CORRIDOR STRATEGIES MEMORANDUM

I-85 Planning Environmental Linkages (PEL) Study

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July 22, 2020

GDOT Georgia Department of Transportation

Gwinnett

I-85 PLANNING AND ENVIRONMENTAL LINKAGES (PEL) STUDY

Corridor Strategies Memo

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ACRONYMS AND ABBREVIATIONS

ATM	Active Transportation Management
BRT	Bus Rapid Transit
CD	Collector-Distributor
DDI	Diverging Diamond Interchange
DLT	Displaced Left Turn
EMS	Emergency Medical Services
ETL	Express Toll Lanes
GCDOT	Gwinnett County Department of Transportation
GCT	Gwinnett County Transit
GDOT	Georgia Department of Transportation
HOT	High-Occupancy Toll
HOV	High-Occupancy Vehicle
ITS	Intelligent Transportation Systems
PEL	Planning and Environmental Linkages
RCUT	Restricted-Crossing U-Turn
SME	Subject-Matter Expert
SPUI	Single-Point Urban Interchange
SR	State Route
TDM	Transportation Demand Management
TIMS	Traffic Incident Management System
UOI	Universe of Ideas

1 INTRODUCTION

The purpose of this memorandum is to provide the Georgia Department of Transportation (GDOT), Gwinnett County Department of Transportation (GCDOT), and stakeholders with an overview of the draft corridor strategies for the I-85 Planning and Environmental Linkages (PEL) Study. The I-85 PEL Study area runs roughly 18 miles along I-85 from I-285 (Spaghetti Junction) to I-985 (Exit 113). The corridor contains 16 interchanges[1], four to six general-purpose travel lanes in each direction, and one High-Occupancy Toll (HOT) lane in each direction. The study area starts in DeKalb County but runs primarily through Gwinnett County, with 14 cities within or adjacent to the corridor. This memo begins by explaining the development and application of the Corridor Strategies, followed by a detailed description of each strategy.

2 HOW TO USE CORRIDOR STRATEGIES

The I-85 Corridor Strategies is a set of strategies derived from best practices and experience in urban corridor planning. These strategies can be applied to develop future projects along the I-85 corridor study area and to convert the unique opportunities that the corridor provides into planning investments that help shape a better future for the corridor and the region in general. The draft Study Vision and Goals guided the development of the Corridor Strategies. The draft Vision is as follows:

> *I-85 will provide safe, reliable interstate travel for people and goods as part of a connected, efficient transportation network while creating value for surrounding communities.*

Although the Study Goals are still in draft form, they laid the foundation for developing the Corridor Strategies. **Figure 1** shows the draft Study Goals.

[1] Includes the programmed McGinnis Ferry Road interchange

Figure 1. Draft Study Goals

Subject-matter experts (SMEs) collaborated to brainstorm and develop the Corridor Strategies in October 2019. The purpose of doing this early in the study process was to develop broad, generic, and flexible strategies that could be applied to specific issues cited in the Existing Conditions and Needs Assessment. As SMEs brainstormed possible strategies for the study area, 23 generic Corridor Strategies emerged. They ranged from roadway modifications and policy recommendations to improved public transit and multimodal connections. **Figure 2** shows the results of the brainstorming session that led to Corridor Strategies.

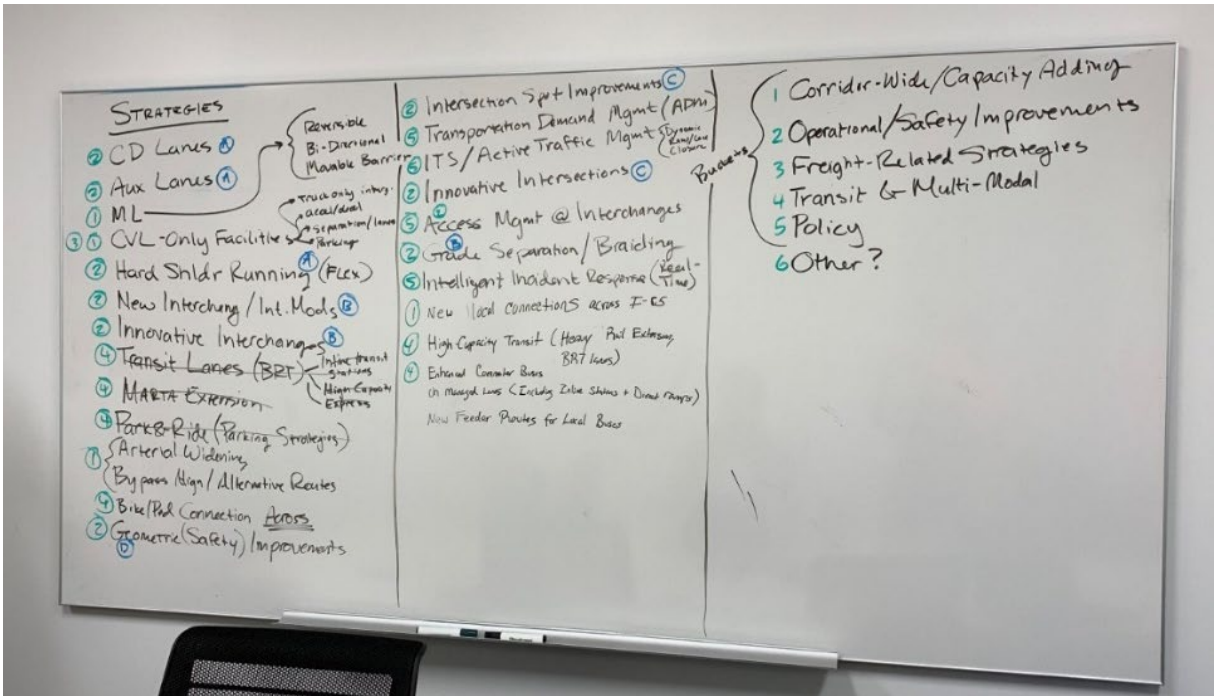


Figure 2. Photo Taken During the Strategies Brainstorming Session

After the brainstorming session, the Corridor Strategies were grouped into five broad categories. They are as follows:

- Corridor-Wide/Capacity-Adding Improvements
- Operational/Safety Improvements
- Freight-Related Strategies
- Transit & Multimodal Strategies
- Policy Strategies

The Corridor Strategies, working in conjunction with Hot Spots[2], play an important role in identifying potential improvements along the I-85 study area. All the potential improvements are organized into the Universe of Ideas (UOI), an all-encompassing list of potential improvement ideas, as part of the first phase of the I-85 PEL Study. The I-85 PEL Study consists of three major phases (**Figure 3**):

1. Alternative Generation
2. Screening Methods
3. Implementation Plan

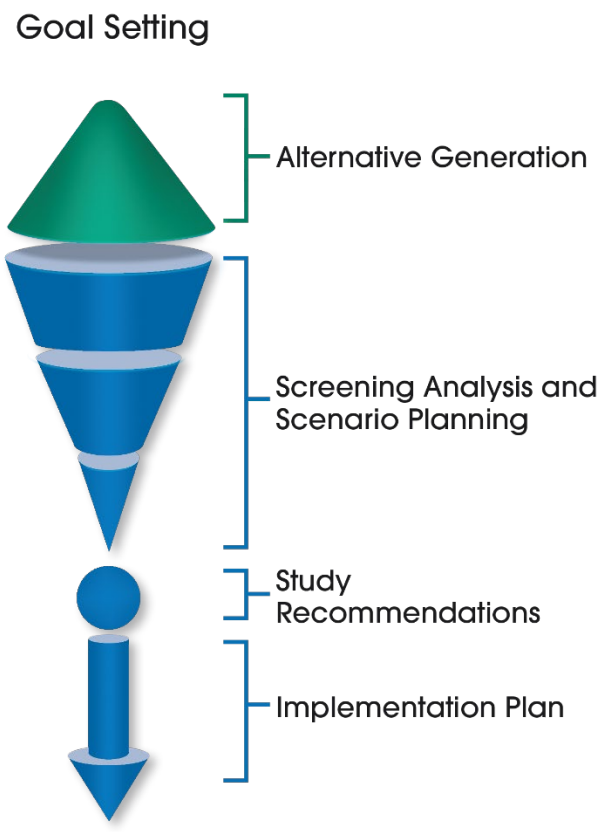


Figure 3 Major Phases of the I-85 PEL Study

[2] In the context of the I-85 PEL Study, the definition of a Hot Spot is a*n area that has been identified as having a high proportion of operational and/or capacity issues, experiencing a high concentration of crashes, and/or needing design improvements.*

The Corridor Strategies fit into the **Alternative Generation** phase. This phase includes data collection, Existing Conditions and Needs Assessment, and the generation of the UOI. The UOI will undergo a high-level feasibility and constructability screening process, and those with fatal flaws will be eliminated from further consideration. Comparable improvement ideas will be combined, as appropriate, during this phase. The Alternative Generation phase will produce a manageable number of improvement alternatives to advance to more detailed evaluation.

There are four primary ways potential improvements are identified for the UOI. Public and stakeholder input, as well as previous plans and studies, help generate improvements to incorporate into the UOI. Innovation team meetings – workshops with the study team and national subject-matter experts – also provide input into the UOI. Finally, the Hot Spot analysis and the Corridor Strategies, which follow the Existing Conditions and Needs Assessment, provide a systematic way to identify potential improvements for the UOI. This process is illustrated on **Figure 4** .

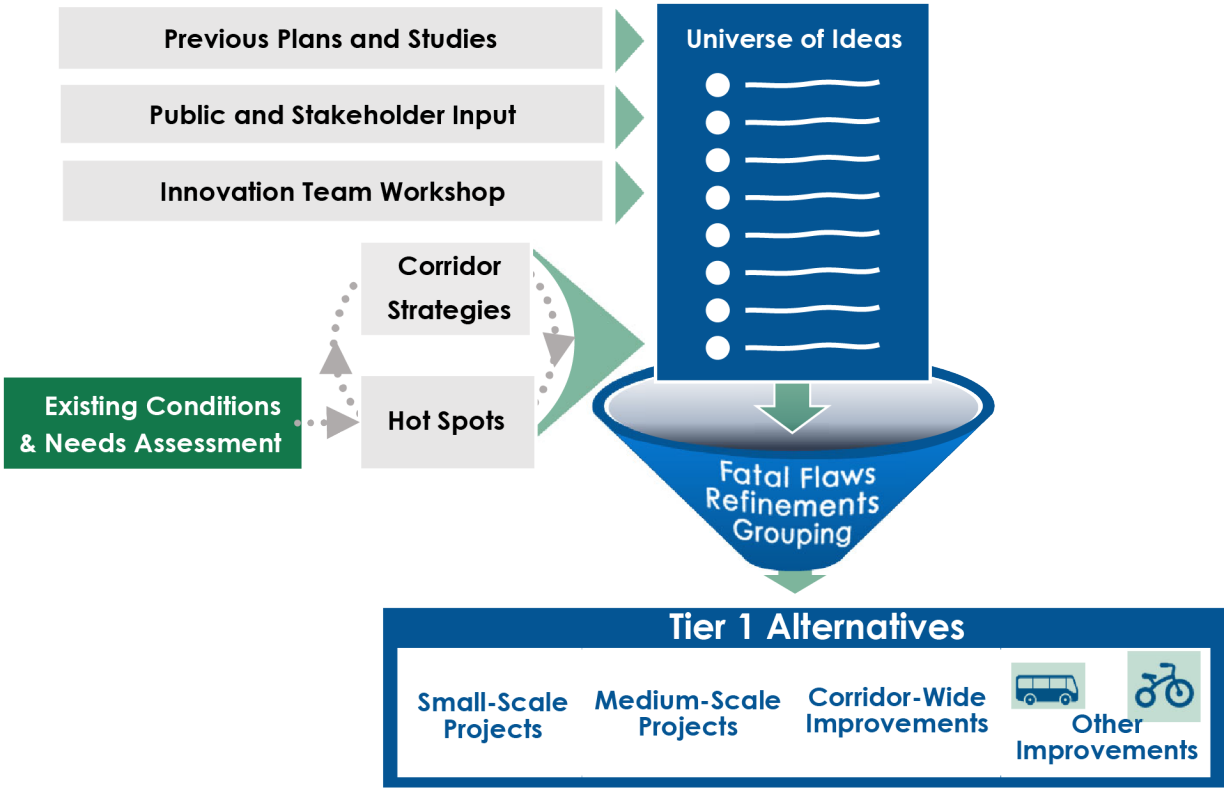


Figure 4. Alternative Generation Process

The study team will apply Corridor Strategies on each Hot Spot to identify potential solutions. For example, Hot Spot 1 is located on the northbound side of the I-85 mainline from the I-285/I-85 interchange to the Pleasantdale Road on-ramp[3]. The study team can then systematically find applicable solutions for this Hot Spot using the list of Corridor Strategies on **Figure 5**. The remainder of this memo discusses each Corridor Strategy in detail.

[3] Details related to Hot Spots can be found in the Hot Spot Technical Memorandum for the I-85 PEL Study.

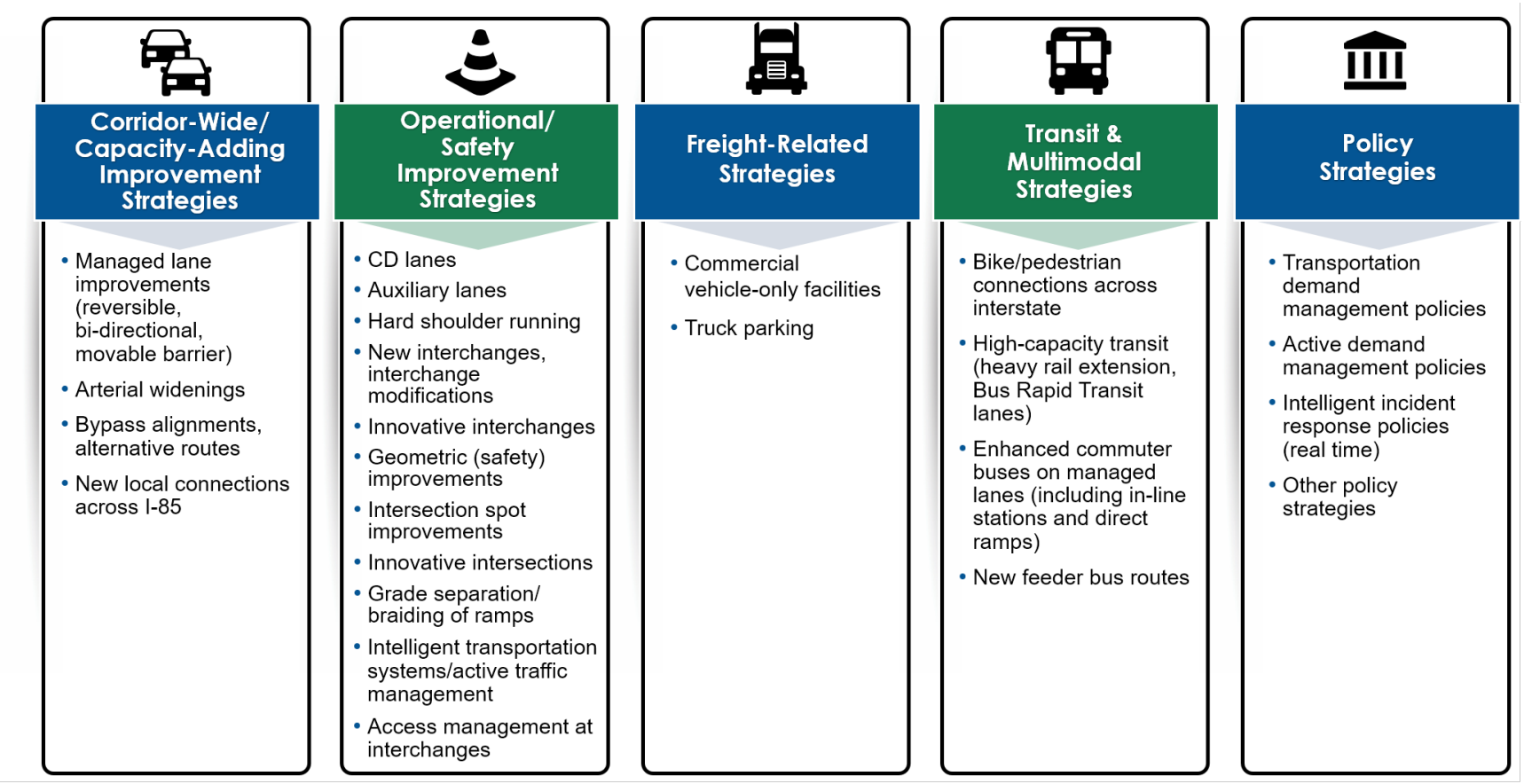


Figure 5. Corridor Strategies by Category

3 CORRIDOR STRATEGIES

3.1 Corridor-Wide/Capacity-Adding Improvements

This section examines each strategy, through the lens of the following characteristics:

- **Strategy Description** – explains the approach
- **Types of Application** – involves applicable policies or regulations associated with each strategy
- **Types of Configuration** – explains possible types of design or alignment from current best practices
- **Potential Benefits** – summarizes high-level benefits
- **Examples** – provides examples along the I-85 corridor, or other places in Atlanta or other cities

Not all of the above apply to each strategy, as some strategies do not have variable types of applications or configurations.

1. Managed Lane Improvements

Strategy Description: Managed lanes use a combination of vehicle eligibility, access controls, and/or pricing tools to actively manage traffic volumes. The purpose of managed lanes is to provide a valuable mobility option, optimize traffic flow, and maximize travel efficiency.

Types of Application: There are different types of managed lanes, including High-Occupancy Vehicle (HOV) lanes, value-priced lanes such as HOT lanes and Express Toll Lanes (ETLs), bus or transit lanes, and commercial vehicle lanes. HOV lanes are reserved for vehicles with two or more occupants, motorcycles, emergency vehicles, buses, and certified alternative fuel vehicles. Approximately 90 miles of HOV lanes operate on I-75, I-85, and I-20 in metro Atlanta inside of the Perimeter.

HOT lanes are free to high-occupancy vehicles and other exempt vehicles without charge; other vehicles are required to pay fees, or tolls. The tolls can be fixed or have a variable fee that adjusts based on demand. HOT3+ lanes also operate on I-85 north in Atlanta. These lanes allow vehicles with three or more occupants to use for free, but charge tolls to vehicles with one or two occupants.

ETLs require that all vehicles pay tolls, with the exception of transit vehicles, emergency vehicles, certified alternative fuel vehicles, and motorcycles. Some ETLs, such as express lanes on I-75/I-575 north in Atlanta, prohibit medium or heavy trucks.

Bus or transit lanes are reserved exclusively for these vehicles. Commercial vehicle lanes are usually dedicated to commercial vehicles (e.g., medium or heavy trucks).

Types of Configuration: Managed lanes can be either bi-directional or reversible. Unlike bi-directional managed lanes, reversible managed lanes focus on the peak directional demand. These lanes provide flexibility and can maximize the lanes' utility by serving the direction of greatest traffic flow.

In addition, managed lanes can operate using different separation types, including physical barrier separated, buffer separated, or moveable barriers. Moveable barriers can help redistribute unused capacity from the off-peak traffic direction to the peak traffic direction.

Vehicles can enter or exit managed lanes via access points. The types of access points include continuous access, restricted at-grade access, and grade-separated access.

Potential Benefits: Considering the complexity to apply for funding to widen or expand general-purpose lanes, managed lanes can be a feasible alternative to improve congestion along freeways in urban areas. With appropriate operations, policies, and regulations in place, managed lanes provide mobility, optimize traffic flow, and maximize travel lane efficiency. Managed lanes are often a potential mechanism for innovative financing to build and maintain additional capacity along interstates.

Examples: Managed lanes can be found throughout major U.S. cities. In Atlanta, multiple types of managed lanes are in operation, including buffer-separated bi-directional HOV lanes on I-85, I-75, and I-20 inside the Perimeter; buffer-separated bi-directional HOT3+ lanes on I-85 north; and barrier-separated reversible ETLs on I-75/I-575 north and I-75 south. Figure 6 shows a portion of the current express toll reversible lanes along I-75 north in Atlanta, which are elevated two-lane facilities. **Figure 7** shows a flyover visualization of the buffer-separated express lanes planned on SR 400 at Northridge Road.

Figure 6. Northwest Corridor Express Lanes

Source: https://www.wsbradio.com/news/traffic/some-metro-atlanta-express-lanes-close-ahead-winter-weather/KzVocADHMUOdfFistpRP1O/

Figure 7. SR 400 Express Lanes Project Visualization

Source: https://majormobilityga.com/projects/sr400/

2. Arterial Widenings

Strategy Description: Widening the parallel and/or connecting arterials to an interstate corridor could be considered when widening the interstate corridor is excessively costly or causes severe adverse impacts.

Potential Benefits: Widening and upgrading the parallel and/or connecting arterials can help relieve traffic congestion on the interstate, as local or shorter trips would use those improved arterials as an alternative.

Examples: SR 20 between Canton in Cherokee County and Cumming in Forsyth County is a major arterial connecting I-75 and I-575. The SR 20 widening project has two sections: I-75 to I-575 and I-575 to North Corners Parkway. **Figure 8** shows the widening project.

Figure 8. Project Map of SR 20 Widening

Source: http://www.dot.ga.gov/BS/Projects/SpecialProjects/SR20Improvements

3. Bypass Alignments / Alternative Routes

Strategy Description: Alternative or bypass routes might be appropriate in cases in which the interstate corridor is severely congested, and the resulting bypass would not cause serious trip delays or environmental impacts. Before considering alternative route options, better connections between local roads and interstates must be established. **Figure 9** illustrates the function of bypass and alternate routes.

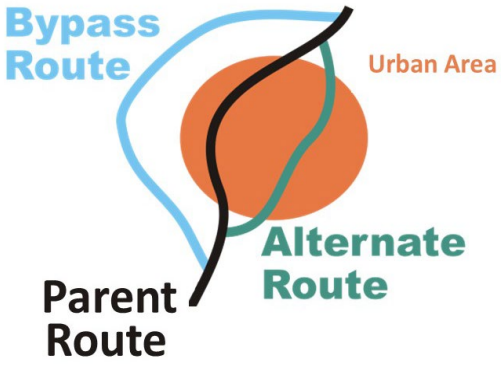


Figure 9. Bypass Route and Alternative Routes

Source: http://www.dot.ga.gov/BS/Projects/SpecialProjects/SR20Improvements

Potential Benefits: Alternative routes can help accommodate traffic demand on major interstates by alleviating congestion on segments experiencing heavy traffic.

Examples: I-285 in Atlanta, built in the late 1960s, provides bypass routes for vehicles going through downtown Atlanta. The SR 120 Alternative route in Marietta serves as a bypass, or alternative, route to the SR 120 mainline as shown on **Figure 10**.

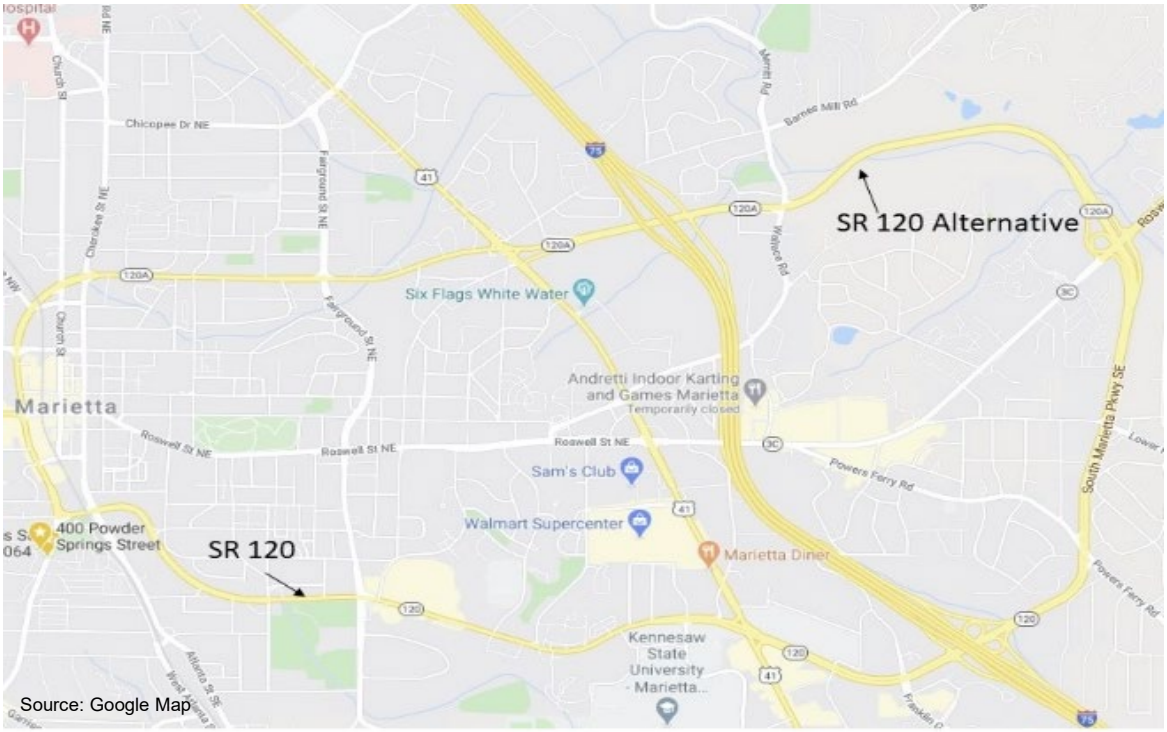


Figure 10. SR 120 Alternative in Marietta, GA

4. New Local Connections

Strategy Description: New local connections can be considered when local traffic heavily or frequently uses existing interchanges to cross the highway and therefore impacts operations at the interchanges.

Potential Benefits: Providing more local connections across the interstate could improve existing interchange operations and increase accessibility in areas around the highway system.

Example: **Figure 11** shows a new local connection, 17th Street, which was built from 2002 to 2003; 17th Street overpasses the Downtown Connector, providing local access between communities and business centers such as Atlantic Station as well as surrounding commercial developments.

Figure 11. New Local Connections

Source: https://www.aisc.org/nsba/prize-bridge-awards/prize-bridge-winners/17th-street-bridge/

3.2 Operational/Safety Improvements

5. Collector-Distributor Lanes

Strategy Description: Collector-Distributor (CD) lanes are separate lanes between the mainline and local roads that are designed to handle entering and exiting traffic volumes.

Types of Configuration: CD lanes can be bi-directional on one or both sides of a major highway or can be one-way roads on each side.

Potential Benefits: CD lanes can improve efficiency by increasing traffic flow and enhance safety by providing more organized transitions. CD lanes can be used at major highway interchanges where lane changes cause mainline traffic to slow down unnecessarily. They can also be used along freeways in areas with closely spaced major roadways and little room for entrance and exit ramps.

Examples: Along the I-85 study area, established CD lanes serve the corridor and nearby communities. These lanes include those around the I-285 and I-85 interchanges as well as those connecting the interchanges at Northcrest and Pleasantdale roads. **Figure 12** shows the CD lane system on I-20 at Wesley Chapel Road.

Figure 12. CD Lane System on I-20 at Wesley Chapel Road in DeKalb County

6. Auxiliary Lanes

Strategy Description: An auxiliary lane is an extra lane constructed between on- and off-ramps to allow vehicles to merge into highway traffic while avoiding potential bottlenecks caused by vehicles getting on or off the highway. **Figure 13** illustrates the auxiliary lanes concept and benefits.

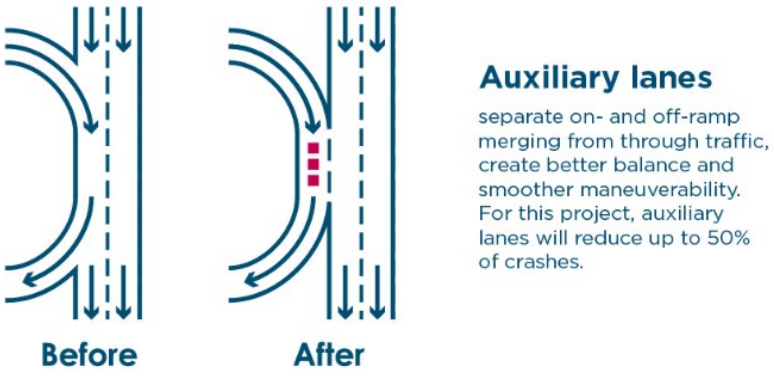


Figure 13. Auxiliary Lanes

Source: https://www.i5rosequarter.org/i-5-auxiliary-lanes-shoulders/

Types of Configuration: Besides constructing auxiliary lanes, extensions of existing auxiliary lanes on the interstate can provide more space and time for vehicles to merge onto the interstate and reduce potential bottlenecks.

Potential Benefits: Introducing new auxiliary lanes or expanding existing auxiliary lanes can increase efficiency and safety, providing an easier merging transition and leading to fewer crashes. The lanes can also reduce highway ramp congestion with easier transitions and reduced queues.

Examples: Auxiliary lanes exist along the I-85 study area at major interchanges such as I-85 northbound approaching Jimmy Carter Boulevard and I-85 southbound at Sugarloaf Parkway.

7. Hard Shoulder Running

Strategy Description: Hard shoulder running allows a roadway shoulder to serve as additional capacity temporarily. This concept shares the same methodology as dedicated lane planning for commercial vehicles or public buses. However, hard shoulder running is more economical, as it temporarily converts pre-existing facilities.

Types of Application: Hard shoulder running can be used by commuters during peak periods to alleviate congestion or to provide temporary multimodal facilities for public transit vehicles, buses, or vanpools.

Potential Benefits: Hard shoulder running provides additional capacity that can improve travel speeds and travel time reliability. Hard shoulder running is significantly less costly to build than capacity-adding projects along interstates, and it results in a better return on investment in the short term. Experience with other cities suggests that a hard shoulder running strategy works effectively when combined with transportation system management and operation strategies or techniques. These techniques include the application of control devices such as signals, signage, and gates to regulate the number of vehicles entering or leaving the shoulders; the systematic, coordinated use of incident management to reduce the impact of incidents on shoulders; and better traveler education on shoulder lane policies. **Figure 14** shows a sign on SR 400 in Atlanta indicating peak time shoulder operations.

Examples: **Figure 15** and **Figure 16** provide examples of using shoulders on congested interstates or state routes.

Figure 14. Peak Time Shoulder Operations on SR 400 in Atlanta

Source: https://ops.fhwa.dot.gov/publications/fhwahop15023/apb.htm

Figure 15. Shoulder Operations on I-85 in Atlanta

Source: Google Street View

Figure 16. Xpress bus running on hard shoulder lane on SR 400

Source: Google Street View

8. New Interchanges or Interchange Modifications

Strategy Description: Adding new interchanges provides additional accessibility from interstates to local roads (e.g., arterials, collectors), which could benefit areas that lack an access point to destinations. However, in urban areas, where interchange density along an interstate segment tends to be higher, modifying the existing interchanges is more cost effective and could avoid greater environmental impacts.

Potential Benefits: Modifications to existing interchanges include access control revisions for new ramps or the relocation/elimination of existing ramps. Modifications to a specific interchange can be assessed and determined based on identified issues to improve traffic and safety.

Example: The proposed McGinnis Ferry Road interchange at I-85 could provide relief for the heavily congested Lawrenceville-Suwanee Road interchange.

9. Innovative Interchanges

Strategy Description: The innovative designs of the interchange modify vehicle, pedestrian, and bicycle movements at conventional interchange locations.

Types of Configuration: Innovative interchanges include but are not limited to Diverging Diamond Interchange (DDI), Displaced Left Turn (DLT) Interchange, Single-Point Urban Interchange (SPUI), and double roundabouts at ramp terminals.

Potential Benefits: Innovative interchanges could provide new, cost-effective options to reduce delay, increase efficiency, and improve safety for road users.

Examples: Currently, there are two DDIs along the corridor: Jimmy Carter Boulevard and Pleasant Hill Road. **Figure 17, Figure 18,** provide illustrations of DDI and SPUI, respectively. Examples of DDI and DLT in Georgia can be found here: http://www.dot.ga.gov/DS/Alternative. **Figure 19** shows an overlook of the double roundabouts on the Riverside Drive and I-285 ramps.

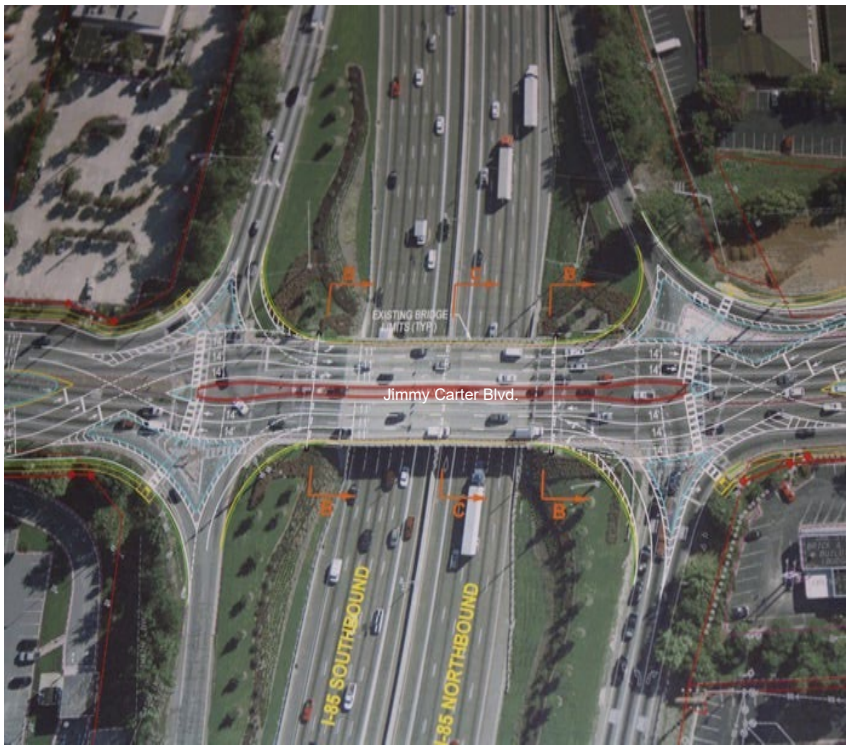


Figure 17. Diverging Diamond Interchange (on I-85 in Gwinnett County, GA)

Source:https://patch.com/georgia/norcross/grant-approved-for-diverging-diamond-interchange-at-je209b588c0

Figure 18. Single Point Urban Interchange

Source: http://www.dot.ga.gov/AboutGeorgia/Board/Board%20Meeting%20Documents/IntersectionControlEvaluationICE-4-18-19.pdf

Figure 19. Roundabouts at Riverside Dr and I-285

Source: https://www.georgia.ashe.pro/ann/TS_4B-Latest_Developments_of_Intersection_Control_Evaluation_ICE.pdf

10. Geometric (Safety) Improvements

Strategy Description: Geometric improvement measures involve vertical and horizontal road realignments.

Types of Configuration: Typical improvements on the interstate include lane widening, curve realigning, reconstructing and widening pavement, improving super elevation deficiencies, adding spiral transition curves, improving storm drains, and widening substandard shoulders or providing shoulders.

Potential Benefits: Geometric improvement measures directly affect the operational performance of highways and vehicle safety.

11. Intersection Spot Improvements

Strategy Description: Intersection spot improvements are actions to address specific problems at intersections to improve operations and safety by bridging physical or functional gaps. This strategy addresses issues at the intersections near interstate interchanges, as these safety and operational deficiencies could impact overall interstate performance.

Types of Configuration: The most common strategies for intersection spot improvements include adding and/or extending turn lanes to accommodate heavy turning movements, improving signal timing, improving sight distance, and enhancing bicycle or pedestrian facilities at the intersection.

Examples: The unique design of intersections can alleviate common road congestion challenges. **Figure 20** shows an example of spot improvement at a quadrant road intersection design constructed in Fairfield, Ohio.

Figure 20. Quadrant Road Intersection in Fairfield, OH

Source: https://thespot.ljbinc.com/2012/05/11/unique-intersection-design-alleviates-common-roadway-challenges/

12. Innovative Intersections

Strategy Description: As traffic volumes grow and congestion worsens, conventional intersection designs could be insufficient at certain locations to address mobility and safety challenges. Similar to the strategy of No. 11 (intersection spot improvements), innovative intersections apply to intersections on arterials that connect to the interstates. The purpose of this strategy is to reduce queues on arterials and improve vehicle movement on or off interstates.

Types of Configuration: Innovative intersections, such as Median U-Turns, DLT, Restricted-Crossing U-Turn (RCUT), or Continuous Flow Intersections, are used by transportation agencies and local communities to reduce delay, increase efficiency, and enhance safety by reducing the number and severity of conflict points.

Examples: **Figure 21** shows a typical Medium U-Turn in Michigan. **Figure 22** shows a Restricted-Crossing U-Turn intersection, SR 20 at Simpson Mill Road in Georgia. **Figure 23** (next page) shows a Continuous Flow Intersection at US 78/SR 124 in Snellville, GA.

Figure 21. Medium U-Turn in Michigan

Figure 22. Restricted-crossing U-turn Intersection in Georgia

Source: https://www.fhwa.dot.gov/publications/research/safety/07033/ (Figure 21)
Source: Google Map (Figure 22)

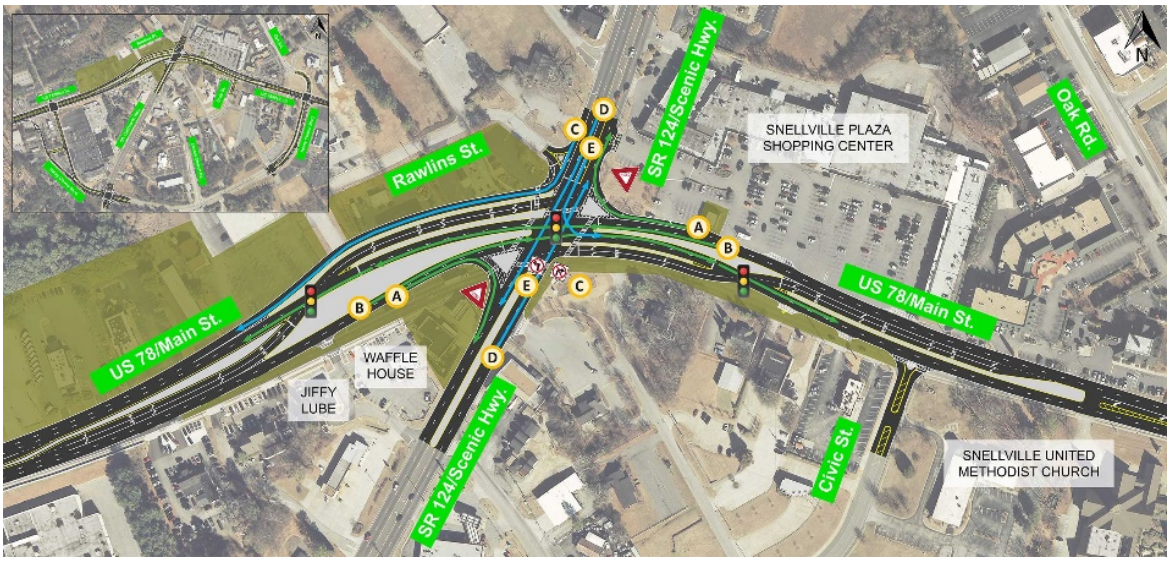


Figure 23. US 78/SR 124 Continuous Flow Intersection in Snellville, GA

Source: http://www.dot.ga.gov/DS/Alternative/DLT/US78SR124

13. Grade Separation/Braiding of Ramps

Strategy Descriptions: Grade separation is used in high-traffic volume areas to enable uninterrupted traffic flow by using overpasses. Braided ramps separate incoming and exiting traffic by having one ramp pass over the other, which are typically separated vertically by concrete.

Potential Benefits: Grade separation or braided ramps streamline traffic flow by eliminating traffic weaving to improve safety and reduce congestion.

Examples: **Figure 24** shows an example of braided ramps at I-496 in Lansing, MI.

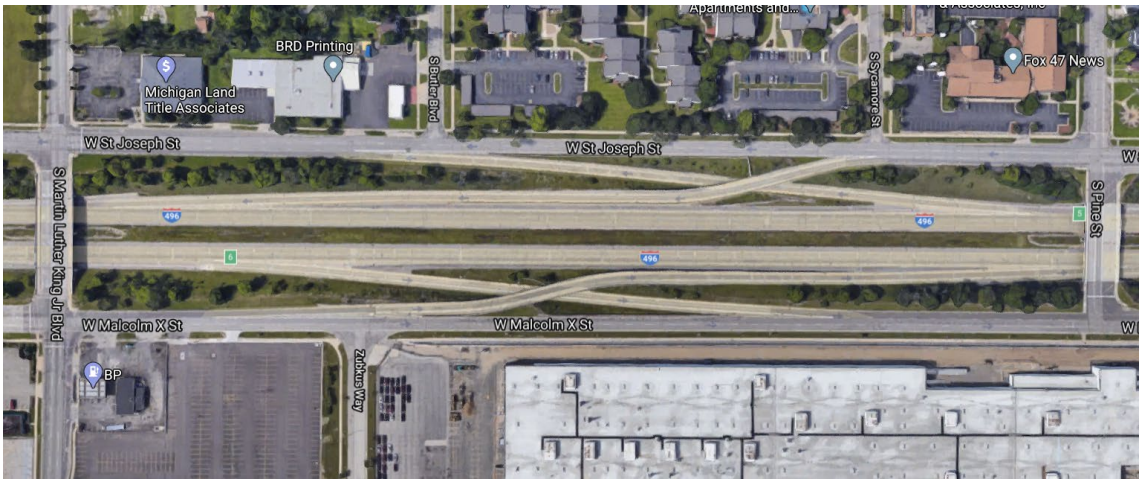


Figure 24. Braided Ramps at I-496 in Lansing, MI

Source: Google Map

14. Intelligent Transportation Systems/Active Traffic Management

Strategy Description: Intelligent Transportation Systems (ITS) enable users and facilities to share information with one another and receive real-time data to advance safety and mobility. This is achieved by integrating advanced communication technologies into traditional transportation infrastructures and vehicles on highway systems.

Active Traffic Management (ATM) focus on dynamically managing recurrent and non-recurrent congestion to improve peak period operations based on prevailing and predicted traffic conditions.

Types of Application: Techniques under ATM include dynamic lane use control, dynamic speed limits, adaptive ramp metering, merge control, queue warning, and dynamic messaging signs.

Examples: **Table 1** lists a few examples in cities where ATM was implemented.

Table 1: Active Traffic Management Examples

Location(s)	ATM Strategy	Active Technologies
Atlanta, GA	Dynamic speed limits, queue warning, adaptive ramp metering, dynamic shoulder lanes	Roadway sensors, lane control/dynamic speed limit signals, dynamic message signs, TMC algorithms and control
Minneapolis, MN	Dynamic lane use control, dynamic speed limits, queue warning, adaptive ramp metering	Roadway sensors, lane control/dynamic speed limit signals, dynamic message signs, TMC algorithms and control
Seattle, WA	Dynamic lane use control, dynamic speed limits, queue warning, adaptive ramp metering	Roadway sensors, lane control/dynamic speed limit signals, dynamic message signs, TMC algorithms and control
Northern Virginia	Dynamic lane use control, dynamic speed limits, queue warning, dynamic shoulder lanes	Roadway sensors, lane control signs, dynamic speed limit signals, dynamic message signs, TMC algorithms and control
Los Angeles, CA	Dynamic junction control	Dynamic lane assignment signs, illuminated pavement markers

Source: https://ops.fhwa.dot.gov/publications/fhwahop13003/index.htm

15. Access Management at Interchanges

Strategy Description: This strategy applies to intersections along arterials that connect to interstate ramps. Strategic access management along arterials will help improve an interstate interchange by removing conflict points on roadways close to ramp terminals.

Types of Configuration: Access management includes a set of techniques that control elements of a roadway segment, such as the spacing, design, and operation of driveways, turns, medians, and intersections. Implementation of control access points can be achieved by operation utilization, geometric design, and safety enhancements.

Potential Benefits: Incorporation of roadway access management at interchanges could effectively extend the life of roads and highways, increase public safety, and reduce traffic congestion. Access management on arterial roadways near interstates could benefit these interstates by removing conflict points that are close to highway ramp terminals.

Examples: I-85 at Jimmy Carter Boulevard, shown on **Figure 25,** exhibits some of the features of access management of controlled-access interstates: entrance and exit ramps as well as no at-grade intersections between the local road and interstate. The raised median on Jimmy Carter Boulevard limits the conflict points by allowing only right-in/right-out movements from/to the arterial.

Figure 25. I-85 at Jimmy Carter Boulevard

Source: https://www.ersnell.com/projects/gwinnett-county-jimmy-carter-blvd-85/

3.3 Freight-Related Strategies

16. Commercial Vehicle-Only Facilities

Strategy Description: Commercial vehicle-only facilities are lanes dedicated for use by qualifying commercial vehicles. These lanes are typically separated from passenger vehicle lanes by physical barriers or buffer zones.

Types of Configuration: Commercial Vehicle Lanes (CVLs) can have dedicated entrance and exit ramps and can be bi-directional or one-way along interstate segments, depending on the truck movement pattern.

Potential Benefits: CVLs are considered on corridors with a higher percentage of truck traffic. Dedicated commercial vehicle lanes can enhance safety and traffic flow by minimizing conflicts between commercial and passenger vehicles.

Examples: Georgia is advancing its first CVL project on I-75 from metro Atlanta to the Macon area, as shown on **Figure 26**.

Figure 26. I-75 Commercial Vehicle Lanes (CVLs)

Source: https://movinghenryforward.org/2019/10/07/georgia-dot-announces-accelerated-timeline-for-i-75-commercial-vehicle-lanes/

17. Truck Parking

Strategy Description: Current and projected growth of truck traffic has prompted demand for better access to safe, secure, and accessible truck parking regionwide. Adequate truck parking (e.g., designated parking locations) along a primary interstate freight corridor would minimize the hazards of parking on ramps and freeway shoulders. **Figure 27** shows an example of a public truck parking area on I-20.

Type of Applications: Truck parking can vary between truck stops. They include small parking areas with a fueling station, or large truck parking centers providing full services such as refueling, rest areas, restaurants, truck maintenance facilities, vehicle wash facilities, showers, and movie theaters.

Potential Benefits: Sufficient truck parking services along major interstates will further enhance highway safety and efficient operations of the statewide freight network.

Figure 27. Rest Area on I-20 WB (MM 108)

3.4 Transit & Multimodal Strategies

18. Bike/Pedestrian Connections Across Interstates

Strategy Description: Interstates often act as a physical barrier to and disconnect existing or planned bike and/or pedestrian facilities. This strategy aims to add these facilities across interstates and arterials that connect interstate ramps.

Types of Application: This strategy can be implemented in conjunction with innovative intersections, innovative interchanges, and/or intersection spot improvements.

Potential Benefits: Adding and improving bike and pedestrian connections will allow trips across the interstate in less time and in safer conditions.

Examples: 17th Street on **Figure 28** is an example of bike and pedestrian facilities next to a bus-only lane. **Figure 29** illustrates a potential I-20 pedestrian bridge that connects to the Beltline southside trail.

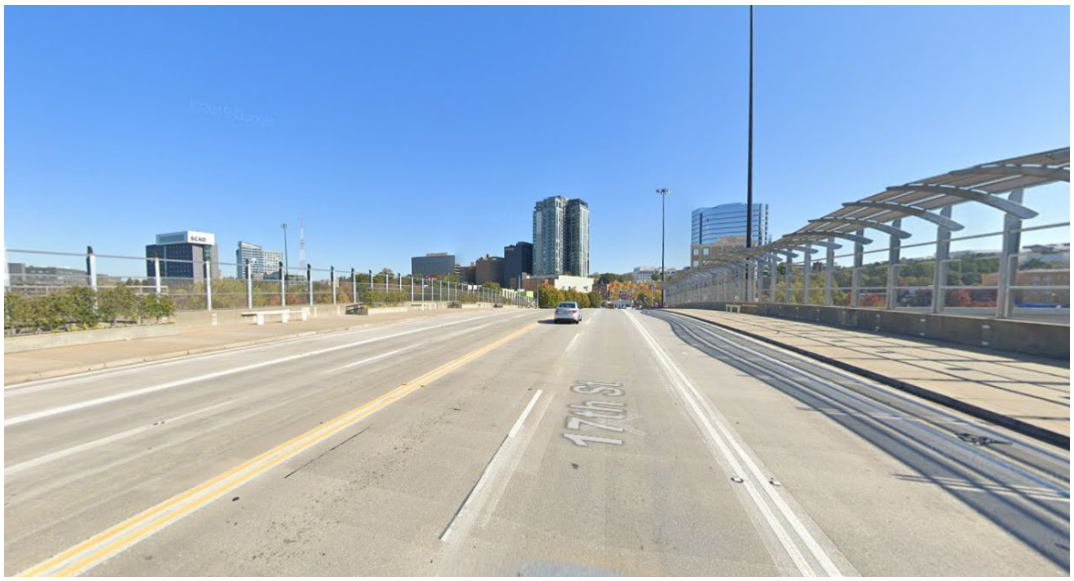


Figure 28. Bike/Pedestrian Connections Across Interstates

Source: Google Map

Figure 29. Proposed I-20 Pedestrian Bridge

Source: https://atlanta.curbed.com/atlanta-development/2019/7/25/8930111/beltline-i-20-pedestrian-bridge-southside-trail-atlanta

19. High-Capacity Transit

Strategy Description: High-capacity transit (e.g., buses and trains) can carry more passengers with more frequent services than a standard fixed route bus system.

Types of Application: High-capacity transit can operate on exclusive right-of-way such as a heavy rail or dedicated Bus Rapid Transit (BRT) lanes, as shown on **Figure 30**.

Potential Benefits: The main goal of high-capacity transit is to provide faster, more convenient, and more reliable service for a larger number of passengers and, at the same time, help reduce congestion for the overall transportation system.

Figure 30. Bus Rapid Transit Station above Interstates

Source: https://www.mprnews.org/story/2010/04/30/bus-rapid-transit

20. Enhanced Commuter Buses on Managed Lanes (Including In-line Stations and Direct Ramps)

Strategy Description: The commuter bus system aims to connect the central business district with suburban residential areas and provide more affordable, convenient commuting options.

Potential Benefits: With the implementation of HOV and HOT lanes on the interstate, commuter buses can use managed lanes to provide time-saving, dependable service to passengers. The advantages of commuter buses could be enhanced with supporting amenities and infrastructure, such as in-line stations and direct ramps. Better commuter bus services could help encourage modal shift, alleviate congestion, and provide more efficient use of the highway system while promoting multimodal options.

Examples: **Figure 31** shows an Xpress bus using the managed lane on I-85 in Atlanta.

Figure 31. Xpress Bus on Managed Lane in Atlanta

Source: https://www.srta.ga.gov/wp-content/uploads/2018/01/

21. New Feeder Bus Routes

Strategy Descriptions: Feeder buses help address last-mile connectivity issues in metro areas. Feeder bus routes connect residential areas with popular transit spots, such as freeway access points.

Potential Benefits: New feeder bus routes around the interstate could increase the accessibility of public transit and solve last-mile connectivity issues for passengers using BRT or commuter bus services.

Examples: Figure 32 shows an Atlantic Station shuttle bus parked at the Arts Center MARTA Station. The shuttle provides transportation services between the transit station and Atlantic Station.

Figure 32. Atlantic Station Shuttle Bus at Arts Center MARTA Station

Source: https://cptdb.ca/topic/15204-marta-atlanta/page/2/

3.5 Policy Strategies

22.Transportation Demand Management Policy

Strategy Description: Transportation Demand Management (TDM) Policy involves systems that combine individual transportation assets along a corridor into one integrated operating system.

Types of Application: Demand management can include a wide range of approaches based on different goals and objectives. Based on the I-85 study goals, the following applications, including both policy-level and project-level examples, can be considered as part of the TDM strategy:

- Congestion pricing policy
- Parking management and pricing policies
- Park-and-ride facilities
- Commute trip reduction programs
- Telework/flexwork programs
- Incident management policy
- Active traffic management policy
- Congestion management policy
- Truck parking improvements
- Transit improvements
- Ridesharing programs
- Bike/pedestrian improvements
- Carsharing programs

Potential Benefits: By partnering with local, state, and private agencies responsible for freeway, arterial, and transit operations within the corridor, TDM can optimize transportation throughout the network by combining technologies and sharing information among network partners.

Examples: TDM covers a wide range of techniques and approaches, and it is being considered and implemented nationwide. Georgia has implemented park-and-ride facilities promoting transit use. The

Georgia Commute Options[4] program, one of the largest programs in the nation working employers, commuters and schools to reduce the number of single-occupant vehicles on roads, includes a range of incentives to promote modes of commuting, such as carpool, vanpool, transit, telework/flexwork, biking and walking other than single occupant driving. **Figure 33** shows the user interface for Georgia Commute Options program participants.

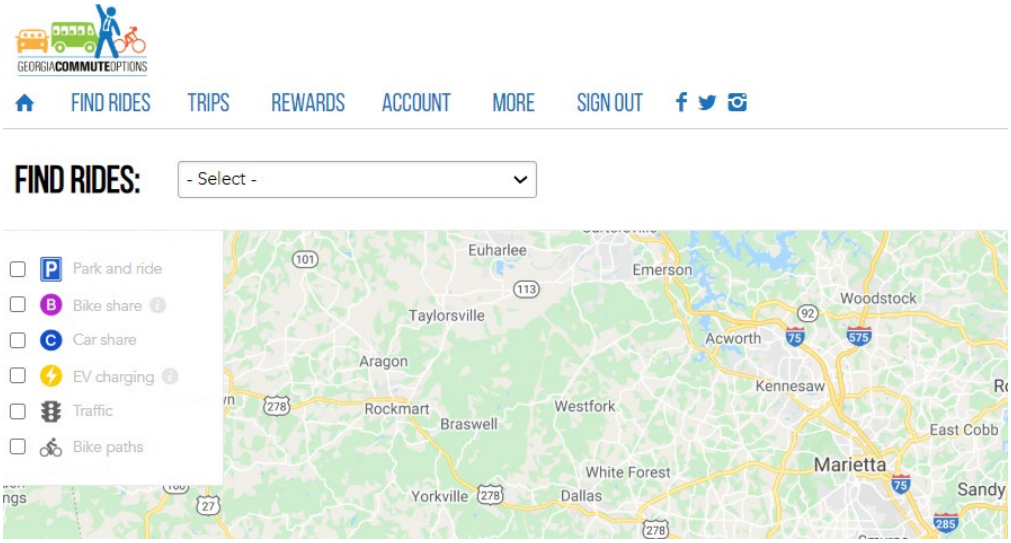


Figure 33. Georgia Commute Options User Interface

Source: https://mygacommuteoptions.com

23. Traffic Incident Management System Policy

Strategy Descriptions: Traffic Incident Management System (TIMS) is a transportation system used to detect and remove incidents, restoring traffic to normal operations safely and more quickly.

Types of Application: Such devices include traffic cameras, automated positioning systems, and dynamic message signs along a highway. Resources for TIMS can be found at https://ops.fhwa.dot.gov/eto_tim_pse/about/tim.htm.

Types of Configuration: Implementing a TIMS policy can lead to accident investigation sites, alternative emergency response access routes, and traffic responsive signal control plans.

Potential Benefits: The integration of intelligent devices into TIMS plays an important role in incident detection and verification. These devices ensure that incident responders such as Emergency Medical Services (EMS), first responders, and law enforcement officers can be notified promptly. In addition, strategies can be implemented to improve incident responses, enhance incident site management, and rapidly clear incidents after they occur.

[4] For more information about the Georgia Commute Operations, visit https://gacommuteoptions.com.

Examples: Figure 34 shows the Georgia's Highway Emergency Response Operators (HERO) program operation example. HERO is also part of the Department's statewide safety patrol program—the first in the nation—with the Coordinated Highway Assistance & Maintenance Program (CHAMP) that covers interstates outside metro Atlanta. HEROs patrol 24 hours with the primary duty to clear roads and restore normal traffic flow due to an incident.

Figure 34. HERO Unit from Georgia

Source: https://patch.com/georgia/cartersville/gdot-rolls-out-bigger-safer-hero-units-0

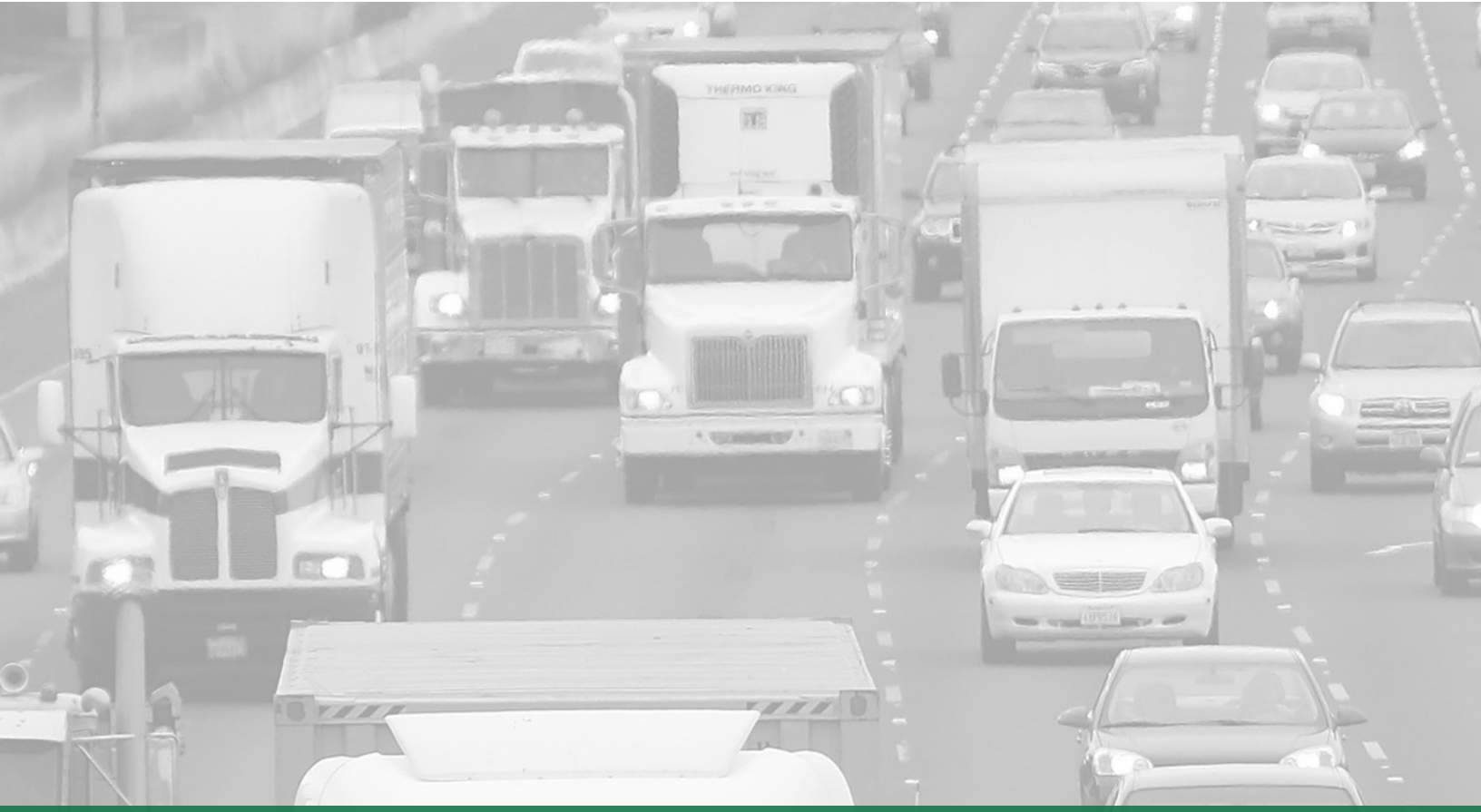
24.Other Policy Strategies

Strategy Descriptions: Policy strategies cover a variety of topics and can address issues along the study corridor. Policy recommendations can have a dramatic impact on traffic operations, and they can be incorporated into a planning study. Still, these recommendations may require buy-in from leadership, partnering agencies, and even the public.

Types of Application: Other than corridor management strategies mentioned above, the following are examples of policies that could be considered based on the I-85 study goals:

- Parking Management
- Trip Reduction Options
- Transportation Management Associations
- Complete Street
- Construction Contracting Options

Potential Benefits: Transportation agencies – in partnership with local, state, and private organizations – can lead the development of policy strategies. These strategies may address specific corridor issues and complement mitigation strategies already identified or in place. Policy strategies, with their wide range of techniques and approaches, can play a vital role in shaping the regional demand and supply of transportation options. Effective implementation often depends on local political dynamics and stakeholder willingness.



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