

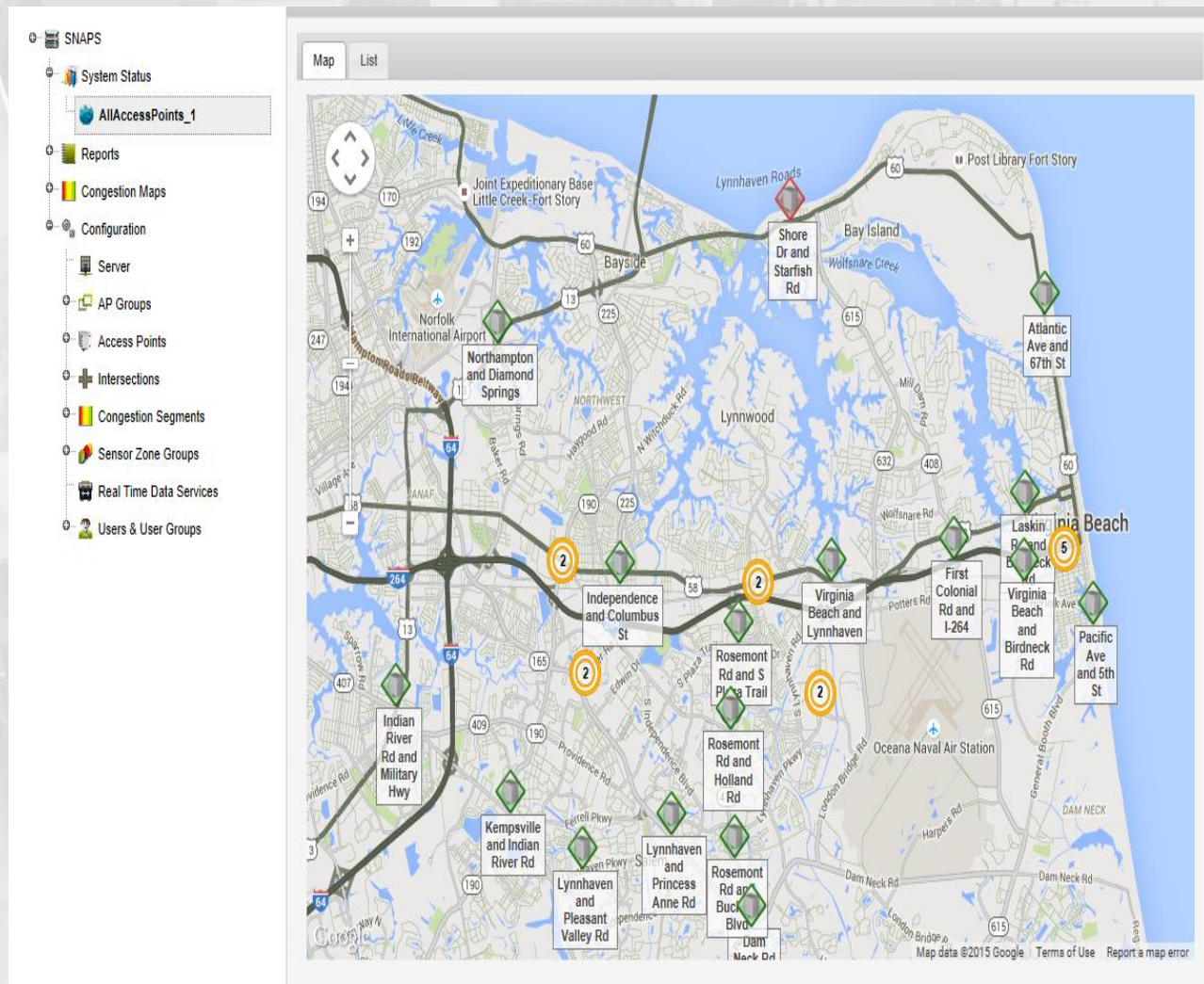


TRAFFIC MANAGEMENT CENTER *NEWSLETTER*

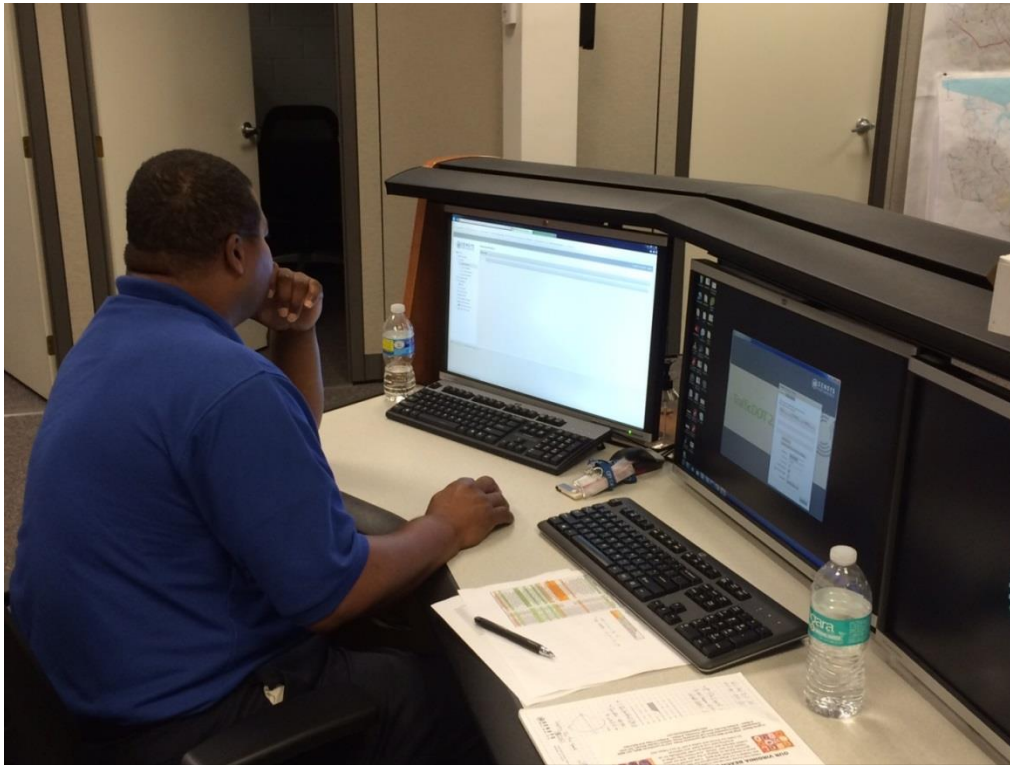
April/May/June – 2015

Wireless Vehicle Detection System Implementation

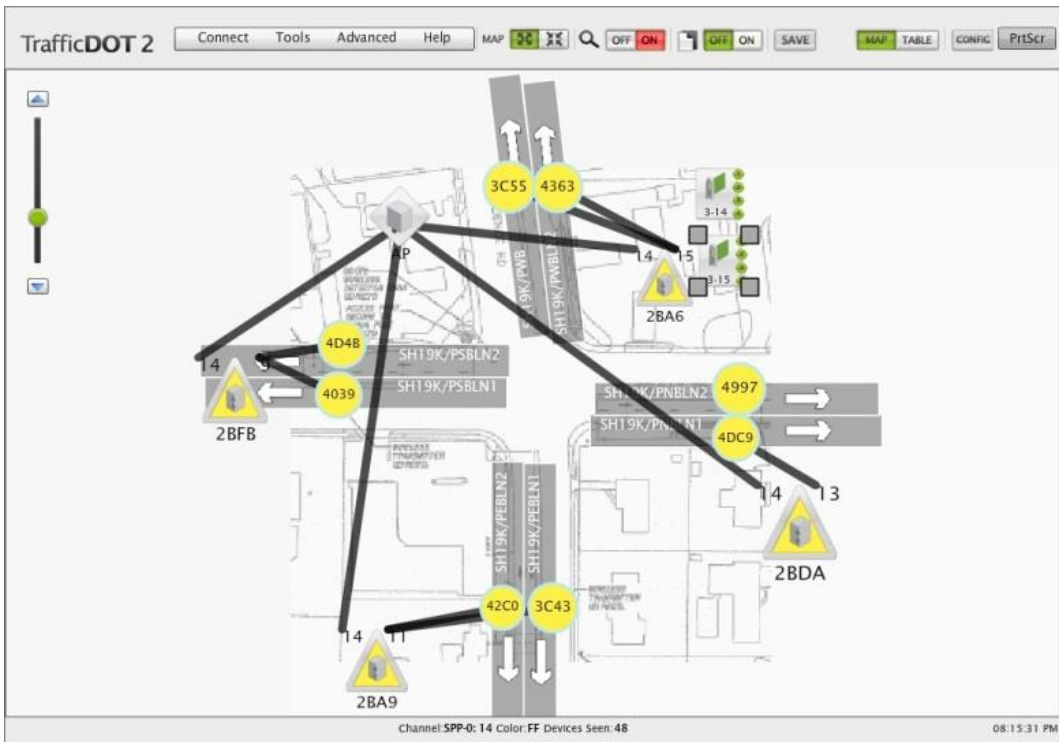
Staff completed the automation of vehicle volume and occupancy data collection from 31 of 32 sites on major arterials in the city. The wireless detection system allows the capture of real-time vehicle counts, occupancy and potentially speed information.



Having an effective vehicle detection network is essential for determining traffic signal network performance and is imperative for implementation of a traffic adaptive or traffic responsive signal system control.



William Morgan, Traffic Operations Superintendent, led the effort to bring the wireless detection sites on-line.



Site Set-up Guide

Illustration of location of wireless access points and detector locations

Typical Intersection Status Report

Device Diagnostics Report: Rosemont Rd and S Plaza Trail, Rosemont Rd and Buckner Blvd

Start Date: 07/21/2015 00:00:00 Eastern Daylight Time
 End Date: 07/21/2015 08:49:00 Eastern Daylight Time
 Units: IMPERIAL

← Change Report Criteria

Location: Rosemont Rd and S Plaza Trail, Rosemont Rd and Buckner Blvd

Counts: Rosemont Rd and S Plaza Trail, Rosemont Rd and Buckner Blvd

Vehicle detection 3-axis magnetometer at 128 Hz sampling rate

Diagnostics for Access Point: Rosemont Rd and S Plaza Trail

| Sensor Zone | Sensor DotId | Count | Occupancy (%) | Speed Avg (mph) | Battery Level | RSSI Avg | LQI Avg | Down Time (secs) | Stuck High | Reboots | Blips | Channel | Timeslot | Mode | Type | RSSI Standard Deviation | LQI Standard Deviation | Lat |
|-------------|--------------|-------|---------------|-----------------|---------------|----------|---------|------------------|------------|---------|-------|---------|----------|------|--------------|-------------------------|------------------------|-----|
| SH 37NBLN1 | 5BE7 | 2126 | 3.28 | n/a | 3.69 | -69.19 | 96.90 | 176 | 0 | 4 | 1 | 10 | 56 | B | Magnetometer | 6.68 | 1.52 | 0.1 |
| SH 37NBLN2 | 5A7A | 2372 | 3.91 | n/a | 3.69 | -66.68 | 96.89 | 104 | 1 | 2 | 0 | 10 | 14 | B | Magnetometer | 8.57 | 1.71 | 0.1 |
| SH 37SBLN1 | 5B9A | 1068 | 1.52 | n/a | 3.69 | -70.52 | 96.90 | 202 | 0 | 4 | 0 | 10 | 60 | B | Magnetometer | 5.71 | 1.72 | 0.1 |
| SH 37SBLN2 | 59C1 | 1010 | 1.78 | n/a | 3.69 | -78.41 | 96.78 | 184 | 0 | 3 | 0 | 10 | 52 | B | Magnetometer | 3.67 | 2.24 | 0.1 |

Showing 1 to 4 of 4 entries

Access Point Reboots: 0

Repeaters

| Repeater ID | Battery Level | Packet Loss % | RSSI Average | RSSI Standard Deviation | LQI Avg | LQI Standard Deviation |
|-------------|---------------|---------------|--------------|-------------------------|---------|------------------------|
| 6FD6 | 3.52 | 0.27 | -80.17 | 1.64 | 92.95 | 5.66 |

Showing 1 to 1 of 1 entries

Dots Heard From but not in Configuration

| DotId | First Heard | Last Heard | Battery Level | Channel |
|-----------------|-------------|------------|---------------|---------|
| None Applicable | | | | |

Traffic adaptive and traffic responsive signal control (systems that automatically calculate or select signal timings from traffic volume information) require reliable traffic volume detection. The above report provides instantaneous detector status information

The system supports near real time retrieval of traffic count data, instantaneous detector battery life level data (eliminating guess work regarding when a detector unit needs to be replaced).



Detector installation on Virginia Beach Boulevard

Traffic Management Operations Division Response Information

Some of the vital statistics we address April thru June 2015

- 1. Number of Traffic Counts Scheduled/Completed – 90/90**
- 2. Number of Hits on the Traffic Data Database**
<http://vbgov.ms2soft.com>
 - 1588 hits from January thru March 2015
 - 15,591 hits since program inception (July 2009)
- 3. Number of Utility Locate Tickets (Miss Utility) Received/Checked/Marked – 6293/643/539**
- 4. Number of Traffic Signal Preventive Maintenance Actions completed –232**
- 5. Number of Traffic Signal Work Orders Received – 649**
- 6. Number of Traffic Sign Work Orders Completed – 755**
- 7. Linear feet of Thermoplastic Applied to Roadway – 103,120**