Chapter 5.
Transportation

Goal:
A balanced and sustainable multimodal transportation system that links highways, transit, greenways, bikeways, and sidewalks into a seamless network that provides choices for people's travel needs.

Introduction
Our transportation system not only affects our ability to get from one place to another, it shapes our land uses, economic development, housing choices, air and water quality, health, and even our physical fitness. To maintain a livable community, we need to assure that our transportation policies and decisions are consistent with our land use goals; that transportation choices are available for pedestrians, bicyclists, transit users and persons of all abilities, in addition to automobiles. Our transportation system should be designed to encourage physical activity and developed in an environmentally sustainable manner.

In order to accommodate 120,000 new people and 66,000 additional jobs by the year 2030, we need to recognize that the major purpose of our transportation network is to move people and goods, not simply vehicles. We need to have an integrated, multimodal, sustainably designed transportation system that offers choices among modes, from sidewalks and bicycles to transit to cars and trucks. This chapter serves as a guide to public investment in our transportation system and is the basis for new and updated standards and guidelines for transportation facilities. It also sets the goals and objectives of the Long Range Transportation Plan, the federally required transportation plan for the Winston-Salem urban area.

What the 2001 Legacy Plan says about Transportation...

Create a balanced and sustainable transportation system that links highways, transit, greenways, bikeways, and sidewalks into a seamless network

Promote land use patterns and transit-oriented design standards that support public transit, walking, and bicycling

Encourage transportation decision makers and agencies to use Legacy recommendations when updating transportation plans and implementing projects and services

Develop a quality street and highway network

Design streets and highways that are safe and effectively move vehicles, pedestrians, and bicyclists, and have minimum negative environmental impacts

Improve connectivity of the existing street network

Employ traffic calming measures where appropriate

Develop a long-range plan for the establishment of a commuter rail system

Ensure that land use policies and regulations along rail transit corridors and around rail stations support increased development densities and transit-friendly design

Support the Piedmont Authority for Regional Transportation in coordinating regional public transportation planning in the Triad

Expand public transportation into a countywide system that is efficient, convenient, safe, and cost-effective

Expand the existing public transportation system along major corridors consistent with the Growth Management Plan

Create a bicycle, sidewalk, and greenway network that is an integral part of the transportation system

Integrate bicycle and pedestrian travel into every level of community planning – transportation, community development, recreation, schools, transit, etc.

Establish policies to reduce travel demand

Improve the efficiency, effectiveness, and safety of Smith Reynolds Airport

Develop an environmentally sustainable transportation system

Support an open, inclusive, and participatory transportation planning process
How Have the 2001 Legacy Plan Strategies Worked?

The success of transportation strategies since the adoption of Legacy is mixed. One area of improvement is progress in transportation and land use coordination. Transportation and land use are closely connected. Everything that happens to land use has transportation implications and every transportation system change affects existing or future land use. Local decision makers have become more aware of these links and there is greater cooperation between the agencies dealing with those issues. This includes different levels of government (local, state, federal) as well as different geographic areas (city, county, region). Plans such as the Long Range Transportation Plan (LRTP) and the Comprehensive Transportation Plan (CTP) have been completed as well as more specific transportation plans, such as the US 52 Land Use/Transportation Study.

In 1999, the Winston-Salem Urban Area Metropolitan Planning Organization (MPO) (Map 5-1) adopted its first multimodal Long Range Transportation Plan consistent with the landmark federal Intermodal Surface Transportation Efficiency Act (ISTEA). In the mid-2000s, NCDOT required local jurisdictions to expand their road-only thoroughfare plans to Comprehensive Transportation Plans (CTP), which include bicycle, pedestrian, transit, and rail elements, in addition to the street & highway element. Compared to the LRTP, the CTP is longer range and includes projects without identified funding. The CTP’s road cross-section recommendations are applied in rezoning cases to obtain necessary right-of-way or to require facility construction. The CTP includes only roads classified as freeways, expressways, boulevards, and major and minor thoroughfares. Recognizing the need to identify a finer grain street and highway system for local planning purposes, the MPO developed and adopted a Collector Street Plan in 2007. Collector streets provide both local access to adjacent properties and mobility for vehicles and other forms of transportation.

There have also been strides in transit planning. Transit use benefits the entire community by providing cost-efficient transportation choices, access to jobs and health care, and reducing roadway congestion. Work completed since the adoption of Legacy includes the Central City Streetcar Study, the Regional Commuter Rail Study, the Human Services Transportation Coordination Plan, and the Regional Transit Development Plan. There has been an increase in transit ridership since the adoption of Legacy with the ridership peaking in 2009 after gas prices exceeded $4 a gallon. Regional transit ridership has increased more than an average of nearly 10,000 riders per month to over 45,000 riders per month between 2003 and 2012.

Local road planning has seen improvements. A connectivity index now rates new subdivision developments to ensure shorter travel distances and more route options. The Collector Street Plan was developed to ensure that neighborhoods and communities are logically connected as development is approved. To help slow traffic down in neighborhoods, the City of Winston-Salem has put a traffic calming program in place in selected areas. Examples of traffic calming projects include Lockland Avenue and London Lane.

There is an increased awareness of the importance of other transportation choices such as walking and biking, as well as the relationship of transportation options to a healthy community. New street standards were adopted in Winston-Salem.
requiring sidewalks in new developments, and all sidewalks in Winston-Salem were mapped using the Global Positioning System. The City began striping bike lanes in 2007 and now has eight miles of lanes marked. A large section of the Muddy Creek Greenway was also constructed. The Winston-Salem Urban Area Metropolitan Planning Organization created a bicycle and pedestrian coordinator position in 2008 and major long-range plans were completed for greenways, pedestrian facilities, and bicycle facilities. Development design has been another area of success. Several new pedestrian-oriented commercial developments have been approved and built in Forsyth County.

The Winston-Salem Urban Area MPO currently has separate plans for greenways, sidewalks and bicycling. The Greenway Plan was originally adopted in 2002; an update of the plan was adopted in 2012. The first Comprehensive Bicycle Master Plan for the Winston-Salem Urban Area was adopted in 2005; the first Sidewalk and Pedestrian Facilities Plan was adopted in 2007. The next step for the MPO will be to create a comprehensive active transportation plan that integrates bikes, pedestrians and greenway components to more fully link and integrate these modes.

Nevertheless, there are still many areas of transportation planning that need to improve. While progress has been made in coordinating work between various agencies dealing with transportation planning, much more needs to be done to integrate land use and transportation policy. Land use decisions are typically made at the local level while transportation decisions are made at the local, regional, state, and federal levels.

The Winston-Salem Urban Area MPO is responsible for transportation planning for most of Forsyth County and portions of Stokes, Davie and Davidson Counties.
With rising gas prices, increased road congestion, and a slow economy, many Americans are taking another look at their driving habits. The American Automobile Association (AAA) estimates that the average cost of owning and operating a vehicle driven 15,000 miles annually in the US in 2012 was 59.6¢ per mile, a total of $8,946. This is a significant portion of a typical household budget, even for one car.

When analyzing the family budget, Americans traditionally consider housing affordable if it costs 30 percent or less of their income. But calculations of housing affordability typically only include housing costs. The Center for Neighborhood Technology developed the Housing + Transportation (H + T) Affordability Index for a more complete picture. H+T takes into account the cost of transportation associated with the location of the home as well as housing costs. When transportation costs are factored in, cities with higher housing cost, but with good transit systems and diverse transportation options, are often more affordable than auto-dependent suburban and rural locations.

According to the Center for Neighborhood Technology, the average US family spends almost 50 percent of its income on housing and transportation. However, families in transit-rich neighborhoods spent 10 to 14 percent less of their income on transportation. This new awareness of the actual cost of owning multiple cars is raising interest in mass transit and urban living in many communities.

One major project that has been on the books for years in Forsyth County is the Northern Beltway. The project is made up of two sections for a total length of 34 miles. Construction was delayed first due to issues with its environmental impact statement, then due to funding. Many in the community see this project as crucial both from a traffic management standpoint as well as an essential economic development driver. However, citizens with properties in the right-of-way have been left holding properties they can neither sell nor improve. As part of the State’s Urban Loop Acceleration Plan, a 3.4-mile segment from US 421/Business 40 to US 158 was recently funded with construction to begin in 2015.

Another issue is that the automobile still dominates as the transportation mode of choice in Forsyth County and the Triad. The time citizens spend in the car and the number of miles driven continues to rise at a rate higher than the population growth rate. While local transit ridership has increased, it is more likely due to higher gas prices than a change in our development patterns.

Even as our community has seen a marked increase in pedestrian and bicycle facilities, there are still few sidewalks and bike lanes outside of the central, older neighborhoods of Winston-Salem and its surrounding communities. Local and state government needs to move forward with initiatives to promote complete (multimodal) streets to accommodate all users of the transportation system when building or upgrading streets. Transit/pedestrian-oriented design also needs to be used more to create the livable, walkable communities that Legacy calls for. Transit/pedestrian-oriented design is also discussed in Chapter 4, Land Use.
Objectives, Policies, and Action Agenda

Objective 1: Land Use and Transportation Coordination

Promote integrated development patterns and transportation networks that work together to support mixed-use, pedestrian-friendly communities and active modes of transportation. Land use and transportation decisions should be consistent and mutually reinforce each other.

Transportation and land use are inescapably linked. Every land use decision affects our investment in transportation and vice versa. Communities that integrate transportation and land-use decisions manage growth better, improve travel efficiency, and contain infrastructure costs. When land use and transportation decisions are made together, we can increase access to goods, services, and opportunities and improve our quality of life. Unfortunately, land use planning and transportation investment decisions are often made by different entities and/or levels of government. Land use decisions are typically made at the local level, while transportation decisions are made at the local, regional, state and federal levels. In Forsyth County, land use decisions are made by local planning boards and elected officials, while transportation decisions are made not only by local governments, but also the Winston-Salem Department of Transportation (WSDOT), the Winston-Salem Urban Area Metropolitan Planning Organization (MPO), the North Carolina Department of Transportation (NCDOT), and even federal government agencies. Transit service is provided locally by the Winston-Salem Transit Authority (WSTA) and regionally by the Piedmont Authority for Regional Transportation (PART).

Transportation and land use are coordinated through many approaches, including through parking regulations, linking development standards to roadway classification, and encouraging mixed use development in appropriate locations. Some land uses create more traffic than others, so traffic impact studies are sometimes required to identify transportation impacts resulting from a proposed development. Access management is a strategy that helps maintain the capacity and safety of roadways while reducing conflicts between vehicles, pedestrians, and bicyclists. Access management strategies include limiting the number and location of driveways and intersecting streets, requiring combined driveways, limiting driveway access to side or rear roads or alleys, requiring construction of medians to control turning movements, and requiring the construction of frontage roads.


Policies

**Legacy 2030 Guidance** Encourage WSDOT, the Winston-Salem MPO, WSTA, PART, and NCDOT to use *Legacy 2030* and the guidelines in this chapter when updating transportation plans and implementing projects and services.

**Land Use Supports Transportation** Invest in transportation projects that further *Legacy 2030's* land use goals.

**Growth Management Plan** Implement *Legacy 2030's* Growth Management Plan to create a strong downtown, direct growth to activity centers and growth corridors to make efficient use of our transportation resources, and to make transit, walking and biking viable transportation options.

**Mixed-Use Development** Support land use policies, decisions and regulations that promote mixed-use development and transit/pedestrian-oriented design. Require new mixed-use/large-scale developments, employment centers, and major institutions to integrate transit and provide pedestrian and bicycle networks within their projects and connect to pedestrian and bicycle networks.

**Thoroughfare and Arterial Driveway Cuts** Minimize the number of driveways along thoroughfares and arterials to reduce vehicular conflicts, increase pedestrian safety, and improve roadway capacity.

**Access Management** Encourage the combination of driveways and use of cross-access easements through the development approval process.

Peters Creek Parkway is one area that could benefit from mixed-use development.
5.1.1. Planning Board Review Continue to have transportation plans reviewed by the City-County Planning Board to ensure that these plans support land use proposals and maximize the potential for transit and other active modes of transportation.

5.1.2. Traffic Impact Study Standards Review the traffic impact study (TIS) standards and consider whether there should be an expansion of when a TIS is required for public and private projects and a requirement for analysis of multimodal transportation impacts.

5.1.3. Transportation Facilities Require construction of facilities or acquire right-of-way for future transportation corridors (roadways and bike/pedestrian facilities) consistent with adopted transportation plans through land use planning and development permitting process.

5.1.4. Support Active Transportation Update the UDO and subdivision regulations/ordinances to incorporate provisions that support active modes of transportation. Ensure that development standards and zoning districts for activity centers and growth corridors support the mix, type, density and design of development that facilitates walking, bicycling and the use of public transportation. Identify zoning districts that may require transit/pedestrian-oriented design.

5.1.5. Road Classifications Continue to use road classifications as a factor in UDO standards (zoning districts and use conditions). Review and revise language to assure consistency between transportation function and land use.

5.1.6. Access Management Develop a comprehensive access management policy/program for the City of Winston-Salem. Where City requirements provide greater controls than NCDOT policy and practice, coordinate with NCDOT to have City policy applied on NCDOT controlled roadways in the City.

5.1.7. Transit/Pedestrian Design Standards Prepare and adopt design standards for transit/pedestrian-oriented design for both new developments and changes to existing developments. Standards should address land uses, density, building location and orientation, transit features, bike and pedestrian facilities and linkages.

Photo by NCDOT Communications via Flickr
Objective 2: Integrated Multimodal Transportation Network

Develop a high quality, fully integrated, highly connected, multimodal transportation network that provides transportation options that meet the short- and long-term transportation needs of residents and businesses in Winston-Salem and Forsyth County.

During the last 50 years of the 20th century, the American transportation system and road system were synonymous. This hierarchical road system emphasized a separation of land uses and resulted in heavy traffic, increased travel distances, and few alternatives to the automobile. Fortunately, there is now a greater recognition that our transportation system needs to go beyond single-function roads and become a multimodal network, providing people with integrated transportation choices, including transit, sidewalks and bikeways, as well as roads.

Practically, however, between now and 2030, the automobile will remain our primary means of getting around, especially for the transportation of goods. The CTP and LRTP identify a street and highway network, along with specific road construction and improvement projects, to assure a first class street and highway system that meets our short- and long-term needs. Key linkages and improvements in our road system are important measures to help expedite freight movement to and from our manufacturing centers, and the delivery of goods and services. Our challenge is to provide not only a first class road system, but to integrate the road system with other transportation options to become an integrated, multimodal network.

In addition to being multimodal, we also now recognize that our transportation system needs to go beyond single-function roads and become a multimodal network, providing people with integrated transportation choices, including transit, sidewalks and bikeways, as well as roads.

To assure street connectivity, jurisdictions typically establish a connectivity index and/or maximum block lengths for new developments and when considering connecting streets and roads in existing developed areas. Because street connectivity disperses traffic, connecting existing streets can sometimes serve as an alternative to road widening. However, residents sometimes oppose street connections out of fear of increased traffic on their residential streets. Recognizing this, all parties involved in decision-making must fully understand the communitywide benefits of a highly connected transportation system.

### Policies

<table>
<thead>
<tr>
<th>Road Network</th>
<th>Complete key elements of the road network that will enhance our manufacturing and logistics strengths, contribute to further development of our economic base, and lessen congestion on existing streets and highways.</th>
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<tr>
<td>Multimodal Transportation</td>
<td>Promote and develop an integrated, multimodal transportation network that offers safe and attractive choices among modes including sidewalks, bikeways, greenways, public transportation, roadways, railways, and aviation.</td>
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<td>New Developments</td>
<td>Assure that new public and private developments include a multimodal transportation network that provides circulation within their developments and connects to adjacent land uses and transportation facilities.</td>
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<td>Context</td>
<td>Plan and develop the transportation network and individual transportation facilities in a manner consistent with adopted land use plans and sensitive to the human and environmental context.</td>
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<td>Right-of-Way Closures</td>
<td>Consider the impact on both vehicular and pedestrian access and connectivity when evaluating the closure of a street, alley, bridge, or other public right-of-way.</td>
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**5.2.1. Significant Road Projects** Work to fund and implement road projects of areawide significance (Map 5-2), including the Northern Beltway; US 52 improvements; Business 40 improvements (Downtown Winston-Salem), I-40 widenings (from US 311 to the east and from Harper Road to the west); Reidsville Road (US 158) widening; Macy Grove Road extension and interchange; Thomasville Road (NC 109) relocation; Salem Creek Connector; US 311 Connector; and Union Cross Road improvements.

**5.2.2. Corridor Maps** Develop and adopt corridor maps for new roads proposed in the CTP.

**5.2.3. Roadway System Gaps** Identify and eliminate gaps in the roadway system to increase connectivity, reduce travel distances, improve access to nearby land uses and provide mobility options for vehicles, bikes, pedestrians, and transit.

**5.2.4. Connectivity Ratio** Review the connectivity ratio in the UDO street standards and consider whether revisions are needed to provide greater connectivity in the street network.

**Objective 3: Street Design**

Design streets and highways that are safe and efficient for motor vehicle drivers while accommodating transit users, pedestrians, and bicyclists, and limiting negative environmental impacts.

For many years, the objective of street design was to move motor vehicles faster and with minimal interruption. However, this singular focus ultimately undermined the effectiveness of mass transit and the safety of pedestrians and bicyclists. Our goal now is to design streets for people as well as vehicles. Livable streets are an important part of transit/pedestrian-oriented design as discussed in Chapter 4, Land Use, and these strategies can be applied to new developments and in retrofitting existing neighborhoods.

Other strategies include complete streets, traffic calming, and road diets. Complete streets, sometimes called multimodal streets, are streets designed to be safe and comfortable for users of all ages and capabilities, including pedestrians, bicyclists, transit riders, and motorists. These streets generally include sidewalks, bike lanes, transit stops, appropriate street widths and speed limits, and are well integrated with surrounding land uses. They emphasize safety, mobility and accessibility for multiple modes and may include crosswalks, bus lanes, on-street parking, landscaping, lighting, signaling systems, and separation between sidewalks and streets. Many jurisdictions have adopted complete streets policies and design guidelines to make accommodation of all users an expected part of transportation projects.

To make existing streets more livable, jurisdictions can use a variety of tools, including traffic calming and road diets. Traffic calming programs use design techniques to slow down and control the flow of traffic in neighborhoods and other areas. Measures often include placing speed humps and bulb-outs in the roadway; narrowing travel lanes by placing medians and/or bike lanes in the roadway; and installing sidewalks, on-street parking spaces, street trees, pedestrian-refuge islands and/or well-marked, signalized crossings. The City of Winston-Salem adopted a traffic calming policy in 2003 to promote safety for motorists, bicyclists and pedestrians while enhancing the appearance of neighborhoods. Since 2003, many neighborhoods have worked with WSDOT to develop and implement appropriate techniques in their neighborhoods.

The design of roadways and transportation structures, such as bridges, can enhance or detract from a landscape or a community. The Creative Corridors Coalition is a community-based organization created to provide a voice and process for residents of Winston-Salem and Forsyth County to influence the design of roadway infrastructure projects in and around the Downtown Winston-Salem area. The Creative Corridors Coalition has developed a master plan and design guidelines to be used by decision makers for transportation projects in the Downtown Winston-Salem area. While the plan and guidelines were developed specifically for Downtown projects, the Creative Corridors Coalition process demonstrates how roadway projects, corridors and bridges can be designed as distinctive features of a community.
### Policies

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<th>Policy Type</th>
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<tr>
<td><strong>Multimodal Projects</strong></td>
<td>Ensure that new roadway projects and major reconstruction projects provide safe, convenient, and attractive accommodations for all users including pedestrians, bicyclists, transit riders, and motorists.</td>
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<td><strong>Traffic Calming</strong></td>
<td>Create livable, people-oriented streets by integrating appropriate traffic calming/management principles into new streets and retrofits of existing streets.</td>
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<td><strong>Safety</strong></td>
<td>Prioritize the safety and needs of pedestrians, bicyclists and transit users over the convenience of motorists.</td>
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<td><strong>Context-Sensitive Approaches</strong></td>
<td>Use context-sensitive approaches to locate and design transportation facilities to be consistent with adjacent land uses, preserve natural features, protect historic and cultural resources, and enhance community appearance.</td>
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<td><strong>Sustainable Roadway Design</strong></td>
<td>Encourage sustainable roadway design and construction best practices to reduce stormwater runoff, maintain and enhance vegetation, and minimize environmental impacts.</td>
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<td><strong>Multilane Streets</strong></td>
<td>Limit the use of undivided multilane streets and utilize raised or landscaped medians, where feasible, to improve safety and capacity while providing opportunities for pedestrian refuges and landscaping.</td>
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<td><strong>Roadway and Bridge Design</strong></td>
<td>Design roadways and bridges to be community assets, serving to connect communities and to enhance the visual appearance of the built environment. Incorporate public art, landscaping and landscaped medians, street trees and canopy trees, and, where feasible, the placement of utility lines underground. In suburban and rural settings, work with natural topography to create attractive, natural medians.</td>
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### Action Agenda

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<th>Agenda Item</th>
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<tr>
<td><strong>5.3.1. Complete Streets</strong></td>
<td>Adopt a complete streets policy and develop complete streets guidelines.</td>
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<td><strong>5.3.2. Street Standards</strong></td>
<td>Work with stakeholders to review and revise UDO street standards to make streets more multimodal, livable, and sustainable by incorporating complete streets and traffic calming concepts.</td>
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<td><strong>5.3.3. Safety</strong></td>
<td>Consider the safety of all users, including bicyclists and pedestrians, when evaluating road and intersection improvement projects. Review locations with high vehicular crashes involving pedestrians and bicyclists to identify needed improvements.</td>
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<td><strong>5.3.4. Traffic Calming</strong></td>
<td>Continue and enhance the City of Winston-Salem’s existing traffic calming program and investigate new ways to manage vehicle speed, volumes, and safety in neighborhoods in and around sensitive areas, including schools, parks and institutional uses.</td>
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<td><strong>5.3.5. Road Diets</strong></td>
<td>Consider road diets on roads with excessive widths, lanes, and/or travel speeds. Use available right-of-way for landscaping and/or bicycle and pedestrian facilities or preserve right-of-way for future transit use (rail/streetcar lines, bus rapid transit lanes, etc).</td>
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<td><strong>5.3.6. Planting Strips</strong></td>
<td>Require planting strips from the back of curb or pavement edge to the sidewalk. Planting strips should be wide enough to allow for the viability of appropriate plantings, to accommodate stormwater recharge and to give pedestrians an additional safety margin from travel lanes and parking.</td>
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Action Agenda

5.3.7. Improved Transit Features
Consider incorporation of features such as traffic signal priority, transit pull outs, and exclusive transit lanes to improve transit operations and reliability.

5.3.8. Corridor Design
Prepare corridor studies and overlay districts with design guidelines for major roadway corridors. Focus on land use, transportation facilities, access management, signage, parking location, building design/location, and landscaping.

5.3.9. Creative Corridors
Implement the Creative Corridors Coalition master plan and design guidelines.

5.3.10. Highway Ramp Safety
Carefully design highway ramp configurations to more safely accommodate pedestrian and bicycle crossings.

Objective 4: Bicycle and Pedestrian Transportation
Create a safe and effective bikeway/sidewalk/greenway network that is an integral part of the transportation system, links together resources and destinations, provides an alternative to automobile travel, increases recreational opportunities, and advances healthy lifestyles and quality of life.

While Winston-Salem and Forsyth County may not top the list of pedestrian- or bike-friendly communities, we have come a long way since the adoption of Legacy. Developers are now required to construct sidewalks on at least one side of streets in new residential subdivisions and along property frontages on most streets for other types of development. Municipalities, using their own funds and federal dollars, have invested millions to construct sidewalks on existing streets and roadways. Bike lanes have been striped on almost eight miles of roadway and are routinely considered as part of all resurfacing projects. However, for streets to be truly safe and inviting to pedestrians and bicyclists, we will need to add features like street trees, refuge islands, and highly visible signalized crosswalks. Adjacent land uses in a number of areas will also need to be pedestrian-oriented with mixed uses, buildings pulled up to the street, and parking lots and driveways located to minimize their visibility and impact. Pedestrian and bicycle access will need to be considered for all current and future employment centers and community facilities, such as schools, parks, and libraries.

The benefits of active forms of transportation and greenways are discussed in Chapter 8, Healthy, Complete and Equitable Communities.
Policies

**Bicycle and Pedestrian Planning** Consider use of bicycle and pedestrian transportation at every level of community planning, including development review, community development, recreation, school siting, and transit.

**Locations for Bicycle and Pedestrian Improvements** Enhance pedestrian and bicycle circulation, access, and safety in Downtown and activity centers; along growth corridors; and near community facilities, including schools, libraries, parks and recreation centers.

**Bicycle and Pedestrian Facilities Funding** Ensure adequate funding for construction and maintenance of bicycle facilities, sidewalks and greenways as a critical component of the transportation system. Leverage state and federal grant funds to supplement local resources whenever possible.

**Road, Bridge, and Intersection Improvements** Seek to accommodate pedestrians and bicyclists in all road, bridge, and intersection improvement and construction projects. Continue to coordinate and implement pedestrian and bicycle accommodations with maintenance projects, such as striping bike lanes as part of resurfacing projects.

**Underused Right-of-Way** Add bike lanes to roadways by converting underused right-of-way or travel lanes or by removing center turn lanes.

**Unused Railroad Corridors** Convert unused or abandoned railroad corridors to bicycle, pedestrian and multiuse paths, where feasible.

**Safe and Appealing Sidewalks** Provide sidewalks that are safe and appealing to pedestrians of all ages and abilities by including features such as tree canopies and separation of sidewalks from travel lanes; signals and signage; safe and visible pedestrian crossings; and bulb-outs, medians and pedestrian refuge islands. Where necessary, use traffic calming measures to slow traffic to enhance pedestrian comfort and safety.

**Child Safety** Support programs such as Safe Routes to School, and provide new infrastructure to encourage children to walk and bicycle safely to and from school. Consider expanding such programs to connect to parks and other community facilities.

**Bicycle Support Facilities** Encourage provision of bicycle support facilities, such as secured bicycle racks, personal lockers and showers, for new and existing office developments/employment centers to encourage bicycling as an alternative mode for work commutes.
5.4.1. Bicycle and Pedestrian Plans  Implement the Sidewalk and Pedestrian Facilities Plan, the Comprehensive Bicycle Master Plan and the Greenway Plan/Greenway Plan Update.

5.4.2. Integrate Bicycle/Pedestrian/Greenway Planning  Develop a comprehensive active transportation plan that integrates bicycle, pedestrian, and greenway components.

5.4.3. Pedestrian Planning  Update the Pedestrian Plan (or the pedestrian component of an active transportation plan) to include a gap analysis and a sidewalk construction priority list based on an objective ranking system. Fund sidewalk construction based on the priority rankings and geographic diversity.

5.4.4. Sidewalk Regulations  Amend the UDO and subdivision regulations/ordinances to require the construction of sidewalks on both sides of streets in new subdivisions as well as new and redeveloped sites. Work with stakeholders to develop revised standards.

5.4.5. Bike Parking  Consider amending the UDO to require bike parking for commercial, mixed-use, and multifamily developments. Continue to allow reduction of required vehicle parking spaces for provision of bike parking. Consider providing incentives in the UDO, such as reduced parking requirements, for the provision of bicycle amenities.

5.4.6. Bicycle/Pedestrian Cross-Sections  Provide or require the construction of sidewalks, bike facilities, multiuse paths, and greenways consistent with the cross-sections established in the CTP.

5.4.7. Sidewalk Construction Priorities  Prioritize construction of sidewalks based on criteria, such as road classification type; proximity to transit stops and park-and-ride lots; proximity to schools, parks and other public facilities; location in activity centers and along growth corridors; and the potential to connect to existing sidewalks, greenways and bike facilities.

5.4.8. Bicycle/Pedestrian Rights-of-Way  Reserve, obtain and/or acquire right-of-way or easements for proposed bikeways, sidewalks, multiuse paths and greenways if facilities are not required to be constructed as part of the development approval process.

5.4.9. Walkability/Bikeability Deficiencies  Undertake walkability and bikeability audits to identify deficiencies and target areas for infrastructure improvements and traffic calming efforts.

5.4.10. Major Employment Centers  Work with hospitals, colleges/universities, and major employment centers to develop plans to increase transit, pedestrian, and bicycle access to their campuses and to decrease congestion and demand for parking.
Objective 5: Public Transportation

Enhance and expand public transportation into a countywide transit system of buses, vanpools, car pools, and special population transit services that is efficient, convenient, safe, and cost-effective. Increase transit use through service enhancement, improved pedestrian and bicycle linkages, and transit-supportive development patterns.

Public transit has many benefits for a community. It provides an affordable transportation option to all and mobility to those unable to drive. In addition, transit reduces road congestion, auto emissions and reliance on fossil fuels. Most trips in Forsyth County are made by car, often in single-occupancy vehicles. There are many reasons why people choose not to ride transit—lack of convenience concerning the location of routes or schedules, or perceptions concerning safety, or even the opinion that transit is only for those who have no other choice. As a result, some solutions to these issues are policy- and funding-related, and other solutions involve marketing and education. Transit usage generally increases with higher residential development densities to operate efficiently and economically. By increasing densities through land use planning, more residents can live within walking distance of transit lines, enabling higher ridership and more convenient service. A better-connected street system with sidewalks and other pedestrian/transit amenities can make it safer, easier and more pleasant to use transit.

Forsyth County is served by two public transit agencies: the Winston-Salem Transit Authority (WSTA) and the Piedmont Authority for Regional Transportation (PART). WSTA provides bus service in the City of Winston-Salem on approximately 24 regular daytime and seven evening routes, plus various connectors and shuttles. WSTA also operates TransAid, a paratransit service, as a countywide demand response service for elderly and disabled riders. PART provides bus service on approximately 15 routes in a 10-county region. Eight of these routes serve Forsyth County; Downtown Winston-Salem is one of three major hubs of the PART system. PART also manages ridesharing and vanpooling programs. PART’s Regional Transit Development Plan (discussed in Objective 6, Regional Transportation) was adopted by the Winston-Salem Urban Area MPO in 2011. There are gaps in both systems, particularly for night and weekend service.

The benefits of a Center City streetcar system are discussed in Chapter 10, Downtown and the Center City.
### Action Agenda

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<thead>
<tr>
<th>5.5.1. Transit Planning</th>
<th>Review existing public transportation service in relation to the goals of Legacy 2030. Develop a plan to expand the existing system to connect the Clark Campbell Multimodal Transportation Center to activity centers, town centers, and major employment centers along growth corridors. Explore ways to provide service to the entire county, including partnership with PART.</th>
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<tbody>
<tr>
<td>5.5.2. Regional Transit</td>
<td>Implement the recommendations of the Regional Transit Development Plan in Forsyth County and its municipalities, including PART express corridors, transit emphasis corridors, local route extensions and a Center City streetcar system (see Chapter 10, Downtown and the Center City).</td>
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<tr>
<td>5.5.3. Downtown People Mover</td>
<td>Develop a streetcar or people-mover system based on the recommendations of the Urban Circulator Alternatives Analysis to link Downtown and nearby major employment, entertainment and education centers (see Chapter 10, Downtown and the Center City).</td>
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<td>5.5.4. Bus and Streetcar Connections</td>
<td>As a streetcar or people-mover system is developed, consider how bus transit service might be reconfigured to maximize interconnectivity and allow for further extension of transit service to unserved areas.</td>
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<tr>
<td>5.5.5. Human Services Plan</td>
<td>Update and implement the Human Services Transportation Coordination Plan to improve and coordinate transportation services for persons with disabilities, older adults, and lower-income persons.</td>
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<tr>
<td>5.5.6. Satellite Transit Hubs</td>
<td>Study the feasibility and effectiveness of establishing satellite transit hubs at key locations such as Union Station (former Davis Garage), universities, hospitals, major retail areas and in the town centers of outlying municipalities.</td>
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<td>5.5.7. Park and Ride Lots</td>
<td>Establish park-and-ride lots at key locations along growth corridors, activity centers and the periphery of the Center City. Consider use of parking lots that have significant unused daytime parking, such as churches and shopping malls.</td>
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<tr>
<td>5.5.8. Transit Stops and Shelters</td>
<td>Continue to require transit stops and shelters, as appropriate, through the site plan review process.</td>
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<td>5.5.9. Bus Stop Spacing</td>
<td>Explore opportunities to provide more appropriately spaced bus stops with better amenities, trading shorter walking distances with faster transit service and better facilities.</td>
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<tr>
<td>5.5.10. Unique Transit Shelters</td>
<td>Develop unique transit shelters that reflect the history or character of the areas in which they are located. Use community charrettes or competitions to design shelters.</td>
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<td>5.5.11. Event Shuttles</td>
<td>Substitute event shuttle services for on site parking requirements, where feasible, to free land for other uses around event locations. Amend the UDO as necessary to allow parking space reductions.</td>
</tr>
<tr>
<td>5.5.12. Internet Service</td>
<td>Equip WSTA buses and major stops, including the Clark Campbell Multimodal Transportation Center, with wireless internet access and charging stations.</td>
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Objective 6: Regional Transportation
Create a strong multimodal regional transportation system that provides regional mobility, encourages economic development, promotes sustainable growth patterns, and preserves the natural and built environments of the region.

A good regional transportation system is important for getting people to jobs and for attracting and retaining businesses and residents. Coordinated, cooperative efforts and decision making will serve not only to improve our regional transportation system, but also to enhance our chances of securing State and federal transportation funding for major projects.

The Piedmont Authority for Regional Transportation (PART) serves as a regional transportation provider and planning agency, coordinating efforts to promote regional mobility and sustainable growth patterns in the Triad. PART coordinates the Regional Travel Demand Model and the Conformity Analysis and Determination Report required for Long Range Transportation Plans of area MPOs. Other regional planning efforts include:

- **Piedmont Triad Seamless Mobility Study.** In 2006-08, PART facilitated completion of a study to consolidate, coordinate and improve communication among the transit systems in the Triad.
- **Commuter Rail Study.** See discussion in Objective 7, Commuter Rail.
- **Heart of the Triad.** In 2009-2010, PART worked with planners, property owners, and real estate developers to develop a master plan for the 7,500 acres of land located along the Guilford-Forsyth County line west of the Piedmont Triad International Airport and along I-40, Business-40 and US 421 corridors, with the goal to increase economic vitality and quality of life.
- **Piedmont Together.** PART and Piedmont Triad Regional Council (PTRC) staffs are working with elected officials, staff, and citizens from throughout the 12-county region to develop a regional plan to build economic competitiveness by connecting housing with good jobs, quality schools and transportation.
- **Regional Transit Development Plan.** The Piedmont Triad Regional Transit Vision for 2025’s key recommendations for Forsyth County include:
  - **Bus Rapid Transit (BRT) Gold Route** to serve as a commuter rail precursor and connect North Carolina Agricultural and Technical State University, Downtown Greensboro, Friendly Center, Piedmont Triad International Airport, Heart of the Triad/Kernersville, Downtown Winston-Salem, Wake Forest Baptist Medical Center, Forsyth Medical Center and Hanes Mall;
  - **PART Express Corridors** extend PART service to the downtowns of smaller municipalities in Forsyth County;
  - **Transit Emphasis Corridors,** where higher frequency transit service, with enhanced amenities and special features are offered;
  - **Local Route Extensions** at a variety of locations in Winston-Salem and Kernersville; and
  - **The Winston-Salem Streetcar** connecting Downtown Winston-Salem and the Wake Forest Innovation Quarter with activity and employment centers to the east and west, as well as a north-south route connecting Wake Forest University, Downtown, and the UNC School of the Arts. The streetcar would also help develop the densities and ridership that would enhance future commuter rail prospects.
Regional Transportation Planning Continue to work with regional planning partners and local transportation agencies to coordinate transportation planning, operations, and funding priorities for roads, transit, commuter rail, and other transportation modes.

Regional Transit Support PART’s transit service and demand management programs in the Triad region.

Regional Planning Work with regional organizations and other jurisdictions on collaborative land use and transportation planning efforts, such as the Heart of the Triad Plan.

Regional Sustainability Planning Support regional planning and sustainability efforts, such as the Piedmont Together planning project.

Roadway Improvements Coordinate roadway improvement projects to support regional transit service.

Regional Greenways and Bikeways Work with regional partners to develop multijurisdictional greenways and bikeways.

Action Agenda

5.6.1. Regional Transit Plan Implement PART’s Regional Transit Development Plan.

5.6.2. Regional Mobility Plan Implement PART’s Piedmont Triad Seamless Mobility Plan.

5.6.3. Regional Land Use Plan Implement the Heart of the Triad Plan.

Objective 7: Commuter Rail
Support policies and development patterns to make establishment of a regional commuter rail system feasible in the future.

A regional commuter rail system is a dream of many in the Triad. Nevertheless, a 2009 analysis found that the projected benefits of a commuter rail line between Winston-Salem and Greensboro did not yet justify federal transportation funding. The analysis evaluated a rail option within existing railroad rights-of-way and bus rapid transit (BRT) on an exclusive right-of-way between Hanes Mall in Winston-Salem and North Carolina Agricultural and Technical State University in Greensboro. Both options were estimated to cost over $300 million.

While the study’s findings did not support near-term funding under Federal Transit Administration guidelines, it suggested that the Triad could position itself for future commuter rail funding by protecting its right-of-way corridor, increasing densities along the corridor and at potential stations, and building transit ridership in the east-west corridor. To build transit ridership, PART completed the Regional Transit Development Plan, which focuses on transit service within the region’s urban cores and along current and future PART corridors. Land use policies and decisions to support a future rail system, including mixed use, higher-density with transit/pedestrian-oriented design, will need to be made in different jurisdictions by local policy makers.
Policies

Rail Compatible Development Patterns
Encourage land use development patterns and designs that are compatible with a regional rail system, including mixed use, higher density with transit/pedestrian-oriented development and design.

Rail Corridors and Station Locations
Ensure that land use policies and zoning regulations along potential commuter rail corridors and around potential rail station locations support increased densities and transit-friendly design.

Existing Rail Lines
Preserve existing rail lines and rights-of-way for future regional/local rail service or for interim or permanent pedestrian use.

Action Agenda

5.7.1. Development Density
Implement the Legacy 2030 Growth Management Plan to create the type and density of development to support creation of a regional commuter rail system.

5.7.2. Regional Transit Plan
Implement PART’s Regional Transit Development Plan, including the Bus Rapid Transit Gold Route to serve as commuter rail precursor.

5.7.3. Commuter Rail Study
Update the commuter rail study. Consider a wide range of potential corridors including existing rail lines and major road rights-of-way.

Objective 8: Freight Transportation
Provide a safe and efficient freight transportation system that improves existing levels of freight access and mobility, supports the region’s economic well-being, and minimizes negative impacts on sensitive land uses and the environment.

The movement of freight, primarily by truck, but also by air and rail, is an important part of the economy in Forsyth County and the region. Recognizing the key role that freight transportation plays in the Piedmont Triad, metropolitan planning organizations (MPO) in the region jointly developed a freight element for their Long Range Transportation Plans (LRTPs) adopted in 2009. The goals of the freight element of Winston-Salem’s LRTP are to provide a safe freight transportation system that sustains or improves existing levels of freight access and mobility; support the region’s economic well-being, while remaining sensitive to environmental needs and concerns; and achieve efficiency in operations and investments in the freight transportation system. The LRTP freight element also notes freight-supportive road projects in the Winston-Salem urban area (including Future I-74, Union Cross Road, Business 40, NC 109 and the Northern Beltway) and includes recommendations in a number of areas (including truck routes, air freight and system planning).

Recognizing the importance and also the complexity of freight transportation, Triad MPOs have jointly contracted with a consultant to develop a more comprehensive freight element for their updated LRTPs to be adopted in 2013.

This is the first time a freight-related objective has been included in Forsyth County’s comprehensive plan. The recommendations listed below are generally related to land use and land use decision making. The LRTP includes additional freight-related recommendations.
**Policies**

**Freight Movement** Consider freight movement as a priority in roadway planning, infrastructure investment and land use decision making.

**Industrial Site Access** Consider access to freight terminals, warehouses and other industrial uses in land use decision making. Direct transportation investment to improve access to existing examples of such facilities.

**Airports and Freight Connections** Support efforts to improve freight movement to and around Smith Reynolds Airport and the Piedmont Triad International Airport.

**Action Agenda**

**5.8.1. Freight Planning** Implement the recommendations of the freight element of the LRTP.

**5.8.2. Industrial Collector Streets** Identify existing and future industrial collectors as part of a future update of the Collector Street Plan. Require, through the development process, construction of industrial collectors consistent with plan recommendations.

### Objective 9: Air Transportation

Support efforts to improve air service, promote economic development, and provide transportation access to the Smith Reynolds Airport and the Piedmont Triad International Airport.

Smith Reynolds has the advantage of an easily-accessible location close to Downtown Winston-Salem and airfield infrastructure that exceeds the majority of downtown airports within the United States. It provides an effective base of operations for corporate aircraft, air charter services, general aviation, and air cargo. It also has the potential of providing convenient “just-in-time” delivery of specialty items such as biomedical production to locations elsewhere in the nation and beyond. However, due to the close proximity of Piedmont Triad International Airport (PTIA), Smith Reynolds does not focus on commercial airline service. Over the years, the Smith Reynolds Airport has become one of the largest and busiest general aviation airports in North Carolina by investing in the airfield infrastructure to support growth.

In 2012, the Airport Commission of Forsyth County finalized their updated *Smith Reynolds Airport Master Plan*, creating a 20-year development program that would maintain a safe, efficient, economical, and environmentally-acceptable airport facility for Forsyth County. The document will provide guidance to satisfy the aviation demand in a financially feasible and responsible manner while addressing the aviation, environmental, and socioeconomic issues of the community. Although Smith Reynolds Airport is surrounded by residential development, future expansion is possible and depicted in alternative development proposals in its master plan.

The economic importance of Smith Reynolds Airport will be enhanced with the implementation of the aerotropolis concept for the Piedmont Triad. Although much regional economic benefit will be gained with development of an “airport city” emphasizing strategically-timed distribution and delivery of products from facilities around the Piedmont Triad International Airport, Smith Reynolds can benefit from the same approach for the products and services that originate or are processed in Winston-Salem near its “downtown” airport. Further discussion of business and industrial development near the airports is discussed in *Chapter 6, Economic Development*.
Objective 10: Travel Demand Reduction

Establish policies and programs to reduce vehicle miles traveled, single-occupancy vehicle use, congestion, and pollutant emissions.

The idea behind travel demand reduction is that to reduce congestion and auto emissions, we need to decrease the number of vehicle trips and vehicle miles traveled (VMT) on existing roadways. We can do this by increasing the number of persons in a vehicle, promoting alternatives to driving, including telecommuting and use of other modes of transportation, (walking, biking, and transit), and creating compact and mixed-use land use patterns that reduce the need to drive.

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<tr>
<th>Policies</th>
<th>Travel Demand Management</th>
<th>Support PART in providing demand management programs, including transit, ridesharing and vanpooling, and awareness programs, such as the Triad Commute Challenge.</th>
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<td>Employers and Travel Demand</td>
<td>Encourage employers to reduce travel demand by providing transit subsidies, bicycle facilities, alternative work schedules, ridesharing, telecommuting and work-at-home programs, employee education and preferential parking for carpool/vanpool.</td>
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<td></td>
<td>Telecommuting</td>
<td>Promote telecommuting and assure that land use regulations do not inhibit telecommuting activities.</td>
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<tr>
<th>Action Agenda</th>
<th>5.10.1. Commuting Alternatives</th>
<th>Encourage businesses that obtain City and County incentives to work with PART to develop alternatives to the single-occupant vehicle for their employees, including carpooling, vanpooling, telecommuting, alternative work schedules, walking, bicycling, and transit.</th>
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<td>5.10.2. Alternate Vehicles</td>
<td>Consider allowing the use of alternate vehicles, such as Segways and golf carts, in appropriate locations, and amend ordinances as necessary.</td>
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<td>5.10.3. Mixed-Use Development</td>
<td>Consider requiring mixed-use development in specified areas and/or other major development proposals (see Chapter 4, Land Use).</td>
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Objective 11: Transportation Funding
Ensure adequate long-term funding for maintenance and construction of all modes of transportation facilities.

A variety of federal, State, and local funds are used to plan, design, construct and maintain transportation facilities in the Winston-Salem urban area, with most funding for street and highway projects coming from the State or federal government, primarily from gasoline taxes. However, the financial burden is shifting to local governments as the federal and State governments face funding shortfalls. While continuing to seek State and federal funding, we will also need to examine other potential funding mechanisms such as voter-approved bond issues, public/private partnerships, fees, regional or local tax levies devoted to transportation, and perhaps other more innovative ways to pay for such projects.

Policies

Adequate Funding Ensure adequate funding for construction and maintenance of all modes of transportation.

State and Federal Funds Aggressively seek State and federal funds for local transportation projects. Leverage State and federal grant funds to supplement local resources whenever possible.

Funding Sources Consider a wide range of standard and innovative funding sources for transportation funding, including bond issues, assessments and fees-in-lieu, taxes, toll roads, and public/private partnerships.

Equitable Transportation Investment Ensure that transportation infrastructure investments are equitably distributed in the community.

Action Agenda

5.11.1. Funding Strategies Develop funding strategies for maintenance of existing and new construction of transportation facilities.

5.11.2. State Enabling Legislation Seek State enabling legislation, as necessary, to expand transportation funding sources.

5.11.3. Development Impacts Require developers to provide right-of-way, make improvements, construct facilities, or provide fees-in-lieu to help alleviate the traffic impacts of their projects.

5.11.4. Innovative Financing Pursue local, State, and federal sources and innovative financing options to assist in funding transit infrastructure investments. Make greater use of the mass transit tax (portion of property tax) already authorized by the City to pay for increased transit service. Consider seeking voter approval of a ½-cent sales tax to fund local and regional transit service expansion as allowed by the NC General Assembly.

Photo by NCDOT Communications via Flickr
Objective 12: Transportation Planning Process
Support an open, inclusive, and participatory transportation planning process.

Federal requirements and local commitment to community involvement requires transportation planning agencies to seek public involvement at all stages of transportation planning and project development. However, when plans are at the conceptual or system level (the line on a map stage), it is difficult to get the public involved. Without public opposition, projects move forward to more detailed planning and funding. It is usually in a project’s later stages when citizens mobilize and voice concerns, sometimes resulting in delays and additional expense for taxpayers.

Local transportation planners have used creative ways to advertise proposed projects and get citizen input, especially at the conceptual stage of planning. Recent efforts have included promotion through social media; humorous and eye-catching ads; and information tables at atypical locations, including shopping centers, stock car races, farmer markets, and festivals.

To assure that citizens have opportunities to give input at all levels of transportation planning and decision making, the Winston-Salem MPO has adopted a public participation policy to bring a broad cross-section of the public into the transportation planning decision-making process. The MPO makes special efforts to increase opportunities for citizen involvement for those who do not generally participate in community affairs, particularly low-income and minority populations.

Despite local efforts to have an open, inclusive and participatory planning process, major transportation funding decisions are ultimately made at the State and federal level. The Winston-Salem Urban Area MPO has discretion over some funding, generally for smaller intersection improvements, transit, bike/pedestrian and greenways projects; however, the MPO’s role is essentially an advisory one when it comes to the larger projects included in State Transportation Improvement Program (STIP). The MPO could block a project by refusing to include it in required local plans, but has limited ability to advance projects the State has not prioritized for funding.

Policy

**Collaborate** Ensure that transportation planning and decision-making is an open, collaborative process that includes citizens and local, State, and federal governments.

Action Agenda

**5.12.1. Public Participation Policy** Follow the public participation policy adopted by the Winston-Salem Urban Area MPO to bring a broad cross-section of the public into transportation policy, planning, and investment decision-making processes.
Objective 13: Protection of the Environment
Develop a transportation system that respects and enhances the natural and human environment.

Our roads and vehicles have a significant impact on our natural and human environment. Automobiles are a major source of air pollution, creating health problems, especially for vulnerable populations. Pollutant-laden runoff from roads, parking lots, and driveways degrades water quality. The Air Quality Conformity and Determination Report is a key component of both the LRTP and the Transportation Improvement Program (TIP). The Conformity Analysis must show through transportation and air quality modeling that when the projects in the plan are implemented, the area will not exceed allowable emission thresholds (including those for ozone, carbon monoxide, particulate matter, and nitrogen dioxide.) In addition to creating an efficient transportation system through good transportation planning, we can also improve air quality by driving fewer miles, operating lower-emission vehicles, and using transit and nonvehicular transportation modes.

Road projects often diminish open space, wetlands, and other valuable ecosystems, as well as contribute to the destruction of neighborhoods, cultural and historic resources. However, with context-based planning, it is possible to improve transportation safety and mobility, while preserving scenic, aesthetic, historic, community and environmental resources. “Context-sensitive solutions” is an approach to transportation planning that engages stakeholders in designing transportation facilities that fit with their setting and the surrounding land use.

See Chapter 7, Environmental Quality and Sustainability for additional discussion and recommendations.

Action Agenda

5.13.1. Consultation and Mitigation Follow the consultation procedures and, as necessary, the mitigation strategy established in the Consultation and Environmental Analysis/Mitigation Plan of the LRTP.

5.14.2. Context-Sensitive Approaches Use Context-sensitive approaches for all transportation projects to involve stakeholders, and minimize impacts to neighborhoods, historic resources, and sensitive natural areas; conserve energy resources; reduce greenhouse gas emissions; and limit air pollution.
Objective 14: Healthy, Active Transportation
Support development patterns and transportation networks that promote healthy lifestyles and increase active transportation options.

For a discussion of this topic and applicable recommendations, see Chapter 8, Healthy, Complete and Equitable Communities.

Objective 15: Environmental Justice
Identify and address the needs of minority and low-income populations in making transportation decisions.

The term environmental justice (EJ) comes from Title VI of the Civil Rights Act of 1964. For transportation planning, the three main principles of EJ are to: avoid or minimize high and adverse human health, environmental, social, and or economic effects on minority and low-income (MLI) populations; ensure full and fair participation of all potentially affected communities in the transportation decision-making process; and prevent denial of, reduction or significant delay in the receipt of benefits by MLI populations.

Action Agenda

5.15.1. Environmental Justice Plan Implement the recommendations of the Environmental Justice Plan of the LRTP.

Conclusion

Like most communities, Forsyth County is changing its view of what transportation planning should entail, moving in a direction that recognizes all modes of transportation and their relationship to land use planning. New concepts have come to the forefront since the adoption of the 2001 Legacy Plan and we need to determine where we want to see ourselves in the future. By investing in mixed-use development and transportation options, such as a Center City streetcar and bicycle and pedestrian facilities, we can better link the different areas within our community. When it comes to transportation, our growing population is actually an advantage, creating the economies of scale needed for a more efficient, cost-effective system.