

Transportation Improvement Program FY 2020-2021-2022-2023



Bay City Area Transportation Study (BCATS)

DRAFT REPORT

**Prepared by the
Bay County Transportation Planning Division
515 Center Avenue, Suite 504
Bay City, MI 48708**

**989-895-4064
TDD: 989-895-4049**

www.baycounty-mi.gov/transportation



Table of Contents

<u>Section</u>	<u>Page</u>
Chapter 1 – TIP Development and Overview	3
Public Outreach	4
BCATS Overview Map	5
Chapter 2 – Financial Plan for Bay City area TIP	6
Introduction	6
Part I: Available Highway and Transit Funding.....	6
Part II: Fiscal Constraint.....	7
Part III: Estimate of Operations and Maintenance Costs for the Federal-Aid Highway System	8
Part IV: Summary – Resources Available for Capital Needs of Public Transit Agencies.....	9
Part V: Demonstration of Financial Constraint, FY 2020 through FY 2023	9
Chapter 3 – Transportation Projects	11
Completed FY 2017-2018-2019-2020 TIP Projects.....	11
Delayed Transportation Projects	12
FAST Act Performance Based Planning	12
Amendments & Administrative Changes.....	23
2020-2021-2022-2023 TIP Project Locations	24
Chapter 4 – Environmental Justice.....	25
Environmental Justice	25
Definition of “Minority” for Purposes of Environmental Justice	26
Definition of “Low-income” for Purposes of Environmental Justice	26
Development and Analysis.....	27
Project Overview Map / Total Minority.....	31
Project Overview Map / African American Minority	32
Project Overview Map / Native American Minority	33
Project Overview Map / Asian American Minority	34
Project Overview Map / Hispanic American Minority	35
Project Overview Map / Total Low-Income Population	36
Project Overview Map / Total Multiple Race Population	37
Project Overview Map / Total Hawaiian and Pacific Islander Population.....	38
Appendix A.....	39
Metropolitan Transportation Planning Process Certification	39
Consultation Letter	40
Consultation Contact List.....	41
Comments Received.....	46
Appendix B - Projects, Illustrative List, Fiscal Constraint Tables	47
2020-2023 Transportation Improvement Projects	48



Appendix C - List of Available Federal-Aid Highway and Transit Resources 54

Highway Resources 54

Transit Resources 55

Appendix D - Financial and Operations and Maintenance Assumptions 56

Funding Growth Rates 56

Year of Expenditure (YOE) Rates 56

Estimate of Operations and Maintenance Costs on the Federal-Aid Highway System 57

Cover photographs: Independence Bridge completed project 2018 (left); Three Mile Road completed project 2017 (right)

The preparation of this report has been financed in part through a grant from the Federal Highway Administration, U. S. Department of Transportation, under the Metropolitan Planning Program, Section 104(f)] of Title 23, U.S. Code. The contents of this report do not necessarily reflect the official views or policy of the U.S. Department of Transportation.



Chapter 1 – TIP Development and Overview

The Transportation Improvement Program (TIP) is an integral part of the planning process for the Bay City Area Transportation Study (BCATS). According to the Federal Transportation Bill, *Fixing America's Surface Transportation Act (FAST Act) of 2015* and 23 USC 134(a) and (h)/FTA-Sec 8(a) and (h), a TIP must be developed for the Bay City metropolitan area by BCATS in cooperation with the State, transit operators, and local road implementing agencies. The TIP must be updated and approved at least every four years by BCATS and the Governor. It must include all projects to be funded under Title 23 and the Federal Transit Administration (FTA). This includes all federally funded highway, transit, and non-motorized transportation projects, as well as any regionally significant projects that are either federally funded or non-federally funded. There must be a reasonable opportunity for public comment prior to TIP approval. The TIP must cover a period of not less than 4 years and must include a priority list of projects to be carried out in the first 4 years. The TIP shall be financially constrained and include a financial plan that demonstrates how the projects can be implemented while the existing transportation system is being adequately operated and maintained. Only projects for which construction and operating funds can reasonably be expected to be available may be included. In developing the financial analysis, BCATS shall take into account all projects and strategies funded under Title 23, U.S.C., and the Federal Transit Act, other Federal funds, local sources, State assistance, and private contributions. The TIP must be consistent with the BCATS 2045 Metropolitan Transportation Plan and any future updates to the plan.

Implementing agencies in the BCATS area include: the Cities of Bay City and Essexville, the Bay County Road Commission (BCRC), the Bay Metropolitan Transportation Authority (BMTA) and the Michigan Department of Transportation (MDOT). MDOT is the implementing agency for all state highway projects. These agencies have representation on both the Policy and Technical Committees of BCATS. The Technical Committee reviews all project requests then forwards a recommended priority list of projects to the Policy Committee for final approval and placement in the TIP. All implementing agencies in the Bay City area have participated in the development of projects and priorities identified in the TIP. In addition, a map of the BCATS area is included on page five (5).

On May 12, 2012 the United States Environmental Protection Agency (EPA) revoked the 1997 8-hour 0.080 ppm Ozone standard for the purposes of regional transportation conformity. On May 21, 2012, the USEPA issued designations for the new 2008 8-hour 0.075 ppm Ozone standard. Bay County is designated attainment under the 2008 standard.

Effective July 21, 2013, (as a result of both the partial revocation of the 0.080 Ozone standard, and the designation of Bay County as attainment for the 0.075 standard), the Bay County attainment/maintenance area is no longer required to demonstrate regional transportation conformity of Long Range Plans or Transportation Improvement Plans (TIPs) until EPA publishes a notice designating the area in nonattainment.



Unless a designation to nonattainment for the 2008 standard occurs on or before July 20, 2013, the requirement to demonstrate regional transportation conformity will end until a designation of nonattainment under a National Ambient Air Quality Standard (NAAQS) is published for the area.

In addition, approval of the TIP shall be in accordance with the BCATS Participation Plan, which was originally adopted on October 23, 2014. The Participation Plan ensures consideration of Environmental Justice concepts. An Environmental Justice analysis of the TIP can be found in Chapter Four (4) of this document.

The BCATS implementing agencies have indicated that sufficient funds are available from the sources indicated to implement the projects listed in the TIP (i.e. non-Federal share will be available). Funds have been included in each agencies approved transportation budget. Furthermore, projects can be funded within available resources.

Project listings for fiscal years 2020, 2021, 2022 and 2023 are included in Appendix B.

Public Outreach

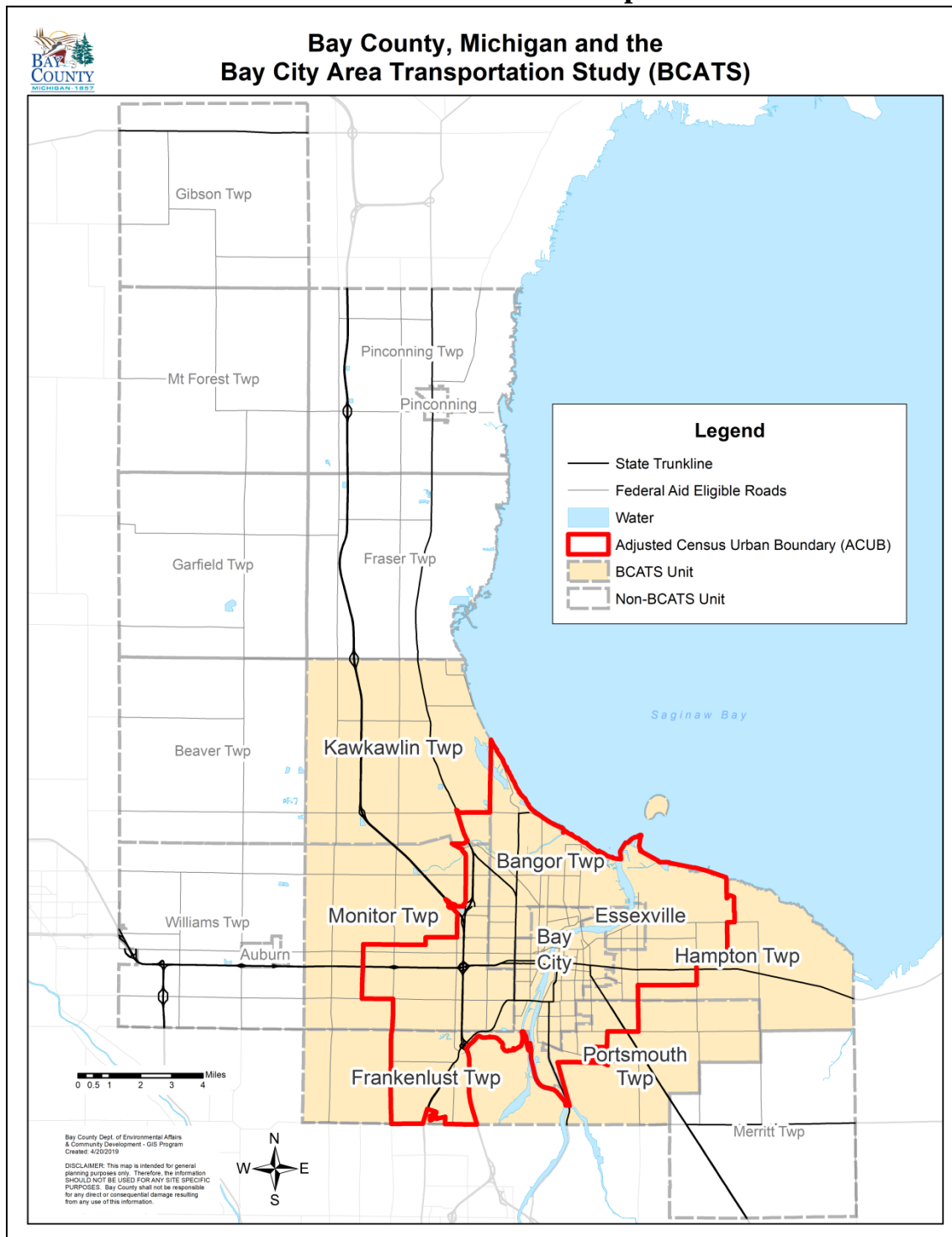
In accordance with the BCATS 2045 Metropolitan Transportation Plan and the Participation Plan, a Public Open House Meeting on the 2020-21-22-23 TIP was held on May 8, 2019, at 4:00 P.M to 7:00 P.M at the Bay County Community Center – Room 128, 800 John F Kennedy Drive, Bay City MI, 48706.

To solicit public comments for the public meeting, BCATS sent letters to our consultation contact list used for our 2045 MTP and updated to reflect changes, informing the public of the projects in the 2020-21-22-23 TIP. A copy of this letter is included in Appendix A. Any comments received back were incorporated into the program as well as added in Appendix A. The goal of the outreach is to keep those contacts informed on the transportation improvement program and acquire additional feedback from those groups, organizations, and individuals who have concerns or questions regarding the program. As part of the updated Travel Demand Model for the 2045 Metropolitan Transportation Plan, BCATS met directly with the townships and cities and discussed the 2020-23 TIP and well as their specific local plans and programs. Over the development of the 2020-23 TIP, BCATS held these and numerous other discussions with city and township staff, and other community agencies regarding any of their local plans.

The previously mentioned list is available in Appendix A. BCATS also posted the TIP and associated maps and tables on the Bay County Transportation Planning Website at www.baycounty-mi.gov/transportation. Prior to adoption of the TIP, a public hearing will be held at the BCATS Policy Meeting on June 19, 2019 at 1:30 P.M. located at the Bay County Building, 515 Center Ave, Bay City MI, 48708.



BCATS Overview Map





Chapter 2 – Financial Plan for Bay City area TIP

Introduction

The Transportation Improvement Program (TIP) is the list of road and transit projects that communities and agencies plan to implement over a four-year period. That list is required to be fiscally constrained; that is, the cost of projects programmed in the TIP cannot exceed the amount of funding “reasonably expected to be available” during that time. The function of the TIP Financial Plan is to manage available federal-aid highway and transit resources in a cost-effective and efficient manner. Specifically the Financial Plan details:

- I. Available highway and transit funding (federal, state, and local);
- II. Fiscal constraint (cost of projects cannot exceed revenues reasonably expect to be available);
- III. Expected rate of change in available funding (unrelated to inflation);
- IV. Year of Expenditure (YOE) factor to adjust for predicted inflation;
- V. Estimate of Operations and Maintenance (O and M) costs for the federal-aid highway system (FAHS).

Part I: Available Highway and Transit Funding

The majority of federal highway and transit funding is derived from federal motor fuel taxes, currently 18.4 cents per gallon on gasoline and 24.4 cents per gallon on diesel. These funds are deposited in the Highway Trust Fund (HTF). A portion of these funds is retained in the Mass Transit Account of the HTF for distribution to public transit agencies and states. In recent years, the HTF has seen large infusions of cash from the federal General Fund, due to declining collections from motor fuel taxes. This is mostly due to increased fuel efficiency in conventionally-powered vehicles, as well as a growing number of hybrid and fully-electric vehicles that require little to no motor fuel.

There are a number of federal highway programs serving different purposes. Appendix C contains a list of these programs. Federal highway funds are apportioned to the states (apportionment means distribution of funds according to formulas established by law) and then a portion is allocated to local agencies based on the population in each region. Local agencies within the BCATS Planning Area receive approximately \$1 million in federal-aid highway funding each year. In addition, MDOT spends approximately \$2.5 million annually for capital needs on state-owned highways in the BCATS Planning Area (I-, US-, and M- roads). The last few years have been higher at closer to \$10 million.

Like the highway programs, there are a number of federal transit programs, the list of which can also be found in Appendix C. Transit funds are distributed according to a complex set of distribution formulas. BMTA receives approximately \$1.7 million in federal-aid transit funding each year.



State funding for transportation comes from vehicle registration fees and motor fuel taxes. Currently, state motor fuel taxes are set at 26.3 cents per gallon on gasoline and diesel which was recently increased starting in 2017 from 19 cents per gallon for gasoline and 15 cents per gallon for diesel. The state also levies a six percent sales tax on the wholesale and federal tax portion of each gallon of motor fuel. Virtually none of this sales tax revenue goes to transportation. Also starting in 2017 was a 20 percent increase in vehicle registration fees. Funding from motor fuel taxes and registration fees (but not the sales tax) is deposited in the Michigan Transportation Fund (MTF), which is analogous to the federal HTF. The current gross receipts to the MTF are approximately \$2.86 billion annually. The Comprehensive Transportation Fund (CTF) within the MTF is used for transit. Currently, a little under \$254 million is deposited by the state into the CTF each year. MTF funding, after set-asides, is distributed to the State Trunkline fund (I-, US-, and M-designated roads) and to counties, cities, and villages throughout the state.

A series of laws enacted in November 2015 increased state funding for transportation. The Michigan House Fiscal Agency estimates that, starting in FY 2016, an additional \$455 million will be raised, increasing each year until 2020, when it's expected that the increase will stabilize at an additional \$1.2 billion per year.¹

Local funding is much more difficult to predict. There is a patchwork of transportation millages, special assessment districts, downtown development authorities, and other funding mechanisms throughout the BCATS Planning Area. Therefore, this Financial Plan does not attempt to quantify current non-federal funding or forecast future non-federal funding revenues, except for MTF and CTF.

Part II: Fiscal Constraint

The most important financial consideration when creating and/or maintaining a S/TIP is fiscal constraint. This means that each year's list of projects cannot exceed the amount of funding reasonably expected to be available in the fiscal year. Funding is considered "reasonably expected to be available" if the federal, state, and local funding amounts are based on amounts received in past years, with rates of change developed cooperatively between MDOT, transportation planning agencies, and public transportation agencies. Note that these rates of change not the same as inflation; rather, they are forecasts of the amount of funding that will be made available by the federal, state, and local governments. In Michigan, this cooperative process is facilitated by the Michigan Transportation Planning Association (MTPA), whose members include the aforementioned agencies, plus the Federal Highway Administration (FHWA) and FTA. The MTPA has determined that recent federal transportation funding shortfalls make it prudent to hold federal funding levels at a two percent annual rate of increase for all four years for the FY 2017-2020 TIP (see Appendix D).

¹ Hamilton, William E., Jim Stansell, and Kyle I. Jen. "Road Funding Package-Enacted Analysis." Lansing, MI House Fiscal Agency, November 2015.



Year of Expenditure (YOE)

When MDOT, BCRC, City of Bay City, City of Essexville, and BMTA program their projects, they are expected to adjust costs using year of expenditure (YOE) dollars. YOE simply means that project costs have been adjusted for expected inflation. This is not the same as expected rates of funding change (see previous section). Each agency has its own inflation factor(s), based on past experience. However, MDOT has developed YOE factors for itself and any agency that hasn't developed its own. For the upcoming FY 2020-2023 TIP cycle, MDOT assumes a 2 percent inflation rate. See Appendix D for more details.

Summary: Resources Available for Capital Needs on the Federal-Aid Highway System

Table 1 contains a summary of the predicted resources that will be available for capital needs on the federal-aid highway system in the BCATS Planning Area over fiscal years 2020 through 2023. The only local (i.e., non-federal) funding included is funding required to match federal-aid funds. This is usually about 20 percent of the cost of each project.

Table 1. Forecast of Resources Available for Capital Needs on the Federal-Aid Highway System in the BCATS Planning Area (Millions of Dollars)

2020	2021	2022	2023	Total
\$79.11	\$27.22	\$1.92	\$43.12	\$151.37

Part III: Estimate of Operations and Maintenance Costs for the Federal-Aid Highway System

Almost all federal-aid highway funding is restricted to capital costs; i.e., the cost to build and maintain the actual physical assets of the federal-aid highway system (essentially, all I-, US-, and M- designated roads, plus most public roads functionally classified as "collector" or higher). Operations and maintenance (O and M) costs, such as snow and ice removal, pothole patching, rubbish removal, electricity costs to operate streetlights and traffic signals, etc. are the responsibility of MDOT or local road agencies, depending on road ownership. Nevertheless, federal regulations require an estimate of O and M costs on the federal-aid highway system over the years covered by the TIP. Appendix D explains the method and assumptions used to formulate the estimate. Table 2. Contains a summary O and M cost estimate for roads on the federal-aid highway system in the BCATS Planning Area. These funds are not shown in the TIP, because most highway operations and maintenance costs are not eligible for federal-aid. The amounts shown are increased by the agreed-upon estimated YOE (i.e., inflation) factors (see Appendix D for a discussion of YOE adjustments).

Table 2. Forecast of Operations and Maintenance Costs on the Federal-Aid Highway System in the BCATS Planning Area (Millions of Dollars)

2020	2021	2022	2023	Total
\$5.42	\$5.48	\$5.54	\$5.60	\$22.04



Part IV: Summary – Resources Available for Capital Needs of Public Transit Agencies

Transit agencies receive their funding from a variety of sources: federal, state, and local. Federal funding is distributed, in large part, according to the population of the urbanized area and/or state. For example Section 5307 (Urbanized Area Formula Grant) is distributed directly to large transit agencies located within Ann Arbor, Detroit, and Toledo Transportation Management Areas (TMAs; urbanized areas with more than 200,000 residents). Section 5307 funds are distributed to federally-specified transit agencies in urbanized areas between 100,000 and 199,999 residents. For areas with populations under 100,000, the state can generally award funding at its discretion.

Other sources of funding are more specialized, such as Section 5310 (Transportation for Elderly and Persons with Disabilities) and Section 5311 (for rural areas). See Appendix C for more information on federal transit resources.

The State of Michigan, through the MDOT Office of Passenger Transportation (OPT), also distributes CTF funding to match federal-aid, for job access reverse commute (providing access to available employment for persons in low-income areas), and for local bus operating (LBO). LBO funds are very important to the agencies as federal-aid funding for transit, like federal aid funding for highways, is almost entirely for capital expenses.

Local funding can come from fare box revenues, a community's general fund, millages, and other sources. As with local highway funding, local transit funding can be difficult to predict. Therefore, this chapter will only include federal and state resources available for transit.

Table 3 contains a summary of the predicted resources that will be available for capital needs (and some operation needs, depending on the program) for BMTA during fiscal years 2020 through 2023. Federal funding reasonable expected to be available is included. CTF funding expected to be distributed by the MDOT Office of Passenger Transportation to BMTA is also included.

Table 3. Forecast of Resources Available for Public Transit Capital Needs in the BCATS Planning Area (Millions of Dollars)

2020	2021	2022	2023	Total
\$0.16	\$0.16	\$0.16	\$0.16	\$0.64

Part V: Demonstration of Financial Constraint, FY 2020 through FY 2023

After determination of resources available for federal-aid highway and transit capital needs in the BCATS Planning Area from FY 2020 through FY 2023, and matching those available resources to specific needs, a four-year program of projects is created within the context of the region's transportation policies as contained in the 2045 BCATS Long Range Plan. The list must be



adjusted to each year's YOY factor and then fiscally constrained to available revenues (see Appendix D). Table 4 contains a summary of the cost of highway and transit projects programmed over the four-year TIP period, matched to revenues available in that same period. This table shows that FY 2020 through FY 2023 TIP is fiscally constrained. Note: Operations and maintenance costs of the federal-aid highway system are included in the text of this chapter. However, these costs are not included in the TIP itself, as nearly all highway operations and maintenance costs are ineligible for federal-aid funding.

Table 4. Demonstration of Fiscal Constraint, FY 2020 through FY 2023 TIP (millions of dollars)

	2020	2021	2022	2023
Highway Funding	\$79.11	\$27.22	\$1.92	\$43.12
Highway Programmed	\$79.11	\$27.22	\$1.92	\$43.12
Transit Funding	\$6.98	\$6.98	\$6.98	\$6.98
Transit Programmed	\$6.98	\$6.98	\$6.98	\$6.98
Total Funding	\$86.09	\$34.20	\$8.90	\$50.10
Total Programmed	\$86.09	\$34.20	\$8.90	\$50.10
Difference	\$0	\$0	\$0	\$0



Chapter 3 – Transportation Projects

For projects to be included in the TIP, BCATS sends out a “Call for Projects” to the implementing agencies. Those transportation projects received are brought forward to the BCATS Technical Committee for review at a meeting open to the public where input is sought. The Technical Committee then prioritizes the projects based on how each project will enhance the entire system in the BCATS region based on condition of adjacent roads, traffic volumes, truck routes, adopted performance targets, and overall benefit to the roadway system and users in general. During this review the amount of available funds by the implementing agencies available for transportation projects is taken into account. The prioritization process has worked well in the past as it balances the implementing agencies ability to budget for the local match requirement, and yet focuses on the best projects for the system as a whole. The Technical Committee then recommends to the Policy Committee the prioritized projects for inclusion in the TIP. The full Policy Committee then votes on the recommended projects after review of all comments and suggestions, including a public comment period at each BCATS Policy Committee meeting.

Completed FY 2017-2018-2019-2020 TIP Projects

During the life of the FY 2017-2018-2019-2020 TIP, the BCATS implementing agencies completed several major projects.

In FY 2017 TIP, those include:

- City of Bay City – Patterson Avenue reconstruction from Smith Street to Marquette Avenue.
- City of Bay City – Midland Street/Vermont Street rehabilitation from Wenona Avenue to Dean Street.
- BCRC – Three Mile Road rehabilitation Project from M-84 to Amelith Road.
- BCRC – Cass Road resurfacing from Jones Road to Farley Road.
- BCRC – Farley Road resurfacing from M-25 to M-138.
- MDOT – I-75 restoration and rehabilitation from Cottage Grove Road to half mile north of Linwood Road.
- MDOT – Addition of roadway gates at Lake State Railway and Wilder Road
- MDOT – Installation of a new crossing surface at Lake State Railway and Cass Avenue

In FY 2018 TIP, those include:

- City of Bay City – Harry S Truman Parkway Bridge (Independence Bridge) preventative maintenance.
- BCRC – Pine Road rehabilitation project from Munger Road to German Road.
- MDOT – I-75 rehabilitation from Beaver Road to Cottage Grove Road.
- MDOT – M-25 (Veteran’s Memorial Bridge) structural, mechanical, and electrical repairs over the Saginaw River.



- MDOT – M-25 (Veteran’s Memorial Bridge) bridge rehabilitation over CM Railroad in Bay City.
- MDOT – M-13 Connector resurfacing from I-75 to M-13.
- MDOT – M-13 resurfacing from Chippewa Street to Linwood Road.
- MDOT – Longitudinal pavement marking application.
- MDOT – Special pavement marking application

In FY 2019 TIP, those include:

- City of Bay City – N Trumbull Street reconstruction between Center Avenue (M-25) and Woodside Avenue.
- BCRC – Old Kawkawlin Road (Grove Street) rehabilitation from M-13 to Two Mile Road.
- BCRC – Mackinaw Road rehabilitation from Salzburg Road to US-10.
- BCRC – Wheeler Road capital preventative maintenance from Seven Mile Road to Eight Mile Road.
- MDOT – I-75 NB Road rehabilitation, M-13 Connector to Beaver Road.
- MDOT – 2 bridge deck replacements over I-75. Mackinaw Road and Chip Road.
- MDOT – 8 bridge rehabilitations along I-75. I-75 SB over Wheeler Road, over North Branch of Kawkawlin River, over M-13 SB Connector, and over Beaver Road. I-75 NB over North Branch of Kawkawlin River, over Wheeler Road, and over M-13 SB Connector.
- MDOT – Wilder Road over I-75 bridge deck replacement
- MDOT – Capital preventative maintenance on US-10 E.
- MDOT – Application of special pavement markings.
- MDOT – Longitudinal pavement markings.

Delayed Transportation Projects

Originally listed in the FY 2017-2018-2019-2020 TIP for FY 2020, S 7 Mile Road rehabilitation project from Salzburg Road to Midland Road was suspended.

FAST Act Performance Based Planning

A key feature of the Fixing America’s Surface Transportation (FAST) Act is the establishment of a performance and outcome based program, originally introduced through the Moving Ahead for Progress in the 21st Century (MAP-21) Act. The objective of a performance-based program is for states and MPOs to invest resources in projects that collectively will make progress toward the achievement of national goals. 23 CFR 490 outlines the seven areas in which performance goals are required, these include: Safety, Infrastructure Condition, Congestion Reduction, System Reliability, Freight Movement, Environmental Sustainability, and Reduced Project Delivery Delay.



Performance Measures

The regulations required the U.S. Department of Transportation/Federal Highway Administration to establish final rules on performance measures to address the seven areas in the legislation, resulting in the following areas being identified as measures for the system:

- Fatalities and serious injuries, both in number and rate per vehicle mile traveled on all public roads as well as the number of non-motorized fatalities and serious injuries.
- Pavement condition on the Interstate system and on the remainder of the National Highway System (NHS).
- Bridge condition on the NHS.
- System reliability of the Interstate system and on the remainder of the NHS.
- Traffic congestion.
- On-road mobile source emissions.
- Freight movement on the Interstate system.

MAP-21 also mandated the Federal Transit Administration (FTA) to develop a rule establishing a strategic and systematic process of operating, maintaining, and improving public capital assets effectively through their entire life cycle. The Transit Asset Management (TAM) Final Rule 49 CFR part 625 became effective Oct. 1, 2016 and established categories of capital assets. The performance management requirements outlined in 49 CFR 625 Subpart D are a minimum standard for transit operators. Providers with more data and sophisticated analysis expertise are allowed to add performance measures and utilize those advanced techniques in addition to the required national performance measures.

- Rolling Stock - means a revenue vehicle used in providing public transportation, including vehicles used for carrying passengers on fare-free services.
- Equipment - means an article of non-expendable, tangible property has a useful life of at least one year.
- Facilities - means a building or structure that is used in providing public transportation.
- Infrastructure - means the underlying framework or structures that support a public transportation system.

Table 5 below lays out the current timeline for the National Transportation Performance Measures and targets.



Table 5. National Transportation Performance Measures

Area	Measures	Target Setting Status
Safety Performance	• Number of fatalities; • Rate of fatalities; • Number of serious injuries; • Rate of serious injuries; • Number of non-motorized fatalities and non-motorized serious injuries	Approved adoption of statewide targets (February 2019)
Pavement and Bridge Asset Management	• Percent NHS Bridges in good and poor condition; • Percent Interstate pavement in good and poor condition; • Percent Non-Interstate NHS pavement in good and poor condition	Approved adoption of statewide targets (October 2018)
System Performance and Freight	• Interstate travel time reliability; • Non-Interstate travel time reliability; • Truck travel time reliability	Approved adoption of statewide targets (October 2018)
Congestion Mitigation and Air Quality	• Peak hour excessive delay per capita; • Percent of non-single occupancy vehicle travel; • Total emissions reduction	Not Applicable to BCATS
Public Transportation	Transit Asset Management (TAM) Plans; Public Transportation Agency Safety Plan • Fatalities • Injuries • Safety events • System reliability	Approved State of Good Repair Targets (December 2018); TAM Plans Received October 2018; Safety Plans have no regulations adopted at this time.

Performance Targets

State Targets

Within one year of the U.S. Department of Transportation final rules on performance measures, States are required to set performance targets in support of these measures. Within 180 days of the state setting targets, MPOs are then required to choose to support the statewide targets, or optionally set their own targets. To ensure consistency, each MPO must, to the maximum extent practicable:

- Coordinate with an MPO when setting performance targets for the area represented by that MPO; and
- Coordinate with the relevant State and public transportation providers when setting performance targets in an urbanized area not represented by an MPO [§1202; 23 USC 135(d)(2)(B)].

The Statewide Transportation Improvement Program (STIP), State asset management plans under the National Highway Performance Program (NHPP), and State performance plans under the Congestion Mitigation and Air Quality Improvement program are required to include performance targets. Additionally, State and MPO targets should be included in State-wide transportation plans.



MPO Targets

Within 180 days of the state, and/or providers of public transportation, setting performance targets, it is required that MPOs set performance targets in relation to the performance measures (where applicable). To ensure consistency each MPO must, to the maximum extent practicable, coordinate with the relevant state and public transportation providers when setting performance targets. MPO Metropolitan Transportation Plans (MTPs) and TIPs are required to include State and MPO targets.

Current BCATS Programming of Projects Procedures and Performance Measures

Historically BCATS has and continues to face limitations in funding resources at the local, state, and federal levels. The MPO has established goals and objectives in the MTP to guide project selection as well as data gathered on the federal-aid road network. Data that is currently gathered by the BCATS on the federal-aid network and will tie in to performance measures are traffic volumes, safety, non-motorized infrastructure, and pavement and bridge condition. The latest traffic volume, PASER rating, and non-motorized infrastructure is requested for each project submitted for inclusion in the TIP.

MPO staff meets regularly with road agencies and local units of government and offer crash data and additional relevant information upon request. Road agencies that have identified a safety deficiency in their area submit project proposals to MDOT for consideration. BCATS will, however, continue to program projects using all sources of funding that target identified intersections and corridors with high crash rates as well as intersections and corridors with high fatalities and serious injuries, which we hope will support MDOT's safety targets.

As the performance measure targets are established in the future, BCATS will determine appropriate targets for the study area and include any and all necessary data for those performance measures for project selection in the development of all future TIP developments. BCATS will begin highlighting progress towards meeting current performance targets with the annual listing of obligated projects. MPO staff will also continue to work with other MPOs on best practices for performance-based programming of projects and analysis of performance measure data.

MPO Target Setting

Safety

The Highway Safety Improvement Program final rule (23 CFR Part 490) requires States to annually set targets for five safety performance measures by August 31st. MDOT coordinated the establishment of safety targets with the 14 MPOs in Michigan through monthly Target Coordination Meetings and through discussions at various meetings of the Michigan Transportation Planners Association (MTPA). MDOT officially adopted the 2019 state safety targets in the Highway Improvement Program annual report dated August 31, 2018. BCATS may, within 180 days of MDOT establishing and reporting its safety targets, establish safety targets by agreeing to plan and programming projects so that they contribute toward the accomplishment of the state safety targets, or committing to a quantifiable target for each safety



performance measure for the BCATS planning area. On February 20, 2019 the BCATS Policy Committee agreed to support the MDOT state safety targets for the calendar year of 2019. Table 6 below provides the current MDOT state safety targets that are supported by BCATS.

Table 6. Michigan State Safety Targets for Calendar Year 2019

Safety Performance Measure	Baseline Through Calendar Year 2017	Calendar Year 2019 State Safety Target
Fatalities	981.4	1,023.2
Fatality Rate	1.00	1.02
Serious Injuries	5,355.0	5,406.8
Serious Injury Rate	5.47	5.41
Non-motorized Fatalities & Serious Injuries	743.6	759.8

The FY 2020 – 2023 TIP includes several projects which are anticipated to support the MDOT state safety targets in the BCATS planning area. Table 7 below represents over \$24 million investment in highway safety projects in the BCATS planning area.

Table 7. FY 2020-2023 TIP Safety Projects

Fiscal Year	Agency	Project	Work Type	Project Cost	Safety Benefit
2020	MDOT	US-10	Install Medial Guardrail, Type TD	\$3,409,239	Reduce the potential for vehicles cross the median and collide with oncoming traffic
2020	MDOT	I-75 S	Freeway Shoulder Delineation Enhancement	\$157,400	Increase driver awareness of roadway
2020	MDOT	Bay Region-wide	Longitudinal Pavement Marking Application on Trunkline Routes	\$2,970,000	Increase driver awareness of roadway direction and movement
2020	MDOT	Bay Region-wide	Special Pavement Marking Application on Trunkline Routes	\$727,500	Increase driver awareness of signs and roadways
2020	MDOT	Bay Region-wide	Pavement Markings & Retro Reflectivity Readings on Trunkline Routes	\$23,000	Increase driver awareness of signs and roadways



2021	MDOT	M-13	Signal Modernization & Geometric Improvements	\$475,000	Reduce the potential for intersection collisions and improve traffic movement efficiency
2021	MDOT	Bay Region-wide	Longitudinal Pavement Marking Application on Trunkline Routes	\$3,180,000	Increase driver awareness of roadway direction and movement
2021	MDOT	Bay Region-wide	Special Pavement Marking Application on Trunkline Routes	\$590,000	Increase driver awareness of signs and roadways
2021	MDOT	Bay Region-wide	Pavement Markings & Retro Reflectivity Readings on Trunkline Routes	\$22,000	Increase driver awareness of signs and roadways
2022	MDOT	M-84 N	Non-freeway Signing Update	\$577,000	Increase driver awareness of signs
2022	MDOT	Bay Region-wide	Pavement Markings & Retro Reflectivity Readings on Trunkline Routes	\$22,000	Increase driver awareness of signs and roadways
2022	MDOT	Bay Region-wide	Longitudinal Pavement Marking Application on Trunkline Routes	\$3,180,000	Increase driver awareness of roadway direction and movement
2022	MDOT	Bay Region-wide	Special Pavement Marking Application on Trunkline Routes	\$590,000	Increase driver awareness of signs and roadways
2023	MDOT	Bay Region-wide	Pavement Markings & Retro Reflectivity Readings on Trunkline Routes	\$22,000	Increase driver awareness of signs and roadways
2023	MDOT	Bay Region-wide	Longitudinal Pavement Marking Application on Trunkline Routes	\$3,180,000	Increase driver awareness of roadway direction and movement
2023	MDOT	Bay Region-wide	Special Pavement Marking Application on Trunkline Routes	\$890,000	Increase driver awareness of signs and roadways
2023	MDOT	I-75 S	Freeway Signing Update	\$4,250,000	Increase driver awareness of signs, improve travel efficiency



Pavement and Bridge Condition

The Federal Highway Administration (FHWA) requires that MDOT will be establishing 2-year and 4-year targets for the four pavement and two bridge performance measures. MDOT finalized the pavement and bridge targets on May 20, 2018. Table 8 below shows the pavement and bridge performance measures set by the state of Michigan and supported by BCATS. MPOs are required to establish 4-year targets for these measures. On October 17, 2018 the BCATS Policy Committee signed a resolution supporting the MDOT 4- year targets.

Table 8. Michigan State Targets for First Performance Period

Performance Area	Measure	Baseline Condition (2017)	2- Year Targets	4- Year Targets
Bridge	Percent National Highway System (NHS) Deck Area in Good Condition	32.7%	27.2%	26.2%
	Percent NHS Deck Area in Poor Condition	9.8%	7.2%	7.0%
Pavement	Percent of Interstate Pavement in Good Condition	56.8%	N/A	47.8%
	Percent of Interstate Pavement in Poor Condition	5.2%	N/A	10.0%
	Percent of Non-Interstate NHS Percent in Good Condition	49.7%	46.7%	43.7%
	Percent of Non-Interstate NHS Percent in Poor Condition	18.6%	21.6%	24.6%

Pavement and Bridge projects in the BCATS 2020-2023 TIP can be seen in Tables 9 and 10 respectively. These projects represent over a \$50 million investment into NHS pavement improvements and over \$98 million investment into NHS bridge improvements in the BCATS Planning area.



Table 9. NHS Pavement Projects in the FY 2020-2023 TIP

Fiscal Year	Agency	Project	Work Type	Project Cost	Pavement Benefit
2021	MDOT	I-75 from Beaver Road to Cottage Grove	Road Rehabilitation	\$17,037,896	Improve surface condition and IRI
2023	MDOT	US-10 W from 7 Mile Road to Bay City	Reconstruction	\$33,380,987	Improve surface condition, IRI, cracking, and faulting

Table 10. NHS Bridge Projects in the FY 2020-2023 TIP

Fiscal Year	Agency	Project	Work Type	Project Cost	Bridge Impact
2020	MDOT	M-13 (Lafayette Bridge over East Channel Saginaw River)	Bridge Replacement	\$82,291,765	Bridge Replacement
2020	MDOT	M-13 and M-84 over W Channel Saginaw River in Bay City	Bridge Capital Preventative Maintenance	\$472,884	Bridge Restoration Work
2021	MDOT	I-75	Bridge Replacement	\$6,286,615	Deck Replacement
2021	MDOT	I-75 over Beaver Rd	Bridge Replacement	\$2,291,934	Deck Replacement
2021	MDOT	I-75 over Hembling Drain	Bridge CSM	\$181,705	Joint Repair, Scour Protection
2023	MDOT	Mackinaw Road over US-10	Bridge Replacement	\$4,642,449	Bridge Replacement
2023	MDOT	2 Structures on US-10	Bridge Rehabilitation	\$1,960,767	Overlay - Shallow



System Performance and Freight

Federal regulations require states and Metropolitan Planning Organizations (MPOs) to use three performance measures for assessing travel time reliability. Travel time data used to calculate each measure is purchased by the Federal Highway Administration (FHWA) and made available for use by states and MPOs. The vehicle probe data set used for the federally required measures is called the National Performance Management Research Data Set (NPMRDS). The data is processed through an analytical software tool known as Regional Integrated Transportation Information System (RITIS). The travel time reliability measures, as defined in the PM3 federal rule are:

- Level of Travel Time Reliability (LOTTR) on the Interstate: % of person-miles traveled on Interstate that are reliable
- LOTTR on the Non-Interstate NHS: % of person-miles traveled on the Non-Interstate NHS that are reliable
- Freight Reliability Measure on the Interstate: Truck Travel Time Reliability (TTTR) Index

MDOT finalized the targets for the System Performance and Freight performance measures, on May 20, 2018. Table 11 shows the measures set by the state of Michigan and supported by BCATS. MPOs are required to establish 4-year targets for these measures. On October 17, 2018, the BCATS Policy Committee signed a resolution supporting the MDOT 4 year targets.

Table 11. Michigan State Reliability Targets

Measure	Baseline Condition 2017	2-Year Targets	4-Year Targets
Interstate Travel Time Reliability	85.1%	75.0%	75.0%
Non-Interstate NHS Travel Time Reliability	85.8%	-	70.0%
Freight Reliability	1.38	1.75	1.75

System performance and freight reliability projects in the BCATS 2020-2023 TIP can be seen in Table 12. These projects represent over an almost \$150 million investment into travel time and freight reliability improvements in the BCATS Planning area.



Table 12. System Performance and Freight Projects in the FY 2020-2023 TIP

Fiscal Year	Agency	Project	Work Type	Project Cost	Performance/Freight Benefit
2020	MDOT	M-13 (Lafayette Bridge over East Channel Saginaw River)	Bridge Replacement	\$82,291,765	Improve travel time reliability
2020	MDOT	M-13 and M-84 over W Channel Saginaw River in Bay City	Bridge Capital Preventative Maintenance	\$472,884	Improve travel time reliability
2021	MDOT	I-75 from Beaver Road to Cottage Grove	Road Rehabilitation	\$17,037,896	Improve travel time and freight reliability
2021	MDOT	I-75	Bridge Replacement	\$6,286,615	Improve travel time and freight reliability
2021	MDOT	I-75 over Beaver Rd	Bridge Replacement	\$2,291,934	Improve travel time and freight reliability
2021	MDOT	I-75 over Hembling Drain	Bridge CSM	\$181,705	Improve travel time and freight reliability
2021	MDOT	M-13	Signal Modernization & Geometric Improvements	\$475,000	Increase traffic movement efficiency
2023	MDOT	US-10 W from 7 Mile Road to Bay City	Reconstruction	\$33,380,987	Improve travel time reliability
2023	MDOT	Mackinaw Road over US-10	Bridge Replacement	\$4,642,449	Improve travel time reliability
2023	MDOT	2 Structures on US-10	Bridge Rehabilitation	\$1,960,767	Improve travel time reliability

Congestion Mitigation and Air Quality

This measure applies to urbanized areas containing NHS mileage and having a population over 200,000 (Phase 1 population over 1 million). The Bay City urbanized area does not meet the criteria for this performance measure.



Public Transportation

BCATS has worked with the Bay Metropolitan Transportation Authority (BMTA) to report State of Good Repair Targets to the Federal Transit Administration. On December 19, 2018 the BCATS Policy Committee supported the FY 2019 BMTA State of Good Repair Targets below in Table 13.

Table 13. BMTA State of Good Repair Targets

Asset Class	Current Condition	2019 Target
Facilities	0% of our facilities are past Useful Life Benchmark (ULB)	0% of our facilities to be past Useful Life Benchmark (ULB)
Revenue Vehicles	19.5% of our revenue vehicles are past Useful Life Benchmark (ULB)	16.9% of our revenue vehicles to be past Useful Life Benchmark (ULB)
Non-Revenue Vehicles	57.1% of our non-revenue vehicles are past Useful Life Benchmark (ULB)	14.3% of our non-revenue vehicles to be past Useful Life Benchmark (ULB)

BMTA State of Good Repair projects in the BCATS 2020-2023 TIP can be seen in Table 14. These projects represent over an \$800 thousand investment into public transportation improvements in the BCATS Planning area.

Table 14. State of Good Repair Projects in the FY 2020-2023 TIP

Fiscal Year	Agency	Project	Project Cost	Asset Benefit
2020	BMTA	ADP Hardware and Software	\$80,000	Facilities
2020	BMTA	Replace (2) Lift Vans	\$120,000	Revenue Vehicles
2021	BMTA	Replace (2) Lift Vans	\$120,000	Revenue Vehicles
2021	BMTA	Window, Door, and Floor Replacements	\$80,000	Facilities
2022	BMTA	Replace (2) Lift Vans	\$120,000	Revenue Vehicles



2022	BMTA	Air Make-Up Unit	\$80,000	Facilities
2023	BMTA	DPF Exhaust Cleaner	\$80,000	Facilities
2023	BMTA	Tire Changer Replacement	\$15,000	Facilities
2023	BMTA	Air Make-Up Unit	\$90,000	Facilities
2023	BMTA	Air Compressor Replacement	\$15,000	Facilities

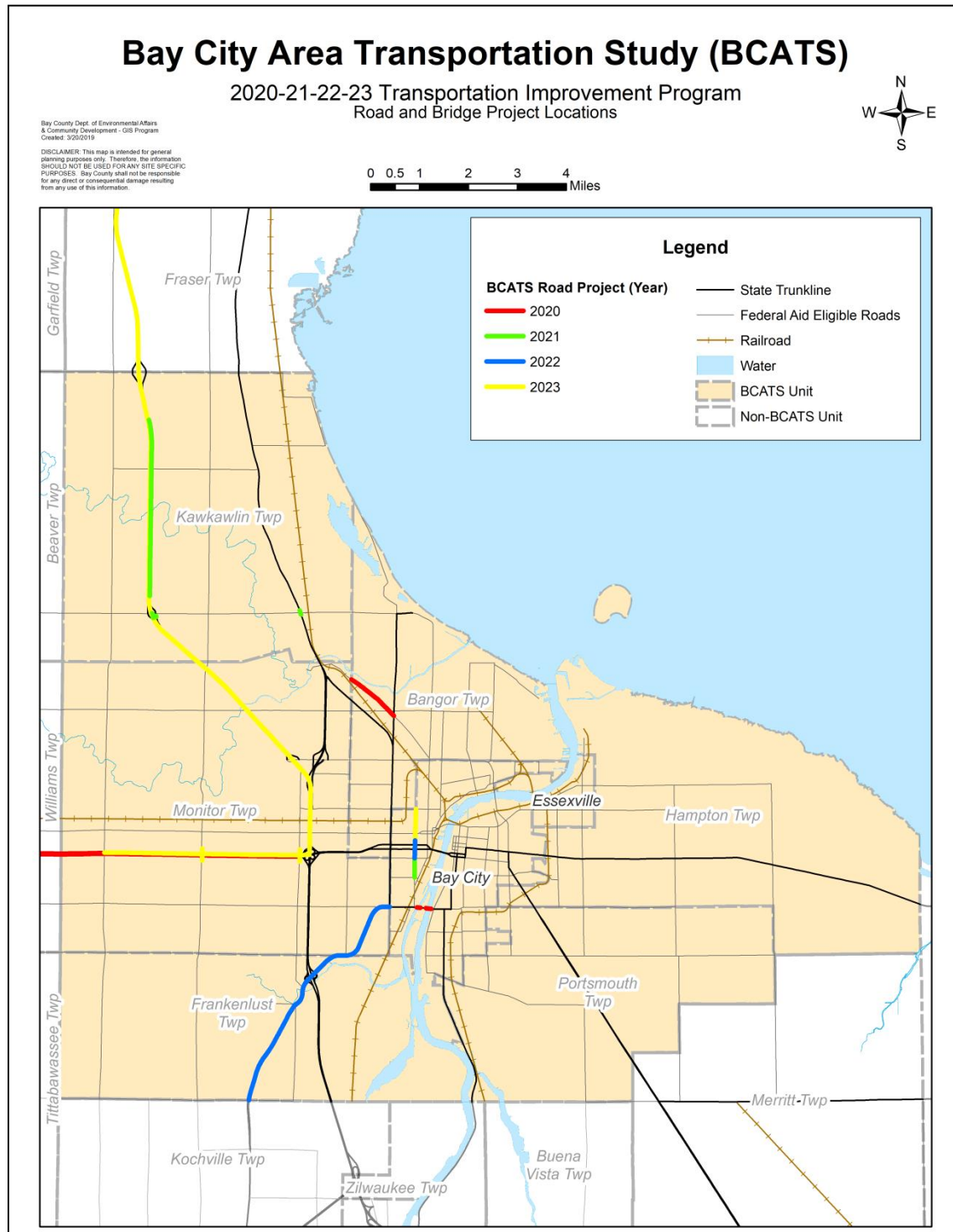
Amendments & Administrative Changes

It is important to remember what constitutes an amendment and what represents an administrative change because each has a different process and approval procedures. The table below provides guidance to assist local agencies in determining whether an amendment is needed for a project or if an administrative change is sufficient.

Amendments Include:	Administrative Changes Include:
1. Adding new project(s). New projects include projects previously deleted from the TIP and then resubmitted at a later time for inclusion in the TIP.	1. Carrying a project from one approved TIP to the next as long as it is not a major capacity project and the carrying forward is done in the first quarter of the first year of the new TIP.
2. Deleting projects	2. A minor change in scope of work (generally, anything not mentioned in the "Amendment" column is considered minor).
3. Extending the length of a previously approved project one-half mile or greater. This is considered a major change in scope of work.	3. Cost increases of 10 percent or less without a major change to scope of work AND without over programming the TIP.
4. Adding a travel or turn land one-half miles or greater to a previously approved project. This is considered a major change in scope.	4. Changing the source of federal aid within the same federal agency.
5. Adding a new project phase to a previously approved project. This is considered a major change in scope.	5. Changing the order of approved projects by year within the TIP.
6. Adding federal funds to a previously non-federally funded project.	6. Changing a federally funded project to advance construct. The project must be shown in both the advance construct and payback years.
7. Cost increases by more than 25 percent with or without a major change in scope of work.	7. Moving a project from the Illustrative List to the TIP should a cost savings occur or additional funding becomes available.



2020-2021-2022-2023 TIP Project Locations





Chapter 4 – Environmental Justice

Environmental Justice

In April 1997 the U.S. Department of Transportation (DOT) issued the DOT order on environmental justice to address Environmental Justice in Minority Populations and Low-Income Populations (DOT Order 5610.2). The order generally describes the process for incorporating environmental justice principles into all DOT programs, policies, and activities.

Environmental justice is an important part of the planning process and must be considered in all phases of planning. This includes all public participation plans and activities, the development of Regional Transportation Plans and Transportation Improvement Programs adopted by BCATS. Specifically, BCATS will consider environmental justice concerns within their established public involvement procedures.

There are three fundamental concepts of environmental justice:

- To avoid, minimize, or mitigate disproportionately high and adverse human health or environmental effects, including social and economic effects, on minority populations and low-income populations.
- To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.
- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority populations and low-income populations.

BCATS has identified census block groups where a high percentage of low-income and minority populations live so that their needs can be identified and addressed, and the benefits and burdens of transportation investments can be fairly distributed. BCATS updated its public Participation Plan in 2014 to eliminate barriers and engage minority and low-income populations in transportation decision making.

However, BCATS cannot fully meet community needs without the active participation of well-informed, empowered individuals; community groups; and other non-governmental organizations. These individuals and groups advance the letter, spirit, and intent of environmental justice in transportation when they are involved in public participation activities (meetings, hearings, advisory groups) to help BCATS understand community needs, perceptions, and goals. Our basic message to all citizens is that the earlier you get involved, the better your chances will be to create the impact you desire. There are many situations where public participation has influenced transportation decisions made in our community.

Transportation programs and projects cannot proceed without citizen acceptance and support that comes through an educated public and an open inclusive process.



BCATS has worked with the following groups for environmental justice purposes: the five Citizen District Councils, the Hispanic Community Agency, the NAACP Bay City branch, the Saginaw Chippewa Indian Tribe, the Bay City Housing Commission (low income) and the Division on Aging. Of particular note, the City of Bay City and the Chippewa Tribe have cooperated on past projects by agreeing on an official protocol for the handling and disposition of human remains. BCATS has contacted the five Citizen District Councils to solicit input into the transportation planning process. BCATS has notified the local president of the NAACP regarding the TIP and Metropolitan Transportation Plan. TIP project and meeting information is posted on the BCATS website <http://www.baycounty-mi.gov/transportation> as well as being published in the local newspaper, Bay City Times, and in and around the Bay County Building. BCATS will host a Public Open House Meeting to present the TIP to the public and solicit comments on Tuesday, May 10, 2016 from 4 p.m. to 7 p.m. at the Bay City Alice and Jack Wirt Library, 500 Center Ave, Bay City, MI 48708. BCATS will continue the ongoing development of strategies to ensure cooperation between the MPO and community organizations representing low-income populations and minority populations.

Definition of “Minority” for Purposes of Environmental Justice

According to the U.S. DOT Order 5610.2 the following groups are defined as “minority”:

1. Black (a person having origins in any of the black racial groups of Africa).
2. Hispanic (a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race).
3. Asian American (a person having origins in any of the original people of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands).
4. American Indian and Alaskan Native (a person having origins in any of the original people of North America and who maintains cultural identification through tribal affiliation or community recognition).
5. Native Hawaiian and Other Pacific Islanders (a person having origins in any of the original people of Hawaii, Guam, Samoa, or other Pacific Islands).

Definition of “Low-income” for Purposes of Environmental Justice

“Low-Income” is defined as a person whose household income is at or below the Department of Health and Human Services (HHS) poverty guidelines. HHS poverty guidelines are used as eligibility criteria for the Community Services Block Grant Program and a number of other federal programs. However, a state or locality may adopt a higher threshold for low-income, as long as the higher threshold is not selectively implemented and is inclusive of all persons at or below the HHS poverty guidelines.



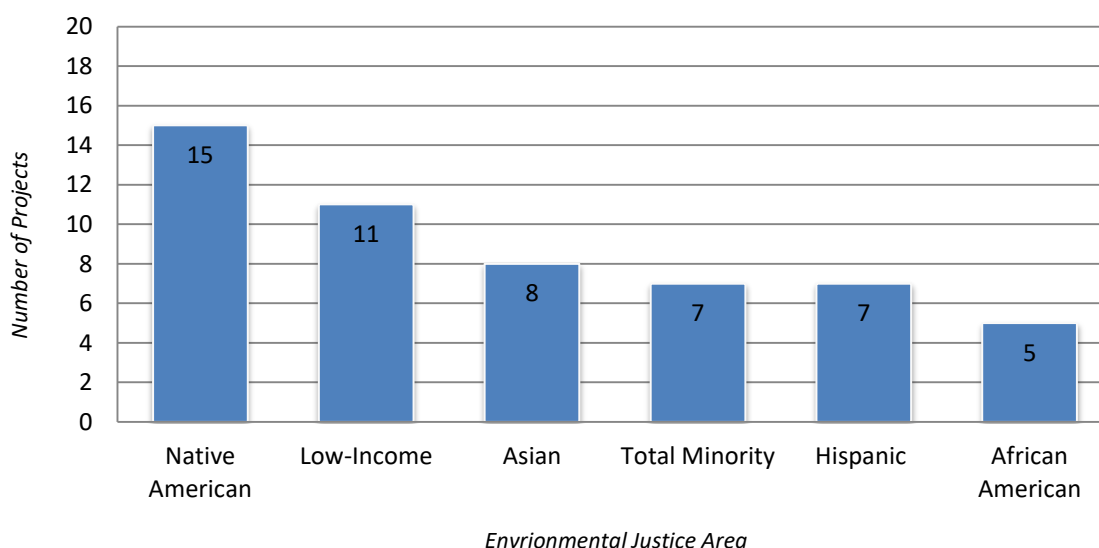
Development and Analysis

BCATS has developed a demographic profile of the transportation planning area that includes identification of the locations of minority populations and low-income populations as covered by the executive order on environmental justice.

The maps, beginning on page 30, identify the minority populations and low-income populations within the BCATS Planning Area. The maps identify minority and low-income areas in relation to the FY-2020-21-22-2023 proposed TIP projects, in order to provide a visual analysis of potential impacts.

Of the 21 total street and highway projects in the TIP, seven (7) projects are located within or adjacent to census tracts identified as having a total minority percentage higher than the overall BCATS average for all census block groups. For each identified minority population, five (5) projects are located within or adjacent to African American minority areas, eight (8) projects are located within or adjacent to Asian minority areas, fifteen (15) projects are within or adjacent to Native American minority areas, and seven (7) projects are within or adjacent to Hispanic minority areas. Furthermore, 11 of the 21 projects are within or adjacent to block groups which have been identified to have a low-income population higher than the overall BCATS average for all block groups. Overall, 21 of the 21 of the street and highway projects are completely preservation and maintenance in nature. These projects do not include any relocations and displacements.

Chart 1: Number of Projects Located in Each Minority and Low-Income Area.





The data that was used in the minority maps is based on individuals, while the data for low-income is based on household. In order to show if there are minority populations or households below the poverty level impacted by a road project, a “buffer” was created with a radius of 0.25 miles around each project to provide an Impact Area; shown in light blue on the maps. Since some of the block groups are large in area, and the majority of the road projects are smaller in comparison, an analysis technique was applied to the raw data to better show how many people are being affected by the road projects. The data had to be prorated by using the ratio of the total area of the block groups to the total area of the Impact Area. Once the ratio is obtained, it is then used to derive an estimated amount of people from the minority and low-income groups that are within a quarter mile radius of all projects.

Each percentage was calculated by taking the estimated number of individuals in each minority group within the Impact Area and dividing it by the estimated total population within the Impact Area. In addition, the percentage of each minority group was calculated for all the block groups located in the BCATS area. Once the percentages of minority and below-poverty households were calculated within the Impact Area, they were compared to the percentages of the whole BCATS area. Table 15 shows the summary of the minority populations and low-income households in the entire BCATS area, as well as the totals and percentages of each group located within the 0.25 mile Impact Areas of the 2020-2023 TIP projects.

Table 15. Environmental Justice Analysis of Minority and Low-Income Populations

	BCATS MPO		Project Impact Area (0.25 mile buffer)	% within Impact Area
Total Area (miles²)	172.38	---	12.32	7.2%
Total Population	90,318	100%	8,232	9.1%
White	79,965	88.5%	7,231	87.8%
African American	1,651	1.8%	162	2.0%
Native American	451	0.5%	44	0.5%
Asian	517	0.6%	50	0.6%
Hispanic	4,584	5.1%	434	5.3%
Hawaiian	12	0.01%	1	0.0%
Other Races	966	1.1%	90	1.1%
Two or More Races	2,172	2.4%	220	2.7%
Total Households	38,819	---	3,579	9.2%
Households Below Poverty Level	5,343	13.8%	379	7.1%

As the data shows, there are not any groups that are disproportionately neglected or overexposed in terms of proposed transportation projects. For each minority group, the percentage within the Impact Area is roughly equal to or higher than the percentage in the whole BCATS area. This shows that the minorities’ needs are being taken into consideration with respect to future transportation improvements. The same is true for low-income population. The 9.1% of low-income (below-poverty-level) households that are within the Impact Area of proposed



transportation projects are roughly equal to the overall percentage in the whole BCATS area (13.8%).

Table 16 below, shows a slightly different assessment; it compares the minority populations within the Impact Area to the total population within the Impact Area. In this case, the Impact Area percentages should be compared up & down the column to the Total Population percentage to see if any minority group or low-income population is more concentrated therein. This analysis shows that similar percentages of most minority groups and low-income population are represented within Impact Areas of proposed transportation projects. Accordingly, it is concluded that imminent transportation system investments are affecting all involved in a similar manner. These projects do not disproportionately burden nor fail to meet the needs of any segment of the population.

Table 16. Percent Concentrations within Projects' Impact Area

	BCATS MPO	2020-2023 EJ Impact Area (0.25 miles)	% Concentration per Category within Impact Area
Total Area (miles²)	172.38	12.32	---
Total Population	90,318	8,232	9.11%
White	79,965	7,231	9.04%
African American	1,651	162	9.80%
Native American	451	44	9.73%
Asian	517	50	9.73%
Hispanic	4,584	434	9.47%
Hawaiian	12	1	9.48%
Other Races	966	90	9.33%
Two or More Races	2,172	220	10.11%
Total Households	38,819	3,579	9.22%
Households Below Poverty Level	5,343	379	7.09%

During the planning process, all projects will have an opportunity for public comment and public participation. For major projects in the TIP, open houses will be conducted by the implementing agencies. These project open houses are held to discuss the socio-economic impacts of the project on the community which includes any low-income populations or minority populations. Mailing lists are compiled and invitations sent to everyone in the affected neighborhood. Also, during construction, appropriate detour routes are developed to minimize delay and disruption on all population groups. Having followed the adopted environmental justice practices BCATS has not identified any disproportionate adverse effects on minority and low-income populations.

There are also 11 transit projects identified in the TIP. The service area of the BMTA is the entire County of Bay which encompasses all of BCATS. BMTA promotes equality within their transportation programs. For example, BMTA supplies transit service to everyone, regardless of

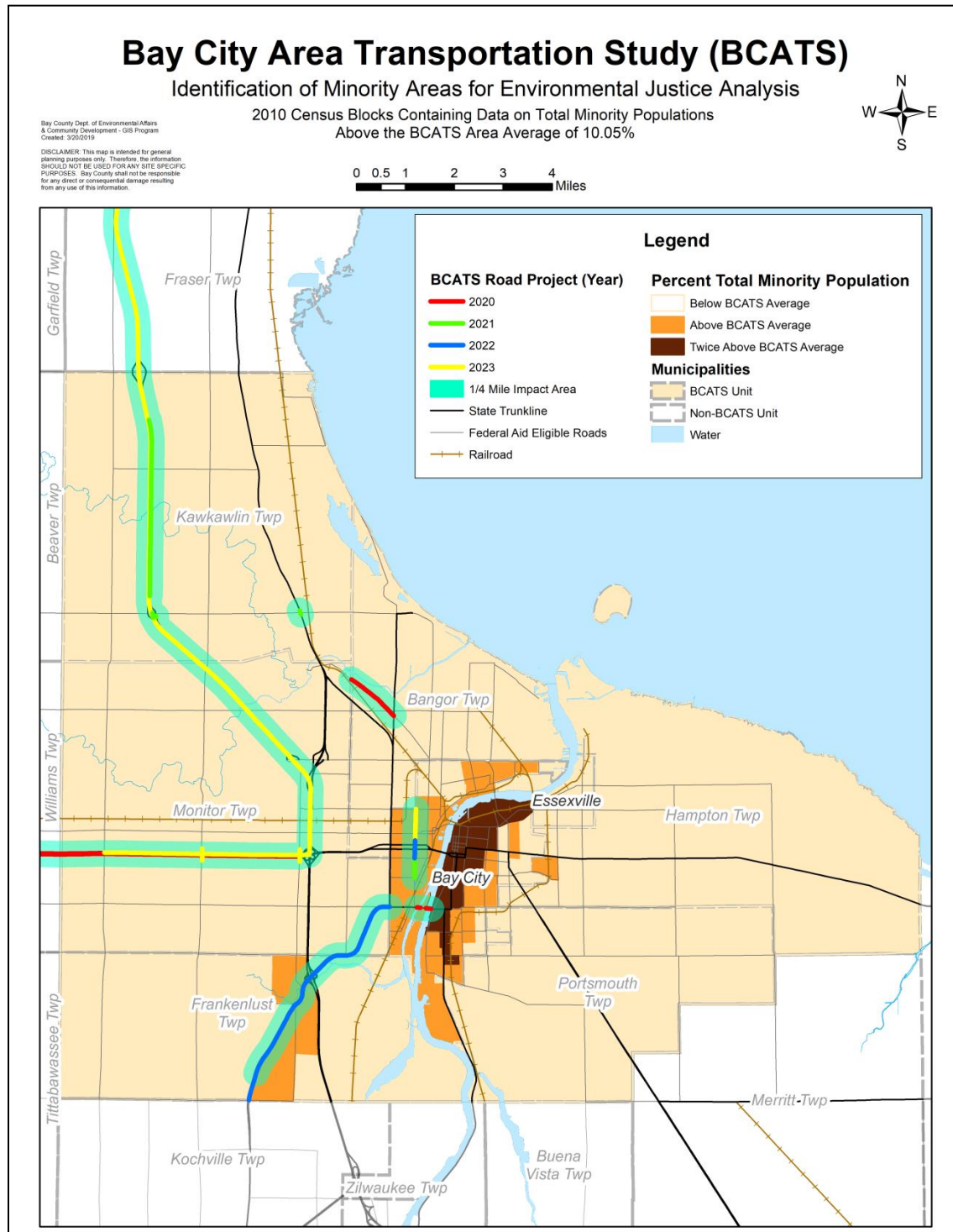


where they live, if they own a vehicle or not. BMTA has discounted fares for the elderly, the disabled and students populations. Outside of vehicle replacement purchases and operating costs, all projects are for improvements at the central passenger station or the main administrative building. These 11 projects benefit all identified minority populations and low-income populations.

This TIP was adopted according to the BCATS Participation Plan, which ensures that the decision-making process was open and fair and there was no denial or delay of benefits to minority and low-income populations. It should be noted that the Participation Plan was adopted on October 23, 2014. BCATS will continue to address environmental justice issues over the life of the TIP. Coordination with MDOT with assistance and guidance provided by FHWA will help to refine and expand on our efforts.

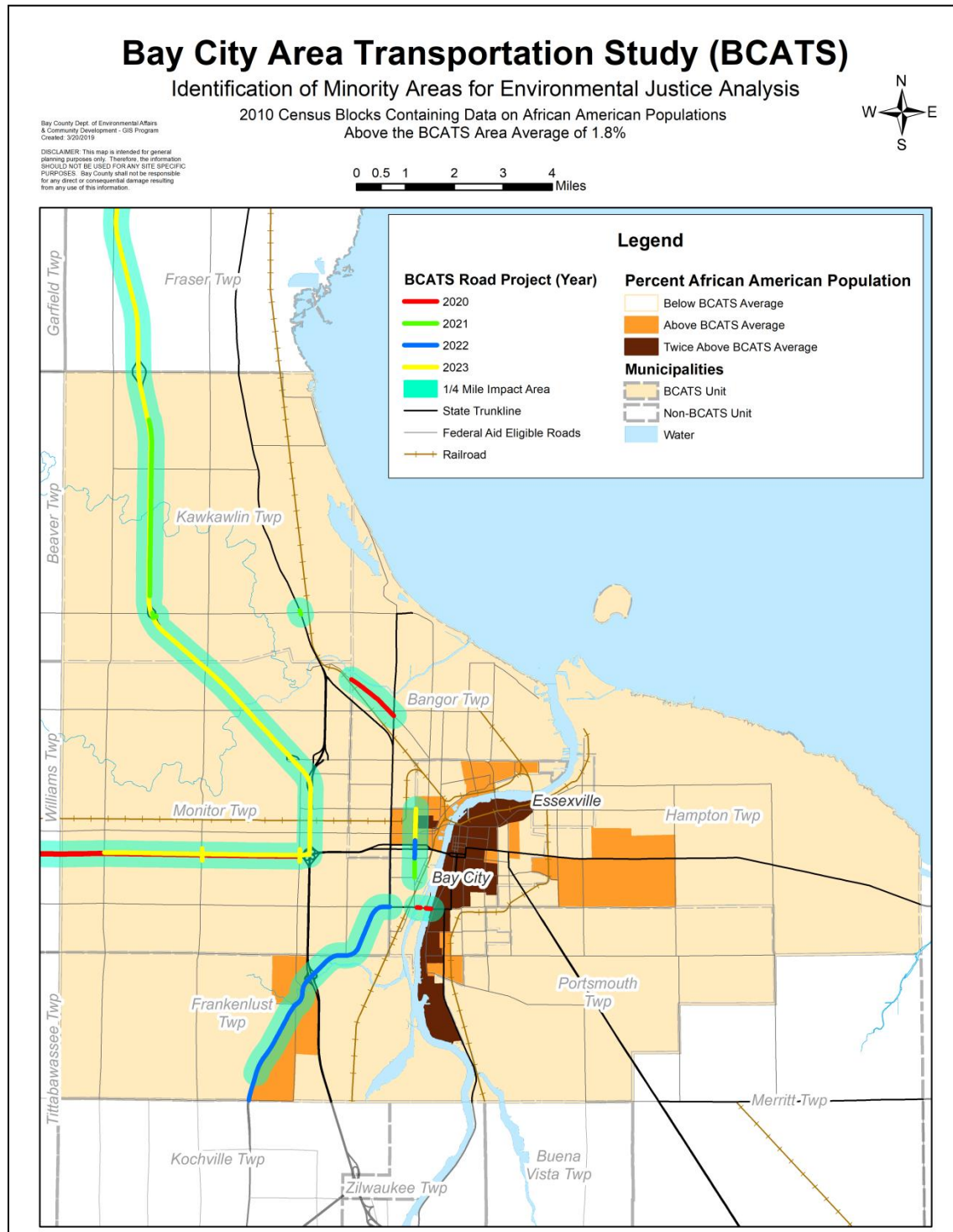


Project Overview Map / Total Minority



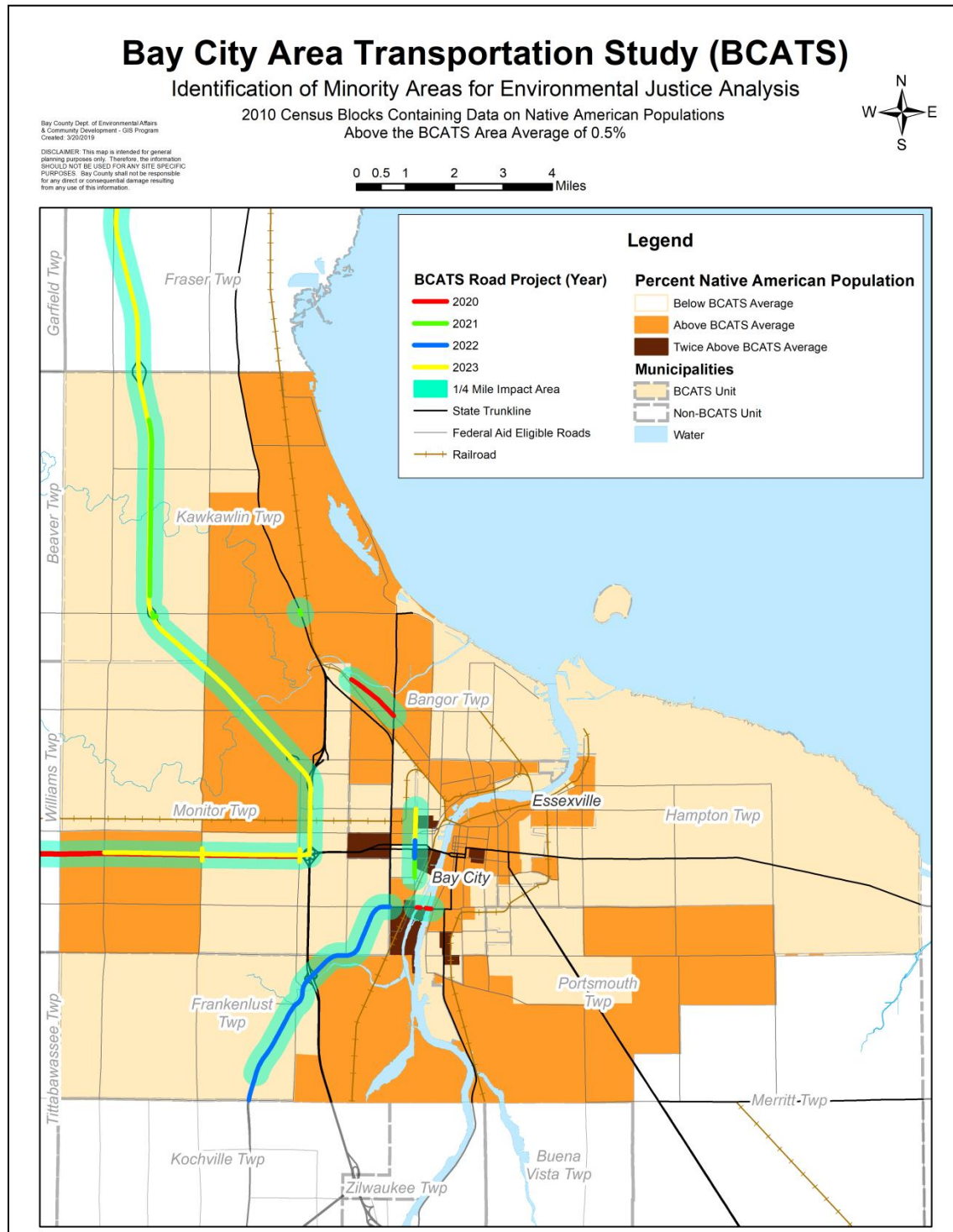


Project Overview Map / African American Minority



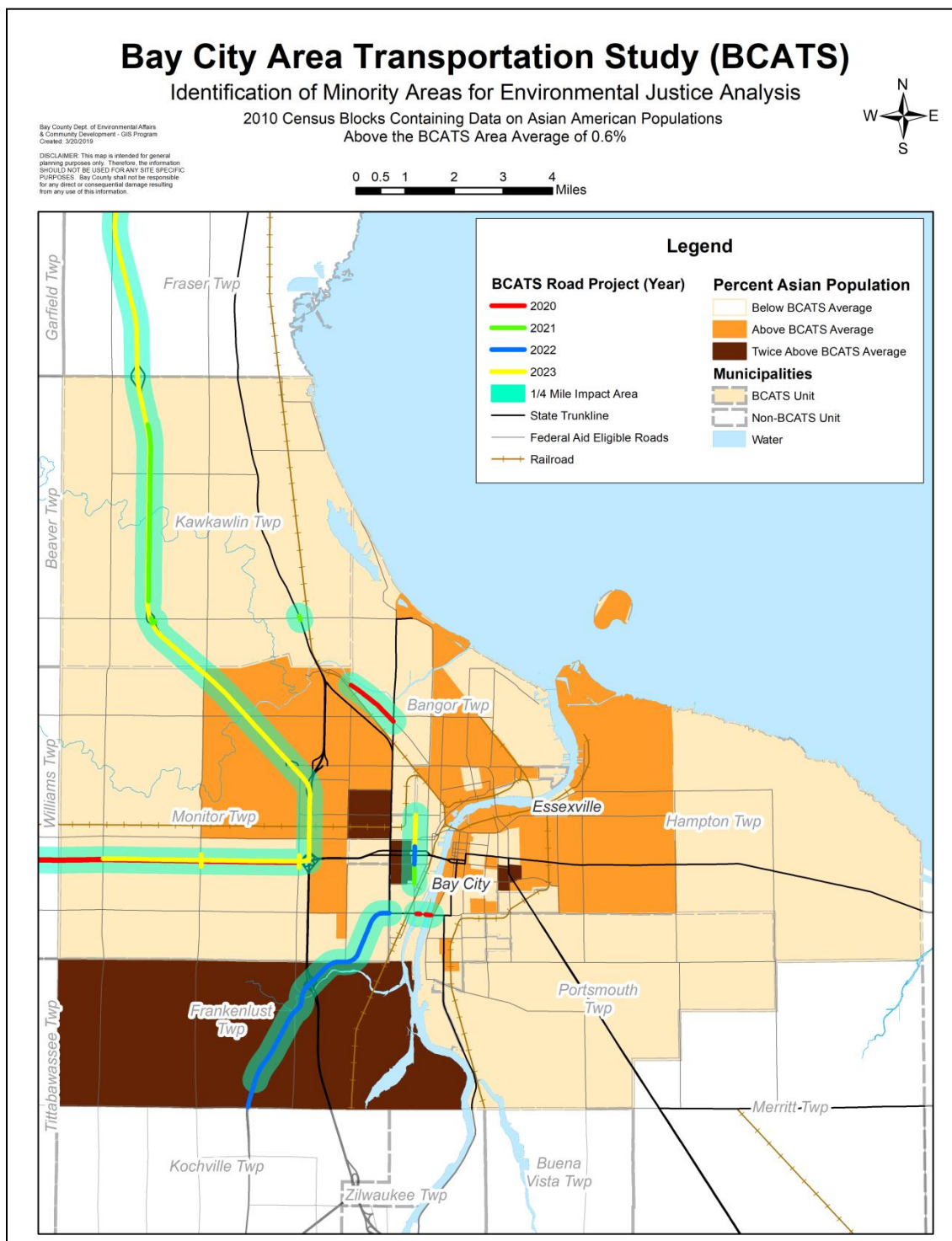


Project Overview Map / Native American Minority



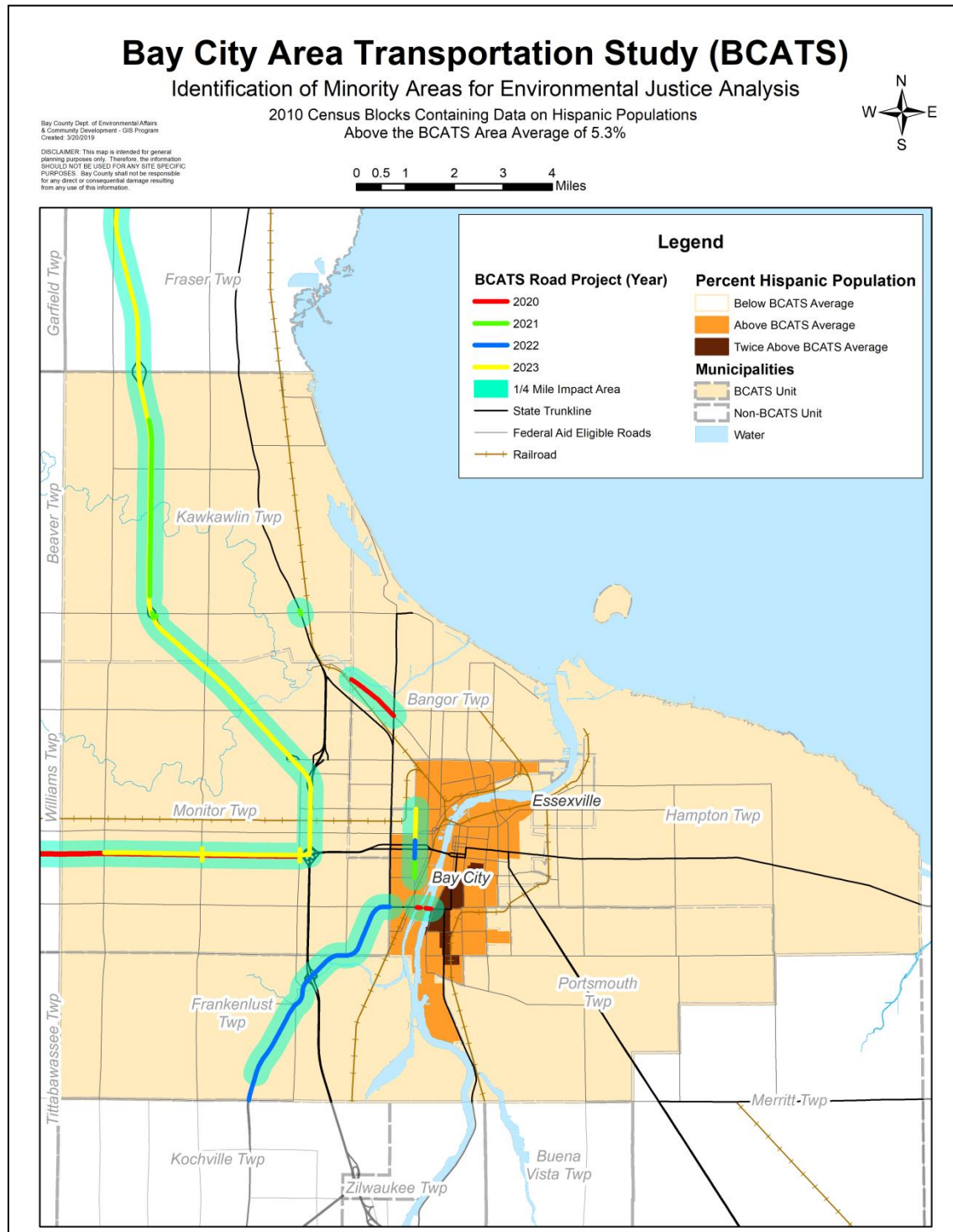


Project Overview Map / Asian American Minority



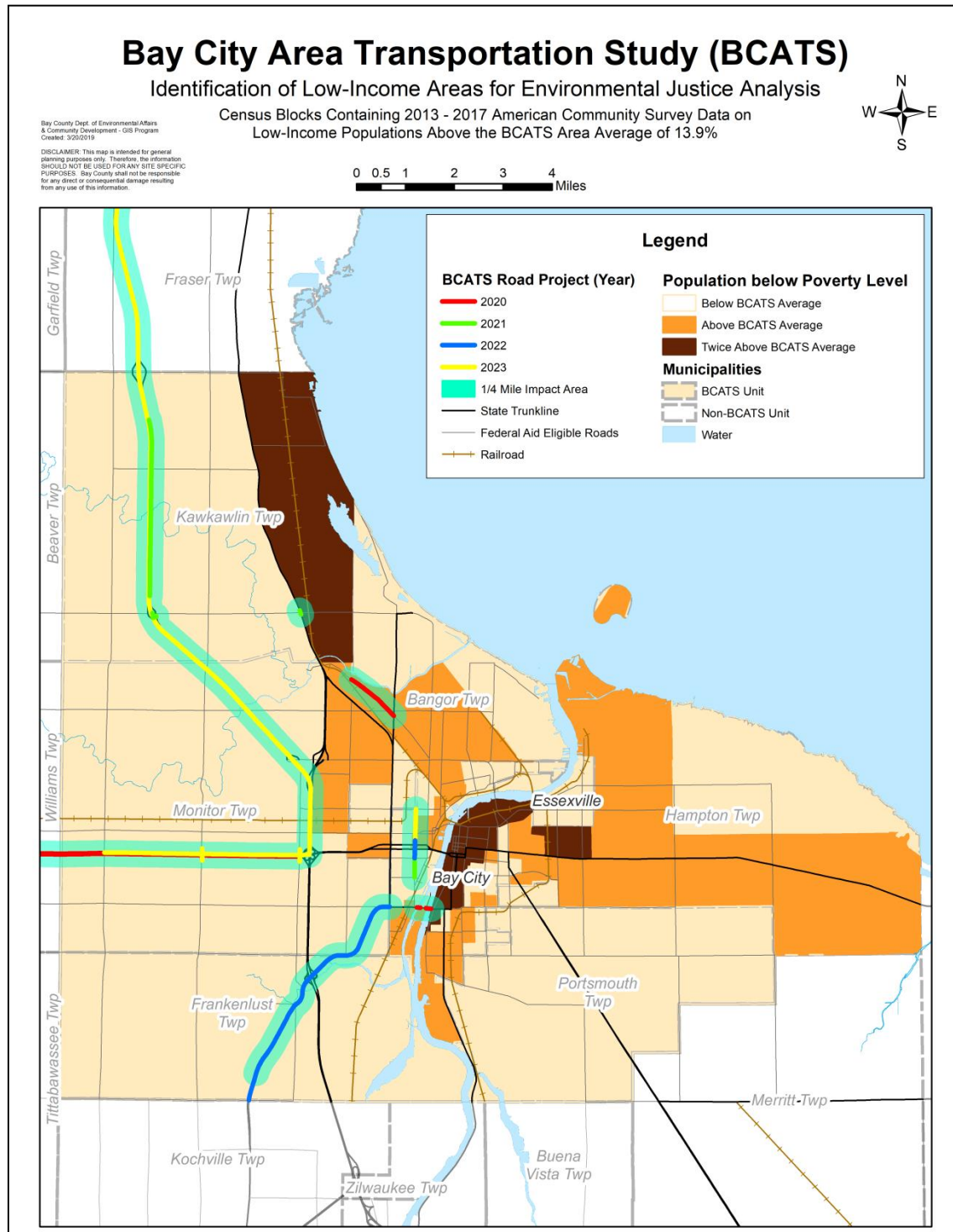


Project Overview Map / Hispanic American Minority



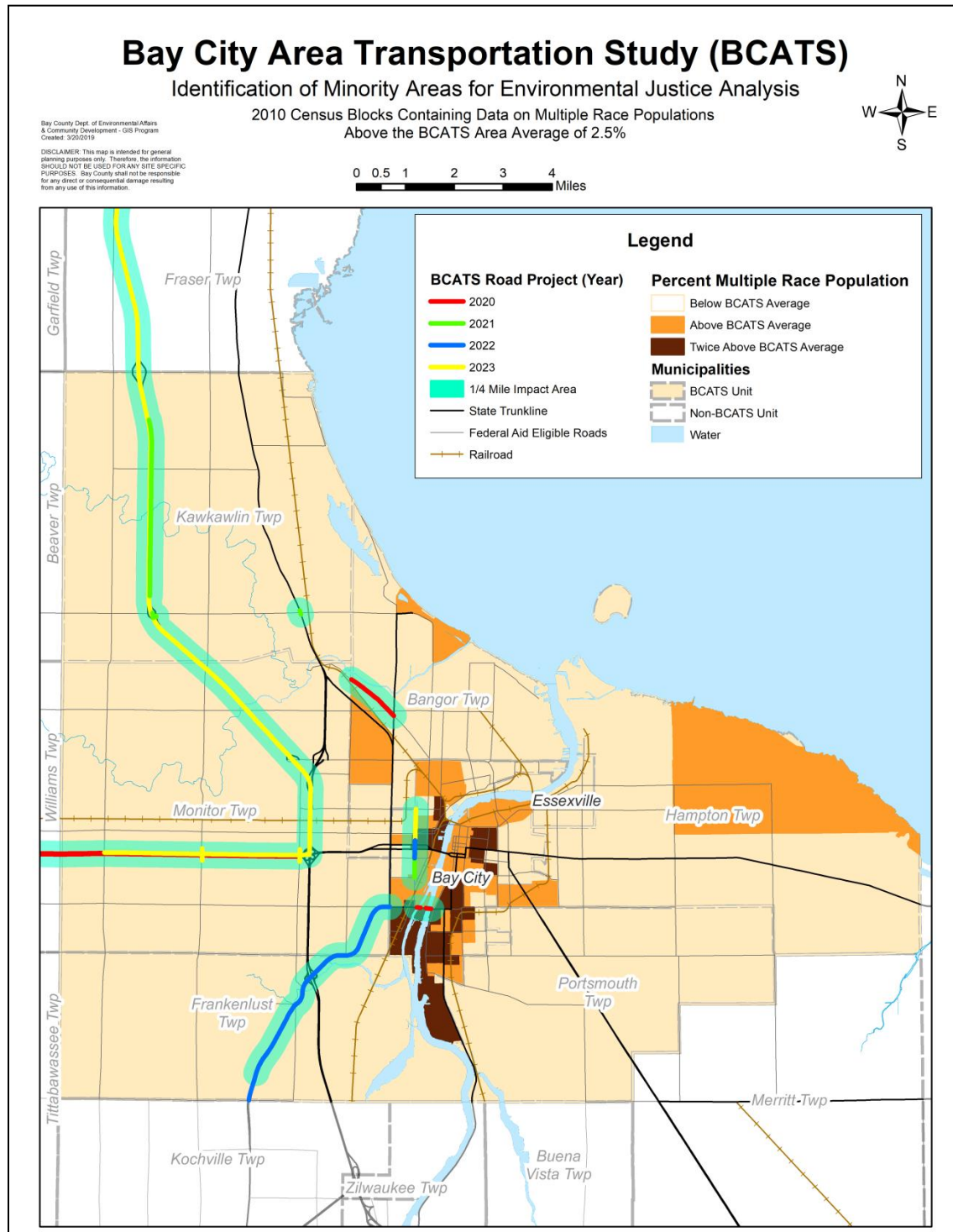


Project Overview Map / Total Low-Income Population



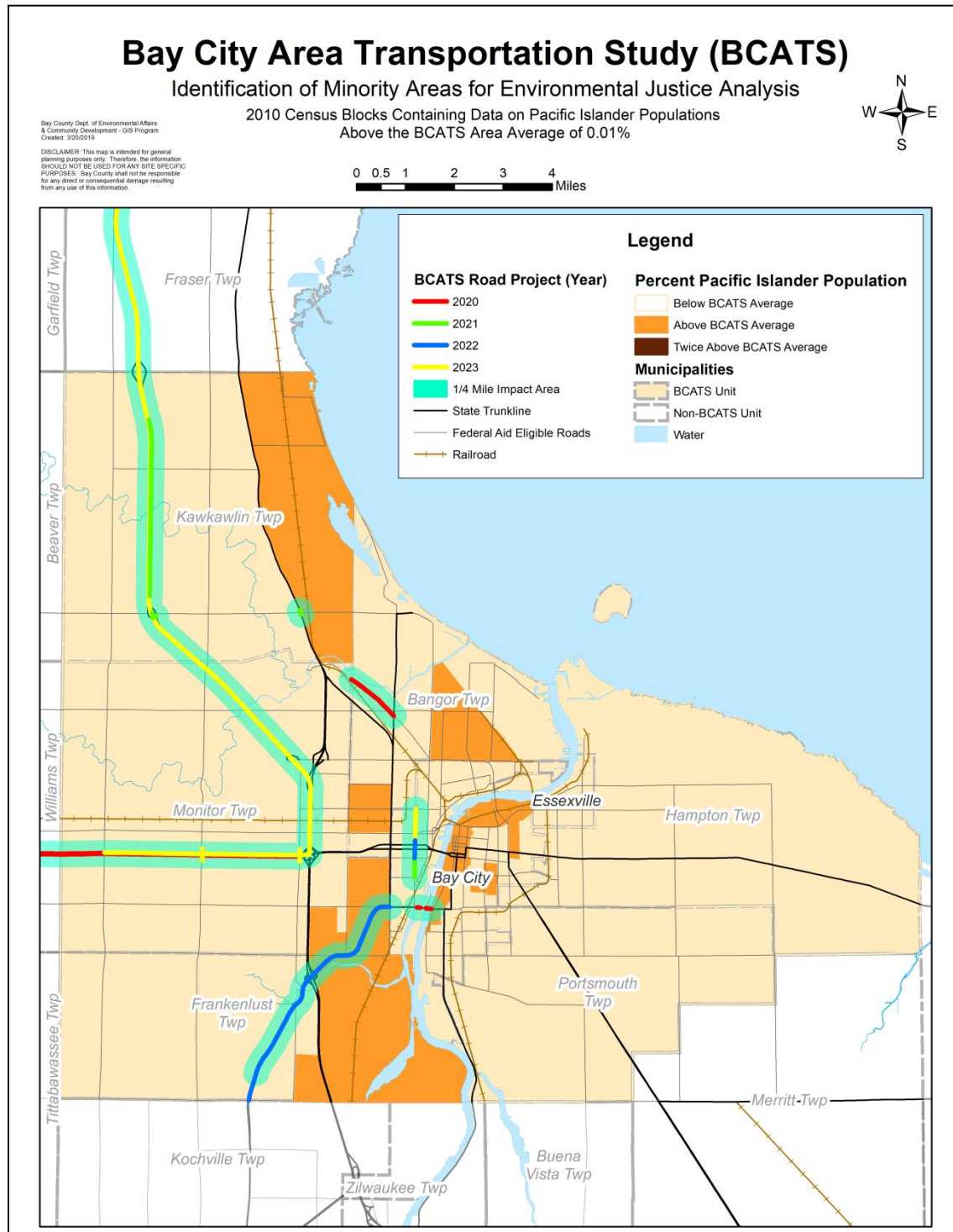


Project Overview Map / Total Multiple Race Population





Project Overview Map / Total Hawaiian and Pacific Islander Population





Appendix A

Metropolitan Transportation Planning Process Certification

METROPOLITAN TRANSPORTATION PLANNING PROCESS CERTIFICATION

In accordance with 23 CFR 450.334, the Michigan Department of Transportation and the *Bay City Area Transportation Study (BCATS)*, the Metropolitan Planning Organization for *Bay City*, Michigan urbanized area, hereby certify, as part of the STIP submittal, that the transportation planning process is addressing the major issues in the metropolitan planning area and is being conducted in accordance with all applicable requirements of:

- I. 23 U.S.C. 134 and 135, 49 U.S.C. 5303 and 5304, and this part;
- II. Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d-1) and 49 CFR part 21;
- III. 49 U.S.C. 5332, prohibiting discrimination on the basis of race, color, creed, national origin, sex, or age in employment or business opportunity;
- IV. Section 1101(b) of the FAST Act (Pub. L. 114-357) and 49 CFR part 26 regarding the involvement of disadvantaged business enterprises in USDOT funded projects;
- V. 23 CFR part 230, regarding the implementation of an equal employment opportunity program on Federal and Federal-aid highway construction contracts;
- VI. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 *et seq.*) and 49 CFR parts 27, 37, and 38;
- VII. The Older Americans Act, as amended (42 U.S.C. 6101), prohibiting discrimination on the basis of age in programs or activities receiving Federal financial assistance;
- VIII. 23 U.S.C. 324, regarding the prohibition of discrimination based on gender; and
- IX. Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794) and 49 CFR part 27 regarding discrimination against individuals with disabilities.
- X. (*applicable to Non-Attainment and Maintenance Areas only*) Sections 174 and 176(c) and (d) of the Clean Air Act, as amended (42 U.S.C 7504 and 7506(c) and (d)) and 40 CFR part 93

Jim Lillo, Chairman
Bay City Area Transportation Study

Todd White, Director
Bureau of Transportation Planning

Date



Consultation Letter

BAY COUNTY TRANSPORTATION PLANNING

515 Center Avenue, Suite 504
Bay City, Michigan 48708

JAY ANDERSON, BCATS DIRECTOR

andersonj@baycounty.net

Phone (989) 895-4064
Fax (989) 895-4068
TDD (989) 895-4049
<http://www.baycounty-mi.gov>



JAMES A. BARCIA

County Executive

LAURA OGAR, DIRECTOR

ogarl@baycounty.net

Community Initiatives
Geographic Information Systems
Gypsy Moth Suppression Program
Mosquito Control
Transportation Planning

April 15, 2019

Public Notice Bay City Area Transportation Study 2020-21-22-23 Transportation Improvement Program (TIP) Public Comment and Open House

The Bay City Area Transportation Study (BCATS) is seeking public comment on the proposed 2020-21-22-23 Transportation Improvement Program (TIP). The public is encouraged to submit comments to BCATS by any of the following methods: In writing to Jay Anderson, BCATS Director, 515 Center Avenue, Suite 504, Bay City, MI 48708; By phone to 989-895-4064; By fax to 989-895-4068; By email to andersonj@baycounty.net, or: By visiting the BCATS office at the above address. Please submit comments by June 7, 2019.

In addition, an "Open House" to discuss the TIP will be held on Wednesday, May 8, 2019 from 4:00 p.m. to 7:00 p.m. at the Bay County Community Center – Room 128, 800 John F Kennedy Drive, Bay City, MI 48706.

Copies of the proposed TIP are available for review at the BCATS Office or on the BCATS Website at www.baycounty-mi.gov/transportation.

Pursuant to the Americans with Disabilities Act, individuals with disabilities may request aids/services within a reasonable time period to participate in the meeting. To request aids/services please contact: Amber Davis-Johnson, Corporation Counsel Director, 515 Center Avenue, Bay City, MI 48708. Phone: 989-895-4131/TDD: 989-895-4049 or johnsona@baycounty.net.



Consultation Contact List

Name	Contact Means	Organization	Additional Information
AAA Taxi	Mailing	Transit Operator	
Aaron Dawson	E-Mailed	FHWA	Michigan Div.
Abed Itani	E-Mailed	Grand Rapids MPO	
Adam Rivard	E-Mailed	MDOT	Bay City TSC
Adam Webster	E-Mailed	Bay City Electric Light & Power	
Al Tacey	Mailing	Hampton Township DDA	
Alicia Wallace	E-Mailed	Bay County	EA&CD
Amy MacDonald	E-Mailed	Bay City	
Andy Pickard	E-Mailed	FHWA	Michigan Div.
Angelica Salgado	E-Mailed	FTA	
Anita Boughner	E-Mailed	MDOT	Lansing Planning
Bangor Township DDA	E-Mailed	Bangor Township DDA	
Battle Creek MPO	E-Mailed	Battle Creek MPO	
Bay City CDC	E-Mailed		
Bay City Housing Commission	Mailing		
Bay County Employees	E-Mailed	County of Bay	
Bay County Historical Society	E-Mailed	Historical Society	
Bay County Road Commission	E-Mailed	Bay County Road Commission	General
Beth Eurich	E-Mailed	Bay County	Division on Aging
Bill Shubert	E-Mailed	Riverwalk/Railtrail Committee	
Bob Pawlak	E-Mailed	Portsmouth Township	Supervisor
Brandon Krause	E-Mailed	Bay County	Register of Deeds
Brian Conway	E-Mailed	State Historic Preservation Office	State Historic Preservation Officer
Brian Elder	E-Mailed	State of Michigan	House
Brian Mulnix	E-Mailed	Muskegon MPO	
Brian Stark	E-Mailed	SMATS	
Candace Bales	E-Mailed	City of Bay City DDA	
Cathy Washabaugh	E-Mailed	Riverwalk/Railtrail Committee	
Chris Hare	E-Mailed	State of Michigan	DEQ Air Quality
Christopher Izvorski	E-Mailed	Bay County	911/Central Dispatch
Cole Waterman	E-Mailed	Bay City Times	Mlive
Cory Wale	E-Mailed	Bay County Road Commission	
Craig Goulet	E-Mailed	Bay County	Administrative Services
Cristen Gignac	E-Mailed	Bay County	Recreation & Facilities
Cynthia Gaul	E-Mailed	Bay County	EA&CD



Cynthia Luczak	E-Mailed	Bay County	Clerk
Dan Hansford	E-Mailed	Essexville	City Manager
Dan Kildee	Mailing	US Representative	House
Dana Muscott	E-Mailed	Bay City	City Manager
Darold Newton	Mailing	NAACP, Bay City Branch	
Darryl Szilagyi	E-Mailed	Bay City Electric Light & Power	
Dave Maurer	E-Mailed	News Organization	WSGW
Dave Schabel	E-Mailed	Merritt Township	
Dave Waite	E-Mailed	GLBRT	
David Engelhardt	E-Mailed	EMCOG	
David Haag	E-Mailed	City of Auburn	Administrator
David Pfund	E-Mailed	Bay City Public Schools	
Dawn Hoder	Mailing	Pinconning City	
Debbie Stabenow	E-Mailed	US Senate	Senate
Dennis Bragiel	E-Mailed	Kawkawlin Township	
Derek Bradsahw	E-Mailed	Flint MPO	
Diane M. Middleton	E-Mailed	Delta	
Don Mayle	E-Mailed	MDOT	Rural Task Force
Doug Dodge	Mailing	James Clements Airport	
Doug Wirt	E-Mailed	Freight Company	
Edward Rivet	E-Mailed	Bay County Road Commission	Chairman
Eliza Cortez	E-Mailed	Bay County	Admin.
Ellen Kasper	E-Mailed	Hampton Township	Assessor
Eric Mullen	E-Mailed	State of Michigan	Lansing Planning
Eric Sprague	E-Mailed	Bay Metro Transit Authority	
Erik Dziurka	E-Mailed	Bay County Road Commission	
Erik Rodriguez	E-Mailed	Saginaw Chippewa Indian Tribe	
Ernie Krygier	E-Mailed	Bay County	Board of Commissioners
Fabiano Brothers	E-Mailed	Freight Company	
Forrest Robinson	Mailing	South End CDC	
Frank Cloutier	E-Mailed	Saginaw Chippewa Indian Tribe	
Gary Peters	Mailing	US Senate	Senate
Gavin McIntyre	E-Mailed	Mlive.com	Bay City Times
George Augustyniak	E-Mailed	Fraser Township	
GLBR Hispanic Business Association	E-Mailed	Hispanic Community	
Glenn Rowley	E-Mailed	Bangor Township	
Go-To Transport, Inc	E-Mailed	Freight Company	
Great Lakes Bay Regional CVB	Mailing	CVB	



J & L Transport Inc.	Mailing	Freight Company	
Jack Hofweber	E-Mailed	MDOT	Bay City TSC
Jack Wheatley	E-Mailed	Rowe	
Jan Rise	Mailing	Northeast CDC	
Jason Ciavarella	E-Mailed	FTA Region 5 - Chicago Office	Environmental Contact
Jay Anderson	E-Mailed	Bay County	EA&CD
Jay Reithel	E-Mailed	MDOT	Bay Region
Jayson Hoppe	E-Mailed	Bay County	Corporation Counsel
Jeff Anderson	E-Mailed	Bay Metro Transit Authority	
Jeff Mayes	E-Mailed	Consumers	
Jeff Nagel	E-Mailed	MBS	
Jeffrey T. Martin	E-Mailed	GLBRT	
Jeremy Lowell	E-Mailed	Bay County	EA&CD
Jill Causley	Mailing	Northwest CDC	
Jim Barcia	E-Mailed	Bay County	Executive
Jim Dubay	E-Mailed	Garfield Township	
Jim Johnson	Mailing	State of Michigan	Dept. of Agriculture
Jim Lillo	E-Mailed	Bay County Road Commission	
Jim Snell	E-Mailed	Lansing MPO	
Joe Ledesma	E-Mailed	Bay City	
John Kramer	E-Mailed	Monitor Twp	Fire Chief
John Lanum	E-Mailed	MDOT	Lansing Planning
Jon Start	E-Mailed	Kalamazoo MPO	
Joseph Rivet	E-Mailed	Bay County	Drain
Josh Fredrickson	E-Mailed	City of Midland	City Engineer
Kathleen Kowal	E-Mailed	EPA	Cc: Kenneth Westlake
Kathleen Newsham	E-Mailed	Bay City	Mayor
Kathy Leikert	E-Mailed	Riverwalk/Railtrail Committee	
Kelly Green	E-Mailed	Michigan DEQ	
Kenneth Malkin	E-Mailed	Monitor Township	
Kerice Basmadjian	E-Mailed	Bay City	City Commission
Kevin Daley	E-Mailed	State of Michigan	Senate
Kim Coonan	E-Mailed	Bay County	Board of Commissioners
Kim Gallagher	E-Mailed	SWMPC	
Kim Zimmer	E-Mailed	MDOT	Region
Kristen Podnar	E-Mailed	Michael Baker	
Kurt Hausbeck	E-Mailed	Bay City	Streets Supervisor
Laura Anderson	E-Mailed	Bay City Electric Light & Power	Power System Planner



Laura Chapman Reynolds	Mailing	Gibson Township	
Laura Ogar	E-Mailed	Bay County	EA&CD
Linda Vermeesch	E-Mailed	United Way	
Lindsay Wallace	E-Mailed	St. Clair County Transportation Study	
Lori Ettema	E-Mailed	Spicer	
Maja Bolanowska	E-Mailed	Midland MPO	
Marc Miller	E-Mailed	Michigan DNR	
Marcella Hadden	E-Mailed	Saginaw Chippewa Indian Tribe	
Marilyn Jean Langley	E-Mailed	Thumb Easy Riders Bicycle Group	
Mark Galus	E-Mailed	Fraser Township	
Marty Jurish	E-Mailed	Bay City	Water
Mary Hoffmeyer	E-Mailed	MDOT	OPT
Mary Lou Benecke	E-Mailed	Delta	
Marybeth Laisure	E-Mailed	United Way	
Matthew Ihnken	E-Mailed	FWS	Tranportation Liason
Matthew Pitlock	E-Mailed	MDOT	Lansing Planning
Megan Manning	E-Mailed	Bay Future	
Michael Bacigalupo	E-Mailed	Historical Society	
Michael D. Rowley	E-Mailed	Delta	
Michael Duranczyk	E-Mailed	Bay County	Board of Commissioners
Michael Haranda	Mailing	Mt. Forest Township	
Michael Kelly	E-Mailed	Saginaw Bay WIN	
Michael Lutz	E-Mailed	Bay County	Board of Commissioners
Michael Weiler	Mailing	Columbus Avenue	
Michigan Eco. Development Corp.	Mailing	State of Michigan	Eco. Dev. Corporation
Michigan Historic Preservation Network	E-Mailed	Historic Preservation	Historic Resource Council (HRC)
Michigan Sugar Company	Mailing	Freight Company	
Mike Niederquell	E-Mailed	Wade Trim	
National Trust for Hist. Preservation	E-Mailed	Historic Preservation	Public Affairs
Pat Conlen	Mailing	Freight Company	Corrigan Moving
Paul Wasek	E-Mailed	Williams Township	
Philip Grimaldi	E-Mailed	SMATS	
Rachel Phillips	E-Mailed	Bay City	Engineering
Rebecca Brandt	E-Mailed	Bay County	EA&CD
Rebecca Grzegorzcyk	E-Mailed	Bay County	
Region VII Area Agency on Aging	Mailing	Region VII Area Agency on Aging	
Rich Fenner	E-Mailed	Michigan DNR	Bay City State Park Manager
Richard Hembling	Mailing	Midland Salzburg CDC	



Rob Eggers	E-Mailed	Spicer	
Robert Dion	E-Mailed	Bay City	DPW
Robert Ranck	E-Mailed	MDOT	Region
Robert Redmond	E-Mailed	Bay County	Board
Roger Rosebush	Mailing	City of Essexville DDA	
Ronald Campbell	E-Mailed	Frankenlust Township	
Ryan Buck	E-Mailed	Ann Arbor MPO	
Ryan Manz	E-Mailed	Bay County	Emergency Management
Ryan McDonnell	E-Mailed	MDOT	Bay City TSC
Ryan Smith	E-Mailed	Bay County	EA&CD
Ryan Tarrant	E-Mailed	Bay Area Chamber of Commerce	
Sara Dimitroff	E-Mailed	Bay City	Economic Development Division
Scott Bury	E-Mailed	Tri-City Cyclist	
Scott Witbrodt	E-Mailed	Essexville	Mayor
Sharon Stalsberg	E-Mailed	Pinconning Township	
Shawna Walraven	E-Mailed	Bay County	Treasurer
Short Freight Lines	E-Mailed	Freight Company	
Sita Compton	E-Mailed	Riverwalk/Railtrail Committee	
Stephen Hocquard	E-Mailed	Saginaw Valley State University	
Steve Duke	E-Mailed	Jackson MPO	
Steve Gray	E-Mailed	Beaver Township	
Steven Stepek	E-Mailed	Kalamazoo MPO	
Sue Fortune	E-Mailed	EMCOG	Executive Director
Terrence Beurer	E-Mailed	State of Michigan	DHHS
Terri Close	E-Mailed	Hampton Township	
Terry Moulthane	E-Mailed	Bay City	
Terry Palmer	E-Mailed	MCRC	
Thomas Herek	E-Mailed	Bay County	Board of Commissioners
Tim Botzau	E-Mailed	Bay City	Parks & Sanitation
Tim Burkman	E-Mailed	Holland MPO	
Tod Fackler	E-Mailed	Bangor Township	Assessor
Tom Bruff	E-Mailed	SEMCOG	
Tom Doyle	E-Mailed	MDOT	Lansing Planning
Tom Mussell	E-Mailed	Bangor Township Public Schools	Transportation Supervisor



Comments Received

DRAFT



Appendix B - Projects, Illustrative List, Fiscal Constraint Tables

DRAFT



2020-2023 Transportation Improvement Projects

Fiscal Year	Job #	GPA Type	County	Responsible Agency	Project Name	Limits	Length	Primary Work Type	Project Description	ACC Year(s)	Phase	Fed Estimated Amount	State Estimated	Local Estimated Amount	Total Estimated Amount	Fund Source	Total Job Cost	MPO/Rural Approval Date
2020	130309	N/A	Bay	Bay County Road Commission	Old Kawkawlin Rd	2 Mile to M-247	1.144	Road Rehabilitation	Mill, Rehab, Resurface, Drainage, Signage		CON	\$1,106,000	\$0	\$778,000	\$1,884,000	STUL	\$1,884,000	02/22/2017
2020	200522	N/A	Bay	BMTA	Transit Capital	Areawide/Bay Metro Transportation/ Bay County		SP1105 Van Replacement, SP1404 Computers	ADP Hardware, ADP Software, Lift Van Replacement (2)		NI	\$160,000	\$40,000		\$200,000	5339	\$200,000	02/20/2019
2020	206244	N/A	Bay	BMTA	Transit Operating	Areawide/Bay Metro Transportation/ Bay County		SP3000	Operating Assistance		NI	\$1,500,000	\$3,175,000	\$2,100,000	\$6,775,000	5307	\$6,775,000	02/20/2019
2020	127506	N/A	Bay	MDOT	US-10 - WB	BCATS MPO Study Area	9.940	Traffic Safety	Median Guardrail, Type TD		CON	\$1,406,312	\$156,257	\$0	\$1,562,569	HSIP	\$3,409,239	10/21/2016
2020	128908	N/A	Bay	MDOT	M-13	Over the East Channel of the Saginaw River	0.000	Bridge Replacement	Bridge Replacement		CON	\$61,340,970	\$12,411,992	\$1,190,190	\$74,943,152	NH	\$82,291,765	02/20/2019
2020	202649	N/A	Bay	MDOT	M-84 N	Signing Upgrade	29.048	Traffic Safety	Non-freeway Signing		PE	\$19,500	\$0	\$0	\$19,500	STG	\$577,000	08/22/2018
2020	206483	N/A	Bay, Genesee, Midland, Saginaw, St. Clair	MDOT	Bay Regionwide Longitudinal Pavement Markings	Bay City Area	2.948	Traffic Safety	Longitudinal pavement marking application on trunkline routes		PE	\$1,582	\$176		\$1,758	HSIP	\$2,970,000	04/17/2019
2020	206483	N/A	Bay, Genesee, Midland, Saginaw, St. Clair	MDOT	Bay Regionwide Longitudinal Pavement Markings	Bay City Area	2.948	Traffic Safety	Longitudinal pavement marking application on trunkline routes		CON	\$234,459	\$26,051		\$260,510	HSIP	\$2,970,000	04/17/2019
2020	206487	N/A	Bay, Genesee, Midland, Saginaw, St. Clair	MDOT	Bay Regionwide Special Pavement Markings	Bay City Area	4.513	Traffic Safety	Special pavement marking application on trunkline routes		PE	\$594	\$66		\$660	HSIP	\$727,500	04/17/2019
2020	206487	N/A	Bay, Genesee, Midland, Saginaw, St. Clair	MDOT	Bay Regionwide Special Pavement Markings	Bay City Area	4.513	Traffic Safety	Special pavement marking application on trunkline routes		CON	\$57,024	\$6,336		\$63,360	HSIP	\$727,500	04/17/2019
2020	206558	N/A	Bay, Genesee, Lapeer, Midland, Saginaw, St. Clair	MDOT	Bay Regionwide Pvmt Mrkg Retro Readings	All of BCATS MPO	4.577	Traffic Safety	Pvmt mrkg retroreflectivity readings on trunklines		CON	\$1,822	\$202		\$2,024	HSIP	\$23,000	04/17/2019



2020	203156	Trunkline Bridge	Bay	MDOT	M-13	M-13 & M-84 over West Channel Saginaw River		Bridge Capital Preventative Maintenance	Scour Protection		CON	\$276,312	\$61,271		\$337,583	NH	\$472,884	04/17/2019
2020	201946	Trunkline Traffic Operations And Safety	Saginaw	MDOT	I-75 S	BCATS MPO Area	38.622	Traffic Safety	Freeway Shoulder Delineation Enhancement		CON	\$32,582	\$3,620	\$0	\$36,202	HSIP	\$157,400	08/22/2018
2021	206231	N/A	Bay	Bay City	S Wenona Ave	Wenona Ave between Ionia and Jane	0.395	Reconstruction	Reconstruction		CON	\$1,128,000	\$0	\$1,230,760	\$2,358,760	STUL	\$2,358,760	02/20/219
2021	206166	Local Road	Bay	Bay County	E Salzburg Rd	Fraser Rd to Eight Mile Rd	1.839	Road Rehabilitation	Crush & Shape & Asphalt Resurfacing		CON	\$580,000		\$420,000	\$1,000,000	STL	\$1,000,000	
2021	206246	N/A	Bay	BMTA	Transit Operating	Areawide/Bay Metro Transportation/ Bay County		SP3000	Operating Assistance		NI	\$1,500,000	\$3,175,000	\$2,100,000	\$6,775,000	5307	\$6,775,000	02/20/2019
2021	206278	N/A	Bay	BMTA	Transit Capital	Areawide/Bay Metro Transportation/ Bay County		SP1105 Van Replacement, SP1203 Facility Improvements	Lift Van Replacement (2), Window, Door, Floor Replacement		NI	\$160,000	\$40,000		\$200,000	5339	\$200,000	02/20/2019
2021	128585	N/A	Bay	MDOT	I-75	Beaver Rd to Cottage Grove	3.600	Road Rehabilitation	Concrete Overlay or Rubblization / HMA Overlay		CON	\$14,619,454	\$1,624,384		\$16,243,838	IM	\$17,037,896	
2021	201645	N/A	Bay	MDOT	I-75 N	I-75		Bridge Replacement	Deck Replacement		CON	\$4,997,477	\$555,277		\$5,552,753	IM	\$6,286,615	
2021	204969	N/A	Bay	MDOT	I-75	over Beaver Road		Bridge Replacement	Deck Replacement		CON	\$1,810,803	\$201,201		\$2,012,003	IM	\$2,291,934	
2021	207279	N/A	Bay, Genesee, Midland, Saginaw, St. Clair	MDOT	Bay Regionwide Longitudinal Pavement Markings	All of BCATS MPO	2.573	Traffic Safety	Longitudinal pavement marking application on trunklines		PE	\$1,584	\$176		\$1,760	HSIP	\$3,180,000	
2021	207279	N/A	Bay, Genesee, Midland, Saginaw, St. Clair	MDOT	Bay Regionwide Longitudinal Pavement Markings	All of BCATS MPO	2.573	Traffic Safety	Longitudinal pavement marking application on trunklines		CON	\$250,272	\$27,808		\$278,080	HSIP	\$3,180,000	
2021	207281	N/A	Bay, Genesee, Midland, Lapeer, Saginaw, St. Clair	MDOT	Bay Regionwide Special Pavement Markings	All of BCATS MPO	2.020	Traffic Safety	Special pavement marking application on trunklines		PE	\$792	\$88		\$880	HSIP	\$590,000	
2021	207281	N/A	Bay, Genesee, Midland, Lapeer, Saginaw, St. Clair	MDOT	Bay Regionwide Special Pavement Markings	All of BCATS MPO	2.020	Traffic Safety	Special pavement marking application on trunklines		CON	\$45,936	\$5,104		\$51,040	HSIP	\$590,000	



2021	207305	N/A	Bay, Genesee, Lapeer, Saginaw, St. Clair	MDOT	Bay Regionwide Retroreflectivity Readings	All of BCATS MPO	1.737	Traffic Safety	Retroreflectivity readings on trunklines		CON	\$1,742	\$194		\$1,936	HSIP	\$22,000	
2021	204971	Trunkline Bridge	Bay	MDOT	I-75	over Hembling Drain	0.000	Bridge CSM	Joint Repair, Scour Protection		CON	\$141,402	\$15,711	\$0	\$157,113	IM	\$181,705	
2021	129229	Trunkline Traffic Operations And Safety	Bay	MDOT	M-13	Beaver Road	0.120	Traffic Safety	Signal Modernization & Geometric Improvements		CON	\$306,000	\$34,000		\$340,000	HSIP	\$475,000	
2022	206234	N/A	Bay	Bay City	S Wenona Ave	Wenona Ave between Fisher St and Jane St	0.362	Reconstruction	Reconstruction		CON	\$1,151,000	\$0	\$970,706	\$2,121,706	STUL	\$2,121,706	02/20/2019
2022	200943	N/A	Bay	BMTA	Transit Operating	Areawide/Bay Metro Transportation/ Bay County		SP3000	Operating Assistance		NI	\$1,500,000	\$3,175,000	\$2,100,000	\$6,775,000	5307	\$6,775,000	02/20/2019
2022	206282	N/A	Bay	BMTA	Transit Capital	Areawide/Bay Metro Transportation/ Bay County		SP1105 Van Replacement, SP1203 Facility Improvements	Lift Van Replacement (2), Air Make-up Unit		NI	\$160,000	\$40,000		\$200,000	5339	\$200,000	02/20/2019
2022	202649	N/A	Bay, Saginaw	MDOT	M-84 N	Signing Upgrade	29.048	Traffic Safety	Non-freeway Signing		CON	\$152,500			\$152,500	STG	\$577,000	
2022	205858	N/A	Bay, Genesee, Midland, Lapeer, Saginaw, St. Clair	MDOT	Bay Regionwide Retroreflectivity Readings	All of BCATS MPO	2.634	Traffic Safety	Pavement marking retroreflectivity readings on trunklines		CON	\$1,742	\$194		\$22,000	HSIP	\$22,000	
2022	207317	N/A	Bay, Genesee, Midland, Lapeer, Saginaw, St. Clair	MDOT	Bay Regionwide Longitudinal Pavement Markings	All of BCATS MPO	1.399	Traffic Safety	Longitudinal pavement marking application on trunklines		PE	\$1,584	\$176		\$1,760	HSIP	\$3,180,000	
2022	207317	N/A	Bay, Genesee, Midland, Lapeer, Saginaw, St. Clair	MDOT	Bay Regionwide Longitudinal Pavement Markings	All of BCATS MPO	1.399	Traffic Safety	Longitudinal pavement marking application on trunklines		CON	\$250,272	\$27,808		\$278,080	HSIP	\$3,180,000	
2022	207319	N/A	Bay, Genesee, Midland, Lapeer, Saginaw, St. Clair	MDOT	Bay Regionwide Special Pavement Markings	All of BCATS MPO	3.252	Traffic Safety	Special pavement marking application on trunklines		PE	\$792	\$88		\$880	HSIP	\$590,000	
2022	207319	N/A	Bay, Genesee, Midland, Lapeer, Saginaw, St. Clair	MDOT	Bay Regionwide Special Pavement Markings	All of BCATS MPO	3.252	Traffic Safety	Special pavement marking application on trunklines		CON	\$45,936	\$5,104		\$51,040	HSIP	\$590,000	
2023	206236	N/A	Bay	Bay City	S Wenona Ave	Wenona Ave between Jane St and North Union St	0.640	Reconstruction	Reconstruction		CON	\$1,174,000	\$0	\$2,714,148	\$3,888,148	STUL	\$3,888,148	02/20/2019



2023	206168	Local Road	Bay	Bay County	E Beaver Rd	County Wide Rehabilitation		Road Rehabilitation	Crush & Shape & Asphalt Resurfacing		CON	\$603,000		\$207,000	\$810,000	STL	\$810,000	
2023	200103	N/A	Bay	BMTA	Transit Operating	Areawide/Bay Metro Transportaion/ Bay County		SP3000	Operating Assistance		NI	\$1,500,000	\$3,175,000	\$2,100,000	\$6,775,000	5307	\$6,775,000	02/20/2019
2023	206288	N/A	Bay	BMTA	Transit Maintenance Equipment and Parts	Areawide/Bay Metro Transportation/ Bay County		SP1203 Facility Improvements, SP1408 Maintenance Equipment	DPF Exhaust Cleaner, Tire Changer, Air Make-up Unit, Air Compressor		NI	\$160,000	\$40,000		\$200,000	5339	\$200,000	02/20/2019
2023	201403	N/A	Bay	MDOT	US-10 W	7 Mile Rd to Bay City	5.485	Reconstruction	Concrete Reconstruct		CON	\$25,644,651	\$5,686,626		\$31,331,277	NH	\$33,380,987	
2023	202144	N/A	Bay	MDOT	US-10	Mackinaw Road over US-10		Bridge Replacement	Bridge Replacement		CON	\$3,335,742	\$739,690		\$4,075,432	NH	\$4,642,449	
2023	202723	N/A	Arenac, Bay, Saginaw	MDOT	I-75 S	Signing Update	75.287	Traffic Safety	Freeway Signing		CON	\$2,350,000			\$2,350,000	IMG	\$4,250,000	
2023	207356	N/A	Bay, Genesee, Lapeer, Saginaw, St. Clair	MDOT	Bay Regionwide Longitudinal Pavement Markings	All of BCATS MPO	3.494	Traffic Safety	Longitudinal pavement marking application on trunklines		PE	\$1,584	\$176		\$1,760	HSIP	\$3,180,000	
2023	207356	N/A	Bay, Genesee, Lapeer, Saginaw, St. Clair	MDOT	Bay Regionwide Longitudinal Pavement Markings	All of BCATS MPO	3.494	Traffic Safety	Longitudinal pavement marking application on trunklines		CON	\$250,272	\$27,808		\$278,080	HSIP	\$3,180,000	
2023	207357	N/A	Bay, Genesee, Lapeer, Saginaw, St. Clair	MDOT	Bay Regionwide Special Pavement Markings	All of BCATS MPO	3.554	Traffic Safety	Special pavement marking application on trunklines		PE	\$792	\$88		\$880	HSIP	\$890,000	
2023	207357	N/A	Bay, Genesee, Lapeer, Saginaw, St. Clair	MDOT	Bay Regionwide Special Pavement Markings	All of BCATS MPO	3.554	Traffic Safety	Special pavement marking application on trunklines		CON	\$69,696	\$7,744		\$77,440	HSIP	\$890,000	
2023	207374	N/A	Bay, Genesee, Midland, Lapeer, Saginaw, St. Clair	MDOT	Bay Regionwide Retroreflectivity Readings	All of BCATS MPO	3.187	Traffic Safety	Pavement marking retroreflectivity readings on trunklines		CON	\$1,742	\$194		\$1,936	HSIP	\$22,000	
2023	204851	Trunkline Bridge	Bay	MDOT	US-10	2 Structures on US-10		Bridge Rehabilitation	Overlay - Shallow		CON	\$1,387,684	\$307,716		\$1,695,400	NH	\$1,960,767	



Financial Constraint Table

Fund Source	Total Revenue	Federal Revenue	Federal Commitment	State Commitment	Local Commitment	Total Commitment
Fiscal Year - 2020						
Fiscal Year - 2020, Local MPO Based Constraint						
STP - Small MPO	\$1,884,000	\$1,106,000	\$1,106,000	\$0	\$778,000	\$1,884,000
FY 2020, Local MPO Based Constraint Total	\$1,884,000	\$1,106,000	\$1,106,000	\$0	\$778,000	\$1,884,000
Fiscal Year - 2020, MDOT Project Templates						
Traffic & Safety	\$1,946,583	\$1,753,875	\$1,753,875	\$192,708	\$0	\$1,946,583
Other	\$75,280,735	\$61,617,282	\$61,617,282	\$12,473,263	\$1,190,190	\$75,280,735
FY 2020, MDOT Project Templates Total	\$77,227,318	\$63,371,157	\$63,371,157	\$12,665,971	\$1,190,190	\$77,227,318
Fiscal Year - 2020, Transit Project Categories						
5307	\$6,775,000	\$1,500,000	\$1,500,000	\$3,175,000	\$2,100,000	\$6,775,000
5339	\$200,000	\$160,000	\$160,000	\$40,000	\$0	\$200,000
FY 2020, Transit Project Categories Total	\$6,975,000	\$1,660,000	\$1,660,000	\$3,215,000	\$2,100,000	\$6,975,000
Fiscal Year - 2020 Grand Total	\$86,086,318	\$66,137,157	\$66,137,157	\$15,880,971	\$4,068,190	\$86,086,318
Fiscal Year - 2021						
Fiscal Year - 2021, Local MPO Based Constraint						
STP - Small MPO	\$1,584,238	\$1,128,000	\$1,128,000	\$0	\$456,238	\$1,584,238
FY 2021, Local MPO Based Constraint Total	\$1,584,238	\$1,128,000	\$1,128,000	\$0	\$456,238	\$1,584,238
Fiscal Year - 2021, Local RTF Based Constraint						
STP - Rural/Flexible	\$1,000,000	\$580,000	\$580,000	\$0	\$420,000	\$1,000,000
FY 2021, Local RTF Based Constraint Total	\$1,000,000	\$580,000	\$580,000	\$0	\$420,000	\$1,000,000
Fiscal Year - 2021, MDOT Project Templates						
Bridge Preservation	\$157,113	\$141,402	\$141,402	\$15,711	\$0	\$157,113
Bridge Replacement	\$7,564,758	\$6,808,280	\$6,808,280	\$756,478	\$0	\$7,564,758
Road - Rehabilitation and Reconstruction	\$16,243,838	\$14,619,454	\$14,619,454	\$1,624,384	\$0	\$16,243,838
Traffic & Safety	\$673,696	\$606,326	\$606,326	\$67,370	\$0	\$673,696
FY 2021, MDOT Project Templates Total	\$24,639,405	\$22,175,462	\$22,175,462	\$2,463,943	\$0	\$24,639,405
Fiscal Year - 2021, Transit Project Categories						
5307	\$6,775,000	\$1,500,000	\$1,500,000	\$3,175,000	\$2,100,000	\$6,775,000
5339	\$200,000	\$160,000	\$160,000	\$40,000	\$0	\$200,000
FY 2021, Transit Project Categories Total	\$6,975,000	\$1,660,000	\$1,660,000	\$3,215,000	\$2,100,000	\$6,975,000



Bay City Area Transportation Study (BCATS)
Transportation Improvement Program (TIP) - FY 2020-2021-2022-2023

Draft Report
26 April 2019

Fiscal Year - 2021 Grand Total	\$34,198,643	\$25,543,462	\$25,543,462	\$5,678,943	\$2,976,238	\$34,198,643
Fiscal Year - 2022						
Fiscal Year - 2022, Local MPO Based Constraint						
STP - Small MPO	\$1,434,866	\$1,151,000	\$1,151,000	\$0	\$283,866	\$1,434,866
FY 2022, Local MPO Based Constraint Total	\$1,434,866	\$1,151,000	\$1,151,000	\$0	\$283,866	\$1,434,866
Fiscal Year - 2022, MDOT Project Templates						
Traffic & Safety	\$486,196	\$452,826	\$452,826	\$33,370	\$0	\$486,196
FY 2022, MDOT Project Templates Total	\$486,196	\$452,826	\$452,826	\$33,370	\$0	\$486,196
Fiscal Year - 2022, Transit Project Categories						
5307	\$6,775,000	\$1,500,000	\$1,500,000	\$3,175,000	\$2,100,000	\$6,775,000
5339	\$200,000	\$160,000	\$160,000	\$40,000	\$0	\$200,000
FY 2022, Transit Project Categories Total	\$6,975,000	\$1,660,000	\$1,660,000	\$3,215,000	\$2,100,000	\$6,975,000
Fiscal Year - 2022 Grand Total	\$8,896,062	\$3,263,826	\$3,263,826	\$3,248,370	\$2,383,866	\$8,896,062
Fiscal Year - 2023						
Fiscal Year - 2023, Local MPO Based Constraint						
STP - Small MPO	\$2,501,535	\$1,174,000	\$1,174,000	\$0	\$1,327,535	\$2,501,535
FY 2023, Local MPO Based Constraint Total	\$2,501,535	\$1,174,000	\$1,174,000	\$0	\$1,327,535	\$2,501,535
Fiscal Year - 2023, Local RTF Based Constraint						
STP - Rural/Flexible	\$810,000	\$603,000	\$603,000	\$0	\$207,000	\$810,000
Fiscal Year - 2023						
FY 2023, Local RTF Based Constraint Total	\$810,000	\$603,000	\$603,000	\$0	\$207,000	\$810,000
Fiscal Year - 2023, MDOT Project Templates						
Bridge Preservation	\$1,695,400	\$1,387,684	\$1,387,684	\$307,716	\$0	\$1,695,400
Bridge Replacement	\$4,075,432	\$3,335,742	\$3,335,742	\$739,690	\$0	\$4,075,432
Road - Rehabilitation and Reconstruction	\$31,331,277	\$25,644,651	\$25,644,651	\$5,686,626	\$0	\$31,331,277
Traffic & Safety	\$2,710,096	\$2,674,086	\$2,674,086	\$36,010	\$0	\$2,710,096
FY 2023, MDOT Project Templates Total	\$39,812,205	\$33,042,163	\$33,042,163	\$6,770,042	\$0	\$39,812,205
Fiscal Year - 2023, Transit Project Categories						
5307	\$6,775,000	\$1,500,000	\$1,500,000	\$3,175,000	\$2,100,000	\$6,775,000
5339	\$200,000	\$160,000	\$160,000	\$40,000	\$0	\$200,000
FY 2023, Transit Project Categories Total	\$6,975,000	\$1,660,000	\$1,660,000	\$3,215,000	\$2,100,000	\$6,975,000
Fiscal Year - 2023 Grand Total	\$50,098,740	\$36,479,163	\$36,479,163	\$9,985,042	\$3,634,535	\$50,098,740



Appendix C - List of Available Federal-Aid Highway and Transit Resources²

Highway Resources

Source	Purpose	Examples of Eligible Activities
Surface Transportation Block Grant Program (STBG)	Maintain and improve the federal-aid highway system.	Construction, reconstruction, or rehabilitation of highways, bridges, and tunnels; transit capital projects, infrastructure-based intelligent transportation systems (ITS) capital improvements; border infrastructure; highway and transit safety projects; traffic monitoring, management, and control facilities; non-motorized projects (including projects eligible under the former Transportation Alternatives Program); and bridge scour countermeasures.
Highway Safety Improvement Program (HSIP)	Decrease highway deaths and injuries.	Intersection safety improvements; pavement and shoulder widening; rumble strips or other warning device; improvements for pedestrian or bicyclist safety or safety of persons with disabilities; Construction and improvement of a railway-highway grade crossing safety feature, including installation of protective devices; traffic calming features; elimination of a roadside hazard; and installation, replacement, and other improvement of highway signage and pavement markings, or a project to maintain minimum levels of retro-reflectivity, that addresses a highway safety problem consistent with a State Strategic Highway Safety Plan; roadside safety audits.
Congestion Mitigation and Air Quality Improvement Program (CMAQ)	Reduce emissions from transportation sources.	Installing dedicated turn lanes; signal retiming, interconnection, or actuation; constructing roundabouts; diesel retrofits; projects to reduce single-occupant vehicle travel; new or reduced-headways transit routes. However, since Bay County is in attainment for Ozone under USEPA's recently implemented 8-hour Ozone Standard, BCATS is not eligible for CMAQ funds.
National Highway Performance Program (NHPP)	Maintain and improve the National Highway System (NHS) (i.e., the subset of the federal-aid highway system that includes roads classified as principal arterials or above).	Construction, rehabilitation, or reconstruction of highways, bridges, and tunnels; transit capital projects on the NHS; infrastructure-based intelligent transportation systems (ITS) capital improvements on the NHS; highway and transit safety projects on the NHS; certain bicycle and non-motorized activities; and construction, rehabilitation, or reconstruction of highways, bridges, and tunnels on federal-aid highways not on the NHS, as long as they are within the same corridor as a segment of the NHS.

² Not intended to be an exhaustive list of all eligible activities.



Transit Resources

Source	Purpose	Examples of Eligible Activities
Sec. 5307 Urbanized Area Formula Grants	Funding for basic transit capital needs of transit agencies in urbanized areas.	Capital projects, transit planning, and projects eligible under the former Job Access Reverse Commute (JARC) program (intended to link people without transportation to available jobs). Some of the funds can also be used for operating expenses, depending on the size of the transit agency. One percent of funds received are to be used by the agency to improve security at agency facilities.
Section 5310, Elderly and Persons with Disabilities	Improving mobility options for seniors and disabled persons.	Projects to benefit seniors and disabled persons when service is unavailable or insufficient and transit access projects for disabled persons exceeding Americans with Disabilities Act (ADA) requirements. Section 5310 incorporates the former New Freedom program.
Section 5311, Non- Urbanized Area Formula Grants	Improving mobility options for residents of rural areas.	Capital, operating, and rural transit planning activities in areas with under 50,000 total population.
Section 5337, State of Good Repair Grants	Maintaining fixed-guideway transit systems in a state of good repair.	Capital, maintenance, and operational support projects. Recipients develop and implement an asset management plan. Half of Section 5337 funding is distributed by a formula accounting for vehicle revenue miles and directional route miles; half is based on ratios of past funding received.
Section 5339, Bus and Bus Facilities	Funding for basic transit capital needs of transit agencies, including construction of bus-related facilities.	Replace, rehabilitate, and purchase buses and related equipment, and construct bus-related facilities.



Appendix D - Financial and Operations and Maintenance Assumptions

Funding Growth Rates

These rates are not Year of Expenditure (i.e., inflation). Funding growth rates are the forecast of what is expected to be apportioned and/or allocated to the state and the MPOs. These funds are not indexed for inflation: There is no “cost of living” adjustment. Assumptions are made based on information known at a given point in time. What we know as we develop our current estimates is:

1. Michigan has seen very little growth in its federal-aid highway apportionment over the past couple of decades. Over the past 18 fiscal years, the state’s apportionment has only increased, on average 2.47 percent per year. In recent years the average annual change in apportionment has actually been negative, with the ten-year average at -0.30 percent and the five-year average at -1.21 percent.
2. On December 4, 2015, the FAST Act was signed into law. The FAST Act authorizes \$305 billion in federal funding for the nation’s surface transportation system over the next five years. The legislation breaks the cycle of short-term funding authorizations that have characterized the federal program for the past 10 years and, in covering nearly five full fiscal years, represents the longest surface transportation authorization bill enacted since 1998.
3. Reliance on non-transportation revenue to support investments in surface transportation is continued in the FAST Act. The FAST Act transfers \$70 billion from the federal General Fund into the federal HTF to ensure that all investments in highways and transit during the next five fiscal years are fully paid for. This brings the total amount of non-transportation revenue that has supported investments from the HTF during the past seven years to nearly \$145 billion.

Although the FAST Act has increased funding stability over the next five fiscal years, funding increases are modest at best. In keeping the modest increases outlined in the FAST Act, MDOT is recommending two percent per year funding increases between FY 2020 and FY 2023.

Year of Expenditure (YOE) Rates

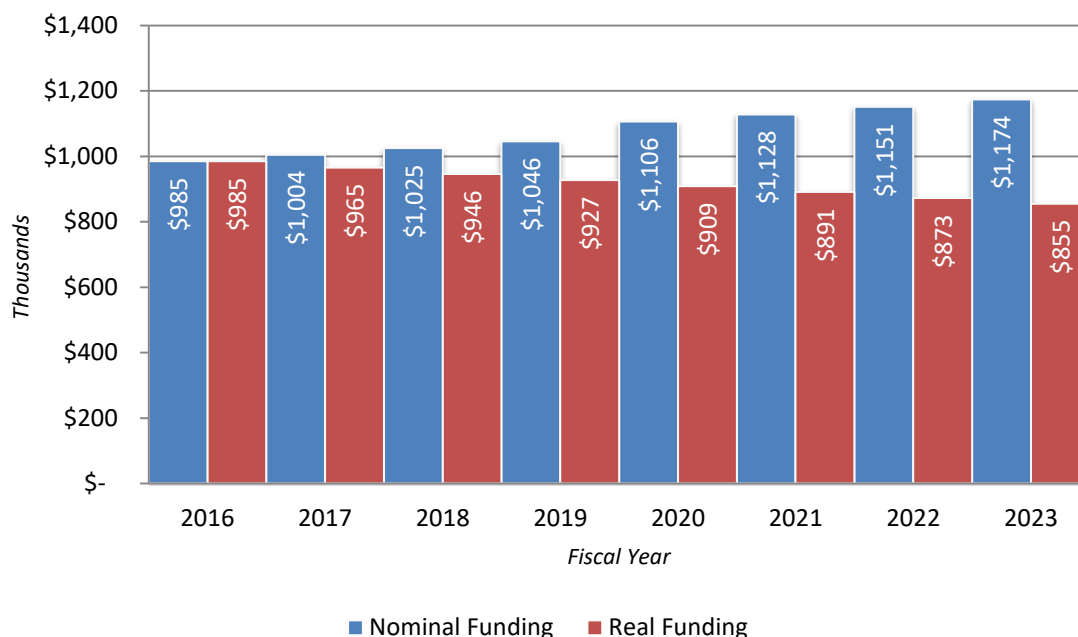
These rates represent the forecast of how much the cost of implementing transportation projects will increase each year, on average. In other words, YOE is the expected inflation rate in the transportation agencies’ cost of doing business. YOE adjustments to project costs are essential to show the true relationship between costs and resources. In recent years, highway and transit agencies have been increasingly squeezed by this phenomenon, since the inflation rate on transportation costs have increased essentially around 2.47 percent, the inflation rate means that less work can be done per allocated dollar. When viewed from the point of view of purchasing power, the states and MPOs have experienced a sharp decline in funding resources.

Based on past experience, MDOT, in cooperation with MTPA, will use the 2 percent YOE factor with 2016 as the base year. Chart 2 is an example that illustrates the difference between what BCATS will officially receive in STPBG Urban funding over the life of the FAST Act (i.e.,



nominal funding), and what that funding will be worth relative to the purchasing power of the base year (i.e., real funding).

Chart 2: Nominal and Real Funding for Each Fiscal Year



Estimate of Operations and Maintenance (O and M) Costs on the Federal-Aid Highway System

Repair and improvements to capital assets are only part of the total cost of the federal-aid highway system. Operations and maintenance (O and M), defined as those items (other than repair/replacement of capital assets) necessary to keep the highway infrastructure functional for vehicle travel, is just as important. Federal-aid funds cannot be used for O and M, which covers activities like grass cutting, trash removal, and snow removal. However, federal transportation planning regulations require an estimate of those costs on the federal-aid highway system.

The O and M estimate was derived in the following manner:

1. MDOT's estimate of total O and M funding available for the state trunkline system throughout Michigan is approximately \$599 million annually.
2. The total lane miles for the entire state trunkline system is determined and used as the denominator in the fraction $\$599 \text{ million} / \text{Total State Trunkline Lane Miles}$ to determine a per-lane-mile cost.
3. Approximately 1.0 percent of the lane miles in the state trunkline system are located in the BCATS Planning Area.



4. Assuming a roughly equal per-lane-mile operations and maintenance cost throughout the state trunkline system, MDOT should spend approximately \$ 5.5 million annually in the BCATS Planning Area on these activities.
5. The per-lane-mile cost will also be applied to locally-owned roads on the federal-aid-highway system.
6. The sum of costs from Steps 4 and 5 will constitute the required O and M estimate.
7. This base estimate is adjusted according to the inflation factors noted above in each fiscal year, since this is the *cost* of O and M, not a particular funding *source*.

DRAFT