Chapter 3 – Plan Development Framework

Contents

Guiding the Way

As outlined in Chapter 2, the PLAN 2040 Regional Assessment identified key Findings that framed the needs of the Atlanta region. These were communicated to stakeholders as well as the ARC Board and Committees and were a key input into the development of a Vision for PLAN 2040. In addition to the Regional Assessment Findings, the Fifty Forward visioning effort, Statewide Strategic Transportation Plan, and input from stakeholders and the public were also used to help develop the Vision for PLAN 2040.

In July 2010, ARC adopted a Vision statement to guide development of PLAN 2040.

The theme of "sustainability" was selected as an overarching concept for guiding the development of PLAN 2040. This theme was defined through meetings of ARC Committees and a Vision, Goals and Objectives for PLAN 2040 were adopted by the ARC Board in July 2010.

PLAN 2040 Vision and Goals

The PLAN 2040 vision statement is: ***Visionary leadership for sustainable growth by balancing environmental responsibility, economic growth and social needs while maximizing benefits to all.***

This Vision is supported by three goal statements that help articulate the desired end product of the PLAN 2040 process:

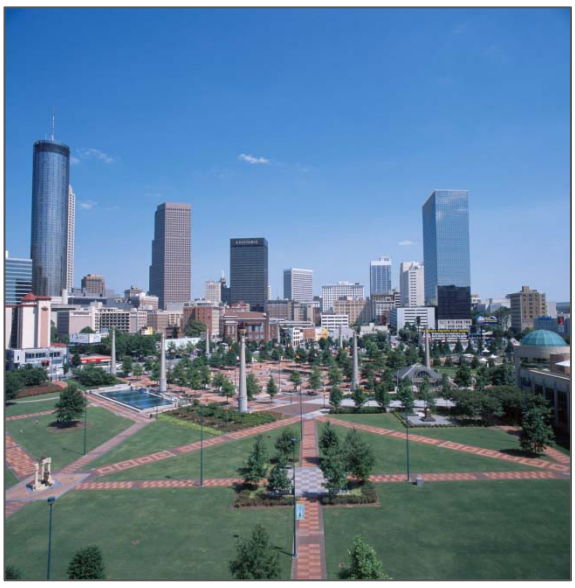
- **Lead as the Global Gateway to the South**
- **Encourage Healthy Communities**
- **Expand Access to Community Resources**

It was agreed that the Atlanta region is well positioned for greater success, but only if local governments, businesses, and citizens are prepared for changes to the way they live and do business. PLAN 2040 encourages those key changes that will be needed to foster sustainable regional growth that effectively balances environmental, economic, and social needs of the people living and working in the Atlanta region

Goal: Lead as the Global Gateway to the South

The Atlanta region is one of the nation's primary centers of commerce and culture. Maintaining this position of preeminence is critical to the region's future.

This goal articulates the region's ambition to lead the State to future prosperity, sustaining existing assets while creating new competitive advantages for the future.



Goal: Encourage Healthy Communities

The region's most important asset is the people that reside here, with supporting healthy communities a centerpiece of PLAN 2040. Without a healthy population, the region's economic and social sustainability outcomes cannot be achieved.

Goal: Expand Access to Community Resources

An important function of the transportation system is to connect people with community resources. PLAN 2040 seeks to expand access by providing reliable travel alternatives to regional centers.

Expanding access to community resources will be increasingly important in the future. The region's population makeup is changing, older and young population shares are increasing while becoming more diverse.

PLAN 2040 Objectives and Principles

ARC defined a number of specific Objectives to help define how PLAN 2040's Vision and Goals will be achieved and to help focus subsequent program development and project evaluation activities for the RTP. Objectives, developed with input from regional policy makers, cover a wide range of desired outcomes for the region.

A set of Principles was also defined. Principles are the equivalent of policies to help guide development and implementation of PLAN 2040.

Objective: Increase Mobility Options for People and Goods

PLAN 2040 focuses on increasing the mobility options for people and goods in the region. This objective addresses Findings from the Regional Assessment that show most of the region has very limited travel options other than by car and that the changing makeup of the region's population will require more travel choices.

PLAN 2040 Principles supporting this objective include:

- **Assuring the preservation, maintenance, and operation of the existing multimodal transportation system.**
- **Continuing to implement cost effective improvements such as sidewalks, multi-use trails, bicycle lanes, and roadway operational upgrades to expand transportation alternatives, improve safety, and maximize existing assets.**
- **Maintaining industrial and freight land uses at strategic locations with efficient access and mobility.**
- **Maintaining and expanding infrastructure to support air and rail travel and transport.**
- **Strategically targeting roadway capacity improvements to serve regionally significant corridors and centers.**

Objective: Foster a Healthy, Educated, Well Trained, Safe and Secure Population

PLAN 2040 seeks to improve the social well-being of the region's citizens through focused strategies that improve people's lives. Without a healthy and well-educated population, economic prosperity is at risk, leading to a decrease in the competitiveness of the region compared to national peers.

PLAN 2040 Principles supporting this objective include:

- **Building communities that encourage healthy lifestyles and active living for all ages, with provisions for healthcare, education, recreation, cultural arts and entertainment opportunities.**
- **Promoting a regional community that embraces diversity – age, ethnicity, and lifestyle – as its strength.**
- **Promoting access to quality schools, career training, and technology literacy to provide a workforce that can support economic opportunity.**
- **Promoting public safety efforts to create vibrant and safe 24-hour communities.**

Objective: Promote Places to Live with Easy Access to Jobs and Services

The competitive future of the region depends, in large part, on ensuring that the region offers a broad array of housing that accommodates a variety of lifestyles. All types of housing types are needed to serve future growth and to help attract and retain a strong labor force, including those in urban, suburban and rural settings.

PLAN 2040 Principles supporting this objective include:

- **Building compact development in existing communities with integrated land uses that will minimize travel distances and support walking, cycling and transit.**
- **Increasing housing, services, and employment opportunities around transit stations.**
- **Providing a range of housing choices to accommodate households of all income levels, sizes, and needs and to ensure that workers in the community have the option to live there.**
- **Protecting the character and integrity of existing neighborhoods, while also meeting the needs of the community.**

Objective: Improve Energy Efficiency While Preserving the Region's Environment

The Atlanta region is home to a rich natural environment, creating an invaluable resource for communities. Opportunities exist to improve energy efficiency while preserving the environment.

PLAN 2040 Principles supporting this objective include:

- **Conserving and protecting environmentally-sensitive areas and increasing the amount and connectivity of greenspace.**
- **Continuing to enhance stewardship of water resources throughout the region.**
- **Promoting energy-efficient land development and infrastructure investments that foster the sustainable use of resources and minimize impacts to air quality.**
- **Encouraging appropriate infill, redevelopment and adaptive reuse of the built environment to maintain the regional footprint and optimize the use of existing investments.**

Objective: Identify Innovative Approaches to Economic Recovery and Long Term Prosperity

The Atlanta region is one of the nation's great economic centers. However, the economic downtown has significantly impacted the region's citizens and governments. Regional leadership must identify innovative approaches to ensure future prosperity.

PLAN 2040 Principles supporting this objective include:

- **Focusing financial resources and public investments in existing communities.**
- **Establishing a region-wide economic and growth management strategy that includes federal, state, regional and local agencies, as well as non-governmental partners.**
- **Enhancing and diversifying economic development activities to include sectors like life sciences, logistics and transportation, agribusiness, energy and environmental technology, healthcare and eldercare, aerospace technology and entertainment and media production.**
- **Leveraging the diversity of the region – people, places and opportunities – to continue to attract business and residents.**

Applying Goals, Objectives, and Principles within the Plan Development Process

While the Vision, Goals, Objectives, and Principles define the desired future of the Atlanta region and the general approach for achieving that future via PLAN 2040, additional detail is needed in crafting the RTP. This includes translating the Vision, Goals, Objectives and Principles into a regional growth strategy that promotes and reinforces sustainable land use that can be supported by transportation systems, programs, and projects that, taken together, facilitate progress in achieving the Vision for the region.

Translating the broader Vision and Goal statements of PLAN 2040 into a discrete plan development process occurred in the following key ways:

- Preparation of Regional Development Guide and Unified Growth Policy Map (UGPM).
- Increased focus on Livable Centers Initiative
- Enhanced, strategic focus on critical regional transportation systems:
    - Regional Strategic Transportation System (RSTS) - identifies the most critical regional facilities for federal funding.
    - Regional Thoroughfare Network (RTN) - provides management guidelines to ensure that PLAN 2040 goals and objectives are met for roadway facilities.

- Concept 3 – defines the vision for transit expansion in the region.
- Regional Truck Route Network - defines the most significant facilities for the movement of freight in the region.
- Regional bicycle and pedestrian network - identifies the most critical centers and corridors for future bicycle and pedestrian facilities.

Unified Growth Policy Map and Development Guide

To accommodate the region's anticipated growth in a sustainable fashion, the region must plan for a different type of development than it has seen in recent decades. The Regional Development Guide provides direction for future growth based on the Unified Growth Policy Map (UGPM). Additional information on both the Development Guide and UGPM is available at www.atlantaregional.com/plan2040.

The UGPM is comprised of Areas and Places. Areas describe predominant land use patterns throughout the region. Places reflect concentrated uses that have generally defined boundaries and provide greater detail within Areas. The Development Guide provides the following for each Area and Place identified on the UGPM:

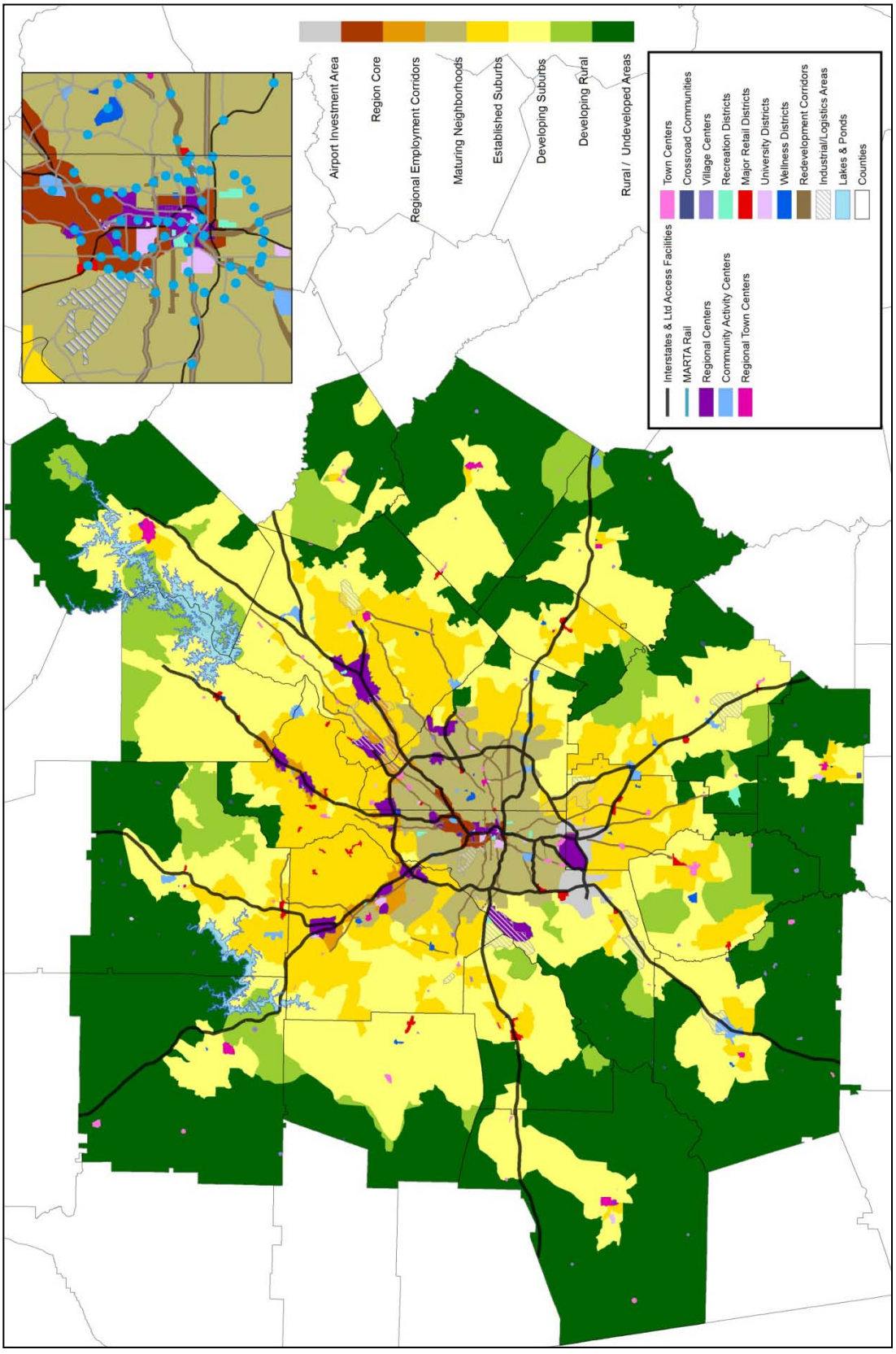
- A detailed map showing the specific location in the region
- A written description that includes a defining narrative and issue summary
- Guidelines for recommended building height and development density
- Pictures that characterize development patterns that are typical and desirable
- Implementation Priorities, defined by the PLAN 2040 Objectives, that identify measures to achieve desired development patterns and suggest possible action toward the attainment of regional goals

The UGPM and Development Guide supported PLAN 2040 RTP recommendations through:

- **Evaluation of Potential Transportation Investments** – The specific policies and outcomes identified in the UGPM and Development Guide were applied in evaluating potential projects for inclusion in the RTP. For example, transportation investments that were inconsistent with regional growth objectives were not recommended for federal funding.
- **Identification of Transportation Programs** – Based on the vision articulated in the UGPM and Development Guide, existing transportation programs were extended and modified to support desired outcomes. New programs were also identified to meet PLAN 2040 objectives. For example, the Livable Centers Initiative (LCI) program is continued in PLAN 2040. This program helps support core regional vision objectives such as fostering growth in transit-supportive communities.

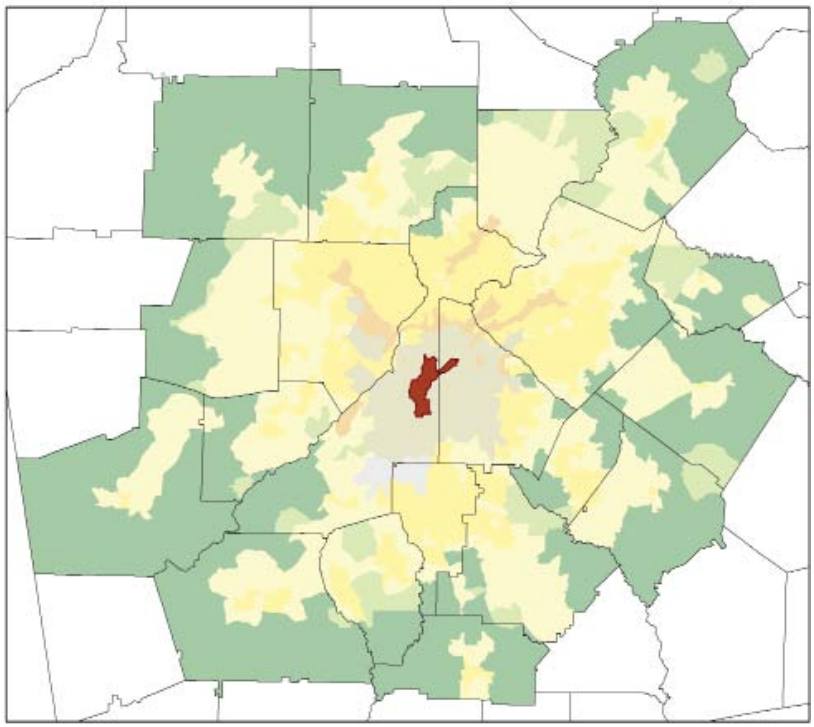
Figure 3-1 illustrates the UGPM. The UGPM provides a coherent vision for the future development of the region. The PLAN 2040 transportation investments discussed in Chapter 4 support this vision. The UGPM is the foundation of the RTP in that it identifies desired future growth, including the nature and density of future communities, and assists in identifying existing and future transportation needs.

Figure 3-1: Unified Growth Policy Map



Below is a description of the key Areas and Places identified and described in the UGPM and Development Guide.

Regional Core



The Region Core, shown in red, is the major economic, cultural and transportation hub of the region.

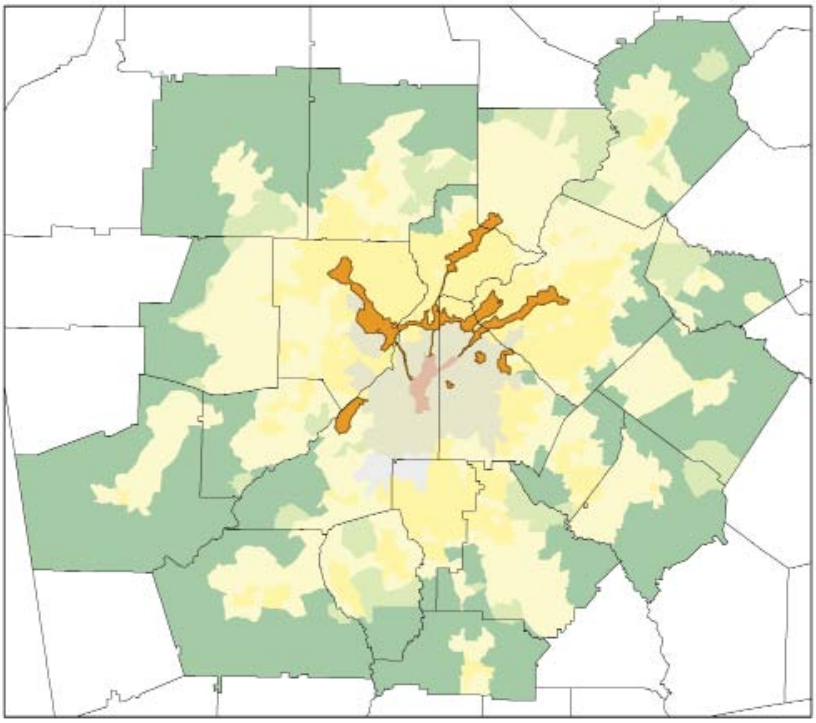
This area is the densest in terms of employment, residential, and cultural offerings throughout the region, with the most developed transit service in the region.

The Region Core can handle the most intense development due to the amount of infrastructure already in place; however, this infrastructure may need improvements due to its age.

Regional Core transportation implementation priorities:

- Enhance pedestrian connectivity across streets through design standards such as shorter blocks, mid-block crossings, shorter crossing distances, ADA compliance and other measures
- Prioritize preservation and enhancement of existing transit systems and facilities
- Explore options for innovative parking management strategies, including dynamic pricing, shared parking, parking maximums, and unbundled parking
- Maintain connectivity within and efficient access to and through the Core, which serves as the major regional transportation hub
- Integrate Lifelong Communities principles in addition to ADA compliance to ensure a comprehensive approach to connectivity and accessibility
- Enhance mobility and accessibility for all by creating Complete Streets that accommodate all modes of transportation (cars, transit, bicycles and pedestrians)
- Increase numbers of bicycle commuters and recreational riders through implementation of bicycle lanes, paths, bike parking and safety and encouragement programs

Regional Employment Corridors



Regional Employment Corridors, shown in orange, represent the densest development outside of the Region Core.

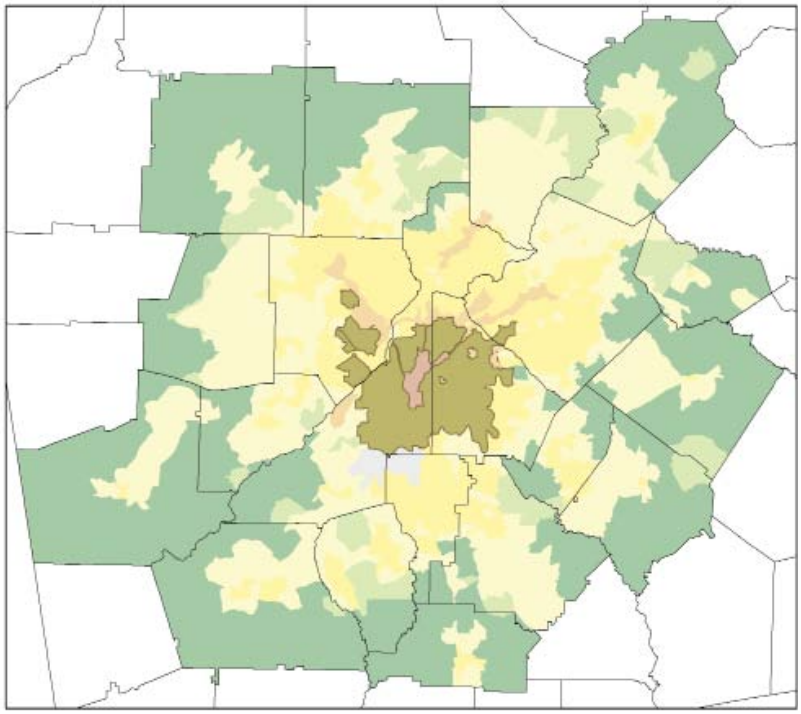
The Regional Employment Corridors connect the various Regional Centers and the Region Core via existing or planned high capacity transportation facilities. These areas need to increase in housing or job density, and focus primarily on improving connectivity between Centers and the Region Core.

These areas often buffer the denser parts and the less dense parts of the region. These areas often face greater peak hour congestion, therefore transit station areas and transit right-of-way (ROW) need to be preserved within Regional Employment Corridors.

Regional Employment Corridors transportation implementation priorities:

- Establish strategies for improved road design, such as establishing minimum connections to existing road networks and evaluating excess capacity of existing roads
- Enhance pedestrian connectivity across streets through design standards such as shorter blocks, mid-block crossings, shorter crossing distances, ADA compliance and other measures
- Prioritize preservation of existing transit, increase frequency and availability of transit options, and increase access to circulators through Regional Employment Corridors
- Improve general operations and local and regional service needs within Regional Employment Corridors
- Explore options for innovative parking management strategies, including shared parking
- Incorporate appropriate end-of-trip facilities, such as bicycle racks, showers/ locker rooms, within new and existing development
- Develop and implement access management plans along major thoroughfares
- Enhance mobility and accessibility for all by creating Complete Streets that accommodate all modes of transportation (cars, transit, bicycles and pedestrians)
- Increase numbers of bicycle commuters and recreational riders through implementation of bicycle lanes, paths, bike parking and safety and encouragement programs

Maturing Neighborhoods



Maturing Neighborhoods, shown in tan, are areas in the region characterized by older neighborhoods that include single- and multifamily development, as well as commercial and office uses at connected key locations.

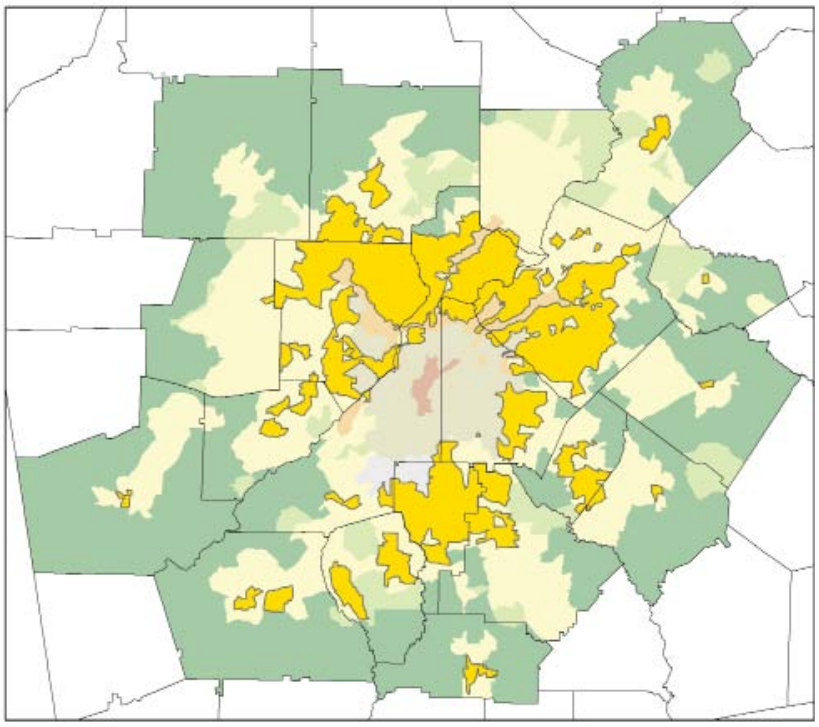
Though commercial and office buildings are aging, they nonetheless are often incorporated into neighborhoods, providing an active mix of uses and amenities. Maturing neighborhoods are denser than established suburbs and the development pattern is more similar to that of pre-1970s urban development.

These areas represent the part of the region that is facing infill and redevelopment pressures. In many cases, the infrastructure is in place to handle the additional growth, however in some areas, infrastructure is built out with limited ability to expand. This may constrain the amount of additional growth possible in certain areas. Many arterial streets in this area are congested due to their use as a regional route for commuters. Limited premium transit service is available in these areas.

Maturing Neighborhoods transportation implementation priorities:

- Maintain and expand both local and regional transit services, including local and express bus, bus rapid transit (BRT), light rail and heavy rail
- Improve safety and quality of transit options by providing alternatives for end-of-trip facilities (such as bicycle racks) and sidewalks and/ or shelters adjacent to bus stops
- Create redundancy with new alignments or parallel routes rather than expanding capacity to improve traffic through this area to other regional areas and places
- Promote programs that encourage safe walking and biking while reducing traffic congestion such as Safe Routes to School
- Establish strategies for improved road design, such as establishing minimum connections to existing road networks, incorporating traffic calming measures and improved local road design
- Integrate Lifelong Communities principles in addition to ADA compliance to ensure a comprehensive approach to connectivity and accessibility

Established Suburbs



Established Suburbs, in gold, are areas in the region where suburban development has occurred. These areas are characterized by strip commercial development, single family subdivisions, and offices in limited locations.

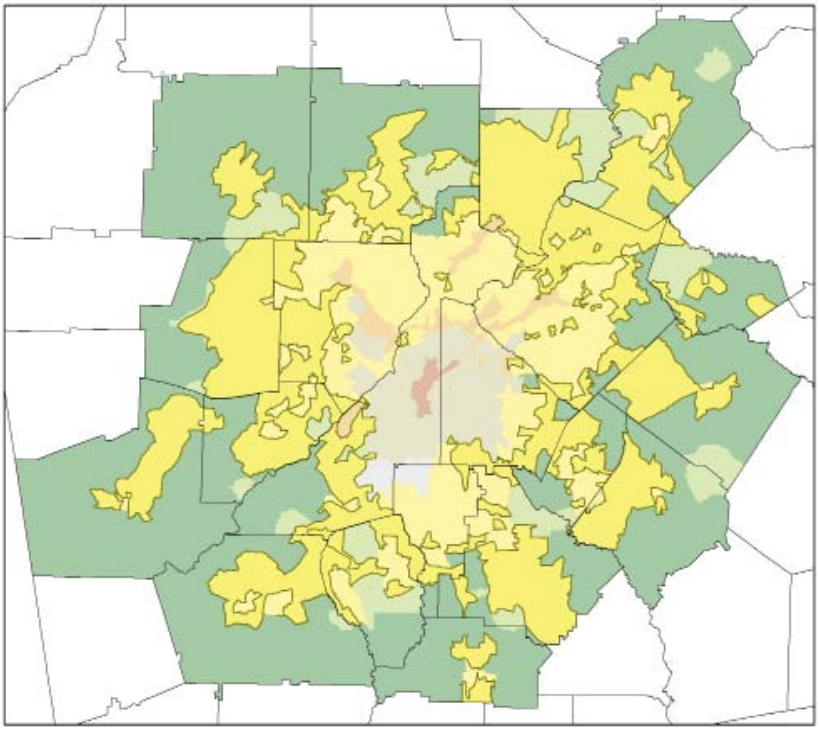
These areas represent the part of the region that has just recently reached "build out." With few remaining large parcels for additional development, these are the areas in which the region may see the least amount of land use change outside of retail/ commercial areas.

While there is still room for limited infill, these areas may begin to focus more on redevelopment over the next 30 years. Within this area, infrastructure is built out with limited ability to expand, which may constrain the amount of additional growth that is possible.

Established Suburbs transportation implementation priorities:

- Maintain a state of good repair and maintenance of the existing transportation network
- Maintain and expand access to regional transit services, including bus rapid transit (BRT), light rail and heavy rail
- Establish strategies for improved road design, such as establishing minimum connections to existing road networks
- Promote programs that encourage safe walking and biking while reducing traffic congestion such as Safe Routes to School
- Improve sidewalk connectivity along arterials, collectors and local streets throughout Established Suburbs
- Provide multi-use trails, dedicated bike lanes and dedicated pedestrian routes to provide alternative transportation options throughout Established Suburbs
- Promote improved sidewalk connectivity with traffic calming measures and refuge islands for more than two lanes of traffic
- Utilize strategies that make the environment feel safe, including sensory cues at decision points (junctions or grade changes), adequate pedestrian lighting, crossable streets, countdown crossing signals, and signal timing suitable for slower walking speeds
- Evaluate roadways for excess capacity and retrofitting potential to incorporate bike and pedestrian facilities, enhance options for transit, etc.

Developing Suburbs



Developing Suburbs, in yellow, are areas in the region where suburban development has occurred, and the conventional development pattern is present but not set.

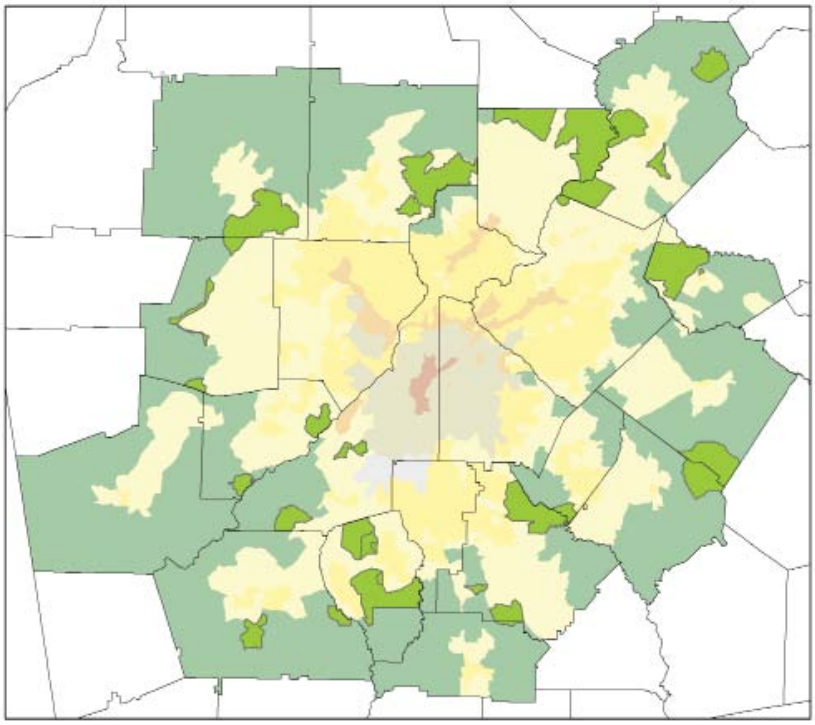
These areas represent the extent of the urban service area. The region should strive to develop these areas in a more sustainable way than the existing development model.

Limited existing infrastructure in these areas will constrain the amount of additional growth that is possible. Some transportation improvements may be needed within these developing suburbs, but care should be taken not to spur unwanted growth.

Developing Suburbs transportation implementation priorities:

- Connect new development to the existing road network and adjacent developments and the use of cul-de-sacs or other means resulting in disconnected subdivisions should be discouraged
- Promote the continuity of publicly maintained streets and pedestrian infrastructure
- Prioritize issues of safety of existing transportation infrastructure rather than capacity expansion or development of new infrastructure
- Promote improved sidewalk connectivity with traffic calming measures and refuge island for more than two lanes of traffic
- Utilize strategies that make the environment feel safe, including sensory cues at decision points (junctions or grade changes), adequate pedestrian lighting, crossable streets, countdown crossing signals, and signal timing suitable for slower walking speeds
- Incorporate bicycle and pedestrian and multi-use path connectivity, including where possible, connecting cul-de-sacs to each other or to community facilities, such as schools, along non-motorized paths or walkways

Developing Rural Areas



Developing Rural Areas, in light green, are areas in the region where little to no development has taken place, but where there is development pressure.

These areas are characterized by limited single-family subdivisions, individual large single-family lots, agricultural uses, protected lands, and forests.

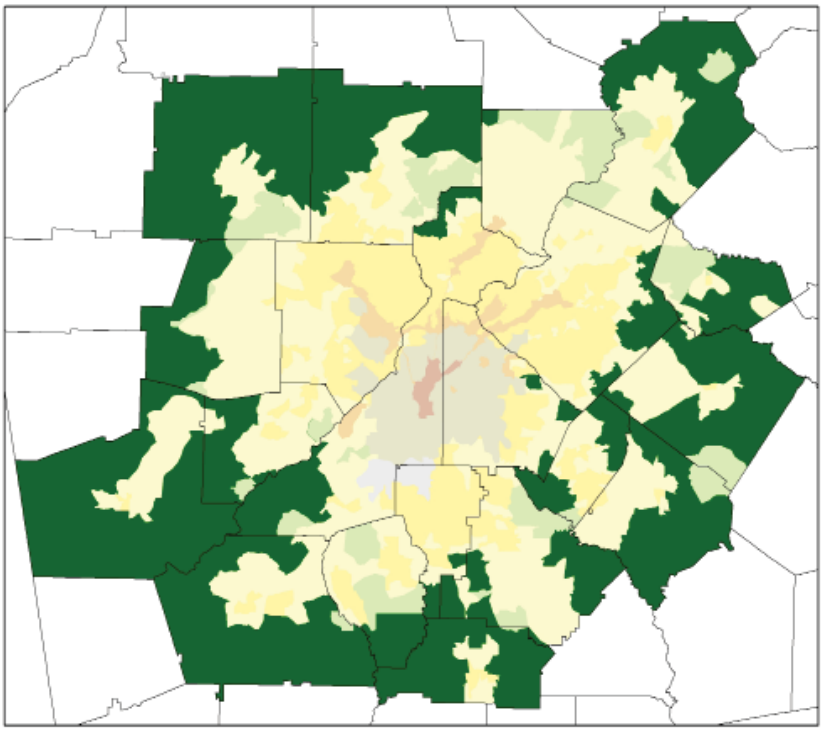
The region should strive to protect these areas by limiting infrastructure investments to targeted areas and allowing no development or only low intensity development.

Limited existing infrastructure in these areas will constrain the amount of additional growth that is possible. Some transportation improvements may be needed in developing rural areas, but care should be taken not to spur unwanted growth.

Developing Rural Areas transportation implementation priorities:

- Anticipate possibilities of commuter rail through Regional Town Centers and Town Centers in Developing Rural Areas
- Promote the continuity of publicly maintained streets and pedestrian infrastructure
- Prioritize issues of safety of existing transportation infrastructure rather than capacity expansion or development of new infrastructure
- Ensure the continued efficiency of trucking and shipping routes through the region
- Maintain rural road characteristics and protect scenic corridors

Rural Areas



Rural Areas, shown in dark green, are areas on the periphery of the region where little to no development has taken place or where there is little development pressure. These areas are characterized by sporadic large single family lots, agricultural uses, protected lands, and forests. These areas outline the developed and developing areas, as well as the limits to the urban service area in Atlanta region.

There is a desire by many living in and governing these areas to keep them rural in character. Within rural areas confusion may exist regarding appropriate development densities for rural intensity uses. Most rural zoning categories have 1 unit per acre minimums, which will lead to dramatic changes in character for some rural areas. Increased development may also threaten existing rural economic uses, including forestry and agriculture.

The region should strive to protect these areas by limiting infrastructure investments to targeted areas and allowing no development or only low intensity development. There is a need for additional preservation of critical environmental locations, as well as agricultural and forest uses. There will be a need to maintain existing transportation infrastructure, but care should be taken to not spur unwanted growth by inappropriate expansion of infrastructure capacity.

Rural Areas transportation implementation priorities:

- Anticipate possibilities of commuter rail through Regional Town Centers and Town Centers in Rural Areas
- Promote the continuity of publicly maintained streets and pedestrian infrastructure
- Prioritize issues of safety of existing transportation infrastructure rather than capacity expansion or development of new infrastructure
- Ensure the continued efficiency of trucking and shipping routes through the region
- Maintain rural road characteristics and protect scenic corridors

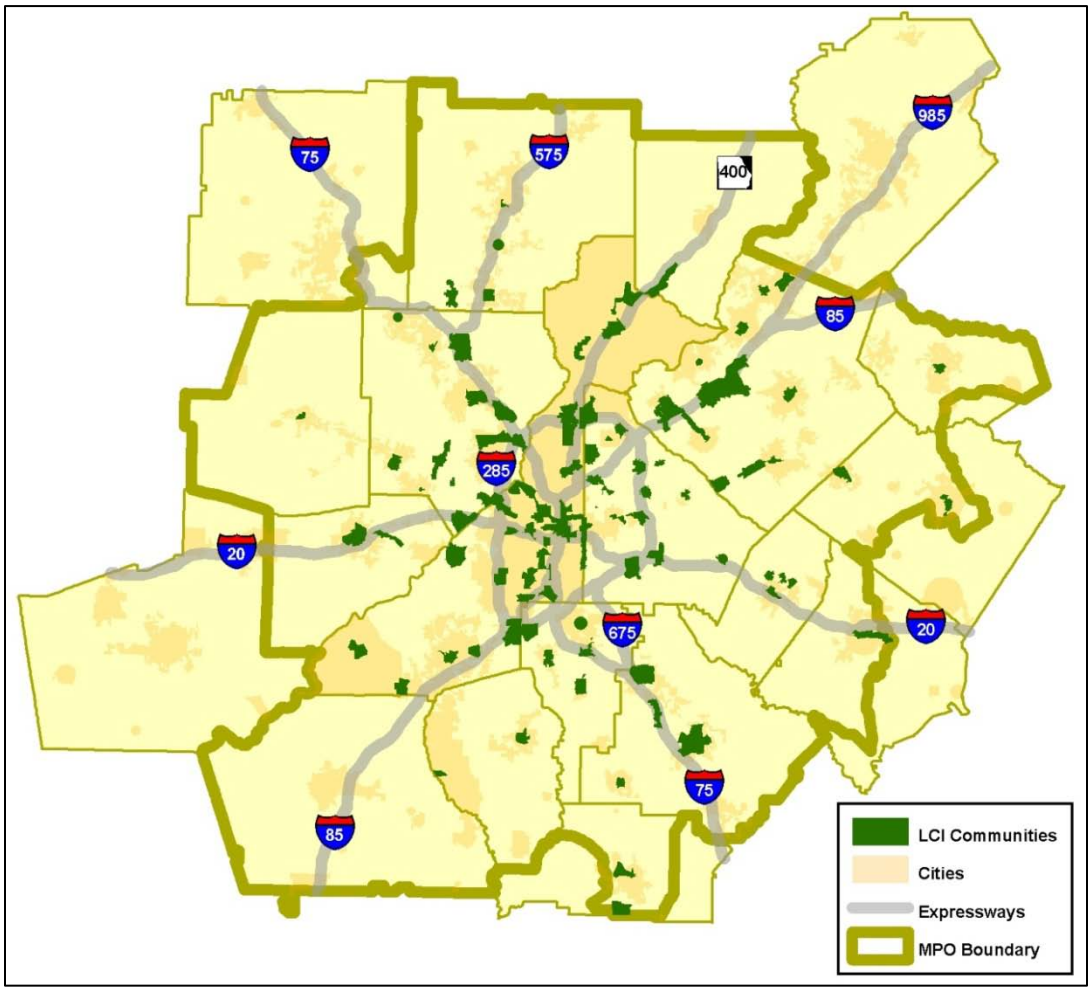
Livable Centers

The LCI Program, which began in 2000, awards planning grants on a competitive basis to local governments and non-profit organizations to prepare plans for the enhancement of existing centers and corridors consistent with regional development policies. To assist in realizing plan recommendations, the LCI Program also provides federal funding to implement transportation projects identified in LCI studies. More information on the LCI Program is available at www.atlantaregional.com/lci. The LCI Program goals relate to PLAN 2040 Goals and Objectives:

- Encourage local governments to plan and implement strategies that link transportation improvements with development strategies
- Provide planning grants to develop transportation efficient land use studies
- Link implementation actions to receipt of transportation project funding
- Take advantage of existing infrastructure in centers and corridors

As illustrated in Figure 3-2, LCI communities are identified throughout the region. PLAN 2040 considered the location of these communities in drafting plan and program recommendations presented in Chapter 4.

Figure 3-2: Livable Centers Initiative Communities



Strategic Focus on Critical Regional Transportation Systems

To support the identification of specific transportation investments for the RTP, the PLAN 2040 Vision, Goals and Objectives are operationalized through identification of several critical, regional transportation systems. Similar to the UGPM, these systems articulate regional priorities for future investments and establish policy for the implementation of PLAN 2040.

Regional Strategic Transportation System

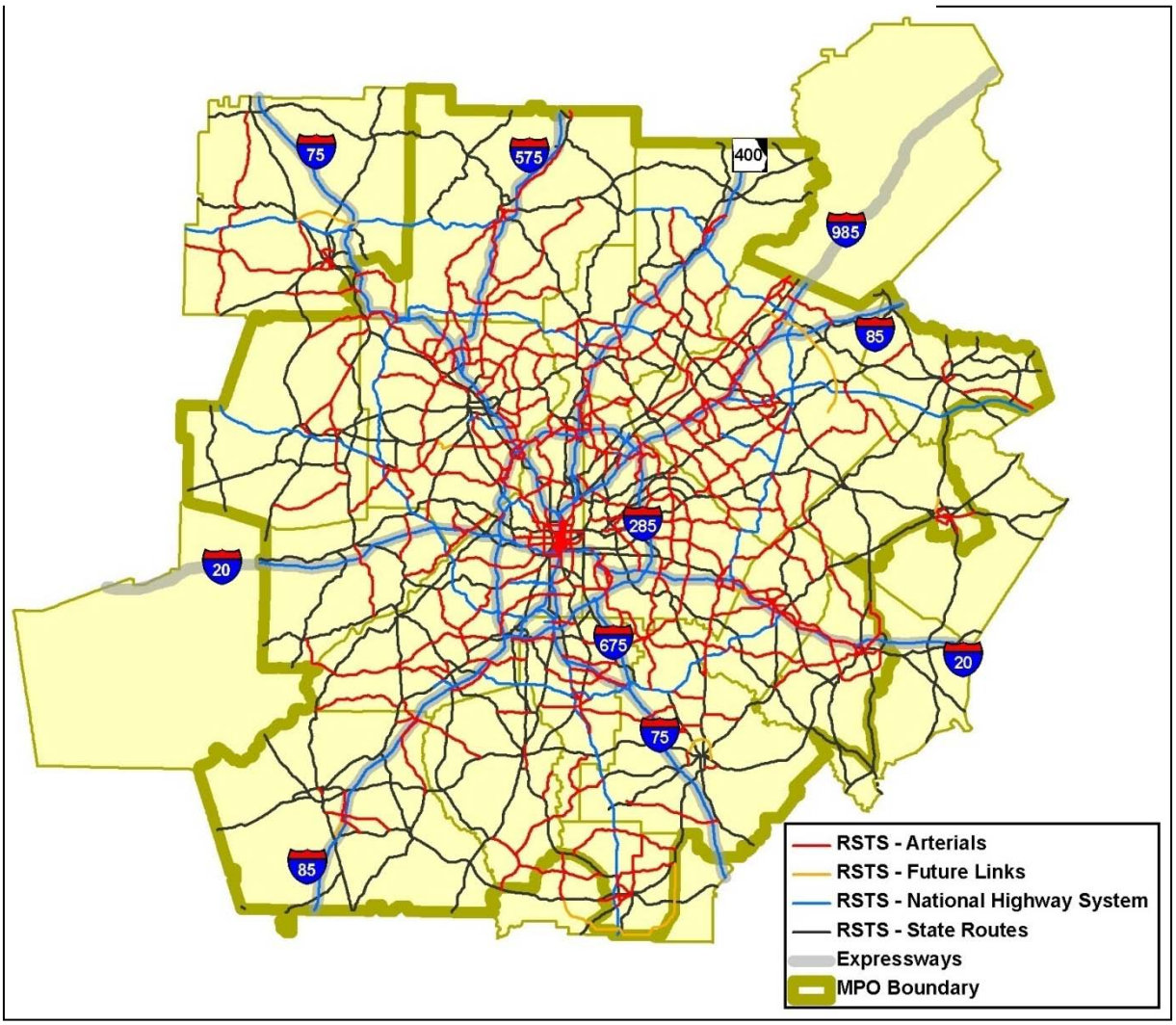
PLAN 2040 recommends focusing limited federal transportation funds on the Regional Strategic Transportation System (RSTS), developed in 2006 and updated as part of PLAN 2040 RTP development. The RSTS furthers the development of an integrated multimodal transportation system to facilitate the safe and efficient movement of people and goods, including addressing current and future transportation demand. It is a critical element in identifying roadway and transit strategies. It is ARC policy to only fund roadway and transit capacity expansions on RSTS facilities. PLAN 2040 updated RSTS route designations, including a thorough review by regional stakeholders during PLAN 2040 development.

The RSTS accommodates the region's most critical trip movements and is comprised of (see Figure 3-3):

- Interstate highways and freeways,
- National Highway System (NHS) classified facilities and State highways, including intermodal connectors for freight facilities,
- Existing and future regional transit service, and
- Principal arterials, critical minor arterials and other facilities that provide continuous, cross-regional mobility, ensure adequate spacing of major roadways and connect regional activity centers, town centers and freight corridors.

These multimodal facilities and services operate on a regional scale and are essential in meeting mobility and accessibility goals. Major roadway system expansion or transit expansion may reduce congestion and provide additional travel choices as measured at a corridor or regional scale.

Figure 3-3: Regional Strategic Transportation System



Regional Thoroughfare Network (RTN)

The RSTS provides a framework for identifying regional facilities that are critical to the movement of goods and people, while identifying priority facilities for the use of federal-aid funding for capacity expansions. However, additional refinement of the RSTS is needed to help in policy planning. This need is met through the Regional Thoroughfare Network (RTN) identified in the Strategic Regional Thoroughfares Plan which defines guidelines and strategies for maximizing the effectiveness of the system as a whole, rather than its individual segments. More information on the Strategic Regional Thoroughfares Plan is available at www.atlantaregional.com/srtp.

A thoroughfare is a transportation corridor that serves multiple ways of traveling, including walking, bicycling, driving, and riding transit. It connects people and goods to important places in the region. It is managed by applying special traffic control strategies and suitable land development guidelines in order to maintain travel efficiency, reliability, and safety for all thoroughfare users. In light of this special

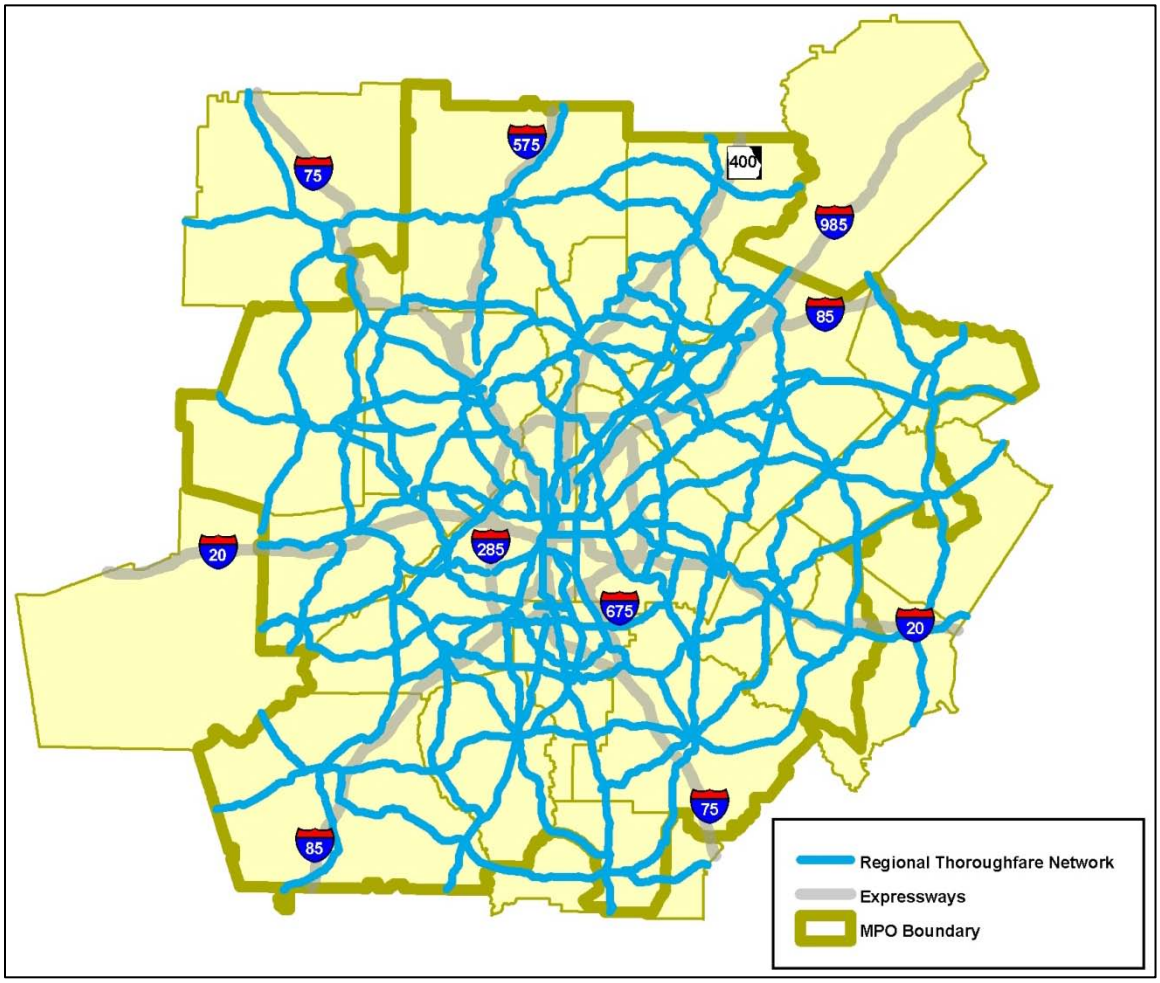
regional function, the thoroughfare network receives priority consideration for infrastructure investment in the Atlanta region.

The RTN has several purposes that further PLAN 2040 development:

- Identify guidelines and strategies to manage the operations of the RTN based on regional travel trends and land use characteristics.
- Serve as a priority network for performance monitoring (which is a Congestion Management Process requirement) and facilitate PLAN 2040 RTP Plan Management Process which is outlined in Chapter 6.
- Serve as the basis for selecting future locations for multimodal corridor studies.

As illustrated in Figure 3-4, the RTN is classified into levels that correspond with specific management guidelines and strategies.

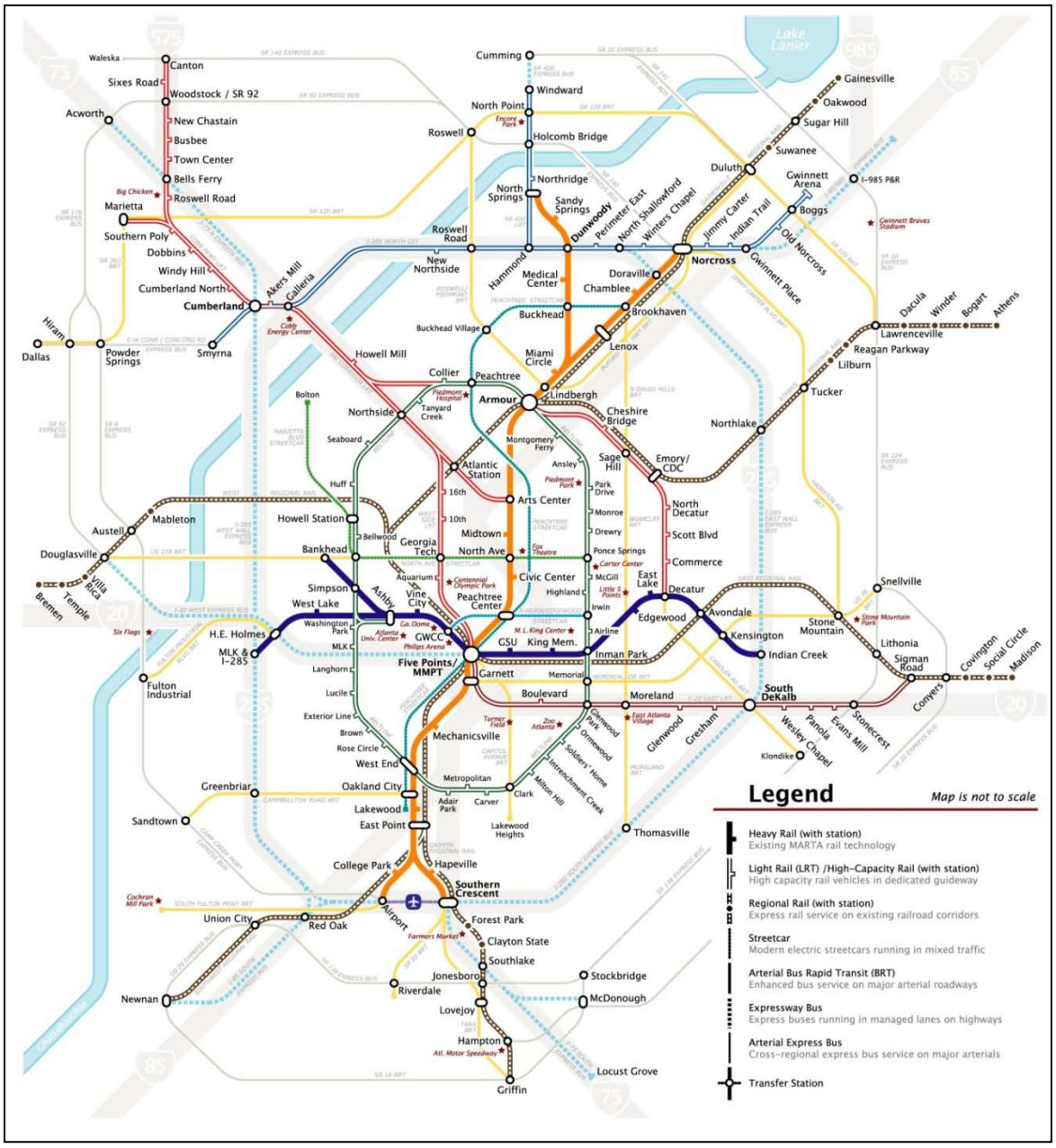
Figure 3-4: Regional Thoroughfare Network



Concept 3 Transit Vision

Concept 3 (see Figure 3- 5) is the Atlanta region's official long-range vision for transit. It was developed through a collaborative, multi-year effort led by the Transit Planning Board, a predecessor to today's Regional Transit Committee (RTC). The vision was officially adopted in 2008 and now serves as the transit element of the Aspirations Plan of the RTP. The Aspirations Plan represents all needs identified in the region. The Aspirations Plan is discussed in Chapter 4.

Figure 3-5: Concept 3 Transit Vision



Additional information on Concept 3 is available at www.atlantaregional.com/transit.

Atlanta Strategic Truck Route Network (ASTRoMaP)

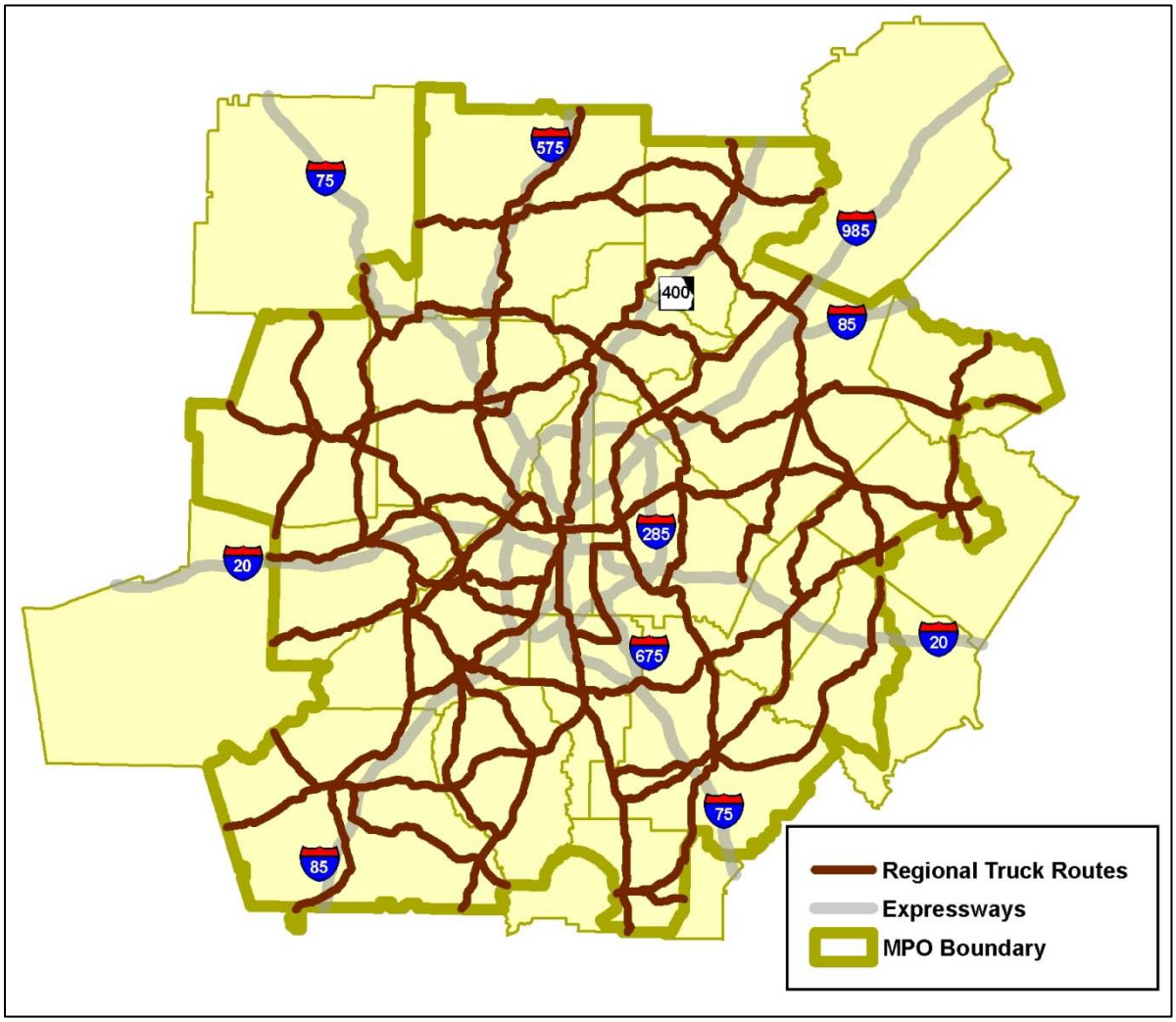
The 2008 Atlanta Regional Freight Mobility Plan (www.atlantaregional.com/freightplan) noted that the region has discontinuous routes serving freight truck traffic. Many truck routes are not logical in that they may stop at jurisdictional boundaries or conflict with restrictions placed in adjacent communities. It was recognized that additional study was needed to address issues pertaining to truck routing and operations. One of the additional follow-up activities included the development of a regional truck route network as well as associated policies and guidelines.

As growth of truck-related movements has and will continue to occur, the supporting transportation system must take steps to meet the challenges of existing traffic volumes, and plan for the efficient movement of that traffic into the future. The region has few continuous routes by which trucks may travel over the metropolitan region.

In response to the recommendation from the Freight Mobility Plan, ARC developed the Atlanta Strategic Truck Route Master Plan (ASTRoMaP). This project, in cooperation with state and local government bodies and agencies, including the State and participating county and municipal governments, designed a truck route system to provide regional access that will guide current and future decision making. Additional information on ASTRoMaP is available at www.atlantaregional.com/truckrouteplan.

Figure 3-6 illustrates the ASTRoMaP network. Policies, guidelines, and design strategies that impact freight planning were developed for this network, with specific emphasis placed on addressing at-grade rail crossings and intersection geometrics.

Figure 3-6: Strategic Truck Route Network



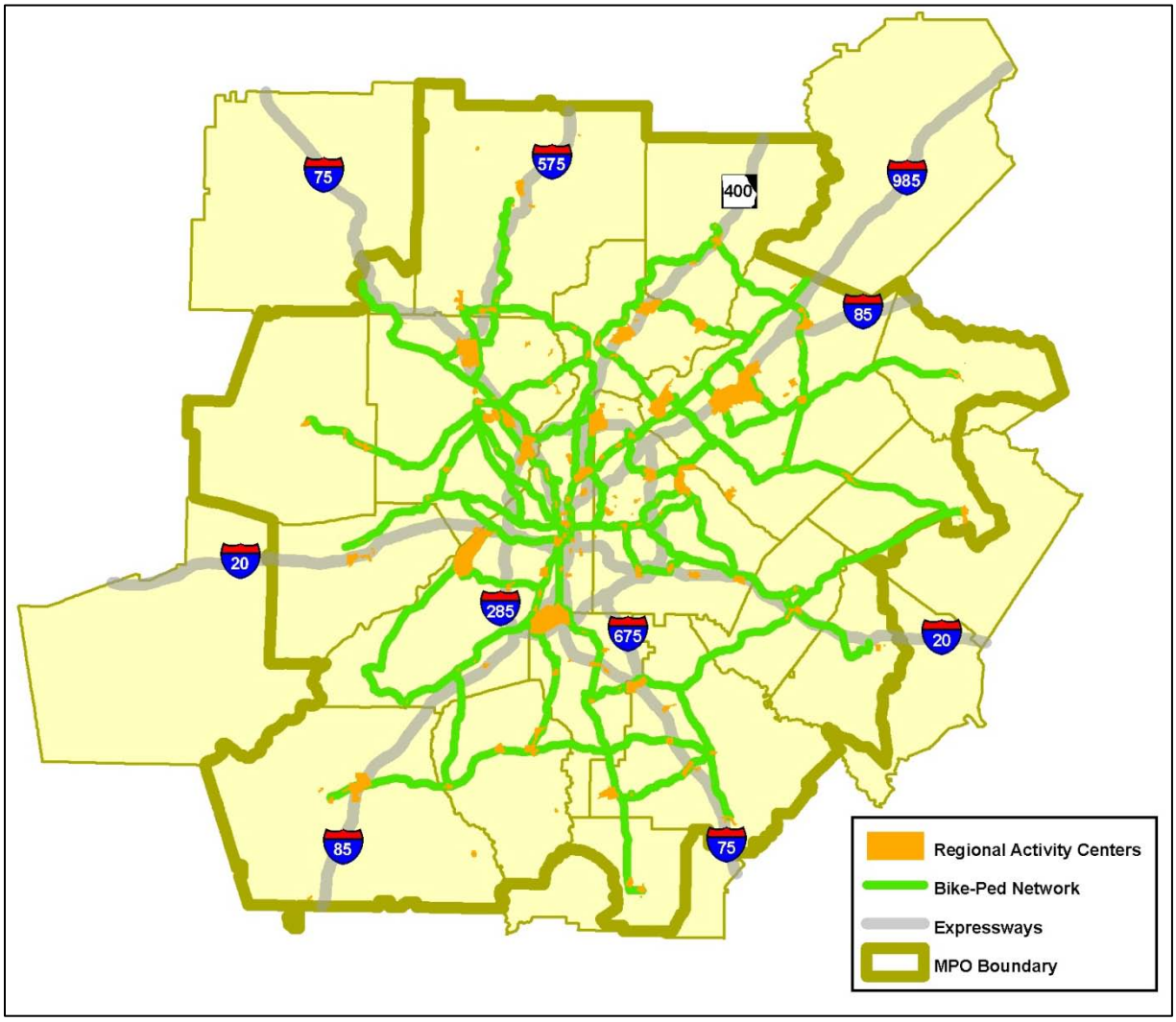
Regional Bicycle and Pedestrian Network

Through the 2007 Atlanta Region Bicycle Transportation and Pedestrian Walkways Plan (www.atlantaregional.com/bikepedplan), ARC has identified a strategic bicycle and pedestrian network of regionally significant corridors that connect to town centers, major activity centers, and LCI communities.

Federal funding for bicycle and pedestrian improvements is directed to this network due to its ability to serve regional bicycle and pedestrian trips. This concept seeks to make regional corridors and centers more multi-modal, improving safety, mobility, and accessibility for pedestrians and bicycles.

The Regional Bicycle and Pedestrian Network is illustrated in Figure 3-7.

Figure 3-7: Regional Bicycle and Pedestrian Network



PLAN 2040 RTP Project and Program Selection

ARC has become increasingly proactive in implementing performance-based planning over the last several years. Significant transportation funding issues serve as an immediate driver for developing more structured and transparent performance-based decision-making processes.

ARC developed a performance-based planning process to guide development of PLAN 2040. The performance-based process for the RTP element of PLAN 2040 consists of two pieces: plan development and plan management.

A performance framework connects Goals and Objectives into a coherent decision-making process.

A key component of this process is the development of a performance framework for the RTP which organizes development activities within the context of broader PLAN 2040 Goals and Objectives, setting the stage for subsequent plan management and plan delivery activities. Because the RTP comprises the majority of specific investments made in PLAN 2040, it is critical to define a framework to communicate how transportation investment decisions are made.

The plan development piece and RTP performance framework are described in this Chapter. Detail is provided on the performance measures used to support plan development and the technical methods used to implement the performance assessment procedures. The plan management piece, which relates to plan delivery, is described in Chapter 6. Additional details on specific project evaluation procedures are detailed in Appendix C.

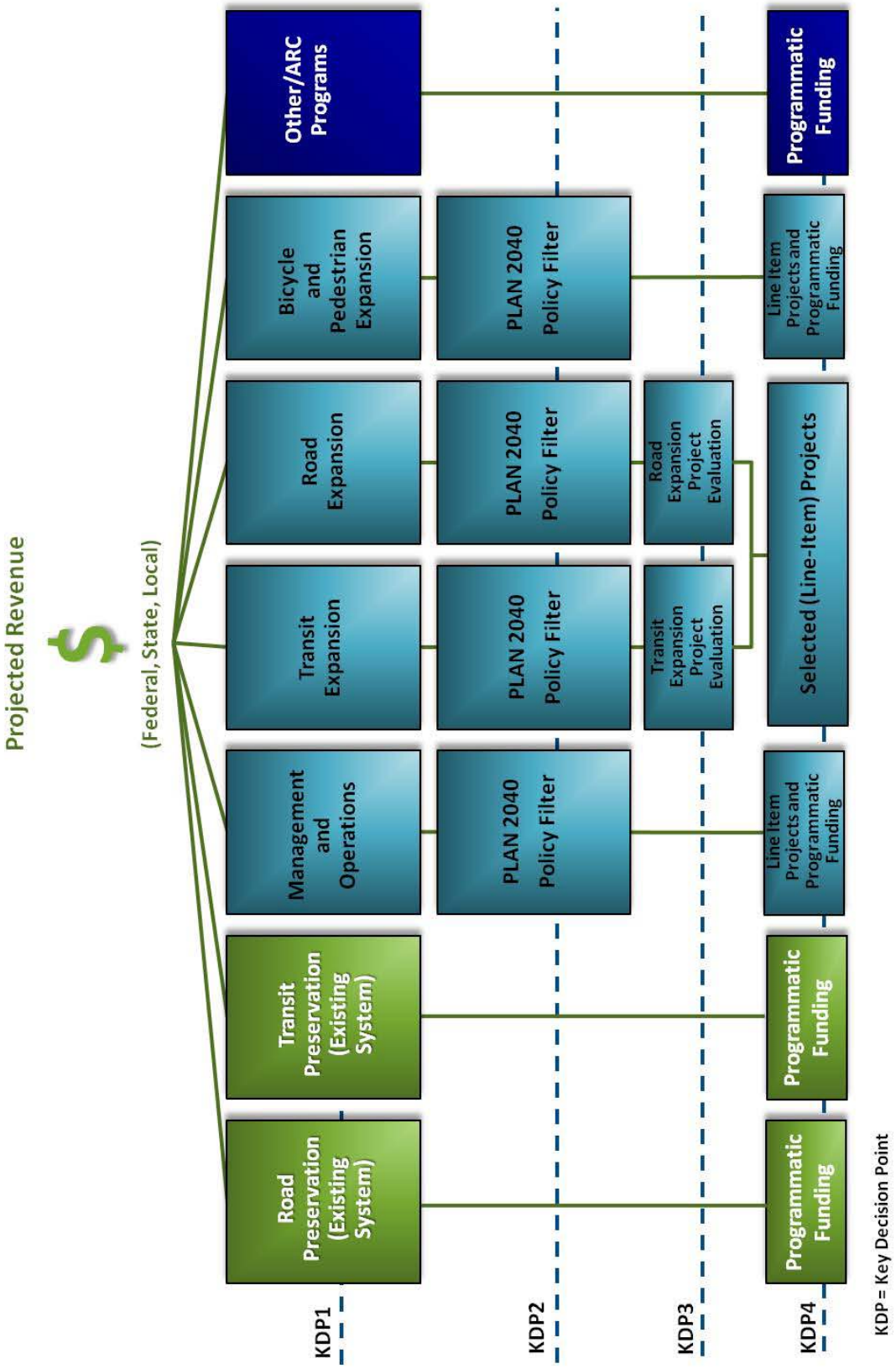
As part of PLAN 2040 RTP development, the performance framework was designed to convey the following:

- Key resource allocation steps that occurred during the transportation plan development process
- Performance assessment that occurred at each step and how it was used to inform the decisions made at that point
- Linkage to long-range goals and objectives, to ensure decisions were made with the desired end state in mind.

The RTP performance framework was developed in consultation with ARC stakeholders and reflects feedback received during two performance measurement workshops. It was also presented to ARC's committees for input.

The performance framework is organized around four Key Decision Points (KDP), each of which impacts, on some level, the allocation of projected transportation revenue over the plan horizon. More specifically, each KDP represents a specific point in the transportation plan development process where ARC made some level of resource allocation decision, either funding provisions or funding restrictions. Organizing the framework around KDPs allows ARC to directly communicate the various resource allocation steps that were made as part of the plan development process, and highlight which of these steps were influenced by an objective performance assessment. While exact funding allocations were not identified for each program in the early stages of the framework, general priorities were made that helped guide investment decisions. This framework is shown in Figure 3-8.

Figure 3-8: RTP Performance Framework



Key Decision Point 1 – Conduct Program-Level Scenario Analysis

The first step of the performance framework was to discuss available funding across various transportation programs. Programs, in this case, refer to groupings of similar types of investments strategies (i.e., projects). The allocation of funds at this step is intended to be a critical first link between stated PLAN 2040 policy and RTP development. While specific funding amounts were not allocated to every category, generalized breakdowns were made among system expansion vs. system modernization programs and projects.

Define Program Types

Program types align with prior *Envision6* programs (previously defined as System Preservation, System Management, and Expansion) to ensure a connection with the previous plan process, but are more (mode) specific to enable ARC to link PLAN 2040 policy direction more directly to KDP1 analysis.

Develop Performance versus Funding Trendlines for Preservation Programs

Performance trendlines establish the general relationship between the performance impact of each program given certain funding levels. For the roadway and bridge preservation categories, trendlines are intended to help isolate key funding thresholds associated with performance, e.g., Is there any point of diminishing return between funding and performance. Is there a clearly optimal level of funding?

Additional information on the program-level measures and methods that were established for trendline development to support KDP1 analysis across program types is available in Appendix C.

Use Performance Trendlines to Define Funding Allocation Scenarios

Once trendlines were established for preservation program areas, they were used to help determine an optimal fund distribution across all other program types, in line with PLAN 2040 policy direction. Given current funding issues associated with maintaining existing transportation infrastructure, the preservation analysis was used as a starting point for determining the initial fund distribution (i.e., a "preservation first" scenario) in the following manner. Preservation funding needed for the following was determined:

- Funding to preserve the existing roadway system (bridges and pavement) at current performance levels, and
- Funding to maintain the transit system at existing service levels and within state of good repair.

Funding levels needed to support (targeted) pavement and bridge maintenance conditions for the roadway system over the plan horizon were defined. Key policy question asked at this step included:

- How do Georgia's roadway maintenance expenditures compare to other states'?
- Can existing maintenance levels be sustained over time?
- What level of road maintenance will be acceptable, given current funding constraints?
- Will some level of deterioration in road maintenance funding be required to support adequate investment in other program areas?
- Should there be a shift in funds towards other projects that reduce longer-term preservation costs?

Total preservation funding needs were evaluated in terms of cost to support targeted roadway maintenance levels (bridge and pavement). Remaining funds available for allocating across other program areas were identified.

Evaluate Funding Distribution Scenario

For preservation programs, fund distribution scenarios were evaluated in terms of overall impact on the program area using the performance versus funding trendlines.

Define Preferred Funding Scenario

The key outcome of the KDP1 analysis was a preferred funding allocation of constrained revenue across each of the program areas. In July 2010, MPO policy makers instructed staff to emphasize increased funding for preservation in PLAN 2040. This emphasizes the region's preservation needs while still allowing for strategic expansion of the transportation system to accommodate future growth.

Key Decision Point 2 – Apply Policy Filter

The second step of the performance framework, KDP2, involved reviewing potential projects for consistency with PLAN 2040 policy, with the intent to advance only those projects that support the direction of the plan. The policy filter was only applied to programs that yield line-item investments in the RTP (as opposed to general funding programs).

Define Policy Filters

Policy filters link specifically to four of the program areas: Management and Operations, Transit Expansion, Road Expansion, and Bicycle and Pedestrian Expansion. Policy filters interject PLAN 2040 Principles into the RTP development process, in particular land use policy, as a means to directly coordinate the transportation and land use elements of PLAN 2040. Policy filters reflect the following:

Align investment with strategic, priority transportation systems such as:

- Regional Strategic Transportation System
- ASTRoMaP truck route network
- Bicycle and Pedestrian network
- Concept 3 transit network
- Align investment with Unified Growth Policy Map area types to encourage coordinated transportation and land use strategies.

Accommodate additional considerations such as:

- Safety need
- Statewide Strategic Transportation Plan priorities
- Projects already under development ("in the pipeline")
- Project readiness

Review Potential Investment Options against Policy Filters

The universe of transportation projects under consideration for the PLAN 2040 RTP was compared against each of the policy filters. Documentation of each project reviewed and the results of policy filter cross-check were compiled for follow-up discussion with project sponsors and is available in Appendix C.

Advance Projects That Are Consistent with PLAN 2040 Policy to Project-Level Evaluation

Only those projects consistent with PLAN 2040 policy proceeded to KDP3 for evaluation for consideration for federal funding.

Key Decision Point 3 – Project Evaluation

The third step in the performance framework was to evaluate and score projects that have passed through the policy filters, using performance measures that align with the strategic direction of PLAN 2040. Performance measures used at KDP3 were organized according to RTP Emphasis Areas, as shown in Table 3-1.

Table 3-1: RTP Emphasis Areas

	PLAN 2040 Objectives				
RTP Emphasis Area	**Mobility Options for People and Goods**	**Healthy, Educated, Well Trained, Safe and, Secure Population**	**Residential Choice in Locations Accessible to Jobs and Services**	**Energy and Resource Efficiency while Preserving Region's Environmental and Critical Assets**	**Innovative Approaches to Economic Recovery and Long-Term Prosperity**
Mobility	◆				◆
Connections and Access	◆	◆	◆		◆
Safety		◆			
Economic Growth		◆	◆		◆
Community/ Environment		◆	◆	◆	
State of Good Repair				◆	

The RTP emphasis areas are intended to:

- "Bridge" the more comprehensive PLAN 2040 Goals and Objectives to RTP-specific outcomes

- Link to transportation criteria that ARC must address as part of plan development (SAFETEA-LU planning factors)
- Link to potential Federal performance measures that are expected to be implemented via reauthorization, if not sooner
- Demonstrate a many-to-many relationship between intended RTP outcomes and the Objectives of PLAN 2040
- Help ARC manage expectations regarding the intended impact of transportation investment decisions

Project-level evaluations were focused on road expansion and transit expansion projects. Project evaluation was conducted *within* road and transit capacity programs to provide a relative comparison between road projects and a relative comparison between transit projects, separately.

Project evaluation measures were drawn from acceptable, ongoing practice in the region and state (consistent with existing MARTA evaluation criteria and SSTP criteria) and are supported by methods that use readily available data and tools. In addition, project-level measures were kept to a vital few that are easy to communicate to ARC stakeholders and decision-makers.

Performance measures for KDP3 were presented and vetted with ARC staff and stakeholders at the two performance framework workshops. Initial recommendations were subsequently refined by ARC staff to be more in line with internal modeling resources.

Benefit/Cost Calculation

As part of project-level evaluation, a Benefit/Cost (B/C) estimate was calculated for each project. A number of modifications to the previous *Envision6* project-level B/C calculation were applied for PLAN 2040.

These B/C updates were applied for roadway capacity project evaluation only. Transit projects applied a surrogate B/C in which the project score was used as the benefit/numerator and total project cost was used as the cost/denominator for calculation. Additional detail on the B/C methodology and calculations is available in Appendix C.

Integrating Project-Level Performance Results with Benefit/Cost Information

The result of KDP3 was a ranked list of high-performing projects for both road and transit expansion programs, with an associated B/C evaluation for each. Both of these key evaluation results were used to inform project selection for the draft plan. A tiered approach was used to integrate project-level performance impact and B/C results.

Project-level results were plotted using the 100-point performance score and B/C, for roadway and transit projects separately. B/C and scoring thresholds were defined, as needed, to produce a reasonable distribution of projects into four tiers:

- Tier 1 – Highest priority projects with high predicted performance and highest B/C ratio;
- Tier 2 – Medium priority projects with high predicted performance, but lower B/C ratio;
- Tier 3 – Medium priority projects with lower predicted performance, but higher B/C ratio; and
- Tier 4 – Lowest priority projects with low predicted performance, and low B/C ratio.

Key Decision Point 4 – Project Selection

The performance-based process did not stop at the project evaluation level, with projects programmed according to the list identified at KDP3. The KDP3 evaluation was used to identify the best performing projects, most cost effective projects within their respective program area, in the context of PLAN 2040 Goals and Objectives. Given funding constraints impacting PLAN 2040, ranked and tiered project lists do not serve as the sole determinant of project priority (i.e., costs to fund "good" projects are likely to significantly exceed available revenue). As part of plan development, ARC packaged high-performing projects across multiple program areas into a meaningful, implementable regional plan following rational steps:

Map High-Performing Projects for Each Program Area

Maps were produced in GIS for road and transit programs with project (performance) score, B/C results, and Tier identified. These maps were overlaid against other key planning criteria such as Equitable Target Areas (ETAs) that are used to define transportation disadvantaged areas, lifelong community or LCI areas.

Identify Complimentary Investments

ARC reviewed the results of project-level evaluation in relation to how projects did (or did not) complement one another across program areas, as well as other planning criteria considered in the previous step.

Select and Program Projects Accordingly

Based on the results of the first two steps, projects that demonstrated positive performance impacts in a cost-effective manner, with complimentary benefits across other program areas, were prioritized for funding in the RTP (given available funding revenue).

Evaluate Draft Plan

Once the draft plan was assembled from these projects, it was evaluated using plan-level performance measures that align with RTP emphasis areas. Plan-level measures, as opposed to project-level measures, reflect performance analysis that is inclusive of all roadways and transit in the model network/MPO planning area. Plan-level measures are meaningful at the network level and reflect performance of the cumulative investment strategy on the entire transportation system. The measures used are mode neutral to reflect the impact of proposed investment strategies for all system users. Plan-level measures are shown in Table 3-2.

Table 3-2: Plan-Level Performance Measures

RTP Emphasis Area	Plan-Level Measure	(A) Description (B) Data Source	
Mobility	Average Commute Time	(A)	Average travel time by auto and transit for HBW trip per commuter.
		(B)	ARC travel model.
Connections/ Access	Activity/Employment Center Travel Shed	(A)	Average number of workers reaching major activity/employment centers within 45-minute (autos and transit).
		(B)	ARC travel model.
Safety	Injury/Fatal Crash Rate	(A)	Number of injury and fatal crashes per 100M VMT.
		(B)	Georgia CARE, ARC travel model.
Economic Growth	Jobs and Growth	(A)	Change in GDP and jobs for the region resulting from travel time (delay) savings.
		(B)	Georgia Heat equations.
		(A)	Peak-Hour Freeway Speed: Managed lanes, HOV versus General Purpose.
		(B)	ARC travel model.
	Cost Savings	(A)	Annual congestion cost savings.
		(B)	ARC travel model.
Community/ Environment	Emissions	(A)	NO_x, VOC, $PM_{2.5}$, and GHG.
		(B)	ARC travel model, emissions model.
State of Good Repair	Roadway and Transit Condition	(A)	Percent pavement, bridge, and transit infrastructure in good condition.
		(B)	HERS/NBIAS (trendlines), level of transit preservation funding.

Compare Fund Distribution Results to Preferred Funding Allocations for System Preservation Levels

The fund distribution reflected in the draft plan was compared to the preferred funding allocation identified in KDP1. This feedback mechanism ensured that high-level policy direction was maintained throughout plan development.