

2050

LONG RANGE TRANSPORTATION PLAN

May 2026

MIAMI VALLEY
Regional Planning Commission

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2050 LONG RANGE TRANSPORTATION PLAN

Adopted: May 7, 2026

Miami Valley Regional Planning Commission
6 North Main Street
Suite 400
Dayton, Ohio 45402

This document is the product of a study financed by the U.S. Department of Transportation (U.S. DOT), the Ohio Department of Transportation (ODOT), and the Miami Valley Regional Planning Commission.

The contents of this document reflect the views of the Miami Valley Regional Planning Commission, which is responsible for the facts and accuracy of the data presented herein. The contents do not necessarily reflect the views of the U.S. DOT or ODOT. This document does not constitute a standard, specification, or regulation.

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RESOLUTION 26-10
ADOPTING THE 2050
LONG RANGE TRANSPORTATION PLAN

WHEREAS, the Miami Valley Regional Planning Commission is designated as the Metropolitan Planning Organization (MPO) by the Governor acting through the Ohio Department of Transportation in cooperation with locally elected officials for Greene, Miami, and Montgomery Counties including the jurisdictions of Carlisle, Franklin, Springboro, and Franklin Township in Warren County; and

WHEREAS, the MPO members of the MVRPC's Board of Directors serve as the policy and decision making body through which local governments guide the MPO's transportation planning process for the Dayton Metropolitan Area; and

WHEREAS, the MVRPC currently conforming 2050 Long Range Transportation Plan (2050 Plan) was adopted in May 2021; and

WHEREAS, the Infrastructure Investment and Jobs Act (IIJA) requires that the Plan be comprehensively updated every five years; and

WHEREAS, the updated 2050 Long Range Transportation Plan is the result of a coordinated effort that reflects federal requirements and regional priorities; and

WHEREAS, the updated 2050 Long Range Transportation Plan is fiscally constrained; and

WHEREAS, the MVRPC current SFY2026-2029 Transportation Improvement Program (TIP) is consistent with the updated 2050 Long Range Transportation Plan; and

WHEREAS, the conformity process completed for Greene, Miami, and Montgomery Counties in the Dayton/Springfield Air Quality Region meets the Clean Air Act and Transportation Conformity rule requirements for the 1997 ozone standard; and

WHEREAS, significant TIP projects in Franklin, Carlisle, Springboro, and Franklin Township have been included in the regional emissions analysis for the Cincinnati Region and found to conform to the 2008 and 2015 8-hour ozone standards; and

WHEREAS, the MVRPC's 2050 Plan conformity determination is made consistent with the April 2012, U.S. EPA Transportation Conformity Regulations.

NOW, THEREFORE, BE IT RESOLVED, that the MPO members of the Board of Directors of the Miami Valley Regional Planning Commission hereby adopt the 2050 Long Range Transportation Plan.

BY ACTION OF THE Miami Valley Regional Planning Commission's Board of Directors.

Brian O. Martin

Brian O. Martin, AICP
Executive Director

May 7, 2026
Date

Robin I. Oda

Robin I. Oda, Chairperson
Board of Directors of the
Miami Valley Regional Planning Commission

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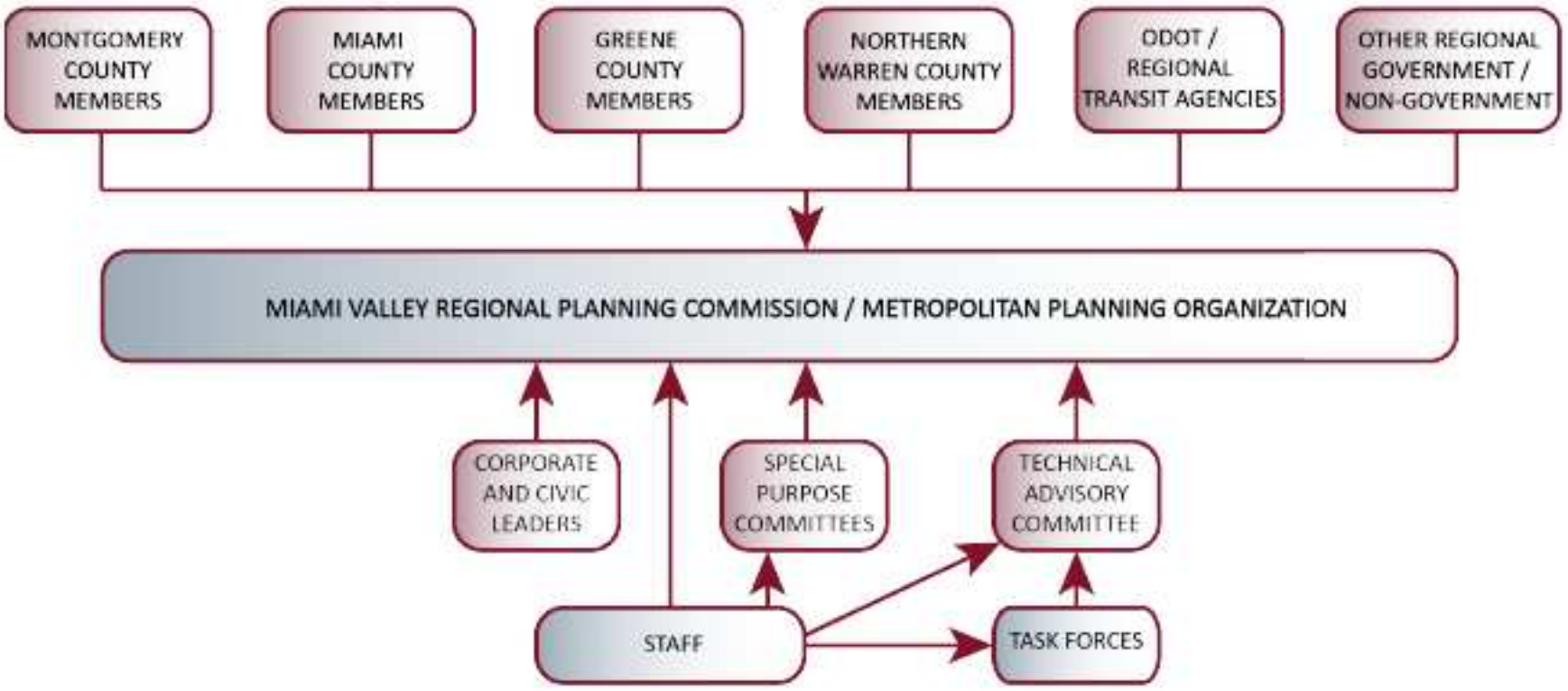
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Chapter 1
Introduction

The Miami Valley Regional Planning Commission (MVRPC) is the Regional Planning Commission for Darke, Greene, Miami, Montgomery, Preble, and Shelby counties in west-central Ohio. MVRPC is also the Metropolitan Planning Organization (MPO) for Greene, Miami, and Montgomery counties, the cities of Carlisle, Franklin, and Springboro, and Franklin Township in Warren County (hereafter referred to as northern Warren County) (see Figure 1.2). As such, MVRPC is responsible for developing, implementing, monitoring, and updating a variety of transportation plans that are designed to enhance the Region's competitive position, promote regional growth, improve personal mobility, and preserve the environment.

Figure 1.1 gives a brief overview of the transportation program structure at MVRPC.

Figure 1.1 — MVRPC Transportation Program Structure

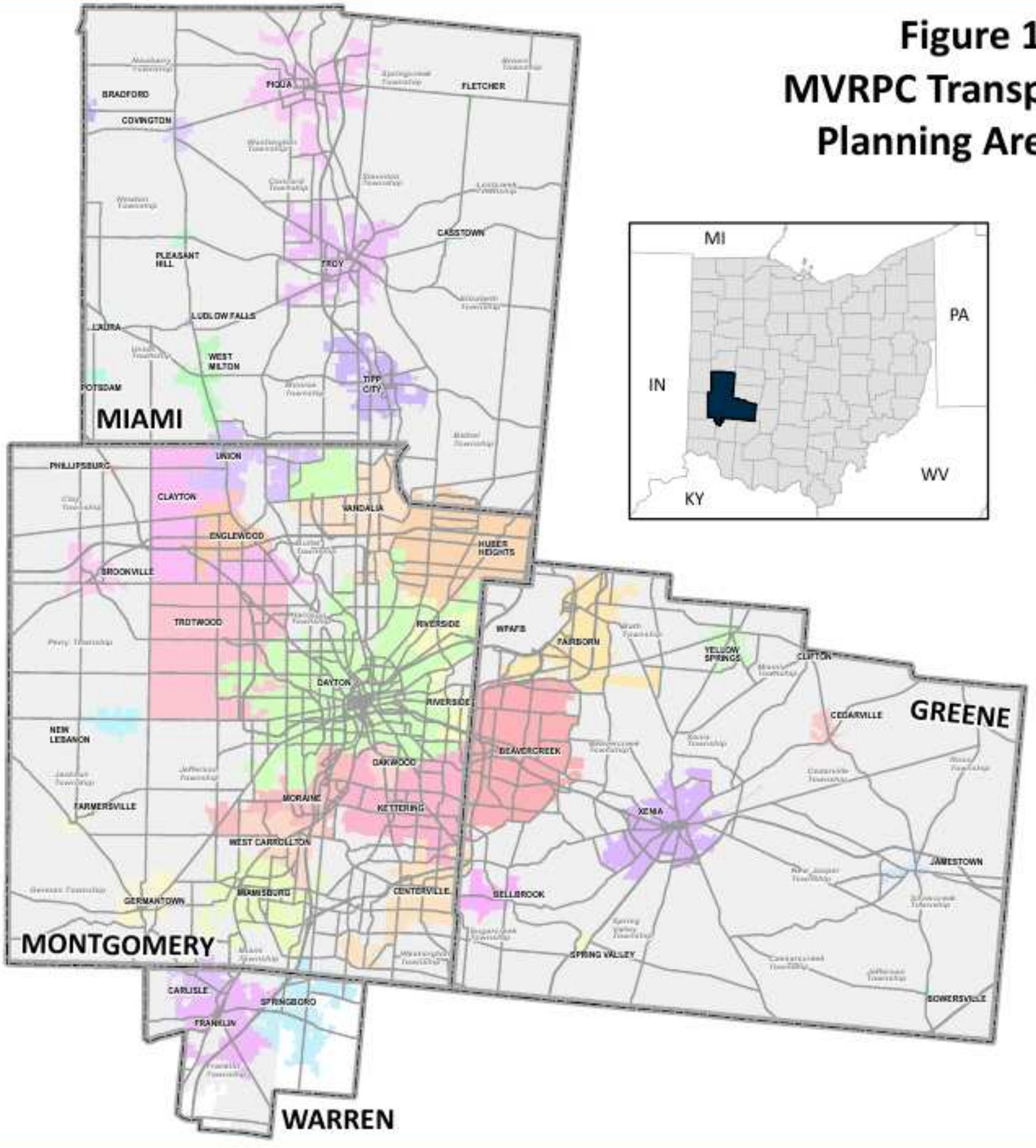


The MVRPC Board of Directors is the policy-making body and consists of local elected officials from the member jurisdictions throughout the Region. The Board also includes representation from corporate and civic leaders, the Ohio Department of Transportation (ODOT), and the regional transit systems. The Board of Directors meets regularly and receives input from the Technical Advisory Committee (TAC) and/or other special committees to make decisions regarding the Regional Planning Commission and the MPO. Only those members of the Board of Directors that are members of the MPO can act on MPO-related issues, such as the adoption of the Long Range Transportation Plan.

The TAC is a permanent committee composed primarily of transportation professionals from local jurisdictions and counties, ODOT, transit systems, and other government districts. Together they review and provide technical assistance and make recommendations to the Board on transportation-

MVRPC

Figure 1.2
MVRPC Transportation Planning Area Map



Metropolitan Planning Organization Boundary

Source: MVRPC
May 2026

N

0 2 4 6 8 Miles

related projects and programs planned for the Miami Valley Region. Special task forces serve a specific purpose by examining requests for modifications to previously adopted access control plans, thoroughfare plans, and other plans. Technical representatives from the jurisdictions that are likely to be affected by the modification(s) use input from these groups to make well-informed decisions on transportation plans that will affect the Region for years to come.

MVRPC technical staff (planning, engineering, and GIS) generate forecasts, system alternatives, recommendations, and reports for subsequent review and action by the Board of Directors.

1.1 Long Range Transportation Plan Overview

The Long Range Transportation Plan (LRTP) is a long range (20+ year), multimodal strategy and capital improvement program developed to guide the effective investment of public funds in transportation facilities. The LRTP is updated every five years and may be amended as a result of changes in projected Federal, State, and local funding; major investment studies; the congestion management process; interstate interchange justification/modification studies; environmental impact studies; and federal or state legislation. The LRTP provides the context from which the Region's Transportation Improvement Program (TIP), a capital improvement program for implementing highway, transit, and other multimodal projects, is drawn.

MVRPC last conducted a comprehensive update of its LRTP in 2021, focusing on highway, transit, and bicycle/pedestrian transportation improvements desired between 2021 and 2050. Since the adoption of the LRTP in May 2021, MVRPC staff has worked on the data collection, analysis, and program development necessary to update it. The new plan, titled the 2026 Update to the 2050 Long Range Transportation Plan (hereafter 2050 LRTP or the Plan), adopted on May 7, 2026, is a 25-year multimodal transportation plan with a base year of 2020 and a planning horizon year of 2050. The 2050 LRTP reflects active involvement by the elected officials, engineers and planners of the MPO's jurisdictions and member agencies, as well as input from the business community, general public, and special interest groups. This update also reflects current and projected land uses, demographics, economic conditions, traffic conditions, environmental analyses, and local/State/Federal priorities, so that the Plan can be actively used and referred to by local decision makers.



There have been numerous new initiatives incorporated into the 2050 LRTP update. The Plan includes a discussion on the latest Federal Transportation law — the Infrastructure Investment and Jobs Act (IIJA) and the performance management approach compliance requirements **(Chapter 2).**



In 2019, MVRPC's Project Evaluation System (PES) was updated to better align the project selection and evaluation criteria with the type of projects that are currently being funded.

MVRPC has updated its 2020 and 2050 socioeconomic data based on the results of the 2020 U.S. Census. The Plan also includes a summary for the recently completed **MVRPC Safe Streets for All Safety Action Plan.** For the 2050 LRTP update, MVRPC also updated its regional report card based on latest safety, congestion, mobility, and land use data. Finally, the Plan includes an updated discussion on mitigation and adaptation strategies to mitigate the impact of extreme weather events (**Chapter 9**).

The process for preparing the 2050 LRTP included several steps as shown in Figure 1.3. MVRPC started the update process by collecting data for the base year transportation and land use conditions to be used for transportation modeling and analysis purposes. Data collection was an on-going process throughout the update and included gathering several types of data – highway and transit networks, socioeconomic data, traffic counts, transportation performance measures and targets, and major studies conducted in the Region.

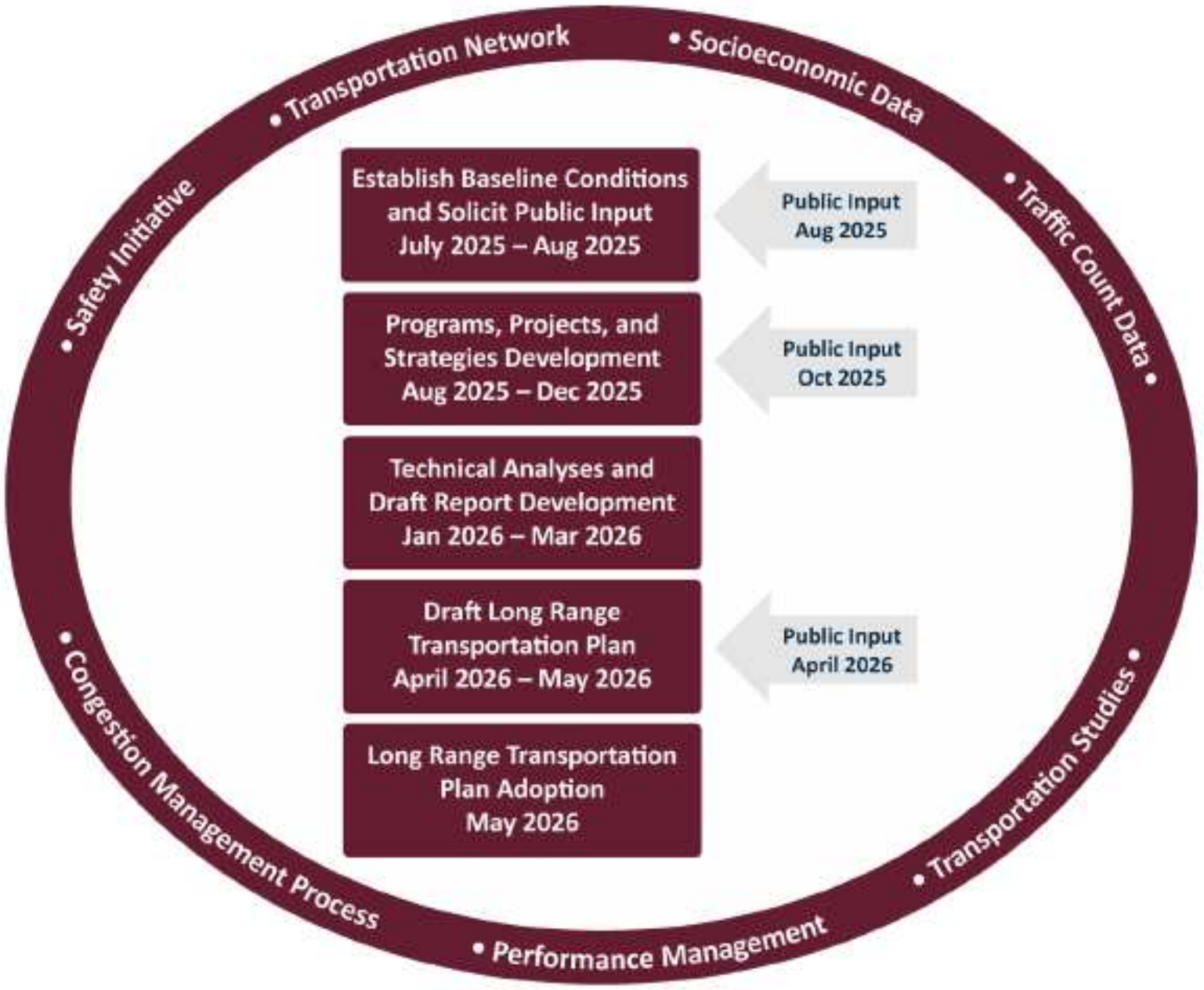
Following the data collection effort, MVRPC prepared exhibits displaying background transportation, socioeconomic, and land use information for the 2050 LRTP update. The socioeconomic and land use data analysis is presented in **Chapter 3** of this report. A virtual public participation meeting was held in August 2025 to present the background information pertaining to the Plan.

Between August and December of 2025, MVRPC carried out the projects, programs, and strategies development process whereby MVRPC solicited projects from local jurisdictions. The draft (not-fiscally-constrained) project list that resulted from the solicitation process was presented to the public in two virtual meetings in October of 2025. After taking note of public input and working with project sponsors, MVRPC staff completed the project evaluation process to develop a fiscally-constrained proposed project list. The proposed project list was adopted by the Board of Directors in December 2025. **Chapters 4 to 7** of this report provide detailed information on projects, programs, and strategies.

Based on the proposed project list and the previously gathered transportation, socioeconomic, and land use data, MVRPC completed the required plan analyses between January 2026 and March 2026. Travel demand forecasts were produced for various scenarios, including: the base year (2020); the horizon year assuming implementation of existing and committed projects only (2050 E+C); and the horizon year assuming the implementation of all congestion management projects in the Plan (2050 Plan). All regionally significant congestion management projects were analyzed for potential environmental impacts and possible mitigation measures were suggested. Community impact analysis was also conducted to identify and address community impacts. Analyses conducted as part

of the 2050 LRTP update are explained in further detail in **Chapters 4, 9, and 10**. **Chapter 8** documents the IIJA requirements for implementing performance management as part of the metropolitan transportation planning process, and provides a summary description of the performance measures and targets applicable to the MVRPC MPO Region.

Figure 1.3 — 2050 Long Range Transportation Plan Update Process Overview



MVRPC held a final virtual public participation meeting in April 2026 to present the draft 2050 LRTP update to the public for their input and comments. The final draft Plan was also presented to the TAC for their recommendations and comments. The 2026 Update to the Long Range Transportation Plan was adopted on May 7, 2026 by the MVRPC Board of Directors. Following the adoption of the Plan by the Board, the draft report was submitted to ODOT, U.S. Environmental Protection Agency (U.S. EPA), Federal Highway Administration (FHWA), and Federal Transit Agency (FTA) for their review and approval.

As described above, MVRPC made extensive public outreach efforts in every step of the 2050 LRTP update process to increase the likelihood of public participation. Public participation efforts are summarized in **Chapter 11** of this report.

1.2 Transportation Goals and Objectives

MVRPC's transportation goals and objectives were redefined in 2003 as a result of a community-based visioning process known as TransAction 2030. The objective was to identify the collective transportation values of the communities in the Region and develop a shared transportation vision, along with measurable criteria that could be applied to potential projects to gauge their consistency with the vision. TransAction 2030 involved soliciting input from stakeholders in the Region by applying various tools and methods. Based on this input, transportation goals were identified and incorporated into the MVRPC Strategic Plan. In May of 2007, MVRPC revised the Plan's goals and objectives to incorporate "security" into its transportation system management objective as per SAFETEA-LU requirements.

Regional Stewardship

Develop Regional Priorities — Continue to address regional transportation needs that further the shared social, economic, transportation, and environmental goals of the Region.

Vibrant Communities

Transportation Choices — Encourage a stronger multi-modal network in the Region to ensure that people and goods reach their destination safely, efficiently, and conveniently.

Transportation System Management — Continue to maintain and upgrade the regional transportation system by providing safety, security, aesthetic, and capacity improvements as needed.

Transportation and Land Use — Incorporate regional land use strategies into the transportation policy and the investment decision making process.

Vigorous Economy

Transportation — Continue to address regional transportation needs to enhance economic development in order to attract and retain businesses in the Region while improving the quality of life of its residents.

Sustainable Solutions

Clean Air — Encourage the pursuit of alternative fuels and transportation to reduce emissions and our reliance on petroleum-based products.

1.3 Federal, State, and Local Requirements

MVRPC complies with Federally-mandated planning requirements that the Long Range Transportation Plan is meant to satisfy. An explanation of the requirements is provided in **Chapter 2**.

1.4 Fiscal Constraint

Fiscally constrained lists for highways, transit, and sustainable growth strategies for the 2050 LRTP were developed based on:

- LRTP Project Sponsors;
- Public comments on transportation system needs and opportunities;
- Review by the local jurisdiction's engineers and planners, ODOT Districts, and Transit Agencies; and
- Review by MVRPC staff.

For each mode, the costs of the 2026 through 2050 plan projects are balanced against projected revenues and, following the IIJA requirements, are expressed in year of expenditure dollars. The fiscal constraint for each transportation mode is summarized in Table 1.1. Extensive documentation of project costs, revenues, and fiscal constraint for highway, transit, and bikeway/pedestrian strategies is provided in **Chapters 5, 6, and 7,** respectively.

Table 1.1 — Fiscal Constraint of the 2050 LRTP Projects (in millions of Year of Expenditure dollars)

Project Type	Total Revenues	Total Cost	Total Revenues – Total Cost
Highway Maintenance/Reconstruction	$4,372.08	$4,372.08	0.00 (Fiscally Constrained)
Highway Operational/Safety/Capacity *	$2,672.02	$2,236.38	+$435.63 (Fiscally Constrained)
Highway Interstate Widening Projects	$761.87	$761.87	0.00 (Fiscally Constrained)
Transit	$3,319.02	$3,318.45	+$0.57 (Fiscally Constrained)
Ridesharing/Air Quality	$22.75	$22.75	0.00 (Fiscally Constrained)
Bikeway/Pedestrian	$8.29	$8.29	0.00 (Fiscally Constrained)

Source: MVRPC; * Does not include Interstate widening projects

1.5 Air Quality Conformity

On March 6, 2015, U.S. EPA published the final rule for the Implementation of the 2008 NAAQS for Ozone: State Implementation Plan Requirements, 80 FR 12264, effective April 6, 2015. The final rule revoked the 1997 ozone standard for all purposes including transportation conformity but on February 16, 2018, the U.S. Court of Appeals for the District of Columbia Circuit on the South Coast II Court Case held that transportation conformity determinations must continue to be made in those areas ("orphan areas"). As an ozone orphan area, and consistent with U.S. EPA's November 29, 2018 guidance and interagency consultation, MVRPC will advance a qualitative Long Range Transportation Plan (LRTP) conformity determination for the Dayton/Springfield Region.

The conformity analysis demonstrates that the transportation programs in the Dayton/Springfield and northern Warren County areas conform to applicable air quality standards. The current air quality status and the associated requirement and procedures by which MVRPC performed the 2050 LRTP update transportation conformity analysis are discussed in detail in **Chapter 9**.

1.6 Project Implementation

All federally and non-federally funded surface transportation projects (that are regionally significant and that increase capacity, extend roadways, or add new roadways) are implemented via the following steps:

- The project must be in the Long Range Transportation Plan;
- The Long Range Transportation Plan must continue to meet financial constraints and air quality conformity;
- The project must be placed on MVRPC's TIP;
- The project receives funding and can move towards implementation.

It is important to note that non-federally funded projects (that are regionally significant and that increase capacity, extend roadways, or add new roadways) are treated the same as federally funded projects because of their potential air quality impacts. Further, ODOT, local jurisdictions, and modal agencies might need to work to break up large projects into smaller, more manageable components (i.e., preliminary engineering, environmental, right-of-way, construction, as well as smaller segments) in order to improve project funding capability and facilitate project development and implementation.



1.7 Amending and Updating the Long Range Transportation Plan

Amendments to the Plan may occur either as part of the comprehensive update (every five years), annual TIP-related updates, or at other times as needed. The comprehensive update is a federal mandate and consists of re-examining the basic assumptions behind the Plan and the resulting projects and strategies. Amendments to the Plan requiring a comprehensive update consist of reassessing:

- Land use, demographic, and economic forecasts;
- Projected traffic and travel deficiencies;
- Financial Analyses (Cost/Revenues);
- Regional Air Quality Analyses; and
- Other aspects of the vision and plan.

Amendments to the Plan requiring a comprehensive update would need to be adopted by MVRPC's Board of Directors after the opportunity for general public review and comment.

A comprehensive update is normally initiated by staff on a timetable that ensures the continuation of at least a 20-year horizon for the Plan, and that meets the federal update timeframe requirements (currently every 5 years). On those other rare occasions when a comprehensive or major update might be requested by a jurisdiction due to unforeseen changes to a major project or due to drastic and immediate changes in land use/demographics/economics, staff would develop a timeline to conduct the update in a timely manner.

The following outlines the anticipated process for Plan amendments:

- Receive a formal jurisdictional request for a Plan amendment;
- Complete the Project Profile and Evaluation Forms;
- Determine if additional revenues are available to cover the project or modified project;
- If sufficient additional revenues cannot be projected, submit recommendations to redesignate Long Range Transportation Plan projects as non-plan projects; any agreements with other jurisdictions or agencies to redesignate projects should be so noted;
- Submit justification for the amendment.

MVRPC staff would then finalize the project evaluation, review the appropriateness of the proposed amendment, review the financial constraints, conduct the air quality conformity analysis, and make a recommendation for the Board's action.

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Chapter 2
Federal, State, and Local Planning Requirements

2.1 The Infrastructure Investment and Jobs Act (IIJA)

On November 15, 2021, the new federal surface transportation bill, the IIJA, was signed into law. The new bill follows its predecessors, the Fixing America's Surface Transportation Act (FAST Act), and the Moving Ahead for Progress in the 21st Century Act (MAP-21). Both Acts made important contributions to the metropolitan planning process. The FAST Act is the last act that made changes to the metropolitan planning rules as described in 23 CFR part 450 while reinforcing the requirements first introduced in MAP-21 for performance-based planning.

The metropolitan planning rules state that the planning process shall be continuous, cooperative, and comprehensive, and provide for consideration and implementation of projects, strategies, and services that will address the following planning factors:

- Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency;
- Increase the safety of the transportation system for motorized and non-motorized users;
- Increase the security of the transportation system for motorized and non-motorized users;
- Increase the accessibility and mobility of people and for freight;
- Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and state and local planned growth and economic development patterns;
- Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;
- Promote efficient system management and operation;
- Emphasize the preservation of the existing transportation system;
- Improve the resilience and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation; and
- Enhance travel and tourism.

The last two factors were additions under the FAST Act. The planning factors are addressed by MVRPC in our numerous planning programs and are summarized throughout the report.

Performance Based Planning

The cornerstone of MAP-21, continued in the FAST Act and the IIJA, was the transition to a performance and outcome-based program. As part of this program, recipients of Federal-aid highway funds would invest resources in projects to achieve individual targets that collectively would make progress toward national goals. Chapter 8 of the 2050 LRTP provides an overview of the transportation performance management process — MPO requirements as stipulated in the IIJA as

well as a description and summary of all applicable performance measures and targets supported by MVRPC to assess the performance of the Region's transportation system.

2.2 Development of Content and the Regional Transportation Plan

The 2050 LRTP was developed in accordance with 23 CFR 450.324, the required elements are detailed in Table 2.1.

Table 2.1 — Required Transportation Plan Elements

Content and Development Requirements:	How the 2050 LRTP Addresses…
(a) The metropolitan transportation planning process shall include the development of a transportation plan addressing no less than a 20-year planning horizon as of the effective date.	The Plan has a 25-year planning horizon, to the year 2050.
(b) The transportation plan shall include both long-range and short-range strategies/actions that lead to the development of an integrated multimodal transportation system to facilitate the safe and efficient movement of people and goods in addressing current and future transportation demand.	The first four years of Plan projects are referred to as the Transportation Improvement Program (TIP). Both the TIP and the remainder of the LRTP projects include highway, transit, and bikeway/pedestrian projects, as well as travel demand management strategies. The needs of freight transportation are also considered during the project development process as freight dependent industries are heavily represented in the economy of the Miami Valley and Ohio.
(c) The MPO shall review and update the transportation plan at least every five years in air quality attainment areas.	The Plan will be reviewed and updated at least every five years.
(d) In metropolitan areas that are in nonattainment for ozone or carbon monoxide, the MPO shall coordinate the development of the metropolitan transportation plan with the process for developing transportation control measures (TCMs) in a State Implementation Plan (SIP).	While many Transportation Control Measures (TCMs) such as signalization improvements and rideshare programs have been implemented in the Region, there are no TCMs included for credit in the applicable SIPs.
(e) The MPO, the State(s), and the public transportation operator(s) shall validate data utilized in preparing other existing modal plans for providing input to the transportation plan.	The latest planning assumptions as agreed through the interagency consultation process are used in the development of the 2050 LRTP. Those same assumptions were presented to the public and the Board of Directors in the early stages of the Plan development process. Additional details are provided in Chapter 3.
(f) The metropolitan transportation plan shall, at a minimum, include:	
(1) The current and projected transportation demand of persons and goods in the metropolitan planning area over the period of the transportation plan;	MVRPC has coordinated its forecasting methodology and process closely with ODOT's Modeling and Forecasting Section. Based on the latest planning assumptions, the travel demand model forecasts passenger vehicles, commercial vehicles, and transit demand. Additional details are provided in Chapter 3.
(2) Existing and proposed transportation facilities (including major roadways, transit, multimodal and intermodal facilities, pedestrian walkways and bicycle facilities, and intermodal connectors) that should function as an integrated metropolitan transportation system, giving emphasis to those facilities that serve important national and regional transportation functions over the period of the transportation plan;	A discussion of existing transportation facilities is included in Chapter 3 of the Plan. Specific strategies and projects are presented in Chapters 4 to 7.
(3) A description of the performance measures and performance targets used in assessing the performance of the transportation system;	A description of the performance measures and performance targets is provided in Chapter 8.

Content and Development Requirements:	How the 2050 LRTP Addresses…
(4) A system performance report and subsequent updates evaluating the condition and performance of the transportation system with respect to the performance targets;	A system performance summary comparing actual performance to supported targets for each applicable performance measure in the MVRPC MPO region is included in Chapter 8.
(5) Operational and management strategies to improve the performance of existing transportation facilities to relieve vehicular congestion and maximize the safety and mobility of people and goods;	The Congestion Management Process (CMP), which identifies operational and management strategies to reduce congestion, has been incorporated into the Plan. The CMP also assesses strategies not currently implemented in the Region according to their suitability for future use.
(6) Consideration of the results of the congestion management process in TMAs including the identification of SOV projects that result from a congestion management process in TMAs that are nonattainment for ozone or carbon monoxide;	The results of the regional CMP and other management systems implemented by the State have been incorporated into the Plan.
(7) Assessment of capital investment and other strategies to preserve the existing and projected future metropolitan transportation infrastructure and provide for multimodal capacity increases based on regional priorities and needs, and reduce the vulnerability of the existing transportation infrastructure to natural disasters;	Maintenance and operations of the existing system (plus additions to the system) have been identified as crucial to the Plan. It is assumed in the Plan that the current real value of expenditures for roadway maintenance and operations will continue into the future. The fiscally constrained revenue forecasts for the roadways system outline operations/maintenance and capacity enhancing projects. The transit project lists include operations/maintenance and capacity enhancements.
(8) Transportation and transit enhancement activities, including transportation alternatives;	The TIP includes all funded transportation alternative projects in the MPO.
(9) Design concept and design scope descriptions of all existing and proposed transportation facilities in sufficient detail, regardless of funding source, in nonattainment and maintenance areas for conformity determinations under the EPA's transportation conformity rule;	The 2050 LRTP project lists provide sufficient detail for the modeling of travel demand, air quality conformity, and fiscal constraints; one exception is projects identified as studies since the outcome and particular scope is dependent on the study recommendations.
(10) A discussion of types of potential environmental mitigation activities and potential areas to carry out these activities, including activities that may have the greatest potential to restore and maintain the environmental functions affected by the metropolitan transportation plan;	Chapter 9 in the Plan includes a discussion of the environmental analysis and potential environmental mitigation activities, including stormwater impacts of surface transportation.
(11) A financial plan that demonstrates how the adopted transportation plan can be implemented.	A conservative financial plan has been developed for each of the 2050 LRTP modal strategies. Only historical and clearly dependable funding source assumptions have been made. The Plan was developed cooperatively with ODOT and the regional transit agencies. As discussed in Chapters 1, 5, 6, and 7, and in detail in the Financial Summary document, the Plan meets the IIJA mandated fiscal constraint requirement with costs and revenues in year of expenditure dollars.
(12) Pedestrian walkway and bicycle transportation facilities;	Specific regional bicycle and pedestrian projects are listed in Chapter 7 but since the passing of the Regional Complete Streets Policy in 2011, many roadway projects now include bike and pedestrian elements.

Content and Development Requirements:	How the 2050 LRTP Addresses…
(g) The MPO shall consult, as appropriate, with State and local agencies responsible for land use management, natural resources, environmental protection, conservation, and historic preservation concerning the development of the transportation plan.	MVRPC's public participation list has been expanded to include agencies with an interest in the areas of land use management, environmental resources, environmental protection, conservation, and historic preservation. As a result, the list now includes over 400 agencies and individuals. Contacts are notified and given the opportunity to comment on any transportation program that requires action by the MVRPC Board of Directors, such as the LRTP and the TIP. Chapter 9 in the Plan includes a discussion of the environmental analysis comparing LRTP projects to known inventories of natural and historic resources.
(h) The metropolitan transportation plan should include a safety element that incorporates or summarizes the priorities, goals, countermeasures, or projects for the MPA contained in the Strategic Highway Safety Plan.	Safety is a big component of the transportation planning program at MVRPC. In addition to coordinating with ODOT to ensure consistency with the Ohio Strategic Highway Safety Plan and participating in the annual ODOT District priority safety locations, MVRPC maintains a regional priority list (updated every 3 years) which is used to prioritize funding requests. Safety data and/or safety study assistance is also provided to local jurisdictions upon request. Chapter 4 of this report includes a summary of MVRPC's Safety Initiative.
(i) An MPO may, while fitting the needs and complexity of its community, voluntarily elect to develop multiple scenarios for consideration as part of the development of the metropolitan transportation plan.	MVRPC opted not to include alternative scenarios.
(j) The MPO shall provide citizens, affected public agencies, representatives of public transportation employees, freight shippers, providers of freight transportation services, private providers of transportation, representatives of users of public transportation, representatives of users of pedestrian walkways and bicycle transportation facilities, representatives of the disabled, and other interested parties with a reasonable opportunity to comment on the transportation plan using the MPO's participation plan.	MVRPC's public participation list has been expanded to include over 400 agencies and individuals including all stakeholders, such as affected public agencies, representatives of public transportation employees, freight shippers, providers of freight transportation, representatives of users of public transportation, representatives of users of pedestrian walkways and bicycle transportation facilities, representatives of the disabled, and other interested parties. Contacts are notified well in advance and given the opportunity to comment on the LRTP both electronically as well as through mail-in comment cards over a one month period.
(k) The metropolitan transportation plan shall be published or otherwise made readily available by the MPO for public review, including (to the maximum extent practicable) in electronically accessible formats and means, such as the World Wide Web.	A user friendly website, plan2050.mvrpc.org, focusing entirely on the Plan update, was available throughout the update process to focus attention on the information most relevant at each stage of the process including all exhibits that were presented at each public participation meeting as well as the ability to comment on the information. In continuation of past trends, the entire Long Range Transportation Plan will be published electronically on MVRPC's website in pdf format and the final congestion management project list will be made available in an interactive map format.
(l) A State or MPO shall not be required to select any project from the illustrative list of additional projects included in the financial plan.	There are no additional projects identified in the Plan as potential needs beyond the 2050 timeframe.
(m) In nonattainment and maintenance areas for transportation-related pollutants, the MPO, as well as the FHWA and the FTA, must make a conformity determination on any updated or amended transportation plan in accordance with the Clean Air Act and the EPA transportation conformity regulations.	The adopting resolution of the 2050 Plan update includes a conformity determination by the MVRPC Board of Directors.

Source: MVRPC

State and Local Coordination

MVRPC worked very closely with ODOT's Modeling and Forecasting section regarding modeling and related activities, including transportation conformity. MVRPC also coordinated closely with ODOT District offices regarding projects under development. Overall, the Plan was developed consistent with ODOT's planning requirements.

The Plan was developed with extensive coordination with the general public, ODOT, and local jurisdictions, including elected officials, agency directors, planners, and engineers.

MVRPC's Long Range Transportation Plan is important to the Region because:

- All federally-funded surface transportation projects need to be drawn or be consistent with the LRTP via MVRPC's Transportation Improvement Program (TIP); and
- The updated Long Range Transportation Plan should be used by local jurisdictions, agencies, and groups to help provide a regional context within which to conduct their long range transportation planning.

It should be understood that local jurisdictions, agencies, and groups developed the 2050 LRTP cooperatively and in a regional fashion. It is hoped that this regional initiative will be incorporated into the planning efforts of the local entities, and that there will be a continuing, cooperative, and comprehensive strategic effort to use the Plan as a guide to other local planning endeavors.

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Chapter 3
State of the Region

3.1 Overview

The Miami Valley Region (hereafter the Region), located in southwest Ohio, is defined as Greene, Miami, and Montgomery counties and the jurisdictions of Franklin, Franklin Township, Carlisle, and Springboro in northern Warren County. The Region is situated approximately 50 miles north of Cincinnati, 70 miles west of Columbus, and 90 miles east of Indianapolis.

As of 2020, the Region is home to approximately 868,090 people in 1,345 square miles with 82 units of county, city, village, and township governments. Montgomery County is the largest county, with 62% of the Region's total population, and the City of Dayton is the largest city with approximately 137,644 residents. The Region is also home to Wright Patterson Air Force Base (WPAFB), the largest single-site employer in Ohio.

The Region is served by a variety of transportation modal choices. The Dayton International Airport is located in the northern part of Montgomery County and a Greyhound bus terminal is located in Trotwood. Further, an extensive network of roads, transit services, bikeways, and pedestrian facilities provide mobility, accessibility, and connectivity within and outside the Region. Freight infrastructure and facilities support the efficient movement of freight passing through and moving within the Miami Valley.

According to the 2020 Census, the majority of residents in the Region live and work within the same county, although Montgomery County attracts a significant number of its workers from the surrounding counties. The Region is also heavily dependent on personal vehicles, with approximately 84% of work trips made by automobiles averaging a 21.2-minute commute to work.

Under the assumption that the development patterns of the past will remain predominant in the future, it is anticipated that the Region will continue to develop along freeway corridors and their fringes. Overall, the Region's total population is expected to decrease slightly by 4.2%, with the eventual stabilization of population loss in the older urban areas, continued growth in the suburbs, and some spillover of that growth into the surrounding rural areas. On the other hand, employment is expected to grow by 12.8% between 2020 and 2050.

The regional Travel Demand Forecasting Model (TDFM) that predicts transportation assignment forecasts based on future assumptions of development patterns has been updated for use in the transportation planning process.

3.2 The Miami Valley Region Today

When the Region was first settled in the late 1700s, urban land uses followed the river valleys, which were the main transportation arteries prior to the development of mechanized forms of transportation. Most of the heavy industries were located along the rivers, which also provided the major source of water.

Today, employment is still concentrated in some of the original locations even though the Region's economy has since diversified from its industrial base. Although the current land use patterns in the Region have been shaped more by history than by any inherent physical limitations or advantages, the development patterns of the Miami Valley Region can be characterized as following the main transportation network.

Over the past 55 years, the Region has experienced a drastic change in developed areas characterized by an outward movement from the central city to the suburban areas following Interstates I-75, I-70, and I-675 and US 35, as seen in Figure 3.1. According to the 2020 Census, the urbanized area extends north for 30 miles into the City of Troy in Miami County; east for 15 miles into the City of Xenia in Greene County; south for 15 miles to northern Warren County; and west for 8 miles from the Dayton Central Business District (CBD). Further, the 2020 Census indicates that densely settled areas have emerged in scattered locations throughout the Region.

The trend to move from urban to suburban and suburban-fringe rural areas continued between 2010 and 2020. While there isn't one specific reason for the shift, there are various ones that make the move understandable including real or perceived crime rates, school district quality, and a desire for newly build housing coupled with an underinvestment in urban housing stock in both rented and owner-occupied markets. Post the 2008 recession, housing also became relatively more affordable to build as construction materials were cheaper and builders were offering various forms of low interest financing for homes in the suburbs. One exception to this trend is that Downtown Dayton showed an increase in housing stock with several new housing developments being completed or under development.

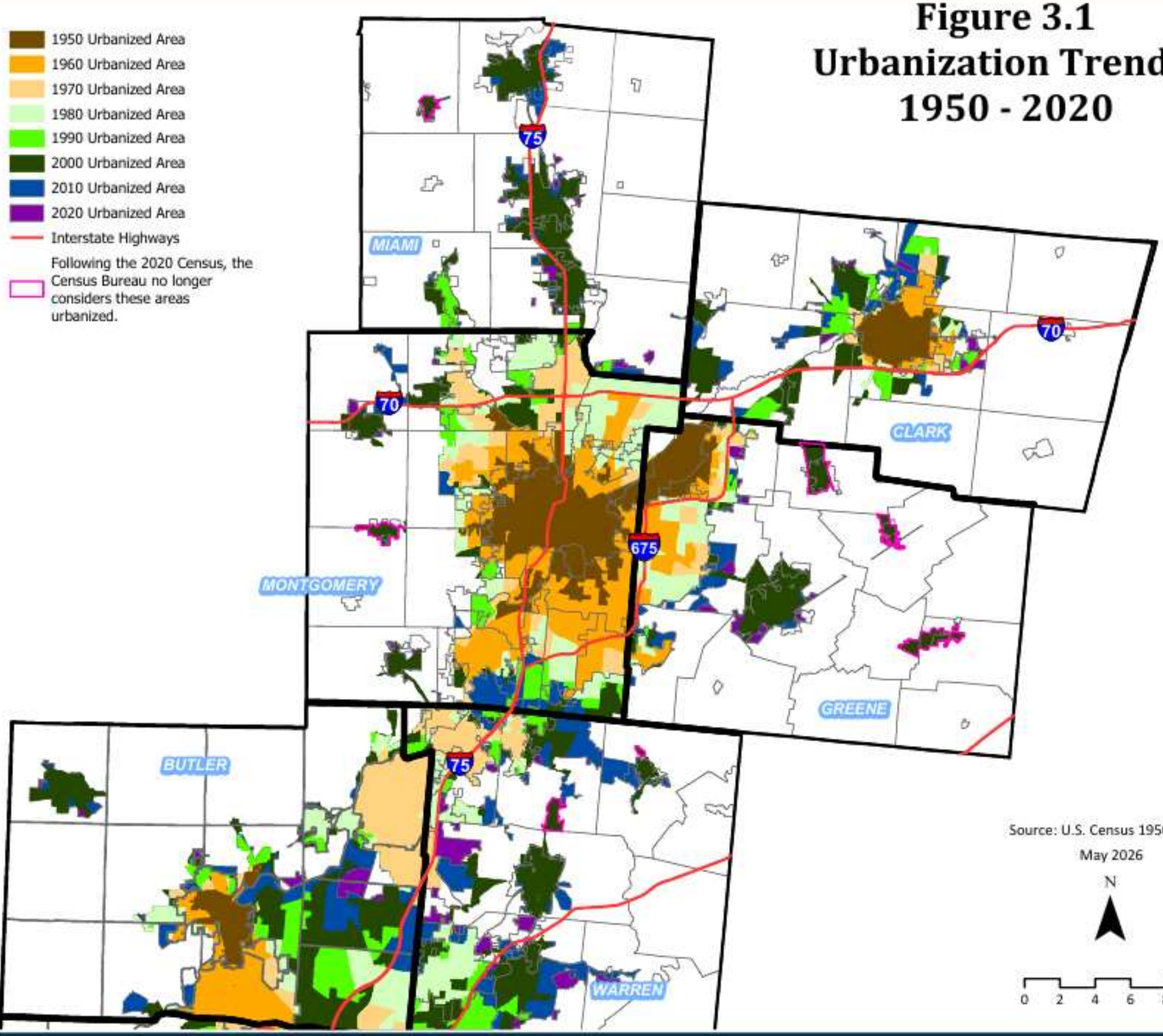
During the same period, employment also underwent a shift towards suburban employment centers making living and working in the same place possible for some suburban workers.

Land Use

MVRPC used its GIS capabilities along with the latest aerial photography to examine how the land was utilized in the year 2025. Figure 3.2 shows the generalized land use/land cover in 2025. Figure 3.2 shows that residential development in the Region is spread fairly evenly throughout the urbanized area, with high concentrations between the eastern half of Montgomery County and western part of Greene County and along I-75 in Miami County. Since 2000, increased residential development has occurred in northern Warren County as well. The Region's residential development is largely low-density in character.

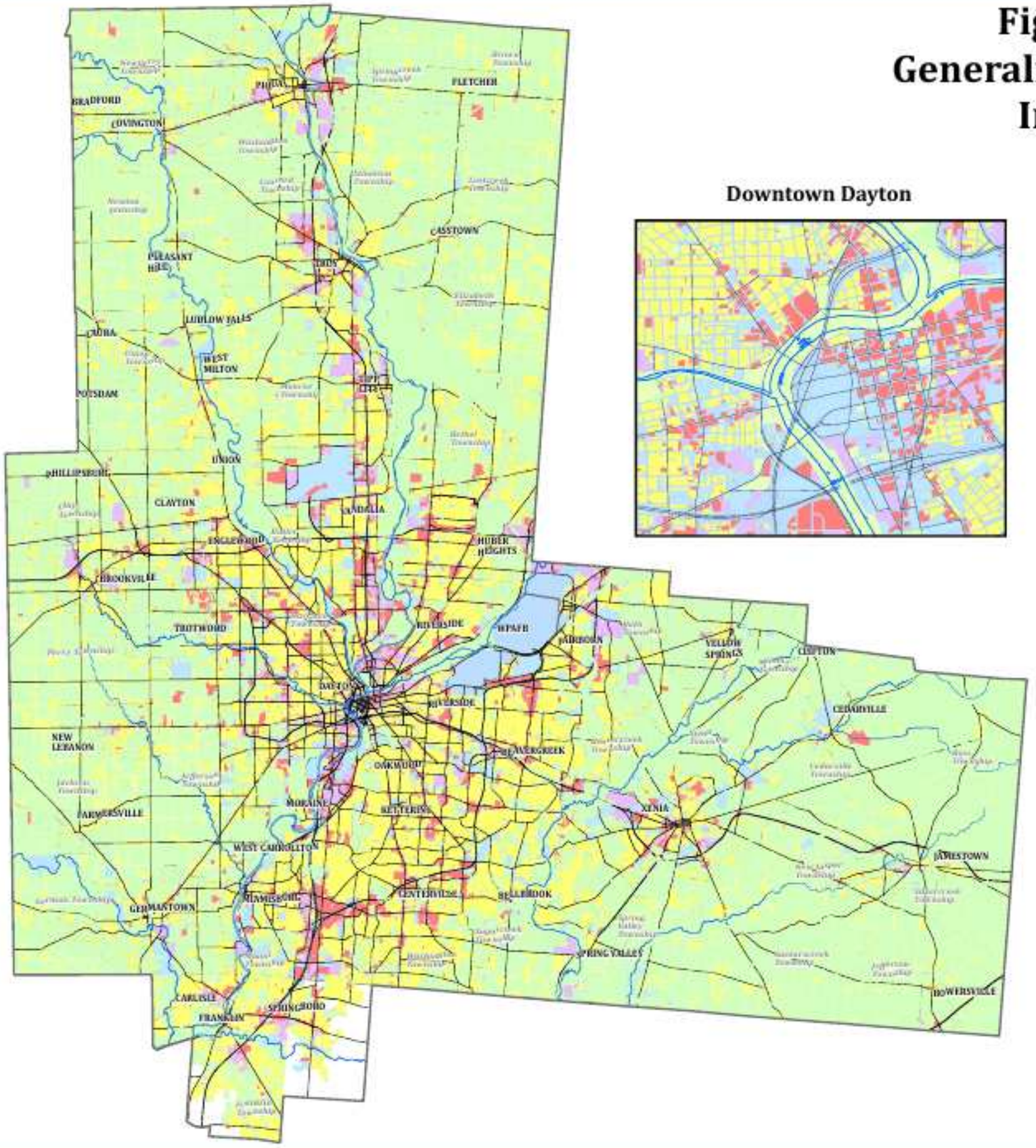
MVRPC

Figure 3.1
Urbanization Trends: 1950 - 2020



MVRPC

Figure 3.2
Generalized Land Use
In 2025



Commercial development is spread somewhat less evenly, with concentrations around three suburban malls and in the Dayton CBD. Additional commercial areas are found along the major transportation routes, such as Interstates, US Routes, and State Routes, and at the junctions of major roadways, such as the intersection of I-75/I-675, I-70/SR 202, and I-675/SR 48. However, outside of these highly concentrated locations, there is still a mixture of shopping centers, strip center development, and neighborhood shopping districts, with several rural and suburban municipalities also retaining recognizable downtown commercial districts. As a result, most parts of the Region are well served by retail and service facilities.



Industrial development in the Region generally follows the I-75 corridor, which parallels the Great Miami River and provides access to major factories and office clusters stretching from the City of Piqua at the northern edge of the Region to the southern Montgomery County border. The most important concentration of employment outside the I-75 corridor is located along the Greene/Montgomery County border, near the intersection of I-70 with SR 4, and along I-675.

Socioeconomic Data

Three main sources of information were utilized to produce socioeconomic variables. For residence-related variables, the Census was the sole source. For employment, MVRPC used a combination of Covered Employment and Wages by Industry data known as ES202 prepared by the Ohio Department of Jobs and Family Services and obtained from the Ohio Department of Transportation, as well as a variety of local sources and knowledge.

Residence-related data were extracted directly from the 2020 Census at the block level and then aggregated to the Traffic Analysis Zone (TAZ). In addition, the 2018-2022 American Community Survey (ACS) data was used for variables unavailable from the 2020 Census products, for example, automobile availability. For employment-related variables, several steps were taken in order to develop base year data. First, the ES202 data obtained from ODOT was geocoded to the TAZ level. Second, in-house databases were used as secondary data sources to complement the ES202 data and fine-tune employment figures. Third, extensive field reviews were conducted throughout the Region for areas with high employment concentrations to verify the locations of individual businesses. Finally, the total employment and employment by 25 industry sectors were generated at the TAZ level following North American Industry Classification System (NAICS) codes. A summary of the Region's socioeconomic data and the percentage share by county is shown in Table 3.1.

Table 3.1 — 2020 Socioeconomic Data

County	Population[1]	Households[1]	Employment[2]
Greene	167,966 (19.3%)	66,831 (18.6%)	108,884 (22.02%)
Miami	108,774 (12.5%)	44,086 (12.3%)	54,109 (10.9%)
Montgomery	537,309 (62%)	228,536 (63.6%)	313,766 (63.5%)
Warren*	54,041 (6.2%)	20,011 (5.6%)	17,742 (3.6%)
Total	**868,090**	**359,464**	**494,501**

Note: *Warren County includes only the municipalities of Franklin, Franklin Township, Carlisle, and Springboro. The employment number for Warren County is an aggregate of TAZs because the employment numbers were developed at the TAZ level. The area covered by these TAZs is slightly larger than the area covered by the constituent municipalities.
Source: [1] 2020 Census DCH; [2] MVRPC/OKI

The Region is home to a population of 868,090. The majority of the population, (61.9%), lives in Montgomery County. However, a closer look at the population density distribution indicates that the Region has significant variations as shown in Figure 3.3. In general, higher population density is observed around the City of Dayton with the density decreasing away from the center and into the surrounding rural areas. Nonetheless, some of the municipalities in the rural areas also have population densities similar to those found inside the urbanized area.

There are 359,464 households in the Region, with 63.6% located in Montgomery County. The household density distribution is similar to the population density distribution; household density is highest in the developed areas in the City of Dayton and in the immediate suburbs, and gradually decreases outward into the rural areas.

The Region is also home to over 494,500 jobs. Similar to the population and household distributions, Montgomery County has the largest employment share, with 63.5% of the Region's total employment, followed by Greene (22.0%), Miami (10.9%), and northern Warren (3.6%) counties.

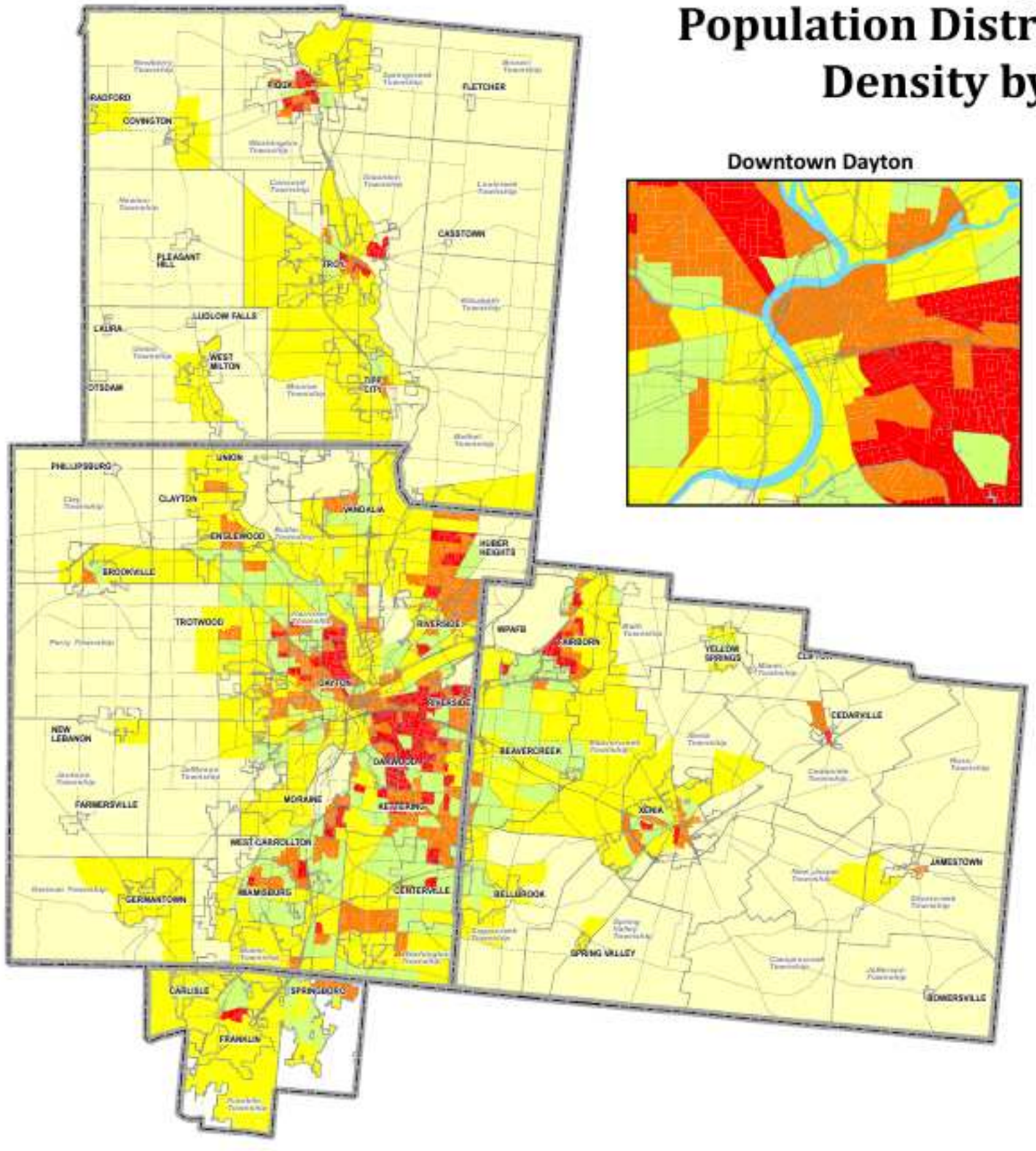
Functional Classification

Approximately every ten years, MVRPC, in cooperation with ODOT, conducts a major review of the existing Functional Classification System following the urbanized area changes made by the Decennial Census. MVRPC completed the most recent update to the functional class system in 2020. MVRPC's regional functional classification system can be seen in Figure 3.4.

According to FHWA, Functional Classification is the grouping of roads, streets, and highways in a hierarchy based on the type of service they provide. Type of service is defined by combinations of mobility and land access as follows:

MVRPC

Figure 3.3
Population Distribution - Population Density by Block Group



Downtown Dayton

Population per Square Mile

- Low (0 - 300)
- Medium Low (300 - 1,700)
- Medium (1,700 -3,000)
- Medium High (3,000 - 5,000)
- High (5,000 +)

Source: U.S. Census 2020

May 2026

N

0 2 4 6 8 Miles

MVRPC

Figure 3.4
Highway Functional Classification



Downtown Dayton



- Principal Arterial - Interstate
- Principal Arterial - Freeway and Expressway
- Principal Arterial - Other
- Minor Arterial
- Collector - Major
- Collector - Minor
- Transportat on Urbanized Area

Source: ODOT and MVRPC

May 2026

Miles
0 2 4 6 8

- Arterials include those classes of highway emphasizing a high level of mobility for the through movement of traffic, with land access being a secondary function. Interstates and freeways represent the highest class of arterials.
- As their name indicates, collectors collect traffic from the lower-class facilities and distribute it to the higher-class facilities. Their function is divided equally between mobility and land access.
- Local streets are located at the bottom of the hierarchy, their primary function being to provide access to adjacent land uses.

Using these three major categories as the base, roads are then subdivided into major or minor as shown in Table 3.2.

It should also be noted that only roadways that are functionally classified as a Minor Collector or above in an urban area or Major Collector or above in a rural area are eligible to use federal funds, the exception being bridges on non-classified roads.

Table 3.2 — Functional Classification System

Functional Class	Functional Class Number
Principal Arterial (Interstate)	1
Principal Arterial (Freeway/Expressway)	2
Principal Arterial (Other)	3
Minor Arterial	4
Major Collector	5
Minor Collector	6
Local	7

Source: FHWA

Multimodal Transportation System

The Region offers a variety of multimodal transportation opportunities as seen in Figure 3.5. The Region is served by the Dayton International Airport located in the northern part of Montgomery County, three Interstate highways, and a Greyhound bus terminal located in Trotwood.



Together, they connect the Miami Valley Region to other regions in the U.S. by air and ground. Within the Region, a variety of intermodal facilities, such as an extensive transportation network of roads, transit, bikeways, and pedestrian facilities, provide multi-faceted transportation options for better mobility, accessibility, and connectivity. The Region's roadway network includes three interstates (I-70, I-75, and I-675), freeways, and principal arterials, including the intersection of I-70/I-75, a major focal point for intermodal traffic.

Figure 3.6 illustrates multimodal freight infrastructure and facilities located in the Region. Networks of railroads, pipelines, and roadways, along with facilities such as the Dayton International Airport and truck terminals, support the efficient movement of raw materials, manufactured items, merchandise, and/or other material goods passing through and moving within the Region.

The Region is also served by four transit agencies. The Greater Dayton Regional Transit Authority (GDRTA) serves Montgomery County residents with an extensive network of 22 different types of fixed routes covering nearly 700 miles of directional roadways serving over 6.2 million passenger trips per year. Further, GDRTA's Transit Hubs, located throughout Montgomery County, connect the central city and the suburban areas with bus services at centralized locations.



Greene County is served by Greene CATS Public Transit (Greene CATS) on a demand-responsive basis, providing over 66,000 one-way passenger trips per year. Greene CATS provides flex-route service from Fairborn to Beavercreek, from Xenia to downtown Dayton, and east-west transit services within Xenia and Fairborn. The Miami County Transit System provides demand-responsive transit service for Miami County residents, with approximately 42,000 passenger trips per year. The Warren County Transit System provides demand-responsive services in Warren County and provides 33,606 passenger trips per year.

The Region offers excellent opportunities for pedestrians and cyclists, with an extensive network of bikeways and sidewalks. Further, intermodal facilities such as Park-N-Bike and Park-N-Ride are located throughout the Region.

GoBus

GoBus, established in 2010, is a federally supported bus service administered by Hocking Athens Perry Community Action Program (HAPCAP) that connects rural communities across Ohio with major urban centers, improving access to jobs, education, and essential services.

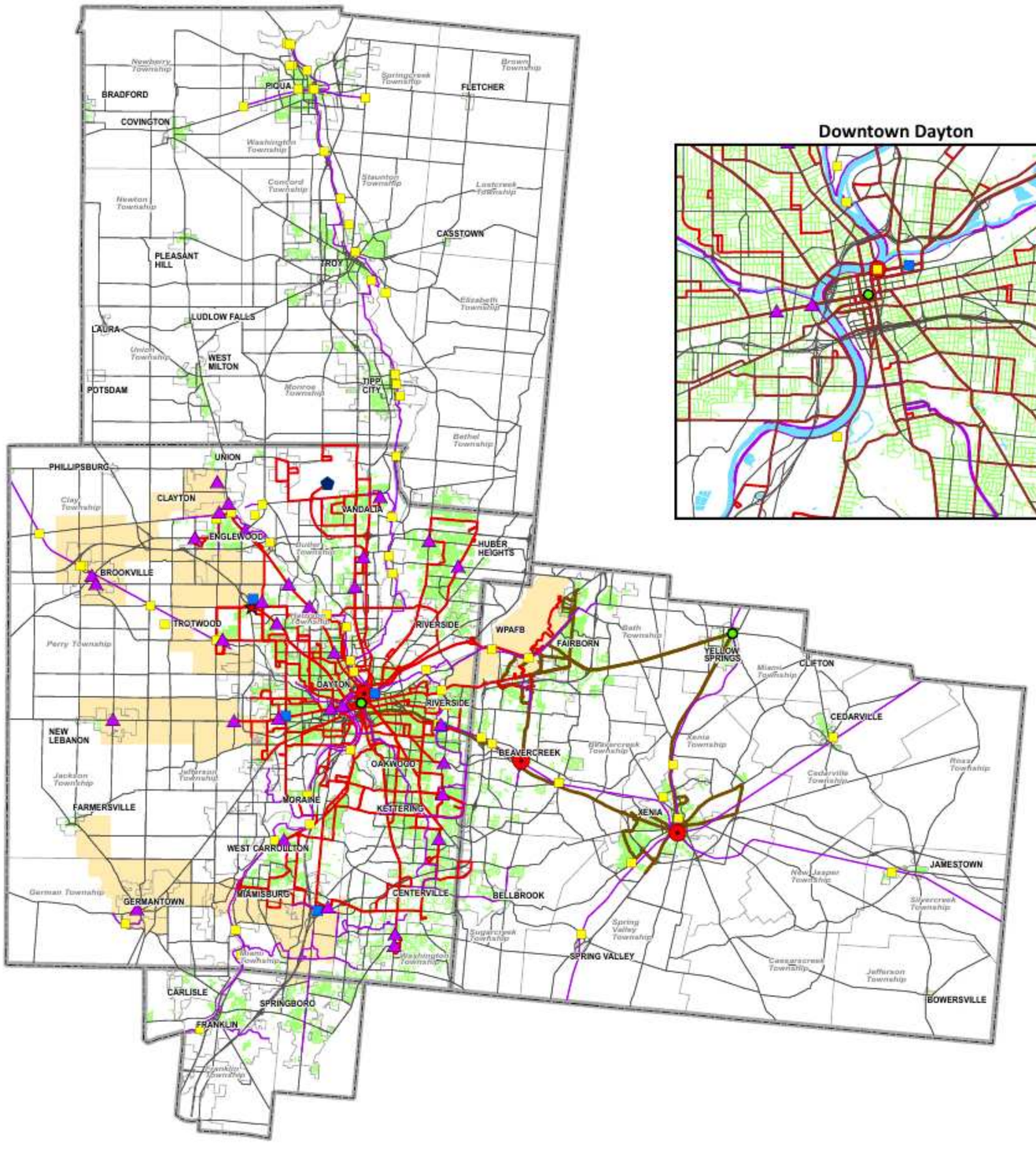
An expansion announced in October 2025 launched in March 2026, adding four new routes and increasing the network from five to nine routes. The Red Line, running between Toledo and Cincinnati, includes stops in the MVRPC area at Dayton and Yellow Springs. The service runs daily, year-round, with multiple departures in both directions. With this expansion, GoBus now serves 64 communities across 47 of Ohio's 88 counties, providing connections to 32 colleges and universities and 27 local transit systems.

Ohio 3C&D Corridor

The proposed 3C&D passenger rail line aims to link Ohio's three largest cities: Cleveland, Columbus, and Cincinnati along with Dayton across around 267 miles of existing rail. These four metropolitan areas make up around 60% of Ohio's 11.8 million residents. Amtrak Connect U.S., a 15-year vision to add 39 new routes and enhance 25 existing routes, showed the corridor having strong potential for

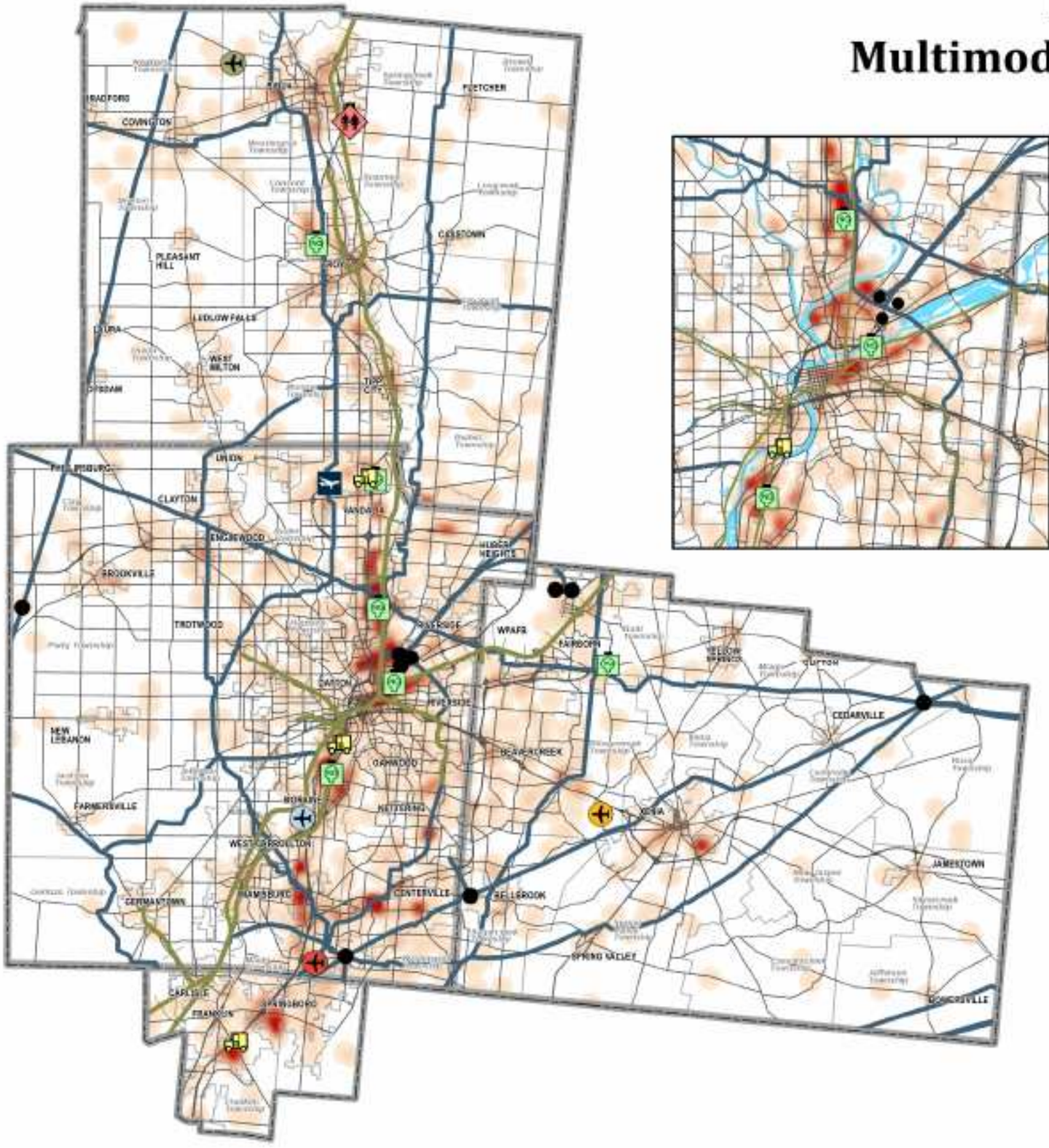
MVRPC

Figure 3.5
Multimodal Passenger Facilities



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Figure 3.6
Multimodal Freight Facilities



- Dayton International Airport
- Dayton Wright Brothers Airport
- Lewis A Jackson Regional Airport
- Moraine Air Park
- Piqua Airport - Hartzell Field
- Private Travel Centers
- CNG Stations
- Rest Areas
- Pipeline Terminals
- Railways
- Pipelines
- Roads
- Concentration of Freight-Dependent Employment (Sparse – Dense)

Source: MVRPC
May 2026

N

0 2 4 6 8 Miles

high ridership among proposed new corridors in the Midwest through a comprehensive assessment including likely ridership, investment costs, and operating costs.

The Federal Railroad Administration (FRA) Corridor Identification and Development (Corridor ID) Program, established as part of the Infrastructure Investment and Jobs Act (IIJA), is intended to be the primary instrument to guide intercity passenger rail development in the United States and create a pipeline of intercity passenger rail projects ready for implementation. The 3C&D Corridor, sponsored by the Ohio Rail Development Commission (ORDC), was selected for funding by the FRA to initiate planning in FY 2022.

As of September 2025, the Phase I Corridor ID had been submitted to the FRA including the project scope, schedule, and costs estimates for preparing a Service Development Plan. Future phases include completing the Service Development Plan (Phase II) which would prepare a service frequency analysis, capital project inventory, financial/operating plans, environmental/economic impact analysis, and governance and public engagement. Phase 3 would then focus on preliminary engineering, NEPA and environmental reviews, and final design and permitting. Pending the successful completion of all three phases, final construction for the 3C&D Corridor could begin in 2028 with service starting as early as 2031.

Airports



The Miami Valley has a long aviation history since the ideas of two young bicycle shop owners became a reality with the first flight of the Wright-B Flyer in 1903. This tradition is continued today at Wright-Patterson Air Force Base, one of the premier aviation research and development centers in the world, and also at the Dayton International Airport, the United States' top 90-minute air market. In addition to the Dayton International Airport, the Region is served by four general aviation airports eligible for funding by ODOT (see Figure 3.5). The Dayton International Airport is the focal point of the Region's air transportation network, including freight. The other airports in the Region are mainly general aviation airports that serve small private planes for personal and agricultural uses.

James M. Cox Dayton

The James M. Cox Dayton International Airport (DAY) serves as the primary commercial service airport for the MVRPC Region. The Dayton Airport is located approximately 11 miles north of downtown Dayton in northern Montgomery County on 4,500 acres. The Dayton International Airport is less than a five-minute drive from the I-70/I-75 interchange and has three runways: a 10,900-foot primary, a 7,000-foot parallel with operations on a parallel runway when necessary, and an 8,500-

foot crosswind runway. The dual runway system allows simultaneous operations on parallel runways with landings and departures on the crosswind runway.

There were four airlines serving the airport in 2026, with American Airlines as the single largest passenger carrier, surpassing Delta after American's merger with U.S. Airways. For the 12-month period ending on December 31, 2024, the airport had an average of 107 aircraft operations per day, 38% of which were air carrier, 24% air taxi, 36% general aviation, and 1% military. There are 34 aircrafts based at this airport. There are more than 50-70 passenger flights a day with nonstop service to 13 major domestic markets carrying about 650,000 passengers annually. In 2024, total passenger enplanements at the Dayton International Airport were 645,930. That is an increase of 3.9% from 2023's total passenger enplanements.

Washington/Baltimore, Orlando, and Atlanta respectively, were the three busiest domestic routes for the airport in 2024.

In 2020 during the pandemic, passenger enplanement dropped dramatically to a 5-year low of 337,517, which was a 62.2% decrease from 2019. Since then, not only has enplanement almost doubled, there have been major updates to the airport itself and surrounding property to accommodate distribution, air cargo, and military airplane maintenance. Since 2019, over 3,900 new jobs have been created from the addition of distribution and warehouse facilities being built which included companies such as Crocs, Spectrum Brands, Pratt Industries, ALPLA, Purina Mills, and General Pet Supply. Amazon has committed to the region as well with a 630,000 square foot facility which created 1,500 new jobs and is adding another 250 jobs from the construction of a delivery hub.

On a six-acre site near the north side of the airport, Sierra Nevada Corporation (SNC) is currently developing the airport's Defense and Aerospace Campus. This facility will be used for aerospace maintenance, and will allow the airport to accommodate very large and military aircraft. Since 2024 SNC has continued to expand with 3 more hangars, including the SNC Aviation Innovation and Technology Center (AITC), and have been contracted to update the Survivable Airborne Operations Center aircrafts that the government utilizes.

Greene County Lewis A. Jackson Regional Airport

The Greene County Lewis A. Jackson Regional Airport (GDK), situated 8 miles east of Dayton in Beavercreek Township, is undergoing numerous improvements to support increasing general aviation needs in eastern Montgomery County and Greene County. The airport underwent a significant expansion in 2005, adding runway and taxi length as well as service buildings and roads. The Greene County Regional Airport Authority owns the airport and is comprised of seven members of the community.

Dayton-Wright Brothers Airport

The Dayton-Wright Brothers Airport (MGY) is a general aviation airport located, approximately 12 miles south of the City of Dayton, on State Route 741. I-75 allows easy access to and from the airport.

The Dayton-Wright Brothers Airport covers an area of 541 acres which contains one asphalt paved runway (2/20) measuring 5,000 feet.

For the 12-month period ending December 31, 2024, the airport had 38,851 aircraft operations, an average of 106 per day: 98% general aviation, 2% air taxi, and <1% military. There are 75 aircraft based at this airport.

Piqua Hartzell Field Airport

The Piqua Airport — Hartzell Field (I17), home to 27 aircrafts, is located approximately 3 miles from downtown Piqua. The airport has a 4,000-foot runway and is the home of the Hartzell Propeller Factory Service Center.

Moraine Air Park

The Moraine Air Park (I73) is located approximately 4 miles south of downtown Dayton. The air park is home to 108 aircrafts, including medical aircrafts owned by Miami Valley Hospital which uses the air park as a maintenance base. Facilities include a 3,500-foot runway (08/26) and a partial parallel taxiway.

Journey to Work Characteristics

The Region's journey-to-work characteristics were examined for Greene, Miami, Montgomery, and Warren counties using data from the 2017-2021 and 2018-2022 American Community Survey (ACS) 5-year estimates. Warren County was included as a whole for journey-to-work analysis purposes since detailed place "city" level data is unavailable for Franklin, Franklin Township, Carlisle, and Springboro in the Region. However, an examination of available data indicates that a significant number of workers that reside in Carlisle (26%), the City of Franklin (24%), or Springboro (40%) commute to Montgomery County. This is consistent with the location of these municipalities at the edge of the Montgomery/Warren County border.

Work trip characteristics were examined due to work trips increasing travel at peak times that can make the difference between the transportation system reaching maximum capacity or staying below that threshold.[1] The 2022 National Household Travel Survey found that in 2022, most vehicle commutes started between 6 a.m. and 9 a.m. and between 4 p.m. and 7 p.m. The data shows that in the morning and evening peak periods these additional trips have the potential to overload the transportation system.

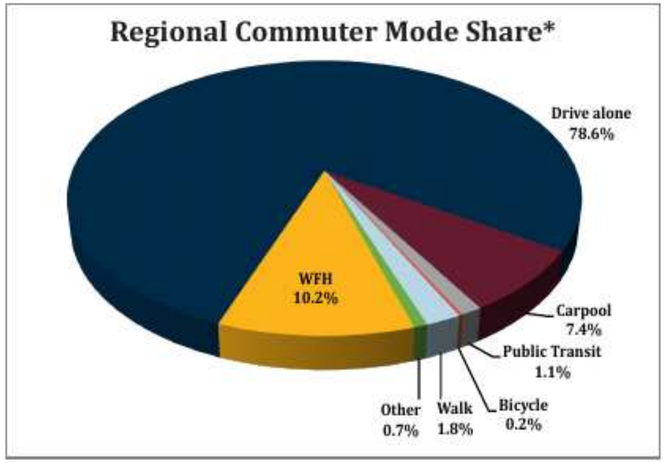
Figure 3.7 summarizes journey-to-work characteristics, including commuting patterns, means of transportation, and average travel time to work for Greene, Miami, Montgomery, and Warren counties.

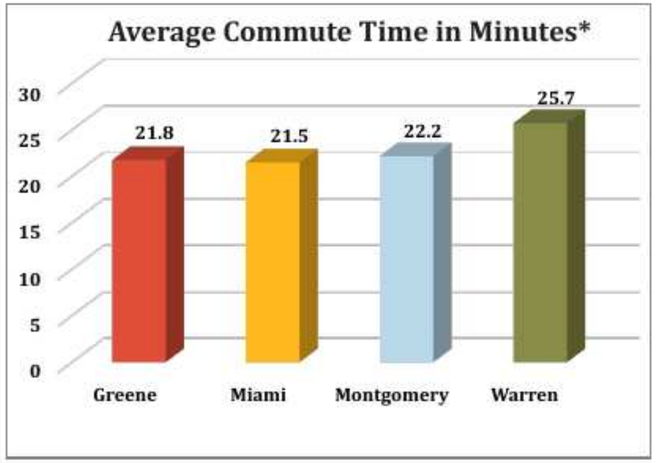
[1] FHWA 2022. "Summary of Travel Trends 2022 National Household Travel Survey (NHTS)" https://nhts.ornl.gov/assets/2022/pub/2022_NHTS_Summary_Travel_Trends.pdf

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Figure 3.7 Regionwide Journey-to-Work Characteristics

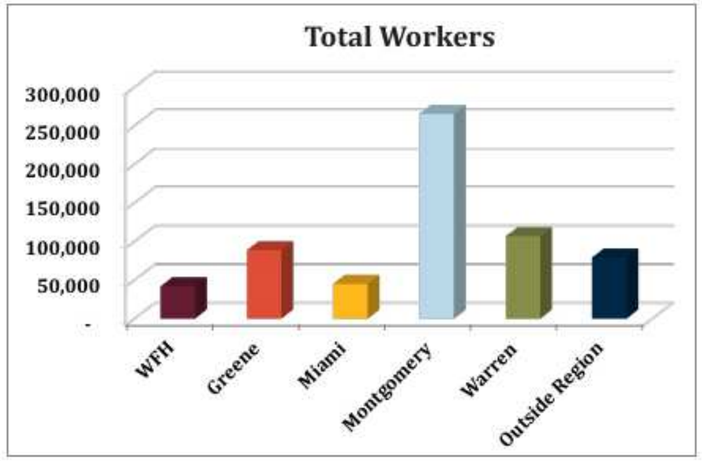
Source: ACS 2018-2022* and CTTP 2021**
May 2026

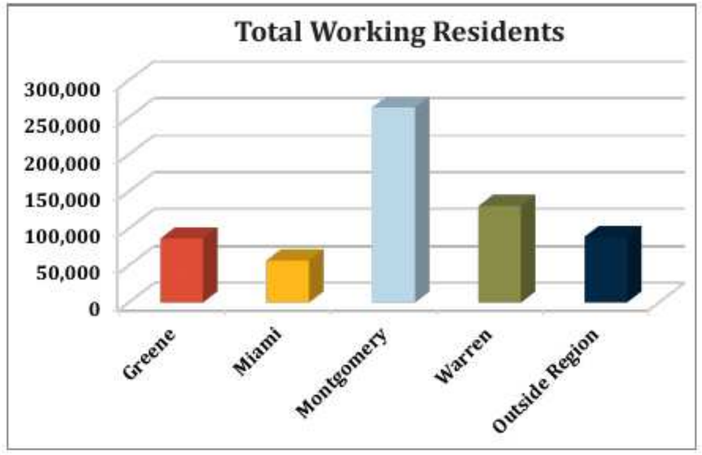




		Workplace**						
	From / To	Work at Home	Greene	Miami	Montgomery	Warren	Outside Region	Total Working Residents
Residence	Greene	6,720	46,320	670	23,250	1,320	8,281	**86,561**
	Miami	3,660	1,755	31,455	11,840	125	7,877	**56,712**
	Montgomery	17,555	26,775	5,330	188,070	8,390	17,611	**263,731**
	Warren	13,985	2,980	130	13,365	54,645	45,503	**130,608**
	Outside Region* **		10,714	7,366	28,634	42,218		**88,932**
	Total County Employees	**41,920**	**88,544**	**44,951**	**265,159**	**106,698**	**79,272**	

***Only outside residents working inside the Region are considered.





The ACS data revealed that, although the majority of Greene, Miami, Montgomery, and Warren County residents work in the same county in which they live, Montgomery County is a major "work destination" for commuters living in the surrounding counties. Significant portions of Greene (27%), Miami (21%), and Warren (10%) County residents travel to Montgomery County for work according to 2017-2021 ACS data.

Commuting demographics changed significantly between the 2006-2010 and 2017-2021 ACS. All four counties saw a work-from-home (WFH) work rate increase of at least 150%; Warren County saw the biggest increase in WFH workers (248%) in comparison to their 2006-2010 ACS numbers. There has also been an increase in the total amount of workers in all four counties and an increase in employment across all counties. Warren County saw both the largest increase in employment (28%) and the number of workers living in the county (32%). The substantial increase in employment and worker numbers across all counties reflects the region's recovery from the 2008 recession.

Other notable shifts in regional commuting demographics include a significant increase in workers commuting from Montgomery County to Warren County (45%), and Warren County to Greene County (48%).

Average travel time to work was analyzed for the Region using 2018-2022 ACS data. The average commute time was 21.8 minutes for Greene County workers (2.3-minute increase from 2010), 21.5 minutes for Miami County workers (0.8-minute increase from 2010), and 22.2 minutes for Montgomery County workers (1.4-minute increase from 2010). While all these commute times are longer than the average commute times for each county observed in 2010 ACS 5-year data, the commute time increases are relatively low and significantly lower than the current average state (23.6 minutes) and national (26.7 minutes) commute times.

Travel trends in the Miami Valley Region follow national patterns. As is the case with the U.S., the automobile represents the preferred mode of travel. According to the 2018-2022 ACS, approximately 78.6% of the Region's residents drove their automobile alone to work. This represents a slight decrease in residents that drove their automobile to work alone from the 84% seen in 2006-2010 ACS results, due to the significant increase in workers working from home.

3.3 The Miami Valley Region in the Year 2050

The Region in 2050

The Plan assumes that the development patterns of the past will remain predominant in the future. The Region will spread further away from the central city and beyond the boundaries of existing suburbs. The future of the Region will be characterized by less concentrated, low density development patterns, away from existing urban centers, and by fragmented land uses where complementary developments are not always in close proximity. However, it is expected that there will be a close relationship between transportation and land use, as future development is likely to occur along freeway corridors.



MVRPC, as a regional agency, maintains locally adopted future land use plans for jurisdictions located in the Region and constantly updates the data as jurisdictional updates become available. Although future land use plan horizon years vary among jurisdictions, they are good indicators of future growth patterns (see Figure 3.8).

As illustrated in Figure 3.8, residential areas are to remain in the eastern part of Montgomery County, western part of Greene County, and along the I-75 corridor in Miami County. However, it is observed that additional residential developments are planned beyond what is currently developed throughout the Region. Industrial and commercial areas are planned for the western part of the City of Dayton in the vicinity of SR 49 and southern part of Montgomery County near the county line. In Greene County, commercial areas are planned in the vicinity of the I-675/US 35 interchange and industrial areas along the US 35 bypass south of the City of Xenia. In Miami County, industrial areas are planned on the outskirts of the cities of Tipp City, Troy, and Piqua.



In addition to the expansion of residential, commercial, and industrial areas, it is expected that a certain level of infill development will occur over the next 30 years. For instance, the greater Downtown Dayton area is attracting more businesses and people; several research facilities have been planned in the vicinity of the University of Dayton, Downtown Dayton and surrounding areas are witnessing a spur in residential development, the inner suburb of Kettering is attracting office and other retail establishments, and in Moraine, the vacant former General Motors plant complex has been reinhabited by a large overseas automotive glass manufacturing company and several other smaller companies.

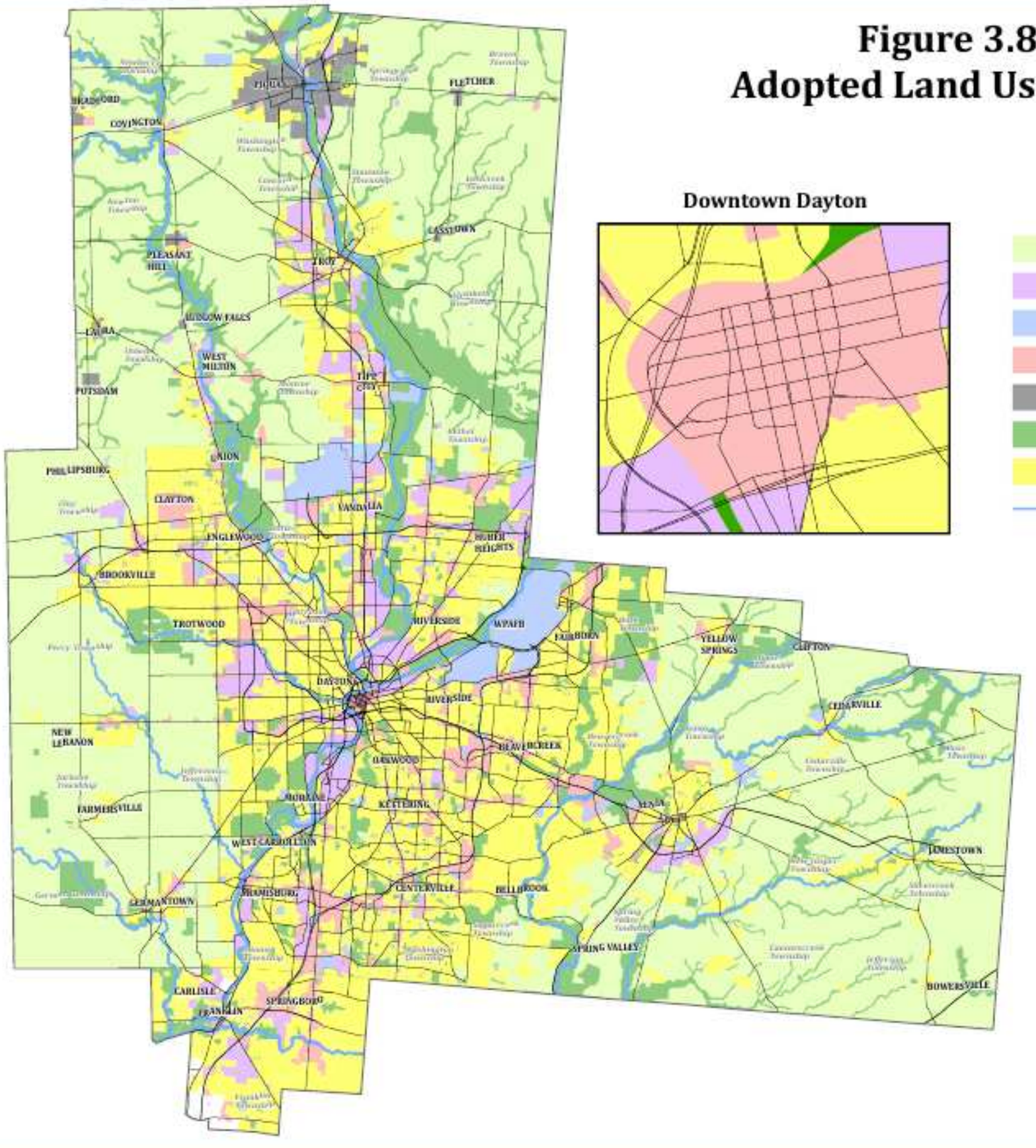
In summary, MVRPC anticipates that much of the growth in the Region, as illustrated in Figure 3.9, will continue to occur along the fringes of the I-675 corridor, the I-70 corridor, the I-75 corridor in Miami County, and the southern portion of I-75 in Montgomery County. Further development will occur along US 35 from the Montgomery/Greene County border to the external edge of the City of Xenia, and along SR 49 in western Montgomery County. Northern Warren County is also projected to experience new development.

Population and Employment Projections

MVRPC developed 2050 population and employment projections to identify the Region's future socioeconomic characteristics and for subsequent use by the travel demand forecasting model and LRTP analyses. Projections were generated for Greene, Miami, and Montgomery counties.

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Figure 3.8
Adopted Land Use Plans



Downtown Dayton

- Agricultural
- Industrial
- Institutional
- Commercial; Mixed
- Municipal/NA
- Open Space/Recreation
- Residential
- Rivers

Sources: City and County Comprehensive Plans:
Greene County: 1974-2025
Miami County: 2003-2025
Montgomery County: 1993-2025
Warren County: 2009-2025

May 2026

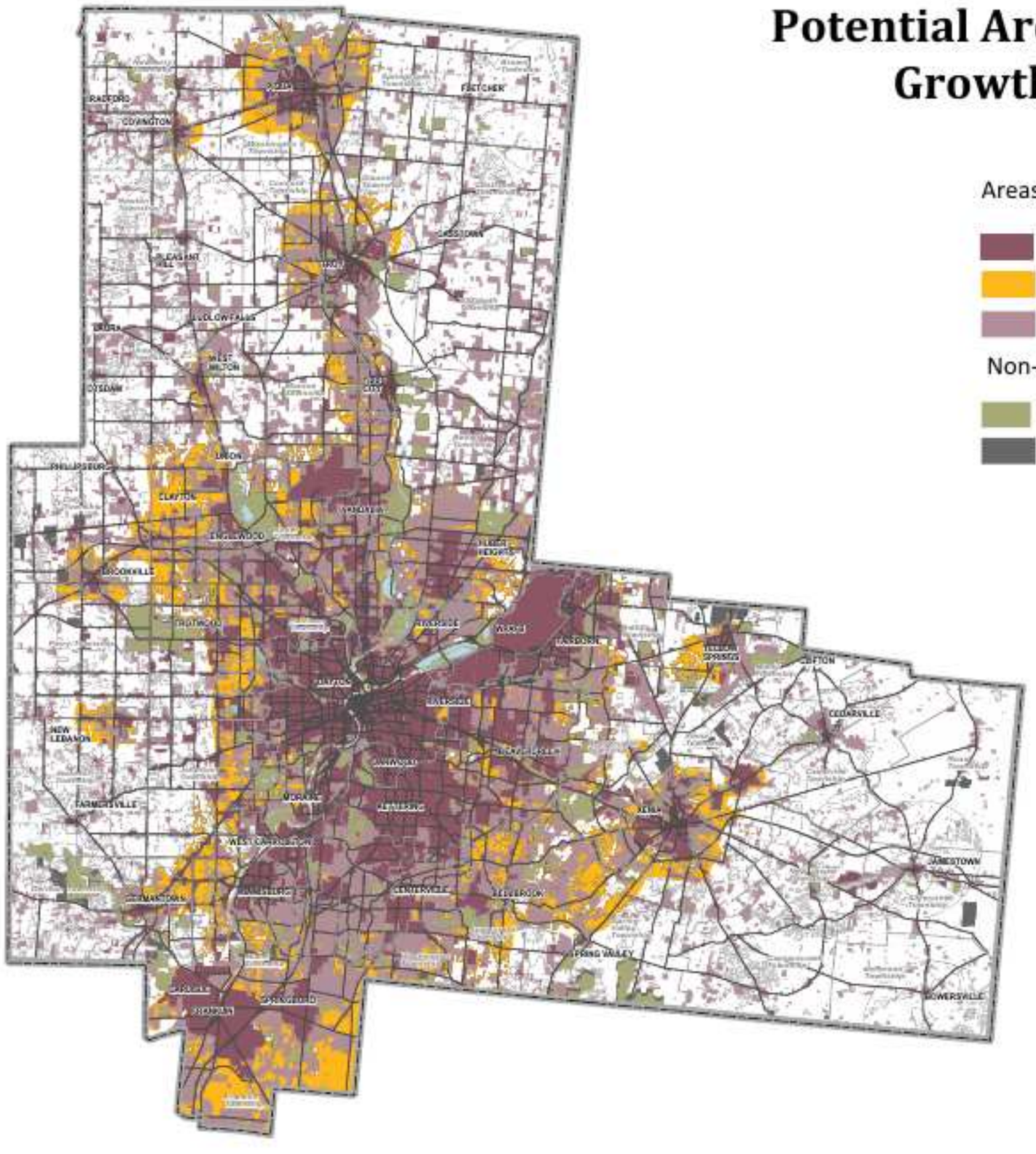
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Figure 3.9
Potential Areas of Concentrated Growth: 2018 - 2050



Areas of Development

- 1970 Developed Areas
- Potential Growth Areas: 2018 - 2050
- 2018 Developed Areas

Non-developable Areas

- Park, Cemetery, Used Open Space
- Protected Area

Source: MVRPC

May 2026

N

0 2 4 6 8 Miles

For the 2026 update of the 2050 LRTP, MVRPC used the forecasts developed in 2018 based on county-level forecasts purchased from Woods & Poole disaggregated to TAZs, ES202 employment data by industry, and in-house databases. These forecasts were adjusted to 2020 ES202 employment data for the 2026 LRTP update. Each TAZ was assigned growth factors applied to the base-year population and employment totals, resulting in 2050 projections for population and employment in each of 12 forecasted industry sectors.

Overall, the population of the Region is expected to decrease slightly between 2020 and 2050 as shown in Table 3.3. However, Miami and Greene counties are expected to gain while Montgomery County is expected to lose population.

Table 3.3 — Population Projections: 2020 – 2050

County	Census 2020	MVRPC 2050	% Change (2020 – 2050)
Greene	167,966 (20.6%)	171,091 (21.9%)	1.86%
Miami	108,774 (13.4%)	116,812 (15%)	7.39%
Montgomery	537,309 (66.0%)	492,205 (63.1%)	-8.39%
Total	**814,049**	**780,108**	**-4.17%**

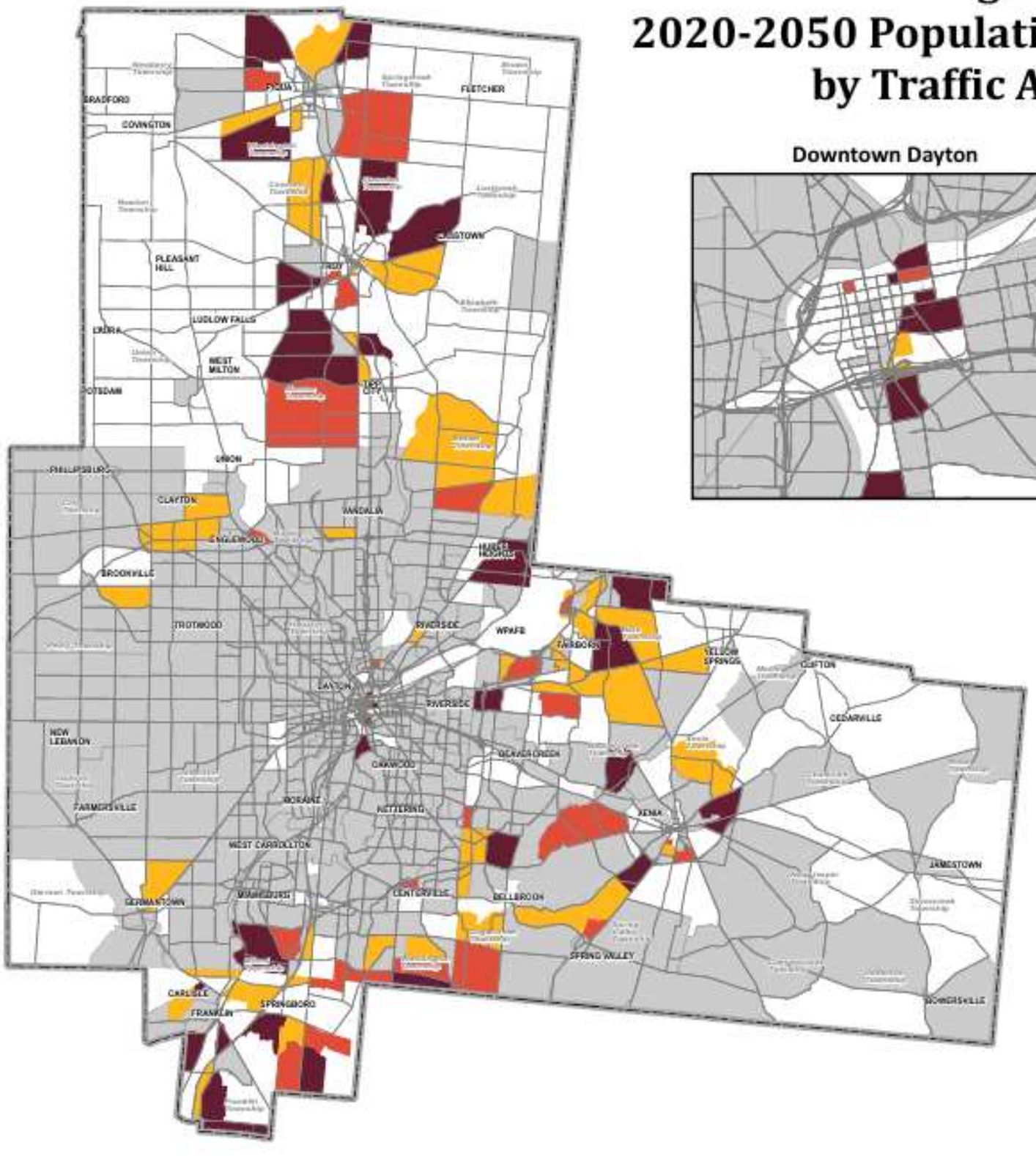
Source: 2020 Census/MVRPC

Figure 3.10 shows the population percentage changes from 2020 to 2050 at the TAZ level, illustrating where the population growth and decline are expected to occur. It is anticipated that there will be a continuing outward movement of population characterized by the stabilization of population losses in the older urban areas, continued growth in the newer suburbs, and some spillover of that growth into the surrounding rural areas. Thus, the central city and first ring suburbs are expected to experience the highest population declines while the outlying areas, such as southeastern Montgomery County, areas along the I-75 corridor in Miami County and Western Greene County, are expected to experience the highest population gains. Areas in and around the new Austin Pike Interchange are projected to see strong growth, including areas in northern Warren County. Further, downtown Dayton is expected to moderately offset the trend of population decline in the central city when considering continued redevelopment efforts.

Table 3.4 summarizes population density by area type between 2020 and 2050. Overall, all densities but the CBD, are anticipated to be lower in 2050 than in 2020. By county, both Greene and Miami counties will have slightly higher densities in 2050 than in 2020 for both suburban and rural areas because of the outward movement of population.

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Figure 3.10
2020-2050 Population Change Projection by Traffic Analysis Zone



Downtown Dayton



Population Change

- Below -5%
- -5.0% - +5.0%
- 5.1% - 25.0%
- 25.1% - 50.0%
- Over 50.0%

Source: MVRPC

May 2026

N

0 2 4 6 8 Miles

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Table 3.4 — Population Density by Area Type: 2020 – 2050 (Persons per acre)

Area Type	Greene		Miami		Montgomery		Total	
	2020	2050	2020	2050	2020	2050	2020	2050
CBD	-	-	-	-	4.83	5.29	4.83	5.29
Urban	5.32	5.21	7.41	7.11	5.85	4.93	5.85	5.06
Suburban	1.72	1.74	1.32	1.44	1.87	1.98	1.87	1.83
Rural	0.12	0.13	0.14	0.16	0.14	0.14	0.14	0.14

Source: MVRPC

Overall, employment in the Region is expected to grow between 2020 and 2050 by approximately 12.8%. The employment projections by county are summarized in Table 3.5. Both Greene and Miami counties are expected to experience substantial employment growth between 2020 and 2050 (23.1% in Greene County and 20.6% in Miami County). Montgomery County employment is expected to show a more modest growth of 7.8%.

Table 3.5 — Employment Projections: 2020 – 2050

County	2020	2050	% Change (2020 – 2050)
Greene	108,884 (22.8%)	134,078 (24.9%)	23.1%
Miami	54,109 (11.3%)	65,242 (12.1%)	20.6%
Montgomery	313,766 (65.8%)	338,279 (62.9%)	7.8%
Total	476,759	537,600	12.8%

Source: MVRPC

In general, it is anticipated that urban, suburban, and rural areas will all experience employment growth through 2050. The bulk of employment growth is expected to continue to occur along major road corridors such as Interstate I-75, I-70, US 35, SR 4, and SR 49. The areas around Dayton International Airport and Wright-Patterson Airforce Base are expected to experience robust growth.

Employment density changes are summarized in Table 3.6. Urban and suburban areas in Greene and Miami Counties see the greatest percentage increase. Montgomery County urban and suburban areas are projected to see modest growth, while rural area employment density in all counties is expected to remain about the same.

Table 3.6 — Employment Density by Area Type: 2020 – 2050 (Jobs per Acre)

Area Type	Greene		Miami		Montgomery		Total	
	2020	2050	2020	2050	2020	2050	2020	2050
CBD	-	-	-	-	32.23	30.89	32.23	30.89
Urban	5.91	7.31	3.24	4.09	2.68	2.94	2.77	3.08
Suburban	1.22	1.51	0.87	1.05	1.23	1.34	1.17	1.34
Rural	0.02	0.02	0.03	0.03	0.02	0.02	0.02	0.03

Source: MVRPC

3.4 Travel Demand Forecasting Model

ODOT and MVRPC have worked closely together to establish and maintain a regional travel demand forecasting model since the 1960s (last updated in 2025). The model is a series of computerized mathematical programs using databases to rationalize the social, physical, and psychological constraints of travel patterns.

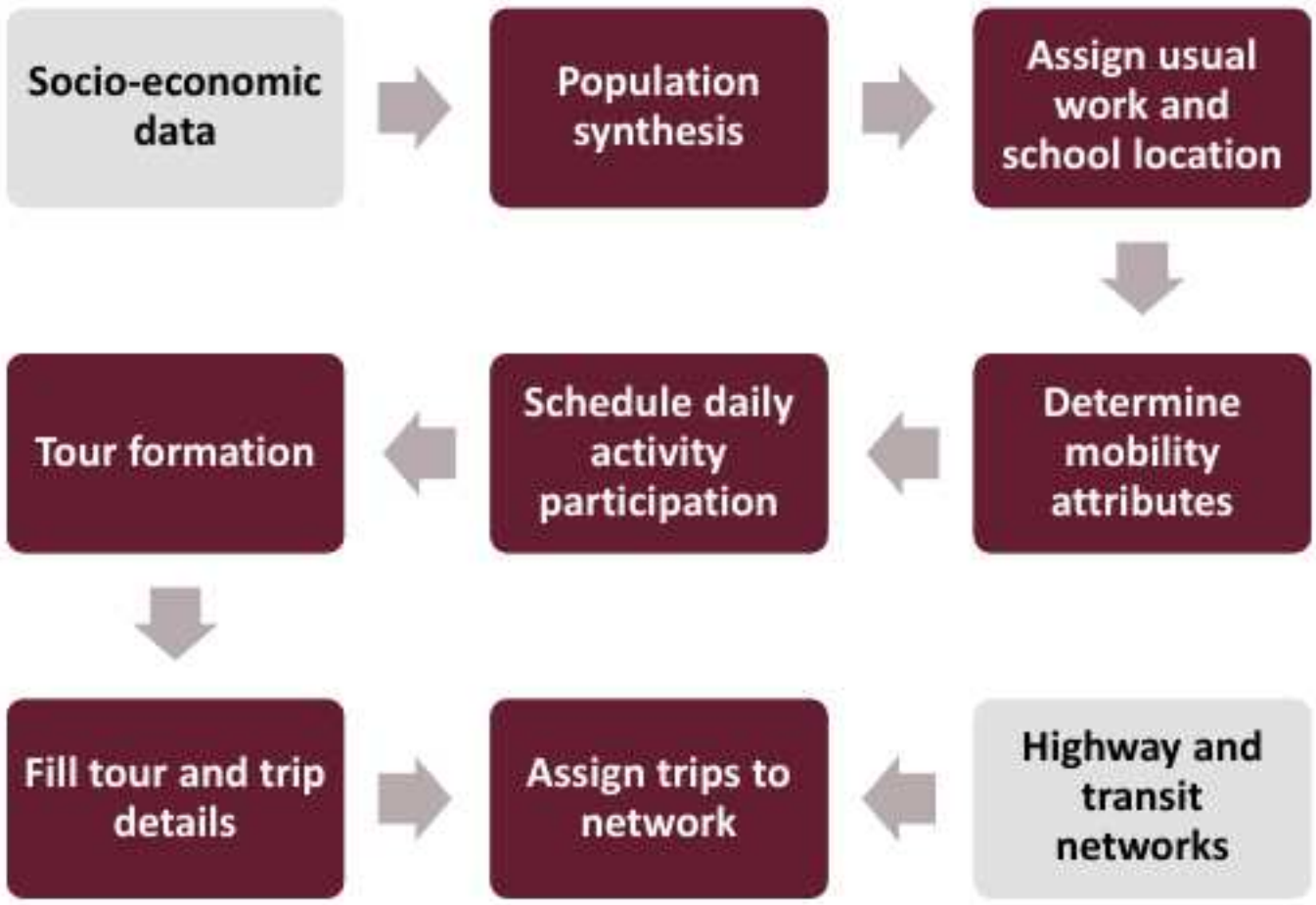
Combined OKI/MVRPC Travel Demand Model

The OKI/MVRPC Travel Demand Forecasting Model (TDFM) includes the combined planning regions under the jurisdictions of the Ohio-Kentucky-Indiana Regional Council of Governments (OKI) and MVRPC. The combined OKI/MVRPC TDFM was originally developed as part of the North-South Transportation Initiative in 2000 and extended the OKI model design to the combined OKI/MVRPC super-region. Between 2013 and 2019, the model structure was updated again to an activity based concept from a traditional trip-based 4-step version, and for the 2021 LRTP update the horizon year was extended to 2050. The 2026 LRTP update incorporates the results of the 2020 U.S. Census.

Activity Based Models (ABMs) have similarities to traditional 4-step models but rather than representing each trip individually they represent each person's activities and travel choices across the entire day. ABMs give consideration to the types of activities the individual and household need to participate in and set priorities for scheduling these activities. Because ABMs are based on behavioral theory about how people make decisions they can provide a more realistic view of travel and be used to test a wider range of policy alternatives.

Figure 3.11 shows a simplified version of the activity based model structure and how different components interact with one another. Data inputs are shown in gray and the various model steps are shown in burgundy. The results of the model are then used in model applications such as congestion management, air quality, or as needed by on-going regional transportation studies.

Figure 3.11 — Basic Model Structure



Data Inputs

Model data inputs fall into two main categories: socioeconomic variables and transportation networks. Socioeconomic variables at the TAZ level can be broadly divided between households and related variables (persons, workers, and autos per household) and employment, classified by 2-digit NAICS code. Three main sources of information were utilized to produce the 2020 base-year model. For residence-related variables, the 2020 Decennial Census was the sole source. For employment, MVRPC used a combination of ES202 data prepared by the Ohio Department of Jobs and Family Services as well as a variety of local sources and knowledge.

Households and employment are forecasted for year 2050. For intermediate years, the model has the built-in capability of interpolating between available data sets, 2020-2050. Information on the forecasting methodology and data sources is available in Section 3.3 of this chapter. Table 3.7 summarizes 2020 and 2050 Census/forecasted socioeconomic variables.

Table 3.7 — Year 2020 and 2050 Forecasted Socioeconomic Variables

Variable	Area Type				
	CBD	Urban	Suburban	Rural	Total
# of TAZs	64	209	458	125	856
Acres	871	30,708	301,083	492,893	825,555
2020 Census Population	4,207	179,712	562,318	67,812	814,049
2020 Households	2,599	75,980	235,477	25,397	339,453
2020 Employment	28,061	85,011	352,288	11,399	476,759
2050 Population	4,603	155,336	550,133	70,036	780,108
2050 Households	2,948	68,093	238,709	27,477	337,227
2050 Employment	26,900	94,571	403,263	12,865	537,600
2020 Persons per Household	1.39	2.27	2.34	2.55	2.33
2020 Workers per Household	0.84	1.04	1.15	1.26	1.13
2020 Autos per Household	1.02	1.53	1.85	2.32	1.81

Source: 2020 Census/MVRPC

The base-year transportation network is based on the existing year 2020 roadway facilities and available fixed transit routes. The network is updated on an annual basis using a combination of field surveys and orthophotos. Roadway inventory information, such as number of lanes, is then coded in the format required by the model, along with all other relevant information such as roadway capacity and speeds. A transit network, based on the 2020 GDRTA fixed transit routes was also developed for five different time periods. The travel demand model does not have the capability of forecasting demand-responsive transit services.

Future-year highway networks are developed for the following years (2029 E+C and 2050) based on the feasibility period in the congestion management project list provided in Chapter 5 and also include completed projects between 2020 and 2025. The 2029 E+C (Existing plus Committed) network includes all projects that are currently funded in the Transportation Improvement Program (TIP). Since transit service levels are expected to remain constant throughout the planning period, all future year networks are based on current (2025) transit routes which also include Greene CATs flex routes.

Trip Summary Overview

The forecasting model and methodology first replicated existing (2020) conditions. The network was then used to forecast traffic for year 2050 based on the Existing plus Committed transportation system (2050 E+C) and for the year 2050 based on all the projects in the Congestion Management list (2050 Plan). Table 3.8 shows trips by trip purpose for year 2020 and 2050. The table shows trips increasing by approximately 3% from 2020 to 2050, the fastest growing trips are trucks and external trips at 24 and 46 percent respectively.

Table 3.8 — Typical Weekday Trip Summary

Analysis Period	Person Trips					Vehicle Trips		
	Home	Work	School	Shopping	Other	Trucks	4T-CV	External
2020	**763,156**	**478,212**	**66,868**	**544,430**	**779,416**	**154,536**	**143,185**	**185,760**
2050	**749,409**	**492,336**	**62,642**	**535,846**	**762,150**	**192,304**	**150,234**	**271,286**

Source: MVRPC

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Chapter 4
Long Range Transportation Planning and the Congestion Management Process

4.1 Overview

MVRPC has assimilated many of the state and federal goals, strategies, and programs to manage congestion through its Long Range Transportation Plan (LRTP), Transportation Improvement Program (TIP), and various regional projects, strategies, and initiatives. This chapter focuses on the evaluation of the existing regional multimodal transportation network and the overall impact of the approved 2050 LRTP Congestion Management (CM) project list on managing regional congestion. In addition, this chapter documents how congestion evaluation and congestion management serve as inputs to a number of MVRPC planning processes and programs. Other relevant congestion management efforts undertaken as part of the ongoing transportation planning processes at MVRPC are also addressed—including public transportation and alternative modes.

Summary of Congestion Management Efforts

Introduction to Congestion

"Congestion" is generally defined from the perspective of the roadway user. The public's perception of congestion relies primarily on their own experiences when traveling on the nation's roadways. However, an engineer would describe congestion as the condition where traffic demand approaches and/or exceeds the roadway's ability to facilitate travel at normal speeds. Typically, roadway congestion manifests itself as "stop-and-go" traffic conditions.

Roadway congestion consists of three key elements: severity, extent, and duration.[2] The blending of these elements determines the overall effect of congestion on roadway users. Roadway congestion occurs due to a number of planned and unplanned events either in isolation or in tandem. In some cases, the clockwork nature of recurring congestion can be the sole event. Factors attributing to congestion differ significantly between urban and rural areas. For example, physical bottlenecks (i.e. sections of the roadway system that have reached their operational capacity) are estimated to be the source of about 40% of congestion in urban areas but only 3% in rural areas.[3]

Additionally, research by the Federal Highway Administration (FHWA) has identified several root causes for unplanned events that cause non-recurring congestion. The estimated breakdown of non-recurring congestion for urban and rural areas are:

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[2] Federal Highway Administration 2020. "Traffic Congestion and Reliability: Trends and Advanced Strategies for Congestion Mitigation" https://ops.fhwa.dot.gov/congestion_report/chapter2.htm

[3] Texas A & M Transportation Institute 2021. "Congestion Pie Chart for Different Sources of Congestion" https://tti.tamu.edu/documents/TTI-2021-2.pdf

- *Traffic Incidents (Urban: 25% | Rural: 50%)* — Random events occurring in the travel lanes that disrupt otherwise "normal" traffic flow, such as crashes, disabled vehicles, or roadway debris;
- *Inclement Weather (Urban: 15% | Rural: 10%)* — Environmental conditions can affect driver behavior, causing motorists to drive more slowly and/or allow for larger gaps between cars;
- *Work Zones (Urban: 10% | Rural: 35%)* — Construction activities that alter traffic flow due to lane or shoulder restrictions, lane shifts, or temporary closures;
- *Traffic Control Devices (Urban: 5% | Rural: 2%)* — Poorly timed or spaced signals and railroad crossings can cause intermittent disruptions in traffic flow;
- *Special Events (Urban: 5% | Rural: 0%)* — Sudden increases in traffic demand due to planned or unplanned events, particularly in rural areas, can temporarily overburden the roadway system; and
- *Fluctuations in Normal Traffic Flow (Unknown)* — Day-to-day changes in the traffic demand placed on the system due to random unknown causes.

Other than bottlenecks resulting from maximized roadway capacity, the above listed events take place with irregularity throughout the day. Therefore, accurately predicting travel times between two points becomes increasingly difficult as irregular congestion disrupts the transportation network over longer periods of time and larger sections of roadway, leading to frustration for commuters, commercial operators, and public officials.

National Congestion Trends

Congestion time and costs are increasing again across the nation and trends in when freeway congestion occurs have changed since the peak pandemic years of 2020 and 2021. After the pandemic, more congestion began appearing between 11 am and 1 pm on workdays compared to before the pandemic: this is likely due to increased hybrid and remote work affecting travel behavior. In general, more travel is occurring on weekends now than before the pandemic and congestion is also more spread out through the day. In contrast, weekend congestion was concentrated in the middle of the day prior to 2020.[4]

In contrast to freeway trends where delay patterns have shifted from the evening to afternoon hours by around 5 percent, congestion on arterial roads has not drastically changed before and after the pandemic. According to the 2025 UMR, 2023's peak period of delay on arterial streets is about the same as 2019's peak period.

Truck congestion and subsequent costs have increased since the peak pandemic years.[4] According to the 2025 UMR, "A major contributor to the truck congestion cost increase has been the value of time associated with truck travel, which has gone up noticeably over this period [2020-2023]." There are several factors reported by the American Transportation Research Institute that have

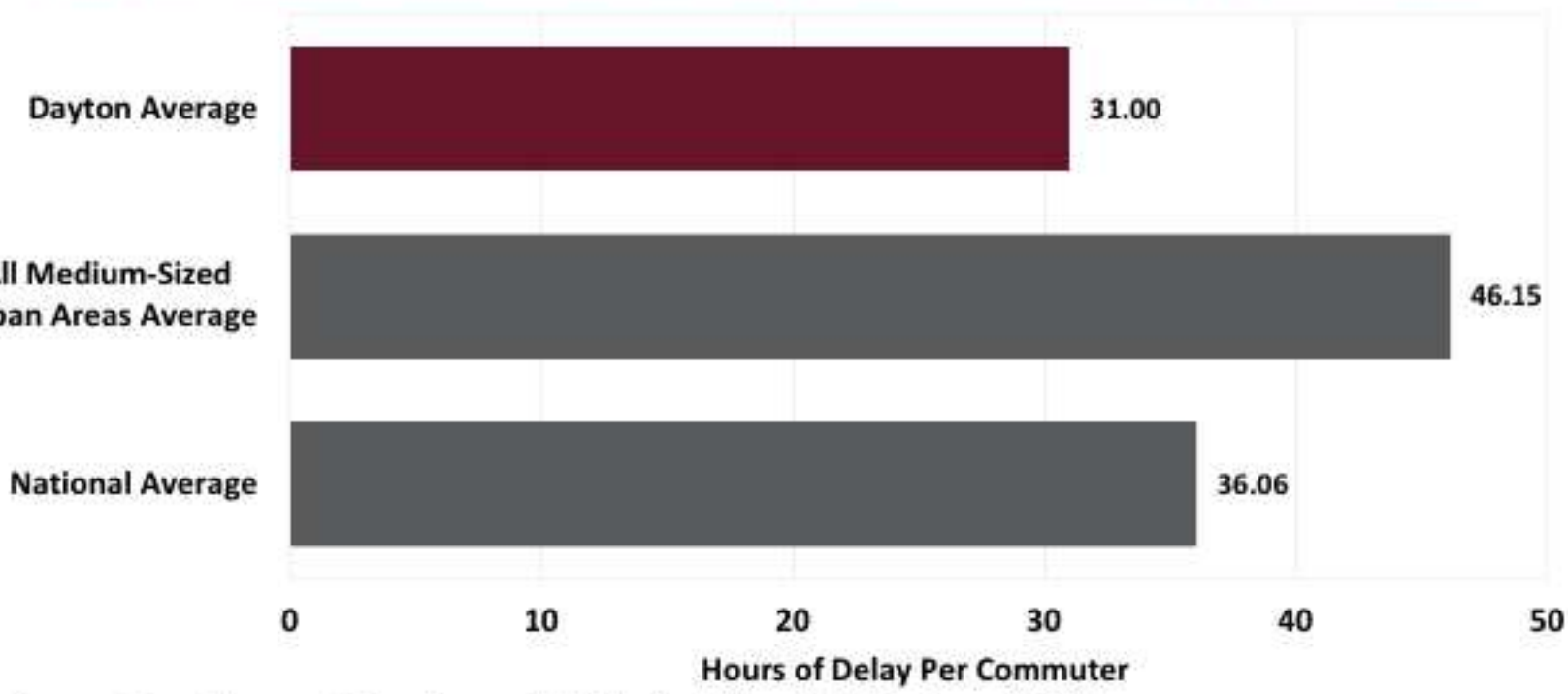
[4] Texas A & M Transportation Institute 2025. "2025 Urban Mobility Report" https://static.tti.tamu.edu/tti.tamu.edu/documents/mobility-report-2025.pdf

contributed to the increase in nation trucking costs across the board including rising fuel, repair, maintenance, insurance, and driver wage costs.[5]

Comparing Commuter Delay in the Dayton Urban Area

Congestion in the Dayton Urban Area (DUA) follows the national trend of steadily increasing after the peak pandemic years of 2020 and 2021. However, individual commuter hours of delay have stayed relatively unchanged in the DUA between 2019 and 2023.[4] The Texas A&M Transportation Institute classifies different urban areas by population size. In that schema, Dayton is classified as a medium-sized urban area.[6] The Dayton urban area, tied with McAllen in Texas, has the lowest annual hours of delay per commuter out of all medium-sized areas in the nation. Commuters in the DUA had around 5 hours of delay less compared to the average hours of delay commuters across the nation experienced in 2023. The exact averages for the DUA compared to all medium-sized urban areas and the national average can be seen below.

Figure 4.1 — Medium-Sized Urban Area Comparison of Annual Hours of Delay in 2023



Source: Texas Transportation Research Institute, Urban Mobility Report 2025

4.2 Roadway Congestion in the Miami Valley Region

MVRPC used its regional travel demand model to develop scenarios consistent with the congestion management projects proposed by the 2050 Plan (see Table 5.3 in Chapter 5). Three scenarios were developed: 2020 Base, 2050 Existing plus Committed (E+C), and 2050 Plan conditions. The 2050 Plan scenario includes all projects in the Long Range Transportation Plan (LRTP), while the E+C scenario includes only projects that are funded in the SFY 2026-2029 Transportation Improvement Program

[5] American Transportation Research Institute 2025. "An Analysis of the Operational Costs of Trucking: 2025 Update" https://truckingresearch.org/about-atri/atri-research/operational-costs-of-trucking/

[6] The word "urban area" is used as opposed to "city" due to urban area boundaries having different, usually slightly larger boundaries than one would think of for a city.

(TIP). Socioeconomic data from 2020 is used on the Base scenario, while 2050 forecasted socioeconomic data is used on the 2050 E+C and Plan scenarios. Detailed information on socioeconomic data assumptions is available in Chapter 3. Performance measure statistics for the base and future year scenarios were generated for each roadway segment by using POSTCMS software developed by the Ohio Department of Transportation (ODOT). Systemwide congestion was identified by location and quantified by severity using the level of service (LOS) performance measure.

Level of Service

Level of Service (LOS) is defined as a qualitative measure describing operational conditions within a traffic stream and their perception by motorists. Volume-to-Capacity (V/C) ratio is a measure of the traffic volume on a road compared to the capacity of the road. The capacity of a road depends on its physical and operational characteristics and varies by functional class. A higher V/C ratio indicates that the traffic volume of the road is nearing its capacity and is becoming congested.

Similarly, the ratio of average speed to free flow speed can be used to measure congestion—lower speed ratios indicate congested conditions.

The analyses presented in this section are based on calculations by POSTCMS software and its definition of LOS by Speed and V/C ratio. LOS is broken down into six levels (A through F), with significant traveler delay and recurring congestion occurring at LOS D, E, and F. LOS was used to identify specific locations of congestion in the Base (2020), Existing plus Committed (2050 E+C) and the Long Range Transportation Plan (2050 LRTP) networks. Figures 4.2, 4.3, and 4.4 identify roads having LOS D (V/C > 0.751) or worse for surface roads while LOS for freeways is determined by speed ratios as recommended in the 2015 Highway Capacity Manual.

2020 Base

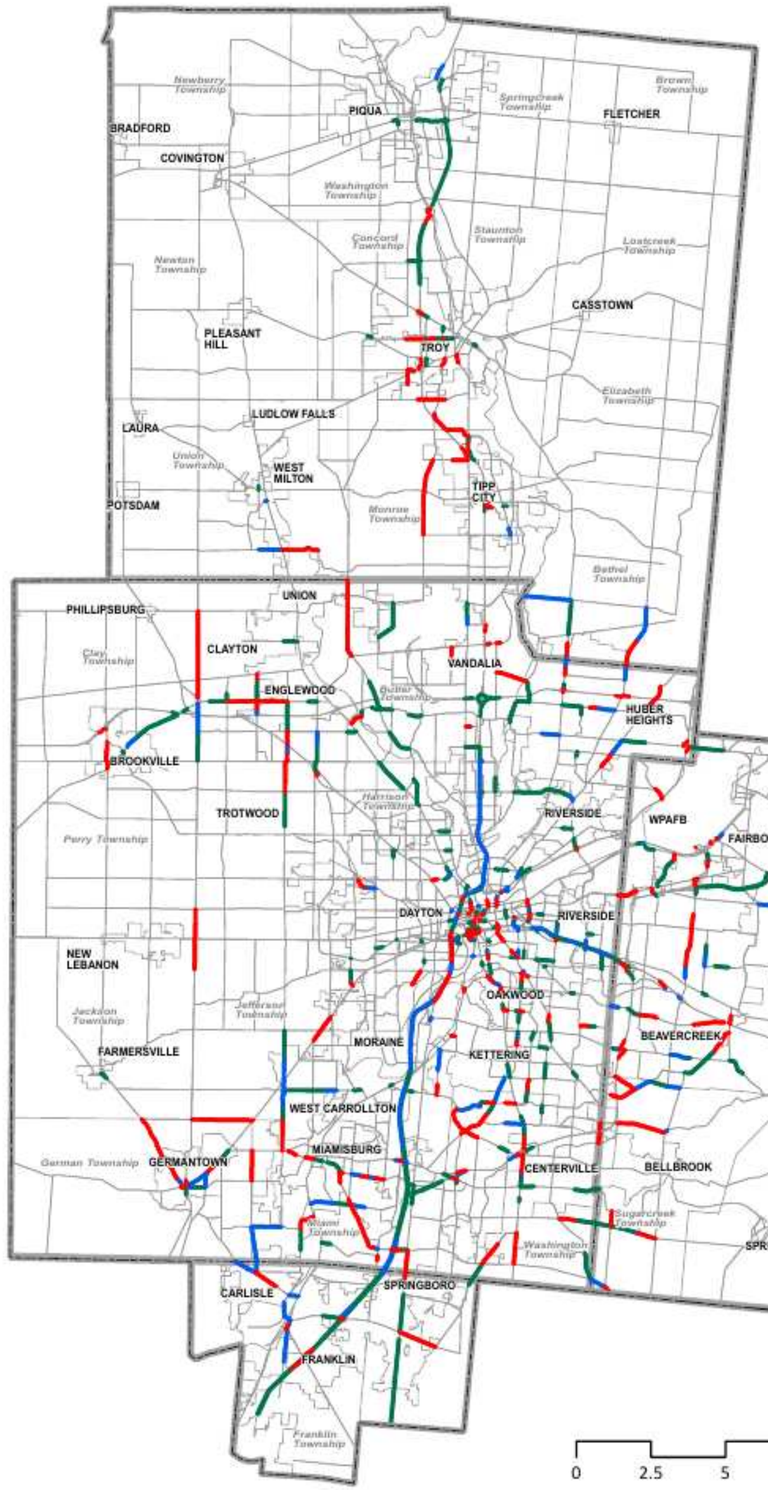
In the Base (2020) network, roadway congestion has a noticeable concentration on I-75 and US-35 as well as their interchanges. The 4-mile stretch of I-75 north and south of Downtown Dayton that leads into the downtown area sees consistent severe congestion. Roadway congestion is also worsening across most city centers in the Region and on I-675 near WPAFB—which is the largest employer in the Region.

2050 E+C

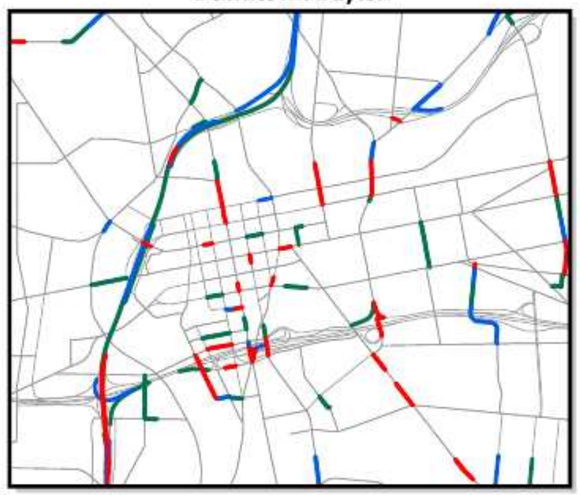
Roadway congestion is increasingly present in the 2050 E+C network. The majority of all freeway sections in Montgomery County will operate at LOS D or E. I-75 in Montgomery County will experience severe LOS F congestion for about 15 continuous miles from the I-75/I-675 interchange to Exit 59 north of Downtown Dayton. The section of I-675 near WPAFB will see heightened congestion and function at LOS D and E while connecting roads will experience severe congestion near the Base. Congested conditions will spread to the portion of I-70 in Montgomery County and will function mostly at LOS D. Various projects, including interchange and freeway reconstruction, are included in the 2050 LRTP to improve the freeway performance; this is reflected in Figure 4.4 representing the 2050 Plan scenario.

MVRPC

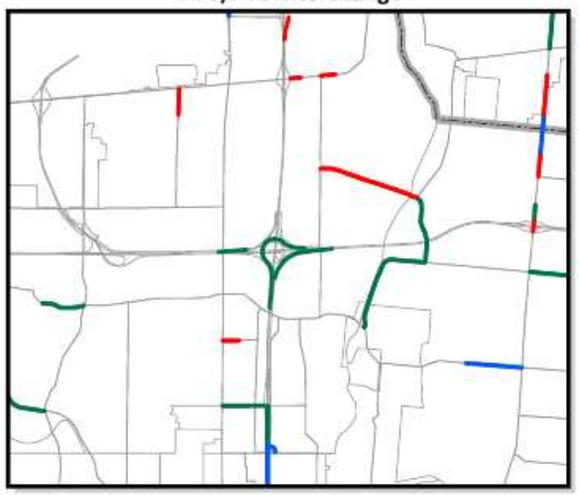
Figure 4.2
Level of Service
2020 Base



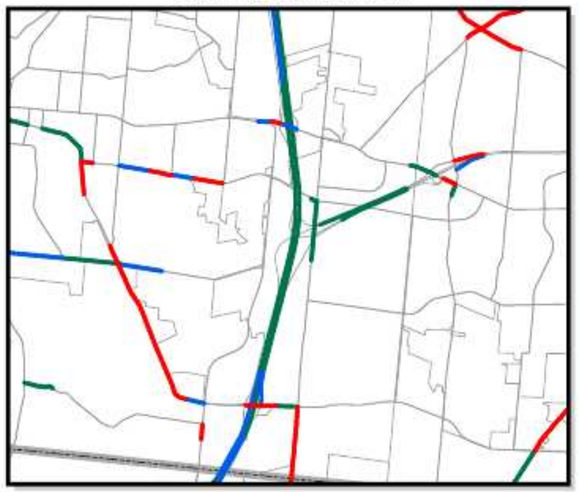
Downtown Dayton



I-70/I-75 Interchange



I-75/I-675 Interchange



Level of Service

- D
- E
- F

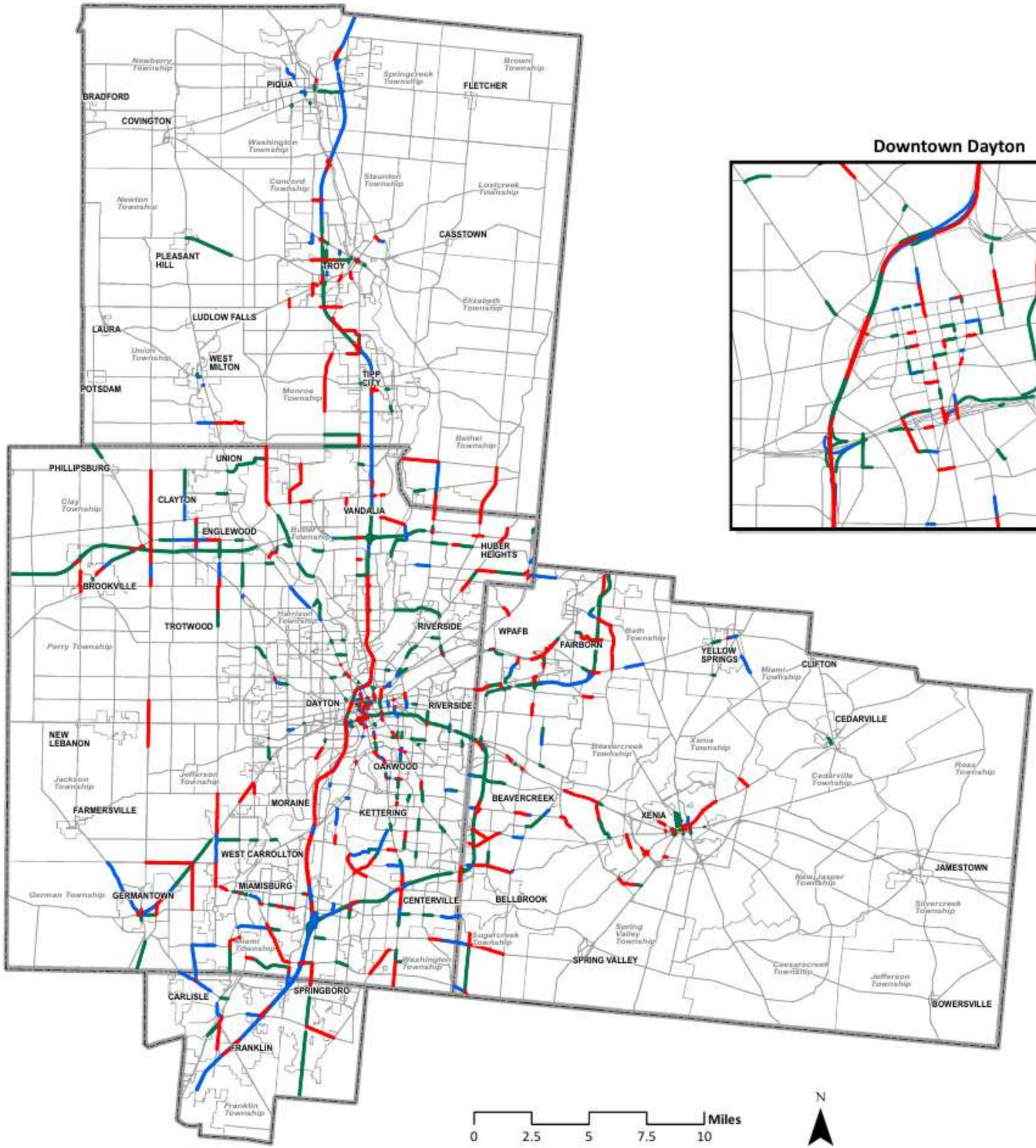
Political Boundaries

- County
- City
- Township

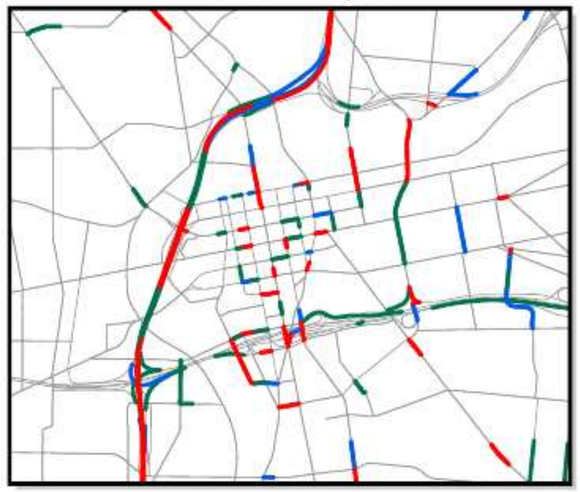
Source: MVRPC
May 2026

MVRPC

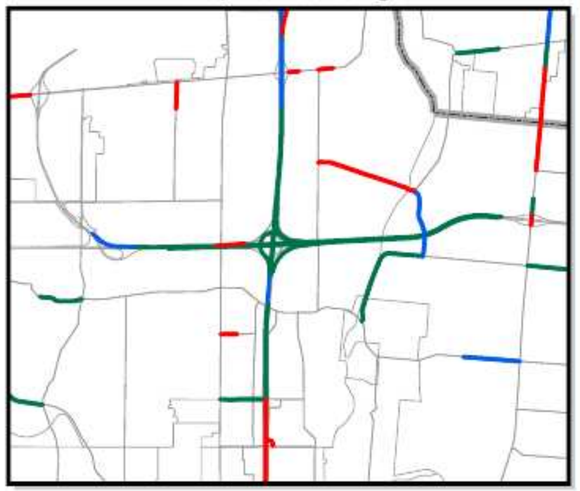
Figure 4.3
Level of Service
2050 Existing+Committed



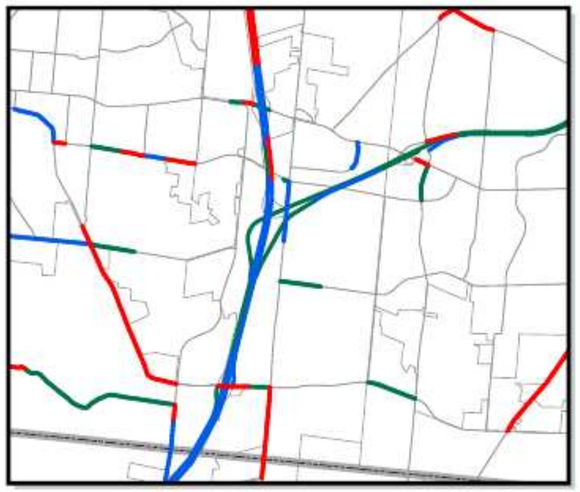
Downtown Dayton



I-70/I-75 Interchange



I-75/I-675 Interchange



Level of Service

- D
- E
- F

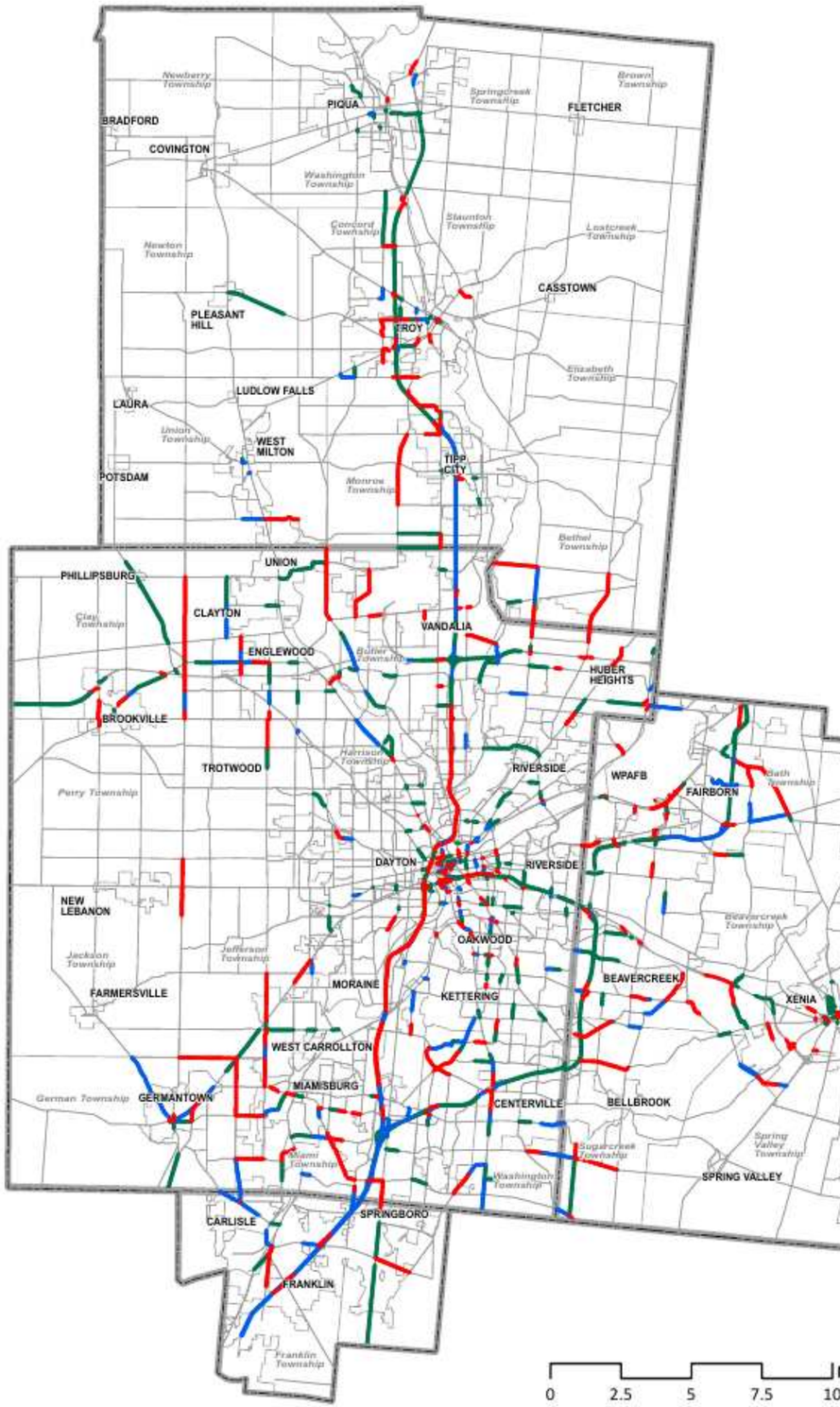
Political Boundaries

- County
- City
- Township

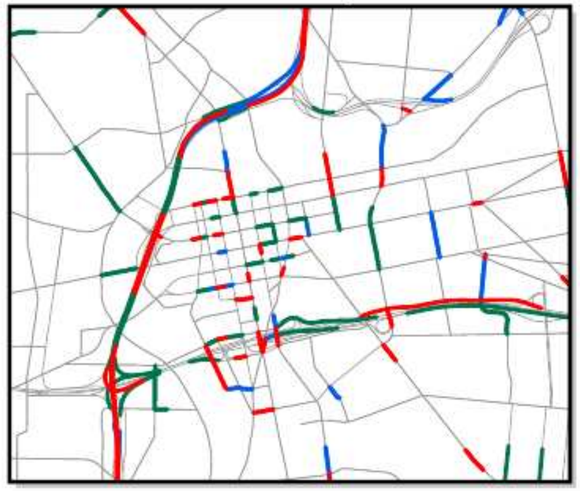
Source: MVRPC
May 2026

MVRPC

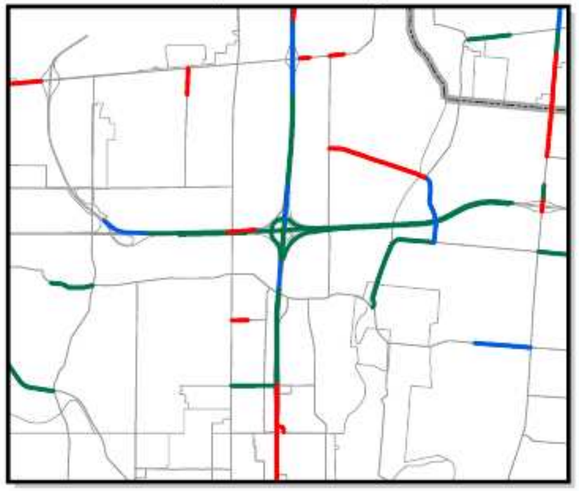
Figure 4.4
Level of Service
2050 Plan



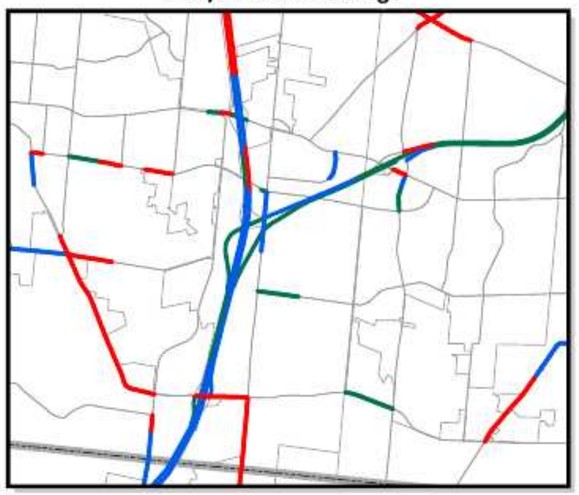
Downtown Dayton



I-70/I-75 Interchange



I-75/I-675 Interchange



Level of Service

- D
- E
- F

Political Boundaries

- County
- City
- Township

Source: MVRPC
May 2026

2050 Plan

Under the 2050 LRTP scenario, the level of service across the Region improves a little bit. The 15-mile portion of I-75 from the I-75/I-675 interchange extending north to Exit 59 remains at LOS F. There is slight congestion improvement on Miami County's portion of I-75 in the 2050 LRTP scenario between Exit 69 and Exit 82 that functions at LOS D instead of LOS E if the plan scenario is followed. Given the importance of freeways to the regional economy, MVRPC recommends continued monitoring and potential implementation of additional travel demand management strategies along these corridors in the medium to long-term timeframe including smart mobility solutions.

Status of Freeway Corridors in the Region

In the Dayton Region freeways represent only 15 percent of the total roadway lane miles but carry between 42 percent (2020 Base) and 48 percent (2050 LRTP Plan scenario) of the total vehicle miles of travel (VMT). As a result, freeway travelers experience some of the worst congestion levels in the Region.

As part of the congestion management process, ten freeway corridors in the Region were identified for detailed congestion study and analyses. The congestion corridors listed in Table 4.1 are used to identify current and future deficiencies related to travel time, safety, and/or level of service for development of projects or programs that can be funded through various funding programs such as Congestion Mitigation/Air Quality (CMAQ), Surface Transportation Program (STP) or through the Federal Transit Administration (FTA). Selected measures are displayed in Figure 4.5.

Term Definitions

Daily Volume — refers to the average weekday daily volume along the segments of a CMP corridor. Most corridors have large ranges in volume and often feature lower traffic levels on the periphery. High volume locations frequently experience high levels of delay or congestion, though the correlation is not perfect. The daily volume for the base year (2023) is obtained from ODOT estimated counts while the 2050 volumes are estimated based on MVRPC's travel demand model.

Truck Volume — refers to the average weekday daily truck volume along the corridor. The daily truck volume for the base year (2023) is obtained from ODOT's estimated truck counts while the 2050 truck volumes are estimated based on MVRPC's commercial traffic model.

Average Speed — refers to the average speeds observed along the corridor during peak periods. MVRPC utilized INRIX data to compute average speeds during peak hours for each corridor.

Level of Service (LOS) — LOS for freeways is based on the 2015 Highway Capacity Manual and calculated based on the ratio of average to free flow speed with varying thresholds by speed limit. Generally, the lower the ratio of average to free flow speed, the lower the LOS. Table 4.1 presents peak LOS for peak direction of travel.

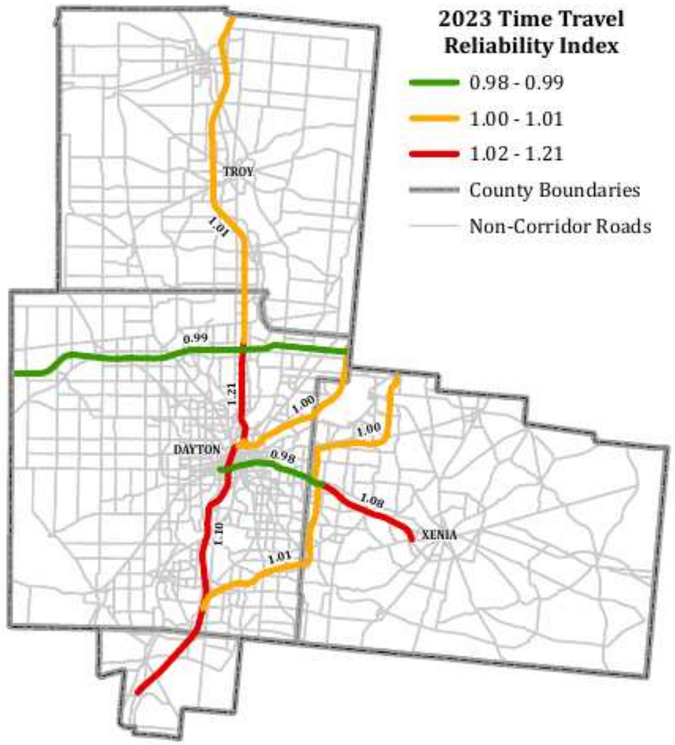
Travel Time Index — the ratio of the average peak period travel time as compared to free-flow travel time. For example, a value of 1.2 means that average peak travel times are 20% longer than free-flow travel times. In this analysis, the travel time index was calculated for 2023 weekday peak times. MVRPC utilized travel time data supplied by a private vendor, INRIX, to determine travel time reliability trends in the Miami Valley. Travel time reliability is measured through several mobility and reliability indicators that impact the individual traveler such as travel time index, buffer time index, and planning time index.

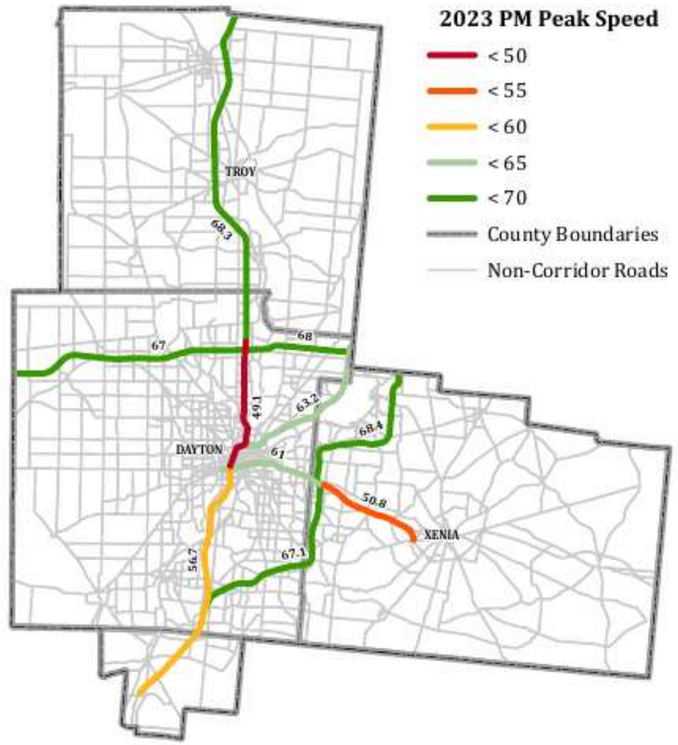
Cost of Vehicle Delay — is the economic impact to drivers and businesses based on lost productive time, wasted fuel, and additional vehicle maintenance costs due to extra time spent in traffic. The cost of vehicle delay is calculated by applying monetary values to the estimated hours of total delay incurred by passenger and truck travel, plus additional vehicle operating costs. Total delay is defined as the difference between the amount of time it would take a vehicle to traverse a corridor from one end to the other traveling at the posted speed compared to the actual amount of time it takes a vehicle to drive the corridor.

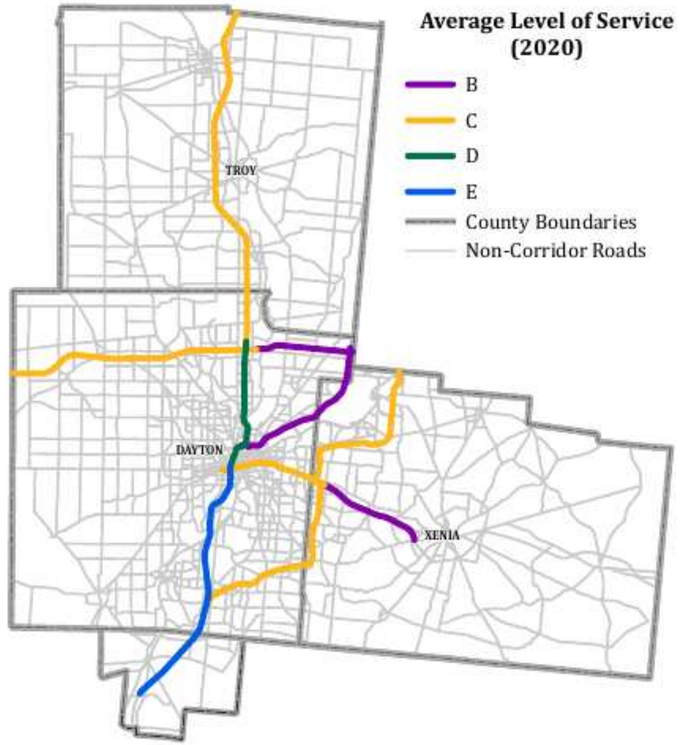
Total Crashes and Crash Rates — are tabulated for each corridor based on 2021-2023 data obtained from ODOT. The crash rates are reported per million vehicle miles traveled (MVMT). In general, safety is an important component in measuring congestion as congested conditions often result in a greater likelihood of crashes, and crashes can further increase congestion.

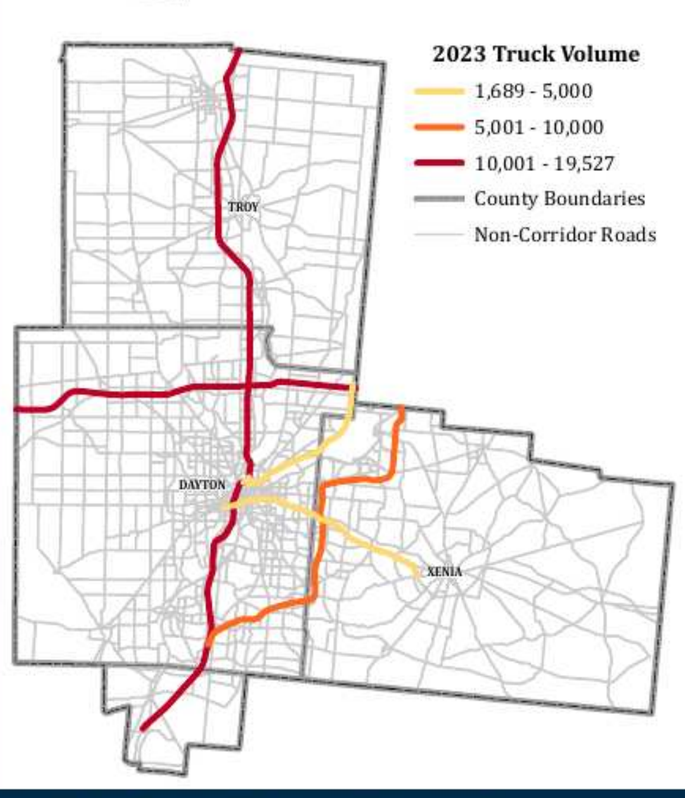
MVRPC

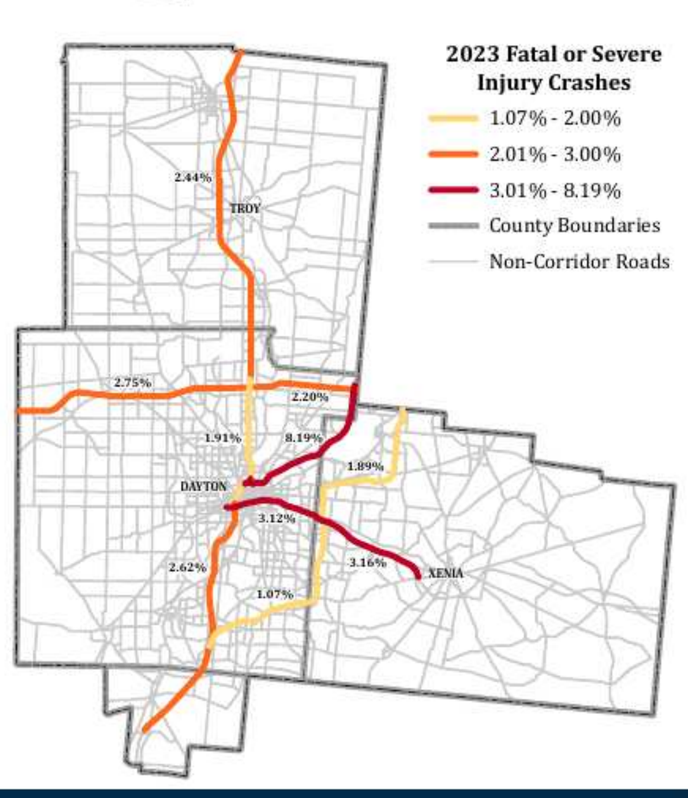
Figure 4.5 Selected Regional Corridor Performance Measures

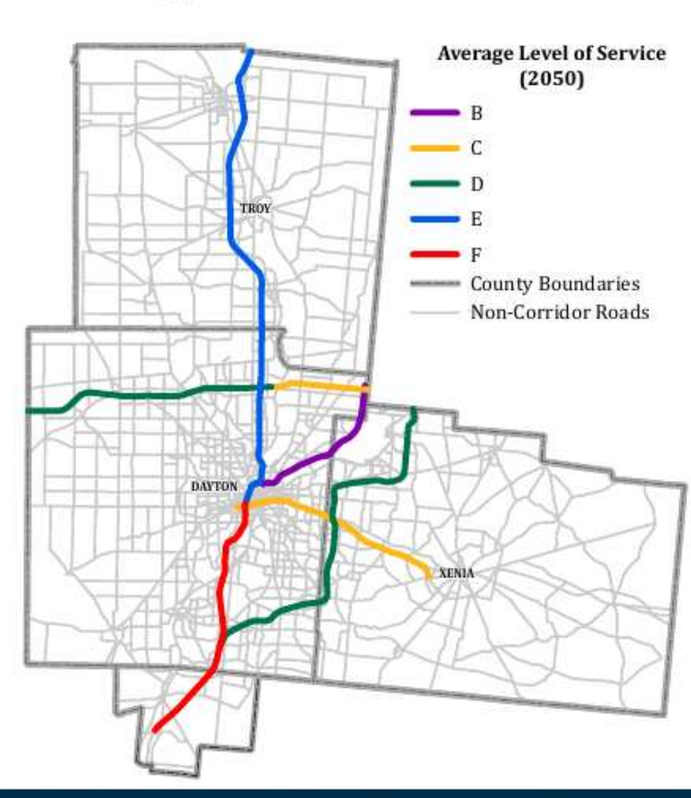












N

0 5 10 15

Miles

Sources: INRIX, ODOT, RITIS, and MVRPC

Table 4.1 — Regional Corridor Statistics

Congestion Performance	Corridor 1: I-70 — East of I-75	Corridor 2: I-70 — West of I-75	Corridor 3: I-75 — North of I-70	Corridor 4: I-75 — US 35 to I-70	Corridor 5: I-75 — South of US 35	Corridor 6: I-675 — North of US 35	Corridor 7: I-675 — South of US 35	Corridor 8: US 35 — I-75 to I-675	Corridor 9: US 35 — East of I-675	Corridor 10: SR 4 — I-75 to I-70
Daily Volume (2023)	73,311	59,168	68,416	121,844	118,467	56,692	74,464	67,051	42,182	29,423
Daily Volume (2050 Estimated)	77,450	59,182	98,181	157,188	158,528	82,640	94,244	72,943	44,054	36,773
Truck Volume (2023)	16,145	19,527	12,000	16,937	18,320	6,295	6,130	4,210	4,429	1,689
Truck Volume (2050 Estimated)	27,019	24,501	25,074	29,307	24,112	7,605	7,418	9,981	7,333	3,259
Posted Speed (MPH)	65	65-70	65-70	55-65	55-65	65	65	55	50-55	50-60
Average Speed (AM Peak Hour: 7 – 8 AM)	68.7	68.0	69.4	58.5	64.8	68.1	68.6	61.5	53.1	62.5
Average Speed (PM Peak Hour: 4 – 5 PM)	68.0	67.0	68.3	49.1	56.7	68.4	67.1	61.0	50.8	63.2
Average Level of Service (2020)	B	C	C	D	E	C	C	C	B	B
Average Level of Service (2050)	C	D	E	E	F	D	D	C	C	B
Travel Time Reliability Index 2023 – Peak Hours	0.99	0.99	1.01	1.21	1.10	1.00	1.01	0.98	1.08	1.00
Cost of Vehicle Delay (In '000s of 2023 dollars)	$488	$1,149	$3,010	$8,009	$12,247	$897	$1,779	$1,588	$3,666	$1,046
Fatal and Serious Injury Crashes (2021-2023)	6	16	25	20	46	6	8	10	18	23
Total Crashes (2021-2023)	273	582	1,025	1,047	1,759	317	749	321	569	281
Fatal and SI Crash Percentage (2021-2023)	2.20%	2.75%	2.44%	1.91%	2.62%	1.89%	1.07%	3.12%	3.16%	8.19%
Crash Rate (In MVMT; 2021-2023)	0.52	0.53	0.59	0.90	0.72	0.44	0.62	0.56	0.93	0.74

Source: INRIX, MVRPC, and ODOT

4.3 Congestion and Safety

The MVRPC Regional Safety Initiative (RSA) began in SFY 2006 as a response to the emphasis placed on roadway safety by the 2005 Federal Transportation Bill known as SAFETEA-LU (Safe, Accountable, Flexible, Efficient Transportation Equity Act - A Legacy for Users). In an effort to reduce roadway fatalities and injuries throughout the Miami Valley, the goal of the RSA is to generate a list of locations in need of safety countermeasures to reduce the frequency or severity of crashes.

The Moving Ahead for Progress in the 21st Century (MAP-21), authorized in 2012, established a performance- and outcome-based program that required MPOs to coordinate with state departments of transportation on setting the following five safety performance targets for their region: number of fatalities, number of serious injuries, fatality rate, serious injury rate, and number of non-motorized injuries and fatalities and measuring their results.[7] These requirements are maintained in the current Infrastructure Investment and Jobs Act (IIJA), authorized in 2021. More information on this statute is available in Chapter 8.

MVRPC analyzes crash data to help improve transportation safety and inform the planning process. A number of statistical and comparative analyses are performed on the regional crash data, which is collected from the Ohio Department of Transportation (ODOT) and the Ohio Department of Public Safety (ODPS) in three-year intervals. MVRPC analyzes crash trends and generates a list of high-crash locations that identify roadways that may need further examination to determine need for improvement.

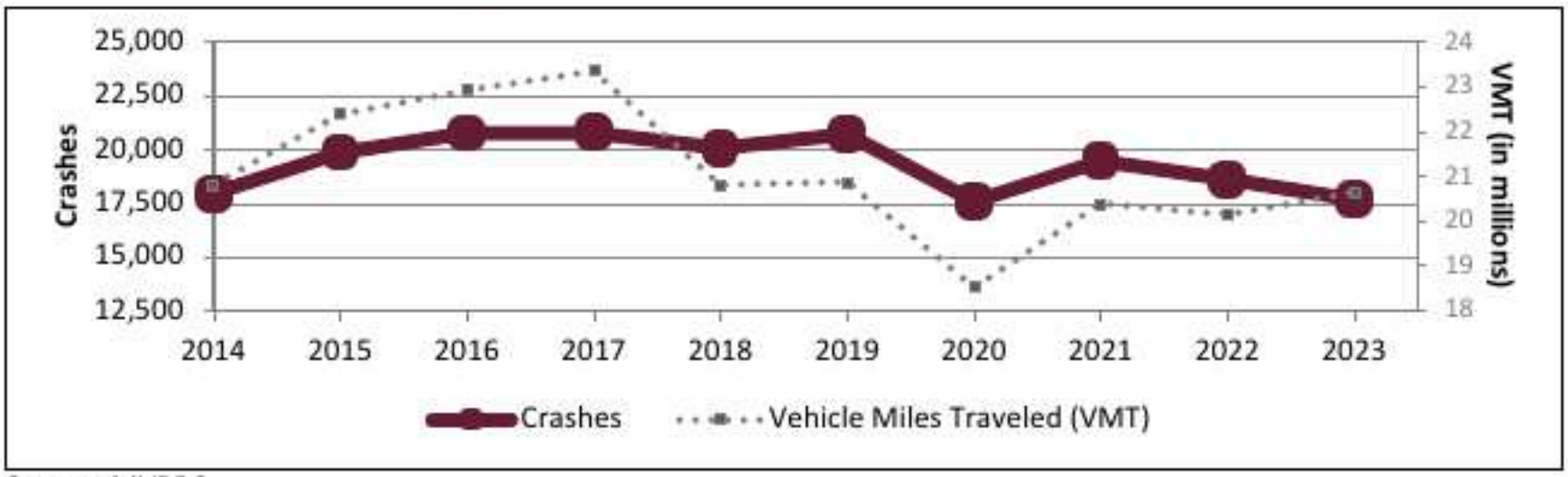
The SFY 2025 High-Crash Location Analysis used roadway crash data for 2021 through 2023 to rank intersections and roadway segments based on the frequency and severity of crashes. These high-crash locations were prioritized as low, medium, and high priority. 163 intersections and 206 segments were ultimately ranked in the analysis. A few excerpts from the 2021-2023 Crash Data Report for the Miami Valley Region are presented in the following paragraphs.

A total of 55,776 reported crashes occurred in the Miami Valley from 2021 to 2023. These crashes include only those costing $1,000 or more in property damage, injury-causing, or fatal. Of that total, 262 crashes were fatal, and 14,753 crashes led to injuries whereas 1,325 of injury crashes lead to serious injuries. Alcohol or drugs were reported to be involved in 61% of all fatal crashes. On average, a crash occurred in the Region every 28 minutes.

The total number of crashes reported annually in the Miami Valley generally increased through 2019 then decreased through 2023. From 2019 to 2023, the total reported crashes decreased by 14%. In 2019, 20,721 crashes were reported compared to 17,679 in 2023. Similarly, the average VMT also decreased after reaching a peak point in 2017.

[7] U.S. DOT Federal Highway Administration 2013. "Performance Management" https://www.fhwa.dot.gov/map21/factsheets/pm.cfm

Figure 4.6 — Total Crashes and VMT by Year



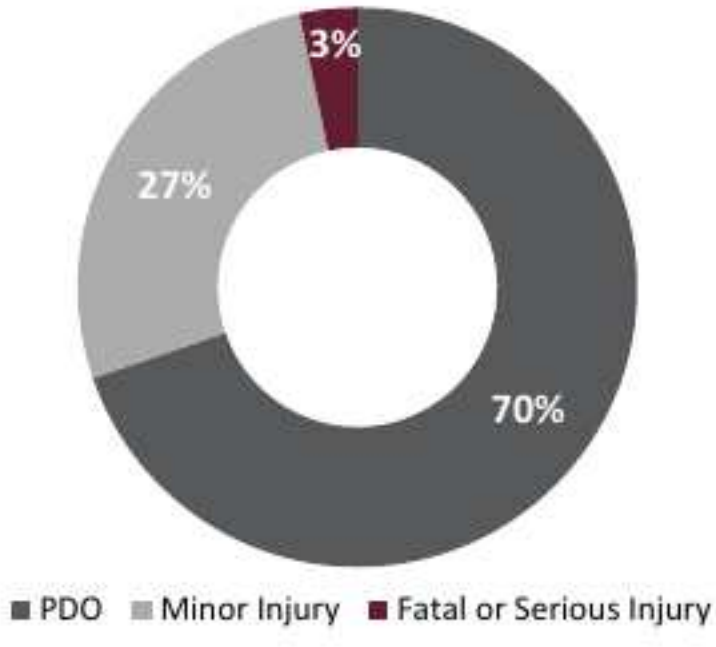
Source: MVRPC

Serious Crashes

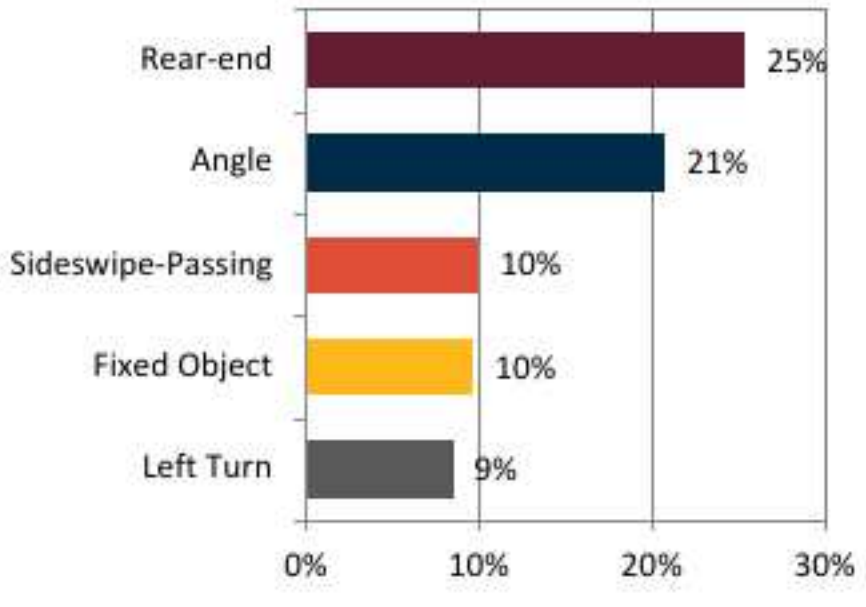
Serious crashes are those that lead to an incapacitating injury or loss of life. Serious crashes represented a small percent of total crashes (3%), with a total of 1,076 serious injury crashes and 213 fatal crashes. The remaining crashes led to minor injuries or property damage only (PDO). In the last 10 years (2014-2023), serious injury crashes decreased by 27% while fatal crashes have increased by 50%. In the last 10 years, serious injuries have decreased by 17% while fatalities have increased by 54%.

Twenty-five percent (25%) of serious crashes were fixed object crashes, and 21% were angle crashes. These crashes varied by age group of drivers involved. Thirty-one percent (31%) of fixed-object crashes involved youth, ages 16 to 25. Similarly, 28% of angle crashes involved seniors, ages 66 and above.

Percent Total Crashes by Severity



Top Crash Types Leading to Serious Crashes

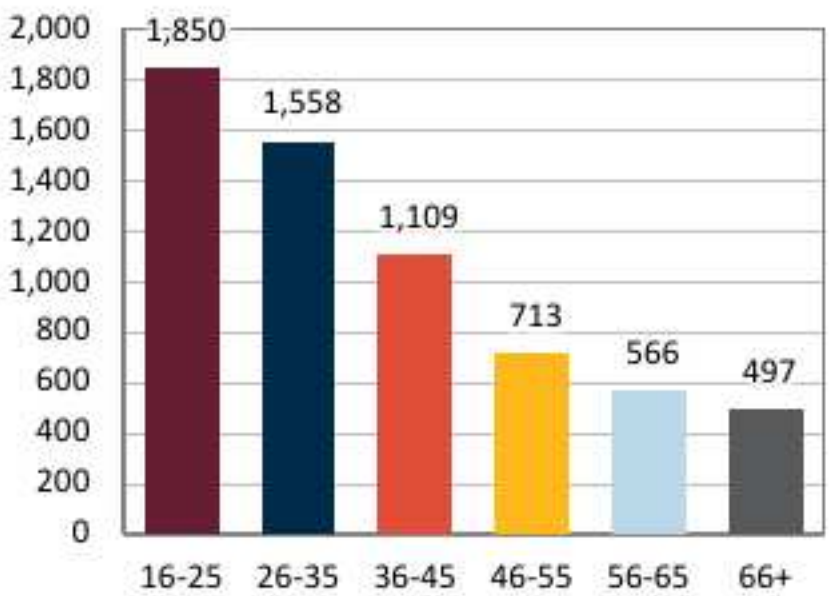


Distracted Driving

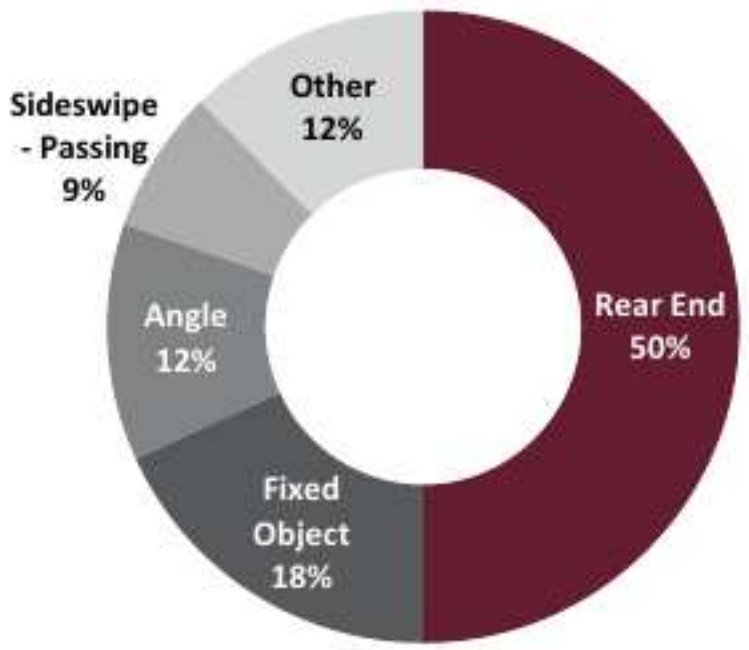
In 2012, law enforcement officers started collecting information on distracted driving in crash reports. This data indicates that from 2021 to 2023, 2,047 crashes involving a distracted driver occurred. These crashes included internal distractions, external distractions, phones, and other electronic devices. Young drivers, ages 16 to 25, were most frequently involved in distracted driving. The top crash type reported with distracted driving was rear ends. Fifty percent (50%) of distracted driving crashes were rear ends.

In January 2023, Ohio passed a hands-free distracted driving law that prohibits motorists, in most cases, from holding or interacting with electronic devices while driving and making it a primary offense. Enforcement started on April 4th, 2023.

Age Groups of Distracted Drivers



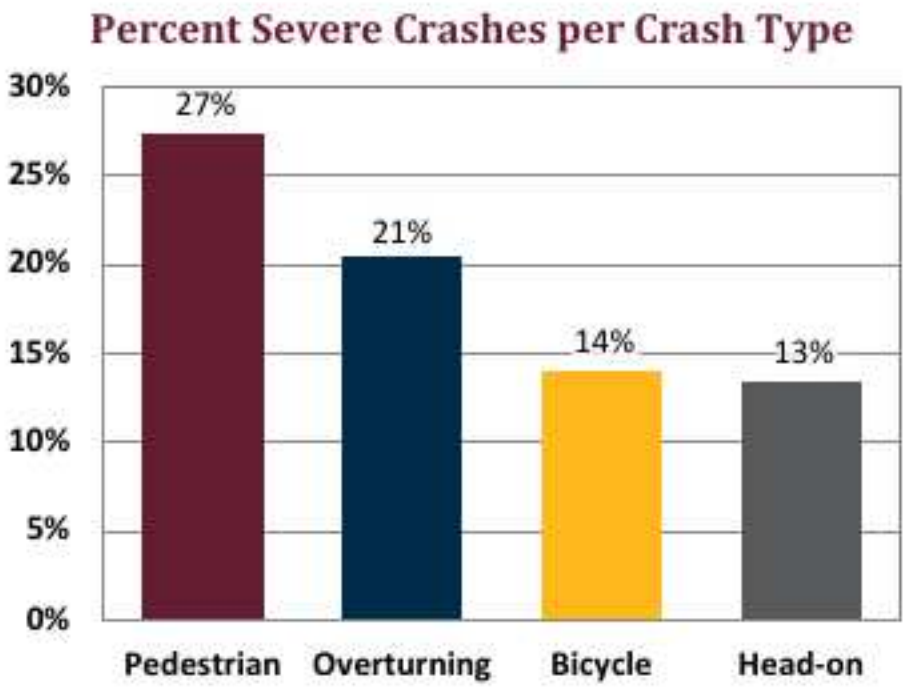
Types of Crashes Involving Distractions



Bicycle and Pedestrian Crashes

There were 219 bicyclist-motorist and 384 pedestrian-motorist crashes reported. These crashes represented a small fraction of all roadway crashes (only 1.49%). However, they were very severe. Up to 96% of pedestrian crashes and 85% of bicycle crashes resulted in an injury, 23% resulted in a serious crash (serious injury or fatality).

The number of fatal crashes involving a bicycle or pedestrian has remained relatively constant. From 2017 to 2019, 35 fatal crashes were reported. That number increased to 36 from 2021 to 2023.





This analysis platform allows comparisons between the SFY 2025 update and past and future iterations of the Regional Safety Analysis. As future analyses are completed, MVRPC can work with our regional partners to identify locations where roadway safety continues to be a public hazard. Pre- and post-implementation data can also be compared using the analysis platform to determine if implemented safety countermeasures are achieving noticeable reductions in crash frequency and/or severity.

Safety and Congestion

There is a correlation between roadway safety and congestion, with increasing congestion levels resulting in diminished road safety. During times of recurring congestion, when the roadway is at or over capacity, there is usually an increase in crash frequency. These periods are usually during peak travel times in the morning (AM peak: 7 to 10 AM) and/or evening (PM peak: 3 to 6 PM). The chart in Table 4.2 illustrates the percent of total crashes that occurred by hour and weekday. As indicated by the darker colors, a higher percent of crashes occurs during the peak weekday AM, midday, and PM hours than at other times of the day.

Table 4.2 — Percent of Crashes by Time and Day

Day	12A	1A	2A	3A	4A	5A	6A	7A	8A	9A	10A	11A	12P	1P	2P	3P	4P	5P	6P	7P	8P	9P	10P	11P
Sun	0.4%	0.3%	0.4%	0.3%	0.2%	0.2%	0.1%	0.2%	0.2%	0.3%	0.4%	0.6%	0.7%	0.6%	0.8%	0.7%	0.7%	0.8%	0.8%	0.6%	0.5%	0.4%	0.4%	0.3%
Mon	0.2%	0.1%	0.1%	0.1%	0.1%	0.2%	0.4%	0.7%	0.7%	0.5%	0.6%	0.7%	0.7%	0.8%	0.9%	1.3%	1.3%	1.4%	0.9%	0.6%	0.5%	0.4%	0.3%	0.2%
Tue	0.2%	0.1%	0.1%	0.1%	0.1%	0.2%	0.5%	0.9%	0.8%	0.5%	0.6%	0.7%	0.8%	0.8%	1.1%	1.4%	1.4%	1.5%	0.9%	0.7%	0.6%	0.4%	0.3%	0.2%
Wed	0.2%	0.1%	0.1%	0.1%	0.1%	0.2%	0.4%	0.8%	0.7%	0.6%	0.6%	0.7%	0.8%	0.9%	1.1%	1.5%	1.4%	1.5%	1.0%	0.6%	0.6%	0.4%	0.3%	0.2%
Thu	0.2%	0.1%	0.1%	0.1%	0.1%	0.2%	0.4%	0.9%	0.8%	0.5%	0.6%	0.7%	0.9%	0.9%	1.1%	1.4%	1.5%	1.6%	0.9%	0.7%	0.6%	0.5%	0.4%	0.3%
Fri	0.3%	0.2%	0.2%	0.1%	0.1%	0.2%	0.4%	0.8%	0.6%	0.6%	0.6%	0.8%	0.9%	1.0%	1.2%	1.6%	1.6%	1.7%	1.2%	0.8%	0.7%	0.6%	0.5%	0.5%
Sat	0.4%	0.4%	0.4%	0.2%	0.2%	0.2%	0.2%	0.2%	0.3%	0.4%	0.6%	0.7%	1.0%	0.8%	0.8%	0.8%	0.8%	0.8%	0.9%	0.7%	0.5%	0.7%	0.5%	0.5%
									12% AM Peak				27% Midday				27% PM Peak							

4.4 Safe Streets For All (SS4A) Regional Action Plans

In 2023, MVRPC was awarded grant funding through the U.S. Department of Transportation's (U.S. DOT) Safe Streets for All (SS4A) program to develop a regional Safety Action Plan (SAP). Established by the IIJA, the SS4A program is a national initiative which seeks to eliminate fatalities and serious injuries on the nation's roadways by supporting both planning and implementation efforts.

The MVRPC Safety Action Plan covers all communities on the MPO except for the cities of Dayton and Franklin which also received U.S. DOT grants to developed their own SAPs. In addition, the City of Riverside also received a grant focused on improving safety on the Woodman Drive corridor.

MVRPC SAFE STREETS FOR ALL
COMPREHENSIVE SAFETY ACTION PLAN

Throughout 2025, MVRPC, in partnership with stakeholders in the Region, worked to develop a draft Safety Action Plan. ***In September 2025, the MPO members of the MVRPC Board of Directors adopted a resolution with a goal to reduce fatalities and serious injuries by 50% by 2040.*** The final SAP was adopted by the MPO members of the MVRPC Board of Directors at their March 2026 meeting after extensive public participation efforts. The SAP establishes a regional vision, goals, and data-driven strategies to eliminate traffic fatalities and serious injuries and positions communities within the MPO area to be eligible for SS4A implementation grants.

MVRPC SAP Recommendations

The MVRPC SAP recommends focusing on locations identified by the high risk and high injury networks and recommends over 100 countermeasures across Engineering, Education, Enforcement, and Evaluation along with guidance on how to determine what countermeasures are appropriate for targeted implementation. The SAP enables projects developed by local agencies to take advantage of SS4A implementation grants and other safety funding opportunities.



The MVRPC Safety Action Plan is available on a dedicated SS4A webpage.

Other Regional Safety Action Plans

City of Riverside – Woodman Drive Corridor

The Riverside SAP, focusing on the Woodman Drive corridor, identified several key recommendations aimed at improving safety and reducing traffic-related fatalities. Recommendations included the installation of additional traffic signals, pedestrian crossings, and roundabouts at high-risk intersections. In addition to infrastructure improvements, the SAP recommended signal optimization to reduce delays and improve traffic flow, especially during peak hours.

In the long term, the SAP proposes more transformative projects, such as converting certain intersections to single-lane roundabouts and reconfiguring the Woodman Drive Corridor to promote a more neighborhood-friendly design. These projects are grounded in the Safe System Approach and are intended to make Riverside's streets safer for all users while enhancing residents' overall quality of life. Two projects aimed at implementing the long-term recommendations are included in the 2050 LRTP, see Table 5.4 for projects 879B and 879C.

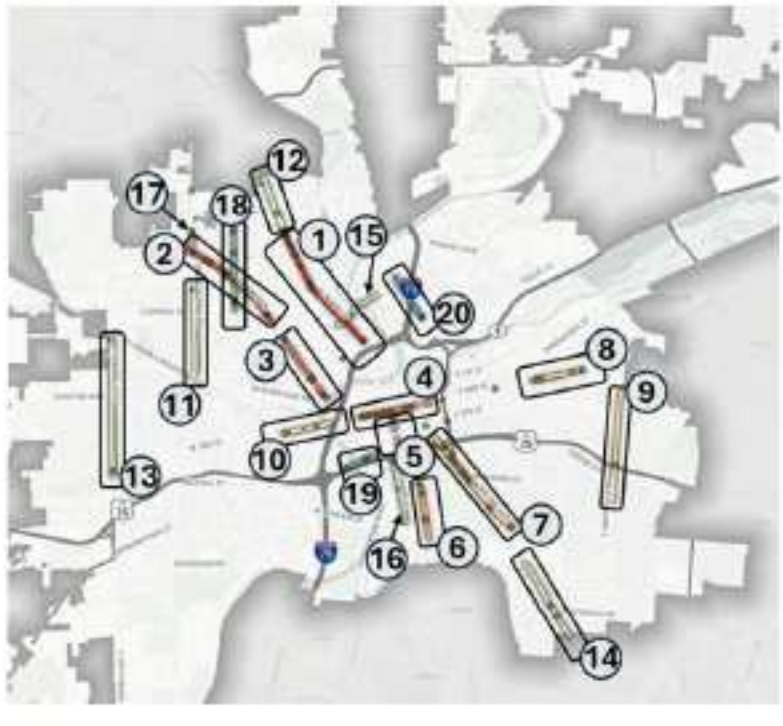
City of Franklin – Safety Action Plan

The Franklin SAP, combined deep data analysis, spatial data analysis, best practices in transportation engineering, planning, and public engagement in the development of a truly comprehensive document including an accounting of all crashes in the City between 2014 and 2023; how they happened, why they happened, who was involved, and what caused them. The Franklin SAP identifies 24 priority projects that will improve transportation safety and work to eliminate traffic fatalities and serious injuries. Two tier 1 priority projects aimed at implementing the recommendations of the Franklin SAP are included in the 2050 LRTP, see Table 5.4 for projects 720 and 721.

City of Dayton – Safety Action Plan

The Dayton SAP commits the City to creating a safe, efficient and inclusive transportation system, with a goal of reducing roadway fatalities and serious injuries by 50% by 2040, and ultimately eliminating them altogether. This goal will be achieved through a data driven approach and proactive safety culture supported by policies, public education, collaborative engagement, and infrastructure investments.

To support this vision zero goal, the Plan identifies the top 20 corridors and top 10 intersections outside of the top corridors to be prioritized for safety improvements.



4.5 Congestion Management Strategies

Currently, there are a number of strategies that transportation planners and engineers implement to reduce the geographic and temporal extent of roadway congestion. These countermeasures include both physical and operational roadway improvements. More often, two or more of these strategies are combined to provide for maximum congestion relief. Below is an abbreviated list of potential roadway congestion countermeasures:

Access Management — These physical roadway treatments attempt to regulate the manner in which motorists access adjacent land uses by consolidating multiple driveways, providing exclusive turning lanes, and/or incorporating various median treatments including two-way left-turn lanes and non-traversable barriers.

Traffic Signal Timing — Adjusting signal times for current roadway demand can be a cost-effective way to increase roadway capacity and is one of the most basic roadway congestion countermeasures.

Freeway Management Systems — These systems integrate a number of operational enhancements, such as cameras, dynamic message signs, and highway advisory radio, into a traffic management center which provides the motoring public with up-to-the-minute updates on current traffic conditions, allowing them to bypass areas with roadway congestion.

Travel Demand Management — A transportation policy that aims to spread transportation demand amongst numerous modes, including carpooling, transit, and bikeway/pedestrian pathways, to reduce dependence on the automobile.

Traffic Incident Management — A program that encourages the quick, safe, and coordinated removal of traffic incidents to restore normal traffic flow.

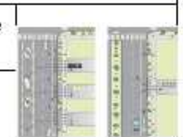
Value Pricing — A strategy that charges travelers a user fee to access congested corridors during pre-determined periods of high demand.

Adding Capacity — By increasing the carrying capacity of a roadway, the growth of congestion may be alleviated.

Table 4.5 includes a matrix describing a toolbox of congestion countermeasures either currently implemented in the Region or /suitable for application in the Region in the future.

As technologies emerge and our understanding of roadway congestion expands, the use of these and other strategies will have a significant effect on reducing roadway congestion, thus providing a safer and more reliable transportation network.

Table 4.3 — Congestion Mitigation Strategies

Congestion Mitigation Strategy	Description	Currently Implemented in the MPO	Illustration / Photograph
Highway Capacity Addition Strategies			
Highway Capacity Expansion	This strategy involves increasing the capacity of congested roadways through additional general purpose travel lanes and/or upgrading interchanges on freeways. Strategies to add capacity are the most costly and least desirable strategies. They should only be considered after exhausting all feasible demand and operational management strategies.	Yes. **Completed:** Downtown Dayton Subcorridor Reconstruction, various I-70 widening projects, US 35 in Montgomery County. **Planned:** I-70 in Montgomery County, I-75 in Miami County, and I-71 in Greene County	
Alternative Transportation Mode Strategies			
Bicycle and Pedestrian Projects Including Exclusive Non-Motorized ROW and New Sidewalk Connections	Investments in these modes can increase safety and mobility in a cost-efficient manner, while providing a zero-emission alternative to motorized modes. In many cases, bicycle lanes can be added to existing roadways through restriping. Abandoned rail rights-of-way and existing parkland can be used for medium-to-long distance bicycle trails, improving safety, and reducing travel times.Increasing sidewalk connectivity encourages pedestrian traffic for short trips.	Yes. Implementation of new Regional Bikeways and Trails as well as Designated Bicycle Lanes on Facilities and Routes at the local level. Implementation of the federally-funded Safe Routes to School program provides 100 percent funding to communities to invest in pedestrian and bicycle infrastructure surrounding elementary schools. ODOT's HSIP program funds systemic improvements that prevent injuries to pedestrians.	
Complete Streets	Routinely design and operate the entire right-of-way to enable safe access for all users including pedestrians, bicyclists, motorists, and transit users. Elements that may be found on a complete street include sidewalks, bike lanes, special bus lanes, accessible transit stops, frequent crossing opportunities, median islands, accessible pedestrian signals, curb extensions, and more.	Yes; MVRPC adopted its Regional Complete Streets Policy in January 2011 (http://www.mvrpc.org/transportation/complete-streets). Dayton, Riverside, Piqua, Troy, and Yellow Springs also have complete streets policies.	
Alternative Mode Marketing and Education	Providing education on alternative modes of transportation can be an effective way of increasing demand for alternative modes. This strategy can include mapping websites that compute directions and travel times for multiple modes of travel.	MVRPC promotes alternative modes in conjunction with a Rideshare and Air Quality Program. Many local communities have promoted non-motorized forms of transportation by providing marked routes, paths, and sidewalks that connect and/or guide users to the Miami Valley Recreational Trail system (http://www.mvrpc.org/transportation/bikeways-pedestrians).	
Travel Demand Management Strategies			
Transportation demand management (TDM) strategies are used to reduce travel during peak periods. They are also used to help agencies meet air quality conformity standards and are intended to provide ways to provide congestion relief/mobility improvements without high cost infrastructure projects.			
Ridesharing and Emergency Ride Home	In ridesharing programs, participants are matched with potential candidates for sharing rides. This is typically arranged/encouraged through employers or transportation management agencies, which provide ride-matching services. Emergency Ride Home programs provide a safety net to those people who carpool or use transit to work so that they can get to their destinations due to unexpected work demands or an emergency.	Yes; MVRPC's Rideshare Program helps commuters with resources form carpools or vanpools through ride-matching, find bike routes and transit options, or form bikepools. There are around 4,000 people currently enrolled in MVRPC's RIDESHARE program. MVRPC also advertises the program across multiple media outlets. MVRPC also has the Drive Less Live More initiative emphasizing the use of sustainable commute options such as carpooling outside of the regular work or school commute times to reduce air pollution and improve health outcomes.	
Alternative Work Hours	There are three main variations: staggered hours, flex-time, and compressed work weeks.	Yes; Alternative Work Hours are becoming more common. WPAFB, the Region's largest employer, allows a variety of work schedules.	
Telecommuting/WFH	Telecommuting policies allow employees to work at home or at a regional telecommute center instead of going into an office all of the time or for a certain number of days per week.	Yes; Telecommuting has become more common, either on a regular or hybrid basis. Recent American Community Survey data confirms the increase.	
Intelligent Transportation Systems (ITS) Strategies			
The strategies in ITS use new and emerging technologies to mitigate congestion while improving safety and environmental impacts. Typically, these systems are made up of many components, including traffic sensors, electronic signs, cameras, controls, and communication technologies.			
Dynamic Messaging	Dynamic Messaging uses changeable message signs to warn motorists of downstream queues; it provides travel time estimates, alternate route information, and information on special events, weather, or accidents.	The Dayton/Springfield Freeway Management System (https://www.mvrpc.org/transportation/long-range-planning-lrtp/intelligent-transportation-systems), combines technological and operational solutions to manage congestion growth. ODOT has a website (www.ohgo.com) and accompanying app designed to provide motorists with real-time travel information using ITS technology on Ohio's roadways. GDRTA has a mobile app called Dayton Bus Tracker and an app called Transit also shows current bus route information.	
Advanced Traveler Information Systems (ATIS)	ATIS technology provides access to an extensive amount of data to travelers, such as real-time speed estimates or information on alternate route options.		
Integrated Corridor Management (ICM)	This strategy provides for the coordination of individual network operations between parallel facilities to create an interconnected system. A coordinated effort between networks along a corridor can effectively manage the total capacity in a way that will result in reduced congestion.	No.	
Transportation System Management Strategies			
Traffic Signal Coordination	Signals can be pre-timed and isolated, pre-timed and synchronized, actuated by events, set to adopt one of several pre-defined phasing plans, or set to calculate an optimal phasing plan based on current conditions.	Yes. There are numerous examples throughout the Region. This strategy is particularly well-suited for built-up urban areas where capacity expansion is difficult or unfeasible.	
Channelization	This strategy is used to optimize the flow of traffic for making left or right turns usually using concrete islands or pavement markings.		
Intersection Improvements	Intersections can be widened and lanes restriped to increase intersection capacity and safety. This may include auxiliary turn lanes and widened shoulders.		
Bottleneck Removal	This strategy removes or corrects short, isolated, and temporary lane reductions, substandard design elements, and other physical limitations that form a capacity constraint that results in a traffic bottleneck.	ODOT has established the ODOT Ramp Clear program, a freeway bottleneck removal program, to help clear queues from freeway exit ramps.	
Vehicle Use Limitations and Restrictions	This strategy includes all-day or selected time-of-day restrictions of vehicles, typically trucks, to increase roadway capacity.	Yes; used during construction and special events.	
Construction Management	This strategy includes preparing construction managment plans, implementing detour signing improvements and providing advance information of closures and alternate routes.	Yes, in cooperation with ODOT and local jurisdictions.	
Other Miscellaneous Strategies			
Traffic Incident Management	This strategy addresses primarily non-recurring congestion, typically includes video monitoring and dispatch systems, and may also include roving service patrol vehicles.	Yes; ODOT partners with sponsors to run the Safety Patrol Program providing freeway incidence response vehicles to improve traffic flow and reduce traffic congestion due to stalled vehicles as well as offering roadway assistance to motorists in need.	
Access Management Strategies	Access management is a broad concept that can include everything from curb cut restrictions on local arterials to minimum interchange spacing on freeways. Restricting turning movements on local arterials can reduce accidents and prevent turning vehicles from impeding traffic flow. Similarly, eliminating merge points and weaving sections at freeway interchanges increases the capacity of the facility.	Yes.	

4.6 Public Transportation

An important tool to manage recurring and non-recurring congestion is the regional public transportation system. Public transportation provides people with mobility and access to employment, community resources, medical care, and recreational opportunities in communities across the Region. It also has the potential to significantly reduce congestion on the regional roadway network. The role of public transit in roadway congestion management is to give commuters an alternative to the automobile for local trips. The Miami Valley Region is served by four transit agencies including the Greater Dayton Regional Transit Authority (GDRTA), offering fixed route services and demand responsive services; Greene CATS Public Transit (Greene CATS), offering deviated fixed route and demand responsive services; and Miami County Transit System (MCTS) and Warren County Transit System (WCTS) offering demand responsive services only. See Chapter 6 for more information on transit services in the Region.

Load Factor Analysis

Transit is less attractive when passengers must stand for long periods of time, especially when transit vehicles are highly crowded. When passengers must stand, it becomes difficult for them to use their travel time productively, which eliminates a potential advantage of transit over the private automobile. Crowded vehicles also slow down transit operations, as it takes more time for passengers to get on and off.[8] Load factor is a measure of ridership compared to seating capacity of a route for a given period of time. Similar to level of service on roadways, the relative comfort that a passenger may experience while seated on a transit vehicle is given a level of service label of A through F as seen in Table 4.3. A load factor of 1.0 means that all seats are taken.

Table 4.4 — Transit Vehicle LOS and Load Factor

LOS	Load Factor	Passenger Conditions
A	0.00-0.50	No passenger needs to sit next to another
B	0.51-0.75	Some passengers may need to sit together, but not all
C	0.76-1.00	All passengers may sit together, limited seat choice
D	1.01-1.25	Some passengers will need to stand
E	1.26-1.50	Full vehicle, spacing between passengers at maximum level of tolerability
F	>1.50	Crush load, extremely intolerable

Source: TCRP Report 100: Transit Capacity and Level of Service Manual 2003
Table 4.4 shows the 5 routes with the highest load factor for each travel period.

[8] Transit Capacity and Quality of Service Manual—3rd Edition

Table 4.5 — Maximum Load Factor Level of Service

Maximum Load Factor Level of Service AM Peak (6:00 AM-9:30 AM)			
Route	**Peak Headway**	**Load Factor AM Peak**	**LOS AM Peak**
8S	20	0.64	B
7S	20	0.62	B
12S	40	0.59	B
22S	40	0.55	B
4W	25	0.47	A
Maximum Load Factor Level of Service PM Peak (3:00 PM-6:30 PM)			
Route	**Peak Headway**	**Load Factor PM Peak**	**LOS PM Peak**
12N	40	1.04	D
7N	25	0.66	B
8N	30	0.58	B
16N	50	0.43	A
18N	40	0.42	A
Maximum Load Factor Level of Service Off Peak (4:00 AM-6:30 AM, 9:00 AM-3:00 PM, 6:30 PM-2:00 AM)			
Route	**Peak Headway**	**Load Factor PM Peak**	**LOS PM Peak**
8N	60	0.45	A
12N	85	0.43	A
7N	50	0.43	A
18S	70	0.41	A
2W	105	0.33	A

Source: GDRTA

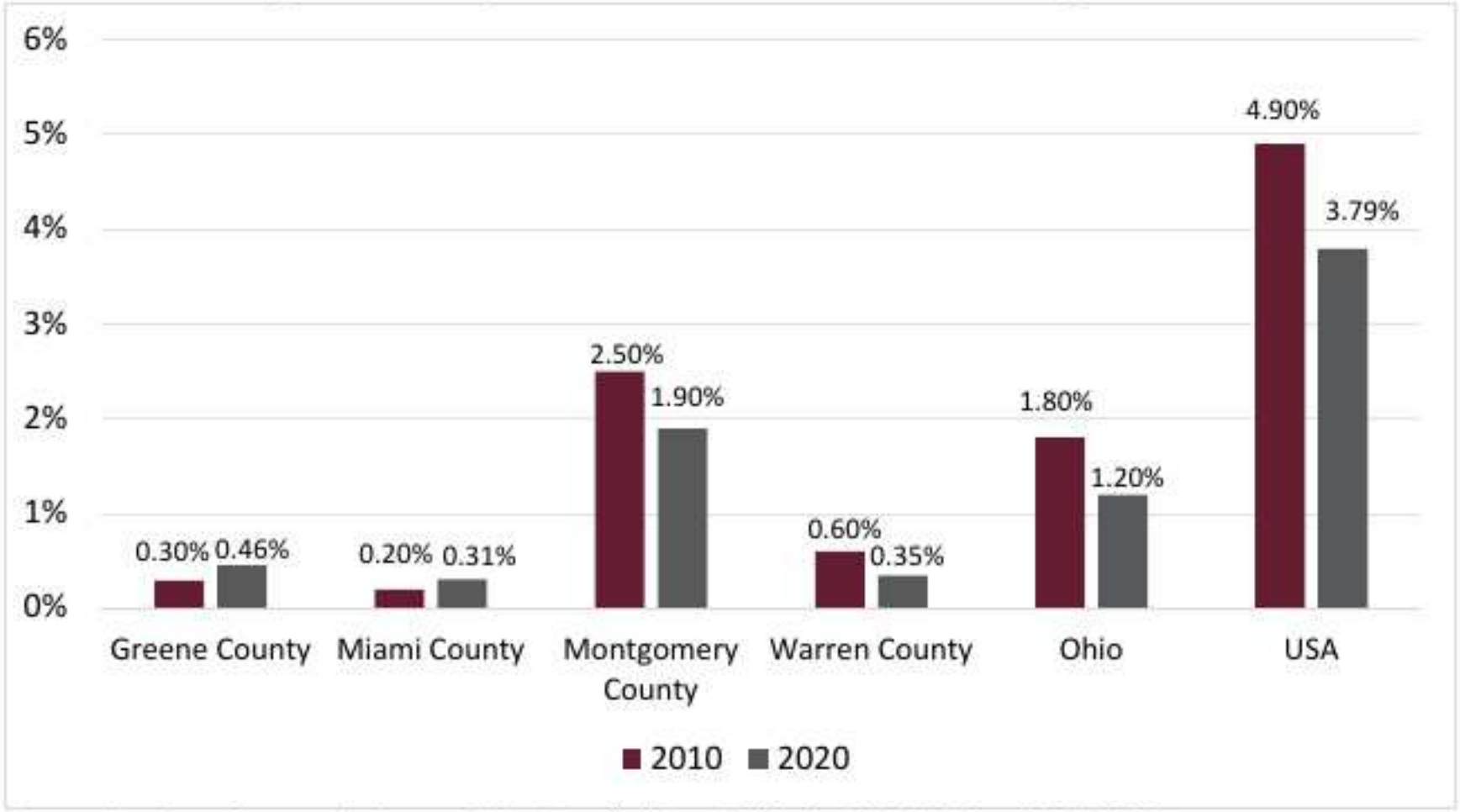
The results of the load factor analysis indicate that all but one route (Route 12N during the PM Peak) experience load factors less than 1.0, indicating high LOS and acceptable levels of passenger congestion. Riders experience comfortable conditions, available seats, and often flexible space with which to make use of their travel time. As GDRTA implements plans to attract new riders, load factors are likely to increase and headways may need to increase to maintain the current exemplary LOS for some routes.

Commuting Transit Trends

The vast majority of the Miami Valley Region population commutes by single occupancy automobile. Transit remains a very small portion of the regional commuting profile. Given that Montgomery County is served by the largest and only fixed-route system, its residents use public transit more than any other county in the Region. About 1.90% of Montgomery County residents commute to work

using public transit compared to less than 1% for Greene, Miami, and Warren counties. While all counties in the Region use public transit less than the United States average, Montgomery County residents use public transit in greater numbers than Ohio residents as a whole. Figure 4.7 displays public transit usage for all counties in the Region compared to both the Ohio and United States averages. Transit usage decreased significantly in the Region in 2020 due to the pandemic.

Figure 4.7 — Regional Public Transit Use for Commuting to Work



Source: American Community Survey 5-Year Detailed Data Tables for 2008-2012 and 2018-2022

4.7 Regional Intelligent Transportation Systems

Intelligent Transportation Systems (ITS) continues to be at the forefront of transportation planning as MVRPC proceeds with the Region's Deployment Plan. The plan focuses on making the transportation system more efficient and responsive to drivers by using technological improvements instead of making major road capacity expansions. In addition to many signal coordination systems implemented throughout the years, the Freeway Management System was completed in 2012 and provides timely and accurate traveler information to motorists that can be accessed through ohgo.com or mobile applications.

To maintain and build upon the Region's strong ITS foundation, the Miami Valley Region ITS stakeholders completed the first Miami Valley ITS Regional Architecture in 2003. Simply put, the regional architecture defines the framework on which to build the ITS system.

In 2022, MVRPC, in coordination with the Clark County Springfield Transportation Coordinating Committee (CCSTCC) and the Ohio Department of Transportation (ODOT), completed a comprehensive update to the Miami Valley Regional ITS Architecture. A regional architecture is required by both the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) to qualify ITS projects for federal funding after April 2005.

MVRPC updated the regional architecture to be consistent with the National Reference ITS Architecture. Similarly, ODOT/DriveOhio have completed a systems engineering analysis to develop a statewide framework for Connected and Automated Vehicles (CV/AV) technology deployments. This comprehensive framework promotes consistency and interoperability as various projects are implemented at varying scales by a wide range of stakeholders and has been incorporated in full into the Miami Valley Regional ITS Architecture.

Key points of the 2022 architecture update are summarized below:

- Comprehensive update to stakeholders, elements, and services to better reflect the services that are currently in use or planned/possible in the near future.
- Addition of functional requirements for the major ITS elements in the region.
- Addition of potential communication solutions based on nationally recognized standards.
- Integration of Statewide CV/AV architecture into Regional ITS architecture.
- Addition of the RAD-IT database to the MVRPC website and available to download.

Figure 4.8 represents the Miami Valley Regional ITS Architecture System. Within each subsystem, darker colored boxes represent elements available or anticipated in the Miami Valley in the near future.

More information on the ITS regional architecture is available on the MVRPC ITS page.

Figure 4.8 — Miami Valley Regional ITS Architecture Subsystem Diagram

4.8 Smart Mobility and Advanced Air Mobility Initiatives

There is substantial anticipation and excitement in the area of Connected/Autonomous Vehicles (CAVs) as well as Advanced Air Mobility (AAM) and the potential of those technologies to revolutionize mobility. Given that MPOs incorporate a multi-decade planning horizon, MVRPC has begun to consider the implications of CAVs and AAM now before their widespread implementation.

DriveOhio

DriveOhio is an initiative of the Ohio Department of Transportation (ODOT) that was created in 2018 to highlight the State's efforts in designing, testing, and deploying smart mobility technologies. The mission statement of DriveOhio follows:

> **The DriveOhio mission is to create pathways for the use of smart mobility technologies that increase safety, enhance mobility, expand access, and attract, prepare, and retain Ohio's talent. We connect government, industry, and academia to support research, development, testing, and deployment of innovative solutions to Ohio's mobility challenges.**

DriveOhio has several active projects studying CAVs, electric vehicles, and electric vehicle infrastructure. They have also been working on developing guides for implementing this new technology and helping to educate school-age children and college students about rapidly developing transportation technologies.

Major Truck Automation Project along the I-70 Corridor



DriveOhio, ODOT, and the Indiana Department of Transportation (IDOT) began a partnership in 2021 on a project focused on the safe and efficient deployment of automated trucks on I-70 between Columbus, Ohio and Indianapolis, Indiana—this path crosses through the Miami Valley Region. The project is expected to conclude in January 2027 and involves a wide variety of stakeholders ranging from technology providers, truck manufacturers, regional logistics councils, down to private freight companies. The project's first truck platooning deployment occurred on April 14, 2025. Two tractor-trailers with automated truck platooning technology were involved in that deployment and drove autonomously for portions of the trip between Columbus and Indianapolis. It is important to note that professionally-trained truck drivers were at the steering wheel in both trucks during the testing period.[9] This initial deployment tested platooning technology with the two trucks. Platooning vehicular technology is defined as "the linking of two or more vehicles using vehicle-to-vehicle technology. The driver of the lead vehicle controls the speed and direction [of the vehicles] while the following vehicle automatically matches the precise movements **without input from the second driver**." [10] Additional platooning deployments were planned for late 2025 and through 2026 but further details have not been publicly provided as of January 2026.

In December 2025, DriveOhio began soliciting for more CAV vehicle tests in the Region between Indiana and Ohio and expanded the potential roads that qualify for the tests to include any routes with an end point in Ohio and Indiana. This expanded research request opens up more pathways for CAV testing that includes the Miami Valley.[11]

Vehicle-Based Data Collection Pilot Project

DriveOhio partnered with Honda, i-Probe Incorporated, the University of Cincinnati, and Parsons to "develop a road condition management system that used vehicle-generated data to identify and

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[9] Ohio Department of Transportation 2025. "Ohio and Indiana Deploy Partially Automated Trucks on Interstate 70" https://drive.ohio.gov/about-driveohio/news/70-Truck-Automation

[10] Ohio Department of Transportation 2025. "Truck Automation Project" https://drive.ohio.gov/programs/av-cv/truck-automation

[11] Ohio Department of Transportation 2025. "ODOT I-70 Truck Automation Corridor Notice of Deployment Partners" https://dam.assets.ohio.gov/image/upload/drive.ohio.gov/programs/automated-connected/truck-automation-factsheet.pdf

report hazardous road conditions in Ohio."[12] Two Honda vehicles were equipped with the road condition management systems to analyze road conditions and driven around Ohio to assess what roads needed to be fixed. The vehicle-generated data was then compared to the visual assessment of the same roadways by ODOT personnel and the ODOT personnel missed three times the number of items that the road condition management software missed—this is likely due to ODOT personnel having to multitask driving and assessing roadway conditions.[13] The pilot study showed that vehicle-generated road monitoring data could optimize roadway maintenance in the future.

Advanced Air Mobility State and Local Developments

Advanced Air Mobility (AAM) is defined by the FAA as a "rapidly-emerging, new sector of the aerospace industry which aims to safely and efficiently integrate highly automated aircraft into the National Airspace System. AAM is **not a single technology, but rather a collection of new and emerging technologies** being applied to the aviation transportation system, particularly in new aircraft types."

Unmanned Aerial Systems are one subset of AAM technology and are defined by the FAA "as an aircraft that is operated without the possibility of direct human intervention from within or on the aircraft".

Generally, AAM technologies are categorized by their level of autonomy (manual, remote, or autonomous) and general configuration (how they achieve flight and what they are made of).[14]

The operational cost of AAM technology, as of early 2026, is still too high to be widely accessible, but the current assumption of the FlyOhio coalition (discussed in the next section) is that the business case for this technology "will become more attractive as the operational costs are driven down" as increased research and time is put into the technology.[14]

FlyOhio – A Statewide Initiative

FlyOhio is a coalition of public, private, and academic partners with a stake in advanced aviation technology in Ohio that is a subset of the DriveOhio ODOT program. It is led by ODOT's Uncrewed Aircraft Systems (UAS) center. Similar to DriveOhio's goals with CAVs, FlyOhio exists to aid statewide efforts to design, test, and ultimately deploy advanced aviation technology across the state.

FlyOhio published the "Advanced Air Mobility Framework" going over AAM and its potential in Ohio at a state and local level in July 2022—that document lays out both the physical and policy

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[12] Ohio Department of Transportation 2025. "Vehicle-Based Data Pilot Project" https://drive.ohio.gov/programs/av-cv/vehicle-based-data

[13] Honda Motor Corporation Ltd. 2026. "Honda and DriveOhio Complete Pilot of Nation's First Proactive Roadway Maintenance System Aimed at Creating Safer Roads" https://hondanews.com/en-US/honda-corporate/releases/release-362088f67796c0d72b8469227602bc7d-honda-and-driveohio-complete-pilot-of-nations-first-proactive-roadway-maintenance-system-aimed-at-creating-safer-roads

[14] Ohio Department of Transportation 2025. "Advanced Air Mobility Framework" https://drive.ohio.gov/programs/aam/advanced-air/aam-framework

infrastructure that needs to be established for AAM technology to flourish and identified stakeholders who can help make that happen.

The Drones for First Responders Pilot Program is a recently funded ongoing program that will help local law enforcement, fire departments, and emergency medical service agencies utilize drones in their work.[15] Examples of anticipated drone uses in this program are listed below:

- Search and rescue
- Crash response
- Public Safety Incident Response
- Medical Supplies Delivery
- Natural Disaster Response

AAV Technology in the Miami Valley

In the private sector, the AAV industry is impacting the Miami Valley through Joby Aviation, which is a private aviation company with an aircraft manufacturing plant near the Dayton International Airport. As of December 2025, Joby Aviation stated they plan to use the facility to produce Electric Vertical Take-off and Landing (eVTOL) air taxis but the facility is not fully open.

In the public sector, the Wright-Patterson Air Force Base (WPAFB) houses the Air Force Research Laboratory (AFRL) that has multiple active initiatives to study AAM and Uncrewed Aircraft Systems (UAS) for potential deployment. Additionally, the local Sinclair College has an Aviation Technology Department that includes an Advanced Air Mobility Maintenance Technology certificate option to help train the local workforce to be prepared for upcoming AAV technology.[16]

GDRTA Connect

Locally, the GDRTA Connect service, described in Chapter 6, is Greater Dayton RTA's effort to improve mobility in the Miami Valley through the use of smart technologies. Over 200,000 trips used the GDRTA Connect service in 2025.

[15] Ohio Department of Transportation 2025. "Drones for First Responders Pilot Program" https://drive.ohio.gov/programs/aam/uas/drones-first-responders

[16] https://www.sinclair.edu/program/params/programCode/AAMMT-S-STC/

Chapter 5
Congestion Management Strategies–Highway

5.1 Overview

Following the Long Range Transportation Plan kick-off meeting in August 2025, MVRPC worked with stakeholders in the Region to develop Congestion Management (CM) highway projects for SFY 2026 through SFY 2050. This list includes all roadway capacity expansion projects and other projects not covered under the operations and maintenance program.

In order to develop the final congestion management project list for the 2050 LRTP update, MVRPC hosted a project sponsor webinar followed by in-person (October 29, 2025) and virtual (October 30, 2025) public participation meetings.

The process continued by identifying future revenue and conducting a systematic evaluation of projects. The resulting SFY 2026-2050 LRTP includes 238 projects with a total cost of $2,998.25 million. The congestion management list is fiscally constrained, with a projected revenue of $3,433.89 million. The remainder revenue of $4,372.08 million is reserved for operations and maintenance/reconstruction projects. As required by the Infrastructure Investment and Jobs Act (IIJA), both costs and revenues are expressed in year of expenditure dollars.

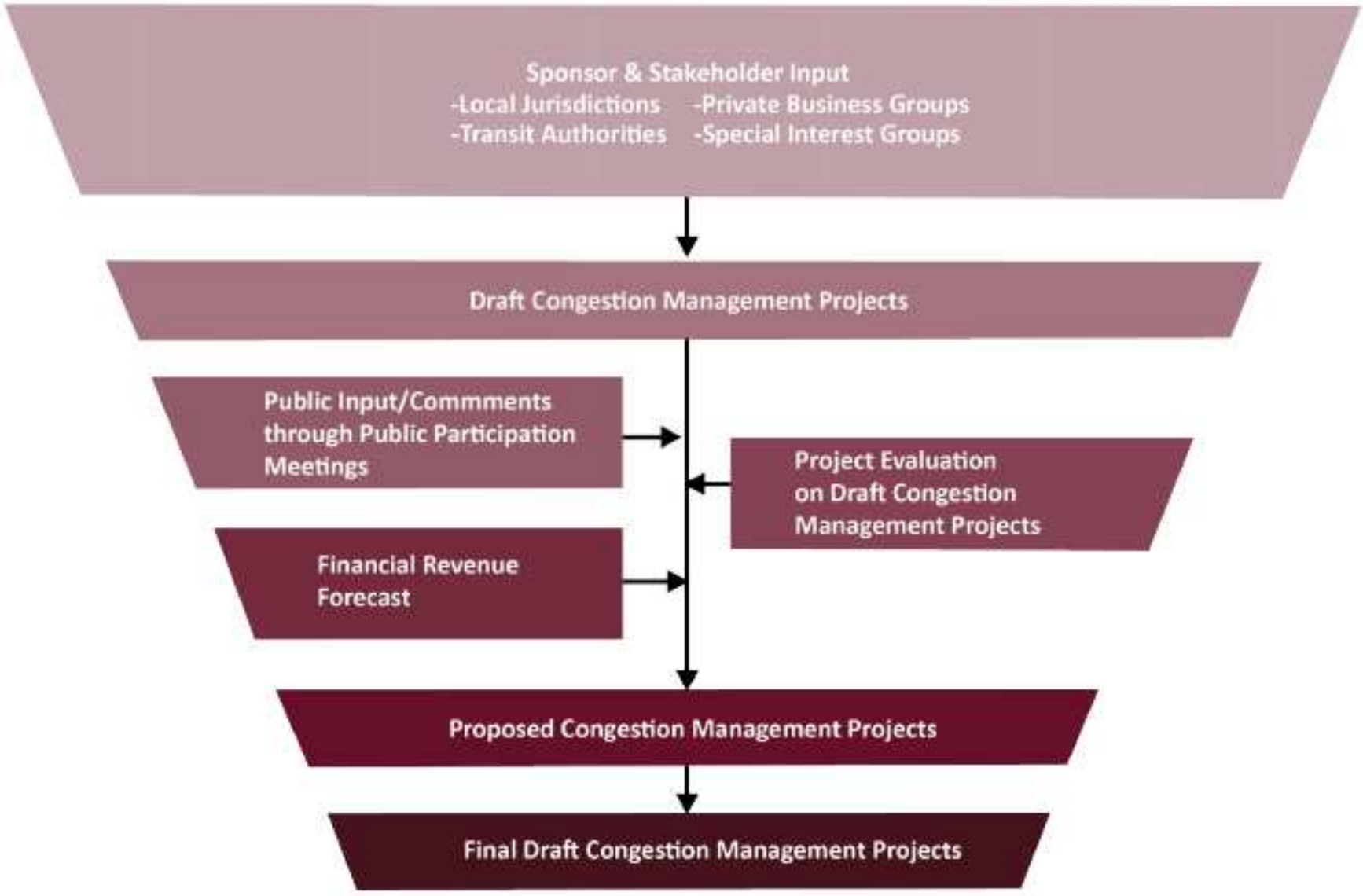
5.2 Process Overview

MVRPC developed the final CM projects following several interactive steps in conjunction with local stakeholders in the Region. Representatives of all stakeholders in the Region, from local jurisdictions to the general public, were involved in every step of the process.

MVRPC first sought sponsor and stakeholder input through virtual meetings. Staff then compiled the draft fiscally unconstrained project list and modified it as necessary to make the list of projects consistent. Following this, MVRPC hosted both in-person and virtual public participation meetings to present the draft CM list and solicit comments from the general public. After the meetings, applicable public comments were forwarded to the appropriate project sponsor and, if necessary, the projects were modified. Next, the financial analysis was conducted to determine the available 25-year revenue. Staff then completed the project evaluation process and developed a fiscally constrained proposed project list. Finally, the proposed project list was presented at the MVRPC committee meetings and adopted by the Board of Directors in December 2025. Staff were then directed to begin the analyses pertaining to the Plan update.

The following sections of this chapter provide in-depth information on each step of the CM project development process and is visualized below in Figure 5.1.

Figure 5.1 — Congestion Management Projects Development Process Overview



5.3 Sponsor and Stakeholder Input

MVRPC invited both governmental and other organizations to submit projects to the 2050 LRTP by sending an invitation email. In addition, web links to the Project Profile and Evaluation Forms, along with pertinent background information materials on the state of the transportation system, were emailed prior to the meetings and made available on the Plan website (https://plan2050.mvrpc.org/)

Project sponsors were encouraged to submit forms electronically, using user-friendly point-and-click forms. The background information materials attached with the invitation email and available on the Plan webpage included:

- List and maps of Congestion Management Projects in the current LRTP
- Project Evaluation System information—including project profile forms, evaluation forms, criteria definitions, and maps;
- Project review spreadsheet; and
- Tips for project submission.

A seminar for jurisdictions on how to submit LRTP projects, was held on August 14, 2025 via zoom.

MVRPC staff electronically communicated with all jurisdictions and project sponsors regarding project submission requirements and deadlines, and also provided them with a review spreadsheet that could be used to update the status of CM projects included in the previous LRTP to identify projects that have been completed or are under construction, update the current status of remaining projects (including deletion of projects), and identify new projects. The Project Profile Form and the Project Evaluation Form were submitted by the project sponsors electronically.

MVRPC received a total of 238 CM projects. Once all the projects were submitted, the staff compiled the projects and worked with the appropriate project sponsor to fine-tune the projects in terms of scope, feasibility, and cost to develop a draft, not-fiscally-constrained, CM project list. After this, the draft project list was sent to project sponsors for their review prior to the public participation meetings in October 2025.

In general, project cost was estimated by the project sponsor and included in the Project Profile Form. However, other sources such as the TIP and relevant transportation studies were additionally used when necessary. Due to recent trends in construction related inflation, project sponsors were encouraged to re-estimate the cost of all projects being submitted to the LRTP process using up-to-date assumptions.

5.4 Public Participation

Two public participation meetings were held to present the draft CM projects and solicit comments from the general public and other interested parties; an in-person meeting was held on October 29, 2025, and a virtual meeting via zoom was held on October 30, 2025. Comments received regarding the draft CM projects were reviewed by MVRPC staff, forwarded to the appropriate project sponsor and, if necessary, projects were modified accordingly. All comments were also presented to the TAC and Board of Directors prior to the adoption of the draft congestion management project list. Please refer to Chapter 11 for more information regarding the October public participation meetings.

5.5 Project Evaluation

MVRPC originally developed the Project Evaluation System (PES) for the 2004 LRTP in order to advance transportation projects that are consistent with regional transportation priorities. The PES was based on the common themes and transportation values identified by the 2003 visioning process, named TransAction 2030, and reflected under the Plan goals and objectives described in Chapter 1.

In 2006, MVRPC undertook a major review of the project evaluation system to ensure that the process was a more collaborative, transparent, and interactive way to work with member jurisdictions. As a result, some criteria were modified, additional explanations and examples were provided, and a complete set of maps and data were made available to project sponsors to aid in the self-scoring process.

In 2019, MVRPC staff worked with a PES Update Committee composed of 15 TAC or Board members representing MPO member agencies and communities to undertake another major review of the PES. Following an analysis of the projects funded over the previous decade, the motivation for the 2019 update was to better align the criteria with the type of projects that were currently being funded, and to incorporate the performance management approach for project scoring and selection.

The PES is now available on the MVRPC website along with all relevant information. MVRPC staff work with participants to ensure a full understanding of the process—which includes hosting a seminar for project sponsors. PES maps and criteria are updated as needed to ensure that they are based on the most recent information.

Figure 5.2 illustrates the conceptual design structure of MVRPC's PES.

Figure 5.2 — Project Evaluation System Design Concept



Although some of the criteria under the different categories may appear to overlap, the attributes that they measure for each project remain distinct and unique. Specifically, the PES for highway projects measures 20 indicators, with a maximum total of 70 points grouped by 6 themes. These themes are: Regional Context/Coordination; Transportation Choices; Transportation System Management; Land Use; Economic Development; and Environment. Based on the PES, the Project Evaluation Form was updated so that a project sponsor could complete the project evaluation and attach it to the Project Profile Form at the time of project submission.

Once all Project Evaluation Forms were received, MVRPC staff reviewed them for consistency, accuracy, and completeness of data for each individual project. A cross-examination of all projects was also conducted to ensure that the evaluation remained fair. Other factors such as existing traffic counts, future projected traffic volumes, future land use plans, and corridor completion were incorporated into the evaluation process to determine the proposed fiscally-constrained project list.

5.6 Congestion Management Projects

Based on public input, future revenue projections by timeframe, and the project evaluation process, MVRPC proposed 238 projects with a total cost of $2,998.25 million for the current 2050 LRTP. All of the projects submitted to the LRTP process are included in the final CM list. However, due to additional requirements regarding the LRTP financial plan, some projects were moved to later years of the Plan where financial capacity was expected to be available. Decisions about what projects to cut or move to a later period were made based on the PES score, public input, and consultation with the project sponsor. MVRPC presented the proposed project list to its committees and the Board of Directors adopted it on December 4, 2025, making the proposed project list the final draft list. Minor changes to the list occurred between December 4, 2025, and the plan adoption on May 7, 2026 and the list was again presented to the public in April 2026. The final 2050 LRTP CM projects are included in Table 5.4. Figures 5.4, 5.5, 5.6, and 5.7 illustrate locations of CM projects in the Region.

Table 5.4 includes the following information about each project:

- Project ID Number;
- County;
- Roadway Name;
- Assumed feasible implementation period;
- Mileage (length in project miles);
- Cost (in millions of 2025/YOE dollars; TIP project costs in the year in which the funds are committed);
- TIP (Yes = in TIP, YP = partially in TIP (e.g. PE/ROW Phases only), NF = committed project with local funds or federal funds outside of the current TIP years, No = not in TIP/not funded); and
- Description of the project.

All 238 CM projects can be categorized by project type as follows:

- Interchange, Intersection Improvement, Turn Lane Additions – 143 projects (60.1%);
- Road or Bridge Widening – 30 projects (12.6%);
- Bike/Pedestrian – 19 projects (8.0%);
- Road Diets – 18 projects (7.6%);
- Road/Bridge Replacement, Realignment, or Reconstruction – 15 projects (6.3%);
- New Road, New Interchange, or Road Extension – 7 projects (2.9%);
- Signal Improvement or Signal Interconnect – 3 projects (1.3%);
- Other – 2 projects (0.8%); and
- Studies – 1 project (0.4%).

5.7 Status of Major Projects

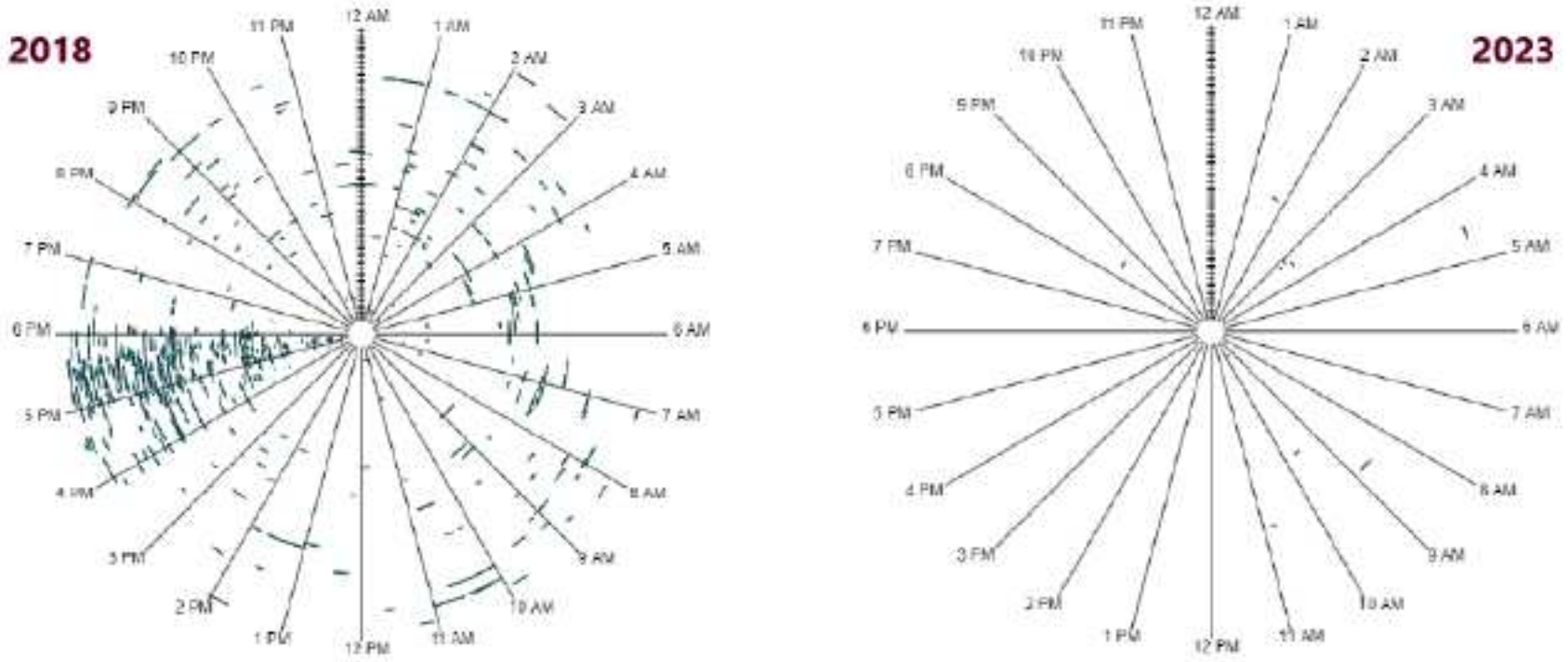
This section provides a brief update on major and regionally significant projects that have been completed since the adoption of the last plan, are currently under construction, or are funded in the current SFY 2026-2029 TIP.

US 35 in Montgomery County

MVRPC, in conjunction with ODOT, conducted the US 35 Corridor Major Investment Study (MIS) to identify improvements to the US 35 corridor from I-75 to I-675 in 2004. This section of US 35 is one of the oldest sections of freeway in Ohio and needed geometric improvements to address safety, congestion, and accessibility issues resulting from increased traffic and changing traffic characteristics over the last 60 years.

The US 35 improvement project was divided in five phases for construction: (1) widening mainline bridges, (2) installing a noise wall, (3) improving the Smithville interchange, (4) widening US 35 between Steve Whalen Boulevard and I-675 by adding a lane in each direction, and (5) improving the Woodman interchange. The widening project wrapped up in SFY 2023 and has been reducing peak hour congestion and improving safety throughout the corridor by reducing traffic bottlenecks and reducing crashes. INRIX data indicates significantly less congestion events occurred after the project was completed. Figure 5.3 shows that significantly less traffic delays happened after the improvements compared to before. The lines around the circle indicate bottlenecks along the US-35 Corridor and the center of the circle represents the beginning of the year and outer edge is the end of the year. The 2018 data shows routine backup queues of variable lengths being particularly common between 4pm and 6pm. In contrast, the 2023-time spiral shows that congestion now occurs far less frequently and with shorter durations along the corridor.

Figure 5.3 — Time Spirals for the US-35 Corridor from I-75 to I-675 in Montgomery County



Source: INRIX and RITIS

US 35 in Greene County

The Major Investment Study (MIS), completed in 2004, evaluated the conversion of US 35 from North Fairfield Road to the Xenia Bypass into a limited access facility by eliminating the at-grade intersections at Shakertown Road, Factory Road, Alpha Road, Orchard Lane, and Valley Road.

Further research, driven by statewide funding constraints, unveiled a new alternative to convert US 35 into a "superstreet" that would address the majority of the safety concerns at a lower cost. The superstreet was completed in SFY 2023 and allows drivers traveling north on Factory Road or Orchard Lane to only make an immediate right-turn or drive a short distance further before making a U-turn on US 35 to travel west or continue on Factory Road or Orchard Lane.

The superstreet is intended to be a short-term fix. A project is tentatively planned to occur between 2041 and 2045—pending construction funding from the Transportation Review Advisory Council (TRAC)—to eliminate at-grade intersections at Factory Road, Alpha Road, and Orchard Lane and replace them with full-access interchanges.

Additionally, the US 35 intersection with Trebein Road and North Valley Road is undergoing conversion to a grade separated interchange and is expected to be completed in April 2026. This project will reduce congestion and improve safety.

Northeast Logistics Access at the Dayton International Airport

Montgomery County hired a consulting firm to perform an analysis focused on potential logistics and distribution sector growth in the area surrounding the Dayton International Airport (DIA) in 2013. This was done because the area was identified as a potentially optimal location for logistics and distribution sector growth due to close proximity to an airport (DIA) and multiple highways (I-70 and I-75). As part of a regional strategy to attract logistic and distribution sector investment, various roadway improvement projects were and actively are being planned in the area surrounding the DIA.

One project, completed in 2023, widened US 40 between Airpark Boulevard and Peters Pike to a five-lane cross section and upgraded the interchange at the Airport Access Road and US 40 intersection.

The next large-scale improvement planned in the area is scheduled for construction in SFY 2027 on Northwoods Boulevard, North Dixie Drive (between Northwoods Boulevard and Lightner Road), and Lightner Road. It will include resurfacing the existing roadways, widening shoulders, installing concrete barriers, adding tree lawns, adding bike paths, creating a roundabout (at the intersection of North Dixie Drive, Lightner Road, and CR 25A) and upgrading a traffic signal. This project will help the three roadways accommodate increased traffic—especially from heavy truck traffic servicing large logistics and distribution facilities near the I-70/I-75 Interchange and the Dayton International Airport.



Source: Google Maps

I-70 Corridor Improvements

I-70 is a major interstate that crosses through the northern part of Montgomery County and is close to the DIA. In recent years, a concerted effort has been made to widen I-70 to 3 continuous lanes in both directions. As part of that endeavor, I-70 will be widened in Montgomery County in three phases. Phase 1 will widen I-70 between SR 48 and the SR 49 interchange and is expected to be finished in 2031. Phase 2 will widen I-70 between the SR 49 interchange and 0.3 miles east of Brookville-Phillipsburg Road and is tentatively planned in the 2031-2035 timeframe. Phase 3 will widen I-70 from 0.3 miles east of Brookville-Phillipsburg Road to Upper Lewisburg-Salem Road and is tentatively planned in the 2036-2040 timeframe. All three phases of the project are currently completing the environmental and preliminary engineering phases. One last phase to widen I-70 between Jordan Road in Preble County and Upper Lewisburg Salem Road in Montgomery County is tentatively scheduled in the 2041-2045 timeframe and has not yet started the environmental process.

5.8 Fiscal Constraint

The Congestion Management projects in the 2050 LRTP are fiscally constrained, with a total cost of $2,238.64 million and a total projected revenue of $2,672.02 million when expressed in year of expenditure dollars and excluding interstate projects (analyzed separately). Table 5.1 shows a summary of costs and revenues by timeframe. Project costs for projects outside the TIP were inflated using the March 2025 Congressional Budget Office's "Long-Term Budget Outlook: 2025 to 2055 for Consumer Price Index for all urban consumers for FY 2025 and beyond" (2.3 percent per year). This resulted in inflation factors of 1.12, 1.27, and 1.59 being used for the mid-years of the Plan periods (2030), (2031-2040), and (2041-2050) respectively. A few projects outside the TIP years were not inflated because their cost estimates reflect ODOT's Ellis estimates and are already inflated according to ODOT guidelines. These projects are identified in Table 5.4 as TIP: NF and YP. Complete documentation of the revenue forecast can be found in the Financial Summary Report.

Table 5.1 — Fiscal Constraint of the 2050 LRTP Projects (in millions of 2025/Year of Expenditure dollars)

Costs / Revenues	Short Term Plan (2026-2030)	Medium Term Plan (2031-2040)	Long Term Plan (2041-2050)	For Full 25 Year Plan
2025				
- Cost	215.15	762.95	662.30	1,640.40
- Revenues	393.17	831.70	831.70	2,056.56
YOE				
- Cost	217.71	965.62	1,053.06	2,236.38
- Revenues	401.49	1,022.99	1,247.54	2,672.02

Source: MVRPC

Due to the high cost and high state and national significance of interstate widening projects (I-70, I-75, and I-71 corridors), the financial resources that have been historically available to the Region are not sufficient to implement such high cost/high impact projects. As a result, MVRPC is primarily relying on financial resources from outside the Region to implement interstate projects and it is expected that all such projects will receive funding through Ohio's Transportation Review Advisory Council (TRAC). Table 5.2 documents the costs of these projects in year of expenditure dollars.

Table 5.2 — 2050 Forecasted Cost and Revenues for Interstate Widening Projects (in millions of Year of Expenditure dollars)

Program	Short Term Plan (2026-2030)	Medium Term Plan (2031-2040)	Long Term Plan (2041-2050)	For Full 25 Year Plan
Cost/Revenue	106.27	296.85	358.75	761.87

Source: MVRPC

Recognizing that the transportation system cannot be sustained in the long term without proper maintenance, MVRPC includes operations and maintenance/reconstruction projects as part of its revenue forecast. The forecast is based on actual programmed projects on the TIP and historical expenditures derived from the annual local project sponsor survey. The current forecast shows that the Region is expending approximately 54% of TIP revenues for operations and maintenance/reconstruction projects and 81% of local roadway expenditures on operations and maintenance/reconstruction projects not programmed in the TIP for a total of $4,372.08 million over the life of the Plan spanning from SFY 2026 to SFY 2050.

The assumption is that these funds ($4,372,080) will be reserved for operations and maintenance/reconstruction projects and will be sufficient to maintain the transportation system. Table 5.3 shows operations and maintenance/reconstruction costs as well as revenues for each Plan period by funding source.

Table 5.3 — 2050 Operations and Maintenance / Reconstruction Costs and Revenues by Funding Source (in millions of 2025 / Year of Expenditure dollars)

Source	Costs/ Revenues				
	Four Year (2026-2029)	Short Term Plan (2026-2030)	Medium Term Plan (2031-2040)	Long Term Plan (2041-2050)	For Full 25 Year Plan
Federal	205.72	262.39	566.76	566.76	1,395.91
State	113.21	139.39	261.71	261.71	662.80
Local and Other	197.51	250.42	529.15	529.15	1,308.73
Total (2025 Dollars)	**516.44**	**652.20**	**1,357.62**	**1,357.62**	**3,367.44**
Total (YOE Dollars)	**516.44**	**665.78**	**1,669.87**	**2,036.43**	**4,372.08**

Source: MVRPC

Table 5.4 — Proposed Congestion Management Projects
(Cost is in Millions of 2025 / Year of Expenditure Dollars)

5GRE **I-675 / Grange Hall Road**

Feasible: 2041-2045 Mileage: N/A Cost: $45.00 / $71.55 TIP: No

Add full movements at Grange Hall Road interchange.

9AGRE **US 35 — Phase I**

Feasible: 2041-2045 Mileage: 0.53 Cost: $120.00 / $190.80 TIP: No

Eliminate the existing at grade intersections at Factory Road, Alpha Road, and Orchard Lane and replace them with full access interchanges.

53BGRE **Grange Hall Road**

Feasible: 2031-2035 Mileage: 0.66 Cost: $4.03 / $5.12 TIP: No

Widen Grange Hall Road from Summerfield Drive to Southview Drive from 2 to 3 lanes with curb, storm sewer, and sidewalk.

53DGRE **Grange Hall Road**

Feasible: 2026-2030 Mileage: 0.27 Cost: $1.40 / $1.40 TIP: Yes

Construct a sidewalk on the west side of Grange Hall Road between Kensington Glen and Shakertown Road and between Rockfield Drive and SR 835. Construct a shared use path along the east side of Spring House Park from Shakertown Road to Rockfield Drive.Build a pedestrian bridge over the Little Beaver Creek along the west side of Grange Hall Road. Improve the curb and drainage at the intersections along Grange Hall Road.

58DGRE **Kemp Road**

Feasible: 2026-2030 Mileage: 0.53 Cost: $2.49 / $2.49 TIP: Yes

Widen Kemp Road between North Fairfield Road and Hanes Rd from 2 to 3 lanes, and add bicycle and pedestrian amenities.

58EGRE **Kemp Road**

Feasible: 2026-2030 Mileage: 0.55 Cost: $4.75 / $4.75 TIP: Yes

Widen Kemp Road from 2 to 3 lanes from Meadowcourt Drive to Blue Wing Drive. Add bicycle and pedestrian amenities from Meadowcourt Drive to North Fairfield Road.

58FGRE **Kemp Road**

Feasible: 2031-2035 Mileage: 0.47 Cost: $3.68 / $4.67 TIP: No

Widen Kemp Road from 2 to 3 lanes from Hanes Road to Hidden Woods Boulevard.

66CGRE **New Germany-Trebein Road**

Feasible: 2031-2035 Mileage: 0.22 Cost: $3.43 / $4.36 TIP: No

Widen New Germany-Trebein Road from 3 to 5 lanes between Lillian Lane and Big Woods Drive.

74AGRE **Shakertown Road Phase 1**

Feasible: 2026-2030 Mileage: 0.60 Cost: $3.89 / $3.89 TIP: Yes

Widen Shakertown Road from 2 to 3 lanes between Carthage Drive and Southern Belle Boulevard. Also improve the gutters and storm sewer and add sidewalks.

74BGRE **Shakertown Road Phase 2**

Feasible: 2031-2035 Mileage: 1.07 Cost: $7.93 / $10.07 TIP: No

Widen Shakertown Road from 2 to 3 lanes from Autumn Leaf Drive to Carthage Drive, improve gutters and storm sewer, and add sidewalks.

74CGRE **Shakertown Road Phase 3**

Feasible: 2031-2035 Mileage: 0.47 Cost: $3.85 / $4.89 TIP: No

Widen from 2 to 3 lanes from Southern Belle Boulevard to the relocated Shakertown Road, improve gutters and storm sewer, and add sidewalks.

411CGRE **North Fairfield Road**

Feasible: 2031-2035 Mileage: 0.36 Cost: $3.25 / $4.13 TIP: No

Widen North Fairfield Road from 2 to 3 lanes between Fairbrook Elementary School and Indian Ripple Road, including installation of bicycle and pedestrian amenities.

425GRE **Upper Bellbrook Road Widening**

Feasible: 2031-2035 Mileage: 0.47 Cost: $6.00 / $7.62 TIP: No

Widen Upper Bellbrook Road from 2 to 3 lanes between Colorado Drive and Progress Drive, including a pedestrian path.

Table 5.4 — Proposed Congestion Management Projects
(Cost is in Millions of 2025 / Year of Expenditure Dollars)

443A GRE — Indian Ripple Road

Feasible: 2026-2030 | Mileage: 0.88 | Cost: $5.54 / $5.54 | TIP: Yes

Widen Indian Ripple Road from 2 to 3 lanes between Baronwood Boulevard and Alpha Bellbrook Road and add bicycle and pedestrian amenities.

443B GRE — Indian Ripple Road

Feasible: 2031-2035 | Mileage: 0.81 | Cost: $8.74 / $11.10 | TIP: No

Widen Indian Ripple Road from 2 to 3 lanes between Grange Hall Road and Baronwood Boulevard. Also add curb, gutter, storm sewer, and sidewalk.

455 GRE — Van Eaton Road / Hedges Road Intersection

Feasible: 2046-2050 | Mileage: N/A | Cost: $3.15 / $5.01 | TIP: No

Realign the Van Eaton Road and Hedges Road intersection to eliminate its offset intersection.

456 GRE — East Main Street / North Patton Street / Jasper Road Intersect

Feasible: 2041-2045 | Mileage: N/A | Cost: $3.25 / $5.17 | TIP: No

Reconstruct a five (5) point intersection at the intersection of East Main Street, North Patton Street, and Jasper Road with a roundabout.

457B GRE — Dayton-Xenia Road Widening

Feasible: 2031-2035 | Mileage: 1.33 | Cost: $9.86 / $12.52 | TIP: No

Widen Dayton-Xenia Road between Hanes Road and Beaver Valley Road from 2 to 3 lanes and install bicycle and pedestrian amenities.

459 GRE — Dayton-Xenia Road at High School Road

Feasible: 2031-2035 | Mileage: 0.20 | Cost: $1.40 / $1.78 | TIP: No

Install a new traffic signal at the East Beavercreek High School Road and Dayton-Xenia Road intersection and update lanes. Add bicycle and pedestrian facilities.

460 GRE — Hanes Road

Feasible: 2041-2045 | Mileage: 2.10 | Cost: $15.57 / $24.76 | TIP: No

Widen Hanes Road from 2 to 3 lanes between Dayton-Xenia Road and Kemp Road with bicycle and pedestrian facilities.

461A GRE — Kemp Road Widening

Feasible: 2031-2035 | Mileage: 0.57 | Cost: $4.83 / $4.83 | TIP: NF

Widen Kemp Road between I-675 and Grange Hall Road from 2 to 3 lanes and add bicycle and pedestrian facilities.

461B GRE — Kemp Road Widening

Feasible: 2031-2035 | Mileage: 0.45 | Cost: $4.63 / $5.88 | TIP: No

Widen Kemp Road from the west corporation line to I-675 from 2 to 3 lanes with bicycle and pedestrian facilities.

462 GRE — Alpha-Bellbrook Road

Feasible: 2041-2045 | Mileage: 1.20 | Cost: $9.12 / $14.50 | TIP: No

Widen Alpha-Bellbrook Road between Indian Ripple Road and Shakertown Road from 2 to 3 lanes with bicycle and pedestrian facilities.

463 GRE — North Fairfield Road / Swigart Road Roundabout

Feasible: 2036-2040 | Mileage: 0.20 | Cost: $1.40 / $1.78 | TIP: No

Reconstruct the intersection of North Fairfield Road and Swigart Road with a roundabout.

464 GRE — North Fairfield Road Widening

Feasible: 2036-2040 | Mileage: 0.56 | Cost: $4.15 / $5.27 | TIP: No

Widen North Fairfield Road between Swigart Road and Indian Ripple Road from 2 to 3 lanes and add bicycle and pedestrian facilities.

465 GRE — Darst Road

Feasible: 2036-2040 | Mileage: 1.28 | Cost: $9.49 / $12.05 | TIP: No

Widen Darst Road between Swigart Road and Indian Ripple Road from 2 to 3 lanes with bicycle and pedestrian facilities.

466 GRE — Indian Ripple Road/I-675 Sidepath

Feasible: 2036-2040 | Mileage: 0.22 | Cost: $1.00 / $1.27 | TIP: No

Extend the bicycle and pedestrian facilities west of the I-675/Indian Ripple Road interchange over I-675 to the existing bicycle/pedestrian facilities at Sylvania.

Table 5.4 — Proposed Congestion Management Projects
(Cost is in Millions of 2025 / Year of Expenditure Dollars)

467 GRE — New Germany-Trebein Road Sidepath

Feasible: 2036-2040 | Mileage: 1.35 | Cost: $4.33 / $5.50 | TIP: No

Extend existing bicycle and pedestrian facilities along New Germany-Trebein Road from Big Woods Drive to Varner Drive.

468 GRE — Grange Hall Road

Feasible: 2041-2045 | Mileage: 2.41 | Cost: $17.87 / $28.41 | TIP: No

Widen Grange Hall Road between Patterson Road and Indian Ripple Road from 2 to 3 lanes. The project will also include bicycle and pedestrian facilities.

469 GRE — Lantz Road Sidepath

Feasible: 2041-2045 | Mileage: 1.33 | Cost: $4.70 / $7.47 | TIP: No

Add bicycle and pedestrian facilities along Lantz/McKay Roads from Hanes Road to Beaver Valley Road.

470 GRE — Lantz Road Widening

Feasible: 2041-2045 | Mileage: 0.64 | Cost: $4.75 / $7.55 | TIP: No

Widen Lantz Road between North Fairfield Road and Hanes Road from 2 to 3 lanes with bicycle and pedestrian facilities.

471 GRE — Kemp Road

Feasible: 2046-2050 | Mileage: 1.28 | Cost: $9.49 / $15.09 | TIP: No

Widen Kemp Road between Hidden Woods Boulevard and Beaver Valley Road from 2 to 3 lanes with bicycle and pedestrian facilities. Relocate roadway to remove S curves.

472 GRE — Patterson Road Widening

Feasible: 2046-2050 | Mileage: 1.88 | Cost: $13.94 / $22.16 | TIP: No

Widen Patterson Road between County Line Road and SR 835 from 2 to 3 lanes with bicycle and pedestrian facilities.

473 GRE — Swigart Road Sidepath

Feasible: 2046-2050 | Mileage: 0.83 | Cost: $2.75 / $4.37 | TIP: No

Install bicycle and pedestrian facilities along Swigart Road from Darst Road to North Fairfield Road.

474 GRE — Research Blvd (SR 835)/Seajay Drive Sidepath

Feasible: 2046-2050 | Mileage: 0.75 | Cost: $2.75 / $4.37 | TIP: No

Extend the City bicycle and pedestrian facilities from Patterson Road to North Fairfield Road along SR 835 and Seajay Drive.

475A GRE — Beaver Valley Road Improvement

Feasible: 2026-2030 | Mileage: 0.27 | Cost: $2.24 / $2.24 | TIP: Yes

Extend bicycle and pedestrian facilities along Beaver Valley Road from Dayton-Xenia Road to Hazel Drive.

475B GRE — Beaver Valley Road Improvement

Feasible: 2046-2050 | Mileage: 1.24 | Cost: $10.00 / $15.90 | TIP: No

Extend bicycle and pedestrian facilities along Beaver Valley Road from Hazel Drive to Lantz Road.

476 GRE — SR 235 & Byron, Trebein

Feasible: 2026-2030 | Mileage: 0.75 | Cost: $5.00 / $5.60 | TIP: No

Construct adjacent roundabouts at the intersections of SR 235 with Byron and Trebein Roads.

477 GRE — I-675 NB Exit to Col. Glenn

Feasible: 2031-2035 | Mileage: 1.18 | Cost: $3.00 / $3.81 | TIP: No

Widen the exit ramp from I-675 to WPAFB on Colonel Glenn Highway from 2 to 3 lanes.

481 GRE — US 42 Sidewalk

Feasible: 2026-2030 | Mileage: 0.17 | Cost: $2.00 / $2.24 | TIP: No

Construct a sidewalk and crossing between the Cedarville Meadows subdivision and Cedarville High School.

482 GRE — S. Detroit, Miami and Home Intersection Improvements

Feasible: 2036-2040 | Mileage: N/A | Cost: $3.50 / $4.45 | TIP: No

Reconstruct a skewed intersection at S. Detroit Street, Miami Avenue and Home Avenue with a roundabout. Install new sidewalk and provide a better connection for the Ohio to Erie Bike Path to the Xenia Station Bike Hub.

483 GRE — Hospitality Drive

Feasible: 2036-2040 | Mileage: 0.40 | Cost: $2.50 / $3.18 | TIP: No

Widen Hospitality Drive between West Main Street and South Progress Drive from 3 to 5 lanes.

Table 5.4 — Proposed Congestion Management Projects
(Cost is in Millions of 2025 / Year of Expenditure Dollars)

484 GRE — Progress Drive

Feasible: 2041-2045 | Mileage: 0.97 | Cost: $6.10 / $9.70 | TIP: No

Widen Progress Drive between West Second Street and Dayton Xenia Road from 3 to 5 lanes.

485 GRE — N. Progress Drive / Greene Way Boulevard Intersection

Feasible: 2031-2035 | Mileage: N/A | Cost: $0.75 / $0.95 | TIP: No

Add a mast arm signal to the intersection of N. Progress Drive and Greene Way Boulevard.

487 GRE — Progress Drive / W. Main Street Intersection Improvements

Feasible: 2031-2035 | Mileage: N/A | Cost: $6.00 / $7.62 | TIP: No

Reconfigure the intersection of Progress Dr. and W. Main Street with a dual lane roundabout.

488 GRE — US 68 / Innovation Drive Intersection

Feasible: 2036-2040 | Mileage: N/A | Cost: $1.00 / $1.27 | TIP: No

Install a new mast arm traffic signal at the intersection of US 68 and Innovation Drive.

489 GRE — I-71 Widening

Feasible: 2041-2045 | Mileage: 3.98 | Cost: $60.00 / $95.40 | TIP: No

Widen I-71 from 2 to 3 lanes in each direction. This project is part of a larger effort to widen I-71 to 6 lanes in Warren, Clinton, and Greene counties.

490 GRE — Indian Ripple / Factory Road

Feasible: 2026-2030 | Mileage: 0.28 | Cost: $6.46 / $6.46 | TIP: Yes

Replace the existing two-way stop control intersection on Factory Road with the addition of turn lanes on Indian Ripple Road and a new signal. The project will also include bridge widening and rehabilitation.

491 GRE — National Road

Feasible: 2031-2035 | Mileage: 1.33 | Cost: $19.90 / $25.27 | TIP: No

Reconstruct and widen National Road between Colonel Glenn Highway and Kauffman Avenue from 2/3/4 lanes to 5 and add bicycle and pedestrian facilities.

492 GRE — Kauffman Avenue

Feasible: 2031-2035 | Mileage: 1.71 | Cost: $4.10 / $5.21 | TIP: No

Widen Kauffman Avenue from 3 to 4 lanes between M Street and National Road and include bicycle and pedestrian facility upgrades.

493A GRE — Trebein Road — Section 1

Feasible: 2031-2035 | Mileage: 2.16 | Cost: $20.20 / $25.65 | TIP: No

Reconstruct and widen Trebein Road from 2/3 lanes to 3/5 lanes and add bicycle and pedestrian facilities between Dayton-Xenia Road and Fairground Road.

493B GRE — Trebein Road — Section 2

Feasible: 2041-2045 | Mileage: 3.41 | Cost: $19.10 / $30.37 | TIP: No

Reconstruct and widen Trebein Road from 2 to 3 lanes and add bicycle and pedestrian facilities between Fairground Road and Dayton-Yellow Springs Road.

493C GRE — Trebein Road — Section 3

Feasible: 2046-2050 | Mileage: 1.98 | Cost: $8.50 / $13.52 | TIP: No

Reconstruct and widen Trebein Road from 2 to 3 lanes and add bicycle and pedestrian facilities between Dayton-Yellow Springs Road and SR 235.

494A GRE — Feedwire Road Section 2 — Phase 1

Feasible: 2031-2035 | Mileage: 0.40 | Cost: $4.10 / $5.21 | TIP: No

Reconstruct, widen from 2 to 3 lanes, and add bike and pedestrian facilities to Feedwire Road between Brookdale Boulevard and Little Sugarcreek Road. Also add a right turn lane to the Little Sugar Creek Road side of the intersection with Feedwire Road.

494B GRE — Feedwire Road Section 2 — Phase 2

Feasible: 2041-2045 | Mileage: 0.31 | Cost: $4.69 / $7.46 | TIP: No

Reconstruct and widen Feedwire Road from 3 to 5 lanes from Brookdale Boulevard to Little Sugarcreek Road and add bicycle and pedestrian facilities.

494C GRE — Feedwire Road — Section 3

Feasible: 2041-2045 | Mileage: 1.03 | Cost: $6.30 / $10.02 | TIP: No

Reconstruct and widen Feedwire Road from 2/3 to 5 lanes from Little Sugarcreek Road to Upper Bellbrook Road and add bicycle and pedestrian facilities.

Table 5.4 — Proposed Congestion Management Projects
(Cost is in Millions of 2025 / Year of Expenditure Dollars)

495A GRE — Indian Ripple Road — Section 1

Feasible: 2031-2035 Mileage: 0.34 Cost: $4.90 / $6.22 TIP: No

Widen Indian Ripple Road from 2 to 3 lanes and add bicycle and pedestrian facilities between Alpha Bellbrook Road and Ridgebrook Trail. Construct a roundabout at the intersection of Alpha Bellbrook Road and Indian Ripple Road.

495B GRE — Indian Ripple Road — Section 2

Feasible: 2036-2040 Mileage: 0.91 Cost: $3.50 / $4.45 TIP: No

Widen Indian Ripple Road from 2 to 3 lanes and add bicycle and pedestrian facilities between Narrows Path Way and Shepard Road.

496 GRE — South Alpha Bellbrook Road

Feasible: 2036-2040 Mileage: 0.91 Cost: $4.70 / $5.97 TIP: No

Reconstruct and widen S. Alpha-Bellbrook Road from 2 to 3 lanes between Swigart Road and Indian Ripple Road and include bicycle and pedestrian facilities.

822D GRE — Feedwire East (Wilmington/I-675)

Feasible: 2031-2035 Mileage: 0.60 Cost: $22.89 / $29.07 TIP: No

Replace and widen the bridge over I-675 from 2 to 4 lanes and rebuild the traffic signal at the Clyo Road intersection.

89A MIA — I-75 — Phase I

Feasible: 2036-2040 Mileage: 2.33 Cost: $125.00 / $158.75 TIP: No

Rehabilitate and widen I-75 from 4 to 6 lanes between 1.13 miles north of SR 41 and CR 25A.

89B MIA — I-75 — Phase II

Feasible: 2041-2045 Mileage: 6.77 Cost: $125.00 / $198.75 TIP: No

Rehabilitate and widen I-75 from 4 to 6 lanes between CR 25A and the Shelby County Line.

96 MIA — SR 41

Feasible: 2031-2035 Mileage: 0.72 Cost: $2.03 / $2.58 TIP: No

Widen SR 41 from 2 to 5 lanes from just west of Kings Chapel Drive to Washington Road.

103 MIA — Commerce Boulevard — Phase III

Feasible: 2031-2035 Mileage: 0.60 Cost: $3.60 / $4.57 TIP: No

Extend Commerce Center Boulevard from its eastern terminus to intersect SR 718 at Barnhart Road.

105B MIA — County Road 25A — Phase V

Feasible: 2036-2040 Mileage: 1.51 Cost: $7.55 / $9.59 TIP: No

Widen CR 25A from 2 to 4/5 lanes between the Montgomery County line and Evanston Road.

112 MIA — Evanston Road

Feasible: 2031-2035 Mileage: 0.50 Cost: $6.10 / $7.75 TIP: No

Widen Evanston Road from 2 to 3 lanes between CR 25A and I-75, including a proposed bike/pedestrian crossing over I-75 and construct either an on- or off-street bike/pedestrian path.

113A MIA — Eldean Road / Experiment Farm Road

Feasible: 2036-2040 Mileage: 0.33 Cost: $2.19 / $2.78 TIP: No

Realign the offset intersection at the Eldean Road and Experiment Farm Road intersection.

113B MIA — Experiment Farm Road

Feasible: 2031-2035 Mileage: 0.51 Cost: $1.56 / $1.98 TIP: No

Widen Experiment Farm Road from 2 to 5 lanes between just north of Corporate Drive and Eldean Road.

121 MIA — McKaig Road

Feasible: 2031-2035 Mileage: 1.40 Cost: $6.00 / $7.62 TIP: No

Widen McKaig Road from 2 to 3 lanes between Dorset Road and Cartwright Court.

130B MIA — R. M. Davis Parkway Extension

Feasible: 2036-2040 Mileage: 0.52 Cost: $3.75 / $4.76 TIP: No

Create a roadway extending R.M. Davis Parkway south to Brown Road and include utilities, curb and gutter.

139A MIA — Washington Road / Wilson Road

Feasible: 2031-2035 Mileage: 0.74 Cost: $1.35 / $1.71 TIP: No

Realign Washington Road to intersect Wilson Road at McKaig Road.

Table 5.4 — Proposed Congestion Management Projects
(Cost is in Millions of 2025 / Year of Expenditure Dollars)

371 MIA — SR 41
Feasible: 2031-2035 | Mileage: 0.51 | Cost: $1.13 / $1.44 | TIP: No
Widen SR 41 from 5 to 7 lanes between Experiment Farm Road and I-75.

501 MIA — Tipp-Cowlesville Road Widening
Feasible: 2031-2035 | Mileage: 1.31 | Cost: $4.38 / $5.56 | TIP: No
Widen Tipp-Cowlesville Road from 2 to 3 lanes between Crane Road and CR 25A.

507 MIA — Swailes Road Extension
Feasible: 2041-2045 | Mileage: 0.55 | Cost: $1.35 / $2.15 | TIP: No
New roadway extension from the western termini of Swailes Road at Nashville Road to Wilson Road at SR 55.

508A MIA — Peters Road — Phase I
Feasible: 2031-2035 | Mileage: 0.41 | Cost: $1.24 / $1.57 | TIP: No
Widen Peters Road from 2 to 3 lanes between Dickerson Drive and Premwood Road.

508B MIA — Peters Road — Phase II
Feasible: 2036-2040 | Mileage: 0.68 | Cost: $1.96 / $2.49 | TIP: No
Widen Peters Road from 2 to 3 lanes between Premwood Road and Swailes Road.

512A MIA — Eldean Road — Phase I
Feasible: 2036-2040 | Mileage: 1.13 | Cost: $3.75 / $4.76 | TIP: No
Widen Eldean Road from 2 to 3 lanes between Experiment Farm Road and CR 25A.

512B MIA — Eldean Road — Phase II
Feasible: 2041-2045 | Mileage: 1.03 | Cost: $3.21 / $5.10 | TIP: No
Widen Eldean Road from 2 to 3 lanes between Washington Road and Experiment Farm Road.

512C MIA — Eldean Road — Phase III
Feasible: 2046-2050 | Mileage: 1.14 | Cost: $3.56 / $5.66 | TIP: No
Widen Eldean Road from 2 to 3 lanes between SR 41 and Washington Road.

514 MIA — Piqua-Troy Road
Feasible: 2031-2035 | Mileage: 1.64 | Cost: $3.73 / $4.74 | TIP: No
Widen Piqua-Troy Road from 2 to 3 lanes between the Troy north corporation limit and Troy-Sidney Road.

516A MIA — Washington Road — Phase I
Feasible: 2031-2035 | Mileage: 1.43 | Cost: $5.85 / $7.43 | TIP: No
Widen Washington Road from 2 to 3 lanes between SR 718 and 0.6 miles south of SR 41.

516B MIA — Washington Road — Phase II
Feasible: 2036-2040 | Mileage: 0.78 | Cost: $2.54 / $3.23 | TIP: No
Widen Washington Road from 2 to 3 lanes between SR 41 and Eldean Road.

516C MIA — Washington Road — Phase III
Feasible: 2041-2045 | Mileage: 1.94 | Cost: $6.06 / $9.64 | TIP: No
Widen Washington Road from 2 to 3 lanes between Eldean Road and Farrington Road.

517B MIA — Farrington Road — Phase II
Feasible: 2036-2040 | Mileage: 1.00 | Cost: $2.00 / $2.54 | TIP: No
Widen Farrington Road from 2 to 3 lanes between Stillwell Road and Washington Road.

517C MIA — Farrington Road Widening - Phase I
Feasible: 2031-2035 | Mileage: 1.49 | Cost: $8.00 / $10.16 | TIP: No
Widen Farrington Road between Washington Road and County Route 25-A to 5 lanes and install a shared use path, curb, and gutter.

518B MIA — Kinna Drive — South
Feasible: 2031-2035 | Mileage: 0.50 | Cost: $2.74 / $3.48 | TIP: No
Construct a 3-lane extension from the current south terminus of Kinna Drive to Evanston Road.

520A MIA — Peters Road — Phase I
Feasible: 2036-2040 | Mileage: 2.09 | Cost: $6.54 / $8.31 | TIP: No
Widen Peters Road from 2 to 3 lanes between Kessler-Cowlesville Road and Swailes Road.

Table 5.4 — Proposed Congestion Management Projects
(Cost is in Millions of 2025 / Year of Expenditure Dollars)

520B MIA **Peters Road — Phase II**

Feasible: 2041-2045 Mileage: 1.10 Cost: $3.44 / $5.47 TIP: No

Widen Peters Road from 2 to 3 lanes between SR 571 and Kessler-Cowlesville Road.

531D MIA **Main Street — Streetscape**

Feasible: 2026-2030 Mileage: 0.25 Cost: $1.87 / $2.09 TIP: No

Rehabilitate and improve West Main Street / SR 571 from Hyatt Street eastward to the CSX Railroad Tracks; includes an interconnection among the existing traffic signals.

532 MIA **Experiment Farm Road**

Feasible: 2036-2040 Mileage: 1.96 Cost: $6.13 / $7.79 TIP: No

Widen Experiment Farm Road from 2 to 3 lanes between Eldean Road and Farrington Road.

546 MIA **CR 25A / Looney Road Intersection**

Feasible: 2046-2050 Mileage: N/A Cost: $2.75 / $4.37 TIP: No

Build a roundabout at the intersection of Looney Road and CR 25A.

548 MIA **R. M. Davis Parkway / US 36 Intersection**

Feasible: 2036-2040 Mileage: N/A Cost: $4.25 / $5.40 TIP: No

Build a roundabout at the intersection of R.M. Davis Parkway and US 36.

549 MIA **Fox Drive / CR 25A**

Feasible: 2036-2040 Mileage: N/A Cost: $4.00 / $5.08 TIP: No

Build a roundabout at the intersection of Fox Drive and County Road 25A and add a bike path extension from Goodrich Giles Park south to this intersection and further along County Road 25A.

550 MIA **Stillwell Road Widening**

Feasible: 2036-2040 Mileage: 1.87 Cost: $3.50 / $4.45 TIP: No

Widen Stillwell Road to two 12' lanes and improve the Brown/Stillwell Road and Stillwell/Farrington Road intersections. Road alignment will be changed by Brown Road to meet up with the new R.M. Davis Parkway extension.

551 MIA **Wood Street / Wayne Street Intersection**

Feasible: 2041-2045 Mileage: N/A Cost: $2.60 / $4.13 TIP: No

Build a roundabout at the intersection of Wood Street and S. Wayne Street.

552 MIA **E. Ash Street (US 36) Improvements**

Feasible: 2046-2050 Mileage: 0.41 Cost: $1.05 / $1.67 TIP: No

Add curb, gutter, sidewalks and street trees to E. Ash Street (US 36) between Looney Road and Kienle Drive.

553 MIA **College / South Street Intersection**

Feasible: 2046-2050 Mileage: N/A Cost: $2.60 / $4.13 TIP: No

Build a roundabout at the intersection of S. College Street and South Street.

554 MIA **Washington / Farrington Road Intersection Improvements**

Feasible: 2031-2035 Mileage: N/A Cost: $4.50 / $5.72 TIP: No

Build a roundabout at the intersection of Washington Road and Farrington Road.

555 MIA **Washington Road Widening**

Feasible: 2031-2035 Mileage: 1.67 Cost: $3.50 / $4.45 TIP: No

Widen Washington Road between Arrowhead Drive and Farrington Road from 2 to 3 lanes and include a shared use path, curb, and gutter installation or improvements.

556 MIA **Farrington Road / CR 25A Intersection**

Feasible: 2031-2035 Mileage: N/A Cost: $1.00 / $1.27 TIP: No

Add turn lanes at the intersection of Farrington Road and County Route 25A and improve the signal at the intersection.

557 MIA **Farrington / Experiment Farm Road Intersection**

Feasible: 2031-2035 Mileage: N/A Cost: $4.00 / $5.08 TIP: No

Build a roundabout at the intersection of Farrington Road and Experiment Farm Road.

558 MIA **Center Court Intersection Improvements**

Feasible: 2031-2035 Mileage: 0.66 Cost: $5.25 / $6.67 TIP: No

Build a roundabout at the intersection of Center Court ~350 feet south of E. Ash Street (US 36). Reconstruct Center Court with pedestrian facilities from E. Ash Street (US 36) to Garbry Road and move utilities.

Table 5.4 — Proposed Congestion Management Projects
(Cost is in Millions of 2025 / Year of Expenditure Dollars)

559 MIA — High Street and Piqua-Clayton Road Reconstruction

Feasible: 2031-2035 | Mileage: 0.34 | Cost: $1.25 / $1.59 | TIP: No

Reconstruct W. High Street/Piqua-Clayton Road from Lambert Drive west ~1,800 feet with an added right-turn only lane and sidewalks.

560 MIA — SR 55 Widening

Feasible: 2026-2030 | Mileage: 0.44 | Cost: $6.00 / $6.72 | TIP: No

Widen SR 55 from 2 to 5 lanes between Kenton Way and Horizon West Court.

561 MIA — Swailes Road and CR 25A Intersection Improvements

Feasible: 2026-2030 | Mileage: N/A | Cost: $0.50 / $0.56 | TIP: No

Intersection improvements to increase safety at the intersection of Swailes Road and CR 25A.

144C MOT — I-70 Widening — Phase I

Feasible: 2026-2030 | Mileage: 4.12 | Cost: $106.27 / $106.27 | TIP: YP

Widen I-70 from 4 to 6 lanes between SR 48 and the SR 49 interchange. Environmental document to be cleared under PID 119672. Expected completion in CY 2031.

144D MOT — I-70 Widening — Phase II

Feasible: 2031-2035 | Mileage: 2.37 | Cost: $68.93 / $68.93 | TIP: YP

Widen I-70 from 4 to 6 lanes between the SR 49 interchange and 0.3 miles east of Brookville-Phillipsburg Road. Environmental document to be cleared under PID 119672.

144E MOT — I-70 Widening — Phase III

Feasible: 2036-2040 | Mileage: 1.95 | Cost: $69.17 / $69.17 | TIP: YP

Widen I-70 from 4 to 6 lanes from 0.3 miles east of Brookville-Phillipsburg Road to Upper Lewisburg-Salem Road. Environmental document to be cleared under PID 119672.

144F MOT — I-70 Widening — Phase IV

Feasible: 2041-2045 | Mileage: 3.97 | Cost: $64.60 / $64.60 | TIP: No

Widen I-70 from 4 to 6 lanes from Jordan Road in Preble County to Upper Lewisburg Salem Road.

167 MOT — SR 48 Widening

Feasible: 2031-2035 | Mileage: 1.70 | Cost: $10.00 / $12.70 | TIP: No

Widen SR 48 from 2 to 3 lanes between the Warren County Line and Sheehan Road.

184B MOT — SR 725

Feasible: 2036-2040 | Mileage: 1.00 | Cost: $8.00 / $10.16 | TIP: No

Widen SR 725 from 2 to 5 lanes between Bigger Road and Wilmington Pike.

202G MOT — Social Row Road — Phase III

Feasible: 2036-2040 | Mileage: 0.39 | Cost: $3.30 / $4.19 | TIP: No

Widen Social Row Road from 2 to 3 lanes between 500 feet west of Benham Road and 1,500 ft east of Benham Road.

202H MOT — Social Row Road — Phase IV

Feasible: 2036-2040 | Mileage: 0.36 | Cost: $3.10 / $3.94 | TIP: No

Widen Social Row Road from 2 to 3 lanes between 1,500 ft east of Benham Road and SR 48.

209A MOT — Arlington Road

Feasible: 2041-2045 | Mileage: 1.20 | Cost: $7.00 / $11.13 | TIP: No

Widen Arlington Road from 2 to 3 lanes between I-70 and US 40.

220 MOT — Clyo Road

Feasible: 2041-2045 | Mileage: 2.42 | Cost: $14.30 / $22.74 | TIP: No

Widen Clyo Road from 2 to 3 lanes between Spring Valley Road and Social Row Road.

221B MOT — Clyo Road

Feasible: 2026-2030 | Mileage: 0.72 | Cost: $4.63 / $4.63 | TIP: Yes

Widen Clyo Road from 2 to 3 lanes between St. Leonard's Way and 150' south of Ole Quaker Court. Also add a shared use path and improve the intersection with Dimco Way.

Table 5.4 — Proposed Congestion Management Projects
(Cost is in Millions of 2025 / Year of Expenditure Dollars)

244C MOT — Hoke Road

Feasible: 2026-2030 | Mileage: 0.28 | Cost: $5.53 / $5.53 | TIP: Yes

Widen Hoke Road from 2 to 3 lanes between Wenger Road and Smith Drive, including intersection improvements and a roundabout at Wenger Road.

244D MOT — Hoke Road

Feasible: 2031-2035 | Mileage: 0.47 | Cost: $7.48 / $7.48 | TIP: NF

Widen Hoke Road from 2 to 3 lanes between Wenger Road and Springview Lane.

244E MOT — Hoke Road

Feasible: 2031-2035 | Mileage: 0.43 | Cost: $4.80 / $6.10 | TIP: No

Widen Hoke Road from 2 to 3 lanes between Springview Lane and US 40.

253 MOT — Little Richmond Road / Diamond Mill Road

Feasible: 2046-2050 | Mileage: N/A | Cost: $4.00 / $6.36 | TIP: No

Correct the split-T intersection at the Diamond Mill Road and Little Richmond Road intersection.

260 MOT — Mad River Road

Feasible: 2046-2050 | Mileage: N/A | Cost: $4.50 / $7.16 | TIP: No

Improve and realign intersections of Yankee Street and Munger Road with Mad River Road.

272B MOT — DIA Northeast Logistics

Feasible: 2026-2030 | Mileage: 0.80 | Cost: $22.50 / $22.50 | TIP: YP

Improve Northwoods Blvd and N Dixie Drive between Northwoods Blvd and Lighter Road as well as Lighter Road. Includes the installation of a roundabout and upgrading a traffic signal.

298 MOT — Salem Avenue

Feasible: 2046-2050 | Mileage: 1.10 | Cost: $10.60 / $16.85 | TIP: No

Widen Salem Avenue from 4 to 5 lanes between Hillcrest Avenue and Curundu Avenue.

335B MOT — Yankee Street — Phase III

Feasible: 2036-2040 | Mileage: 0.75 | Cost: $6.00 / $7.62 | TIP: No

Widen Yankee Street from 2 to 5 lanes between Winding Green Way and Spring Valley Pike.

335C MOT — Yankee Street — Phase IV

Feasible: 2036-2040 | Mileage: 0.55 | Cost: $2.45 / $3.11 | TIP: No

Widen Yankee Street from 3 to 5 lanes between Social Row Road/Austin Pike and Winding Green Way.

336A MOT — Yankee Street Reconstruction Section 1

Feasible: 2031-2035 | Mileage: 0.40 | Cost: $2.50 / $3.18 | TIP: No

Widen Yankee Street from 2 to 3 lanes between Social Row Road/Austin Pike and 2,088 ft south of that intersection.

336B MOT — Yankee Street Reconstruction Section 2

Feasible: 2031-2035 | Mileage: 0.40 | Cost: $2.50 / $3.18 | TIP: No

Widen Yankee Street from 2 to 3 lanes between 2,088 ft south of Austin Pike and the Montgomery-Warren County Line.

338C MOT — Miamisburg-Springboro Pike Section 1 — Phase II

Feasible: 2041-2045 | Mileage: 0.50 | Cost: $6.50 / $10.34 | TIP: No

Widen Miamisburg-Springboro Pike from 3 to 5 lanes between Peacock Lane and Medlar Road.

338D MOT — Miamisburg-Springboro Pike Section 2 — Phase I

Feasible: 2031-2035 | Mileage: 0.90 | Cost: $8.50 / $10.80 | TIP: No

Widen Miamisburg-Springboro from 2 to 3 lanes between Medlar Road and Benner Road.

338E MOT — Miamisburg-Springboro Pike Section 2 — Phase II

Feasible: 2041-2045 | Mileage: 0.90 | Cost: $6.50 / $10.34 | TIP: No

Widen Miamisburg-Springboro Road from 3 to 5 lanes between Medlar Road and Benner Road.

338F MOT — Benner Road

Feasible: 2031-2035 | Mileage: 1.40 | Cost: $14.00 / $17.78 | TIP: No

Widen Benner Road from 2 to 3 lanes between Dayton-Cincinnati Pike and Miamisburg-Springboro Pike.

Table 5.4 — Proposed Congestion Management Projects
(Cost is in Millions of 2025 / Year of Expenditure Dollars)

338G MOT I-75

Feasible: 2026-2030 Mileage: 3.575 Cost: $74.10 / $74.10 TIP: Yes

Widen I-75 from 6 to 8 lanes between close to Pennyroyal Lane and I-675.

338H MOT Miamisburg-Springboro Pike at Benner Road

Feasible: 2026-2030 Mileage: N/A Cost: $4.60 / $4.60 TIP: Yes

Construct congestion mitigation and safety improvements at the intersection of Miamisburg-Springboro Pike with Benner Road.

361 MOT South Brown School Road Improvements

Feasible: 2031-2035 Mileage: 1.60 Cost: $4.00 / $5.08 TIP: No

Widen and improve drainage on South Brown School Road roadway from Waldsmith Way to Little York Road from 2 to 3 lanes and improve the intersection of US 40/S Brown School Rd via signalization or a roundabout.

372A MOT Spring Valley Road - Phase I

Feasible: 2041-2045 Mileage: 1.40 Cost: $4.50 / $7.16 TIP: No

Widen Spring Valley Road from 2/3 to 5 lanes between SR 48 and Clyo Road.

372B MOT Spring Valley Road - Phase II

Feasible: 2041-2045 Mileage: 2.10 Cost: $9.80 / $15.58 TIP: No

Widen Spring Valley Road from 3 to 5 lanes between Yankee Street and SR 48.

608 MOT Brookville-Salem Road

Feasible: 2041-2045 Mileage: 2.10 Cost: $12.40 / $19.72 TIP: No

Widen Brookville-Salem Road from 2 to 3 lanes between SR 49 and Brookville-Phillipsburg Road.

611A MOT Hoke Road — South

Feasible: 2031-2035 Mileage: 0.60 Cost: $1.60 / $2.03 TIP: No

Widen Hoke Road from 2 to 3 lanes between south of Career Drive and Westbrook Road.

611B MOT Hoke Road and Westbrook Road Roundabout

Feasible: 2026-2030 Mileage: N/A Cost: $3.58 / $3.58 TIP: Yes

Construct a roundabout at the intersection of Westbrook Road and Hoke Road/Moss Creek Boulevard.

613C MOT Union Road

Feasible: 2046-2050 Mileage: 6.50 Cost: $17.20 / $27.35 TIP: No

Improve geometry on Union Road from SR 4 to Fairview Drive and extend Union Road through Lower Miamisburg Road to create a new four-leg intersection.

628A MOT Diamond Mill Road

Feasible: 2046-2050 Mileage: 7.80 Cost: $15.00 / $23.85 TIP: No

Improve the roadway geometry and left turn lanes of Diamond Mill Road at the Upper Lewisburg-Salem Road, Westbrook Road, Air Hill/Shiloh Springs Road, Wolf Creek Pike, and Old Dayton Road intersections; includes a realignment of the Shiloh Springs Road/Air Hill Road intersection.

628B MOT Diamond Mill Road

Feasible: 2041-2045 Mileage: 8.10 Cost: $16.00 / $25.44 TIP: No

Improve roadway geometry and add left turn lanes on Diamond Mill Road from the Germantown north corporation limit to US 35 at the Dayton-Farmersville Road, Hemple Road, Farmersville-West Carrollton Road, and Manning Road intersections; includes a realignment of the Hemple Road intersection with Diamond Mill Road.

637 MOT Little York Road — Phase I

Feasible: 2031-2035 Mileage: 0.45 Cost: $6.00 / $7.62 TIP: No

Widen Little York Road from 2 to 3 lanes between Miller Lane and North Dixie Drive.

647 MOT Little York Road — Phase II

Feasible: 2036-2040 Mileage: 1.50 Cost: $7.00 / $8.89 TIP: No

Widen Little York Road from 2 to 3 lanes between North Dixie Drive and Peters Pike.

648 MOT Little York Road — Phase III

Feasible: 2041-2045 Mileage: 1.50 Cost: $8.50 / $13.52 TIP: No

Widen Little York Road from 2 to 3 lanes between Peters Pike and Frederick Pike.

Table 5.4 — Proposed Congestion Management Projects
(Cost is in Millions of 2025 / Year of Expenditure Dollars)

650 MOT — Frederick Pike

Feasible: 2046-2050 | Mileage: 2.00 | Cost: $11.80 / $18.76 | TIP: No

Widen Frederick Pike from 2 to 3 lanes between Little York Road and US 40.

654 MOT — Broadway Street Widening and Realignment

Feasible: 2031-2035 | Mileage: 1.00 | Cost: $5.75 / $7.30 | TIP: No

Realign and widen Broadway Street from 2 to 3 lanes between Germantown Street and Edwin C. Moses Boulevard and add bike lanes.

656A MOT — Smithville Road Reconstruction Phase 1

Feasible: 2026-2030 | Mileage: 0.53 | Cost: $3.31 / $3.31 | TIP: Yes

Reconstruct Smithville Road between US 35 and Huffman Avenue with new streetlights, sidewalks, curbs and catch basins.

656B MOT — Smithville Road Reconstruction Phase 2

Feasible: 2026-2030 | Mileage: 0.53 | Cost: $2.97 / $2.97 | TIP: Yes

Reconstruct Smithville Road between Huffman Avenue and East Third Street with a new shared use path and new curb ramps, curbs, catch basins, streetlights, and traffic signals.

665 MOT — Sheehan Road

Feasible: 2036-2040 | Mileage: 1.50 | Cost: $4.00 / $5.08 | TIP: No

Widen Sheehan Road from 2 to 3 lanes between Social Row Road and Bonnie Anne Place.

668 MOT — Kitridge Road Widening

Feasible: 2031-2035 | Mileage: 0.60 | Cost: $2.88 / $3.66 | TIP: No

Widen Kitridge Road from 2 to 3 lanes between Gander Road and the Dayton east corporation limit.

669 MOT — Spring Valley Pike

Feasible: 2046-2050 | Mileage: 1.20 | Cost: $4.40 / $7.00 | TIP: No

Widen Spring Valley Pike from 2 to 3 lanes between Clyo Road and the Greene County Line.

670A MOT — Centerville Station Road — Phase I

Feasible: 2026-2030 | Mileage: 0.43 | Cost: $4.72 / $4.72 | TIP: Yes

Reconstruct Centerville Station Road from Parkeast Court to the Centerville East corporation limit with improved roadway geometry and drainage.

670B MOT — Centerville Station Road — Phase II

Feasible: 2036-2040 | Mileage: 0.45 | Cost: $1.10 / $1.40 | TIP: No

Widen Centerville Station Road between Brainard Woods Drive and Parkeast Court from 2 to 3 lanes.

676 MOT — I-75 / Needmore Road Interchange

Feasible: 2041-2045 | Mileage: N/A | Cost: $30.00 / $47.70 | TIP: No

Improve the traffic operation of the I-75 and Needmore Road interchange.

677 MOT — I-75 Edwin C. Moses/SR 741/Dryden Road Interchanges

Feasible: 2036-2040 | Mileage: N/A | Cost: $75.00 / $95.25 | TIP: No

Improve safety and operations at and between interchanges at I-75 intersecting with Edwin C. Moses Boulevard, SR 741, and Dryden Road.

678 MOT — I-75 Wagner Ford Rd and Stanley Ave Interchanges

Feasible: 2036-2040 | Mileage: N/A | Cost: $50.00 / $63.50 | TIP: No

Improve safety and operations at and between I-75 intersecting with Stanley Avenue and Wagner Ford Road.

800A MOT — West Moraine Connector — Phase I

Feasible: 2031-2035 | Mileage: 1.00 | Cost: $8.25 / $10.48 | TIP: No

Widen Pinnacle Road from the Moraine/Jefferson Township boundary to Infirmary Road, Infirmary Road from Pinnacle Road to Hemple Road, and Hemple Road from Infirmary Road to 800 feet west of Infirmary Road; including new drainage culverts, side road drainage, bike/pedestrian paths, and realignment of the intersection at Infirmary Road and Hemple Road.

800B MOT — West Moraine Connector — Phase II

Feasible: 2031-2035 | Mileage: 1.00 | Cost: $2.70 / $3.43 | TIP: No

Widen Hemple Road from 800 feet west of Infirmary Road to SR 4; including new drainage culverts, side road drainage, bike/pedestrian paths, and realignment of the intersection at Hemple Road and SR 4.

Table 5.4 — Proposed Congestion Management Projects
(Cost is in Millions of 2025 / Year of Expenditure Dollars)

804 MOT SR 48

Feasible: 2036-2040 Mileage: 0.50 Cost: $4.50 / $5.72 TIP: No

Traffic signal upgrades, street lighting, sidewalks, curb and gutter, and drainage issues on SR 48 from Westbrook Road to Hacker Road.

808A MOT SR 4 / Manning / Jamaica

Feasible: 2036-2040 Mileage: N/A Cost: $4.00 / $5.08 TIP: No

Improve the SR 4, Manning, and Jamaica intersection to improve safety; this project might include road realignment and/or implementation of a roundabout.

808B MOT SR 4 / South Union

Feasible: 2036-2040 Mileage: N/A Cost: $1.20 / $1.52 TIP: No

Upgrade the intersection of SR 4 and Union Road to increase safety and slow traffic by implementing a roundabout, turn lanes, and/or a traffic signal.

810 MOT Helena Street Widening and Realignment

Feasible: 2031-2035 Mileage: 0.25 Cost: $2.88 / $3.66 TIP: No

Realign and widen Helena Street from 2 to 3 lanes between Riverside Drive and Forest Avenue.

822B MOT Clyo & Wilmington (Wilmington/I-675)

Feasible: 2026-2030 Mileage: N/A Cost: $8.10 / $8.10 TIP: NF

Improve operation of the Clyo Road and Wilmington Pike intersection by adding additional left and right turn lanes and extending turn lanes to accommodate longer queues.

822C MOT Feedwire Improvements (Wilmington/I-675)

Feasible: 2036-2040 Mileage: 0.40 Cost: $9.76 / $12.40 TIP: No

Reconfigure Feedwire Road between 600' west of Wilmington Pike and Clinger Road by reassigning lanes, adding lanes, and increasing queue lengths. Replace the traffic signals at the intersection of Wilmington Pike and Charles Drive.

823B MOT I-675 Southbound Exit Ramp (Wilmington/I-675)

Feasible: 2036-2040 Mileage: 0.50 Cost: $4.80 / $6.10 TIP: No

Widen the southbound exit ramp from I-675 to Wilmington Pike to 2 lanes and improve operations at the intersection with Wilmington Pike by adding additional turn lanes.

823C MOT Diverging Diamond Interchange (Wilmington/I-675)

Feasible: 2036-2040 Mileage: 1.75 Cost: $25.80 / $32.77 TIP: No

Reconstruct Wilmington Pike at I-675 to a diverging diamond interchange. Add through lanes on Wilmington Pike south of Feedwire Road, a second left turn lane onto I-675 at the SB and NB ramp intersections, and widen the NB ramp to I-675 to two lanes.

830 MOT East Third Street

Feasible: 2031-2035 Mileage: 2.21 Cost: $2.30 / $2.92 TIP: No

Widen East Third Street at Findlay and Irwin Streets for the installation of left turn lanes.

833 MOT Patterson Boulevard Reconstruction

Feasible: 2026-2030 Mileage: 0.46 Cost: $4.26 / $4.26 TIP: NF

Reconstruct Patterson Boulevard with new pavement, base, curb, sidewalk, streetlights, catch basins, and traffic signals.

837B MOT First Street

Feasible: 2031-2035 Mileage: 1.40 Cost: $4.00 / $5.08 TIP: No

Change the lane configuration of First Street from 4 to 3 lanes, including installation of bike lanes and street lighting, from Webster Street to Springfield Street.

839 MOT Webster Street Widening

Feasible: 2031-2035 Mileage: 0.50 Cost: $2.50 / $3.18 TIP: No

Widen Webster Street to 5 lanes from Deeds Park Drive to Keowee Street for the installation of left turn lanes with parking and bicycle infrastructure.

859 MOT Dryden Road Multi-Modal Path — Phase I

Feasible: 2031-2035 Mileage: 1.40 Cost: $0.75 / $0.95 TIP: No

Construct a multimodal (bike, skate, walk) path along Dryden Road in front of former GM property to Northlawn Avenue to connect industrial property and West Moraine residential areas to the River Corridor bikepath.

Table 5.4 — Proposed Congestion Management Projects
(Cost is in Millions of 2025 / Year of Expenditure Dollars)

860 MOT — Dryden Road Multi-Modal Path — Phase II

Feasible: 2036-2040 | Mileage: 1.40 | Cost: $0.85 / $1.08 | TIP: No

Construct a multimodal (bike, skate, walk) path along Dryden Road from Arbor Boulevard to East River Road to loop through industrial areas and connect to the River Corridor bikepath.

865 MOT — East Third Street Roadway Improvements

Feasible: 2026-2030 | Mileage: 0.65 | Cost: $1.53 / $1.53 | TIP: Yes

Reduce travel lanes from 5/4 to 3 on East Third Street from Keowee Street to Springfield Street.

867 MOT — Hudson Avenue / Main Street Intersection Realignment

Feasible: 2036-2040 | Mileage: 0.25 | Cost: $1.50 / $1.91 | TIP: No

Realign Hudson Avenue at Main Street to create a single intersection.

868 MOT — Monument Avenue Left Turn Lane Installation

Feasible: 2041-2045 | Mileage: 1.08 | Cost: $4.10 / $6.52 | TIP: No

Install a left turn lane on Monument Avenue from Keowee Street to Findlay Street.

869 MOT — Webster Street Left Turn Lane Installation

Feasible: 2036-2040 | Mileage: 0.83 | Cost: $4.10 / $5.21 | TIP: No

Install a left turn lane on Webster Street from Keowee Street to Stanley Avenue.

870A MOT — West Third Street

Feasible: 2026-2030 | Mileage: 1.65 | Cost: $2.92 / $2.92 | TIP: Yes

Reduce lane configuration from 4 to 3 lanes on West Third Street between Plaza Avenue and Broadway Street.

870B MOT — West Third Street

Feasible: 2031-2035 | Mileage: 0.48 | Cost: $1.98 / $2.51 | TIP: No

Reduce lane configuration from 4 to 3 lanes on West Third Street between S Gettysburg Avenue and Plaza Avenue.

870C MOT — West Third Street

Feasible: 2026-2030 | Mileage: 0.51 | Cost: $2.11 / $2.11 | TIP: Yes

Reduce lane configuration from 4 to 3 lanes on West Third Street between Gettysburg Avenue and Almond Avenue.

870D MOT — West Third Street

Feasible: 2031-2035 | Mileage: 0.33 | Cost: $1.36 / $1.73 | TIP: No

Reduce lane configuration from 4 to 3 lanes on West Third Street between Almond Avenue and Liscum Drive.

872 MOT — Washington Church Road Extension

Feasible: 2026-2030 | Mileage: 0.63 | Cost: $1.56 / $1.74 | TIP: No

Construct a new 2/3 lane roadway approximately 3,300 feet south from the intersection of Washington Church Road and Austin Boulevard to the Montgomery/Warren County line.

879B MOT — Woodman Gateway - Springfield Street Intersection

Feasible: 2031-2035 | Mileage: 0.50 | Cost: $19.00 / $24.13 | TIP: No

Reconstruct Woodman Drive at the Springfield Street intersection with an at-grade signalized intersection or roundabout based on a feasibility study. Scope will also include a shared use path, street lighting, and storm sewer replacement.

879C MOT — Woodman Gateway - Springfield to Bayside/Longview

Feasible: 2041-2045 | Mileage: 0.72 | Cost: $40.00 / $63.60 | TIP: No

Reconstruct Woodman Drive south of the Springfield Street intersection to the Bayside/Longview intersection. Based on feasibility study results, intersections in the corridor will be adjusted. Scope will also include storm sewer replacement, street lighting and installation of a shared use path.

880 MOT — Byers - Lyons Bikeway Connector

Feasible: 2026-2030 | Mileage: 0.50 | Cost: $0.70 / $0.78 | TIP: No

Construct a 10' ft wide shared used path linking the existing shared use path near a FedEx facility to the existing shared use path on Lyons Road.

881 MOT — Patterson Boulevard Bridge

Feasible: 2031-2035 | Mileage: 0.15 | Cost: $23.10 / $29.34 | TIP: No

Replace the Patterson Boulevard bridge and provide sidewalks on both sides of the bridge.

Table 5.4 — Proposed Congestion Management Projects
(Cost is in Millions of 2025 / Year of Expenditure Dollars)

882A MOT **Alex-Bell Road Reconstruction - Phase 1**

Feasible: 2031-2035 Mileage: 0.17 Cost: $3.80 / $4.83 TIP: No

Reconstruct Alex-Bell Road from SR 741 to 900 ft east to include continuous sidewalk on both sides of the road.

882B MOT **Alex-Bell Road Reconstruction - Phase 2**

Feasible: 2031-2035 Mileage: 0.31 Cost: $2.40 / $3.05 TIP: No

Reconstruct Alex-Bell Road from 900 ft east of SR 741 to Lamme Road to include continuous sidewalk on both sides of the road. Add a two-way left turn lane between Cobblegate Drive and Lamme Road.

882C MOT **Alex-Bell Road Reconstruction - Phase 3**

Feasible: 2031-2035 Mileage: 0.42 Cost: $3.30 / $4.19 TIP: No

Widen Alex-Bell Road between Lamme Road and Willowtwig Lane to an urban typical to include a two-way left turn lane and sidewalks.

889 MOT **Monument Avenue Street Conversion**

Feasible: 2031-2035 Mileage: 0.50 Cost: $0.50 / $0.64 TIP: No

Convert one way Monument Avenue to two way with removal of the signals at St. Clair Street, Jefferson Street, Ludlow Street, and Wilkinson Street and replace with all-way stop signs.

890 MOT **Keowee Street Improvements**

Feasible: 2026-2030 Mileage: 0.59 Cost: $4.00 / $4.00 TIP: Yes

Construct shared-use paths on both sides of Keowee Street from Fifth Street to Monument Avenue by reducing travel lanes from 7 to 5 lanes.

891 MOT **James H. McGee Boulevard Extension**

Feasible: 2036-2040 Mileage: 0.20 Cost: $1.50 / $1.91 TIP: No

Extend James H. McGee Boulevard as a 5 lane section through the Desota Bass property to connect with Danner Avenue at W. Stewart Street.

892 MOT **Findlay Street**

Feasible: 2026-2030 Mileage: 0.43 Cost: $2.25 / $2.25 TIP: Yes

Reconstruct Findlay Street between Springfield Street and E. Monument Avenue. Rebuild Curbs, sidewalks, driveway approaches, lighting, traffic signals, signage, pavement markings and a buried interconnect. Perform minor storm sewer work including new manholes, catch basins, and some pipe replacement.

893A MOT **Edwin C. Moses Boulevard and West Riverview Road**

Feasible: 2026-2030 Mileage: 0.34 Cost: $0.85 / $0.85 TIP: Yes

Implement road diet on Riverview Avenue and Edwin C. Moses Boulevard from Salem Avenue to West 3rd Street from 5/4 lanes to 2/3 lanes with parking, and realign the intersection of Edwin C. Moses Boulevard and West Riverview Avenue.

893B MOT **West Riverview Avenue**

Feasible: 2031-2035 Mileage: 0.16 Cost: $0.40 / $0.51 TIP: No

Implement a road diet on West Riverview Avenue from 4 lanes to 2/3 lanes with parking between Monument Avenue and West First Street.

894 MOT **Far Hills Avenue Improvements**

Feasible: 2026-2030 Mileage: 0.87 Cost: $2.95 / $2.95 TIP: Yes

Reduce the existing roadway section between Stroop Road and Dorothy Lane from 6 to 5 lanes. Construct a new shared use path along the east side of the project corridor by eliminating the northbound curb lane.

895 MOT **East Chambersburg Road Widening, Phase V**

Feasible: 2031-2035 Mileage: 1.10 Cost: $7.00 / $8.89 TIP: No

Widen Chambersburg Road from 2 to 3 lanes between 5,000 L.F. east of Bellefontaine Road and State Route 4/235.

896 MOT **Catalpa & Siebenthaler Intersection**

Feasible: 2026-2030 Mileage: N/A Cost: $3.00 / $3.00 TIP: Yes

Improve safety at the intersection of Siebenthaler Avenue and Catalpa Drive by implementing a roundabout.

897 MOT **Sheehan Road Widening**

Feasible: 2036-2040 Mileage: 0.50 Cost: $3.00 / $3.81 TIP: No

Widen Sheehan Road to an urban typical section to include a two-way left turn lane and sidewalks from Social Row Road to the Montgomery/Warren County Line.

Table 5.4 — Proposed Congestion Management Projects
(Cost is in Millions of 2025 / Year of Expenditure Dollars)

898A MOT — Frederick Pike - Phase 1

Feasible: 2031-2035 | Mileage: 0.40 | Cost: $2.40 / $3.05 | TIP: No

Widen Frederick Pike from 2 to 3 lanes to include a two-way left turn lane between US 40 and 2,000 feet north of US 40.

898B MOT — Frederick Pike - Phase 2

Feasible: 2031-2035 | Mileage: 0.50 | Cost: $3.00 / $3.81 | TIP: No

Widen Frederick Pike from 2 to 3 lanes to include a two-way left turn lane between 2,000 feet north of US 40 to 500 feet north of Martindale Road.

898C MOT — Frederick Pike - Phase 3

Feasible: 2036-2040 | Mileage: 0.50 | Cost: $3.00 / $3.81 | TIP: No

Widen Frederick Pike from 2 to 3 lanes to include a two-way left turn lane between 500 feet north of Martindale Road and 2,000 feet north of Jackson Road.

898D MOT — Frederick Pike - Phase 4

Feasible: 2036-2040 | Mileage: 0.70 | Cost: $4.10 / $5.21 | TIP: No

Widen Frederick Pike from 2 to 3 lanes to include a two-way left turn lane between 2,000 feet north of Jackson Road and Old Springfield Road.

899 MOT — Linden Avenue

Feasible: 2031-2035 | Mileage: 1.00 | Cost: $6.50 / $8.26 | TIP: No

Widen and fix the geometry of Linden Avenue from Maue Road to Leis Road and add a center left-turn lane. Add curb, stormwater drains, and sidewalk on both sides of the roadway.

900 MOT — Medlar Road

Feasible: 2031-2035 | Mileage: 0.65 | Cost: $4.00 / $5.08 | TIP: No

Widen Medlar Road from Mellow Drive to Miamisburg-Springboro Road and add a shared use path on the south side. Construct a roundabout at Medlar Road and Miamisburg-Springboro Road.

901 MOT — Benner Road

Feasible: 2036-2040 | Mileage: 0.85 | Cost: $6.00 / $7.62 | TIP: No

Widen Benner Road from Hambletonian Court to Medlar Road and add a shared use path on the south side. Improve intersection at S. Gebhart Church Road and replace culvert structure.

902 MOT — Mound Road

Feasible: 2036-2040 | Mileage: 0.65 | Cost: $4.20 / $5.33 | TIP: No

Widen Mound Road from Benner Road to Enterprise Court and add a shared use path on the east side. Realign Mound Road at Benner Road to eliminate the skewed intersection.

903 MOT — SR 725 Shared-Use Path

Feasible: 2041-2045 | Mileage: 2.00 | Cost: $5.00 / $7.95 | TIP: No

Install an 11' shared-use path from Heincke Road to Byers Road, including updated pedestrian crossings at Heincke Road, Gebhart Church Road, Kettering Hospital Miamisburg, Alexandersville Road, and Monarch Lane.

904 MOT — Gebhart Church Road

Feasible: 2041-2045 | Mileage: 0.40 | Cost: $5.00 / $7.95 | TIP: No

Widen and fix the geometry of Gebhart Church Road from Leiter Road to Maue Road. Upgrade the crossing over Sycamore Creek to accommodate proposed improvements.

905 MOT — SR 725 Intersection Improvements

Feasible: 2041-2045 | Mileage: 0.25 | Cost: $4.00 / $6.36 | TIP: No

Upgrade the intersections at Union Road and Linden Avenue with roundabouts to improve traffic operations and roadway safety.

906 MOT — Dixie Drive Improvements

Feasible: 2026-2030 | Mileage: 0.38 | Cost: $1.65 / $1.85 | TIP: No

Implement multimodal improvements on S Dixie Drive from National Road to Elva Court with a possible roundabout at Dixie Dr and National Rd and a road diet to add street parking and bike lanes.

907 MOT — East Third Street Cycle Track

Feasible: 2031-2035 | Mileage: 0.70 | Cost: $1.60 / $2.03 | TIP: No

Create a two-way cycle track along the south side of East Third Street from Ludlow Street to Webster Street by removing a travel lane.

Table 5.4 — Proposed Congestion Management Projects
(Cost is in Millions of 2025 / Year of Expenditure Dollars)

908 MOT — Fifth Street Bike Lanes

Feasible: 2036-2040 | Mileage: 0.50 | Cost: $1.50 / $1.91 | TIP: No

Install bike lanes by removing the eastbound lane on Fifth Street from Patterson Boulevard to Perry Street. Convert the block from Wilkinson Street to Perry Street to be a two-way street.

909 MOT — First Street Conversion

Feasible: 2031-2035 | Mileage: 0.75 | Cost: $3.00 / $3.81 | TIP: No

Convert First Street from Webster Street to Wilkinson Street to be a two-way street.

910 MOT — Germantown Street Bike Lanes Phase 2

Feasible: 2036-2040 | Mileage: 2.00 | Cost: $2.00 / $2.54 | TIP: No

Add bike lanes to Germantown Street from Euclid Avenue to Gettysburg Avenue.

911 MOT — James H. McGee Blvd

Feasible: 2031-2035 | Mileage: 3.50 | Cost: $7.30 / $9.27 | TIP: No

Remove outside travel lanes and create a multi-use path and improve pedestrian crossings on James H. McGee Boulevard between Germantown Street and Little Richmond Road.

912 MOT — Keowee Street Safety Improvements Phase 2

Feasible: 2031-2035 | Mileage: 0.50 | Cost: $3.00 / $3.81 | TIP: No

Remove the outside travel lanes from East Fifth Street to US Route 35 and the slip ramps for US Route 35. Create a standard intersection at the ramps and add shared use paths on both sides of Keowee Street.

913 MOT — Linden Avenue Reconstruction

Feasible: 2041-2045 | Mileage: 1.10 | Cost: $10.00 / $15.90 | TIP: No

Reconstruct Linden Avenue between Hamilton Avenue and Smithville Road by reducing to three lanes with roundabouts at Hamilton Ave, Xenia Avenue, Lorain Ave, and John Glenn Ave.

914 MOT — Riverside Drive

Feasible: 2031-2035 | Mileage: 1.60 | Cost: $5.00 / $6.35 | TIP: No

Remove outside travel lanes, create a multi-use path, and improve pedestrian crossings on Riverside Drive between Helena Street and Siebenthaler Ave.

915 MOT — Second Street Cycle Track

Feasible: 2036-2040 | Mileage: 1.00 | Cost: $2.00 / $2.54 | TIP: No

Add a two-way cycle track to the south side of Second Street between Patterson Boulevard and Salem Avenue Bridge by removing a travel lane.

916 MOT — Smithville Road Reconstruction Phase 3

Feasible: 2041-2045 | Mileage: 1.00 | Cost: $7.50 / $11.93 | TIP: No

Change the lane configuration on Smithville Road from 2 lanes to 3 lanes, including curb, walk and street lighting from East Third Street to Springfield Street.

917 MOT — SR 48 Safety Improvements

Feasible: 2031-2035 | Mileage: 0.70 | Cost: $5.00 / $6.35 | TIP: No

Reduce lanes from 4 to 3 and implement pedestrian safety and mobility treatments on SR 48 from Shoup Mill/Turner Road to Philadelphia Drive.

918 MOT — I-675/I-75/SR 725 Interchanges

Feasible: 2041-2045 | Mileage: N/A | Cost: $50.00 / $79.50 | TIP: No

Improve safety and operations at and between the I-675/I-75 and I-675/SR 725 interchanges and the SR 725 and Yankee Street intersection.

919 MOT — West Franklin Safety Study

Feasible: 2026-2030 | Mileage: 0.52 | Cost: $2.50 / $2.50 | TIP: YP

Feasibility study for a road diet on West Franklin Street from Main Street to Normandy Lane with a goal to improve pedestrian safety with traffic calming features.

920 MOT — Franklin Street and Clyo Road Bike Path

Feasible: 2026-2030 | Mileage: 1.65 | Cost: $1.98 / $1.98 | TIP: Yes

Install a multi-use trail on the south side of Franklin Street from South Johanna to Clyo and on the East side of Clyo from Franklin to Alex Bell. Replace signals that are affected by the work at the intersections.

Table 5.4 — Proposed Congestion Management Projects
(Cost is in Millions of 2025 / Year of Expenditure Dollars)

921 MOT — Bigger Road / Clyo Road Intersection

Feasible: 2026-2030 | Mileage: 0.25 | Cost: $2.05 / $2.05 | TIP: Yes

Increase EB left turn lane capacity, add protected turning movements for the SB left turn lane, and add storage capacity to SB dedicated turn lanes at the Bigger Road and Clyo Road intersection.

922 MOT — Main Street Uptown Improvements

Feasible: 2031-2035 | Mileage: 0.15 | Cost: $4.98 / $6.32 | TIP: No

Widen North Main Street between 150' north of Ridgeway Road and Franklin Street to a five-lane section and reconstruct the Ridgeway Road intersection with ADA curb ramps, crosswalks and a traffic signal. Also improve curve radii and ADA compliance of the Franklin intersection.

923 MOT — Loop Road Multi-use Path

Feasible: 2041-2045 | Mileage: 0.85 | Cost: $12.00 / $19.08 | TIP: No

Install a multi-use trail from Alex Bell to SR 48 by replacing the existing sidewalk with a multi-use path. Widen the bridge to allow for the addition of a path.

924 MOT — SR 48

Feasible: 2031-2035 | Mileage: 0.70 | Cost: $2.42 / $3.07 | TIP: No

Install a multi-use path and improve three traffic signals on SR 48 between Whipp Road and I-675.

925 MOT — North County Line Road Improvements

Feasible: 2026-2030 | Mileage: 0.40 | Cost: $2.05 / $2.30 | TIP: No

Reconstruct 2100' of County Line Road west of the Peters/Lightner intersection to the intersection and widen the road from 2 to 3 lanes, add curb and gutters, and add an enclosed storm sewer system.

715 WAR — Clearcreek Franklin Road

Feasible: 2031-2035 | Mileage: 0.70 | Cost: $1.35 / $1.71 | TIP: No

Widen Clearcreek Franklin Road from 2 to 3 lanes between Whispering Pines and Pennyroyal Road and add curb and gutters and storm sewers. Re-profile the roadway to correct vertical deficiencies and re-stripe roadway to include bike lanes.

716 WAR — East Second Street Signal Upgrade

Feasible: 2026-2030 | Mileage: N/A | Cost: $2.61 / $2.61 | TIP: Yes

Upgrade the traffic signals at the intersections of East Second Street at Charles Street/Victory Lane, Millard Drive and Deardoff Road and network them with the City's centrally controlled signal system. Extend the existing fiber optic infrastructure along East Second Street between Riley Boulevard and I-75 for networking and integrate 7 intersections with the ATMS signal system.

717 WAR — SR 73 Improvement Project

Feasible: 2046-2050 | Mileage: 1.90 | Cost: $3.75 / $5.96 | TIP: No

Install curb and gutter, sidewalks, embankment, storm sewer pipe extension, catch basins, signal upgrades and a pedestrian bridge along SR 73 from Springwood Lane to Deardoff Road.

718 WAR — SR 123 Improvements (East)

Feasible: 2046-2050 | Mileage: 1.14 | Cost: $4.30 / $6.84 | TIP: No

Widen SR 123 from 2 to 3 lanes including installation of a 4' treated shoulder from Beal Road to Robinson Vail Road, correct vertical alignment and add storm sewers as needed.

719 WAR — SR 123 Improvements (West)

Feasible: 2036-2040 | Mileage: 1.14 | Cost: $5.20 / $6.60 | TIP: No

Widen SR 123 from 2 to 3 lanes including installation of a 4' treated shoulder from Riley Boulevard to I-75, realign and install traffic signal at the intersection of Grand Oak Drive and Watkins Glen Drive, and upgrade all existing traffic signals.

720 WAR — N Riley Blvd / N Main St / N River St / Van Horne Ave

Feasible: 2036-2040 | Mileage: 0.25 | Cost: $4.00 / $5.08 | TIP: No

Install a roundabout at the six point intersection of N Riley Blvd, N Main St, N River St, and Van Horne Ave to improve traffic flow and safety and extend sidewalks for pedestrian access.

721 WAR — Riley Blvd / SR 73 / S Main St / Dixie Hwy Roundabout

Feasible: 2031-2035 | Mileage: 0.25 | Cost: $5.00 / $6.35 | TIP: No

Install a roundabout at the skewed intersection of Riley Blvd, SR 73, S Main St, and Dixie Hwy. Also extend sidewalks for pedestrian access, and upgrade railroad crossing signals.

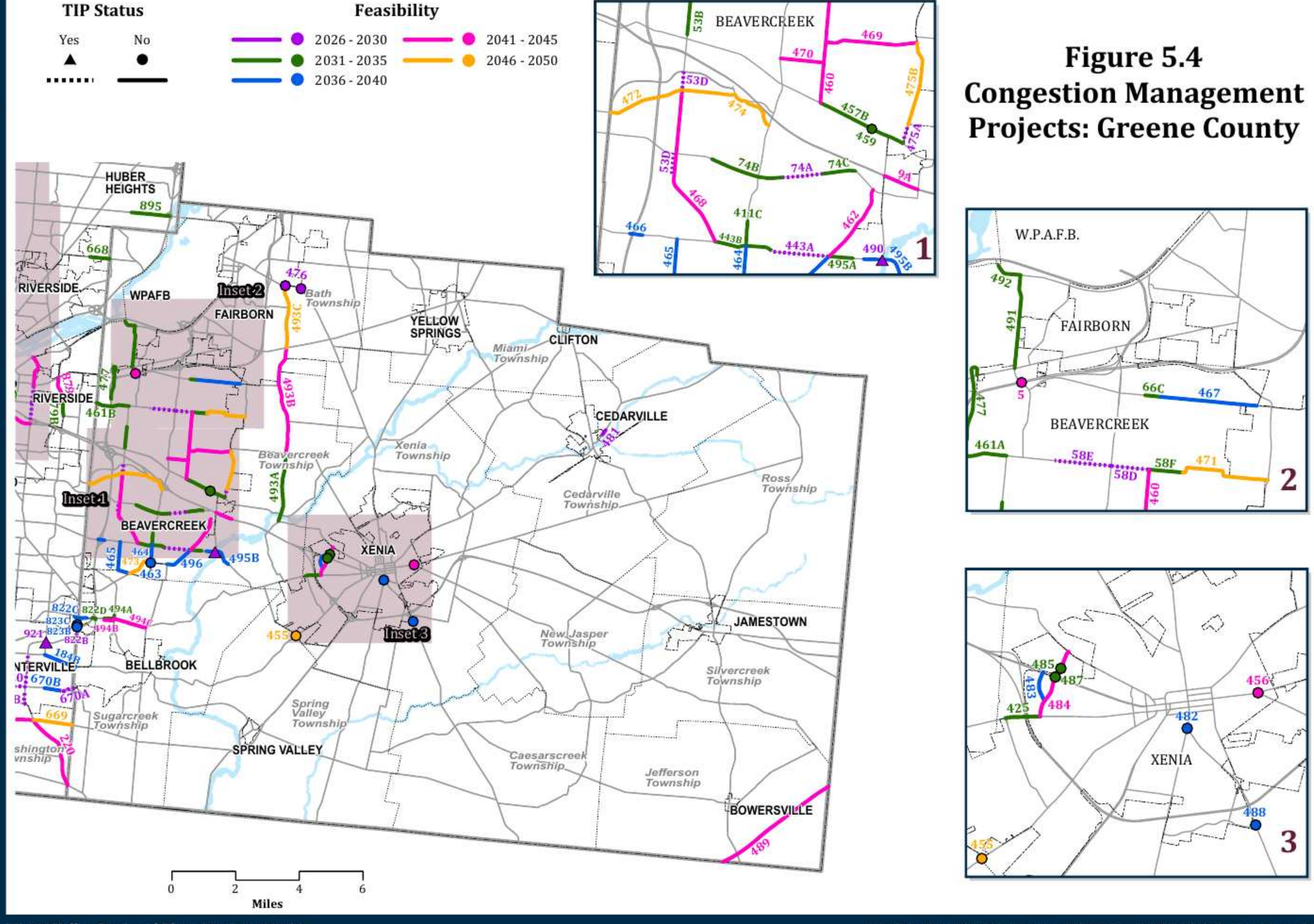
722 WAR — S Main Street Improvements

Feasible: 2031-2035 | Mileage: 0.25 | Cost: $0.80 / $1.02 | TIP: No

Implement a road diet on S Main Street between Riley Boulevard and Hudson Street/S River Street from 4 lanes to 2/3 lanes.

Source: MVRPC

Figure 5.4
Congestion Management Projects: Greene County



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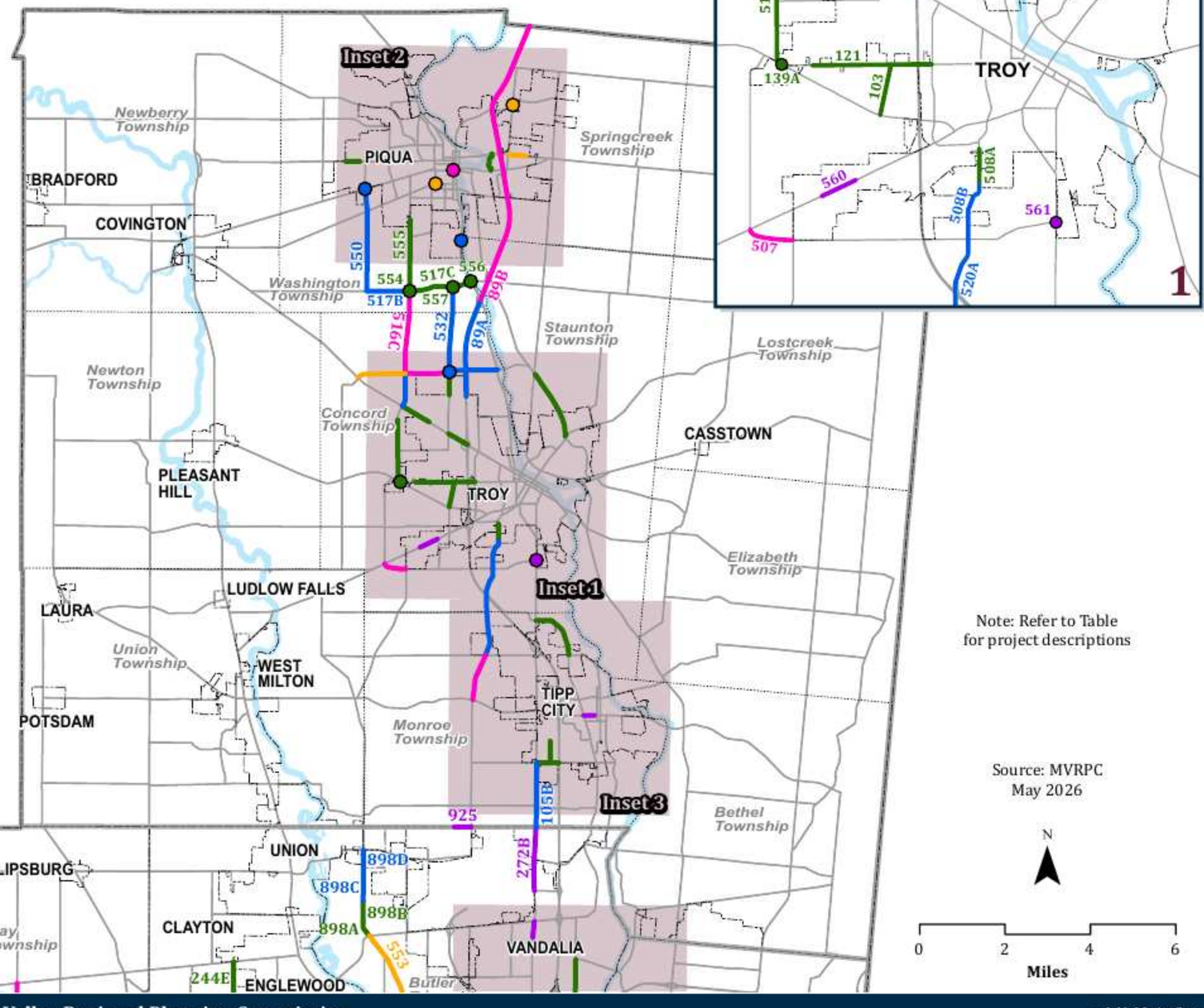
Figure 5.5
Congestion Management Projects: Miami County

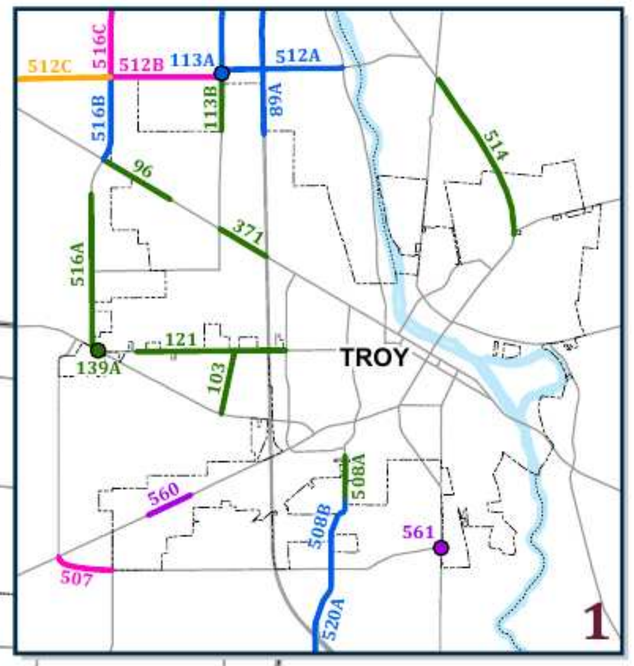
TIP Status

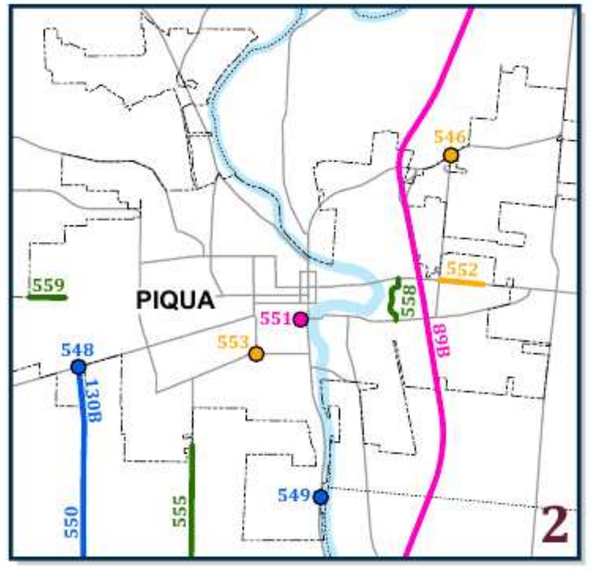
Yes ▲ ..... No ●

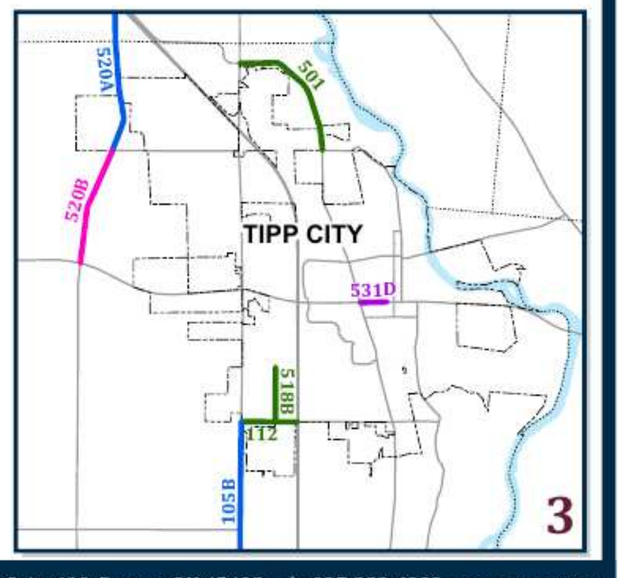
Feasibility

2026 - 2030
2031 - 2035
2036 - 2040
2041 - 2045
2046 - 2050









Note: Refer to Table for project descriptions

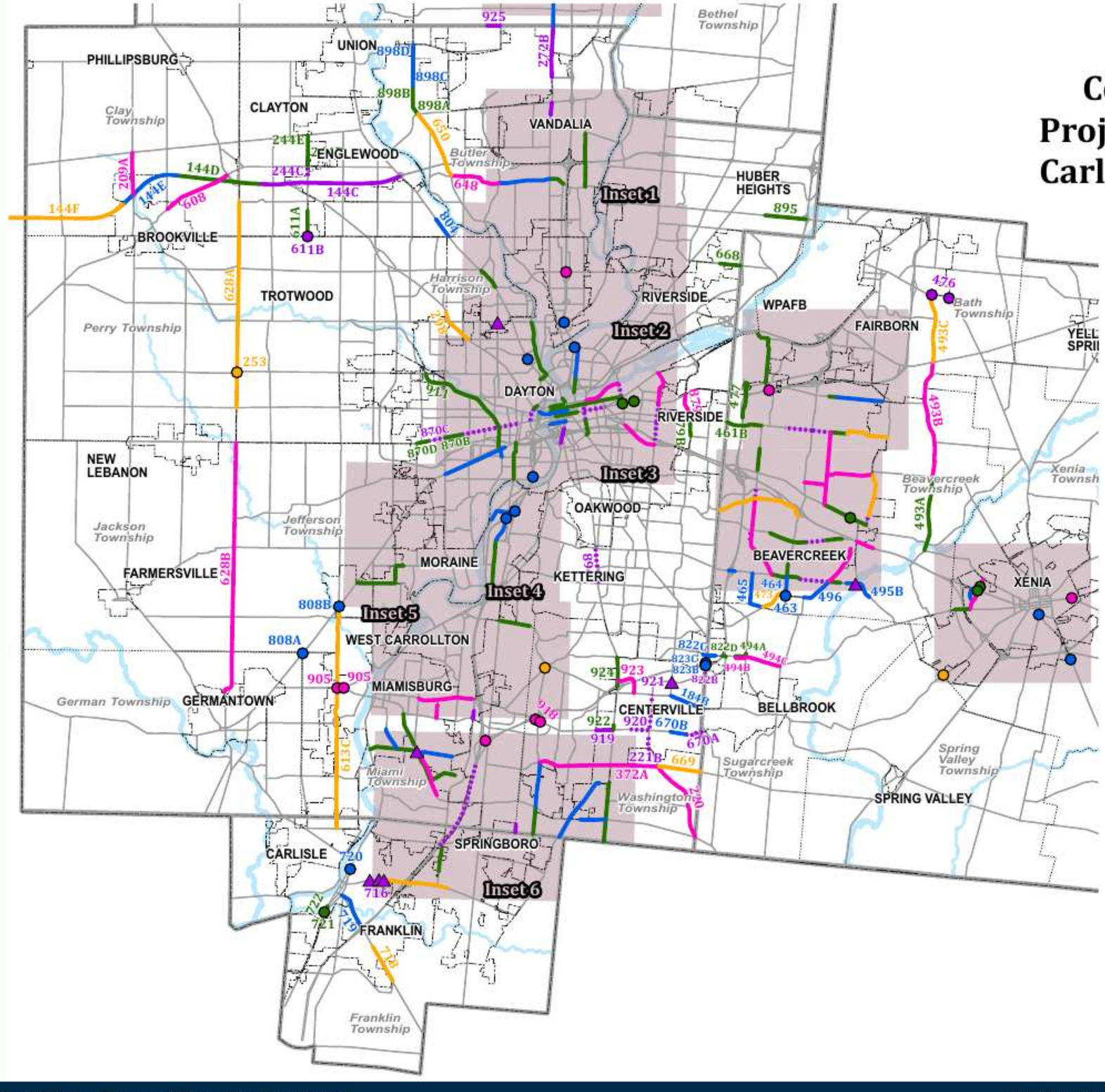
Source: MVRPC
May 2026

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Figure 5.6
Congestion Management Projects: Montgomery County, Carlisle, Franklin, Springboro, and Franklin Twp.



TIP Status

Yes ▲ No ●

Feasibility

- 2026 - 2030
- 2031 - 2035
- 2036 - 2040
- 2041 - 2045
- 2046 - 2050

Note: Refer to Table for project descriptions.

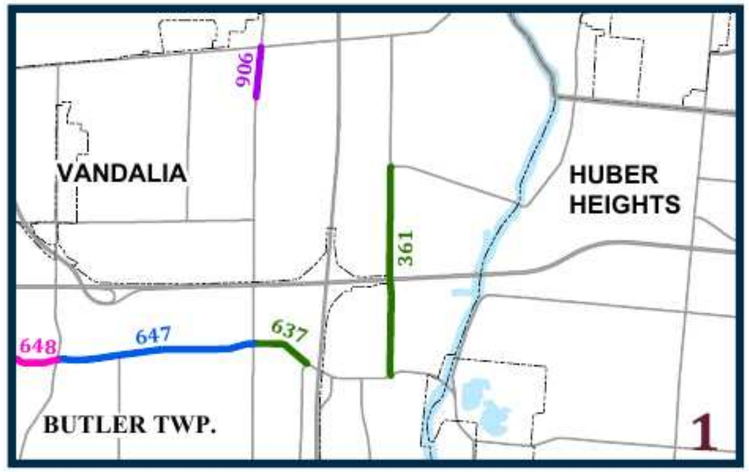
Source: MVRPC
May 2026

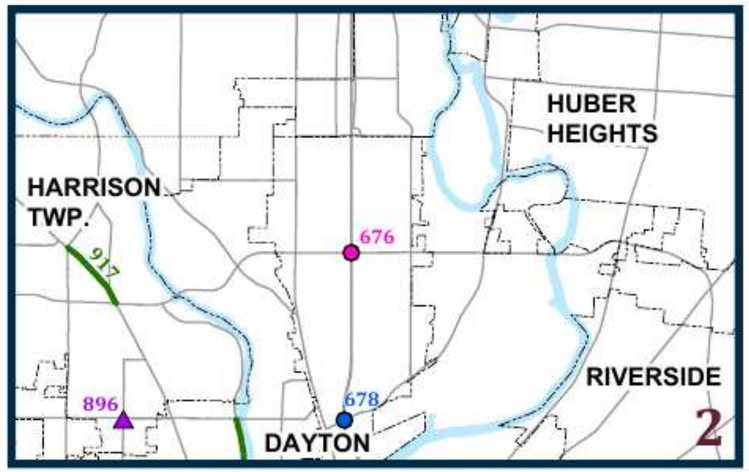
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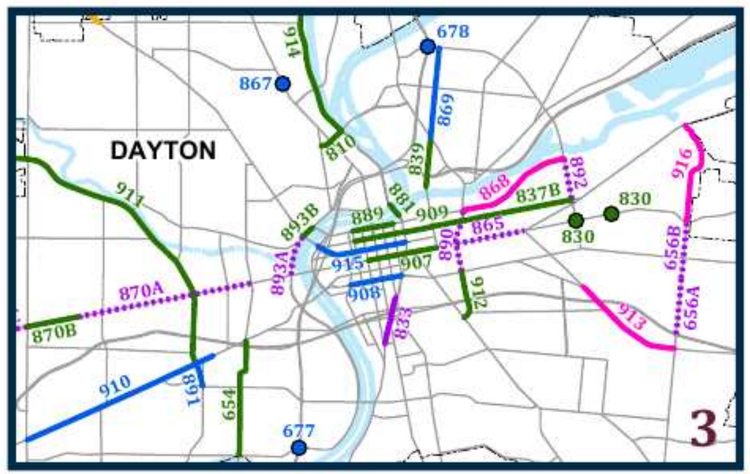
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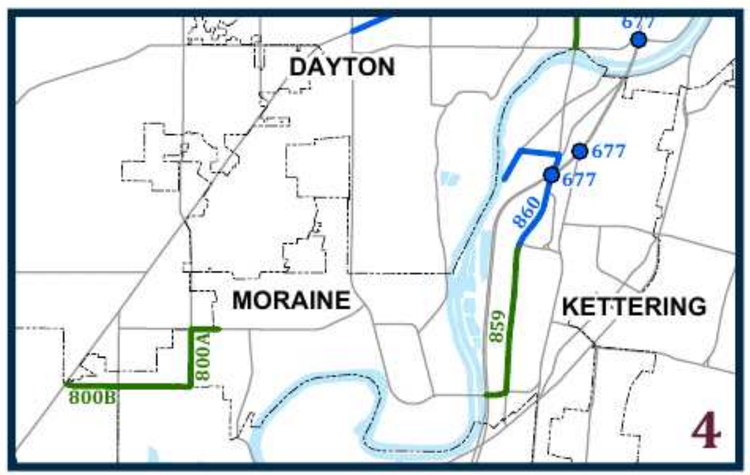
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Figure 5.7
Congestion Management Projects: Montgomery County Insets

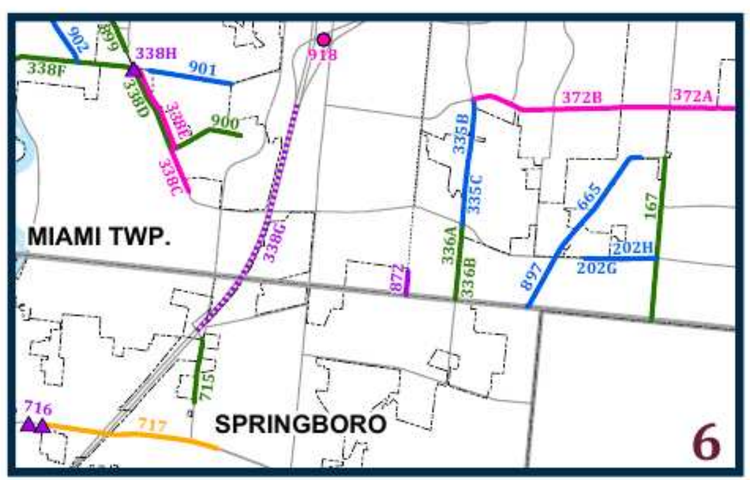












TIP Status

Yes ▲ No ●

Feasibility

- 2026 - 2030
- 2031 - 2035
- 2036 - 2040
- 2041 - 2045
- 2046 - 2050

Note: Refer to Table for project descriptions.

Source: MVRPC
May 2026

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Chapter 6
Congestion Management Strategies – Transit

6.1 Overview

For the Region to progress, it must have a comprehensive transportation system that serves the needs of travelers using all modes of transportation with reasonable mobility options for all residents including those using public and human services transportation. The 2050 Long Range Transportation Plan addresses future mobility needs by including transit programs and projects that provide alternatives to the private automobile.

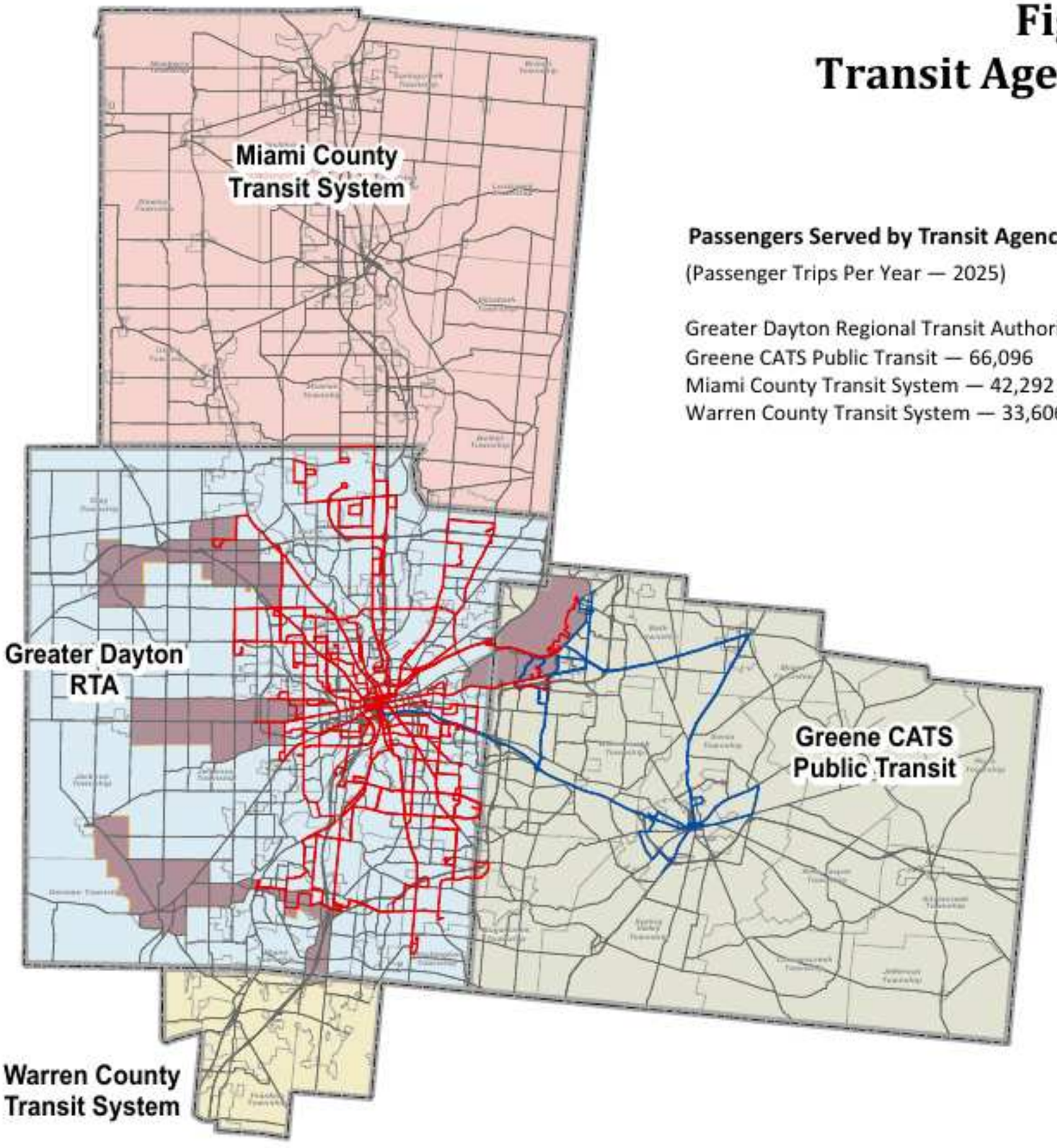
Four transit agencies serve the Region (see Figure 6.1). The Greater Dayton Regional Transit Authority (GDRTA) provides fixed-route and demand responsive service in Montgomery County. The Greene County Transit Board (Greene CATS Public Transit) provides flex-route service as well as demand-responsive service in Greene County. The Miami County Transit System and the Warren County Transit System provide demand-responsive service in Miami and Warren counties, respectively.

In conjunction with the 2020 U.S. Census, the Dayton Urbanized Area boundary was redrawn resulting in changes to the transit systems designations within the Metropolitan Planning Area. As a result, the Miami County Transit System has transitioned to a rural system and will no longer be eligible for 5307 funding necessitating a revision to the standing agreement to suballocate Federal (5307) Bus Tier Urban Transit Funding. In addition, due to the age of the old agreement dating back to April 2003, outdated references were updated throughout and low-income populations were incorporated into the distribution formula as it is current practice by FTA, the new agreement was signed by the remaining transit agencies in June 2023. MVRPC will continue to suballocate funding annually.

Financial Outlook

Financial forecasts for the regional transit agencies were provided by each agency in year of expenditure dollars using 2.3 percent per year to project inflation into the future. The analysis shows that the various transit programs are fiscally constrained throughout the life of the Plan and the complete financial analysis can be found in the LRTP Financial Summary Report.

Figure 6.1
Transit Agency Service Areas



Passengers Served by Transit Agency

(Passenger Trips Per Year — 2025)

Greater Dayton Regional Transit Authority — 6,240,533
Greene CATS Public Transit — 66,096
Miami County Transit System — 42,292
Warren County Transit System — 33,606

Source: GDRTA, Greene CATS, MCTS, and WCTS

May 2026

6.2 Greater Dayton Regional Transit Authority

The long range planning process used by GDRTA or RTA is based upon strategic plan priorities, as well as federal directives. This planning process has led to the current transit system and has also assisted in the development of the 2050 LRTP.

Service Description and Social/Economic Impacts

RTA provides over 6 million passenger-trips per year through an extensive network of fixed routes, covering nearly 700 miles of directional roadways. Further, RTA's Transit Centers, located throughout Montgomery County, connect the central city and the suburban areas with bus services at centralized locations.

Fixed Route Service

RTA serves Montgomery County and parts of western Greene County through a network of over 20 bus routes. There are local routes that provide downtown-based service, mostly within the City of Dayton; suburban routes that provide downtown-based service for suburban jurisdictions; cross-town routes that provide service between jurisdictions; and a downtown circulator.

Demand Response Service

Beginning in 2016, RTA created a new line of alternative mobility services called Connect. RTA Connect is intended to give customers one-stop access to the mobility option that best meets their needs. The Connect line of services include RTA's existing Americans with Disabilities Act (ADA) - Complementary Paratransit, as well as On-Demand, Premium, and various coordinated demand response services.

Connect Paratransit service offers door-to-door service to certified customers with disabilities who are unable to use fixed routes. This includes complementary ADA, countywide, and same day paratransit services. Countywide service launched in 2016, providing expanded access to all eligible customers outside the standard ADA ¾ mile service area to throughout Montgomery County. Same day service launched in 2018, providing an opportunity for all ADA eligible customers to travel same day as availability allows. Same day service provides the customers with more flexibility and the ability to work around critical medical appointments that may not run on time.

Connect On-Demand service launched in June 2017, creating the state of Ohio's first partnership between a public transit agency and ride-sourcing companies. On-Demand enhances and increases accessibility in previously underserved areas, and is designed and structured to complement existing RTA services. There are four (4) On-Demand zones/areas throughout Montgomery and parts of western Greene counties. RTA and other transportation providers, including taxi and ride-sourcing companies provide the service.

Connect Premium Service is a door-to-door service that is open to the general public and serves Greene, Miami, Montgomery, Preble, and Darke Counties and northern Warren County. The cost of

a one-way trip is applied to the reserving customer and includes traveling companions who board and alight at the same locations as said customer. This service is subject to availability.

The Social, Environmental, and Economic Benefits of GDRTA's Service

Over 65% of riders use the RTA to get to jobs, with the remaining traveling for medical appointments, educational opportunities, and shopping/social purpose trips. This creates an economic engine for the community and results in $4 of economic return for every $1 invested in public transportation.

To benefit the community, the RTA has invested in environmentally friendly technology using dual-mode electric trolley and hybrid diesel vehicles. RTA operates a fleet of 45 NexGen trolley buses, which run on over 100 miles of trolley wire infrastructure, including off-wire, expanding the overall coverage of the trolley network. In 2010, RTA was designated with the highest possible certification as a five-star Ohio Green Fleet by Clean Fuels Ohio.

Electric Trolleybus Service

RTA is committed to clean air methods of transportation with its electric trolleybuses. Fifty-seven electric trolleybuses were purchased from 1996 through 1998 as a replacement of the old electric fleet. In 2010, RTA conducted a cost/benefit analysis which recommended continued operation of trolley buses along with community support from those benefiting communities.

As a result, beginning in 2018, RTA began replacing its older fleet of trolley buses and as of 2020, operates a fleet of NexGen trolley buses. NexGen buses run on over 100 miles of trolley wire infrastructure, including off-wire operation, expanding the overall trolley bus network. The NexGen's battery propulsion system can power a fully loaded bus at full speed for 15 miles off wire. The NexGen bus has a lifespan of 18 to 20 years and 500,000 miles. It costs more than a standard diesel bus but lasts longer, provides lower operating costs, is better for the environment and quieter.

Technology

In 2013, RTA began planning and implementing numerous technologies in support of improving mobility operations and the experiences of its users. Transit technologies focus on increasing efficiencies, enhancing operational effectiveness, increasing service usage and satisfaction, increasing safety and security, and improving financial and performance management.

Intelligent Transportation Systems — Intelligent Transportation Systems (ITS) are essential components of the day-to-day operations infrastructure of RTA and other public transit agencies. Together these systems perform mission critical functions necessary to deliver safe and efficient services to RTA customers and employees. RTA recognizes the importance of providing and supporting a state-of-the-art system to maintain a safe and reliable service to its customers, employees, and the community.

RTA's system currently provides enhanced performance, productivity and efficiency, and advanced resource management capabilities that improves capacity to deliver consistent and quality service. In addition to maintaining and enhancing the key role of ITS as a source of real-time data that is used to support RTA's operations, planning, customer service, security, and revenue collection functions.

Real Time Information System — RTA's real time information system, created by its ITS infrastructure, provides customers with real time bus arrival information, including notification of service changes in real time. The transit app is a trip planning and real-time tracker tool for customers to use to plan their trip and know when their bus will be arriving to their stop. This platform was rolled out to RTA customers in 2016 and is currently the preferred method of bus tracking and trip planning.

In addition, RTA released a text and email alert subscription program for its customers, an interactive voice response system to provide automated real time service information via RTA's phone system, and a text for next bus feature where customers can text the RTA their bus stop number and receive a message back when the next buses are arriving in real time to that stop.

Radio and Data Systems — In 2016, RTA replaced its radio and data system with an 800 MHz voice and cellular data communications system. This state-of-the-art communications system now provides increased coverage beyond RTA's current service area, redundancy (backup), and increased communication capabilities with first responders increasing customer safety and security leading to an overall secure and reliable communications network within RTA's service area.

On Board Camera Surveillance System — In 2016, RTA replaced its camera system to provide increased safety and security. The current on-board camera system is available on all RTA fixed route and demand response services and provides state of the art advanced video and audio quality along with the ability to conduct real time live streaming of any on-board camera in the event of an emergency.

The Future Service

As the region changes so must RTA services to continue connecting people to jobs, healthcare, and educational opportunities. In addition, while RTA assets are in good condition, continued investment in state of good repair facilities, fleet replacement, and the needed rebuild of the trolleybus infrastructure will still require a funding stream to match federal and state investments.

Transit Network Redesign — Beginning in 2016, the RTA embarked on a comprehensive transit network redesign project called What Drives You. RTA finalized the project in 2020. The goal of the project was to develop service plans that increase the quality of RTA services, through more frequent, direct, and an easy to use range of multi-mobility options. The following guiding principles were utilized to help shape the overall mobility network recommended:

- Customer, Community & Employee Focused
- Equitable & Accessible
- Connections to Jobs, Healthcare & Educational Opportunities
- Data Driven

During the project, RTA targeted and studied promising transit markets (e.g. employment centers, daycare facilities, universities, etc.) and identified traditional and non-traditional transit options to encourage and increase existing and new ridership. As a result of the pandemic in the early 2020s, the RTA revised this service plan in response to changes in ridership and customer travel patterns.

Technology & Fare Payment Systems — RTA's goal is to deliver a seamless, accessible, customer-focused mobility experience for all. To improve fare accessibility to its customers, starting in 2016, RTA began the process of reviewing its legacy fare payment system which was past its useful life.

Beginning in 2018, the RTA implemented critical fare structure changes that reduced the level of cash fare payments. Although some fare structure changes were driven by budget constraints at the time, the structure redesign kept focus on the goal of eliminating cash acceptance on-board the vehicle and increasing pass usage.

In 2020, RTA's new payment system, known as Tapp Pay, launched. RTA currently offers account-based payments to its customers and traditional passes to outside organizations who purchase directly from the agency. Tapp Pay is available on both RTA's fixed route and demand response vehicles.

Following the completion of these activities and review of the findings, the RTA Board of Trustees in August 2021 approved the change in fare structure to include the elimination of accepting on-board cash payments. As a result, beginning November 1, 2021 the RTA implemented a 100% cashless on-board system across its entire bus route fleet, and over 90% cashless acceptance rate on its demand response fleet. RTA is the first transit agency in the United States to eliminate cash acceptance on-board.

GDRTA Assumptions for 2026 – 2050

The following assumptions were made in developing the RTA Long Range Transportation Plan project lists, costs, and revenues:

Fiscal Constraint — RTA Long Range Transportation Plan project list is fiscally constrained and was even further constrained due to the impact of the 2020 COVID-19 pandemic.

Service and Ridership — Service area is likely to remain the same, however funding constraints could result in service alterations or reductions. In 2019, RTA experienced a ridership increase of 5%, but due to the impact of the 2020 COVID-19 pandemic, ridership has declined.

Service Configuration

- Service area is likely to remain the same, however funding constraints could result in service alterations or reductions.
- RTA will continue to operate as a multi-transit center/transfer system. However, the total and/or locations of transit centers may be altered.
- RTA will continue to pursue dual-mode vehicle technology for service extensions off existing electric trolley wire.
- Annual vehicle hours and vehicle miles will likely remain steady. Increases or decreases in hours and miles will be based on the budget, customer and community transportation needs.
- Annual ridership for fixed route services will likely remain steady.
- Annual ridership for demand response services will likely increase as it is expected that there will be a rise of adults age 65 and older that are unable to drive.

- Average fares will increase as the cost of operating services continues to rise.

Fleet Changes — RTA anticipates a fleet size as follows:

- Electric Trolleys – 45;
- Diesels 30' to 40' – 120;
- Small Connect Vehicles – 75; and
- Contingency 35' to 40' Diesels – remain at 20.

Capital Needs — Fleet Replacement

- Electric trolley buses will be replaced every 18-20 years;
- Diesel buses will be replaced every 10-12 years; and
- Demand response vehicles will be replaced every 7-10 years.

Electric TrolleyBus Infrastructure — Continued maintenance of substation and overhead distribution system.

Other

- Utility vehicle fleet to be replaced several times over the 2026-2050 period;
- Vehicle equipment;
- Upgrades to facilities and hubs;
- Upgrades to technology infrastructure;
- Replacement and addition of amenity infrastructure;
- Office/shop equipment;
- Capitalized leases;
- Planning projects; and
- Community projects.

Project List, Cost, and Revenues

A summary of GDRTA's Long Range project list is presented in Table 6.1.

Table 6.1 — GDRTA 2050 LRTP Projects
(in millions of Year of Expenditure dollars)

Project	Cost
Capital Projects	***559.79***
Revenue Vehicles & Equipment	
- Electric Buses - 45 (Fleet of 45)	81.00
- Diesel Buses - 274 (Fleet of 120)	196.57
- Small Connect Buses- 300 (Fleet of 75)	52.77
- Vehicle Equipment	2.12
Electric System Infrastructure	69.78
Transit Hubs & Facility Improvements	
- Longworth Campus	25.94
- Downtown Campus	24.15
- Countywide Transit Hubs	11.06
- Facility-wide Security Items	14.63
Equipment	
- Maintenance Equipment	13.77
- Office Equipment & Furnishings	7.49
- Computer Equipment & Software	25.53
- Support / Utility Vehicles	3.19
Passenger Amenities	
- General Transit Enhancements	6.56
- Community Specific TE Projects	8.29
Capital Tire Lease	16.94
Operating / Maintenance Projects	***2,540.22***
Total	***3,100.01***

Source: GDRTA

6.3 Greene County Transit Board (Greene CATS Public Transit)

The Greene County Transit Board is a public body that was formed to provide public transit for Greene County and to help coordinate social services transportation in the County. The commonly known name of the transit service is "Greene CATS". The Board contracts out the day-to-day operations of the transit service to a private company, currently Transdev.

Service Description

The system is a combination of traditional demand responsive service and flex routes. Flex routes have defined routes with scheduled time points that circulate and link the larger Greene County communities and connect with Greater Dayton RTA service, operating five days a week. The service is wheelchair accessible and serves a mix of fare-paying and contract riders. The transit service area is Greene County with trips to neighboring counties on a limited basis. In addition, the Greene County Transit Board works with local social services agencies through its Mobility Management Program to help coordinate social service transportation and provide a wider range of transportation options to riders.



Plan Assumptions

The following assumptions were made in developing the Greene CATS Public Transit project lists, expenses, and revenues for the 2050 LRTP:

- Cares Act Funding;
- Increased Ohio of Department of Transportation formula funding;
- Reduction in FTA funding due to reduction in total annual trips provided from reduction of Developmentally Disabled service;
- Reduction in FTA funding as startup grant for expanded service on Flex Routes runs out;
- Reduction in contract and fare revenue due to coronavirus pandemic;
- No change in fares through 2021;
- No dedicated source of local revenue;
- Reduced peak, evening, and weekend flex route service beginning in 2021;
- Continue to provide contract service for local social service agencies; and
- Continue Mobility Management Program.

Table 6.2 — Greene CATS Public Transit 2050 LRTP Operating Statistics

	Short Term Plan 5 years (2026-2030)	MediumTerm Plan 10 years (2031-2040)	Long Term Plan 10 years (2041-2050)	Full 25 Year Plan
Vehicle-miles: (568,000/yr)	2,840,000	5,680,000	5,680,000	**14,200,000**
Vehicle-hours: (39,600/yr)	198,000	396,000	396,000	**990,000**
Fleet size:	35	35	35	-
Passenger trips: (63,400/yr)	317,000	634,000	1,200,000	**1,585,000**

Source: Greene CATS Public Transit

Project List, Cost, and Revenues

A summary of the Greene CATS Public Transit 2050 LRTP project list is presented in Table 6.3.

Table 6.3 — Greene CATS Public Transit 2050 LRTP Expenses Summary (in millions of 2020 / Year of Expenditure dollars)

Major Projects	Cost
Capital	***11.44***
- Bus Purchase – 125 (Fleet of 35)	11.25
- Shop/Office Equipment	0.19
Operating / Maintenance	***105.29***
Total (YOE dollars)	**116.73**

Source: Greene CATS Public Transit

6.4 Miami County Transit System

As a result of the 2000 Census classifying Miami County as an urbanized area, the Board of Commissioners established a Miami County Transit Department effective January 2, 2004. The Miami County Transit staff is responsible for the growth, financial, and operational aspects of the department. Operations and Maintenance are currently contracted to Transdev. Following the 2020 Census, the Dayton Urbanized Area boundary was redrawn again and the Miami County Transit System transitioned back to a rural system.

Service Description

Miami County Transit System provides demand responsive transit services within the geographic area of Miami County. Miami County Transit offers a connection with GDRTA in two areas (Vandalia and Huber Heights). There are also two other connections with Darke County and Shelby County that

work with Greenville Transit System (Darke County) and Shelby County Public Transit (Shelby County), respectively. Miami County Transit provides service six days a week, Monday through Friday from 5:00 AM to 6:00 PM, and Saturday from 8:00 AM to 2:00 PM.

The County anticipates continued increases in benefits for local human service organizations. Many of these organizations have the opportunity to utilize Miami County Transit as a method of expanding existing programs. The County also anticipates continued population growth. With this being said, Miami County Transit may look into the option of a Flex Route if funds are available to sustain the need.

In limited cases, special transit trips may have trip ends (such as major employers, medical facilities, etc.) outside of Miami County, but within ODOT's 50-mile radius constraint. The system provides approximately 42,300 trips annually. Annual increases in passenger counts are expected. These increases will require a thoughtful approach in order to absorb new riders into the existing infrastructure of the system and operate within available resources. The current fleet consists of eighteen small transit buses, all are lift equipped and ADA accessible.

Project List, Cost, and Revenues

A summary of the Miami County Transit System's 2050 LRTP project list is presented in Table 6.4 below.

Table 6.4 — Miami County Transit 2050 LRTP Projects
(in millions of Year of Expenditure dollars)

Project	Cost (YOE)
Capital	***8.39***
- Small Buses - 75 (Fleet of 20)	8.11
- Shop/Office Equipment	0.10
- Security Equipment	0.18
Operating / Maintenance	***48.71***
Total	**57.10**

Source: Miami County Transit

6.5 Public Transit Human Services Transportation

The Federal Transit Administration's Enhanced Mobility for Seniors and Individuals with Disabilities Program (Section 5310) funds projects that meet the needs of older adults and people with disabilities when the existing transit services are unavailable, insufficient, or inappropriate to meeting needs. FTA requires that all projects selected must be included in a locally developed, coordinated public transit-human services transportation plan. The coordinated plan must be developed and approved through a process that includes participation by older adults, individuals with disabilities, representatives of public, private, and nonprofit transportation and human services providers, and other members of the public.

Greater Region Coordinated Transportation Plan

Established in 2018, the Greater Region Mobility Initiative (GRMI) serves as a pilot program in Ohio aimed at enhancing coordination between rural and urban communities in order to reduce duplication and gaps in services and transportation barriers. This initiative is a collaboration between the Ohio Department of Transportation and MVRPC, focusing on an eight-county region which includes: Champaign, Clark, Darke, Greene, Miami, Montgomery, Preble, and Shelby counties.



The strategic planning process included stakeholders from all counties who set collective goals and strategies. It addresses county-level challenges while establishing regional objectives, allowing all eight counties in the Greater Region to qualify for funding under a unified plan. The GRMI Plan was last updated in 2024 and will be renewed in 2028.

2024 Coordinated Plan Focus

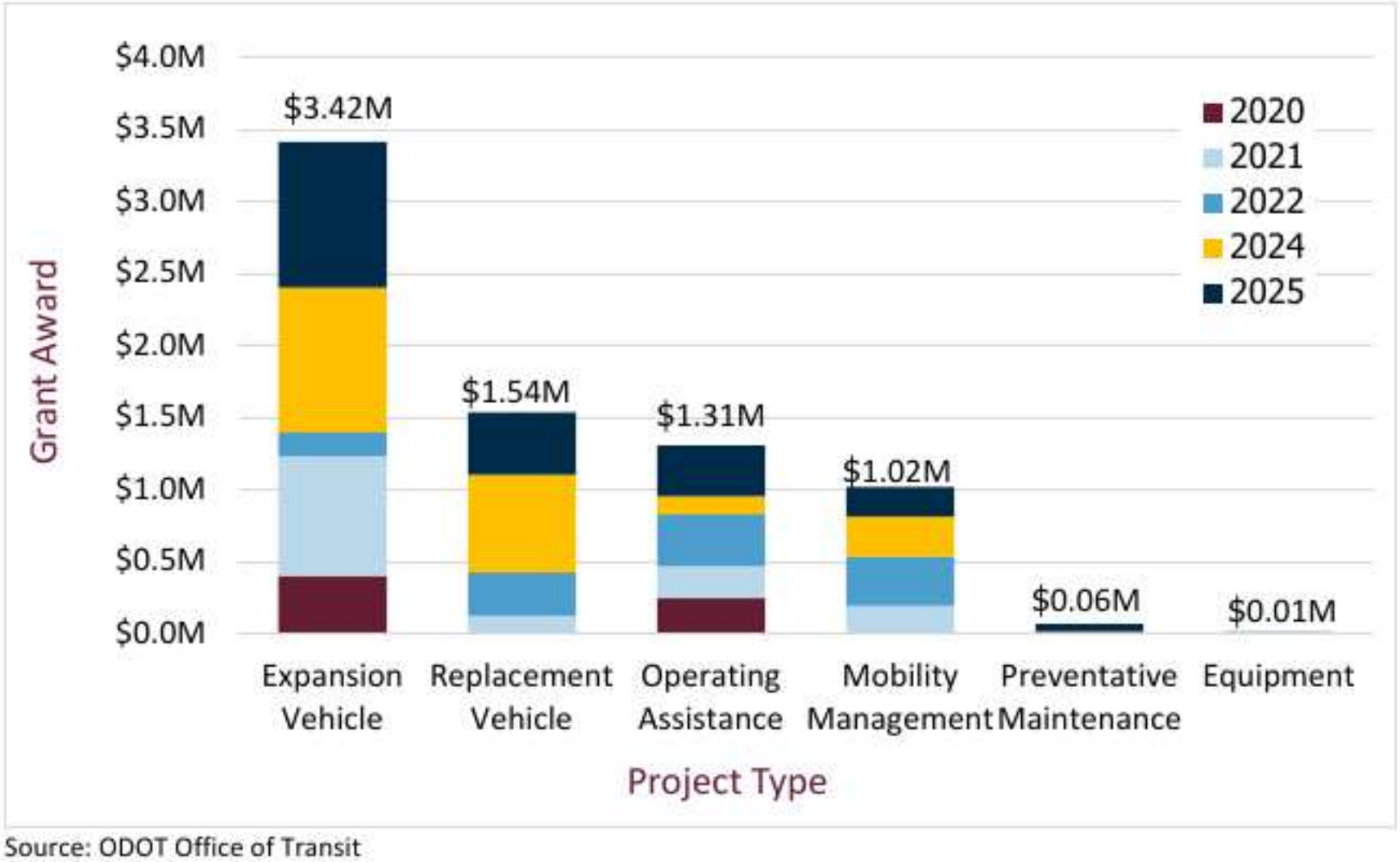
- Employment and medical transportation.
- County-wide and cross-county transportation.
- Capacity and information sharing between providers.
- Accessing additional funding resources.
- Early morning, night, and weekend transportation services.
- Awareness and outreach of services.
- Identifying solutions to address driver shortages.

Section 5310 Program

The purpose of the Enhanced Mobility for Seniors and Individuals with Disabilities Program (Section 5310) is to enhance the mobility of seniors and individuals with disabilities by removing barriers to transportation services and expanding transportation services planned, designed, and carried out to meet the special transportation needs of seniors and individuals with disabilities. The program funds capital and operating expenses to private nonprofit organizations and local government authorities that provide alternative options to public transportation and to public transit agencies that provide services which exceed the requirements of the ADA or improve access to fixed-route services and decrease reliance on complementary paratransit services.

Section 5310 has funded a variety of projects including wheelchair-accessible buses and minivans, operations, preventative maintenance, mobility management, technology and equipment, and more. In the eight-county Greater Region, transportation providers have leveraged $7.4 million in Section 5310 funds in years 2020-2025, providing approximately 4 million miles of transportation services to non-driving populations that may otherwise not have access to transportation services.

Figure 6.2 — Section 5310 Funded Projects (Years 2020-2025) in millions



Source: ODOT Office of Transit

In 2022, the Ohio Department of Transportation's Office of Transit became the Designated Recipient for the Section 5310 apportioned funds for the Dayton Urbanized Area. A Memorandum of Understanding was signed between ODOT Office of Transit and MVRPC, identifying key responsibilities for each party for the administration of the grant program.

ODOT Office of Transit is expected to:

- Develop project selection criteria consistent with the coordinated planning process and in alignment with the adopted regional coordinated public transit-human services transportation plan, known as the GRMI Plan;
- Determine applicant and project eligibility;
- Prepare a Program of Projects and submit grant application annually to FTA for project approval;
- Act as the purchasing agent for the program and manage all aspects of grant distribution and oversight of grant recipients under the program;
- Maintain contractual agreements with agencies who receive Section 5310 funds and hold a title lien on awarded vehicles throughout the useful life of the vehicle; and
- Submit reports as required by the FTA.



MVRPC is expected to:

- Write and administer the regional coordinated public transit-human services transportation plan, known as the GRMI Plan, and host quarterly meetings to review progress and implement goals and strategies established in the plan;
- Organize and host a selection committee whose membership is open to agencies and others within the Dayton Urbanized Area interested in improving coordination of transportation services;
- Review and score applications in accordance with ODOT's scoring criteria for Montgomery, Greene, Miami, and northern Warren counties and make recommendations for project awards; and
- Oversee the implementation of projects as developed and prioritized in the GRMI Plan.

Agencies applying for Section 5310 funding must align their projects with the Greater Region Mobility Initiative Transportation Coordination Plan and actively participate in coordinated planning efforts by attending quarterly meetings and engaging in stakeholder activities like completing surveys and providing requested data and information about programs or services, (see Table 6.5).

Table 6.5 — Section 5310 Applicant Expectations

Project Type	Federal Match	Local Match	Eligible Expenses	Compliance Expectations
Wheelchair Accessible Vehicles	80%	20%	• Modified minivan • Modified van • Light transit vehicle	• Bi-annual vehicle reports • Vehicle inspections • Driver training schedules • Maintenance schedules • Policies: maintenance, driver training, ADA, Title VI
Preventative Maintenance	80%	20%	• Supplies • Materials • Labor • Services • Other costs to preserve functionality of vehicle	• Maintenance schedules • Policies: preventative maintenance
Operating Assistance	50%	50%	• Salaries & wages • Fringe benefits • Fuel • Services • Volunteer recruitment & mileage reimbursement	• Policies: financial management, driver training, ADA, Title VI
Computer Hardware, Software & Equipment	80%	20%	• Scheduling software • Computers/laptops • Tablets for vehicles	• Independent Cost Estimate • Policies: DBE, FTA compliant procurement
Mobility Management	80%	20%	Programs designed to: • Increase understanding & awareness of transportation needs • Promote coordination of transportation options to meet needs • Build sustainable & healthy communities by integrating transportation into planning programs	Host Agency responsibility: • Creating, filling and maintaining a Mobility Manager position • Provide general supervision of grant funded activity to ensure agreed upon scope of work is being completed • Oversight, compliance and fiscal responsibility of the funded program

Source: ODOT Office of Transit

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Chapter 7
Alternative Transportation Modes

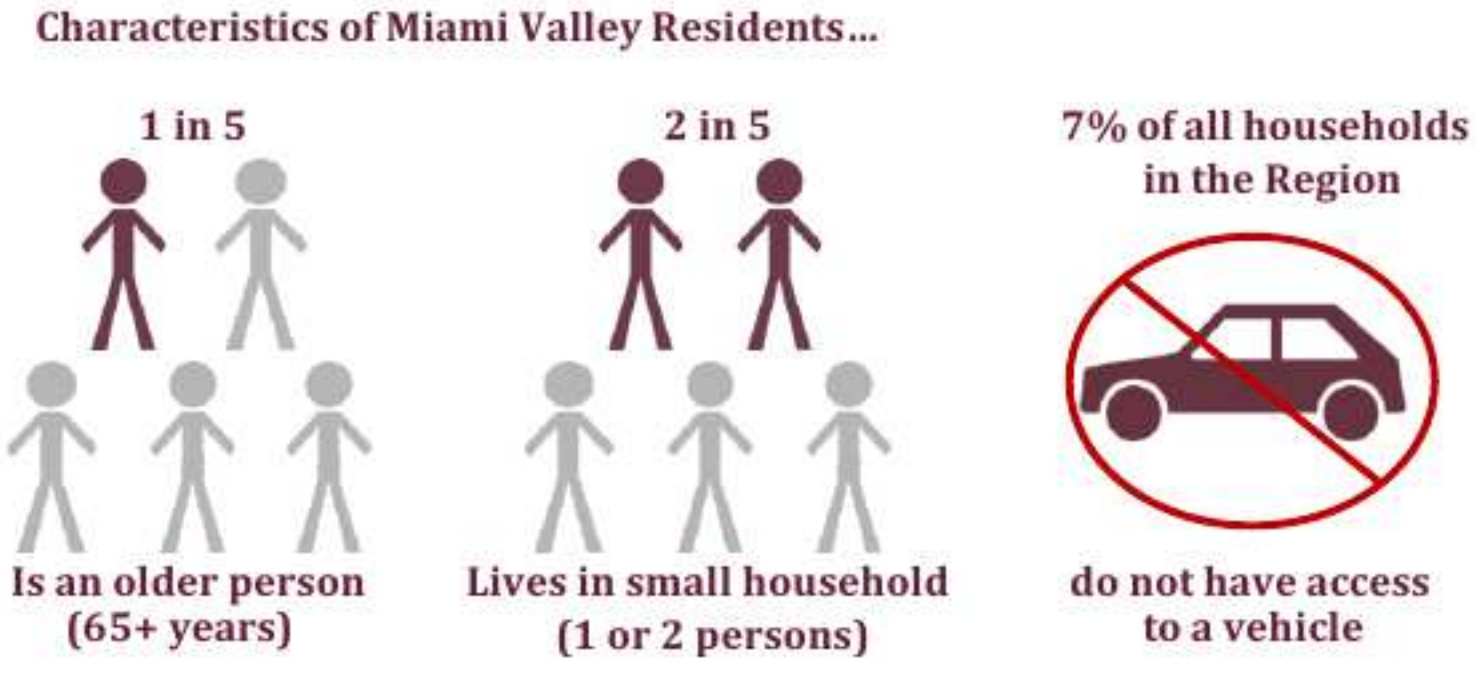
7.1 Overview

As the Region grows, it is essential to plan a comprehensive transportation system that serves the needs of travelers using all modes of transportation and ultimately allows for a variety of mobility choices for everyone. The 2050 LRTP addresses future transportation needs by including programs and projects that provide alternatives to traditional forms of transportation (like driving) and thereby helps to reduce congestion. Alternative transportation modes are crucial to the health of the Region as they spur economic development in existing communities and help create places with a strong sense of place.

Trends

Between 2010 and 2020, the Region's older adult (persons 65 and over) population increased by 26.4 percent. This significant increase in the older adult population indicates that alternative transportation modes are and will be crucial in the Region so that older adults live in an environment where they are not forced to drive beyond their limits to meet their needs.

On the household front, the Regional household population living in a 1 or 2 person household is stable, sitting at 41% in 2020—which is close to the 2010 value. The majority of housing stock in the Region is owner-occupied (65.8%), as opposed to being rented (34.2%). The majority of housing occupied by persons ages 15-34 are rented whereas the majority of housing occupied by persons above the age of 34 are owned. It is important for persons that don't have access to a vehicle to retain their mobility and access places they want to go, nearly 7% of all households in the Region have no access to a vehicle.



The shift in general population age, transportation, and living preference are combining into a non-traditional demand for varied living arrangements and transportation choices. On the housing end there is a strong demand for older adult housing as well as infill housing, urban housing, and more affordable housing options. Successful regions will need to address these preferences to retain existing residents and attract new ones.

Improvements in transportation technologies are addressing some of these challenges. According to the U.S. DOT's Shared Mobility: Current Practices and Guiding Principles primer, the shared use of a vehicle, bicycle, or other mode is an innovative transportation strategy that enables users to have short term access to transportation modes on an "as-needed" basis. Shared mobility will continue to evolve and develop and as the menu of shared mobility options continues to grow, the public sector needs to respond with appropriate legislation to protect public safety and provide guiding policies to maximize benefits. On a longer horizon, emerging self-driving and autonomous vehicle technologies will also impact congestion, mobility, safety, and development patterns.

These demographic, socio-economic, and technology-oriented shifts are expected to continue into the future so it is increasingly important for regions to plan for and provide such alternatives.

7.2 Funding Outlook

Financial forecasts for the programs and projects described in this chapter are based on annual averages as shown in the current SFY 2026-2029 TIP and are assumed to be in 2025 dollars. A summary is provided in Table 7.1 below and additional details can be found in the Financial Analysis Summary.

Table 7.1 — 2050 Forecasted Cost and Revenue for Alternative Modes (in millions of 2025 / Year of Expenditure dollars)

Program	Cost/Revenues					
	Four Year TIP (2026-2029)	Annual Average	Short Term Plan (2026-2030)	Medium Term Plan (2031-2040)	Long Term Plan (2041-2050)	For Full 25 Year Plan
RIDESHARE	1.86	0.47	2.35	4.70	4.70	11.75
Air Quality	1.76	0.44	2.20	4.40	4.40	11.00
Bikeway/Pedestrian	8.23	-	8.23	-	-	8.23
Total (2025/YOE dollars)	**11.85**	**-**	**12.78**	**9.10**	**9.10**	**30.98**

Source: MVRPC

7.3 Rideshare Program

Ridesharing and other travel demand management strategies are expected to continue to be important elements in the effort to reduce ground-level ozone (smog) and particle pollution. MVRPC's Rideshare Program promotes sustainable transportation options to reduce the use of single-occupancy vehicles to reduce carbon emissions contributing to poor air quality.

The Rideshare Program helps commuters with resources to form carpools or vanpools through ride-matching, find bike routes and transit options, or form bikepools. These resources are available at MiamiValleyRideshare.org. The program is part of the statewide platform, Gohio Commute - GohioCommute.com, which allows users to search for matches with others across the State. The Rideshare Program is available for free to anyone who lives, works or attends college in Montgomery, Greene, Miami, Preble, Darke, Shelby and Clinton counties. For those who do not have access to the internet, a phone number is available 800.743.SAVE or locally at 937.223.SAVE to reach a representative who will act on their behalf.

The Rideshare Program advertises across a variety of media outlets to reach commuters in the Miami Valley Region. The advertising messages promote the program resources and encourage commuters to try sustainable forms of transportation like carpooling, vanpooling, biking, walking, or riding transit to reduce traffic congestion and carbon emissions.



Another way MVRPC promotes transportation options that reduce carbon emissions is through the Drive Less Live More initiative. Drive Less Live More emphasizes trying sustainable commute options such as carpooling, walking, biking, or taking transit outside of the regular work or school commute but rather to other destinations such as concerts or festivals to reduce air pollution and improve health outcomes.

In an effort to reduce traffic congestion and commuting delays sometimes created by construction projects, MVRPC has developed a website, MiamiValleyRoads.org, to provide a comprehensive resource to find construction projects that may impact your daily commute in the Region. This website is organized by county, highlighting major state routes and interstates, and connects directly to the construction updates on the Ohio Department of Transportation's website. The website also provides user-friendly links to route planning tools, commute solutions, and other ideas to reduce congestion and prevent air pollution. Advertisements and social media posts promote this resource to commuters in the Region.

7.4 Air Quality Awareness Program

MVRPC's Air Quality Awareness Program is a public information/behavior modification campaign to inform the Miami Valley residents about ground-level ozone and particle pollution issues and how the general public's behavior can impact the air quality. MVRPC promotes actions to take to reduce air pollution incorporating messages from the FHWA's campaign, "It All Adds Up to Cleaner Air" that include:

- Try carpooling/vanpooling to work or college. Fewer vehicles on the road mean less air pollution (in coordination with MVRPC's Rideshare Program).
- Try riding the bus. A full bus means fewer vehicles on the road causing air pollution.
- Consider driving an electric vehicle. EVs produce zero tailpipe emissions.
- Get your vehicle tuned up. A tuned engine produces lower emissions, runs more efficiently, and lasts longer.
- Avoid letting your car idle.
- Plan ahead and combine errands and trips so you can limit cold starts.
- Walk or ride a bike for short trips.
- When filling up at the gasoline station, don't top off your tank. Plus, make sure your gasoline cap fits tightly so vapors don't escape.
- Mow your lawn and use other gasoline-powered equipment later in the evening, when temperatures are cooler and smog is less likely to form.
- Eliminate ALL outdoor burning—do not burn leaves, wood or trash. Mulch or compost leaves/yard waste.
- Reduce or eliminate fireplace and wood stove use. Consider retrofitting wood stoves with a filter or use gas logs instead of wood.

The actions to reduce air pollution are promoted with tv, radio, print, and digital advertisements and are featured on MiamiValleyAir.org.

MVRPC receives updates about the air quality in the Region from the Regional Air Pollution Control Agency (RAPCA) who monitors air pollution levels year-round. If and when the Air Quality Index (AQI) is forecasted to be above 100, MVRPC, in coordination with RAPCA, issues an Air Quality Alert (AQA). When an AQA is issued for the area, MVRPC activates advertisements and social media posts to notify the public of the poor air quality forecast; a press release is sent to the media and stakeholders. The National Weather Service (NWS) is also notified to activate the Air Quality Alert across their NOAA radio network, their website, and social media account, which triggers other outlets that monitor NWS activity to send alerts, like weather apps and websites. An email from the U.S. EPA is also sent to those registered for notifications about the air quality in the Region.



7.5 Bikeway and Pedestrian Program and Projects

Bikeways and sidewalks are both important components of an intermodal transportation network for accessing work, academic, and recreational places. In addition to maintaining a project listing of actual projects being implemented or planned for the future, MVRPC conducts extensive outreach and planning efforts related to bikeway and pedestrian mobility.

The Miami Valley Comprehensive Local – Regional Bikeways Plan

This plan, originally adopted by the Board of Directors in December 2008, and updated in 2015, inventoried bicycle facilities and identified future bikeway connections at both the regional and local network levels. The purpose of the plan was to create a complete system of bicycle facilities that connect people to desired destinations – including their homes. Further, the plan encouraged policies and programs that will foster increased bicycle use across the Miami Valley Region. The 2015 Update assessed both national and regional data regarding safety, barriers to cycling, and preferred cycling environments to highlight the general support for bike facilities that provide greater degrees of physical separation from motor traffic.

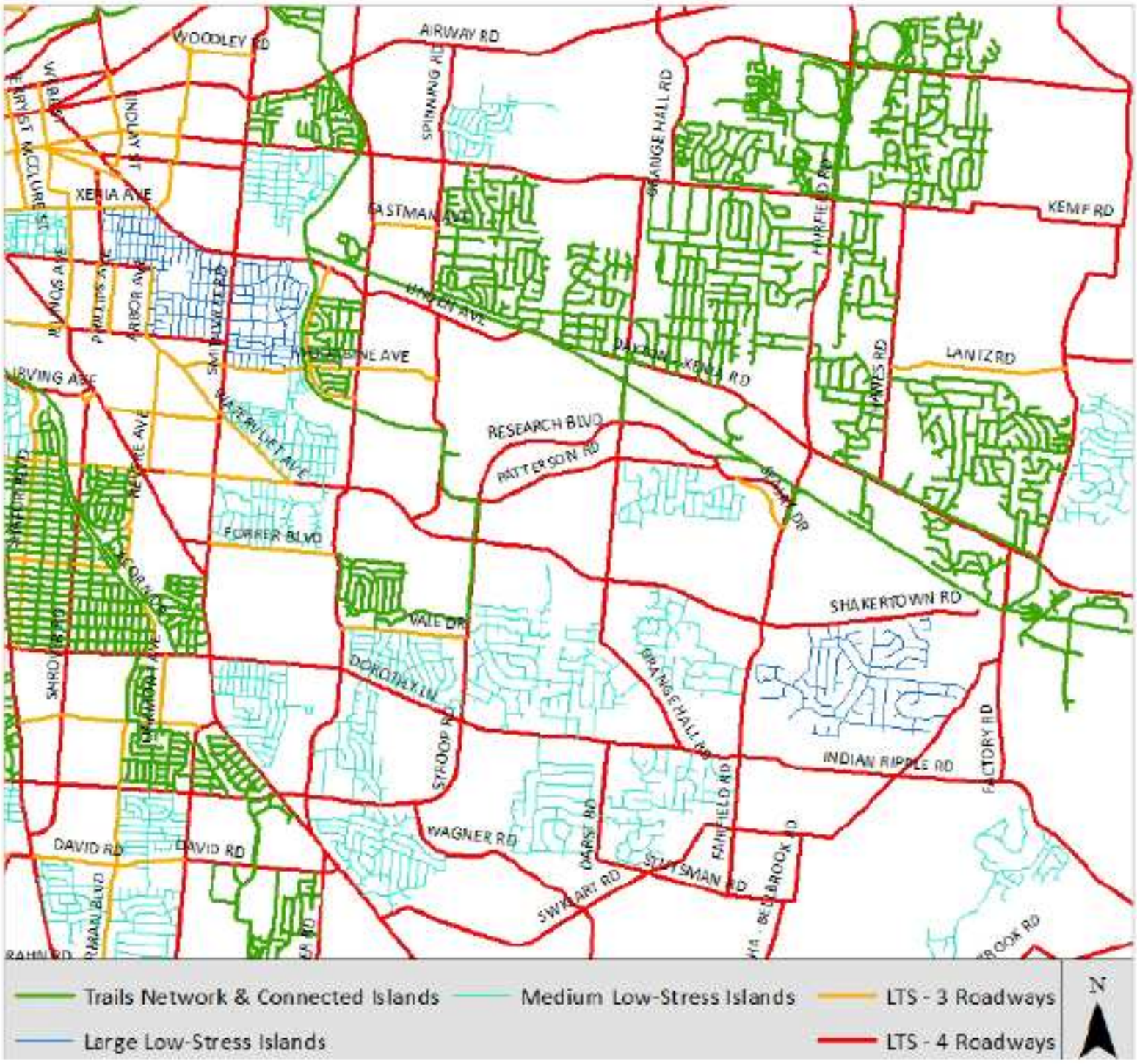
Adapting the "Level of Traffic Stress" (LTS) analysis methodology for a regional scale, the 2015 Update identified locations that could improve bicycle connectivity. The analysis assumed residential streets and the Miami Valley Trails network are low-stress (LTS 1) facilities. Roads that are federally functionally classified were assessed using the scale developed by the Mineta Institute. Most were found to be LTS 4 facilities (≥35 mph speeds), with a small minority being LTS 3 (≥30 mph speeds and/or 4 lanes). Using GIS analysis, the largest low stress islands were identified in terms of population review to identify potential projects that would provide low-stress connections from those islands to the trails network or neighboring islands.

Figure 7.1 illustrates the LTS analysis using the transportation network in the Kettering/Beavercreek area. The complete regional maps can be found at https://www.mvrpc.org/past-bikeways-plan.

In 2022, the Miami Valley Regional Planning Commission expanded the Regional Bike plan into a "Regional Active Transportation Plan" (AT Plan). The plan looks at walking and biking infrastructure and how walking and biking infrastructure can complement transit services. The vision of the plan was to provide safe walking, biking, and transit networks that enhance well-being and access to opportunity and provide quality of life benefits for all. Prior plans used the Miami Valley Trails and the regional bikeway network as the spines of the regional biking network, but the AT Plan centers transit services as the spines of the pedestrian network. The AT Plan includes an analysis of sidewalk availability along fixed-route and flex route transit services, identifying stops and route segments where sidewalks are not present. Pedestrian facilities are essential to making transit services ADA accessible.

The 2022 Active Transportation Plan included a number of policy recommendations from the community and MVRPC to develop a supportive cycling ecosystem in the Miami Valley. Those recommendations are listed below.

Figure 7.1 — Bikeway Level of Stress Analysis



Community-Oriented Recommendations:

- Conduct an Americans with Disabilities Act (ADA) Self Evaluation.
- Develop an ADA Transition Plan.
- Develop a local Complete Streets Policy.
- Develop Safe Routes to School Travel Plans and/or local Active Transportation Plans.
- Communities are strongly encouraged to develop a sidewalk maintenance program.

MVRPC Recommendations:

- MVRPC should prioritize complete streets designs in projects on streets with LTS3 or LTS4, or high crash priority rankings. Exceptions to the Complete Streets policy on such roads should be rare.

- MVRPC should consider periodic funding programs for retrofitting transit accessibility, bicycle and pedestrian facilities into roads, modeled after the very successful "Simple Resurfacing Program" offered periodically.
- MVRPC should review the Project Evaluation System for "Bikeways" projects and update the application, as needed, to address bicycle, pedestrian and transit access ("Active Transportation") projects holistically.
- MVRPC should develop a "Complete Streets Priority Plan" in compliance with U.S. DOT requirements once such requirements are developed. This plan would serve as an opportunity to consider updates to the Regional Complete Streets Policy adopted in 2011.
- MVRPC should develop a regional systemic safety plan, often known as a "Vision Zero" plan (see Section 4.4 for MVRPC's Action Plan).

Since 2008, significant progress has been made in implementing the recommendations of MVRPC's bicycle and pedestrian planning documents. In addition to bicycle infrastructure, a number of non-infrastructure strategies have been initiated across the Region by MVRPC and/or partner agencies including:

Development of Complete Streets Policies — MVRPC adopted its Regional Complete Streets Policy in January 2011. The cities of Dayton, Riverside, Piqua, Troy, and the Village of Yellow Springs have also adopted similar policies for their jurisdictions.

Several communities have developed their own Active Transportation Plans – Yellow Springs developed an Active Transportation Plan for the Village encompassing bicycling, pedestrian, transit, and accommodations for persons with disabilities. Fairborn developed an Active Transportation plan which focused on connectivity within parks and bike routes. Clayton adopted their Active Transportation plan in May of 2025 focusing on safety while also addressing gaps in the pedestrian and biking network. Miamisburg is currently in the process of developing an Active Transportation Plan, the goals of which will be based on community outreach and feedback.

Evolution of the Active Transportation Committee — The committee evolved from an existing committee of trail managing agencies, with the significant inclusion of member jurisdictions interested in adding on-street bike infrastructure to their communities. Active participants have included Dayton, Kettering, Riverside, Springboro, Fairborn, Trotwood, Troy, and Yellow Springs. The Committee has now evolved into a Regional Active Transportation Committee and still includes trail management agencies along with stakeholders in active transportation within the Miami Valley Region. This Regional Active Transportation Committee meets quarterly to discuss a wide variety of topics relating to active transportation, which include bikeway improvements along with pedestrian infrastructure improvements.

Bicycle and Pedestrian Counts — With the cooperation of the trail managing agencies, comprehensive Trail User Surveys were completed in 2009, 2013, 2017, and 2021. The next survey is expected to be competed in the spring of 2026. MVRPC initiated a multi-faceted bicycle count program in 2015 including aggregations of trail counter data and use of on-road bicycle counters. Available bicycle counts have now been added to the Online Traffic Count Viewer.

Continued Support for the Regional Bikeways Map — MVRPC and partner agencies last updated the regional bikeways map in 2023. In addition, the cities of Dayton, Piqua, Kettering, and Springboro, and the village of Covington developed and distributed their own map of bike routes and bike-friendly streets.

Development of Safe Cycling Messaging — Bicycle safety PSAs and messaging campaigns were developed addressing road cycling, cycling at night, and helmet use. Future campaigns on e-bike safety are in development.

Miami Valley Cycling Summits — MVRPC, Bike Miami Valley, and numerous regional partners have held eight Summits in Dayton (2009, 2011, and 2023), Springfield (2013 and 2025), Piqua (2015), Fairborn (2017), and Miamisburg (2019). The May 2021 Summit was held virtually due to the Covid-19 pandemic with Kettering as the host community.

Continued Support for Bike Month/Bike to Work Week/Bike to Work Day — MVRPC has partnered with Five Rivers MetroParks since 2006 to sponsor the annual Bike to Work Day breakfast in downtown Dayton. The event is held annually in May and has been paired with Miami Valley Cycling Summits in some years.

Coordinated Marketing — In early 2012, MVRPC and a consortium of partners, including park districts, transit agencies, and convention and visitor bureaus re-launched a one-stop cycling information website for the Miami Valley, www.miamivalleytrails.org. This site was further updated in 2017 to be mobile-friendly. Also, the trail managing agencies agreed on a unified policy regarding use of electric bicycles throughout the regional bikeway network in early 2019. The website received significant maintenance in 2025 updating mapping and anti-spam content.

Bikeway and Pedestrian Projects

Table 7.2 lists projects with local, state, or federal funds committed for implementation. These projects represent approximately $8.29 million of investment. The Long Range Regional Bikeway and Pedestrian Project list presented in Table 7.3 includes proposed long range regional bikeway and pedestrian projects for the east-west and north-south corridors, with a total cost of $115.33 million. Figure 7.2 – Regional Bikeway and Pedestrian Projects, shows the location of all existing and proposed regional bicycle/pedestrian ways.

Table 7.2 — Funded Regional Bikeway and Pedestrian Projects (SFY 2026-2029)

(Cost in Year of Expenditure Dollars)

Corridor Direction	Corridor Name	Map Label	Bikeway Limits	Owner / Maint.	Type of Facility	Width (feet)	Length (miles)	Cost
East-West	Great Miami-Little Miami Connector Trail	F2a	In Springboro from the parking area of East Milo Beck Park east along West Lower Springboro Road, then north on Factory Road to the Franklin Township/City of Springboro corporation line-Construction of a portion of the Central Greenway Multi-use Path, Segment D.	Warren County	Off- Street		0.2	$490,572
East-West	Wolf Creek Trail	G2a	Construct multi-use path following Wolf Creek from W Hillcrest Ave. at Hickorydale Park to James H. McGee Blvd. at the Wesleyan MetroPark.	Five Rivers MetroParks	Off- Street	10	2.3	$3,407,604
North-South	Iron Horse Trail	J4a	East Franklin Street from North Johanna Drive to Clyo Road; Clyo Road from East Alex Bell to East Franklin Street-Construct a 10' hiker/biker path on the south side of East Franklin Street from North Johanna Drive to Clyo Road and on the east side of Clyo Road from East Alex Bell to East Franklin Street. Also included is the replacement of signals with PED buttons at the intersection of Franklin Street/Johanna Drive and at the Centerville High School exit.	Centerville	Off-Street	10	1.6	$2,902,443
North-South	SR 741 Bikeway	T1d	Along SR 741 from Ferndown Drive to Newmark Drive-Construct bicycle and pedestrian improvements.	Montgomery County	Off-Street	Varies	0.3	$1,485,483
Regional Totals for Short Range Projects							**4.34**	**$8,286,102**

Source: MVRPC

Table 7.3 — Unfunded Regional Bikeway and Pedestrian Projects (Cost in 2025 dollars)

Corridor Direction	Corridor Name	Map Label	Bikeway Limits	Owner / Maint.	Type of Facility	Width (feet)	Length (miles)	Cost
East-West	Ohio-to-Indiana Trail	A1	From the existing Cardinal Trail bike route, traveling north on High St. to abandoned Conrail ROW, then east along Conrail ROW.	Miami County Park District	Off- Street	10	9.2	$778,179
East-West	Ohio-to-Indiana Trail	A2a	Construct shared use path between Troy-Sidney Road and North Casstown-Sidney Road via Garbry's Big Woods Reserve/Sanctuary.	Miami County Park District	Off- Street	10	3.5	$2,820,470
East-West	Ohio-to-Indiana Trail	A2b	Construct shared use path between North Casstown-Sidney Road and Miami/Champaign county line.	Miami County Park District	Off- Street	10	5.5	$4,432,167
East-West	Fairborn-Yellow Springs-Cedarville Connector Trail	B3	Widen/add shoulders on Black Lane, Armstrong Road, W Enon Road, N Enon Road, Cornerstone Trail and Yellow Springs-Fairfield Road to the Little Miami Scenic Trail.	Greene County, Fairborn, Yellow Springs	On-Street	6	6.1	$3,295,240
East-West	Fairborn-Yellow Springs-Cedarville Connector Trail	B4	Widen shoulders on SR 343 and SR 72 between Yellow Springs and Cedarville.	Greene Co.	On-Street	6	10.1	$2,633,212
East-West	Germantown-Spring Valley-Bowersville Connector Trail	C1	Construct shared use path along Twin Creek between Main St. and SR 4/SR 725 intersection.	Germantown	Off- Street	10	1.0	$286,691
East-West	Germantown-Spring Valley-Bowersville Connector Trail	C2	Widen shoulders on Lower Miamisburg Rd./Riverview Ave./Maue Rd. between SR 4 and Alexandersville Rd.	Montgomery County, Miamisburg	On-Street	Varies	6.8	$2,837,899
East-West	Germantown-Spring Valley-Bowersville Connector Trail	C7	From existing SR 725 bikeway, traveling east from Marwyck Dr. to Wilmington Pike.	Centerville	Off- Street	12	0.7	$253,113
East-West	Germantown-Spring Valley-Bowersville Connector Trail	C8	Traveling east along SR 725, from Wilmington Pike to 0.02 miles east.	Bellbrook	Off- Street	12	0.1	$25,000
East-West	Germantown-Spring Valley-Bowersville Connector Trail	C10	From Sackett-Wright Park in Bellbrook to the Little Miami Scenic Trail.	Greene Co.	Off- Street	10	4.6	$1,100,000
East-West	Germantown-Spring Valley-Bowersville Connector Trail	C11	Widen shoulders between Spring Valley and Bowersville via Spring Valley-Pointersville Rd. and Hussey Rd.	Greene Co.	On-Street	6	16.3	$5,512,398
East-West	Mad River Trail	E4	Northeast from existing Mad River Corridor Bikeway along former railroad to Enon.	Greene County Park District	Off- Street	10	2.8	$599,592

Table 7.3 — Unfunded Regional Bikeway and Pedestrian Projects (Cost in 2025 dollars)

Corridor Direction	Corridor Name	Map Label	Bikeway Limits	Owner / Maint.	Type of Facility	Width (feet)	Length (miles)	Cost
East-West	Great Miami-Little Miami Connector Trail	F1a	Construct shared use path along SR 123 and Clear Creek between downtown Franklin and the western side of I-75.	Warren County	Off- Street	12	0.5	$1,360,973
East-West	Great Miami-Little Miami Connector Trail	F2b	Widen shoulders on Lower Springboro Rd. between proposed Clear Creek Trail and US 42.	Warren County	On- Street	6	5.0	$2,772,008
East-West	Wolf Creek Trail	G2b	Construct multi-use path connecting the Wolf Creek Recreation Trail between Hillcrest Avenue and the existing terminus west of Olive Road.	Five Rivers MetroParks	Off- Street	10	2.3	$4,215,404
East-West	Wolf Creek Trail	G3	Construct shared use path between existing Wolf Creek Trail (near Dodson) and Montgomery/Preble County line.	Five Rivers MetroParks	Off- Street	12	2.2	$532,040
North-South	Bellbrook-Fairborn Connector Trail	I1	Signed shared roadway from SR 725 along W. Walnut St. to existing bikeway at Bellbrook Park.	City of Bellbrook	On-Street	Varies	0.2	$135,402
North-South	Bellbrook-Fairborn Connector Trail	I2c	From the existing bikeway, traveling north along Upper Bellbrook/Feedwire/S. Alpha-Bellbrook/Stutsman/N. Fairfield Rds., to Shakertown Rd.	Greene Co.	Off- Street	10	4.0	$984,402
North-South	Bellbrook-Fairborn Connector Trail	I4	WSU to Kauffman Ave. Bikeway traveling north from Colonel Glenn Hwy. to Wright State Road.	Wright State University	Off- Street	10	1.0	$231,788
North-South	Bellbrook-Fairborn Connector Trail	I5	Construct sidepath from Old Mill Lane to Kemp Rd.	Beavercreek	Off- Street	8	2.3	$1,000,000
North-South	Iron Horse Trail	J4b	Extend Iron Horse Trail from Alex Bell Road to Social Row Road using S Johanna, Bethel, Clareridge, Susan, E Spring Valley Pike and Atchison Roads.	Centerville	On/Off-Street	Varies	2.9	$5,181,662
North-South	Great Miami River Trail	K7a	Extend the Great Miami River Trail north from Roadside Park to the city limits along Hardin Road. This would include a bridge to cross the stream north of Roadside Park.	City of Piqua	Off- Street	Varies	0.6	$900,000
North-South	Great Miami River Trail	K7b	Traveling north from Johnston Farm to the County Line.	Miami County Park District	Off- Street	10	2.1	$456,557

Table 7.3 — Unfunded Regional Bikeway and Pedestrian Projects (Cost in 2025 dollars)

Corridor Direction	Corridor Name	Map Label	Bikeway Limits	Owner / Maint.	Type of Facility	Width (feet)	Length (miles)	Cost
North-South	Stillwater River Trail	L1	From existing bikeway at Sinclair Park, traveling north to Grossnickle Park.	Five Rivers Metro-Parks/Various	Off- Street	10	5.2	$2,990,725
North-South	Stillwater River Trail	L3	From the existing Englewood Reserve Bikeway, traveling north along the Stillwater River corridor, to SR 55.	Miami County Park District	Off- Street	10	10.4	$3,413,921
North-South	Stillwater River Trail	L5	Construct shared use path roughly paralleling SR 48 between Covington and Ludlow Falls.	Miami County Park District	Off- Street	10	9.8	$2,051,460
North-South	Wolf Creek Connector Trail	M1	Widen shoulders along Union Rd. from the Wolf Creek Bikeway to the existing path at I-70.	Englewood, Trotwood	On-Street	6	4.1	$1,688,055
North-South	Wolf Creek Connector Trail	M3	Widen shoulders on Union Rd. between Existing Wolf Creek Trail in Trotwood and SR 725.	Montgomery County	On-Street	6	11.5	$3,975,305
East-West	Great-Little Trail	N1	Construct shared use path along Miamisburg-Springboro Rd./Austin Pike/Social Row Rd. between Medlar Rd. and Wilmington-Dayton Rd.; widen shoulders on Ferry Rd./Lytle Rd. between Wilmington-Dayton Rd. and North St. in Corwin; develop signed on-street bikeway.	Mont. County, Centerville Washington Park District	On/Off-Street	Varies	9.2	$2,491,329
North-South	Bowersville-Jamestown-Clifton Connector Trail	O1	Widen shoulders on SR 72 between Bowersville and Jamestown.	Greene Co.	On-Street	6	5.4	$1,842,903
North-South	Bowersville-Jamestown-Clifton Connector Trail	O2	Widen shoulders on Charleston Rd. and Selma-Jamestown Rd. between Jamestown and Greene/Clark County line.	Greene Co.	On-Street	6	10.4	$3,506,843
North-South	Troy-Fletcher Connector Trail	P1	Widen shoulders along SR 55 and SR 589, providing an on-street bikeway linking Troy, Casstown, and Fletcher.	Troy, Miami County Park District	On-Street	6	10.6	$3,596,324
East-West	Laura-Troy Connector Trail	R1	Construct shared use path along former railroad corridor between Laura and Ludlow Falls.	Miami County Park District	Off- Street	10	6.6	$1,388,219
East-West	Laura-Troy Connector Trail	R2	Construct shared use path roughly paralleling SR 55 and along former Penn Central Railroad between Ludlow Falls and Troy.	Miami County Park District	Off- Street	12	7.6	$1,920,678

Table 7.3 — Unfunded Regional Bikeway and Pedestrian Projects (Cost in 2025 dollars)

Corridor Direction	Corridor Name	Map Label	Bikeway Limits	Owner / Maint.	Type of Facility	Width (feet)	Length (miles)	Cost
North-South	SR 741 Bikeway	T1a	Fill missing sidepath segments along SR 741 between the Cox Arboretum entrance and Newmark Drive.	Montgomery County	On/Off-Street	Varies	2.1	$340,380
North-South	SR 741 Bikeway	T1c	Construct a bike facility along SR 741 from entrance to Waldruhe Park to Austin Pike.	Montgomery County	On/Off-Street	Varies	0.6	$220,000
North-South	SR 741 Bikeway	T2a	Construct bike lanes on SR 741 between Austin Pike and the current terminus of the bike lanes approx. 1,000 feet south of W. Tech Drive.	Springboro, Warren County	On-Street	6.0	0.8	$56,000
East-West	Carriage Hills Connector Trail	U1	Connect Great Miami River Trail and Carriage Hills MetroPark via shared use path through Carriage Trails development.	Various	Off- Street	12	4.9	$1,063,000
North-South	Carriage Hills Connector Trail	U2	Connect Carriage Hills MetroPark and New Carlisle via widened shoulders on SR 202, Singer Rd., Palmer Rd., SR 571, Dayton-Brandt Rd., and shared use path on former railroad corridor between Dayton-Brandt Rd. and New Carlisle.	Miami County Park District, Montgomery County	On/Off-Street	Varies	7.9	$2,431,000
North-South	Carriage Hills Connector Trail	U3	Connect Huffman MetroPark and Carriage Hill MetroPark via Union School House, Baker, Kitridge, and Bellefontaine Roads.	Montgomery County, Five Rivers MetroParks	On-Street	Varies	8.3	$2,302,289
East-West	Great Miami River-Centerville Connector Trail	V1	Construct trail following local streets and shared use paths connecting Moraine, West Carrollton, Washington Township, Centerville, and Bellbrook via Cox Arboretum, Yankee Park, Grant Park and Pleasant Hill Park.	Various	On/Off-Street	Varies	8.8	$1,881,895
East-West	Great Miami River-Creekside Connector Trail	X1	Construct trail extension roughly paralleling US 35 to 4th St. along RR ROW then west to Keowee St and north to Monument Avenue.	Dayton, Five Rivers MetroParks	Off- Street	12	2.9	$845,192
East-West	Old National Road Trail	Z1a	Construct a bikeway paralleling US 40 from the intersection with The Wolf Creek Trail to Northmont Schools property.	Montgomery County, Five Rivers MetroParks	On/Off-Street	Varies	5.9	$1,467,259
East-West	Old National Road Trail	Z1c	Construct a bikeway paralleling US 40 from Centenial Park in Englewood to Englewood MetroPark.	Englewood	On/Off-Street	Varies	0.5	$106,400

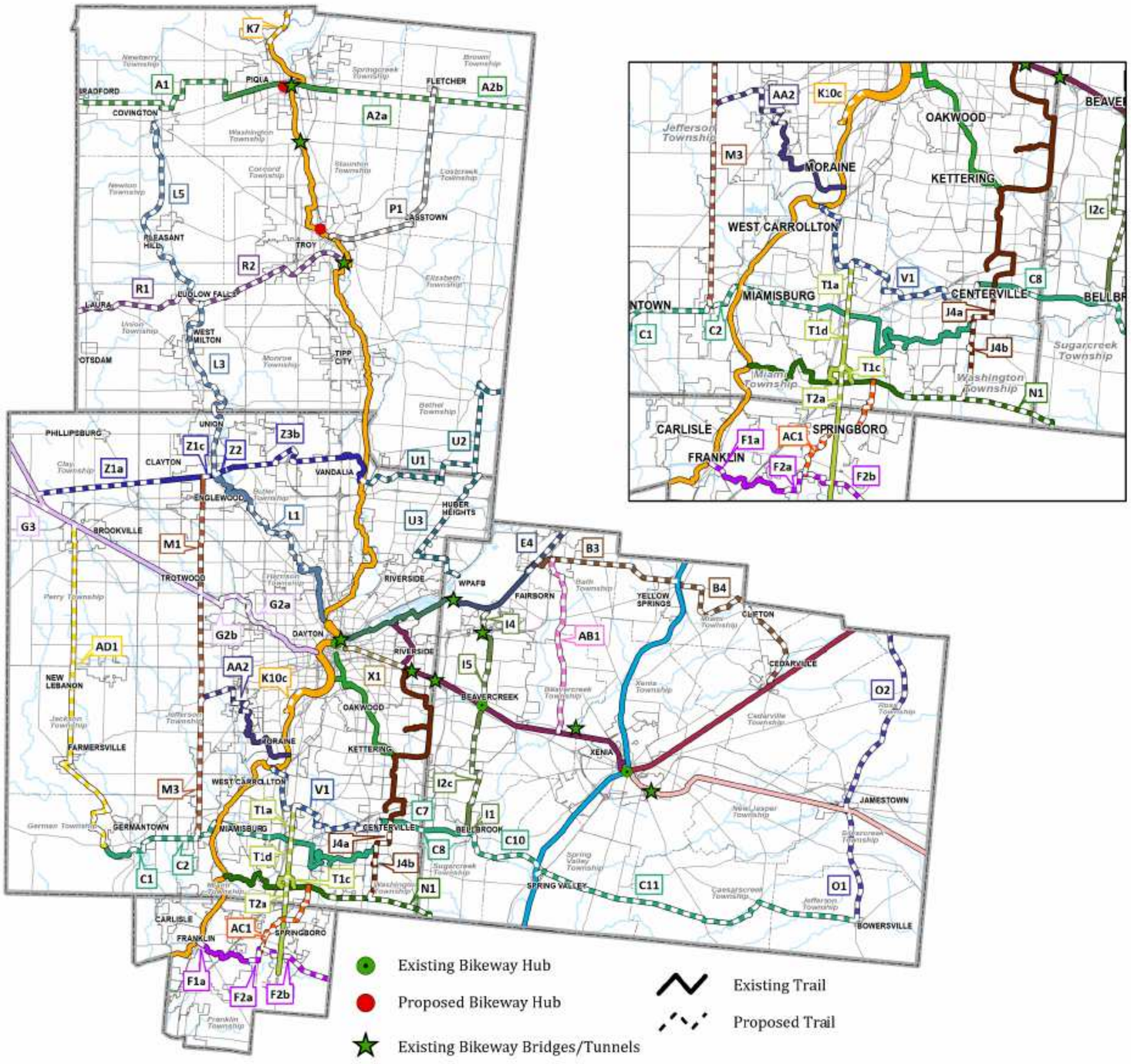
Table 7.3 — Unfunded Regional Bikeway and Pedestrian Projects (Cost in 2025 dollars)

Corridor Direction	Corridor Name	Map Label	Bikeway Limits	Owner / Maint.	Type of Facility	Width (feet)	Length (miles)	Cost
East-West	Old National Road Trail	Z2	Construct a bikeway through Englewood MetroPark using marked park roads, new shared use path, and a new covered bridge.	Five Rivers MetroParks/ Englewood	Off- Street	12	0.7	$4,426,886
East-West	Old National Road Trail	Z3b	Construct bikeway paralleling US 40 from Frederick Pike to James Bohanan Drive through Dayton Airport property and City of Vandalia.	Vandalia	On/Off-Street	Varies	5.3	$1,262,889
East-West	Great Miami River Trail	AA1	Construct trail on/along West River Road to Sun Watch Village.	Dayton	Off- Street	10	1.3	$323,295
East-West	Possum Creek Jefferson Township Connector	AA2	Construct trail from Possum Creek MetroPark to Arthur Fisher Park and along Dayton-Liberty Road to Union Road.	Jefferson Twp., Montgomery County	On/Off-Street	Varies	3.9	$570,000
North-South	New Trebein Connector	AB1	Construct a sidepath facility along Trebein Road from Indian Ripple Rd to Creekside Trail to New Germany Trebein Rd.	Greene County Engineer	Off-Street	Varies	8.7	$6,301,806
North-South	Springboro Central Greenway	AC1	Construct a bikeway connecting the City of Springboro to the Great Little Trail and Great Miami Trail. In general to connect neighborhoods and parks throughout Springboro.	City of Springboro	On/Off-Street	Varies	4.9	$7,548,120
North-South	Western Montgomery County Connector	AD1	Construct a bikeway from Wolf Creek Recreational Trail near the intersection of Arlington Road and Upper Lewisburg Salem Rd that goes south into Germantown.	Montgomery County Engineer	On/Off-Street	Varies	18.1	$12,973,099
Regional Totals for Short Range Projects							**266.2**	**$115,329,470**

Source: MVRPC

MVRPC

Figure 7.2
Regional Bikeway & Pedestrian Network



- Bellbrook-Fairborn Connector (I)
- Bowersville-Jamestown-Clifton Connector (O)
- Carriage Hills Connector (U)
- Creekside Trail
- Dayton-Kettering Connector (J)
- Fairborn-Yellow Springs-Cedarville Connector (B)
- Germantown-Bowersville Connector (C)
- Great Miami River Trail (K)
- Great Miami River-Centerville Connector (V)
- Great Miami River-Creekside Connector (X)
- Great Miami-Little Miami Connector (F)
- Great-Little Trail (N)
- Iron Horse Trail (J)
- Laura-Troy Connector (R)
- Little Miami Scenic Trail
- Mad River Trail
- New Trebein Connector (AB)
- Ohio to Indiana Trail (A)
- Ohio-to-Erie Trail
- Old National Road Trail (Z)
- Possum Creek Jefferson Township Connector (AA)
- SR 741 Corridor (T)
- Simon Kenton Trail
- Springboro Central Greenway (AC)
- Stillwater River Trail (L)
- Troy-Fletcher Connector (P)
- Western Montgomery County Connector (AD)
- Wolf Creek Connector (M)
- Wolf Creek Trail (G)
- Wright Brothers-Huffman Prairie Trail (E)
- Xenia-Jamestown Connector

N

0 2 4 6 8

Miles

May 2026

Chapter 8
Transportation Performance Management

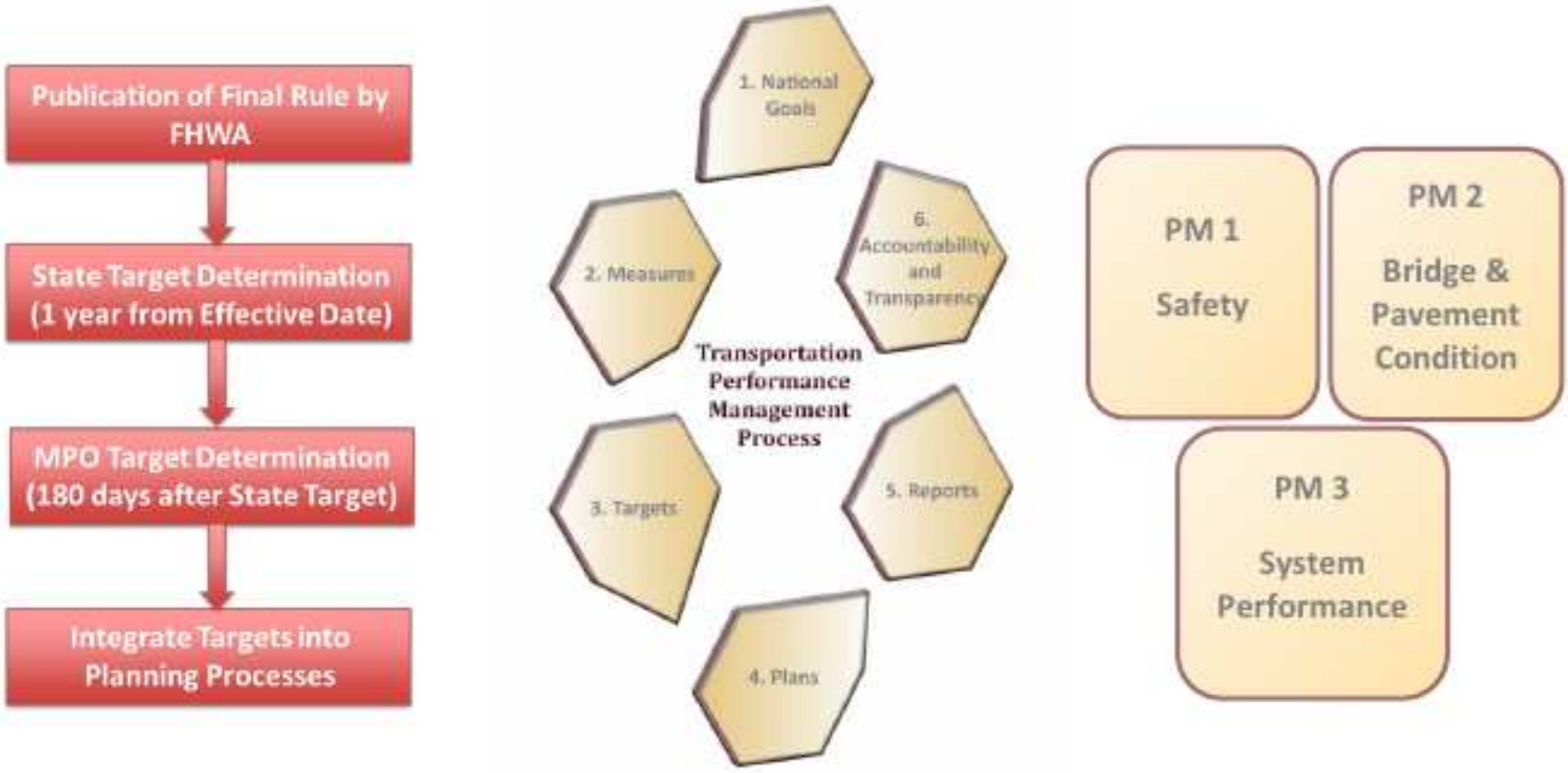
8.1 Overview

Transportation Performance Management (TPM) is a strategic approach that uses system information to make investment and policy decisions to achieve national performance goals. Figure 8.1 provides an overview of the planning rule framework for TPM, FHWA established target setting process, and required performance measures. This chapter serves the role of the **System Performance Report** for the MVRPC Long Range Transportation Plan.

Planning Rule Framework

First established by MAP-21, the IIJA requires state departments of transportation (DOTs), transit agencies, and metropolitan planning organizations (MPOs) to conduct performance-based planning by tracking performance measures and establishing data-driven targets to improve those measures in a coordinated process to ensure consistency.

Figure 8.1 — Transportation Performance Management Process



The Federal Highway Administration (FHWA) organized the many performance-related provisions within the IIJA for recipients of federal-aid highway funding into six elements: National goals or programs to focus the federal-aid highway program on specific areas of performance; Establishment

of measures by FHWA to assess performance and condition in order to carry out performance-based federal-aid highway programs; Establishment of targets for each of the measures to document expectations of future performance; Development of strategic and/or tactical plans to identify strategies and investments that will address performance needs; Development of reports that would document progress toward the achievement of targets, including the effectiveness of federal-aid highway investments; and requirements developed by FHWA to achieve or make significant progress toward achieving targets established for performance.

The IIJA also furthers several important goals with respect to public transportation, including safety, state of good repair, performance, and program efficiency. The IIJA gives the Federal Transit Administration (FTA) significant new authority to strengthen the safety of public transportation systems throughout the United States. The IIJA also put new emphasis on restoring and replacing aging public transportation infrastructure by establishing a new needs-based formula program and new asset management requirements.

Under this framework, FHWA and FTA have established a set of rulemakings for implementation of Performance-Based Planning and Programming (PBPP). FHWA published three Performance Measures (PM) rules that established performance measures to monitor the performance of safety (PM 1), bridge and pavement conditions (PM 2), and system performance (PM 3) while the FTA published rules to monitor Transit Asset Management (TAM) and develop Public Transportation Agency Safety Plans (PTASP). The rules dictate how State DOTs, MPOs, and transit agencies should set targets, report progress, and integrate performance management into their Long Range Transportation Plans (LRTPs) and Transportation Improvement Programs (TIPs).

The performance measures and standards are based on national goals and aligned to various program and policy areas including the National Highway Performance Program (NHPP), Highway Safety Improvement Program (HSIP), the Congestion Mitigation and Air Quality Improvement Program (CMAQ), and the National Freight Policy.

Target Setting Options

According to the U.S. DOT, all state Department of Transportations (DOT) and transit agencies must set targets for the established performance measures within one year of respective final rule implementation date, and all MPOs, including MVRPC, must either: 1) establish their own quantifiable targets for their metropolitan planning areas, or 2) support the statewide/regional targets as established by the state DOT or transit agency, no later than 180 days after the state/transit agency adopts its targets. To date, MVRPC has decided to support all applicable performance targets established by ODOT and the regional transit agencies. Table 8.1 provides a summary of all applicable performance measures in the MVRPC MPO region, established targets for those measures, and the most recent MVRPC Board of Directors resolution adoption date in support of those targets.

Table 8.1 – Summary of MVRPC Supported ODOT/Transit Agencies Performance Targets

	Target Areas	Performance Measures	Network	Target Adoption Date	Target Adopted
PM 1	Safety	Number of Fatalities	All Public Roads (Applicable to MPO)	Dec 2025	1,201.0
		Rate of Fatalities			1.09
		Number of Serious Injuries			7,283.0
		Rate of Serious Injuries			6.52
		Number of Non-Motorized Fatalities and Non-Motorized Serious Injuries			839.0
PM 2	Pavement Condition	Percentage Interstate System in Good Condition	Interstate System (Applicable to MPO)	June 2022	55%
		Percentage Interstate System in Poor Condition			1%
		Percentage non-Interstate System in Good Condition	NHS Non-Interstate (Applicable to MPO)	June 2022	40%
		Percentage non-Interstate System in Poor Condition			2%
	Bridge Condition	Percentage of NHS bridges by deck area in Good condition	NHS (Applicable to MPO)	June 2022	55%
		Percentage of NHS bridges by deck area in Poor condition			3%
PM 3	NHS Travel Time Reliability	Percent of Person-Miles Traveled on the Interstate System that are Reliable	Interstate System (Applicable to MPO)	June 2022	85%
		Percent of Person-Miles Traveled on the Non-Interstate System that are Reliable	NHS Non-Interstate (Applicable to MPO)	June 2022	80%
	Freight	Truck Travel Time Reliability (TTTR) Index	Interstate System (Applicable to MPO)	June 2022	< 1.5
	Total CMAQ Emissions	Total CMAQ Project Reductions for CO, VOC, Nox, PM2.5 & PM10	N/A (MVRPC and Specific MPOs)	June 2022	VOC: 60 kg/day Nox: 230 kg/day
	Peak Hour Excessive Delay	Annual Hours of Peak Hour Excessive Delay per capita	NHS (Applicable to Urbanized Areas)	June 2022	< 7.2 hours
	Non-SOV Travel	Percent of Non-SOV Travel	N/A (Applicable to Urbanized Areas)	June 2022	> 16.1%
Transit	Transit Asset Management Plan	Transit – Capital State of Good Repair	N/A	December 2022	For specific targets see: https://www.mvrpc.org/sites/default/files/transit_asset_management_2017.pdf
	Public Transportation Agency Safety Plan	Fatalities	N/A	May 2020	For specific targets see: https://www.mvrpc.org/sites/default/files/ptasp_targets_2020.pdf
		Injuries			
		Safety Events			
		System Reliability (State of Good Repair)			

Source: Greene CATS, GDRTA, MCTS, ODOT, and MVRPC

Assessment of Significant Progress

The assessment of significant progress is conducted by FHWA at the state level wherein the FHWA determines whether ODOT has met or made significant progress towards meeting the adopted targets. FHWA does not directly assess MPO progress towards meeting targets; however, FHWA will review MPO performance relative to targets as part of periodic transportation planning reviews, including MPO certification reviews, and reviews of adopted LRTPs and TIPs.

Project Evaluation System Update

In 2019, and in preparation for the Long Range Transportation Plan update, MVRPC staff worked with a committee of 15 MPO members to conduct a major review and update the Project Evaluation System (PES). One of the main goals of the PES update was to better align the criteria with the performance management approach and to improve the condition of regional transportation assets, particularly those in the National Highway System (NHS). As a result, the PES now includes criteria addressing pavement and bridge conditions and additional points are given to projects that improve major arterials on the NHS.

8.2 PM 1 Safety

The first of the performance measure rules issued by FHWA became effective on April 14, 2016, establishing five measures to assess the condition of road safety:

- Number of Fatalities.
- Rate of Fatalities: fatalities per million vehicle miles traveled (MVMT).
- Number of Serious Injuries.
- Rate of Serious Injuries: serious injuries per MVMT.
- Number of Non-Motorized Fatalities and Non-Motorized Serious Injuries

ODOT has established a 2% annual reduction goal for all five safety performance measures for 2026. To date, MVRPC has supported all ODOT's safety performance targets. In December 2025, the MVRPC Board of Directors adopted a resolution to support ODOT's most recent 2% annual reduction goal for 2026 for all five performance measures. While a determination of progress is done at the state level only, Figure 8.2 shows the MPO safety trends and targets for 2026 assuming that MVRPC would have adopted a 2% annual reduction goal. Based on the preliminary data, MVRPC would have made progress towards meeting the number of serious injuries and serious injury rate targets for the previous performance period 2024.

Impact of Projects in the SFY 2026-2029 Transportation Improvement Program

As per performance management requirements of the IIJA, and in coordination with ODOT and the regional transit agencies, MVRPC staff analyzed the impact of pertinent SFY 2026-2029 TIP projects to help achieve adopted targets. There are 18 projects in the TIP that address a regional safety priority location. An additional 6 projects are expected to have a positive impact on safety. The total cost of safety improvement projects funded with STP, CMAQ, TA, and CR funds is nearly $55 million. An additional 21 projects with a construction cost of $46.5 million are funded with ODOT HSIP funds.

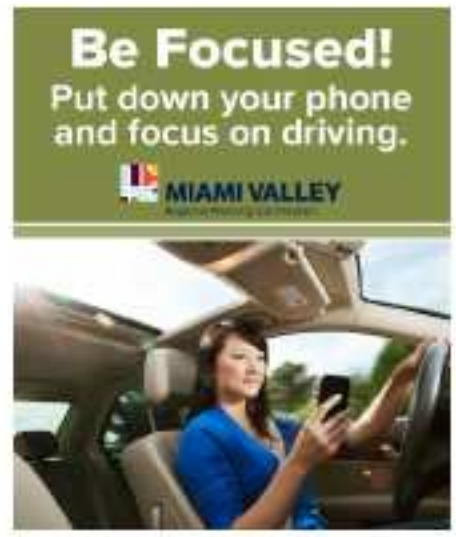
Figure 8.2 — Summary of Safety Trends in the MVRPC MPO Region



Source: ODOT and MVRPC

Public Education Safety Campaigns

Recognizing that public education plays an important role in reducing crashes and making the Region's roads safer for all users, MVRPC develops safety materials and educational campaigns to encourage safe behavior and address trending/rising crash types or behaviors. Past materials and campaigns have included Bike PSAs, Share the Road materials, Street Smart Campaign (aimed at pedestrian safety), seat belt usage, proper use of child restraints, and distracted driving.



8.3 PM 2 Pavement and Bridge Conditions

The second of the performance measures rules issued by FHWA became effective on May 20, 2017, establishing measures to assess the condition of pavements and bridges on the National Highway System (NHS) that is further subdivided into the Interstate System and the non-Interstate NHS. States are required to establish 2-year and 4-year targets for PM 2 measures over a four-year performance period. Two-year targets reflect the anticipated performance level at the midpoint of each performance period, while 4-year targets reflect it for the end of the performance period. MVRPC is only required to either establish or support ODOT's 4-year targets.

Pavement Conditions

There are four performance measures to evaluate pavement conditions on the NHS:

- Percentage of pavements on the Interstate system in *good* condition.
- Percentage of pavements on the Interstate system in *poor* condition.
- Percentage of pavements on the non-Interstate NHS in *good* condition.
- Percentage of pavements on the non-Interstate NHS in *poor* condition.

ODOT reviewed 8 years of HPMS submitted NHS pavement data to establish targets for the pavement condition performance measures. MVRPC has chosen to support ODOT's 4-year targets. The table in Figure 8.3 summarizes Ohio's 4-year targets and compares them against MVRPC's 2021 baseline computed values. Figure 8.3 shows that while the majority of the interstate pavements in the MVRPC MPO region are in good condition, a significant portion of the non-interstate NHS pavements (especially locally owned non-interstate NHS) are classified as being in either fair or poor condition. As a result, MVRPC meets two out of four of ODOT's pavement condition "targets"; the first being "Percentage of Interstate Pavements in Good Condition, beating the state target of 55% with 68% of Interstate Pavements in the area in "Good" Condition. The other target MVRPC has met is "Percentage of Interstate Pavements in Poor Condition". The State has a target % set at 1%, while MVRPC baseline percentage was .10%.

Impact of Projects in the SFY 2026-2029 Transportation Improvement Program

MVRPC does not have any Interstate System pavement condition projects that use STP, CMAQ, or TA funds. There are 6 projects using ODOT controlled funds that improve 178 lane-miles of Interstate with a construction cost of $66.5 million.

There are 17 projects in the TIP that address Non-Interstate NHS pavement conditions. The total cost of pavement condition projects funded with STP, CMAQ, TA, or CR funds is $25.9 million. There are an additional 25 projects using ODOT controlled funds that improve Non-interstate NHS pavement conditions with a cost of $58.2 million.

Bridge Conditions

ODOT used the National Bridge Inventory (NBI) data to assess condition of bridges on the interstate and non-interstate NHS to establish targets against two performance measures:

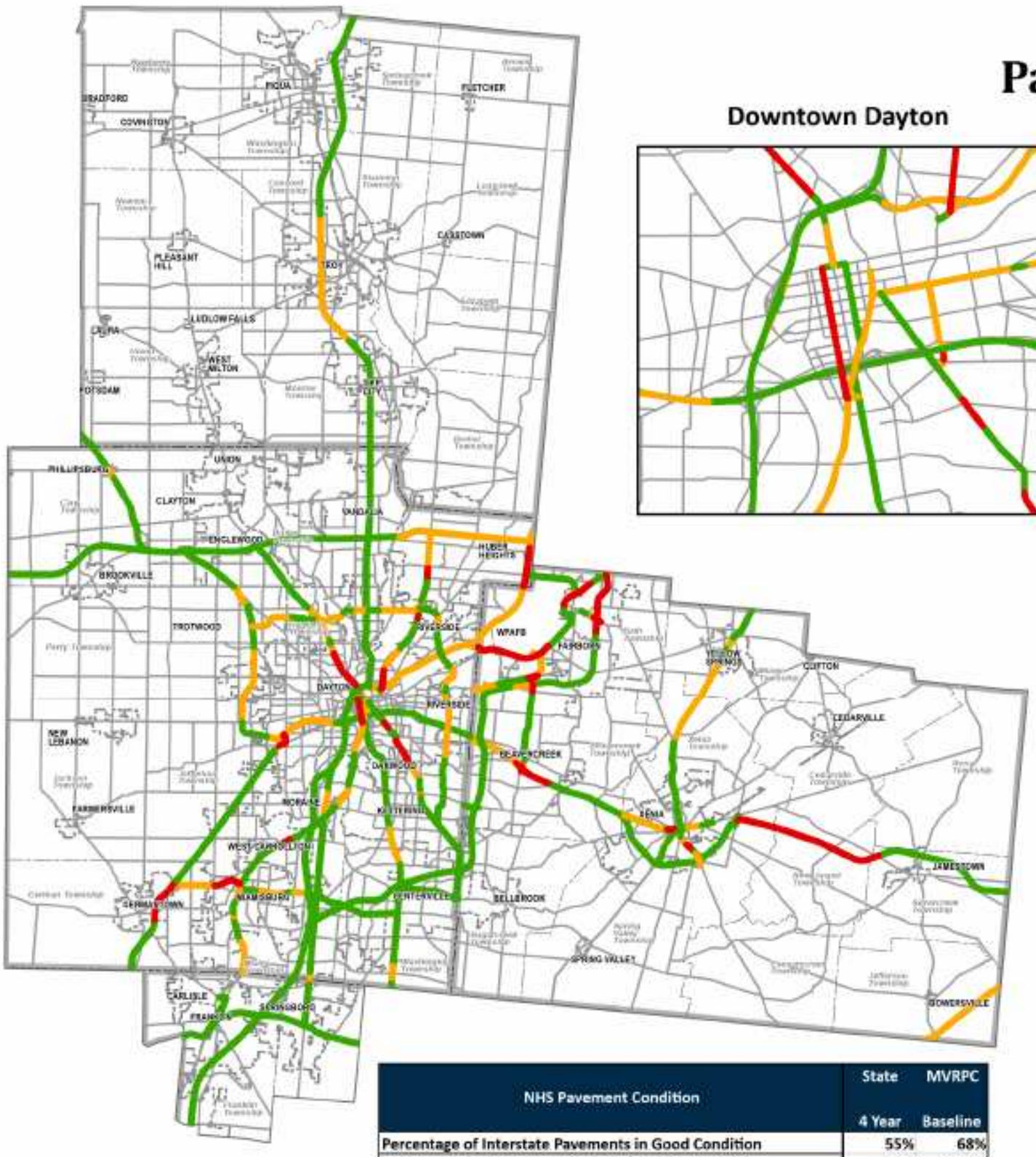
Percentage of bridges on the NHS in *good* condition.
Percentage of bridges on the NHS in *poor* condition.
Figure 8.4 shows the NHS bridges in the MVRPC MPO region. The majority of the bridges can be classified as being in either good or fair condition. In 2021, five bridges were rated as being in poor condition. There are two bridges under construction currently, and two that have projects in the planning stages. MVRPC is supporting ODOT's 4-year targets for bridge condition measures and MVRPC's 2021 baselines shows that it met both those targets as shown in Figure 8.4.

Impact of Projects in the SFY 2026-2029 Transportation Improvement Program

MVRPC does not have any NHS Bridge Condition projects that use STP, CMAQ, TA, or CR funds. There are 36 bridges on the NHS that are being improved with ODOT controlled funds with a total construction cost of $12.5 million.

MVRPC

Figure 8.3
Pavement Conditions



Downtown Dayton

Good
Fair
Poor

NHS Pavement Condition	State 4 Year	MVRPC Baseline
Percentage of Interstate Pavements in Good Condition	55%	68%
Percentage of Interstate Pavements in Poor Condition	1%	0.10%
Percentage of Non-Interstate NHS Pavements in Good Condition	40%	26%
Percentage of Non-Interstate NHS Pavements in Poor Condition	2%	2.10%

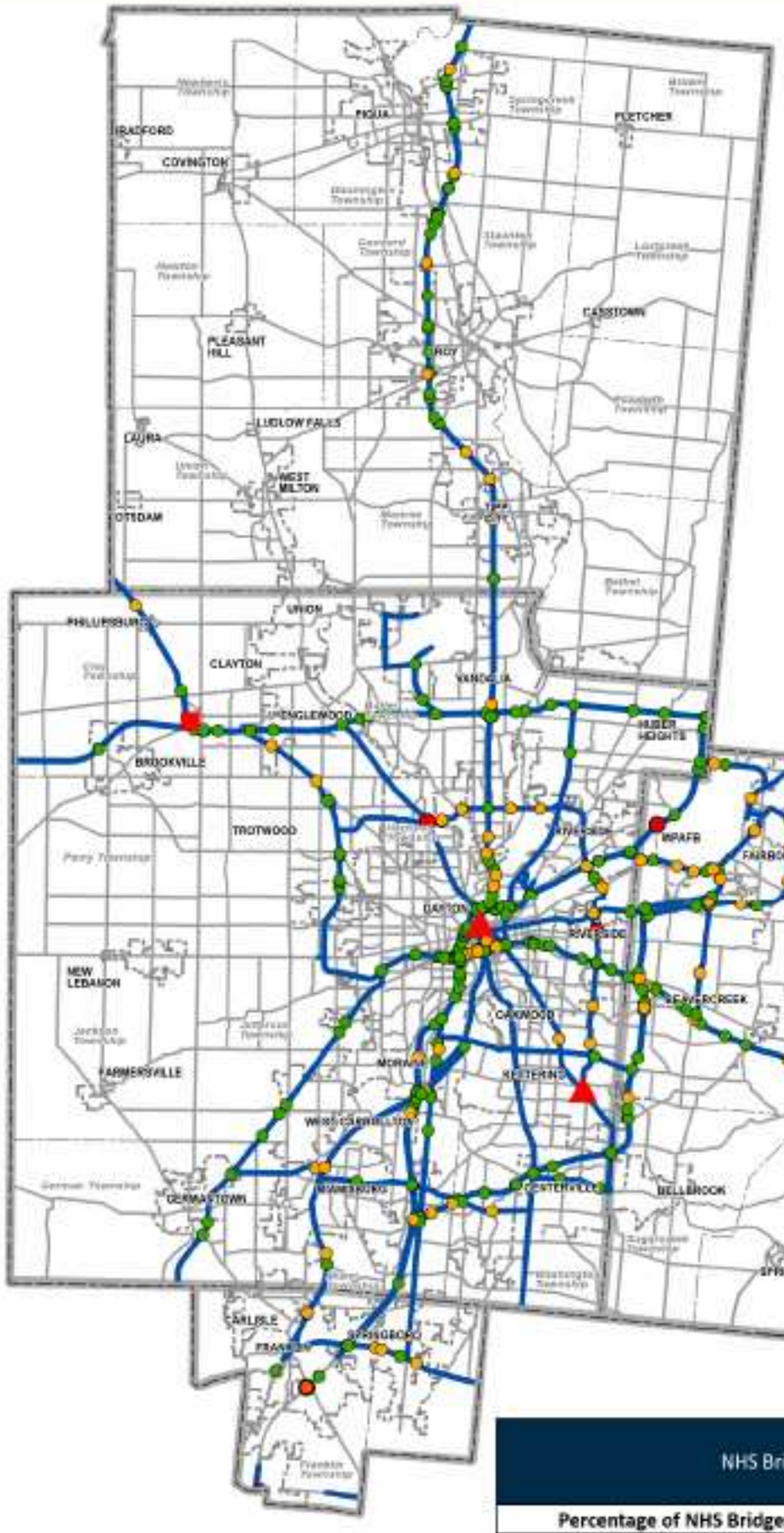
Source: ODOT and MVRPC

May 2026

N

0 2 4 6 8 Miles

Figure 8.4
Bridge Condition Ratings



Downtown Dayton



Bridges

- Good
- Fair
- Poor
- Project Planned
- Under Construction
- National Highway

Source: ODOT and MVRPC

May 2026

N

0 2 4 6 8 Miles

NHS Bridge Condition	State Target 4 Year	MVRPC Baseline
Percentage of NHS Bridges by deck area in Good Condition	55%	76%
Percentage of NHS Bridges by deck area in Poor Condition	1%	<1%

8.4 PM 3 System Performance

The third of the three performance measures rules issued by FHWA became effective on May, 20 2017, establishing measures to assess the performance of the NHS, freight movement on the Interstate System, and Congestion Mitigation and Air Quality Improvement Program (CMAQ). States are required to establish 2-year and 4-year targets for PM 3 measures for a four-year performance period. MVRPC has chosen to support ODOT's 4-year targets for all applicable PM 3 measures.

Travel Time Reliability on the NHS

FHWA established two performance measures to assess travel time reliability on the NHS:

- Percent of Person-Miles Traveled on the Interstate that are Reliable.
- Percent of Person-Miles Traveled on the non-Interstate NHS that are Reliable.

These measures seek to assess how reliable the NHS network is by calculating a ratio called the Level Of Travel Time Reliability (LOTTR). The data to compute LOTTR is sourced from FHWA's National Performance Management Research Data Set (NPMRDS). Ohio MPOs are able to access the computed metrics for their region through an ODOT subscription to a toolset provided by a private contractor that assists in calculating these metrics for the NHS. The top graph in Figure 8.5 shows the trend lines for the auto travel time reliability measures on the Interstate and non-Interstate NHS in the MVRPC Region. Based on the 2021 baseline values, MVRPC would meet both of the 4-year targets as established by ODOT and summarized in Table 8.1.

Impact of Projects in the SFY 2026-2029 Transportation Improvement Program

At this time MVRPC does not have any Interstate System NHS Travel Time Reliability projects that use STP, CMAQ, TA or CR funds. There is an additional Interstate System Travel Time Reliability project using ODOT controlled funds with a total construction cost of $21.3 million.

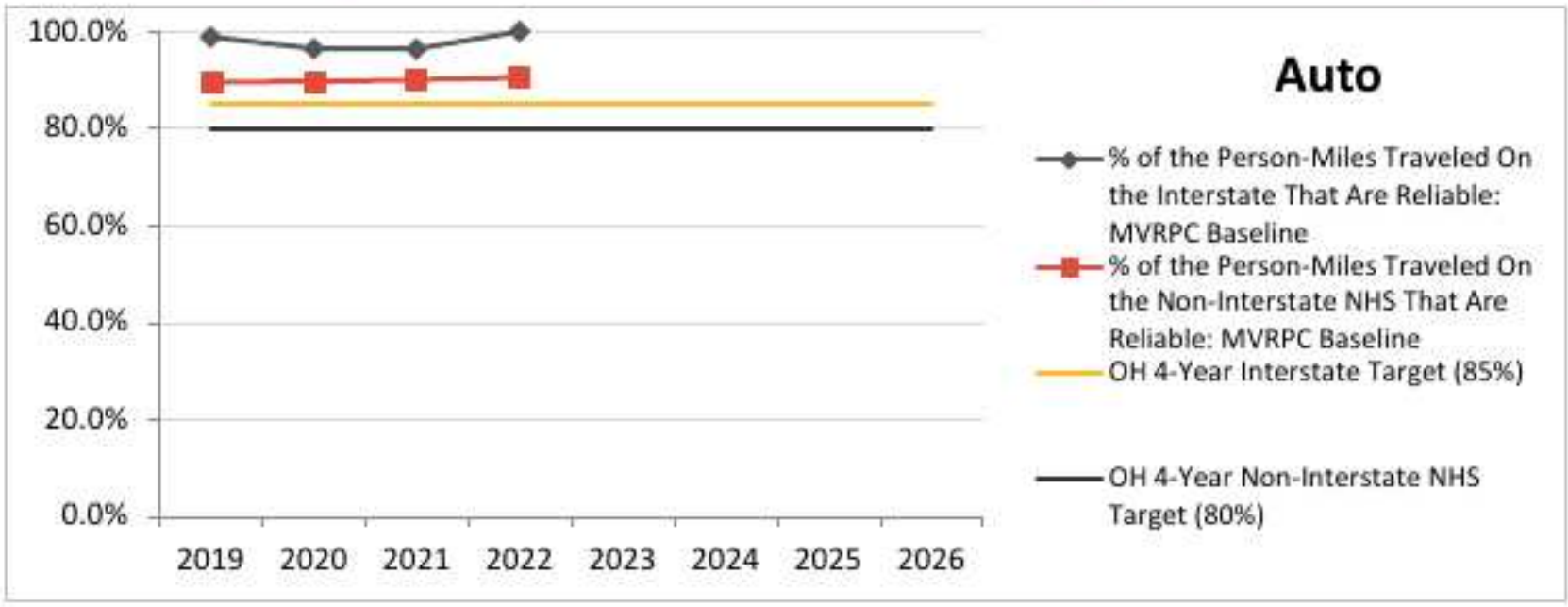
Freight Travel Time Reliability on the Interstate System

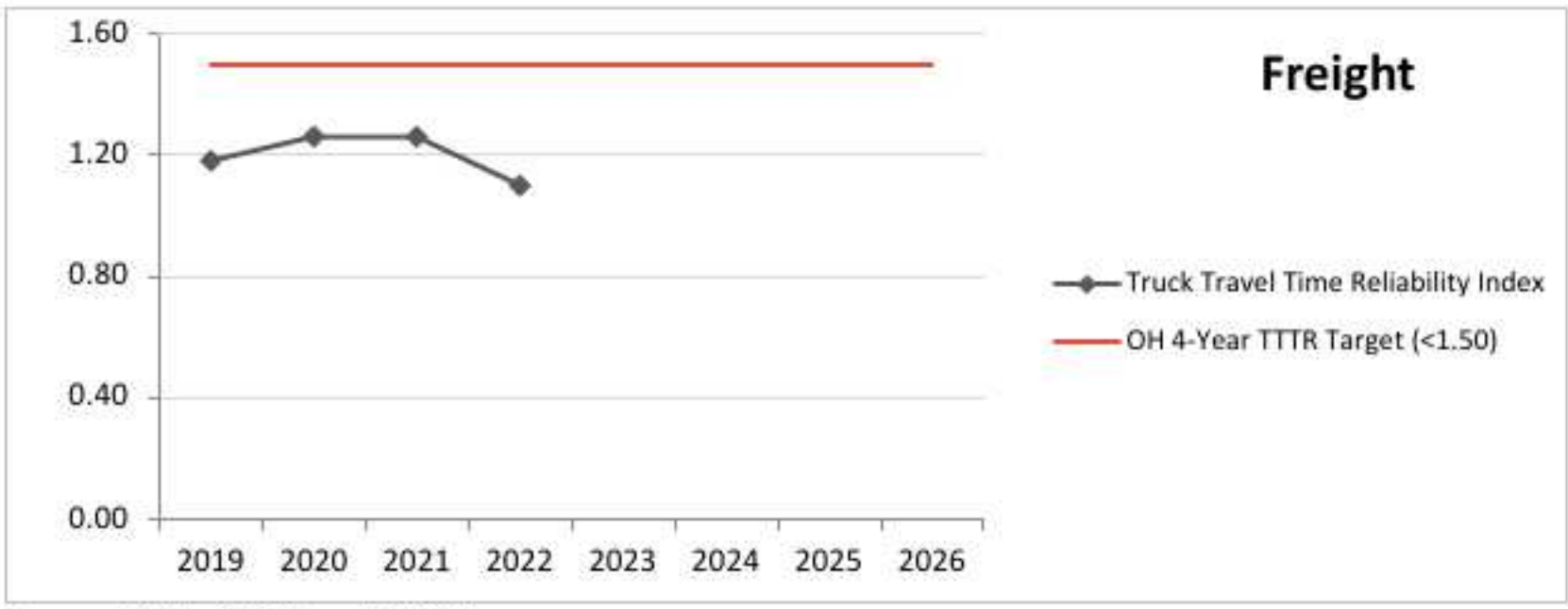
FHWA established the following freight reliability performance measure:

- Truck Travel Time Reliability (TTTR) Index.

This measure seeks to assess how reliable the interstate network is for trucks by calculating a ratio called TTTR. Similar to the computation of LOTTR, the data to compute TTTR is also sourced from the NPMRDS. The bottom graph in Figure 8.5 shows the trend lines for the TTTR Index on the Interstate system in the Region. Based on the 2022 baseline value of 1.26, MVRPC would meet the 4-year target as established by ODOT (<1.50 TTTR Index).

Figure 8.5 — Travel Time Reliability: MVRPC Regional Trends





Source: FHWA, ODOT, and MVRPC

Impact of Projects in the SFY 2026-2029 Transportation Improvement Program

There is 1 project funded with STP, CMAQ, TA or CR funds that addresses NHS Non-Interstate Travel Time Reliability with a total cost of $2.2 million.

CMAQ Program

The PM 3 rule also contains performance measures to assess the Congestion Mitigation and Air Quality Improvement (CMAQ) program through measurement of total emissions reduction of on-road mobile source emissions. States whose geographic boundaries include any part of a nonattainment or maintenance area for ozone, carbon monoxide, or particulate matter need to establish targets for each of these applicable criteria pollutants and precursors. Since Warren County is designated as non-attainment for 8-hour ozone (2015), MVRPC is required to either establish targets or support ODOT's targets for VOC and NOx.

ODOT established emissions reduction targets in 2022 for three mobile-source pollutants (VOC, NOx, and PM 2.5) based on 2014-2020 project emissions data recorded in FHWA's CMAQ Public Access Database. MVRPC is supporting the applicable 4-year VOC and NOx targets as established by ODOT and summarized in Table 8.1.

Impact of Projects in the SFY 2026-2029 Transportation Improvement Program

There are 24 projects in the SFY2026-2029 TIP that address CMAQ Emission reductions for our region. The total cost of MPO funded CMAQ emissions reduction projects is nearly $53.1 million.

Peak Hour Excessive Delay

Another measurement that is related to the CMAQ Program is documenting annual hours of peak hour excessive delay per capita. ODOT and MPOs must measure traffic congestion using annual hours of peak excessive delay (PHED) per capita on the National Highway System. ODOT established a PHED range in 2022 of less than < 7.2 annual hours per capita.

Impact of Projects in the SFY 2026-2029 Transportation Improvement Program

There is one project funded with STP, CMAQ, TA or CR funds that addresses Peak Hour Excessive Delay with a total cost of 2.2 million. There are an additional 8 projects using ODOT controlled funds with a total construction cost of $42.4 million that decrease Peak Hour Excessive Delay.

Non-SOV Travel

Non-SOV travel measures the percentage of daily commuters in the urbanized area who use some form of transportation other than driving alone in a personal vehicle. Examples include carpool, vanpool, public transportation, commuter rail, walking, bicycling, and telecommunicating. ODOT in conjunction with MVRPC last established non-SOV targets in 2022 for the Dayton urbanized area to meet at least 16.1% of commuting by a means other than driving alone.

Impact of Projects in the SFY 2026-2029 Transportation Improvement Program

There are 31 projects with STP, CMAQ, TA or CR funds that addresses Non-SOV Travel with a total cost of $68 .8 million. There is an additional 33 non-SOV travel projects using ODOT controlled funds with a total cost of $35.2 million.

8.5 Transit Asset Management

FTA's Transit Asset Management (TAM) rule became effective on October 1, 2016. This rule applies to all recipients and subrecipients of federal transit funding that own, operate, or manage public transportation capital assets. The purpose of the TAM is to help achieve and maintain a state of good repair (SGR) for the nation's public transportation assets. It requires transit agencies to establish a

system to monitor and manage public transportation assets to improve safety and increase reliability and performance, and to establish performance targets for four national performance measures:

- Rolling Stock: % of vehicles that have met or exceeded their Useful Life Benchmark (ULB).
- Equipment: % of vehicles that have met or exceeded their ULB.
- Infrastructure: % of track segments with performance restriction.
- Facilities: % of facilities in an asset class, rated <3 on the Transit Economic Requirements Model (TERM) scale.

In coordination with ODOT's Office of Transit and the three regional transit agencies, GDRTA, Greene CATS Public Transit, and Miami County Transit System, the MVRPC Board of Directors adopted a resolution in June 2017 in support of the targets established in the TAM Plan. A summary of the initial targets established by each transit agency by asset class in relation to a 2017 baseline can be viewed on the MVRPC website at:
https://www.mvrpc.org/sites/default/files/transit_asset_management_2017.pdf

Impact of Projects in the SFY 2026-2029 Transportation Improvement Program

There are 31 projects in the TIP that address Transit Assets. The total cost of Transit Asset projects funded in the TIP is $165.3 million.

8.6 Public Transportation Agency Safety Plans

In July 2018, FTA published the Public Transit Agency Safety Plan (PTASP) Final Rule, which requires certain operators of public transportation systems that receive federal funds under FTA's Urbanized Area Formula Grants and all rail transit systems to develop safety plans that include the processes and procedures to implement Safety Management Systems (SMS). Its purpose is to improve public transportation safety by guiding transit agencies to more effectively and proactively manage safety risks in their systems. Transit agencies are required to set performance targets for each of the performance measures as identified in the most recent National Public Transportation Safety Plan (NSP):

- System reliability: mean distance between major mechanical failures.
- Safety events: number and rate per total vehicle revenue miles by mode.
- Fatalities: number and rate per total vehicle revenue miles by mode.
- Injuries: number and rate per total vehicle revenue miles by mode.

In coordination with ODOT's Office of Transit and the three regional transit agencies, (GDRTA, Greene CATS Public Transit, and Miami County Transit System), the MVRPC Board of Directors adopted a resolution in May 2020 in support of the public transportation safety targets established by each regional transit agency in relation to a historical baseline. A summary of the public transportation safety targets can be viewed on the MVRPC website at:
https://www.mvrpc.org/sites/default/files/ptasp_targets_2020.pdf

Impact of Projects in the SFY 2026-2029 Transportation Improvement Program

There are 8 projects in the TIP that address system reliability. The total cost of these projects in the TIP is $41 million. Fatalities, injuries, and safety events are addressed by each transit agency, through policies, risk management practices, safety assurances and promotion including but not limited to: communication, reporting, hazard identification, and training programs.

8.7 Regional Report Card

In addition to the federal performance measures described in the previous sections, MVRPC researches and tracks other regional transportation measures related to system performance, safety, transportation system conditions, and accessibility to gain insight into how well the transportation system is doing and what areas need improvement. It also expands the geographic scope beyond the federal requirements (for example, considering all functionally classified roads versus roads in the NHS only) and provides an indication of future needs. These trends are published in a **Regional Report Card**.

The Regional Report Card is shown in Table 8.2. It documents and describes the various measures that are tracked under each category, the data source used to evaluate the measures, two historical data points for comparison, and a trend analysis based on this historical comparison. The trend analysis shows the goal for that measure (for example, the Region would like to see a downward trend for the number of fatalities) against the actual performance. All measures where the actual performance is worse than the desired trend is identified by shading the table cell red.

Table 8.2 — Regional Report Card

	Measure	Description	Data		Goal	Actual	Trend
System Performance	Average Freeway Speed (mph)	Source: INRIX	63.1 (2018)	65.6 (2023)	—	↑	3.8%
	Congested System	Congested Lane-Miles Source: Texas Transportation Institute (TTI)	8.4% (2017)	6.20% (2022)	↓	↓	-26.1%
	Annual Freeway Vehicle Hours of Delay	In hours; Source: INRIX	844,980 (2018)	872,960 (2023)	↓	↑	3.31%
	Annual Cost of Vehicle Delay on Freeways	In millions; Source: INRIX	$30.14 (2018)	$35.85 (2023)	↓	↑	18.9%
	Annual Cost of Truck Delay on Freeways	In millions; Source: INRIX	$14.44 (2018)	$14.91 (2023)	↓	↑	3.2%
Safety	Incident Response	Average duration of major freeway incidents In minutes; Source: INRIX	101.3 (2018)	148.6 (2023)	↓	↑	46.6%
	Mean Distance Between Calls	Miles between service calls Source: GDRTA	1,508 (2018)	5,224 (2024)	↑	↑	246.4%
	Rate of Fatalities	Total fatalities per 100 million Daily VMT Source: ODPS	1.00 (2017-19)	1.30 (2021-23)	↓	↑	30.0%
	Rate of Serious Injuries	Total incapacitating injuries per 100 MDVMT Source: ODPS	7.03 (2017-19)	7.06 (2021-23)	↓	↑	0.4%
	Transit Incidents	Transit incidents per 100,000 trips Source: NTD	0.47 (2016-18)	0.19 (2022-24)	↓	↓	-59.5%
	Bike/Pedestrian Safety	Number of Nonmotorized Fatalities and Serious Injuries Source: ODOT & ODPS	848.0 (2017-19)	894.0 (2021-23)	↓	↑	5.4%
System Conditions	Pavement Condition Rating (PCR)	% Road Mileage in Poor Condition based on PCR Source: ODOT	4.3% (2018)	7.8% (2023)	↓	↑	81.3%
	Bridge Rating	% of Bridges in Fair / Poor Condition Source: ODOT	13.4% (2018)	11.3% (2023)	↓	↓	-15.6%
Accessibility	Miles of Regional Bikeway	Additions to Regional Bikeway System In miles; Source: MVRPC	220 (2018)	238 (2025)	↑	↑	8.2%
	Population Served by Bikeway	Population within ½ mile of a Regional Bikeway Source: U.S. Census, MVRPC[1]	32.3% (2018)	33.2% (2025)	↑	↑	2.8%
	Employment Served by Bikeway	Employment within ½ mile of a Regional Bikeway Source: QCEW, MVRPC[1]	46.8% (2018)	47.5% (2025)	↑	↑	2.1%
	Population Served by Transit	Population within ½ mile of a GDRTA Bus Route Source: U.S. Census, MVRPC, GDRTA[1]	83.0% (2018)	82.6% (2024)	↑	—	■
	Employment Served by Transit	Employment within ½ mile of a GDRTA Bus Route Source: QCEW, MVRPC, GDRTA[1]	89.5% (2018)	89.1% (2024)	↑	—	■
	Work trips by Biking and Walking	Work trips in the Region by biking and walking Source: ACS 2014-2018, ACS 2018-2023	2.58% (2018)	2.59% 2023	↑	—	■
	Population Living in Mixed Land Use Districts	Population living in districts integrated with residential and employment land uses Source: U.S. Census, QCEW, MVRPC	26.5% (2010)	33% (2020)	↑	↑	24.5%

[1] Using 2010 populations and employment for previous period and 2020 population and employment for current period.

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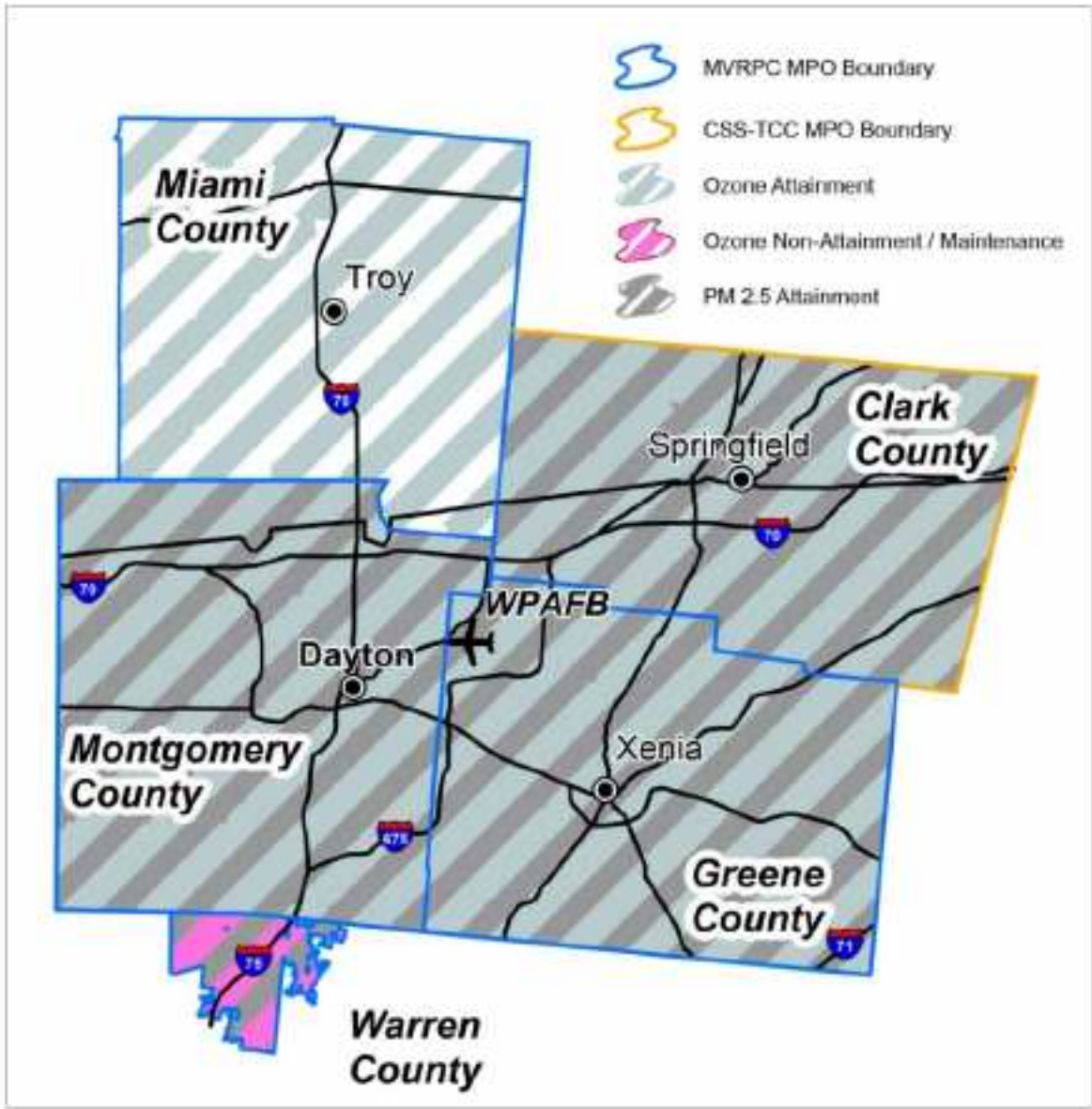
Chapter 9
Environmental Planning

9.1 Air Quality Planning

Background

MVRPC is comprised of the counties of Greene, Miami, and Montgomery as well as the cities of Franklin, Carlisle, and Springboro, and Franklin Township in northern Warren County. Warren County is located in the Cincinnati air quality Region (Cincinnati Region), with the remainder counties in the MPO located in the Dayton/Springfield air quality Region (D/S Region). The D/S Region also includes Clark County, which is represented by a different MPO, the Clark County Springfield Transportation Coordinating Committee (CCSTCC). Due to multiple air quality regions and MPOs, conformity is closely coordinated with neighboring organizations, with MVRPC being the lead agency in the D/S Region and the Ohio-Kentucky-Indiana Regional Council of Governments (OKI) being the lead agency in the Cincinnati Region. Figure 9.1 illustrates this complex situation.

Figure 9.1 — Air Quality Standards Designations



MVRPC conducts transportation conformity in accordance with the Clean Air Act Amendments of 1990 which expanded transportation's role in contributing to national clean air goals. The 1990 amendments expanded the definition of "transportation conformity" to:

> Conformity to the (air quality implementation) plan's purpose of eliminating or reducing the severity and number of violations of the national ambient air quality standards and achieving expeditious attainment of such standards; and that such activities will not (i) cause or contribute to any new violations of any standards in any area, (ii) increase the frequency or severity of any existing violation of any standard in any areas, or (iii) delay timely attainment of any standard or any required interim emission reductions or other milestones in any area.

9.2 Air Quality Standards

Ozone Standards

In April 2004, the United States Environmental Protection Agency (U.S. EPA) issued final designations regarding the 1997 8-hour ozone standard. The 1997 8-hour standard is violated when the 3-year average of the annual fourth highest daily maximum 8-hour ozone average concentration exceeds 0.08 ppm (parts per million). All four counties (Clark, Greene, Miami, and Montgomery) in the Dayton/Springfield Region (D/S Region) and Warren County in the Cincinnati Region were designated as basic non-attainment for ozone. The D/S Region was designated to attainment/maintenance for 1997 ozone in August 2007 and the Cincinnati Region was designated to attainment/maintenance for 1997 ozone in May 2010. The Cincinnati Region is also designated as maintenance for the 2008/2015 ozone standards.

On March 6, 2015, U.S. EPA published the final rule for the Implementation of the 2008 NAAQS for Ozone: State Implementation Plan Requirements, 80 FR 12264, effective April 6, 2015. The final rule revoked the 1997 ozone standard for all purposes including transportation conformity but on February 16, 2018, the U.S. Court of Appeals for the District of Columbia Circuit on the South Coast II Court Case held that transportation conformity determinations must continue to be made in those areas ("orphan areas"). As an ozone orphan area and consistent with U.S. EPA's November 29, 2018 guidance and interagency consultation, MVRPC will advance a qualitative Long Range Transportation Plan (LRTP) conformity determination for the Dayton/Springfield Region as documented in Table 9.1.

Table 9.1 — MVRPC Transportation Conformity Requirements

Requirements	Documentation
Latest planning assumptions:	• MVRPC maintains current travel demand model socio-economic variables and highway/transit networks used to develop the MPO Transportation Plans. With the 2026 update, the 2020 Census results have been incorporated into the socio-economic variables.
Consultation:	• Interagency consultation was conducted in January-February 2026, documentation can be found in Appendix A. • Consistent with MVRPC's Public Participation Policy, several public participation meetings were conducted throughout the update period with the final meeting being held on April 8, 2026. Chapter 11 provides a summary of the public participation efforts.
Transportation Control Measures (TCMs):	• There are no TCMs in the Dayton/Springfield air quality Region State Implementation Plan (SIP).
Fiscal Constraint:	• All non-exempt projects in the MVRPC region are included in the 2050 LRTP and TIP (if within the TIP years SFY 2026-2029). Costs for these projects are included in the fiscal constraint analysis for the respective documents.

Tables 9.2 and 9.3, prepared by the Ohio Kentucky Indiana Regional Council of Governments, shows that the Ohio portion of the Cincinnati non-attainment area demonstrates conformity to the 8-hour ozone standards of the State Implementation Plan (SIP). Technical details of the analysis and additional documentation can be found at: https://www.oki.org/wp-content/uploads/2025/04/FINAL-OKI-FY26-29TIP-4-10-2025.pdf.

Table 9.2 — Quantitative Conformity Findings of Ozone-forming Emissions (tons per day) for the Ohio and Indiana Portion* of the 2008 Ozone Maintenance Area

Budget/Emissions	2037	2040	2050
Ohio/Indiana VOC Budget	11.01	11.01	11.01
Ohio/Indiana VOC Emissions	9.57	9.08	7.60
Ohio/Indiana NO_x Budget	9.32	9.32	9.32
Ohio/Indiana NO_x Emissions	8.10	7.39	6.00

* Includes Lawrenceburg Twp., Dearborn County in Indiana

Table 9.3 — Quantitative Conformity Findings of Ozone-forming Emissions (tons per day) for the Ohio Portion of the 2015 Ozone Maintenance Area

Budget/Emissions	2026	2035	2040	2050
Ohio VOC Budget	14.15	10.58	10.58	10.58
Ohio VOC Emissions	14.08	9.81	8.55	7.15
Ohio NO_x Budget	25.30	18.98	18.98	18.98
Ohio NO_x Emissions	19.89	8.89	6.90	5.66

Fine Particulate Standards

In December 2004, the U.S. EPA issued air quality designations regarding the 1997 fine particulate (or PM 2.5) standard. The Clark, Greene, Montgomery, and Warren Counties were designated non-attainment for the annual PM 2.5 standard. The annual standard is exceeded if the 3-year average of annual mean PM 2.5 concentrations is greater than 15 micrograms per cubic meter. The D/S Region was re-designated to attainment/maintenance for PM 2.5 on September 26, 2013 and the Cincinnati Region was designated to attainment/maintenance for PM 2.5 in 2011. In August 24, 2016, U.S. EPA published the final rule for the Implementation of the Fine Particulate Matter National Ambient Air Quality Standards: State Implementation Plan Requirements, 81 FR 58010, effective October 24, 2016. The final rule revokes the 1997 PM 2.5 standard for all purposes including transportation conformity.

With the revocation of the PM 2.5 standard, areas that have already been re-designated to attainment no longer have to demonstrate conformity.

9.3 Extreme Weather Events

Significant changes to the climate have become a global phenomenon which have been observed over the past several decades and is projected to continue into the foreseeable future. The driving characteristic of these changes are an increase in temperatures, which creates changes in weather patterns. Different parts of the globe will experience different aspects of these changes, from severe drought and wildfires in some areas to flooding due to rising tides in others. The Miami Valley has its own set of challenges, attributable to changes in climate, that are being or will be experienced.

The increased occurrence of these severe weather phenomenon is driven by a surplus concentration of water vapor and other carbon emissions (e.g. carbon dioxide and methane) in the atmosphere. These gases absorb energy, locking heat onto the Earth that would normally escape into space. As more heat is trapped, glaciers and ice caps shrink, which adds more water into the oceans, as well as increasing the amount of water evaporating into the atmosphere. In this manner, the heat-trapping effect reinforces itself. Other emissions are added by natural processes (e.g. volcanic eruption), as well as activities like farming and burning fossil fuels. Currently, fuel burnt for

transportation accounts for 28% of carbon emissions in the United States, making transportation the top source of such emissions.[17]

It is also important to distinguish between climate and weather; climate is a long-term average of weather over a specified area, whereas weather is a description of circumstances at a particular time. So, for example, while the climate may be getting warmer, a particular region may experience an increased number of extreme cold events. Thus, a geographic locale experiencing record or near-record low temperatures with heightened frequency (for example), does not indicate a cooling in the climate's trajectory. It may be a symptom of the planet getting warmer overall.

What is Happening in the Miami Valley?

In the Miami Valley Region, we have seen a significant increase in precipitation, and models predict this trend will continue (see Figure 9.2). In fact, while more precipitation is predicted by climate models, it is also predicted to occur over fewer days of precipitation. This means more frequent flooding of roads, culverts, and bridges/bridge approaches; with each flood event having the potential to disrupt the ability to travel and the need to reroute around the flooding. In the long term, more frequent flooding can also lead to erosion of the soil which supports roads and bridges, thus shortening the lifespan of infrastructure.[18] Regional bike trails, many of which are built along waterways, are also likely to be submerged more frequently and for extended periods of time.

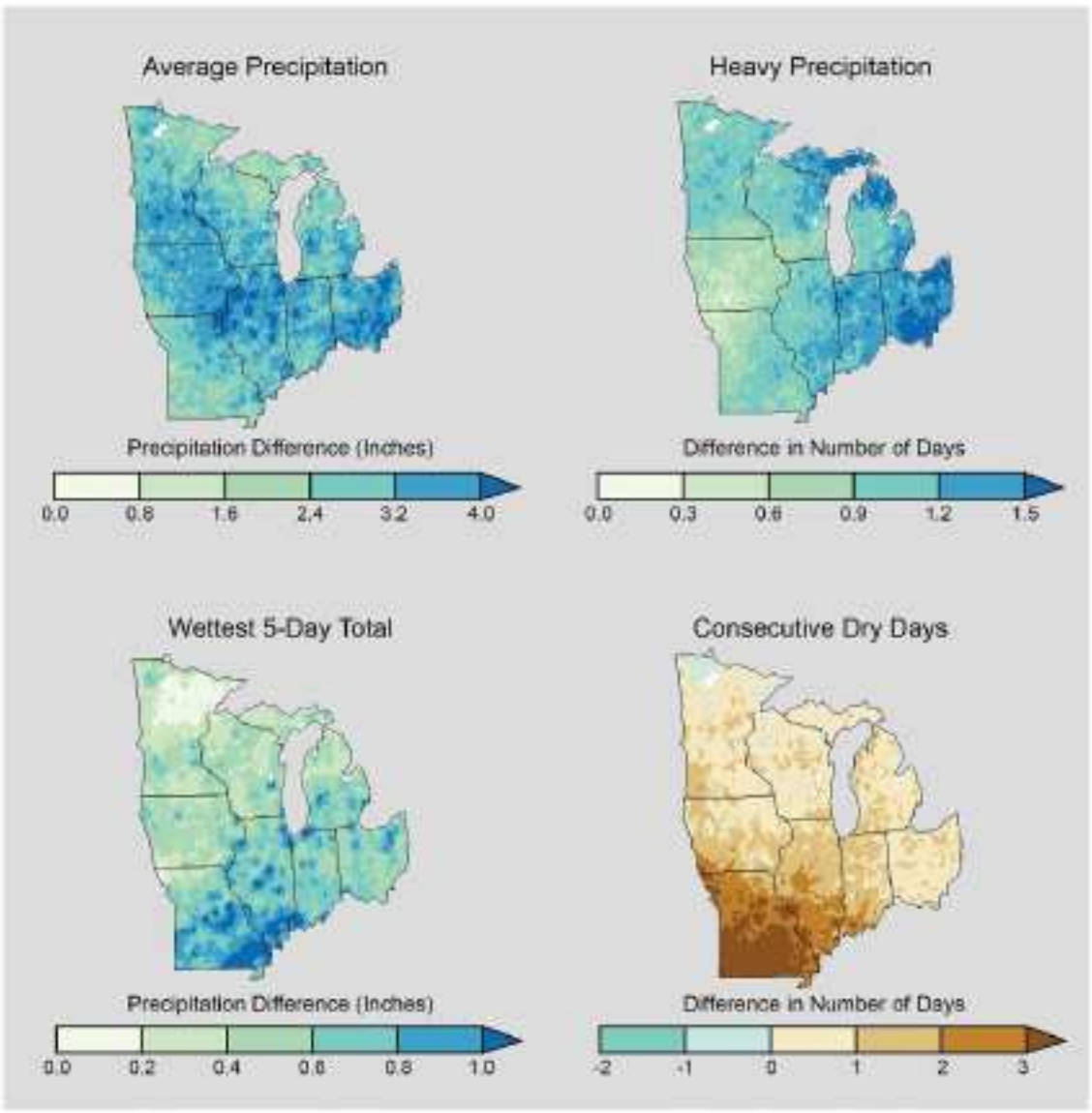
As there become fewer (but heavier) precipitation days, there are also projected to be more dry days. While the abundance of natural water in Ohio and the Midwest (especially the Great Lakes) prevents the threat of drought on the level of more arid climates like in the Southwest, many consecutive days with little or no precipitation can cause problems. When soil is dried, it becomes less permeable, so less precipitation is needed to cause flood conditions and a heavy precipitation event will cause more flooding than usual. Thus, the issues outlined above for heavier precipitation events are exacerbated by drought. These events can further breakdown the soil's ability to absorb water in the future, snowballing damage further.[18]

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[17] EPA 2020. "Inventory on Greenhouse Gas Emissions and Sinks: 1990-2018." U.S. Environmental Protection Agency, Washington, D.C. April 2020. EPA-430-R-20-002 (2020). Sec. 2 Pg. 25

[18] ODOT 2016. "Ohio DOT Infrastructure Resiliency Plan." Ohio Department of Transportation, Columbus, OH May 2016.

Figure 9.2 — Projected changes for 2041-2070, relative to the averages from 1941-1970[19]



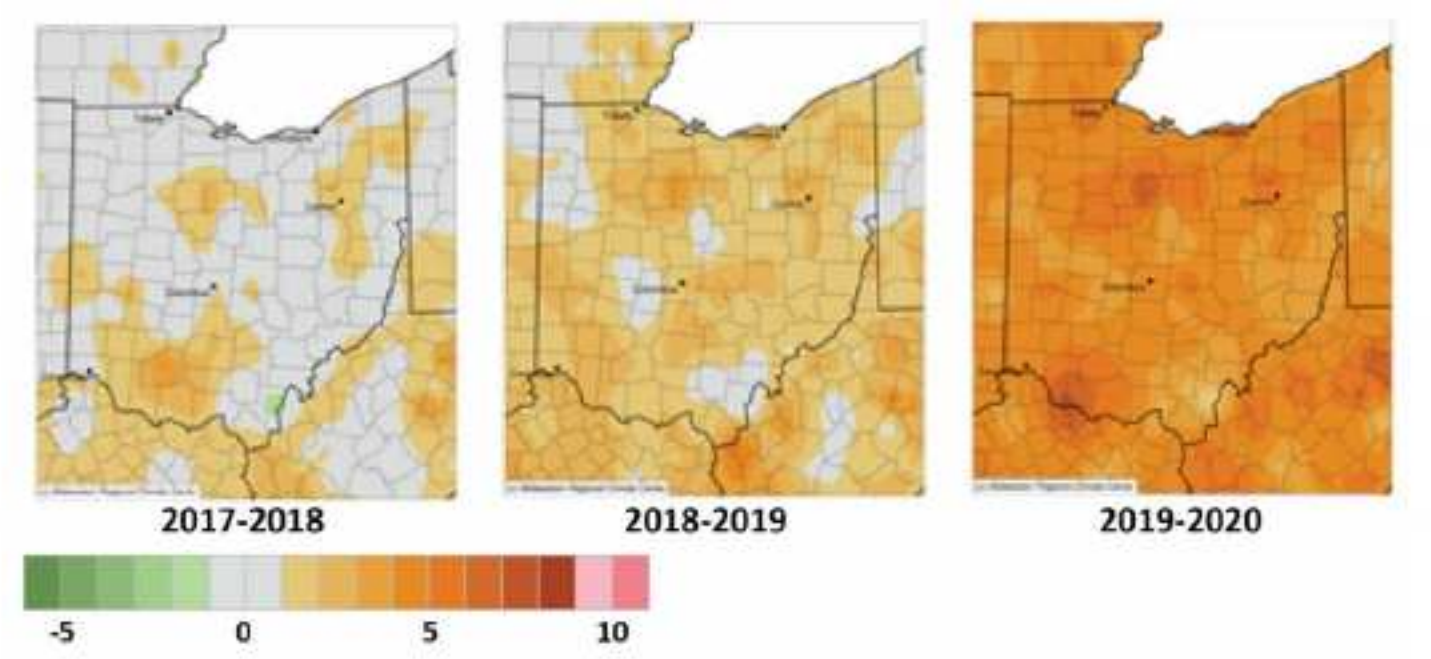
There are mixed projections concerning winter weather in the Region. The overall trend predicted by models is warmer winters, as we have seen in recent years (see Figure 9.3), but there is also evidence that the jet stream is slowing and becoming wavier as the planet warms.[20] A wavy jet stream would have an effect on arctic oscillation, increasing the frequency of events when the polar vortex drops south into the Midwest, as happened in early January 2014 and late January 2019. Such events bring extreme cold. Projections of warmer winters overall and increasing bouts of extreme cold are not inconsistent, but together they amount to a prediction of erratic winter temperatures, likely to produce (near-)record highs and (near-)record lows.

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[19] NCA 2014. "Climate Change Impacts in the United States: The Third National Climate Assessment." U.S. Global Change Research Program (USGCRP), Washington, D.C. 2014.

[20] NOAA 2014. "How Is the Polar Vortex Related to the Arctic Oscillation?" How is the polar vortex related to the Arctic Oscillation? National Oceanic and Atmospheric Administration (NOAA), January 20, 2014. https://www.climate.gov/news-features/eventtracker/how-polar-vortex-related-arctic-oscillation.

Figure 9.3 — Average daily maximum temperature change, December-February, relative to the average from 1981-2010[21]

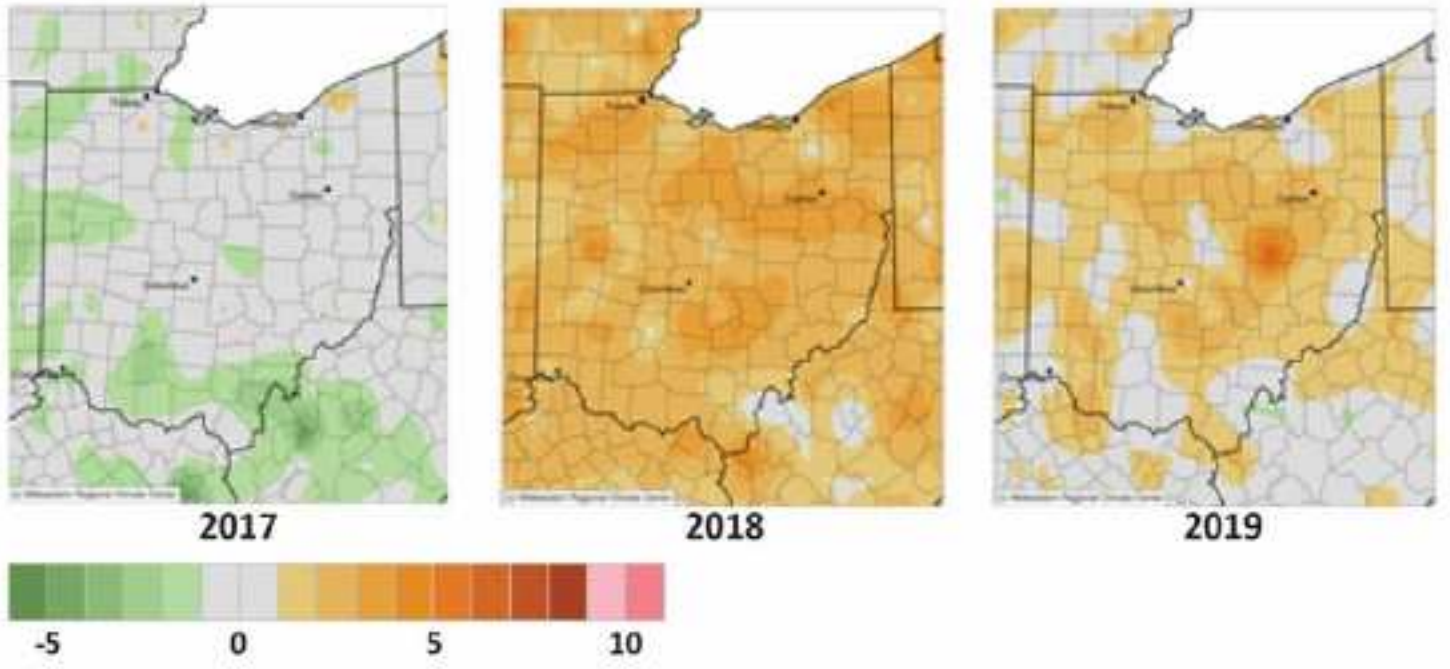


Warmer winters would indicate a decrease in snow and ice accumulation. This may increase the life of infrastructure, owing to less corrosion from salt treatment. However, a winter with more days for which the high temperature is above freezing is more likely to result in more frequent freeze-thaw cycles; this is destructive to road and bridge surfaces and creates potholes.[18]

Increasing average summer temperatures and extreme heat events can cause expansion of bridge joints and buckling of pavement, thus shortening the life of infrastructure. High temperatures also worsen air quality, creating a public health concern. The impact of poor air quality is especially acute for those with preexisting respiratory conditions (e.g. asthma and COPD) and older adults. Summer 2024 was the hottest on record in the northern hemisphere. In Ohio, summer 2021 and 2025 were hotter, due in large part to higher-than-average daily low temperatures. The trend of warmer summers is projected to continue.

[21] MWRCC 2020, cli-MATE Interpolated Station Data online tool. Midwest Regional Climate Center (MRCC), Accessed May 12, 2020. https://mrcc.illinois.edu/CLIMATE/.

Figure 9.4 — Average daily minimum temperature change, June-August, relative to the average from 1981-2010[21]



One question of significance to the Region, due to the Memorial Day 2019 Tornado, which cannot yet be answered is whether severe changes in the climate are responsible for a recent increase in the frequency of tornados, or whether these weather patterns will result in further increases in the future. Scientists are not yet confident enough to answer these questions one way or another.[22] While we must settle for now on keeping the question open, it would be prudent to plan for the worst and hope for the best, while keeping up with the latest information. MVRPC has been leading the long-term recovery effort for communities affected by the Tornado.

Mitigation and Adaptation

While changes to the climate have been occurring for decades, it is still possible to slow its rate and avoid the worst outcomes.[23] As fuel burned for transportation is one of the largest sources of carbon emissions, changes in the way people and goods are transported could significantly reduce the rate at which heat-trapping gases enter the atmosphere.[19] Commuters traveling by walking, biking, and public transportation contribute significantly fewer emissions than those traveling with combustion engine automobiles. The switch to electric vehicles for both commuters and freight is another significant way to reduce emissions. Replacing long-haul trucking and air freight with rail and river transportation, when possible, can also substantially reduce emissions.

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[22] PNAS 2018. Ornes S. "Core Concept: How does climate change influence extreme weather? Impact attribution research seeks answers." National Academy of Sciences of the United States of America (PNAS), 115(33), 8232–8235. August 14, 2018. https://doi.org/10.1073/pnas.1811393115

[23] IPCC 2014. "Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change." [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. Intergovernmental Panel on Climate Change (IPCC), Geneva, Switzerland. November 2, 2014. Pgs. 17-26

Slowing the growth rate of impervious surfaces is a more localized and immediate way to reduce damage from extreme weather events in the Region.[24] Maximizing the efficiency of drainage is the best way to avoid and reduce damage caused by flooding. Preserving open space & forests and utilizing pervious pavements and other infrastructure features that promote rapid drainage are strategies that can be used to mitigate the threat posed by flooding.[25]

Developing resiliency plans for handling the fallout of major weather events and decreasing air pollution are important ways to reduce the economic, social, and health costs posed by these hazards. To assist in understanding these risks and identify actions to build resilience, MVRPC developed a Regional Resiliency Guidebook and Toolkit to support planning efforts by local communities. The tool provides data on which hazards and stressors may impact community assets, informational resources, funding opportunities, and real-life application best practices to aid in decision making.

Some examples in the Regional Resiliency Guidebook and Toolkit include using templates to establish evacuation routes to help people escape disaster areas quickly and safely, factoring such items as which areas are flood-prone at varying levels of precipitation and flood stages. While it is impossible to predict when a disaster will occur, pre-assigning responsibilities, planning communications, and deciding upon logistics for handling network breakdowns on critical arterials can make response faster and more effective. The tool's available templates help communities plan for future events.

While budgets are always thin, it is necessary to consider that many of the effects of repeated extreme weather events will require an increasingly greater allocation of funds to manage and respond. Inspections are likely to be needed more frequently with the threats of erosion from flood events and heat, tornado, or wind damage. Annual needs for salt and other ice treatments should be expected to be less predictable, including funding allocations, storage considerations, and potential issues with the supply chain. Pothole filling and resurfacing should be expected to be required more frequently, due to a greater number of freeze-thaw cycles. Using available tools to support mitigation and adaptation strategies can be an effective way to reduce the burden on annual budgets.

ODOT, U.S. DOT, Ohio EPA, the U.S. EPA, and other state and federal agencies are actively monitoring climate data and are positioned to provide guidance and assistance for encountering related challenges. Coordinating with these and other agencies and staying abreast of the latest data and opportunities is a valuable strategy for mitigating and adapting to this evolving situation. From learning best practices to being positioned to quickly apply for and receive emergency funding, it is recommended to follow any related information given and actions taken by these agencies.

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[24] USGS 2003. "Effects of Urban Development on Floods," Fact Sheet 076-03. United States Geological Survey (USGS), Water Resources. Tacoma, WA. November, 2003.

[25] USGS 2012. "Strategies for Managing the Effects of Urban Development on Streams," Circular 1378. United States Geological Survey (USGS). Reston, VA. 2012. Pgs. 18-19

9.4 Environmental Mitigation in the IIJA

> The final metropolitan transportation planning rules state that "metropolitan transportation plans shall include a discussion of types of potential environmental mitigation activities and potential areas to carry out these activities, including activities that may have the greatest potential to restore and maintain the environmental functions affected by the metropolitan T-Plan. Discussion may focus on policies, programs, or strategies. The discussion shall be developed in consultation with Federal, State, and Tribal land management, wildlife, and regulatory agencies."

Using guidance and databases from ODOT Environmental Services (OES) as a starting point, MVRPC analyzed the Long Range Transportation Plan projects for potential environmental impacts using GIS overlay techniques. When available, OES databases were enhanced with local or internal data sources. Mitigation techniques for various types of environmental effects are also discussed along with any applicable local mitigation resources.

Process Overview

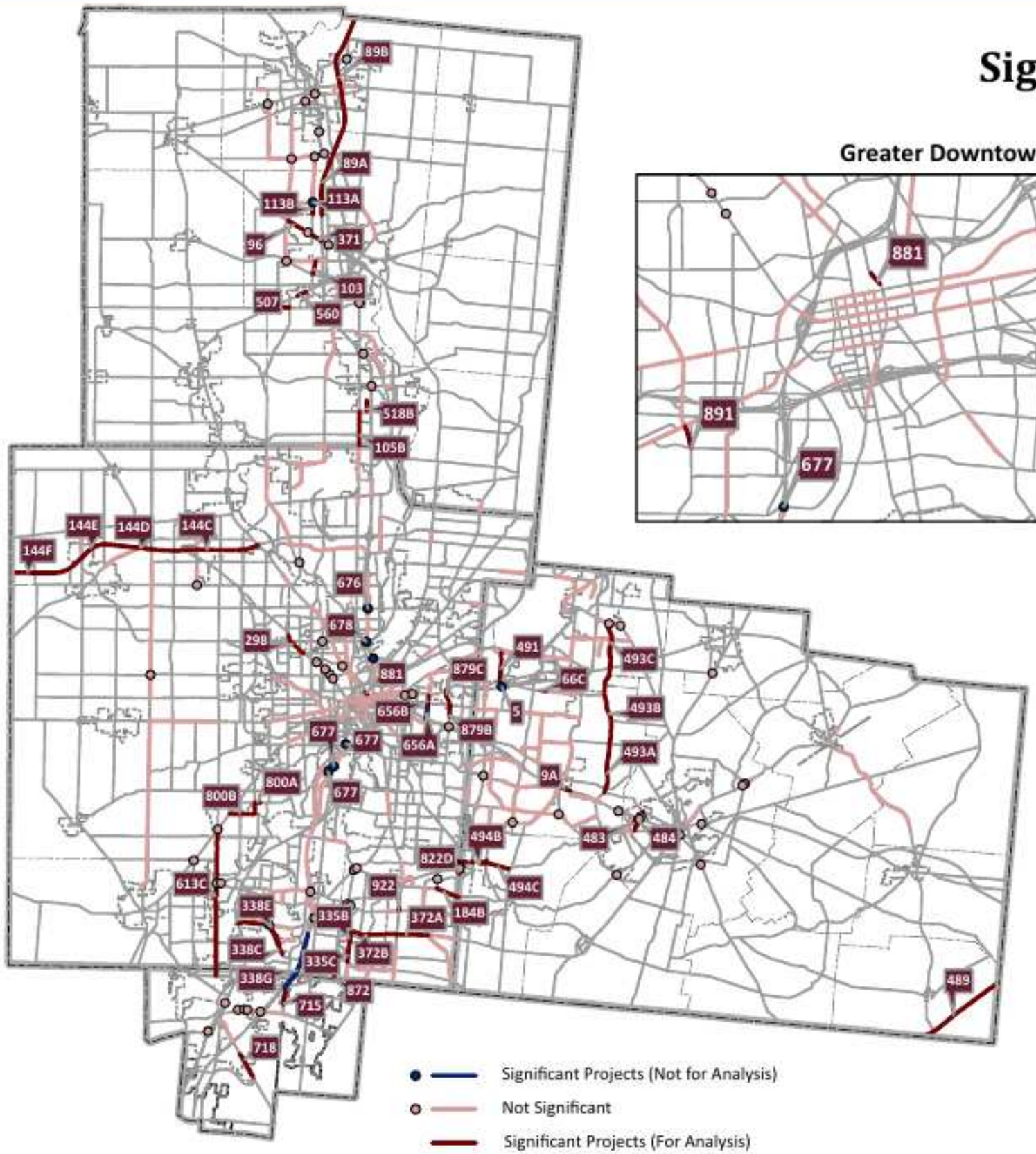
Identification of possible projects with impacts to environmental resources began with the congestion management projects in the 2050 Long Range Transportation Plan. These projects were classified into two categories: Significant Projects and Non-Significant Projects. Projects were classified as "Significant" if, by virtue of their implementation/construction, there was a probability of potential impacts to the Region's natural resources. Such projects were typically capacity projects such as road widening, lane additions, and interchange addition/modification projects. Projects were classified as "Not Significant" if their implementation was unlikely to result in major impacts to the Region's environmental resources. These projects were typically non-capacity adding intersection improvement projects such as the addition of a turn lane and/or signal coordination projects.

Based on the above classification, potential environmental impacts were only determined for the significant projects. A few of the significant projects are already included in MVRPC's current Transportation Improvement Program (TIP) and have environmental documentation in place. These were excluded from the list of analyzed projects since their environmental effects are already well-documented. Figure 9.5 shows projects classified according to their potential environmental impact.

In 2025, MVRPC undertook a major effort to update old regional GIS databases with the latest available datasets for several environmental resources: cultural, historic and archaeological resources; wetlands, rivers and streams; total maximum daily load plans; threatened and endangered species habitats; superfund sites; and parklands. MVRPC staff was able to procure updated information for most of these environmental resources except threatened and endangered species habitats owing to the sensitive and confidential nature of that data. Thus, a separate map was created using GIS for each of the Region's environmental resources except threatened and endangered species habitats, that are displayed separately by county in a matrix format.

MVRPC

Figure 9.5
Significant Projects



The remaining significant projects were evaluated for potential environmental impacts by overlaying them on various environmental resource maps using GIS. Projects in direct conflict with the Region's wetlands, parklands, etc... were identified as potentially affecting these environmental resources and displayed on maps, along with the plant and animal threatened and endangered species habitats by county matrices, in Figure 9.6 and Table 9.5 respectively.

Table 9.4 describes mitigation guidelines and strategies designed to address potential project impacts to environmental resources. Though not resources per se, this includes superfund sites, and those which are on the National Priorities List are described in Table 9.6 in more detail. Since the projects were evaluated for impacts at a macro level rather than determining specific impacts, the mitigation strategies encompass a menu of options to address a wide-range of potential impacts and are not project-specific. Detailed assessment of individual projects in future stages of project development may emphasize the importance of certain mitigation efforts, where needed, while rendering others redundant. It is the policy of MVRPC to require that all federally funded projects comply with applicable environmental statutes as a condition to receiving funding. The table also lists agencies with which to coordinate and consult on conservation of these resources.

Finally, a discussion on the various locally available mitigation resources and locally functioning environmental conservation organizations is provided at the end of this section in Table 9.7. These agencies have also been added to MVRPC's public participation list.

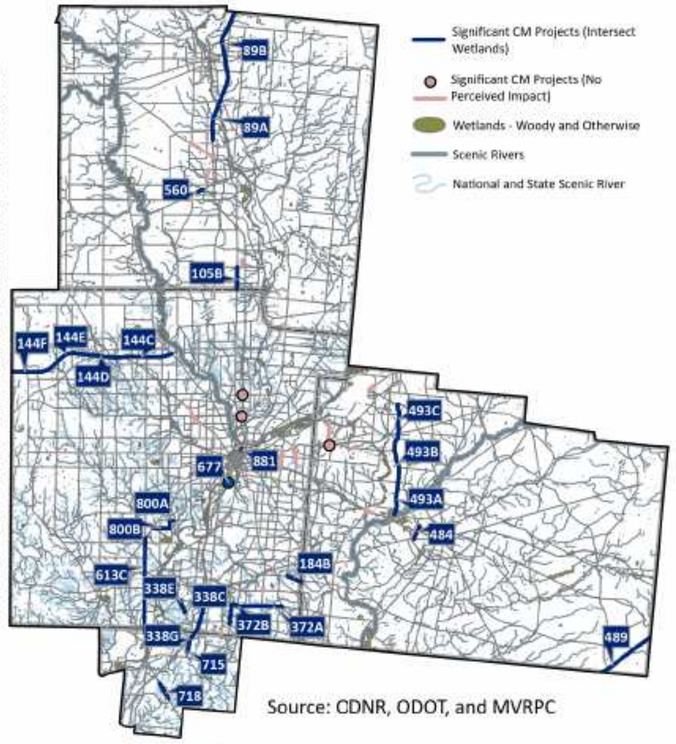
Table 9.4 — Environmental Resources for Mitigation

Resource	Statute	Regional Resources
Wetlands, Rivers, and Streams	Wetlands: U.S. ACE mitigation guidelines are outlined in the Regulatory Guidance Letter 02-02, dated December 24, 2002. The Ohio Environmental Protection Agency has specific guidelines for wetland mitigation included in the Ohio Administrative Code 3745-1-50-54. Rivers & Streams: No formal rules in Ohio, but mitigation is required for unavoidable impacts. Case-by-case requirements negotiated with OEPA and U.S. ACE by the ODOT Office of Environmental Services.	The Region has approximately 35 square miles of wetlands. The Region contains all or part of many rivers and streams, including designated scenic rivers: the Little Miami River, the Stillwater River, and the Greenville Creek. There are also several major lakes. Much of the Region is contained in the Great Miami River Watershed. These healthy waterways provide many opportunities for water-based recreation, and habitats for fish.
Threatened and Endangered Species/Fish and Wildlife	The Region is bound by regulations to build and operate its roadway projects with no, or minimal, impacts to protected species and their habitats. Statutes providing and defining these regulations include: the National Environmental Policy Act, the Endangered Species Act, the Clean Water Act, and the Ohio Revised Code.	Land-use changes have been the most common cause for decline in species range and diversity. Contamination and degradation of natural waters has also contributed to loss of habitat. The Miami Valley has wetlands, river corridors, moist and dry woods, farmland, and prairies that serve as habitat for numerous plants and animal species. The Region is part of the largest hardwood forest in the world, and an important flyway for migrating birds.
Historic, Cultural, or Archaeological Resources	Historic and cultural resource reviews for all federal and state funded projects in the Region are planned and designed to comply with the National Environmental Policy Act, the National Historic Preservation Act, Section 4(f) of the Department of Transportation Act, the Ohio Revised Code, and 36 CFR Part 800 (the implementing regulations for Section 106 of the National Historic Preservation Act). All acts require that historic and cultural resources be considered during the development of all transportation projects in Ohio.	The Region has numerous cultural, archaeological, and National Register historic sites. As of 2024, 241 sites in the Region were listed on the National Register of Historic Places (NRHP). Additionally, 4 undisturbed archaeological sites are located throughout the area. These sites are important to our communities and heritage.
Parklands	Section 4(f) of the Department of Transportation Act requires that special effort be made to preserve public park and recreation lands, wildlife and waterfowl refuges, and historical sites. Section 4(f) specifies that federally-funded transportation projects requiring the use of land from a public park, recreation area, wildlife and waterfowl refuge, or land of significant historic site can only occur if there is no feasible and prudent alternative. Using Section 4(f) land requires all possible planning to minimize harm.	The Region has one national park, several state and local parks, and wildlife and waterfowl refuges. The parklands are subdivided into natural protection areas and recreational areas. These sites are important to our communities for their promotion of healthy active lifestyles, connection to natural environments and preservation.
Hazardous Materials	The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and its Superfund Amendments and Reauthorization Act (SARA) amendment establish national policy and procedures for identifying and cleaning up sites found to be contaminated with hazardous substances. The Acts created the Hazard Ranking System (HRS), which determines the likely level of threat to human health and the environment upon initial investigation. High-ranking projects are eligible to be placed on the National Priority List, which enables application for environmental clean-up funds. CERCLA is important to the highway planning process primarily in the acquisition of right-of-way. Accepting financial liability for contaminated property may adversely affect the financial feasibility of a project. Additionally, significant need for clean-up may cause project delays.	Eleven sites in the Region are on the NPL. Another 63 sites, though not currently on the NPL, are potentially contaminated sites and sources of concern. Table 9.4 provides a summary of the NPL sites, HRS scores, and stage of cleanup. Additionally, a brief summary of each site is provided.

Coordination and Consultation	Mitigation
The ODOT Office of Environmental Services in cooperation with ODOT Districts, the ODOT-Office of Real Estate, the ODOT-Office of Aerial Engineering, and project consultants coordinate to develop all stream and wetland mitigation projects.	Mitigation needs are determined, and an analysis is performed to develop mitigation opportunities. A plan of action is developed in coordination with resource and regulatory agencies, along with a report. The report is submitted with permit applications, with revisions before permit approval. Conservation easements are procured. Funding is received and credits obtained. Construction plans are developed and carried out with monitoring and post-construction monitoring by ODOT.
The Fish and Wildlife Coordination Act (16 U.S.C. 661-666) requires coordination among (1) the agency proposing the highway project, (2) the U.S. Fish and Wildlife Service of the Department of the Interior, and (3) the state agency responsible for protecting wildlife resources whenever the waters of any stream or other water body are proposed to be impounded, diverted, or otherwise modified.	A Habitat Conservation Plan, as required by the Endangered Species Act, may include: • Preserving habitat through an acquisition or a conservation easement; • Enhancing or restoring degraded or former habitat; • Creating new habitat; • Establishing buffer areas around existing habitat; • Modifying land-use practices; and • Restricting access to habitat.
Consultation with various entities, including the Federal Highway Administration (FHWA), the State Historic Preservation Office (SHPO), the Advisory Council on Historic Preservation (ACHP), city historic preservation offices, local public officials, local organizations, and the public, is required during the project development process.	A mitigation plan is developed with stakeholders (e.g. ODOT, SHPO, FHWA, local officials, organizations, and the public) through the Section 106 Memorandum of Agreement (MOA) consultation process. Measures vary depending on the projected impact and may include aesthetic treatments, avoidance, archaeological data recovery, salvage/re-use of historic materials, and other methods. Measures must be completed and accounted for with SHPO and FHWA.
Project sponsors, ODOT, and officials with jurisdiction over Section 4(f) resources closely coordinate throughout the project development process to minimize harm or mitigate impacts on protected resources. Long-range planning should account for well-known Section 4(f) resources throughout the Region that would pose a significant loss if affected. It is, however, premature to analyze individual projects' Section 4(f) impacts this early in the process.	The cost of mitigation should be a reasonable public expenditure in light of the severity of the impact on the Section 4(f) resource in accordance with federal requirements. Mitigation for common Section 4(f) resource impacts may be: • Improving access or expansion/pavement of parking area; • Landscape or screening of resource; • Installation of beautification enhancements such as park benches, trash receptacles, signage, etc.; • Maintenance of traffic accommodation or rerouting of traffic; • Minimizing construction noise or limiting construction to specific times; • Direct compensation for improvements to on-site resources; and • Design refinements.
The U.S. EPA provides guidelines and Hazard Ranking System scores. There is an eight-stage process: 1) New listing 2) Remedial assessment not begun 3) Remedial assessment not begun with removal 4) Study Underway 5) Remedy Selected 6) Designing Underway 7) Construction Underway 8) Construction Complete Note that, in many cases, "construction complete" does not mean cleanup is complete. There may be ongoing actions required once the infrastructure is in place.	If any initial studies or preliminary environmental evaluations identify known or potentially hazardous waste sources, alternatives to avoid the site must be explored. If the site cannot be avoided, an assessment including sampling and possibly a characterization of the problem should be conducted. When a hazardous waste site is identified, the type of regulatory actions it is subject to and any environmental databases or lists that it appears on along with regulatory identification numbers should be specified. In addition: • Environmental site assessment screenings (and any other required assessments) will be conducted on a project-by-project basis; and • Unavoidable encroachment on an identified hazardous site will be mitigated according to all applicable federal, state, and local requirements.

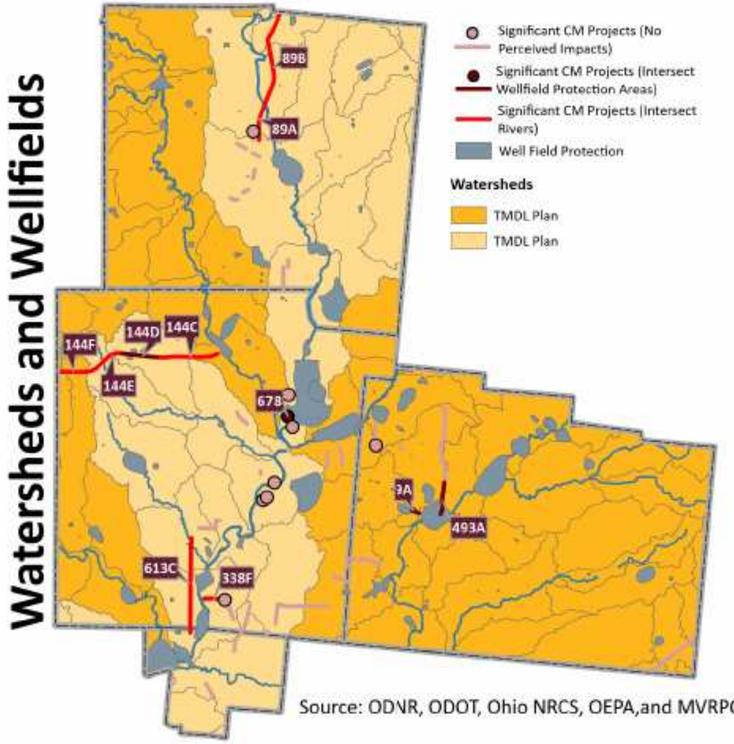
MVRPC

Wetlands and Scenic Rivers



Source: ODNR, ODOT, and MVRPC

Watersheds and Wellfields

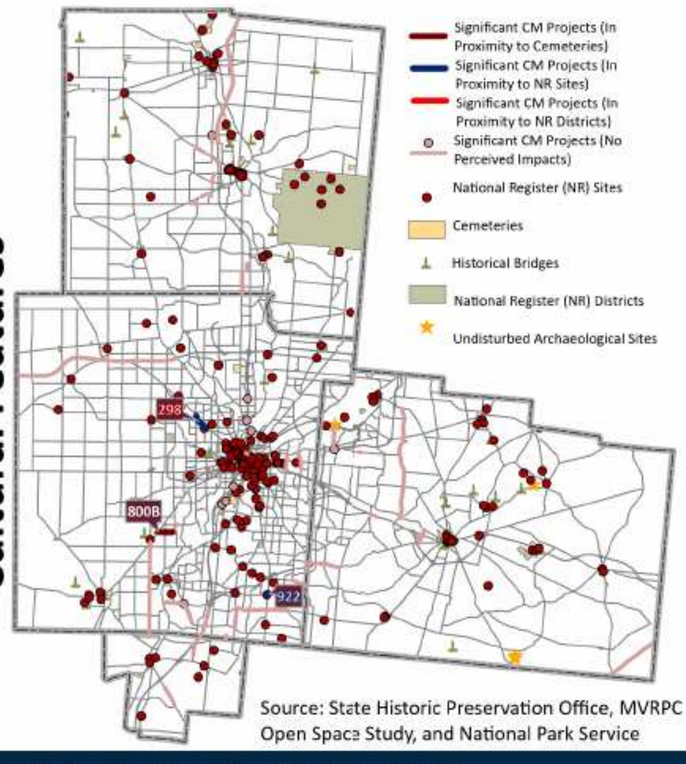


Source: ODNR, ODOT, Ohio NRCS, OEPA,and MVRPC

Endangered Species

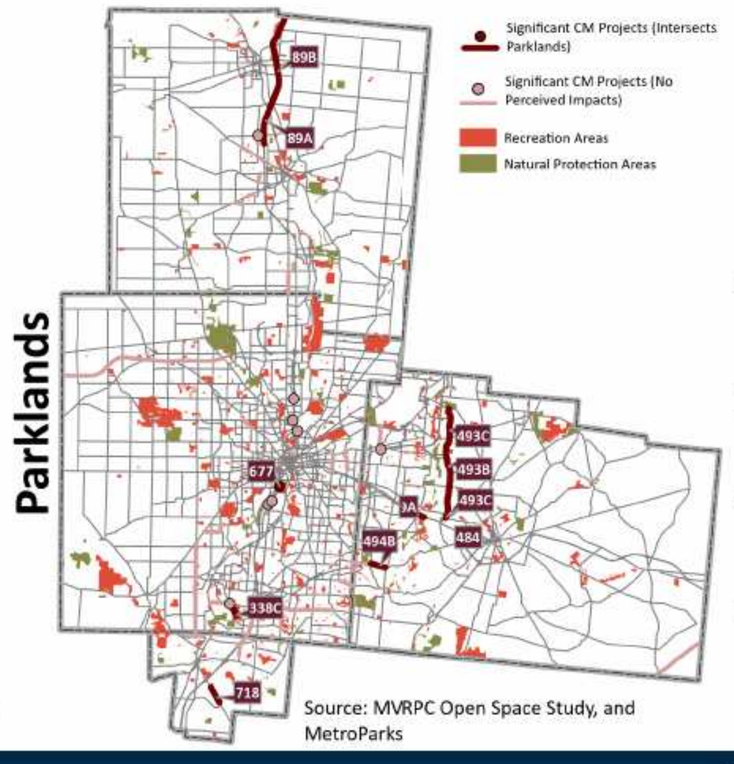
See Table 9.5 for Endangered Species Matrices

Cultural Features



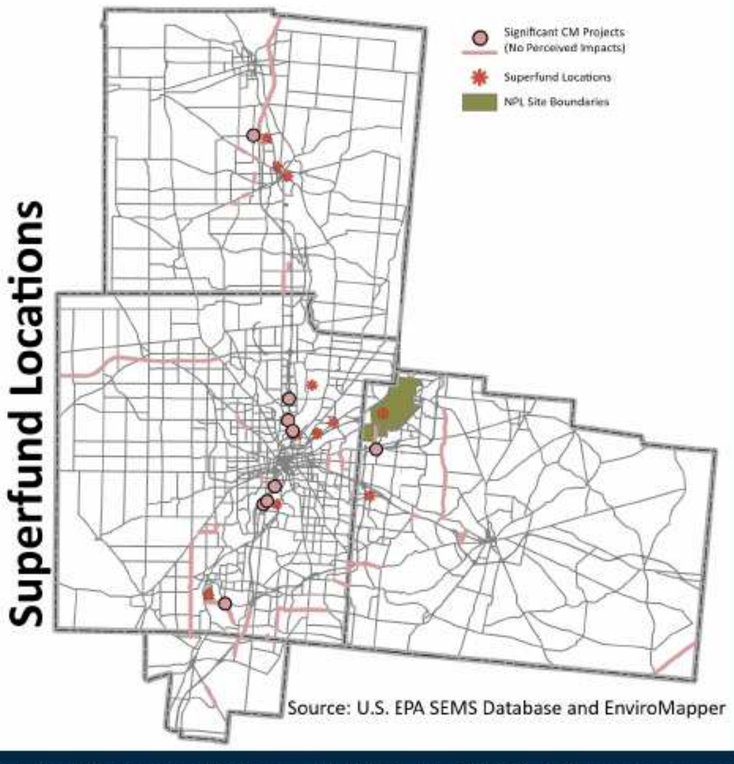
Source: State Historic Preservation Office, MVRPC Open Space Study, and National Park Service

Parklands



Source: MVRPC Open Space Study, and MetroParks

Superfund Locations



Source: U.S. EPA SEMS Database and EnviroMapper

Figure 9.6
Environmental Mitigation Analysis

N

Miles
0 2 4 6 8

Table 9.5 — Environmental Mitigation Analysis – Endangered Species Matrices

Ohio Status	Category	Common Name	Species	Greene	Miami	Montgomery	Warren
Endangered	Plant	Slender Sedge	Carex lasiocarpa	X			
	Plant	Ear-leaved-foxglove	Agalinis auriculata	X			
	Plant	False Melic	Schizachne purpurascens	x			
	Plant	Plains Muhlenbergia	Muhlenbergia cuspidata	X		X	
	Plant	Green Star Sedge	Carex viridistellata	X			
	Plant	Bent Spike-rush	Eleocharis geniculate	X			
	Plant	Ashy Sunflower	Helianthus mollis		X		
	Plant	Long Tail Moss	Anomodon viticulosus			X	
	Plant	Twisted Teeth Moss	Barbula indica			X	
	Plant	Dwarf Bulrush	Lipocarpha micrantha			X	
Threatened	Plant	Flat-leaved Bladderwort	Utricularia intermedia		X		
	Plant	Harebell	Campanula rotundifolia		X		
	Plant	Midwest Spike-moss	Selaginella eclipes	X			
	Plant	Red Baneberry	Actaea rubra	X			
	Plant	Rock Serviceberry	Amelanchier sanguinea		X		
	Plant	Royal Catchfly	Silene regia	X			
	Plant	Seaside Arrow-grass	Triglochin maritimum	X	X		
	Plant	Canada Milk-vetch	Astragalus canadensis				X
	Plant	Carolina Whitlow-grass	Draba reptans			X	
	Plant	Soft-leaved Arrow-wood	Viburnum molle			X	
	Plant	Sprengel's Sedge	Carex sprengelii		X		
	Plant	Wall-rue	Asplenium ruta-muraria	X			
	Plant	Limestone Savory	Calamintha arkansana	X			
	Plant	Yellow Sedge	Carex flava	X			
	Plant	Tennessee Bladder Fern	Cystopteris tennesseensis	X			
	Plant	Northern Adder's-tongue	Ophioglossum pusillum	X			
	Plant	Harebell	Campanula rotundifolia		X		
	Plant	Baxter's Violet	Viola baxteri		X		
	Plant	Small Fringed Gentian	Gentianopsis virgata			X	
	Plant	Burhead	Echinodorus berteroi				X
	Plant	Buckbean	Menyanthes trifoliata				X
	Plant	Wood's-hellebore	Melanthium woodii		X	X	
Endangered	Fish	Iowa Darter	Etheostoma exile		X		
	Fish	Bigeye Shiner	Notropis boops				X
	Fish	Tonguetied minnow	Exoglossum laurae	X			
	Reptile	Smooth Greensnake	Opheodrys vernalis	X			
	Reptile	Eastern Massasauga	Sistrurus catenatus	X			
	Mollusk	Snuffbox	Epioblasma triquetra		X	X	X
	Mollusk	Rayed Bean	Villos fabalis			X	X
	Mollusk	Washboard	Megalonaias nervosa				X
	Moth	Beer's Noctuid	Papaipema beeriana	X			
	Dragonfly	Skillet Clubtail	Gomphurus ventricosus			X	
	Dragonfly	Slender Baskettail	Epitheca costalis			X	
	Dragonfly	Golden-winged Skimmer	Libellula auripennis			X	
	Bird	Lark Sparrow	Chondestes grammacus	X			X
	Bird	Northern Harrier	Circus hudsonius			X	
	Bird	Loggerhead Shrike	Lanius ludovicianus				X
	Bird	Upland Sandpiper	Bartramia longicauda	X		X	
Threatened	Bird	Yellow-crowned Night-heron	Nyctanassa violacea			X	
	Bird	Sandhill Crane	Antigone canadensis		X		X
	Bird	Least Bittern	Ixobrychus exilis	X			X
	Damselfly	Paiute Dancer	Argia alberta	X		X	
	Dragonfly	Jade Clubtail	Arigomphus designates		X		
	Dragonfly	Plains Clubtail	Gomphus externus			X	
	Fish	American Eel	Anguilla rostrata				X
	Fish	Mountain Madtom	Noturus eleutherus				X
	Fish	Paddlefish	Polydon spathula				X
	Mollusk	Slippershell Muissel	Alasmidonta viridis	X		X	X
	Damselfly	Seepage Dancer	Argia bipunctulata	X		X	
	Reptile	Kirtland's Snake	Clonophis kirtlandii	X		X	X
	Reptile	Spotted Turtle	Clemmys guttata	X			X

Source: Ohio Department of Natural Resources – Division of Wildlife

Table 9.6 — Superfund Sites on Final NPL

Site Name and Location	HRS Score	Stage of Clean-up	Description
Lammers Barrel Factory, Greene County	69.33	Remedial Action Underway	According to former employees, Lammers Barrel Factory sold and reclaimed all types of solvents. Any inventories of chemicals handled at the facility were reportedly destroyed in a fire. Sampling analysis identified an area of ground water contamination along the northern end of the Valleywood subdivision, located southeast of the facility.
Wright-Patterson Air Force Base, Montgomery/Greene Counties	57.85	Construction Completed	Past Air Force activities in support of operational missions have resulted in the creation of several unlined waste disposal areas throughout the base. More than 791 tons of waste have been disposed on the Base, including solvents, contaminated thinners, degreasing sludges, tetraethyllead sludge, and miscellaneous hazardous chemicals. In 1985, the Base and OEPA found 1,1,1-trichloroethane, tetrachloroethylene, trichloroethylene, 1,2-dichloroethane, and manganese in on-base wells.
Miami County Incinerator, Miami County	57.84	Construction Completed	A combination of poor geologic location and environmentally unsound disposal practices resulted in significant contamination to one of the most productive and valuable aquifers in Ohio. All landfilling operations stopped in 1978, and the site now serves as a transfer station for wastes that are disposed of elsewhere.
North Sanitary Landfill, Montgomery County	50	Remedial Action Underway	Several industrial facilities are located adjacent to the property. Industrial and municipal wastes from the Dayton area were used to fill unlined gravel pits that were created by former mining operations. These pits contained water that may have entered the sand and gravel aquifer that the pits intersect.
Behr Dayton Thermal System, Montgomery County	50	Remedy Selected	The site hosts a manufacturer of parts and sub-assemblies of HVAC equipment for auto manufacturers. Industrial solvent cleaners were used in the site manufacturing processes. The solvent cleaners included TCE, tetrachloroethene, 1,1,1-trichloroethane and sulphuric acid. Such compounds have been reported in shallow ground water beneath the Behr facility. Ground water has been contaminated above USEPA's Safe Drinking Water Act's maximum contaminant level (MCL) for TCE. Also, TCE vapors have migrated into residential homes and commercial businesses above a safe indoor air level.
East Troy Contaminated Aquifer, Miami County	50	Remedy Selected	Two ground water plumes on the site are contaminated at various levels with VOCs, including cis-1, 2-dichloroethene (cis-1, 2-DCE), tetrachloroethene (PCE), and trichloroethene (TCE). The State of Ohio currently has an agreement in place to address a source area for one of the plumes. There is no source control on the second plume. The State and USEPA are working to find a comprehensive solution to address both plumes, any additional source areas, and potential issues related to vapor intrusion.
Sanitary Landfill Co., Montgomery County	35.57	Construction Completed	The landfill reportedly accepted municipal wastes and various types of industrial wastes, including solvents. The landfill is located above gravel deposits. Wells supplying drinking water are drilled into an aquifer which may be connected to the gravel deposits, according to a U.S. Geological Survey study. Thus, there is a potential for contamination of public water wells.
Mound Plant (USDOE), Montgomery County	34.61	Construction Completed	The Mound operates to support U.S. weapons and energy programs. The major waste areas include a landfill in which solvents, paints, and photoprocessing and plating bath solutions were deposited; several leach beds used to dispose of solutions containing radionuclides and/or explosive/pyrotechnic materials; and an area in which a solution contaminated with plutonium was spilled.
Powell Road Landfill, Montgomery County	31.62	Construction Completed	Wastes were dumped on the site, including strontium chromate and benzidine. The wastes are toxic, persistent, flammable, and highly volatile. There is no evidence of the landfill being lined, and some containers are leaking. Groundwater nearby supplies private wells and the surface water is used for recreational purposes.
West Troy Contaminated Aquifer, Miami County	50	Remedy Selected	VOCs have been detected in two of the five wells in the field, from a yet-unidentified source. Contaminants found in untreated well water include tetrachloroethene (PCE), trichloroethene (TCE), cis-1,2-dichloroethene (DCE) and 1,1,1-trichloroethane (TCA). PCE amounts were found to exceed the federal maximum contaminant level. A groundwater plume has been identified heading toward the field. Further investigation is needed to identify the source of VOC contamination and define the precise extent of the plume.
Valley Pike VOCs, Montgomery County	50	Study Underway	A mixed industrial and residential site, VOCs were found in groundwater, including tetrachloroethylene (PCE) and trichloroethylene (TCE). Residents have been impacted by vapor intrusion caused by the contaminated groundwater plume. Approximately 400,000 residents are impacted from the drinking water coming from the well fields. However, the site's residents' drinking water is not impacted by the site's conditions. The site remains as an active business.

Source: U.S. EPA SEMS Database https://cumulis.epa.gov/supercpad/cursites/srchsites.cfm

Stormwater Mitigation

The FAST Act of 2015 added a factor for MPOs to consider strategies to reduce or mitigate stormwater impacts of surface transportation. Storm water discharges are generated by runoff from land and impervious areas such as paved streets, parking lots, and building rooftops during rainfall and snow events. Storm water often contains pollutants in quantities that could adversely affect water quality. In Ohio, OEPA implements the federal stormwater program to ensure compliance with the Clean Water Act and National Pollutant Discharge Elimination System (NPDES) requirements.

Construction sites, including transportation improvements, impact Ohio's waters by adding pollutants, especially sediment, to rainwater running off of construction sites during construction as well as making long-term land use changes that alter the hydrology and pollutant loading of local streams. If a project disturbs one or more acres of ground, the project sponsor must get a permit to discharge stormwater from the site and control stormwater discharges through the use of Best Management Practices (BMPs). Typically, projects are screened during the environmental process and if they exceed the acreage limit, BMPs are included in the construction plans. ODOT's Location and Design Manual has information on acceptable BPM methods.

There are two storm water permit application options for construction activities in Ohio. The first is to submit an individual NPDES permit application and the second is to file a Notice of Intent (NOI) form requesting coverage under a general permit. The general permit process is usually easier and faster than the individual permit process. MVRPC requires that all project sponsors comply with applicable federal and state requirements as a condition of receiving funding.

Regional Mitigation and Consultation Resources

The main purpose of various conservation organizations in the Region is to monitor and protect regional land including natural resources and historical properties. Close partnerships with individuals, businesses, and local jurisdictions are a key component for these organizations to achieve their conservation goals. A brief description of each organization in the Region is provided in Table 9.7.

Table 9.7 — Environmental Conservation Organizations in the Region

Responsible Organization	Type of Conservation Organization	Description
Three Valley Conservation Trust	*Land Trust*	The Three Valley Conservation Trust actively seeks to protect agricultural land, forested lands, wildlife areas, wetlands and other scenic or natural lands. The Trust protects streams in Butler, Preble, Montgomery and Darke counties in Ohio, and very small parts of Wayne, Franklin, and Union counties in SE Indiana.
Miami Conservancy District	*Flood Protection*	The Miami Conservancy District established its Groundwater Preservation Program in 1997 to develop and maintain an ongoing watershed-wide technical program to help protect and manage the area's aquifer and groundwater resources. Over the years, the organization has branched out to meet the Region's water needs. MCD has been actively involved for many years in promoting recreation along the Region's rivers and streams as well as being a key partner in projects like downtown Dayton's RiverScape, by bringing together state and federal funds to leverage local dollars.

Responsible Organization	Type of Conservation Organization	Description
Tecumseh Land Trust	*Land Trust*	The Trust's purpose is to preserve agricultural land, open space, and historic structures in voluntary cooperation with landowners and their heirs, and to educate the public about methods of private land conservation. The Trust currently has about 38,000 acres of farmland on 240 properties in Clark and Greene counties under protective conservation easements.
Ohio Chapter of the U.S. Department of Agriculture	*Government Agency*	Natural Resources Conservation Service (NRCS) assists owners of Ohio's private land with conserving their soil, water, and other natural resources. NRCS partners with the Miami Valley Conservancy District to conserve local soil and water. Several environmental conservation and mitigation programs are offered by NRCS in partnership with local agencies. These include EQIP – Environmental Quality Incentives Program, SWCA – Soil and Water Conservation Assistance, WHIP – Wildlife Habitat Incentives Program, and the WRP – Wetlands Reserve Program.
B-W Greenway Community (B-WGC) Land Trust	*Land Trust*	B-WGC's purpose is to educate the public about the value of wetlands and the importance of connecting the Beavercreek and Wenrick Wetlands with a greenway; to promote sustainable use of land within B-WGC while balancing human and wildlife needs; and to protect, preserve, and steward open space for farming, recreation, habitat, and watershed management.
Beavercreek Wetlands Association	*Land Trust*	BCWA helps protect the wetland ecosystems in the Beaver Creek watershed in Greene County through partnerships, community networks, and public education.
Ohio Chapter of the Worldwide Conservation Organization	*Nature Conservancy*	The Nature Conservancy works to protect large landscapes made up of plants, animals, and natural communities all over Ohio including the Miami Valley Region.
Little Miami, Inc.	*Watershed / Land Trust*	Little Miami, Inc. (LMI) was founded in 1967 as a 501(c)(3) nonprofit organization dedicated to the restoration and protection of the Little Miami Wild & Scenic River. The organization owns over 120 nature preserves along the Little Miami and several tributaries, restoring 100 miles of river, planted 55,000 trees, and 220 acres of prairie planted.
Dayton History	*Historical Preservation*	This regional organization collects, preserves, interprets, presents and promotes the Region's assets, stories and experiences. The organization also maintains "Preservation Watch List" for the Region's historical assets.
Preservation Dayton, Inc.	*Historical Preservation*	Preservation Dayton actively promotes the work of preservation, protection and enhancement, and historically sympathetic revitalization of the Dayton, Ohio community through advocacy and a variety of other creative methods.
Greene County Parks and Trails	*Parks and Recreation*	The County is the home of 1801 acres of green space held in public interest in 27 parks and recreation sites (though it owns 33. It manages 62 miles of paved, multiuse trails connecting to over 340 miles of regional trails as well as 36 miles of river trails and more than 24 miles of hiking trails.
Five Rivers MetroParks	*Parks and Recreation*	The Five Rivers MetroParks (FRMP) district is a nationally recognized park system composed of natural area parks, gardens, sensitive river corridors, urban parks, and a network of recreational trails. Its key mission is to protect rapidly disappearing open space and natural areas in the Miami Valley.
Miami County Park District	*Parks*	The County offers beautiful farmland, the Great Miami River, and charming parks. The Miami County Park District has 16 parks and recreation sites. The mission of the District is to acquire and manage outstanding natural resources for the purpose of preservation, conservation, education, and passive leisure activities for the people of Miami County. The District continues to strive to excel in the areas of environmental education, bikeway development, and land acquisition.
Greene Soil & Water Conservation District	*Water Conservation*	The Greene Soil and Water Conservation District provides urban and rural water quality and erosion control technical assistance, conservation education for all ages, land use planning, forestry and wildlife management, drainage information and design, and maps, including soil, flood plains, and aerial.
National Aviation Heritage Alliance	*Historical Preservation*	The National Aviation Heritage Alliance is an organization that seeks to conserve, interpret, develop, and promote the historic resources of the National Aviation Heritage Area. Its vision is to make the Dayton region the recognized global center of aviation heritage and premier destination for aviation heritage tourism, sustaining the legacy of the Wright brothers. The Alliance comprises of an eight-county area in SW Ohio (Montgomery, Greene, Miami, Clark, Warren, Champaign, Shelby, and Auglaize counties).

Source: MVRPC

Chapter 10
Community Impact Assessment

10.1 Overview

MVRPC conducts a Community Impact Assessment to take into account the impacts and benefits of LRTP projects to the Region's residents. The analysis includes identifying populations that might be more affected by projects or are not well served by the Region's automobile centric transportation system. As such, MVRPC undertakes extensive measures to identify locations where vulnerable populations are concentrated in the Region and to extend additional public outreach efforts to these communities.

Technical analyses – travel time to work; travel time to basic services such as grocery stores, medical centers, and community centers; and transit and regional bikeway accessibility – were performed, and the findings indicate that vulnerable populations and the general population see similar outcomes.

The following sections of this chapter document the results of MVRPC's strives towards addressing the needs of vulnerable populations in the 2050 LRTP.

10.2 Background

MVRPC, as an MPO, receives federal funding to support many of its programs and activities, and must comply with federal law as a condition of receiving those funds.

Regulatory Framework

Under Title VI of the 1964 Civil Rights Act and related statutes, each federal agency is required to ensure that no person is excluded from participation in, denied the benefit of, or subjected to discrimination under any program or activity receiving federal financial assistance on the basis of race, color, national origin, age, sex, disability, or religion. Title VI bars intentional discrimination as well as disparate impact discrimination (i.e., a neutral policy or practice that has a disparate impact on a protected group).

The National Environmental Policy Act of 1969 (NEPA) stressed the importance of providing for, "all Americans a safe, healthful, productive, and aesthetically pleasing surroundings," and provided a requirement for taking a "systematic, interdisciplinary approach" to aid in considering environmental and community factors in decision-making.

This approach was further emphasized in the Federal-aid Highway Act of 1970: 23 United States Code 109(h). It established a further basis for equitable treatment of communities affected by transportation projects. It requires consideration of the anticipated effects of proposed

transportation projects upon residences, businesses, farms, accessibility of public facilities, tax base, and other community resources.

The Americans with Disabilities Act of 1990 (ADA) aims to ensure that pedestrians with disabilities have an equal opportunity to use the public right-of-way in the transportation system. Title II of the ADA and Section 504 of the Rehabilitation Act of 1973 (Section 504) includes oversight of state and local entities and recipients of federal funds that are responsible for roadways and pedestrian facilities to ensure that they do not discriminate on the basis of disability in any highway transportation program, activity, service, or benefit they provide to the public. In accordance to Title II of the ADA, MVPRC ensures that individuals with disabilities have equal access to its services, programs, and/or activities.

10.3 MVRPC's Approach to the Community Impact Assessment

MVRPC employed both quantitative and qualitative methods to analyze the impact of the 2050 LRTP to the Region's residents.

MVRPC's approach included:

Defining vulnerable populations;
Identifying vulnerable areas;
Conducting tests for adverse impacts; and
Taking extra public participations efforts to fully engage diverse population groups.

10.4 Defining Vulnerable Populations

MVRPC's vulnerable population groups include racial and ethnic minorities, persons in poverty, persons with disabilities, persons 65 and over, and households without automobiles.

Data Sources

MVRPC used the 2020 Census and 2018-2022 American Community Survey (ACS) as primary data sources for analyzing vulnerable population groups. The 2020 Decennial Census block level data were aggregated to the traffic analysis zone (TAZ) level using GIS for minorities, persons 65 and over, and Hispanic population data. For the remaining populations (persons in poverty, persons with disabilities, and zero-car households), 2018-2022 ACS 5-Year Estimate block group data were used by converting block group estimates to the TAZ level using spatial analysis techniques.

Definition of Population Groups

MVRPC defined the vulnerable populations as follows:

Persons in Poverty

Persons in poverty are defined as the sum of the number of persons in families with an income below the poverty threshold and the number of unrelated individuals with incomes below the poverty thresholds. The set of poverty thresholds varies by family size and composition and age of householder. MVRPC defined the poverty population based on available ACS data tabulated for total household population plus non-institutionalized group quarters.

Persons with Disabilities

In 2010, the ACS began using a new definition for persons with disabilities, focusing on the impact conditions have on basic functioning rather than the presence of conditions. Consistent with this new definition, MVRPC defined the population of persons with disabilities based on available ACS data tabulated for the household population 18 years of age and over. A person was considered as having a disability if they met any of the following conditions. A brief description of each disability category is as follows:

- Hearing difficulty — deaf or having serious difficulty hearing.
- Vision difficulty — blind or having serious difficulty seeing, even when wearing glasses.
- Cognitive difficulty — because of a physical, mental, or emotional problem, having difficulty remembering, concentrating, or making decisions.
- Ambulatory difficulty — having serious difficulty walking or climbing stairs.
- Self-care difficulty — having difficulty bathing or dressing.
- Independent living difficulty — because of a physical, mental, or emotional problem, having difficulty doing errands alone such as visiting a doctor's office or shopping.

Zero-Car Households

Zero-Car Households are households with no automobiles at home and available for the use of household members.

Minority Population

All persons of races other than Caucasian were considered minorities, including American Indian or Alaska Native; Asian; Black or African American; Native Hawaiian or Other Pacific Islander; some other race alone; and persons of two or more races. It is important to note that the population of Hispanic origin was not counted as a race since the U.S. Census Bureau treats persons of Hispanic origin as an ethnic group, not a race.

Hispanic Population

Persons who classified themselves in one of the specific Spanish/Hispanic/Latino origin categories listed, such as Mexican, Mexican-American, Puerto Rican, or Cuban, as well as those who indicated

that they were of other Spanish/Hispanic/Latino origin. Persons of Hispanic origin may be of any race.

Older Adults

The older adult population is defined as all persons 65 years of age and older.

10.5 Identifying Vulnerable Areas

MVRPC identified vulnerable areas by examining the concentration of the vulnerable populations at the TAZ level using Geographic Information Systems (GIS).

Population Thresholds

Population thresholds were calculated for each population demographic group being examined in order to locate the areas of high concentration. Each population group (e.g., older adults) was aggregated to the county level and a county average percentage calculated. The areas of high concentration were then identified for each population group with the county average being used as the threshold. Then, the areas of high concentration were identified as seen in Table 10.1.

- *Persons in Poverty* — Montgomery County has the highest percentage of persons in poverty (15.57%) and Warren County has the lowest percentage of persons in poverty (5.14%).
- *Persons with Disabilities* — Montgomery County has the highest percentage of persons with disabilities in the Region (18.39%) and Warren County has the lowest county percentage of persons with disabilities (14.05%).
- *Zero-Car Households* — Montgomery County has the highest percentage of households without access to cars. Almost one in ten households (9.04%) reported having no cars in the 2018-2022 ACS. Warren County has the lowest percentage of households without access to cars (2.69%).
- *Minority Population* — Montgomery County has the highest minority population in the Region (32.05%). Miami County has the lowest minority population in the Region (10.25%).
- *Hispanic Population* — Montgomery County has the highest percentage of persons of Hispanic descent (3.94%) in the Region. Miami County has the lowest Hispanic population (2.02%).
- *Older Adult Population* — Miami County has the highest percentage of persons 65 or older in the Region at 19.30%, meaning nearly 1 in 5 people in Miami County is 65 or older. Warren County has the lowest percentage of older adults (15.46%).

Table 10.1 — Vulnerable Population Thresholds

	County	Total	Threshold
People in Poverty	Greene	17,729	10.65%
	Miami	8,840	8.19%
	Montgomery	82,772	15.57%
	Warren	12,208	5.14%
Population with Disabilities	Greene	21,520	16.23%
	Miami	12,154	14.56%
	Montgomery	77,335	18.39%
	Warren	25,599	14.05%
Zero-Car Households	Greene	2,919	4.37%
	Miami	2,150	4.88%
	Montgomery	20,651	9.04%
	Warren	2,396	2.69%
Minority Population	Greene	30,820	18.35%
	Miami	11,152	10.25%
	Montgomery	172,232	32.05%
	Warren	42,264	17.44%
Hispanic Population	Greene	5,216	3.11%
	Miami	2,199	2.02%
	Montgomery	21,179	3.94%
	Warren	7,738	3.19%
Older Adults	Greene	30,076	17.91%
	Miami	20,996	19.30%
	Montgomery	99,435	18.51%
	Warren	37,472	15.46%

Sources: 2020 Census and 2018-2022 American Community Survey

Distribution of Vulnerable Areas

Using the county's threshold for each vulnerable population, TAZs were examined and coded as either "Above County Average" or "Below County Average." It is important to note here that a specific TAZ could be a vulnerable area for several vulnerable population groups.

MVRPC used GIS to produce a series of maps showing the geographic distribution of vulnerable areas for each population group in the Region. The maps are shown in Figure 10.1.

- *Distribution of Persons in Poverty* — The distribution of persons in poverty is highly concentrated in the central city areas of Montgomery County. Greene and Miami counties also had higher concentrations of persons in poverty around their central city areas as well as in the outlying areas.
- *Distribution of Persons with Disabilities*— The distribution of persons with disabilities showed no particular pattern. Persons with disabilities were spread throughout the entire Region.
- *Zero-Car Households Distribution* — The distribution of households with no cars shows a general clustering pattern in city centers. This is particularly evident in Montgomery County where there is fixed-route transit.
- *Minority Population Distribution* — TAZs with an above average amount of minority persons are concentrated around urban areas or cities.
- *Hispanic Population Distribution* — In contrast with the distribution patterns for minority populations and persons in poverty, the Hispanic population in the Region appears to be located away from city centers and closer to rural areas and large employment centers—especially Wright Patterson Air Force Base.
- *Older Adult Population Distribution* — No strong patterns were identified with the older adult population, aside from a small but perceptible lack of concentration near urban centers. In general, the older adult population appears to be spread evenly throughout the Region and has increased since 2010.

10.6 Community Impact Analysis

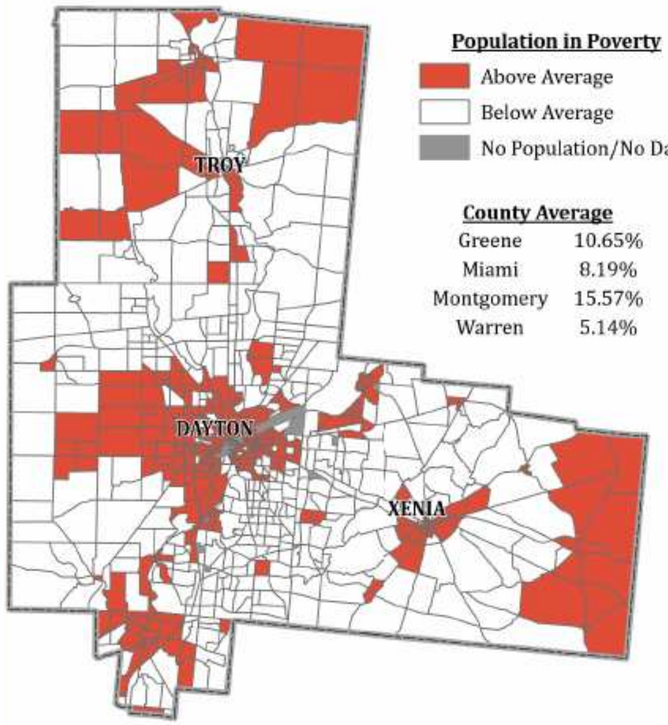
Accessibility to Basic Services

MVRPC conducted the accessibility analysis by measuring travel time from TAZs to basic service facilities for driving and transit. Micro Analysis Zones (MAZs) based on U.S. Census blocks are used for analyzing access to basic service facilities via walking. The facilities included in this analysis were grocery stores, medical centers, and community centers (including schools) located in the Region based on inventories conducted in the summer of 2018. The analysis will be repeated periodically as facilities' locations shift over time and the location of the facility is the principal determinant of accessibility.

MVRPC calculated the travel time from each TAZ to the closest facility using the Transportation Demand Forecasting Model (TDFM) with 2010 based conditions, and walking time from each MAZ was calculated assuming a constant walking speed of 3 mph. TAZs and MAZs were then determined

MVRPC

Figure 10.1 Vulnerable Populations

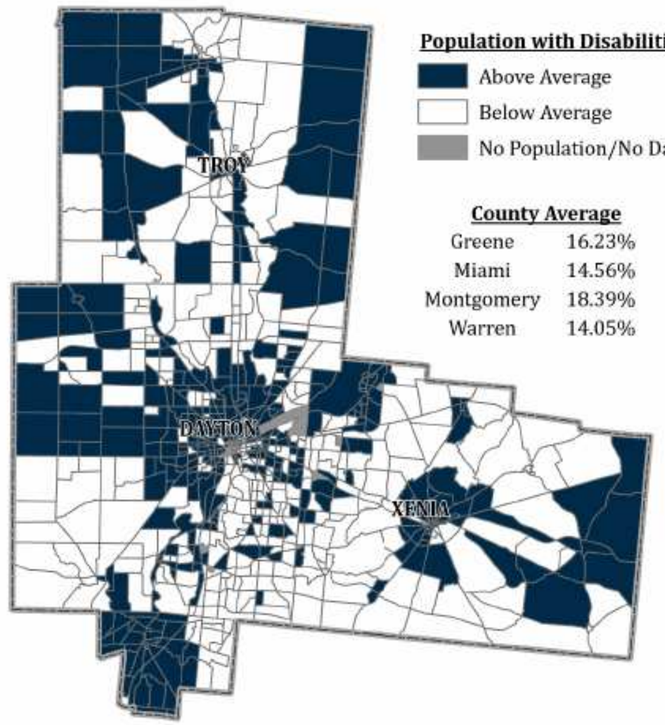


Population in Poverty

- Above Average
- Below Average
- No Population/No Data

County Average

Greene	10.65%
Miami	8.19%
Montgomery	15.57%
Warren	5.14%

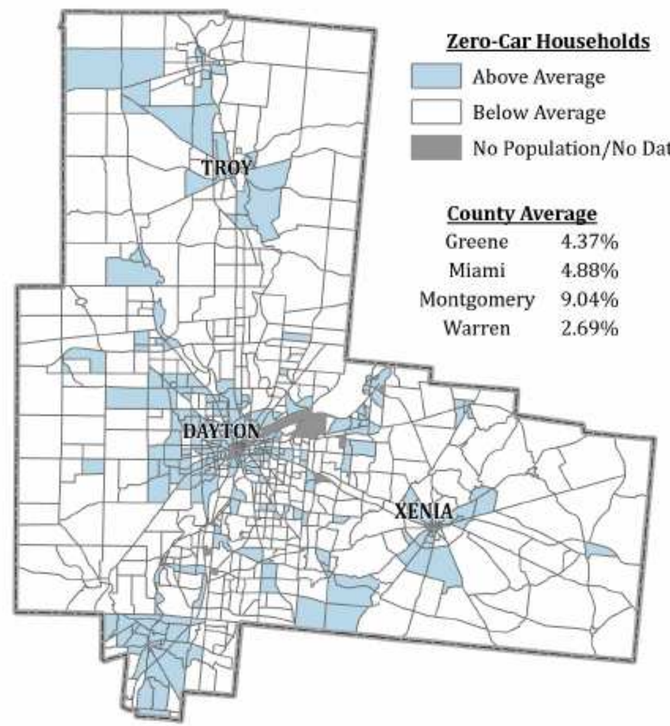


Population with Disabilities

- Above Average
- Below Average
- No Population/No Data

County Average

Greene	16.23%
Miami	14.56%
Montgomery	18.39%
Warren	14.05%

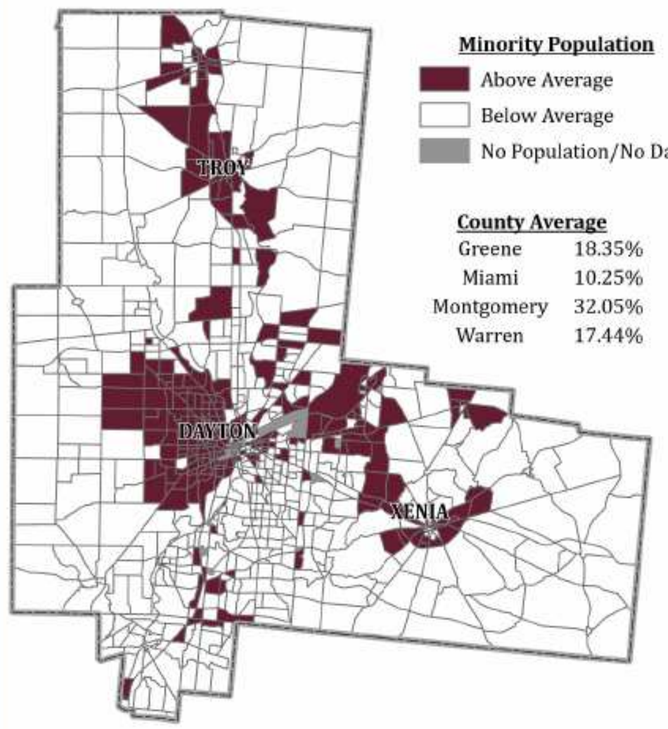


Zero-Car Households

- Above Average
- Below Average
- No Population/No Data

County Average

Greene	4.37%
Miami	4.88%
Montgomery	9.04%
Warren	2.69%

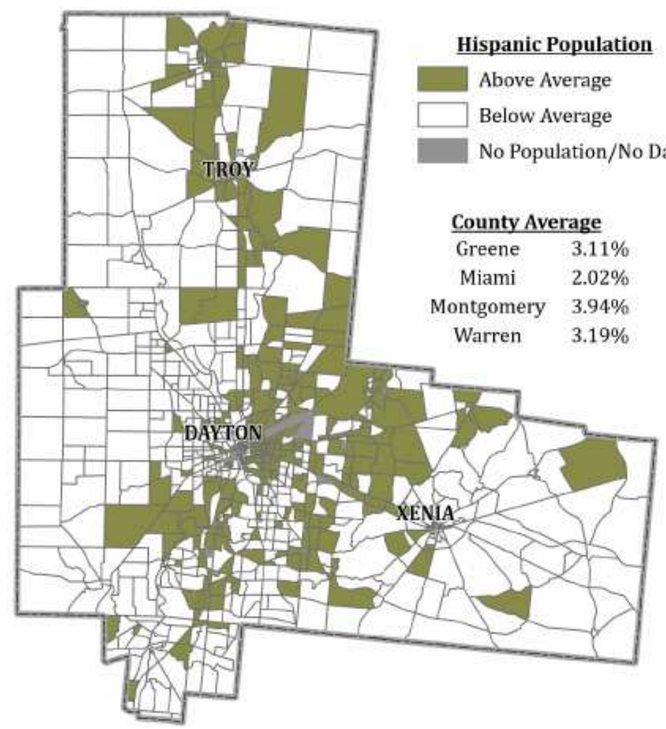


Minority Population

- Above Average
- Below Average
- No Population/No Data

County Average

Greene	18.35%
Miami	10.25%
Montgomery	32.05%
Warren	17.44%

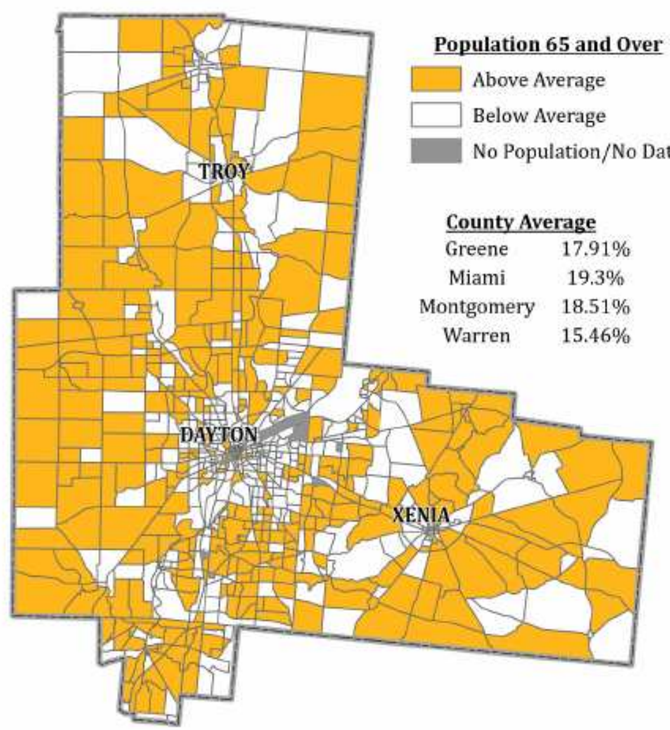


Hispanic Population

- Above Average
- Below Average
- No Population/No Data

County Average

Greene	3.11%
Miami	2.02%
Montgomery	3.94%
Warren	3.19%



Population 65 and Over

- Above Average
- Below Average
- No Population/No Data

County Average

Greene	17.91%
Miami	19.3%
Montgomery	18.51%
Warren	15.46%

N

0 5 10 15

Miles

Source: 2018-2022 ACS and 2020 U.S. Census

May 2026

to have driving, transit, or walking access to each facility type based on travel time thresholds. From there, the percentage of each vulnerable group with access was compared to the percentage of the general population with access for each travel mode and each facility type. More information is available on the Accessibility Analysis webpage.

Travel Time to Work

MVRPC analyzed the travel time to work (Home Based Work, or HBW Trips) as a community impact evaluation measure of the 2050 LRTP projects. This measures the travel time to work for persons in vulnerable areas compared to the general population in regards to employment locations as a result of the Plan projects.

The average travel time to work for each TAZ was derived using MVRPC's TDFM for all three scenarios (2020 Base, 2050 E+C, and 2050 Plan). The average HBW travel time for each TAZ was calculated for areas with an above average amount of persons in a vulnerable population and the general population. The results of the analysis can be seen in Table 10.2 below.

Table 10.2 — Average Travel Time to Work in Minutes

	2020	2050 E+C	2050 Plan
General Population	9.73	13.02	13.00
Persons in Poverty	9.48	12.65	12.64
Population with Disabilities	9.49	12.86	12.85
Zero-Car Households	9.41	12.84	12.82
Minority Population	**9.78**	12.95	12.93
Hispanic Population	**9.95**	**13.37**	**13.34**
Older Adult Population	**9.95**	**13.41**	**13.37**

Source: MVRPC

The differences in HBW travel time between the vulnerable areas and the general population vary based on the vulnerable population group. The Persons in Poverty, Persons with Disabilities, and Zero-Car Households groups all fare better in travel time to work compared to the general population in all scenarios. In contrast, the Minority Population fared worse than the general public in 2020, but is projected to fare better than the general population in both 2050 scenarios. The Hispanic and Older Adult Populations had longer travel times than the general population in all scenarios. The longer travel times for these groups are likely due to these populations being more dispersed in suburban and rural areas in tandem with being less concentrated in urban centers. But regardless, travel times for all analyzed groups vary by less than one minute.

A comparison of HBW travel times between the 2050 E+C and 2050 Plan scenarios show that implementing the 2050 LRTP slightly decreases HBW travel times for all population groups, despite discrepancies in how each population group individually fares compared to the general population. Due to all populations having faster HBW travel times in the 2050 Plan scenario compared to the 2050 Existing + Committed Project scenario, it is fair to say the Plan projects do benefit all population groups.

Transit Accessibility Analysis

MVRPC conducted a Transit Accessibility Analysis as a second measure of community impact for the 2050 LRTP. The analysis was conducted using GIS to identify how much access each vulnerable population group has to public transit in the Region. Furthermore, this analysis evaluates how much transit access various vulnerable population groups have in comparison to the general population.

With the exception of limited portions of Greene County (Wright Patterson Air Force Base and Wright State University), Montgomery County is the only county in the MPO area that is served by regularly scheduled fixed transit routes through the Greater Dayton Regional Transit Authority (GDRTA).

Therefore, the analysis in this section focuses on Montgomery County (see Figure 10.2). Miami and Greene counties have demand-responsive transit services that are open to the general public.

Due to the close proximity of transit stop locations—less than ¼ mile apart on most routes and relatively comprehensive time/location coverage—bus routes, not bus stops, were used as the basis for the analysis. The analysis utilized the September 2024 GDRTA transit routes and RTA Connect Zones. GDRTA began using RTA Connect service in 2018, which designates Connect Zones within which ride-hailing service can be utilized to connect to a bus or travel within a zone for the cost of bus fare.

Transit route buffers were overlaid on TAZ and census block boundaries to determine the area covered by the buffer with respect to the overall population and target population groups. RTA Connect Zones were then added to the buffers to account for service provided within the zones. Using the assumptions that population is evenly spread throughout underlying census blocks and target population proportions are consistent within TAZs, the percentage of the general population and target population groups covered in the combined buffer was calculated.



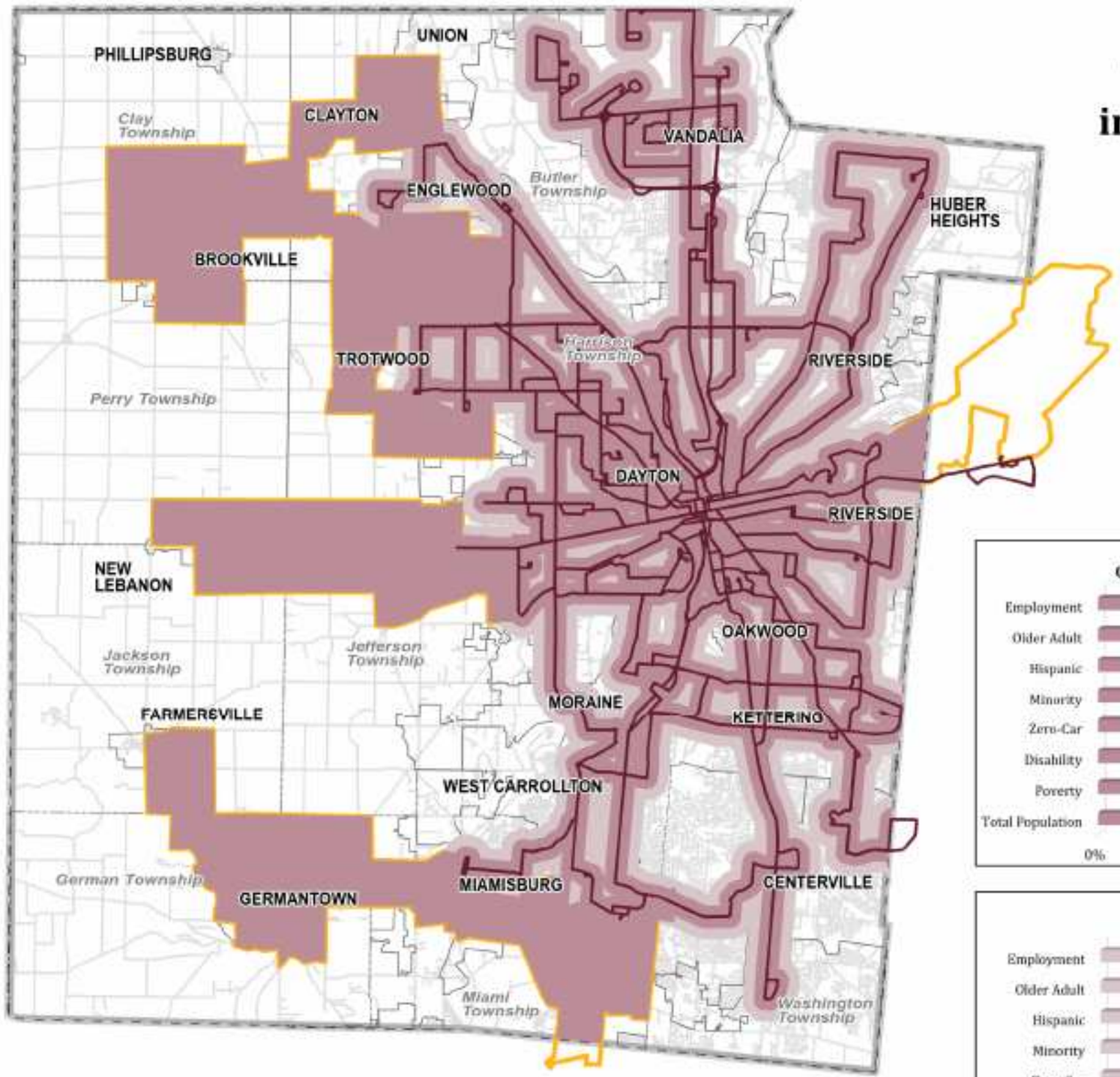
The results of the analysis are presented in two charts in Figure 10.2. The first chart shows the percentage of the general population and target population groups within ¼ mile of a transit route. The second chart shows percentages within ½ mile.

The results reveal that nearly 66 percent of the total population of Montgomery County lives within ¼ mile and 82.6 percent within ½ mile of a transit route and that high percentages of vulnerable

populations have good access to public transportation. Furthermore, the results show that vulnerable population groups, with the exception of the older adult population, are better served than the general population in both the ¼ mile and ½ mile buffer analyses. This is seen in 76.3 percent of minorities, 78.8 percent of persons living in poverty, 70.2 percent of persons with a disability, 72.0 percent of persons of Hispanic origin, and 80.0 percent of zero car households living within ¼ mile of a transit route, compared to 66.0 percent for the general population in the same area. As expected, the older adult population has slightly less coverage than the general population at 60.4 percent, being more evenly spread out throughout the county and noticeably less present in the urban core. However, older adults with mobility limitations have access to demand response transit systems. The transit accessibility analysis indicates that, in general, vulnerable population groups have better accessibility to transit compared to the general population.

MVRPC

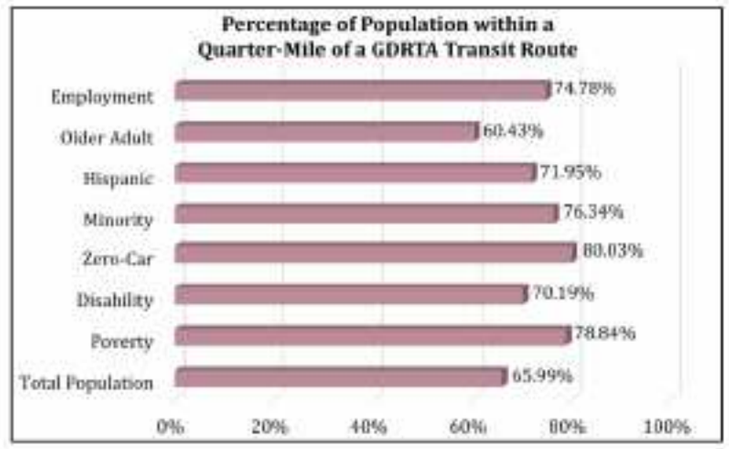
Figure 10.2
Transit Accessibility in Montgomery County

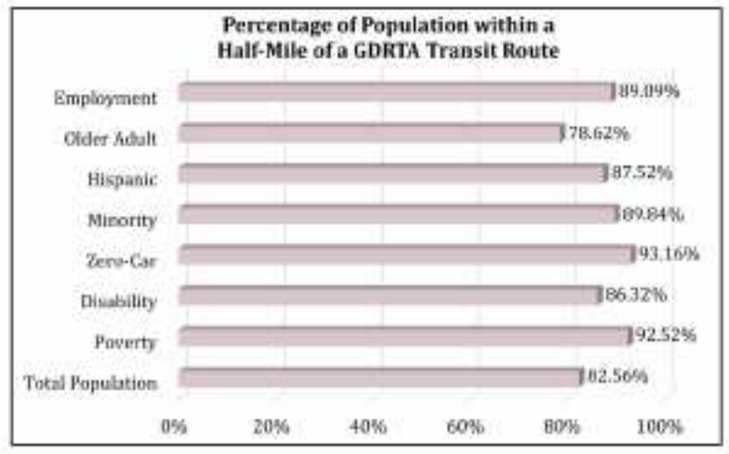


N

0 1 2 3 4
Miles

Source: GDRTA, U.S. Census 2020, ACS 2018-2022, and MVRPC





Regional Bikeway Accessibility Analysis

The importance of measuring the accessibility of the Region's bikeways for vulnerable population groups has become an important focus as investment in the system has increased over time. Unlike GDRTA's fixed route transit service, the regional bikeway network extends throughout the MPO Region and continues to grow as new sections are designed and constructed. Only existing regional bikeways — bike paths or bike routes — were included in the analysis.



Bike path facilities are typically grade separated, paved trails intended for non-motorized vehicles; while bike routes are designated portions of the surface roadway network that serve both motorized and non-motorized vehicles. Bike routes are typically identified through signs and/or pavement markings.

Currently there are roughly 237 miles of bikeways in the Region—approximately 12 miles of bikeways were added to the Region since 2021.

As in the transit analysis, regional bikeway buffers were overlaid on TAZ and census block boundaries to determine the area covered by the buffer with respect to overall population and vulnerable population groups. Using the assumptions that population is evenly spread throughout underlying census blocks and vulnerable population proportions are consistent within TAZs, the percentage of the general population and vulnerable population groups covered in the buffer were calculated.

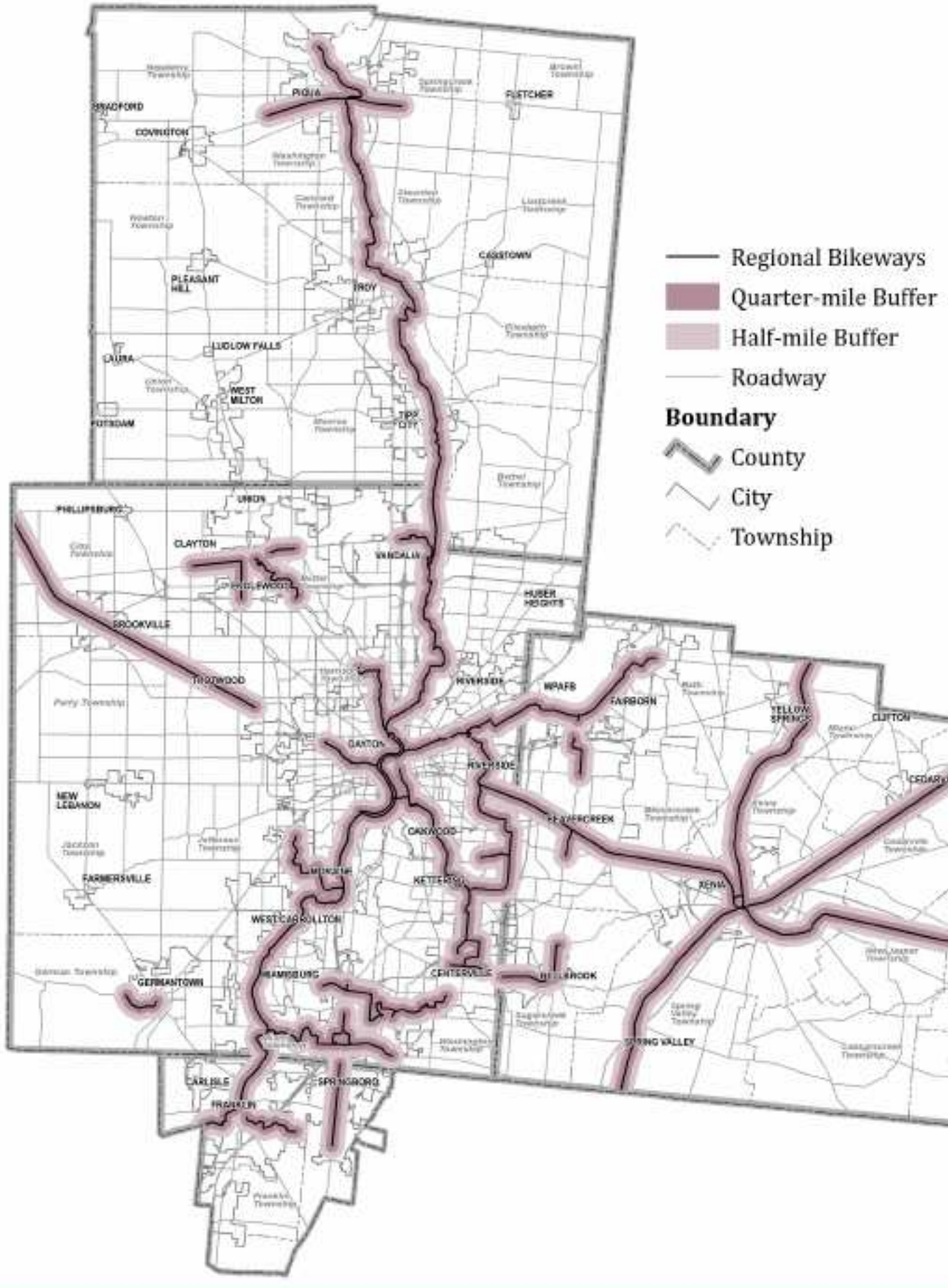
The results of the analyses are presented in two charts in Figure 10.3. The first chart shows the percentage of the general population and vulnerable population groups within ¼ mile of a regional bikeway. The second chart shows percentages within ½ mile.

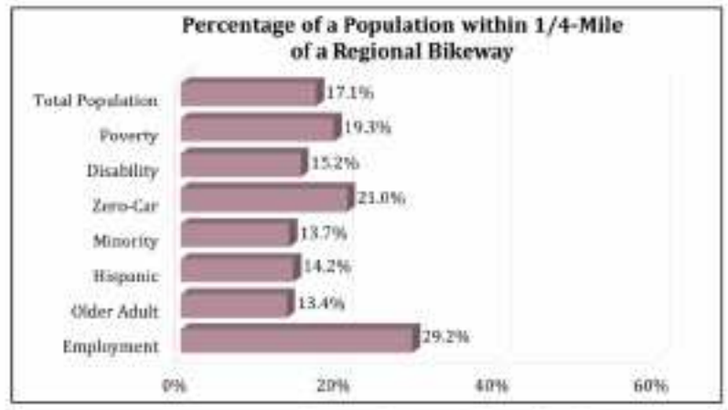
The analysis shows that only 17.1% and 32.7% of the general population live within ¼ and ½ mile of a regional bikeway, respectively. Access for vulnerable populations varies in comparison to the general population, with the largest deficit being the 6.8% difference between 25.9% bikeway access for older adults at the ½ mile distance compared to the 32.7% bikeway access for the general population. Deficits were also observed in the Minority (5.8%), Hispanic (5.2%), and Disability (3.7%) population groups compared to the general population.

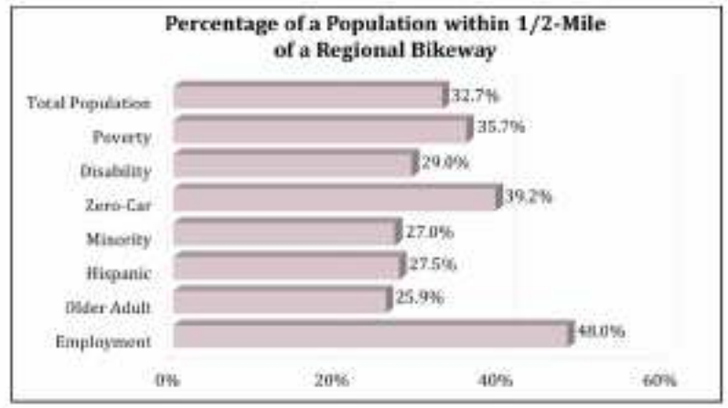
Persons in Poverty and Zero-Car Households populations experience the greatest access, with 2.25% and 3.93% more access than the general population at the ¼ mile distance. At the ½ mile distance, these populations had 3.0% and 6.5% respectively more access compared to the general population. In addition, 48% of the Region's employment opportunities are located within half of a mile of a regional bikeway.

MVRPC

Figure 10.3
Regional Bikeway Accessibility







N

0 2 4 6 8

Miles

May 2026

Source: U.S. Census 2020, ACS 2018-2022, and MVRPC



The Regional bikeway accessibility analysis indicates that vulnerable population groups have variable accessibility to regional bikeway facilities compared to the general population. While persons in poverty and zero-car household populations have higher access compared to the general population, the Disability, Hispanic, Older Adult, and Minority communities have less access compared to the general population. This was especially concerning due to the fact that all of these populations had worsening gaps in access compared to the general population than was seen in the 2010 Census-based accessibility analysis. This worsening access is likely due to these populations, and the general population as a whole, slightly shifting out from urban centers where bikeways tend to be located. For example, the Older Adult population tends to live in suburban areas (75%) and also saw a slight increase in rural areas (where 9% of the population is situated). Only 16% of the Older Adult population lives in an urban area.

While the deficits several vulnerable populations are facing in bikeway access compared to the general population is likely due to those populations being less situated in urban areas where bikeways are clustered, MVRPC will keep a close eye on bikeway accessibility and work to improve accessibility for vulnerable populations. To that end, there are several planned bikeways in the Region that will improve bikeway access in rural and suburban areas. Several proposed trails—like the Springboro Central Greenway, Iron Horse Trail, Great Miami River-Centerville Connector, and New Trebein to name a few—will substantially increase suburban access to the Regional bikeway system.

10.7 Community Impact Assessment and Public Participation

Refer to Chapter 11 — Public Participation and Consultation, for a discussion of additional public participation efforts to reach vulnerable populations.

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Chapter 11
Public Participation and Consultation

11.1 Overview

MVRPC's integration of a more proactive approach in transportation planning is accomplished through the public participation process. This process is made up of multiple components, including consultation with the TAC and MVRPC Board of Directors, the LRTP sponsors and stakeholders, and general outreach to the public. Additionally, community outreach efforts were expanded in an attempt to reach vulnerable populations.

As per the IIJA, a MPO needs to develop and use a documented public participation plan that defines a process for providing citizens, affected public agencies, representatives of public transportation employees, freight shippers, providers of freight transportation services, private providers of transportation, etc. with reasonable opportunities to be involved in the metropolitan transportation planning process. MVRPC last updated its *Public Participation Policy* in May 2024. The policy details the LRTP public participation requirements and complies with current planning regulations and the IIJA statutory provisions. MVRPC made an extensive public outreach effort to solicit input from the general public and special interest groups in order to increase public participation in the 2050 LRTP update process. The policy's key items include an expanded public participation notification list, use of technology to enhance communication with the public (website applications and social media), and efforts to reach vulnerable populations.



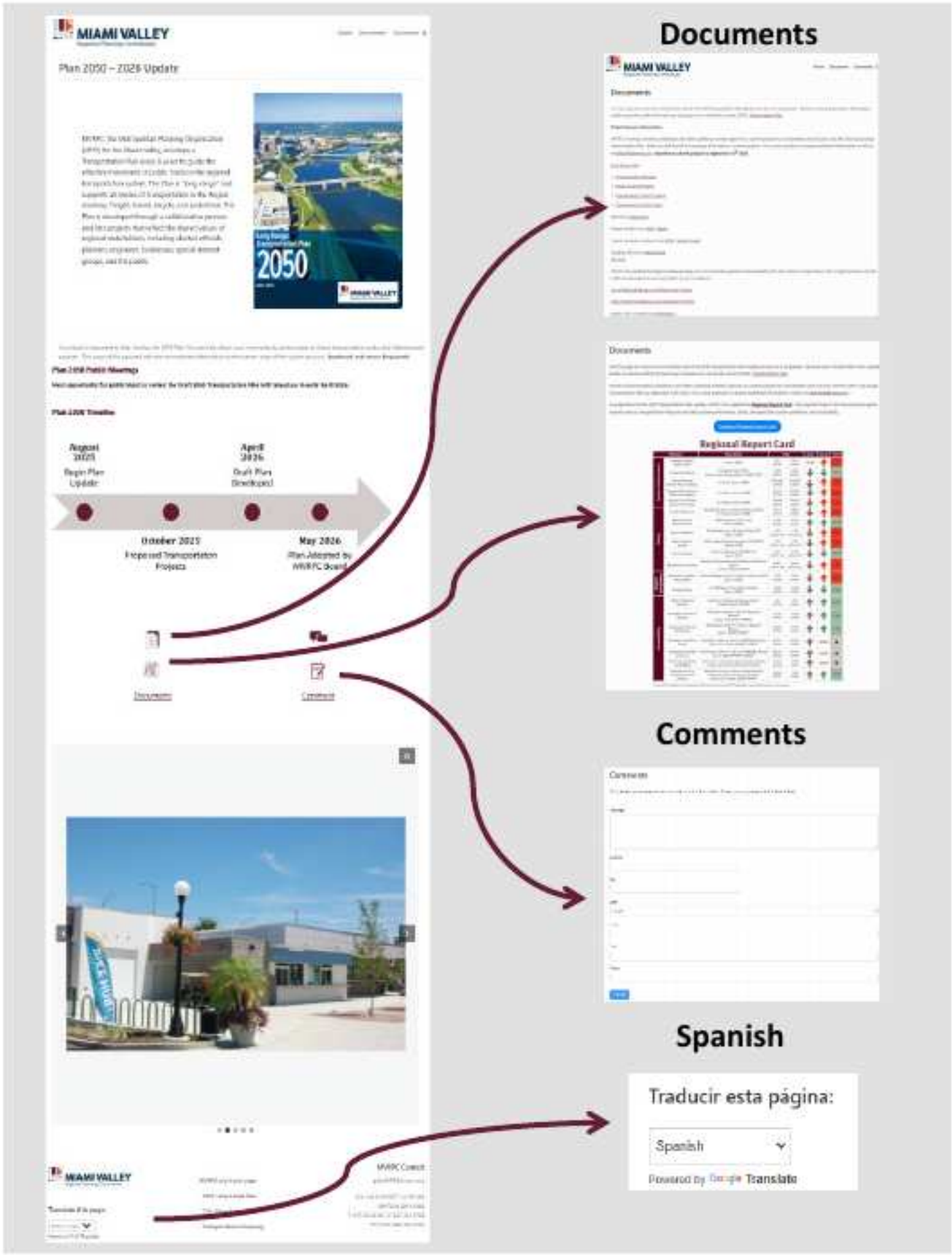
Public participation is conducted both in-person and in a virtual environment using the Zoom platform and relying on plan2050.mvrpc.org to communicate information.

11.2 Plan2050.mvrpc.org Webpage

For the May 2026 Update of the 2050 LRTP, MVRPC created a webpage solely dedicated to the update effort and promoted its use through public notices, advertising, and social media as a one-

stop shop for all items related to the Plan update. The webpage launched in July 2025 and was available throughout the update process and included the update timeline, information presented at various meetings, comment card, and an interactive map with the ability to comment on individual projects on the map. Figure 11.1 depicts the various webpage features including the ability to view website content in Spanish by using an online translator.

Figure 11.1 — Features and Content: plan2050.mvrpc.org



11.3 Public Participation Meetings

Beginning in August 2025, the public was involved in each step of the 2050 LRTP update process through the use of various tools. Virtual public participation meetings were held to present the latest information pertaining to the update and MVRPC staff was available at the meetings to answer questions. Comments received at the meetings were recorded and reference was made to the online comment cards. MVRPC's website was updated frequently to provide the latest information and an online version of the comment card was made available to receive comments 24/7 on any of the information provided. The same information was also made available at MVRPC's offices during the comment period for each meeting.

The first phase of the public participation process involved hosting one virtual public participation meeting in August 2025 to provide transportation-related background information used in the development of the LRTP, most notably incorporating the results of the 2020 Census. The second phase included presenting the draft list of multimodal transportation projects in a virtual public participation meeting and an open house public participation meeting in October 2025.

Finally, the last phase of public participation took place in April of 2026, through a virtual public meeting format, to present the final draft 2050 LRTP including the findings of various LRTP analyses. Comments received at each meeting were presented to the TAC and the Board of Directors prior to action on LRTP related items.

MVRPC's 2050 Long Range Transportation Plan – Public Participation Summary report provides comprehensive information and documentation regarding the public participation process, including all the public outreach materials used to promote the meetings, a listing of information presented at the meetings, and all the comments received. Table 11.1 provides a brief summary of each meeting.

Table 11.1 — Public Participation Meeting Summary

Outreach	Comments	Attendance/Comments
August 19, 2025 – 5 to 6 PM, via Zoom		
• Printing public notices in the Dayton Daily News and Dayton Weekly & promotional social media posts in RadioOne La Mega 97.7. • Submitting press releases to all local newspapers, television and radio stations – approximately 58 media outlets. • Sending e-mails/letters to individuals and agencies who have requested to be notified about public participation meetings as well as additional agencies/interested parties identified in IIJA legislation – over 400 individuals/agencies. • Sending letters and promotional posters to all the public libraries in Montgomery, Greene, and Miami counties.	• Zoom meeting instructions • 2050 Long Range Transportation Plan Update Overview • 2050 Long Range Transportation Goals • Safety and Congestion Conditions • Transportation System and Congestion Analysis	• 8 people attended the meeting. • 1 comment was received 

• Displaying promotional posters in English and Spanish at the Greater Dayton Regional Transit Authority hubs. • E-mailing promotional posters to Miami County Transit and Greene CATS. • E-mailing promotional posters (English & Spanish) to Latinos Unidos en Dayton for distribution. • Announcing the meeting on MVRPC's website. • Promoting the meeting using using Twitter/X,Facebook, Instagram, and LinkedIn, including 4 boosted posts. • Posting the information, which was to be presented at the meeting, on plan2050.mvrpc.org along with an online comment card. • Making the information to be presented at the meetings & online available at the MVRPC offices along with comment cards.	• Alternative Transportation Modes (Passenger & Freight) • Community Impact Assessment • 2020 & 2050 Land Use and Socioecenomic Projections • Transportation Performance Management	
October 29, 2025 – 12 to 1 PM, via Zoom and October 30, 2025 – 5 to 6 PM, MVRPC Offices		
• Printing public notices in the Dayton Daily News and Dayton Weekly & promotional social media posts in RadioOne La Mega 97.7. • Purchasing ads on YouTube, Spotify, WDTN, WHIO, & WYSO. • Submitting press releases to all local newspapers, television and radio stations – approximately 58 media outlets. • Sending e-mails/letters to individuals and agencies who have requested to be notified about public participation meetings as well as additional agencies/interested parties identified in IIJA legislation – over 400 individuals/agencies. • Sending letters and promotional posters to all the public libraries in Montgomery, Greene, and Miami counties. • Displaying promotional posters in English and Spanish at the Greater Dayton Regional Transit Authority hubs. • E-mailing promotional posters to Miami County Transit and Greene CATS. • E-mailing promotional posters (English & Spanish) to Latinos Unidos en Dayton for distribution. • Announcing the meeting on MVRPC's website.	• Zoom meeting instructions • Overview of online project map and online comment card • Draft Congestion Management Projects List and Maps • Transit Service Long Range Plan Assumptions 2026-2050 • Regional Bikeway & Pedestrian Network Project List and Map	• 4 people attended the virtual meeting and 3 people attended the in-person meeting. • 13 comments were received by various platforms (12 via comment form, 1 via comment card). 

• Promoting the meeting using using Twitter/X,Facebook, Instagram, and LinkedIn, including 4 boosted posts. • Posting the information, which was to be presented at the meeting, on plan2050.mvrpc.org along with an online comment card. • Making the information to be presented at the meetings & online available at the MVRPC offices along with comment cards.		
April 8, 2026 – 5 to 6 PM, via Zoom		
• Printing public notices in the Dayton Daily News and Dayton Weekly & promotional social media posts in RadioOne La Mega 97.7. • Printing ¼ page ad in the Dayton Daily News. • Submitting press releases to all local newspapers, television and radio stations – approximately 58 media outlets. • Sending e-mails/letters to individuals and agencies who have requested to be notified about public participation meetings as well as additional agencies/interested parties identified in IIJA legislation – over 400 individuals/agencies. • Sending letters and promotional posters to all the public libraries in Montgomery, Greene, and Miami counties. • Displaying promotional posters in English and Spanish at the Greater Dayton Regional Transit Authority hubs. • E-mailing promotional posters to Miami County Transit and Greene CATS. • E-mailing promotional posters (English & Spanish) to Latinos Unidos en Dayton for distribution. • Announcing the meeting on MVRPC's website. • Promoting the meeting using using Twitter/X,Facebook, Instagram, and LinkedIn, including 4 boosted posts. • Posting the information, which was to be presented at the meeting, on plan2050.mvrpc.org along with an online comment card. • Making the information to be presented at the meetings & online available at the MVRPC offices along with comment cards.	• 2050 Long Range Transportation Plan Update Overview • Plan Content • Regional Report Card • Congestion Management Process Overview • Congestion Management Projects – Roadway • Congestion Management Projects – Transit • Congestion Management Projects – Bikeway and Pedestrian • Fiscal Constraint Analysis • Air Quality	• Five people attended the meeting; one comment was received through the online comment tools. 

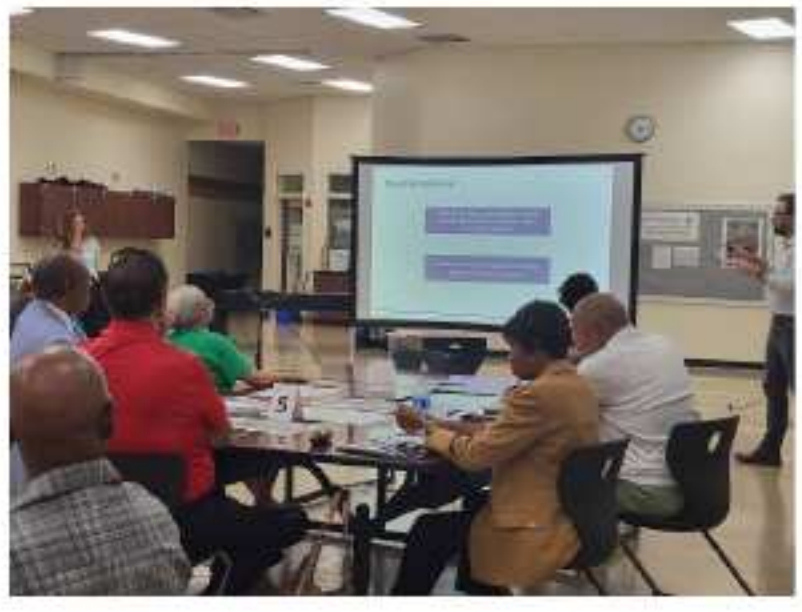
11.4 Community Outreach and Public Participation

In accordance with federal law, Metropolitan Planning Organizations (MPO) are responsible for facilitating dialogue, recording input received, and incorporating the thoughts and concerns of the public into the development of major MPO planning documents and in various aspects of the MPO planning process. Extensive outreach efforts throughout all areas of the region are conducted in order to assemble a broad cross-section of input into the decision-making process, including traditionally underserved areas. MVPRC's outreach efforts in these areas will continue to provide these residents with an opportunity to voice their opinions and concerns.

These efforts included:
Expanding the mailing list to include vulnerable populations (low-income, minority, older adults, and persons with disabilities);
Adapting advertising for ease of understanding, including special articles and flyers;
Expanding advertising to online platforms (e.g. YouTube, Spotify) to reach a more diverse population;
Adapting public meeting times and locations for accessibility;
Advertising at GDRTA Hubs and public libraries;
Purchasing public notices in Dayton Weekly, a minority distribution newspaper;
Purchasing promotional social media posts in RadioOne La Mega 97.7, a Spanish focused radio station;
Offering an English-to-Spanish translator on MVRPC's website; and
Posting information about upcoming meetings on social networking sites such Twitter/X and Facebook.

11.5 Participation in Other Public Outreach Efforts

During the 2050 LRTP update cycle, MVRPC staff actively participated and/or attended numerous public participation meetings pertaining to studies and projects in progress throughout the Region. These meetings ranged from stakeholder meetings to public hearings related to various transportation studies, as well as Comprehensive and/or Land Use Plans being developed by member jurisdictions. By attending the meetings, staff members were able to gain a better understanding of the projects and studies and to listen to any concerns that the general public might have regarding a given project or study. MVRPC staff were also able to answer any questions that arose in relation to MVRPC's planning activities and the 2050 LRTP.



11.6 Consultation Requirements in IIJA

The IIJA mandates that the MPO consult, as appropriate, with State and local agencies responsible for land use management, natural resources, environmental protection, conservation, and historic preservation concerning the development of the transportation plan. MVRPC's Public Participation contact list has been expanded to include agencies with an interest in the areas of land use management, environmental resources, environmental protection, conservation, and historic preservation. As a result, the list now includes nearly 400 agencies and individuals.

All contacts are notified and given the opportunity to comment on any transportation program that requires action by the MVRPC Board of Directors, such as the Long Range Transportation Plan and the Transportation Improvement Program.

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Appendix A
Conformity Interagency Consultation

CCSTCC/MVRPC 2026 Regional Transportation Plan Update
1997 Ozone Standard "Orphan" Areas
Conformity Analysis Summary

Overview:

The Clark County Springfield Transportation Coordinating Committee (CCSTCC) and the Miami Valley Regional Planning Commission (MVRPC) located within a US EPA designated 1997 Ozone Standard "Orphan" Area are updating their Regional Transportation Plans.

As a 1997 Ozone Standard "orphan area" and consistent with US EPA's November 29, 2018 guidance resulting from the South Coast II Court Case, the MPOs will advance qualitative Transportation Plan transportation conformity determinations.

Affected MPO/Air Quality Areas:

MPO	1997 Ozone Standard Geography	Transportation Plan Update	SFY 2026-2030 TIP Amendment
Dayton / MVRPC	Clark, Greene, Miami, & Montgomery Cos., OH	x	x
Springfield / CCS-TCC		x	

Qualitative Conformity Determination Criteria – 40 CFR 93.109:

- Latest planning assumptions – Each MPO maintains current travel demand model socio-economic variables and highway/transit networks used to develop the MPOs' Transportation Plans. With the 2026 update the 2020 Census results have been incorporated into the socio-economic variables
- Latest emission model – Should a future quantitative emission analyses be needed, the MPOs and ODOT will use US EPA's MOVES4 emissions software.
- TCMs – The Ohio SIP for the Dayton/Springfield region does not include any TCMs
- All non-exempt projects in the MVRPC region are included in 2050 LRTP and TIP (if within the TIP years SFY2026-2029). Costs for these projects are included in the fiscal constraint analysis for the respective documents.
- Conformity process schedule:
  - Each MPO will conduct a public review of its Final Draft Regional Transportation Plan and 1997 Ozone Standard "Orphan" area conformity determination information consistent with its adopted Public Participation Policy as recorded below.

MPO	MPO LRTP Public Meeting (Comment Period)	MPO Policy Board LRTP Adoption & Conformity Determination Resolution Date
Dayton / MVRPC	4/8/26 (3/25/26 - 4/23/26	5/7/26
Springfield / CCSTCC	3/18/26 (3/18/26 – 4/1/26)	5/8/26

- MPO Conformity Tests
    - 1997 Standard Ozone "Orphan Area" qualitative conformity determination
    - MVRPC only, for the portion of the MPO (northern Warren County) that is included in the Cincinnati AQ Region, MVRPC will coordinate with OKI to provide the latest conformity findings (quantitative analysis) for the 2008 and 2015 ozone standards. All northern Warren County projects in the Long Range Transportation Plan and TIP are currently exempt.

Other:

- Expectation that all road diet projects in the Plan and TIP will be determined to be exempt.
- MVRPC will obtain a concurring resolution or letter from OKI for the Cincinnati air quality region.

Outcomes:

- ODOT and the MPOs listed above request Ohio's Transportation Conformity Interagency Consultation Partners review the information above and provide written concurrence/comments that the documentation herein meets the requirements for advancing **qualitative** 1997 Ozone Standard "Orphan" Area for the 2026 Update of the Regional Transportation Plans conformity determinations by **February 4th, 2026.**

Ramirez, Ana

From: Ramirez, Ana
Sent: Friday, February 6, 2026 2:25 PM
To: 'Nallaballi, Neena'; Johnson, Daniel J (FHWA); ANTHONY.HILL@dot.ohio.gov; Zhuojun.Jiang@dot.ohio.gov; Andy Reser; susan.weber@dot.gov; Kenny, William; angel.lee@dot.ohio.gov; Scott.Schmid@dot.ohio.gov; Scott.Brown@dot.ohio.gov
Cc: Agresta, Louis; Regina Fields; Arnold, Paul
Subject: RE: 2050 Regional Transportation Plan and SFY 2026-2029 TIPs AQ Interagency Consultation
Attachments: MVRPC_CCSTCC_LRTP_Consultation_LRTP26_rev.docx

Good Afternoon,

Please find revised IAC summary document that has been modified to reflect Neena's comment regarding road diet projects.

We appreciate your review and hope you have a great weekend,

Ana

From: Nallaballi, Neena <nallaballi.neena@epa.gov>
Sent: Monday, February 2, 2026 5:08 PM
To: Ramirez, Ana <ARamirez@mvrpc.org>; Johnson, Daniel J (FHWA) <daniel.j.johnson@dot.gov>; ANTHONY.HILL@dot.ohio.gov; Zhuojun.Jiang@dot.ohio.gov; Andy Reser <ARESER@oki.org>; susan.weber@dot.gov; Kenny, William <william.kenny@epa.ohio.gov>; angel.lee@dot.ohio.gov; Scott.Schmid@dot.ohio.gov; Scott.Brown@dot.ohio.gov
Cc: Agresta, Louis <lagresta@clarkcountyohio.gov>; Regina Fields <RFIELDS@oki.org>; Arnold, Paul <PArnold@mvrpc.org>
Subject: RE: 2050 Regional Transportation Plan and SFY 2026-2029 TIPs AQ Interagency Consultation

Good afternoon,

Upon review , we recommend revising the current language regarding road diet projects. We would like the language to reflect an expectation that all road diet projects in the Plan and TIP will be determined to be exempt rather than the current phrasing.

Thank you

Neena Nallaballi
Control Strategies Section
EPA Region-5
Nallaballi.Neena@epa.gov
312-353-1770

From: Ramirez, Ana <ARamirez@mvrpc.org>
Sent: Tuesday, January 20, 2026 7:41 AM

To: Johnson, Daniel J (FHWA) <daniel.j.johnson@dot.gov>; ANTHONY.HILL@dot.ohio.gov; Zhuojun.Jiang@dot.ohio.gov; Andy Reser <ARESER@oki.org>; susan.weber@dot.gov; Nallaballi, Neena <nallaballi.neena@epa.gov>; Kenny, William <william.kenny@epa.ohio.gov>; angel.lee@dot.ohio.gov; Scott.Schmid@dot.ohio.gov; Scott.Brown@dot.ohio.gov
Cc: Agresta, Louis <lagresta@clarkcountyohio.gov>; Regina Fields <RFIELDS@oki.org>; Arnold, Paul <PArnold@mvrpc.org>
Subject: 2050 Regional Transportation Plan and SFY 2026-2029 TIPs AQ Interagency Consultation

Caution: This email originated from outside EPA, please exercise additional caution when deciding whether to open attachments or click on provided links.

Good morning,

The Miami Valley Regional Planning Commission (MVRPC), the MPO for the Dayton, Ohio urbanized area and the Clark County-Springfield Transportation Coordinating Committee (CCSTCC), the MPO for the Springfield, Ohio urbanized area are completing their five year Transportation Plan updates.

Attached is the proposed approach and schedule for demonstrating Transportation Plan conformity to the 1997 Ozone standards, the SFY 2026-2029 TIPS will also be amended if needed so that Plans and TIPs are consistent.

Please review this document and respond with comments or concurrence by **Wednesday, February 4, 2026**.

Thank you,

Ana