**Advanced Traffic Signal Control Improvements:** Through coordination with the DelDOT, TMC and WILMAPCO, an effort was made to use the performance measures developed through the corridor identification process to help the operations community to prioritize their efforts to address the corridors which are in need of installing traffic signal improvements, including retiming and/or installing Traffic Responsive Signalization (TRS).

Traffic responsive signalization is a method of signal management that uses advanced technology to adjust timing to meet the needs of the current traffic volume. The signals used in this method optimize signal timing according to traffic volume in each direction. Sensors are used to detect vehicular traffic in a certain direction at a particular point and an algorithm is used to predict when and where the traffic will be. The signal controller utilizes these algorithms to adjust the length of green time to allow the maximum amount of vehicles through the intersection. This method can react to fluctuating traffic volume in order to reduce congestion.

As an aid to the TMC, the University of Delaware Signal Timing Enhancement Partnership (DSTEP) has performed data collection and engineering. DSTEP is a partnership between the Delaware Department of Transportation and the University of Delaware. The partnership has laid out a work plan for the corridors identified, including analyzing the best signal timing sequence along each. Using the resources of the University of Delaware GPS travel time probes, each corridor can then be driven to measure how much improvement was made as a result of each retiming project.

The TMC's corridor work plan correlates very well with the identified 2012 CMS corridors. As a strategy to mitigate congestion, select corridors will be studied for further implementation.

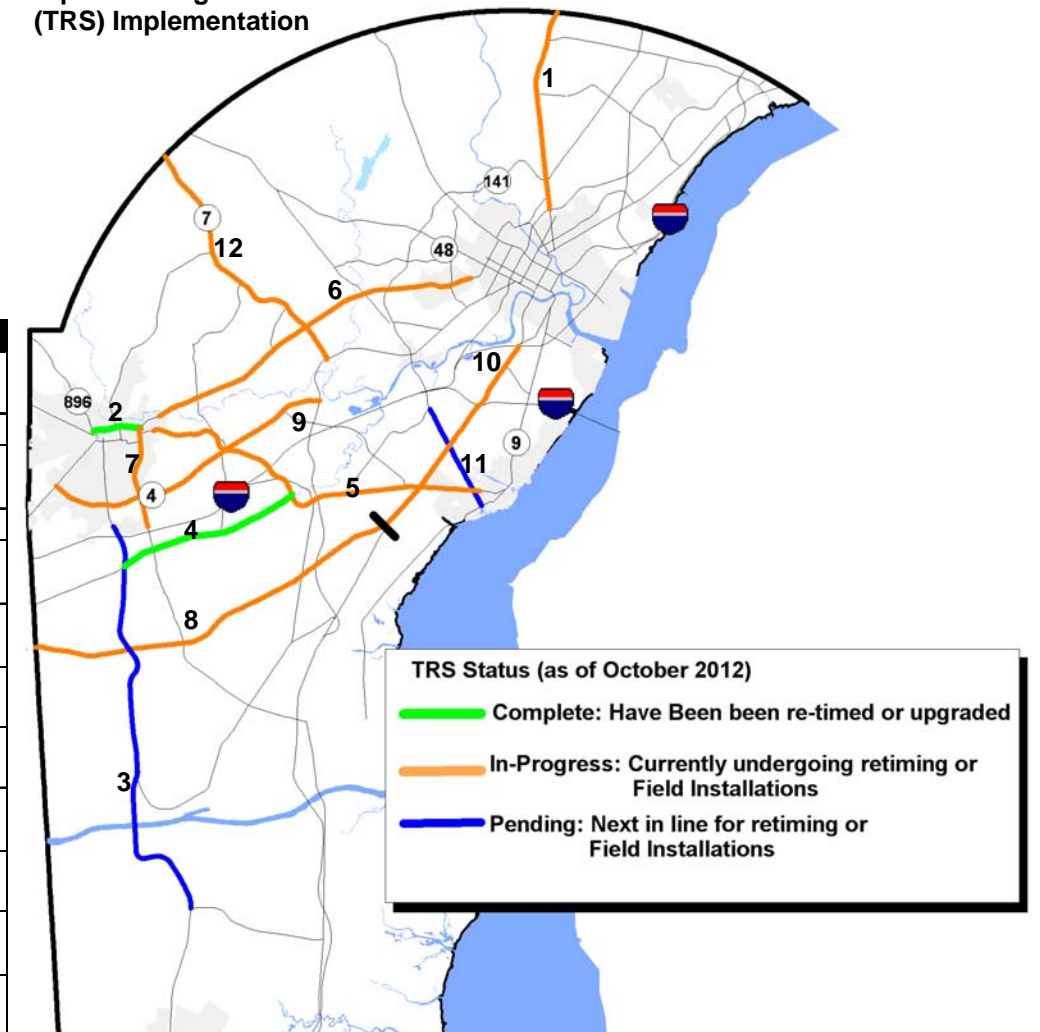**Figure 4: Status of Traffic Responsive Signalization (TRS) Implementation**



**Table 2: Status of TRS/DSTEP Corridors (as of October 2012)**

| Map ID | Corridor | Length (mi) | TRS/DSTEP | Status | Year Completed |
|---|---|---|---|---|---|
| 1 | US 202 | 5.1 | TRS | In Progress—undergoing retiming and/or field installations for traffic responsive operation | |
| 2 | Cleveland Avenue | 1.2 | DSTEP | Completed in 2010 | 2010 |
| 3 | DEL. 896 | 10.8 | | Pending— next in line for retiming and/or field installations for traffic responsive operation | |
| 4 | Old Baltimore Pike | 4.7 | TRS | Completed in 2011 | 2012 |
| 5 | DEL. 273, Christiana | 9.2 | TRS & DSTEP | In Progress—undergoing retiming and/or field installations for traffic responsive operation | |
| 6 | DEL. 2, Kirkwood HW | 8.8 | | In Progress—undergoing retiming and/or field installations for traffic responsive operation | |
| 7 | DEL. 72 | 2.6 | TRS & DSTEP | In Progress—undergoing retiming and/or field installations for traffic responsive operation | |
| 8 | US 40, Pulaski HW | 9.9 | TRS | In Progress—undergoing retiming and/or field installations for traffic responsive operation | |
| 9 | DEL. 4 | 7.6 | TRS & DSTEP | In Progress—undergoing retiming and/or field installations for traffic responsive operation | |
| 10 | US 13 | 5.4 | TRS | In Progress—undergoing retiming and/or field installations for traffic responsive operation | |
| 11 | DEL. 141, Basin Rd. | 2.8 | | Pending— next in line for retiming and/or field installations for traffic responsive operation | |
| 12 | DEL. 7, Limestone Rd | 6.9 | TRS | In Progress—undergoing retiming and/or field installations for traffic responsive operation | |