

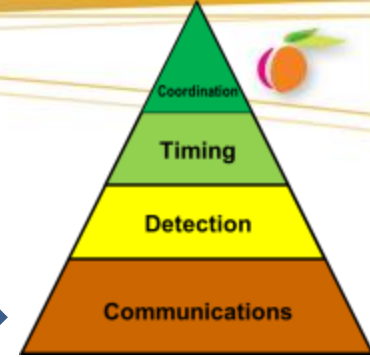


# Georgia Department of Transportation

Alan Davis, PE, PTOE

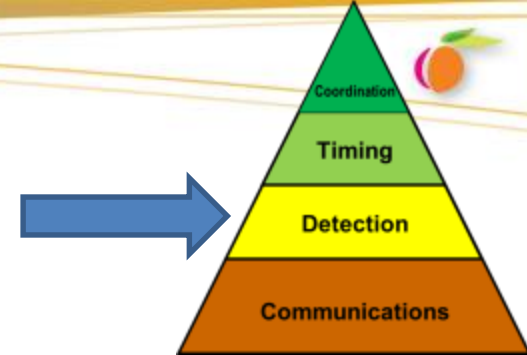
State Signal Engineer

# Agency Factoids (System/Comm.)



- Number of signalized intersections
  - 1,343 connected by fiber
  - 179 connected by radio
  - 18 connected by twisted pair
  - 152 connected by cellular
  - 1,925 not connected to communication\*
- 21 Engineers, 58 Technicians
- Intelight MaxView
- 303 signals collecting high resolution data\*
- 1-2 Years of experience with high resolution data

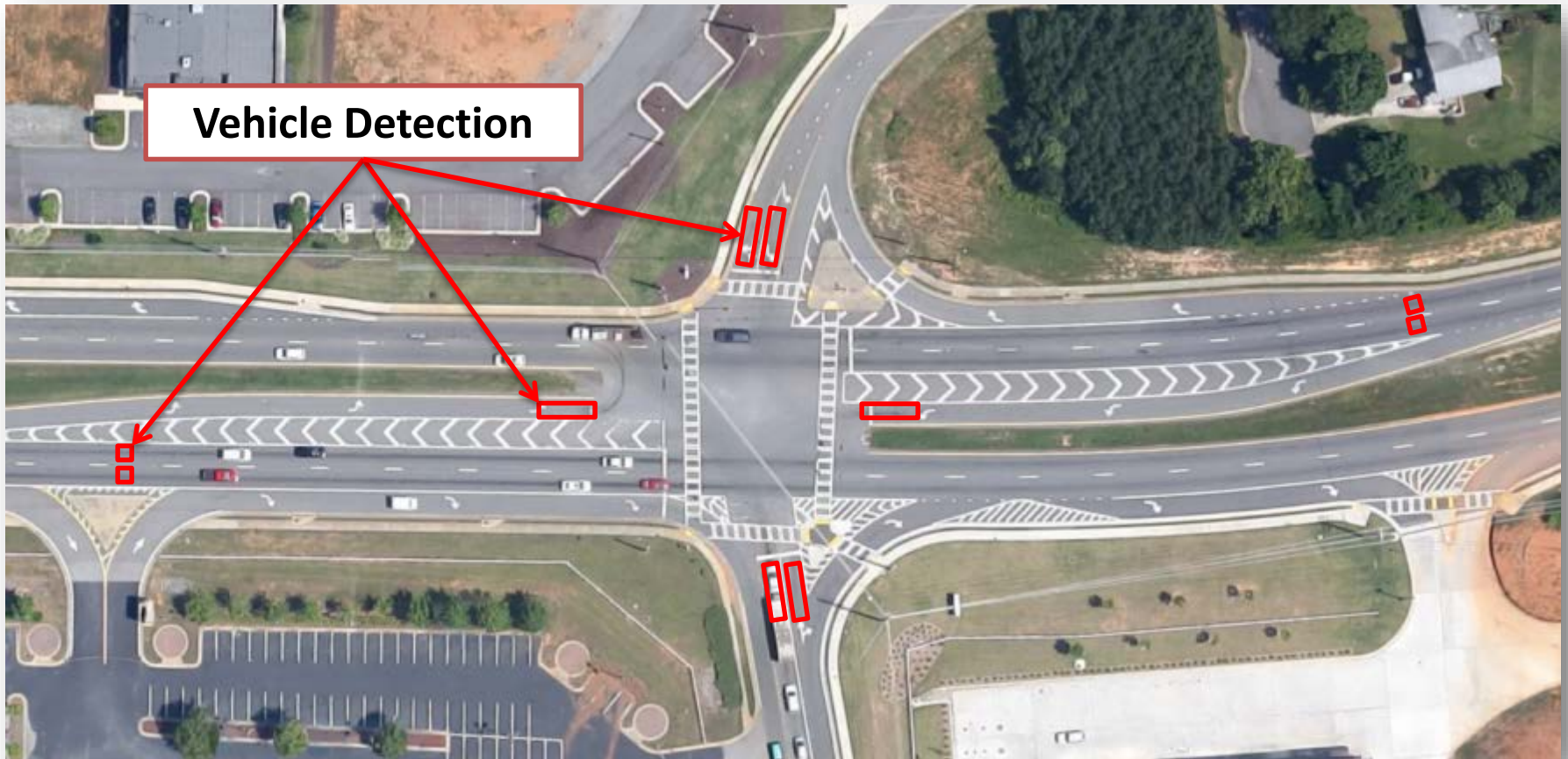
# Agency Factoids (Detection)



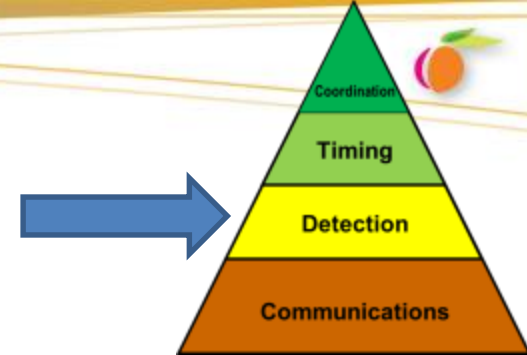
- Side street detection: 6' x 40'
  - 6' x 6' set-back loops on mainline
  - Loop, video, magnetometer, radar
  - “Lane by Lane”
- <http://www.dot.ga.gov/PartnerSmart/Business/Source/specs/DOT2013.pdf>
- Detection Testing and Maintenance Practices
  - 0 Signals with Emergency Vehicle Preemption
  - All signals within 200 ft of crossing – RR Preempt



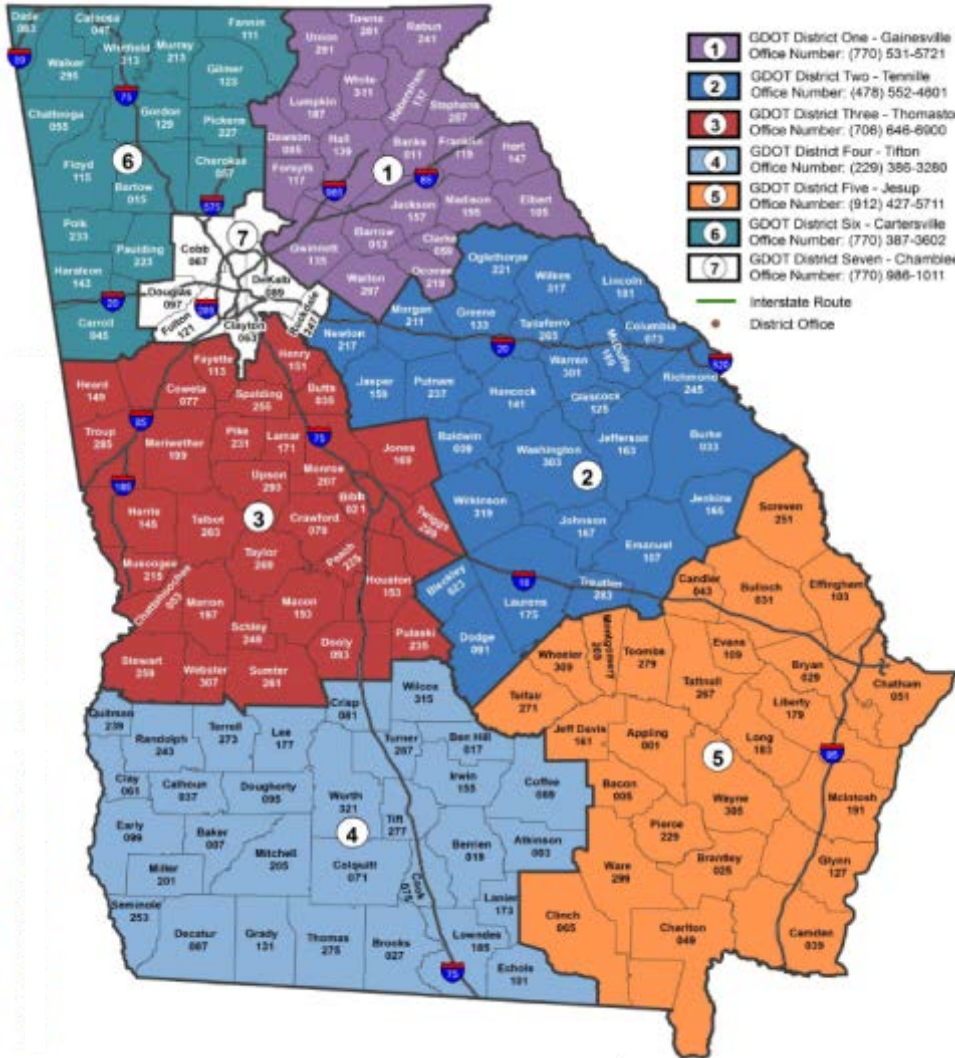
# Typical GDOT Intersection Detection Zones



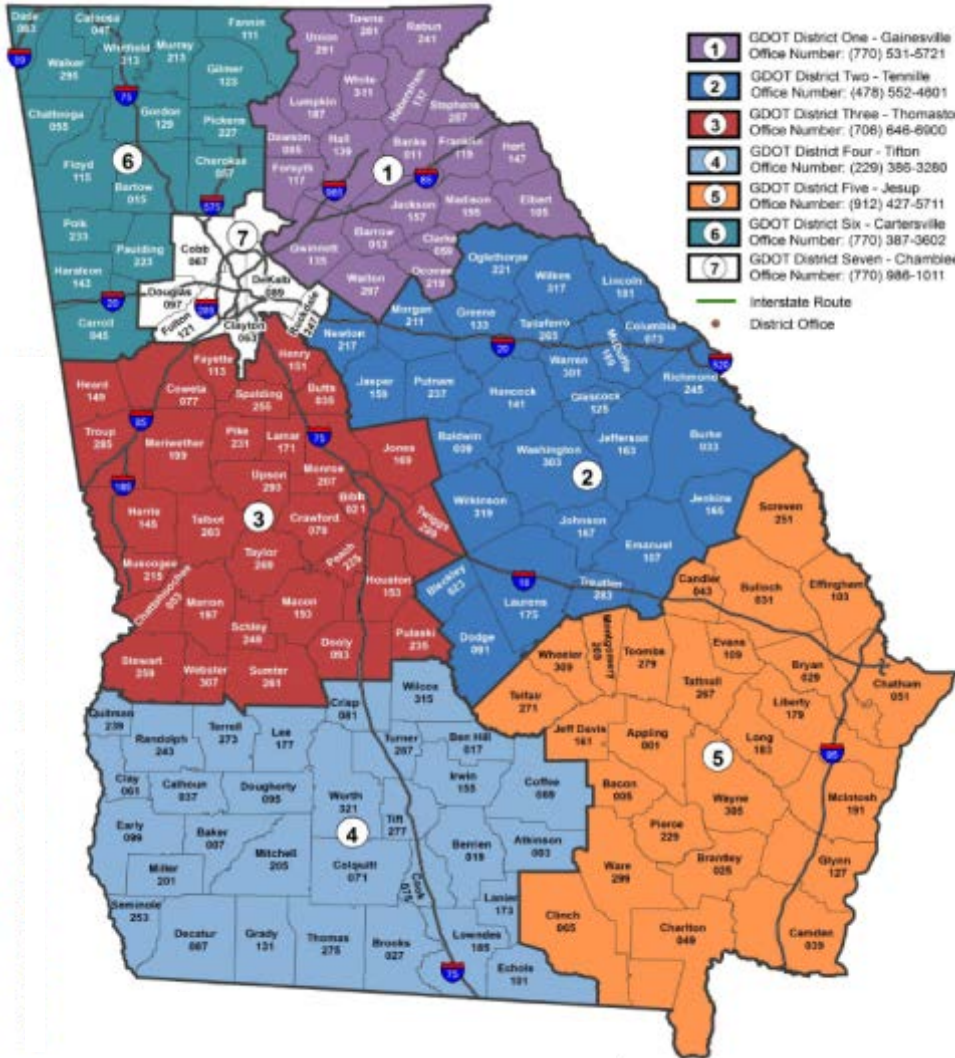
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- Seven Districts
- One Central Office
- Two Transportation Management Centers (TMC)

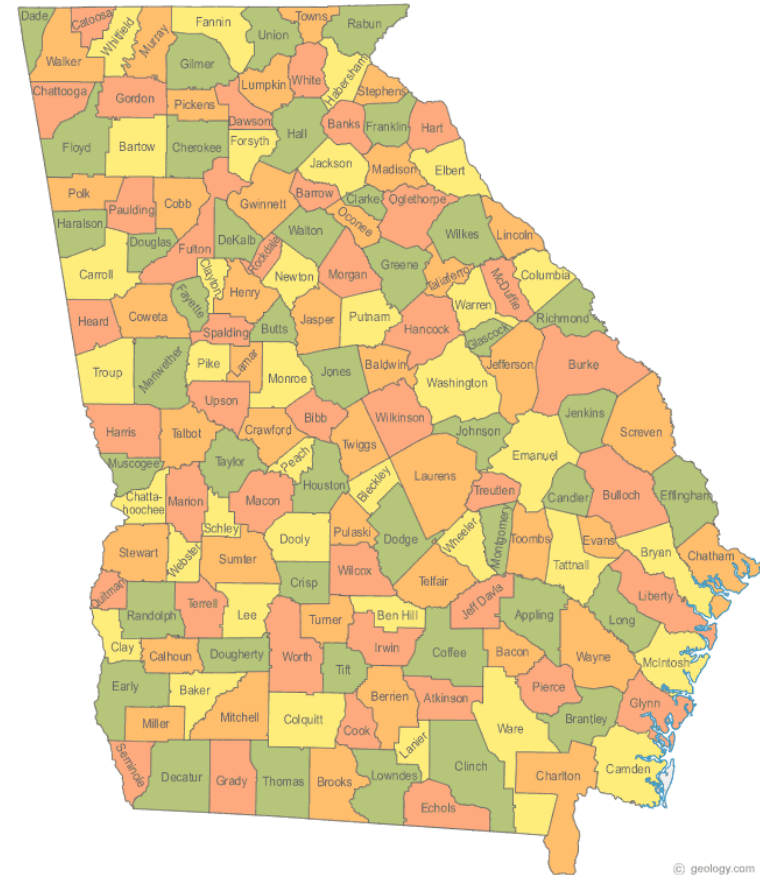


- 9,500 signals statewide
- 5,414 on-system
- 3,000 GDOT maintained



- Maintaining Agencies:
  - 7 GDOT Districts
  - 54 Counties
  - 36 Cities
  
- Top 5 maintaining agencies:
 

• GDOT:	3000 signals
• City of Atlanta:	975 signals
• Gwinnett County:	705 signals
• DeKalb County:	661 signals
• Cobb County:	543 signals







# Staffing

## TMC

10 Traffic Engineers

7 Field Technicians

3 Signal Timing Contracts

9 Signal Maintenance Contractors

## District

3 Traffic Engineers

5-10 Field Technicians



4 Traffic Engineers

1 Field Technician

2 Consultant Teams



# GDOT Signals

- Pre 1996: multiple platforms, multiple vendors
- 1996 Olympics: standardized on 170 platform (BiTrans)
- Early 2000's: Upgrade to 2070; Siemens (ACTRA + SEPAC)
- 2010: Upgrade to TACTICS
- 2015: Upgrade to Intelight MaxTime & MaxView



# High Resolution Data Integration

- 2013: development of RFP for new signal software begins
- November 2013: Scan tour
- 2014: RFP development, funding identification
- 2015: RFP issued (twice!)
- September 2015: NTP given to Intelight



# Darcy Bullock Workshop – GA ITE



# GDOT Signal Performance Metrics

->Signal Metrics

Selected Signal

Signals  
 District:   
 Metric Type:   
 Filter:

**Signal List**

**Map**

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Metric Settings

Metric Type

- Approach Delay
- Approach Volume
- Arrivals On Red
- Purdue Coordination Diagram
- Purdue Phase Termination
- Speed
- Split Monitor
- Turning Movement Counts

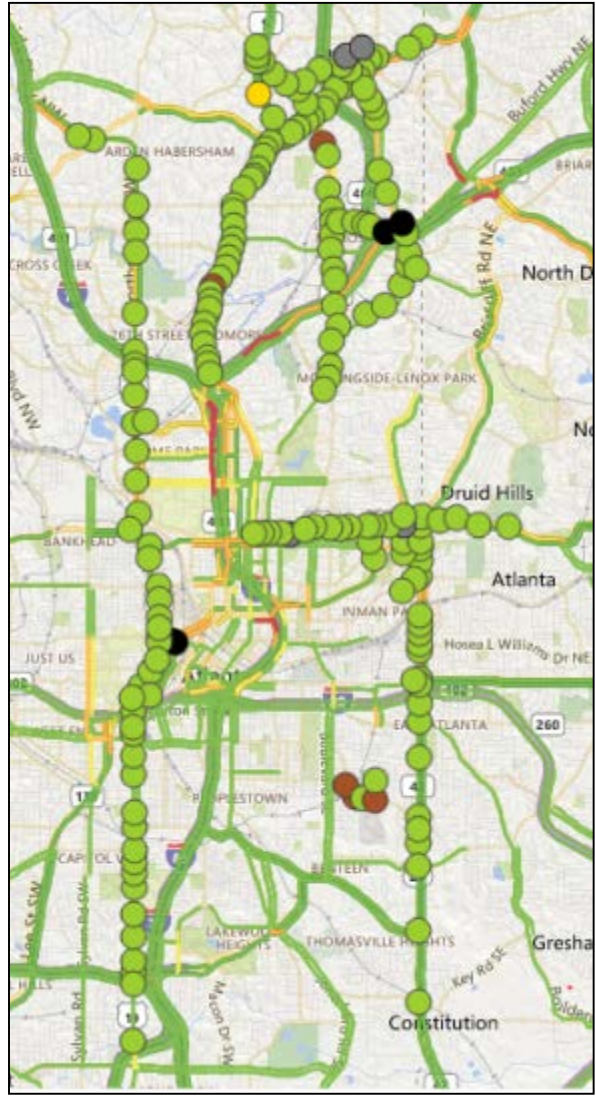
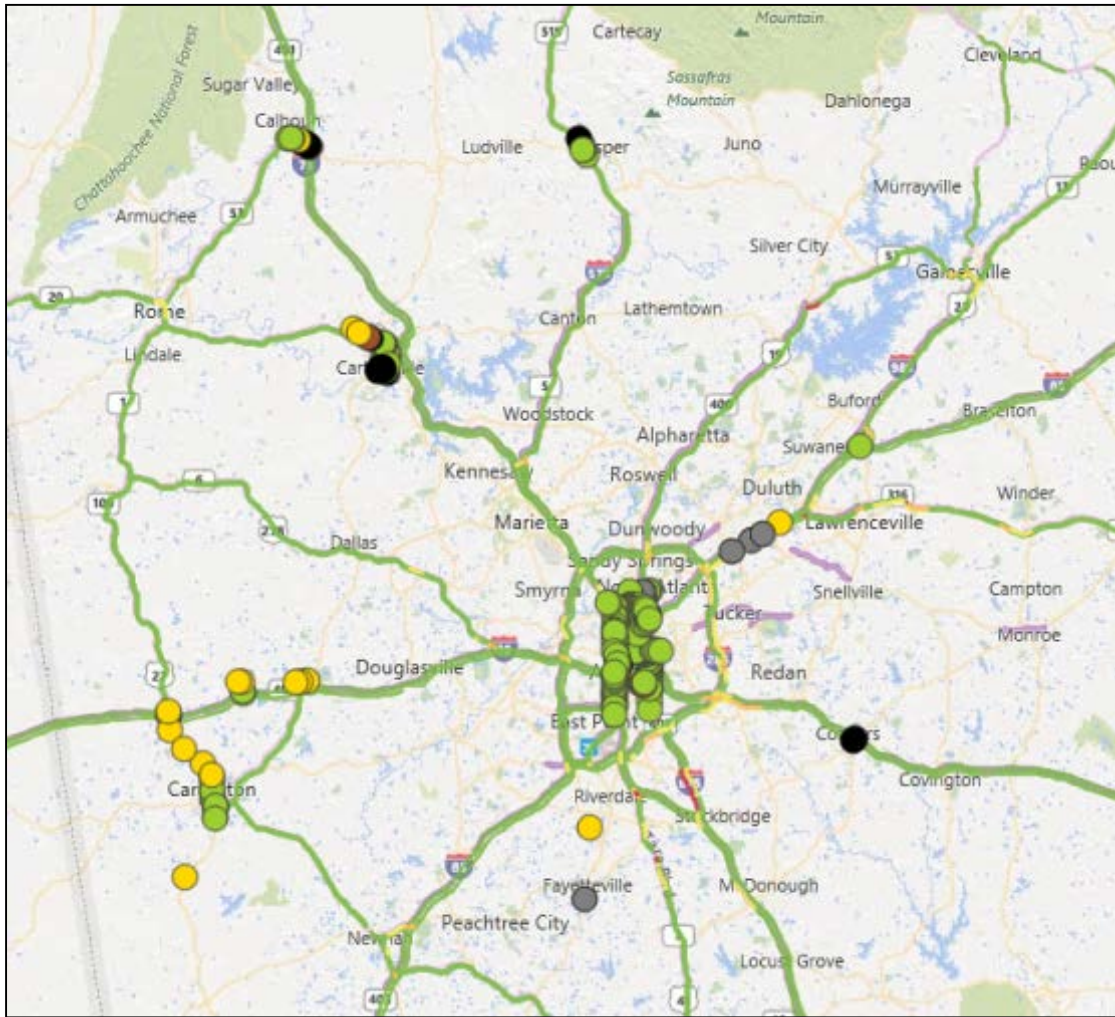
Time Y Axis Maximum:   
 Volume Y Axis Maximum:   
 Volume Bin Size:   
 Dot Size:

Show Plan Statistics  
 Show Volumes  
[Export Data](#)  
 Upload Current Data

Dates

Start Date:     
 End Date:

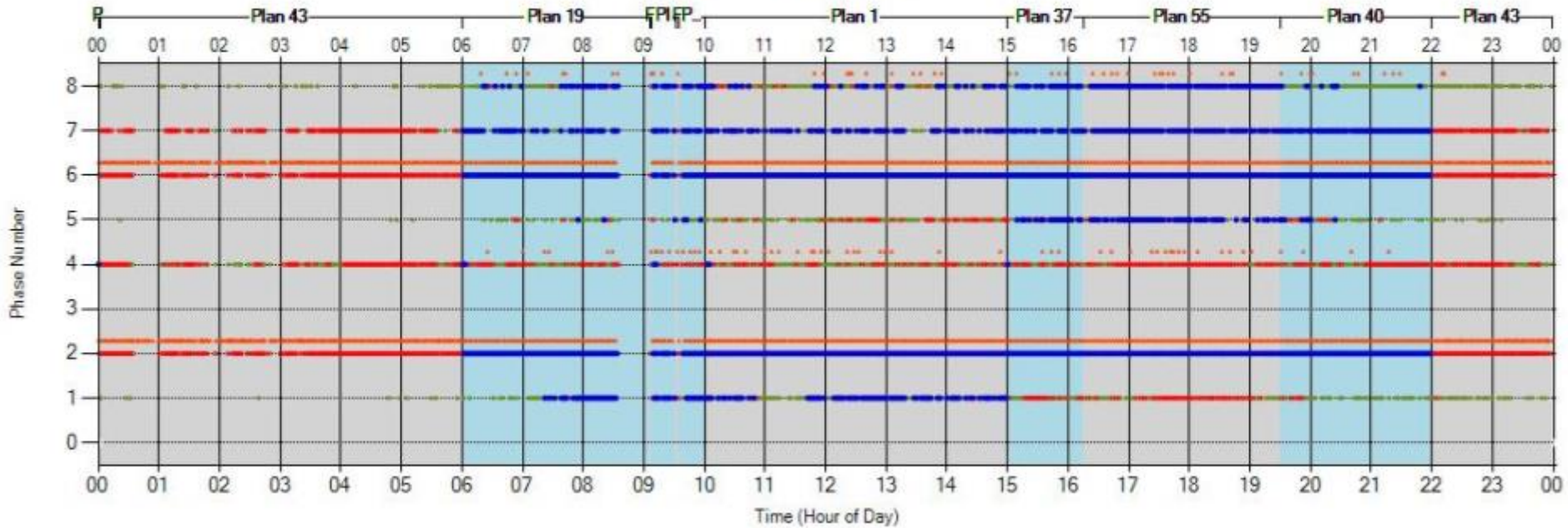
Sun	Mon	Tue	Wed	Thu	Fri	Sat
27	28	29	30	31	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	1	2	3	4	5	6





SR 141 Peachtree Peachtree Dunwoody Signal 7045  
 Thursday, November 19, 2015 12:00 AM - Thursday, November 19, 2015 11:59 PM

Currently showing Force-Outs, Max-Outs and Gap-Outs with a consecutive occurrence of 1 or more.  
 Pedestrian events are never filtered





# Operations

## Future goals

- Integration in signal timing manuals and specifications
- Consultant performance evaluation based on probe and high-resolution data
- Pro-active and prioritized effort with signal timing
- Support for local agencies – training and engineering
- Public portal for historical operational data