



Georgia Department of Transportation

# GDOT's ITS and Traffic Management

John Hibbard, PE

Marc Plotkin

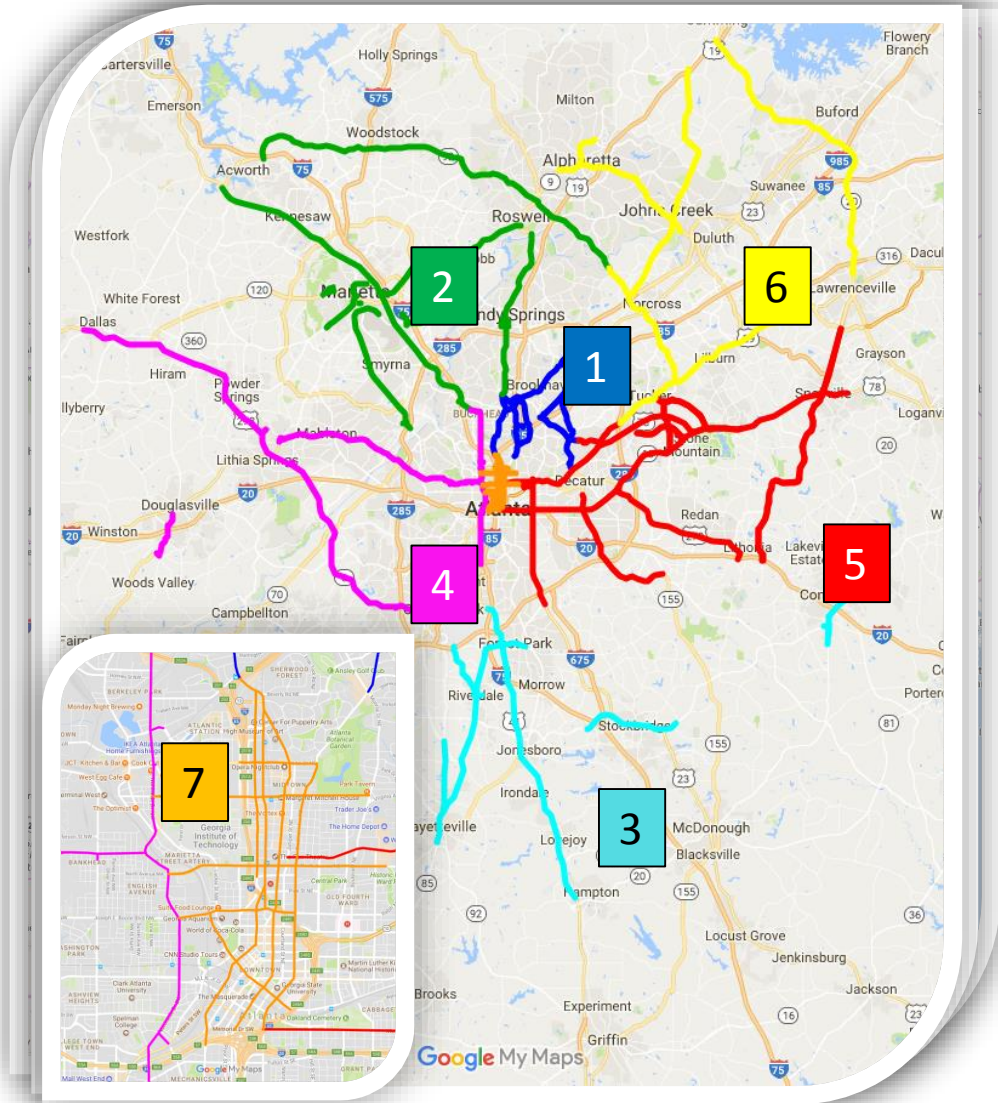
Samuel Harris, PE

July 18<sup>th</sup>, 2018



# Update

- Statewide Deployment of Signal Software (MaxView/MaxTime)
- Connected Vehicle Technology
  - Fully deployed along SR 141 from SR 9 to I-285 and SR 8 from Midtown to SR 42.
- Regional Traffic Operations Program (RTOP)



# ATSPM

Automated Traffic Signal Performance Measures

measures Reports Log Action Taken Links FAQ About Register Log in

signal

**Signal Selection**

Signal ID


Signal ID  Press Enter to select signal

Signal List

Signal Map

Region

Metric Type



**Chart Selection**

**Date Selection**

Start Date

End Date

July 2018

Su	Mo	Tu	We	Th	Fr	Sa
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

# How does this work?



# Monthly Reporting Tool

**RIOP** Monthly Report

This is the New RTOP Monthly Report.  
Past month reports can be viewed back to September 2017.

Month:

Signal Group:

- All RTOP
- RTOP1
- RTOP2
- D1
- D5
- D6
- Zone 7

- One-Month Summary
- Quarter Summary
- Summary Trend
- Performance
- Volumes
- Equipment
- Activity
- Explanation of Calcs

**Performance**

Arterial performance measures

<b>2,174</b> (+2.8%) Throughput (vph)	<b>73.4%</b> (+0.2%) Arrivals on Green	<b>15.2%</b> (+2.8%) Spillback Rate	<b>2.8%</b> (+6.4%) Split Failures	<b>1.33</b> (+0.8%) Travel Time Index	<b>1.42</b> (+2.3%) Planning Time Index
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Volume-Based Measures

Corridor volumes

<b>27,285 (+5.2%)</b> Traffic Volume (veh/day)	<b>1,536 (+3.5%)</b> AM Peak Volume (veh/hr)	<b>1,858 (+3.6%)</b> PM Peak Volume (veh/hr)
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Equipment Measures

Device and Communications Uptime

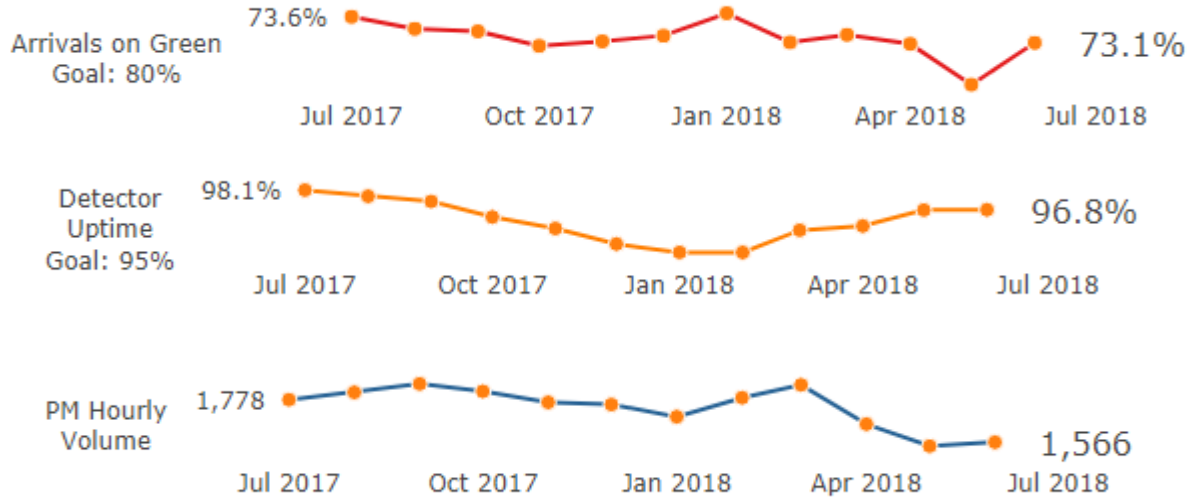
<b>93.8% (-0.1%)</b> Vehicle Detector Availability (manually collected)	<b>98.7% (-0.1%)</b> Pedestrian Detector Availability (manually collected)	<b>62.0% (-8.6%)</b> CCTV Availability	<b>97.1% (+4.6%)</b> Communications Uptime
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Activity Measures

Activity measures from TEAMS and as reported by Traffic Engineers.

<b>465 (+24.3%)</b> TEAMS Tasks Reported This Month	<b>363 (+0.6%)</b> TEAMS Tasks Resolved This Month	<b>317 (+47.4%)</b> TEAMS Tasks Outstanding (Unresolved)
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# Monthly Reporting Tool



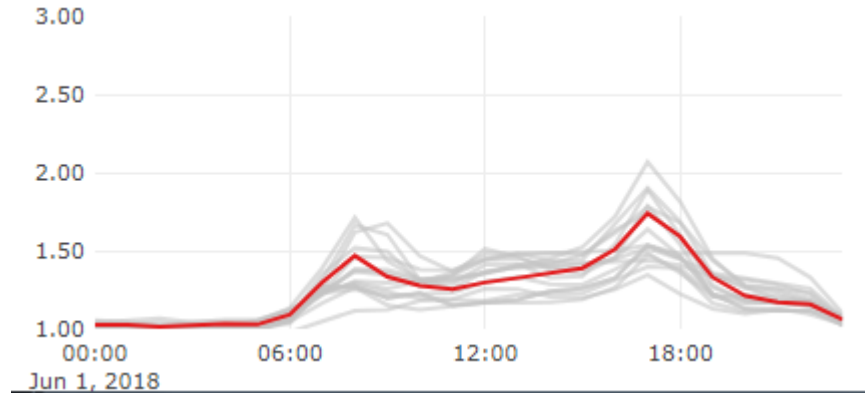
Fri 7/13/2018 7:13 AM  
 UtahAPPServer@dot.ga.gov  
 ATSPM Alerts for 7/13/2018

To: Carrillo, Jaime Esteban; Montufusco, Joshua M; Coulter, Victoria L; RTOP\_AlertToppers: Glasser, Matthew; DiGanza, Mike; RTOP\_TSDS; Robinson Nicol; Patel, Bhagratkumar M.; Mathis, Frederick X; Jonathan Moore; Wall, Eric; Davis, Alan; Villalobos, Chad; dman.angela@biviverbar.com; Givias, Michael; Hensel, Timothy; Lupo, Brent; Tency, Bachmann; Banchele, Michael; Dee Taylor; Wegener, David; Katherine D'Ambrosio; Shearin; Hatch, Justin A; aritter@dot.ga.gov; Harris, Darren S; ATSPM\_Alert\_Recipients; Westberry, Andy; Andy King; Montgomery, Ken; Davis, Alan

Retention Policy: GDOT RetentionPolicy\_Inbox (30 days) Expires: 8/2/2018  
 This item will expire in 27 days. To keep this item longer apply a different Retention Policy.

--The following signals had too few records in the database on 7/12/2018:  
 5065 - W 12th Street & SR 44L (Missing Records)  
 7293 - SR 120 & Westside Parkway (Missing Records)

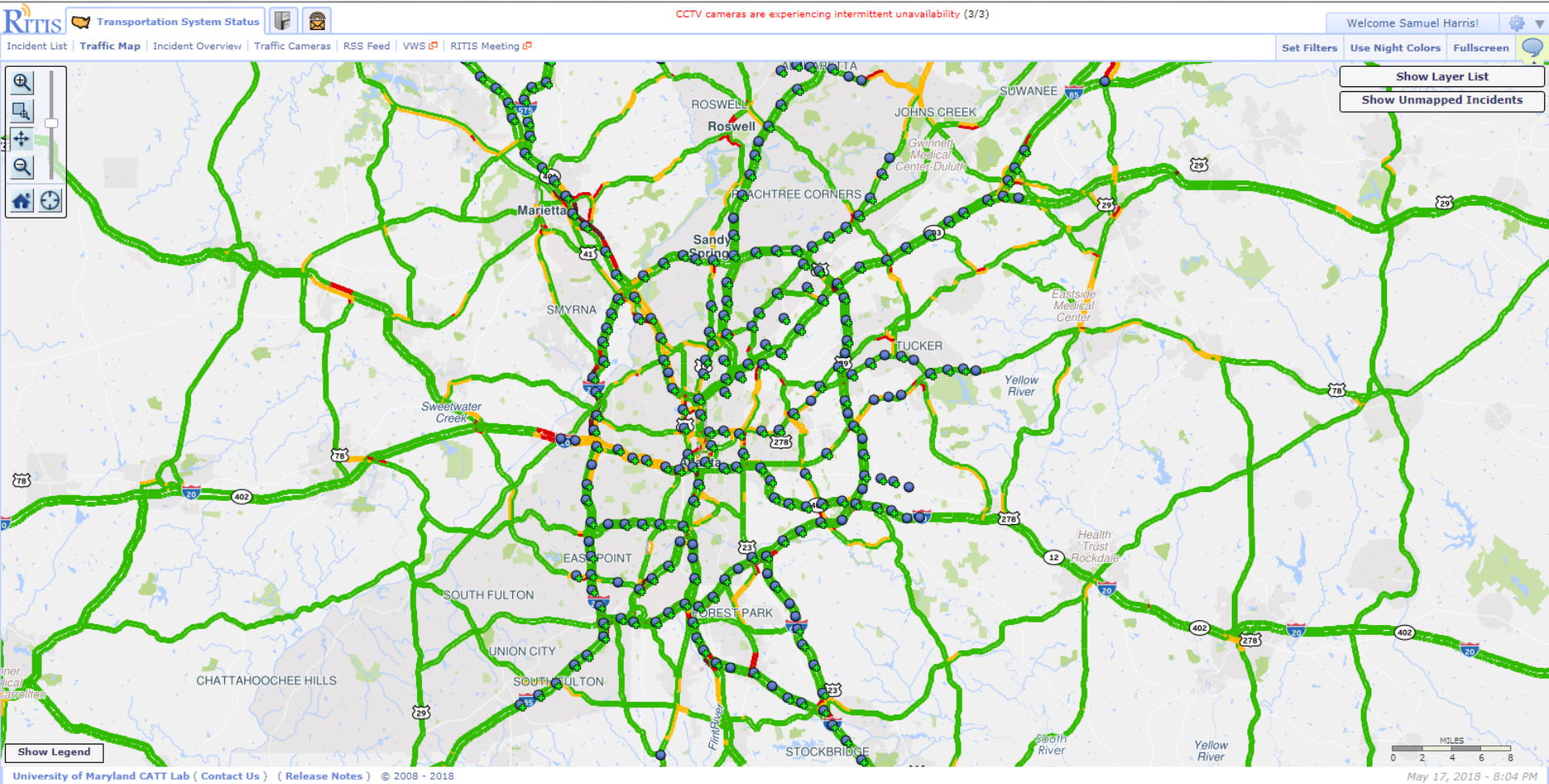
--The following signals had too many force off occurrences between 1:00 and 5:00:  
 149 - Capitol Sq & Capitol Ave - Phase 4 (Force Offs 97.5%)  
 1659 - SR 140 & Best Friend Rd - Phase 2 (Force Offs 100%)  
 1659 - SR 140 & Best Friend Rd - Phase 6 (Force Offs 100%)  
 25 - Williams St & Simpson St - Phase 2 (Force Offs 100%)  
 25 - Williams St & Simpson St - Phase 6 (Force Offs 100%)  
 3236 - SR 920 & Foster Drive - Phase 2 (Force Offs 100%)  
 3236 - SR 920 & Foster Drive - Phase 6 (Force Offs 100%)  
 7008 - SR 42 & Faith Avenue/McPherson Avenue - Phase 2 (Force Offs 100%)  
 7008 - SR 42 & Faith Avenue/McPherson Avenue - Phase 6 (Force Offs 100%)  
 7009 - SR 42 & Memorial Drive/Arkwright - Phase 2 (Force Offs 100%)  
 7009 - SR 42 & Memorial Drive/Arkwright - Phase 6 (Force Offs 100%)  
 7020 - SR 42 Connector & N Highland Avenue - Phase 2 (Force Offs 100%)  
 7020 - SR 42 Connector & N Highland Avenue - Phase 6 (Force Offs 100%)  
 7037 - SR 8 & Boulevard/Monroe - Phase 2 (Force Offs 100%)  
 7037 - SR 8 & Boulevard/Monroe - Phase 3 (Force Offs 92.3%)  
 7037 - SR 8 & Boulevard/Monroe - Phase 6 (Force Offs 100%)



Watchdog

Travel Time

# Travel Time Probe Data

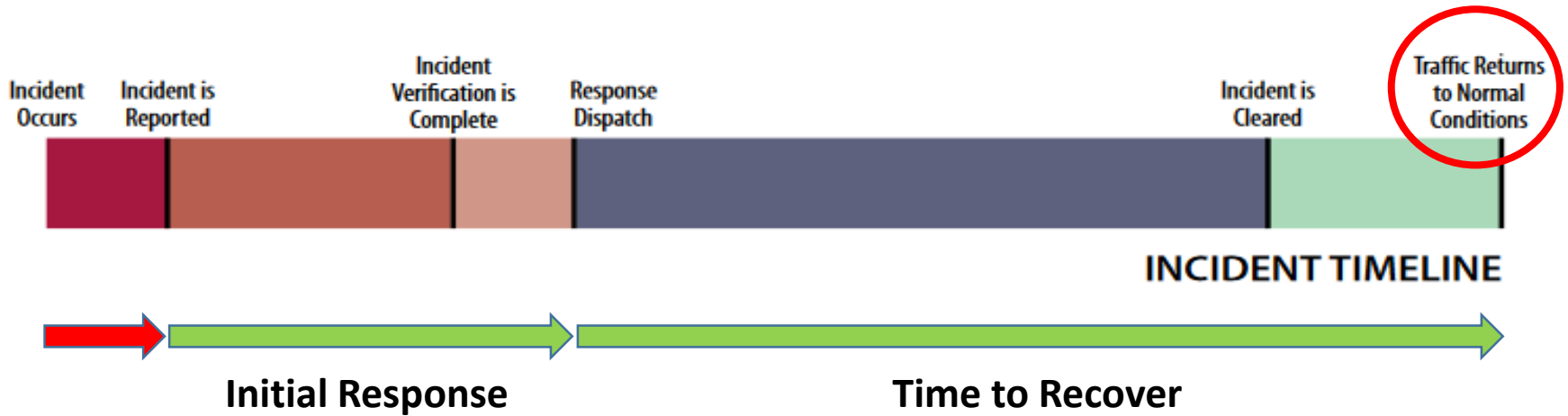


# Benefits of Automated Reporting

- Reduce cost and time saving
- Accountability
  - Awareness of the system
- Efficiency
  - Focus resources in areas of need
- Easily accessible and to use
- Creates new goals and business practices
- Better customer service
- Statewide approach and interdepartmental collaboration.



# Incident Timeline



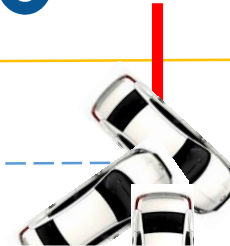
**Incident Occurrence**

# Four Lane Interstate

2000 VPH →



2000 VPH →



	First Hour	Second Hour	Third Hour
2			
2			
80			
First 8,000 cars	\$ 180,000	\$ 180,000	\$ 180,000
Second 8,000 cars		\$ 180,000	\$ 180,000
Third 8,000 cars			\$ 180,000
<b>Hourly Total</b>	<b>\$ 180,000</b>	<b>\$ 360,000</b>	<b>\$ 540,000</b>
<b>GRAND TOTAL</b>			<b>\$1,080,000</b>

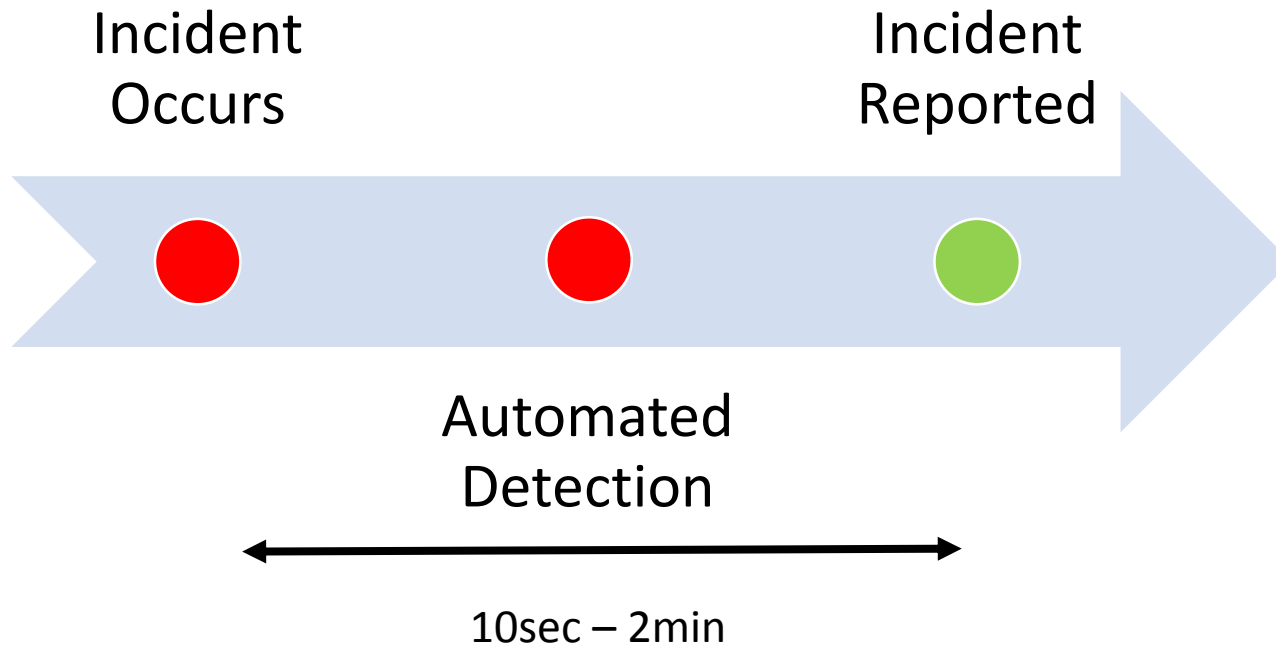
# The Facts

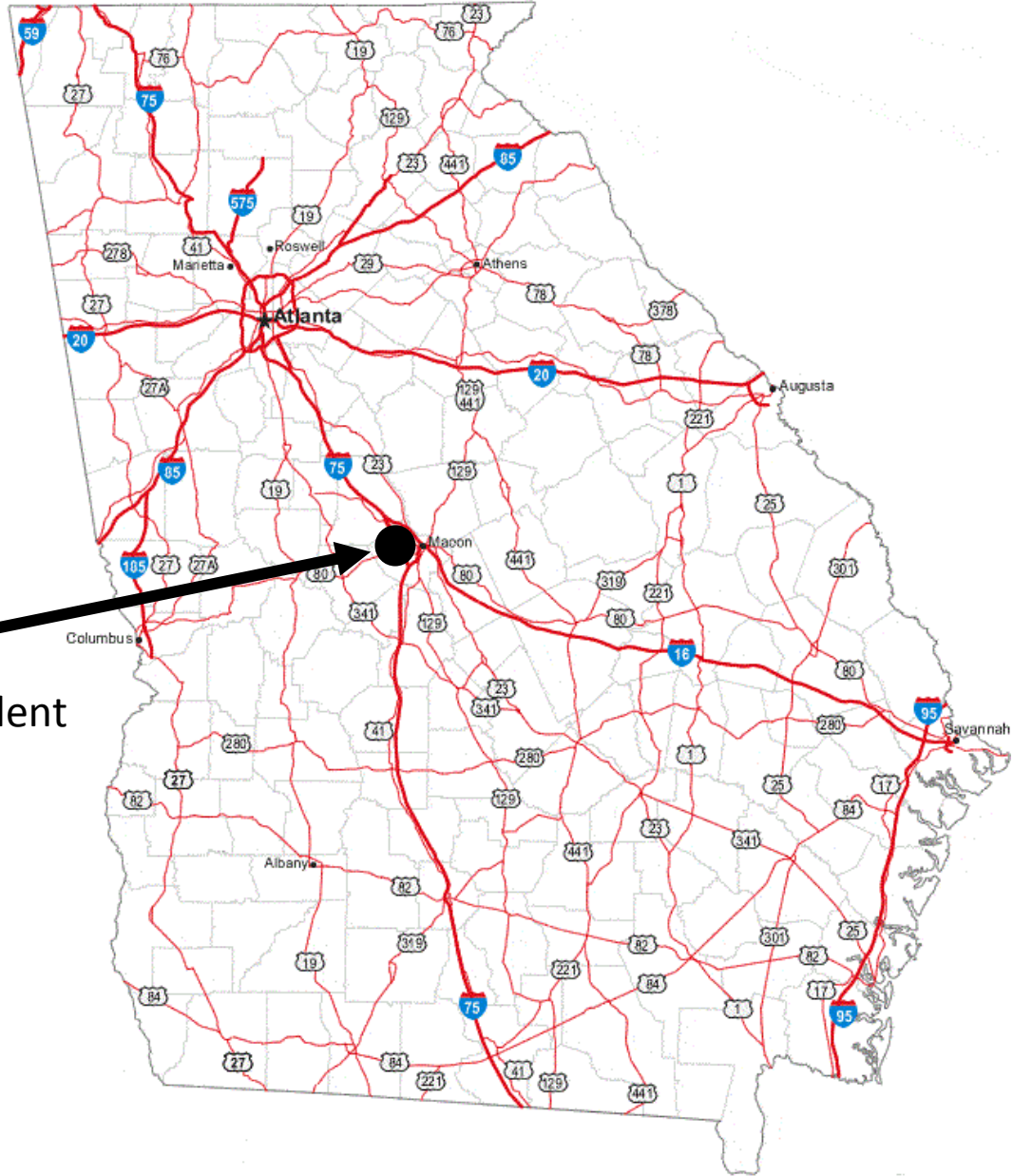
2.3% chance of a secondary accident EVERY MINUTE

69% chance in 30 minutes

Every minute the lane is blocked adds 5 minutes to the time that the congestion will remain

# Incident Occurrence

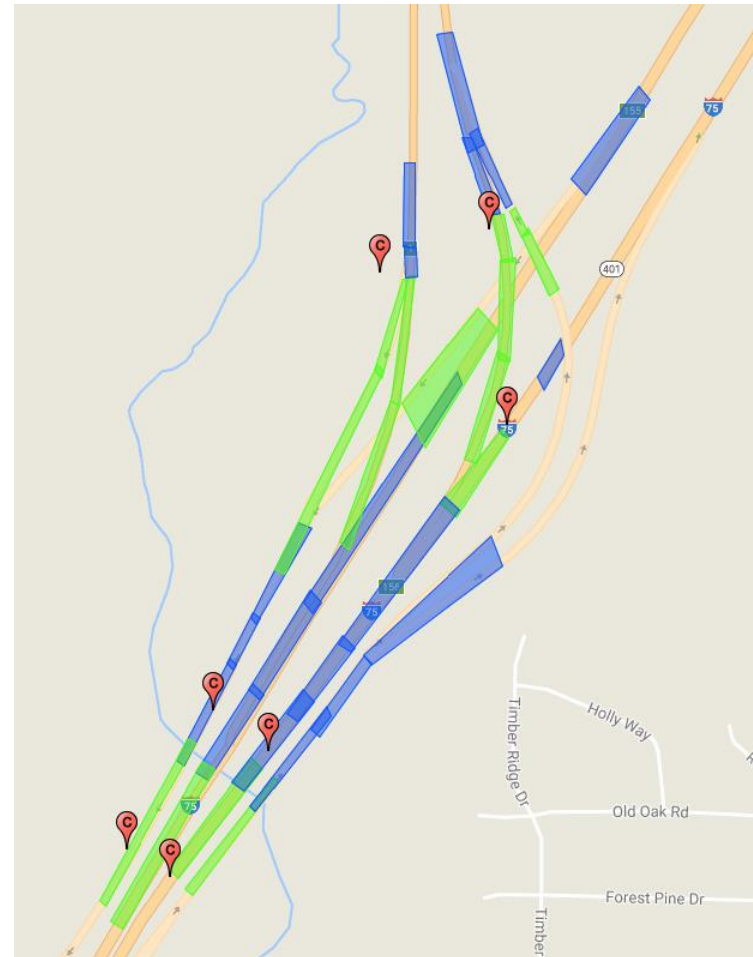




I-475 Automated Incident  
Detection Pilot Test

# I-475 Incident Detection

- Largest continual deployment in the Nation
- 153 Fixed cameras
- 31 upgraded pan-tilt-zoom cameras
- 84 power management devices
- Total cost \$1,086,293.25



# How it works

fps: 11

**Alerts**

▼ BIBB-CAM-009

**Far:**  
-  
**nb:**  
-

▼ N1C10

**sb:**  
67  
**nb:**  
69

▼ N1C37

**sb:**  
71  
**nb:**  
75

▼ BIBB-CAM-025

**NB:**  
81  
**SB:**  
75

<p>S1C30</p> <p><b>nb: 63</b> </p> <p><b>sb: 70</b></p>	<p>BIBB-CAM-035</p> <p><b>nb: 63</b></p> <p><b>sb: 72</b></p>	<p>S1C29</p> <p><b>nb: -</b></p> <p><b>sb: -</b></p>	<p>S1C28</p> <p><b>nb: 69</b></p> <p><b>sb: 74</b></p>	<p>BIBB-CAM-034</p> <p><b>nb: -</b></p> <p><b>sb: -</b></p>
<p>S2C26</p> <p><b>NB: 86</b></p> <p><b>SB: 87</b></p>	<p>S1C25</p> <p><b>Far: -</b></p> <p><b>RAMP: 24</b></p>	<p>S2C25</p> <p><b>nb: 99</b></p> <p><b>sb: 87</b></p>	<p>BIBB-CAM-032</p> <p><b>nb: 61</b></p> <p><b>sb: 73</b></p>	<p>S1C24</p> <p><b>Far: 76</b></p> <p><b>Near: 79</b></p>
<p>S3C23</p> <p><b>nb: 81</b></p> <p><b>sb: 86</b></p>	<p>S1C22</p> <p><b>nb: 67</b></p> <p><b>sb: 83</b></p>	<p>S2C22</p> <p><b>nb: 78</b></p> <p><b>sb: 84</b></p>	<p>S1C21</p> <p><b>nb: 81</b></p> <p><b>sb: 78</b></p>	<p>BIBB-CAM-030</p> <p><b>Far: 75</b> </p> <p><b>Near: 74</b></p>

2018/08/28 18:19:53

# Results

## Rural Applications

- Incident detection 6-8 minutes before incident reported by credible source

## Current Uses

- Unplanned incident
- Debris in roadway
- Stall
- Wrong way detection
- Pedestrian

## Urban Applications

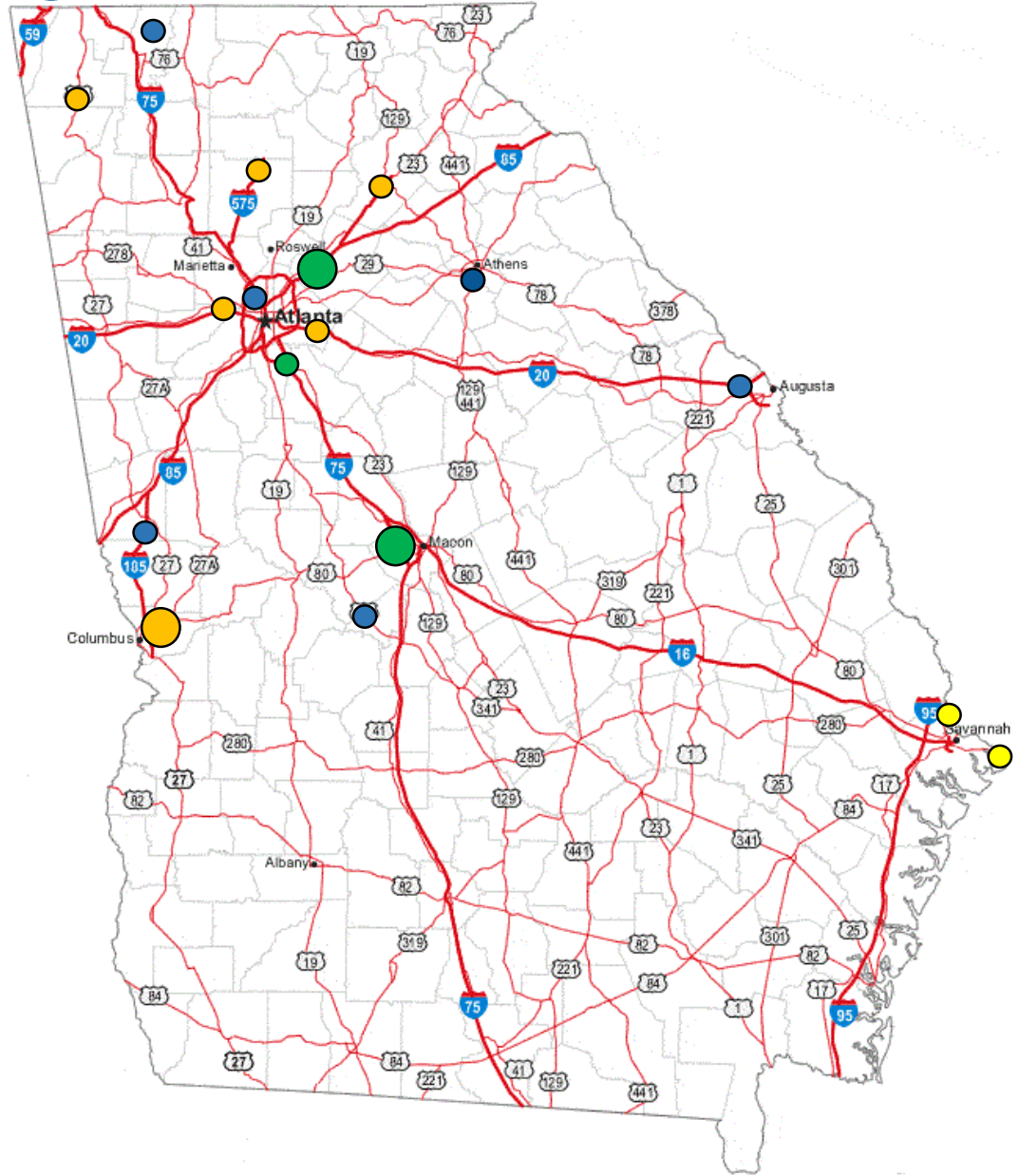
- Incident detection 3-6 minutes before incident reported by credible source

## Current Uses

- Unplanned incident
- Debris in roadway
- Left shoulder stall
- Situation Wrong way
- Pedestrian



# Looking to the Future with ITS



# **GDOT's ITS and Traffic Management**

**Questions?**

Thanks for your attention.