

9. Financial Plan

Executive Summary/Key Points

- The financial plan chapter provides a comparison of existing funding streams with projected needs by examining
 - the various funding sources for transportation,
 - a review of the historical trends for funding in the urban area;
 - a summary of the federal and State funds in the draft Fiscal Year 2014-2020 State Transportation Improvement Program (STIP); and the
 - urban area's projected transportation revenues through the 2035 horizon year.
- The overall projected revenues for street and highway projects in the Winston-Salem Urban Area **will not** meet the estimated cost of **all** of the projects planned; the funding deficit will likely be over **\$310 million**.
- The City will need to increase the Mass Transit Tax Fund (MTTF) up to the maximum \$.05 cent tax rate in the future for additional revenues for the Winston-Salem Transit Authority (WSTA) transit system .
- By 2015, WSTA will be operated by PART as a part of the overall regional transportation system.

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9.1 Introduction

When the Intermodal Surface Transportation Efficiency Act (ISTEA) was enacted by Congress in 1991, one of the primary provisions of that original legislation was that the long range transportation plan (LRTP) for an urbanized area must be financially constrained. This meant that a financial plan had to be developed as a part of the LRTP. As subsequent transportation legislation (TEA-21, SAFETEA-LU, and the current MAP-21) became enacted, the financial plan provisions in the legislation have remained fairly consistent.

The financial plan is basically a comparison of existing funding streams with projected needs. The statutory language specifically requires that the financial plan indicate the resources from public and private sources that are reasonably expected to be made available to carry out the LRTP. The federal law also requires that an urban area's financial plan will:

- Demonstrate how the State Transportation Improvement Program (STIP) can be implemented.
- Identify any innovative financing techniques to provide funds for the projects, programs and strategies in the long range transportation plan.
- Identify other transportation projects that would be implemented if additional funds were available.

The federal and state lawmakers who represent the Winston-Salem Urban Area are continuing to face a serious challenge to find sufficient funding to meet our urban area's ever growing transportation needs. Population growth, greater amounts of individual travel, and increases in economic activity and freight shipments are deteriorating the transportation infrastructure, causing congestion and increasing the overall burden on the surface transportation network. Also, the cost of building and maintaining this network has skyrocketed in recent years.

At the same time, North Carolina has less money available to spend on transportation. Gas taxes – a staple of transportation funding – have declined in their purchasing power, are less capable of filling the funding need, and have increasingly become politically difficult to increase. Other funding sources, like North Carolina's general funds, are being squeezed by major items like education.

As a result of these financial constraints, the focus of the Winston-Salem Urban Area 2035 Transportation Plan update and the financial plan components has been to significantly reduce the number of major transportation projects that can be objectively accomplished by the 2035 horizon year, and concentrate on making other lower cost type improvements such as intersection modifications, improving the overall traffic signal system, building numerous greenways and sidewalks, modifying existing streets for bicycle accommodations and providing some additional transit services.

In this section, the financial plan for the 2035 Transportation Plan is presented. The financial plan contains several important sections including, the various funding sources for transportation, a review of the historical trends for funding in the urban area, a summary of the federal and State funds in the draft Fiscal Year 2014-2020 State Transportation Improvement Program (STIP), and the urban area's projected transportation revenues through the 2035 horizon year are presented.

9.2 Streets and Highways

Street and Highway Funding Revenue Sources

The North Carolina Department of Transportation (NCDOT) is responsible for the funding and implementation of thousands of street and highway projects every year in North Carolina. A variety of federal, State, and, local funds are used to plan, design, construct and maintain these projects. Funding for most of the street and highway projects in the Winston-Salem Urban Area come from the federal government or the State of North Carolina. However, there is a growing shift of the financial burden being placed at the local level as federal and State resources continue to face funding shortfalls. Below is a brief description of each of the major funding categories:

Federal Funds

Each year, highway users pay billions of dollars in highway excise taxes, which end up in the federal Highway Trust Fund. Federal legislation generally requires that funds paid into the Highway Trust Fund be returned to the States for various highway programs. There are four (4) primary categories of federal funds which are usually provided for street and highway purposes in the Winston-Salem urban area. The categories include: Surface Transportation Program/Direct Attributable (STP/STP-DA), National Highway System (NHS), Interstate Maintenance (IM), and Congestion Mitigation and Air Quality (CMAQ).

State Funds

The State of North Carolina has been funding street and highway projects since 1921, which is when the North Carolina General Assembly first imposed the gasoline tax of .01 cents per gallon on all motor vehicle fuels sold or distributed in the state. The Highway Fund, along with the Highway Trust Fund and Powell Bill Funds are the three primary revenue sources for street and highway purposes in the Winston-Salem urban area.

Local Funding

Municipalities often use local taxes or bonds to build and maintain their streets and highways. The City of Winston-Salem and other municipalities like the Town of Kernersville have passed bond referendums to help build needed streets, widen roads, improve intersections and other improvements like install traffic signals, signs, pavement markings and traffic calming facilities.

Occasionally, street and highway facilities in the Winston-Salem urban area are constructed by the private sector, usually as a condition of development. In some locations, portions of planned streets and highways on the Comprehensive Transportation Plan (formerly the Thoroughfare Plan), Collector Street Plan, or small area plans are built. Other minor road widening, turn lanes, sidewalks,

greenways and greenway easements, bus stops and shelters are built to serve the development site as well as the overall needs of the general public.

Historical Trends

According to NCDOT's historical records on revenues for street and highway projects for the years 1986 through 2012, most of the funding for street and highway projects in the Winston-Salem urban area has been provided at a very slow pace. Through the STIP, the urban area has seen the amount of funding (both federal and State) grow by only four (4) percent per year for construction, and about four (4) percent per year for maintenance. **Table 9.1** shows that during this decade period, the Winston-Salem Urban Area has averaged only \$34.863 million per year for construction and \$10.866 million per year for maintenance, for a total of only \$45,729 million per year. In more recent years, from 2006 through 2012, the figures rise to an average of over \$59.75 million spent on construction and maintenance.

Table 9.1
Winston-Salem Urban Area Metropolitan Planning Organization
2035 Transportation Plan Update
Street and Highway Projects Expenditures History for 1986-2012

Year	Construction	Maintenance	Yearly Total	Yearly Change	% Change
1986	\$17,481,930	\$3,722,029	\$21,203,959	\$0	0%
1987	\$20,174,585	\$3,765,631	\$23,940,216	\$2,736,257	13%
1988	\$19,921,850	\$4,308,262	\$24,230,112	\$289,896	1%
1989	\$24,283,205	\$5,047,694	\$29,330,899	\$5,100,787	21%
1990	\$41,388,217	\$7,538,792	\$48,927,009	\$19,596,110	67%
1991	\$41,387,528	\$11,638,836	\$53,026,364	\$4,099,355	8%
1992	\$57,160,752	\$10,112,175	\$67,272,927	\$14,246,563	27%
1993	\$19,400,388	\$13,348,628	\$32,749,016	-\$34,523,911	-51%
1994	\$12,924,815	\$12,483,604	\$25,408,419	-\$7,340,597	-22%
1995	\$19,228,030	\$13,112,028	\$32,340,058	\$6,931,639	27%
1996	\$27,195,135	\$11,121,049	\$38,316,184	\$5,976,126	18%
1997	\$25,201,101	\$7,357,727	\$32,558,828	-\$5,757,356	-15%
1998	\$36,192,742	\$10,232,451	\$46,425,193	\$13,866,365	43%
1999	\$34,221,409	\$9,749,907	\$43,971,316	-\$2,453,877	-5%
2000	\$21,611,016	\$7,342,090	\$28,953,106	-\$15,018,210	-34%
2001	\$38,411,910	\$10,295,430	\$48,707,340	\$19,754,234	68%
2002	\$27,925,058	\$11,904,202	\$39,829,260	-\$8,878,080	-18%
2003	\$38,958,058	\$11,842,408	\$50,800,466	\$10,971,206	28%
2004	\$33,951,043	\$16,336,805	\$50,287,848	-\$512,618	-1%
2005	\$47,083,802	\$14,657,296	\$61,741,098	\$11,453,250	23%
2006	\$47,353,742	\$10,532,622	\$57,886,364	-\$3,854,734	-6%
2007	\$46,007,519	\$12,084,755	\$58,092,274	\$205,910	0%
2008	\$42,819,721	\$13,456,970	\$56,276,691	-\$1,815,582	-3%
2009	\$52,851,949	\$11,414,864	\$64,266,814	\$7,990,122	14%
2010	\$36,676,285	\$11,487,804	\$48,164,089	-\$16,102,725	-25%
2011	\$60,178,487	\$15,077,761	\$75,256,248	\$27,092,159	56%
2012	\$51,315,630	\$23,414,382	\$74,730,012	-\$526,236	-1%
Total	\$941,305,907	\$293,386,202	\$1,234,692,109	\$53,526,053	
Annual Average	\$34,863,182	\$10,866,156	\$45,729,337	\$1,982,446	4%

Source: North Carolina Department of Transportation, 2012

Notes:

- 1) Construction figures reflect only Federal and State funding, doesn't reflect local spending.
- 2) Construction figures are not broken down by Federal and State funding sources.

It should be noted that these figures are only for Forsyth County and does not include the entire urban area, which has expanded into parts of Davidson, Davie and Stokes Counties. Historical data for the entire urban area is currently unavailable. Also, the figures do not include the contributions of the City of Winston-Salem, the Town of Kernersville and any of the other municipalities within the MPO.

Review of the draft Fiscal Year 2014-2020 STIP

In **Table 9.2**, the draft Fiscal Year 2014-2020 STIP for the Winston-Salem Urban Area shows that there will be at least \$426.53 million in federal and State funds to build new streets and highways, widen existing facilities and make other improvements to increase the capacity and function of the street and highway network in the urban area.

This averages to approximately \$61 million per year. Of this amount, the State/federal split in funding is mostly on the Federal side with Federal resources providing about \$49.7 million per year, and the State providing another \$11.3 million per year. Most of the Federal funding will come from the Federal National Highway System Program (NHS) and Surface Transportation Program (STP), averaging about \$48.6 million per year.

Table 9.2
Winston-Salem Urban Area Metropolitan Planning Organization
2035 Transportation Plan Update
2012-2018 State Transportation Improvement Program
Street and Highway Revenues (Construction Only, not Maintenance)

Calculation	STIP Funding Sources (\$000)							STIP Funding Sources Total (\$000)
	NHS	STP or STP-DA	IM IMPM	CMAQ and Federal Aid	State	Highway Trust Fund	NFA	
Grand Totals (in \$000)	\$154,792	\$185,197	\$0	\$7,981	\$66,560	\$7,800	\$4,200	\$426,530
STIP Annual Average (in \$000)	\$22,113	\$26,457	\$0	\$1,140	\$9,509	\$1,114	\$600	\$60,933
Federal Programs Total (in \$000)								\$347,970
Annual Federal Average (in \$000)								\$49,710
State Programs Total (in \$000)								\$78,560
Annual State Average (in \$000)								\$11,223

Currently, another \$16.2 million of federal and State funds (not including Powell Bill funds) are spent annually for maintenance of the system, including pavement rehabilitation and resurfacing, replacing bridges, safety improvements, railroad crossing improvements, etc. Most of these maintenance funds come from the federal government.

Projected Street and Highway Projects Funding

Based on the historical trends of funding provided at the federal and State levels and the very conservative assumptions for funding in the future, **Table 9.3** on the following page presents all of the major street and highway projects that are anticipated will be constructed through 2035 in the Winston-Salem Urban Area.

The projects have been assigned to the 2015, 2021, 2025 and 2035 horizon years based on their funding availability and cost estimates in the 2014-2020 STIP, the Capital Improvement Programs for Winston-Salem, Kernersville and other municipalities within the MPO, where feasibility studies have been completed for them, or are considered to be high priority projects. For a few projects, the cost estimates were generated using NCDOT's latest estimating figures.

Table 9.3
Winston-Salem Urban Area Metropolitan Planning Organization
2035 Transportation Plan Update
Street and Highway Project Cost Estimates and Financial Projections

November 10, 2012

Project Title	Project Description	STIP Number	2012 Estimated Project Cost (\$000)	Estimated Urban Area Portion Cost (\$000)	Estimated Date of Completion	Inflation Factor Used (%) *	Final Inflated Cost (\$000)	Prior Years Cost (\$000)	STIP Funding Sources (\$000)							STIP Funding Sources Total (\$000)	Non STIP or Post Year Costs (\$000)	By 2025 Federal	By 2025 State	By 2035 Federal	By 2035 State	All Years Local	Project Status, Notes
									NHS	STP or STP-DA	IM	CMAQ and Federal Aid	State	Highway Trust Fund	NFA								
2015 Projects																							
Research Park Boulevard	New Four Lane Road	U-4918A	\$8,000	\$8,000	2013	0.000	\$8,000	\$8,000							\$0	\$0						Under Construction	
Union Cross Road	Widening to Four/Six Lane Divided Road	U-4909	\$30,331	\$30,331	2015	0.000	\$30,331	\$0		\$30,000		\$331			\$30,331	\$0						Under Construction	
West Clemmonsville Road	Widen to Three Lanes	U-2923	\$9,940	\$9,940	2014	0.000	\$9,940	\$9,940							\$0	\$0						Under Construction	
US 52	Operational Improvements	U-2826B	\$13,171	\$13,171	2012	0.000	\$13,171	\$13,171							\$0	\$0						Under Construction	
Carver School Road Extension	New Three-Lane Road	N/A	\$8,192	\$8,192	2013	0.000	\$8,192	\$8,192							\$0	\$0						Under Construction	
Salem Creek Connector	New Multi-Lane Road; Salem Avenue to US 52	U-2925	\$101,870	\$101,870	2015	0.000	\$101,870	\$0		\$101,234					\$101,234	\$636				\$636		Planning Completed; Right-of-Way and Construction in 2013	
Macy Grove Road Interchange with US 421	New Four-Lane Divided Road	U-2800	\$38,825	\$38,825	2015	0.000	\$38,825	\$2,287		\$34,978			\$1,560		\$36,538	\$0						Right-of-Way and Construction; Complete in 2015	
Piney Grove Road (SR 1969)		U-5512	\$1,261	\$1,261	2013	0.000	\$1,261	\$0		\$1,006					\$1,006	\$255				\$255		Town of Kernersville Local Match	
2016-2021 Projects																							
Business 40 (US 421) Improvements	Rebuilding Corridor with New Interchanges, Bridges, Pavement Surface	U-2827 BA & BB	\$59,900	\$59,900	2021	0.000	\$59,900	\$0	\$52,250			\$7,650			\$59,900	\$0						Planning Underway;	
Northern Beltway (East)	Build Six-Lane Freeway, Business 40 to US 158	U-2579 B	\$242,320	\$242,320	2021	0.000	\$242,320	\$0	\$102,542				\$65,000		\$167,542	\$74,778	\$74,778					Planning, EIS Review; Construction begins in 2015	
Northern Beltway (East)	Rebuild the Hastings Hill Road Bridge over Business 40	U-2579 G	\$4,200	\$4,200	2016	0.000	\$4,200	\$0					\$4,200	\$4,200	\$0							Hastings Hill Road Bridge Replacement; Construction begins in 2013	
Piney Grove Road (SR 1969)	Widen to Three Lanes		\$1,500	\$1,500	2016	0.000	\$1,500	\$0						\$0	\$1,500		\$1,500					Future STP-DA project	
2022-2025 Projects																							
University Parkway	Widen to Six Lanes	U-2924	\$8,000	\$8,000	2025	1.219	\$9,752	\$0							\$0	\$9,752					\$9,752	Planning; \$9,752 in City Bonds	
Great Wagon Road and Lewisville-Clemmons Road Ext.	New Three-Lane Road		\$4,400	\$4,400	2025	1.219	\$5,364	\$0							\$0	\$5,364					\$5,364	Through Development;	
N. Main Street/Piney Grove Road Connector	New 2 Lane Divided Road		\$7,070	\$7,070	2022	0.000	\$7,070	\$0							\$0	\$7,070					\$7,070	Planning;	
Interstate 40	Widen to Six Lanes	I-911	\$76,073	\$76,073	2025	1.219	\$92,733	\$27,223							\$0	\$65,510	\$65,510					Planning/Design	
Reidsville Road (US 158)	Widen to Multi-Lanes from Business 40 to NC 66	R-2577A	\$32,266	\$32,266	2025	1.219	\$39,332	\$1,110					\$7,800		\$7,800	\$30,422		\$30,422				Planning	
Thomasville Road (NC 109) *	Widen to Multi-Lanes	R-2568C	\$105,000	\$105,000	2025	1.219	\$127,995	\$0		\$17,979					\$17,979	\$110,016	\$80,016				\$30,000	Planning; Right-of-Way in 2020; \$30 million in City Bonds	
Macy Grove Road Extension (Macy Grove/N. Main St. Conn.)	New Four-Lane Divided Road	U-4734	\$16,740	\$16,740	2025	1.219	\$20,406	\$1,186							\$0	\$19,220		\$19,220				Planning Completed;	
Northern Beltway (East)	Build Six-Lane Freeway, US 52 to US 311	U-2579 AA, AB, C, D, E, F	\$726,234	\$726,234	2025	1.219	\$885,279	\$0							\$0	\$885,279		\$885,279				Construction begins after 2022	
Hanes Mill Road	Widen to Multi-Lanes	U-2729	\$6,445	\$6,445	2025	1.219	\$7,856	\$145							\$0	\$7,711				\$7,711		Planning Completed; Paid for by City Bonds	
Idols Road Extension	New Wide Two-Lane Road	U-2707	\$13,600	\$13,600	2025	1.219	\$16,578	\$2,300							\$0	\$14,278	\$14,278					Right-of-Way Completed;	
Interstate 40 *	Widen to Six Lanes, US 311 to Guilford County	FS-0609A	\$158,756	\$158,756	2025	1.219	\$193,524	\$0							\$0	\$193,524	\$193,524					Feasibility Study Finished	
Business I-40 at Big Mill Farm Road	Build New Interchange; Includes Widening of Hopkins Road to NC 66		\$31,000	\$31,000	2025	1.219	\$37,789	\$0							\$0	\$37,789		\$37,789				Feasibility Study Finished	
Ebert-Stratford Road Connector	New Three Lane Road		\$14,000	\$14,000	2025	1.219	\$17,066	\$0							\$0	\$17,066				\$17,066		Feasibility Study Finished; Through Development and \$15 million in City Bonds	
Forum Parkway Connector	New Wide Two-Lane Road		\$5,661	\$5,661	2025	1.219	\$6,901	\$0							\$0	\$6,901		\$6,901				Feasibility Study Completed;	
Clemmons Road (US 158)	Widen to Three Lanes		\$4,913	\$4,913	2025	1.219	\$5,989	\$0							\$0	\$5,989		\$5,989				Planning;	
Martin Luther King, Jr. Drive Extension	New Four Lane Divided Road		\$12,500	\$12,500	2025	1.219	\$15,238	\$0							\$0	\$15,238				\$15,238		Feasibility Study Completed; \$15 million in City Bonds	

Table 9.3
Winston-Salem Urban Area Metropolitan Planning Organization
2035 Transportation Plan Update
Street and Highway Project Cost Estimates and Financial Projections

November 10, 2012

Project Title	Project Description	STIP Number	2012 Estimated Project Cost (\$000)	Estimated Urban Area Portion Cost (\$000)	Estimated Date of Completion	Inflation Factor Used (%) *	Final Inflated Cost (\$000)	Prior Years Cost (\$000)	STIP Funding Sources (\$000)							STIP Funding Sources Total (\$000)	Non STIP or Post Year Costs (\$000)	By 2025 Federal	By 2025 State	By 2035 Federal	By 2035 State	All Years Local	Project Status, Notes
									NHS	STP or STP-DA	IM	CMAQ and Federal Aid	State	Highway Trust Fund	NFA								
2026-2035 Projects																							
East Mountain Street *	Widen to Multi-Lanes	U-3617	\$19,900	\$11,741	2035	1.486	\$17,447	\$0							\$0	\$17,447			\$17,447		Planning; 59% within the MPO;		
Williams Road Over US 421	Widen Bridge; Improve Roundabouts, Install new Roundabouts, New Eastbound US 421 on-ramp		\$16,663	\$16,663	2035	1.486	\$24,761	\$0							\$0	\$24,761			\$24,761		Lewisville Traffic Study Completed;		
Peace Haven/Styers Ferry Road Connector	New Wide Two-Lane Road		\$12,000	\$12,000	2035	1.486	\$17,832	\$0							\$0	\$17,832			\$5,000	\$12,832	Feasibility Study Completed; Through Development;		
Glenn Hi Road Extension	New Four Lane Divided Road		\$22,000	\$22,000	2035	1.486	\$32,692	\$0							\$0	\$32,692				\$32,692	Planning; Through Development;		
Reidsville Road (US 158) *	Widen to Multi-Lanes from NC 66 to Guilford County	R-2577B	\$42,900	\$34,320	2035	1.486	\$51,000	\$0							\$0	\$51,000			\$51,000		Planning; 80% within the MPO; Highway Trust Funds		
US 52	I-40 Bypass to Proposed Northern Beltway (Western Loop) Interchange. Widen and Upgrade Roadway and	U-2826B	\$435,672	\$435,672	2035	1.486	\$647,409	\$48,972							\$0	\$598,437		\$598,437			Planning		
Stokes County Connector *	New Two Lane Road	R-3823	\$65,100	\$27,993	2035	1.486	\$41,598	\$0							\$0	\$41,598			\$41,598		Planning; 43% within the MPO		
I-73 I-74 Connector (Regional Airport Connector) *	New Four-Lane Freeway	I-4924	\$239,030	\$119,515	2035	1.486	\$177,599	\$0							\$0	\$177,599			\$177,599		Possible Toll Road; 50% within the MPO		
Northern Beltway (West)	Build Four-Lane Freeway, Interstate 40 to US 52	R-2247B-F	\$482,348	\$482,348	2035	1.486	\$716,769	\$59,901							\$0	\$656,868		\$328,434	\$328,434		Planning, EIS Completed		
Northern Beltway (West)	Build Four-Lane Freeway, US 158 to Interstate 40	R-2247A	\$20,300	\$20,300	2035	1.486	\$30,166	\$900							\$0	\$29,266			\$4,266	\$25,000	Planning, EIS Completed; \$25 million in City Bonds		
NC 801 (Davie County)	Widen to Multi-Lanes	R-3610	\$18,510	\$18,510	2035	1.486	\$27,506	\$0							\$0	\$27,506			\$27,506		Planning		
Bethania-Rural Hall Road (NC 65)	Widen to Multi-Lanes	U-2730B	\$16,550	\$16,550	2035	1.486	\$24,593	\$300							\$0	\$24,293		\$24,293			Planning		
US 311 Connector	New Four-Lane Divided Road		\$40,400	\$40,400	2035	1.486	\$60,034	\$0							\$0	\$60,034		\$30,034	\$30,000		Feasibility Study Completed; \$30 million bond by City of Winston-Salem		
Business 40 (US 421)	Widen to Six-Lane Freeway		\$97,838	\$97,838	2035	1.486	\$145,387	\$0							\$0	\$145,387		\$145,387			Planning		
Peace Haven/Styers Ferry Road Connector	New Wide Two-Lane Road		\$7,338	\$7,338	2035	1.486	\$10,904	\$0							\$0	\$10,904				\$10,904	Feasibility Study Completed; Through Development Except Bridge - \$5,000 by City		
Grand Totals (in \$000)			\$3,278,717	\$3,105,356			\$4,034,079	\$183,627	\$154,792	\$185,197	\$0	\$7,981	\$66,560	\$7,800	\$4,200	\$426,530	\$3,423,922	\$428,106	\$987,100	\$1,126,585	\$677,611	\$204,520	
STIP Annual Average (in \$000)										\$22,113	\$26,457	\$0	\$1,140	\$9,509	\$1,114	\$600	\$60,933	\$3,423,922					
Federal Programs Total (in \$000)																	\$347,970						
Annual Federal Average (in \$000)																	\$49,710						
State Programs Total (in \$000)																	\$78,560						
Annual State Average (in \$000)																	\$11,223						
Notes: * = Project Extends Beyond MPO Boundary																							

All of the projects cost estimates are in 2012 dollars. However, following the lead of NCDOT in their preparation of the 2014-2020 STIP, an inflation factor of four percent (4%) per year was applied to each project where construction has not already begun. For the projects in the 2025 and 2035 horizon years, given the uncertainty of project construction within that horizon year, the projects were assigned the maximum inflation factor to present a “worst case” scenario.

The total cost estimate for the street and highway projects (in 2012 dollars) is approximately \$3.279 billion. Using an assumed inflation factor for each project, the total cost estimate is approximately \$4.034 billion, of which only \$426.53 million is currently programmed for funding.

Funding Assumptions

Based on the history of the financing of streets and highways, and the analysis of existing financial resources available to the NCDOT and the Winston-Salem urban area, the following very conservative and general assumptions were made to guide the development of revenue projections through the year 2035:

- As the nation’s fleet of personal vehicles becomes more energy efficient, significantly less revenue will come from gasoline taxes and automotive related sources. The use of Transportation Infrastructure Finance and Innovation Act of 1998 (TIFIA) and Grant Anticipation Revenue Vehicles (GARVEE Bonds) will make up some federal revenue losses.
- Funding from the federal government will continue to slowly increase by four percent (4%) annually through 2020 with the passage of MAP 21 and another federal transportation bill. From 2021 through 2028, this percentage will drop to two percent (2%) annually, and from 2029 through 2035, there will be no increase (0%) in federal funds.
- Funding from the State of North Carolina will continue to increase by four percent (4%) annually through 2020. From 2021 through 2028, funding from the State of North Carolina will increase significantly to seven percent (7%) annually as the equity formula is revamped to address transportation needs and not regions, and new sources of funds are developed to build the street and highway system. From 2029 through 2035, the rapid increase in State funding will decline back to four percent (4%) annually.
- The NCDOT and all of the municipalities within the MPO will continue to receive a small increase of Powell Bill funding for the maintenance of all street and highway facilities by an average of four percent (4%) annually through 2020. From 2021 through 2028, funding from the State of North Carolina will increase significantly to seven percent (7%) annually as new sources of funds are developed to maintain the street and highway system. From 2029 through 2035, State funding will decline back to four percent (4%) annually.
- The Winston-Salem Urban Area is designated as a Transportation Management Area (TMA), and has the authority to direct the expenditures of federal Surface Transportation Program – Direct Attributable (STP-DA) and Congestion Mitigation and Air Quality (CMAQ) funds to various projects in the MPO. These funds will continue to be available for the MPO and will slowly increase by four percent (4%) annually through 2035.
- The City of Winston-Salem will be the only municipality to approve of general obligation bonds and 2/3 bonds to pay for various local street and highway projects and other local transportation facilities.
- Forsyth County and the surrounding counties in the MPO will gradually use their new authority to build and maintain streets and roads on the State’s system by 2025.
- The City of Winston-Salem will continue to use the motor vehicle registration tax funds for various City street improvement projects, and this will increase in the 2025 and 2035 horizon years.

Revenue Projections

Table 9.4 on the following page, is a summary of the revenue projections for street and highway projects for the Urban Area through the year 2035. With the conservative projected increases in revenues from the federal government, the State of North Carolina and local municipalities, a total of over \$3.114 billion dollars will be available in the future. Over \$2.08 billion will come from various federal sources while over \$829 million will come from the State of North Carolina. Local resources including bond referendums and 2/3 bonds, municipal revenues, developer participation in projects, and other general revenues will provide another \$205 million in revenues through 2035. Of the \$3.114 billion dollars expected for the urban area, approximately \$829 million will be used to maintain the street and highway system, or approximately 26.6% of the total expected revenues.

The City of Winston-Salem will approve of and issue \$150 million of general obligation and 2/3 bonds following this approximate schedule:

- By 2020 - \$50 million in general obligation bonds and 2/3 bonds
- By 2028 - \$50 million in general obligation bonds and 2/3 bonds
- By 2035 - \$50 million in general obligation bonds and 2/3 bonds

Future Revenue Needs

The overall projected revenues for street and highway projects in the Winston-Salem Urban Area **will not** meet the estimated cost of **all** of the projects planned within the 2035 Transportation Plan. While not precise, the funding deficit will likely be over **\$310 million**. Most of this deficit is due to the continuing rapid escalation of the cost of construction, federal and State revenues rising at a very slow pace, and projects becoming increasingly difficult to implement because of community concerns, environmental issues, etc. This deficit is very acute in the later horizon years of 2025 and 2035. The planning and engineering of these proposed projects need to be completed to have a better gauge of the overall funding deficits the Urban Area will be facing in the years to come.

Other major street and highway projects needing additional or complete future funding include:

- 1) The entire Northern Beltway, from South Stratford Road (US 158) to US 311;
- 2) Improvements to Business Interstate 40 (US 421) in downtown Winston-Salem, from US 52 to Peters Creek Parkway (NC 150);
- 3) Comprehensive improvements to US 52, from Interstate 40 to the Northern Beltway;
- 4) The Interstate 73/74 Connector (Regional Airport Connector);
- 5) Widening Business 40 (US 421) from the Northern Beltway east to the split in Guilford County;
- 6) Widening Interstate 40, from US 311 east to Business 40 split in Guilford County; and,
- 7) The US 311 Connector, from Business Interstate 40 to Interstate 40.

Innovative Funding Techniques

Some of the following innovative funding techniques have the potential to offset some of the \$310 million in projected deficit, and likely can help with some of the lower cost road projects, intersection improvements and safety projects:

- Advertising revenue
- Battery Tax
- Bicycle Fees
- Congestion Pricing
- Driver's License Fee Increases
- Drive Through Service Fee
- Electricity Generated by Vehicle Tax
- Emissions Fees
- Facility Tolling
- Fare Programs
- Impact Fees
- Mileage Fee (Vehicle Miles Traveled Fee)
- New Vehicle Tax
- Privatizing Transportation Facilities
- Property Tax, Vehicle Ownership Tax, or Use Fees
- Registration Fees – The City of Winston-Salem is currently using these fees to pay for some transportation improvements
- Rental Car Tax
- Road Utility Fees
- Safety Violation Fee
- Sales Tax on Transportation Related Goods
- Special License Plate Fees
- Studded Tire Fee
- Temporary Visitor Access Fee
- Tire Tax
- Title Fees
- Transportation Impact Fee
- Use Fuels Tax Increase
- Vehicle Impact Fee
- Weight Mile Truck Tax

**Table 9-4
Winston-Salem Urban Area Metropolitan Planning Organization
2035 Transportation Plan Update
2013-2035 Street and Highway Revenue Projections Summary**

January 17, 2013

Federal Construction Funding Sources	2013	2014	2015	2016	2017	2018	2019	2020	2013-2020 Totals	2021-2028 Totals	2029-2035 Totals	Grand Totals
	NHS	\$ 22,113	\$ 22,998	\$ 23,917	\$ 24,874	\$ 25,869	\$ 26,904	\$ 27,980	\$ 29,099	\$ 203,754	\$ 254,753	\$ 238,658
STP/STP-DA	\$ 26,457	\$ 27,515	\$ 28,616	\$ 29,761	\$ 30,951	\$ 32,189	\$ 33,477	\$ 34,816	\$ 243,781	\$ 304,798	\$ 285,544	\$ 834,123
IM	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CMAQ/Other Federal	\$ 1,140	\$ 1,186	\$ 1,233	\$ 1,282	\$ 1,334	\$ 1,387	\$ 1,442	\$ 1,500	\$ 10,504	\$ 13,133	\$ 12,306	\$ 35,943
Federal Total	\$ 49,710	\$ 51,698	\$ 53,766	\$ 55,917	\$ 58,154	\$ 60,480	\$ 62,899	\$ 65,415	\$ 458,039	\$ 572,684	\$ 536,508	\$ 1,567,231
Federal Maintenance Funding Sources												
NHS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
STP/STP-DA	\$ 1,447	\$ 1,505	\$ 1,565	\$ 1,628	\$ 1,693	\$ 1,760	\$ 1,831	\$ 1,904	\$ 13,333	\$ 16,670	\$ 15,617	\$ 45,620
IM	\$ 3,465	\$ 3,604	\$ 3,748	\$ 3,898	\$ 4,054	\$ 4,216	\$ 4,384	\$ 4,560	\$ 31,927	\$ 39,919	\$ 37,394	\$ 109,240
Bridge and Safety	\$ 11,355	\$ 11,809	\$ 12,282	\$ 12,773	\$ 13,284	\$ 13,815	\$ 14,368	\$ 14,942	\$ 104,628	\$ 130,815	\$ 122,549	\$ 357,992
Maintenance Total	\$ 16,267	\$ 16,918	\$ 17,594	\$ 18,298	\$ 19,030	\$ 19,791	\$ 20,583	\$ 21,406	\$ 149,888	\$ 187,404	\$ 175,560	\$ 512,852
North Carolina Funding Sources												
State	\$ 9,509	\$ 9,889	\$ 10,285	\$ 10,696	\$ 11,124	\$ 11,569	\$ 12,032	\$ 12,513	\$ 87,618	\$ 137,370	\$ 176,606	\$ 401,594
Trust Fund	\$ 1,114	\$ 1,159	\$ 1,205	\$ 1,253	\$ 1,303	\$ 1,355	\$ 1,410	\$ 1,466	\$ 10,265	\$ 16,093	\$ 20,690	\$ 47,048
Powell Bill	\$ 8,410	\$ 8,746	\$ 9,096	\$ 9,460	\$ 9,839	\$ 10,232	\$ 10,641	\$ 11,067	\$ 77,492	\$ 121,493	\$ 156,195	\$ 355,180
Small Urban, etc.	\$ 600	\$ 624	\$ 649	\$ 675	\$ 702	\$ 730	\$ 759	\$ 790	\$ 5,529	\$ 8,668	\$ 11,143	\$ 25,340
North Carolina Total	\$ 19,633	\$ 20,418	\$ 21,235	\$ 22,084	\$ 22,968	\$ 23,887	\$ 24,842	\$ 25,836	\$ 180,903	\$ 283,624	\$ 364,634	\$ 829,161
Local Funding Sources												
City of Winston-Salem Bonds	\$ -	\$ 30,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 30,000	\$ 30,000	\$ 30,000	\$ 90,000
Winston-Salem 2/3 Bonds	\$ -	\$ -	\$ -	\$ 10,000	\$ -	\$ -	\$ 10,000	\$ -	\$ 20,000	\$ 20,000	\$ 20,000	\$ 60,000
Other Local	\$ 150	\$ -	\$ -	\$ 150	\$ -	\$ -	\$ 150	\$ -	\$ 450	\$ 450	\$ 300	\$ 1,200
Developer	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 16,000	\$ 18,000	\$ 20,000	\$ 54,000
Local Total	\$ 2,150	\$ 32,000	\$ 2,000	\$ 12,150	\$ 2,000	\$ 2,000	\$ 12,150	\$ 2,000	\$ 66,450	\$ 68,450	\$ 70,300	\$ 205,200
Grand Totals	\$ 87,760	\$ 121,034	\$ 94,596	\$ 108,450	\$ 102,152	\$ 106,158	\$ 120,474	\$ 114,657	\$ 855,280	\$ 1,112,162	\$ 1,147,002	\$ 3,114,444

9.3 Public Transportation

Winston-Salem Transit Authority

The Winston-Salem Transit Authority (WSTA) provides transit services for the citizens of Winston-Salem and Forsyth County. Primarily the services are in two areas, its regular fixed bus system, and Trans-Aid, which provides para-transit transportation to elderly and disabled residents. WSTA also provides maintenance services for the regional ridesharing program on a reimbursement basis with the Piedmont Authority for Regional Transportation (PART), maintains the Hampton D. Haith Administration Building, provides its own vehicle and facility maintenance at the Haith facility, and operates the Clark Campbell multi-modal Transportation center in downtown Winston-Salem.

Approximately 3.5 million passengers ride WSTA regular fixed route bus system each year, averaging about 11,600 riders per day. This is a large increase from 2004 when 2.75 million passengers rode the system each year. In this span, ridership has climbed 28.3%.

WSTA Funding Resources

WSTA receives its funding from a wide variety of resources including directly generated passenger revenues from the fare box, miscellaneous revenues (advertisements, vending machines, etc.), the local Mass Transit Tax Fund (MTTF), State and federal grants. The State and federal grants are provided from the Federal Transit Administration (FTA), the North Carolina Department of Transportation Public Transportation Division (NCDOT – PTD).

The federal Mass Transit Account is the primary source of revenues for Federal-aid funding returned to the states for carrying out various public transportation programs. The major categories of funding include the Urban Area Formula Program Capital, Operating and Maintenance Assistance for Cities (Section 5307); Capital Investment and New Starts Programs (Sections 5308 and 5309); Elderly and Persons with Disabilities Formula Program (Section 5310); Non-Urbanized Area Formula Program (Section 5311), Rural Transit Assistance Program (RTAP), Surface Transportation Program (STP), Congestion Mitigation and Air Quality (CMAQ), and the Federal Job Access and Reverse Commute (JARC) Program (being implemented by WSTA).

In Fiscal Year 2011-2012, WSTA had an overall budget of approximately \$12.958 million. Over \$10,049,960 or 77% went to the fixed route bus system, while over \$2,516,290 or 19% went to the Trans-Aid operations in Forsyth County and another \$392,000 or 4% came from miscellaneous sources.

Fixed Route Bus System Revenues

Last year, WSTA's fixed route bus system received most of its revenues from the Mass Transit Tax Fund (MTTF). Over \$4.510 million or 44.5% of the total came from the MTTF. The FTA provided over \$2.805 million or 27.9% of the total revenues while the fare box provided only \$1.571 million or 15.6%. The rest of the total revenues came from a variety of taxes and other resources like NCDOT, contracted services, the City's Motor Vehicle Privilege Tax, etc.

Trans-Aid of Forsyth County Revenues

In Fiscal Year 2011-2012, Trans-Aid of Forsyth County, received its revenues from NCDOT- PTD, Forsyth County, the MTTF, funds from human service agencies and miscellaneous grants. Over \$1.133 million or 45% of the total came from NCDOT while over \$518,000 or 20.6% came from MTTF and almost equal amount \$505,000 came from various human service agencies.

Mass Transit Tax Fund

In the early 1980's the Winston-Salem voters approved the use of a \$.05 levy on real property to support the transit system (Mass Transit Tax). In Fiscal Years 1982-1983 and 1983-1984, \$.03 of the Mass Transit Tax was levied but had gradually decreased with the yearly balancing of the annual budget.

Since 2003, the Mass Transit Tax rate was lowered to \$.015 and has remained that way until this year. For a number of years the MTTF revenues had created a substantial balance for WSTA to operate its system with. For example, in 2001, the MTTF reserves had \$1.6 million and had increased to \$3.5 million in 2004. However, in recent years, with the downturn in the economy, and the reduction in general tax revenues, the MTTF fund balance was spent down rapidly until this past year when the reserves had been completely depleted, mainly due to State operating assistance that was lower than anticipated and increased fuel and vehicle maintenance expenses.

Over the last several years, the growth in operating revenues and property tax support have not kept pace with growth in operating expenses. With the exception of Fiscal Year 2009-2010 when the City received federal stimulus funds, as mentioned above, the City has drawn down the reserves in the MTTF to ensure the operation of WSTA.

In addition to operating support, mass transit tax fund reserves are used to provide local matching funds for federal capital grants that provide for the replacement of buses, facility maintenance, and other investments in the transit system. Typically, these grants cover 80% to 90% of the cost of these capital investments. With depleted reserves, it has become a challenge for the transit authority to provide the matching funds.

Long-Range Financial Outlook

To ensure the long-term financial sustainability of the transit authority, the Fiscal Year 2012-2013 budget included the following measures to increase the resources available for transit operations and future capital needs:

- 1) Increase the MTTF by \$.015 cents back close to its original rate of \$.0308. The \$.015 increase of the tax fund is projected to generate another \$3.1 million in additional revenues for the transit system.
- 2) Increase the public bus fare by 30 cents, from \$1.00 for a single ride to \$1.30. While increasing the bus fare may result in decreased ridership initially, it is projected that the 30-cent increase would generate \$533,000 in additional revenues. The downside to this is that it assumes a decrease in ridership of 12.6%

Other Funding Options

Future financial options to increase revenues include fare increase (\$.10 increase would render approximately \$100,000); increase certain pass prices; tax rate increase (\$.01 would render approximately \$1.47 million); increase motor vehicle privilege license fee (\$10.00 increase would render approximately \$1.35 million, legislation would be required); and advertising at bus stops. Ideas for decreasing operations cost could include rerouting of service for increased efficiency and/or reduce service levels.

Funding Assumptions

Based on the history of the financing of public transportation capital and operating, facilities, programs and services, the analysis of existing financial resources available to the NCDOT and the Winston-Salem Urban Area, the following very conservative and general assumptions were made to guide the development of revenue projections through the year 2035:

- The funding of regional public transportation and passenger rail transportation projects through the Piedmont Authority for Regional Transportation (PART) and the proposed Winston-Salem Streetcar system are not included in the financial plan because the necessary planning and engineering studies have not been completed.
- By 2015, WSTA will be operated by PART as a part of the overall regional transportation system.

9.4 Other Modes

Historically, a small percentage of federal, State and local funds have been provided for other modes of transportation in the urban area, including public transportation, para-transit, greenways, sidewalks, and other pedestrian facilities. Private transportation providers such as airlines, trucking firms, taxis and other vehicles for hire, charter bus companies and intercity bus transportation receive no public funding and are not included in this analysis. The success or failure of these private transportation providers is based on the market demand for the services.

9.5 Bicycle and Pedestrian Funding Assumptions

Based on the history of the financing of bicycle and pedestrian projects, and the analysis of existing financial resources available to the NCDOT and the Winston-Salem Urban Area, the following very conservative and general assumptions were made to guide the development of revenue projections through the year 2035:

- Funding for bicycle paths, greenways, sidewalks and other pedestrian facilities will continue to increase at an average of five percent (5%) annually by a variety of federal, State and local sources.
- STP-DA funds (or an equivalent program) will continue to provide adequate funding for the implementation of numerous bicycle and pedestrian projects, programs and services.

Appendix References

Tables

Table 9 A-1	2035 Exempt Street and Highway Projects
Table 9 A-2	2004 – 2014 Powell Bill Fund Expenditures
Table 9 A-3	Programming STP-DA Funds
Table 9 A-4	Detailed Revenue Projections by Horizon Year

Documents

FY 2012 – 2018 Metropolitan Transportation Improvement Program (MTIP)
FY 2012 – 2018 MTIP Amendments and Modifications (July 2011 through September 2012)
Federal and State Funds Obligated in 2011