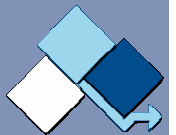


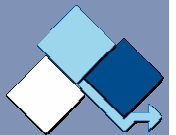
Gwinnett County Transportation System

Presentation to the
Suwanee 2030 Comprehensive Plan
Task Force
May 17, 2007

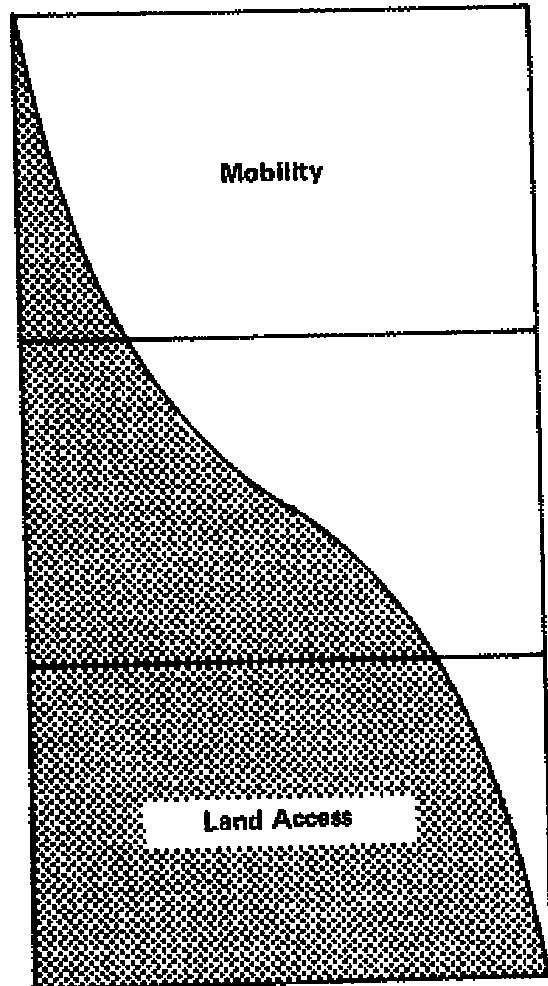


Indicators for Transportation

- Maximize Mobility for people and goods
 - Intensity, duration, and extent of congestion
 - Travel times between activity centers/destinations
 - Transit mode share
- Maximize Accessibility for people and goods
 - Roadway lane mile per capita
 - Travel distances between activity centers/destinations
 - Number of households with walk/drive access to transit
 - Land use compatibility



Access and Mobility



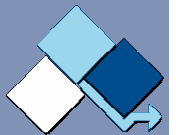
Interstate

Arterials

Collectors

Local Roads

Cul de Sac



Toolkit - Highways and Streets



Interstate Highway



**Four-Lane Divided Roadway
with median**



Residential Street



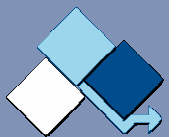
Managed Lane Interstate



**Five-Lane Roadway
(no median)**



Rural Road



Toolkit - Bicycle and Pedestrian Paths



On-Street Bike Lane



Multi-Use Trail



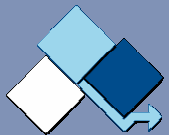
Off-Street Bike Path



Multi-Use Trail



Walking Path in Activity Center



Toolkit - Public Transportation



Commuter Rail



Express Buses



Local Buses



Rubber-Tired Trolley



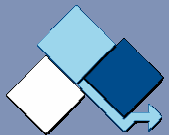
Activity Center Circulator



Heavy Rail (metro)

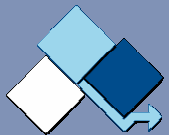


Paratransit or Dial-A-Ride



Land Use – Transportation Connection

- Land uses create a need for transportation
- Households travel to get to work, school, recreation, shopping, etc.
- Transportation infrastructure can influence land use



Land Use Patterns Affect Our Transportation System

Residential



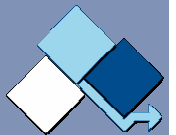
Office



Retail and Services

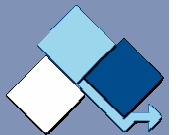


Single-use, disconnected developments create places where the main travel option is driving on arterial roads, even for short, local trips ... trips that could be made on local roads or by alternative forms of transportation, such as walking, bicycling, or using public transportation.



Why Land Use Matters to Transportation

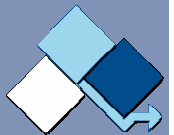
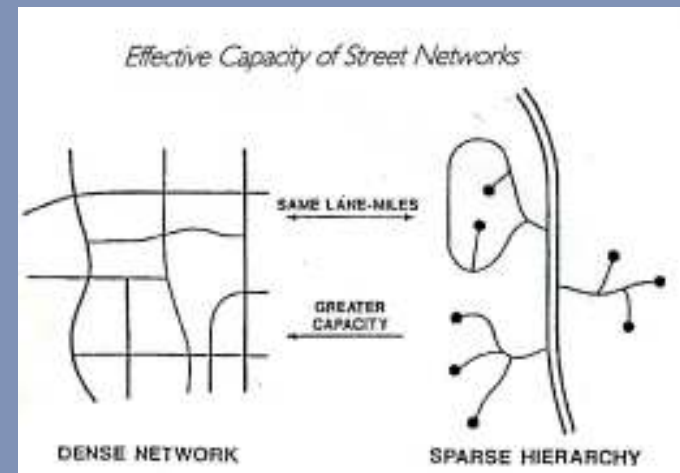
- Land Use Mix – having a variety of residential, commercial, park, school, etc. uses within a short distance of each other reduces demand for longer trips.
- Residential and/or Employment Patterns – clustering more housing units or more employees within a smaller land area in appropriate places vs. spreading the development out can encourage transportation options.
- Physical Connections Among Uses - developments that are disconnected from the surrounding area generate only auto trips – regardless of density.



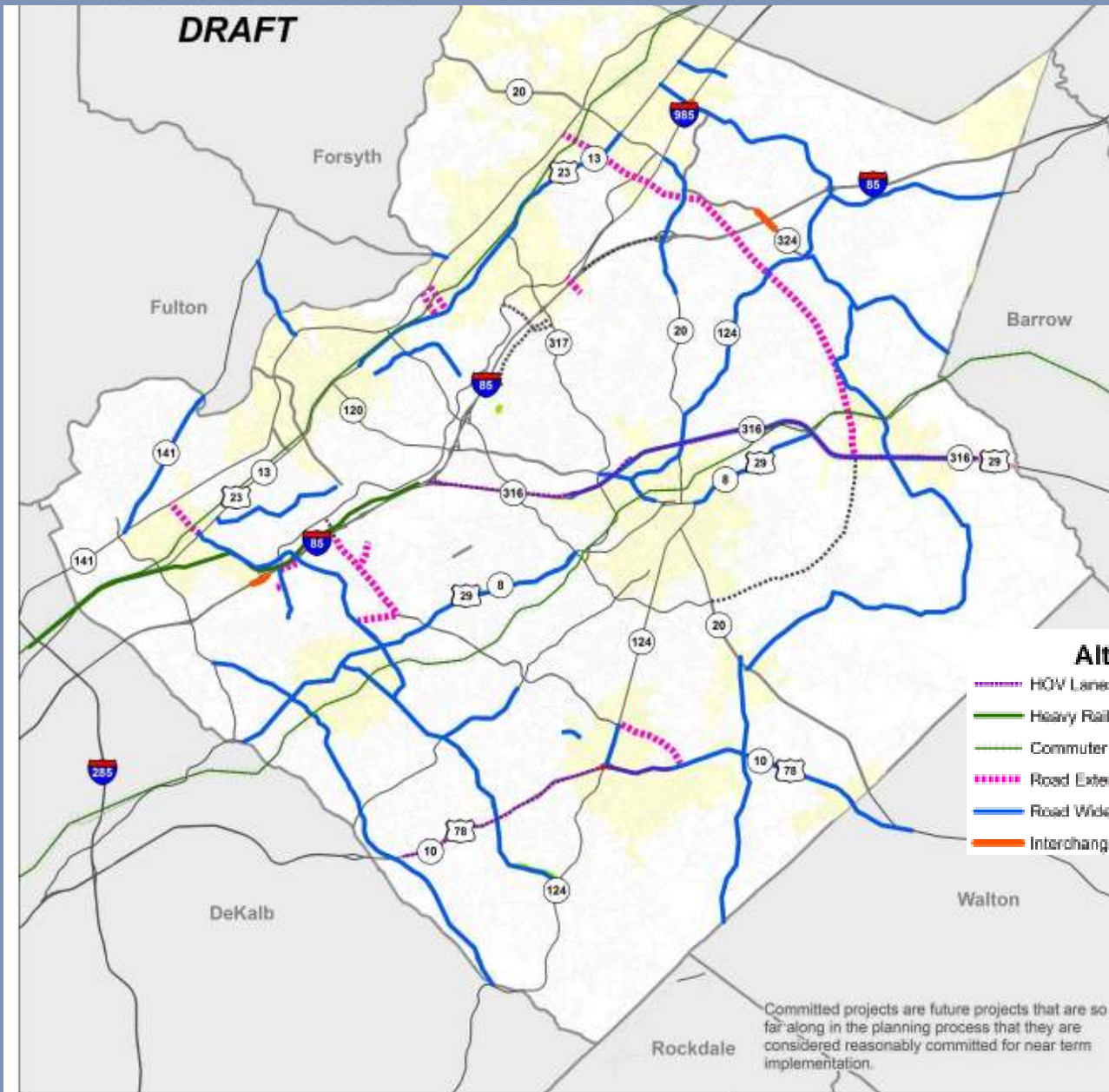
Transportation Options

A local road network can:

- Reduce the amount of local traffic using arterial roadways, where possible.
- Provide alternative travel routes (fill in missing gaps, etc.)
- Create more direct routes to important destinations which will reduce the amount of travel each household must make.
- Encourage walking and bicycling by providing a better network of paths and reducing travel distances.



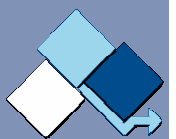
Future Options in Gwinnett County



Alternative Strategies

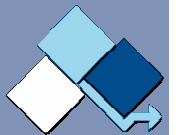
- HOV Lanes
- Heavy Rail
- Commuter Rail
- - - - - Road Extension/New Road
- Road Widening
- Interchange or Grade Separation
- Pedestrian Improvement
- - - - - Advanced ROW
- - - - - Committed Rd Extension/New Road
- Committed Widening
- - - - - Committed Extension and Widening

Committed projects are future projects that are so far along in the planning process that they are considered reasonably committed for near term implementation.



Some Near Term Results

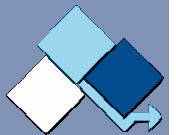
- 2015 analysis year of “Middle of the Pack” or Trends scenario
- Limited analysis of roadway needs and potential improvements to address congestion



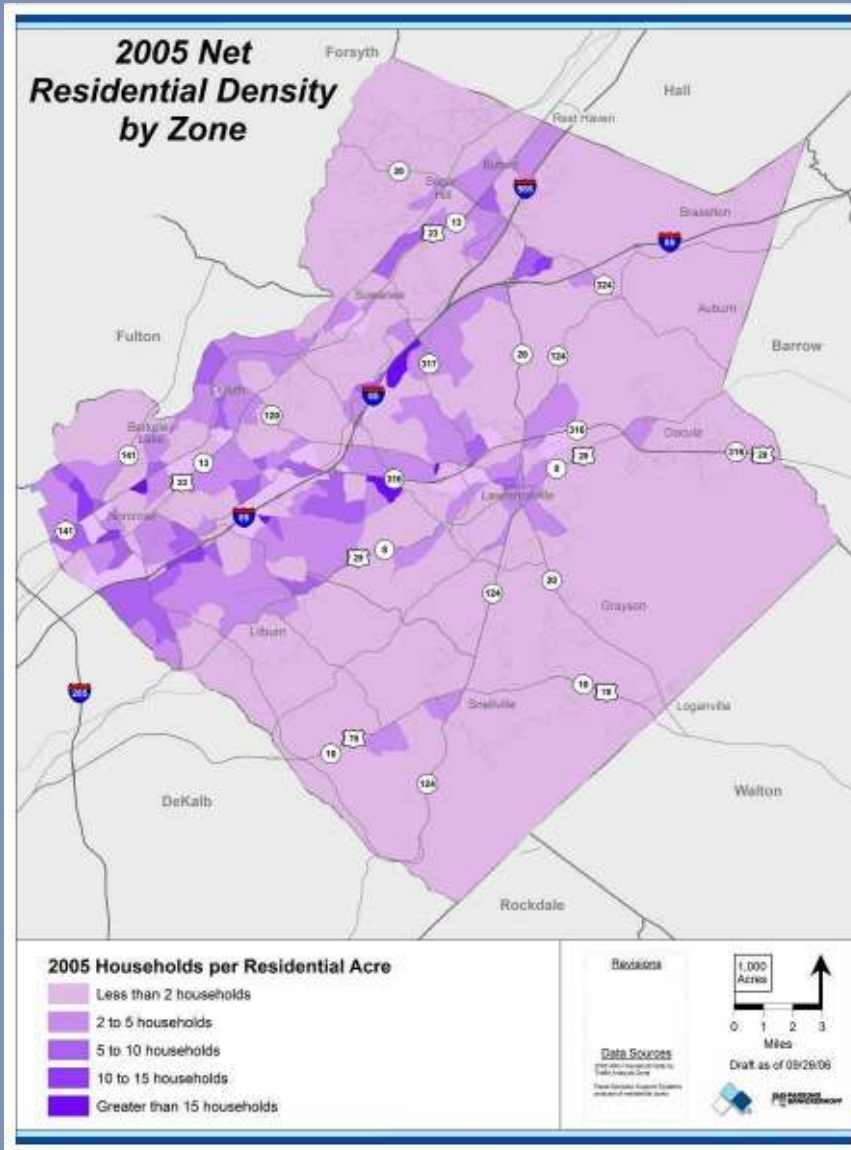
Near Term Context

- Draft Unified Plan projections* for 2015
 - Population of about 860,000
 - Over 400,000 jobs in the County
- 20% population growth over 2005
- 27% job growth over 2005

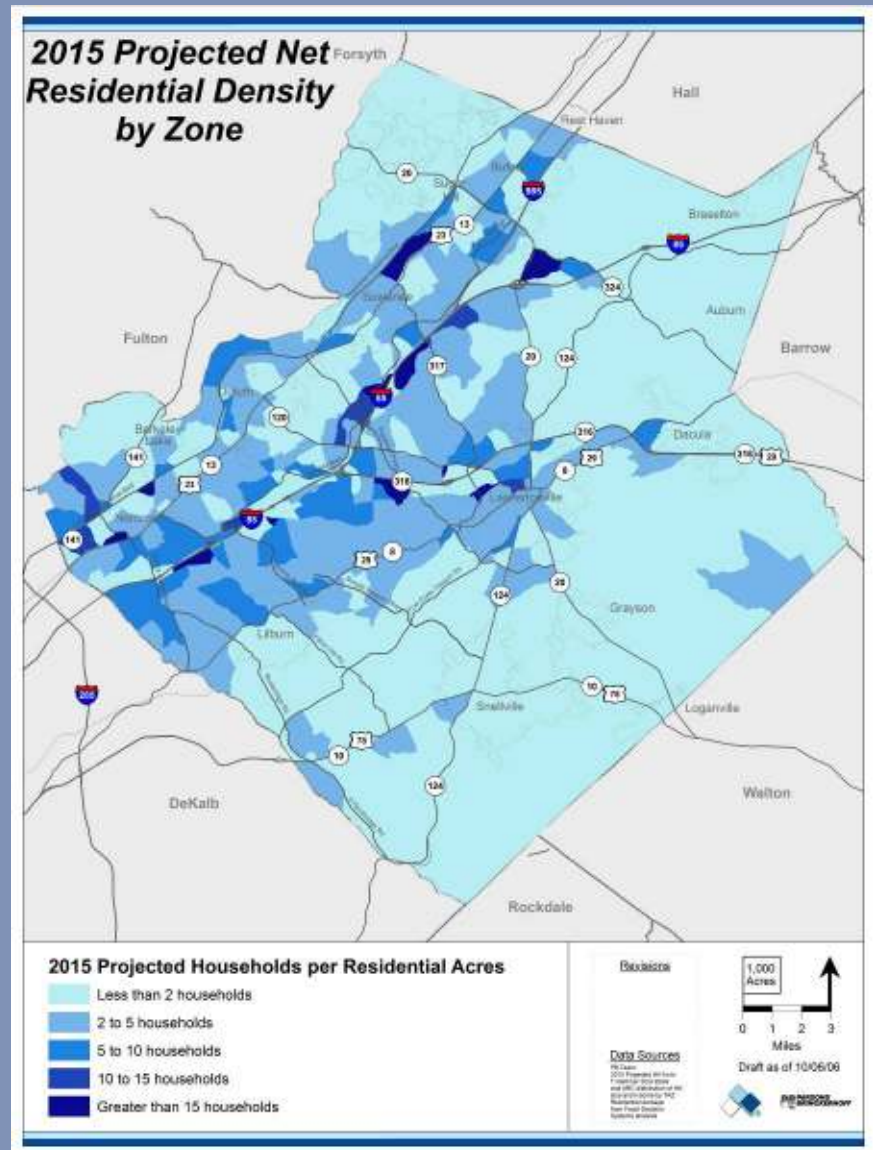
* market based or “Middle of the Pack” scenario



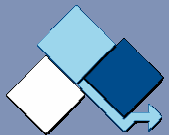
Population Projections



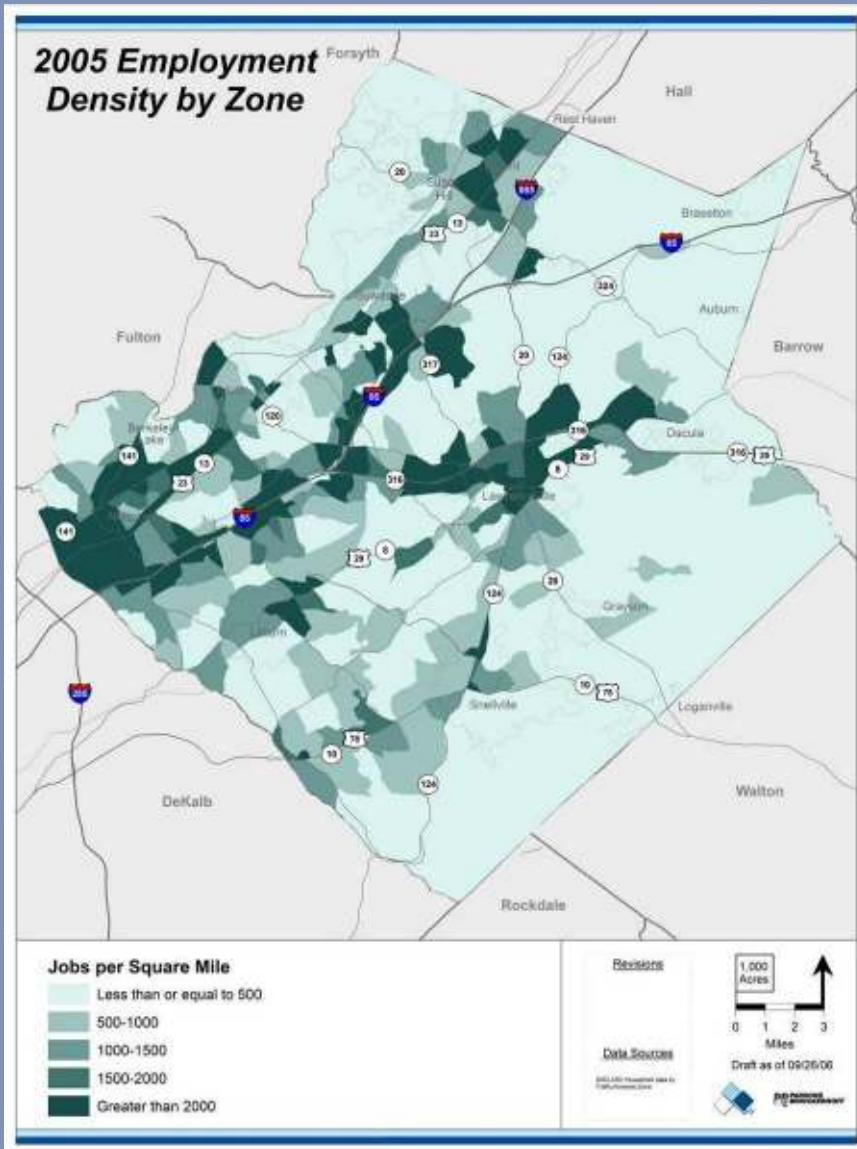
2005 Households



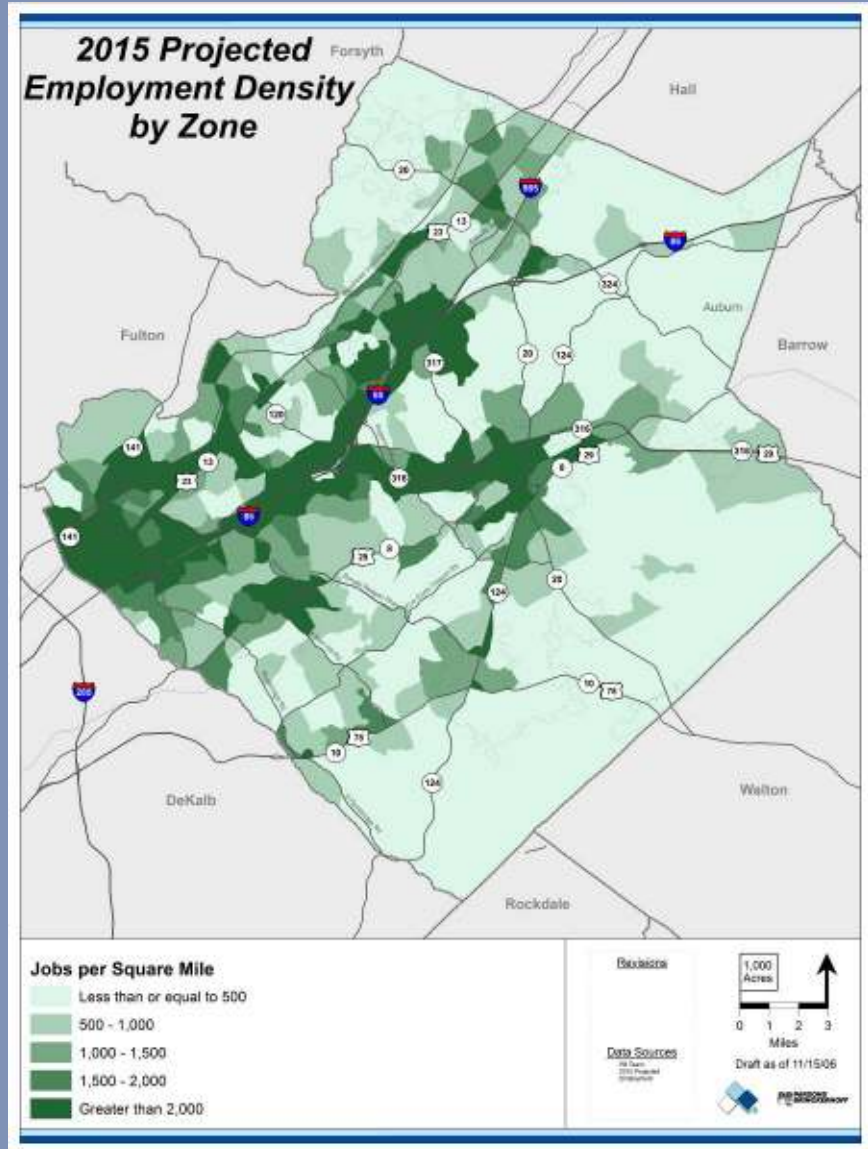
2015 Households



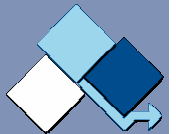
Employment Distribution



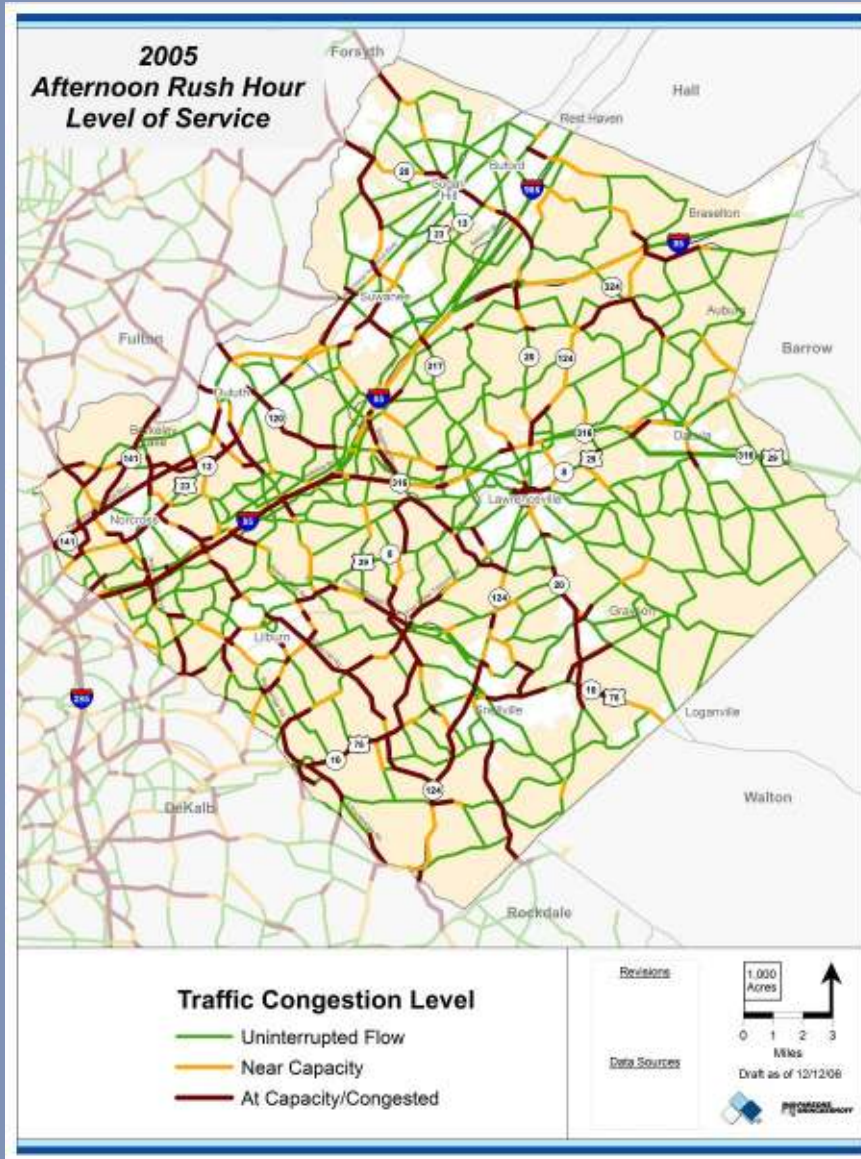
2005 Jobs



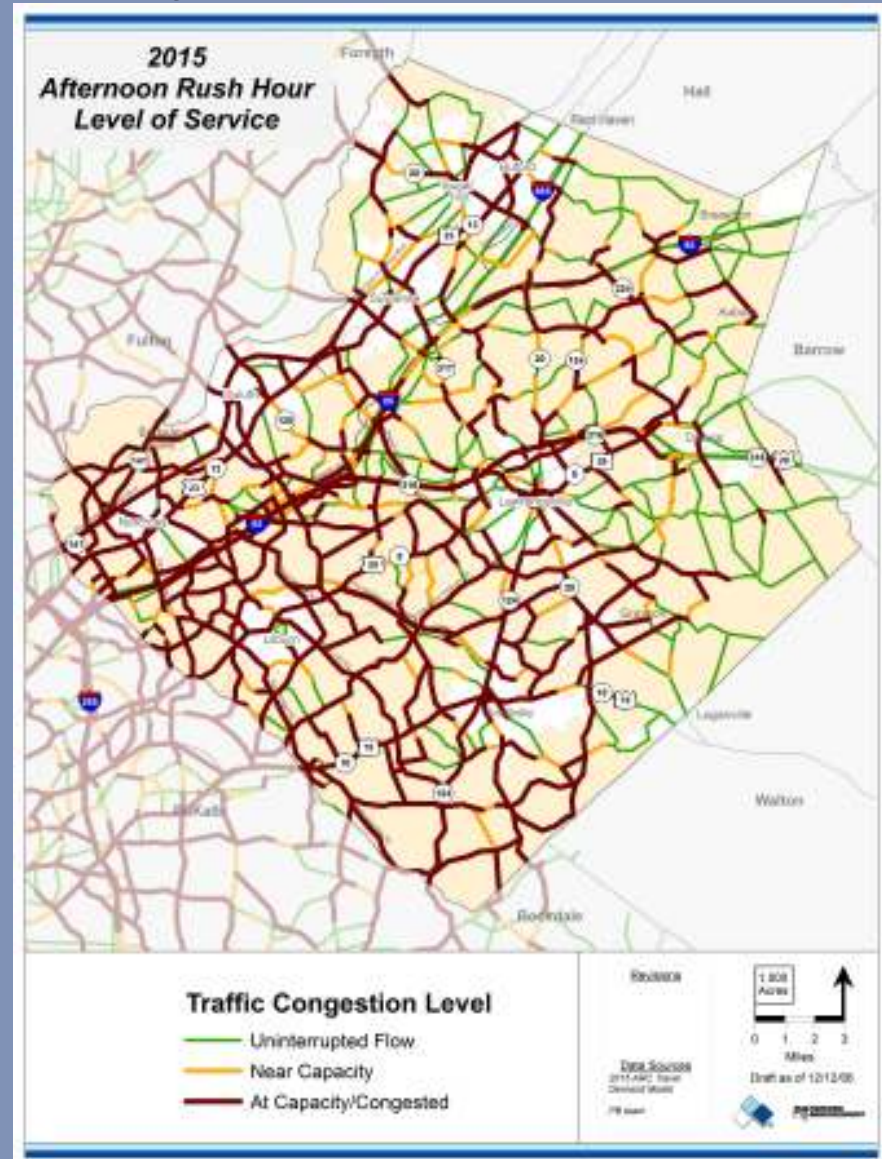
2015 Jobs



Needs Analysis

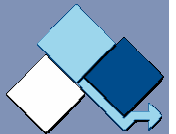


2005 existing system

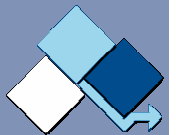
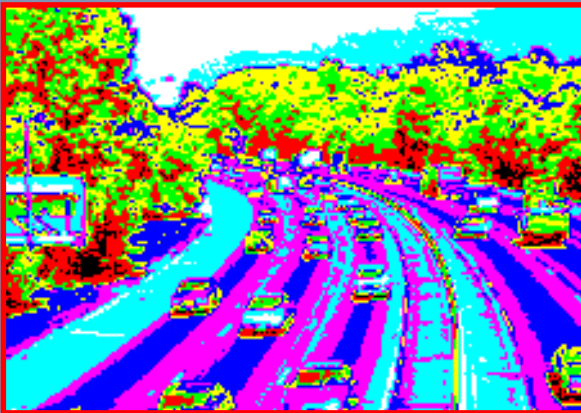
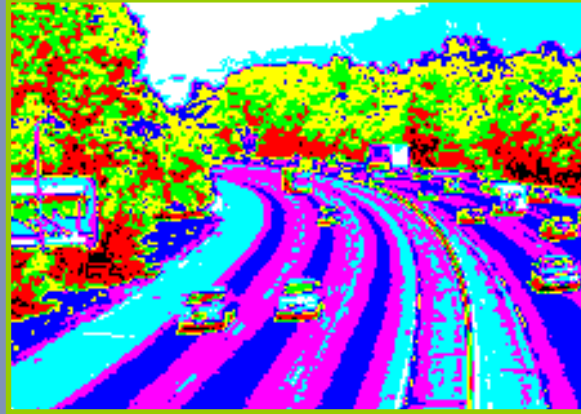


2015 existing plus committed*

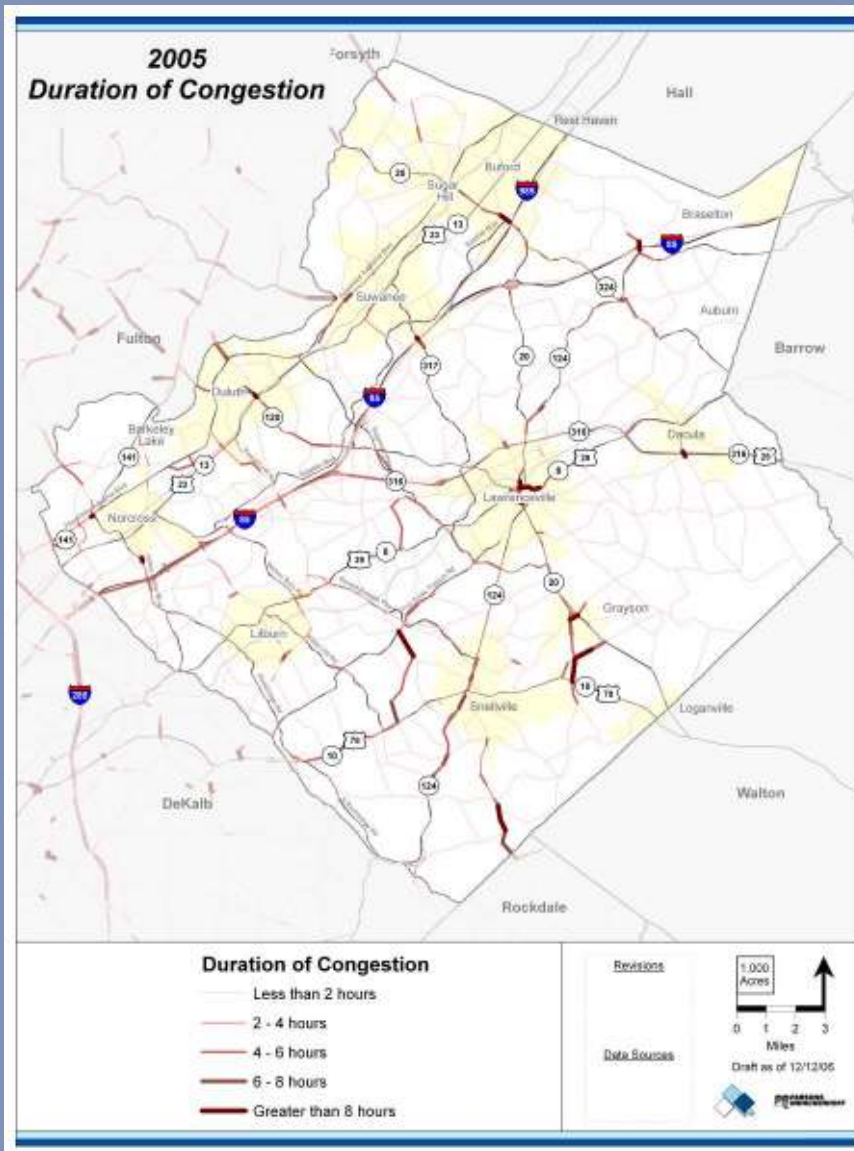
*Assumes Unified Plan SE data and Baseline (E+C) Road Network



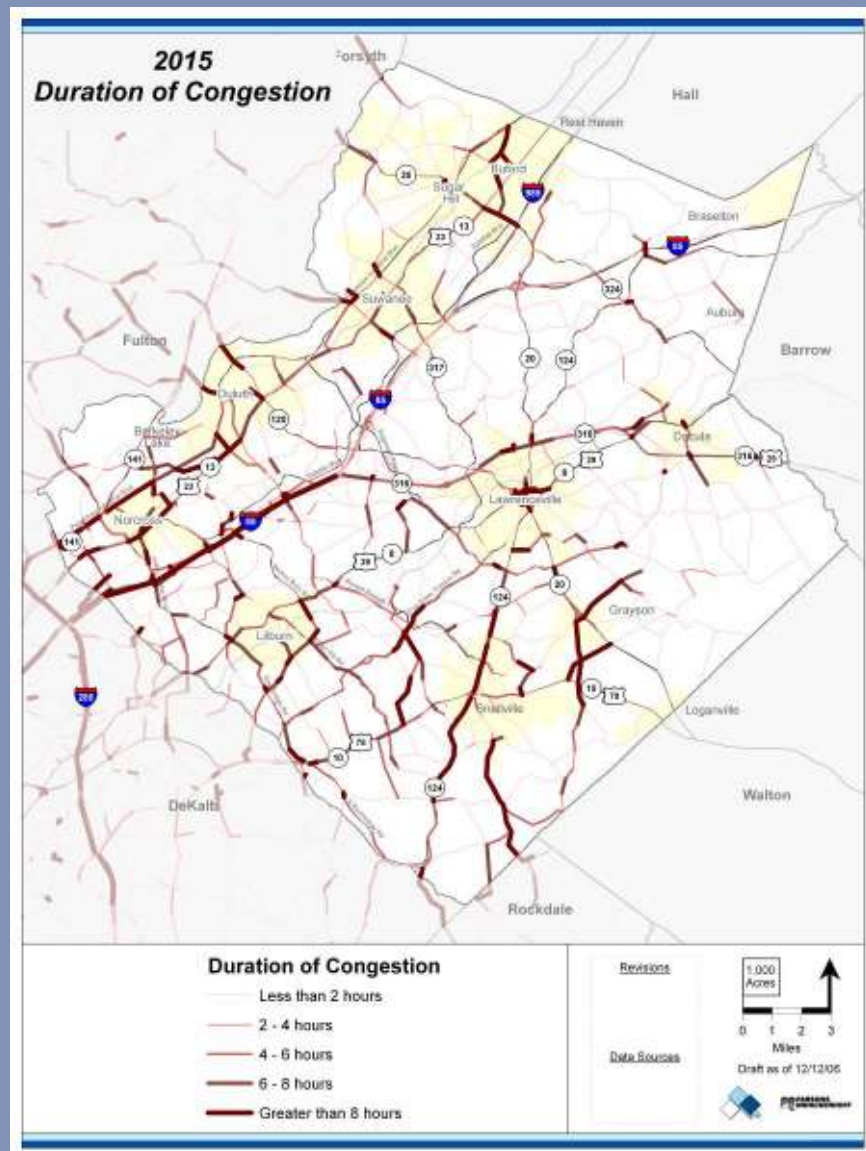
Congestion



Duration of Congestion

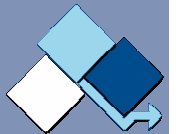


2005 existing system

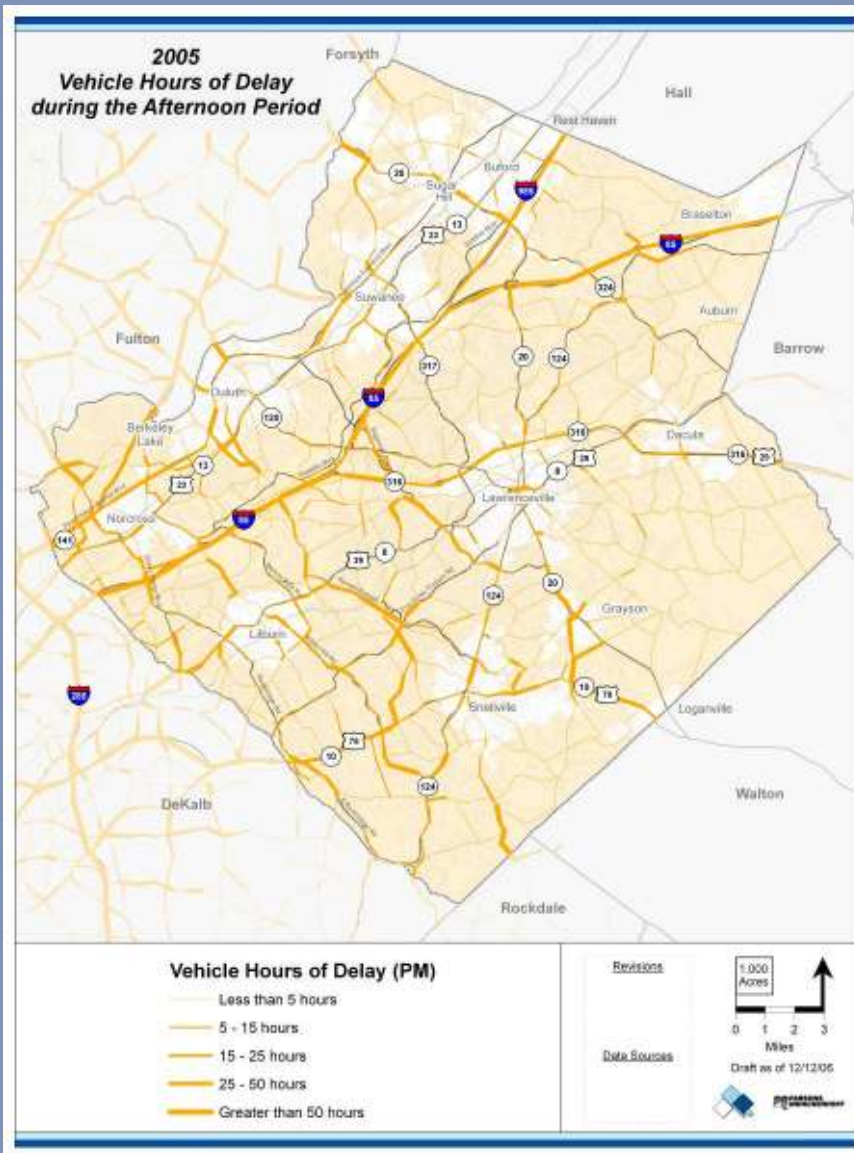


2015 existing plus committed*

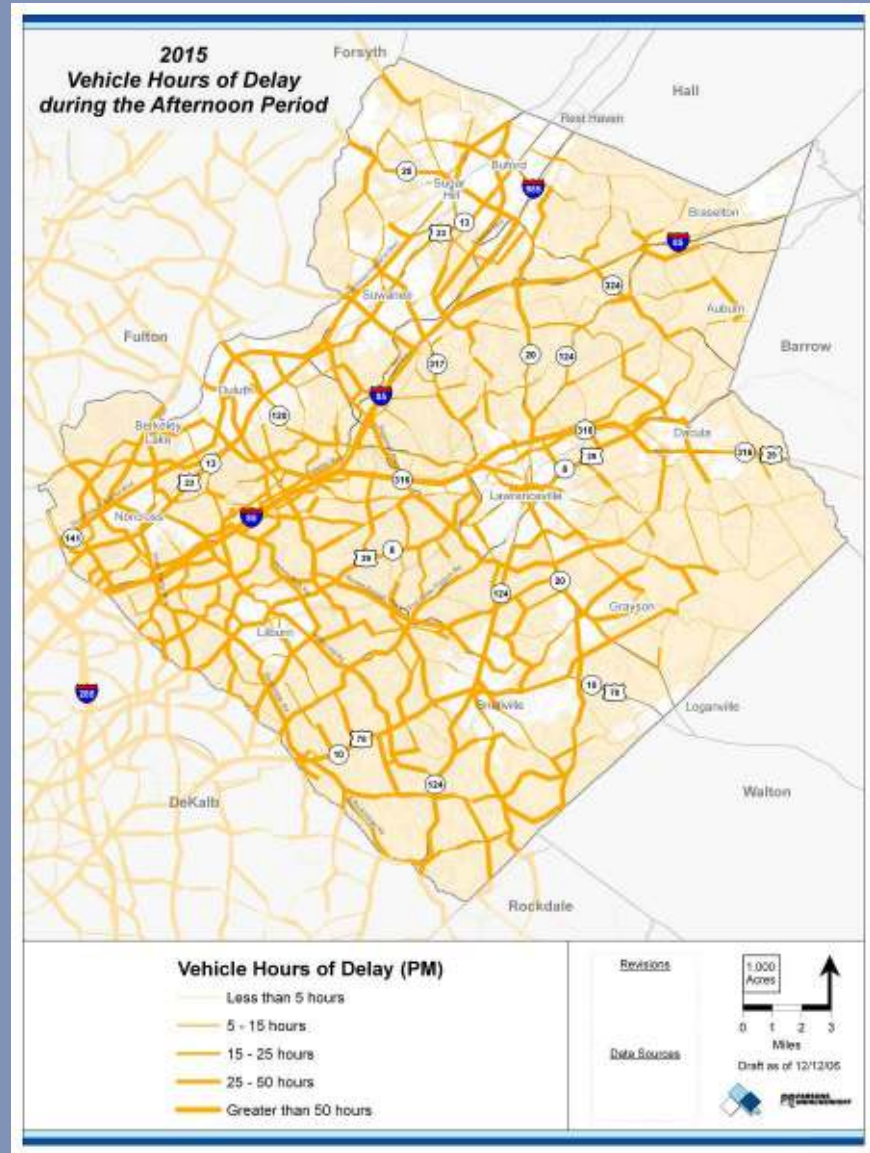
*Assumes Unified Plan SE data and Baseline (E+C) Road Network



Vehicle Delay

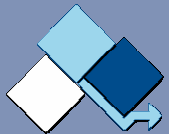


2005 existing system

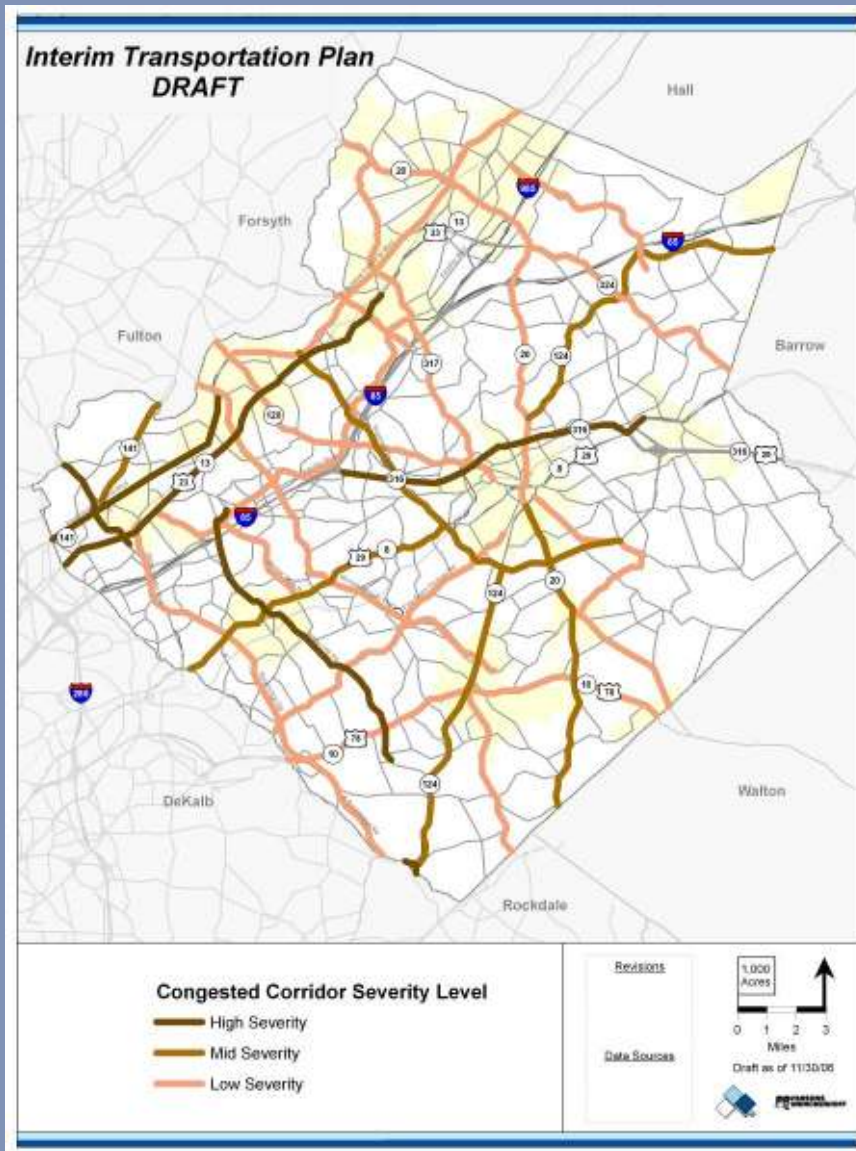


2015 existing plus committed*

*Assumes Unified Plan SE data and Baseline (E+C) Road Network

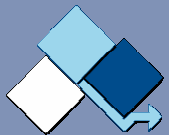


Near Term Needs Analysis



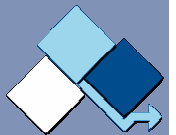
If we do no more than build the committed projects, where are the most severely Congested Corridors?

2015 Congested Corridors

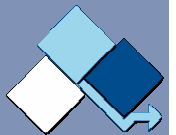
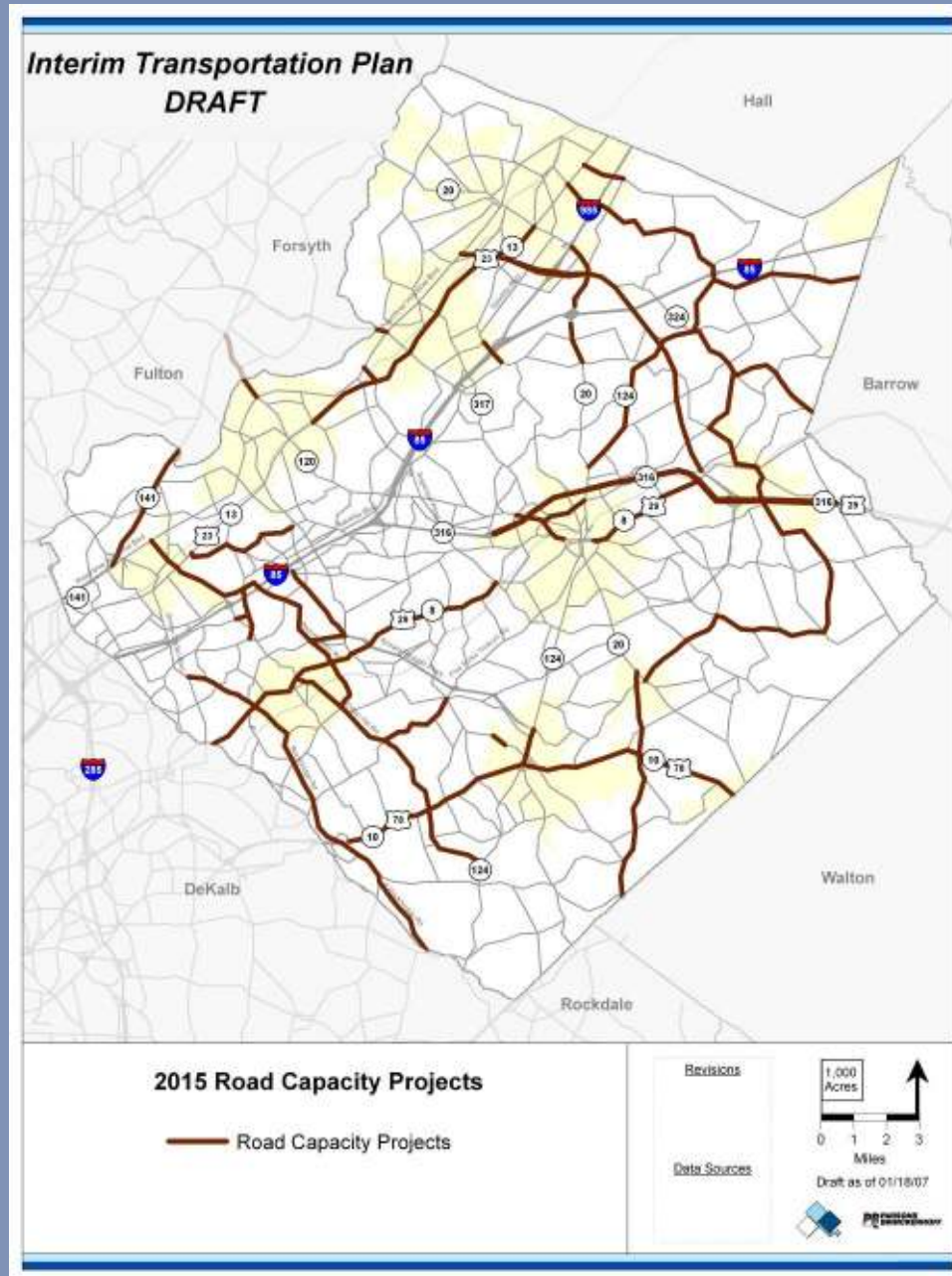


Project Identification

- 2015 Committed Projects
 - Reasonably committed
 - Without major negative environmental impacts
 - Without significant public opposition
- 2015 Additional Potential Projects
 - Non-committed
 - Based on Needs Analysis
 - Prioritized for potential near term implementation

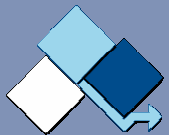


Project Identification-Potential Road Projects

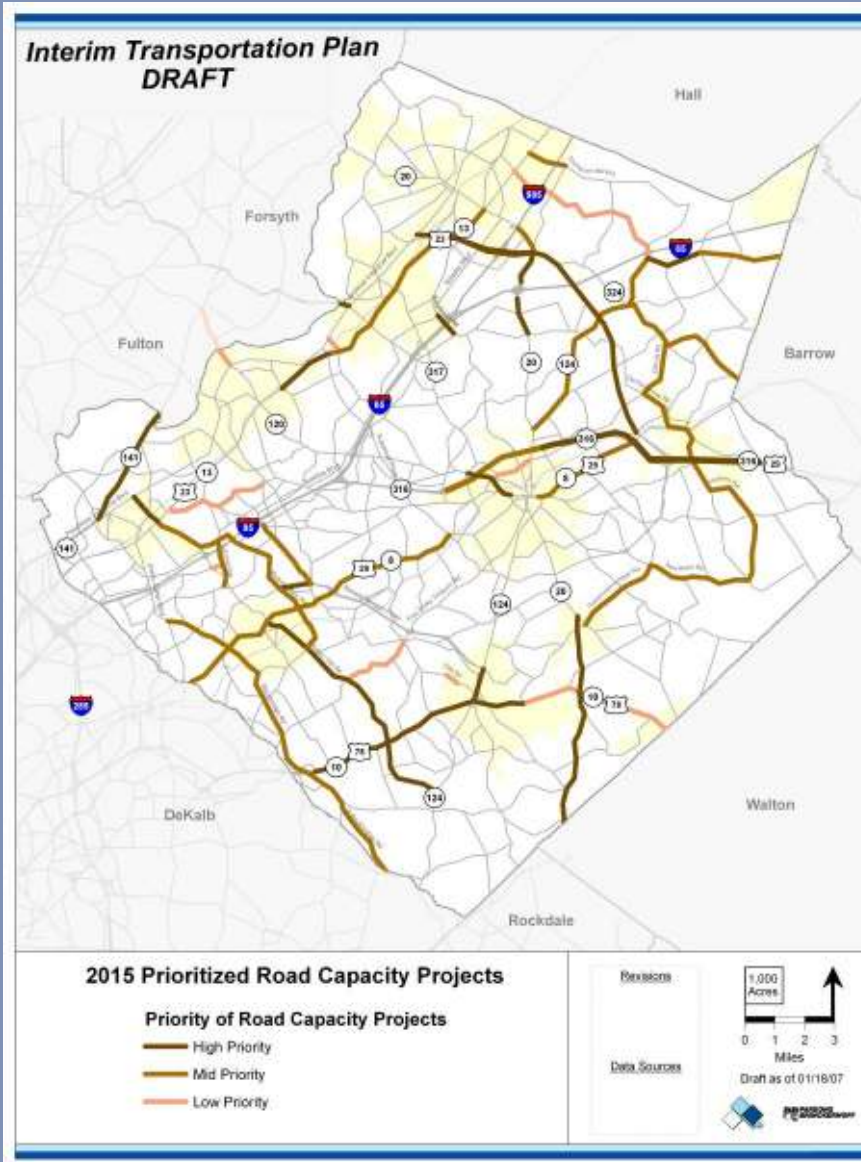


Project Prioritization

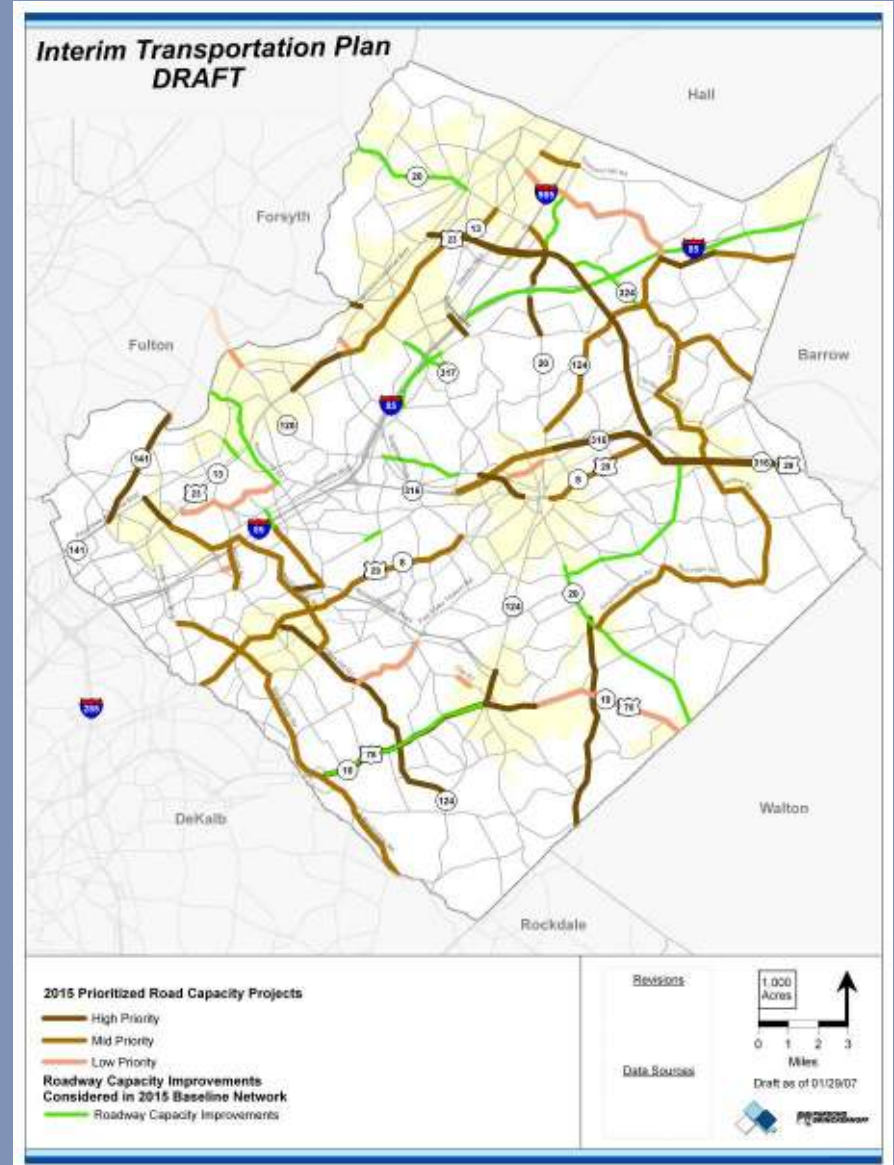
- Road Widenings
 - Quantitative Measures - Congestion
 - Severity of Afternoon Rush Hour
 - Weekday Duration of Congestion
 - Afternoon Peak Period Vehicle Hours of Delay
 - Qualitative Measures
 - Crashes
 - Congested Corridor
 - Truck Volume
- Road Extensions
 - Year 2015 Traffic Volume (ADT)
 - Crashes
 - Congested Corridor
 - Truck Volume



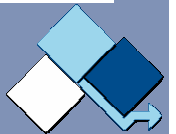
Project Prioritization



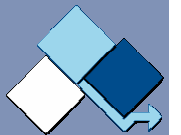
Potential Projects



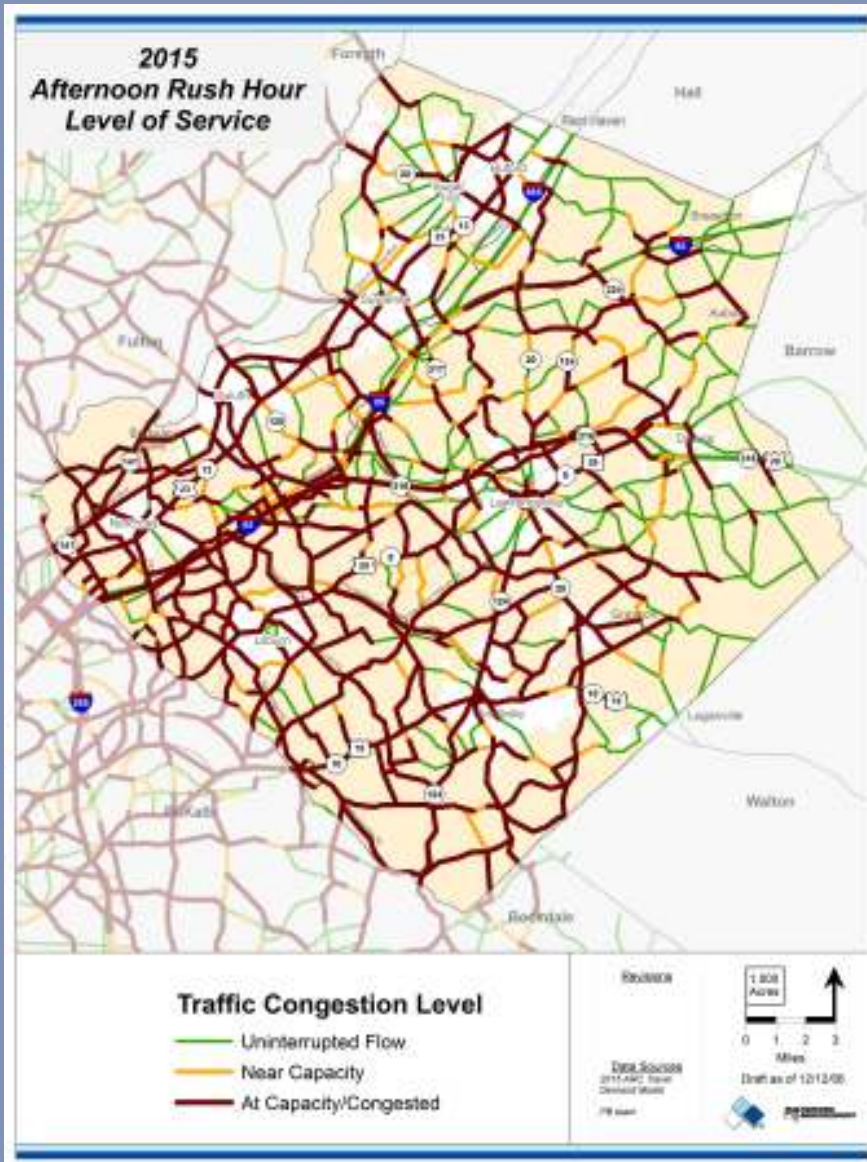
Potential + Baseline Projects



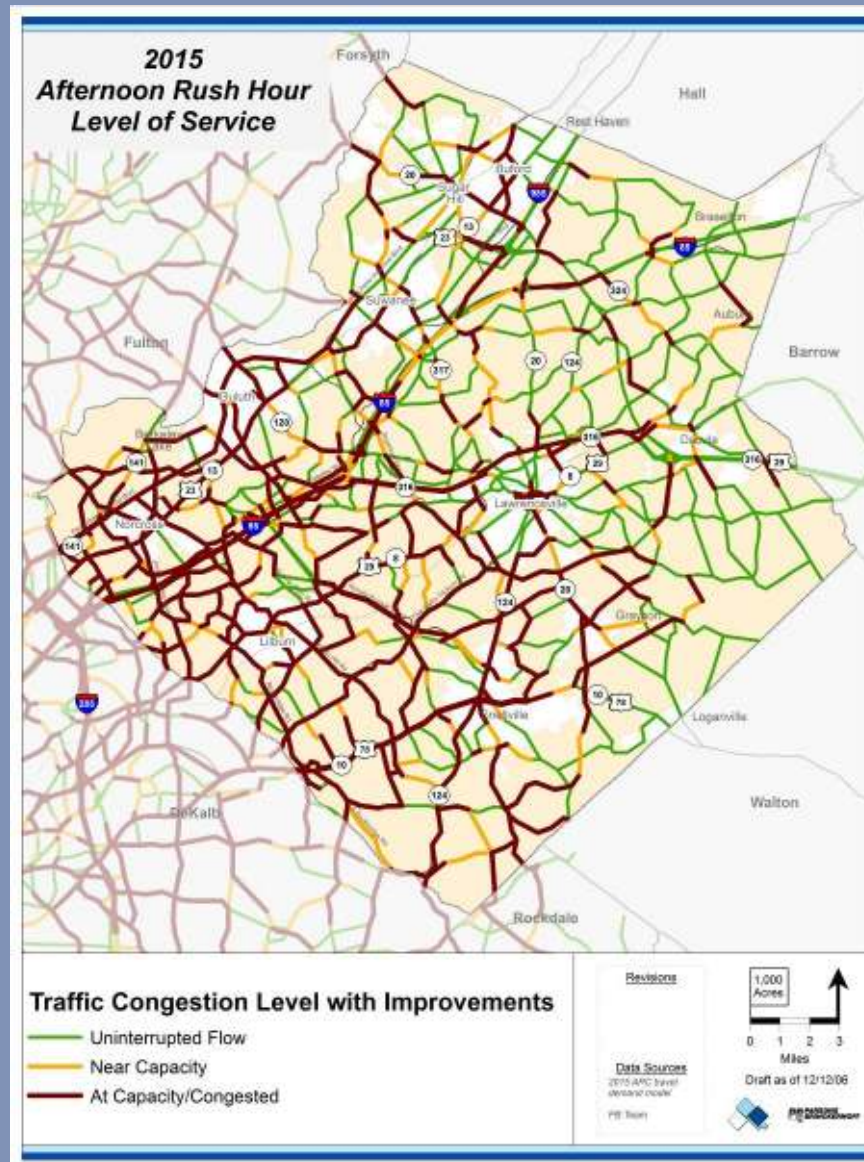
If you could build all of the road
capacity projects by 2015,



Severity of Rush Hour Congestion



2015 existing plus committed*



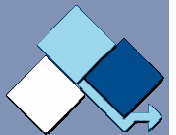
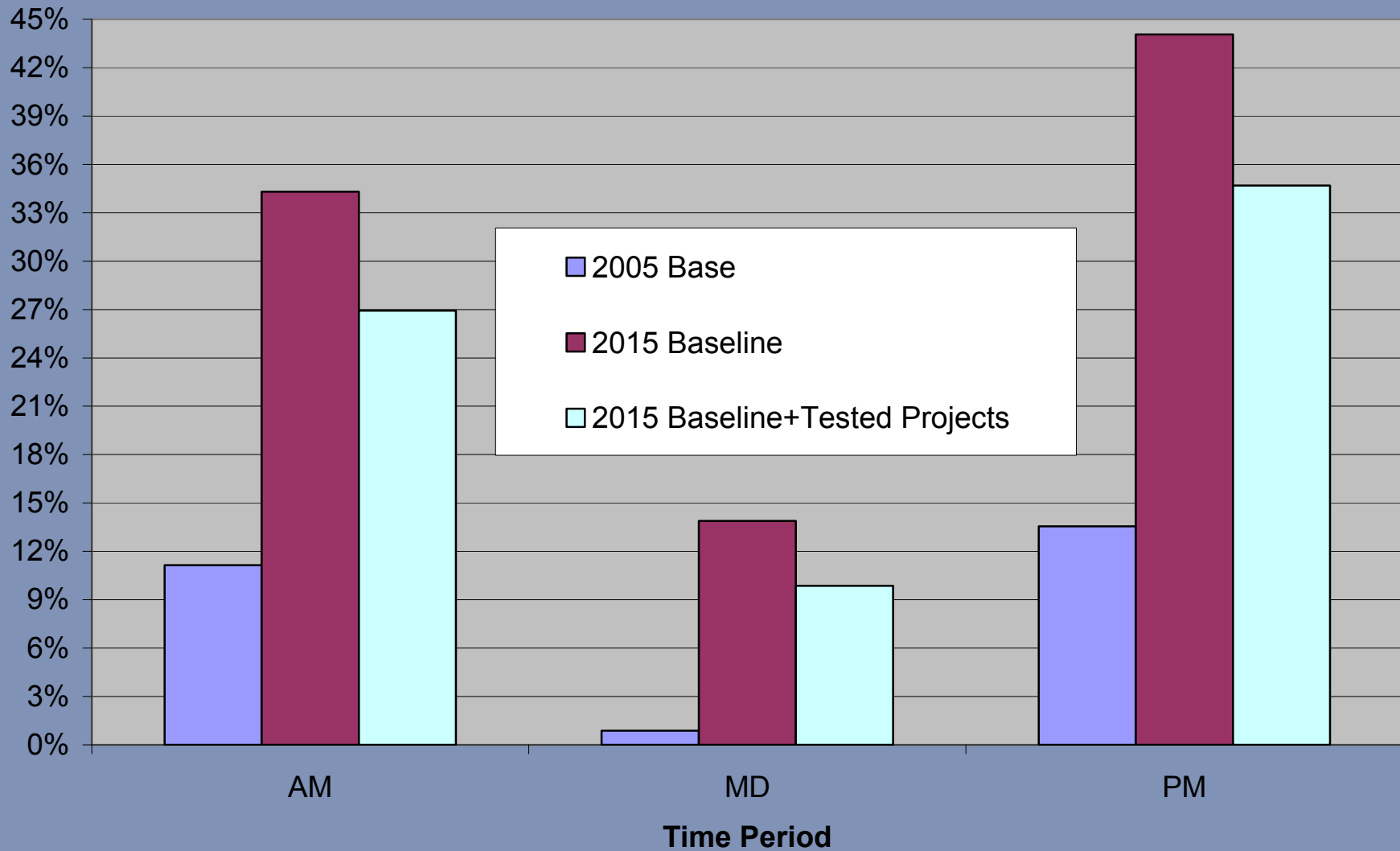
2015 with road improvements*

*Assumes Unified Plan SE data for Middle of the Pack scenario



System Performance - Congestion

Percent of Gwinnett County Lane Miles at Capacity or Congested



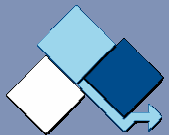
Future Funding Estimate

- \$ 853 M allocated in *Mobility 2030*¹ RTP
- \$ 200 M may be available from SPLOST if it is continuously in place²
- \$ 1,053 M rough estimate of available funds through 2015

1 RTP is currently being updated

2 Preliminary SPLOST projections through 2015 received from Gwinnett County Department of Financial Services December 8, 2006 and adjusted for inflation; for interim planning purposes only.

Figures are given in 2006 dollars.

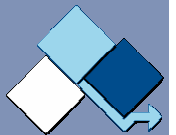


Project Costs

Using ARC's Costing Tool...

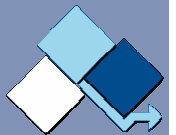
- 2015 Baseline Projects
 - \$ 309 M includes Engineering, ROW, and Construction
- 2015 Potential Projects
 - \$2,970 M includes Engineering, ROW, and Construction

Note: All figures are given in 2006 dollars



Transportation Funding Initiatives

- Reaction to current situation of growing congestion and funding shortfalls
- Regional SPLOST
 - Two or more counties may ask voters to approve an additional 1% tax for transportation
 - HB 434 now in committee
- Statewide sales tax
 - 1% sales tax to transportation trust fund
 - Referendum every ten years
 - Linked to the “The BIG Idea”
 - HR 509 now in committee



Questions?

