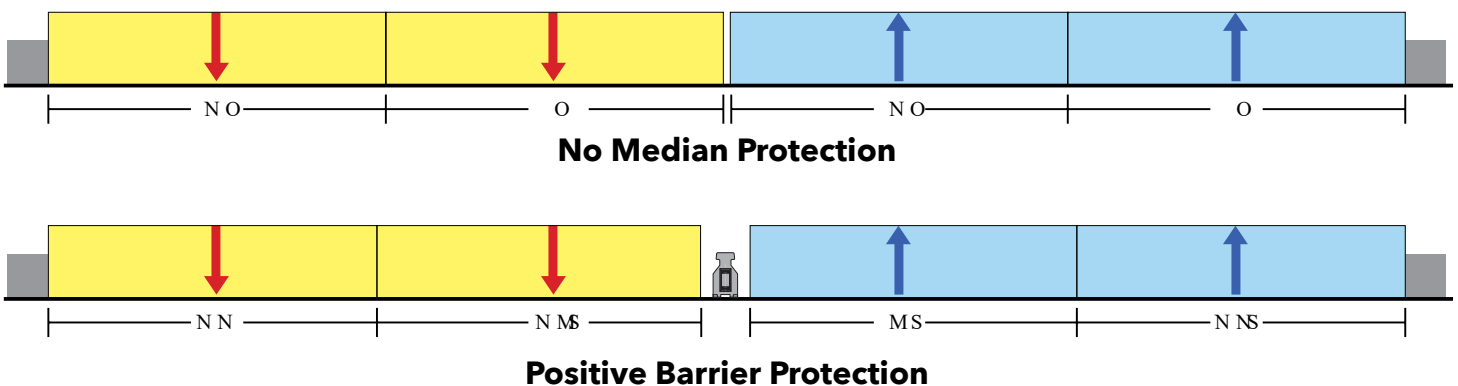
Moveable Barrier Chosen for Safety Characteristics

The Pell Bridge in Rhode Island carries four lanes of traffic across Narragansett Bay. As the most recognized structure in Rhode Island, the iconic bridge has remained mostly unchanged for nearly fifty years. The bridge provided two 12-foot lanes in each direction with a painted center divider and emergency walkways on each side. Without positive protection between oncoming lanes of traffic, the number of crossover accidents leading to injuries and fatalities began to rise over the years as the average daily traffic climbed to almost 30,000 vehicles. When the bridge suffered three deaths within a 27-month period, a resolution was drafted to install a median barrier within one year. Temporary median delineation was installed

while construction was completed on the east approach to the bridge to ensure that the additional weight of the new median divider would not be a concern.

After careful consideration of the available barrier options, the Rhode Island Turnpike and Bridge Authority (RITBA) selected the Reactive Tension System, part of the Road Zipper family of barriers. The RTS system offered RITBA the only unanchored barrier option, which meant that the barrier would provide TL-4 protection levels without compromising the integrity of the bridge deck. Anchored only at the ends, the RTS barrier wall is able to absorb energy from impacting vehicles with minimal deflection.

In March of 2015, the two center lanes of the bridge were closed for one week while the barrier was installed. RITBA did not want to alter the look and feel of the bridge, so the concrete used to make the barriers was tinted “Newport Blue” to match the existing color scheme. Unlike most Road Zipper installations, the barrier will not be moved on a daily basis for congestion mitigation. Instead of investing in a Zipper Truck, the bridge authority chose to purchase a trailer with a similar conveyor system that can be towed behind a heavy work vehicle to move the barrier for special events and emergencies such as hurricane evacuations, and also for traffic control during maintenance work.



Project Highlights

- **Managing Agency:** RITBA
- **Design Engineers:** Parsons Brinckerhoff
- **Prime Contractor:** Aetna Bridge
- **Barrier Wall Length:** 2 miles
- **Installation Purpose:** Eliminate crossover accidents
- **Anchorage:** Unanchored except at terminal ends
- Barrier will be moved for special occasions and maintenance only



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