

# Technical Advisory Stakeholder Committee (TASC) Meeting

September 2016



# Agenda

- Study Schedule
- Major Themes from Stakeholder Interviews
- Previous Studies Review
- Vision, Guiding Principles, Goals, Objectives  
Discuss
- Data Collection & Existing Conditions
  - Congestion Data
  - Parallel Arterial Analysis
  - Crash and Incident Data
  - Origin-Destination DataDiscuss
- Evaluation Framework & Project Ideas  
Discuss
- Next Steps



# Study Area



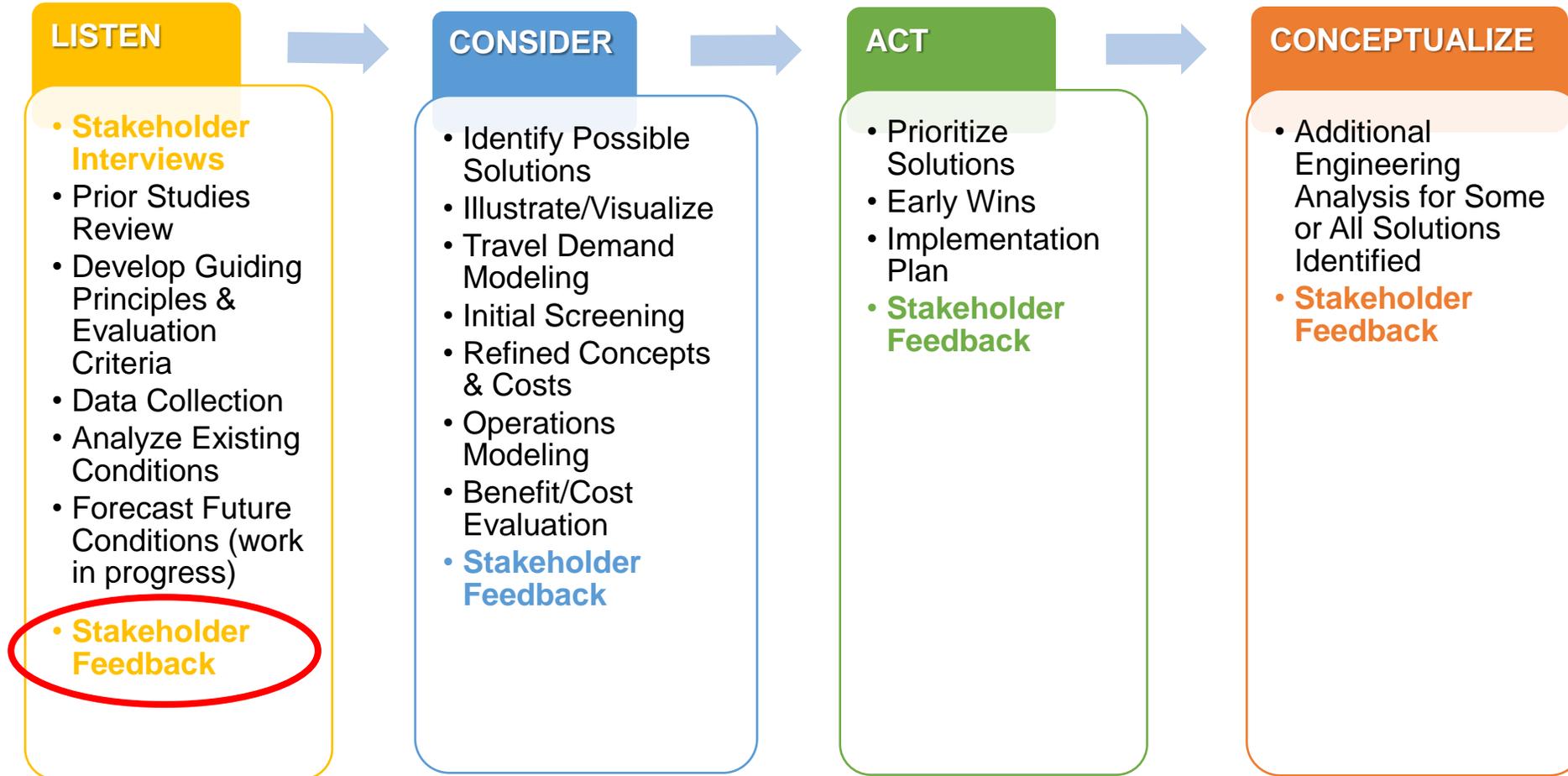
Focus is on the common section of I-75 and I-85, known as the Connector.

Complete study area includes:

- Approaches to Connector along I-75, I-85, and I-20 inside I-285
- Interchange ramps, cross streets, potential parallel routes in metro Atlanta



# Study Schedule





# Stakeholder Interviews



- Early outreach to engage key stakeholders
- Introduce study team
- Solicit ideas and input on previous activities
- Interviews included:
  - SRTA & GRTA
  - Atlanta Regional Commission
  - MARTA
  - City of Atlanta
  - Fulton County
  - Central Atlanta Progress
  - Midtown Alliance
  - GDOT District 7
  - GDOT Bridge Design
  - GDOT Roadway
  - GDOT Traffic Operations



# Major Themes from Stakeholder Interviews



## Problems:

- Connector at Williams/Ivan Allen
- Connector at Freedom Parkway
- Connector at I-20
- Connector between Freedom & I-20, aka "Grady Curve"
- Connector at University
- I-75 SB to I-85 NB loop at Brookwood Interchange
- East-West surface street connectivity across the Connector
- Ramp meters & impact on surface streets
- Lighting
- Drainage
- Safety
- Various incidents (crashes, stalls, flat tires, debris, etc.)
- Impact of Turner Field redevelopment



# Major Themes from Stakeholder Interviews

## Project Specific Solutions:

- Consider 15<sup>th</sup> Street HOV exit
- Strategically “cap” the Downtown Connector
- Close select ramps
- Tunnel under the Connector
- Upgrade the I-20 Interchange

## Other Solutions:

- Seek balance of serving through travel, local access, and special events
- Improved signage (wayfinding, ITS, etc.) to direct motorists to better routes
- Policy and regulatory changes to enhance operations (incident response, HOV enforcement, etc.)
- Changing travel trends and technology (less VMT per capita, autonomous and connected vehicles, etc.)
- Managing congestion and creating options rather than reducing congestion



Central Atlanta Progress  
Atlanta Downtown Improvement District





# Previous Studies Review

- Atlanta Regional Evacuation Plan, 2016
- Atlanta Regional Freight Mobility Plan, 2008 with 2016 update
- The Atlanta Region's Plan, 2016
- Georgia Regional Transportation Authority (GRTA) Direct Xpress Service Plan, 2016
- Atlanta Regional Managed Lanes System Implementation Plan, 2010 with 2015 update
- Walk. Bike. Thrive! Draft Bicycle and Pedestrian Plan Update, 2015
- Midtown Alliance Capital Improvements Map, 2015
- Midtown Parking Assessment and Action Plan, 2015
- Peachtree Bridges/Downtown Connector Transformation, 2015
- Metro Atlanta Operating and Planning Study Update, 2014
- Parking Today: Downtown Atlanta Parking Assessment, 2014
- Atlanta Beltline/Atlanta Streetcar System Plan, 2014
- Strategic Regional Thoroughfare Plan, 2011
- Atlanta Regional Strategic Truck Route Master Plan, 2010
- Connect Atlanta Plan, 2010
- 15th Street Bridge and HOV Interchange, 2008
- Imagine Downtown: Encore, 2008
- Reducing Congestion in Atlanta: A Bold New Approach to Increasing Mobility, 2006
- Blueprint Midtown II, 2003
- Downtown Connector Congestion Mitigation and Operational Improvement Study, 2003
- [Monitoring ongoing studies](#)

# Vision

The vision will serve as a general statement about the role and function of the Downtown Connector in the future.



“The Downtown Connector will promote safe and efficient travel while balancing mobility and access needs for all users, recognizing its vital role in the Atlanta region and moving Georgia’s economy.”



# Guiding Principles

Guiding Principles will tell “how” the Vision will be achieved.

The Study will consider:

- trends and technologies
- the long-term utility and benefit of existing and proposed infrastructure
- complementary capital projects, policies, programs and corridor management
- multimodal connections and use of multiple modes of travel
- the needs of both local traffic and through traffic
- the relationship to surrounding areas, land uses, and the local street network
- key economic impacts and influences
- impacts on the environment



# Goals and Objectives

A goal is a general statement of purpose that reflects a long-term desired end.

An objective is an intermediate step to reach a goal, and is more focused and easily measured.

## Improve Safety

- Minimize speed differentials
- Reduce number of crashes
- Minimize severity of crashes
- Reduce response and clearance times

## Improve Mobility

- Minimize travel times
- Increase travel time reliability
- Increase person throughput

## Use Transportation Funds Efficiently

- Maximize benefit-cost ratio
- Leverage partnership with other entities
- Streamline project delivery
- Lower lifecycle costs

## Promote Economic Vitality

- Improve connection to key economic drivers in the downtown core and throughout the region
- Consistency with local, regional, and state plans

## Better Manage Accessibility

- Improve modal options to and within the downtown core
- Improve traveler information systems and users' ability to easily navigate

## Promote Context Sensitive Solutions

- Minimize adverse environmental impacts
- Minimize adverse business and community impacts

# Discuss



**Are we on target with the Vision, Guiding Principles, Goals and Objectives?**



# Data Gathered

Source	Data Description
GDOT Navigator	Spot Speed Data (by lane) Segment Throughput Data Event Data (incident Detection and Response Data) ITS Device Locations
GDOT Traffic Counts	Mainline and Ramp Throughput Volumes
GDOT Planning/Various	Final Documentation from Recent Studies
GDOT Office of Planning	Downtown Connector VISSIM Model
GDOT Archives	As Built Construction Plans
GDOT Bridge Office	Field review of bridges and structures
Fulton County GIS	Aerial Photography GIS Data (Contours, Property Boundaries, Property Owners)
MARTA	As Built Construction Plans
Atlanta Regional Commission	Demand Volumes for Segments and Ramps Crash Data (2013 – 2015)*
Streetlight Data	Travel Time between Key Locations* Basic Origin-Destination Data*
All Traffic Data	Turning Movement Counts*
Google Traffic Maps	Ramp Queue Lengths* (used to verify other data sources)
Alpha Helicopters	Aerial Video*

\* Original data collection for Downtown Connector Study, 2016



# Existing Conditions

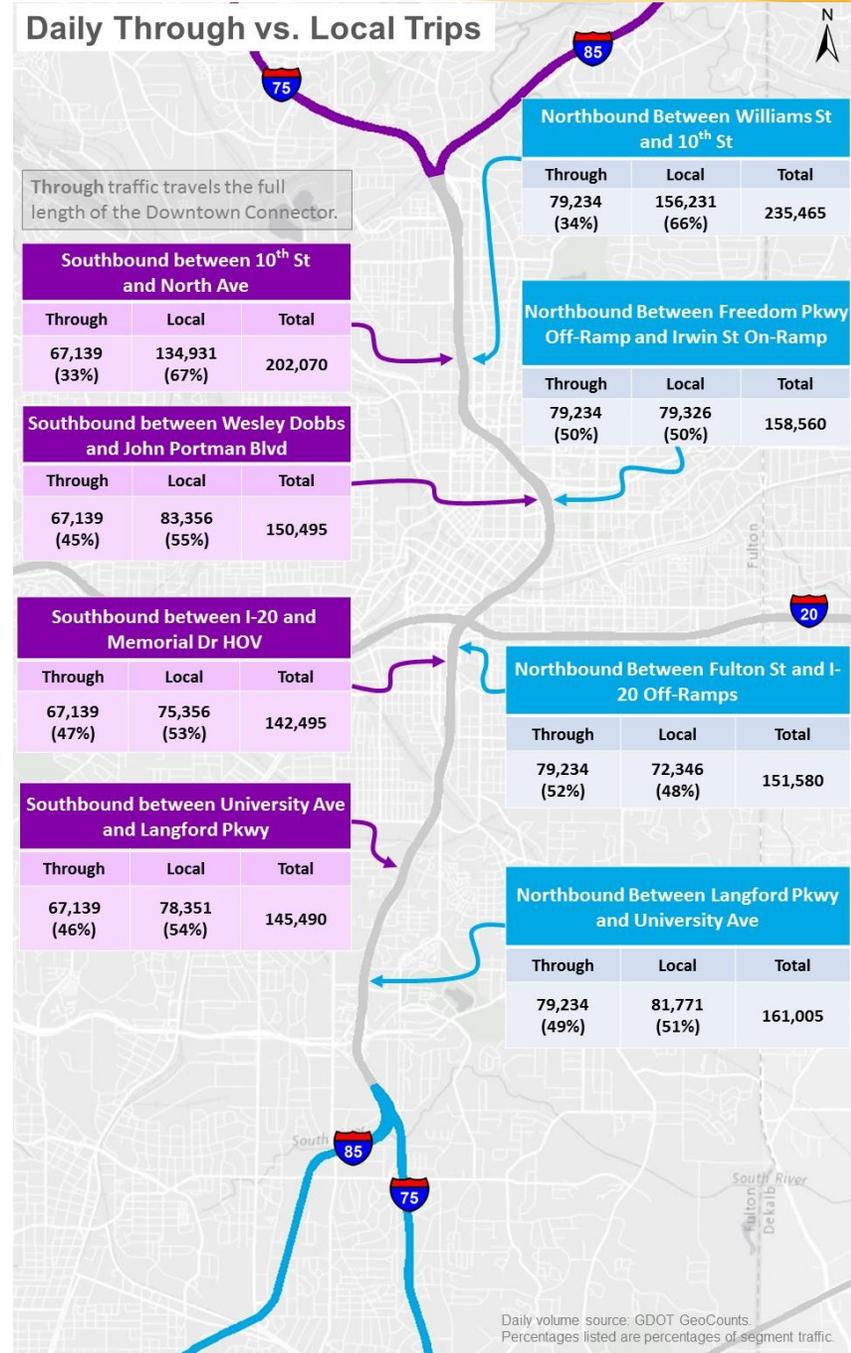
- Origin Destination Data
- Congestion Analysis
- Crash Data



# Daily Volume & Local/Through Split

- Highest total volume is 437,535 just south of 10<sup>th</sup> Street
- Lowest total volume is 243,940 just south of Fulton Street
- **Approximately 60% local traffic\*/ 40% through traffic**

\*Local traffic includes I-20 entrance/exit





# Who uses the Connector?

## AM Peak Trip Patterns

Most common destinations are along Connector between I-20 and the Brookwood Split.

30% of traffic from south of Airport Split is destined for I-85N.

## PM Peak Trip Patterns

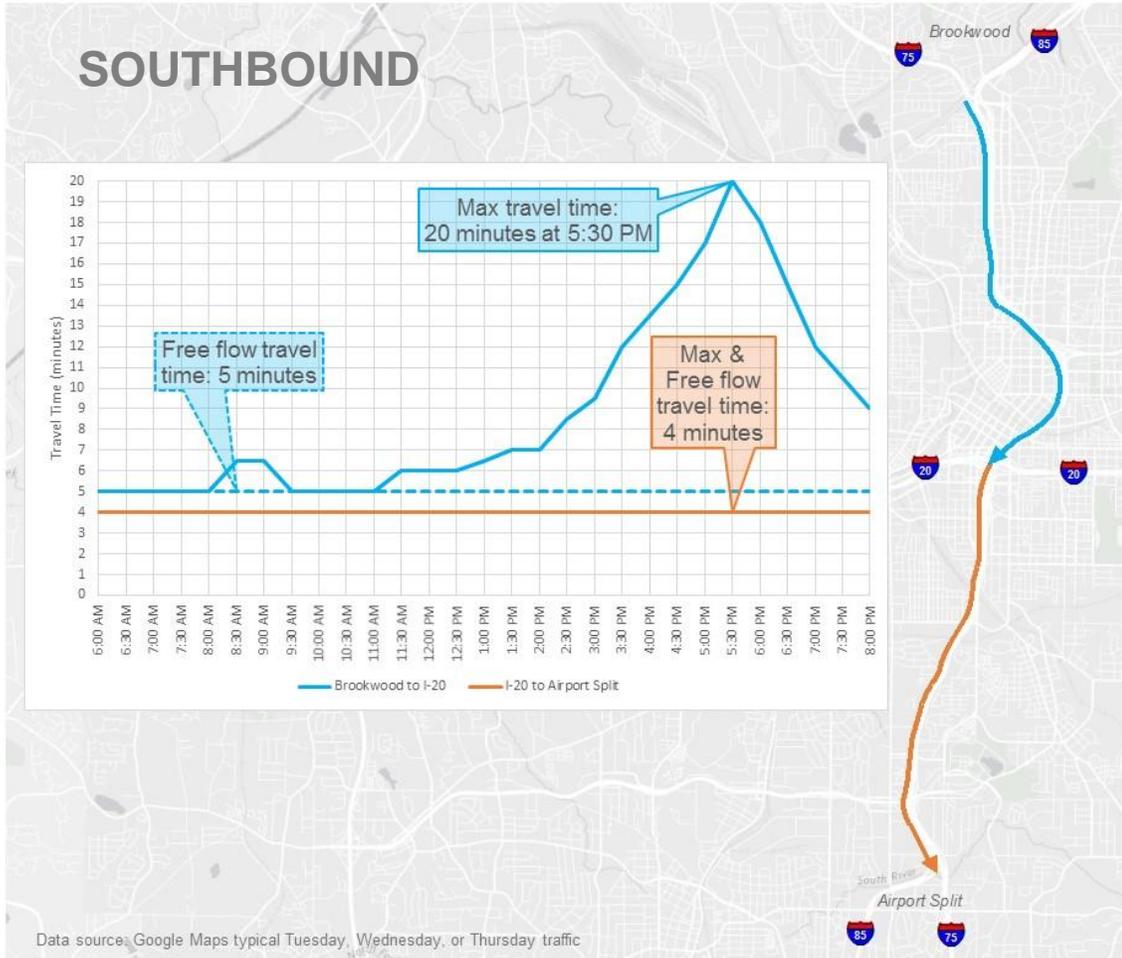
Approximately 35% traffic from south of Airport Split is destined for I-85N.

About 40% of traffic from I-75N is destined to I-85N (i.e.: Cobb County to Gwinnett County).

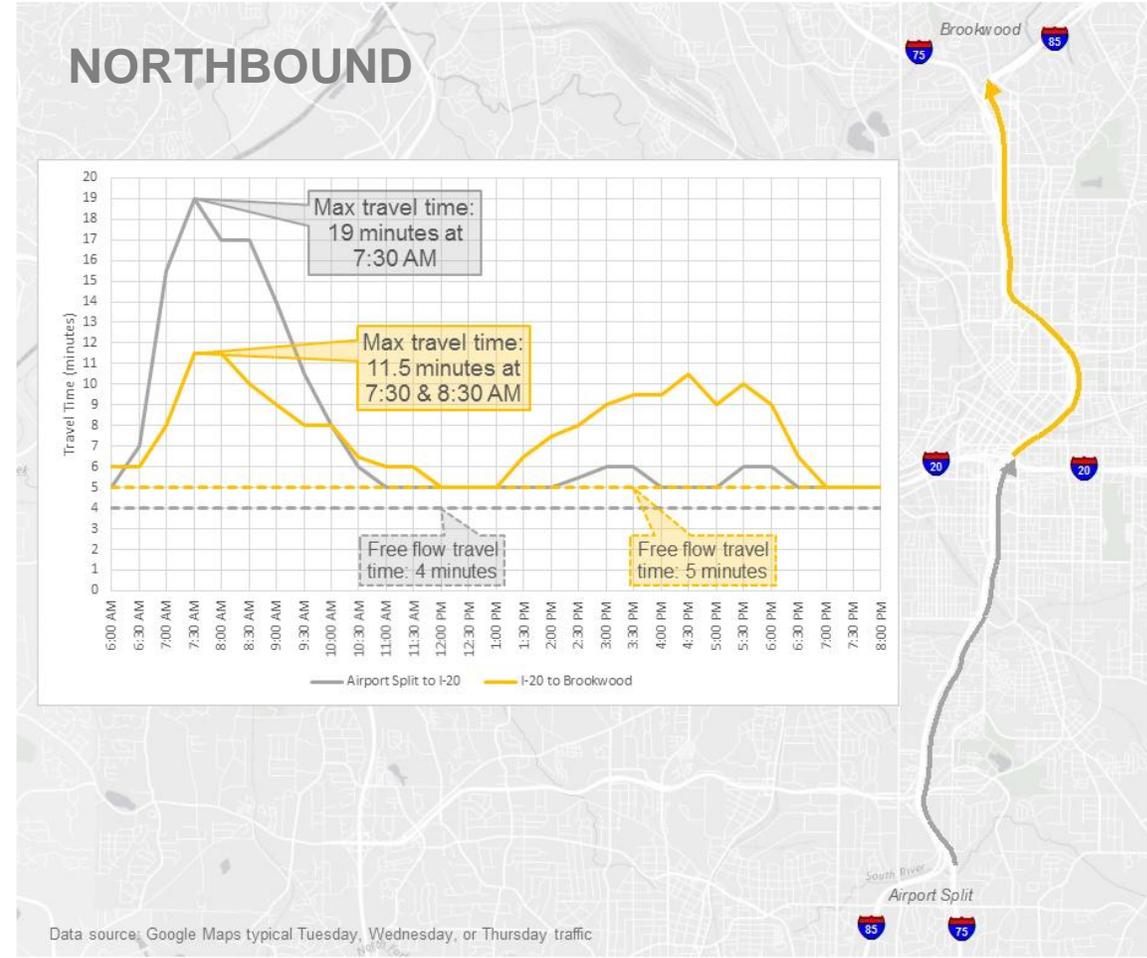
About 35-50% traffic from all directions is destined to exits along the Connector.



# Typical Travel Times



- Brookwood Split to I-20 peaks at 5:30PM
- I-20 to Airport Split constant throughout day

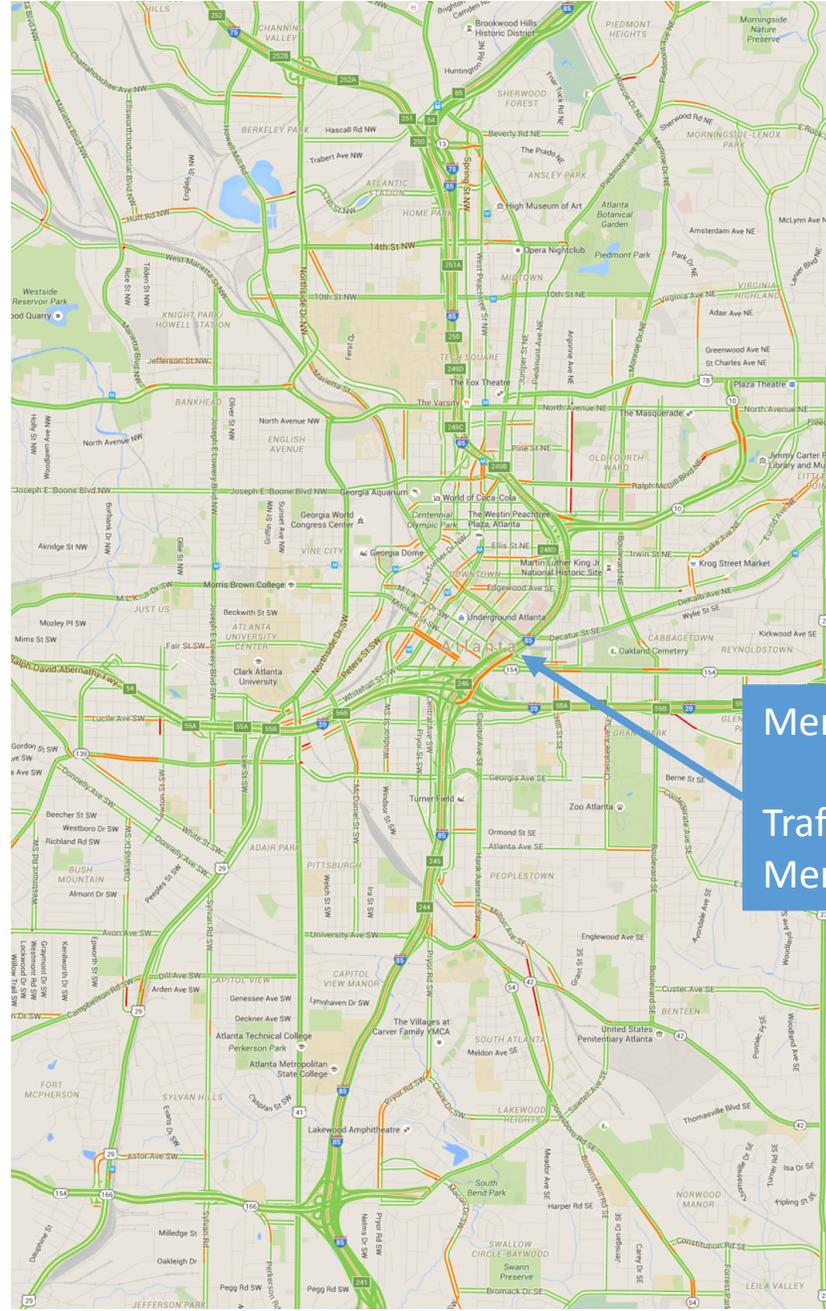


- I-20 to Brookwood Split peaks 7:30AM
- Airport Split to I-20 peaks during AM & PM peak periods



# Congestion Analysis

Peak period begins at 6am with first signs of congestion

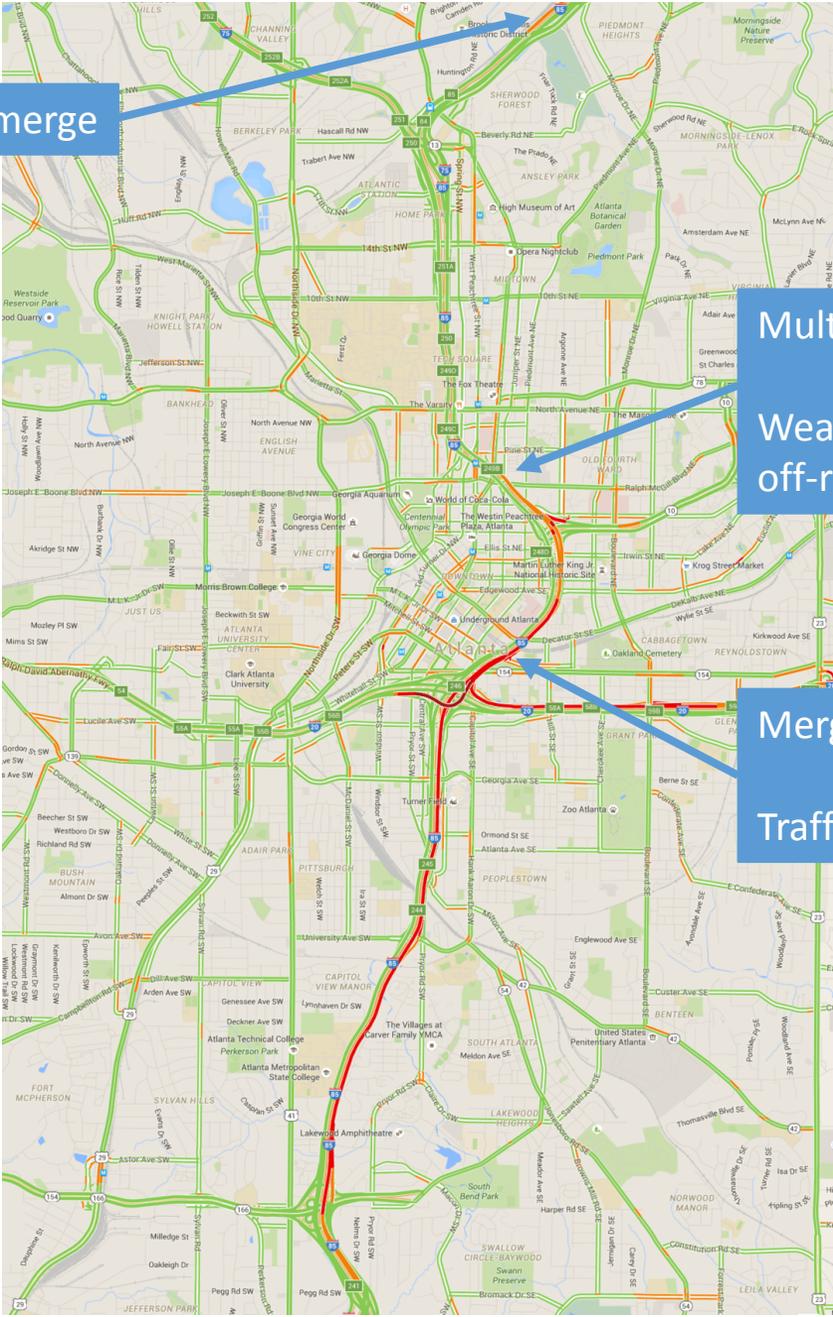


Merging capacity at I-20 on-ramps  
Traffic slows due to “tunnel” under Memorial Drive bridge

6:00 AM



Buford-Spring Connector merge

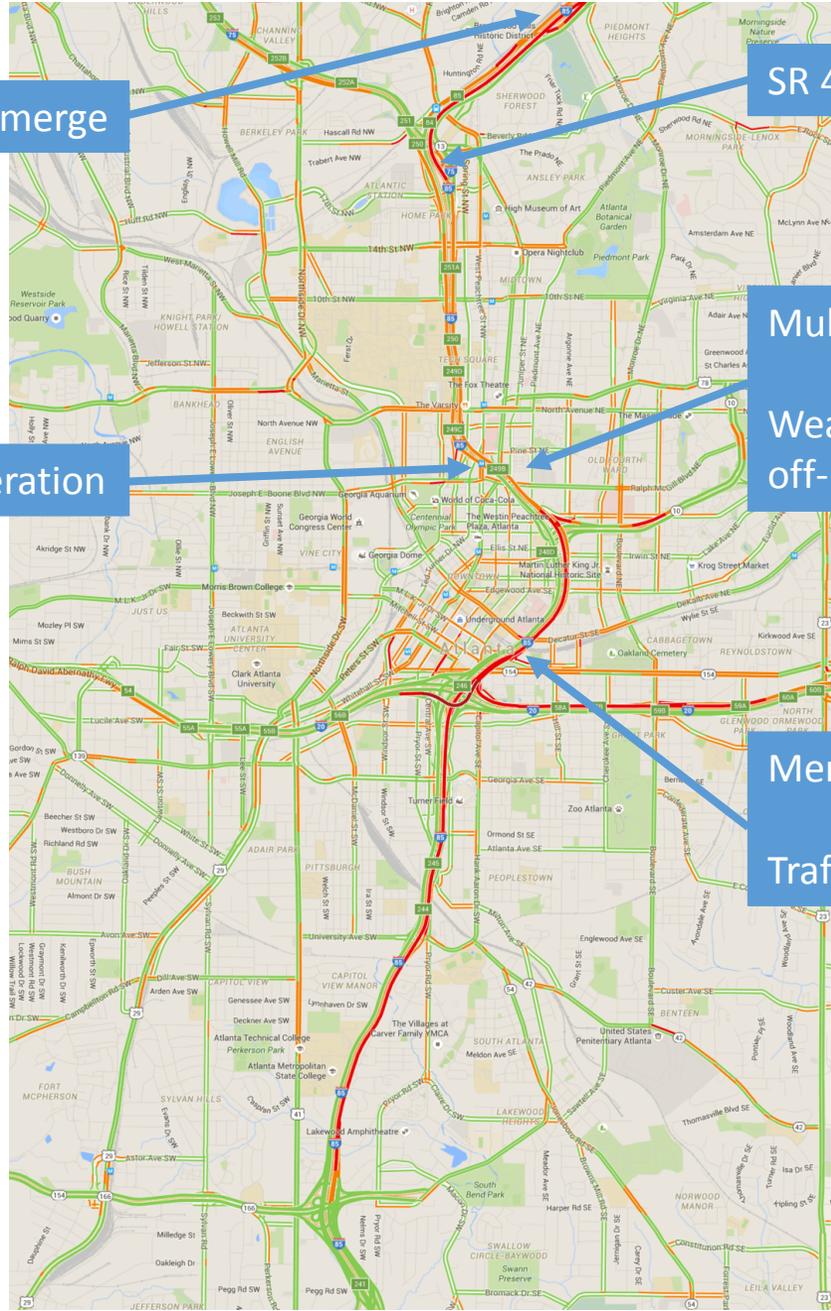


Multiple on-ramps in a short distance (1400')  
Weaving between on-ramps and Peachtree Rd off-ramp

Merging capacity at I-20 on-ramps  
Traffic slows due to tunnel entrance

**NB traffic is congested from Grady curve all the way to the Airport Split**

7:00 AM



Buford-Spring Connector merge

SR 400 congestion spills back

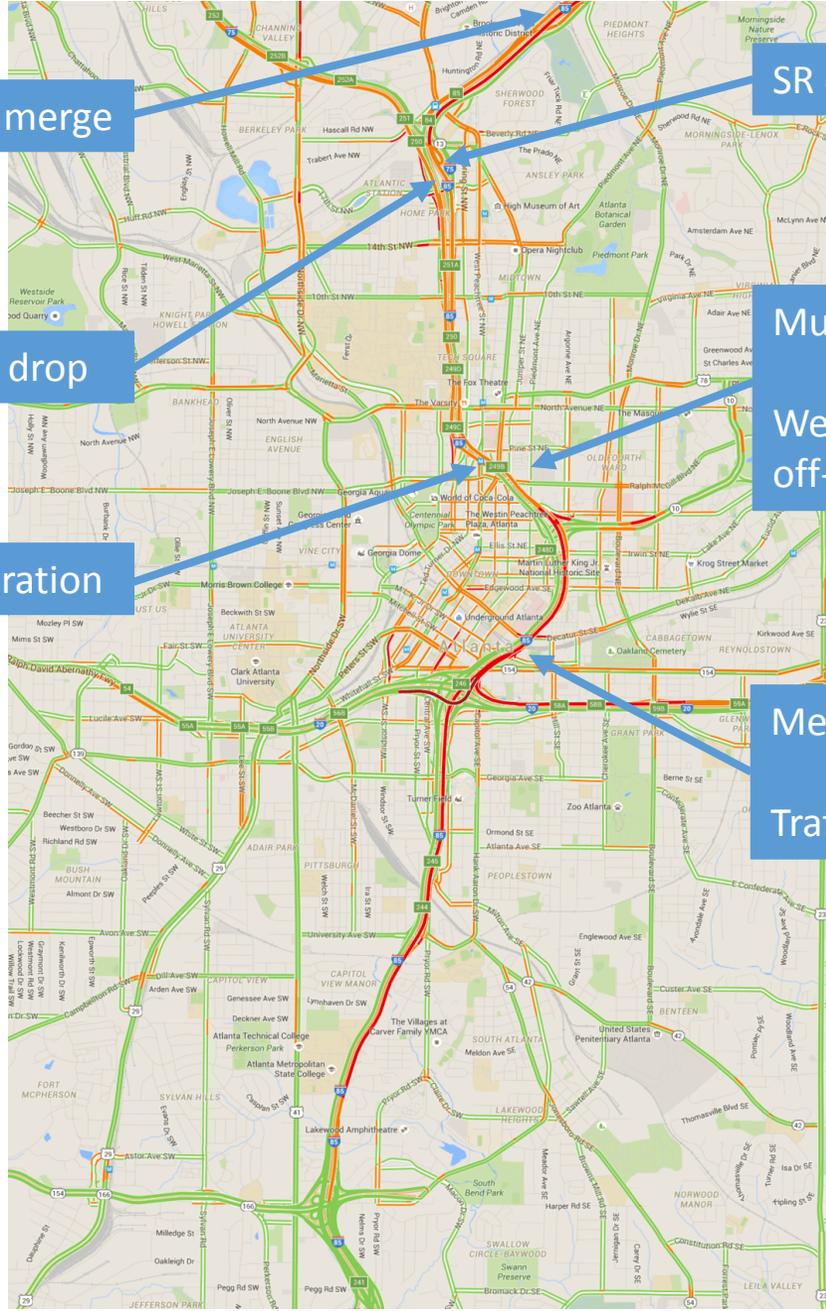
Multiple on-ramps in a short distance (1400')  
Weaving between on-ramps and Peachtree Rd off-ramp

Surface street capacity and signal operation

Merging capacity at I-20 on ramps  
Traffic slows due to tunnel entrance

**NB traffic congested on the entire Connector; SB traffic slowing through Midtown area; Downtown surface streets congested**

8:00 AM



Buford-Spring Connector merge

SR 400 congestion spills back

I-75 lane drop

Multiple on-ramps in a short distance (1400')

Weaving between on-ramps and Peachtree Rd off-ramp

Surface street capacity and signal operation

Merging capacity at I-20 on-ramps  
Traffic slows due to tunnel entrance

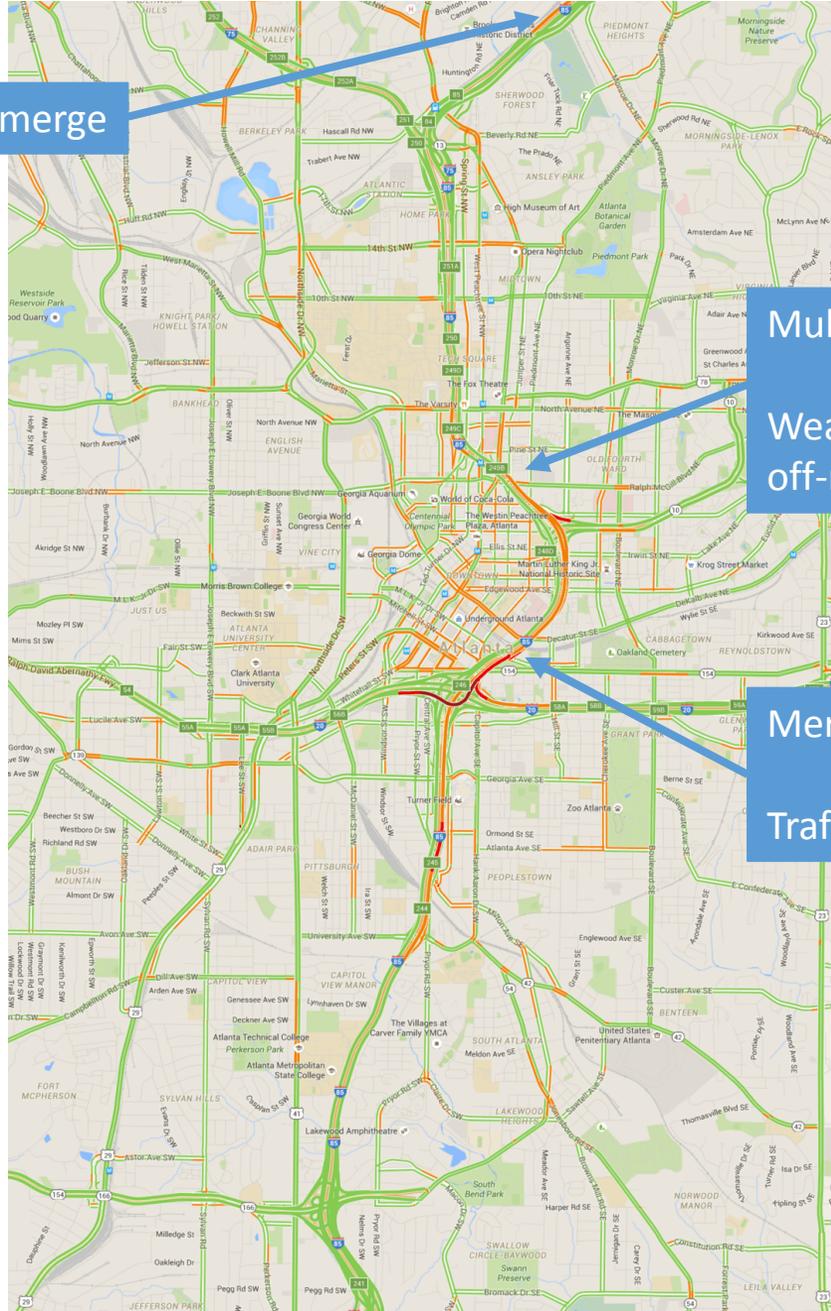
Conditions about the same at 9:00AM

9:00 AM



Buford-Spring Connector merge

The peak is over;  
congestion only exists  
NB from University  
Ave through the Grady  
curve and some  
surface streets



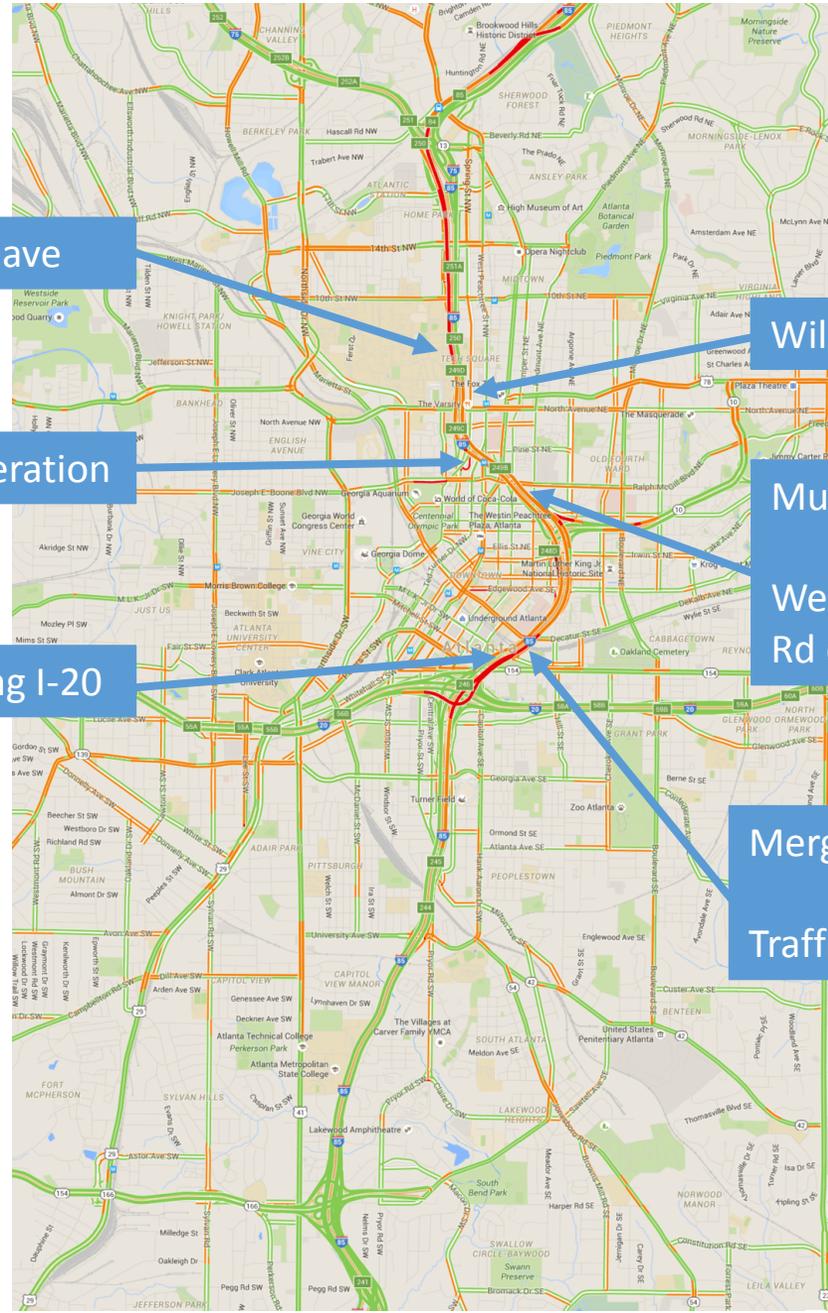
Multiple on-ramps in a short distance (1400')

Weaving between on-ramps and Peachtree Rd off-ramp

Merging capacity at I-20 on-ramps

Traffic slows due to tunnel entrance

10:00 AM



10<sup>th</sup> Street/North Ave weave

Williams St/Spring St merge

Surface street capacity and signal operation

Multiple on-ramps in a short distance (1400')

Weaving between on-ramps and Peachtree Rd off-ramp

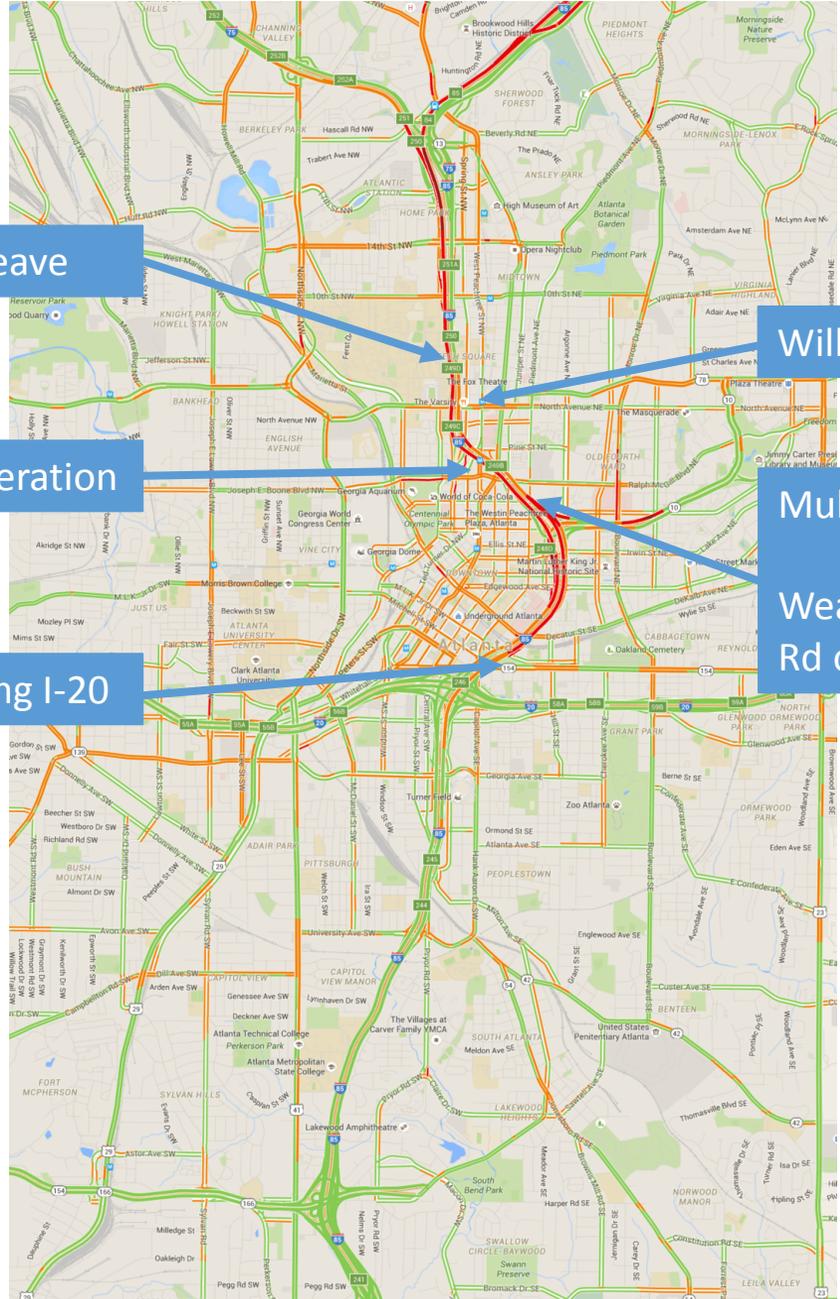
Weaving movements approaching I-20

Merging capacity at I-20 on ramps

Traffic slows due to tunnel entrance

The PM peak starts early, and includes congestion from I-20 to Brookwood Split

3:00 PM



10<sup>th</sup> Street/North Ave weave

Williams St/Spring St merge

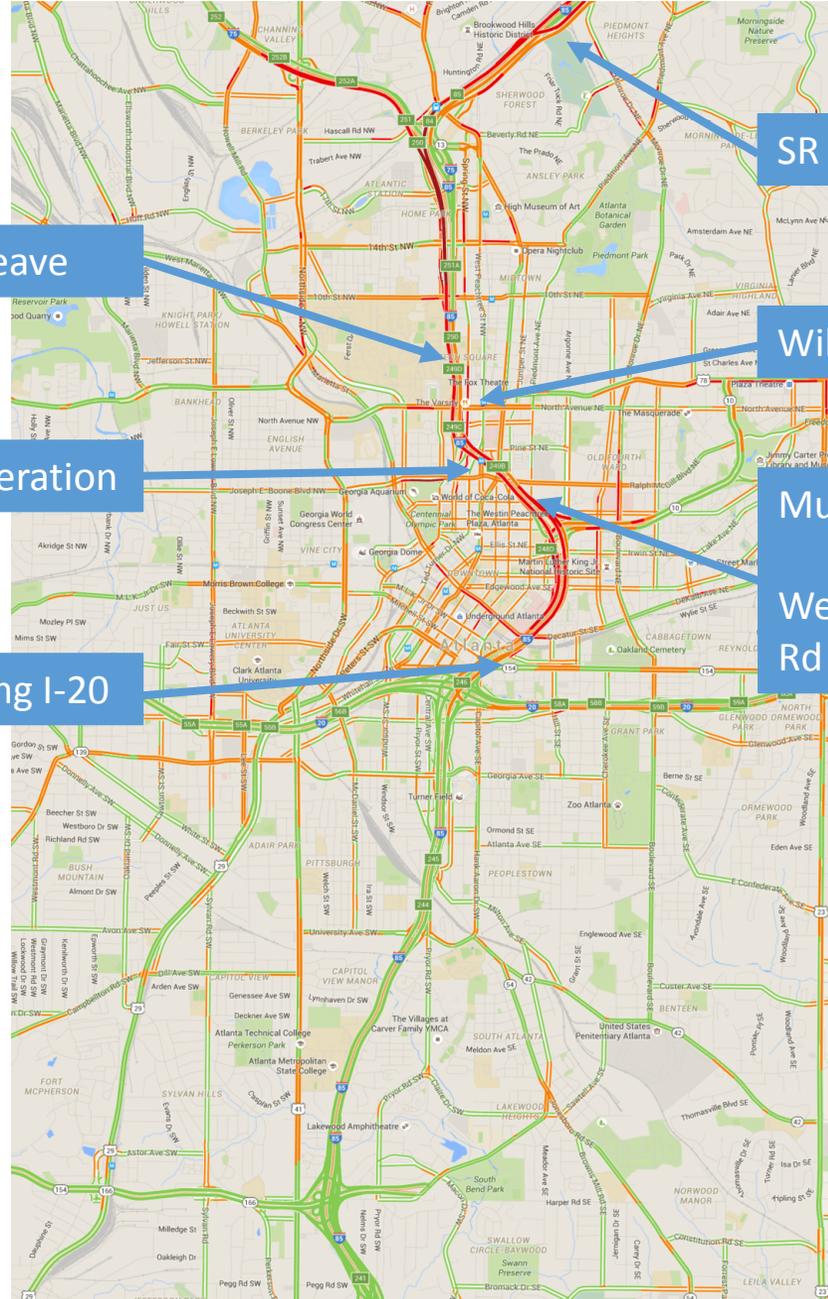
Surface street capacity and signal operation

Multiple on-ramps in a short distance (1400')  
Weaving between on-ramps and Peachtree Rd off-ramp

Weaving movements approaching I-20

**Congestion intensifies along the Grady curve in both directions**

4:00 PM



10<sup>th</sup> Street/North Ave weave

SR 400 and Buford Spring Connector merge capacity

Williams St/Spring St merge

Surface street capacity and signal operation

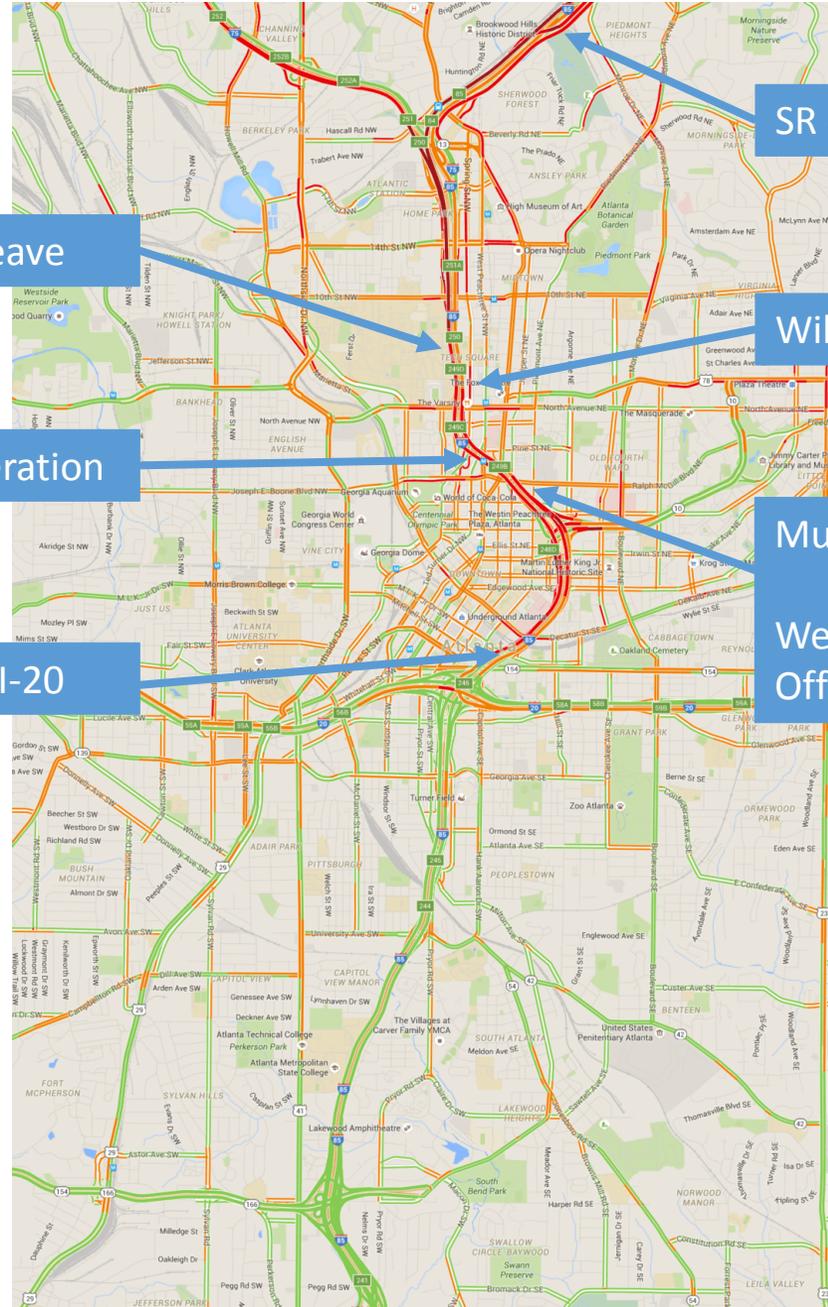
Multiple on-ramps in a short distance (1400')

Weaving between on-ramps and Peachtree Rd off-ramp

Weaving movements approaching I-20

**Congestion intensifies north to the Brookwood Split and beyond; surface streets are failing**

5:00 PM



SR 400 and Buford Spring Connector merge capacity

10<sup>th</sup> Street/North Ave weave

Williams St/Spring St merge and weave to I-85

Surface street capacity and signal operation

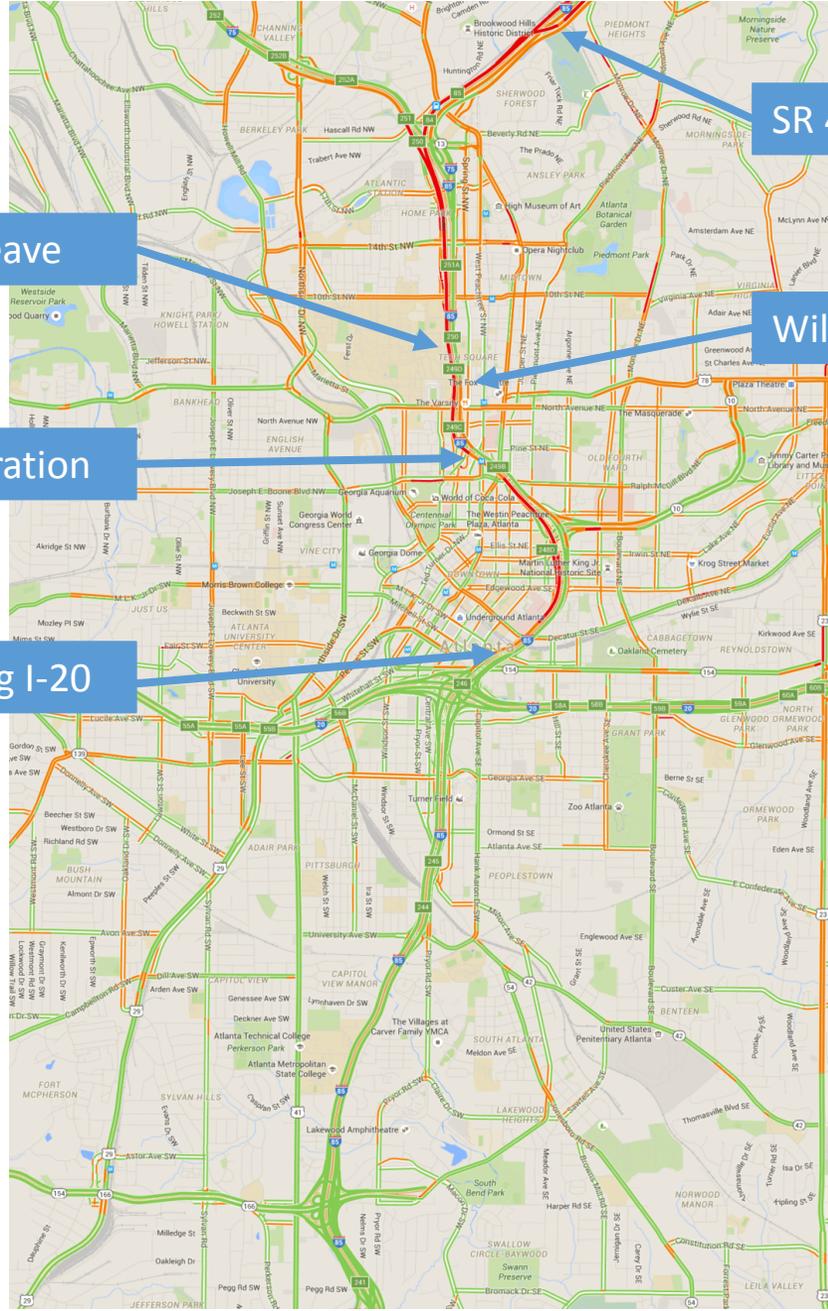
Multiple on-ramps in a short distance (1400')

Weaving movements approaching I-20

Weaving between on-ramps and Peachtree Rd Off-Ramp

**Congestion continues to intensify north of I-20 on Connector and surface streets; no congestion south of I-20**

6:00 PM



SR 400 and Buford Spring Connector merge capacity

10<sup>th</sup> Street/North Ave weave

Williams St/Spring St merge and weave to I-85

Surface street capacity and signal operation

Weaving movements approaching I-20

Peak period has ended but significant SB congestion persists north of I-20 to Brookwood Split

7:00 PM

# Crash Data

## Connector: 2013-2015

- 14,163 total crashes
- 22% injury crashes
- 6 fatal crashes

## Connector compared to statewide crash average: 2013-2014\*

- Total crashes are greater than 200% of state average
- Injury crashes are 200 – 500% greater than state average (varies by direction, location, year)
- Fatality crashes are less than the state average

\* 2015 statewide crash data not yet published as of 9/2016





# Crash Hot Spots

## I-85 at Brookwood Split

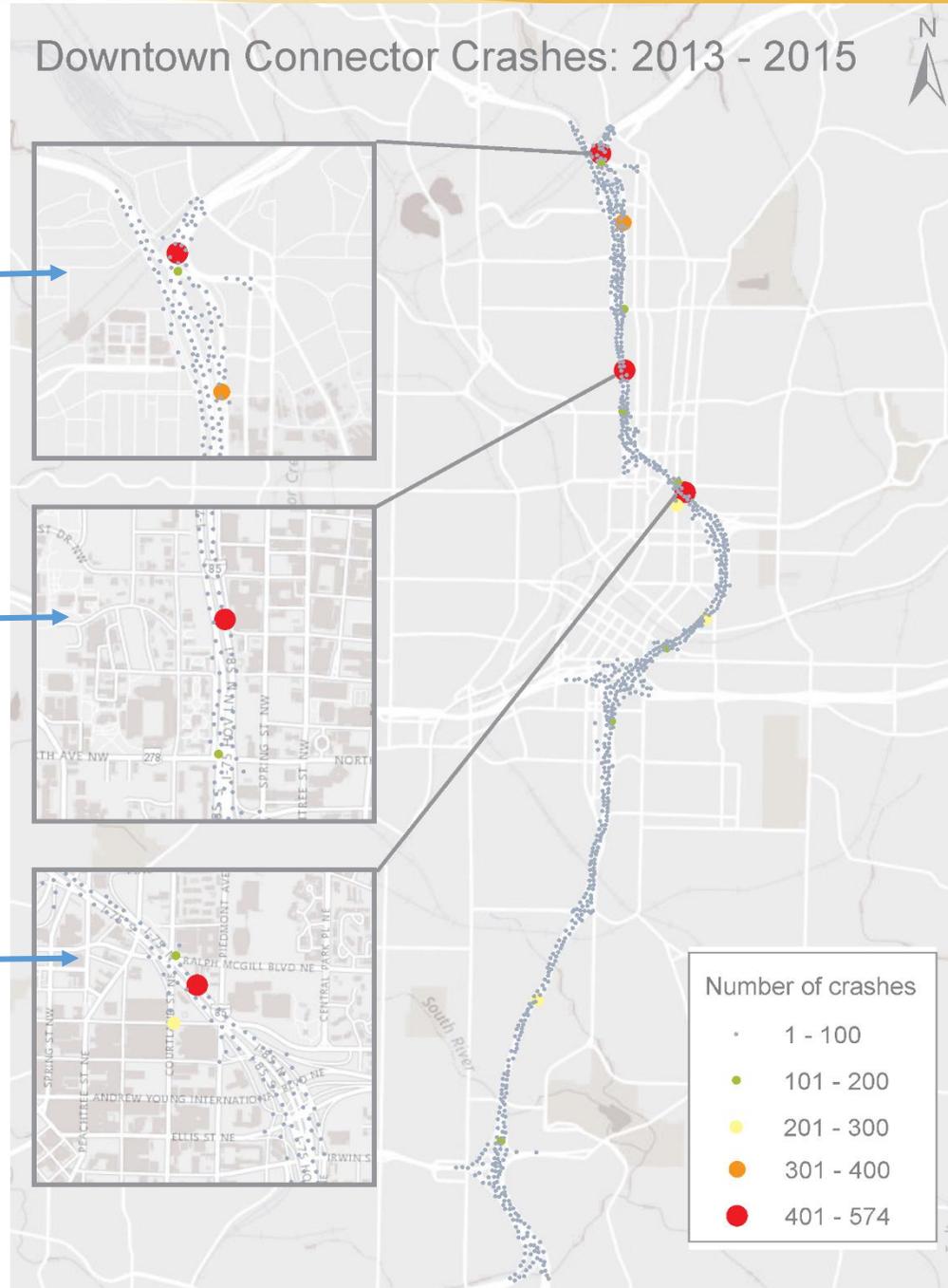
- 467 crashes
- 77% rear end, 14% sideswipe
- 4% struck a fixed object
- 154 injuries

## Between 4<sup>th</sup> & 5<sup>th</sup> Streets

- 551 crashes
- 74% rear end, 19% sideswipe
- 158 injuries, 1 fatality

## Between Baker-Highland Connector & Ralph McGill Blvd bridges

- 574 crashes
- 70% rear end, 23% sideswipe
- 154 injuries



# Crash Clearance Times

## Overall highest averages:

- 17<sup>th</sup> St 44 minutes
- Langford Parkway 41 minutes
- I-20 40 minutes
- Fulton Street 39 minutes
- 10<sup>th</sup> Street 36 minutes
- University Avenue 36 minutes

## Highest at AM/PM peak hours:

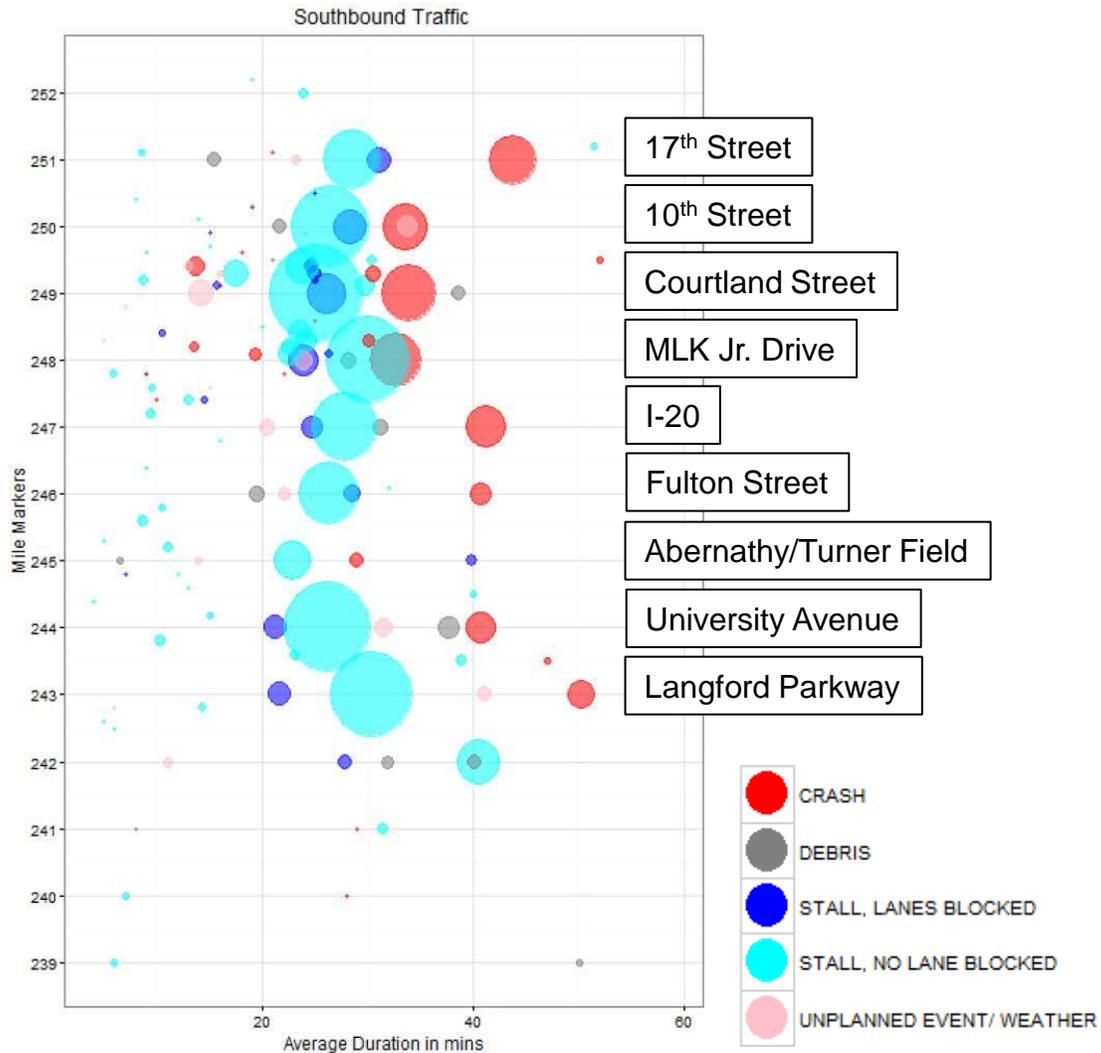
- 17<sup>th</sup> Street 40 / 38 minutes
- 10<sup>th</sup> Street 33 / 34 minutes
- University Avenue 32 / 24 minutes
- Courtland Street 30 / 28 minutes
- MLK Jr. Drive 29 / 26 minutes



\* Clearance time is defined as the number of minutes between verifying the incident and confirmation that all travel lanes are open and available for traffic flow



# Incident Data



Sources: NavIGator

Stalls, no lane blocked, are the most frequent non-crash incident causing delay on the Connector

- 9,994 stalls no lane blocked in 2015
- ~28 per day
- 25 minute average clearance time

Locations of highest frequency:

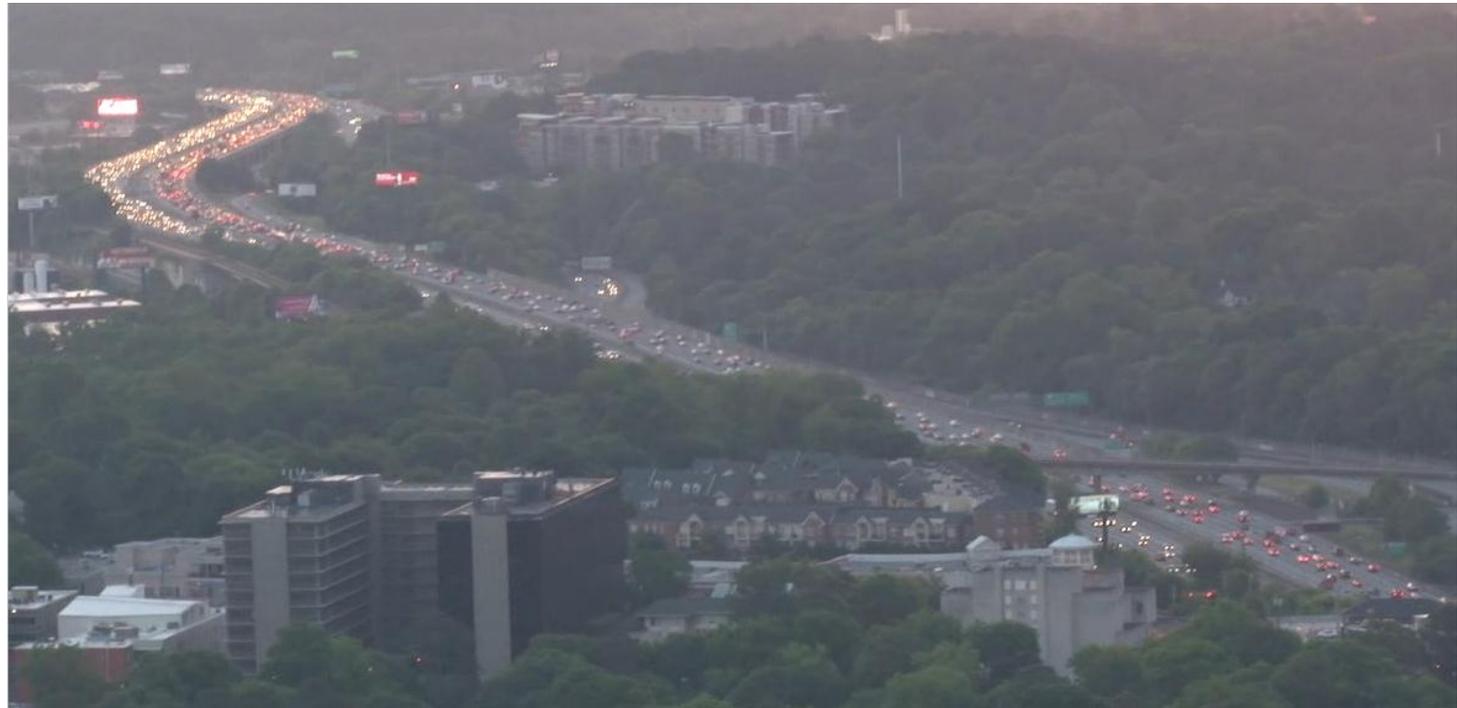
- University Avenue
- Courtland Street
- MLK Jr Drive
- Langford Parkway

\* Incident clearance time is defined as the number of minutes between verifying the incident and confirming that all responders have left the scene.

# Discuss

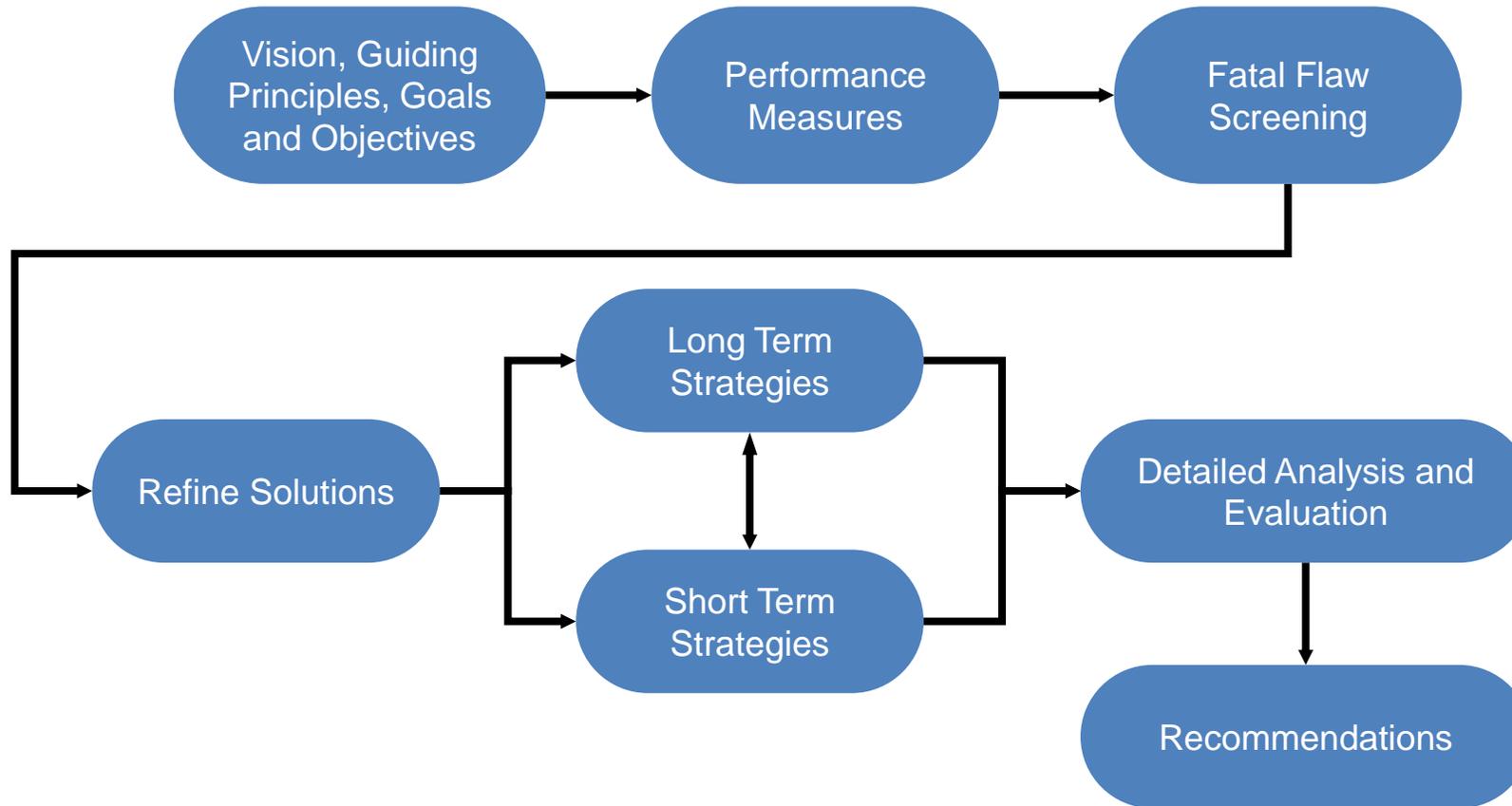
What are your thoughts and reactions to the existing conditions data?

- Origin-destination
- Congestion
- Crashes and Incidents



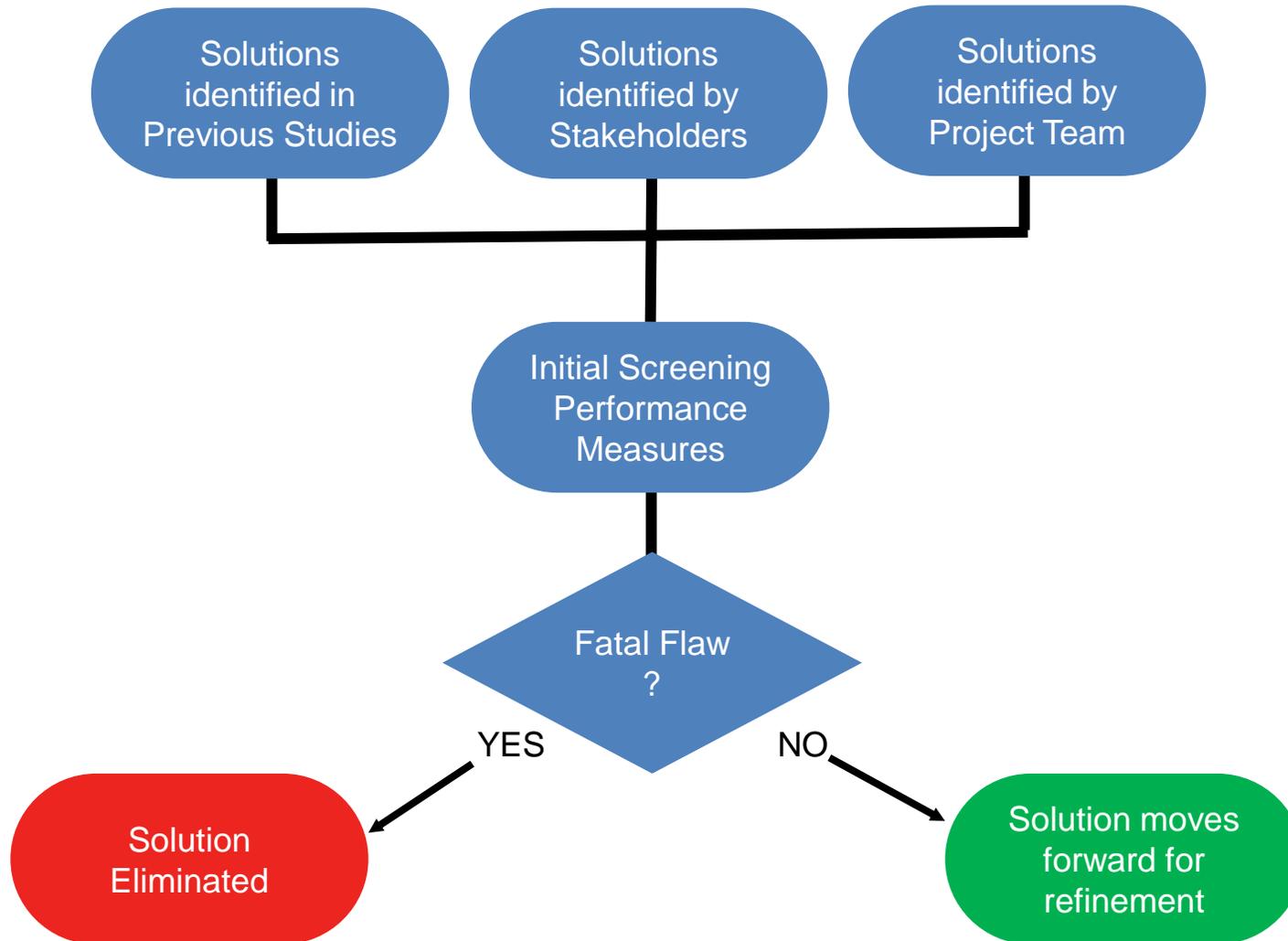


# Evaluation Framework



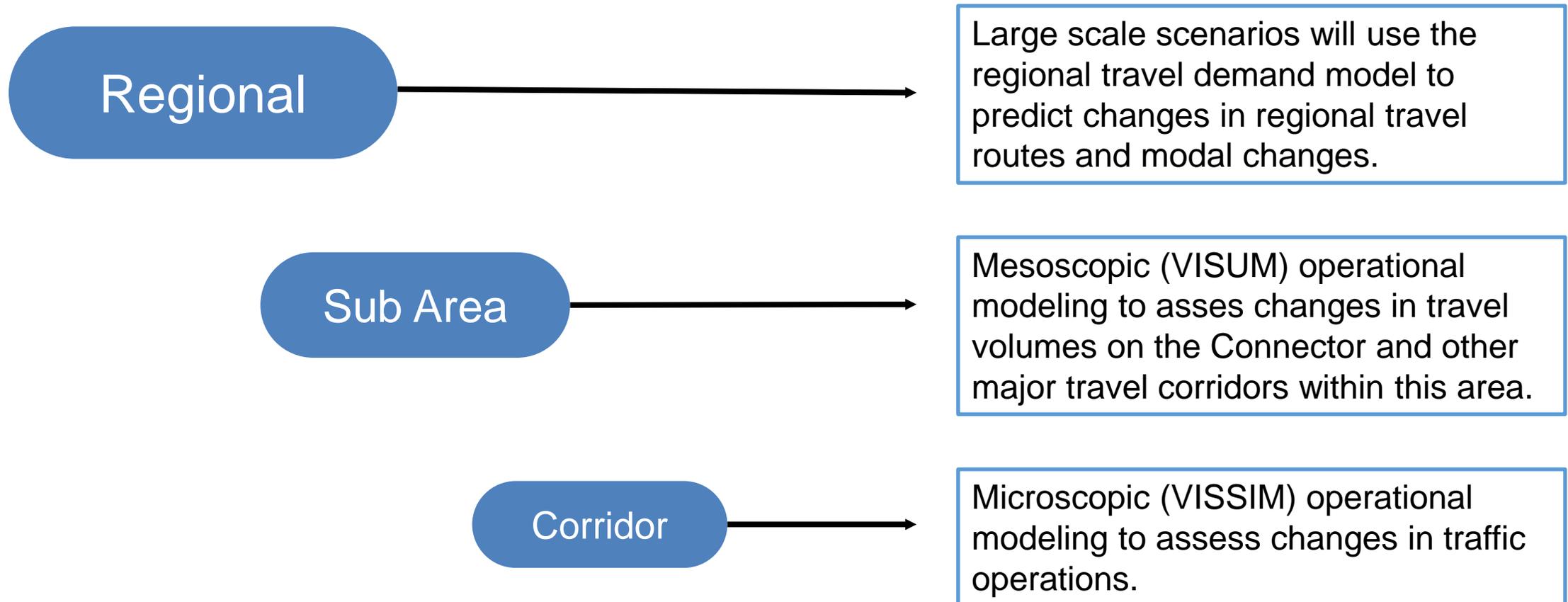


# Fatal Flaw Screening





# Detailed Analysis and Evaluation Areas





# Discuss



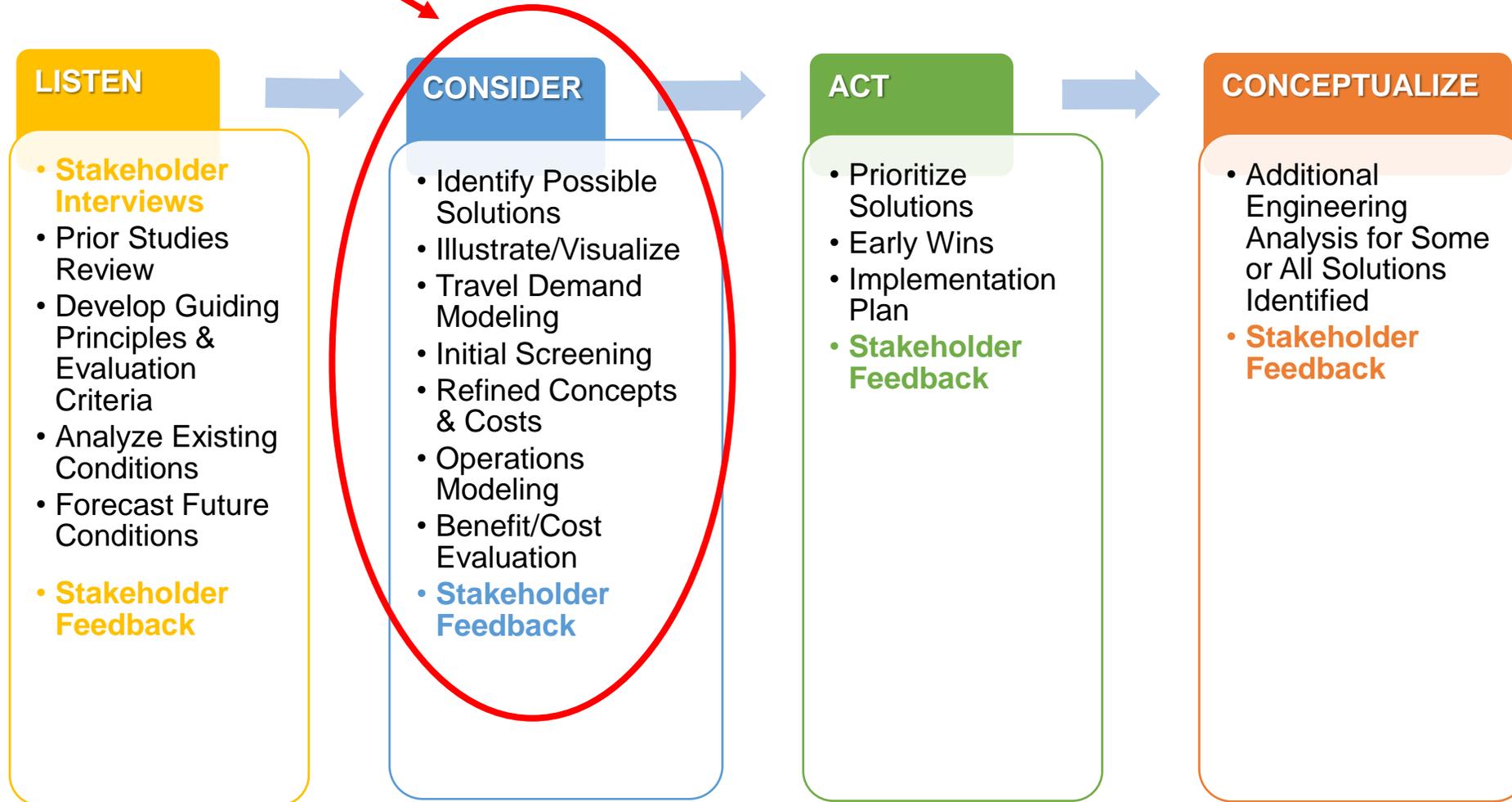
- Project ideas:**
- **Tunnel under the Connector**
  - **New I-20 Interchange**
  - **Cap the Connector**
  - **15<sup>th</sup> Street HOV exit**
  - **Closing exits**
  - **...**

**Building a project ideas database from:**

- **Stakeholder Interviews**
- **Previous Studies**
- **Project Team**



# Next Steps





# Contact

**KAYCEE MERTZ, AICP**

**or**

**MATTHEW FOWLER**

GDOT, Office of Planning

404.347.0245

connectorstudy@dot.ga.gov

[www.dot.ga.gov/DowntownConnector](http://www.dot.ga.gov/DowntownConnector)