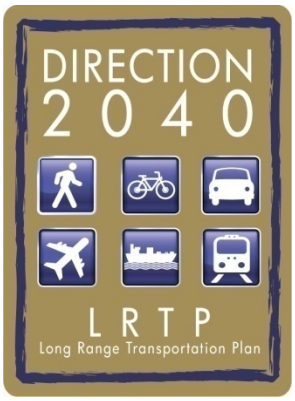

Chapter #8

IMPLEMENTATION PLAN

LAST AMENDED 09-12-13

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8.0 FINANCIAL AND IMPLEMENTATION PLAN

8.1 Introduction

The purpose of the financial and implementation plan is to provide a framework of action upon which the programs, projects, and desires presented throughout this document can become reality. Federal legislation (MAP-21) requires the LRTP to be fiscally constrained. The financial plan shows how the proposed improvements can be implemented using funding sources that can reasonably be expected to be available over the life of the plan. Implementation is based on the goals and objectives of the plan and the actions required to implement multimodal solutions designed to improve the safety and mobility of the Memphis region.

The *Memphis Urban Area Long Range Transportation Plan – Direction 2040* is financially constrained. The mix of transportation recommendations to meet the needs of the metropolitan area until 2040 is consistent with the revenue forecasts for the same time period. The financial plan details both the proposed investments for these recommendations and the revenue forecasts over the life of the plan.

The proposed recommendations were developed in collaboration with the Memphis MPO, local municipalities, Shelby County, Fayette County, DeSoto County, TDOT, MDOT, and the Memphis Area Transit Authority (MATA). These projects include roadway, transit, bicycle, and pedestrian facilities and services for the life of this plan and reflect existing and committed projects, the Transportation Improvement Program (TIP), and the future plans of the Memphis MPO, TDOT, MDOT, local jurisdictions, and MATA. These recommendations also reflect travel demand benefits and socioeconomic impacts studied using the congestion management and project evaluation processes. Finally, these projects result from an extensive public participation process that incorporated public workshops, small focus group meetings, and the efforts of a Transportation Plan Advisory Committee.

Revenue forecasts were developed after a review of previous state and local expenditures, current funding trends, and likely future funding levels. The revenue forecasts involved consultation with TDOT, MDOT, the Memphis MPO, MATA, and local jurisdictions. All dollar figures discussed in this section initially were analyzed in current year dollars (i.e. 2011) and then inflated to reflect projected year of expenditure dollars for funding and implementation. Based on current national and state standards, an annual inflation rate of 3% was used to forecast costs and revenues. This inflation rate is consistent with the Construction Cost Index (20 City Average) reported in *Engineering News-Record.*

Fierce competition for limited funds forces local decision-makers to work with citizens, business owners, and other stakeholders to identify alternate funding resources and innovative implementation techniques. To implement the long range plan, the Memphis MPO must continue to reach out to and work proactively with diverse stakeholders, including:

- Citizens and business owners
- Shelby and Fayette Counties, TN; and DeSoto County, MS
- Local Municipalities, including Memphis, Germantown, Collierville, Arlington, Lakeland, Bartlett, Millington, Hernando, Horn Lake, Olive Branch, Southaven, Walls, Braden, Gallaway, and Piperton
- Memphis Area Transit Authority
- Memphis and Shelby County Airport Authority
- Private Real Estate Developers
- Tennessee and Mississippi Departments of Transportation
- Federal Transportation Agencies

- Various Freight Providers, including Memphis Port Commission, trucking companies, Federal Express, and the railroads.

This chapter provides an overview of revenue assumptions, probable cost estimates, and financial strategies along with the research results used to derive these values. This chapter also includes a discussion of proposed performance measures and guidance for implementation of the LRTP. Since this is a planning level funding exercise, all funding programs, projects, and assumptions will have to be re-evaluated in subsequent plans and as projects advance through the detailed planning and implementation phases.

8.2 System Costs and Revenues

System costs and revenues are comprised of capital costs, operations and maintenance costs, and the associated revenues to fund these activities. Since the funding sources are different, the discussion of costs and revenues has been split into transit and non-transit activities in the LRTP. Non-transit activities include roadway facilities, bicycle and pedestrian facilities, safety projects, bridge replacement and rehabilitation projects, and other activities not directly related to transit. Transit activities include construction of new transit facilities, purchase of transit vehicles, operation of transit facilities, and on-going transit related maintenance.

Funding is composed of two elements, capital and operations and maintenance. Capital revenue generally is used to fund construction activities. Operations and maintenance revenues are generally used for the day–to-day activities required to operate and maintain the transportation facilities, such as striping, signing, signal maintenance, paving, and transit vehicle maintenance. In the sections that follow, the revenue sources for non-transit operations and maintenance and transit and non-transit capital activities will be described in more detail.

8.2.1 Non-Transit Operations and Maintenance Revenue

The MPO and its member agencies must ensure that the existing transportation facilities are properly operated and maintained. The maintenance of non-transit facilities within the MPO area is currently funded through a combination of state funds and local funds. The state funds are used to operate and maintain state and federal facilities such as state highways and the interstate system. Local funds are used for the facilities that are not state or federal routes, such as local streets, collector streets, bicycle facilities, and pedestrian facilities. Operation and maintenance activities include paving, signing and marking, striping, right-of-way maintenance, surveillance and inspection, lighting, bridge and guardrail repairs, and other activities.

The funding for this activity is identified in the operating budgets for each jurisdiction. Since each jurisdiction uses their own methods and processes for recording maintenance and operations costs, how this information is reported in their budget documents varies significantly. **Table 8.1** identifies the estimated costs for operation and maintenance activities for each of the MPO member jurisdictions. **Table 8.2** shows the estimated revenues and costs for each jurisdiction over the life of this LRTP.

Table 8.1 Existing System Operations and Maintenance Costs (Non-Transit)

Jurisdiction	Paving	Signs & Painting	ROW Maintenance	Traffic Signal Maintenance	Surveillance and Inspection	Street Lighting	Other	Total
Shelby County	$465,000	$500,000	$5,750,000	$40,000				$6,755,000
Arlington							$500,000	$500,000
Bartlett	$443,000	$30,000		$40,000	$200,000	$1,320,000	$110,000	$2,143,000
Collierville	$1,226,430					$1,275,000		$2,501,430
Germantown	$1,010,000	$100,000	$50,000	$100,000	$50,000	$700,000		$2,010,000
Lakeland	$200,000						$60,000	$260,000
Memphis	$11,500,000	$2,352,000	$5,664,000	$2,556,000	$701,000	$12,895,000	$165,000	$35,833,000
Millington	$50,000	$5,000	$180,000	$50,000	$100,000	$150,000	$15,000	$550,000
TOTAL	**$14,894,430**	**$2,987,000**	**$11,644,000**	**$2,786,000**	**$1,051,000**	**$16,340,000**	**$850,000**	**$50,552,430**
Fayette County							$300,000	$300,000
Braden	$13,500						$7,000	$20,500
Gallaway	$22,700						$11,400	$34,100
Piperton	$10,000	$4,000				$6,000	$5,000	$25,000
TOTAL	**$46,200**	**-**	**-**	**-**	**-**	**-**	**$323,400**	**$379,600**
DeSoto County	$908,405	$46,500		$50,000	$275,000			$1,279,905
Hernando	$750,000					$300,000		$1,050,000
Horn Lake	$400,000	$2,500	$6,500			$32,000		$441,000
Olive Branch	$140,000						$140,000	$280,000
Southaven			$250,000	$150,000		$650,000		$1,050,000
TOTAL	**$2,198,405**	**$49,000**	**$256,500**	**$200,000**	**$275,000**	**$982,000**	**$140,000**	**$4,100,905**
TOTAL MPO AREA	**$17,139,035**	**$3,036,000**	**$11,900,500**	**$2,986,000**	**$1,326,000**	**$17,322,000**	**$1,313,400**	**$55,032,935**

Table 8.2 Non-Transit O & M Costs vs. Revenues by Horizon Year Adjusted for Inflation

Jurisdiction	2011-2014			2015-2020			2021-2030			2031-2040			2011-2040 Plan Summary		
	Cost	Revenue	Balance	Cost	Revenue	Balance	Cost	Revenue	Balance	Cost	Revenue	Balance	Cost	Revenue	Balance
Shelby Co.	$28,260,400	$28,260,400	$ -	$49,178,104	$49,178,104	$ -	$104,070,875	$104,070,875	$ -	$139,862,553	$139,862,553	$ -	$321,371,933	$321,371,933	$ -
Arlington	$2,091,814	$2,091,814	$ -	$3,640,126	$3,640,126	$ -	$7,703,248	$7,703,248	$ -	$10,352,521	$10,352,521	$ -	$23,787,708	$23,787,708	$ -
Bartlett	$8,965,513	$8,965,513	$ -	$15,601,581	$15,601,581	$ -	$33,016,119	$33,016,119	$ -	$44,370,903	$44,370,903	$ -	$101,954,116	$101,954,116	$ -
Collierville	$10,465,050	$10,465,050	$ -	$18,211,042	$18,211,042	$ -	$38,538,269	$38,538,269	$ -	$51,792,211	$51,792,211	$ -	$119,006,572	$119,006,572	$ -
Germantown	$8,409,090	$8,409,090	$ -	$14,633,307	$14,633,307	$ -	$30,967,055	$30,967,055	$ -	$41,617,133	$41,617,133	$ -	$95,626,586	$95,626,586	$ -
Lakeland	$1,087,743	$1,087,743	$ -	$1,892,866	$1,892,866	$ -	$4,005,689	$4,005,689	$ -	$5,383,311	$5,383,311	$ -	$12,369,608	$12,369,608	$ -
Memphis	$149,911,906	$149,911,906	$ -	$260,873,281	$260,873,281	$ -	$552,060,942	$552,060,942	$ -	$741,923,742	$741,923,742	$ -	$1,704,769,871	$1,704,769,871	$ -
Millington	$2,300,995	$2,300,995	$ -	$4,004,139	$4,004,139	$ -	$8,473,572	$8,473,572	$ -	$11,387,773	$11,387,773	$ -	$26,166,479	$26,166,479	$ -
TOTAL	**$211,492,511**	**$211,492,511**	**$ -**	**$368,034,445**	**$368,034,445**	**$ -**	**$778,835,769**	**$778,835,769**	**$ -**	**$1,046,690,147**	**$1,046,690,147**	**$ -**	**$2,405,052,872**	**$2,405,052,872**	**$ -**
Fayette Co.	$1,255,088	$1,255,088	$ -	$2,184,076	$2,184,076	$ -	$4,621,949	$4,621,949	$ -	$6,211,512	$6,211,512	$ -	$14,272,625	$14,272,625	$ -
Braden	$85,764	$85,764	$ -	$149,245	$149,245	$ -	$315,833	$315,833	$ -	$424,453	$424,453	$ -	$975,296	$975,296	$ -
Gallaway	$142,662	$142,662	$ -	$248,257	$248,257	$ -	$525,361	$525,361	$ -	$706,042	$706,042	$ -	$1,622,322	$1,622,322	$ -
Piperton	$104,591	$104,591	$ -	$182,006	$182,006	$ -	$385,162	$385,162	$ -	$517,626	$517,626	$ -	$1,189,385	$1,189,385	$ -
TOTAL	**$1,588,105**	**$1,588,105**	**$ -**	**$2,763,584**	**$2,763,584**	**$ -**	**$5,848,306**	**$5,848,306**	**$ -**	**$7,859,634**	**$7,859,634**	**$ -**	**$18,059,628**	**$18,059,628**	**$ -**
DeSoto Co.	$5,354,645	$5,354,645	$ -	$9,318,031	$9,318,031	$ -	$19,718,850	$19,718,850	$ -	$26,500,486	$26,500,486	$ -	$60,892,012	$60,892,012	$ -
Hernando	$4,392,808	$4,392,808	$ -	$7,644,265	$7,644,265	$ -	$16,176,820	$16,176,820	$ -	$21,740,293	$21,740,293	$ -	$49,954,186	$49,954,186	$ -
Horn Lake	$1,844,980	$1,844,980	$ -	$3,210,591	$3,210,591	$ -	$6,794,264	$6,794,264	$ -	$9,130,923	$9,130,923	$ -	$20,980,758	$20,980,758	$ -
Olive Branch	$1,171,416	$1,171,416	$ -	$2,038,471	$2,038,471	$ -	$4,313,819	$4,313,819	$ -	$5,797,412	$5,797,412	$ -	$13,321,116	$13,321,116	$ -
Southaven	$4,392,808	$4,392,808	$ -	$7,644,265	$7,644,265	$ -	$16,176,820	$16,176,820	$ -	$21,740,293	$21,740,293	$ -	$49,954,186	$49,954,186	$ -
TOTAL	**$17,156,657**	**$17,156,657**	**$ -**	**$29,855,623**	**$29,855,623**	**$ -**	**$63,180,573**	**$63,180,573**	**$ -**	**$84,909,407**	**$84,909,407**	**$ -**	**$195,102,260**	**$195,102,260**	**$ -**
TOTAL MPO AREA	**$230,237,273**	**$230,237,273**	**$ -**	**$400,653,652**	**$400,653,652**	**$ -**	**$847,864,648**	**$847,864,648**	**$ -**	**$1,139,459,187**	**$1,139,459,187**	**$ -**	**$2,618,214,760**	**$2,618,214,760**	**$ -**

8.2.2 Capital Revenue

The primary source of capital revenue for projects of regional significance in the Memphis MPO region is the federal government. Generally, local agencies fund local improvements for projects that are not considered regionally significant. Local and state agencies provide the local matching funds for the federal funding programs, when required.

The various federal funding programs that are used in the Memphis MPO region are identified in MAP-21, the most recent multi-year authorization for federal surface transportation programs. MAP-21, adopted in July 2012, consolidated 87 funding programs under the previous legislation (SAFETEA-LU) into fewer than 30 programs. As a reference for project funding categories contained in this chapter, **Table 8.3** provides a cross-referencing of funding categories under MAP-21 against programs previously available to the region under SAFETEA-LU. This list is not all-inclusive, but serves to highlight the major federal funding categories available within the MPO area. General rules for the funding ratio of projects by program are also provided (percent of federal compared to percent of state or local funds). This table is intended to be used only as a general guideline, as there are situations in which the funding ratios may vary, based on the particular details of a project.

A summary and explanation of the federal funding sources being used in the Memphis MPO region for capital projects is provided following **Table 8.3**.

Table 8.3 MAP-21 and SAFETEA-LU Funding Categories

MAP-21 Federal Programs	SAFETEA-LU Federal Programs	Description	Funding Ratio
National Highway Performance Program (NHPP)			
Combines the Interstate Maintenance, National Highway System, and on-system Federal-Aid Highway Bridges Programs into one program.	Interstate Maintenance (IM)	Provides funding to rehabilitate, restore, and resurface the Interstate System. Reconstruction is also eligible if it does not add new capacity, with the exception of High-Occupancy-Vehicle (HOV) lanes or auxiliary lanes in non-attainment areas, which can be added.	90% Federal 10% Non-Federal
	National Highway System (NHS)	Provides funding for major roads including the Interstate System, a large percentage of urban and rural principal arterials, the Strategic Defense Highway Network (STRAHNET), and strategic highway connections	80% Federal 20% Non-Federal
	Bridge Replacement and Rehabilitation - State (BRR, BR, or BRBD)	Provides funding for on-system bridge replacement, or to rehabilitate aging or substandard bridges based on bridge sufficiency ratings.	80% Federal 20% Non-Federal
Highway Safety Improvement Program			
Program is largely the same as under SAFETEA-LU.	Highway Safety Improvement Program (HSIP)	Provides funding for making high hazard improvements on state highways (and at rail-highway grade crossings).	80% Federal 20% Non-Federal

MAP-21 Federal Programs	SAFETEA-LU Federal Programs	Description	Funding Ratio
Congestion Mitigation and Air Quality Program (CMAQ)			
Program is largely the same as under SAFETEA-LU.	Congestion Mitigation and Air Quality Program (CMAQ)	Provides funding for transportation projects in air quality non-attainment or maintenance areas. CMAQ projects are designed to contribute toward meeting the National Ambient Air Quality Standards (NAAQS).	80% Federal 20% Non-Federal
Surface Transportation Program			
Program is largely the same as under SAFETEA-LU with the exception that STP funds can be used on bridge projects on any public road and for Appalachian Development Highway System (ADHS) projects.	Surface Transportation Program - State (STP or STP-S)	Provides funding for roads functionally classified as rural major collector and above. Funds may be utilized on projects in Rural Areas, Urbanized Areas, Small Urban Areas, Enhancement, Safety and Rail-Highway Crossings.	80% Federal 20% Non-Federal
	Surface Transportation Program - Metropolitan (STP-M)	Provides funding to areas over 50,000 in population for improvements on routes functionally classified urban collectors or higher.	80% Federal 20% Non-Federal
	Bridge Replacement and Rehabilitation - Local (BRR, BR, or BRBD)	Provides funding for off-system bridge replacement, or to rehabilitate aging or substandard bridges based on bridge sufficiency ratings.	80% Federal 20% Non-Federal

MAP-21 Federal Programs	SAFETEA-LU Federal Programs	Description	Funding Ratio
Transportation Alternatives Program			
Combines the Transportation Enhancements Program, Safe Routes to School Program, and Recreational Trails Program into one program. Changes how some funds under this category can be used, but in general continues to support non-motorized transportation accommodations.	Transportation Enhancements Program (TE or ENH)	Provides funding for a set of exclusive activities such as bicycle and pedestrian faciltiies, rehabilitation of historic transportation related structures, and a defined set of environmental mitigation activities.	80% Federal 20% Non-Federal
	Safe Routes to School Program (SRTS)	Provides funding to substantially improve the ability of primary and middle school students to walk and bicycle to school safely.	80% Federal 20% Non-Federal (Previously 100% Federal)
	Recreational Trails Program (RTP)	Provides funding for the creation, rehabilitation, and maintenance of multi-use recreational trails.	80% Federal 20% Non-Federal
Urbanized Area Formula Grant (Section 5307)			
Program provides grants to Urbanized Areas for public transportation capital, planning, job-access and reverse-commute projects, as well as operating expenses in certain circumstances. The Jobs Access and Reverse Comute Program was eliminated in MAP-21, but the activities carried out under the program are an eligible expense under Section 5307.	Federal Transit Administration (FTA-5307)	Section 5307 is a formula grant program for urbanized areas providing captial, operating, and planning assistance for mass transportation.	80% Federal 20% Non-Federal (Capital) 50% Federal 50% Non-Federal (Operating)
	Federal Transit Administration Jobs Access and Reverse Commute (JARC-5316 or FTA-5316)	Jobs Access projects provide new or expanded service designed to fill gaps that exist for welfare recipients and other low-income individuals to and from jobs and other employment-related services. Reverse Commute projects facilitate the provision of new or expanded public mass transportation services for the general public from urban, suburban, and rural areas to suburban work sites. Under MAP-21 this program has been eliminated but job-access and reverse-commute projects are eligible under the Section 5307 Program and Section 5310 Program.	80% Federal 20% Non-Federal (Capital) 50% Federal 50% Non-Federal (Operating)

MAP-21 Federal Programs	SAFETEA-LU Federal Programs	Description	Funding Ratio
Enhanced Mobility of Seniors and Individuals with Disabilities (Section 5310)			
MAP-21 consolidates the Elderly and Disabled Program and New Freedom Program into one program. Operating assistance in now available under this program.	Federal Transit Administration Elderly & Disabled Program (FTA-5310)	Section 5310 grants provide funding for capital expenses of private, nonprofit groups providing service to elderly persons or persons with disabilities. The State agency assures that local applicants and proposed projects are eligible and comply with federal requirements.	80% Federal 20% Non-Federal (Capital) 50% Federal 50% Non-Federal (Operating)
	Federal Transit Administration New Freedom Program (FTA-5317)	The New Freedom Program provides funding to serve persons with disabilities. The purpose of the program is to provide transportation services that either go beyond the minimum requirements of the Americans with Disabilities Act (ADA), or provide new public transportation services which help meet the needs of people with disabilities.	80% Federal 20% Non-Federal (Capital) 50% Federal 50% Non-Federal (Operating)
State of Good Repair Formula Program			
Program provides funding for maintaining public transportation systems in a state of good repair.	Federal Transit Administration Fixed Guideway Modernization Formula Grants (FTA-5309)	Provides funding to urbanized areas with High Intensity Fixed Guideway systemas and High Intensity Motorbus systems to replace and rehabilitate vehicles, equipment, and facilities, and to develop and implement transit asset management plans.	80% Federal 20% Non-Federal (Capital) 50% Federal 50% Non-Federal (Operating)
Bus and Bus Facilities			
Program provides capital funding to replace, rehabilitate, and purchase buses, vans, and related equipment, and to construct bus-related facilities. Replaces the Section 5309 Bus and Bus Facilities Program.	Federal Transit Administration (FTA 5339)	Provides funding for the establishment of new rail or busway projects (new starts), the improvement and maintenance of existing rail and other fixed guideway systems that are more than seven years old, and the upgrading of bus systems.	80% Federal 20% Non-Federal

Summary of Funding Types for Capital Projects

Congestion Mitigation and Air Quality (CMAQ) Program

The Congestion Mitigation and Air Quality Improvement Program (CMAQ) provides funding for projects and programs for areas that are designated as air quality nonattainment or maintenance areas for ozone (NOx and VOC), carbon monoxide (CO), and/ or particulate matter (PM-10, PM-2.5). The CMAQ projects and programs in these areas are used to reduce transportation related emissions [23 USC 149(a)]. A nonattainment area is an area formally designated in the Code of Federal Regulations by the Environmental Protection Agency (EPA) as not meeting the National Ambient Air Quality Standards (NAAQS). A maintenance area is an area that was nonattainment but has subsequently attained the NAAQS and has officially been redesignated as attainment by EPA.

Eligible Use of Funds

1. Transit and Public Transportation Programs
2. Traffic Flow Improvements
3. Travel Demand Management Strategies
4. Ride Sharing Programs
5. Pedestrian and Bicycle Programs
6. Education and Outreach
7. Inspection and Maintenance Programs
8. Extreme Cold Start Programs
9. Alternative "Clean" Fuels
10. Public/Private Partnerships
11. Experimental Pilot Projects

Delta Regional Authority Funds

These funds are to be used to support and encourage multistate transportation planning and corridor development, provide for transportation project development, facilitate transportation decision making and support transportation construction in the eight States comprising the Delta Region (Alabama, Arkansas, Illinois, Kentucky, Louisiana, Mississippi, Missouri, and Tennessee).

Eligible Use of Funds

Eligible uses are multistate highway planning, development and construction projects with projects selected on the basis of:

1. whether the project is in an area under the authority of the Delta Regional Authority (DRA) and on a Federal-aid highway,
2. endorsement of the project by a state department of transportation, and
3. evidence of the ability of the recipient of funds provided under the program to complete the project.

High Priority Projects (HPP) Program

The High Priority Projects Program provides designated funding for specific projects identified in SAFETEA-LU. It is funded by contract authority and available until expended.

Bridge Replacement and Rehabilitation (BRR) Program

The Highway Bridge Program provides funding to enable States and local agencies to improve the condition of their highway bridges through replacement, rehabilitation, and systematic preventive maintenance.

Highway Safety Improvement Program (HSIP)

The program authorized a new core Federal-aid funding program beginning in FY 2006 to achieve a significant reduction in traffic fatalities and serious injuries on all public roads.

Eligible Use of Funds

1. Intersection safety improvements.
2. Pavement and shoulder widening (including addition of a passing lane to remedy an unsafe condition).

3. Installation of rumble strips or another warning device, if the rumble strips or other warning devices do not adversely affect the safety or mobility of bicyclists, pedestrians, and the disabled.
4. Installation of a skid-resistant surface at an intersection or other location with a high frequency of accidents.
5. An improvement for pedestrian or bicyclist safety or safety of the disabled.
6. Construction of any project for the elimination of hazards at a railway-highway crossing that is eligible for funding under section 130, including the separation or protection of grades at railway-highway crossings.
7. Construction of a railway-highway crossing safety feature, including installation of protective devices.
8. The conduct of a model traffic enforcement activity at a railway-highway crossing.
9. Construction of a traffic calming feature.
10. Elimination of a roadside obstacle.
11. Improvement of highway signage and pavement markings.
12. Installation of a priority control system for emergency vehicles at signalized intersections.
13. Installation of a traffic control or other warning device at a location with high accident potential.
14. Safety-conscious planning.
15. Improvement in the collection and analysis of crash data.
16. Planning integrated interoperable emergency communications equipment, operational activities, or traffic enforcement activities (including police assistance) relating to work zone safety.
17. Installation of guardrails, barriers (including barriers between construction work zones and traffic lanes for the safety of motorists and workers), and crash attenuators.
18. The addition or retrofitting of structures or other measures to eliminate or reduce accidents involving vehicles and wildlife.
19. Installation and maintenance of signs (including fluorescent, yellow-green signs) at pedestrian-bicycle crossings and in school zones.
20. Construction and yellow-green signs at pedestrian-bicycle crossings and in school zones.
21. Construction and operational improvements on high risk rural roads.
22. Roundabouts.

Interstate Maintenance (IM) Program

The Interstate Maintenance (IM) program provides funding for resurfacing, restoring, rehabilitating and reconstructing (4R) most routes on the Interstate System.

National Corridor Infrastructure Improvement Program (NCIIP)

A discretionary program that provides funding for construction of highway projects in corridors of national significance to promote economic growth and international or interregional trade. This program replaces TEA-21 section 1118, National Corridor Planning and Development program.

Eligible Use of Funds

1. A corridor linking two existing segments of the Interstate System.
2. A project facilitating major multi-state or regional mobility, economic growth and development in areas underserved by highway infrastructure.
3. A corridor on which commercial traffic in the corridor has increased since enactment of NAFTA and where traffic is projected to increase in the future.
4. A project to enhance international truck-borne commodities movement through the corridor.
5. A project to reduce congestion on an existing segment of the Interstate.
6. A project to reduce commercial and other travel time through a major freight corridor.

National Highway System (NHS) Program

The program provides funding for improvements to rural and urban roads that are part of the NHS, including the Interstate System and designated connections to major intermodal terminals. Under certain circumstances, NHS funds may also be used to fund transit improvements in NHS corridors.

National Scenic Byways Program (NSBP)

The program recognizes roads having outstanding scenic, historic, cultural, natural, recreational, and archaeological qualities and provides for designation of these roads as National Scenic Byways, All-American Roads or America's Byways.

Eligible Use of Funds

1. An activity related to the planning, design, or development of a State or Indian tribe scenic byway program.
2. Development and implementation of a corridor management plan to maintain the scenic, historical, recreational, cultural, natural, and archaeological characteristics of a byway corridor while providing for accommodation of increased tourism and development of related amenities.
3. Safety improvements to a state scenic byway, Indian tribe scenic byway, National Scenic Byway, All-American Road, or one of America's Byways to the extent that the improvements are necessary to accommodate increased traffic and changes in the types of vehicles using the highway as a result of the designation as a State scenic byway, Indian tribe scenic byway, National Scenic Byway, All-American Road, or one of America's Byways.
4. Construction along a scenic byway of a facility for pedestrians and bicyclists, rest area, turnout, highway shoulder improvement, overlook, or interpretive facility.
5. An improvement to a scenic byway that will enhance access to an area for the purpose of recreation, including water-related recreation.
6. Protection of scenic, historical, recreational, cultural, natural, and archaeological resources in an area adjacent to a scenic byway.
7. Development and provision of tourist information to the public, including interpretive information about a scenic byway.
8. Development and implementation of a scenic byway marketing program.

Safe Routes To School (SRTS) Program

The Safe Routes to School (SRTS) Program provides funding to enable and encourage children, including those with disabilities, to walk and bicycle to school; to make walking and bicycling to school safe and more appealing; and to facilitate the planning, development and implementation of projects that will improve safety, and reduce traffic, fuel consumption, and air pollution in the vicinity of schools.

Eligible Use of Funds

For infrastructure related projects, eligible activities are the planning, design, and construction of projects that will substantially improve the ability of students to walk and bicycle to school. These include sidewalk improvements, traffic calming and speed reduction improvements, pedestrian and bicycle crossing improvements, on-street bicycle facilities, off-street bicycle and pedestrian facilities, secure bike parking, and traffic diversion improvements in the vicinity of schools (within approximately 2 miles). Such projects may be carried out on any public road or any bicycle or pedestrian pathway or trail in the vicinity of schools.

Surface Transportation Program (STP)

The Surface Transportation Program provides flexible funding that may be used by states and localities for projects on any Federal-aid highway, including the NHS, bridge projects on any public road, transit capital projects, and intracity and intercity bus terminals and facilities.

Eligible Use of Funds

1. Construction, reconstruction, rehabilitation, resurfacing, restoration, and operational improvements for highways (including Interstate highways) and bridges
2. Capital costs for transit projects eligible for assistance under chapter 53 of title 49, including vehicles and facilities, whether publicly or privately owned, that are used to provide intercity passenger service by bus.
3. Carpool projects, fringe and corridor parking facilities and programs, bicycle transportation and pedestrian walkways in accordance with section 217, and the modification of public sidewalks to comply with the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.).

4. Highway and transit safety infrastructure improvements and programs, hazard eliminations, projects to mitigate hazards caused by wildlife, and railway-highway grade crossings.
5. Highway and transit research and development and technology transfer programs.
6. Capital and operating costs for traffic monitoring, management, and control facilities and programs, including advanced truck stop electrification systems.
7. Surface transportation planning programs
8. Transportation enhancement activities.
9. Transportation control measures listed in section 108 (f)(1)(A) (other than clause (xvi)) of the Clean Air Act (42 U.S.C. 7408 (f)(1)(A)).
10. Development and establishment of management systems under section 303.
11. Wetlands mitigation (i.e., surface drainage and banking).
12. Programs to reduce extreme cold starts.
13. Environmental restoration and pollution abatement projects, including retrofit or construction of stormwater treatment facilities.
14. Natural habitat mitigation, but specifies that if wetland or natural habitat mitigation is within the service area of a mitigation bank, preference will be given to use the bank.
15. Privately owned vehicles and facilities that are used to provide intercity passenger service by bus.
16. Modifications of existing public sidewalks to comply with the requirements of the Americans with Disabilities Act (ADA).
17. Infrastructure based intelligent transportation system capital improvements.
18. Preventative maintenance activities which extend the service life of the facility (pavements, bridges, and essential highway appurtenances) are eligible for federal funding.

Transportation, Community, and System Preservation Program (TCSP)

The TCSP Program is intended to address the relationships among transportation, community, and system preservation plans and practices and identify private sector-based initiatives to improve those relationships.

Eligible Use of Funds

Funds may be used to carry out eligible projects to integrate transportation, community, and system preservation plans and practices that:

1. Improve the efficiency of the transportation system of the United States.
2. Reduce the impacts of transportation on the environment.
3. Reduce the need for costly future investments in public infrastructure.
4. Provide efficient access to jobs, services, and centers of trade.
5. Examine community development patterns and identify strategies to encourage private sector development.

Transportation Enhancement (TE) Program

These funds are used to strengthen the cultural, aesthetic, and environmental aspects of the Nation's intermodal transportation system.

Eligible Use of Funds

All enhancement projects must relate to surface transportation and include at least one of the twelve qualifying activities listed below:

1. Pedestrian or bicycle facilities.
2. Acquisition of scenic easements or scenic historic sites.
3. Scenic or historic highway programs (including provision of tourist and welcome center facilities).
4. Landscaping and other scenic beautification.
5. Historic preservation.
6. Rehabilitation and operation of historic transportation buildings, structures, or facilities — including historic railroad facilities and canals.

7. Preservation of abandoned railway corridors — including conversion for use as bicycle or pedestrian trails.
8. Control and removal of outdoor advertising.
9. Archaeological planning and research.
10. Provision of safety and educational activities for pedestrians and bicyclists.
11. Environmental mitigation to address water pollution due to highway runoff or reduce vehicle-caused wildlife mortality while maintaining habitat connectivity. Environmental activities must go beyond what is customarily provided in projects.
12. Establishment of transportation museums.

American Recovery and Reinvestment Act (ARRA)

On February 13, 2009, the American Recovery and Reinvestment Act (ARRA) was signed into law in a direct response to the economic crisis. ARRA has three immediate goals:

1. Create new jobs and save existing ones
2. Spur economic activity and invest in long-term growth
3. Foster unprecedented levels of accountability and transparency in government spending
4. To strengthen the cultural, aesthetic, and environmental aspects of the Nation's intermodal transportation system.

Eligible Use of Funds

1. Restoration, repair, construction and other activities under Surface Transportation Program
2. Passenger and freight rail transportation and port infrastructure projects as described under Transportation Infrastructure Finance and Innovation Act (TIFIA)

State Funded Projects (SFP)

Projects using this funding source are State of Mississippi projects that require state funds in addition to the other funding sources identified in this section.

Ferry Boat Discretionary

This is a special funding category for construction of ferry boats and ferry terminal facilities. This funding source is currently being used for improvements to the riverfront area in downtown Memphis.

Highway Enhancement through Local Partnerships (HELP)

An additional funding mechanism is being used in the Mississippi portion of the Memphis MPO area. In this innovative program, the local agencies sell bonds to finance the construction of major projects. Federal funds are used to repay the funding and the state pays the debt service on the bonds. This program has allowed the Memphis MPO area to accelerate the construction of I-69/I-269 in North Mississippi.

Section 5307 FTA, Large Urban Cities Funds

The Urbanized Area Formula Funding program (49 U.S.C. 5307) makes Federal resources available to urbanized areas and to Governors for transit capital and operating assistance in urbanized areas and for transportation related planning. An urbanized area is an incorporated area with a population of 50,000 or more that is designated as such by the U.S. Department of Commerce, Bureau of the Census. Funding is made available to designated recipients that must be public bodies with the legal authority to receive and dispense Federal funds. Governors, responsible local officials and publicly owned operators of transit services are to designate a recipient to apply for, receive, and dispense funds for transportation management areas pursuant to 49USCA5307(a)(2). Generally, a transportation management area is an urbanized area with a population of 200,000 or over. The Governor or Governor's designee is the designated recipient for urbanized areas between 50,000 and 200,000.

Section 5309 FTA Funds Major Capital Investments

The transit capital investment program (49 U.S.C. 5309) provides capital assistance for three primary activities:

1. New and replacement buses and facilities (Bus and Bus Related Facilities program),

2. Modernization of existing rail systems (Fixed Guideway Modernization program), and
3. New fixed guideway systems (New Starts program and Small Starts).

The New Starts program provides funds for construction of new fixed guideway systems or extensions to existing fixed guideway systems. The Small Starts program provides funds to capital projects that either meet the definition of a fixed guideway for at least 50 percent of the project length in the peak period or are corridor-based bus projects with 10 minute peak/15 minute off-peak headways or better while operating at least 14 hours per weekday. The Federal assistance provided or to be provided under Section 5309 must be less than $75 million and the project must have a total capital cost of less than $250 million, both in year of expenditure dollars.

Section 5316 FTA Job Access Reverse Commute

The Job Access and Reverse Commute (JARC) program was established to address the unique transportation challenges faced by welfare recipients and low-income persons seeking to obtain and maintain employment. Many new entry-level jobs are located in suburban areas, and low-income individuals have difficulty accessing these jobs from their inner city, urban, or rural neighborhoods. In addition, many entry level-jobs require working late at night or on weekends when conventional transit services are either reduced or non-existent. Finally, many employment related-trips are complex and involve multiple destinations including reaching childcare facilities or other services.

Section 5137 FTA New Freedom Program

The New Freedom formula grant program aims to provide additional tools to overcome existing barriers facing Americans with disabilities seeking integration into the work force and full participation in society. Lack of adequate transportation is a primary barrier to work for individuals with disabilities. The 2000 Census showed that only 60 percent of people between the ages of 16 and 64 with disabilities are employed. The New Freedom formula grant program seeks to reduce barriers to transportation services and expand the transportation mobility options available to people with disabilities beyond the requirements of the Americans with Disabilities Act (ADA) of 1990.

Allocated and Projected Revenues

To determine the level of revenue available to fund the projects in this plan, a detailed historical analysis of the various funding sources that have been used in the Memphis MPO area was conducted. This historical analysis was compared to the funding trends allocated in the 2011-2014 TIP and a conservative estimate of the projected revenues was obtained. **Table 8.4** provides a summary of these analyses for the funding for Tennessee and Mississippi and the projected annual revenue by funding source for each horizon year of the plan.

Table 8.4 Allocated and Projected Non-Transit Capital Revenues 2011 to 2040 by Horizon Year Adjusted for Inflation

	Total 2011 - 2014	2015 - 2020 Total	2021 - 2030 Total	2031 - 2040 Total	2011 - 2040 Total
State of Tennessee					
Surface Transportation Program (State)					
State STP	$ 23,007,568	$ 132,864,605	$ 281,168,537	$ 377,867,002	$ 814,907,712
BRR-S	$ 16,200,000	$ 29,485,022	$ 62,396,305	$ 83,855,417	$ 191,936,744
BRBD	$ 1,195,859	$ 3,640,126	$ 7,703,248	$ 10,352,521	$ 22,891,753
Congestion Mitigation & Air Quality					
CMAQ (State)	$ 16,150,000	$ 11,648,404	$ 24,650,392	$ 33,128,066	$ 85,576,862
National Highway Performance Program					
NHS	$ 108,833,883	$ 105,020,303	$ 177,174,695	$ 238,107,974	$ 629,136,854
IM	$ 81,557,300	$ 174,726,055	$ 369,755,884	$ 496,920,989	$ 1,122,960,229
Highway Safety Improvement Program					
HSIP	$ 9,000,000	$ 16,380,568	$ 34,664,614	$ 46,586,343	$ 106,631,525
Discretionary Funds					
ARRA	$ 597,820	$ -	$ -	$ -	$ 597,820
HPP	$ 41,293,725	$ 104,107,608	$ 220,312,881	$ 296,082,089	$ 661,796,304
HPP/NCIIP/CESA	$ -	$ -	$ 2,969,969,925	$ -	$ 2,969,969,925
Subtotal	$ 297,836,155	$ 577,872,690	$ 4,147,796,481	$ 1,582,900,401	$ 6,606,405,727
State of Mississippi					
Surface Transportation Program (State)					
State STP	$ 75,587,474	$ 128,151,312	$ 266,724,948	$ 358,456,026	$ 828,919,760
STP Bond	$ 199,800,000	$ -	$ -	$ -	$ 199,800,000
High Hazard STP	$ -	$ 27,300,946	$ 57,774,357	$ 77,643,905	$ 162,719,208
National Highway Performance Program					
NHS	$ 9,200,000	$ 24,570,852	$ 51,996,921	$ 69,879,514	$ 155,647,287
IM	$ 11,500,000	$ 109,203,785	$ 231,097,428	$ 310,575,618	$ 662,376,831
Transportation Alternatives Program					
Safe Routes to School	$ -	$ 728,025	$ 1,540,650	$ 2,070,504	$ 4,339,179
Discretionary Funds					
Federal Stimulus	$ -	$ -	$ -	$ -	$ -
Earmark (CESA)	$ 500,000	$ -	$ -	$ -	$ 500,000
HPP/NCIIP/CESA	$ -	$ -	$ 174,704,113	$ -	$ 174,704,113
State Funding Sources					
State Funded	$ 16,700,000	$ 55,050,425	$ 90,898,322	$ 122,159,743	$ 284,808,490
Subtotal	$ 313,287,474	$ 345,005,344	$ 874,736,738	$ 940,785,310	$ 2,473,814,867
Metropolitan Planning Organization					
Surface Transportation Program (Local)					
TN Local STP	$ 193,351,758	$ 145,904,177	$ 308,762,926	$ 414,951,553	$ 1,062,970,414
TN BRR-L	$ 2,040,000	$ 3,712,929	$ 7,857,313	$ 10,559,571	$ 24,169,812
MS Urban STP	$ 29,336,294	$ 13,955,334	$ 29,532,325	$ 39,688,976	$ 112,512,929
Congestion Mitigation & Air Quality					
TN CMAQ (Local)	$ 47,140,246	$ 61,772,941	$ 130,724,112	$ 175,682,275	$ 415,319,573
Transportation Alternatives Program					
TN ENH	$ 4,680,966	$ 9,100,315	$ 19,258,119	$ 25,881,302	$ 58,920,702
Discretionary Funds					
TN HPP	$ 37,442,110	$ 67,706,346	$ 143,280,405	$ 192,556,883	$ 440,985,745
TN TCSP	$ 1,180,750	$ 9,100,315	$ 19,258,119	$ 25,881,302	$ 55,420,486
TN FBD	$ 669,034	$ -	$ -	$ -	$ 669,034
TN FEMA	$ -	$ 14,560,505	$ 30,812,990	$ 41,410,082	$ 86,783,577
TN DEMO	$ 2,951,785	$ 5,387,387	$ 11,400,806	$ 15,321,731	$ 35,061,709
Subtotal	$ 318,792,943	$ 331,200,249	$ 700,887,115	$ 941,933,674	$ 2,292,813,981
Total Non-Transit Revenue	$ 929,916,572	$ 1,254,078,284	$ 5,723,420,334	$ 3,465,619,385	$ 11,373,034,575

Congestion Management Process (CMP) Projects

As discussed in **Chapter 5 – Transportation Strategies**, several strategies to reduce congestion were examined before determining if general purpose lanes should be added. The Congestion Management Projects that employ these alternative strategies are expected to be funded in a variety of ways. Some strategies involve bicycle, pedestrian, and transit projects, which have costs included as a part of their modal analyses. Strategies such as access management improvements and high occupancy vehicle (HOV) lane construction have specific projects delineated as a part of the roadway project analysis. Funding for the other CMP strategies is anticipated to be provided using CMAQ funds at an annual value of $9.1 million, inflated 3% annually after the conclusion of the 2011-2014 TIP. This value accounts for the implementation of rideshare, Intelligent Transportation Systems (ITS), signal system improvements, and other projects such as those currently receiving funding in the TIP.

Highway Safety Improvement Program/Spot Safety/Intersection Improvements

Intersection-level spot safety improvements through the Highway Safety Improvement Program (HSIP) are a great way to improve safety and operations at key intersections. These low-cost solutions can be implemented quickly and have a large impact. The current average annual funding of $2,250,000 was assumed to continue annually after the conclusion of the 2011-2014 TIP, with an inflation rate of 3% annually. This matches the amount currently allocated for HSIP in the TIP.

Safe Routes to School

There is a documented need for more sidewalks and bike lanes in the vicinity of schools throughout the region. In addition to the more traditional funding sources for providing these facilities (i.e., local jurisdiction funds) SRTS funding provides an additional source to improve safety for children going to and from school. The current average annual funding from the SRTS program in the MPO area of $100,000 was assumed to continue annually beyond the conclusion of the 2011 – 2014 TIP, with an annual inflation rate of 3%. This matches the amount currently allotted for SRTS in the TIP.

Bicycle and Pedestrian Funding

There has been a renewed interest in funding bicycle and pedestrian facilities in the Memphis MPO area. Local jurisdictions have begun to routinely include bicycle lanes and pedestrian paths in roadway construction and repaving projects. Off roadway projects, such as the Memphis Greenline project along the abandoned CSXRR tracks adjacent to Shelby Farms and the various Greenway trails along the Wolf River have been well received and are heavily used by the public. Some of these projects have been funded with Transportation Enhancement funds and others with local funds. More recently, these types of projects have also been funded with CMAQ funds.

While it is understood that the Transportation Enhancement funds, or other similar programs that might be included in future transportation bills, are obtained through competitive grant programs, conservative historical averages of the funds obtained by the Memphis region can be used to project the level of funding that can be available for this program. The historical average funding for Transportation Enhancement projects within the Memphis MPO area is approximately $1,250,000 annually. The CMAQ funding for these types of projects has a shorter history, but is averaging approximately $1,170,000 annually. Therefore, it is assumed that approximately $2,420,000 will be available for this program annually, resulting in a total of $70,000,000 being available during the term of this LRTP, adjusted for inflation.

Capital Highway Projects

The largest component of highway capital costs is composed of recommended projects. These projects have been identified utilizing the CMP analysis and the evaluation matrix detailed in **Chapter 5** and meetings held with the public and the project stakeholders. Through this process, projects were prioritized based on factors such as when congestion is expected to occur, levels of congestion relief, and benefits and impacts to the community.

While it would be ideal to implement all projects, only a portion can be accommodated within the funding available. Therefore, workshops were held with the project stakeholders to identify those projects that were most important to the region.

Costs were assigned to each project identified. Many of the more near term projects have already had cost estimates developed based on specific project information. Where available, that data was used. When project specific cost data was not already available, project costs were developed using project cost data provided by the TDOT Long Range Planning Division. This data allows for consideration of various factors in developing the project costs including terrain, type of improvement (new road, widening, etc), the character of the land use where the project is to be developed, and project specific special features. Project costs include engineering, right-of-way, and construction.

From the input obtained in the stakeholder and public meetings and based on the funding available and projected costs, the projects are shown in five groups: projects to be completed prior to 2015, projects to be completed between 2015 and 2020, projects to be completed between 2021 and 2030, projects to be completed between 2031 and 2040, and projects to be completed beyond 2040, also known as the "Vision Plan".

Table 8.5 through **Table 8.7** identify the projects to be completed by 2020, 2030, and 2040. Projects that were identified through the public participation process, by the congestion analyses, or through stakeholder meetings but cannot be funded as part of this plan are included in a separate list identified as the Vision Plan that is provided in **Table 8.8**. All of the above mentioned projects are illustrated in **Figure 8.1**.

8.2.3 Demonstration of Non-Transit Fiscal Constraint

The costs and revenues previously identified for non-transit projects have been compared. The costs and revenues for capital projects have been compared by funding program, state, and horizon year and are provided in **Table 8.9**. The costs and revenues for operating and maintenance have been compared by jurisdiction and horizon year and are provided in **Table 8.2**. As can be seen in these tables, both the non-transit capital and non-transit operating and maintenance programs are fiscally constrained**.**

Table 8.5 Highway Projects - 2020 Horizon Year

*Refer to Table 8.3 for updated funding categories under MAP-21.

ID	LRTP No.	TIP No.	Facility	Termini	Type of Improvement	Jurisdiction	Length (Miles)	Estimated Project Cost (inflated)	Completion Date	Funding Source*
State of Tennessee										
502	02360002		Beverle Rivera Dr	Canada Rd to Seed Tick Rd	New 4 lane (divided)	Lakeland	0.70	$8,338,197	2020	TN-LSTP
36	2180002.1		Dexter Rd	Whitten Rd to Raleigh Lagrange Rd	Widen from 4 to 6 lanes (divided)	Memphis	0.25	$1,766,066	2020	TN-LSTP
48	01010012-13	STP-M-2000-22	Forest Hill-Irene Rd	Walnut Grove to Macon Road **Amended 11-15-12**	Construct new six lane roadway with a median and a bike path. The project also includes an 1,100 foot extension of Trinity Road from Sanga Creek Road to Forest Hill Irene. Trinity Road will maintain a seven lane cross section.	Memphis	2.53	$12,931,864	2020	TN-LSTP
87	00990006 - 00990007		Hacks Cross Rd	Stateline Rd to SR-175 (Shelby Dr)	Widen to 7 lanes	Shelby Co	1.78	$21,970,689	2020	TN-LSTP
126	60010001.1		I-240	NB I-55 to I-240 N	Widen from 2 to 3 lanes	Memphis	1.40	$20,223,143	2020	TN-IM
144	1040017	NHS-2006-10-A	I-40	SR-177 (Germantown Pkwy) to East of Canada Road	Widen from 6 lanes to 8 lanes (includes high occupancy vehicle lanes)	Memphis	4.50	$57,087,495	2020	TN-IM
146	1040021	NHS-2006-10-B	I-40	East of Canada Road to SR-205 (Airline Rd)	Widen from 4 lanes to 6 lanes (includes high occupancy vehicle lanes)	Arlington	3.90	$41,407,807	2020	TN-IM
156	60030002	TN-IM-2011-01	I-55	Interchange at Crump Blvd	Interchange Modification	Memphis		$37,406,285	2020	TN-IM
157	20000001		I-69	SR-300 to SR-385	New 4 lane Interstate	Memphis	12.83	$99,031,574	2020	TN-HPP
158	20000001	NHS-2008-03	I-69	East of US-51 near Millington to Tipton County Line	New 4 lane Interstate	Millington	4.80	$37,058,429	2020	TN-HPP
184	02860005		New Allen Rd	Raleigh Millington Rd	Realignment	Memphis	0.48	$3,201,233	2020	TN-LSTP

Table 8.5 Highway Projects - 2020 Horizon Year

*Refer to Table 8.3 for updated funding categories under MAP-21.

ID	LRTP No.	TIP No.	Facility	Termini	Type of Improvement	Jurisdiction	Length (Miles)	Estimated Project Cost (inflated)	Completion Date	Funding Source*
189	02540002-5	STP-M-2000-09	North Second Street	Cedar to South of the Wolf River Bridge	Improve North Second Street corridor to a parkway design including right-of way acquisition, reconstruction of sidewalks, provisions for bicycles, landscaping, and utility relocation. From Cedar Avenue to the Wolf River Bridge, widen Second Street from two to four lanes with a raised median. Bicycle lanes will be provided along the improved North Second Street corridor. **Amended 5-24-12**	Memphis	1.02	$14,174,849	2020	TN-SSTP
190	01460005-6	STP-M-2006-03	Old Brownsville Rd	SR-14 (Austin Peay) to Kirby Whitten	Widen to 4 lane (divided) with median openings and turn lanes for existing driveways	Bartlett	2.21	$22,098,349	2020	TN-LSTP
604	01670006 - 01670007		Raleigh Millington Rd	Egypt Central to Fite Rd	Bridge over Looshatchie River	Memphis	0.20	$12,915,235	2020	FEMA
212	01670006 - 01670007		Raleigh Millington Rd	Egypt Central to Fite Rd	Widen from 2 to 4 lanes (divided)	Memphis	2.02	$20,309,025	2020	TN-LSTP
			Repaving, Bicycle, and Pedestrian Strategies	Regionwide	Sidewalks, Repaving, and Handicap Ramp Replacement	Tennessee		$24,138,304	2020	TN-LSTP
6	02020024 - 02020025		SR-14 (Austin Peay)	SR-204 (Singleton Parkway) to east of Old Covington Pike **Amended 9-12-13**	Widen from 2 to 5 Lanes	Shelby Co	2.60	$26,500,000	2020	TN-HPP
55	00790003.1		SR-177 (Germantown Rd)	Winchester to Callis Creek	Widen from 2 to 7 lanes	Memphis	0.69	$10,467,916	2020	TN-SSTP
620	02590010		SR-196 (Hickory Withe Rd)	US-64/SR-15 to I-40 (Intersections)	Intersection Improvements	Fayette Co	1.90	$7,334,481	2020	TN-SSTP
609	60020007		SR-3 (North Second St)	Interchange at I-40	Interchange Modification	Memphis		$14,352,505	2020	TN-IM
209	01120039		SR-57 (Poplar Ave)	SR-385 to SR-196	Widen from 2 to 5 lanes	Piperton	0.95	$11,001,721	2020	TN-SSTP

Table 8.5 Highway Projects - 2020 Horizon Year

*Refer to Table 8.3 for updated funding categories under MAP-21.

ID	LRTP No.	TIP No.	Facility	Termini	Type of Improvement	Jurisdiction	Length (Miles)	Estimated Project Cost (inflated)	Completion Date	Funding Source*
108	01120037 - 01120038		SR-57 (Poplar Ave)	SR 205 (Collierville Arlington Rd) to SR-385	Widen from 2 to 5 lanes	Collierville	0.91	$13,070,513	2020	TN-SSTP
115	01200026.1 - 01200029		US-70/US-79/SR-1 (Summer Ave)	I-40 to Elmore	Widen to 7 lanes	Memphis	3.15	$26,529,408	2015	TN-SSTP
94	60030008.1		US-78/SR-4 (Lamar Ave)	Interchange at Holmes Rd	Construct new interchange and widen Holmes 1000 ft east to 7 lanes with service roads	Memphis	0.50	$33,020,303	2020	TN-NHS
167	00820028 - 00820030		US-78/SR-4 (Lamar Ave)	MS/TN Stateline to south of SR-175 (Shelby Dr) **Amended 9-12-13**	Widen from 4 to 6 lanes (divided)	Memphis	1.1	$72,000,000	2020	TN-NHS
247	00900012	STP-M-2000-11	Walnut Grove Rd Middle	Kirby Whitten to SR-177 (Germantown Pkwy) **Amended 9-12-13**	Widen existing four lane roadway to six lane parkway with landscaping. This project will have adjacent paths for bikes and pedestrians designed in conjunction with the parkway.	Memphis	2.86	$19,880,742	2020	TN-LSTP
618	00340020 - 00340023		Winchester Rd	Ridgeway to Hacks Cross	Add median	Memphis	2.70	$7,192,558	2020	TN-ENH
702	90000015		State Congestion Mitigation and Air Quality Improvement	Regionwide	CMAQ projects including traffic signal improvements, signal systems, and ITS projects.	Regionwide		$11,648,404	2020	TN-CMAQ (State)
705	70000003		Regionwide Bridge Replacement and Rehabilitation	Regionwide	Replacement, rehabilitation, systematic preventative maintenance of bridges	Regionwide		$29,485,022	2020	TN-BRR-S
708	30000007		Regionwide Highway Safety Improvement Program	Regionwide	Highway safety projects to reduce fatalities and severe injuries	Regionwide		$16,380,568	2020	TN-HSIP
711	70000004		Regionwide Bridge Replacement and Rehabilitation - Bridge Bond Program	Regionwide	Replacement, rehabilitation, systematic preventative maintenance of bridges using advanced procedures	Regionwide		$3,640,126	2020	TN-BRBD
720	70000005		Local Bridge Replacement and	Regionwide	Local replacement, rehabilitation, systematic preventative maintenance	Regionwide		$3,712,929	2020	TN-BRR-L

Table 8.5 Highway Projects - 2020 Horizon Year

*Refer to Table 8.3 for updated funding categories under MAP-21.

ID	LRTP No.	TIP No.	Facility	Termini	Type of Improvement	Jurisdiction	Length (Miles)	Estimated Project Cost (inflated)	Completion Date	Funding Source*
			Rehabilitation		of bridges using advanced procedures					
723	90000016		Local Congestion Mitigation and Air Quality Improvement	Regionwide	Local CMAQ projects including traffic signal improvements, and signal systems.	Regionwide		$61,772,941	2020	TN-CMAQ (Local)
						State of Tennessee Total		**$675,408,690**		
State of Mississippi										
23	00060011		Church Rd	Pepper Chase Rd to Airways Blvd	Widen from 5 to 7 lanes	Southaven	0.74	$7,470,467	2020	MS-LSTP
27	02810008		Commerce St	Sloans Way to McIngvale Rd	Widen from 4 to 6 lanes (divided)	Hernando	0.30	$5,782,634	2020	MS-LSTP
33	00770008 - 00770009		Craft Rd	Old Lamar to Stateline Rd	New 4 lane road (divided)	Olive Branch	1.03	$12,717,779	2020	MS-SFP
86	00990004 - 00990005		Hacks Cross Rd	MS-302 (Goodman Rd) to Stateline Rd	Widen from 5 to 6 lanes (divided)	Olive Branch	2.23	$15,478,737	2020	MS-SFP
85	00990002		Hacks Cross Rd	Nail Rd to MS-302 (Goodman Rd)	Widen from 5 to 6 lanes (divided)	Olive Branch	1.05	$7,281,402	2020	MS-SSTP
152	01330009	MS-NHS-2006-01	I-55/I-69	Church Rd to MS-302 (Goodman Rd)	Widen to 8 lanes **Amended 5-24-12**	Southaven	1.75	$12,112,050	2020	MS-IM
151	01330007 - 01330008	MS-NHS-2006-02	I-55/I-69	I-269 to Church Rd	Widen to 8 lanes **Amended 5-24-12**	DeSoto Co	5.24	$39,138,473	2020	MS-IM
76	00100007		MS-302 (Goodman Rd)	Hurt Rd to US-51	Widen from 5 to 6 lanes (divided)	Horn Lake	0.60	$3,891,119	2020	MS-NHS
80	60070001		MS-302 (Goodman Rd)	Old Lamar Off Ramp	Reconfigure ramp for safety	Olive Branch	0.25	$1,930,127	2020	MS-NHS
78	00100010 - 00100012		MS-302 (Goodman Rd)	Airways Blvd to Tchulahoma Rd	Widen from 5 to 6 lanes (divided)	Horn Lake	2.02	$13,096,668	2020	MS-NHS
70	00410001 - 00410002		MS-747 (Getwell Rd)	Byhalia Rd to Pleasant Hill Rd	Widen from 2 to 4 lanes (divided)	Hernando	1.14	$11,412,897	2020	MS-SFP
234	00040007 - 00040011	MS-NHS-2008-02	Star Landing Rd	Tulane Rd to Getwell Rd	Widen from 2 to 4 lanes (divided)	DeSoto Co	5.00	$57,903,795	2020	MS-SSTP
240	00140005 - 00140011		Stateline Rd	Horn Lake Rd to US-51	Widen from 2 to 5 lanes	Horn Lake	2.17	$28,130,314	2020	MS-SSTP
124	00820031		US 78/ I-22	MS-302 (Goodman Rd) to MS/TN State Line **Amended 9-12-13**	Widen from 4 to 6 lanes (divided)	Olive Branch	2.51	$46,460,301	2020	MS-IM

Table 8.5 Highway Projects - 2020 Horizon Year

*Refer to Table 8.3 for updated funding categories under MAP-21.

ID	LRTP No.	TIP No.	Facility	Termini	Type of Improvement	Jurisdiction	Length (Miles)	Estimated Project Cost (inflated)	Completion Date	Funding Source*
105	00250003 - 00250006		US-51	Church Rd to Stateline Rd	Widen from 5 to 7 lanes	Horn Lake	4.16	$32,079,580	2020	MS-SSTP
714	30000007		Regionwide Highway Safety Improvement Program	Regionwide	Highway safety projects to reduce fatalities and severe injuries	Regionwide		$27,300,946	2020	MS-HHSTP
71	00410003 - 00410005		MS-747 (Getwell Rd)	Star Landing Road to Church Road	Widen from 2 to 4 lanes (divided) with bike lanes **Amended 9-12-13**	Southaven	4.00	$15,441,012	2020	MS-SFP
181	00080010 - 00080014		Nail Rd Extension	Elmore Road to Swinnea Road	Widen two lane to five lanes **Amended 9-12-13**	Southaven	0.51	$2,240,000	2020	MS-SSTP
717	30000008		Regionwide Safe Routes to School Program	Regionwide	Sidewalk and crossing improvements, bike facilities and other items that encourage walking and biking to school	Regionwide		$728,025	2020	MS-SRTS
						State of Mississippi Total		**$313,083,576**		
						Total All 2020 Projects		**$988,492,267**		

Table 8.6 Highway Projects - 2030 Horizon Year

*Refer to Table 8.3 for updated funding categories under MAP-21.

ID	LRTP No.	TIP No.	Facility	Termini	Type of Improvement	Jurisdiction	Length (Miles)	Estimated Project Cost (inflated)	Completion Date	Funding Source
State of Tennessee										
9	02850001		Big Creek Rd	US-51/SR-3 to Raleigh Millington Rd	Improve roadway with bicycle and pedestrian facilities	Millington	1.21	$2,170,080	2025	TN-ENH
617	002180005		Dexter Rd	Forest Hill-Irene Rd Ext. to Houston Levee Rd	New 2 lane road	Memphis	0.86	$8,923,114	2030	TN-LSTP
37	02180002 - 02180003		Dexter Rd	Raleigh Lagrange Rd to SR-177 (Germantown Rd)	Widen from 2 to 4 lanes (divided)	Memphis	2.40	$27,951,013	2025	TN-LSTP
40	02420001.2		Donelson Pkwy	SR-385 to Airline Rd	New 4 lane road (divided)	Arlington	0.76	$8,043,254	2030	TN-TCSP
49	01010016 - 01010017		Forest Hill-Irene Rd	Cordova Park to US-64/SR-15	Widen and construct new 6 lane road (divided)	Memphis	2.82	$35,093,496	2030	TN-LSTP
510	00160001		Holmes Rd	US-61/SR-14 (South Third St) to SR-175 (Weaver Rd)	Widen from 2 to 5 lanes with intersection improvements at US 61	Memphis	0.49	$6,593,132	2025	TN-LSTP
512	01090008		Houston Levee Rd	Wolf River Blvd to the Wolf River	Widen to 6 lanes (divided)	Collierville	0.71	$5,751,509	2025	TN-LSTP
100	01090009 - 01090010	-	Houston Levee Rd	The Wolf River to Walnut Grove Rd	Widen from 2 to 6 lanes (divided)	Shelby Co	1.67	$26,841,394	2025	TN-LSTP
101	01090011 - 01090012	-	Houston Levee Rd	Walnut Grove Rd to Macon Rd	Widen to 4 lanes (divided)	Shelby Co	2.14	$28,816,189	2030	TN-LSTP
137	02500014		I-240	SR-23 (Walnut Grove Rd) to I-40	Widen from 8 to 10 lanes	Memphis	1.59	$18,405,109	2025	TN-HPP
132	02500007		I-240	Airways Blvd to US-78/SR-4 (Lamar Ave)	Widen from 8 to 10 lanes	Memphis	2.05	$31,242,639	2030	TN-IM
133	02500008		I-240	US-78/SR-4 (Lamar Ave) to SR-176 (Getwell Rd)	Widen from 8 to 10 lanes	Memphis	1.07	$15,538,012	2030	TN-IM
127	60010001.2		I-240	SB I-240 to I-55 S	Add lane	Memphis	1.00	$17,506,449	2025	TN-IM
131	60010001.3		I-240	Airways Blvd **Amended 9-12-13**	Reconstruct interchange	Memphis		$58,134,873	2025	TN-IM
125	60010001.4		I-240	NB I-55 ramp to I-55	Widen to 2 lanes	Memphis	1.27	$27,448,608	2030	TN-IM
130	02500005 - 02500006		I-240	I-55 to Airways Blvd	Widen from 6 to 8 lanes	Memphis	2.21	$29,585,251	2030	TN-IM
141	01040011		I-40	SR-204 (Covington Pike) to I-240	Widen from 6 to 8 lanes	Memphis	1.79	$21,494,418	2030	TN-IM

Table 8.6 Highway Projects - 2030 Horizon Year

*Refer to Table 8.3 for updated funding categories under MAP-21.

ID	LRTP No.	TIP No.	Facility	Termini	Type of Improvement	Jurisdiction	Length (Miles)	Estimated Project Cost (inflated)	Completion Date	Funding Source
143	01040020		I-40	Appling Rd to SR-177 (Germantown Pkwy)	Widen from 8 to 10 lanes	Memphis	1.44	$20,856,921	2025	TN-IM
245	60020003		I-40	US-64/SR-15	Reconstruct interchange	Memphis	0.50	$5,002,607	2025	TN-IM
214	60020005	TN-IM-2011-05	I-40	Interchange at SR-196 (Hickory Withe Rd)	Construct new interchange	Fayette Co	0.00	$34,789,564	2025	TN-IM
92	60030004		I-55	Holmes	Construct new interchange	Memphis	0.50	$31,015,369	2025	TN-IM
169	02220006		Macon Rd	Berryhill Rd to Houston Levee Rd	Widen to 4 lanes (divided)	Shelby Co	1.73	$22,522,911	2025	TN-LSTP
175	02010006 - 02010007		Malone Rd	Holmes Rd to SR-175 (Shelby Dr)	Widen from 2 to 5 lanes	Memphis	0.96	$12,881,143	2025	TN-LSTP
178	02160002.1		Mullins Station Rd	Whitten Rd to Raleigh Lagrange Rd	Widen from 2 to 4 lanes (divided)	Memphis	1.13	$15,261,340	2030	TN-LSTP
522	01150005-7	STP-M-2006-01	New Canada Rd	I-40 to US-70/SR-1	Design and Construction of a new four lane divided highway between Interstate 40 (Exit 20) and U.S. Highway 70 (State Route #1).	Lakeland	2.23	$19,914,156	2025	TN-LSTP
187	02870001		New Frontage Rd	South of US-64/SR-15 at Cherry Road to SR-196	New 2 lane road	Fayette Co	2.17	$11,458,537	2025	TN-LSTP
199	00340012-12.1	STP-M-2006-04	Plough Blvd	Plough Blvd. Interchange with Winchester Rd.	Improve 3,000 feet along Plough-Airways Blvd. south from Brooks Rd. and improve 3,000 feet along Winchester east of original at-grade section. The improvements will provide a grade-separated interchange to replace the existing at-grade condition at the Plough-Airways/Winchester Rd. intersection. The final design will maintain the present direct connectors between Plough Blvd. and the airport. the preliminary planning will include coordination with MATA to address future light rail service to the airport	Memphis	0.00	$30,251,794	2025	TN-HPP
			Repaving, Bicycle, and Pedestrian Strategies	Regionwide	Sidewalks, Repaving, and Handicap Ramp Replacement	Tennessee		$35,070,121	2030	TN-LSTP

Table 8.6 Highway Projects - 2030 Horizon Year

*Refer to Table 8.3 for updated funding categories under MAP-21.

ID	LRTP No.	TIP No.	Facility	Termini	Type of Improvement	Jurisdiction	Length (Miles)	Estimated Project Cost (inflated)	Completion Date	Funding Source
226	00180001.1		Shelby Dr	Sewanee Rd to Weaver Rd	Widen from 2 to 5 lanes with grade separation at rail road track	Memphis	1.69	$35,338,539	2025	TN-HPP
225	266001		Shelby Dr Extension	Paul Lowry Rd to Sewanee Rd	New 4 lane road (divided) with grade separation at rail crossing	Memphis	1.90	$43,882,300	2025	TN-HPP
233	00570013		Singleton Pkwy Extension	SR-205 (Navy Rd) to Bethuel Rd	New 4 lane road with bike lanes	Millington	1.38	$19,782,615	2025	TN-HPP
257	01040019		Southern Gateway	West Memphis to Shelby Co/DeSoto Co	Construct new multimodal bridge over Miss. River	Shelby Co	0.00	$3,144,674,038	2025	HPP/NCIIP
7	02020027 - 02020031		SR-14 (Austin Peay)	East of Old Covington Pike to SR-385 **Amended 9-12-13**	Widen from 2 to 4 (divided)	Shelby Co	3.99	$41,016,232	2025	TN-SSTP
8	02020032 - 02020036		SR-14 (Austin Peay)	SR-385 to Tipton Co Line	Widen from 2 to 4 (divided)	Shelby Co	8.65	$77,123,320	2025	TN-SSTP
228	00180024.1		SR-175 (Shelby Dr)	Jasper Park to Shelby Post	Widen from 2 to 6 lanes (divided)	Collierville	0.96	$17,926,405	2030	TN-LSTP
227	00180014		SR-175 (Shelby Dr)	US-78/SR-4 (Lamar Ave) to Mendenhall Rd	Widen from 5 to 6 lane (divided)	Memphis	0.97	$27,533,690	2030	TN-SSTP
520	00070011		SR-175 (Weaver Rd)	Holmes Rd to US-61/SR-14 (South Third St)	Realign Intersection at Third Street and widen Weaver to 3 lanes. Add left turn lanes on US 61	Memphis	0.47	$4,868,244	2025	TN-LSTP
74	00410010.2 - 00410011		SR-176 (Getwell Rd)	State line to SR-175 (Shelby Dr)	Widen from 4 to 7 lanes	Memphis	1.53	$15,840,650	2030	TN-SSTP
56	00790003.2		SR-177 (Germantown Rd)	Callis Creek to Crestridge Rd	Widen from 2 to 4 lanes (divided)	Memphis	0.53	$6,165,794	2025	TN-SSTP
59	00790004.4		SR-177 (Germantown Rd)	Poplar Pike to US-72/SR-57 (Poplar Ave)	Realign Germantown Rd with a 5 lane cross section	Germantown	0.59	$6,227,887	2025	TN-SSTP
509	60100001		SR-177 (Germantown Rd)	Intersection at Wolf River Blvd	Intersection Capacity Improvements	Germantown	0.50	$1,500,782	2025	TN-SSTP
171	02220012.1		SR-193 (Macon Rd)	SR-385 to Fisherville Rd	Widen from 2 to 4 lanes (divided)	Fayette Co	0.96	$14,878,259	2030	TN-LSTP
215	02590010		SR-196 (Hickory Withe Rd)	I-40 to Main Street	Widen from 2 to 4 lanes (divided)	Fayette Co	0.62	$8,384,285	2030	TN-SSTP
1	01190005.1		SR-205 (Airline	Donelson Farm Pkwy to I-	Widen from 2 to 4 lanes (divided)	Arlington	0.95	$10,033,155	2025	TN-HPP

Table 8.6 Highway Projects - 2030 Horizon Year *Refer to Table 8.3 for updated funding categories under MAP-21.

ID	LRTP No.	TIP No.	Facility	Termini	Type of Improvement	Jurisdiction	Length (Miles)	Estimated Project Cost (inflated)	Completion Date	Funding Source
			Rd)	40						
2	01190005.2		SR-205 (Airline Rd)	I-40 to Douglas Rd	Widen from 2 to 5 lanes	Arlington	1.67	$15,012,937	2025	TN-HPP
501	01190004		SR-205 (Airline Rd)	US-64/SR-15 to Donelson Farm Pkwy	Widen from 2 to 5 lanes	Arlington	3.10	$43,904,836	2030	TN-SSTP
25	02170001.1		SR-205 (Collierville Arlington Rd)	SR-57 (Poplar Ave) to Fletcher Rd	Widen from 2 to 5 lanes	Collierville	0.45	$6,816,052	2025	TN-LSTP
183	01760001.1 - 01760001.3		SR-205 (Navy Rd)	US-51/SR-3 to Veterans Parkway	Add raised median with streetscape	Millington	1.05	$3,775,350	2025	TN-ENH
218	00730003		SR-385	Kirby Rd to Winchester Rd	Widen from 6 lanes to 8 lanes	Memphis	1.10	$37,075,325	2030	TN-IM
217	00730001 - 00730002		SR-385	I-240 to Kirby Rd	Widen from 6 lanes to 8 lanes	Memphis	2.51	$39,591,945	2030	TN-IM
106	00250007 - 00250008		US 51/SR-3 (Elvis Presley)	Stateline Rd to SR-175 (Shelby Dr)	Widen from 4 to 6 lanes (divided)	Memphis	2.04	$19,022,929	2030	TN-SSTP
606	60030007.1		US-61/SR-14	Holmes	Intersection Improvements	Memphis	0.50	$2,838,800	2025	TN-NHS
111	00030012 - 00030014		US-61/SR-14	Stateline Rd to SR-175 (Shelby Dr)	Widen from 4 to 7 lanes	Memphis	3.17	$28,396,488	2025	TN-NHS
120	01200035		US-70/US-79/SR-1	SR-385 to Collierville Arlington Rd/Chester Rd	Widen from 4 to 5 lanes	Arlington	1.36	$12,136,990	2025	TN-SSTP
117	01200031.2 - 01200031.5		US-70/US-79/SR-1 (Summer Ave)	US-64/SR-15 (Stage Rd) to SR-177 (Germantown Rd)	Add two way left turn lane (TWLTL)	Bartlett	3.26	$16,904,751	2030	TN-SSTP
201	60010008		US-72/SR-57 (Poplar Ave)	I-240 Interchange	Add one through lane per direction	Memphis	0.30	$6,185,613	2030	TN-HPP
200	60010008.1		US-72/SR-57 (Poplar Ave)	I-240 off ramp to Yates	Add WB lane	Memphis	0.31	$1,664,734	2025	TN-LSTP
165	00820026		US-78/SR-4 (Lamar Ave)	Raines Rd to SR-176 (Getwell Rd)	Widen from 4 to 6 lanes (divided)	Memphis	1.62	$48,694,863	2030	TN-HPP
607	00820027		US-78/SR-4 (Lamar Ave)	SR-175 (Shelby Dr) to Raines Rd	Widen from 4 to 6 lanes (divided)	Memphis	1.67	$43,244,940	2025	TN-NHS
258	60030008.3		US-78/SR-4 (Lamar Ave)	Interchange at Winchester Rd	Construct new interchange	Memphis	1.00	$94,165,686	2030	TN-NHS
250	00900016-00900020	-	Walnut Grove Rd	Houston Levee to SR-385	Construct 4 lane road on new alignment	Shelby Co	5.06	$83,989,837	2030	TN-HPP

Table 8.6 Highway Projects - 2030 Horizon Year *Refer to Table 8.3 for updated funding categories under MAP-21.

ID	LRTP No.	TIP No.	Facility	Termini	Type of Improvement	Jurisdiction	Length (Miles)	Estimated Project Cost (inflated)	Completion Date	Funding Source
248	0090013-14	STP-M-2000-16	Walnut Grove Rd East	Walnut Bend Rd to Rocky Point Rd	Widen existing four and two lane roadway to six lanes with a median, eliminate sharp curves and realign Rocky Point Road intersection to improve safety. This project will provide wide outside lanes for bikes.	Memphis	2.39	$18,477,405	2025	TN-HPP
254	60080001		Winchester Rd	SR-176 (Getwell Rd) to SR-385	Reconstruct Interchange (add turn lanes)	Memphis	0.25	$4,456,278	2030	TN-LSTP
703	90000015		State Congestion Mitigation and Air Quality Improvement	Regionwide	CMAQ projects including traffic signal improvements, signal systems, and ITS projects.	Regionwide		$24,650,392	2030	TN-CMAQ (State)
706	70000003		Regionwide Bridge Replacement and Rehabilitation	Regionwide	Replacement, rehabilitation, systematic preventative maintenance of bridges	Regionwide		$62,396,305	2030	TN-BRR-S
709	30000007		Regionwide Highway Safety Improvement Program	Regionwide	Highway safety projects to reduce fatalities and severe injuries	Regionwide		$34,664,614	2030	TN-HSIP
712	70000004		Regionwide Bridge Replacement and Rehabilitation - Bridge Bond Program	Regionwide	Replacement, rehabilitation, systematic preventative maintenance of bridges using advanced procedures	Regionwide		$7,703,248	2030	TN-BRBD
721	70000005		Local Bridge Replacement and Rehabilitation	Regionwide	Local replacement, rehabilitation, systematic preventative maintenance of bridges using advanced procedures	Regionwide		$7,857,313	2030	TN-BRR-L
724	90000016		Local Congestion Mitigation and Air Quality Improvement	Regionwide	Local CMAQ projects including traffic signal improvements, and signal systems.	Regionwide		$130,724,112	2030	TN-CMAQ (Local)

Table 8.6 Highway Projects - 2030 Horizon Year

*Refer to Table 8.3 for updated funding categories under MAP-21.

ID	LRTP No.	TIP No.	Facility	Termini	Type of Improvement	Jurisdiction	Length (Miles)	Estimated Project Cost (inflated)	Completion Date	Funding Source
					State of Tennessee Total*			$4,610,094,958		
State of Mississippi										
28	02810012 - 02810013		Commerce St Extension	Commerce St to MS-747 (Getwell Rd)	New 4 lane road (divided)	DeSoto Co	1.52	$25,222,419	2030	MS-LSTP
43	01010001 - 01010002		Forest Hill-Irene Rd	MS-302 (Goodman Rd) to Stateline Rd	New 2 lane road	DeSoto Co	2.23	$19,993,826	2025	MS-SFP
83	00990001.2		Hacks Cross Rd	College Rd to US-78	Widen from 2 to 4 lanes (divided)	Olive Branch	0.66	$8,902,874	2030	MS-SSTP
981	01430004		Horn Lake Rd	DeSoto Rd to Stateline Rd	Widen from 2 to 4 lanes (divided)	Southaven	1.00	$11,690,328	2025	MS-SSTP
150	01330006		I-55	Commerce St to I-69/I-269	Widen from 4 to 6 lanes	Hernando	2.57	$25,940,752	2025	MS-IM
153	01330010.1		I-55/I-69	Stateline Rd to State Line	Widen from 8 to 10 lanes	Southaven	0.30	$2,826,287	2030	MS-IM
173	02010004 - 02010005		Malone Rd	MS-302 (Goodman Rd) to Stateline Rd	Widen from 2 to 5 lanes	Olive Branch	2.03	$27,191,265	2025	MS-SFP
82	00100028		MS-302 (Goodman Rd)	Hacks Cross Rd to Center Hill Rd	Widen from 4 to 6 lanes (divided)	Olive Branch	3.05	$28,486,642	2030	MS-NHS
79	00100016 - 00100018		MS-302 (Goodman Rd)	Pleasant Hill Rd to US-78	Add raised median	Olive Branch	2.61	$20,313,704	2030	MS-NHS
54	00810006		MS-305 (Germantown Ext)	MS-302 (Goodman Rd) to Stateline Rd	Widen from 5 to 6 lane (divided)	Olive Branch	1.48	$9,912,581	2025	MS-SSTP
53	00810005		MS-305 (Germantown Ext.)	US-78 to MS-302 (Goodman Rd)	Widen from 5 to 7 lanes	Olive Branch	1.61	$14,405,047	2025	MS-SSTP
73	00410010.2	MS-LSTP-2002-02	MS-747 (Getwell Rd)	Stateline Rd to State Line	Widen from 5 to 7 lanes	Southaven	0.46	$4,142,850	2025	MS-LSTP
182	00080017 - 00080018		Nail Rd	Pleasant Hill Rd to MS-305 (Germantown Extension)	New 2 lane road	Olive Branch	3.96	$41,782,638	2025	MS-SFP
241	00140019 - 00140021		Stateline Rd	Kirby Rd to Hacks Cross Rd	Widen from 2 to 5 lanes	Olive Branch	3.01	$40,443,637	2025	MS-SSTP
244	00130001 - 00130005		Tulane Rd	I-69 to Church Rd	Widen from 2 to 4 lanes (divided)	DeSoto Co	4.55	$63,041,902	2030	MS-SSTP
122	00820036		US 78/ I-22	I-269 to Hacks Cross Rd	Widen from 4 to 6 lanes (divided)	DeSoto Co	2.66	$66,157,875	2030	MS-IM
123	00820034 - 00820035		US 78/ I-22	Hacks Cross Rd to Goodman Rd	Widen from 4 to 6 lanes (divided)	Olive Branch	3.96	$84,865,486	2025	MS-IM

Table 8.6 Highway Projects - 2030 Horizon Year

*Refer to Table 8.3 for updated funding categories under MAP-21.

ID	LRTP No.	TIP No.	Facility	Termini	Type of Improvement	Jurisdiction	Length (Miles)	Estimated Project Cost (inflated)	Completion Date	Funding Source
104	00250001.2 - 00250001.3		US-51	I-69 to Star Landing Rd	Widen from 2 to 4 lanes (divided)	Hernando	2.86	$38,554,426	2030	MS-SSTP
168	6003008		US-78/ I-22 (Lamar Ave)	Interchange at Stateline Rd	Construct new interchange and connecting roadways	Olive Branch	1.00	$49,825,462	2025	MS-IM
715	30000007		Regionwide Highway Safety Improvement Program	Regionwide	Highway safety projects to reduce fatalities and severe injuries	Regionwide		$57,774,357	2030	MS-HHSTP
718	30000008		Regionwide Safe Routes to School Program	Regionwide	Sidewalk and crossing improvements, bike facilities and other items that encourage walking and biking to school	Regionwide		$1,540,650	2030	MS-SRTS
						State of Mississippi Total*		**$583,700,000**		
						Total All 2030 Projects		**$5,193,794,958**		

* - The Tennessee and Mississippi total project costs have been adjusted to reflect the division of state matching funds for the Southern Gateway project.

Table 8.7 Highway Projects - 2040 Horizon Year

*Refer to Table 8.3 for updated funding categories under MAP-21.

ID	LRTP No.	TIP No.	Facility	Termini	Type of Improvement	Jurisdiction	Length (Miles)	Estimated Project Cost (inflated)	Completion Date	Funding Source
State of Tennessee										
503	02360003		Beverle Rivera Dr	Seed Tick Rd to Chambers Chapel Rd	New 4 lane (divided)	Lakeland	1.36	$33,830,243	2040	TN-LSTP
16	01150008		Canada Rd Extension	US-70/US-79/SR-1 (Summer Ave) to Old Brownsville Rd	Widen from 2 to 4 lanes (divided)	Lakeland	0.73	$15,318,695	2040	TN-LSTP
159	00770010 - 00770011		Crumpler Rd	Stateline Rd to SR-175 (Shelby Dr)	Widen from 2 to 4 lanes (divided)	Memphis	1.80	$32,560,513	2040	TN-LSTP
507	01400002.1		Egypt Central Rd	Raleigh-Millington Rd to Coleman Rd	Widen from 2 to 5 lanes	Memphis	0.64	$13,452,880	2040	TN-LSTP
46	01010007		Forest Hill-Irene Rd	Winchester Rd to Poplar Pike	Widen from 2 to 6 lane (divided)	Germantown	1.06	$26,506,453	2040	TN-LSTP
508	02590011.1		Forrest St	Milton Wilson Rd to SR-196	Widen from 2 to 4 lanes	Arlington	1.61	$25,208,394	2035	TN-LSTP
59	00790004.4		Germantown Rd	Poplar Pike to Poplar Ave	Widen from 5 to 7 lanes	Germantown	0.59	$8,215,923	2040	TN-SSTP
102	01090013 - 01090014	-	Houston Levee Rd	Macon Rd to US-64/SR-15	Widen to 4 lanes (divided)	Shelby Co	3.51	$54,959,749	2035	TN-LSTP
135	02500012		I-240	SR-385 to US-72/SR-57 (Poplar Ave)	Widen from 8 to 10 lanes	Memphis	1.72	$46,604,902	2035	TN-IM
136	02500013		I-240	US-72/SR 57 (Poplar Ave) to Walnut Grove Rd	Widen from 8 to 10 lanes	Memphis	1.68	$54,490,734	2035	TN-IM
134	02500009 - 02500011		I-240	SR-176 (Getwell Rd) to SR-385	Widen from 8 to 10 lanes	Memphis	2.79	$69,387,205	2035	TN-IM
128	0250001-4	NHS-2002-01	I-240 Midtown	I-55 to I-40	Widen from 6 to 8 lanes	Memphis	5.46	$225,146,583	2035	TN-HPP
139	01040004 - 01040005		I-40	SR-14 (Jackson Ave) to Chelsea Ave	Widen from 6 to 8 lanes	Memphis	0.90	$21,605,113	2040	TN-HPP
140	01040005		I-40	Chelsea Ave to SR-300	Widen from 6 to 8 lanes	Memphis	1.35	$30,059,277	2040	TN-IM
19	60020008		I-40	Interchange at Chambers Chapel Rd.	Construct new interchange	Lakeland	0.50	$40,061,614	2040	TN-IM
142	01040013 - 01040014		I-40	Sycamore View Rd to Appling Rd	Widen from 8 to 10 lanes	Memphis	3.32	$56,855,117	2040	TN-IM
154	01330011 - 01330012		I-55	State line to SR-175 (Shelby Dr)	Widen from 8 to 10 lanes	Memphis	1.84	$31,228,081	2035	TN-IM

Table 8.7 Highway Projects - 2040 Horizon Year

*Refer to Table 8.3 for updated funding categories under MAP-21.

ID	LRTP No.	TIP No.	Facility	Termini	Type of Improvement	Jurisdiction	Length (Miles)	Estimated Project Cost (inflated)	Completion Date	Funding Source
155	01330013 - 01330014		I-55	SR-175 (Shelby Dr) to Winchester Rd	Widen from 8 to 10 lanes	Memphis	2.89	$44,069,410	2035	TN-IM
513	02880005		Inglewood Rd	US-64/SR-15 to Donelson Farm Pkwy	Widen from 2 to 4 lanes (divided)	Arlington	2.18	$31,728,241	2035	TN-LSTP
174	02010006		Malone Rd	Stateline Rd to Holmes Rd	Widen from 2 to 5 lanes	Memphis	1.00	$18,066,365	2035	TN-LSTP
198	01990010		Pleasant Hill Rd	Holmes Rd to SR-175 (Shelby Dr)	Widen from 5 to 7 lanes	Memphis	1.06	$14,752,216	2040	TN-HPP
13	01270005	STP-M-2011-06	SR-175 (Byhalia Rd)	Shelby Dr to SR-385	Widen from 4 to 6 lanes (divided)	Collierville	0.62	$6,566,702	2040	TN-SSTP
61	00790011.1		SR-177 (Germantown Pkwy)	Wolf River to Walnut Bend	Widen from 7 to 8 lanes (divided)	Memphis	0.61	$6,416,457	2040	TN-SSTP
62	00790012.1		SR-177 (Germantown Pkwy)	Walnut Bend to Trinity Rd	Widen from 6 to 8 lanes (divided)	Memphis	1.45	$15,284,910	2040	TN-SSTP
63	00790013.1		SR-177 (Germantown Pkwy)	Trinity Rd to Cordova Rd	Widen from 6 to 8 lanes (divided)	Memphis	1.09	$11,556,835	2040	TN-SSTP
64	00790014.1		SR-177 (Germantown Pkwy)	Cordova Rd to Dexter Rd	Widen from 6 to 8 lanes (divided)	Memphis	1.06	$11,242,322	2040	TN-SSTP
65	00790015.1		SR-177 (Germantown Pkwy)	Dexter Rd to Bellevue Pkwy	Widen from 6 to 8 lanes (divided)	Memphis	0.77	$9,389,301	2040	TN-SSTP
66	00790016.1		SR-177 (Germantown Pkwy)	Bellevue Pkwy to I-40	Widen from 6 to 8 lanes (divided), construct new NB lane	Memphis	0.76	$8,071,154	2040	TN-SSTP
605	60100001		SR-177 (Germantown Rd)	Intersection at Wolf River Blvd	Construct Interchange	Germantown	0.50	$56,563,243	2040	TN-SSTP
31	00570007		SR-204 (Covington Pike)	SR-15 (Stage Rd) to SR-14 (Austin Peay)	Widen from 4 to 6 lanes	Memphis	2.02	$24,404,800	2035	TN-SSTP
600	01760010		SR-205 (Navy Rd)	Armor to SR-14	New 4 lane road	Millington	1.66	$37,035,510	2040	TN-SSTP
612	60040002		SR-385	Interchange at Raleigh Lagrange	New Interchange	Collierville	0.50	$58,816,487	2040	TN-HPP
251	60040004		SR-385	Walnut Grove Rd	Construct new interchange	Shelby Co	0.50	$50,735,619	2035	TN-IM

Table 8.7 Highway Projects - 2040 Horizon Year

*Refer to Table 8.3 for updated funding categories under MAP-21.

ID	LRTP No.	TIP No.	Facility	Termini	Type of Improvement	Jurisdiction	Length (Miles)	Estimated Project Cost (inflated)	Completion Date	Funding Source
219	00730004 - 00730005		SR-385	Winchester Rd to Forest Hill-Irene Rd	Widen from 4 lanes to 6 lanes	Shelby Co	3.71	$65,519,426	2040	TN-IM
603	01120040		SR-57 (Poplar Ave)	SR-196 to SR-194	Widen from 2 to 5 lanes	Piperton	4.53	$101,489,887	2040	TN-SSTP
243	00370008.2		Tchulahoma Rd	SR-175 (Shelby Dr) to Christine Rd	Widen from 2 to 5 lanes	Memphis	1.59	$28,608,211	2035	TN-LSTP
112	01320022 - 01320023		US-64/SR-15	Berryhill Rd to Canada Rd	Widen from 5 to 7 lanes	Lakeland	1.23	$15,439,914	2040	TN-SSTP
119	01200034		US-70/US-79/SR-1	Canada Rd to SR-385	Construct a raised median (4 lanes divided)	Lakeland	4.20	$29,311,645	2040	TN-SSTP
121	01200036		US-70/US-79/SR-1	Collierville Arlington Rd/Chester Rd to Milton Wilson Rd	Widen from 2 to 5 lanes	Arlington	0.95	$22,141,757	2040	TN-SSTP
118	01200032 - 01200033		US-70/US-79/SR-1 (Summer Ave)	SR-177 (Germantown Rd) to Canada Rd	Widen to 6 lanes (divided)	Shelby Co	2.80	$31,262,233	2040	TN-HPP
116	01200030 - 01200031.1		US-70/US-79/SR-1 (Summer Ave)	Elmore to Stage Rd	Add two way left turn lane (TWLTL)	Bartlett	1.36	$10,592,617	2040	TN-SSTP
203	01120039.1 - 01120039.2		US-72/SR-57 (Poplar Ave)	Dogwood Rd to Brachton Ave	Widen from 5 to 7 lanes	Germantown	1.61	$22,413,544	2040	TN-HPP
161	00820012.3		US-78/SR-4 (Lamar Ave)	Melrose St Willet St	Widen from 2 to 5 lanes	Memphis	0.23	$47,396,586	2040	TN-HPP
162	00820013		US-78/SR-4 (Lamar Ave)	McLean Blvd to S Parkway	Widen from 5 to 7 lanes	Memphis	0.72	$37,134,806	2040	TN-HPP
166	60030008.2		US-78/SR-4 (Lamar Ave)	Interchange at SR-175 (Shelby Dr)	Construct new interchange	Memphis		$215,476,175	2035	TN-NHS
164	00820019 - 00820021		US-78/SR-4 (Lamar Ave)	Semmes St to American Way	Widen from 5 to 7 lanes (excluding bridge)	Memphis	0.91	$19,844,091	2040	TN-NHS
249	00900015		Walnut Grove Rd	Rocky Point Rd to Houston Levee Rd	Widen 2 to 6 lanes (divided)	Shelby Co	0.98	$29,808,444	2040	TN-HPP
252	01860003 - 01860004		West Union Rd	Veterans Parkway to Quito Rd	Widen from 2 to 5 lanes	Millington	1.90	$40,974,315	2035	TN-LSTP
523	01590001.1		Wilkinsville Rd	Wilkinsville at US-51/SR-3 to Veterans Pkwy	New 5 lane road	Millington	0.77	$17,193,489	2040	TN-TCSP

Table 8.7 Highway Projects - 2040 Horizon Year

*Refer to Table 8.3 for updated funding categories under MAP-21.

ID	LRTP No.	TIP No.	Facility	Termini	Type of Improvement	Jurisdiction	Length (Miles)	Estimated Project Cost (inflated)	Completion Date	Funding Source
255	00340030		Winchester Rd	Byhalia Rd to US-72/SR-86	New 4 lane Rd (divided)	Collierville	1.04	$19,959,683	2035	TN-LSTP
256	02280009.1		Wolf River Blvd	Almadale Farms Pkwy to Stillwind Dr	Widen from 2 to 4 lanes (divided)	Collierville	2.09	$39,907,693	2040	TN-LSTP
704	90000015		State Congestion Mitigation and Air Quality Improvement	Regionwide	CMAQ projects including traffic signal improvements, signal systems, and ITS projects.	Regionwide		$33,128,066	2040	TN-CMAQ (State)
707	70000003		Regionwide Bridge Replacement and Rehabilitation	Regionwide	Replacement, rehabilitation, systematic preventative maintenance of bridges	Regionwide		$83,855,417	2040	TN-BRR-S
710	30000007		Regionwide Highway Safety Improvement Program	Regionwide	Highway safety projects to reduce fatalities and severe injuries	Regionwide		$46,586,343	2040	TN-HSIP
713	70000004		Regionwide Bridge Replacement and Rehabilitation - Bridge Bond Program	Regionwide	Replacement, rehabilitation, systematic preventative maintenance of bridges using advanced procedures	Regionwide		$10,352,521	2040	TN-BRBD
722	70000005		Local Bridge Replacement and Rehabilitation	Regionwide	Local replacement, rehabilitation, systematic preventative maintenance of bridges using advanced procedures	Regionwide		$10,559,571	2040	TN-BRR-L
725	90000016		Local Congestion Mitigation and Air Quality Improvement	Regionwide	Local CMAQ projects including traffic signal improvements, and signal systems.	Regionwide		$175,682,275	2040	TN-CMAQ (Local)
						State of Tennessee Total		**$1,984,665,563**		

Table 8.7 Highway Projects - 2040 Horizon Year

*Refer to Table 8.3 for updated funding categories under MAP-21.

ID	LRTP No.	TIP No.	Facility	Termini	Type of Improvement	Jurisdiction	Length (Miles)	Estimated Project Cost (inflated)	Completion Date	Funding Source
State of Mississippi										
24	02820003		College Rd Extension	College Rd to Pleasant Hill Rd	New 2 lane road	DeSoto Co	0.86	$11,950,193	2040	MS-LSTP
35	02830001		Davidson Rd Extension	Church Rd to Davidson Rd	New 2 lane road	Olive Branch	2.00	$24,104,433	2035	MS-LSTP
149	01330005		I-55	Study Area boundary to Commerce St	Widen from 4 to 6 lanes	Hernando	3.31	$50,181,100	2035	MS-IM
180	60030006		I-55/I-69	Interchange at Nail Road	Construct new interchange	Southaven		$44,721,470	2035	MS-IM
172	02010002		Malone Rd	Church Rd to Nail Rd	New 2 lane road	Olive Branch	0.99	$11,907,558	2035	MS-SSTP
177	00070004 - 00070005		MS-301	Star Landing Rd to Church Rd	Widen from 2 to 5 lanes	DeSoto Co	2.06	$48,966,960	2040	MS-SSTP
77	00100009		MS-302 (Goodman Rd)	US-51 to Airways Blvd	Widen from 5 to 6 lanes (divided)	Southaven	8.50	$45,740,409	2035	MS-NHS
81	00100022 - 00100027		MS-302 (Goodman Rd)	MS-305 (Germantown Rd) to Hacks Cross Rd	Widen from 4 to 6 lanes (divided)	Olive Branch	2.01	$21,782,152	2035	MS-NHS
51	00810001.1 - 00810003		MS-305 (Germantown Ext)	I-269 to Church Rd	Widen from 2 to 5 lanes	DeSoto Co	4.92	$102,907,404	2040	MS-SSTP
52	00810004 - 00810005		MS-305 (Germantown Ext)	Church Rd to US-78	Widen from 5 to 7 lanes	Olive Branch	0.86	$10,344,335	2035	MS-SSTP
179	00080005 - 00080006		Nail Rd	MS-301 to Tulane Rd	Widen from 2 to 5 lanes	Southaven	2.98	$53,799,291	2035	MS-SFP
619	00250003		US-51	Star Landing Rd to Church Rd	Widen from 2 and 3 lanes to 5 lanes	Horn Lake	2.20	$26,462,253	2035	MS-SSTP
103	00250001.1 - 00250001.2		US-51	Commerce St to I-69	Widen from 2 to 5 lanes	Hernando	2.72	$54,865,724	2035	MS-SSTP

Table 8.7 Highway Projects - 2040 Horizon Year

*Refer to Table 8.3 for updated funding categories under MAP-21.

ID	LRTP No.	TIP No.	Facility	Termini	Type of Improvement	Jurisdiction	Length (Miles)	Estimated Project Cost (inflated)	Completion Date	Funding Source
716	30000007		Regionwide Highway Safety Improvement Program	Regionwide	Highway safety projects to reduce fatalities and severe injuries	Regionwide		$77,643,905	2040	MS-HHSTP
719	30000008		Regionwide Safe Routes to School Program	Regionwide	Sidewalk and crossing improvements, bike facilities and other items that encourage walking and biking to school	Regionwide		$2,070,504	2040	MS-SRTS
							State of Mississippi Total	**$507,733,285**		
							Total All 2040 Projects	**$2,492,938,847**		
							Total All Horizon Years	**$8,674,686,072**		

Table 8.8 Highway Projects – Vision Projects

*Refer to Table 8.3 for updated funding categories under MAP-21.

ID	LRTP No.	TIP No.	Facility	Termini	Type of Improvement	Jurisdiction	Length (Miles)	Estimated Project Cost (inflated)	Completion Date	Funding Source
State of Tennessee										
5	00890011.1		Appling Rd Extension	Memphis Arlington Rd to Jon Stone Ln	New 4 lane road	Bartlett	0.96	$24,739,960	2041	TN-LSTP
10	02550002 - 02550009		Billy Maher	Sycamore View to Old Brownsville Rd	Widen from 2 to 4 (divided)	Bartlett	3.75	$80,751,865	2041	TN-LSTP
11	01230003		Bray Station Rd	Shelton Rd to Wolf River Blvd	New 4 lane road (undivided)	Collierville	0.41	$8,854,103	2041	TN-LSTP
12	01270003-01270004		Byhalia Rd	Stateline Rd to SR-175 (Shelby Dr)	Widen from 2 to 5 lanes	Collierville	1.68	$36,114,130	2041	TN-LSTP
15	01230003		Byhalia Rd Extension	Wolf River Blvd to Walnut Grove	New 4 lane road (divided)	Collierville	3.12	$84,673,323	2041	TN-LSTP
504	01150004.1		Canada Rd	North of Kingsridge Dr to I-40	Widen from 4 to 6 lanes (divided)	Lakeland	0.59	$7,647,986	2041	TN-LSTP
17	01150009		Canada Rd Extension	Old Brownsville Rd to Brunswick Rd	New 4 lane road (divided)	Lakeland	1.21	$43,996,516	2041	TN-LSTP
21	01210007		Chambers Chapel Rd	I-40 to US-70/US-79/SR-1	Widen from 2 to 4 lanes (undivided)	Lakeland	2.14	$39,948,460	2041	TN-LSTP
20	01210004 - 01210006		Chambers Chapel Rd	US-64/SR-15 to I-40	Widen from 2 to 4 lanes (divided)	Lakeland	2.65	$49,436,087	2041	TN-LSTP
26	00180024.1		Collierville Rd	Park Ridge Pkwy to 2,500 ft east of Byhalia Rd	Widen from 2 to 4 lanes (undivided)	Collierville	1.64	$30,595,209	2041	TN-LSTP
29	00570003 - 00570006		Covington Pike	Macon Rd to I-40	Widen from 4 to 6 lanes	Memphis	0.56	$7,273,421	2041	TN-LSTP
34	02890001		Crooked Creek Rd	1,000 feet east of Houston Levee Rd to Bailey Station Rd	New 4 lane road (undivided)	Collierville	0.53	$12,286,394	2041	TN-LSTP
505	02900002		Davies Plantation Rd	Davies Manor Dr to Canada Rd	Widen from 2 to 4 lanes (divided)	Lakeland	0.86	$16,079,105	2041	TN-LSTP
38	02180004.2		Dexter Rd	Dewberry Lane to Forest Hill-Irene Rd Ext.	Widen to 4 lanes divided from Dewberry Lane to east of Milbrey Street and Construct 4 lane divided roadway to Forest Hill-Irene Ext.	Memphis	0.71	$14,838,170	2041	TN-LSTP
505	002180005		Dexter Rd	Forest Hill-Irene Rd Ext. to Houston Levee Rd	Widen from 2 to 4 lane (divided)	Memphis	0.86	$16,079,105	2041	TN-LSTP
39	02420001.1		Donelson Pkwy	Chambers Chapel Rd to SR-385	Widen and construct new 4 lane road (divided)	Arlington	1.70	$38,333,287	2041	TN-LSTP

Table 8.8 Highway Projects – Vision Projects

*Refer to Table 8.3 for updated funding categories under MAP-21.

ID	LRTP No.	TIP No.	Facility	Termini	Type of Improvement	Jurisdiction	Length (Miles)	Estimated Project Cost (inflated)	Completion Date	Funding Source
506	02420001.3		Donelson Pkwy	SR-205 (Airline Rd) to Collierville-Arlington Rd	New 4 lane road (divided)	Arlington	0.42	$7,899,873	2041	TN-LSTP
41	01430016		Florida St	McLemore Ave to US-61/SR-1 (Crump Blvd)	Widen from 2 to 5 lanes	Memphis	0.58	$13,989,207	2041	TN-LSTP
44	01010003.1		Forest Hill-Irene Rd	State Line to Holmes Rd	Reconstruct 2 lane road	Shelby Co	0.80	$10,326,250	2041	TN-LSTP
45	01010004		Forest Hill-Irene Rd	Holmes Rd to SR-175 (Shelby Dr)	Widen to 5 lane roadway	Shelby Co	1.01	$21,739,474	2041	TN-LSTP
47	01010011.1		Forest Hill-Irene Rd Extension	Wolf River Blvd to Forest Hill-Irene Rd	New 4 lane road (divided)	Germantown	0.90	$34,010,061	2041	TN-LSTP
50	01160001		Frank Rd	Houston Levee Rd to Bray Station Rd	Widen from 2 to 4 lanes (undivided)	Collierville	1.43	$26,754,895	2041	TN-LSTP
67	00790022		Germantown Rd Extension	US-70/US-79/SR-1 to Old Brownsville Rd	Widen from 2 to 4 lanes (divided)	Bartlett	1.68	$52,641,142	2041	TN-LSTP
68	00790022.1		Germantown Rd Extension	Old Brownsville Rd to SR-385	New 4 lane road (divided)	Shelby Co	3.19	$105,305,592	2041	TN-LSTP
69	00790022.2		Germantown Rd Extension	SR-385 to SR-14 (Austin Peay)	Widen from 2 to 4 lanes (divided)	Shelby Co	2.35	$43,940,831	2041	TN-LSTP
88	00990012		Hacks Cross Rd Extension	Poplar Pike to US-72/SR-57 (Poplar Ave)	New 4 lane road (divided)	Germantown	0.68	$17,490,689	2041	TN-LSTP
90	02910011		Highland St	US-72/SR-57 (Poplar Ave) to SR-23 (Walnut Grove Rd)	Widen from 4 to 6 lanes (divided)	Memphis	0.29	$4,140,659	2041	TN-LSTP
95	00160017.1		Holmes Rd	Kirby Parkway to Riverdale Rd	Widen from 2 to 4 lanes (divided)	Shelby Co	1.00	$18,582,735	2041	TN-LSTP
96	00160018		Holmes Rd	Riverdale Rd to Hacks Cross Rd	Widen to 4 lanes (divided)	Shelby Co	2.01	$37,547,380	2041	TN-LSTP
614	00160022.2		Holmes Rd	Reynolds to Byhalia	Widen from 2 to 4 lanes (divided)	Collierville	2.50	$50,682,833	2041	TN-LSTP
615	00160024.1		Holmes Rd	Byhalia to US 72	New 4 lane road	Collierville	3.10	$71,237,581	2041	TN-LSTP
97	00160019 - 00160022.1		Holmes Rd	Hacks Cross Rd to Reynolds	Widen to 4 lanes	Shelby Co	3.55	$66,197,678	2041	TN-LSTP
98	01430006		Horn Lake Rd	Stateline Rd to Holmes Rd	Widen from 2 to 4 lanes (divided)	Memphis	1.20	$22,440,730	2041	TN-LSTP
99	01090001.1		Houston Levee Rd	Center Hill to SR-175 (Shelby Dr)	New 4 lane road (divided)	Shelby Co	4.64	$133,283,215	2041	TN-LSTP
511	01090006.1		Houston Levee Rd	US-72/SR-57 (Poplar Ave) to 750 feet north of Poplar Ave	Widen from 2 to 3 lanes northbound	Collierville	0.34	$2,959,300	2041	TN-LSTP

Table 8.8 Highway Projects – Vision Projects

*Refer to Table 8.3 for updated funding categories under MAP-21.

ID	LRTP No.	TIP No.	Facility	Termini	Type of Improvement	Jurisdiction	Length (Miles)	Estimated Project Cost (inflated)	Completion Date	Funding Source
170	02220007		Macon Rd	Houston Levee to SR-385	Widen to 4 lanes (divided)	Shelby Co	5.18	$96,669,121	2041	TN-LSTP
608	02920001		Market Blvd	Winchester to US-72/SR-57 (Poplar)	New 4 lane road	Collierville	0.57	$14,166,518	2041	TN-LSTP
515	02920003 - 02920004		Market Blvd	Green Oaks Ln to Fox Run Dr	Widen from 2 to 5 lanes	Collierville	0.51	$10,886,058	2041	TN-LSTP
176	02930003		McVay Rd	Messick Rd to Riverdale Rd	Geometric Improvement	Germantown	0.31	$3,447,718	2041	TN-LSTP
185	02940001		New E-W Rd	Canada Rd to Chambers Chapel Rd	New 4 lane road (divided)	Lakeland	2.15	$49,389,300	2041	TN-LSTP
610	02540002-5	STP-M-2000-09	North Second Street	South of Wolf River Bridge to US-51	Improve North Second Street corridor to a parkway design including right-of-way acquisition, reconstruction of sidewalks, provisions for bicycles, landscaping, and utility relocation. From the Wolf River bridge to Harvester Lane, North Second Street will be constructed on new alignment as a 4 lane divided roadway. From Harvester Lane to US 51, North Second Street / Whitney Avenue will be widened from 2 to 4 lanes. Bicycle lanes will be provided along the improved North Second Street corridor. **Amended 5-24-12**	Memphis	2.70	$116,793,141	2041	TN-LSTP
191	01460009 - 01460010		Old Brownsville Rd	Kirby Whitten to Germantown	Widen from 2 to 5 lanes	Bartlett	2.48	$55,533,983	2041	TN-LSTP
192	00680013		Park Ave	Getwell Rd to Goodlett St	Widen from 5 to 7 lanes	Memphis	0.25	$4,032,103	2041	TN-LSTP
193	00550008.2		Perkins Rd	Chip Rd to Park Ave	Widen from 2 to 5 lanes	Memphis	0.26	$7,846,279	2041	TN-LSTP
197	01990009		Pleasant Hill Rd	Stateline Rd to Holmes Rd	Widen from 2 to 5 lanes	Memphis	1.00	$21,437,537	2041	TN-LSTP
210	00680017.1		Poplar Pike	West St/Germantown Rd to US-72/SR-57 (Poplar Ave)	Widen from 2 to 5 lanes	Germantown	4.26	$102,581,433	2041	TN-LSTP
611	01310001		Progress Road	Shelby Dr to US-72/SR-86	New 4 lane road	Collierville	0.41	$9,421,745	2041	TN-LSTP
211	60090001		Raines Rd	Interchange at SR-176 (Getwell Rd)	Construct new interchange	Memphis	0.00	$66,749,718	2041	TN-LSTP
230	00180025.1		Shelby Dr	SR-175 (Byhalia Rd) to Sycamore Rd	Widen from 2 to 6 lanes (divided)	Collierville	0.25	$8,599,078	2041	TN-LSTP
231	02280011		Shelton Rd	Peterson Lake to Collierville Arlington Rd	Widen from 2 to 4 lanes (divided)	Collierville	0.79	$18,262,029	2041	TN-LSTP
14	01270006 - 01270007		SR-175 (Byhalia Rd)	SR-385 to US-72/SR-57 (Poplar Ave)	Widen from 5 to 7 lanes	Collierville	0.87	$15,258,824	2041	TN-LSTP

Table 8.8 Highway Projects – Vision Projects

*Refer to Table 8.3 for updated funding categories under MAP-21.

ID	LRTP No.	TIP No.	Facility	Termini	Type of Improvement	Jurisdiction	Length (Miles)	Estimated Project Cost (inflated)	Completion Date	Funding Source
75	00410017 - 00410021		SR-176 (Getwell Rd)	American Way to Park Ave	Widen from 5 to 7 lanes	Memphis	2.11	$43,250,265	2041	TN-LSTP
58	00790004.3		SR-177 (Germantown Rd)	Stout Rd to Poplar Pike	Widen from 5 to 7 lanes	Germantown	0.52	$8,365,244	2041	TN-SSTP
213	2590010		SR-196 (Hickory Withe Rd)	US-64/SR-15 to I-40	Widen from 2 to 4 lanes (divided)	Fayette Co	5.14	$99,151,722	2041	TN-SSTP
30	00570003 - 00570006		SR-204 (Covington Pike)	I-40 to SR-14 (Stage Rd)	Widen from 4 to 6 lanes	Memphis	2.72	$43,001,723	2041	TN-LSTP
232	00570008 - 00570011		SR-204 (Singleton Pkwy)	SR-14 (Austin Peay) to SR-385 (Paul Barrett)	Widen from 4 to 6 lanes	Shelby Co	6.11	$109,735,693	2041	TN-LSTP
3	01870023		SR-277 (Airways Blvd)	US-78/SR-4 (Lamar Ave) to S Parkway	Widen from 5 to 6 lanes	Memphis	0.64	$15,014,111	2041	TN-LSTP
4	01870023.1		SR-277 (Airways Blvd)	S Parkway to Young Ave	Widen from 5 to 6 lanes	Memphis	0.34	$6,586,376	2041	TN-LSTP
221	00730019		SR-385	SR-175 (Byhalia Rd) to SR-57 (Poplar Ave)	Widen from 4 lanes to 6 lanes	Collierville	4.36	$76,351,697	2041	TN-IM
222	00730020		SR-385	SR-57 (Poplar Ave) to Raleigh Lagrange Rd	Widen from 4 to 6 lanes	Collierville	4.49	$90,842,170	2041	TN-IM
223	00730021		SR-385	Raleigh Lagrange Rd to SR-193 (Macon Rd)	Widen from 4 to 6 lanes	Shelby Co	3.71	$50,584,965	2041	TN-IM
224	00730022		SR-385	SR-193 (Macon Rd) to US-64/SR-15	Widen from 4 to 6 lanes	Shelby Co	3.94	$58,086,194	2041	TN-IM
613	60040003		SR-385	Interchange at Shelton Road	New Interchange	Collierville	0.35	$61,442,727	2041	TN-IM
220	00730006 - 00730007		SR-385	Forest Hill-Irene Rd to SR-175 (Byhalia Rd)	Widen from 4 lanes to 6 lanes	Shelby Co	3.91	$62,517,609	2041	TN-IM
622	00140018		Stateline Rd	MS Stateline to Crumpler Road	New 5 lane road	Memphis	1.00	$22,979,865	2041	TN-LSTP
518	01210008		Stewart Rd	Salem Terrace Rd to SR-385	Widen from 2 to 4 lanes (divided)	Lakeland	1.17	$21,927,981	2041	TN-LSTP
242	00450005 - 00450008		Sycamore View Rd	US-70/US-79/SR-1 to Pleasant View Rd	Widen from 6 to 7 lanes, add NB through lane	Memphis	0.11	$1,869,383	2041	TN-LSTP
107	00250014		US-51/SR-3	Babe Howard to Veterans Parkway	Access Management	Millington	2.31	$16,702,209	2041	TN-NHS
114	01320027.1		US-64/SR-15	SR-385 to Sammons	Widen from 4 to 6 lanes (divided)	Arlington	1.53	$19,721,464	2041	TN-SSTP

Table 8.8 Highway Projects – Vision Projects

*Refer to Table 8.3 for updated funding categories under MAP-21.

ID	LRTP No.	TIP No.	Facility	Termini	Type of Improvement	Jurisdiction	Length (Miles)	Estimated Project Cost (inflated)	Completion Date	Funding Source
113	01320024 - 01320026		US-64/SR-15	Canada Rd to SR-385	Widen from 5 to 6 lanes (divided)	Memphis	4.40	$56,862,924	2041	TN-SSTP
514	01200037		US-70/US-79/SR-1	Milton Wilson Rd to SR-159	Widen from 2 to 4 lanes (divided)	Galloway	6.85	$127,989,251	2041	TN-SSTP
207	01120034.1		US-72/SR-57 (Poplar Ave)	Bedford Ln to Houston Levee Rd	Widen from 5 to 7 lanes	Collierville	0.45	$6,482,128	2041	TN-NHS
206	01120037		US-72/SR-57 (Poplar Ave)	SR-175 (Byhalia Rd) to US-72/SR-86	Construct new WB lane	Collierville	0.26	$4,513,512	2041	TN-NHS
204	01120039.3		US-72/SR-57 (Poplar Ave)	Brachton Ave to Ashmont Dr	Widen from 5 to 7 lanes	Germantown	0.57	$8,233,907	2041	TN-NHS
205	01120039.4		US-72/SR-57 (Poplar Ave)	Ashmont Dr to Forest Hill-Irene Rd	Widen from 5 to 7 lanes	Germantown	0.33	$4,760,270	2041	TN-NHS
516	01120028		US-72/SR-57 (Poplar Ave)	Kirby Parkway to New Riverdale Road	Widen to 7 lanes	Germantown	0.87	$11,963,211	2041	TN-SSTP
517	01120035.1		US-72/SR-57 (Poplar Ave)	Houston Levee Rd to Bailey Station Rd	Widen from 5 to 7 lanes	Collierville	0.55	$7,961,892	2041	TN-SSTP
208	01120036.1		US-72/SR-57 (Poplar Ave)	Bailey Station Rd to Bray Station Rd	Construct new EB lane	Collierville	1.03	$13,308,084	2041	TN-SSTP
163	00820014.1		US-78/SR-4 (Lamar Ave)	S Parkway to Trezevant St	Widen from 5 to 7 lanes	Memphis	0.53	$20,863,089	2041	TN-NHS
						State of Tennessee Total		**$2,924,961,497**		
State of Mississippi										
18	02840001 - 02840005		Center Hill Rd	US-78 to State Line	Widen from 2 to 4 lanes (divided)	DeSoto Co	6.53	$121,991,854	2041	MS-LSTP
602	00770007	MS-LSTP-2004-01	Craft Rd	Goodman Rd (MS 302) to US 78	Widen from 3 to 5 lanes	DeSoto Co	1.00	$14,362,415	2041	MS-SFP
32	00770002 - 00770004		Craft Rd	I-269 to Church Rd	Widen from 2 to 5 lanes	DeSoto Co	4.35	$93,714,761	2041	MS-SSTP
42	00110001		Fogg Rd	MS-304 to Dean Rd	Widen from 2 to 4 lanes (divided)	DeSoto Co	3.05	$57,000,020	2041	MS-SSTP
195	01990005		Pleasant Hill Rd	Church Rd to Nail Rd	Widen from 2 to 4 lanes (divided)	Olive Branch	1.00	$18,724,183	2041	MS-SFP
194	01990003 - 01990004		Pleasant Hill Rd	Bethel Rd to Church Rd	New 2 lane road	DeSoto Co	3.40	$48,791,410	2041	MS-SSTP
239	00040012 - 00040014	MS-NHS-2008-02	Star Landing Rd	MS-747 (Getwell Rd) to MS-305 (Germantown Rd) at Jones Rd	New 2 lane road	DeSoto Co	6.03	$91,132,377	2041	MS-SSTP

Table 8.8 Highway Projects – Vision Projects

*Refer to Table 8.3 for updated funding categories under MAP-21.

ID	LRTP No.	TIP No.	Facility	Termini	Type of Improvement	Jurisdiction	Length (Miles)	Estimated Project Cost (inflated)	Completion Date	Funding Source
621	00140016		Stateline Rd	US-78 to State Line	New 5 lane road	Olive Branch	0.50	$11,489,932	2041	MS-LSTP
109	00030007 - 00030008		US-61	I-69 to Church Rd	Widen from 4 to 6 lanes (divided)	DeSoto Co	5.80	$74,996,290	2041	MS-NHS
110	00030009 - 00030011		US-61	Church Rd to State Line	Widen from 4 to 6 lanes (divided)	Walls	4.78	$61,808,165	2041	MS-NHS
						State of Mississippi Total		**$594,011,409**		
						Total All Vision Projects		**$3,518,972,906**		

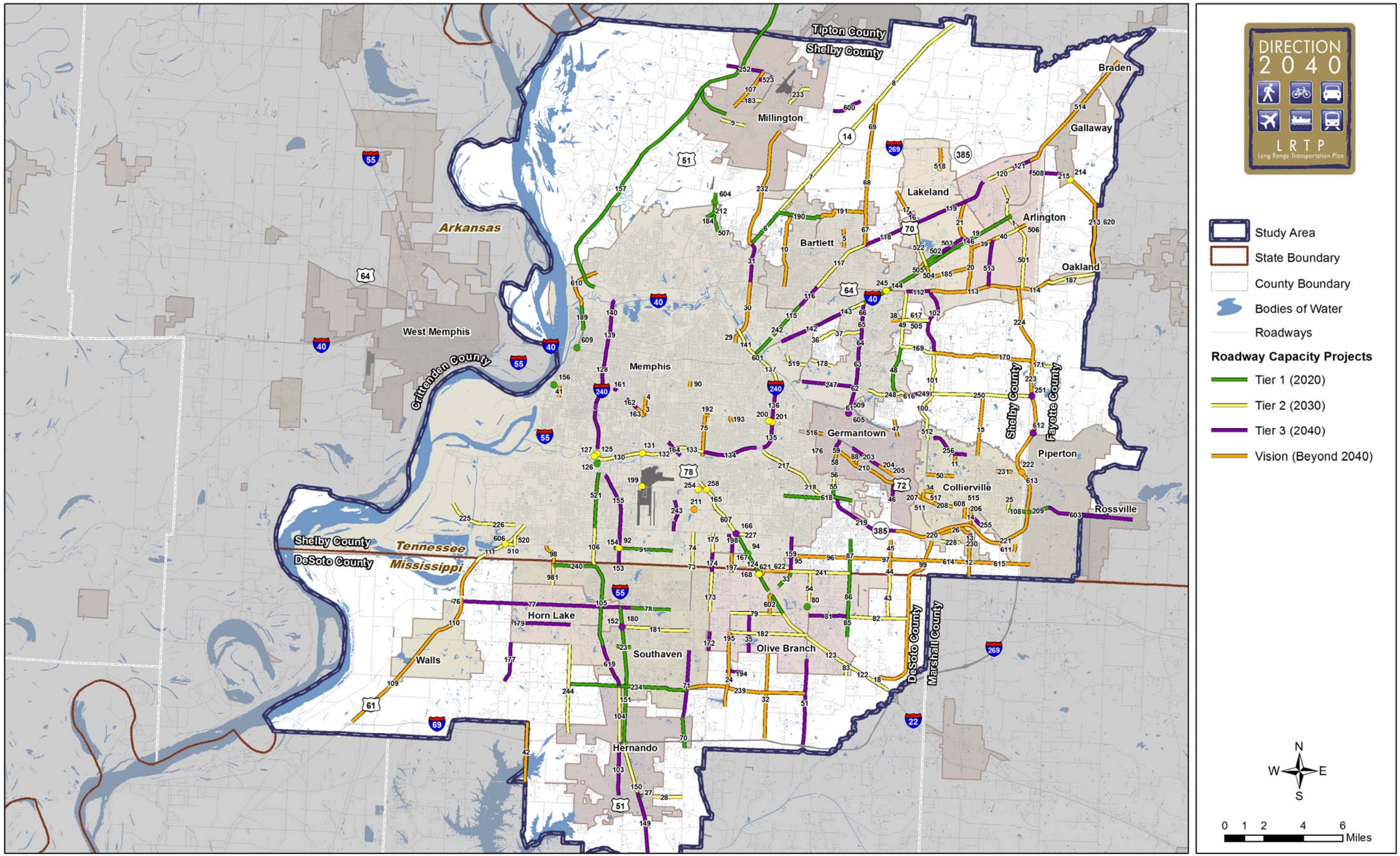

Figure 8.1 Highway Projects

Table 8.9 Non-Transit Capital Costs vs. Revenues by Horizon Year Adjusted for Inflation

Project Funding Source	2011-2014			2015-2020			2021-2030			2031-2040			2011-2040 Plan Summary		
	Cost	Revenue	Balance	Cost	Revenue	Balance	Cost	Revenue	Balance	Cost	Revenue	Balance	Cost	Revenue	Balance
State of Tennessee															
Surface Transportation Program (State)															
State STP	$ 23,007,568	$ 23,007,568	$ -	$ 82,578,888	$ 132,864,605	$ 50,285,716	$ 275,762,146	$ 281,168,537	$ 5,406,391	$ 373,722,975	$ 377,867,002	$ 4,144,027	$ 755,071,578	$ 814,907,712	$ 59,836,134
BRR-S	$ 16,200,000	$ 16,200,000	$ -	$ 29,485,022	$ 29,485,022	$ -	$ 62,396,305	$ 62,396,305	$ -	$ 83,855,417	$ 83,855,417	$ -	$ 191,936,744	$ 191,936,744	$ -
BRBD	$ 1,195,859	$ 1,195,859	$ -	$ 3,640,126	$ 3,640,126	$ -	$ 7,703,248	$ 7,703,248	$ -	$ 10,352,521	$ 10,352,521	$ -	$ 22,891,753	$ 22,891,753	$ -
Congestion Mitigation & Air Quality															
CMAQ (State)	$ 16,150,000	$ 16,150,000	$ -	$ 11,648,404	$ 11,648,404	$ -	$ 24,650,392	$ 24,650,392	$ -	$ 33,128,066	$ 33,128,066	$ -	$ 85,576,862	$ 85,576,862	$ -
National Highway Performance Program															
NHS	$ 108,833,883	$ 108,833,883	$ -	$ 105,020,303	$ 105,020,303	-	$ 168,645,914	$ 177,174,695	$ 8,528,780	$ 235,320,266	$ 238,107,974	$ 2,787,708	$ 617,820,366	$ 629,136,854	$ 11,316,488
IM	$ 81,557,300	$ 81,557,300	$ -	$ 170,477,235	$ 174,726,055	$ 4,248,821	$ 369,281,980	$ 369,755,884	$ 473,905	$ 489,011,384	$ 496,920,989	$ 7,909,605	$ 1,110,327,898	$ 1,122,960,229	$ 12,632,331
Highway Safety Improvement Program															
HSIP	$ 9,000,000	$ 9,000,000	$ -	$ 16,380,568	$ 16,380,568	$ -	$ 34,664,614	$ 34,664,614	$ -	$ 46,586,343	$ 46,586,343	$ -	$ 106,631,525	$ 106,631,525	$ -
Discretionary Funds															
ARRA	$ 597,820	$ 597,820	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 597,820	$ 597,820	$ -
HPP	$ 78,735,835	$ 78,735,835	$ -	$ 162,590,003	$ 171,813,955	$ 9,223,951	$ 330,054,168	$ 363,593,286	$ 33,539,118	$ 488,336,014	$ 488,638,973	$ 302,959	$ 1,059,716,020	$ 1,102,782,048	$ 43,066,028
HPP/NCIIP/CESA	$ -	$ -	$ -	$ -	$ -	$ -	$ 2,969,969,925	$ 2,969,969,925	$ -	$ -	$ -	$ -	$ 2,969,969,925	$ 2,969,969,925	$ -
Subtotal	$ 335,278,265	$ 335,278,265	$ -	$ 581,820,548	$ 645,579,037	$ 63,758,488	$ 4,243,128,692	$ 4,291,076,886	$ 47,948,194	$ 1,760,312,985	$ 1,775,457,284	$ 15,144,299	$ 6,920,540,491	$ 7,047,391,472	$ 126,850,981
State of Mississippi															
Surface Transportation Program (State)															
State STP	$ 75,587,474	$ 75,587,474	$ -	$ 128,151,312	$ 128,151,312	$ -	$ 186,950,796	$ 266,724,948	$ 79,774,152	$ 255,454,235	$ 358,456,026	$ 103,001,791	$ 646,143,817	$ 828,919,760	$ 182,775,943
STP Bond	$ 199,800,000	$ 199,800,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 199,800,000	$ 199,800,000	$ -
High Hazard STP	$ -	$ -	$ -	$ 27,300,946	$ 27,300,946	$ -	$ 57,774,357	$ 57,774,357	$ -	$ 77,643,905	$ 77,643,905	$ -	$ 162,719,208	$ 162,719,208	$ -
National Highway Performance Program															
NHS	$ 9,200,000	$ 9,200,000	$ -	$ 18,917,914	$ 24,570,852	$ 5,652,938	$ 48,800,346	$ 51,996,921	$ 3,196,576	$ 67,522,561	$ 69,879,514	$ 2,356,953	$ 144,440,821	$ 155,647,287	$ 11,206,466
IM	$ 11,500,000	$ 11,500,000	$ -	$ 97,710,824	$ 109,203,785	$ 11,492,960	$ 229,615,862	$ 231,097,428	$ 1,481,566	$ 94,902,571	$ 310,575,618	$ 215,673,048	$ 433,729,257	$ 662,376,831	$ 228,647,574
Transportation Alternatives Program															
Safe Routes to School	$ -	$ -	$ -	$ 728,025	$ 728,025	$ -	$ 1,540,650	$ 1,540,650	$ -	$ 2,070,504	$ 2,070,504	$ -	$ 4,339,179	$ 4,339,179	$ -
Discretionary Funds															
Federal Stimulus	$ -	$ -	$ -		$ -	$ -		$ -	$ -		$ -	$ -	$ -	$ -	$ -
Earmark (CESA)	$ 500,000	$ 500,000	$ -	$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -	$ 500,000	$ 500,000	$ -
HPP/NCIIP/CESA	$ -	$ -	$ -	$ -	$ -	$ -	$ 174,704,113	$ 174,704,113		$ -	$ -	$ -	$ 174,704,113	$ 174,704,113	$ -
State Funding Sources															
State Funded	$ 16,700,000	$ 16,700,000	$ -	$ 55,050,425	$ 55,050,425	$ -	$ 88,967,729	$ 90,898,322	$ 1,930,593	$ 53,799,291	$ 122,159,743	$ 68,360,452	$ 214,517,445	$ 284,808,490	$ 70,291,045
Subtotal	$ 313,287,474	$ 313,287,474	$ -	$ 327,859,446	$ 345,005,344	$ 17,145,898	$ 788,353,852	$ 874,736,738	$ 86,382,886	$ 551,393,067	$ 940,785,310	$ 389,392,243	$ 1,980,893,839	$ 2,473,814,867	$ 492,921,028
Metropolitan Planning Organization															
Surface Transportation Program (Local)															
TN Local STP	$ 193,351,758	$ 193,351,758	$ -	$ 134,634,468	$ 145,904,177	$ 11,269,710	$ 307,688,028	$ 308,762,926	$ 1,074,897	$ 381,081,435	$ 414,951,553	$ 33,870,119	$ 1,016,755,688	$ 1,062,970,414	$ 46,214,726
TN BRR-L	$ 2,040,000	$ 2,040,000	$ -	$ 3,712,929	$ 3,712,929	$ -	$ 7,857,313	$ 7,857,313	$ -	$ 10,559,571	$ 10,559,571	$ -	$ 24,169,812	$ 24,169,812	$ -
MS Urban STP	$ 29,336,294	$ 29,336,294	$ -	$ 13,253,101	$ 13,955,334	$ 702,232	$ 29,365,268	$ 29,532,325	$ 167,057	$ 36,054,627	$ 39,688,976	$ 3,634,349	$ 108,009,290	$ 112,512,929	$ 4,503,639
Congestion Mitigation & Air Quality															
TN CMAQ (Local)	$ 47,140,246	$ 47,140,246	$ -	$ 61,772,941	$ 61,772,941	$ -	$ 130,724,112	$ 130,724,112	$ -	$ 175,682,275	$ 175,682,275	$ -	$ 415,319,573	$ 415,319,573	$ -
Transportation Alternatives Program															
TN ENH	$ 4,680,966	$ 4,680,966	$ -	$ 7,192,558	$ 9,100,315	$ 1,907,757	$ 5,945,430	$ 19,258,119	$ 13,312,689	$ -	$ 25,881,302	$ 25,881,302	$ 17,818,954	$ 58,920,702	$ 41,101,748
Discretionary Funds															
TN TCSP	$ 1,180,750	$ 1,180,750	$ -	$ -	$ 9,100,315	$ 9,100,315	$ 8,043,254	$ 19,258,119	$ 11,214,865	$ 17,193,489	$ 25,881,302	$ 8,687,813	$ 26,417,493	$ 55,420,486	$ 29,002,993
TN FBD	$ 669,034	$ 669,034	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 669,034	$ 669,034	$ -
TN FEMA	$ -	$ -	$ -	$ 12,915,235	$ 14,560,505	$ 1,645,269	$ -	$ 30,812,990	$ 30,812,990	$ -	$ 41,410,082	$ 41,410,082	$ 12,915,235	$ 86,783,577	$ 73,868,342
TN DEMO	$ 2,951,785	$ 2,951,785	$ -		$ 5,387,387	$ 5,387,387		$ 11,400,806	$ 11,400,806		$ 15,321,731	$ 15,321,731	$ 2,951,785	$ 35,061,709	$ 32,109,924
Subtotal	$ 281,350,833	$ 281,350,833	$ -	$ 233,481,232	$ 263,493,903	$ 30,012,670	$ 489,623,404	$ 557,606,710	$ 67,983,305	$ 620,571,396	$ 749,376,791	$ 128,805,395	$ 1,625,026,865	$ 1,851,828,236	$ 226,801,371
Total Non-Transit	$ 929,916,572	$ 929,916,572	$ -	$ 1,143,161,227	$ 1,254,078,284	$ 110,917,057	$ 5,521,105,948	$ 5,723,420,334	$ 202,314,386	$ 2,932,277,448	$ 3,465,619,385	$ 533,341,937	$ 10,526,461,195	$ 11,373,034,575	$ 846,573,380

8.2.4 Transit Funding

As with the non-transit portion of this plan, transit funding is composed of capital and operating revenues as well as capital and operating costs. **Table 8.10** reflects the proposed costs and revenues for transit projects through the planning year 2040 for transit capital projects and maintenance.

Transit Operations and Maintenance Funding

Currently, MATA receives operations and maintenance revenue from Federal funding sources such as 5307 Preventative Maintenance, 5303 Metropolitan and Statewide Planning, 5307 ADA Paratransit, and 5316 Job Access and Reverse Commute (JARC). In addition, operations and maintenance revenue is provided from Tennessee State operating funds, City of Memphis operating funds, and funds generated by MATA such as fare box revenues, advertising, and leases.

To project the operations and maintenance funding levels through the 2040 planning year, data was compiled from MATA FY 2009, FY 2010, and FY 2011 approved budgets, and the Memphis MPO 2011-2014 TIP. Even though funding for advertising and leases can vary greatly from year to year historical averages have been included in the projections. However, this historical data was the best resource available for both operating and capital funding and was used as a basis for funding projections. The funding projections were inflated 3% per year through the 2040 planning year and are as shown in **Table 8.11**.

Table 8.10 Transit Costs and Revenues (in Thousands of Dollars)

Period	Costs			Revenue			Difference
	Capital	Operations	Total	Capital	Operations	Total	
2011-2014	$264,363	$243,615	$507,978	$264,363	$243,615	$507,978	$0
2015-2020	$905,362	$423,932	$1,329,295	$905,362	$423,932	$1,329,295	$0
2021-2030	$1,193,004	$897,127	$2,090,131	$1,193,004	$897,127	$2,090,131	$0
2031-2040	$1,737,032	$1,205,664	$2,942,696	$1,737,032	$1,205,664	$2,942,696	$0
Totals	**$4,099,761**	**$2,770,338**	**$6,870,099**	**$4,099,761**	**$2,770,338**	**$6,870,099**	**$0**

Table 8.11 Transit Operations and Maintenance Revenues (in Thousands of Dollars)

Period	5307 Preventative Maintenance	5303 Metro & Statewide Planning	5307 ADA Paratransit	5316 JARC	State Operating	Memphis Operating	Farebox Recovery	Advertising	Total
Annual Average	$14,024	$191	$1,913	$1,275	$8,318	$22,180	$9,934	$395	$58,230
2011-2014	$58,673	$800	$8,002	$5,335	$34,800	$92,793	$41,558	$1,653	$243,615
2015-2020	$102,101	$1,393	$13,925	$9,283	$60,559	$161,476	$72,319	$2,877	$423,932
2021-2030	$216,066	$2,947	$29,468	$19,645	$128,154	$341,716	$153,042	$6,089	$897,127
2031-2040	$290,374	$3,960	$39,603	$26,402	$172,229	$459,238	$205,676	$8,183	$1,205,664
Totals	**$667,213**	**$9,100**	**$90,998**	**$60,665**	**$395,742**	**$1,055,223**	**$472,595**	**$18,802**	**$2,770,338**

Overall, there is expected to be approximately $424 million, $897 million, and $1.2 billion in transit operations and maintenance funding through the 2020, 2030, and 2040 horizon years, respectively. Operations and maintenance costs are expected to equal revenues through the planning horizon. However, the types of service improvements suggested in this document may require more funding than is presently available.

Transit Capital Funding

Transit funding has been divided into fixed guideway and non-fixed guideway for the purposes of this analysis. Each of these groups has their own unique assumptions and issues that must be addressed.

Non-fixed Guideway Capital Funding

Non-fixed guideway capital funding data was obtained from the Memphis MPO 2011-2014 TIP. Non-fixed guideway transit projects in this region are funded using sources such as CMAQ, 5307 grants, 5309 Bus and Bus Facilities, 5316 JARC funds, and 5317 New Freedom grants. CMAQ funding can be used for a variety of projects such as Ozone Alert programs, school bus retrofits, transit, bicycle and pedestrian projects, traffic signal projects, or HOV lanes. As a result, CMAQ funds were projected to continue as a transit funding source through the life of the plan.

In order to determine the annual funding amount used for projecting non-fixed guideway capital transit funding, the average annual capital costs during 2011-2014 were determined. This amount was then grown by 3% annually after 2014 in order to account for inflation. The funding is summarized in **Table 8.12**.

Table 8.12 Non-Fixed Guideway Transit Capital Revenues (in Thousands of Dollars)

Period	5307 Large Urban Cities	5309 Bus and Bus Facilities	5316 JARC	5317 New Freedom	CMAQ	Total
2011-2014 Average	$23,327	$28,603	$2,150	$766	$750	$55,596
2011-2014	$93,309	$114,412	$8,600	$3,063	$3,000	$222,384
2015-2020	$172,029	$221,520	$15,762	$5,260	$5,460	$420,030
2021-2030	$364,047	$468,781	$33,355	$11,131	$11,555	$888,870
2031-2040	$489,249	$630,003	$44,826	$14,959	$15,529	$1,194,567
Totals	**$1,118,634**	**$1,434,716**	**$102,543**	**$34,413**	**$35,544**	**$2,725,850**

Overall, there is approximately $420 million, $889 million, and $1.2 billion available through the 2020, 2030, and 2040 horizon years, respectively, for non-fixed guideway capital transit projects.

Fixed Guideway Capital Funding

Fixed Guideway capital projects such as bus rapid transit (BRT) and light rail (LRT) are evaluated separately from other transit capital projects due to their large scopes and variable timelines. Federal regulations require a separate Alternatives Analysis study for each corridor in which alternative technologies and alternative alignments are evaluated. Based on the results of an Alternatives Analysis, a technology and an alignment are determined. As detailed in **Chapter 5**, there are several corridors either currently being evaluated for fixed guideway projects or planned for evaluation during the planning period. They consist of the following:

- Downtown - Airport light rail line – TIP and CIP funding has been partially allocated for this project. The project could be constructed as either LRT or BRT.
- Southeast Corridor – Could follow the Norfolk-Southern Railroad alignment, or some other alignment, and be constructed as LRT or BRT. The length varies based on the route and mode selected. The costs are estimated to range from $1.5 billion for the LRT to $180 million for the BRT.
- South Corridor – This project could consist of a southward extension of the Downtown to Airport LRT, a combination of freight railroad and freeway right-of-way southward from downtown Memphis, or some other alignment, and be constructed as LRT or BRT. The length of the corridor could also vary. The cost for this project could range from approximately $520 million for LRT to $80 million for BRT.

These large capital project costs have the effects of inflation included in them already, and as a result are not increased annually at 3%. For these corridors, a funding mechanism is not currently in place that would provide

revenue for these projects. 5309 New Starts money or other innovative financing measure should be explored as a means to fund these projects. Federal funds for LRT and BRT projects are available through the Section 5309-New Starts program. At the present time the typical federal share approved is about 50%, although SAFETEA-LU allows up to 80% federal share. Therefore, a range of 50% to 80% of federal funds has been assumed to project the funding scenario for fixed guideway projects. It is assumed for the purposes of this plan that each of these large fixed guideway capital transit projects will be funded and financially constrained within the 2040 planning horizon.

In addition to these large capital projects, there are also smaller annual capital projects such as rail facility improvements and fixed guideway modernization that, at a growth rate of 3% annually to account for inflation, have a total cost of approximately $84 million. **Table 8.13** provides a summary by horizon year of the expected fixed guideway revenue and costs.

Table 8.13 Fixed Guideway Transit Capital Revenue and Costs (in Thousands of Dollars)

Period	Rail Facility Improvements			Fixed Guideway Modernization			Downtown to Airport LRT			Southeast Corridor BRT			South Corridor BRT/LRT*			Total		
	Revenue	Cost	Balance	Revenue	Cost	Balance	Revenue	Cost	Balance	Revenue	Cost	Balance	Revenue	Cost	Balance	Revenue	Cost	Balance
2011-2014	$1,340	$1,340	$0	$6,150	$6,150	$0	$34,490	$34,490	$0	$0	$0	$0	$0	$0	$0	$41,980	$41,980	$0
2015-2020	$2,332	$2,332	$0	$10,490	$10,490	$0	$465,510	$465,510	$0	$7,000	$7,000	$0	$0	$0	$0	$485,332	$485,332	$0
2021-2030	$4,935	$4,935	$0	$22,199	$22,199	$0	$0	$0	$0	$263,000	$263,000	$0	$14,000	$14,000	$0	$304,134	$304,134	$0
2031-2040	$6,632	$6,632	$0	$29,834	$29,834	$0	$0	$0	$0	$0	$0	$0	$506,000	$506,000	$0	$542,466	$542,466	$0
Totals	$15,238	$15,238	$0	$68,672	$68,672	$0	$500,000	$500,000	$0	$270,000	$270,000	$0	$520,000	$520,000	$0	$1,373,911	$1,373,911	$0

Note: * Since the mode has not been determined through an Alternatives Analysis, the higher cost for the LRT was assumed.

8.3 Alternative Funding Strategies

Based on the fiscally constrained scenario presented in this financial plan, the total projected cost for all non-transit capital projects within the Memphis MPO Area is approximately $10.8 billion. In addition, there are over $3.5 billion in highway projects contained in the non-fiscally constrained Vision Plan. Further, unmet transit needs exist in both capital and operational categories. Based on the level of unmet needs, it is important to identify potential funding sources for these projects as well as for projects from other modes.

State and Federal revenues allocated by formula will not sufficiently fund a systematic program of constructing transportation projects and providing congestion relief in the Memphis MPO region. In addition, discussions regarding funding of the future transportation bills in Congress have emphasized the inability of the Highway Trust Fund to continue to provide all of the funding for transportation projects. Therefore, the Memphis MPO and local jurisdictions may desire to pursue alternative funding measures to supplement existing revenue streams.

Historically, public support for developer impact fees, higher gas taxes, and toll roads have received the highest level of community support. Several new funding sources may be considered and are outlined in the following discussion. However, a mix of funding strategies may be more palatable to the region as it does not focus the burden on one revenue source.

Local Option Sales Tax

Local governments may elect to adopt a general-purpose sales tax to fund transportation improvements. This, however, requires state legislative authority. For Shelby County, a ½ cent sales tax could potentially generate $63 million per year (estimated based on similar sized counties and retail employees). This has been a popular option in many other communities across the country.

The revenue stream should grow in proportion to population growth, and will keep pace with inflation because the tax is a set percentage of the price of goods sold.

Vehicle Registration Fees

A vehicle registration fee is a surcharge collected by the Division of Motor Vehicles at the time of vehicle registration and registration renewal within a defined jurisdiction. It is usually a fixed dollar amount. The fee can be levied on any combination of vehicle types (private, commercial, etc.). Currently, all vehicles in Shelby County are assessed a $50 wheel tax when registered. The majority of this tax is used to fund non-transportation needs. Shelby County should consider reallocation of a portion of these funds to meet the needs for transportation projects. The surrounding counties should also consider this as a source of funding.

Real Estate Transfer Tax

A real estate transfer tax is a surcharge levied on the sale of certain classes of property – residential, commercial or industrial – that increases with the size of the property being sold. Sometimes sellers who have typically seen the value of their homes rise over the years will end up paying this tax. Other times the cost is imposed on buyers who, it is argued, are making an investment in the future of a community.

Local jurisdictions must get special legislative approval for any additional tax. At the local level, the real estate transfer tax can create substantial funds for infrastructure improvements, particularly in fast-growing communities. On the other hand, it can also inflate real estate values and slow the market. Since revenues from the tax fluctuate with the real estate market, income can be difficult to predict. In addition, winning approval in the face of special interest opposition has proven to be a stumbling block for some communities. With the current state of the housing and retail markets in the Memphis area, this may not be a viable alternative in the near term. However, it should be considered as an option once the economic conditions improve.

Rental Car Fee

A rental car fee is a surcharge added to all rental car bills within a defined jurisdiction. The fee, usually a fixed dollar amount, is often levied on both visitors and local residents, who may be renting a car as a replacement for a disabled/damaged personal vehicle. The rental car fee can be assessed based on gross revenues to fund future transit and highway infrastructure projects. Each car rental business is responsible for collecting and remitting the fee to the associated counties on a monthly basis. One benefit of the rental car fee is that a substantial portion of the revenues can be expected to be generated from airport rentals, which tend to be made by out of state travelers.

Impact Fees

Developer impact fees and system development charges provide another funding option for communities looking for ways to fund collector streets and associated infrastructure. They are most commonly used for water and wastewater system connections or police and fire protection services, but they have been used to fund school systems and pay for the impacts of increased traffic on existing roads. Impact fees place the costs of new development directly on developers and indirectly on those who buy property in the new developments. Impact fees free other taxpayers from the obligation to fund costly new public services that do not directly benefit them. The use of impact fees requires special legislative authorization.

Transportation Bonds

Transportation bonds have been instrumental in the strategic implementation of local roadways and non-motorized travel throughout the southeast. Voters in communities both large and small regularly approve the use of bonds in order to improve their transportation system. Projects that historically have been funded through transportation bonds include sidewalks, road extensions, new road construction, transit, and streetscape enhancements.

Developer Contributions

Through diligent planning and early project identification, regulations, policies, and procedures can be developed to protect future arterial corridors and require contributions from developers when the property is developed. These measures reduce the cost of right-of-way and in some cases require the developer to make improvements to the roadway that would result in a lower cost when the improvement is actually constructed. Within Shelby County, developers are generally required to construct the improvements within and adjacent to their property, or pay a fee in lieu of providing the improvements. Other counties may want to consider implementing similar requirements as development activity increases in those communities.

Grant Anticipation Revenue Vehicles (GARVEE) Bonds

GARVEE Bonds can be utilized by a community to implement a desired project more quickly than if they waited to receive state or federal funds. These bonds are let with the anticipation that federal or state funding will be forthcoming. In this manner, the community pays for the project up front, and then receives debt service from the state. GARVEE bonds also are a way to capitalize on lower present-day construction and design costs, thereby finishing a project more quickly and economically than if it was delayed to meet state timelines. Mississippi DOT funded the design, right-of-way acquisition, and construction of portions of I-69/I-269 using a similar program entitled Highway Enhancement through Local Partnerships. H.E.L.P. bonds have been issued in cooperation with DeSoto County and the Marshall County Industrial Development Authority.

Toll Facilities

The Tennessee legislature adopted legislation to consider the construction of toll facilities for four specific projects. TDOT is in the process of studying the feasibility of constructing toll bridges in Chattanooga and Memphis. Toll facilities allow agencies to design, construct and operate projects while using the toll concessions to offset the cost of constructing and operating the facility. The proposed third highway bridge over the

Mississippi River, the Southern Gateway project, is one of the facilities that is being studied to determine the feasibility of constructing and operating it as a toll facility.

Bicycle and Pedestrian Funding

Bicycle and pedestrian projects are often eligible for their own funding sources. For instance, the Robert Wood Johnson Foundation funds a grant program called Active Living by Design. The purpose of this program is to provide communities with a small grant to study bicycle, pedestrian, or other healthy living initiatives. There are other such grant programs in existence for bicycle and pedestrian projects, which would help to supplement the funding currently received by these modes through the Transportation Enhancement Program or the CMAQ program.

Transportation Enhancement Grants

State and federal grants can play an important role in implementing strategic elements of the transportation network. Several grants have multiple applications, including Transportation Enhancement Grants as well as State and Federal Transit Grants. The Enhancement Grant program, established by Congress in 1991 through the Intermodal Surface Transportation Efficiency Act (ISTEA), ensures the implementation of projects not typically associated with the road-building mindset. While the construction of roads is not the intent of the grant, the construction of bicycle and pedestrian facilities is one of many enhancements that the grant targets and could continue to play an important role in enhancing the pedestrian safety and connectivity in the Memphis region, provided this funding source is continued in future transportation legislation.

8.4 Performance Measures

While the goals and objectives outlined in **Chapter 1 – Introduction** provides the framework for the LRTP, it is important to continuously monitor the performance of the transportation improvements and programs to determine if the Memphis MPO is achieving its goals and objectives. Monitoring the progress towards achieving these goals and objectives is helped by developing S.M.A.R.T. goals and objectives during the planning process. Making the goals measureable aids in establishing performance measures for the LRTP.

S.M.A.R.T. Goals
Specific
Measureable
Attainable
Realistic
Timely

There are many tools available to assist with the development of performance measures. The U.S. Environmental Protection Agency (EPA) has developed a Guide to Sustainable Transportation Performance Measures that describes performance measures that can be applied to transportation decision-making. EPA is also working on a Guidebook for Sustainable Community Performance Measures which will establish methodologies for determining calculable baselines for quantitative measure to assess the progress made towards achieving goals and/or objectives. The Federal Highway Administration (FHWA) Office of Operations has established the Operations Performance Measurement Program, which is "leading numerous activities to advance the implementation and practice of operations performance measurement at the Federal, State, and local level."

By implementing a method that can effectively measure the performance of the LRTP's goals and objectives, the Memphis MPO would be able to evaluate the progress of the strategies outlined in the LRTP and help refine the direction of future goals and objectives. The performance measures in **Table 8.14** have been grouped by three of the planning themes used in the development of the Plan Goals and Objectives: Mobility/Accessibility, Safety, and Congestion/Air Quality. **Table 8.14** illustrates some of the potential performance measures and the correlating LRTP objectives identified in Chapter 1 that could be used to establish quantitative benchmarks. Once the performance measures and related quantitative benchmarks are determined, the performance measures could be used to evaluate progress towards achieving the LRTP Goals and Objectives.

Table 8.14 Potential Performance Measures

Categories	Potential Performance Measures	Related Objectives
Mobility/Accessibility	▪ Vehicle hours traveled per capita or per licensed driver ▪ Homes within walking distance to retail, service, and parks ▪ Freeway Travel Time Reliability ▪ Arterial Street Travel Time Reliability ▪ Transit Boardings ▪ Passenger Trips per Vehicle Revenue Mile ▪ Jobs Served by Transit	▪ Encourage transit, bicycle, and pedestrian accessible site design ▪ Improve access to and within key activity population and employment centers ▪ Encourage projects that help stimulate more employment opportunities ▪ Support Complete Streets design ▪ Encourage jurisdictions to coordinate greenway plans and assist in seeking funding for projects ▪ Improve mobility by providing transit services to meet the needs of all citizens ▪ Increase the miles of dedicated bicycle facilities and signed bike routes ▪ Continue to focus on the maintenance or improvement of existing facilities ▪ Encourage access management plans that emphasize shared access (drives, corridors, roads) ▪ Enhance the connectivity and integration of the transportation system between modes ▪ Implement policies to encourage transit ridership and explore options to provide express transit routes
Congestion / Air Quality	▪ Annual Vehicle Emissions ▪ Vehicle Miles Traveled per Capita or per Licensed Driver ▪ Transit Miles Traveled ▪ Passenger Trips per Transit Service Hour ▪ Number of Van Pools or Rideshare Participants ▪ Miles of Bike Lanes	▪ Reduce congestion using strategies that support reduction in vehicle miles traveled, reduction in air pollutant emissions, and improves system operations ▪ Encourage transportation policies, programs, and investment strategies that positively affect the overall health of people and the environment including air quality, physical activity, biodiversity, and natural resources ▪ Support projects that will reduce mobile source emissions that contribute to climate change ▪ Implement ITS solutions to disseminate real-time information for all modes of transportation
Safety	▪ Traffic Crash Fatalities by Vehicle Type ▪ Bicycle and Pedestrian Crash Fatalities ▪ Speed Limit Compliance on Freeways and Arterial Roads	▪ Maintain safe and reasonable levels of service for highway, rail, transit, trail, and aviation facilities ▪ Support projects that reduce crashes for motorized and non-motorized system users ▪ Support development of a system to track and monitor crash data and share with jurisdictions to help identify and prioritize solutions for problem areas ▪ Identify transportation projects to eliminate unsafe conditions ▪ Encourage plans and policies to increase safety

The quantitative benchmarks for these performance measures can be determined using the guidance in the EPA and FHWA documentation and resources such as the American Community Survey (ACS), existing traffic counts, U.S. Census Bureau's "OnTheMap" tool, and EPA's approved mobile source emission model results for emissions data.

The Memphis MPO should develop quantitative benchmark values for the selected performance measures. This will allow the MPO to establish quantitative objectives that could be measured as transportation improvements and programs are implemented.

8.5 Implementation

It is recommended that attention be given to identifying alternative funding sources, careful evaluation of the feasibility of projects, garnering public support for critical projects, evaluation of the economic impact of projects, and investigation of phased implementation of improvements in order to implement this plan. Support must be provided to the agencies responsible for implementing the specific multimodal improvements.

8.5.1 Controlling Factors

The execution of the implementation steps identified in this chapter may need to be phased and will be subject to a variety of factors that will determine their timing. These factors include:

- The availability of the personnel and financial resources necessary to implement the specific proposals.
- Whether an implementation step is an independent project or program, or a component of the rational evaluation of a new development project.
- The interdependence of the various implementation items, in particular, the degree to which implementing one item is dependent on the successful completion of another item.
- The relative severity of the problem which a particular implementation item is designed to remedy.

It is vital to the success of this plan that local municipalities continue to work with and educate local citizens and businesses. While public support can encourage implementation, opposition can significantly delay a project.

8.5.2 Action Plan

Upon adoption of the plan, the following action items can be used to implement the recommendations of the *Memphis Urban Area 2040 Long-Range Transportation Plan – Direction 2040* (LRTP). Where possible, early implementation will take advantage of momentum gained during this planning process.

1. **Prioritize Projects** - Use the existing Memphis MPO committees to prioritize projects and identify projects from this LRTP to be included in the next TIP.
2. **Update Existing Plans -** The MPO's Congestion Management Plan, which contains the CMP strategies used in the LRTP, and the major roads plans of the MPO member jurisdictions, should be evaluated based on the input received during the development of the LRTP, and modified as appropriate.
3. **Request inclusion of high-priority projects** in the next update of the states' Transportation Improvement Program (STIP).
4. **Incorporate the findings of the Short Range Transit Master Plan -** Incorporate the findings of the Short Range Transit Master Plan that is currently underway into the TIP, as appropriate. Develop an implementation plan for the long range transit needs identified, including additional service needs, fixed guideways, major infrastructure improvements, funding resources, and specific implementation strategies.
5. **Use the Citizens Advisory Committee and the Freight Committee** to encourage and educate the public, and aide in the implementation of this plan.
6. **Coordinate with the development review processes of each MPO jurisdiction** to integrate recommended street, bikeway, and greenway networks that create an interconnected network.

8.5.3 Key Relationships

An important relationship exists between the community's collective vision for the area and the plans, policies, and actions that ensure this vision becomes a desirable and functional reality. There is an understanding that the desired future is directly related to the types of transportation investments that will be made.

Another important relationship exists between the human and natural environments. It is essential that the region consider its irreplaceable natural resources when evaluating the impact of changes to its transportation system. It is inevitable that some projects will have an impact on the human and natural environments, but early screening of potential impacts of transportation projects will help to identify how to mitigate or avoid significant impacts that result from construction, pre-mature implementation, and development activities and reduce unnecessary delays and expenses throughout the implementation of the project.

The relationship between land use and transportation is also very important. How land use changes directly impacts the demand on the transportation system. This relationship was studied in detail for the region. Adherence to the long range land use plans for the member jurisdictions is key to controlling the demands placed on the transportation system.

These relationships are all related to the implementation of Smart Growth initiatives. The Memphis Urban Area Metropolitan Planning Organization supports the smart growth initiatives already underway — downtown reinvestment, transit-oriented development, traditional neighborhood development, and rural preservation — and promotes transportation investments that are sensitive to the overall goals of the plan. As the implementation of smart growth initiatives spread to other areas of the region, it is anticipated that this could result in lower vehicle trips and vehicle miles traveled.

8.5.4 Recommendations

The following recommendations are presented throughout the LRTP and are important to the successful fulfillment of the plan's goals.

Land Use Integration Recommendations

- Continue to support local initiatives that result in a more efficient, livable transportation system (street connectivity, transit system enhancements, smart growth, etc.).
- Reinvest in existing infrastructure and promote infill development or redevelopment instead of sprawl out from the core of the community.
- Seek state and federal funding support of activities to improve the quality of development and protect human health and the environment.

Roadway Recommendations

Roadway recommendations presented in **Chapter 5 – Transportation Strategies** of the plan include a variety of strategies aimed at reducing congestion and improving safety. With the number of projects identified and limited funds available for their implementation, project selection is very important. The recommendations summarized below should improve the quality of the transportation system for multiple modes of travel.

Congestion Management Recommendations

Congestion management is a major consideration for the Memphis region due to the status of the region's air quality designation. Using the Congestion Management Plan process adopted by the Memphis MPO, a network of congested roadways was identified and strategies were applied to address the congestion. The following recommendations will help to implement those strategies.

- Regularly review the congested network to make sure the projects included in the TIP and LRTP will effectively reduce congestion.
- Update the Congestion Management Plan including incorporating other congestion relief strategies and reviewing the effectiveness of the existing strategies.
- Commit the time and resources to successfully implement carpooling, park and ride lots, HOV lanes, and growth management strategies.
- Foster the interagency cooperation required to successfully implement the CMP strategies.

Safety Recommendations

Identify the intersections with the highest crash rates. Specific best practices to resolve safety related problems will vary based on the facility type and location. Therefore, once a problem location is identified, it is recommended that a safety audit review be performed. Federal funds are identified within SAFETEA-LU for addressing safety problems. State funds in Tennessee are available under the Spot Safety Fund and in both states under the Highway Safety Improvement Program.

For local governments to better identify and categorize crash data, it is recommended that crash data be incorporated into the Memphis MPO's geographic information system (GIS) database. This step will allow a more complete and detailed analysis of the crash data. This data could be used to identify hot spots for specific crash types such as red light running, speed related crashes, or single vehicle crashes. This information may now be available in this format at the State level, but it is often unavailable for local use.

The need also exists for better sharing of safety data between the local and state agencies. Liability issues that potentially exist with this information would need to be resolved, but the sharing of this data in a useable format would allow the Memphis MPO to identify locations for safety improvements within its boundary.

Complete Street Recommendations

The complete streets concepts attempt to incorporate all realms of travel safely and efficiently within the transportation system. Some of the recommendations to make this happen include:

- **Transit Integration** – Where land use and zoning policies will support transit oriented development, target those areas for high quality transit service to increase the benefits of access to all modes of transportation.
- **Enhance the Pedestrian Environment** through providing high quality buffers between the pedestrians and moving traffic.
- **Road Typical Sections** – adopt road typical sections that incorporate all modes of travel, including pedestrians, bicyclists, and transit.

Access Management Recommendations

The recommendations for access management can be implemented both with new developments and on existing roadways. In both cases, when properly applied access management can improve roadway safety for all modes of transportation and reduce congestion. The following items are a sample of the access management recommendations that can be employed:

- **Shared Use Driveways** – reduce the number of conflict points, making the roadway safer for all modes of transportation

- **Improve On-Site Circulation** – prevents internal circulation and congestion problems from affecting operations on the street.
- **Driveway Spacing** – by keeping driveways as far from street intersections as possible and by spreading the access points as far apart as possible, the number of conflict points are reduced and access is allowed to occur in locations of reduced congestion.
- **Medians** – improve traffic flow and make the roads safer by reducing the number of conflict points and by making the conflicts that occur less severe. Medians also help to reduce delays and provide a place of refuge for pedestrians. Properly landscaped medians will improve corridor aesthetics.
- **Intelligent Transportation Systems (ITS)** – Technologies are available to assist with traffic flow management resulting in reduced congestion and delays and improve air quality.

The region can proactively combat existing congestion by implementing appropriate types of access management, such as medians, shared use driveways, and coordinated signal systems.

Bicycle and Pedestrian Recommendations

A proposed on-street bicycle network should be built based on the recommendations of the MPO Bicycle and Pedestrian Plan. The routes identified in the bicycle and pedestrian plan should be implemented to provide a bicycle network that makes the best use of available street widths for bicycle commuting routes.

Throughout the region, it is recommended that pedestrian facilities provided along arterial roadways be separated from the roadway with landscape areas. This separation provides the pedestrian with a buffer that creates a safer walking environment.

A system of greenway trails has been identified in the Bicycle and Pedestrian Plan near the area rivers and along abandoned railroad lines. It is recommended that funding continue to be pursued to allow the development of more greenway trails. These trails not only provide recreational facilities, they help to preserve ecologically sensitive areas. Pedestrian and bicycle facilities should be coordinated with the transit routes to provide interconnection of these facilities.

Transit Recommendations

The two most critical elements for transit to flourish in the region will be progressive planning and increased, preferably dedicated, funding. Many of the recommendations for transit in the Memphis area involve promoting transit as a safe, convenient, and dependable form of transportation. Long-term solutions target improvements for captive and choice riders to make sure transit exists as a sustainable transportation alternative.

Transit is a mode of transportation which cannot be considered in isolation. One way to support transit use on existing routes and services is to develop around each stop a safe, comfortable customer delivery system complete with attractive and convenient amenities including seating, shelter and information. Proximity to buildings is essential to minimize walking distance. And because most regular transit users walk or bike to and from the stop, a network of sidewalks, safe street crossings, bike facilities, multi-use paths, and pedestrian-level lighting should complement the amenities provided at the stop. The efficiency of transit also depends on an interconnected system of roads and highways that provide access to transit stops. Additional transit recommendations include:

- Enhance communication and information regarding routes and schedules, especially in Spanish for the Hispanic community
- Enhance passenger amenities at well-used bus stops, including the following:
    - repair sidewalks and rebuild as necessary to comply with the federal Americans with Disabilities Act Guidelines
    - Install shelters, canopies, and other amenities and plant a shade tree nearby

  - Add bike racks on all buses
  - Incorporate traveler information systems into heavily used stop locations
- Close gaps in existing bus service
- Improve bus route system to reduce travel time for reverse commute and suburb-to-suburb travel

Freight Recommendations

Five types of freight transportation were studied— marine port, airport, rail, highway, and intermodal service. Freight needs were identified not only through sites visits and visual inspections, but also by a review of published data and survey results. The key infrastructure components of each mode are documented in Chapter 5. The recommendations include:

- Embrace the recommendations of the Aerotropolis Transportation Subcommittee
- Conduct a study to identify high-crash highway/rail grade crossings that can be economically converted into grade separated structures
- Complete the construction of I-69 and I-269 connecting Memphis on the transcontinental highway from Toronto, Canada to Monterey, Mexico
- Build a new rail/highway bridge spanning the Mississippi River, with connections to existing infrastructure
- Conduct a feasibility study to evaluate the potential to develop a Memphis Rail Bypass to route through-freight movements, including the movement of hazardous materials through less populated areas.

Performance Measures

Potential performance measures were identified in this chapter. Since documentation of the impacts of implemented projects is becoming more important, a system to identify, collect, record, and analyze the data should be implemented. To initiate this process, the following recommendations should be considered:

- Review the potential performance measures identified in this chapter with the member jurisdictions and agencies.
- Identify the data sources currently available that will help to establish a base line to measure the success of the Plan.
- Determine the performance measures that can be implemented using the existing available data
- Determine the performance measures that can be implemented by the collection or sharing of data that is readily available
- Establish a regional system for the collection and sharing of the data
- Establish performance measurement criteria to be used in the project selection processes for future TIP and LRTP projects