

Legislative Edition

News—To Go

Winter 2012

ITS MD - working to unite, support and promote Intelligent Transportation in Maryland.

President's Message

By Richard Easley,



ITS Maryland plays a valuable role in providing a place for intelligent transportation systems (ITS) professionals to come together to support and promote the coordinated development and deployment ...okay, too technical, let's keep this simple - In essence, a place where we can work to create a transportation system that squeezes out maximum return on scarce transportation resources. This means educating the region's legislators, the general public, special interest groups, and future generations of transportation professionals about the positive role ITS plays in our lives every day. By understanding what ITS can do, all of these stakeholders can play an important role in saving time, saving lives, and improving the region's economy.

In this issue of the ITS Maryland Newsletter "News - To Go", we look at a sample of three ITS projects. These ITS projects, and ITS projects like them, may not get a lot of fanfare, but they often mean the difference between picking up the kids at day care on time instead of being late again, or making it to work early instead of missing the beginning of that important meeting, or using less gas this week instead of using more gas

and paying the higher gas prices. All of these things are desirable but often-times people are oblivious to these improvements. After all, when you arrive on time, it's hard to appreciate the fact that you weren't late – mainly because *you weren't late*. ITS Maryland believes that one of its roles is to educate the legislators who are charged with making decisions on how transportation funds are allocated. ITS technologies are a relatively small investment that quietly and positively impacts so many lives in so many ways.

Transportation cannot be ignored in today's society. It often means the difference between a *thriving* economy that attracts businesses/jobs and a *poor* economy with businesses trying to relocate to where customers will have easy access and their freight deliveries will be on time – every time. ITS serves as a tool to reduce crashes and save lives, reduce congestion, minimize emissions, and help people get home faster where they can spend more time with family and friends. Whether it be smarter transit systems that can tell riders exactly when the next bus will arrive; or parking meters that no longer take only coins but also cell phone payment (and sends text reminders so your time doesn't expire); or freight related systems that automatically weigh trucks and check their brakes without having the truck stop or slow down, or a myriad of other ITS tools – ITS Maryland will do our best to make sure our region's stakeholders know that ITS is making

In This Issue...

- President's Message
- Maryland 511
- The Intercounty Connector (MD 200)
- Riva Road Corridor Signal Enhancements

a positive difference for them in good and bad weather and all traffic conditions – 24 hours per day, 365 days a year. ☺

ITS America Annual Meeting!

May 21-23, the ITS America 2012 Annual Meeting and Exposition will be held at the Gaylord National Convention Center in National Harbor, Maryland — just outside of Washington, D.C. The meeting theme, "Smart Transportation: A Future We Can Afford," will focus on how ITS offers affordable solutions to the world's transportation challenges.





Maryland 511

By Glenn McLaughlin,



This past year, Maryland joined many other states throughout the US in offering an advanced traveler information system based on the abbreviated telephone dialing code “5-1-1.” Maryland’s 511 Travel Information System provides useful, high-quality, comprehensive, readily available and accessible travel information, for multiple modes of transportation, in a timely manner to its customers including the traveling public; the commercial sector; and transportation system operators. Maryland 511 is a multi-platform system providing information via a menu-driven, automated telephone service, internet web site, mobile web platform, as well as social media services. The 511 service provides information on incidents, transportation status, modal

availability, travel speed and time, roadway conditions, congestion, work zones, weather, planned events, and tourism.

The Maryland 511 service is fully hosted under the current contract with the vendor being responsible for design, development, hosting, telecommunications, operations and maintenance of the system. The system launched on August 11, 2011, and has received over 300,000 calls in the first six months. Also, the project was structured to allow the Maryland 511 service to evolve in order to meet the changing needs of the traveling public. There have been three system enhancements completed since system launch; (1) adding drive time information to the traffic condition reports; (2) a map interface on the web site for defining travel routes; and (3) a data interface upgrade to pull incident reports more directly from existing transportation management databases. This first round of enhancements was completed in No-

vember 2011.

Current activities involve task definition for two additional upgrades; (1) providing e-mail and/or text alerts to registered users; and (2) providing arterial traffic flow information along the US 50 corridor on the Eastern Shore. Work on these enhancements began in February 2012 and is scheduled to be completed by June 2012. Maryland 511 is a free service, and can be accessed by dialing the abbreviated code on most telephones, direct dialing the toll-free number at 1-855-466-3511, or at www.md511.org.

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The Intercounty Connector (MD 200)

By Tony Clarke,
JACOBS



The Intercounty Connector (ICC) / MD 200, Maryland's first all electronic toll (AET) facility opened to the public in 2011. The first 5.65-mile segment, from I-370 at Shady Grove to MD 97 / Georgia Avenue in Rockville / Olney opened on February 23, 2011. The second segment from Georgia Avenue to I-95 (Exit 31) at Laurel opened on November 22, 2011. The six-lane \$2.5

billion facility is a joint effort between the Maryland State Highway Administration (SHA) which managed the construction and the Maryland

Transportation Authority (MDTA) which provided approximately half of the ICC's financing and will own, operate and maintain the facility. A final segment of the ICC, from I-95 to US 1 is tentatively scheduled to open in spring 2014.

AET on the ICC facilitates the collection of tolls electronically at highway speeds making it convenient for customers to pay their toll without having to physically slowdown or stop at a tollbooth. Toll is collected through an E-ZPass® transponder or

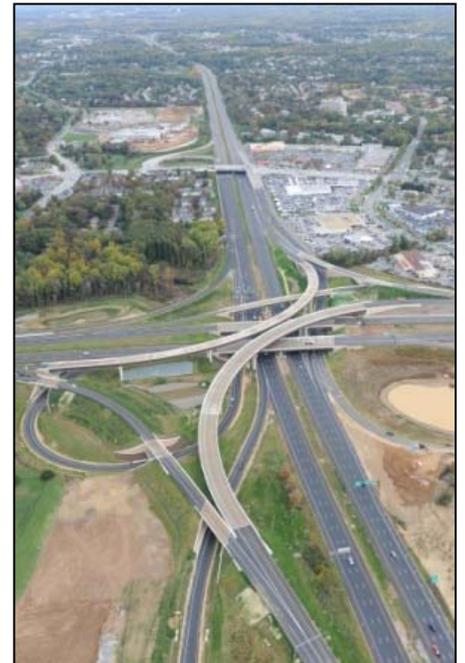
video tolling – the license plate image is captured and the customer billed via mail. Video tolling rates are 50% higher than E-ZPass® rates. AET also promotes improved traffic management, i.e., variable tolls with a higher toll charged during peak hours helps manage traffic volumes and provide dependable travel times. In addition, AET minimizes the potential conflict between cash and E-ZPass® customers that is present at tollbooths thus improving safety on the ICC. Finally, AET is also environmentally friendly because it reduces emissions, noise and fuel consumption by minimizing the stop-and-go driving present at tollbooths.



On the ICC, trip fare is calculated by aggregating the fare at each toll zone (i.e., gantry) the vehicle crosses during the trip. This process called trip construction is unique to the ICC. When a

vehicle traverses the ICC, multiple E-ZPass® transactions or images are received by the server as the vehicle passes through the toll zones. The E-ZPass® or image transactions received from individual toll zones for a vehicle are added together to form a trip for that particular vehicle. The actual fare assessed for that particular trip is based on the toll schedule in effect when the vehicle passed through the first toll zone of that trip.

From a practical standpoint, the ICC is expected to reduce travel time for

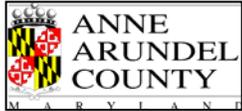


commuters by introducing an option to existing congested roadways and providing improved access to Baltimore-Washington International Thurgood Marshall Airport. As an example, a regular commuter from Falls Church, VA to New York reported being "... able to avoid all the clogged, bumper-to-bumper traffic on the Maryland Beltway..." by using the high-occupancy vehicle lanes onto I-270 and switching to the ICC and cutting across to I-95 (Dr. Gridlock. Drivers take measure of the ICC's worthwhile miles. Washington Post, December 8, 2011). More than 50 years in the making, the ICC has been welcomed as a vital corridor with many potential benefits and expectations. Transportation administrators see benefits of faster and safer travel and the quick and efficient movement of people and goods across the state. With these benefits, however, the region's leaders are expecting the ICC to lead to economic growth and job creation for Maryland. ♪



Riva Road Corridor Signal System Enhancements

By Kevin Newton,



Situation

Congestion has increased along Riva Road in recent years. It was not uncommon to have bumper-to-bumper traffic from MD 665 to the Heritage Office Center in the northbound direction during evening rush hours. Given the difficulty and expense of adding additional capacity on the roadway itself, the County looked for a way to improve the efficiency of the corridor's signal system.

Approach

The Federal Highway Administration's (FHWA), in partnership with Siemens, the University of Arizona, and Purdue University, developed a new software package – ACS Lite – for use on arterial corridors. It is a modification of Adaptive Control Software (ACS) developed for larger, complicated grid systems of signals. ACS Lite interacts with intersection controllers, monitoring real-time traffic flow and updating the signal timing on a cycle-by-cycle basis. In essence, it reallocates green time from underused movements to crowded movements.

Intersections

The system includes 11 intersections along Riva Road and Forest Drive (see map below).

Funding

The cost of the engineering design, software, and hardware upgrades to existing signal controllers was \$141,200. A Congestion Management/Air Quality grant of \$112,960, administered by the Baltimore Metropolitan Council, paid for 80% of that cost. The County funded the remaining 20% and used its forces to install the equipment. A separately planned upgrade of the County's fiber-optic network was coordinated to provide needed communication links.

Results

Traffic studies were performed along the Riva Road corridor before and after the system was installed in late 2010. Overall, the new system has reduced travel time by 8% and total delay by 26% in the corridor. The most dramatic improvements have occurred on northbound Riva Road during the evening rush hour, with delay reductions of 82%. That's a savings of over one minute per vehicle, or 70 hours of travel time each day during the 3-hour evening peak period alone.



Intersections

- Riva Road at Annapolis High School
- Riva Road at Heritage Office Center/ Riva 400
- Riva Road at Board of Education
- Riva Road at Harry S. Truman Parkway
- Riva Road at Admiral Cochrane Drive
- Riva Road at MD 665
- Riva Road at Hearne Drive
- Riva Road at Forest Drive/Holiday Court
- Riva Road at Annapolis Towne Center Boulevard
- Forest Drive at Riva Town Center Boulevard/Tower Place
- Forest Drive at Forest Plaza/Harker Place



For information on how to become a member of ITS Maryland, contact Maritza Montelara at maritza@umd.edu