

# Traffic Systems Face Off with Game Changing Technology

More prominently known for its use in the hockey rink, the “puck” has been passed to the arena of traffic operations.

In response to on-going problems replacing inductive loops, Sensys Networks designed a new traffic detection solution using wireless magnetometers, nicknamed pucks.

Using patented electromagnetic technology, Sensys pucks detect and identify vehicles as they pass over the sensors embedded in the roadway. Each puck sensor wirelessly transmits and relays the compiled data in real-time to a remote traffic controller for analysis to determine traffic speed, travel times and volume trends.

Comparable to the size of a hockey puck, the traffic pucks occupy far less surface area than inductive loops. Due to this aspect, pucks are ideal candidates for locations of temporary projects, poor pavement conditions or multiple lane shifts such as the Route 17 George Washington Memorial Highway widening project.

*A Sensys puck (pictured right) stands only 3 inches high and weighs less than one pound.*

Other locations of VDOT puck installations so far have included the Hampton Roads Bridge-Tunnel through a pilot study with U.C. Berkeley, as well as intersections in Smithfield on Route 10 and Route 32 near Benn’s Church.

In addition to the difference in size, the devices install in 10 to 15 minutes each, one-tenth the amount of time than their loop counterparts. As a result, motorists benefit from less traffic disruption than other traditional traffic detection systems that can require a greater number of lane closures at once, for longer durations of time.

Once installed, the pucks require little to no maintenance, can be controlled remotely and have a battery life lasting up to 10 years or more. However, due to their flexibility and versatility, the pucks can be removed and reused in other VDOT project locations before the end of the batteries’ useful lives.



## George Washington Memorial Highway Widening Project

Route 17 in York County, Virginia

**Construction Start Date:**  
August 2013

**Estimated Completion Date:**  
Winter 2016

**Construction Cost:**  
\$25.2 Million

**Construction Contractor:**  
E.V. Williams

### Project Information:

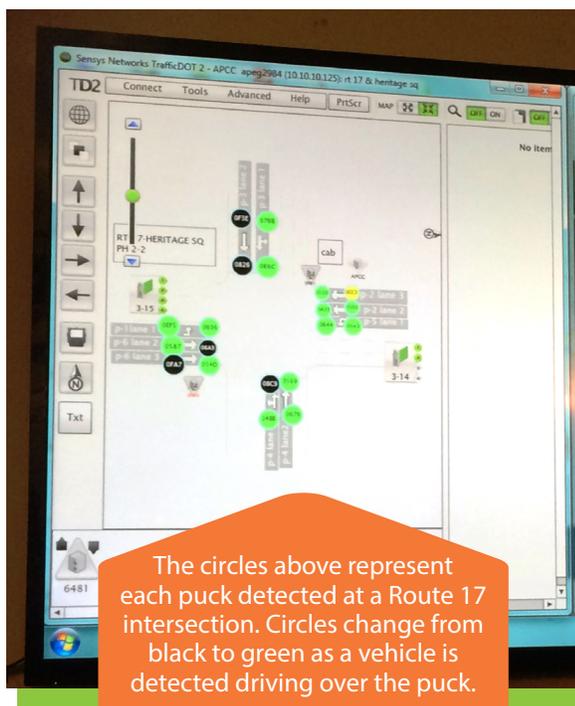
To increase traffic capacity, George Washington Memorial Highway, between Hampton Highway and Wolftrap Road, will be widened from four lanes to six lanes, with three lanes in each direction.

The improved roadway will include a raised median, curb and gutter, with a shared-use path parallel to the northbound lane from Mill Road to Showalter Road.

Additionally, the two existing bridges over the Poquoson River will be replaced with one bridge carrying six lanes of traffic and a shared-use path.

**For project updates visit:**

[www.virginiadot.org/projects/hamptonroads/george\\_washington\\_memorial\\_highway.asp](http://www.virginiadot.org/projects/hamptonroads/george_washington_memorial_highway.asp)



The circles above represent each puck detected at a Route 17 intersection. Circles change from black to green as a vehicle is detected driving over the puck.

