



ATLANTA REGIONAL MANAGED LANE SYSTEM PLAN

• BRIEFING BOOKLET •



MANAGED LANE SYSTEM PLAN



FORWARD FORWARD

Managed Lanes are an innovative solution to managing congestion and provide a valuable mobility option. Types of managed lanes include, High Occupancy Vehicle (HOV), High Occupancy Toll (HOT), Express Toll Lanes (ETL), Truck Only Lanes (TOL) and Truck Only Toll Lanes (TOT). A variation of managed lanes would preserve mobility choices by applying tools such as pricing, eligibility (occupancy and/or vehicle type) and/or limiting system access. In addition to mobility, it is the expectation of the Georgia Department of Transportation (GDOT) that managed lanes would be consistent with other state goals and objectives including safety, the community, financial and homeland security.

The Georgia Department of Transportation has developed a Managed Lane System Plan (MLSP) for Metro Atlanta that will utilize and expand the current HOV system footprint. The MLSP is the first *system-wide* evaluation of urban area managed lanes performed in the United States.

GDOT has recognized that in some locations it is not feasible to construct additional general purpose lanes to meet current and future needs. Managed lane solutions would preserve mobility choices and provide financially feasible improvements.

GDOT has taken a comprehensive approach to its evaluation of managed lanes for Metro Atlanta. Through a multi-step analysis process, a range of alternatives has been studied to determine the optimal solution for a regional network of managed lanes. This analysis process included the following steps:

- Data collection, including traffic counts and surveys
- Identification of candidate corridors
- Traffic and revenue analysis
- Concept and operational analysis
- Social and environmental impact analysis
- Financial feasibility

This briefing provides a summary of the purpose and intent of the managed lane system plan, the goals and objectives of managed lanes, the justification and benefits associated with managed lanes, and the evaluation framework and implementation plan that emerged from this effort.

Managed lanes are characterized by the proactive implementation of operational strategies designed to respond to changing travel conditions. Managed lane strategies seek to optimize efficiency, performance and throughput by offering travel time savings and reliability through the application of vehicle occupancy and eligibility restrictions, pricing, and access control.



PURPOSE & INTENT



Urban area traffic congestion presents a challenge to the continued growth and economic prosperity of the Atlanta region. Future job creation and economic development are inextricably linked to investment in transportation infrastructure, and in order to maintain its competitive edge, there must be continued focus on improving Metro Atlanta's transportation network.

The provision of managed lanes in the region would ensure that mobility would be preserved even with projected population and employment growth. The purpose of the MLSP is to provide a comprehensive roadmap for GDOT as they move forward with this innovative approach to urban area mobility. More specifically, the MLSP seeks to address the following:

- Respond to transportation needs which have outpaced traditional revenue sources
- Unite managed lane investments into a comprehensive "system plan" framework
- Provide a valuable and reliable mobility option, in spite of congestion
- Lead and tackle policy and implementation issues

MANAGED LANE

GOALS & OBJECTIVES

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There are several goals and objectives associated with managed lanes. These center around the ability of managed lanes to deliver travel time reliability and transportation choice in an efficient manner. Not only do managed lanes provide a mobility option, but also a funding flexibility option that optimizes public sector resources. Detailed goals and objectives are shown in the list below.

- **Protect Mobility**
 - Increase average travel speeds
 - Decrease delay
 - Increase access to major activity centers
 - Increase system efficiency
- **Maximize Person/Vehicle Throughput**
 - Increase throughput
 - Decrease travel time variations
 - Improve transit on-time performance
- **Minimize Environmental Impacts**
 - Improve air quality/decrease pollutants
 - Minimize impact to the built environment
- **Provide a Financially Feasible System**
 - Leverage and optimize public cash outflows
 - Incorporate a market-driven approach to complement traditional funding sources
- **Design and Maintain a Flexible Infrastructure for Varying Lane Management**
 - Accommodate future lane management possibilities





JUSTIFICATION & BENEFITS

Acute congestion in Metro Atlanta poses challenges to economic competitiveness and quality of life. Traditional capacity expansion has become increasingly expensive, and over time this capacity could attract new users and ultimately result in more congestion.

There is a value that people place on the ability to reach their destination in a reduced amount of time. Currently, the existing infrastructure in Metro Atlanta does not provide a system that meets that peak-hour demand. Implementing a system of managed lanes would create the means to meet transportation consumers' demand for reliable travel time, every time. Managed lanes also permit some vehicles to utilize the lanes free of charge including: transit vehicles, vanpools, eligible carpools, motorcycles and emergency vehicles.

Funds generated by tolling will likely *not* cover the entire cost of construction and the ongoing maintenance and operations of the managed lanes system. The revenue collected from tolls will likely be applied toward a portion of the debt for construction and will be used to maintain and operate the system.

Current funding constraints pose a challenge to GDOT. With limited dollars available for the capital outlays required for managed lanes, it is important to consider innovative funding mechanisms.

The use of non-traditional financing through Public-Private Partnerships (P3) is one alternative way to advance some corridors in the managed lanes system. P3 opens the door to accelerated financing, design, construction, operation and/or maintenance of a project.

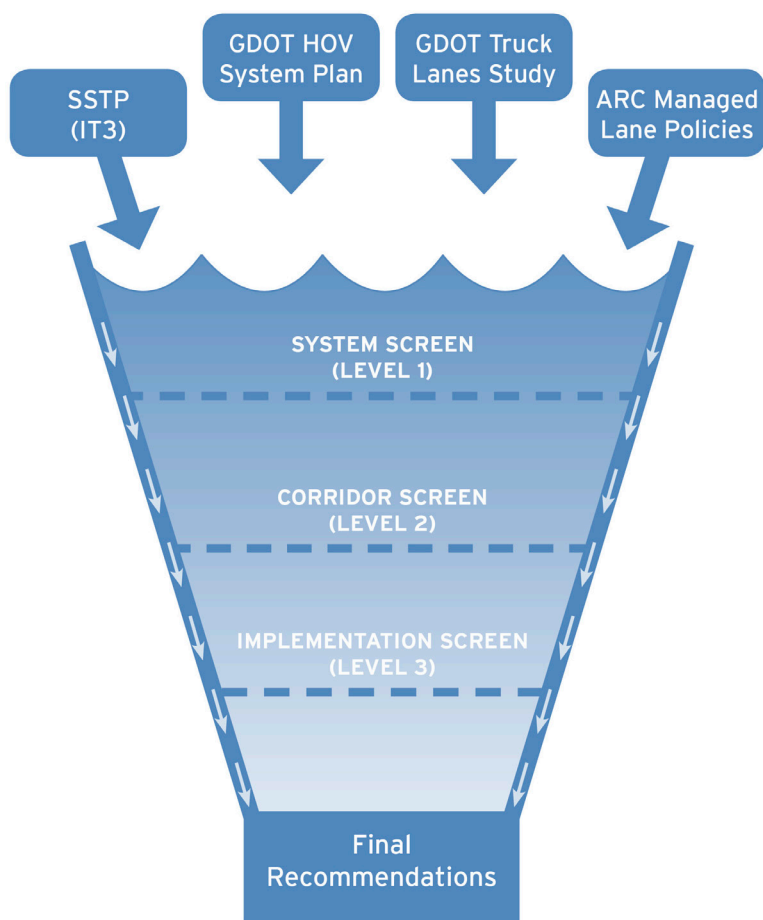
At full build out the managed lane system has a price tag of \$16 Billion, with toll revenues financing \$9 Billion of this amount. With a capital cost of \$16 Billion, the State of Georgia would be responsible for almost half the cost while the other half could be covered through forecast toll revenues.

Managed lanes provide transportation choice. Active management of these travel lanes results in guaranteed travel times and reliability for users. Demand for additional general purpose lanes may eventually exceed capacity, but managed lanes can always provide a congestion-free alternative.



EVALUATION FRAMEWORK

Early on in the development of the MLSP, an evaluation framework was established to systematically study the full range of opportunity offered by managed lanes. Within this framework, a three-tiered screening approach was designed to arrive at one preferred solution for each corridor in the managed lane network. This process sought balance between the system-optimal solution and what was best for each corridor, recognizing that individual projects would ultimately work in concert to provide transportation choice and improved mobility on a regional scale.



Level 1: Features that can be eliminated on a system wide basis

- Identification of candidate corridors
- Bi-directional & reversible lane opportunities
- System-level eligibility policies
- Maximum number of managed lanes
- Managed lane termination points

Level 2: Features that can be eliminated within a specific corridor

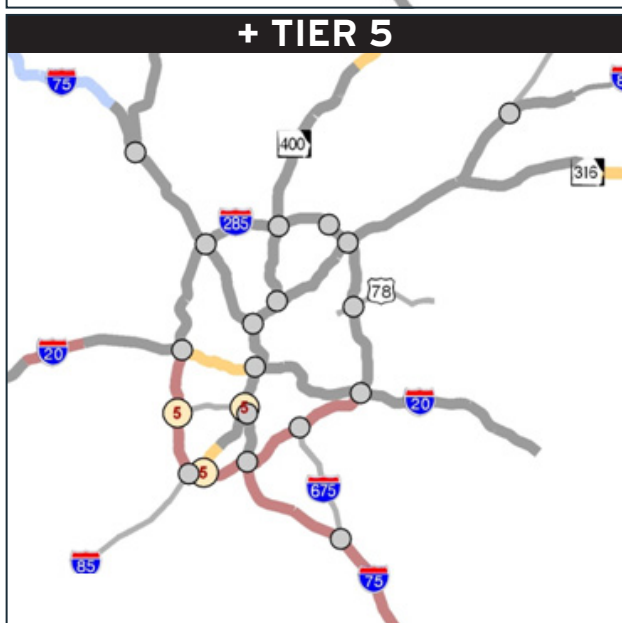
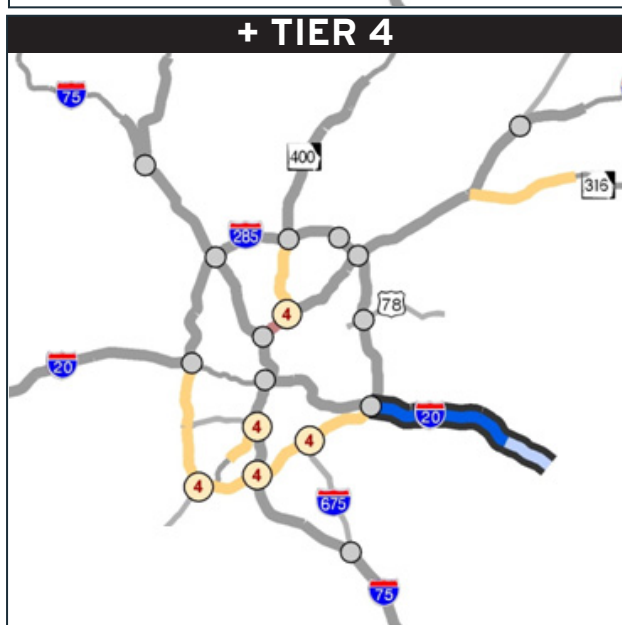
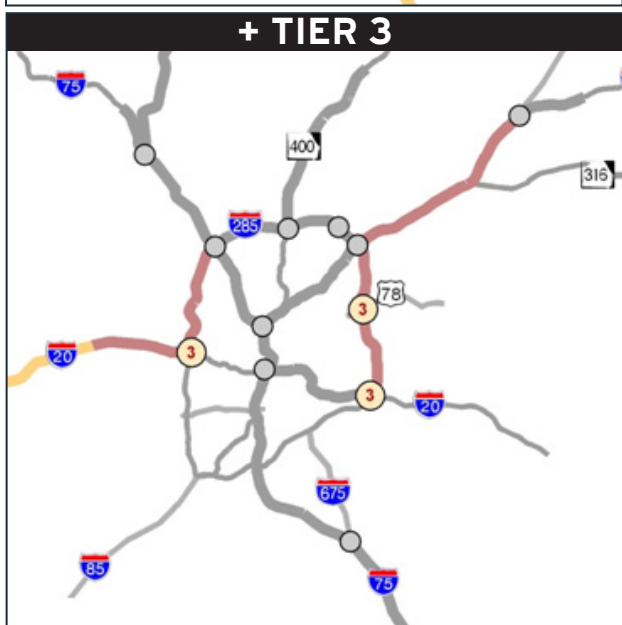
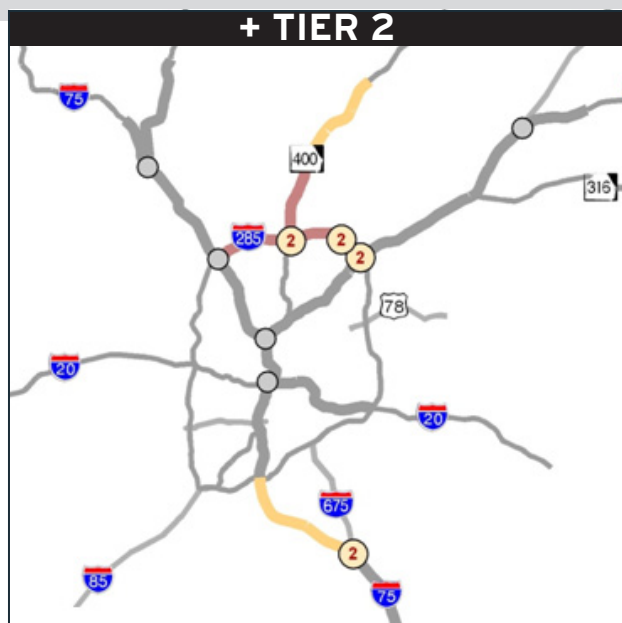
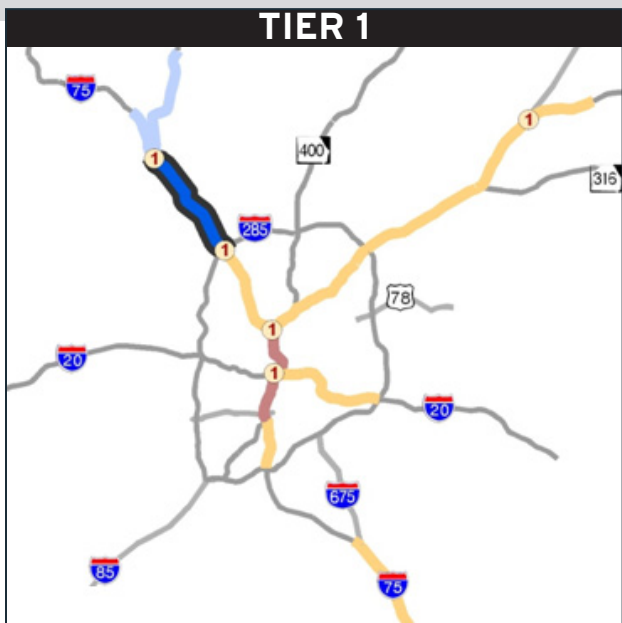
- Truck eligibility & policy recommendation
- Analysis of bi-directional vs. reversible and at-grade vs. elevated
- Logical termini and access location analysis
- Managed lane location analysis (inside vs. outside)
- Analysis of buffer and barrier separation

Level 3: Key concepts and financial trade-offs

- Operating and tolling policy recommendations & future opportunities
- Ultimate and minimum termini & access locations
- Ultimate and minimum operations concept (elevated, reversible, etc.)
- Ultimate and minimum lane construction concept

FINAL RECOM

IMPLEMENTATION, BY TIER



LEGEND

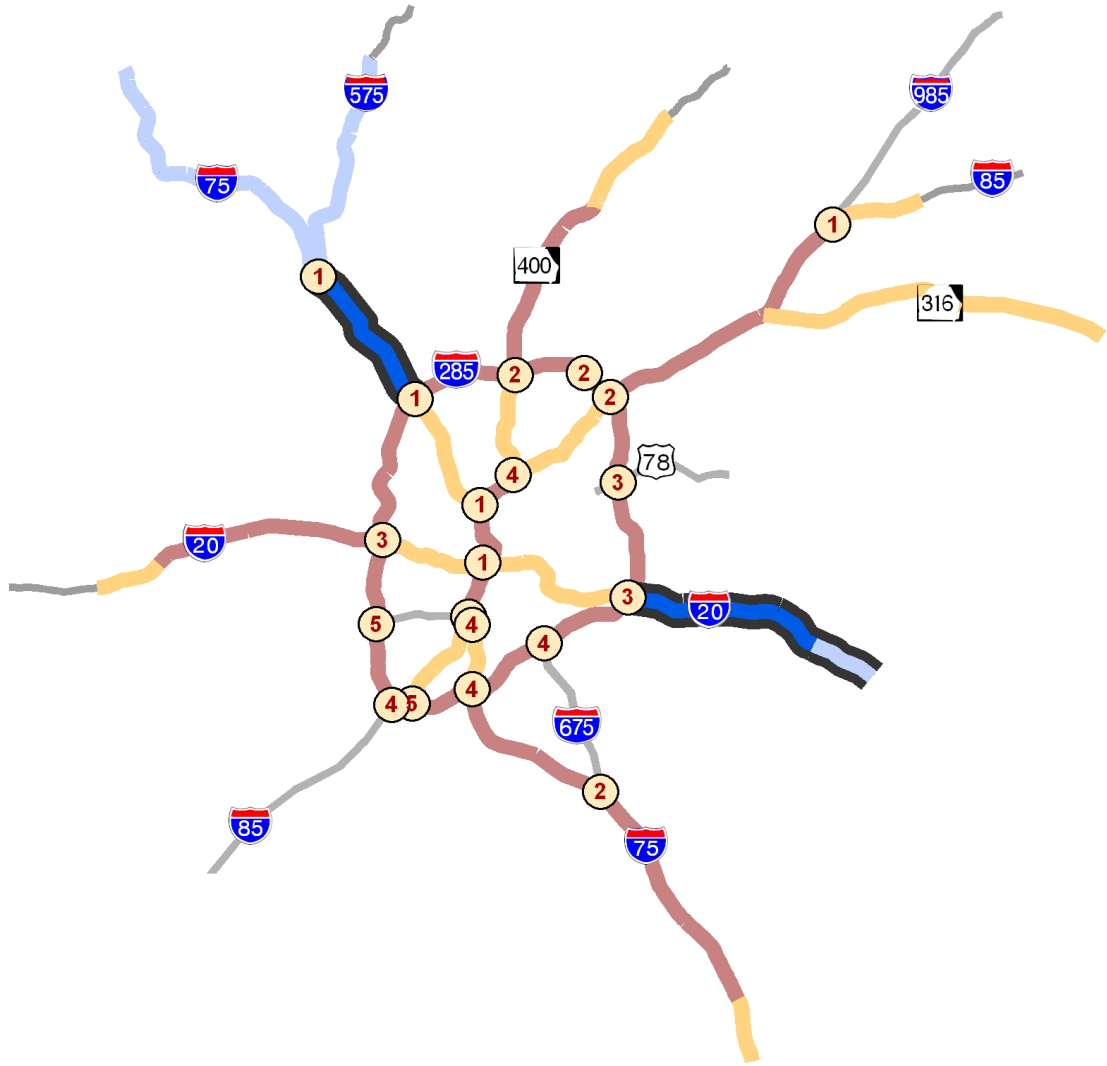
- 1 Interchanges, *number indicates tier*
- 1 Bi-Directional Managed Lane
- 2 Bi-Directional Managed Lanes
- 1 Reversible Managed Lane
- 2 Reversible Managed Lanes
- Elevated - Outside

RECOMMENDATIONS SUMMARY

Five tiers of projects emerged from the screening process. These tiers strike a balance among system benefits, revenue and costs, while also generating a cohesive network. The criteria used as a basis for determining the tiers included:

- Ease of implementation
- Environmental analysis status
- Design activities underway
- Level of public contribution
- Connectivity

ULTIMATE MANAGED LANES SYSTEM BUILD-OUT



CAPITAL COST \$16B

FINANCEABLE AMOUNT \$9B

(Amount supported by project revenues)

FUNDING GAP \$7B

(Necessary Public Sector Contribution)

SAVES THE REGION \$47B IN REDUCED TRAFFIC DELAY, OVER 35 YEARS



MANAGED LANE SYSTEM PLAN

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