

Centre County Metropolitan Planning Organization (CCMPO)
Draft 2023-2026 Transportation Improvement Program (TIP)
Project Selection Process

1. Background

The Bipartisan Infrastructure Law (BIL) continues the requirements included in the Fixing America's Surface Transportation (FAST) Act legislation and the federal *Statewide and Metropolitan Transportation Planning Final Rule* (Title 23 U.S.C. Section 34 and Title 49 U.S.C. Section 1607) that local and state officials work cooperatively to maintain a continuous and comprehensive long-range transportation planning program in all urbanized areas with a population of over 50,000 persons in the United States. This Federal mandate is carried out by a formal group called a "Metropolitan Planning Organization (MPO)". The BIL and the federal rule specify the primary roles and responsibilities of MPOs. The CCMPO is responsible for fulfilling these federal requirements in Centre County PA (State College Urbanized Area).

Every two years, Pennsylvania's MPO and RTPO Planning Partners, including the CCMPO, work in partnership with PennDOT, local transit providers, and local officials to identify priority transportation needs and develop a new Transportation Improvement Program (TIP) to address these needs over the next four-year period.

The TIP details the planned expenditure of federal funds and state capital funds for specific programs and projects, within specified limits of fiscal constraint. In order to be included on the TIP, programs and projects must be included on each Planning Partner's adopted Long Range Transportation Plan (LRTP) or addressed through reserve line items included on the LRTP. The TIP years are based on the federal fiscal year, which extends from October 1 to September 30.

The BIL (also known as Infrastructure Investment and Jobs Act (IIJA)) establishes an intent to address multiple infrastructure needs. In addition to formula driven programs carried forward from the FAST Act, the BIL includes multiple formula and discretionary programs designed to provide an infusion of funds for the transportation network. Compared to previous TIPs, the 2023-2026 draft TIP includes increased funding, new programs, and may need to be updated to include projects funded through multiple discretionary funding programs.

The list of projects on the TIP coincides with the First Four Year segment of the Commonwealth of Pennsylvania's Twelve Year Program (TYP), which is developed by PennDOT and adopted by the State Transportation Commission (STC) every two years, at the same time as the TIP.

In addition to the FAST Act, the Clean Air Act Amendments (CAAA) of 1990 specify planning activities for MPO and RTPO areas exhibiting air quality that is not in attainment with the National Ambient Air Quality Standards (NAAQS). Prior to 2004, air quality in Centre County was in attainment with the standards, and there were no special planning processes required. In June 2004, new air quality standards designated Centre County as a non-attainment area for ozone. Subsequent air quality measurements enabled Centre County to be redesignated as an attainment "maintenance" area. In 2013, federal legal proceedings changed the standards again, and Centre County was determined to be in attainment with the NAAQS. Special planning activities and air quality conformity analyses were no longer required for the LRTP and TIP.

In 2018, the U.S. Eighth Circuit Court of Appeals vacated major portions of a rule impacting air quality conformity requirements for the 1997 8-hour Ozone NAAQS. Although Centre County is still considered an attainment area for all current air quality standards, the Eighth Circuit Court's

ruling and subsequent guidance issued by the U.S. Environmental Protection Agency require that Centre County meet conformity requirements for the 1997 8-hour ozone NAAQS. Thus, in 2022, an Air Quality Conformity Determination Report was completed for the Draft 2023-2026 TIP.

The CCMPO works to educate the general public on transportation programs and encourage interested citizens to participate in the STC public involvement process. The public is notified of the opportunity to provide input via the STC Twelve Year Program update outreach processes, and the CCMPO reviews public feedback compiled by the STC. The CCMPO solicits public input on transportation priorities through public meetings, press releases, surveys, etc.

2. Project Selection

Projects in the TIP may address a variety of transportation modes, including improvements to roadways, bridges, transit, bicycle and pedestrian facilities, rail freight facilities and airports. In recent years, system maintenance has required a growing share of the Commonwealth of Pennsylvania's limited resources. A focus on asset management coupled with a "Lowest Life Cycle Cost (LLCC)" approach is intended to focus the programming of funds on the TIP for projects that rehabilitate, reconstruct, and renew the existing and aging transportation infrastructure. Fiscal constraints also mean that very few new projects have been added to the TIP during recent updates.

Additionally, Environmental Justice (Executive Order 12898) requires Federal agencies and Federal aid recipients to adhere to the following core principles:

- To avoid, minimize, or mitigate disproportionately high and adverse human health or environmental effects, including social and economic effects, on minority 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 and low-income populations.

The CCMPO collaborates with PennDOT, FHWA, and other stakeholders to follow a Performance Based Planning and Programming (PBPP) process. These activities are carried out as part of a cooperative, continuing and comprehensive (3C) planning process which guides the development of regional documents including:

- Statewide and Regional Long Range Transportation Plans (LRTPs)
- Twelve-Year Transportation Program (TYP)
- State Transportation Improvement Program (STIP)
- Regional Transportation Improvement Programs (TIPs)
- Transportation Asset Management Plan (TAMP)
- Transit Asset Management (TAM) Plans
- Public Transportation Agency Safety Plans (PTASP)
- Pennsylvania Strategic Highway Safety Plan (SHSP)
- Comprehensive Freight Movement Plan (CFMP)
- Congestion Mitigation and Air Quality (CMAQ) Performance Plan(s)
- Congestion Management Process (CMP)
- Regional Operations Plans (ROPs)

Based on these resources, PennDOT and MPOs/RPOs have worked together to (1) create data driven procedures that are based on principles of asset management, safety

improvement, congestion reduction, and improved air quality, (2) make investment decisions based on these processes, and (3) work to set targets that are predicted to be achieved from the programmed projects. Aligning goals and performance objectives across national (FHWA), state (PennDOT) and regions (MPOs/RPOs) provide a common framework for decision-making.

Applying these procedures for the development of the Draft 2023-2026 TIP included coordination with PennDOT District 2-0 and CCMPO staff to identify candidate projects for the highway/bridge portion of the 2023 Program. Due to Fiscal constraint the majority of the projects are carryover projects which must be carried forward onto the 2023 Program from a previous Program.

These include:

- Projects that are still advancing through the project delivery process
- Projects with unforeseen cost increases
- Projects with anticipated Advance Construct(AC) conversions

The CCMPO's primary effort in the draft TIP is to carryover and continue existing active projects. Adjustments were made for updated project phase estimates and anticipated let dates. Once the needs for these continuing projects were updated and their impacts on the available funding were assessed, CCMPO and PennDOT staff collaborated to identify candidate projects using the procedures identified. Brief descriptions of the processes for Bridge, Roadway and Safety projects follow.

Bridges

CCMPO and District 2-0 continue to be bridge focused in District 2. The first use of funds available are toward bridges. PennDOT District personnel utilized Bridgecare Data, data collected according to National Bridge Inspection Standards (NBIS) and the same data utilized to develop the Bridge Asset Management System (BAMS) reports, to compile a comprehensive list of Poor and Near Poor condition structures in each District 2 County, approximately 20-25 bridges per County. Bridge structures on the current TIP that were identified as New Starts in 2021 and 2022 were eliminated from the comprehensive list. The District Bridge Unit split into multiple teams and went out to physically field view each structure on the comprehensive list. Following the field views County spreadsheets were compiled for and prioritized. The Centre County list has 21 structures that are identified from Very High to Low. The prioritized list was then compared with the BAMS report before finalizing. The comprehensive list was provided to the Transportation Planning Manager and based on available fund sources starting with the highest priority bridge structure projects where added to the 2023 Draft TIP.

As the PennDOT, CCMPO, and County continue to discuss local bridge structure concerns there was a need to re-establish the Local Bridge Retroactive Fund source on the Draft TIP. A 100% State Bridge fund source will become available in FFY's 23, 24, and 26. Additionally 2023 retroactive funds needs were quickly recognized as a resource for a local bridge structure need and have been assigned to that project for Mary Elizabeth Street.

As the local bridge structure discussions continue, there will be an effort to utilize available funds in Reserve Line Items to develop projects and support needs. Needs could include existing projects see cost increases that will require a TIP amendment with formal approval by CCMPO or TIP administrative modification for concurrence by MPO staff to cover those cost increases. Centre County has begun to develop communications with municipalities and prioritization of some local bridge structures in the effort to utilize the County \$5 Fee and RoadMap Funds.

Roadways and Pavement Asset Management System (PAMS)

Roadway improvements have been identified from a number of sources. PennDOT continues to utilize International Roughness Index, IRI, ratings along with Overall Pavement Index, OPI, ratings, and Pavement Out-of-Cycle data to identify areas of concern and future needs. These details relate back to the same data utilized to develop the PAMS Report. The Department also utilizes feedback from the MPO, County Planner, PennDOT Connects and PennDOT County Maintenance Manager meetings. Routes and locations were compared and discussed prior to project selection.

These roadway details are also utilized to develop the Department Maintenance Funded Group Resurfacing Projects. These project locations have to be flexible and are often modified to accommodate funding alterations and roadway needs. The District's goal is to utilize TIP Fund Sources for primary core routes within the Region and utilize Department Maintenance Fund Sources for the Secondary Routes.

Safety

Safety needs are identified through PennDOT's annual Highway Safety Improvement Program (HSIP) review process, using data and resources such as the statewide Network Screening Analysis, the Intersection Safety Implementation, and the Roadway Departure Implementation Plans. Identification of projects includes field review of key locations identified by PennDOT with their screening tool and other project sponsors. Implementation of safety improvement projects is intended to meet the goals of PennDOT's Strategic Highway Safety Plan (SHSP).

In addition to the PennDOT-focused plans and programs, projects are selected from the following sources:

- Project priorities and line items specified in the Centre County LRTP 2050
- Priorities of key project sponsors, including PennDOT Engineering District 2-0, CATA, CCOT, Centre County Government, and municipalities add PennDOT Central Office
- Safety needs identified through statewide Intersection Safety Implementation and Roadway Departure Implementation Plans as well as the Safety Screening Tool.

Meetings are held with PennDOT Engineering District 2-0 staff to review candidate lists of projects for possible inclusion in the TIP, considering public involvement and consistency with the TAMP, Transportation Investment Plan, SHSP, and the Centre County LRTP 2050. The CCMPO and project sponsors work together to select the projects that provides the greatest possible improvement in asset conditions and improves the overall performance of the system.

PennDOT, CCMPO and Centre County continue to discuss areas and opportunities to utilize (Highway Safety Improvement Program) HSIP funds. A few projects have been identified and are on the current and draft TIP. Remaining funds have been placed into the Reserve Line Item until project selection that is best suited for the use of funds is identified and agreed upon. CCMPO, the County and PennDOT intend to utilize the existing Safety Subcommittee to work toward project selection with the intention of completing project selection prior to the start of FFY 2023.

PennDOT Transportation Asset Management Plan

The new projects which are not carryovers selected for inclusion on the Draft 2023-2026 Centre County TIP are consistent with PennDOT's 2019 Transportation Asset Management Plan (TAMP), which was prepared in 2019 to guide investments in transportation infrastructure in future years and ensure compliance with federal performance measure targets. The targets are consistent with the TAMP's objectives to maintain roadways and bridges in desired state of good repair, managed to lowest life cycle costs, while achieving national and state-level transportation goals.

3. Performance Measures

The BIL, the Fast Act, and associated federal rulemaking continue to require PennDOT, MPOs, RTPOs, and transit operators to address performance management and a PBPP approach to ensure the investment of Federal transportation funds results in progress towards national performance goals.

Transportation Performance Management (TPM) is a strategic approach that uses data to inform investment and policy decisions with the aim of achieving national performance goals. 23 USC 150(b) outlines the national performance goal areas for the Federal-aid program. This statute requires the Federal Highway Administration to establish specific performance measures for the system that address those national goal areas.

National Goal Areas	
Safety	<ul style="list-style-type: none"> To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.
Infrastructure Condition	<ul style="list-style-type: none"> To maintain the highway infrastructure asset system in a state of good repair
Congestion Reduction	<ul style="list-style-type: none"> To achieve a significant reduction in congestion on the National Highway System
System Reliability	<ul style="list-style-type: none"> To improve the efficiency of the surface transportation system
Freight Movement & Economic Vitality	<ul style="list-style-type: none"> To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.
Environmental Sustainability	<ul style="list-style-type: none"> To enhance the performance of the transportation system while protecting and enhancing the natural environment
Reduced Project Delivery Delays	<ul style="list-style-type: none"> To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices

PennDOT, the CCMPO, CATA, and the Centre County Office of Transportation (CCOT) are required to jointly agree on written provisions for how information will be cooperatively developed and shared related to the selection of performance targets and the collection and reporting of data to track progress in meeting critical outcomes. In November 2018, the CCMPO approved agreements with CATA and the CCOT that specify written provisions for developing, collecting and sharing of public transit performance data. In April 2019, the CCMPO approved written data collection and sharing provisions with PennDOT for the safety, pavement, bridge and transportation system performance topic areas.

The following sections provide an overview of the federal performance measures. Since asset management, reliability and CMAQ targets have not yet been set for the 2022-2025 performance period, the project selection process is highlighted with respect to current goals targets and the overall national goals.

Safety Projects [Performance Measure (PM)1]

Federal safety performance measures were implemented in 2016. Targets for measuring safety performance were first established by PennDOT in 2017 and have been updated annually through February 2022. PennDOT established statewide targets based on a 2% annual reduction for fatalities and maintaining levels for suspected serious injuries. In addition to developing statewide targets, PennDOT develops supporting regional targets to guide PBPP decisions at a local level.

On February 22, 2022, the CCMPO voted unanimously to support the safety performance measure targets established by PennDOT, as illustrated in the following table.

Centre County MPO Supporting Values (Targets) for All Years (Targets are based on a rolling five-year average)										
Performance Measure	Initial - 2018		Year 2 - 2019		Year 3 - 2020		Year 4 - 2021		Year 5 - 2022	
	Baseline 2012-2016	Target 2014-2018	Baseline 2013-2017	Target 2015-2019	Baseline 2014-2018	Target 2016-2020	Baseline 2015-2019	Target 2017-2021	Baseline 2016-2020	Target 2018-2022
Number of fatalities	14.6	17.2	15	16.4	15.2	14.9	13	6.4	12.8	11
Rate of fatalities per 100 million VMT	1.08	1.24	1.102	1.173	1.096	1.049	0.919	0.438	0.927	0.838
Number of serious injuries	37.8	41.3	38.6	41.1	44	54.8	47.2	52.5	48	44.4
Rate of serious injuries per 100 million VMT	2.802	2.979	2.835	2.94	3.173	3.857	3.337	3.575	3.476	3.384
Number of non-motorized fatalities and serious injuries	6.2	9.8	8	9.5	9.4	13.7	10.4	10.4	10.4	7.1

The Draft 2023-2026 Centre County TIP includes three roadway safety improvement projects that are intended to help improve the performance of the roadway system relative to the five federal safety performance measures.

The known projects using HSIP funds are as follows:

- Intersection Safety Improvements Route 26/Route 150
- High Friction Surface Treatment Selected Locations on Routes 26, 322, 350
- I-80 Approach slabs ED and WB over SR 150 Bridge Sprayer upgrades

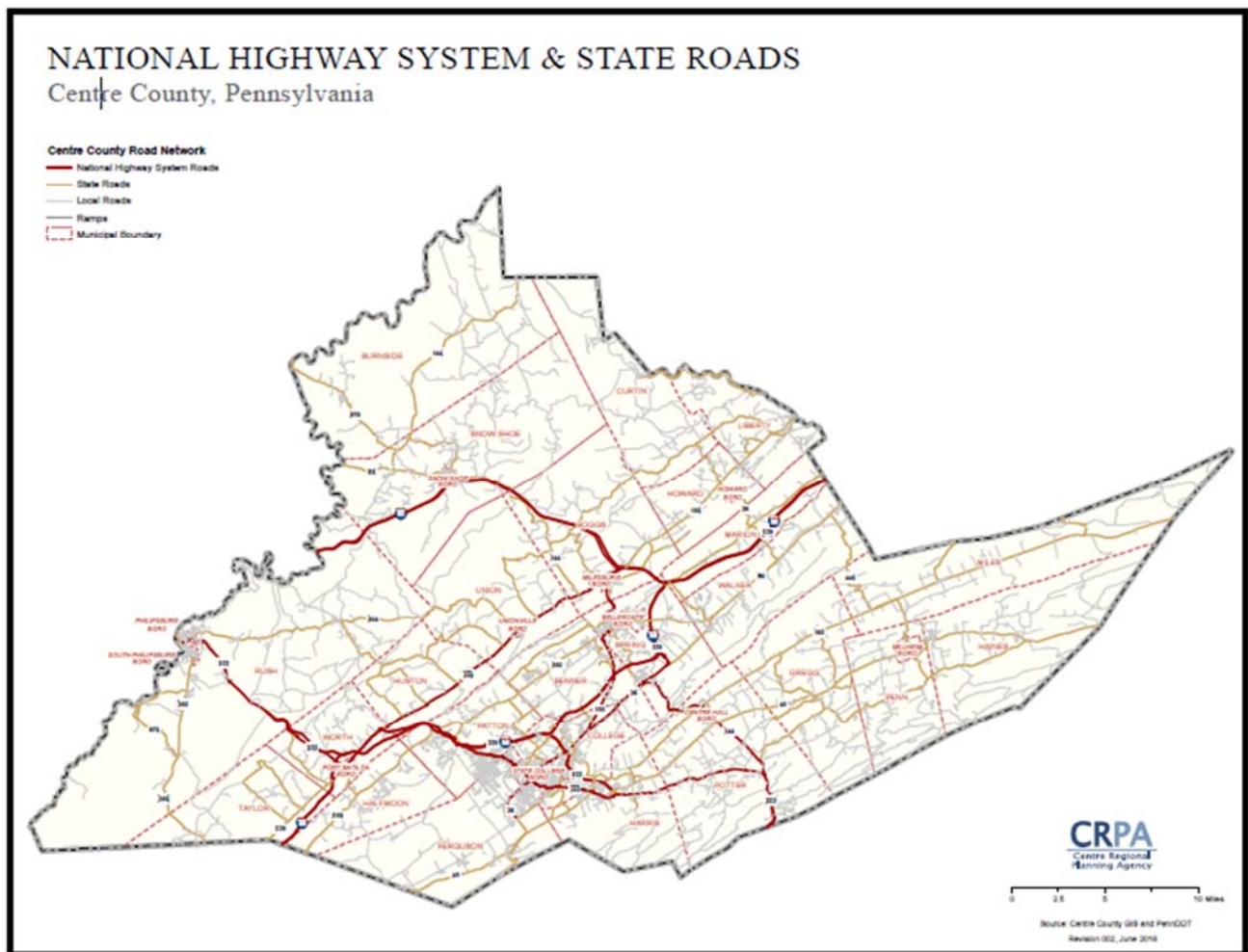
The unallocated HISP funds are programmed into a regional line item that will be used to fund additional projects that emerge through the PBPP process.

The programmed projects are consistent with Safety Focus Areas identified in the 2022 Strategic Highway Safety Plan, including intersection safety, lane departure crashes and transportation system management and operations, and are anticipated to enhance progress towards meeting the regional targets adopted by the CCMPO.

The High Friction Surface Treatment project locations were identified by PennDOT and the CCMPO staff as part of the annual HSIP discretionary funding program project solicitation process in 2019 and have continued into this TIP.

Roadway Pavement and Bridge Improvement Projects (PM2)

Federal PM2 performance measure targets apply only to roadways and bridges on the designated National Highway Performance Program (NHPP), also known as the National Highway System (NHS). NHS routes in Centre County are illustrated on the following map.



Federal regulations require that no more than 5 percent of Pennsylvania’s NHS Interstate lane-miles be in Poor pavement condition. If that requirement is not met, restrictions are placed on how PennDOT can allocate federal NHPP and Surface Transportation Program (STP) funds. PennDOT’s targets for NHS Interstate roadways reflect the federal regulation: no more than 5 percent of Pennsylvania’s NHS Interstate pavements shall be rated in poor condition. Although FHWA has not established a minimum condition for NHS non-Interstate roadways, PennDOT has established performance targets for the non-Interstate NHS roadways. These targets are

reviewed and considered for approval every two years. The most recent approval by CCMPO was February 24, 2021. No change in pavement targets occurred in 2021.

PennDOT Pavement Performance Targets Supported by the Centre County MPO (February 2021)			
Measure	Baseline 2017	2-year Target 2019	4-year Target 2021
% of Interstate pavements in Good condition	NA	N/A	60.0 %
% of Interstate pavements in Poor condition	NA	N/A	2.0 %
% of non-Interstate NHS pavements in Good condition	47.8	35.0 %	33.0 %
% of non-Interstate NHS pavements in Poor condition	15.9%	4.0 %	5.0 %

One of the projects included on the Draft 2023-2026 TIP will have a significant impact on improving poor pavement condition on the NHS in Centre County. The project is located on one of the last remaining sections of the NHS with poor pavement and is:

- SR 3014 (Bus Route 322 Atherton St.) Section 153 for Drainage and Repaving

PennDOT’s 2020 Performance Measures Annual Report for Bridges in Centre County noted that three bridges on non-Interstate NHS routes are in Poor condition. The 2020 Performance Measures Report also indicated that at the end of 2018, only 0.31% of the total bridge deck area on the NHS in Centre County was in Poor condition. With the investments being made in bridges on the past 2021-2024 TIP and the Draft 2023-2026 TIP, bridge conditions on the NHS should continue to be well above PennDOT’s performance measure target for Poor bridges. PennDOT’s targets, which were formally supported by the CCMPO, are illustrated in the following table.

PennDOT Bridge Performance Targets Supported by the Centre County MPO (February 2021)			
Measure	Baseline 2017	2-year Target 2019	4-year Target 2021
% of NHS bridges by deck area classified in Good condition	23.7 %	25.8%	26.0 %
% of NHS bridges by deck area classified in Poor condition	5.1 %	5.6%	6.0%

PennDOT will establish new targets for PM 2 performance measures for the second performance period by October 2022, and the CCMPO will take action regarding these targets within 180 days. It is anticipated that the targets established will continue to be consistent with PennDOT’s asset management objectives as detailed in the TAMP.

Travel Time Reliability (PM3)

The Travel Time Reliability performance measures are quite complex and apply only to roadways on the NHS.

PennDOT has been tracking the measures since 2018. States are permitted to adjust their 4-year targets at the midterm of the performance period and for CCMPO there have been some

adjustments.

Within Centre County, PM3 performance measures include:

- Percent of Person-miles Traveled on the Interstate System that are Reliable
- Percent of Person-miles Traveled on the Non-Interstate NHS that are Reliable

Level of Travel Time Reliability (LOTTR) is defined as the ratio of the 80th percentile travel time of a reporting segment to a "normal" travel time (50th percentile), using data from FHWA's free National Performance Management Research Data Set (NPMRDS) or equivalent. Data are collected in 15-minute segments during all time periods other than 8 p.m.-6 a.m. local time. The measures are the percent of person-miles traveled on the relevant NHS areas that are reliable.

- Truck Travel Time Reliability Index – Interstate System Only

Truck Travel Time Reliability (TTTR) Index. Reporting is divided into five periods: morning peak (6-10 a.m.), midday (10 a.m.-4 p.m.) and afternoon peak (4-8 p.m.) Mondays through Fridays; weekends (6 a.m.-8 p.m.); and overnights for all days (8 p.m.-6 a.m.). The TTTR ratio will be generated by dividing the 95th percentile time by the normal time (50th percentile) for each segment. Then, the TTTR Index will be generated by multiplying each segment's largest ratio of the five periods by its length, then dividing the sum of all length-weighted segments by the total length of Interstate.

PennDOT's targets, which were formally supported by the CCMPO in February of 2021, are illustrated in the following table.

Travel Time and Annual Peak Hour Excessive Delay Measures (Estimated using RITIS Data Extract from May 8, 2018) Supported by the Centre County MPO (February 2021)					
Measure	Centre Co. Baseline 2017	Statewide Baseline 2017	2-year Target 2019	4-year Target 2021	Adjusted 4-Year Target
Interstate Reliability (Statewide)	100.0%	89.5 % (2020)	89.8 %	89.8 %	89.5 %
Non-Interstate Reliability (Statewide)	92.6%	87.4 %	N/A	87.4 %	NA
Truck Reliability Index (Statewide)	1.14	1.40 (2020)	1.34	1.34	1.4

There is one project on an Interstate NHS route in Centre County that is expected to result in significant improvements in travel time reliability. The I-80/I-99 High Speed Interchange (Exit 161) project, which is being advanced through PennDOT's statewide Interstate Management (IM) TIP, will significantly reduce travel delay on I-99 Northbound approaching I-80 Exit 161, and on I-80 eastbound and westbound approaching Exit 161.

There are no projects on the Draft 2023-2026 TIP that are specifically focused on improving travel time reliability on non-Interstate NHS routes. However, the SR 3014 Business Route 322 (Atherton Street) Section 153 and Section 154 projects include some upgrades for traffic signalization that are intended to help with addressing congestion resulting from special events and incidents.

State College Area Connector Project

The Draft 2023-2026 TIP includes \$15 million in discretionary (spike) funds for the State College Area Connector (SCAC) project, which is in the general area of the Route 322/144/45 corridors. Funding is provided for the Preliminary Engineering and Final Design phases. This project has

funds for Preliminary Engineering and Final Design in the Draft 2023-2026 TIP.

Based on the information collected in the Route 322/144/45 Data Refresh effort that was completed by PennDOT in 2019, there are existing and projected needs associated with safety and travel time performance on roadways in this area of Centre County. Needs associated with pavement and bridge condition performance would also be documented during the preliminary engineering work.

Safety performance measures are applicable to all state and local roadway systems in the SCAC study area. The travel time and pavement/bridge performance measures are applicable to roadways in the study area that are part of the NHS. Both Route 322 and Route 144 in this area of Centre County are NHS routes.

No specific alternative improvements have been developed for the SCAC project at this time. The commitment of funding for the PE and Final Design phases has enabled initiation of a PEL process, which is anticipated to result in the documentation of a specific “purpose and need” statement(s) for the project; and the development and evaluation of an alternative improvement(s).

Thus, the commitment of state funds for the PEL study, preliminary engineering and final design work may lead to the future investment of federal and state funds for improvements that contribute to meeting the performance measure targets established by PennDOT and the CCMPO. Completion of the PEL is anticipated to occur in summer, 2022.

Public Transportation Projects

The Draft 2023-2026 TIP includes public transportation projects and line items being carried forward from the previous 2021-2024 TIP. New transit projects are also included on the 2023-2026 TIP. The transit projects reflect the priorities established by:

- The project prioritization process for the LRTP 2044
- PennDOT’s Capital Planning Tool
- Operations and maintenance planning by CATA and the CCOT

In addition, other planning efforts help guide the establishment of priorities for transit projects. In November 2015, the CATA Board of Directors approved its *Strategic Plan Update 2016-2026*, which detailed goals, objectives, and implementation timeframes within five core themes:

1. Address Growth Prudently
2. Advance Technology
3. Plan for Succession
4. Build Reserves
5. Enhance the Use of Metrics

Performance targets derived from federally-required Transit Asset Management (TAM) plans and Public Transportation Agency Safety Plans (PTASP) also shape investments in public transit. These plans place a strong emphasis on proactive maintenance and timely replacement of assets that have reached the end of their useful life, to better manage capital costs and ensure the safety and reliability of service on the street.

CATA maintains its own TAM plan and PTASP, while the CCOT participates in a statewide TAM plan administered by PennDOT and is exempt from PTASP requirement. The CCMPO is also required to adopt asset management and safety performance targets, but has elected to defer to the agency-set targets identified by CATA and the CCOT.

The investments represented by the project funding in the transit element of the TIP are focused on implementing improvements that will help CATA meet the objectives in its *Strategic Plan Update* and will ensure that CATA and the CCOT maintain consistency with their respective TAM Plans.

In particular, the TIP includes funding to improve the condition of CATA's rolling stock. In late 2019, the average age of CATA's fixed route bus fleet was 8 years, and 19 of 79 buses (24%) met or exceeded both the Federal Transit Administration's useful life of 12 years and CATA's target maximum replacement age of 16 years. Safety measures implemented to mitigate the impacts of COVID-19 resulted in changes in state and federal funding and service demands within the area served by CATA. In the succeeding years, CATA has made numerous changes in service, rolling back or eliminating some services, and pursuing innovative new methods of delivering service such as implementing microtransit service areas. Funding is also included in the TIP to replace rolling stock and to continue to implement innovative services in a way that is consistent with the region's TAM, Safety and Strategic Plans.

The investments represented by the project funding in the transit element of the TIP reflect the high level of public transportation service provided by both CATA and the CCOT, are focused on implementing improvements that will help CATA meet the objectives in its *Strategic Plan Update*, and – most notably through a concentration on vehicle replacement – will ensure that CATA and the CCOT continue to make progress in meeting asset management and system reliability goals.

Transit Asset Management (TAM)

In terms of asset management for public transit agencies, performance measurement is required by the Federal Transit Administration (FTA) to support safety and reliability of service, while moderating purchase and maintenance costs. Both the Centre Area Transportation Authority (CATA) and the Centre County Office of Transportation (CCOT) are required to either maintain their own TAM plan, or participate in a statewide group plan administered by PennDOT.

TAM requirements cover three primary asset categories: rolling stock, equipment, and facilities.

Each year, individual agency TAM plans and the statewide group TAM plan must assess performance in the previous year, and set new targets for the upcoming year; typically, this is completed during August and September of each year.

The basis for measuring performance and setting targets is:

- Estimated useful life (age and mileage)
- PennDOT's capital planning tool, which rates assets on a scale of 1 (asset past useful life, replacement or rehabilitation required) to 5 (new or nearly new asset with no defects)

Relevant examples of estimated useful life include:

- Large, heavy duty transit buses: 12 years or 500,000 miles
- Light duty vehicles: 4 years or 100,000 miles
- Facilities: generally 40 years

The CCOT participates in the statewide group TAM plan, for which the performance targets and actual performance are as follows. It is important to note that of the asset classes covered by the statewide group TAM plan, only cutaways and vans are relevant to the CCOT. Moreover, the CCOT does not own its own facilities.

Transit Asset Management Targets (for all agencies in PennDOT Group Plan)				
Performance Measure	Asset Class	FY2020-21 Target	Current Performance	FY 2021-22 Target
Rolling Stock (Revenue Vehicles)				
Age % of revenue vehicles within a particular asset class that have met or exceeded their Estimated Service Life (ESL)	AO-Automobile	16%	18%	18%
	BR-Over-the-road Bus	12%	18%	18%
	BU – Bus	29%	28%	28%
	CU-Cutaway	42%	52%	52%
	VN-Van	64%	63%	63%
	SV-Sports Utility Vehicle	17%	33%	33%
Equipment (Non-Revenue Vehicles)				
Age % of non-revenue/service vehicles within a particular asset class that have met or exceeded their ESL	Automobiles	46%	57%	57%
	Trucks / Rubber Tire Vehicles	50%	27%	27%
Facilities				
Condition % of facilities with a condition rating below 3.0 on the FTA TERM scale	Administrative / Maintenance Facilities	30%	14%	14%
	Passenger / Parking Facilities	83%	84%	84%

Currently, the CCOT is performing less than favorably compared to the statewide actual performance and targets. 77% of CCOT cutaways and 100% of CCOT vans exceed their estimated useful life. The 2023-2026 Centre County TIP and Centre County LRTP 2050, however, are structured to provide support in better meeting performance targets. Specific projects intended to replace rolling stock that has exceeded its estimated useful life include MPMS #89932 – Replace Paratransit Vehicles. This project appears in all four years of the TIP and will help to turn over a significant portion of the CCOT fleet with newer vehicles.

CATA prepares and maintains its own individual agency TAM plan, as do a number of other public transit agencies throughout Pennsylvania. Performance targets and actual performance are as follows.

CATA Transit Asset Management Targets			
Performance Measure	FY2020-21 Target	Current Performance	FY 2021-22 Target
Rolling Stock (Revenue Vehicles)			
Age % of revenue vehicles within a particular asset class that have met or exceeded their Estimated Service Life (ESL)	15%	26%	25%
Equipment (Non-Revenue Vehicles)			
Age % of non-revenue/service vehicles within a particular asset class that have met or exceeded their ESL	25%	32%	40%
Facilities			
Condition % of facilities with a condition rating below 3.0 on the FTA TERM scale	20%	0%	20%

Currently, CATA is performing a bit less favorably compared to its own rolling stock targets. 26% of CATA rolling stock exceeds its estimated useful life. CATA is outperforming its own equipment and facilities targets.

The 2023-2026 Centre County TIP and Centre County LRTP 2050 are structured to provide support in better meeting performance targets. Specific projects intended to replace rolling stock that has exceeded its estimated useful life include:

- MPMS #95505 – Replace Vanpool Vehicles (TIP years 2023 and 2024)
- MPMS #95508 – Replace 40’ Buses (TIP years 2023, 2024, 2025, and 2026)
- MPMS #118200 – Replace <30’ Buses (TIP years 2023 and 2025)
- MPMS #95509 – Replace Paratransit Vehicles (TIP years 2024 and 2025)

These projects will help to turn over a significant portion of CATA’s revenue fleet with newer vehicles.

Specific projects intended to replace service vehicles that have exceeded their estimated useful life include MPMS #89944 – Replace Service Vehicles. This project appears in TIP years 2023, 2025, and 2026 and will help to turn over a significant portion of CATA’s service fleet with newer vehicles.

Though none of CATA’s facilities currently rate below a “3” within PennDOT’s Capital Planning Tool, specific modest line item projects intended to maintain facilities in a state of good repair include:

- MPMS #95512 – Facility Improvements (TIP years 2023, 2024, 2025, and 2026)
- MPMS #95515 – Major Bus and Building Parts (TIP years 2023, 2024, 2025, and 2026)

With respect to both the CCOT and CATA, the transit element of the 2023-2026 Centre County TIP is structured to place a strong emphasis on asset management and maintenance, as opposed to the purchase of fleet expansion vehicles.

Public Transit Safety Performance Measures

In terms of safety management for public transit agencies, performance measurement is required by the Federal Transit Administration (FTA) to reduce or eliminate major safety incidents and increase reliability of service, while moderating purchase and maintenance costs. The Centre Area Transportation Authority (CATA) is required to maintain its own Public Transportation Agency Safety Plan (PTASP), while the CCOT is exempt from these requirements, as they do not receive federal formula funds.

PTASP requirements cover two broad categories, and several sub-categories:

- Safety events (raw number):
 - Fatalities, injuries, and other major safety events – as defined by the National Transit Database (NTD), including only those instances that are within the transit agency’s scope of control. For example, suicides by transit or injuries sustained during the commission of a crime on transit vehicles or property would not be included
- System reliability (average distance – in miles – between major mechanical failures by mode):
 - Fixed route (CATABUS)
 - Contracted service (CATARIDE and CATAGO!)
 - Vanpool (CATACOMMUTE)

Each year, individual agency PTASP documents must assess performance in the previous year, and set new targets for the upcoming year; typically, this is completed during August and September of each year.

CATA’s safety performance targets and actual performance are as follows.

CATA Safety Performance Targets			
Performance Measure	FY2020-21 Target	Current Performance	FY 2021-22 Target
Fatalities	0	0	0
Injuries	0	0	0
Other Major Safety Events	0	0	0

The agency strives for and maintains an exemplary safety record, and though no projects on the transit element of the 2023-2026 Centre County TIP specifically fund safety efforts, the operating assistance line item for CATA (MPMS #89928 in all four TIP years) will in small part help to support safety training and other efforts.

CATA's reliability performance targets and actual performance are as follows.

CATA Reliability Performance Targets			
Average Distance (in miles) Between Major Mechanical Failures	FY2020-21 Target	Current Performance	FY 2021-22 Target
Fixed Route	24,095	13,985	15,952
Contracted Service	398,267	213,994	59,359
Vanpool	1,009,324	218,305	301,965

Currently, CATA is performing a bit less favorably compared to its own targets for all three modes. For the upcoming year, performance was re-assessed, and more meaningful targets were adopted based upon improved data sourcing, tracking, and methodology.

There is quite a bit of overlap between TAM performance measures and the reliability component of CATA's PTASP. Accordingly, the 2023-2026 Centre County TIP and Centre County L RTP 2050 are structured to provide support in better meeting performance targets. Specific projects intended to replace rolling stock that has exceeded its estimated useful life – while increasing reliability – include:

- MPMS #95505 – Replace Vanpool Vehicles (TIP years 2023 and 2024)
- MPMS #95508 – Replace 40' Buses (TIP years 2023, 2024, 2025, and 2026)
- MPMS #118200 – Replace <30' Buses (TIP years 2023 and 2025)
- MPMS #95509 – Replace Paratransit Vehicles (TIP years 2024 and 2025)

These projects will help to turn over a significant portion of CATA's revenue fleet with newer, more reliable vehicles.

MPO-Wide Performance Measures

Though the Centre County MPO was required to adopt its own performance measures for asset management, safety, and reliability, the MPO Coordinating Committee voted to defer to existing agency-based measures. The measures adopted by CATA for asset management are the more stringent of the two transit providers serving Centre County. Moreover, CATA is the only Centre County provider subject to PTASP requirements. Accordingly, MPO membership and staff felt that CATA's measures were appropriate to defer to in making transportation planning and programming decisions.

Other Projects

The Draft 2023-2026 TIP may include funds for projects approved for funding from programs allocated on a statewide basis, including the following:

- Transportation Alternatives Set-Aside
- Appalachian Regional Commission Local Access Road Program
- Automated Red Light Enforcement and Green Light-Go Programs
- Multimodal Transportation Fund
- Congested Corridor Improvement Program

- Rapid Bridge Replacement Program (P3)
- Highway-Rail Grade Crossing Safety Program (RRX)
- Highway Safety Improvement Program (HSIP) Statewide Set-aside

As new projects are successful in obtaining funding through these programs, the CCMPO will add the projects to the TIP.

The project priorities and essential project information are compiled in the Draft TIP documentation package made available to the public as part of a 30-day public comment period before adoption by the CCMPO.

Following adoption of the TIP by the CCMPO, the TIP is approved by PennDOT, which then submits the Statewide TIP to the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) for final approval. After final approval of the Statewide TIP by FHWA and FTA, the TIP takes effect at the beginning of the federal fiscal year on October 1, 2020.