



## Chapter 7: Project Evaluation & Fiscal Constraint

The MTP is required to be fiscally balanced, meaning the projects identified must be financially feasible based on estimated project costs and forecasted revenue through 2040. This chapter describes the assumptions used for estimating project costs, and then summarizes the revenue sources used in forecasting the amount of transportation funding that will be available in the future.

Because the plan must be fiscally balanced, all of the candidate projects cannot be included, due to the cost being greater than the forecasted revenues. To help determine which projects will best help advance the regional transportation goals and therefore should be included in the MTP, project evaluation criteria were developed and a selection process put in place. This chapter also describes the selection process used to identify projects to be included in that plan that will both advance the transportation goals and be financially feasible.



## 7.1 Project Cost Estimates

An estimate of the cost of the proposed projects is necessary to determine the number of projects that could be funded within the MTP horizon year of 2040. For projects that are included in the TIP or other special studies, individual project-specific costs are readily available and these are incorporated. Where the project-specific costs are not readily available, a generic project cost estimating procedure is used. This generic cost estimating methodology is based on the prevailing unit cost estimates from "Budget Estimating Guidelines" prepared by the ODOT Office of Estimating, and uses the unit costs of different types of roadway work based on ODOT's let projects. The unit costs are developed to be in 2015 dollars.

Projects in the MTP are classified into the following primary types:

### Freeway-Related

- New Freeway - The construction of a new limited access freeway where none previously existed.
- Convert to Freeway – The conversion of an existing roadway (typically a divided 4- or more lane expressway) to a full limited access freeway.
- Major Freeway Widening – The addition of one or more lanes in each direction along an existing freeway.
- New interchange – The construction of an interchange where none existed. It could be to replace an existing at-grade intersection along an expressway or a new access point on a freeway.
- Interchange Modification – Modification to an existing interchange to provide for additional capacity.
- Lane Management – Involves inclusion of technology to manage travel lanes along a freeway corridor, which would allow the use of shoulders for vehicles during higher volume periods of the day.

### Non-Freeway Roadways

- Major Surface Street Widening – Typically involves the addition of one or more travel lanes in each direction.
- Minor Widening - Typically involves the addition of a continuous center turn and/or the addition of turn lanes at a series of intersections along a corridor.
- New Roadway – The construction of a new road where none existed previously.
- New Bridge – Typically isolated locations for which only a new bridge is needed and not related roadwork. Could be for vehicle use or a railroad bridge.
- Intersection Modification – Typically involves the addition modification of an existing isolated intersection to add turn lanes and/or signals or construct a roundabout to provide more capacity.

The projects included in the MTP must be cost-feasible based on cost estimates and revenue forecasts.



Bike/Pedestrian

- Sidewalk – a stand-alone project to add sidewalk to at least one side of roadway.
- Bike lane or wide shoulder – A stand-alone project to add bike lanes or wide shoulders alongside existing vehicle travel lane(s).
- Multiuse Path – A stand-alone project to provide a path allowing for two-way bike & pedestrian travel. This could be alongside a roadway or a waterway.
- Add complete street facilities – This description is used where a stand-alone project to have a bike and/or pedestrian facility has been identified but the specifics of how that would be accomplished are not yet known.

Transit

- Local or Express Bus Service – Individual local and express bus routes are not listed in the MTP. These are captured by line items in the project listing.
- High-Capacity Transit – Corridors for transit beyond local or express bus service. These could be Bus Rapid Transit (BRT), Light-Rail Transit (LRT), Commuter Rail or intercity rail.

Management and Operations

- Management and Operations – These are general MTP line items that provide for maintaining the existing roadway facilities such as resurfacing, reconstruction and other maintenance activities.
- ITS – These are projects beyond regular maintenance of the system that will employ technologies to improve the operations and efficiency of the transportation system.
- Access Management Controls – Modifications along a corridor to consolidate intersections/driveways to improve safety and preserve capacity of a corridor without adding additional lanes.
- Operational Changes – Modifications within the roadway that will reallocate the pavement to be more multimodal, perhaps removing travel lanes to make the facility more of a complete street or adding parking.
- Convert to/from One-Way – Modification of the corridor to turn existing one-way street to two-way or a two-way street to one-way.

**TABLE 7.1**  
**Annual Inflation Rates**

Years	Annual Inflation Rate
2016	5.0%
2017	3.6%
2018	4.0%
2019-2020	3.5%
2021-2023	3.0%
2024-2040	2.5%

For the freeway, non-freeway and bike/pedestrian project types a generic cost estimating methodology was applied when a more specific cost was not available. For both the freeway and non-freeway projects they would include appropriate pedestrian facilities and bike facilities to make the facility a complete street. MORPC works with the transit agencies to develop costs related to transit projects. Cost estimates for other project types or strategies are taken from special studies or estimated on a case-by-case basis. Furthermore, specific management and operations projects generally are not individually identified. The line items in the project listing for these encompass aggregate amounts expected to be expended on these activities during the transportation plan time frame.

The cost of each project or strategy identified in the project listing is shown in expected year of expenditure dollars, thus incorporating expected future inflation. ODOT tracks inflation trends and estimates inflation rates into the future. The MTP inflation rates shown in Table 7.1 are based on the ODOT projections.



## 7.2 Financial Plan and Constraints

The 2016-2040 MTP assumes that funding will grow at moderate levels as outlined in the FAST Act. This growth would then continue beyond the time period of the FAST Act with subsequent Federal legislation. Likewise, at the state and local levels there will be modest growth in overall transportation revenue through 2040. However, overall more growth will come more from local and private sectors for expansion of the system, as preservation, maintenance and management of the existing system are the priorities for the state and federal transportation dollars.

### TRANSPORTATION FUNDING SOURCES

Numerous sources of funding have traditionally been used to finance transportation. The state and federal governments levy gasoline taxes and transportation-related fees. Some of the proceeds are shared directly with local governments. Local governments also levy license fees. In addition, many of them have property and income taxes used for operations and capital improvements. The private sector is often required to contribute new or improved transportation infrastructure to facilitate their developments.

Currently, sales taxes constitute the bulk of the funding for transit. Transit also receives Federal Transit Administration funding as well as funds from the Ohio general fund. No state gas tax dollars assist with funding transit operations or capital.

The following list shows the major sources of funding available for transportation system improvements in Central Ohio.

#### Federal Sources

- National Highway Performance Program (NHPP) Funds
- Interstate Maintenance Funds
- Surface Transportation Program (STP) Funds
- Transportation Alternatives Program (TAP) Funds
- Congestion Mitigation and Air Quality (CMAQ) Improvement Program
- Bridge Replacement and Rehabilitation Program (BR)
- Safety Program
- Special Project Earmarks
- Federal National Discretionary programs (TIGER, Freight, etc.)
- Urbanized Area Formula Program Grants—Sections 5307 and 5340
- Enhanced Mobility of Seniors and Persons with Disabilities—Formula Grant Section 5310
- Bus and Bus Facilities Discretionary Grants—Section 5339 State Sources
- Capital Investment Grants (CIG) - Section 5309

The forecast is that \$19.6 billion in funding will be available through 2040.



#### ODOT

- State-Controlled Gas Tax Allocated Across Many State Programs
- General Revenue Funds for Transit
- Ohio Public Works Commission – State Capital Improvement Program (SCIP)
- Ohio Public Works Commission – Local Transportation Improvement Program (LTIP)
- Ohio Development Services Agency – Roadwork Development (629) Program

#### Local

- License Plate Registration Fees
- Portion of State Gas Tax
- Sales Tax
- General Revenue (primarily from income tax)
- Special Purpose Sources (tax-increment financing, transportation improvement districts, joint economic development districts, development assessments, etc.)

#### **FUNDING FORECAST**

The majority of the federal and state sources listed previously are funneled through ODOT. ODOT has various programs to manage its transportation system, utilizing funds from the appropriate sources. In addition, portions of some of the federal and state funding are passed on to MORPC, the County Engineers Association of Ohio (CEAO) and the Ohio Public Works Commission (OPWC) Central Ohio districts to distribute to projects. Furthermore, local funding varies greatly from one community to another. For these reasons, the forecast of available funding is divided into the following categories:

- TRAC
- ODOT
- STP-M (MORPC-controlled STP funds)
- CMAQ-M (MORPC-controlled CMAQ funds)
- TAP-M (MORPC-controlled TAP funds)
- CEAO
- OPWC
- Local Public
- Private
- Other
- FTA, State and Local Transit

These categories were selected because they most easily could be distinguished from each other from the point of view of who controls them and how the funds are used. In balancing the transportation plan budget, the most likely funding sources are assigned to each of the potential projects. The source is identified based on the scope of the project and its eligibility for that funding source, combined with historical practice for the community and projects of that scope. Each of the categories is briefly described below with base forecasting assumptions for each. Generally, historical information was used as the basis for the forecasts with growth to reflect year of receipt dollars.



Transportation Review Advisory Council (TRAC)

The TRAC manages ODOT’s funding for new facilities and major expansion projects. These projects add lanes to freeways, build bypasses, expand existing interchanges, build new interchanges, fund major transit expansion and intermodal/multimodal terminals. ODOT funds the TRAC from a variety of sources depending upon the nature of the project, the funding sources for which it is eligible, and the funding available in a specific program.

In January 2016, the TRAC approved the list of projects to use TRAC funding through 2025. The TRAC has committed approximately \$495 million to projects in the MORPC area from 2016 through 2025, out of a statewide total of \$1.94 billion (an average of \$194 million a year). The MTP assumes that approximately \$200 million will be available statewide in 2026, grow at an annual rate of 2.5 percent, and that the MORPC area will receive its proportional share based on population through 2040. The slight increase in amount per year will come from the historical increase that occurs with a new federal transportation bill and perhaps adjustments to state funding. These assumptions are shown in Table 7.2.

ODOT

The ODOT category encompasses the remainder of the funds controlled by ODOT that the TRAC does not manage. The majority of these funds are for management and operations activities across a variety of program areas, such as major bridge, major rehabilitation, safety and ODOT district bridge and pavement programs. Funds from these programs are also occasionally used for minor and major arterial widening projects. Increasingly, these funds are used to supplement TRAC funds on large expansion projects to the extent that the project is also addressing the physical decay of the facility.

One component of the ODOT funds addresses safety problems. ODOT currently budgets \$102 million statewide annually for its safety program. This amount is assumed to have a 2.5% annual growth and that the MORPC area will receive its population proportion share through 2040. These assumptions are shown in Table 7.3.

A second component of the ODOT category is used for intersection improvements and minor and major widening projects along non-freeways. These are generally included in the ODOT district office allocations. These funds are generally used for projects on state and US routes. Occasionally, these funds support projects funded primarily by TRAC. The SFY 16-19 TIP was reviewed to identify the amount of ODOT-controlled funds (not TRAC or safety) used for minor and major widening projects. The MTP assumes this trend will continue through 2040 with a small annual growth. These assumptions are shown in Table 7.4.

A third component of the ODOT category is general system preservation funds used on major freeway-related rehabilitation projects that also include capacity expansion. The SFY 16-19 TIP was reviewed to identify the amount of ODOT-controlled funds (not TRAC) used for freeway expansion. There are several freeway expansion projects ODOT is pursuing that are using preservation funds. The annual average was \$46.4 million. This is an exceptionally high number and is

**TABLE 7.2**  
Forecast of TRAC Funding (millions)

TRAC Commitment	Amount
TRAC Commitments to MPO Area, 2017-2025	\$495
TRAC Commitments Statewide, 2017-2025	\$1,941
MPO Share of TRAC Commitments, 2017-2025	26%
Assumed Statewide Budget, 2026	\$200.0
Assumed Budget Growth Rate, 2026-2040	2.5%
Assumed Statewide Budget, 2026-2040	\$3,586
Projected MPO Share of Population, 2026-2040	14.6%
Projected MPO Share of TRAC, 2026-2040	\$526
Projected MPO Share of TRAC, 2017-2040	\$1,021

**TABLE 7.3**  
Forecast of ODOT Safety Funds

ODOT Safety Funds	Amount
Available Statewide, 2016	\$102 million
Annual Growth Rate, 2017-2040	2.5%
Average Proportion of MORPC Area to State Population, 2017-2040	14.2%
Number of Years, 2017-2040	24
Safety Funds Available to Area, 2017-2040	\$484 million

**TABLE 7.4**  
Forecast of ODOT Arterial Widening Funds

ODOT Funds	Amount
MORPC SFY 16-19 STIP annual average	\$4.1 million
Annual Growth Rate	2.0%
Number of Years, 2017-2040	24
Funds Available to Area, SFY 2017-2040	\$125 million



**TABLE 7.5**  
Forecast of ODOT Non-TRAC Freeway Widening Funds

ODOT Funds	Amount
Assumed Base Year Amount	\$20 million
Annual Growth Rate	2.0%
Number of Years, 2017-2040	24
Funds Available to Area, SFY 2017-2040	\$608 million

**TABLE 7.6**  
Forecast of ODOT Management and Operations Funds

ODOT Funds	Amount
MORPC SFY 16-19 TIP Annual Average	\$82.3 million
Annual Growth Rate	2.0%
Number of Years, 2017-2040	24
Funds Available to Area, SFY 2017-2040	\$2,554 million

likely not representative of the annual average through 2040. Although we expect the use of preservation funds for certain types of freeway expansion projects to continue, the MTP assumes a more realistic annual amount of \$20 million with a small annual growth through 2040. These assumptions are shown in Table 7.5.

The ODOT funding summarized in Tables 7.4 and 7.5 would be funding that would be used on the individually listed transportation system expansion projects. However, ODOT emphasizes a “fix it first” approach that provides funding for management, operations and preservation activities to keep pace with the anticipated inflation levels. Thus, a large part of ODOT funding is on just preserving and maintaining the existing system without expansion. To estimate the amount of funding for these activities, three methods were used.

First, ODOT published its FY 15 annual report in which it reports that it spent \$1.26 billion statewide on system preservation in FY15. The MORPC area has a little over 4% of the statewide road mileage and bridges. Between 2016 and 2040 the MORPC area is forecasted to have an average of about 14.2% of the statewide population. Using approximately the average of those two (9%), assuming FY 15 value of \$1.26 billion with a 2% annual growth continues through 2040, the amount for the MORPC area would be about \$3.4 billion total through 2040.

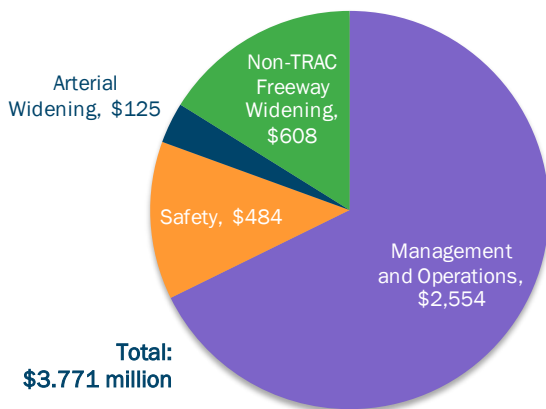
A second method is based on the funding programmed statewide according to the ODOT SFY 16-19 STIP. The SFY 16-19 STIP states that capital preservation and safety programs are funded at \$1.15 billion and \$1.23 billion in SFY 16 and SFY 17 respectively. Taking out the \$102 million per year for the safety program discussed above leaves an average of \$1.088 billion for preservation. Assuming an annual growth rate of 2% through 2040 and approximately 9% for the MORPC area, the amount for the MORPC area would be about \$3.0 billion total through 2040.

Finally, since the previous two methods likely include some ODOT funding going to arterial and freeway expansion projects, which were included in other forecasts described previously, a third method was used. The SFY 16-19 MORPC TIP was reviewed to look at ODOT funding for projects that were only maintenance and preservation projects. The annual average was \$82.3 million. Assuming an annual increase of 2% per year yields approximately \$2.554 billion through the year 2040. This value will be used for the MTP financial forecast and is also shown in Table 7.6.

The total of all non-TRAC ODOT funding is shown in Figure 7.1.

Federal National Discretionary programs (TIGER, Freight, etc.)

Since 2009, the U.S. Department of Transportation has annually conducted a solicitation and selection process for the Transportation Investment Generating Economic Recovery (TIGER) competitive grant program. In its initial year as part of the American Recovery and Reinvestment Act of 2009 (ARRA), \$1.5 billion was available nationally. From 2010 through 2015, the annual amount has ranged from \$474 to \$600 million. In 2012, the MORPC area received \$16 million in TIGER funds for a project in the Rickenbacker area. In December 2015, it was announced that \$500 million would again be available for a 2016 solicitation



**FIGURE 7.1**  
Forecast of all Non-TRAC ODOT Funds (in millions)



and project selection process.

The FAST Act also established a new national competitive freight grant program. The average annual funding for it over the 5-year FAST Act is \$900 million. With the Columbus area a growing region with freight and logistics an emphasized and important part of our economy, several projects in the MTP will be strong candidates for either the TIGER or the freight competitive grant programs. The awarding of a 2012 TIGER grant is evidence of the region’s ability to acquire these national discretionary funds. The \$16 million award in 2012 represents approximately 0.35% of the TIGER funds awarded to date. The region’s population represents about 0.45% of the nation’s population. The MTP assumes the continuation of national competitive grant programs through 2040 at the current funding levels and that two to four projects will receive funding totaling \$135 million, or approximately 0.40% of the \$33.6 billion estimated to be available through 2040.

**STP-M**

MORPC has available a certain amount of STP funds both by formula and at ODOT’s discretion. These funds are used primarily for arterial major widening projects. The average amount of these funds that has been made available historically, including the effects of obligation limitations, was reviewed. MORPC used ODOT’s projected allocation for SFY 2017, which has been flat for the last couple of years. FHWA has published state apportionment tables for the FAST Act for FYs 2016-2020. They show Ohio’s STP apportionment will increase 8.5 percent in FY 2016, with an annual growth rate of about 2.5 percent for the remainder of the bill. The MTP assumes that MORPC’s allocation will not increase 8.5 percent until SFY 2018 and continue to grow at 2.5 percent through 2040. Table 7.7 shows the resulting projection.

**CMAQ-M**

At ODOT’s discretion, MORPC has had a certain amount of CMAQ funds available. These are typically used for transit bus replacements, intersection improvements, minor arterial widening projects, travel demand management programs and air quality awareness programs. As of the fall of 2013, MORPC no longer receives a direct allocation from ODOT of CMAQ funds specifically for the planning area. The funds historically allocated to MORPC are now pooled with the funds formerly provided to each of the eight large MPOs in the state. The eight large MPOs have cooperatively developed (with ODOT’s concurrence) the Ohio Statewide Urban CMAQ Committee (OSUCC) to solicit, evaluate, and select projects to use the pooled CMAQ funding.

The FAST Act does not include any increase to CMAQ funding, except for an annual growth rate of about 2.5 percent. Even with the newly pooled CMAQ funding, the MTP assumes that MORPC will receive its population share of funding as shown via ODOT’s projection for SFY 2017 of what would have been allocated to MORPC prior to the pooling policy. The MTP assumes that the allocation will continue to grow at 2.5 percent annually through 2040. Table 7.8 shows the resulting projection.

**TAP-M**

MORPC has available a certain amount of TAP funds both by formula and at

**TABLE 7.7**  
Forecast of STP-M Funds

Fund	Amount
ODOT Allocation SFY 2017	\$20.0 million
FAST Act Increase	8.5%
Base Year Allocation, SFY 2018	\$21.7 million
Annual Growth Rate	2.5%
Number of Years, 2019-2040	22
<b>Total Available</b>	<b>\$685 million</b>

**TABLE 7.8**  
Forecast of CMAQ-M Funds

Fund	Amount
ODOT Allocation SFY 2017	\$10.1 million
Annual Growth Rate	2.5%
Number of Years, 2018-2040	23
<b>Total Available</b>	<b>\$327 million</b>





**TABLE 7.9**  
Forecast of TAP-M Funds

Fund	Amount
ODOT Allocation SFY 2017	\$2 million
FAST Act Increase	8.5%
Base Year Allocation, SFY 2018	\$2.2 million
Annual Growth Rate	2.5%
Number of Years, 2019-2040	22
<b>Total Available</b>	<b>\$69 million</b>

ODOT’s discretion. These are primarily used for pedestrian and bikeway projects. The average amount of these funds that have been made available historically, including the effects of obligation limitations, was reviewed. MORPC used ODOT’s projected allocation for SFY 2017, which has been flat for the last couple of years. Like STP, FHWA has published state apportionment tables for the FAST Act for FYs 2016-2020. They show Ohio’s TAP apportionment will increase 8.5 percent in FY 2016, with an annual growth rate of about 2.5 percent for the remainder of the bill. The MTP assumes that MORPC’s allocation will increase 8.5 % in SFY 2018 and continue to grow at 2.5 percent through 2040. Table 7.9 shows the resulting projection.

County Engineers Association of Ohio - CEAO

ODOT sub-allocates funding to County Engineers Association of Ohio. The allocation statewide for 2016 is \$14.3 million of HSIP funds for safety projects, \$14.3 million of STP that are generally used for minor arterial widening projects; and \$34.4 million of HBP that are used for bridge replacements. No matching funds are required for HSP funds, but project sponsors must provide a 20 percent

**TABLE 7.10**  
Forecast of CEAO Funds

Fund	HSIP	STP	HBP
Annual Statewide Sub-Allocation, 2016	\$14.3 million	\$14.3 million	\$34.4 million
Annual Growth Rate, 2017-2040	2.5%	2.5%	2.5%
Average Proportion of MORPC Area to State Population, 2017-2040	14.2%	14.2%	14.2%
Number of Years, 2017-2040	24	24	24
Total Available by Source	\$68 million	\$68 million	\$163 million
<b>Total Available CEAO</b>	<b>\$299 million</b>		

match to STP and the LBR funds. The MTP assumes that the planning area will receive an amount proportional to its share of the state’s population, and that the program will grow at a rate of 2.5% annually. Table 7.10 shows the CEAO funds expected to be available to the planning area for road and bridge projects through the year 2040.

OPWC

Ohio Public Works Commission District 3 (Franklin County), District 17 (Delaware, Licking

and Fairfield counties, among others) and District 11 (Union County, among others) awards funds to projects in MORPC’s planning area. In most cases, local agencies making use of District 3 OPWC funds to upgrade their highway systems include some improvements that are equivalent to MTP project type of "minor widening/safety improvement." Central Ohio communities are more likely to use OPWC funds than federal funds for these purposes because of the greater administrative burden of using federal funds.

OPWC allocates funding to districts around the state based on population. OPWC awards funding from the State Capital Improvements Program (SCIP) and the Local Transportation Improvement Program (LTIP). In estimating the amount of OPWC funds (SCIP + LTIP) available to the area, the six-year average of road and bridge grant awards in the area from the three OPWC districts was calculated compared to the amount of funds available statewide. Road and bridge projects in the MTP area received approximately 9.8 percent of all statewide funding. Ohio voters in 2014 approved an amendment to the state constitution to extend the SCIP program through SFY 2026. It allows the state to fund the program by issuing general obligation bonds up to \$175 million in SFYs 2017 to 2021 and \$200 million in SFYs 2022 to 2026. The MTP assumes that the SCIP program will continue at \$200 million annually through 2040. The LTIP program receives about \$60 million per year from a one-cent state fuel tax. The MTP assumes that



LTIP funding would remain at these levels through 2040.

Table 7.11 shows the OPWC funds expected to be available to the planning area for road and bridge projects through the year 2040. As stated above, these funds are most often used on minor widening types of projects. Funds used for other infrastructure (sewers, water, etc.) and loans were excluded.

Local Public Funds

Most local governments allocate their own dollars through a capital improvement program that includes transportation improvements. This may include funds from general revenue or other special-purpose sources. Although local governments go through cycles of experiencing budget problems, it is expected that the local governments will continue to have funds available for system management, operations, preservation and expansion.

Local funds are often used to match state and federal dollars or repay OPWC loans. The amount of local funds typically needed to match the state and federal funds is shown in Table 23. For OPWC projects, local funding sources provided approximately 45 percent of the total costs over the last six years. ODOT and other non-local sources have provided additional funds for these projects.

In addition to the funds for matching state and federal funds, local governments completely fund some projects themselves. During the development of the TIP, MORPC contacts the local governments and reviews the CIPs to identify significant locally funded projects to include in the TIP. The 2016-2019 TIP was analyzed, and approximately \$49 million of local dollars per year (not matching federal or state funding) in system expansion projects were included. These projects include major and minor widening, intersection/interchange upgrade, new roadway and new bikeway projects.

Finally, local governments also spend funds on management, operations and system preservation projects such as resurfacing, minor repairs, signal system maintenance and others. These items are not typically included in the TIP due to their small scale. MORPC reviewed local CIPs and estimates that approximately \$100 million is currently spent per year, in aggregate, on these activities. The total local government funds available are shown in Table 7.12.

Private Funds

Various private sources may include direct contribution of dollars or improvement of the facility by the private sector. These are mostly done as new facilities through vacant land that is being developed or modifications to existing facilities impacted by the development of vacant land. Local governments are increasing the burden on developers to pay for transportation and other infrastructure changes needed to

**TABLE 7.11**  
Forecast of OPWC Funds

Fund	Amount
SCIP plus LTIP Funding Statewide, 2016	\$235 million
Total Statewide, 2017-2040	\$6,115 million
Average % to MTP Area Roads & Bridges, 2011-2016	9.8%
<b>Total Available OPWC</b>	<b>\$600 million</b>

**TABLE 7.12**  
Forecast of Local Public Funds

Source	Available	Minimum Local Match	Local Amount
STP-M	\$685 million	20%	\$137 million
CMAQ-M	\$327 million	10%	\$32.7 million
TAP-M	\$69 million	20%	\$13.8 million
ODOT Safety	\$484 million	20%	\$96.8 million
OPWC	\$600 million	45%	\$273 million
CEAO Safety	\$68 million	0%	\$0
CEAO STP	\$68 million	20%	\$13.6 million
CEAO BR	\$163 million	20%	\$32.6 million
629	\$68 million	20%	\$13.6 million
COTF	\$30 million	25%	\$7.5 million
Local Expansion	\$49 million/ year 2% growth per year	n/a	\$1,569 million
Local M&O	\$100 million/ year 2% growth per year	n/a	\$3,203 million
			<b>\$5,393 million</b>



**TABLE 7.13**  
Forecast of Private Funds

Fund	Amount
Estimated Available 2016	\$20 million
Projected annual growth	2.5%
Number of years, 2016-2040	24
<b>Total Available Private Funds</b>	<b>\$683 million</b>

support the new developments they are building. Table 7.13 shows the amount of private funds expected through the year 2040.

Other Funds

Other funds include four small programs and other unique situations. These are Roadwork Development (629) Program, Safe Routes to School (SRTS), Clean Ohio Trail Fund (COTF) and Recreational Trails Program (RTP). Other funds may also be congressional earmarks, innovative financing techniques, or other unique situations.

The purpose of the 629 program is to fund public roadwork improvements that support the expansion or attraction of businesses. Transfers from the Highway Operating Fund, averaging \$14.4 million per year, fund the program. The transportation plan assumes that the planning area will receive an amount proportional to its share of the state’s population. Table 7.14 presents the resulting projection.

**TABLE 7.14**  
Forecast of Other Funds

Fund	Amount
Available Statewide, 2016	\$14.4 million
Annual Growth Rate, 2017-2040	2.5%
Average Proportion of MORPC Area to State Population, 2017-2040	14.2%
Number of Years, 2017-2040	24
<b>629 Funds Available to Area, 2017-2040</b>	<b>\$68 million</b>

SAFETEA-LU established the Safe Routes to School (SRTS) program to improve the ability of primary and middle school students to walk and bicycle to school safely. MAP-21 folded the federal program into the TAP. However, ODOT continues to administer the SRTS, making statewide TAP funds available to local sponsors in the planning area. The program provides federal transportation funds for right-of-way and construction phases of infrastructure projects, among other eligible activities. ODOT continued to use a range of 10 to 30 percent of SRTS funds for non-infrastructure activities. The program does not require local matching funds. The program is currently funded at \$4 million per year. The MTP assumes the state’s allocation will show small growth annually from 2017 to 2040, and that the planning area will receive an amount proportional to its share of the state’s population. The MTP also assumes that infrastructure projects will receive 80 percent of available funding.

The state created the Clean Ohio Trails Fund, administered by the Ohio Department of Natural Resources (ODNR), as part of the Clean Ohio Fund program. ODNR currently provides \$6.25 million per year. The MTP assumes that the state will continue the program with \$6.25 million available statewide for 2016, growing at an annual rate of 2.5 percent thereafter. MORPC projected the funding available to the planning area by assuming it will receive an amount proportional to its share of the state’s population.

**TABLE 7.15**  
Forecast of SRTS Funds

Fund	Amount
Available Statewide, 2016	\$4 million
Estimated portion for infrastructure projects	80%
Annual Growth Rate, 2017-2040	2.5%
Average Proportion of MORPC Area to State Population, 2017-2040	14.2%
Number of Years, 2017-2040	24
<b>SRTS Funds Available to Area Infrastructure, 2017-2040</b>	<b>\$15 million</b>

The Recreational Trails Program makes federal transportation funds available for recreational trails and facilities for both non-motorized and motorized users. The RTP funds are distributed to states by legislative formula that accounts for the estimated amount of non-highway recreational fuel use in each state. The Ohio Department of Natural Resources administers the program in Ohio. Right-of-way and construction for trail development are among several eligible activities. The MTP assumes that \$1.6 million will be awarded statewide each year in 2016 and 2017. Like STP & TAP, FHWA has published state apportionment tables for the FAST Act for FYs 2016-2020. They show Ohio’s RTP apportionment will increase 8.5 percent in FY 2016, with an annual growth rate of about 2.5 percent for the remainder of the bill. The MTP assumes that MORPC’s allocation will increase 8.5



% in SFY 2018 and continue to grow at 2.5 percent through 2040. The MTP also assumes that the planning area will receive an amount proportional to its share of the state's population.

The MTP also includes projects for the region's rail system, which could include upgrades to intermodal yards, new tracks, bridge clearance projects or road modifications to increase access to intermodal yards. Likewise, access road projects at the major airports are included in the transportation plan. These projects are not likely to be done with the traditional transportation system resources. These are expected to be funded by the private sector, the airports themselves or perhaps a port authority mechanism. Approximately \$100 million for these projects is estimated in the region through 2040.

Other funds may become available such as congressional earmarks or tolling, but these cannot be forecasted at this time. Figure 7.2 provides a summary of all of the other funding forecasted.

FTA, State and Local Transit

As described in Chapter 4 two urban transit systems provide the majority of the transit service to the region. DATABus is a very small urban system, while COTA provides the vast majority of the service. Currently, the total local state and federal funding supporting DATABus is about \$2.5 million per year. COTA, on the other hand, has an annual capital and operating budget of approximately \$165 million per year. The MTP assumes DATABus will continue with moderate growth. The remainder of this subsection will focus on COTA's funding forecast. COTA currently operates on a 0.5 percent sales tax. Half of that is permanent and half is a 10-year levy approved in 2006. The sales tax is collected in Franklin County and portions of most of its municipalities that extend into contiguous counties.

COTA's sales tax base is projected to grow an average of 3.0 percent annually through 2040. This projection is based on FY 2011 Congressional Budget Office's Economic Outlook where GDP & CPI are projected over a 20-year horizon. The 3.0 percent projection represents a simple average of those two key drivers of taxable sales, plus an increment representing the stronger-than-average growth in the Central Ohio Region.

Federal Section 5307 Urban Formula grants are based on various demographic, service level, and ridership variables. Factors in the formula that allocates grants to urbanized areas are estimated based on an assumed annual growth in total Section 5307 funds, adjusted to account for increases in COTA's transit service and demographic base over which these grants are applied, to the extent necessary.

Section 5339 Bus and Bus-Related discretionary and formula grants can be used to purchase buses and bus-related assets. The Transportation Plan assumes COTA will receive matching grants on bus purchases subject to an annual cap of \$1.0 million in base-year dollars.

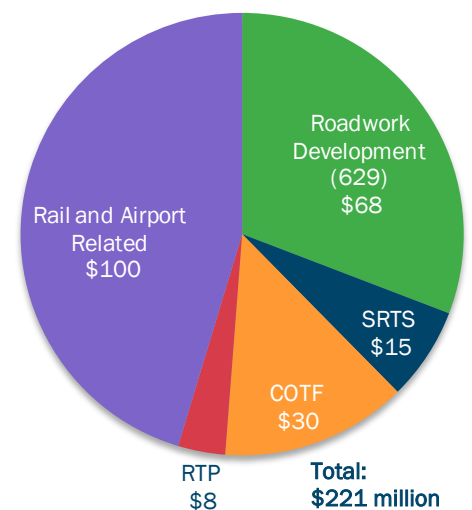
Fare revenues are based on COTA's projected ridership for existing bus services,

**TABLE 7.16**  
Forecast of COTF Funds

Fund	Amount
Available Statewide, 2016	\$6.2 million
Annual Growth Rate, 2017-2040	2.5%
Average Proportion of MORPC Area to State Population, 2017-2040	14.2%
Number of Years, 2017-2040	24
<b>COTF Funds Available to Area, 2017-2040</b>	<b>\$30 million</b>

**TABLE 7.17**  
Forecast of RTP Funds

Fund	Amount
Annual Statewide Allocation, 2017	\$1.6 million
FAST Act Increase	8.5%
Base Year Allocation, SFY 2018	\$1.8 million
Annual Growth Rate	2.5%
Number of Years, 2019-2040	22
<b>Total Available</b>	<b>\$7.6 million</b>



**FIGURE 7.2**  
Summary of Forecast of Other Funds (in millions)



**TABLE 7.19**  
Forecast of Transit Funds

Fund	Amount
FTA Federal (formula-based)	\$492 million
FTA Federal (competitive grants)	\$288 million
State	\$36 million
Local	\$5,583 million
<b>Total</b>	<b>\$6,399 million</b>

as well as projected ridership from COTA's Long-Range Transit Plan. Average fare paid per passenger is assumed to grow with inflation, adjusted every three years. Other transit-related revenue such as advertising, lease income and some state operating assistance, is based on current budget values adjusted annually to account for growth in inflation, level-of-service, ridership, and/or demographics. In FY 16 COTA was successful in receiving a small starts FTA grant of \$38 million for the Cleveland Avenue BRT. The discretionary Capital Investment Grant (CIG) program provides funding for small starts investment projects such as bus rapid transit. As COTA works to develop additional high-capacity transit corridors in the region, the MTP assumes it will be successful in obtaining future FTA grants for these. In total over the next 24 years, the amount of grants for these would be an additional \$250 million.

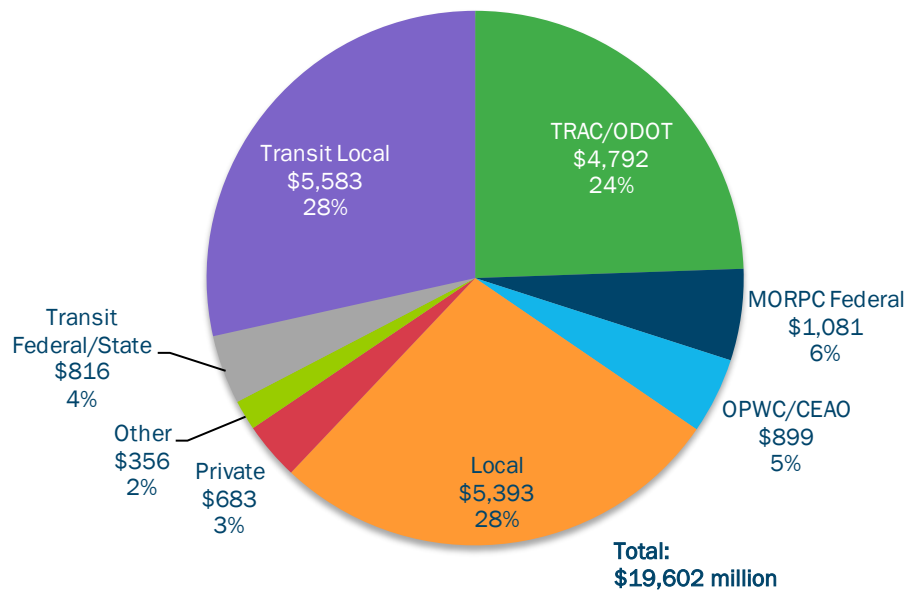
In summary, Table 7.19 provides the forecasted funding from federal, state, and local sources for transit from 2016-2040.

**TABLE 7.20**  
Summary of Forecast of  
Transportation System Funds

Funding Category	Total
TRAC	\$1,021 million
ODOT	\$3,771 million
National Discretionary	\$135 million
STP-M	\$685 million
CMAQ-M	\$327 million
TAP-M	\$69 million
CEAO	\$299 million
OPWC	\$600 million
Local	\$5,393 million
Private	\$683 million
Other	\$221 million
Transit: FTA, State, Local	\$6,399 million
	<b>\$19,602 million</b>

**TRANSPORTATION SYSTEM FUNDING SUMMARY**

Table 7.20 and Figure 7.3 provide a summary of the expected funds available through the year 2040 for the transportation system from all sources. Figure 7.3 collapses the 12 categories from Table 7.20 into 8 funding categories.



**FIGURE 7.3**  
Summary of Forecast of Transportation System Funds  
(in millions)



## 7.3 Additional Funding Options

MORPC is proactively seeking additional funding for the transportation system. MORPC is active at both the state and federal level to explain the need for additional funding. A variety of options is continuously being discussed. These options include a variety of potential options to raise revenue for transportation projects. Some of these alternative financing mechanisms are briefly described below, with a few being new to Ohio.

### **ADJUSTING MOTOR FUEL TAXES**

The Ohio General Assembly last acted to raise the state motor fuel tax in 2003. The tax rate was increased in two-cent increments over the course of three years for a total increase of six cents, from 22 cents per gallon in 2003 to the current rate of 28 cents in 2005.

Some states allow for automatic increases in their fuel taxes by indexing the taxes to the Consumer Price Index or a similar metric, to try to keep revenues for transportation improvements in line with cost increases. A variation on this is to index the motor fuel excise tax to fuel prices, to try to maintain the level of revenues, even as prices of fuel increase, and the amount of fuel sold drops. Indexing can also include a ceiling or floor on the indexed rate. The neighboring states of West Virginia and Kentucky, for example, have some variability built into their fuel taxes.

Another option to adjust for the amount of fuel sold, used by some states, is to implement a fuel sales tax. Some states use this in combination with the more traditional fuel excise tax.

### **ADJUSTING VEHICLE REGISTRATION FEES**

Adjusting vehicle registration fees can be another method to generate additional funds for transportation. Vehicle registration fees are relatively inexpensive to administer and can be collected from non-gasoline vehicles that may not be subject to fuel taxes. Registration fees can be keyed to a vehicle's size and its effect on the roads (larger vehicles pay higher rates).

Vehicle fees can also be based on the vehicle value. Such a tax would be a progressive tax and would have good revenue-generating potential and less cost to taxpayers. This type of tax may also be deductible for individual federal income tax purposes.

### **TAX ON SALE OF NEW AND USED VEHICLES**

A tax on the sale of new or used vehicles could be dedicated to transportation purposes. This is done in several states and has potential to generate significant funds.



#### **CONGESTION-RELATED FEES**

Congestion fees are charged to drivers based on the current level of congestion and may vary throughout a day. It is not widely used in the U.S., except on some existing toll facilities and on some public transit systems. This is a potential revenue generator and also a tool to discourage travel during the busiest times. The fee can also be indexed to inflation.

#### **TOLLS ON ROADS, LANES, OR BRIDGES**

With appropriate legislation, private entities could initiate proposals for a new toll facility. Tolls also could be used on new truck lanes or high-occupancy vehicle lanes. Tolls can also be added to capacity additions to existing facilities.

#### **VEHICLE-MILES-OF-TRAVEL (VMT) FEES**

This is a concept, where fees would be tied to the amount of travel someone does; those who put more miles on their vehicles would pay more. This is made increasingly feasible by new technology. This a longer term option and could be used to supplement or replace fuel taxes. A few states have completed preliminary studies on the use of this new concept.

#### **PUBLIC-PRIVATE PARTNERSHIPS**

Public-private partnerships (PPP) can be used to fund road construction, operation or maintenance. Public-private partnerships are more commonly used in Europe and have been tried by some states in the U.S. It has the potential for significant cost savings and can facilitate access to private capital. ODOT recently initiated one of its first large PPPs in southern Ohio for the Portsmouth bypass, which is now under construction.



## 7.4 Project Evaluation and Selection Process

The development of this plan, covering the years 2016-2040, is a collaborative effort of all the jurisdictions within the MORPC MPO area. The strategies projects included in the MTP represent the consensus of these jurisdictions as to the transportation system investments that are to take place through the year 2040 with the federal, state, local, private and other financial resources reasonably expected to be available within the planning area.

Most of the strategies mentioned throughout the previous chapters and summarized in Chapter 8 address maintaining and expanding the transportation system. The specific transportation infrastructure projects included in the MTP are listed in Section 8.#. These include a few general listings, which provide for maintaining the existing transportation system, including transit operations. The majority, however, are individual projects to add capacity to the transportation system. The planning process leading to this MTP identified over 1000 candidate projects to expand the transportation system. The total cost for these far exceeds the amount of financial resources reasonably expected to be available through the year 2040. Therefore, a selection process was established to determine which projects and strategies to include in the MTP.

As discussed in Chapter 1, goals and measurable objectives were established for the MTP. During the establishment of these, evaluation criteria were also established to evaluate the transportation system expansion projects. The evaluation criteria are tools to help ensure consistency between plan recommendations and the goals. These criteria were applied to the candidate transportation projects considered for inclusion in the MTP.

In applying the evaluation criteria, the projects were divided into similar project types. Quantitative measures were compared against the distribution of values within that project type to help gauge how a project measures relative to similar projects. Each project also received a statement about qualitative criteria, taken into consideration in assigning the score for the corresponding goal. In evaluating the projects, each received a score on a 0 to 20 point scale relative to each of the six goals. The criteria measures helped MORPC staff subjectively assign a score to the project relative to each goal. One can find more information on the criteria, scores and rankings in Appendix B.

As mentioned above, the criteria were tools in the development of the MTP. The scores provided a starting point to identify the projects that would likely best help achieve the measurable objectives. The score for each goal was considered, along with knowledge of the communities' desires and input received through 2015, which led to the development of the first draft of projects that was made available for member and public comment in January 2016.

Another consideration in the selection of projects as discussed in Section 7.2 is

The score for each goal was considered, along with knowledge of the communities' desires and input received.





the forecasts of funds reasonably expected to be available through the year 2040. The different funding sources generally are used for different project types. Each strategy or project was matched to the appropriate funding source(s). In aggregate, the compilation of project types and strategies in the transportation plan must align with the funding available to fund those types of projects and strategies.

Although the evaluation process attempts to capture the major considerations in selecting projects, there are always special considerations that need to be addressed either as a general strategy or with regard to a particular project. These could include the needs of special populations, environmental considerations and development and economic impacts. Additionally, public input always plays a role in determining the final MTP strategies and projects. MORPC received comments continually throughout the process.

Based on feedback during the various comment periods and additional refinement of the funding forecasts, an updated project list was included as part of the draft of the complete MTP that was made available for public comment in early March 2016. Further comments were received through mid-April 2016. These comments we considered for additional refinement to the funding forecast and to the projects to be included in the MTP.



## 7.5 Fiscal Constraint Summary

The project listing in Chapter 8 identifies the estimated time period for each project. Projects that are on the SFY 2016-2019 TIP or a local government capital improvement program have a specific year identified for construction. These are near-term projects that are actively under development and for which the project sponsor is able to provide a construction year. Correspondingly, the cost shown in the project listing is in construction year dollars. Most of the remaining projects are classified into a period of by 2020 (near-term), 2021-2030 (medium-term), or 2031 to 2040 (long-term). For the latter two categories of projects, a total cost range is provided to reflect the uncertainty in the year of construction and the ultimate scope of the project since there has been little to no project development work completed for it at this time. A few project listings are line items to reflect ongoing activities throughout the transportation plan period with the cost reflecting an estimate of the aggregate amount to be expended between 2016 and 2040.

Table 7.22 summarizes the estimated cost by project type for the specific projects and strategies presented in the project listing.

In total, the MTP includes \$19.5 billion in strategies and projects. Of this \$8 billion is for expansion of the transportation system, while the majority, \$11.5 billion, is to maintain the existing system.

The specific projects identified in the MTP are a type of strategy. Some items in the project list encompass the ongoing operation, maintenance, and preservation of the existing transportation system. This includes, in general, the operation and expansion of transit service. However, most of the items listed are projects to expand the physical components of the transportation system. The MTP includes projects that add approximately 88 lane miles of freeways, modify 17 freeway interchanges and build two new ones. Projects to expand the arterial and collector roadways include 45 new road segments and through lane additions on 49 road segments, totaling approximately 275 new lane miles. There are also 135 minor widening or intersection projects on arterial and collector roadways impacting approximately 150 miles of existing roads. The arterial and collector projects will include accommodations for pedestrians and bicyclists. The MTP also includes approximately 240 miles of off-road shared-use paths. It also includes a 15 percent increase in fixed-route transit service hours.



**TABLE 7.22**  
Estimated Costs by Project Type

Project Type	Total Cost (millions)
<b>Management &amp; Operations</b>	
General Preservation & Maintenance	\$6,659
ITS	\$119
Access Management	\$15
Operational Changes & One-way/Two-way Conversions	\$25
<b>Freeway-Related</b>	
New Freeway	\$0
Convert to Freeway	\$306
Major Freeway Widening	\$965
New Interchange	\$267
Interchange Modification	\$1,286
Lane Management	\$426
<b>Non-Freeway Roadways</b>	
Major Surface Street Widening	\$865
Minor Widening	\$914
New Roadway	\$850
New Bridge	\$0
Intersection Modification	\$178
<b>Bicycle &amp; Pedestrian Stand-Alone</b>	
Multi-use Path	\$256
Bike Lane or Wide Shoulder	\$64
Sidewalk	\$11
Complete Street Facility	\$166
<b>Transit</b>	
Local & Express Bus Service	\$6,069
High-Capacity Transit	\$49
<b>Other (airport or railroad-related, studies)</b>	\$105
<b>Total</b>	<b>\$19,597</b>