

INTRODUCTION

The development of the MULTIPLAN involves substantial coordination with the four Metropolitan Planning Organizations (MPOs) within Mississippi. This coordination between MDOT and the MPOs will bring about a truly unified statewide transportation planning effort, with emphasis placed on the interrelationships between the transportation networks at the local, regional and state levels. As such MPO planning efforts have been incorporated in the MULTIPLAN development.

There are four MPO's in Mississippi:

- Mississippi Gulf Coast Urbanized Area;
- Jackson Urbanized Area;
- Hattiesburg – Petal – Forrest – Lamar MPO; and
- DeSoto County (Memphis MPO).

MISSISSIPPI GULF COAST URBANIZED AREA

STUDY AREA

The Mississippi Gulf Coast Urbanized Area is located in south Mississippi approximately 50 miles east of New Orleans, LA and 35 miles west of Mobile, AL. The urbanized area runs along the Mississippi Sound a length of 74 miles and includes portions of the following three counties:

- the southeast portion of Hancock County;
- the south portion of Harrison County; and
- the south portion of Jackson County.

The Gulf Regional Planning Commission (GRPC) is the MPO responsible for transportation planning in the Gulf Coast urbanized area. The study area includes the municipalities of Waveland, Bay St. Louis, Pass Christian, Long Beach, Gulfport, Biloxi, D'Iberville, Ocean Springs, Gautier, Moss Point and Pascagoula.

The Mississippi Gulf Coast Urbanized Area 2030 Transportation Plan study is being conducted with the support of MULTIPLAN.

GOALS AND OBJECTIVES

One of the first tasks of the study is the formulation of a set of goals and objectives to provide a framework for the transportation plan and to maintain it as a viable document. The goals and

objectives are also used as guidelines in preparing and evaluating potential improvements to the system.

The overall transportation goal is to develop a transportation system which will accommodate present and future needs for mobility of all people and goods traveling within and through the area. In addition, the transportation system must be safe, efficient, economically feasible, and in harmony with the character of the area.

To ensure that the recommended transportation plan meets the desires of the area, the following objectives were established:

The Transportation System should:

- Meet the Gulf Coast Area's long range transportation needs;
- Be planned as a unified system of roadways based on function and relative importance, providing a proper balance of freeways, expressways, arterials, collectors, and local streets;
- Encourage and accommodate through traffic on the classified street system (i.e., freeways, expressways, and arterials) and discourage it on collectors and local neighborhood streets;
- Provide access among all developed areas of the Gulf Coast Area;
- Improve overall accessibility to employment, education, public facilities, the central business district (CBD), and other major activity centers;
- Make maximum use of existing highway and street facilities;
- Provide for a high degree of safety for both motorists and pedestrians;
- Provide for an orderly improvement and expansion of the roadway system at minimum cost as the need for improvement arises;
- Minimize disruption of existing and planned developments and established community patterns; and
- Reduce air pollution, noise, and other environmental impacts associated with transportation improvements and new facility construction.

The Metropolitan Transportation Plan should:

- Be viewed as a document that requires periodic updating and revision. It should provide sufficient flexibility to accommodate changes in land use planning for the Gulf Coast Area and other unforeseen changes and conditions; and
- Consider development potentials within and beyond the projected limits of the urbanized area to the year 2029.

Continuing transportation planning activities should:

- Be performed within the framework of comprehensive regional planning and support regional growth and development goals; and
- Provide continuity and coordination between jurisdictions.

GULF COAST STUDY RESULTS

The new 2030 Plan was created by the development of a new traffic forecasting model in TransCAD. Portions of the model were developed by converting the existing TRANPLAN model that was adopted in 2001. A new roadside origin-destination survey was conducted. New socio-economic base year data for the year 2002 was used to develop and calibrate the new

TransCAD model. New socio-economic variable forecasts and network modifications for constructed and committed projects were applied to the traffic forecast model to project traffic conditions for the Plan year 2030.

It should be noted that as the forecast year (2030) socio-economic data was near completion for the model, Hurricane Katrina impacted the entire Gulf Coast region and caused sever damage to homes, businesses and the entire landscape of the Gulf Coast. Many structures were demolished or were damaged to the point of requiring demolition. The damage to property and displacement of the population along the Gulf Coast was so severe that it caused GRPC to re-evaluate their 2030 socio-economic forecasts, which in turn delayed the completion of the plan.

Significant elements of the Plan are shown in **Table 6-1**. The 2030 financially constrained Plan consists of over 274 miles of roadway, intersection and interchange improvements with a cost of over \$1,295 million. There are also over 42 miles and \$158 million of vision needs that are required to fully satisfy the projected demands on the transportation system. Based on the level of historical funding to the Gulf Coast urbanized area, these vision needs may not be met unless significant funding resources are put into place to fund these projects. The total funding needs to meet all of the projected Gulf Coast transportation requirements are over \$1,454 million.

**Table 6-1: Summary of Improvement Needs
Mississippi Gulf Coast Urbanized Area 2030 Transportation Plan**

Time Period	Miles	Cost
Stage I – 2005-2010	55.65	\$205,856,115
Stage II – 2011-2020	103.23	\$516,054,977
Stage III – 2021-2030	115.19	\$573,359,868
Total-Financially Constrained Phases I, II & III	274.07	\$1,295,270,960
Vision Needs	42.61	\$158,812,000

Source: Neel-Schaffer, Inc., November 2006

JACKSON URBANIZED AREA

STUDY AREA

The Jackson Urbanized Area is located in central Mississippi approximately 50 miles east of the Mississippi River. The urbanized area straddles the Pearl River and includes portions of three counties, as shown in **Figure 6-1**:

- the north and east portions of Hinds County;
- Rankin County except for the southeast corner; and
- the south and east portions of Madison County.

The Central Mississippi Planning and Development District (CMPDD) is the MPO responsible for transportation planning in the Jackson urbanized area.

The new 2030 Transportation Plan was created by the development of a new traffic forecasting model in TransCAD. Portions of the model were developed by converting the existing TRANPLAN model that was adopted in 2001. The old study area included the municipalities of Jackson, Clinton, Terry, Pearl, Flowood, Richland, Brandon, Ridgeland, and Madison. Due to growth in the metro area, the study area was expanded to incorporate a greater portion of Madison County to include the cities of Canton and Flora, incorporate more of Hinds county, to include the city of Raymond, and incorporate almost all of Rankin County, except the southeast corner.

GOALS, OBJECTIVES AND CRITERIA

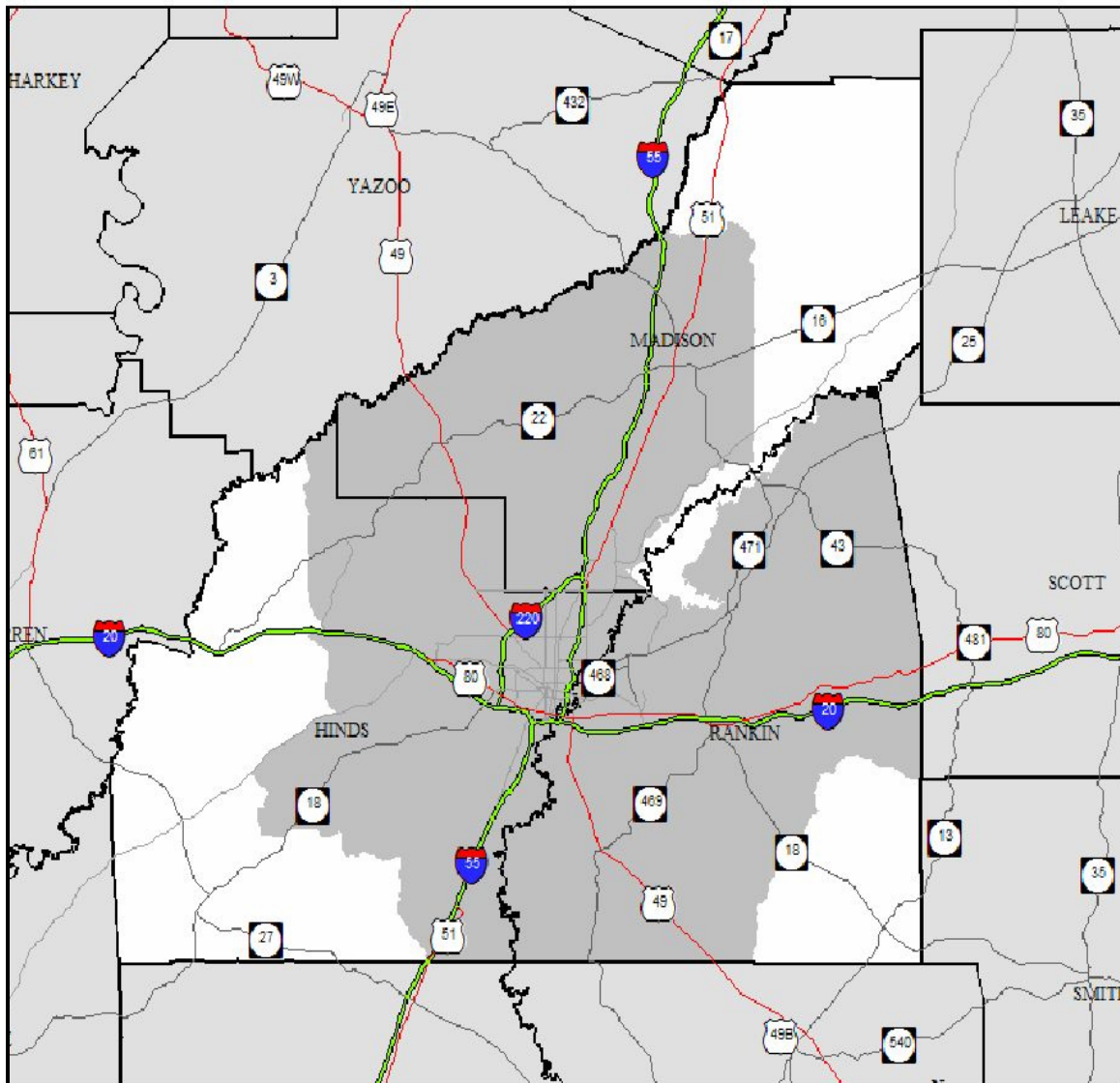
The goals, objectives and criteria defined for the Jackson Urbanized Area 2030 Transportation Plan are listed below.

Goal 1: Enhance transportation system mobility and accessibility for all users, uses and modes

OBJECTIVES:

- Relieve traffic congestion and decrease travel time on Jackson Urbanized Area roadways.
- Optimize the use of available resources by prioritizing potential projects on the basis of their probable effectiveness in relieving congested conditions.
- Expand the availability and attractiveness of public transportation and other ridesharing modes that serve to reduce congestion by increasing average vehicle occupancy.
- Improve regional access to community facilities, recreation sites, shopping outlets, employment centers, hospitals and other medical facilities.
- Enhance the mobility of those who are elderly, physically or mentally impaired or lacking the economic means to take advantage of existing transportation options.
- Facilitate multimodal travel opportunities and intermodal goods movement.

Figure 6-1: Jackson Urbanized Area



CRITERIA:

- Proposed improvement should reduce aggregate vehicle hours of delay.
- Proposed improvement should enhance the level of service on the affected facility (or facilities).
- Proposed facility or service improvement should reduce system access time, increase the frequency and/or duration of service or expand the geographic coverage of operations.
- Proposed improvement should provide better access (reduced travel time and expanded travel opportunities) to locations with high concentrations of public activities.
- Proposed improvement should expand the potential market for a given mode by enhancing accessibility for targeted groups.

- Proposed improvement should provide faster or more direct access to airports, passenger rail stations, bus depots, maritime ports, freight rail or trucking facilities.

Goal 2: Enhance regional connectivity and economic viability

OBJECTIVES:

- Improve mobility between different parts of the Jackson Urbanized Area in order to promote the overall economic sustainability of the region as a whole.
- Optimize the use of available resources by prioritizing potential projects on the basis of their regional significance and potential benefit to the Jackson Urbanized Area as a whole.
- Maximize the economic development potential of transportation system improvements by giving priority consideration to potential projects that would enhance access to employment centers, ports, airports, industrial areas and other locations characterized by the concentration of significant economic activity.
- Increase the potential benefits to be derived from expenditure of scarce public resources by developing projects capable of attracting private-sector investment and broad community support.

CRITERIA:

- Proposed improvement should facilitate travel between Jackson Urbanized Area cities or counties.
- Proposed improvement should enhance the level of service on an arterial roadway or other facility serving multiple jurisdictions.
- Proposed facility or service improvement should reduce travel time between major origins and destinations and provide more direct and unimpeded access to areas of concentrated economic activity.
- Proposed improvement should be capable of eliciting strong support from both the business community and the community as a whole.

Goal 3: Enhance environmental quality and public safety

OBJECTIVES:

- Support emergency evacuation planning efforts by giving priority consideration to proposed transportation system improvements that would facilitate the safe and expeditious removal of people from the area in the event of an impending catastrophe.
- Promote the safety of motorists, pedestrians and bicyclists by giving priority consideration to potential projects that would mitigate existing safety deficiencies.
- Promote the safety of users of non-motorized modes by giving priority consideration to potential roadway or transit projects that would incorporate facilities or meet design standards intended to ensure the safety and well-being of pedestrians and bicyclists.
- Promote the safety of motorists and users of non-motorized modes by supporting the allocation of resources to upgrade grade crossing protection and warning systems on major rail lines in the region.
- Enhance air quality in the region by developing projects that would help reduce mobile-source emissions of pollutants.

CRITERIA:

- Proposed improvement should enhance the capacity or operation of a designated emergency evacuation route.
- Proposed improvement should address a documented safety deficiency manifested by a high accident incidence.
- Proposed facility or service improvement should include design features intended to facilitate safe use by pedestrians and bicyclists.

- Proposed improvement should either reduce the number of at-grade highway-railroad crossings or increase the number of such crossings with automatic gates, warning signals and other protective devices.
- Proposed improvement should reduce aggregate vehicular delay, extended vehicle idling and vehicle miles of travel wherever possible.

Goal 4: Support local values and conserve existing community resources

OBJECTIVES:

- Preserve and make use of existing transportation infrastructure wherever possible by encouraging the development of projects that optimize available system capacity through the application of intelligent transportation system (ITS) techniques and transportation system management (TSM) concepts.
- Ensure that proposed improvements are consistent with local plans, goals, and objectives.
- Support local standards by giving priority consideration to projects that meet community expectations regarding walkability, aesthetic appeal and other quality-of-life issues.
- Support local land use and community planning activities by developing projects that are consistent with access management and traffic-calming strategies for transportation system development.

CRITERIA:

- Proposed improvement should enhance the capacity and operational efficiency of an existing facility or service in order to avoid the necessity of acquiring property to construct a new facility or incurring the cost of implementing new service.
- Proposed improvement should not conflict with local plans, goals and objectives.
- Proposed facility or service improvement should include design features intended to facilitate safe use by pedestrians and harmonious integration into the streetscape.
- Proposed improvement should conform to applicable standards regarding access, speed and related operational considerations.

Goal 5: Provide a transportation planning process that informs and involves the public as well as elected officials

OBJECTIVES:

- Increase public understanding of and involvement in the regional transportation planning process.
- Identify stakeholders and encourage their participation in development of the long-range Regional Transportation Plan.
- Identify and implement appropriate strategies for securing the involvement of groups that have historically been inadequately represented in the process of planning transportation system improvements.

CRITERIA:

- All available means of disseminating information regarding the development of the long-range Regional Transportation Plan should be exploited, including the use of traditional outlets such as print and broadcast news media, public meetings and newsletters, and the adoption of more innovative approaches such as posting information on the Central Mississippi Planning and Development District (CMPDD) website.
- The list of potential stakeholders should be broadly inclusive of all sectors of society and representative of the community as a whole.
- Special efforts should be made to encourage participation in the transportation planning process by members of minority groups and representatives of groups with special transportation needs.

Goal 6: Develop a long-range regional transportation plan that is consistent with all applicable federal, state and local laws

OBJECTIVES:

- Develop a plan that meets the requirements of the U. S. Department of Transportation (Federal Highway Administration and Federal Transit Administration) and the Mississippi Department of Transportation.

CRITERIA:

- The long-range Regional Transportation Plan shall be consistent with all requirements of Chapter 23 of the Code of Federal Regulations, Part 450, and shall address the goals, objectives and criteria identified in Section 450.316.

JACKSON STUDY RESULTS

A road-side origin-destination survey was conducted. This data, together with socio-economic base year data for the year 2000, were used to develop and calibrate a new TransCAD model. Socio-economic variable forecasts for 2030 are shown in **Table 6-2**. Network modifications for constructed and committed projects were then applied to the traffic forecast model to project traffic conditions for the Plan year 2030.

The Intermodal Technical Committee reviewed the updated Plan and on March 23, 2006 agreed to recommend to the Transportation Policy Committee that the Plan be adopted. On March 30, 2006, the Transportation Policy Committee adopted the Plan.

Significant elements of the Plan are shown in **Table 6-3**. The 2030 financially constrained Plan consists of over 281 miles of roadway, intersection and interchange improvements with a cost of over \$1,400 million. There are also some vision needs that are required to fully satisfy the projected demands on the transportation system. Based on the historical funding to the Jackson urbanized area, these needs may not be met unless significant funding resources are put into place to fund these projects.

Details and documentation of the Jackson Urbanized Area 2030 Transportation Plan are contained in a separate document, Volume II, of the MULTIPLAN reports.

**Table 6-2: 2030 Planning Data Forecast
Jackson Urbanized Area 2030 Transportation Plan**

DATA ITEM	YEAR	COUNTY			
		Hinds	Madison	Rankin	Total
Population	2000	235,503	68,335	107,728	411,566
	2030	262,292	129,309	201,931	593,532
	<i>Change</i>	26,789	60,974	94,203	181,966
	<i>Percent Change</i>	11.4	89.2	87.4	44.2
	<i>Percent of Total</i>	44.2	21.8	34.0	100.0
Total Dwelling Units	2000	96,462	27,041	43,739	167,242
	2030	104,940	46,415	74,782	226,137
	<i>Change</i>	8,478	19,374	31,043	58,895
	<i>Percent Change</i>	8.8	71.6	71.0	35.2
	<i>Percent of Total</i>	46.4	20.5	33.1	100.0
Occupied Dwelling Units	2000	87,463	25,605	40,866	153,934
	2030	96,843	44,043	70,074	210,960
	<i>Change</i>	9,380	18,438	29,208	57,026
	<i>Percent Change</i>	10.7	72.0	71.5	37.0
	<i>Percent of Total</i>	45.9	20.9	33.2	100.0
Retail Employment	2000	25,102	4,726	8,700	38,528
	2030	32,774	17,630	32,416	82,820
	<i>Change</i>	7,672	12,904	23,716	44,292
	<i>Percent Change</i>	30.6	273.0	272.6	115.0
	<i>Percent of Total</i>	39.6	21.3	39.1	100.0
Non-Retail Employment	2000	146,780	25,442	44,300	216,522
	2030	148,848	69,222	114,208	332,278
	<i>Change</i>	2,068	43,780	69,908	115,756
	<i>Percent Change</i>	1.4	172.1	157.8	53.5
	<i>Percent of Total</i>	44.8	20.8	34.4	100.0
Total Employment	2000	171,882	30,168	53,000	255,050
	2030	181,622	86,853	146,625	415,100
	<i>Change</i>	9,740	56,685	93,625	160,050
	<i>Percent Change</i>	5.7	187.9	176.7	62.8
	<i>Percent of Total</i>	43.8	20.9	35.3	100.0
School Attendance	2000	71,103	16,285	23,410	110,798
	2030	80,692	31,865	33,542	146,099
	<i>Change</i>	9,589	15,580	10,132	35,301
	<i>Percent Change</i>	13.5	95.7	43.3	31.9
	<i>Percent of Total</i>	55.2	21.8	23.0	100.0
COUNTY					
SUMMARY STATISTIC (2030)		Hinds	Madison	Rankin	Total
Population/Occupied Dwelling Units		2.71	2.94	2.88	2.81
Occupied Dwelling Units/Total DUs		0.92	0.95	0.94	0.93
Retail Employment/Total Employment		0.18	0.20	0.22	0.20
Total Employment/Population		0.69	0.67	0.73	0.70
School Attendance/Population		0.31	0.25	0.17	0.25

Source: Central Mississippi Planning and Development District (2004).

**Table 6-3: Summary of Improvement Needs
Jackson Urbanized Area 2030 Transportation Plan**

Time Period	Miles	Cost
Phase I – 2006-2010	113.87	\$443,722,278
Phase II – 2011-2020	96.19	545,466,548
Phase III – 2021-2030	71.68	411,145,069
Total - Financially Constrained Phases I, II & III	281.74	\$1,400,333,895

Source: Neel-Schaffer, Inc., March 2006

HATTIESBURG – PETAL – FORREST – LAMAR MPO

STUDY AREA

The Hattiesburg Urbanized Area is located in south Mississippi, approximately midway between the Mississippi Gulf Coast and Jackson. The urbanized area straddles the county lines of Lamar and Forrest counties. The study area includes:

- the western portion of Forrest County;
- the eastern portion of Lamar County; and
- the municipalities of Hattiesburg and Petal.

The MPO consists of representatives from the cities of Hattiesburg and Petal and the counties of Forrest and Lamar. The last Plan developed for this area was completed and adopted on November 28, 2001. At that time, no computerized traffic forecasting model was developed for this urbanized area.

GOALS AND OBJECTIVES

One of the initial tasks undertaken in association with the development of this Metropolitan Transportation Plan (MTP) was the formulation of a set of goals and objectives that could be utilized to provide a framework for undertaking the required analysis. The goals and objectives are also used as guidance in preparing and evaluating potential improvements to the transportation network.

The overall transportation goal is to provide a transportation system which will accommodate present and future needs for mobility of all people and goods traveling within and through the Study Area. In addition, the transportation system must be safe, efficient, economically feasible, and, in harmony with the character of the area. To ensure that the recommended transportation plan meets the desires of the area, the MTP established the following objectives.

The transportation system should:

- Meet the Hattiesburg Study Area’s long-range transportation needs.
- Be planned as a unified system of roadways based on function and relative importance, providing a proper balance of freeways, arterials, collectors, and local streets.
- Encourage and accommodate through traffic on the classified street system (i.e., freeways, expressways, and arterials) and discourage it on collectors and local neighborhood streets.
- Provide access among all developed areas of the Study Area.
- Improve overall accessibility to employment, education, public facilities, the central business districts, and other major activity centers.
- Make maximum use of existing highway and street facilities.
- Provide for a high degree of safety for both motorists and pedestrians.
- Provide for an orderly improvement and expansion of the roadway system at minimum cost as the need for improvement arises.
- Minimize disruption of existing and planned developments and established community patterns.
- Reduce air pollution, noise, and other environmental impacts associated with transportation improvements and new facility construction.

The Metropolitan Transportation Plan should:

- Be viewed as a document that requires periodic updating and revision.
- Incorporate sufficient flexibility to accommodate changes in land use planning for the Study Area, and other unforeseen changes and conditions.
- Consider development potentials within and beyond the projected limits of the urbanized area to the year 2030.

Continuing transportation planning activities should:

- Be performed within the framework of comprehensive regional planning
- Support regional growth and development goals, and
- Provide continuity and coordination between governmental jurisdictions.

HATTIESBURG – PETAL – FORREST – LAMAR MPO STUDY RESULTS

The 2030 Plan was created by the development of a new traffic forecasting model in TransCAD. A road-side origin-destination survey was conducted. Socio-economic base year data for the year 2000 was used to develop and calibrate the TransCAD model. Socio-economic variable forecasts from the new future land use plan developed in Phase I of the study were developed and are summarized in **Table 6-4**. Network modifications for constructed and committed projects were applied to the TransCAD traffic forecast model to project traffic conditions for the Plan year 2030.

**Table 6-4: Demographic Data Forecast 2000 - 2030
Hattiesburg Urbanized Area 2030 Transportation Plan**

Year	Population	Occupied Dwelling Units	Total Employment	Retail Employment	School Attendance
2000	91,125	35,683	46,480	10,996	27,376
Change	13,376	5,147	3,948	3,948	4,948
%	14.7%	14.4%	8.5%	35.9%	18.1%
2010	104,501	40,830	50,428	14,944	32,324
Change	11,494	4,273	17,492	2,840	4,317
%	11.0%	10.5%	34.7%	19.0%	13.4%
2020	115,995	45,103	67,920	17,784	36,641
Change	11,730	4,220	10,775	3,268	2,842
%	10.1%	9.4%	15.9%	18.4%	7.8%
2030	127,725	49,323	78,695	21,052	39,483
30 yr %	40.2%	38.2%	69.3%	91.5%	44.2%

Significant elements of the Plan are shown in **Table 6-5**. The 2030 financially constrained Plan consists of over 123 miles of roadway, intersection and interchange improvements with a cost of over \$495 million. There are also 43 miles and \$353 million of vision needs that are required to fully satisfy the projected demands on the transportation system. Based on the historical funding to the Hattiesburg urbanized area, these needs may not be met unless significant funding resources are put into place to fund these projects. The total funding needs to meet all of the projected Hattiesburg urbanized area transportation requirements are over \$848 million.

**Table 6-5: Summary of Improvement Needs
Hattiesburg Urbanized Area 2030 Transportation Plan**

Time Period	Miles	Cost
Phase I – 2006-2010	51.8	\$160,835,000
Phase II – 2011-2020	36.9	\$186,950,000
Phase III – 2021-2030	35.1	\$147,500,000
Total - Financially Constrained Phases I, II & III	123.8	\$495,285,000
Vision Needs	43.0	\$353,000,000

Source: Neel-Schaffer, Inc., November 2006

DESOTO COUNTY/MEMPHIS MPO PLAN

The transportation plan for the DeSoto County urbanized area of Mississippi falls under the responsibility of the Memphis MPO, Memphis-Shelby County Office of Planning and Development (MSCOPD), in cooperation with the DeSoto County Planning Commission (DCPC). At the time of this writing, the MSCOPD has fallen behind the anticipated schedule for developing the model and the Plan update. There has been insufficient opportunity to provide DCPC with the anticipated technical support in the review of the Mississippi portion of the Memphis area plan.