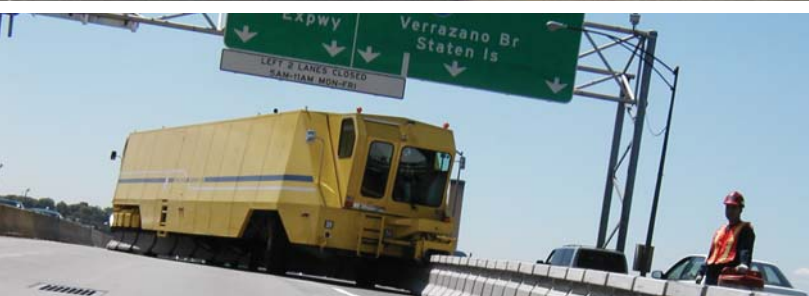


GOWANUS EXPRESSWAY I-278 NEW YORK CITY, NY

MOVEABLE BARRIER FOR MANAGED LANES
CONTRAFLOW APPLICATION



GOWANUS EXPRESSWAY I-278 NEW YORK CITY, NY

HOV LANE MOVES 9.1 PEOPLE PER VEHICLE

The Gowanus Expressway, which serves as the southern extension of the Brooklyn-Queens Expressway, also connects the Brooklyn-Battery Tunnel approach, the Prospect Expressway, the Belt Parkway and the Verrazano Bridge. Construction of the elevated parkway began in 1939 and was completed in 1941. From 1957 to 1964, the parkway was widened into a six-lane expressway and extended to the Verrazano-Narrows Bridge at a cost of \$100 million. Despite this upgrade, most of the expressway still reflected pre-Interstate era design standards. The lack of shoulders, inadequate acceleration and deceleration lanes, tight curves and limited sight distances characterized the route, particularly on its elevated sections.

By 1990, the Gowanus Expressway was in general disrepair and carrying 175,000 vehicles per day. The constant construction and heavy morning tidal traffic flow were contributing to severe gridlock. In 1993, the New York State Department of Transportation (NYSDOT) implemented an HOV lane in an attempt to mitigate the growing congestion. The DOT had been using moveable barrier to facilitate the construction work on the Gowanus, and this barrier was redeployed to create the morning HOV lane from South Long Island to New York City. In 2001, a permanent moveable barrier system was implemented and has since been extended from the Verazanno Bridge to the

Battery Tunnel. Each morning, moveable barrier is deployed on the eastbound side of the expressway to create the westbound HOV lane. The moveable barrier is returned to the stored position to return the lane to eastbound traffic after the morning peak. The afternoon traffic is balanced, so there is no roadway capacity to borrow for a PM system.

The HOV lane has been extremely successful in reducing the number of vehicles on the road. 250 to 300 buses per hour use the HOV lane during the AM peak, as well as EZ-Pass passenger vehicle subscribers. According to a 1997 NYSDOT study, an average of 1,210 vehicles per hour carrying 11,000 people, or 9.1 persons per vehicle, travel in the HOV lane during the morning rush. This compares with 1,290 vehicles per hour carrying 1,625 people, or 1.25 persons per vehicle, in the general-use lanes per hour during the morning rush.

Shortly after the permanent HOV lane was installed, the attack on the World Trade Center left NYC with the daunting task of removing the rubble from Ground Zero. The moveable barrier was left in the deployed position for months as a dedicated haul lane over the Gowanus Expressway to the Staten Island landfill. When the ground was cleared, the HOV lane returned to operation.

