

FISCAL ANALYSIS METHODOLOGY

Appendix X provides supplemental information about the Des Moines Area Metropolitan Planning Organization's (Des Moines Area MPO) methodology and assumptions used to estimate project costs and to develop funding revenue projections.

Historic Street and Highway Expenditures

The Des Moines Area MPO used data from the Iowa DOT's Street Finance Reports to determine expenditures on MPO member government's street and highway system for FY 2008-2017. These numbers include all roadways in the MPO planning area not just the Federal Aid routes.

Maintenance costs include costs associated with maintaining the existing physical infrastructure (i.e., pavement, signals, and right-of-way). Operation costs include costs associated with snow removal, street lighting, equipment purchases, administration, and other related costs. Construction costs include engineering, right-of-way purchase, and the construction of bridges and streets. Debt service includes principal and interest payments made on municipal bonds.

Table 1 provides a summary of street and highway expenditures over the past ten federal fiscal years. Data for the Counties is reported differently and is therefore not accounted for in Table 1. These numbers are used to help estimate approximately how much funding is available for construction projects and it was determine that the County numbers for the planning area were not significant enough to impact the percentages in Table 1.

TABLE 1: HISTORICAL STREET & HIGHWAY EXPENDITURES

FEDERAL FISCAL YEAR	Maintenance	Operations	Construction	Debt Service	Total
2008-2017	\$308,457,488	\$174,932,667	\$835,447,013	\$819,676,107	\$2,138,513,275
10-Year Average	\$30,845,749	\$17,493,267	\$83,544,701	\$81,967,611	\$213,851,328
Percent of Expenditures	14%	8%	39%	38%	100%

Source: Street Finance Reports

Available Funding by Source

Federal Funding

The MPO used historic data going back to 1996 to determine the historic annual growth rate for STBG and STGB Set-Aside funding over the 21-year period. The annual growth rate over this period was 10.6 percent for STBG funding and 9.3 percent for STGB Set-Aside funding. The historic growth rate for STBG and STGB Set-Aside funding was reviewed by the MPO Finance Subcommittee. Their recommendation was to use a conservative 5 percent annual growth rate to project federal funding for Mobilizing Tomorrow. This approach was based on the overall uncertainty concerning transportation funding at the federal level and congresses unwillingness to pass a gas tax increase to address the HTF shortfall. Staff used the 5 percent growth rate to determine an annual funding increase of \$674,105. The annual funding increase was added to each year to create a straight-line projection of STBG and STGB Set-Aside funding that is expected to be available through HY 2050.

TABLE 2: HISTORICAL STBG & TAP REVENUE

FEDERAL FISCAL YEAR	STBG	Set Aside
1996	\$3,811,053	\$442,000
2017	\$12,297,098	\$1,185,000
Percent Change 1996-2017	223%	168%
Annual Growth Rate – Historic	10.6%	9.3%
Annual Growth Rate – Plan	5%	5%

Road Use Tax Fund

Table 3 shows the total historic RUTF funding for MPO member governments for 2008 to 2017. The annual growth rate over the six years of available data was 7 percent. The MPO Finance Subcommittee reviewed the growth rate for RUTF's and determined that a 3 percent rate could reasonably be expected to continue into the foreseeable future. Staff used the 3 percent growth rate to determine an annual funding increase of approximately \$1.9 million for RUTF.

TABLE 3: HISTORICAL ROAD USE TAX FUND REVENUE

FEDERAL FISCAL YEAR	RUTF
2008	\$35,066,596
2017	\$59,442,468
Percent Change 2008-2017	70%
Annual Growth Rate - Historic	7.0%
Annual Growth Rate – Plan	3%

Local Funding

Table 4 shows the historic local revenues for MPO member governments for 2008 to 2017. The annual growth rate over the ten years of available data was 3.3 percent. The MPO Finance Subcommittee reviewed the growth rate for local funding and determined that a zero percent rate could reasonably be expected to continue into the foreseeable future. This decision was based on the historic average being viewed as a long-term trend rather than an anomaly and the likely effect of the property tax rollback passed by the state legislature. Based on this growth rate, staff determined the ten-year average of \$182.6 million in local funding. The ten-year average was used to account for fluctuations in bonding levels by local communities on a year-to-year basis.

TABLE 4: HISTORICAL LOCAL FUNDING

FEDERAL FISCAL YEAR	
2008	\$141,039,272
2017	\$187,026,105
Percent Change 2008-2017	33%
Average Growth Rate - Historic	3.3%
Annual Growth Rate – Plan	0%

Iowa Department of Transportation

Table 5 shows the historic funding spent in the MPO planning area by the Iowa Department of Transportation from 1995 through 2017. The average annual growth rate over this time period was 2.2 percent. After discussing with the Iowa DOT, it was determined that an annual growth rate of 2 percent could reasonably be expected to continue. Therefore, staff used the 2 percent growth rate to determine an annual funding increase of approximately \$1.1 million for Iowa DOT funding.

TABLE 5: HISTORIC IOWA DOT FUNDING

FEDERAL FISCAL YEAR	
1995	\$15,619,837
2017	\$42,522,470
Percent Change 2008-2017	48%
Average Growth Rate - Historic	2.2%
Annual Growth Rate – Plan	2%

Transit (UNDER REVIEW BY DART)

Table 6 shows the six-year average (FY 2013-2018) Des Moines Area Regional Transit Authority (DART) funding sources for capital and operating. MPO staff worked with DART staff to determine an expected growth rate for each of the funding types.

TABLE 6: HISTORIC DART FUNDING

Transit Capital Funds		
Funding Type	Six-Year Annual Average	Annual Growth Rate - Plan
5307	\$1,869,057	3%
5309	\$756,314	0%
5339	\$516,438	0%
5310	\$71,701	3%
PTIG	\$408,651	0%
Property Tax	\$1,661,639	5%
Transit Operating Funds		
Funding Type	Six-Year Annual Average	Annual Growth Rate - Plan
5307	\$4,130,321	0%
5310	\$197,711	3%
5311	\$27,545	0%
STA	\$1,408,759	3%
Property Tax	\$14,011,669	5%
Fares	\$7,066,191	1%
Advertising	\$181,018	3%

The following is a list of federal and state funding programs for transit investments.

Metropolitan Planning Program (Section 5303): FTA provides funding for this program to the State based on its urbanized area populations. The funds are dedicated to support transportation planning projects in urbanized areas with more than 50,000 population.

Urbanized Area Formula Program (Section 5307): FTA provides transit operating, planning, and capital assistance funds directly to local recipients in urbanized areas with populations between 50,000 and 200,000, based on population and density figures, plus transit performance factors for larger areas. Local recipients, for whom projects are programmed by the Des Moines Area MPO, must apply directly to the FTA.

Capital Investment Program (Section 5309): The transit discretionary program provides Federal assistance for major capital needs, such as fleet replacement and construction of transit facilities. All transit systems in the state are eligible for this program. In recent years, Congress has earmarked all these funds for specific projects or geographic regions.

Special Needs Program (Section 5310): Funding is provided through this program to increase the mobility for the elderly and persons with disabilities. Part of the funding is administered along with the Non-Urbanized funding; another part is allocated among urbanized transit systems.

Non-Urbanized Area Formula Program (Section 5311): This program provides capital and operating assistance for rural and small urban transit systems. Fifteen percent of these funds are allocated to Intercity Bus projects. A portion of the funding is also allocated to support rural transit planning.

Rural Transit Assistance Program (RTAP - Section 5311(h)): This funding is also used for statewide training events and to support transit funding fellowships for regional and small urban transit staff or planners.

Statewide Transportation Planning Program (Section 5304): These funds come to the state based on population and are used to support transportation planning projects in non-urbanized areas.

Flexible Funds: Certain Title 23 funds may be used for transit purposes. Transit capital assistance is an eligible use of STP funds. Transit capital and start-up operating assistance is an eligible use of ICAAP funds. When ICAAP and STP funds are programmed for transit projects, they are transferred to the FTA. The ICAAP funds are applied for and administered by the Office of Public Transit.

Discretionary Funds: Competitive, discretionary funding programs, such as the federal TIGER and New Starts programs, are available to help fund large projects like BRT.

State Transit Assistance (STA): All public transit systems are eligible for funding. These funds can be used by the public transit system for operating, capital, or planning expenses related to the provision of open-to-the-public passenger transportation.

Property Tax Levy: The Code of Iowa authorizes municipalities to establish a transit levy dedicated to support public transit up to the maximum amount of \$0.95 per \$1,000 dollars of valuation. DART employs a local property tax levy, which varies by DART member community depending on the amount of service provided to that community. DART also receives local funds, including, but not limited to, fare box revenue, revenue from contracts with business and other transportation providers (such as taxicabs or human service providers), and advertising revenue.

Projected Funding

MPO and Local Funding

Table 7 shows the projected federal, state, and local funding that is reasonably expected to be available over the life of the plan. A review of the Street Finance Reports over the last ten years indicated that approximately 40 percent of the available state and local revenue for transportation is spent on construction expenditures, as indicated in Table 1. The projections assume that this trend will continue. Therefore, 60 percent of the projected state and local revenues were subtracted from the total available revenue to accurately reflect operation, maintenance, and debt service costs. It was assumed that these costs would remain consistent as a percentage of the total projected revenue for each time-period of Mobilizing Tomorrow.

TABLE 7: PROJECTED FEDERAL, STATE, AND LOCAL FUNDING

Funding Type	2020-2024	2025-2029	2030-2034	2035-2039	2040-2050	TOTAL
Federal	\$74,151,539	\$91,004,162	\$107,856,784	\$124,709,407	\$333,681,926	\$731,403,817
RUTF	\$337,460,691	\$385,214,562	\$432,968,433	\$480,722,305	\$1,225,682,697	\$2,862,048,688
Local	\$897,287,072	\$893,238,176	\$893,238,176	\$893,238,176	\$1,965,123,988	\$5,542,125,589
Non-Construction Expenditures	\$740,848,658	\$767,071,643	\$795,723,966	\$824,376,289	\$1,914,484,011	\$5,042,504,566
Available Funding for Construction Projects	\$493,899,105	\$511,381,095	\$530,482,644	\$549,584,192	\$1,276,322,674	\$3,361,669,711

Transit Funding (UNDER REVIEW BY DART)

Table 8 summarizes funding projections for the public transportation system. Funding is segmented into capital and operational funding to more accurately reflect how DART would likely use each funding source. The annual growth rates from Table 6 were used to project funding for DART through HY 2050.

TABLE 8: PROJECTED DART FUNDING

	2020-2024	2025-2029	2030-2034	2035-2039	2040-2050
Transit Capital Funds					
Federal	\$17,232,002	\$18,687,571	\$20,143,139	\$21,598,707	\$52,640,757
State	\$2,043,255	\$2,043,255	\$2,043,255	\$2,043,255	\$4,495,161
Local	\$9,969,834	\$12,046,883	\$14,123,932	\$16,200,980	\$42,953,368
Total Capital	\$29,245,091	\$32,777,708	\$36,310,325	\$39,842,943	\$100,089,286
Transit Operating Funds					
Federal	\$21,896,514	\$22,044,798	\$22,193,081	\$22,341,365	\$49,672,960
State	\$7,889,050	\$8,945,620	\$10,002,189	\$11,058,758	\$28,048,392
Local	\$121,827,903	\$141,244,800	\$160,661,697	\$180,078,594	\$464,520,384
Total Operating	\$151,613,468	\$172,235,218	\$192,856,967	\$213,478,717	\$542,241,736
Total Funds					
Total Funding	\$180,858,559	\$205,012,926	\$229,167,293	\$253,321,659	\$642,331,022

State Funding

Table 9 shows the project Iowa DOT funding that is reasonably expected to be available over the life of the plan assuming an annual growth rate of 2 percent.

TABLE 9: PROJECTED IOWA DOT FUNDING

	2020-2024	2025-2029	2030-2034	2035-2039	2040-2050	TOTAL
Bridge	\$85,909,104	\$93,719,023	\$101,528,942	\$109,338,860	\$268,036,406	\$658,532,335
Roadway	\$228,493,060	\$236,302,979	\$244,112,897	\$251,922,816	\$581,721,108	\$1,542,552,860
Total	\$314,402,164	\$330,022,002	\$345,641,839	\$361,261,676	\$849,757,514	\$2,201,085,195

Available Funding by Category

MPO and Local Funding

Table 10 outlines the available funding and local match required for the projected Surface Transportation Block Grant (STBG) program, STBG Set-Aside, and the required local match assuming that projects are funded at a 60/40 percent federal to local split. The approved investment strategy for the Mobilizing Tomorrow targets funding into six categories – system capacity, major reconstruction/replacement, bridge, system optimization, transit, and transportation alternatives. The target percentage for each of these categories is outlined in the table below.

TABLE 10: FEDERAL FUNDING AND LOCAL MATCH REQUIRED BY FUNDING CATEGORY

Funding Category	2020-2024	2025-2029	2030-2034	2034-2040	2040-2050
Federal Funds by Category (60% of Funding)					
STBG Funds	\$67,634,039	\$83,005,412	\$98,376,784	\$113,748,157	\$304,353,176
System Capacity (30% of STBG)	\$20,290,212	\$24,901,623	\$29,513,035	\$34,124,447	\$91,305,953
Bridge (20% of STBG)	\$13,526,808	\$16,601,082	\$19,675,357	\$22,749,631	\$60,870,635
Reconstruction (25% of STBG)	\$16,908,510	\$20,751,353	\$24,594,196	\$28,437,039	\$76,088,294
System Optimization (15% of STBG)	\$10,145,106	\$12,450,812	\$14,756,518	\$17,062,223	\$45,652,976
Transit (10% of STBG)	\$6,763,404	\$8,300,541	\$9,837,678	\$11,374,816	\$30,435,318
STBG Set-Aside Funds	\$6,517,500	\$7,998,750	\$9,480,000	\$10,961,250	\$29,328,750
Total Federal Funds	\$74,151,539	\$91,004,162	\$107,856,784	\$124,709,407	\$333,681,926
Local Match Funds by Category (40% of Funding)					
STBG Matching Funds	\$45,089,359	\$55,336,941	\$65,584,523	\$75,832,104	\$202,902,117
System Capacity	\$13,526,808	\$16,601,082	\$19,675,357	\$22,749,631	\$60,870,635
Bridge	\$9,017,872	\$11,067,388	\$13,116,905	\$15,166,421	\$40,580,423
Reconstruction	\$11,272,340	\$13,834,235	\$16,396,131	\$18,958,026	\$50,725,529
System Optimization	\$6,763,404	\$8,300,541	\$9,837,678	\$11,374,816	\$30,435,318
Transit	\$4,508,936	\$5,533,694	\$6,558,452	\$7,583,210	\$20,290,212
STBG Set-Aside Matching Funds	\$4,345,000	\$5,332,500	\$6,320,000	\$7,307,500	\$19,552,500
Total Matching Funds	\$49,434,359	\$60,669,441	\$71,904,523	\$83,139,604	\$222,454,617
Total Funding Available by Category (100% of Funding)					
STBG Total Revenue	\$112,723,398	\$138,342,353	\$163,961,307	\$189,580,261	\$507,255,293
System Capacity	\$33,817,020	\$41,502,706	\$49,188,392	\$56,874,078	\$152,176,588
Bridge	\$22,544,680	\$27,668,471	\$32,792,261	\$37,916,052	\$101,451,059
Reconstruction	\$28,180,850	\$34,585,588	\$40,990,327	\$47,395,065	\$126,813,823
System Optimization	\$16,908,510	\$20,751,353	\$24,594,196	\$28,437,039	\$76,088,294
Transit	\$11,272,340	\$13,834,235	\$16,396,131	\$18,958,026	\$50,725,529
STBG Set-Aside Total Revenue	\$10,862,500	\$13,331,250	\$15,800,000	\$18,268,750	\$48,881,250
Total Revenue Available	\$123,585,898	\$151,673,603	\$179,761,307	\$207,849,011	\$556,136,543

Table 11 shows the balance of local funding after subtracting the required local match for the STBG and STBG Set-Aside programs.

TABLE 11: PROJECTED LOCAL FUNDING BALANCE

	2020-2024	2025-2029	2030-2034	2034-2040	2040-2050
Available Matching Funds	\$493,899,105	\$511,381,095	\$549,584,192	\$549,584,192	\$1,276,322,674
Local Match Required	\$49,434,359	\$60,669,441	\$71,904,523	\$83,139,604	\$222,454,617
Balance	\$444,464,746	\$450,711,654	\$477,679,670	\$466,444,588	\$1,053,868,057

Total Projected Transportation Funding

Table 12 shows the total funding for transportation projects that is reasonably expected to be available through HY 2050.

TABLE 12: TOTAL PROJECTED TRANSPORTATION FUNDING

	2020-2024	2025-2029	2030-2034	2035-2039	2040-2050
MPO	\$123,585,898	\$151,673,603	\$179,761,307	\$207,849,011	\$556,136,543
Local	\$444,464,746	\$450,711,654	\$477,679,670	\$466,444,588	\$1,053,868,057
State	\$314,402,164	\$330,022,002	\$345,641,839	\$361,261,676	\$849,757,514
Transit (Capital)	\$29,245,091	\$32,777,708	\$36,310,325	\$39,842,943	\$100,089,286
Total	\$911,697,900	\$965,184,967	\$1,039,393,141	\$1,075,398,217	\$2,559,851,399

Project Cost Projections

The Des Moines Area MPO relied on local governments to estimate costs for their respective projects in 2019 dollars. The first five years of the plan, 2020-2024, are populated with projects from the FFY 2020-2024 Transportation Improvement Program (TIP) and the FY 2020-2024 Transportation Capital Improvement Program (TCIP). Projects were submitted for the following three time periods, 2025-2029, 2030-2034, and 2035-2039. Projects were not requested for the 2040-2050 time period.

Projects costs were determined using a year of expenditure (YOE) calculated on the midpoint of each of the time periods. The Des Moines Area MPO used a four percent annual inflation rate recommended by the Federal Highway Administration (FHWA) to convert these costs into YOE dollars. The Des Moines Area MPO assumed that some projects would be constructed or implemented prior to the HY 2024, 2029, 2034, 2039 and 2050, and used HY 2022, 2027, 2032, 2037 and 2055 as average YOE.

Other Federal Funding Programs

The following is a list of other federal funding sources. Some of these include programs that member governments are eligible to apply for to fund projects. These include the CMAQ and STBG-Highway Bridge Program (HBP) funds and were not included in the funding projects as the annual awards to member governments are unpredictable. The other funds listed are used to fund Iowa DOT projects.

Congestion Mitigation and Air Quality Improvement Program (CMAQ): CMAQ provides flexible funding for transportation projects and programs tasked with helping to meet the requirements of the Clean Air Act. These projects can include those that reduce congestion and improve air quality.

National Highway Performance Program (NHPP): This program consolidates the National Highway System and the Interstate Maintenance Program into one program. NHPP expands the number of eligible roadway miles and funds may be used to construct or improve NHS roadways, including state highways, U.S. highways, and Interstates.

STBG Highway Bridge Program (STBG-HBP): The Iowa DOT maintains a portion of Iowa's STBG funds to be targeted directly to counties and dedicated specifically to county bridge projects. A portion of these funds are required to be obligated for off-system bridges. The remaining funds can be used on either on-system or off-system bridges.

Highway Safety Improvement Program (HSIP): This is a core Federal-aid program that funds projects with the goal of achieving a significant reduction in traffic fatalities and serious injuries on public roads. Portions of these funds are set aside for use on high-risk rural roads.

Federal Lands Access Program (FLAP) and Tribal Transportation Program (TTP): The FLAP Program provides funding for projects that improve access within, and to, federal lands. The FLAP funding will be distributed through a grant process where a group of FHWA, Iowa DOT, and local government representatives will solicit, rank, and select projects to receive funding. The TTP provides safe and adequate transportation and public road access to and within Indian reservations and Indian lands are distributed based on a statutory formula based on tribal population, road mileage, and average tribal shares of the former Tribal Transportation Allocation Methodology.

Demonstration Funding (DEMO): Demonstration funding is a combination of different programs and sources. The FHWA administers discretionary programs through various offices representing special funding categories, and an appropriation bill is used to provide money to a discretionary program. Other examples can include special congressionally directed appropriations during the reauthorization of the transportation bill or through legislative acts, such as the American Recovery and Reinvestment Act of 2009 (ARRA).