

STREET AND HIGHWAY PLAN

Introduction

The street and highway system in the Winston-Salem Urban Area consists of thousands of miles of traffic carrying facilities, ranging from short local residential streets to high volume parkways and freeways such as Silas Creek Parkway (NC 67), Interstate 40 and US 52. Typical of most mid-sized urban areas, the system is dominated by thousands of local and collector streets which provide access to much of the community.

However, most of the traffic service provided in the street and highway network is handled by only a few hundred major facilities such as arterials, urban boulevards, parkways, expressways and full-controlled access freeways. The focus of the Street and Highway Plan is on these major traffic carrying facilities.

The Street and Highway Plan comprises of several important sections: 1) a brief discussion of how the Thoroughfare Plan and Comprehensive Transportation Plan (CTP) are being incorporated into this plan, 2) a general description of the current problems and conditions that exist, 3) the recommended street and highway projects for each horizon year through 2035, and 4) a list of policies and strategies to implement the recommended street and highway facilities and to further enhance the overall street network.

Also, a separate listing of federally “exempt” projects is presented. The list of exempt projects ensures that critical bridge, safety and other projects may continue to be implemented in the absence of a conforming LRTP or State Transportation Improvement Program (STIP). And finally, a program of future initiatives that will guide the planning and further development of the urban area’s street and highway system is provided.

Thoroughfare Plan/Comprehensive Transportation Plan (CTP)

For over forty-five (45) years, the North Carolina Department of Transportation (NCDOT) has worked with the Winston-Salem Urban Area MPO in developing and maintaining the Thoroughfare Plan. The Thoroughfare Plan has served as the street and highway master plan for the urban area by identifying the existing roads that are the major traffic carrying facilities, or showing the proposed general location of future planned major streets and highways. A companion Technical Report has provided official guidance as to the proposed improvements needed to meet future travel demand. However, the Thoroughfare Plan is no longer officially recognized by NCDOT.

In 2001, the North Carolina legislature approved a new law that mandates the creation of comprehensive transportation plans (CTP). A CTP is the State’s new multi-modal transportation plan format and process, similar to the development of this 2035 Transportation Plan. The CTP is starting to replace thoroughfare plans that have been in place since the 1950’s. Both the process and the product of a CTP are different than the thoroughfare plan.

Previously, thoroughfare plans identified the existing and proposed highway network needed to handle existing and future traffic with no fiscal constraints. The CTP is a multi-modal plan that identifies the entire existing and future transportation system and includes highways, public transportation, rail, and bicycle facilities needed to serve the anticipated travel demand. The CTP is intended to be more environmentally and community friendly. It strengthens the connections between the area’s transportation plan, adopted local land development plan, and community vision.

The Winston-Salem Urban Area CTP Street and Highway element combines the recommendations of a Thoroughfare Plan with the format and terminology of the CTP's guidelines. Although not formally required to be included in this LRTP, the CTP Street and Highway element provides a general framework for developing the required Financially Constrained Street and Highway Plan, and for planning some of the other modes of transportation described later in this document.

This brief section on the development of the CTP is included in this plan as recognition that the Winston-Salem Urban Area MPO has developed this plan in conformance to the revised law and the completed guidelines of the CTP as close as possible.

Problems and Conditions

The Winston-Salem Urban Area's streets and highways are a complex system of facilities that generally provide an adequate level of service for most of the driving public on a daily basis. However, the street and highway system still has a wide variety of problems and conditions that need to be addressed by the year 2035. A summary of the problem areas are provided below:

Congestion

Traffic congestion is generally defined as more people trying to use a transportation facility during a specific period of time than the facility can handle with which are considered to be acceptable levels of delay or inconvenience. The urban area experiences most of its congestion during the morning and afternoon peak hours but these time-frames are growing into middle parts of the day, and on weekends. Most of our major facilities experience some form of traffic congestion, particularly Interstate 40, Business 40 (US 421), US 52, Silas Creek Parkway (NC 67), Hanes Mall Boulevard, University Parkway, and South Stratford Road (US 158). Many other roads also experience peak hour congestion problems, particularly at major signalized and un-signalized intersections.

As the urban area continues to grow and develop, congestion will continue be a major issue through the year 2035. The total vehicles of miles of travel (VMT), total vehicle hours of travel (VHT), lane miles of congested roadway, and other important indicators have been studied through the development of the Piedmont Triad Regional Travel Demand Model.

Safety

Traffic safety is a very important measure of how the street and highway system is performing. While it may be true that up to 90% of all accidents that human error is recorded as a contributing factor on accident reports, street and highway improvements can greatly reduce the likelihood of human error or the consequences of the accident. A wide variety of street and highway characteristics have been identified as having an important influence on traffic accidents and their consequences including poor geometric design of streets and intersections, inadequate pavement widths and shoulders, poor lighting, inadequate spacing of freeway ramps and weaving areas, etc. Many street and highway facilities in the urban area suffer from these conditions.

Connectivity

The urban area's street and highway system is generally recognized as a radial network providing direct access into downtown Winston-Salem or into the core of some of the smaller municipalities around Winston-Salem like Kernersville, King, Lewisville and Rural Hall. Unfortunately, this old system of "farm-to-market" roads is inadequate for addressing today's complex travel patterns and desires of cross-town and cross-county movements. The street and highway system lacks connections between these radial routes. A few connecting roads have been built to address this problem including the Silas Creek Parkway Extension,

Bethabara Park Boulevard, the Polo Road-Peace Haven Road Connector, Martin Luther King, Jr. Drive Extension, 14th Street Extension, Hanes Mill Road Extension, etc. But more are needed to provide better connectivity between thoroughfares and major destinations, have better distribution of traffic and traffic flow in the network, to minimize cut-through traffic in residential areas and neighborhoods, and to enhance mobility choices for citizens.

Also, many residential areas and neighborhoods, particularly in suburban areas, have been designed and developed with very poor connectivity to adjoining neighborhoods and destinations such as schools, parks, and local commercial areas. As a result, many thoroughfares provide for travel movements which could often times be made by other means. Greater connectivity between residential streets would distribute the total traffic, ease congestion and make movement easier for all modes of transportation.

Lack of Utility

Streets and highways are required to move a variety of transportation modes safely and efficiently, however, the focus has been to design these facilities to only move vehicles faster and more efficiently. Many major roads in the urban area have been designed in this manner. Numerous bridges and underpasses have become impediments to safe movement by pedestrians and bicyclists and have further divided our community. This has undermined the use of transit, walking and bicycling as transportation options. To facilitate the use of all modes of transportation, streets and highways must be designed to accommodate the various users by providing facilities for pedestrians, bicyclists and transit users. These include sidewalks, bikeways, crosswalks, transit stops, traffic calming, etc.

Horizon Year Recommendations

Summaries of the proposed recommendations in the Street and Highway Plan for the horizon years: 2009, 2010, 2012, 2015, 2025 and 2035 are listed below. At the end of this section, horizon year tables and maps show each proposed project and its location.

2009 Network

The 2009 network includes all of the existing major streets and highways, and the improvement projects that will be completed by the end of 2009 (See 2009 Project List and Map). All five (5) projects in the 2009 network are funded and programmed in the 2009-2015 State Transportation Improvement Program (STIP) or are from the City of Winston-Salem's 2000 Bond Referendum.

The most notable projects include the widening of Lewisville-Clemmons Road, improving the Interstate 40/NC 801 Interchange in the Town of Bermuda Run, and completion of the final segments of the City's West Clemmons Road Extension. The Burke Mill Road realignment project is open to traffic but additional landscaping work, sidewalks still need to be installed.

2010 Network

The 2010 network includes all of the existing major streets and highways, and the recommended new and widened roads that will be completed by the end of 2010 (See 2010 Project List and Map). All five (5) projects in the 2010 network are funded and programmed in the 2009-2015 STIP or are from the City of Winston-Salem's 2000 Bond Referendum.

The most notable projects include the replacement of the Kathryn Crosby Bridge over the Yadkin River on US 158 (Clemmons Road), completion of the final segments of Research Park Boulevard and the Patterson Avenue Extension in the Piedmont Triad Research Park (PTRP), and the widening of Union Cross Road between the Town of Kernersville and the City of Winston-Salem.

2012 Network

The 2012 network includes all of the existing major streets and highways, and the recommended new and widened roads that will be completed by the end of 2012 (See 2011-2012 Project List and Map). All four (4) projects in the 2012 network are funded and programmed in the 2009-2015 STIP or are from the City of Winston-Salem's 2000 Bond Referendum.

The most notable projects include completion of the King-Tobaccoville Road (Main Street) widening and interchange improvements, widening US 52 and the closure of Stadium Drive and 3rd/5th Street interchanges in the heart of Winston-Salem.

2015 Network

The 2015 network includes all of the existing major streets and highways, and the recommended new and widened roads planned to be completed from 2013 through 2015 (See 2013-2015 Project List and Map). During these few years, only five (5) street and highway projects are planned to be completed. Approximately half of the projects in the 2015 network have been programmed in the 2009-2015 STIP, with many of them already in the planning and design phases.

The most notable projects include completing the Salem Creek Connector from US 52 to Salem Avenue and the PTRP, and road improvements around the new downtown baseball stadium.

2025 Network

The 2025 network includes all of the existing major streets and highways, and the recommended new and widened roads that will be completed from 2016 through 2025 (See 2016-2025 Project List and Map). In this decade, only twenty-one (21) street and highway projects are planned to be completed.

The most notable projects planned to be completed by 2025 include the Northern Beltway (Eastern Section) from US 52 to US 311, the eastern section of the Salem Creek Connector, the first phase of the widening of Reidsville Road (US 158), and the Idols Road Extension.

2035 Network

The 2035 network includes all of the existing major streets and highways, and the recommended new and widened roads that will be completed from 2026 through 2035 (See 2026-2035 Project List and Map). In this decade, only eleven (11) street and highway projects are planned to be completed.

The most notable projects planned to be completed by this horizon year include the completion of the Northern Beltway (Western Section), the US 311 Connector, and the Peace Haven Road/Styers Ferry Road Connector.

Policies and Strategies

The following policies and strategies regarding developing the street and highway system in the urban area have been developed in coordination with the City-County Planning Board's Legacy Development Guide and various other policy documents and plans within the MPO to address the problems and conditions above.

- Develop streets and highways in a manner consistent with adopted land use plans.
- Explore improvements to existing facilities first when faced with capacity deficiencies.
- Design streets and highways to accommodate public transportation, bicycles and pedestrians.
- Design new roads to be attractive by working with the natural topography and use grade separation between lanes to create attractive, natural medians.
- Encourage new multi-lane streets and highways, and major collector roads to have a "boulevard" appearance with landscaped medians, ample street trees, bike lanes, sidewalks, and where appropriate, the placement of utility lines underground.
- Include suitable bicycling accommodations in all new roads and road improvement projects where safe, feasible.
- Provide sidewalks along all adopted Comprehensive Transportation Plan (Thoroughfare Plan) streets and collector streets in the Urban Services and Future Growth areas where safe and feasible.
- Develop streets and highways in a manner which minimizes travel times and distance.
- Enhance individual mobility by improving the connectivity of the existing street network.
- Reduce travel speeds on local residential streets as needed.
- Evaluate the use of roundabouts where feasible in all future intersection improvements, road widenings and new road facilities.
- Minimize accident potential and severity.
- Employ traffic calming measures to divert traffic and improve neighborhood quality of life.

Exempt Projects

A list of federal and State funded highway projects has been identified that are exempt from the requirement to determine air quality conformity. In general, they are projects that do not increase the vehicular capacity of streets or highways such as bridge and pavement rehabilitation projects. Such projects may proceed toward implementation even in the absence of a conforming LRTP or TIP. In other words, if the Winston-Salem Urban Area 2035 Transportation Plan lapses or if the air quality conformity determination is not made on the Plan or the current TIP, only the list of exempt projects will be allowed to continue in the planning process for implementation.

In the Fiscal Year 2009-2015 STIP, the Winston-Salem Urban Area has approximately \$301.6 million net worth of exempt street and highway projects that are programmed to be completed (See Exempt Street and Highway Projects table at the end of this section).

Future Initiatives

The Winston-Salem Urban Area MPO will continue to coordinate with NCDOT, the Greensboro and High Point MPOs, and various other State and local agencies on a number of future initiatives regarding the planning and development of its street and highway system. These initiatives include:

- Determining the feasibility of building the southern portion of the beltway to develop a complete loop.

- Identifying whether the Interstate 73/74 Connector is still feasible, how it will connect with the beltway, and whether it will become a future toll road.
- Coordinating the planning of a new north-south freeway/expressway facility along the Guilford County line.
- Planning for and installing a new comprehensive traffic signal system which will serve the needs of Winston-Salem and portions of the MPO for the next 20-30 years.
- Implementing the CTP Street and Highway Plan and its recommendations based on a refined travel demand model.
- Update the Transportation Plan for downtown Winston-Salem to improve traffic flow around the downtown area and to make the streets much more pedestrian friendly and suitable for local traffic.
- Explore the renaming of Business 40 from Interstate 40 (west) to Interstate 40 (east) to make it less confusing to the travelling public.
- Work with NCDOT and local communities to complete transportation planning, traffic engineering and/or corridor feasibility studies for the following proposed roads and interchanges (not in priority order):
 - 1) Lewisville-Clemmons Road median (in the Village of Clemmons) (FS-0309B).
 - 2) Trinity Church Road interchange (in the City of King) (FS-0209A).
 - 3) North-South Connector along the Guilford County line (FS-0707B).
 - 4) US 311 Bypass around Walkertown.
 - 5) Idols Road Extension west across the Yadkin River, into Davie County, and ending at Interstate 40.
 - 6) A new interchange on Interstate 40 in Davie County (Possibly Ragland Road).
 - 7) North Point Boulevard Extension to US 52 along the Motor Road corridor.
 - 8) The Rural Hall Loop.
 - 9) New interchanges on Interstate 40 at Old Salem Road and Macy Grove Road in Kernersville, and High Point Road in Winston-Salem.