



Revenue Gap

The primary focus of [MI Transportation Plan](#) is on the parts of the transportation system that the Michigan Department of Transportation (MDOT) has jurisdiction over; provides funding for; or regulates. The purpose of this white paper is to update the needs, revenues, and resource gaps facing Michigan's transportation system under MDOT.

The statewide long-term transportation needs for the department were split into eight categories:

1. Aviation - Preservation and modest expansion of aviation facilities;
2. Freight - Preservation and modest expansion of rail and marine facilities, as well as investment in preserving and modernizing roadway infrastructure to support safe and efficient goods movement;
3. Highway Expansion - New capacity on trunkline facilities; New roads;
4. Highway Other - Miscellaneous capital improvements to trunkline facilities such as electrical, drainage, etc.;
5. Highway Preservation - Maintenance, rehabilitation, resurfacing, and replacement of pavements and bridges;
6. Highway Modernization - Safety and operational improvements, such as Intelligent Transportation Systems and signalization coordination;
7. Multi-modal Preservation - Sustaining current bus and rail transit operations and infrastructure, carpool, and bike/pedestrian facilities;
8. Multi-modal Expansion - Adding new capital to bus transit and rail passenger facilities, expanding transit and rail passenger service, carpool lots, and bike/pedestrian facilities.

This paper provides a forward looking assessment of state transportation revenues, needs, and gaps under MDOT's current revenue and investment trends. It delineates the state's transportation needs against the available revenues based on trends in the growth of revenues and on how transportation programs are currently funded over the 24-year life of *2035 MI Transportation Plan*.

Revenue Analyses

Transportation revenues available to the department over the 24-year plan are consistent with the numbers from the [Finance White Paper](#).

This forecasted revenue is grouped into four transportation programs based on the overall structure of MDOT's annual appropriations (legislation). Table 1 provides the 2012 base dollars, escalation rate, and the revenues available for the four programs. The escalation rate was applied to the 2012 base dollar and then brought back to 2012 dollars, using the discount rate of 2.3 percent.



Table 1: Assumptions of Gross Revenues, by Program (In Millions of 2012 Dollars)

<i>Fund</i>	<i>2012 Base</i>	<i>Escalation Rate</i>	<i>2012 – 2035</i>
Highway Program*	Federal: \$760.0	Federal: 2.6%	*\$18,334.1
	State: \$730.9	State: 2.3%	*\$16,320.2
Transit Program	Federal: \$31.2	Federal: 4.3%	\$917.3
	State: \$194.5	State: 1.7%	\$4,531.8
Intercity and Freight Program	Federal: \$2.6	Federal: 4.3%	\$76.4
	State: \$16.3	State: 1.7%	\$352.2
Aviation Program	Federal: \$94.1	Federal: 0.0%	\$1,791.0
	State: \$7.3	State: 3.9%	\$219.5

*Revenue for non-capital uses included

The revenues available from the four programs were added together to get the total revenues available for the plan. The highway program required three deductions (debt service, non-capital uses, and routine maintenance) and one additional revenue source of bond proceeds. All are shown in Table 2. Similar deductions were not needed for the other three programs. For the other three programs, bond proceeds and revenues dedicated to debt service are not included in Tables 1 or 2. Also, revenues dedicated to maintenance and operations are included in both Tables 1 and 2, since operations and maintenance are essential parts of providing these programs. The federal and state highway program revenues were escalated using 2.6 percent and 2.3 percent, respectively, which are based on the trend of historical revenues available to the State Trunkline Fund. This estimate encompasses growth due to economic activities and the built-in traditional fuel and vehicle tax increases that have occurred at both state and federal levels over the historical 20-year timeframe.

Table 2: Total Funds Available, by Program (In Millions of 2012 Dollars)

<i>Fund</i>	<i>2012 -2035 Revenues</i>	<i>2012 – 2035 Adjustments</i>	<i>2012 – 2035 Available</i>
Highway Program	Federal: \$18,334.1	+\$2,800.5 Bond Proceeds	\$21,003.7
	State: \$16,320.2	-\$10,600.6 Non-capital Uses	
		-\$5,850.5 Routine Maintenance	
	Total: \$34,654.3	-\$13,650.6 Total Adjustments	
Transit Program	Federal: \$917.3	None	\$5,449.1
	State: \$4,531.8		
	Total: \$5,449.1		
Intercity and Freight Program	Federal: \$76.4	None	\$428.6
	State: \$352.2		
	Total: \$428.6		
Aviation Program	Federal: \$1,791.0	None	\$2,010.5
	State: \$219.5		
	Total: \$2,010.5		
Total	\$42,542.5	-\$13,650.6	\$28,891.9



In the original [*Revenue Gap and Investment Packages Technical Report*](#), detailed information is provided to show how the revenues in the four programs above (in Tables 1 and 2) are distributed to a series of need categories. The need categories were then rolled up to nine overall categories as listed in Table 3. The distribution of revenues is applied to each category assuming continuation of current program emphasis.

Needs Analyses

MDOT’s State Long-Range Transportation Plan 2005-2030 *Revenue Gap and Investment Packages Report* estimated transportation needs in Michigan at \$81.3 billion (base year 2005 dollars). This white paper grew those needs to reflect 2012 dollars using the Bureau of Labor Statistics Inflation Calculator as of March 8, 2011 (1.178). The new estimate of state transportation needs is \$95.6 billion (base year 2012 dollars) over the life of the plan. The distribution of these needs by categories is shown in Figure 1.

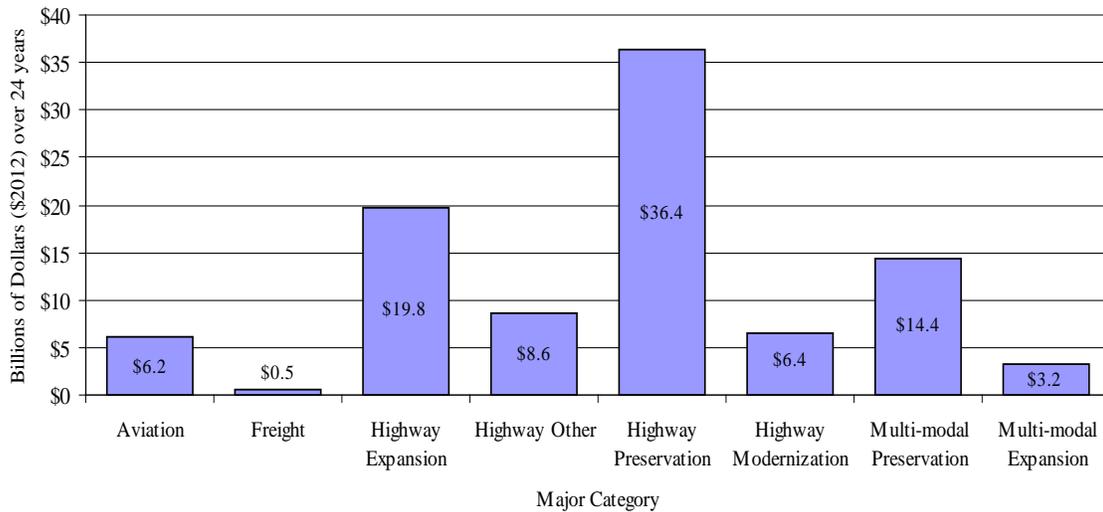
The categories represent groups of state transportation programs. These categories are mutually supporting. For example, programs explicitly supporting goods movement through ports and marine infrastructure comprise the freight category. However, the investments in Highway Preservation, Highway Expansion, and Highway Modernization also represent a significant investment in goods movement supported by programs with broader reach than freight alone. In a similar way, the freight category, which includes needs associated with rail freight, addresses only the state-owned rail system, which is a small part of the rail system in Michigan. The privately-held rail industry is also likely to invest millions in the private system over the 24-year plan time frame in ways beyond the scope of the public investment quantified in *MITP*.

Among the categories, highway preservation has the highest need of \$36.4 billion. Freight has the lowest need of \$0.5 billion over the life of the plan. The total 24-year needs for Michigan’s entire transportation system is \$95.6 billion (in 2012 dollars). A breakdown of the needs by category is shown in the following table and graph.

Table 3: Summary of Need by Category
(in Millions of 2012 Dollars, over 24 years)

Category	Needs
Aviation	\$6,216.6
Freight	\$543.9
Highway Expansion	\$19,805.8
Highway Other	\$8,600.8
Highway Preservation	\$36,428.8
Highway Modernization	\$6,422.1
Multi-modal Preservation	\$14,390.5
Multi-modal Expansion	\$3,200.7
Total	\$95,609.3

Figure 1:
Statewide Long-Term Transportation Needs, by Major Category



Revenue Gap Analyses

The revenue gaps are simply the difference between the available revenues and needs over 24 years, all expressed in 2012 dollars. The revenue gap over 24 years (in 2012 dollars) is \$66.7 billion.

Table 4 and Figure 2 show these gaps grouped into the eight categories to provide a better look at the big picture. Over the 24-year plan (2012-2035), the state has a significant gap in transportation revenues, compared to transportation needs. The revenues available (in 2012 dollars), are estimated at only \$28.9 billion. The needs are estimated at \$95.6 billion, which leaves a revenue gap of approximately \$66.7 billion.

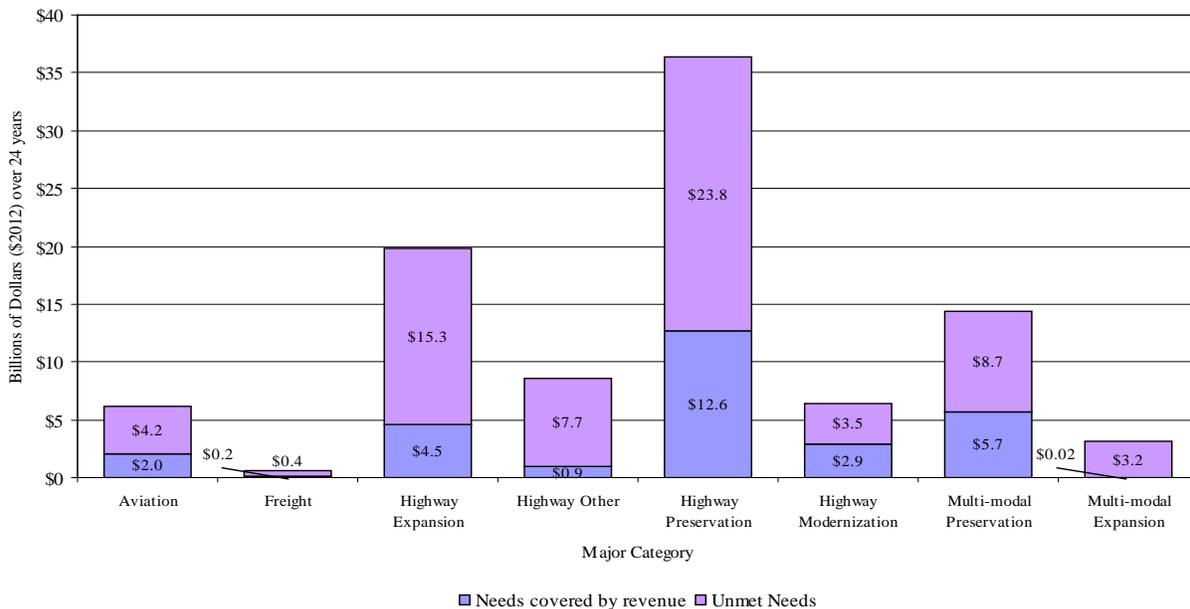


Table 4: Summary of Gap by Category (in Millions of 2012 Dollars, over 24 years)

<i>Category</i>	<i>Needs</i>	<i>Revenues</i>	<i>Gaps</i>	<i>% of needs in category met</i>	<i>% of gap</i>
Aviation	\$6,216.6	\$2,010.5	\$4,206.1	32.3%	6.3%
Freight	\$543.9	\$169.6	\$374.3	31.2%	0.6%
Highway Expansion	\$19,805.8	\$4,536.6	\$15,269.2	22.9%	22.9%
Highway Other	\$8,600.8	\$945.6	\$7,655.2	11.0%	11.5%
Highway Preservation	\$36,428.8	\$12,645.8	\$23,783.0	34.7%	35.6%
Highway Modernization	\$6,422.1	\$2,875.7	\$3,546.5	44.8%	5.3%
Multi-modal Preservation	\$14,390.5	\$5,688.1	\$8,702.4	39.5%	13.0%
Multi-modal Expansion	\$3,200.7	\$20.0	\$3,180.8	0.6%	4.8%
Total	\$95,609.3	\$28,891.9	\$66,717.4	30.2%	100.0%

Highway preservation has the greatest need (\$36.4 billion) and the greatest gap (\$23.8 billion). Multi-modal expansion has the lowest percentage of its needs covered by multi-modal revenues (0.6%).

Figure 2:
Revenue Gap, by Major Category





Conclusion

This white paper update of the *Revenue Gap and Investment Packages Technical Report* is offered as a reference for understanding the shortfall in funding available for Michigan's transportation system. The findings highlight the estimated revenue, needs, and funding gap Michigan is facing over the 2012-2035 time period if additional transportation funding is not realized.

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