



ATLANTA REGIONAL COMMISSION



# ATLANTA REGIONAL FREIGHT MOBILITY PLAN UPDATE

FATF: Discussion of Freight Project  
Priorities, Strategies and Initiatives

December 03, 2015

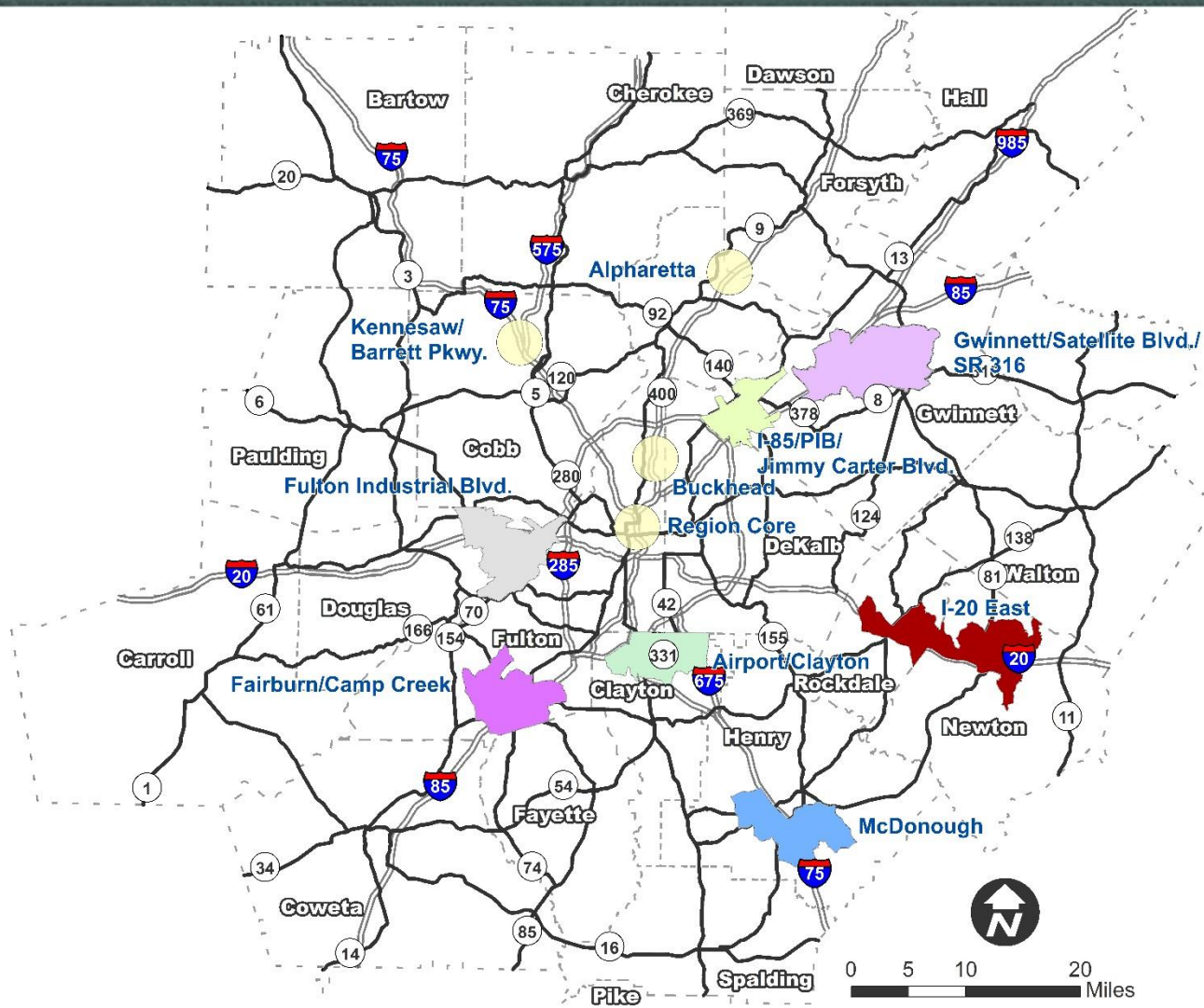
**PARSONS  
BRINCKERHOFF**

- Introductions
- Update on Freight Activity Clusters & Rail Needs
- Freight Project Priorities
- Strategies & Initiatives
- Next Steps





- 11 Freight intensive clusters identified using freight facility and regional center data



# Cluster Coverage of Manufacturing Facilities

Cluster	Leased Area (Sq. ft.)	Percent of Total Leased Area	No. of Firms	Average Facility Size
I-20 East	8,866,434	12%	50	177,329
Fulton Industrial Blvd.	5,727,596	8%	70	81,823
I-85/PIB/Jimmy Carter Blvd.	3,736,728	5%	60	62,279
Gwinnett/Satellite Blvd./SR 316	3,276,135	4%	38	86,214
Fairburn/Camp Creek	2,130,230	3%	13	163,864
McDonough	1,776,677	2%	14	126,906
Airport/Clayton	1,209,191	2%	18	67,177
<b>Subtotal</b>	<b>26,722,991</b>	<b>36%</b>	<b>263</b>	<b>109,370</b>
Remainder of Region	47,938,838	64%	710	64,898
<b>Total</b>	<b>74,661,829</b>	<b>100%</b>	<b>973</b>	<b>76,734</b>

# Cluster Coverage of Warehouse and Distribution Center Facilities

Cluster	Leased Area (Sq. ft.)	Percent of Total Leased Area	No. of Firms	Average Facility Size
Fulton Industrial Blvd.	21,860,200	17%	83	263,376
McDonough	17,364,802	13%	32	542,650
I-85/PIB/Jimmy Carter Blvd.	7,699,134	6%	38	202,609
Airport/Clayton	6,607,929	5%	22	300,360
Fairburn/Camp Creek	6,136,180	5%	14	438,299
Gwinnett/Satellite Blvd./SR 316	3,895,954	3%	15	259,730
I-20 East	2,893,500	2%	11	263,045
<b>Subtotal</b>	<b>66,457,699</b>	<b>51%</b>	<b>215</b>	<b>324,296</b>
Remainder of Region	63,419,366	49%	206	231,052
<b>Total</b>	<b>129,877,065</b>	<b>100%</b>	<b>421</b>	<b>308,497</b>

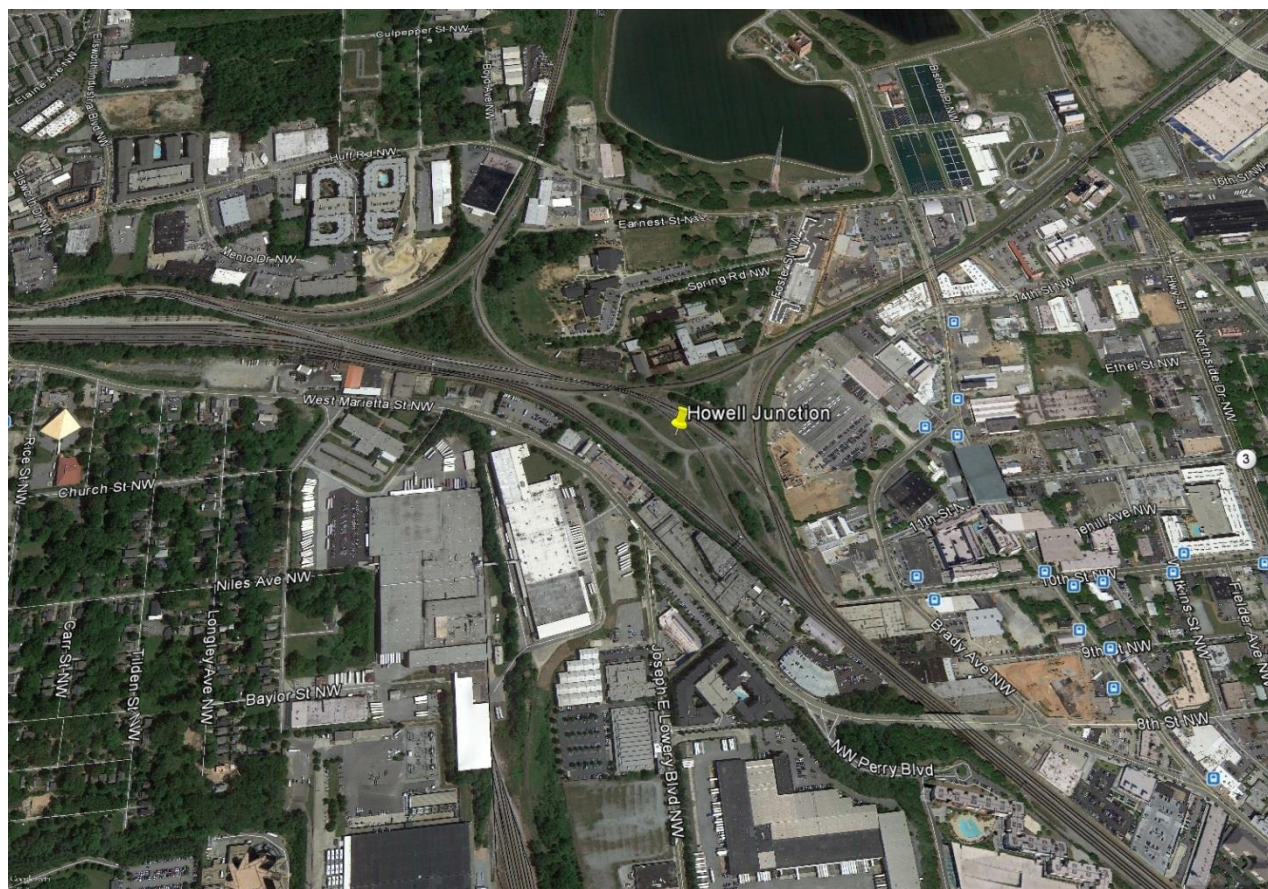
# Cluster Coverage of Commercial Activity

Cluster	Total Employment	Percent of Total
Region Core	272,614	9%
Alpharetta	143,811	5%
Gwinnett/Satellite Blvd./SR 316	114,772	4%
Buckhead	96,727	3%
I-85/PIB/Jimmy Carter Blvd.	93,798	3%
Kennesaw/Barrett Pkwy.	57,434	2%
Fulton Industrial Blvd.	49,592	2%
I-20 East	40,315	1%
Airport/Clayton	38,985	1%
Fairburn/Camp Creek	14,403	<1%
McDonough	10,895	<1%
<b>Subtotal</b>	<b>933,346</b>	<b>32%</b>
Remainder of Region	1,990,594	68%
<b>Total</b>	<b>2,923,940</b>	<b>100%</b>



# Freight Rail Needs

- Growth at the Port of Savannah will continue to fuel freight traffic growth in the Atlanta region, particularly for freight rail
- Its result will be more frequent and longer trains
- Delays at existing rail bottlenecks - notably the Howell Junction crossing of NS and CSX main lines - will be exacerbated if they are not addressed



Source: Google Earth



# Freight Project Prioritization

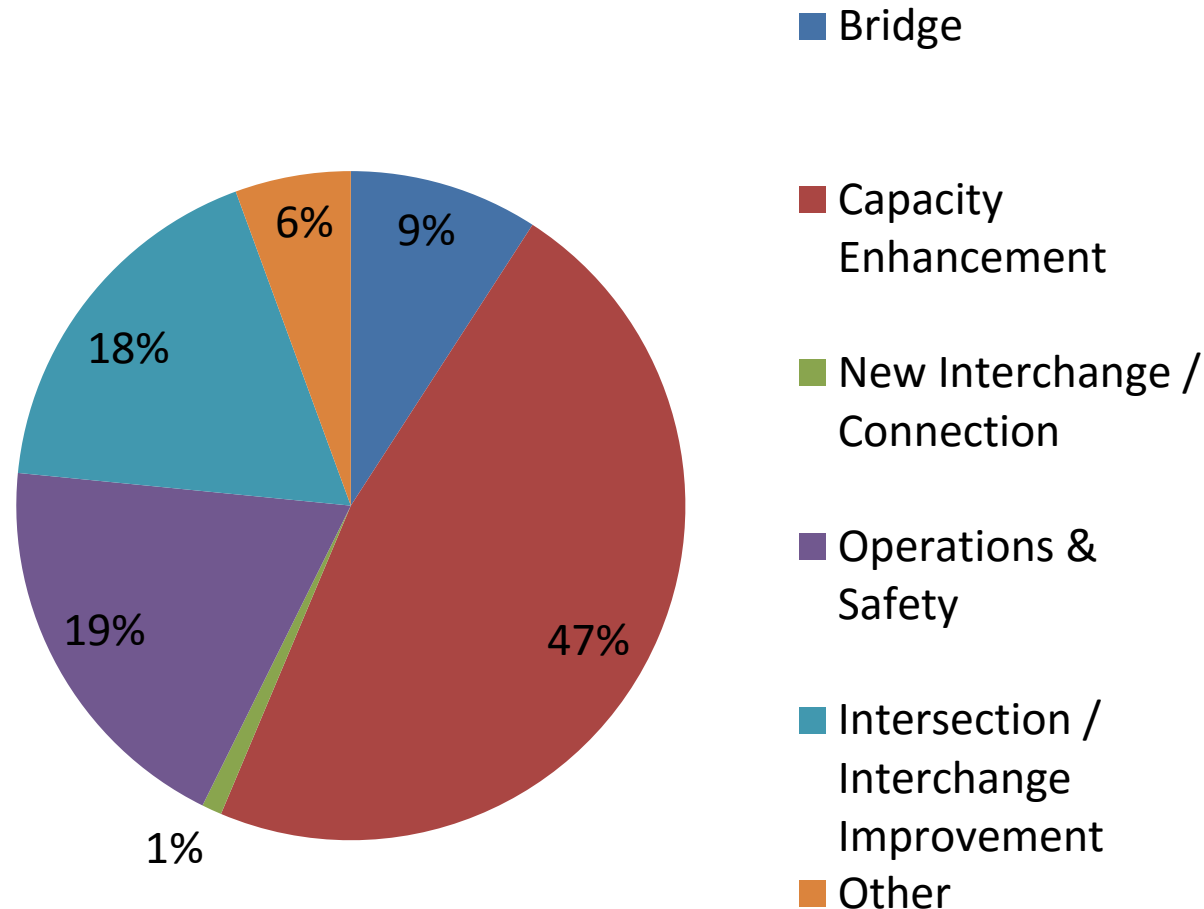




# Universe of Freight Projects: 930

## Sources:

- ARC Regional Transportation Plan (RTP)
- 2008 ARC Freight Mobility Plan
- ASTRoMaP
- Cargo Atlanta Study
- County Comprehensive Transportation Plans
- SR 6 Corridor Study
- GDOT Statewide Freight and Logistics Plan
- Fulton Industrial Boulevard Master Plan
- Stakeholder Input

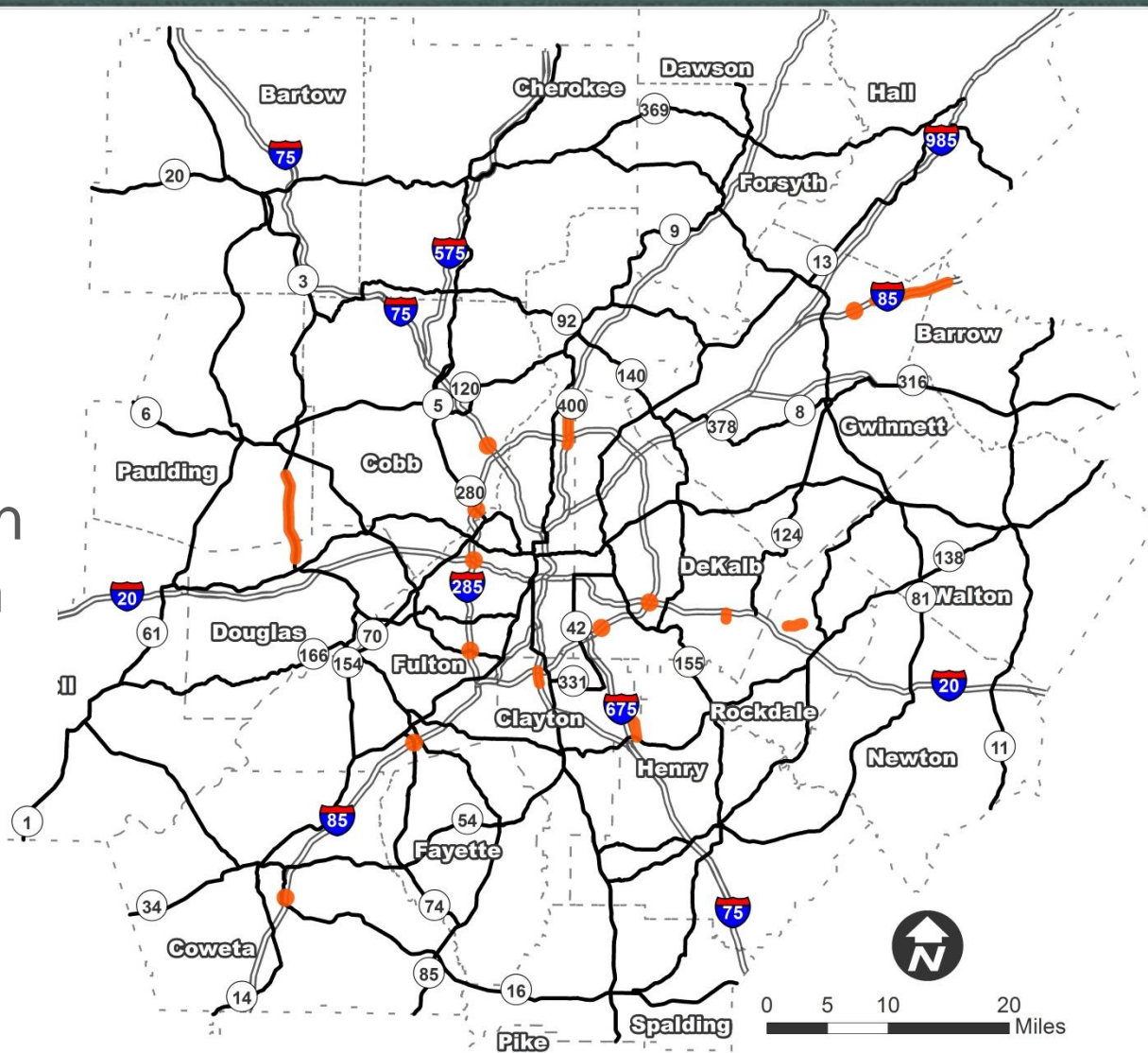


# Major Programmed Freight Related Projects 2016-2021

- 16 freight-related projects in ARC's Transportation Improvement Plan (TIP)
- Construction programmed to begin in 5 year TIP horizon 2016 -2021

## Legend

- Programmed Freight Projects
- Regional Truck Routes
- Expressways
- Counties







# Major Freight Related Projects in 2016-2021 TIP

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Road	Location	Description
I-285	At SR 400	I-285 Interchange Reconstruction And Collector/Distributor
I-285 East	At I-20 East	I-285 East Interchange Improvements
I-285 West	At I-20 West	I-285 West Interchange Reconstruction
I-85 South	At SR 74 (Senoia Road)	I-85 South Interchange Improvements
I-285 South	At Bouldercrest Road	I-285 South Interchange Improvements
I-285 West	At SR 280 (South Cobb Drive)	I-285 West Interchange Improvements
I-285 West	At SR 6 (Camp Creek Parkway)	I-285 West - Diverging Diamond Interchange
I-75	From SR 331 (Forest Parkway) to I-285	I-75 Northbound Collector/Distributor Lanes



# Major Freight Related Projects in 2016-2021 TIP (cont'd)

**PARSONS  
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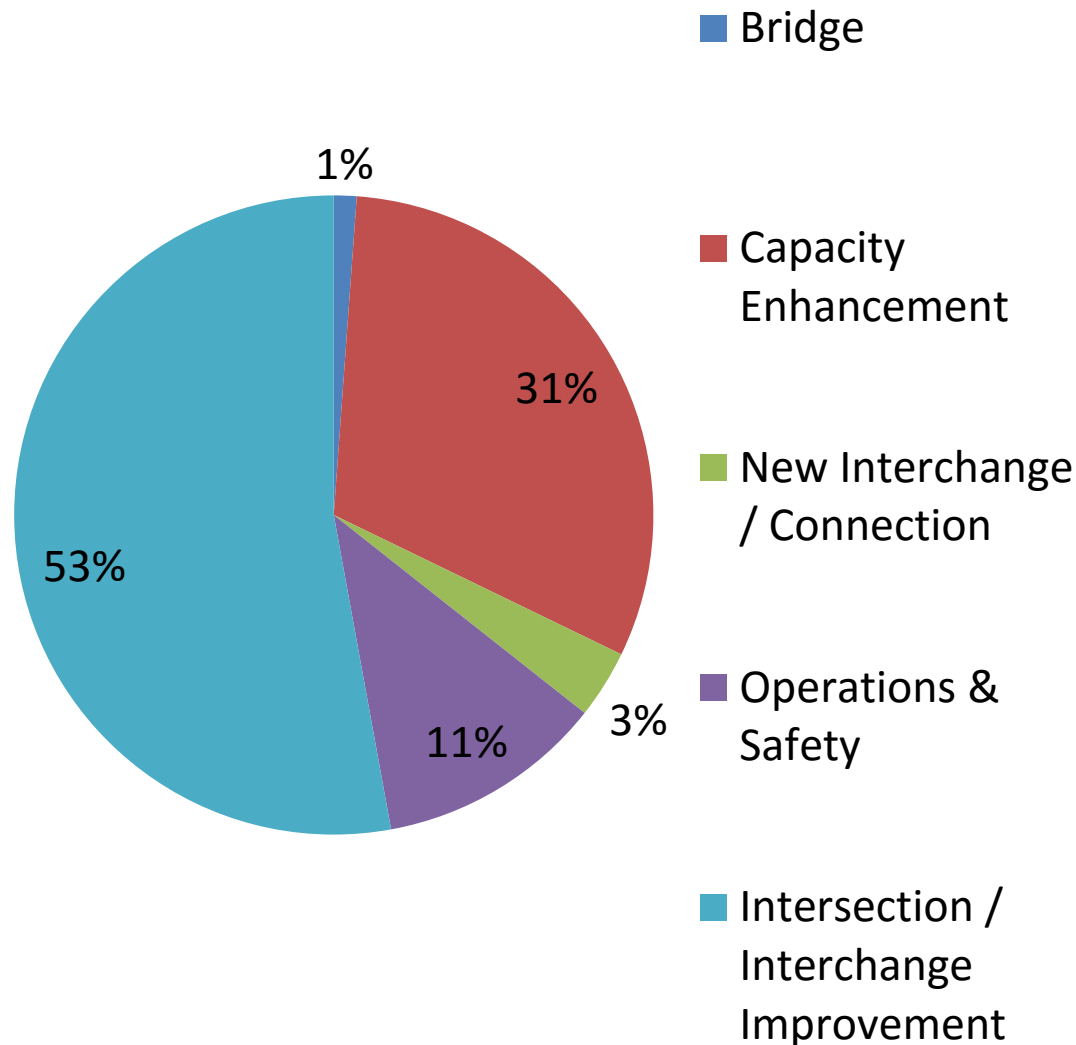
Road	Location	Description
I-75 North	At Windy Hill Road	I-75 North - Diverging Diamond Interchange
I-85 North	At SR 324 (Gravel Springs Road)	I-85 North - New Interchange
I-85 North	From Hamilton Mill Road in Gwinnett County to SR 211 in Barrow County	I-85 North Widening
I-85 South	At Poplar Road	I-85 South - New Interchange
Lithonia Industrial Boulevard Extension	From Hillandale Drive to Woodrow Road	Lithonia Industrial Boulevard Extension: Phase III - New Alignment
Sigman Road	From East of Lester Road to Irwin Bridge Road	Sigman Road Widening
SR 92 (Hiram Douglasville Highway)	From between Brown and Malone Streets in Douglas County (Terminus of DO-282C) to Nebo Road In Paulding County	SR 92 (Hiram Douglasville Highway) Widening
US 23	From SR 138 (North Henry Boulevard / Stockbridge Road) to I-675 In Clayton County	US 23 Widening



# Screening Projects for Prioritization






## Screening from 930 to 87:

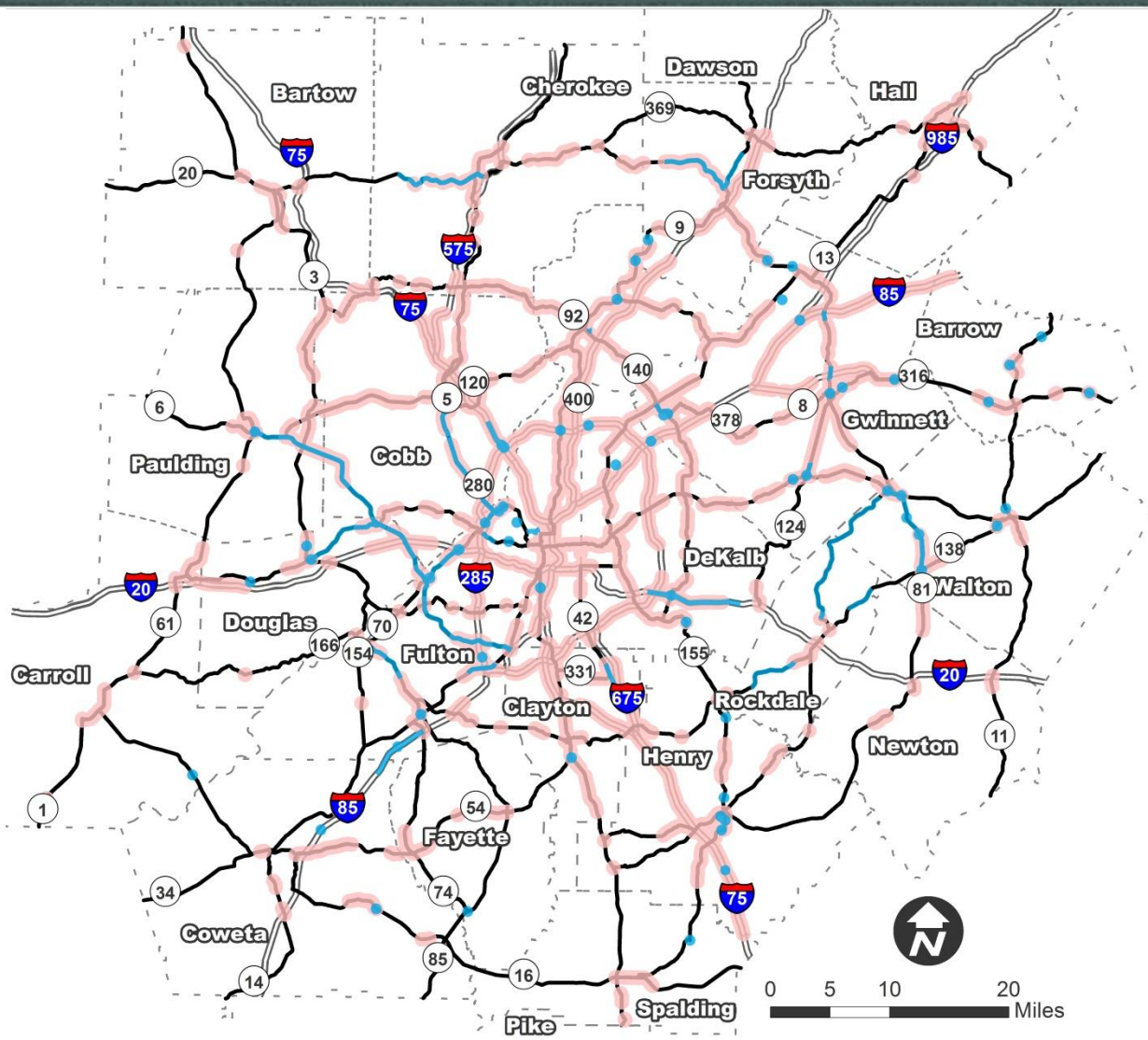
- Identified as freight-related
- Located on the Atlanta Strategic Truck Route Master Plan (ASTRoMaP)
- Excluding projects already programmed, plus others completed, duplicated, etc.
- Including projects identified as Long-Range in the RTP, as well as from other sources



- Location of 87 freight projects undergoing prioritization

## Legend

-  Identified Freight Projects on ASTRoMaP Network
-  Low Travel Time Reliability (Buffer time index > 0.6)
-  Regional Truck Routes
-  Expressways
-  Counties





# Prioritization Process Recap:

## 1<sup>st</sup> Stage - Feasibility

- Each project scored as a “yes/no”
  - Any “No” – eliminates project
  - All “Yes” – advances project to 2<sup>nd</sup> Stage

DIMENSION	CRITERION
Relevance	Identified as freight project, or located on ASTRoMaP (~ Critical Urban Freight Corridors)
Community Support	No major community opposition known, or has strong community support
Financial	No major funding obstacle known (e.g. does not overwhelm budget)
Benefit Cost Ratio	If known: benefits exceed (or expected to exceed) costs

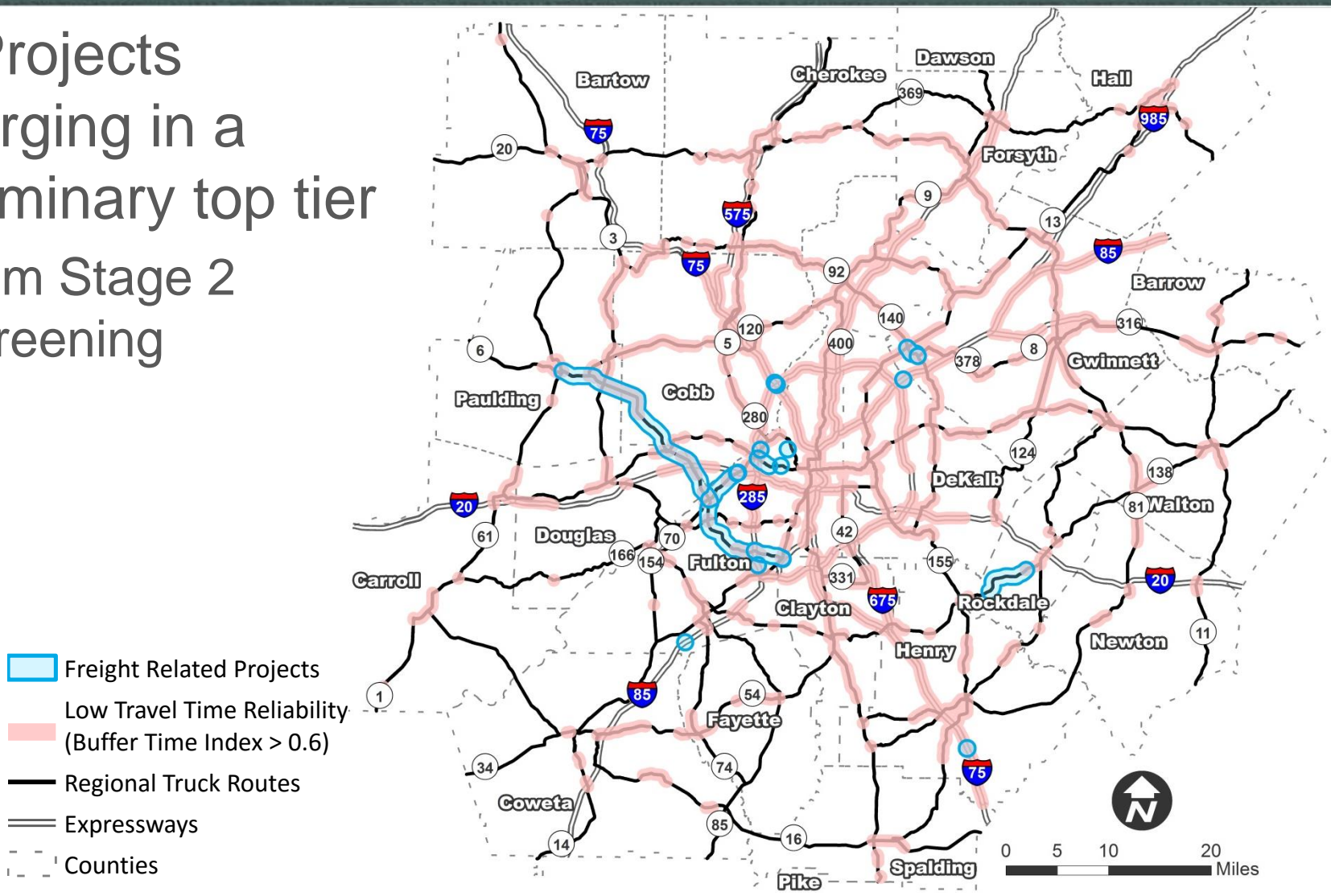
GOAL	WEIGHT	PERFORMANCE MEASURE CORRELATION
Global Hub	30%	Projects improving ASTRoMaP speed (Mobility) or Accessibility Measure buffering score at least 3; doing both scores 9
Skilled Workforce	15%	Projects generating logistics-related jobs score at least 3, and 9 if a large number (e.g.> 100)
Advanced Network	30%	Projects improving speed, buffering, or crashes on ASTRoMaP, or improving Accessibility Measure buffering score at least 3; doing any two scores 9
Vibrant Centers	15%	Freight projects in LCIs score at least 3; those part of an LCI comprehensive freight program score 9
Health & Culture	10%	Projects reducing NOx, PM2.5, and/or GHG score at least 3; large reductions (TBD) score 9

DIMENSION	PURPOSE
Balance across goals	Help assure all goals adequately addressed
Balance across region	Help assure broader needs are met throughout region
Packaging: synergy	Recognize that some combinations of projects are mutually supportive



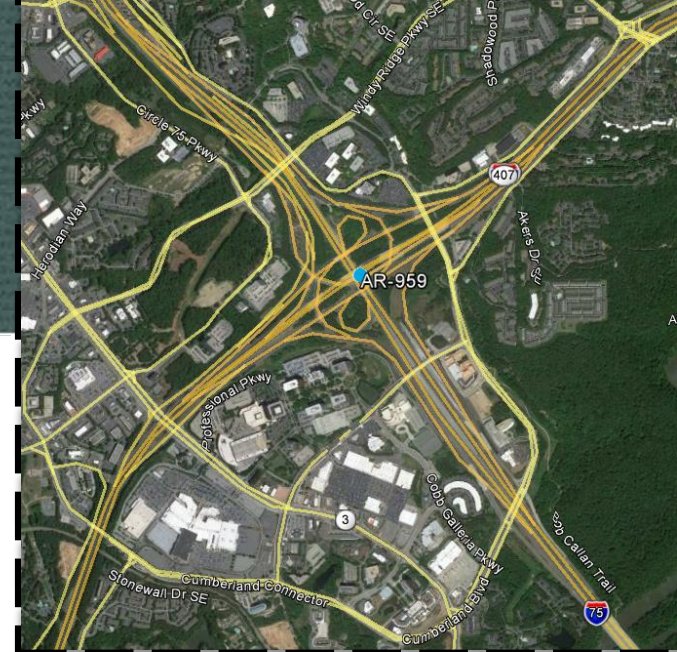
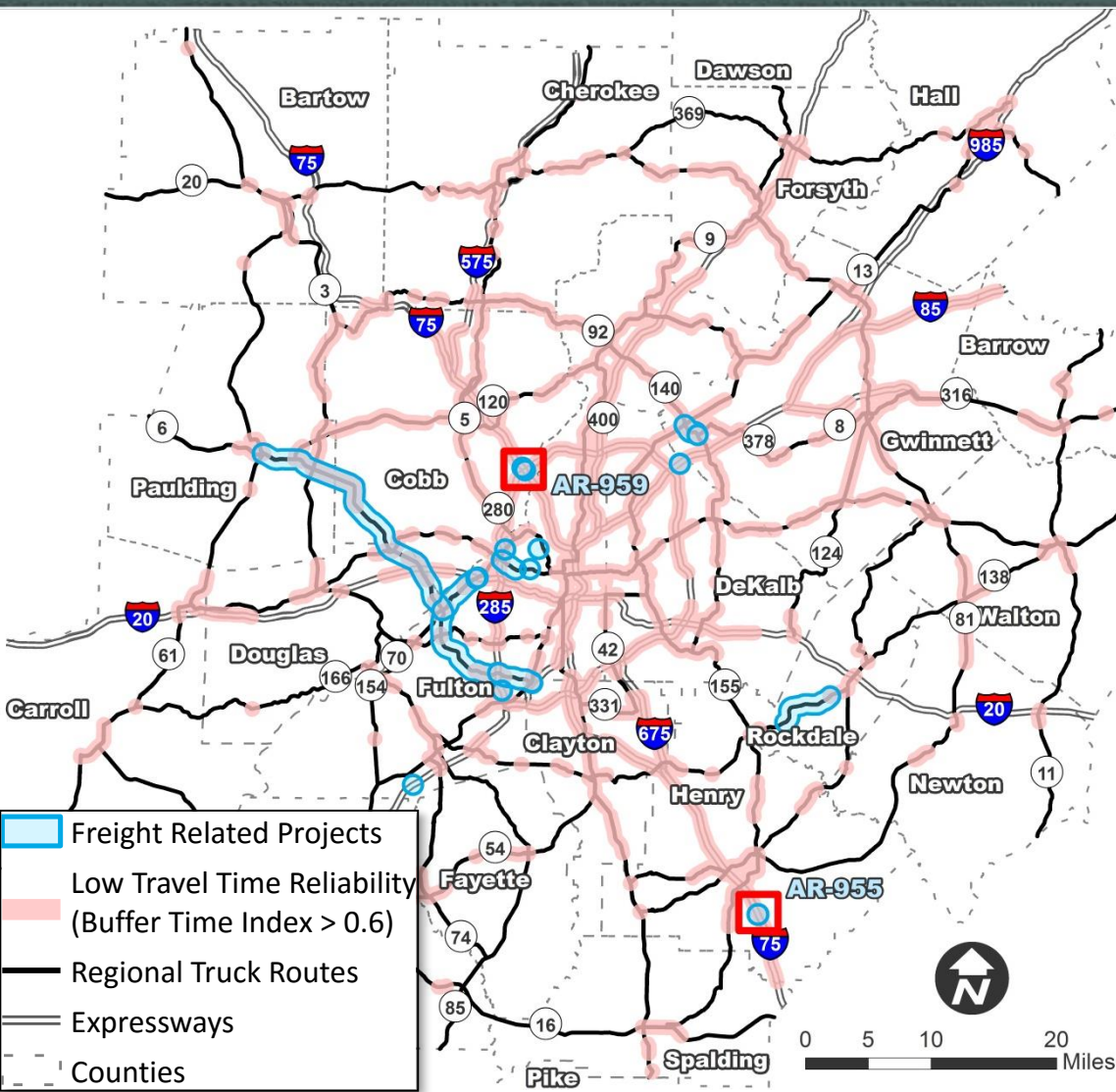
# Prioritized Projects - Preliminary Top Tier

- 18 Projects emerging in a preliminary top tier
  - from Stage 2 screening





# Major Projects in Preliminary Top Tier



- AR-959: I-75 North / I-285 Interchange Improvements
  - Flyover Ramp from I-75 Northbound To I-285 Westbound
- AR-955: I-75 South - New Interchange At Bethlehem Rd





# Freight Projects – Preliminary Top Tier\*

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Road	Location	Description
I-285 / I-85 North	At I-285 Eastbound To I-85 Northbound Direction (In Vicinity Of Pleasantdale Road Exit)	Revive 285 - I-285 / I-85 North Interchange Improvements
SR 70 (Fulton Industrial Boulevard)	From SR 6 (Camp Creek Parkway) To James Aldredge Boulevard	SR 70 (Fulton Industrial Boulevard) Widening
I-75 South	At Bethlehem Road	I-75 South - New Interchange
I-285 South	At Washington Road	I-285 South Interchange Improvements
I-75 North / I-285	At I-75 Southbound To I-285 Westbound Flyover Ramp	Revive 285 - I-75 North / I-285 Interchange Improvements
I-75 North / I-285	At I-75 Northbound To I-285 Westbound Flyover Ramp	Revive 285 - I-75 North / I-285 Interchange Improvements
SR 140 (Jimmy Carter Boulevard)	From SR 13 (Buford Highway) To SR 141 (Peachtree Industrial Boulevard)	SR 140 (Jimmy Carter Boulevard) Widening
Marietta Rd	Inman and Tilford Yard	Replace bridge due to weight restrictions

\*List is not organized by rank





# Freight Projects – Preliminary Top Tier\* (cont'd)

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Road	Location	Description
I-285 Interchange	I-285 at Bolton Road	Provide a new connection to I-285 just south of the Chattahoochee River crossing at Bolton Road. Redesign the I-285 as a full interchange.
SR 6 (Camp Creek Parkway) Widening	From I-285 West To I-85 South	SR 6 (Camp Creek Parkway) Widening
I-85 South	At Gullatt Road	I-85 South - New Interchange
SR 138 (Stockbridge Highway)	From East Fairview Road To Ebenezer Road / Stanton Road	SR 138 (Stockbridge Highway)
SR 6	SR 61 to I-85; ITS truck sensors at 5 locations	Widen outside lane in both Directions to 13 feet, with Truck ITS application
Jimmy Carter Blvd	Jimmy Carter Blvd at Buford Hwy	The Continuous Flow Intersection (CFI) is an innovative and cost effective solution to improving the LOS and delays at this intersection. The project will pull out left turns in advance of the intersection, allowing left turns and through movements to happen simultaneously.

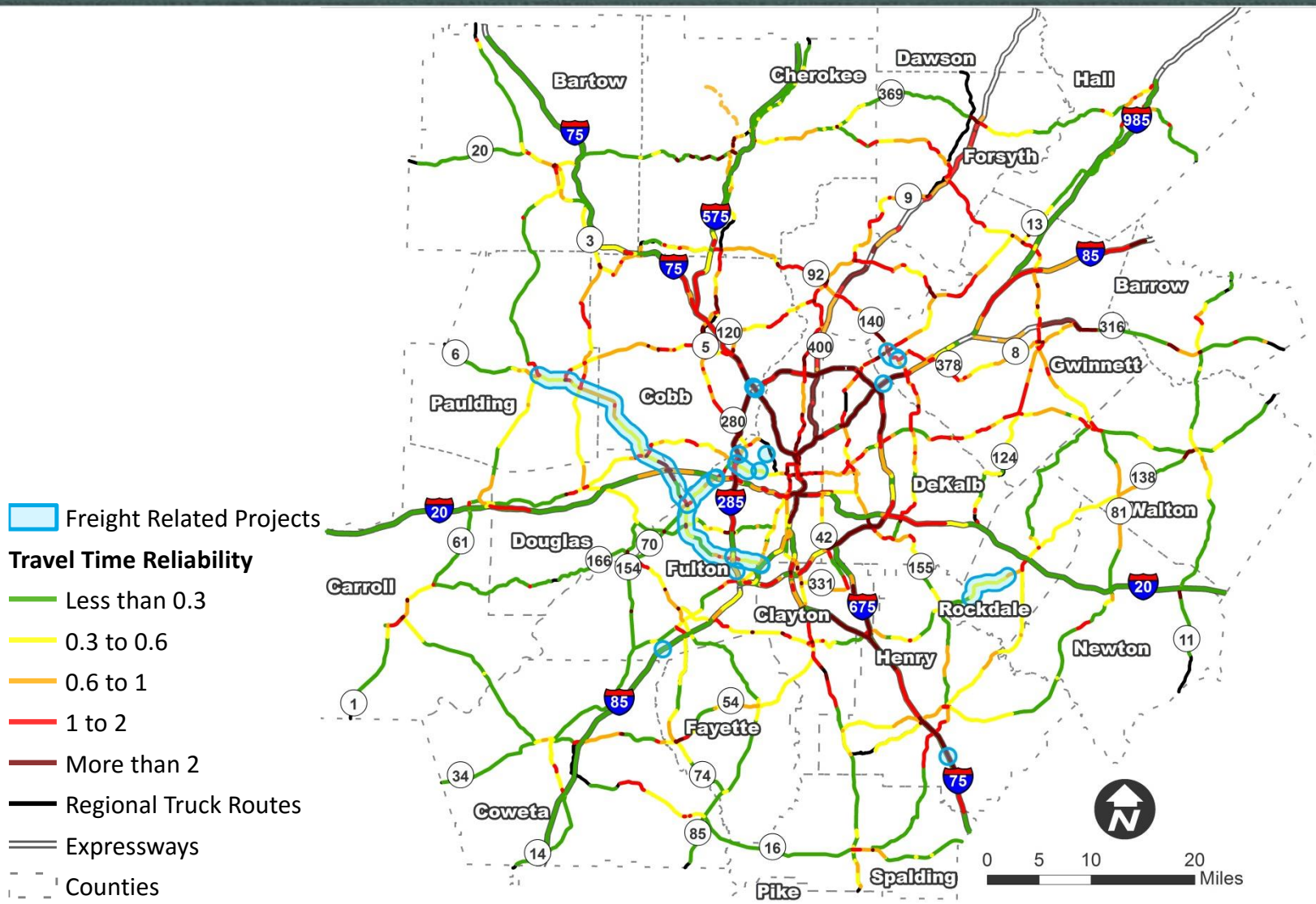
\*List is not organized by rank

# Freight Projects – Preliminary Top Tier\* (cont'd)

Road	Location	Description
I-20 West Bound Ramp	Fulton Industrial Blvd	I-20 West Bound Ramp Intersection Improvements turn radii modifications and median repairs to accommodate larger freight vehicles
I-20 Eastbound Ramps	Fulton Industrial Blvd	I-20 East Bound Ramp Intersection Improvements turn radii modifications and median repairs to accommodate larger freight vehicles
US 78	Northside to I-285	Add center dual left turn lane - 5.5 miles.
Donald Lee Hollowell	From Hamilton Holmes west to I-285, approx. 1.25 miles	Widen DL Hollowell from two lanes to five lanes to accommodate transit from Hamilton Holmes to I-285, approximately 1.25 miles

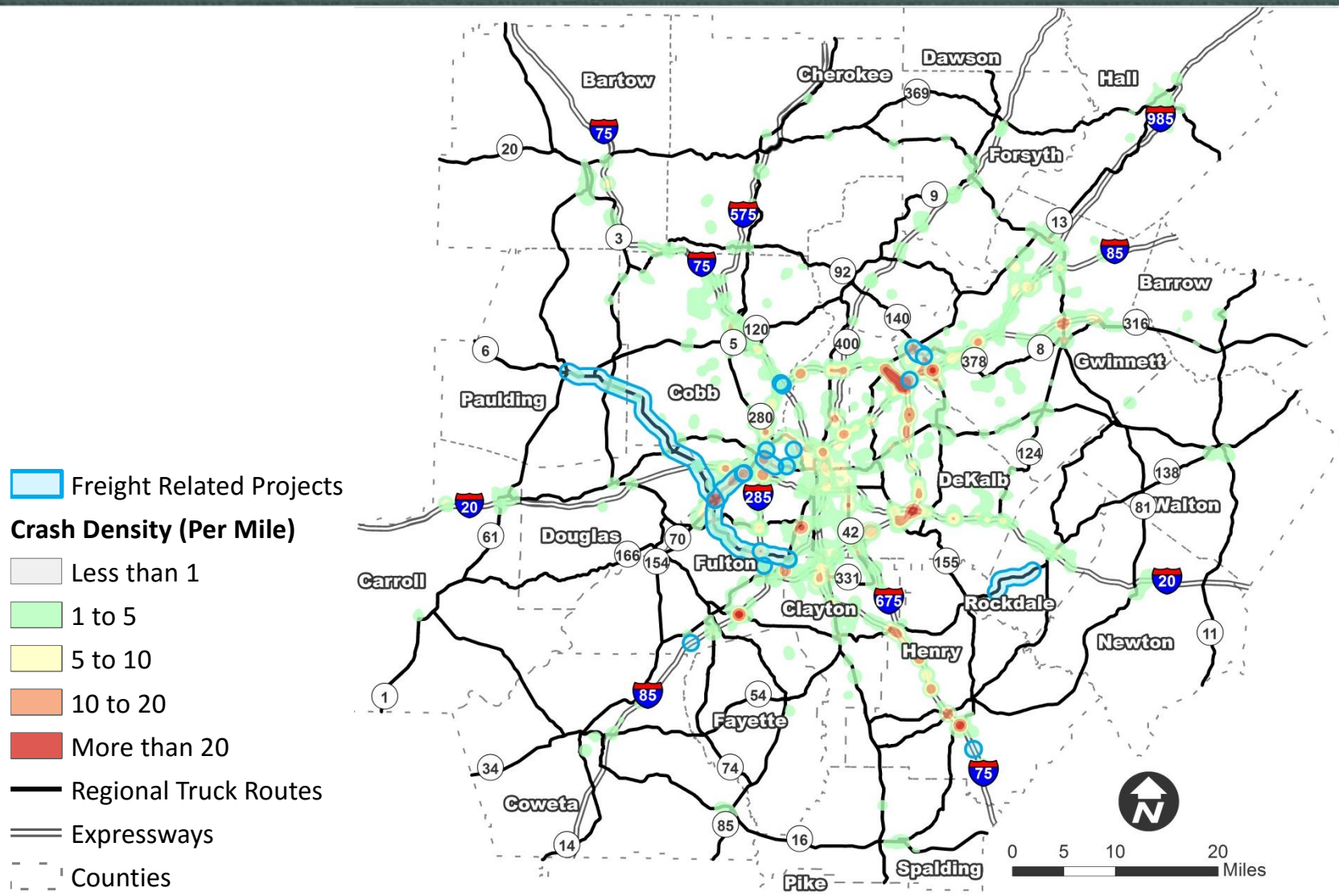
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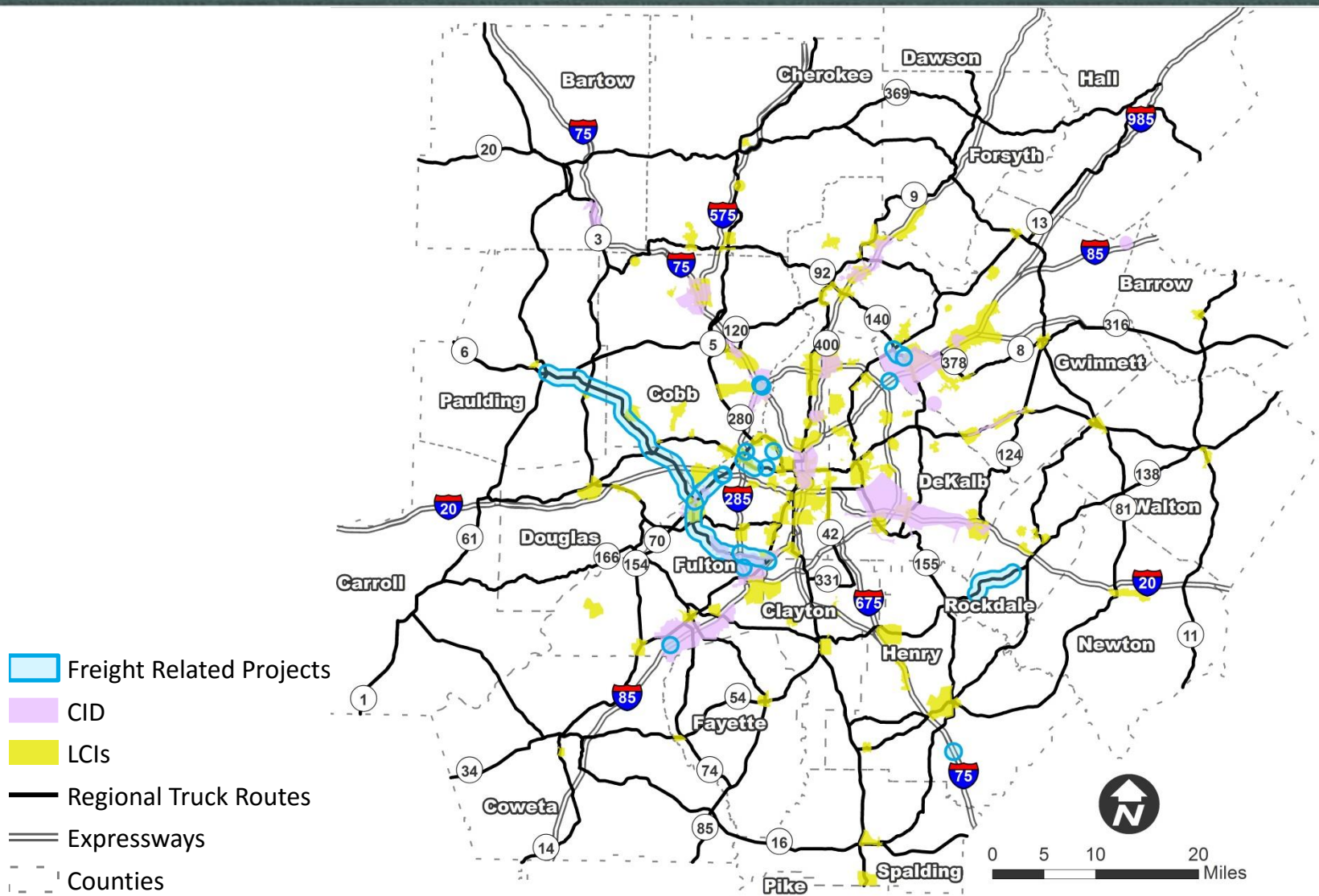
# Preliminary Top Tier Projects and Travel Time Reliability





# Preliminary Top Tier Projects and Crash Density







# Recommended Freight Strategies & Initiatives





# Strategies & Initiatives: Subareas/Corridors, Parking

- Freight Subarea/Corridor Plans
  - Fulton Industrial Blvd Corridor Study
    - Assess long-term capacity needs
  - County Subarea or Cluster Area Freight Plans
    - Options – Douglas, Gwinnett, Henry, Others
    - Land use needs for freight and residential growth
  - South Fulton CID Masterplan
    - Maximize economic development opportunity
  - GDOT Downtown Corridor Operations Study
  - Tara Boulevard Corridor Study
- Truck Parking Study
  - Long-haul truck parking needs
  - Emerging mixed-use population centers
    - Downtown, Midtown, Buckhead

# Strategies & Initiatives: Truck Friendly Lanes

- Explore truck friendly lanes on ASTRoMaP system
  - Purpose: advance, potentially expand operational upgrade recommendation from GDOT SR 6 Access Management study
  - Objective: improve freight safety, reliability, and facility access
  - SR 6 components:
    - Shoulders widened to create 13' truck lane
    - ITS enhancements enabling green signal manipulation for better truck progress
    - Associated signage and intersection improvements
    - Implies active management of freight performance
  - Lower tech variation on CAV Pilot

# Strategies & Initiatives: Cultivation of 21<sup>st</sup> Century Technology

- Initiatives intertwine over time ➡ groundwork for evolving “internet of things”

## Freight CAV Pilot:

- Purpose: develop initial application of connected/automated vehicle technology for freight delivery
- Objective: clarify benefits and test introduction of incipient technology for safety, reliability, economic development, resilience – and ultimately capacity advantage
- Pilot Design (example): partnership with carrier/s to provide signal priority for safety-enhanced trucks delivering urgent air cargo to specified clusters, utilizing real-time traffic feeds to activate under gridlock conditions





# Strategies & Initiatives: Cultivation of 21<sup>st</sup> Century Technology (cont'd)

## Industrial Property Redevelopment:

- Purpose: support introduction of factory/warehouse automation and convergence of functions to invigorate and densify close-in industrial clusters
  - Technologies include robotics, optics, remote sensing, material handling, 3D printing, etc.
- Objectives:
  - Improve economic competitiveness and effective capacity of land
  - Reduce logistics costs and freight travel (delivery and empty) distances
  - Create potential platform for cooperative logistics and lateral economies of scale
- Initiative Design (example): encourage industries and developers introducing automated, dense footprint facilities in close-in industrial clusters (e.g. FIB, PIB) through:
  - Assistance in parcel assembly
  - Development incentives and pre-approvals
  - Transportation capacity improvements and operational upgrades (e.g. CAV)

# Strategies & Initiatives: Home Delivery Study

- Purpose: track and assess profound and costly shift in retail with large effect on freight patterns
  - Storefront vs. on-line strategies being invented
- Objective: ensure transportation planning keeps pace with change

## Factors:

- Battle for convenience
  - Store or collection point pickup vs. delivery to consumer door
  - Same day and 1 hour delivery require local staging facilities
- Battle to capture and grow limited route density
  - “Prime”-style free delivery encourages household bulks (e.g. paper products, pet food) ➡ means more and larger delivery trucks
  - Emerging afternoon delivery pattern
- Developing demography: e.g. on-line millennials; aging, less-mobile baby boomers

# Strategies & Initiatives: Home Delivery (cont'd)

- Challenge and opportunity for community integration of freight
  - Neighborhood conflicts and security concerns
  - Consumer benefits of freight become visible
  - Venue for cleaner, safer trucks e.g. via alternative fuels, CAV technology
- Convenience becomes performance factor for consumer-driven freight





# Strategies & Initiatives: Off-Hours Delivery Pilot

- Purpose: explore methods to increase freight deliveries during night and other off-peak periods
- Objectives: improve capacity utilization, productivity, reliability, air emissions
- Considerations:
  - Industry operates off-peak now, when it can
  - Chief obstacle: business practices and costs for receivers of freight ➡ the shippers' customers
  - Challenges include transitional loss of route efficiency (density)
  - Approaches include start-up incentives, unassisted access, focus on geographic pockets (e.g. CIDs) and half-closed/closed system fleets
  - Precedents available to draw from
- Option to leverage FHWA matching grant program



# Strategies & Initiatives: Resiliency

- Resiliency Planning Assessment
  - Purpose: understand crucial vulnerabilities to supply chain disruption and plan response
  - Objective: mitigate effects of disruption (severe weather, security events, etc.) on industry, populace, economy
  - Focus on critical supply chains: e.g. energy, food, health care
    - Supply & consumption points, routes & alternates
    - Response strategies, partners and roles

# Strategies & Initiatives: Alternative Fuels

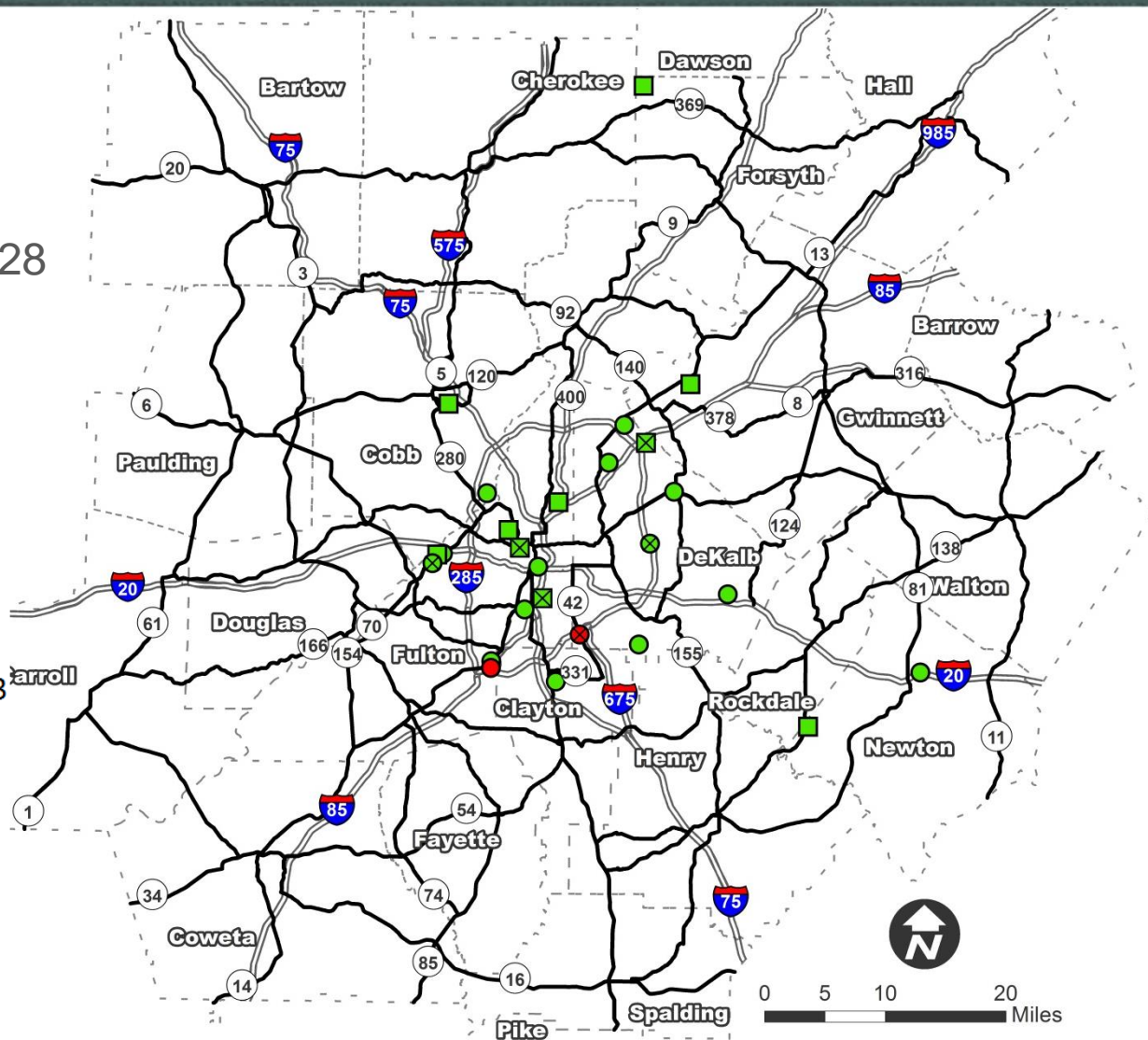
- Support Expansion of Natural Gas Fueling
  - Purpose: enable adoption of practical, cleaner freight fuel
  - Objective: reduce air emissions and long term freight costs; aid integration of freight in communities
  - Factors:
    - Lower CAP emissions (= healthier), mixed GHG emissions
    - Abundant resource, was/should be lower cost
    - Adoption slowed but continuing
    - Fueling stations prerequisite: CNG (regional freight), LNG (long haul and through freight)
    - Component of low cost logistics environment



- Number of alternate fuel stations in Georgia = 52
- Number of alternate fuel stations in Metro Atlanta = 28

## Legend

- CNG - Public (Open): 12
- ⊗ CNG - Public (Planned): 2
- CNG - Private (Open): 8
- ⊗ CNG - Private (Planned): 3
- LNG - Public (Open): 1
- ⊗ LNG - Public (Planned): 2
- Regional Truck Routes
- == Expressways
- Counties



# Strategies & Initiatives: Improvement Studies

- Evaluate, conduct studies proposed from TIP solicitation and stakeholder outreach
  - Huff Rd Widening and Complete Street Scoping Study
  - Marietta Rd Freight Improvement Scoping Study
  - Commerce Drive/Fulton Industrial Circle Realignment Feasibility Study
  - Moreland Avenue (SR 42) from Cedar Grove Rd (SR 54 Conn) to Bailey Street
  - South Fulton Multi-Modal Study
  - Solomon Street at Searcy Avenue/Spalding Street/High Falls Road
  - Hapeville Silent Railroad Crossings
  - Holly Springs Industrial Drive Extension-New Alignment
  - Holcomb Bridge Road Railroad Crossing Study

# Strategies & Initiatives: Financing Sources

- FAST Act (\$300 billion federal Reauthorization Conference Bill):
  - \$10.8 billion nationally for freight over 5 years
  - 58% new highway formula program (= average \$25 million per year per state)
  - 42% new large project (\$100 ml.+) competitive grant program, about half multimodal
- TFA 2015 (GA Transportation Funding Act):
  - Adds \$.8-1.0 billion per year for all transportation
  - Allows county and municipalities to establish gas taxes and special purpose local option sales taxes
- Community Improvement District (CID) real estate assessments
  - Potential dovetail with TFA 2015 local levies
- Public-Private Partnership (P3) opportunities
  - Requires revenue stream in some form
  - Prospects better with faster permitting





- Complete Project Prioritization
- Option: Low Cost Projects Program
- Final Report
- Adoption in February 2016 as part of the Atlanta's Region Plan



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