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Agency

Florida Department of Transportation

Project

Miami-Dade I-95 Express Lanes

Purpose

To increase average speeds, reduce congestion and drive times, and improve reliability on one of the busiest commuter corridors in North America.

Vital Stats

- Two million vehicles and more than 100,000 express bus passengers per month.
- One high-occupancy vehicle (HOV) lane expanded to two high-occupancy toll (HOT) lanes in each direction, without widening the roadway.
- Fast turnaround on construction due to innovative project management.
- Increase in average speeds at peak periods from 15 to 45 miles per hour in general purpose (non-toll) lanes, and from 18 to 60 mph in the HOV/HOT lanes.
- Seven miles in operation in Miami-Dade since 2008, with an extension under construction in an adjacent county.
- Measureable improvements in drive times and wider customer choice.

History

When the Florida Department of Transportation (FDOT) undertook a preliminary design and environmental study for the I-95 corridor through Miami-Dade County, the area already faced very serious congestion. The road had one HOV lane and four general purpose non toll lanes in each direction, and traffic volumes were so high that the HOV lane was also becoming so congested that it provided no benefit.

Years before, the local Metropolitan Planning Organization (MPO) had

decided against widening the road, after determining that nearby neighborhoods had already seen too many impacts from too many highway projects. So, the only option for FDOT was to make creative use of the available capacity by reallocating the pavement that was already in place.

To produce an extra lane in each direction, project planners:

- Reduced the inside shoulder on the roadway from 14 feet to eight
- Reduced vehicle lanes from 12 feet to 11
- Reduced the buffer between the HOV and general purpose lanes from four feet to two.

FDOT and its contractor sped up the project by dividing it in half—but not in the usual way. By completing and opening the northbound lanes before beginning work in the southbound direction, FDOT could introduce northbound congestion pricing by late 2008, with the other direction to follow about a year later. The strategy helped to build public support for the project, as motorists and transit passengers could see tremendous benefit for half of their daily commute and wanted the same time savings on the southbound side.



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Results

Before the road was reconfigured, rush hour traffic moved at an average of 15 to 18 miles per hour in the general purpose lanes and 18 to 20 in the HOV lane. Today, average speeds at peak periods have increased to 40 to 48 miles per hour in the general purpose lanes and 55 to 62 in the two express lanes. Several factors contributed to such a dramatic improvement: The addition of the new lane, a doubling in transit ridership, and ramp metering to smooth traffic flow on the general purpose lanes.

In contrast to earlier express lane proposals in Miami-Dade, the I-95 project received local support and was successful, in part, because it improved customer choice by financing and enhancing a pre-existing express bus service along the corridor. Instead of relying on a single strategy to relieve congestion, the project brought together a number of approaches that benefited all users—with a few, such as ramp metering, devoted primarily to serving the general purpose lanes.

As a result, users of all kinds can count on a much faster, more reliable ride, whether they drive single-occupant vehicles, form car pools or ride transit. Customers also understand that a \$2 toll is a great investment if it prevents

a \$10 late charge at day care, or a \$75 change fee with an airline. Or if a much faster, more reliable road allows a plumber to schedule an additional \$50 service call each day.

With more than \$1 million in monthly revenue, the Miami-Dade express lanes are among the most successful in the United States. But revenue collection is a secondary objective—from a congestion management standpoint, FDOT sees variable pricing as a way to capture drivers' attention and influence their choices. All revenue goes into a trust fund to pay for maintenance and future resurfacing, and to fund other express lane projects that benefit the region.

Key Success Factors

"In customer satisfaction surveys, drivers and transit users actually perceive a significant time saving," said Debora M. Rivera, P.E., FDOT District 6 Director of Transportation Operations. "They also feel the express lanes are safer, even though they're operating at higher speeds, because there's less lane changing. A lot of folks talk to us about quality of life, how mornings and afternoons before the project were about being stuck in gridlock. Now, they have an option that gets them to work and home more quickly and reliably. You can get from work to your son or daughter's softball game with less stress and worry about whether you might miss the opening pitch."

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