



6 Financial Analysis

6 Financial Analysis and Fiscal Constraint

According to federal regulations, transportation improvement projects included in a metropolitan transportation plan (MTP) must fall within the financial capabilities of the community. The final project list included in the MTP must therefore be fiscally constrained – i.e., the amount of revenues available for projects must be greater than or equal to the anticipated cost of the projects.

This chapter includes a list of funding sources and dollar amounts anticipated to be available to fund projects included in the Monroe Urbanized Area 2040 MTP. It also outlines the process by which historic trends in funding were assessed and funding levels were forecast to determine the amount of funds available.

Because federal regulations stipulate that the financial forecasts take into account the change in value of the dollar due to inflation, revenues and costs discussed in this chapter were calculated in year-of-receipt and year-of-expenditure dollars, respectively.

Calculating Revenues

Roadway Revenues

The following section describes the state and federal funding sources available for roadway projects, as well as several local programs that can be used to fund local roadway projects.

Potential Federal and State Funding Sources

MAP-21

MAP-21 authorized the Federal Surface Transportation Programs for highways, highway safety, and transit for the two-year period 2013-2014 and has been extended by continuing resolution by the United States Congress since then.

MAP-21 provided a total funding of \$105 billion nationally for the original two year period, and the current apportionment for 2015 is \$37.8 billion. This legislation includes several categories of funding, under which many of the projects in the financially constrained plan will be eligible for federal funding assistance. These categories are:

National Highway System (NHS)

This category covers all Interstate routes and a large percentage of urban principal arterials. The federal/state funding ratio for arterial routes is 80/20, while the Interstate system, although a part of NHS, receives separate funding at a 90/10 ratio.

Surface Transportation Program (STP)

The STP is a block grant funding program with subcategories for states and urban areas.

These funds can be used for any road, including an NHS roadway, which is not functionally classified as a local road or rural minor collector. The state portion can be used on roads within an urbanized area and the urban portion can only be used on roads within an urbanized area. The funding ratio is 80/20.

Subcategories of the STP funds are:

- STP greater than 200,000 population (STP>200K)
- STP less than 200,000 population (STP<200K)
- STP less than 5,000 population (STP <5K)
- STP Flexible (STP-FLEX)
- STP Hazard Elimination (STP-HAZ)
- STP Enhancement (STP-ENH)

Bridge Replacement and Rehabilitation Program (FBR)

These funds can be used to replace or repair any bridge on a public road. The federal/state funding ratio is 80/20.

Congestion Mitigation and Air Quality (CMAQ)

Urban areas which do not meet ambient air quality standards are designated as nonattainment areas by the U.S. Environmental Protection Agency (USEPA). These funds are apportioned to those urban areas for use on projects that contribute to the reduction of mobile source air pollution through reducing vehicle miles traveled, fuel consumption, or other identifiable factors. Starting in FY 2013 all CMAQ projects will require a 20% local match, with the exception of carpool & vanpool projects, which will remain 100% federal. Because the Monroe Urbanized Area is an attainment area, projects in the MTP are not eligible for CMAQ funds.

Potential Local Funding Sources

Any costs not covered by federal and state programs will be the responsibility of the local governmental jurisdictions. Local funding can come from a variety of sources including property taxes, sales taxes, user fees, special assessments, and impact fees.

Each of these potential sources is important and warrants further discussion.

Property Taxes

Property taxation has historically been the primary source of revenue for local governments in the United States. Property taxes account for more than 80 percent of all local tax revenues. Property is not subject to federal government taxation, and state governments have, in recent years, shown an increasing willingness to leave this important source of funding to local governments.

General Sales Taxes

The general sales and use tax is also an important revenue source for local governments. The most commonly known form of the general sales tax is the retail sales tax. The retail sales tax is imposed on a wide range of commodities, and the rate is usually a uniform percentage of the selling price.

User Fees

User fees are fees collected from those who utilize a service or facility. The fees are collected to pay for the cost of a facility, finance the cost of operations, and/or generate revenue for other uses. User fees are commonly charged for public parks, water and sewer services, transit systems, and solid waste facilities. The theory behind the user fee is that those who directly benefit from these public services pay for the costs.

Special Assessments

Special assessment is a method of generating funds for public improvements, whereby the cost of a public improvement is collected from those who directly benefit from the improvement. In many instances, new streets are financed by special assessment. The owners of property located adjacent to the new streets are assessed a portion of the cost of the new streets, based on the amount of frontage they own along the new streets.

Special assessments have also been used to generate funds for general improvements within special

districts, such as central business districts. In some cases, these assessments are paid over a period of time, rather than as a lump sum payment.

Impact Fees

Development impact fees have been generally well received in other states and municipalities in the United States. New developments create increased traffic volumes on the streets around them, and development impact fees are a way of attempting to place a portion of the burden of funding improvements on developers who are creating or adding to the need for improvements.

Bond Issues

Property tax and sales tax funds can be used on a pay-as-you-go basis, or the revenues from them can be used to pay off general obligation or revenue bonds. These bonds are issued by local governments upon approval of the voting public.



System Maintenance and Operation

The maintenance and operation of the transportation system was considered in the development of the 2040 MTP and staged program. Typically, maintenance costs are applicable to the system as a whole. Where possible, maintenance projects are identified individually. However, it is not possible to develop project specific maintenance schedules

beyond the near term. The maintenance costs identified in this plan are the responsibility of various governmental jurisdictions.

The balancing act of meeting identified transportation improvement needs and maintaining the present transportation system will continue to place local decision makers and revenue forecasts somewhat at odds. Recommendations in this plan are conservative because they factor in the impact of maintenance costs in the determination of available funding.

A variety of both federal and state funds are used to implement the statewide overlay, maintenance, and operations program. This includes Surface Transportation Funds, National Highway System Funds, General Louisiana Trust Fund monies, and State of Louisiana general funds.



Historical Funding for Roadway Projects

In order to determine the financial feasibility of implementing a program of projects in the MTP, an analysis of historical funding was conducted. A database of project lettings in the Monroe Urbanized Area from 1990 through 2014 was obtained from the LADOTD. These databases contain all sources of state and federal funding. The LADOTD database also contains both recurring and non-recurring funds. In order to estimate the expected future revenues, the non-recurring funds were excluded from each year's total historical revenue.

In the next step, the projects were grouped by year. To estimate the cost of historical projects in 2014 dollars, an average annual Consumer Price Index (CPI) factor was calculated using the historical South Urban Areas CPI factors that are shown in Table 6-1.

Table 6-1: Historical State and Federal Funding (1990-2014)

Year	Real Dollars	CPI Factor	2014 Dollars
1990	\$6,324,964	1.803	\$11,401,354
1991	\$18,949,847	1.735	\$32,873,778
1992	\$5,666,150	1.689	\$9,570,273
1993	\$2,596,127	1.637	\$4,251,010
1994	\$16,599,815	1.593	\$26,448,656
1995	\$9,900,740	1.547	\$15,319,701
1996	\$12,306,612	1.501	\$18,472,096
1997	\$2,162,906	1.469	\$3,178,217
1998	\$20,089,073	1.451	\$29,147,740
1999	\$27,594,737	1.423	\$39,271,740
2000	\$15,337,723	1.379	\$21,149,179
2001	\$1,512,624	1.347	\$2,038,214
2002	\$1,042,956	1.330	\$1,387,511
2003	\$18,226,052	1.300	\$23,700,241
2004	\$26,354,234	1.268	\$33,421,460
2005	\$55,959,473	1.224	\$68,516,030
2006	\$5,168,702	1.184	\$6,120,465
2007	\$37,605,735	1.151	\$43,272,281
2008	\$22,777,176	1.105	\$25,164,358
2009	\$9,305,374	1.109	\$10,321,983
2010	\$37,904,074	1.091	\$41,350,160
2011	\$9,544,686	1.055	\$10,065,715
2012	\$7,615,167	1.033	\$7,864,524
2013	\$43,387,502	1.017	\$44,124,726
2014	\$48,794,281	1.000	\$48,794,281

Source: LADOTD

The historical funding database was used to aggregate all of the state and federal funded projects from 1990 through 2014 by funding source.

Forecast Roadway Funding Availability

The feasibility of the financially constrained plan can be assessed by comparing the estimated cost of the programmed improvements to the projected funds available from various funding sources. Recurring funding was projected by analyzing historical data on expenditures for roadway construction in the study area.

Historical information obtained from the LADOTD indicates that on average, in the last 10 years, contracts totaling \$30.6 million per year in 2014 dollars have been let for construction and maintenance of the transportation infrastructure within Ouachita Parish. This amount was then used to forecast the funding to 2040.

An inflation factor of one (1) percent per year was then applied to the \$30.6 million to forecast the annual availability of funds through 2040, resulting in the total state and federal funds forecast to be available over the life of the Financially Constrained Plan will be approximately \$889 million.

Financially Constrained Plan

The annual forecast amounts were aggregated to the three time periods of the MTP resulting in the following levels (Table 6-2) of state and federal funding to be available for each Stage.

Table 6-2: Roadway Funding Forecast by Stage

Stage	Amount
Stage I (2016-2020)	\$160,607,358
Stage II (2021-2030)	\$346,210,388
Stage III (2031-2040)	\$382,431,655
Total	\$889,249,400

Transit Revenues

Transit Funding Sources

Transit providers in the study area are funded through a combination of federal, state, and local sources. Aside from local funding, the Federal Transit Administration (FTA) administers the primary funding programs utilized by transit providers in the study area. Of these programs, the Section 5307 Urbanized Area Formula program is the largest source of funding. Other FTA funding programs are more limited in nature.

Potential Funding Sources - Federal

Section 5307 (Urbanized Area Formula Program)

This formula-based program (49 U.S.C. 5307) provides capital, operating, and planning funding to urbanized areas, or urban areas with a population of 50,000 or more, as designated by the U.S. Department of Commerce, Bureau of the Census. For urbanized areas under 200,000 in population, such as the Monroe Urbanized Area, the Section 5307 formula apportionments are based on the urbanized area population, population density, number of low-income individuals, and level of service provided.

Section 5311 (Formula Grants for Rural Areas)

This formula-based program (49 U.S.C. 5311) provides states and tribal governments with funding for administration, capital, planning, and operating assistance to support public transportation in rural areas, defined as areas with fewer than 50,000 residents. There are set asides within this program for the Intercity Bus Program, the Rural Transit Assistance Program (RTAP), Public Transportation on Indian Reservations, and the Appalachian Development Public Transportation Program.



Section 5310 (Enhanced Mobility of Seniors and Individuals with Disabilities)

This formula-based program (49 U.S.C. 5310) provides both operating and capital funding to states and designated recipients to serve the special needs of transit-dependent populations beyond traditional public transportation services and Americans with Disabilities Act (ADA) complementary paratransit services. This program is intended to enhance mobility for seniors and persons with disabilities.

Section 5339 (Bus and Bus Facilities)

This formula-based program (49 U.S.C. 5339) provides capital funding to states and designated recipients to replace, rehabilitate, and purchase buses, vans, and related equipment, and to construct bus-related facilities.

Other FTA Formula Grants and Discretionary Grants

There are several other FTA grant programs with funding available. Most of these grant programs are focused on fixed guideway systems or on temporary assistance.

Flexible Federal Funding Sources

Funding from the National Highway Performance Program (NHPP), the Surface Transportation Program (STP), and Transportation Alternatives Program (TAP) can be “flexed” to transit projects, with certain eligibility restrictions depending on the funding source.

Potential Funding Sources – State

The state of Louisiana provides state transit funding to urban parishes through the Parish Transportation Program. This program is funded by the Transportation Trust Fund, which is in turn funded by state fuel taxes. All of the state transit funds appropriated under the Parish Transportation Program to Ouachita Parish are distributed to the City of Monroe.

The state of Louisiana also uses funding from the Transportation Trust Fund for capital acquisition for the transit providers operating under 49 U.S.C. 5310 and 5311.

Potential Funding Sources – Local

Local funding sources include all of the same potential sources as local roadway revenue, outlined previously. Fare revenue, a user fee, is an important but relatively small local funding source.

There is no local dedicated transit funding source for Monroe Transit. Transfers from the City’s general fund are used to supplement federal and state funding and fare revenue. Similarly, local funding for the other transit providers also come from their own budgets.



Historical Funding for Transit Projects

Historical data was gathered from the LADOTD and National Transit Database regarding federal and state transit funding.

For federal funding sources, historical funding for FTA’s Section 5307, Section 5311, and Section 5310 funding programs were obtained from LADOTD and Monroe Transit for the most recent five years for which data was available. While other recurring and non-recurring federal funding sources are available, these three programs represent all federal funding that can reasonably be anticipated to be available to transit providers in the study area over the next 25 years. Historical revenues from each of these three programs are shown by year in Table 6-3. Figures in this table have been adjusted so that all values are in 2015 dollars, using the CPI for South Urban Consumers.

For state funding sources, historical state funding was obtained for Monroe Transit for the most recent five years with data available through the National Transit Database. The agency has received an average of \$262,682 (in 2015 dollars) per year. The National Transit Database does not provide data for other providers in the region, and although the West Ouachita Senior Center is included in the database, it did not receive any federal funds during the time period.

Table 6-3: Historical Federal Transit Funding (2011-2015) in 2015 Dollars

Funding Year	Monroe Transit (Section 5307)*	West Ouachita Senior Center (Section 5311)	Ouachita ARC (Section 5310)	Ouachita Council on Aging (Section 5310)
2011	\$1,402,216	\$65,491	\$0	\$0
2012	\$1,377,906	\$70,318	\$34,349	\$50,294
2013	\$1,113,488	\$78,533	\$65,848	\$91,057
2014	\$1,114,894	\$84,264	\$0	\$0
2015	\$1,150,000	\$97,649	\$0	\$0
Annual Average	\$1,231,701	\$79,251	\$20,039	\$28,270

Source: LADOTD, *Represents Section 5307 Operating Funding (no capital funding)

Forecast Transit Funding Availability

After the CPI for South Urban Consumers was used to convert the historical yearly federal and state funding amounts to 2015 dollars, an annual average was calculated. This resulted in annual funding levels of \$1,231,701 from Section 5307 (operating); \$79,251 from Section 5311; \$48,309 from Section 5310; and \$262,682 from the state. These figures were checked against funding estimates from the adopted 2014-2019 TIP and adjusted where necessary. Estimates for capital and local funding were also generated based on amounts reflected in the TIP as well as programmatic local match requirements for each of the different federal programs.

It is assumed that local funding will continue to be available to match and supplement federal funds as needed. The annual averages for all funding sources, in 2015 dollars, were then projected to the future years using an inflation rate of one (1) percent.

Financially Constrained Plan

The year-of-expenditure annual amounts were then aggregated to the three time periods of the MTP resulting in the following federal and state transit funding anticipated to be available for each Stage shown in Table 6-4.

Table 6-4: Transit Funding Forecast by Stage

Stage	Federal			State of Louisiana	Local Funds	Total
	Section 5307*	Section 5311	Section 5310			
Stage I (2016-2020)	\$10,293,726	\$360,641	\$1,897,333	\$1,353,342	\$11,564,046	\$25,469,087
Stage II (2021-2030)	\$22,189,487	\$777,409	\$4,089,951	\$2,917,307	\$24,927,829	\$54,901,983
Stage III (2031-2040)	\$24,510,998	\$858,744	\$4,517,851	\$3,222,522	\$27,535,831	\$60,645,946
Total	\$56,994,212	\$1,996,794	\$10,505,134	\$7,493,171	\$64,027,705	\$141,017,017

*Includes operating and capital funds

Calculating Costs

Federal regulations define “total project cost” for the purpose of estimating fiscal constraint in the MTP to include:

- Planning elements (e.g. environmental studies and functional studies);
- Engineering costs (e.g. preliminary engineering and design);
- Preconstruction activities (e.g. ROW acquisition);
- Construction activities; and
- Contingencies.

The following assumptions helped guide the development of cost estimates for the proposed projects in the MTP as well as the maintenance and operation of the existing transportation system.

1. Because federal regulations do not require that the cost of maintenance and operations activities be computed for individual projects, the funding needed for maintenance and operation of the transportation infrastructure was estimated on a system-wide level.
2. Whenever a detailed engineering estimate for a particular project was not available, generalized planning-level cost figures were used to assess the cost of each of the project’s elements. These generalized cost figures were based on estimates provided by LADOTD and other available resources.
3. Transit costs reflect the amount of available funding throughout the forecast period, due to the fiscally constrained nature of transit operations.
4. Transit project costs were calculated using an annual inflation rate of 1% based on LADOTD guidance.

Table 6-5 shows the typical planning-level improvement costs for different types of transportation improvements based on estimates provided by LADOTD and the City of Monroe. In addition to construction costs, these figures include planning-level engineering, right-of-way, and utility cost estimates. These non-construction costs can vary significantly on a location- and project-specific basis.

Table 6-5: Typical Project Costs by Improvement Type

Improvement	Average Cost	Unit
New 4 Lane Freeway	\$16,650,000	Mile
New 2 Lane Roadway	\$5,200,000	Mile
New 4 Lane Arterial	\$9,400,000	Mile
Interstate Widening	\$9,500,000	Mile
Interstate Rehab	\$2,000,000	Mile
Arterial Widening	\$3,500,000	Mile
Center Turn Lane	\$3,150,000	Mile
Reconstruction	\$2,000,000	Mile
Overlay	\$700,000	Mile
ITS	\$800,000	Mile
New Bridge	\$3,300,000	Each
Bridge Replacement	\$2,000,000	Each
RR Crossing	\$200,000	Each
Intersection Improvement	\$850,000	Each
Interchange Improvement	\$5,750,000	Each
New Interchange	\$23,000,000	Each
Underpass	\$10,500,000	Each
RR Overpass	\$6,250,000	Each
Roundabout	\$1,000,000	Each

Both typical improvement costs and local knowledge of other project costs were used to develop cost estimates for the projects considered for the MTP. In keeping with federal regulations, cost estimates were computed in year-of-expenditure (YOE) dollars using the inflation factors outlined above in accordance with FHWA and LADOTD guidance for project costs. Table 6-6 displays the aggregate total estimated project costs for each time period addressed by the MTP. Each time period figure accounts for general system maintenance and operation costs. The complete list of projects considered for inclusion in the MTP, along with estimated YOE costs, can be found in Chapter 7.

Table 6-6: 2040 Cost Forecast (All Projects)

	Roadway	Transit	Total
Stage I	\$160,607,162	\$25,469,087	\$186,076,249
Stage II	\$346,252,493	\$54,901,983	\$401,154,476
Stage III	\$382,365,385	\$60,645,946	\$443,011,331
Total	\$889,225,041	\$141,017,017	\$1,030,242,058

Constraining the Plan

The anticipated total program revenue for both highway and transit is expected to be roughly \$1.03 billion over the 25-year planning horizon of the MTP. Total program costs are estimated to be about \$1.03 billion in YOE dollars. Because the total program revenue is expected to be greater than program costs, the Monroe Urbanized Area 2040 Metropolitan Transportation Plan is fiscally constrained.

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