2050 inMotion

Transportation Choices for the Future of the Anderson Metropolitan Region

Metropolitan Transportation Plan

MCCOG
A Metropolitan Planning Organization

Adoption Resolution

Resolution 04 - 2025

**ADOPTION OF THE 2050 INMOTION
METROPOLITAN TRANSPORTATION PLAN &
AIR QUALITY TRANSPORTATION CONFORMITY**

WHEREAS, each urban area participating in the programs of the Federal Highway Administration and the Federal Transit Administration must assure that relevant transportation plans are maintained through a process that is comprehensive, cooperative, and coordinated, and

WHEREAS, the Madison County Council of Governments is the agency designated by the Governor to maintain those plans for the Anderson Urbanized Area/Metropolitan Planning Area, and

WHEREAS, the 2050 inMotion MTP has at least a 20-year planning horizon (23 CFR Part 450.306) and is fiscally constrained pursuant to 23 CFR Part 450.326, and

WHEREAS, the MCCOG staff consulted with the Interagency Consultation Group and MCCOG anticipates, after Policy Committee approval, the USDOT (FHWA) will find that the proposed 2050 inMotion MTP update and 2026-2030 TIP meets transportation conformity requirements under Section l 76(C) of the Clean Air Act and 40 CFR Parts 51.390 and 93, and

WHEREAS, the planning process maintained by the Madison County Council of Governments staff has assured that those plans, and subsequent improvement projects, are consistent with the comprehensively planned development of the Anderson Metropolitan Planning Area as well as federal policies and priorities.

NOW, THEREFORE, BE IT RESOLVED THAT the Madison County Council of Governments hereby certifies that the plans, program, and process of its transportation planning effort complies with Title 23 of the Code of Federal Regulations, Part 450.324, and that the 2050 inMotion Metropolitan Transportation Plan, understanding that changes will be made based on comments received from the public and reviewing agencies, is hereby approved.

ADOPTED by the Madison County Council of Governments Policy Committee, this 24th day of

October, 2025.
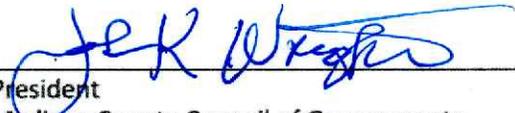
President
Madison County Council of Governments

Latest Amendment

Amendment History

Prepared by:

We aspire to create a safe & complete transportation system that puts people first.

Acknowledgements

Acronyms

ADA – Americans with Disabilities Act

BMP – Best Management Practices

CAMPO – Columbus Area Metropolitan Planning Organization

CATS – City of Anderson Transportation System

CMAQ – Congestion Mitigation & Air Quality

DMMPC – Delaware-Muncie Metropolitan Plan Commission

FAST Act – Fixing America's Surface Transportation Act

FHWA – Federal Highway Administration

FTA – Federal Transit Administration

HSIP – Highway Safety Improvement Program

ICG – Interagency Consultation Group

IIJA - Infrastructure Investment and Jobs Act

IMPO – Indianapolis Metropolitan Planning Organization

INDOT – Indiana Department of Transportation

ITS – Intelligent Transportation Systems

MAP-21 – Moving Ahead for Progress in the 21st Century

MCCOG – Madison County Council of Governments

MPA – Metropolitan Planning Area

MPO – Metropolitan Planning Organization

MTP – Metropolitan Transportation Plan

NAAQS – National Ambient Air Quality Standards

SIP – State Implementation Plan

SLRTP – State Long Range Transportation Plan

TAZ – Traffic Analysis Zones

TAC – Technical Advisory Committee

TIP – Transportation Improvement Program

USDOT – United States Department of Transportation

VMT – Vehicle Miles Traveled

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Chapter 0

Executive Summary

The Anderson Metropolitan Planning Area (MPA) is home to nearly 140,000 residents who rely on transportation to access education, healthcare, and jobs. Roadways, transit operations, and non-motorized infrastructure must keep pace with ever-changing conditions. The Metropolitan Transportation Plan (MTP) serves as a routine assessment and preparation of investments to keep the transportation system functioning as it continues to evolve.

The Anderson MPA is expected to continue growing steadily due largely to its proximity to Indianapolis. Transportation system updates are necessary to address the new challenges and opportunities created by growth. *2050 inMotion* analyzes the region's current state of transportation, anticipates what changes are necessary for the next 30 years, and plans for appropriate funding distributions.

The transportation system is defined as linkages connecting the many people, places, and activities within the MPA. Any change in one of these components affects demand on the system. The Anderson MPA transportation system already supports over 400,000 daily person trips and increasing levels of vehicle miles traveled. Population trends show rapid growth in the southwest, stagnation in the central-east, and decline in the north. Future transportation investments will need to balance funding between the expansion requirements of high growth regions to support more people and economic activity with the maintenance needs of lower growth regions that contend with aging infrastructure. Furthermore, the

expectation of growth brings the potential for disconnected, sprawling development patterns that threaten the preservation of historic and natural resources. Maintaining existing community character by preserving these resources has consistently been noted as a priority throughout the planning process.

Even though extrapolating past trends forms a basis for what to expect in the future, the MPA must be prepared for novel disruptions as well. Emerging technologies and shifting demographic trends may drastically impact the transportation system's future. The availability and use of autonomous vehicles—driverless cars—is likely to become a reality over the next five to ten years and continue increasing. *2050 inMotion* attempts to analyze disruptive trends and policy considerations for addressing growth pressure through scenario planning. Potential futures are simulated and compared to identify a preferred option that best aligns with the desired future and mission of *2050 inMotion*.

The three primary scenarios examined by *2050 inMotion* are: Connected World, Investing in Place, and Status Quo. Respectively, they represent a technology-driven future, a future focused on internal improvements such as prioritizing downtown redevelopment/small business, and a future that invests strictly in interstate corridor development as a continuation of current trends. These scenarios were compared using performance criteria such as the amount of land consumed, change in vehicle miles traveled, and walk access. Public input highlighted the importance of utilizing existing assets, preserving agricultural land,

encouraging walking/biking/transit trips, and reducing emissions to maintain or improve air quality. A combined preferred scenario, Investing in Connected Places, aligns the closest with the vision and mission of *2050 inMotion*:

Mission – "We aspire to create a safe and complete transportation system that puts people first."

Vision – "Through 2050 inMotion, we aim to realize a transportation system that is efficient, effective, and equitable."

These guiding statements are supported by 87 specific actions, both short- and long-term, to address the Anderson MPA's wide range of challenges across four categories: Connect, Educate, Move, and Protect. Of these actions, 63 are non-infrastructure policies, plans, and programs accounting for approximately 36% of funding. 24 actions are infrastructure projects that account for the remaining 64% of funding. These actions combine to improve system safety, reduce emissions, increase carpool/transit/walk/bike trips, increase job access, increase sidewalk access, and improve average commute times while mitigating a portion of increasing time spent in congestion. Overall, the performance of the *2050 inMotion* actions bring the Anderson MPA significantly closer to its desired future.

Introduction

The Anderson Metropolitan Planning Area (MPA) is home to approximately 140,000 residents and businesses that employ nearly 55,000 workers. People need a transportation system that safely provides access to opportunities. Likewise, businesses and city services rely on an efficiently functioning system to keep the regional economy moving. However, a system that is adequate now may not be enough to support future needs. Roadways, transit operations, and non-motorized infrastructure must be developed to adapt to ever-changing conditions.

Metropolitan Planning Organizations (MPOs) are each required to develop a Metropolitan Transportation Plan (MTP) to regularly assess and plan for transportation system improvements. An MTP is a framework for guiding investment decisions in transportation at the regional level, covering multiple local governments.

Due largely to its proximity to Indianapolis, the Anderson MPA has a unique mix of rural, urban, and suburban communities. Extensive updates are necessary for keeping pace with changing regional demands and creating a balanced transportation system. This document will analyze the current state of transportation in the region, anticipate what improvements should be prioritized through 2050, and plan for appropriate funding distributions.

Chapter 1

About MCCOG

MCCOG was founded in 1969 and functions as both a Council of Governments (COG) and the Metropolitan Planning Organization (MPO) for the Anderson MPA, as recognized by the US Department of Transportation. The purpose of MCCOG is to foster cooperation, increase coordination, and sustain continuous communication among residents as well as private, public, and non-profit organizations across the region.

As illustrated in Figure 1.01, the USDOT, including the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA), receives funding through the Federal Highway Trust Fund and distributes it to State Departments of Transportation. Approximately half of the funding is then distributed to MPOs annually.

As a recipient of federal funds, it is mandatory for MPOs to produce, at a minimum, a two-year Unified Planning Work Program (UPWP), four-year Transportation Improvement Program (TIP), and 20-year Metropolitan Transportation Plan (MTP) which consider all modes of transportation to facilitate the movement of goods and people (23 CFR §450).

Mission

MCCOG strives to develop a comprehensive and integrated transportation system through a balance of plans, programs, and policies. As an MPO, the mission of MCCOG is to support a multi-modal, regional transportation system that ensures safety, preserves the natural environment, and enhances the movement of people and goods to improve community livability.

Federal Highway Trust Fund

USDOT
United States Department of Transportation

FHWA
Federal Highway Administration

FTA
Federal Transit Administration

INDOT
Indiana Department of Transportation

Federal Funding Requirements

Annual Unified Planning Work Program

4-Year Transportation Improvement Program

20-year Metropolitan Transportation Plan
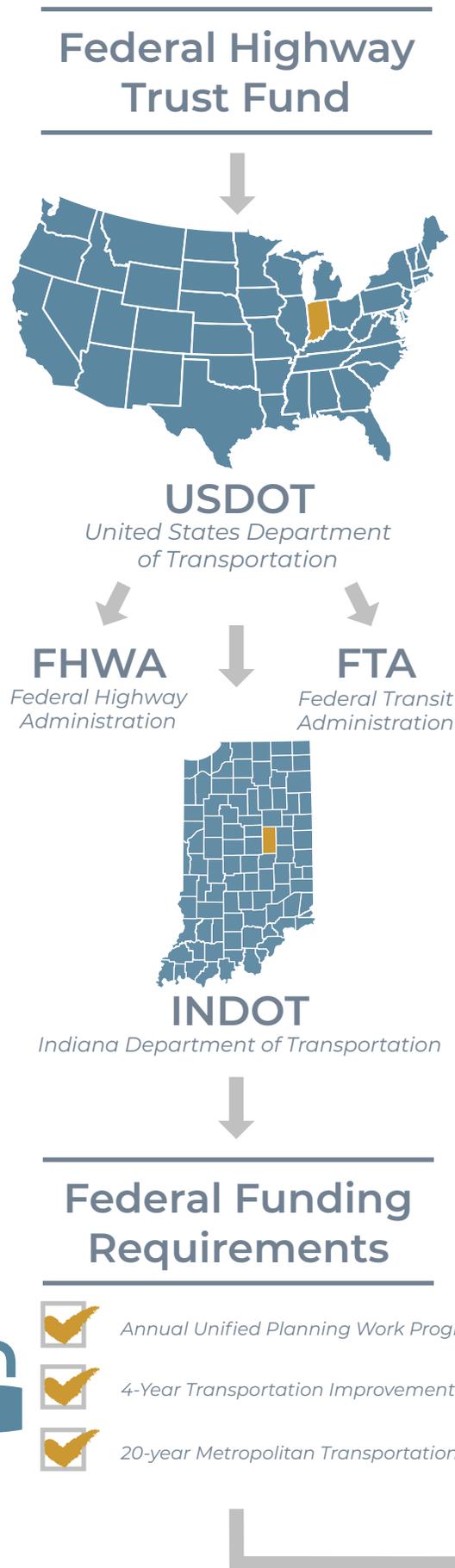
Figure 1.01: Organization Flow Chart

MCCOG
Madison County Council of Governments

Policy Committee
Governing Body

TAC
Technical Advisory Committee: Assesses Programs

CAC
Citizen Advisory Committee: Facilitates Public Involvement

MCCOG Staff
Works with each of these organizations

Organization

MCCOG functions as a regional planning agency serving communities represented within the Anderson MPA. As an MPO, MCCOG also funds transportation projects that impact the region within the Anderson Urban Area. MCCOG works closely with the Indiana Department of Transportation (INDOT) and all communities within the MPA. Due to this structure, MCCOG and INDOT must maintain a strong partnership to propel the region forward.

MCCOG operates under the direction of the Policy Committee and guidance of two advisory committees, a Technical Advisory Committee (TAC) and a Citizen Advisory Committee (CAC). Generally, each committee maintains some representation on various steering committees for both regional and localized planning efforts as part of their participation responsibilities.

Policy Committee

MCCOG is governed by the Policy Committee, composed of the principal elected officials and chairpersons of each governmental jurisdiction who maintains official membership with the organization. Voting members pay annual membership dues and are typically represented by elected or appointed local government officials. Community and organizational involvement are supported through several non-voting membership positions. Non-voting members provide updated information to help guide decision-making. For example, the FHWA participates as a non-voting member to offer insight on updates at the federal level and creates a direct link for committee members and MPO staff to address issues.
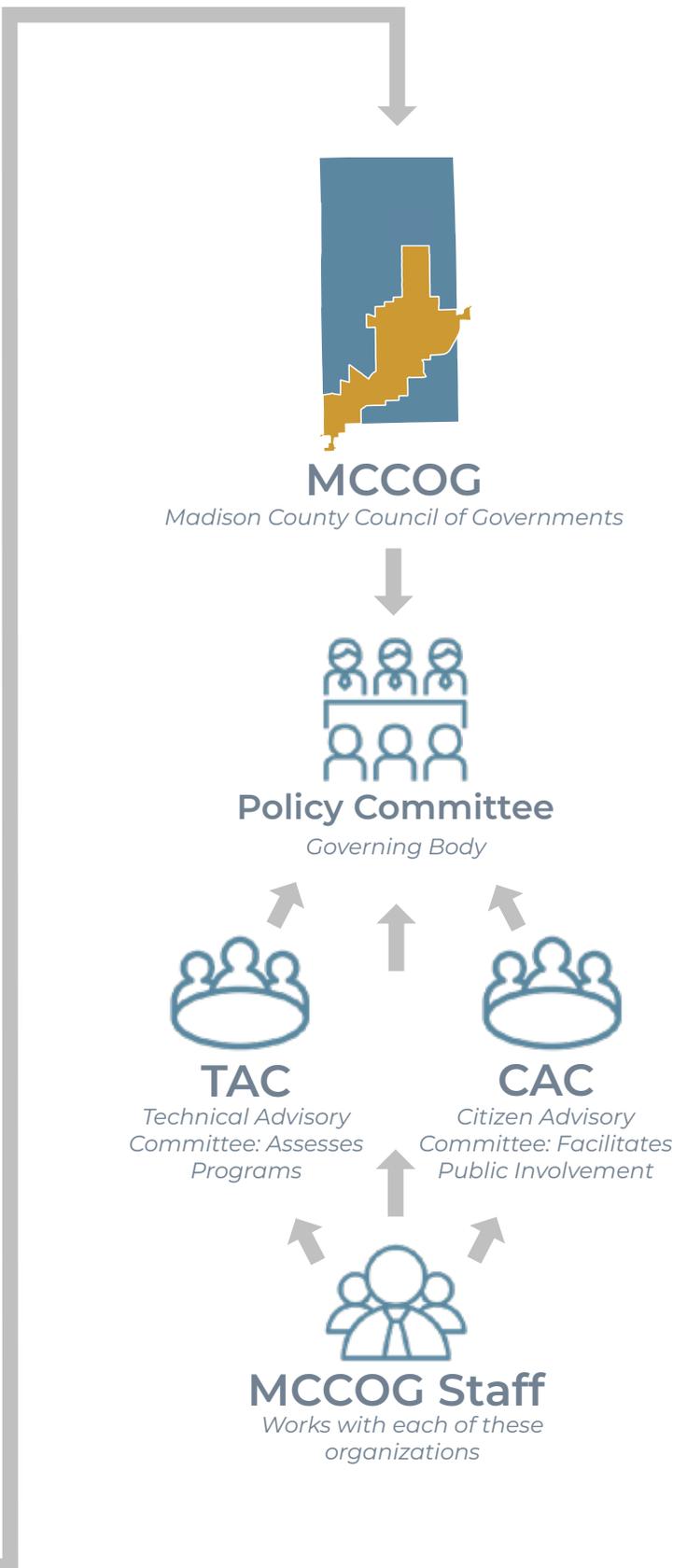
Technical Advisory Committee

The TAC's primary purpose is to provide valuable assessments of MPO plans and programs and to offer useful insight and expertise for the MPO's decision-making process. The TAC is comprised of engineers, planners, and representatives from governmental units or technical organizations. The TAC provides recommendations to the Policy Committee based upon data collected, technical sufficiency, research, local knowledge of community concerns, various studies, and planning endeavors. As a state partner, INDOT also maintains a seat on the TAC to encourage communication and provide technical expertise.

Citizen Advisory Committee

The CAC is the foundation for the public involvement process of many MPO activities. It is a volunteer group primarily consisting of representatives from community organizations, public agencies, and private agencies. The committee assists in gathering public input and informs planning processes by keeping MPO staff appraised of current issues, future community plans and projects, and additional partnership opportunities throughout the MPA.

MPO Council

In addition to MCCOG, there are 13 other MPOs within the State of Indiana. The executive directors and/or the designees of all 14 MPOs meet regularly as the Indiana MPO Council. This body addresses federal and state legislative, policy, and procedural matters, as well as other issues and concerns common among their organizations. Even though each organization is formed differently with a variety of roles in addition to required MPO activities, the council attempts to operate together by sharing advice, guidance, and information

regarding policies, programs, and procedures to collectively improve the 14 MPOs. The MPO Council also focuses a significant amount of effort on improving coordination between INDOT and the MPOs. This effort includes aligning INDOT policies and procedures with various needs of MPOs as well as coordinating transportation planning efforts.

Planning Area

The Anderson MPO is part of the central Indiana region including six MPOs and thirteen counties (see Map 1.02). The Anderson urban area is directly adjacent to the Indianapolis urban area. The MTP study area includes the MPA in its entirety with technical analysis including Hamilton County, portions of northeast Marion County, and a portion of Hancock County north of I-70. Journey-to-work travel patterns and residential out-migration from the MPA supported the decision to include these additional areas. The new boundaries of the study area were included in the plan to better understand regional influences and updated land use changes.

Map 1.01: Study Area

KHCGCC

DMMPC

MCCOG

IMPO

BMCMPO

CAMPO
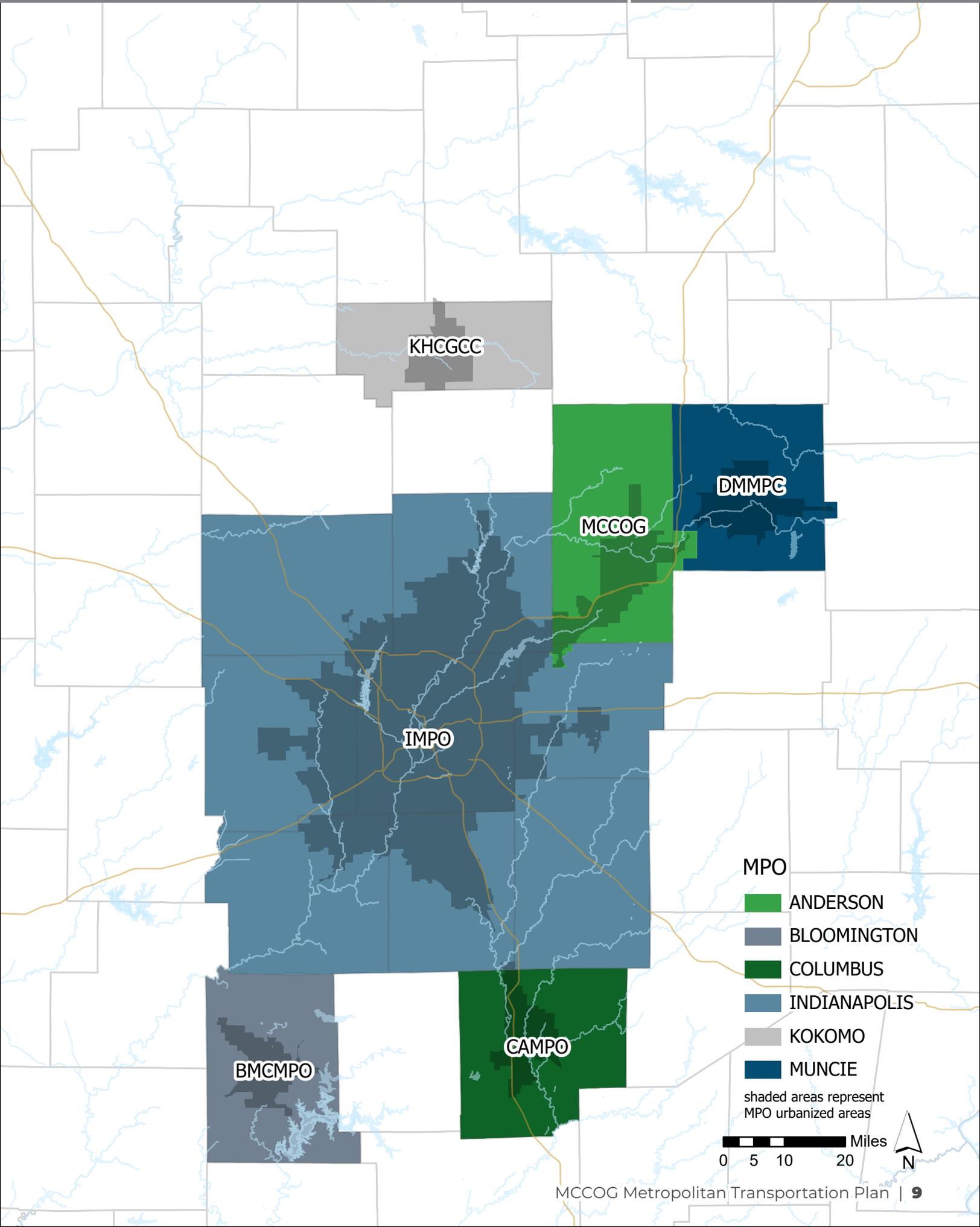
MPO

ANDERSON

BLOOMINGTON

COLUMBUS

INDIANAPOLIS

KOKOMO

MUNCIE

shaded areas represent
MPO urbanized areas

Miles

0 5 10   20

N

What is an MTP?

Formerly known as the Long-Range Transportation Plan (LRTP), the MTP establishes a cooperative, continuous, and comprehensive framework for transportation investment decision-making in metropolitan areas. This process requires developing a planning document with at least a 20-year planning horizon from the date of adoption by the MPO Policy Committee. The MTP must be a performance-based, multi-modal, and coordinated regional plan as outlined 23 CFR §450.324. It must cover all aspects of transportation from a regional perspective including roadways, public transportation, airports, walking, biking, and freight.

MTP Update Procedure

The MTP is prepared and updated by MCCOG at least every four years to meet air quality conformity requirements. It is developed through a cooperative effort among government, business, and organizational groups. It includes a coordinated community outreach and public involvement program to ensure it aligns with public interests. Regular updates allow MPOs to evaluate the plan's validity and consistency with current transportation and land use conditions, as well as respond to changing population and employment forecasts. MPOs may revise the MTP at any time using amendments to update the document with new or expanded projects as well as funding allocation changes. Whenever an MTP amendment is needed, public outreach and demonstration of Fiscal Constraint are required. For all updates and amendments, the MPO Policy Committee reviews, approves, and adopts changes then submits the revised document to INDOT, FHWA, and FTA for review and comment.

2050 inMotion

2050 inMotion is the most recent update to the MCCOG Metropolitan Transportation Plan, which was adopted in December 2021. This update plans to the year 2050, shifting the update timeline to simplify coordination with the Indianapolis Metropolitan Planning Organization (IMPO). Transportation system utilization and funding forecasts are updated through 2050, and public engagement is expanded for action prioritization. In the *2045 inMotion* MTP, input was lacking from young adults aged 18 to 24 and individuals with limited English proficiency (LEP). This update includes public engagement targeted at these demographics.

Code of Federal Regulations Title 23 §450.324.

"The transportation plan shall include both long-range and short-range strategies/actions that provide for the development of an integrated multimodal transportation system (including accessible pedestrian walkways and bicycle transportation facilities) to facilitate the safe and efficient movement of people and goods in addressing current and future transportation demand."

The document is presented to answer four questions as we work through the planning process:

- Where are we now?
- Where do we want to be?
- How do we choose a path?
- How will we get there?

Chapters 1 and 2 reiterate the MTP's background and review regional trends to outline where we are now. Chapter 3 establishes a new direction to define where we want to be as a region. Chapters 4, 5, and 6 examine disruptive external forces, test future scenarios, and integrate project constraints to illustrate the different paths that could take us to the desired future position. Finally, chapter 7 creates the framework of projects, programs, policies, and plans to move the region to 2050. This combination of analysis and public guidance forms a comprehensive approach to addressing regional transportation issues.

COVID-19 Impacts

The *2045 inMotion* process took place from March 2019 until October 2020. Fortunately, most of the public engagement was completed before the March 2020 stay-at-home order was enacted across Indiana due to COVID-19. However, the process timeline and public engagement efforts were significantly impacted by the stay-at-home order and restrictions for in-person social interaction.

The *2050 inMotion* process took place from April 2021 until December 2021. Despite COVID restrictions being lighter during much of this time, most public engagement was conducted virtually. This allowed for continued safety and provided a better means to reach the underrepresented demographics.

1. Where are we now?

2. Where do we want to be?

3. How do we choose a path?

4. How will we get there?

Related Plans & Programs

Long range planning occurs at the state, regional, and local levels. An MTP is a regional-level vision-based plan, which is succeeded by a project-oriented TIP. At the state level, similar functions are filled by the SLRTP and STIP. As shown in the graphic, implementation done at the local level is the result of this planning process. Local plans, influenced by both state and regional plans, may fulfill a wide range of functions.

2045 inMotion

2045 inMotion replaced the *2045 Metropolitan Transportation Plan* adopted in March 2019. It incorporates public feedback gathered through extensive engagement opportunities with analytical tools and planning assumptions. The plan identifies how transportation facilities function as an integrated system to support the people, places, and activities of the Anderson MPA. *2045 inMotion* also represented the first scenario planning effort for MCCOG and a substantial overhaul to the

base assumptions guiding decision-making for both the agency and region.

2045 Metropolitan Transportation Plan

The *2045 Metropolitan Transportation Plan*, which preceded 2045 inMotion, established a framework to guide transportation-based decision-making for the MPO. This document contains policies intended to promote public safety, mobility, accessibility, and the efficiency of the transportation system during all stages of growth and development. Ultimately, the plan outlines the community's needs, sets policies addressing planning issues, and recommends appropriate actions to achieve desired results.

MPO Transportation Improvement Program

The TIP is a document defining a four-year, multi-stage program of transportation improvements including transit, multi-modal, bicycle & pedestrian, air quality, and roadway projects. The TIP includes all planning,

Related Plans and Programs	State		Regional		Local
	SLRTP	STIP	MTP	MPO TIP	Local Plans
Vision-Based	✔		✔		✔
Project-Based		✔		✔	✔
Long-Range	✔		✔		✔
Short-Range		✔		✔	✔

SLRTP — Envision | STIP — Develop | MTP — Priorotize | TIP — Develop | LPAs — Implement
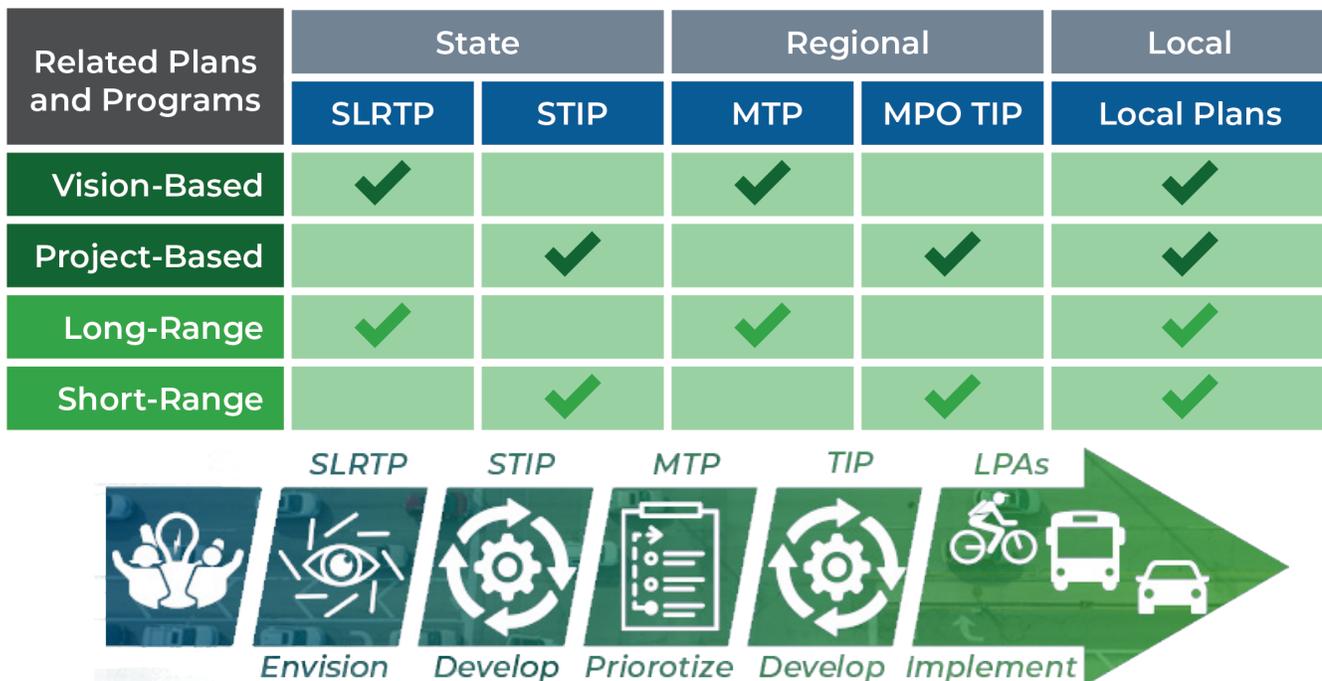
Figure 1.02: Related Plans and Programs

capital, and non-capital surface transportation projects within the boundaries of the MPA proposed for funding.

The document is a coordinated effort by MCCOG and communities located within the MPA to program transportation-related improvements in a comprehensive and systematic framework that meets all federal and state guidelines. The TIP must be updated at least every two years and approved by each MPO Policy Committee, FHWA, FTA, INDOT, and the governor.

Protect 2030

Protect 2030 is the first comprehensive safety action plan for the Anderson region and establishes the direction for a continuous transportation safety program. The process included review of over 10,500 crashes over a 3-year period in the Anderson region. Protect 2030 adopts a vision zero approach, aiming to eliminate all fatal and serious injury crashes and setting an initial target by 2030. Due to the overrepresentation of vulnerable users, including pedestrians and cyclists, in severe crashes, the plan designates vulnerable users as an emphasis area. As the safety program continues to evolve, planning for pedestrians and cyclists will be vital for improving overall system safety.

Bicycle & Pedestrian Plan

The Anderson Metropolitan Planning Area Bicycle and Pedestrian Plan, adopted in 2024, is an update of the 2016 Bicycle Facilities Plan and 2019 pedestrian planning process. It compiles a proposed walk-bike network, based on the proposed facilities of every LPA, and identifies a selection of key routes for improvement based on analysis of the built environment, roadway conditions, and current state of the network. Key analysis includes the bicycle level of stress, road right-sizing tool, and sidewalk gap analysis. Additionally, it plans for the expansion and ongoing maintenance of additional data on the provision of bicycle and pedestrian infrastructure. Key goals include the addition of bicycle and pedestrian aspects to the MPO's MIRE database, the use of ADA planning to encourage installation of infrastructure, and support for adoption of vulnerable road user policies and complete streets policies.

State Long Range Transportation Plan

The 2045 INDOT Long-Range Transportation Plan (ILRTP) is a broad-based policy document developed by INDOT used to guide the development of Indiana's transportation system. The plan identifies existing and emerging transportation challenges, defines what is needed over the 20-year planning horizon, establishes funding priorities for needed improvements, and maps a course for meeting Indiana's transportation vision. It is important to note that the ILRTP is not project-specific; instead, it identifies investment priorities based on current and projected funding as well as transportation needs over a period of 20 years.

State Transportation Improvement Program

The State Transportation Improvement Program (STIP) identifies the funding and scheduling of transportation projects and programs over the course of five state fiscal years (July 1 through June 30). The STIP is prepared in cooperation with all 14 MPOs in Indiana, since it includes each MPO TIP project list in its entirety. The STIP also includes projects on state-maintained facilities such as interstates, interchanges, US routes, and state roads. In addition, the STIP includes any project awarded directly to Local Public Agencies (LPAs), which are usually local government entities not located within MPO urban areas.

State Implementation Plan

The SIP is required under Section 110 of the Clean Air Act. A SIP details how the state plans to limit air pollution from industrial, mobile, and any other source of pollution to protect human health and the environment. The plan typically defines a program for monitoring air pollutants, explores reduction strategies, and evaluates program success.

LPA Plans

LPAs have their own plans to guide future growth. LPAs maintain their own planning programs/procedures and produce plans that meet each community's defined goals and objectives. These plans may include comprehensive plans, park & recreation master plans, strategic economic development plans, downtown revitalization plans, capital improvement plans, and thoroughfare plans. *2050 inMotion* aligns LPA efforts within the MPA to ensure regional mobility, local accessibility, and the promotion of coordinated local community objectives.

Regional Overview

Chapter 2

The Anderson MPA is located at the northeastern edge of the Indianapolis metropolitan region and has a unique mixture of suburban, urban, and rural communities with populations ranging from 500 to over 55,000. Though the region developed around the city of Anderson, it is increasingly tied to the expanding Indianapolis metropolitan region. As these two regions meld together, it will become increasingly important to identify opportunities for cooperation and take steps to preserve the Anderson MPA's unique identity.
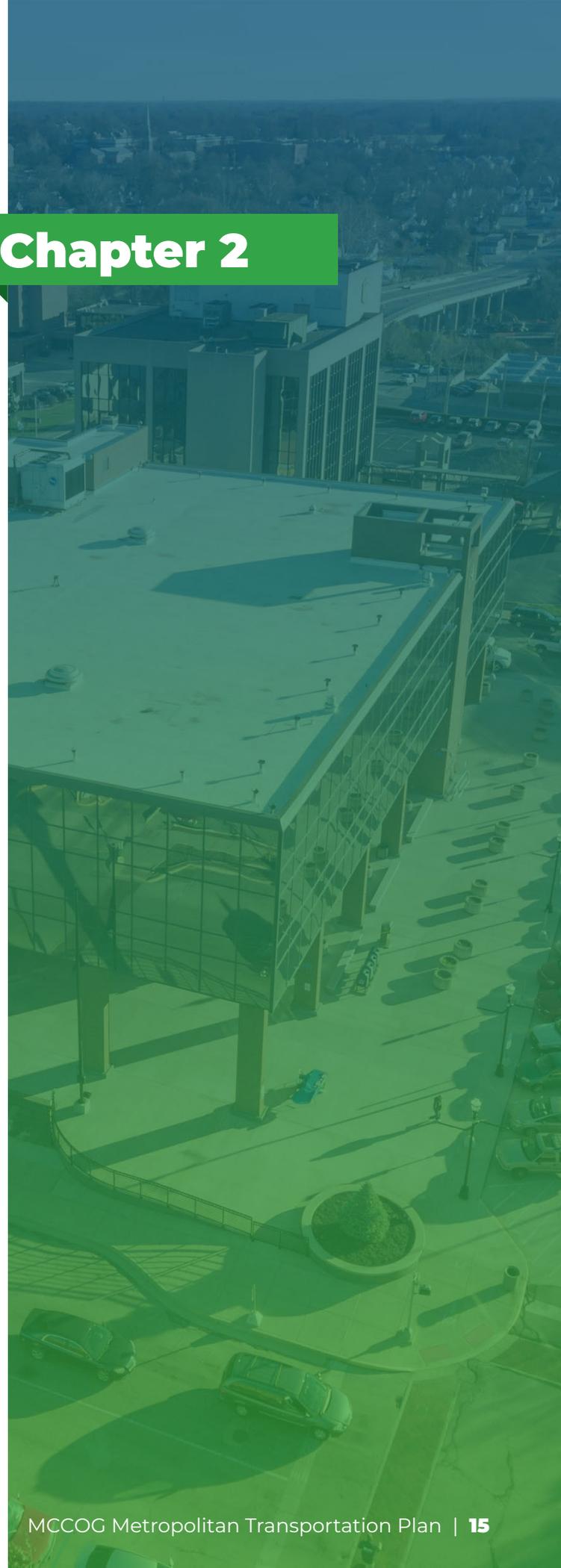
People, Places, Activities, & Systems

To better understand the region, *2050 inMotion* looks at people, places, the activities that attract people to places, the transportation system that connects them, and the complex relationship between each. There are three distinct subregions within the Anderson MPA referenced throughout this document:

- **North** – This region has primarily a rural culture. It includes the municipalities of Alexandria, Elwood, Frankton, Summitville, and Orestes. Population loss has occurred as residents migrate to more urban areas, as seen in many rural areas in Indiana.

- **Central-East** – This is the most urban of the subregions. It includes the municipalities of Anderson, Edgewood, Markleville, Chesterfield, and Daleville. The region continues efforts to revitalize its economy after a massive loss of investment associated with the automobile industry.

- **Southwest** – The southwest is a combination of rural and suburban development. It includes the municipalities of Fortville, Ingalls, Lapel, and Pendleton. It has seen increasing growth pressure as the Indianapolis metropolitan area continues to sprawl outward.

471 mi²
Total Metropolitan
Planning Area

109 mi²
Total Urban Area

139,509
Total Population
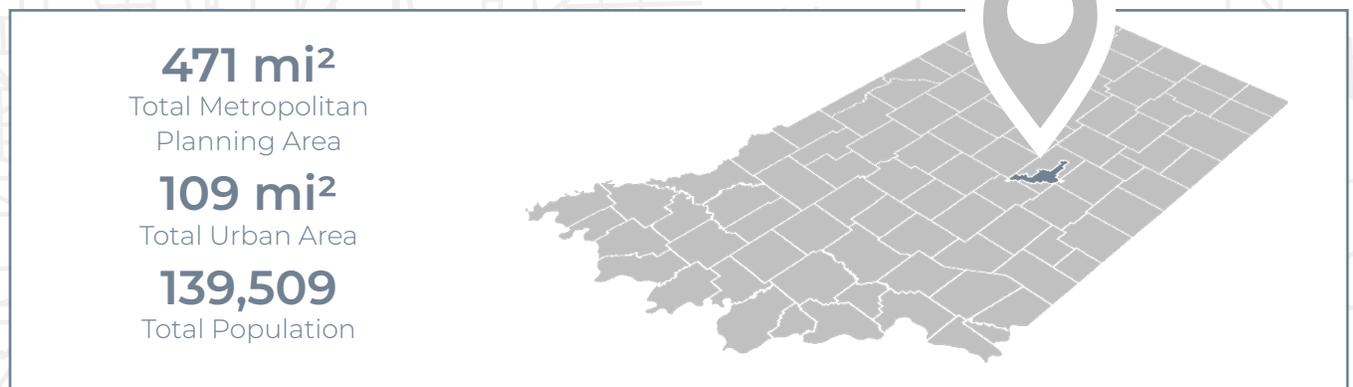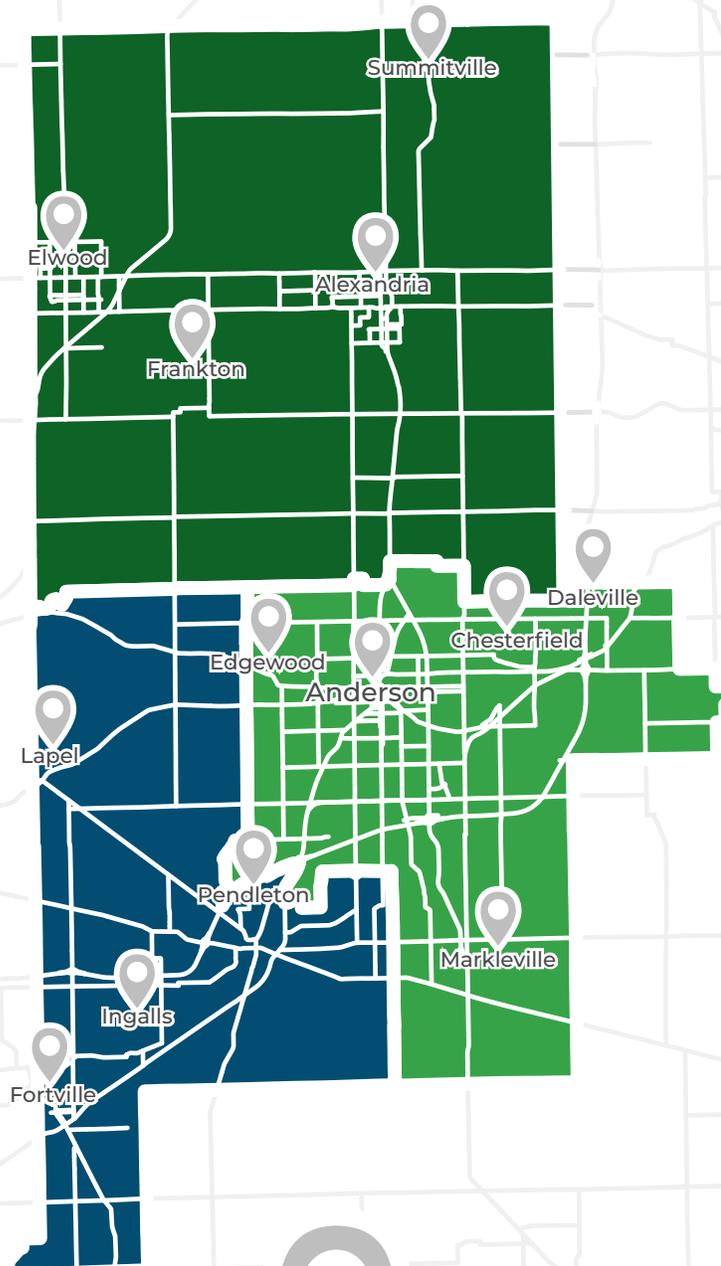
Figure 2.01: Study Area

Transportation System

The transportation system is a combination of components that support the movement of people and exchange of goods. It includes highways, local roads, sidewalks, bike lanes, trails, railroads, airports, and transit. It is important to inventory existing assets and assess their current performance to consider how to address future demands on the system.

Roadway Network

The Anderson MPA contains over 1,800 miles of roadway, 240 miles of which is owned and maintained by INDOT. As noted in the chart and map, these are categorized by *functional classification*—a system separating roadways based on design considerations like speed, capacity, and access to adjacent land. The

Functional Classification System established by the FHWA includes seven designations:

- Principal Arterial – Interstate
- Principal Arterial – Other Freeways or Expressways
- Principal Arterial – Other
- Minor Arterial
- Major Collector
- Minor Collector
- Local

Bicycle & Pedestrian Facilities

Nonmotorized trips (trips taken without a car) are supported by a combination of sidewalks, multi-use paths, trails, and bike lanes. There are approximately 426 miles of sidewalk and 23 miles of multi-use paths and trails within the Anderson MPA. Anderson also has 2.3 miles of bicycle lanes located on 8th Street and Columbus Avenue.
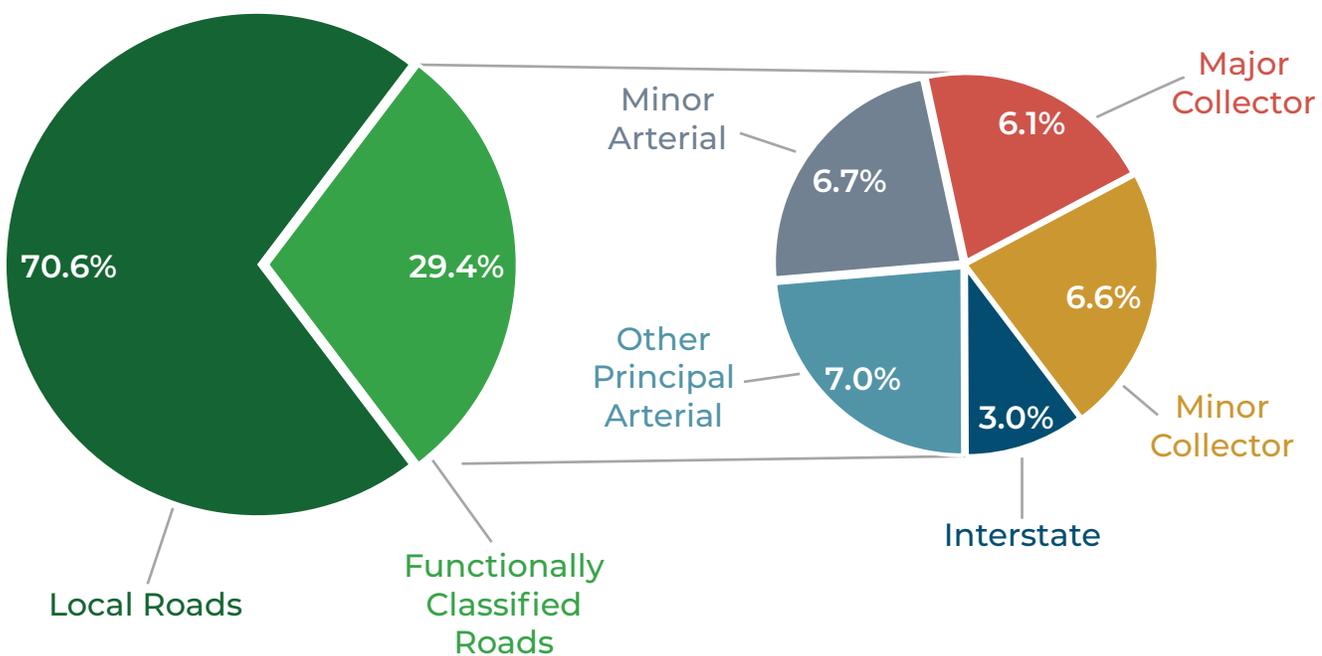
Figure 2.02: Total Road Mileage by Functional Class

Windfall

W·1900·N

W·1850·N

W·1800·N

E·1800·N

N·125·E

N·150·E

N·300·E

Gaston

W·1650·N

W·1600·N

13

N 200 W

E·1650 N

Summitville

9

E 1400 N

W·1400·N

W 1300 N

E 1300 N

28

Elwood

Orestes

Alexandria

28

28

W·1100·N

E·1100·N

13   37

N 700 W

N·900·W

Frankton

9

128

128

E·800·N

W 600 N

E·600·N

Yorktown

Muncie

N 200 W

W·500·N

E·500·N

N·200·E

N·500·E

W·8th·St·Rd

W·300·N

E 300 N

69

E·200·N

W·400·S

32

13

32

Chesterfield

Daleville

67

Edgewood

32

S 500 E

Anderson

232

Lapel

W 200 S

W 38th St

W·300·S

S·600·W

W·53rd·St

236

Middletown

Old·SR·132

S·300·E

69

S·New·Columbus·Rd

38

W·000·S

S·200·E

Noblesville

13

Pendleton

36

E·700·S

38

Fishers

W·800·S

67

S 300 W

109

Markleville

S 400 E

Sulpher Springs

Ingalls

Functional Classification

━━━ Interstate

━━━ Other Principal Arterial

━━━ Minor Arterial

━━━ Major Collector

━━━ Minor Collector

━━━ Local

Fortville

9

W·1100·S

E·1100·S

McCordsville

234

Kennard

Miles

0   1.25   2.5   5

N

Lawrence

Greensboro
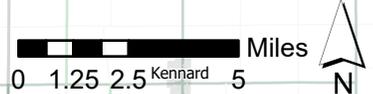
Along with the designated bicycle lanes, there is an on-road bicycle system known as Heartland Bikeways consisting of seven routes located on low-volume roadways. The bikeways connect communities throughout the Anderson MPA and span approximately 147 miles.

There are also five regional trail systems offering connections from the Anderson MPA to other areas of the state including Indianapolis, Hamilton County, and Delaware County. These trail systems include the Cardinal Greenway, Monon Trail, Midland Trace, White River Greenway, and Pennsy Trail. The Cardinal Greenway represents an especially significant opportunity for connection to the American Discovery Trail that spans from California to Washington, D.C.

Transit Systems

There are three transit systems within the Anderson MPA: City of Anderson Transit System (CATS), Transportation for Rural Areas of Madison County (TRAM), and Hancock Area Rural Transit (HART).

CATS strictly operates within the City of Anderson and includes a fixed-route system of seven routes originating from the Anderson Transit Terminal in downtown Anderson, as well as a demand-response service called Nifty Lift.

The TRAM system is a rural, demand-response service owned by Madison County serving all the county's communities. All trips within the county are eligible, except those originating and ending within the City of Anderson, since service there is provided by CATS. Similarly, Hancock County has a rural demand-response service operated by Hancock County Senior Services called Hancock Area Rural Transit (HART).

Map 2.02: CATS Routes and Stops

Gaston

Summitville

Elwood

Orestes

Alexandria

Muncie

Frankton

Yorktown

69

Edgewood

Chesterfield Daleville

Anderson

Lapel

Middletown

Pendleton

Sulpher
Springs

Noblesville

69

Ingalls

Fishers

Markleville
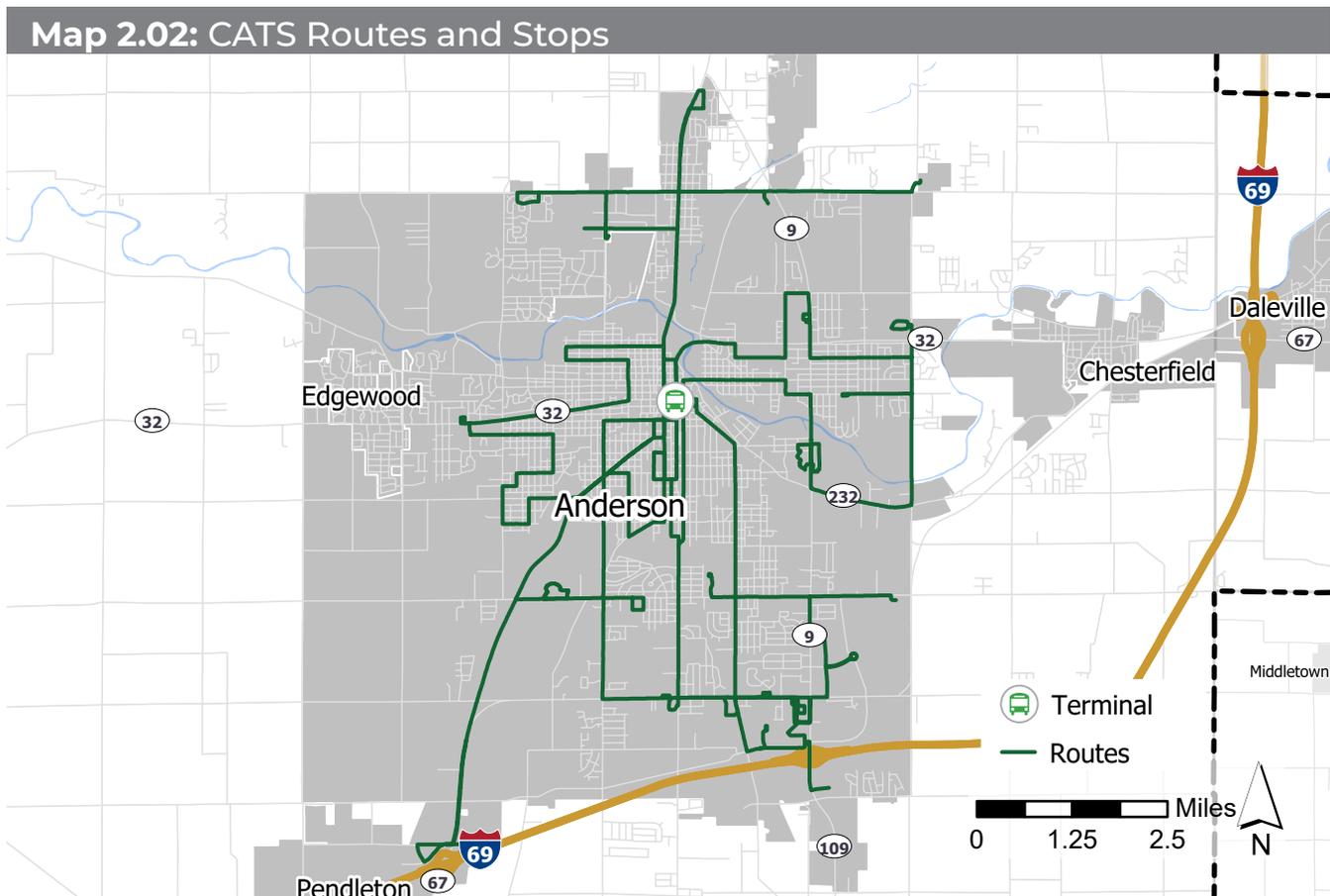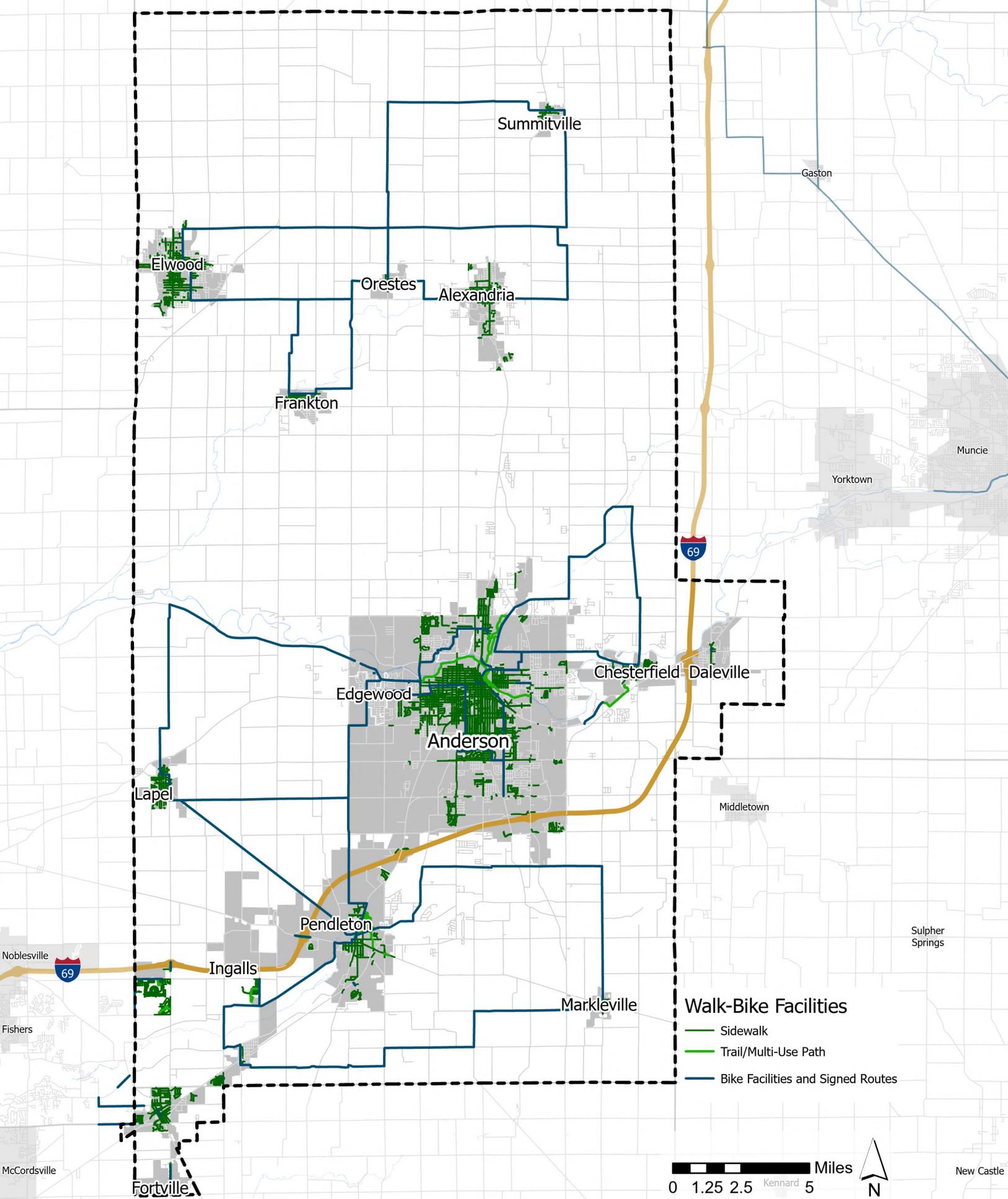
Walk-Bike Facilities

— Sidewalk

— Trail/Multi-Use Path

— Bike Facilities and Signed Routes

McCordsville

New Castle

Miles

0   1.25 2.5   5

Kennard

N

Fortville

Wilkinson

Greensboro

There are wider regional bus connections as well. A neighboring rural transit system, the Hamilton County Express, provides connections from the Madison County line into Hamilton County. Miller Trailways is a regional extension of the national Greyhound Bus Service offering a route between Muncie and Indianapolis with connections in Anderson, Pendleton, and Fortville.

Railroad Corridors & Facilities

The rail system within the Anderson MPA includes 93.88 miles of track and is operated by three railroads: CSX, Norfolk-Southern, and Central Indiana & Western (CEIW). CSX owns the Indianapolis-Cleveland line formerly operated by Conrail. This rail line connects Fortville, Ingalls, Pendleton, Chesterfield, and Daleville. In addition to the line, CSX operates a transfer and maintenance facility on the south side of Anderson. Norfolk-Southern owns the East-West line through northern Madison County serving businesses in Alexandria, Elwood, and Orestes. The CEIW Railroad is a shortline switch and terminal for grain elevators near Emporia, Frankton, and Lapel. All three railroads include connections through the City of Anderson.

Air Service

The Anderson MPA is primarily served by the Anderson Municipal Airport located between the Town of Chesterfield and the City of Anderson along the White River. This is a commercially rated airport handling a considerable amount of traffic each year. The airport averages 53 flights per day with just under 100 aircraft based there.

The Anderson facility provides local and national freight services. However, the Indianapolis International Airport, approximately a one-hour drive from downtown Anderson west of I-465 and north of I-70, provides commercial passenger service to state, national, and international airports. In addition, two other smaller airports serve the broader region: the Indianapolis Regional Airport and the Indianapolis Metropolitan Airport. The Indianapolis Regional Airport, also known as Mount Comfort Airport, is located 15 minutes south of downtown Fortville. The Indianapolis Metropolitan Airport is located 0.8 miles west of I-69 near Allisonville Road.

There is also one public use airport in Alexandria, and four small private airports located near Frankton, Pendleton, and Fortville that primarily serve local recreational pilots.

ITS Infrastructure

Intelligent Transportation Systems (ITS) are intended to increase system efficiency and enhance mobility. ITS refers to a wide range of technological methods that communicate information to transportation system users. Traditionally, this referred to infrastructure such as dynamic message signs and traffic route diversions. However, ITS has quickly evolved as cell phones, Global Positioning Systems (GPS) devices, and individual vehicles have become more interconnected and automated. Future ITS will likely develop around communication to individual vehicles and incorporation of live data. Intelligent traffic signal control systems, for example, update traffic signal timing based on the number of

vehicles going through an intersection or traveling along a corridor in real-time.

ITS Infrastructure is limited across the Anderson MPA but has been installed along two important corridors: I-69 and Dr. Martin Luther King, Jr. Boulevard (MLK) in Anderson. INDOT has installed three dynamic message signs at critical points along the I-69 corridor to provide travel times, weather/construction/crash warnings, and additional messaging for statewide emergencies like amber alerts. Along MLK, the City of Anderson has installed a combination of static and dynamic signage to alert and redirect traffic when the road is blocked by a train at the railroad crossing between 25th and 38th Streets. The signage helps avoid delays as well as the unnecessary idling of car engines that contribute to air quality issues.

Map 2.04: ITS Infrastructure
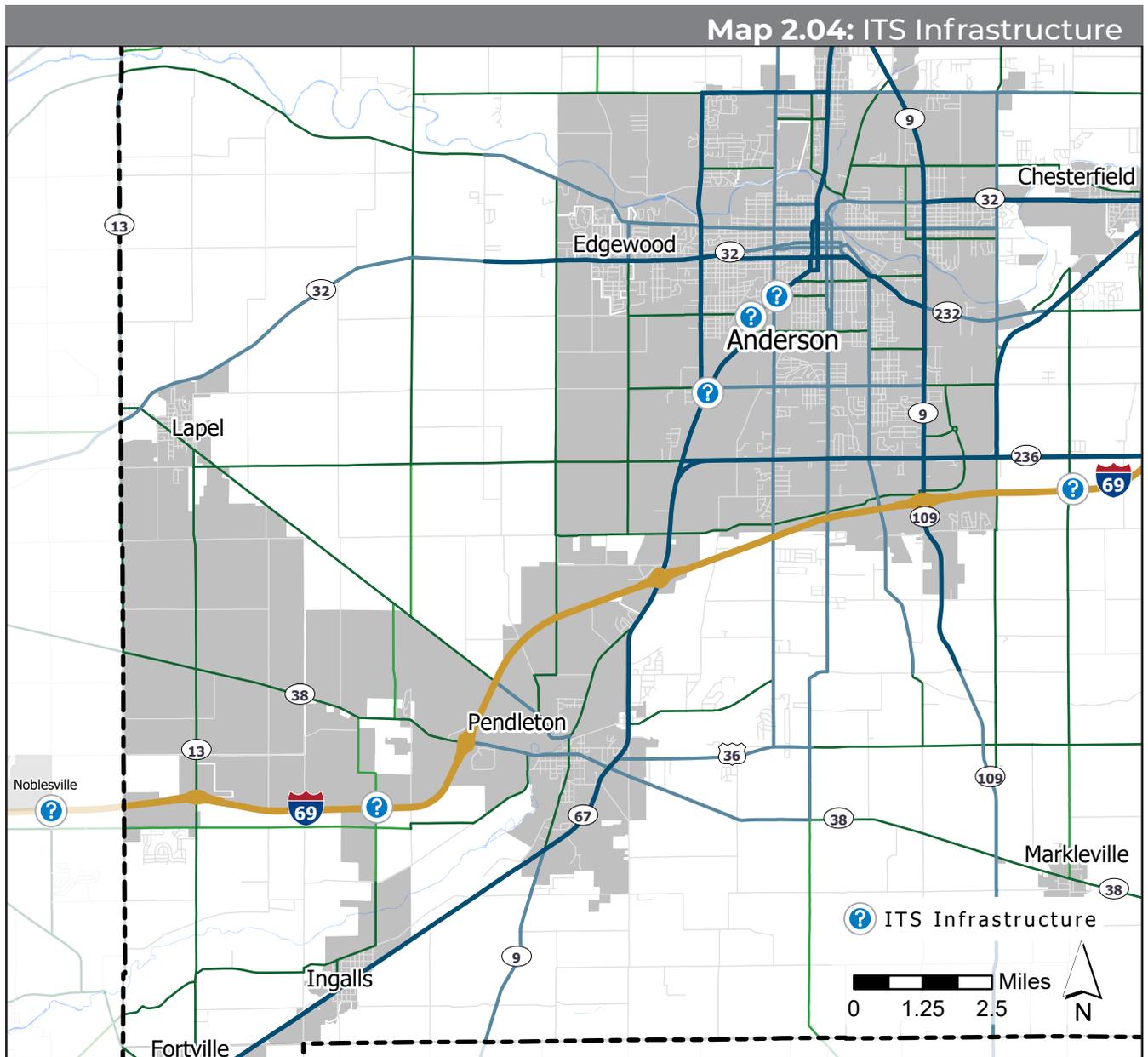
People

At its core, the transportation system exists to connect people to places, activities, and to each other. Since no two people face the exact same circumstances, each person's travel choices can vary depending on limitless characteristics. However, socioeconomic trends and patterns in population change provide insight on local needs so that transportation investments can be prioritized accordingly.

Population Change

Anderson MPA includes approximately 139,509 people in 55,881 households. Population change has a direct relationship with travel demands and more specifically, the number of trips occurring within the transportation system. More people equal more trips and increased travel demands. Past population trends indicate the likely amount and direction

of future population change, so population trends are a predictor of future travel demand.

The MPA grew approximately 3% between 1990 and 2000, or roughly 0.3% annually, but the rate of population growth has been declining since then. Between 1990 and 2015, the overall growth rate was just under 1.5%, or an estimated 0.06% annually. This value is exceptionally low compared to the rest of the nine-county central Indiana region where all other counties saw overall annualized growth rates between 1% and 2% during the same period.

Population changes vary significantly between each of the MPA's three subregions. Generally, population growth correlates to the proximity of a subregion to the City of Indianapolis: the further away from Indianapolis, the greater the population loss. While the MPA overall lost over 2,100 people from 2000 to 2015, the Southwest

Map 2.05: MPA Proximity to Indianapolis
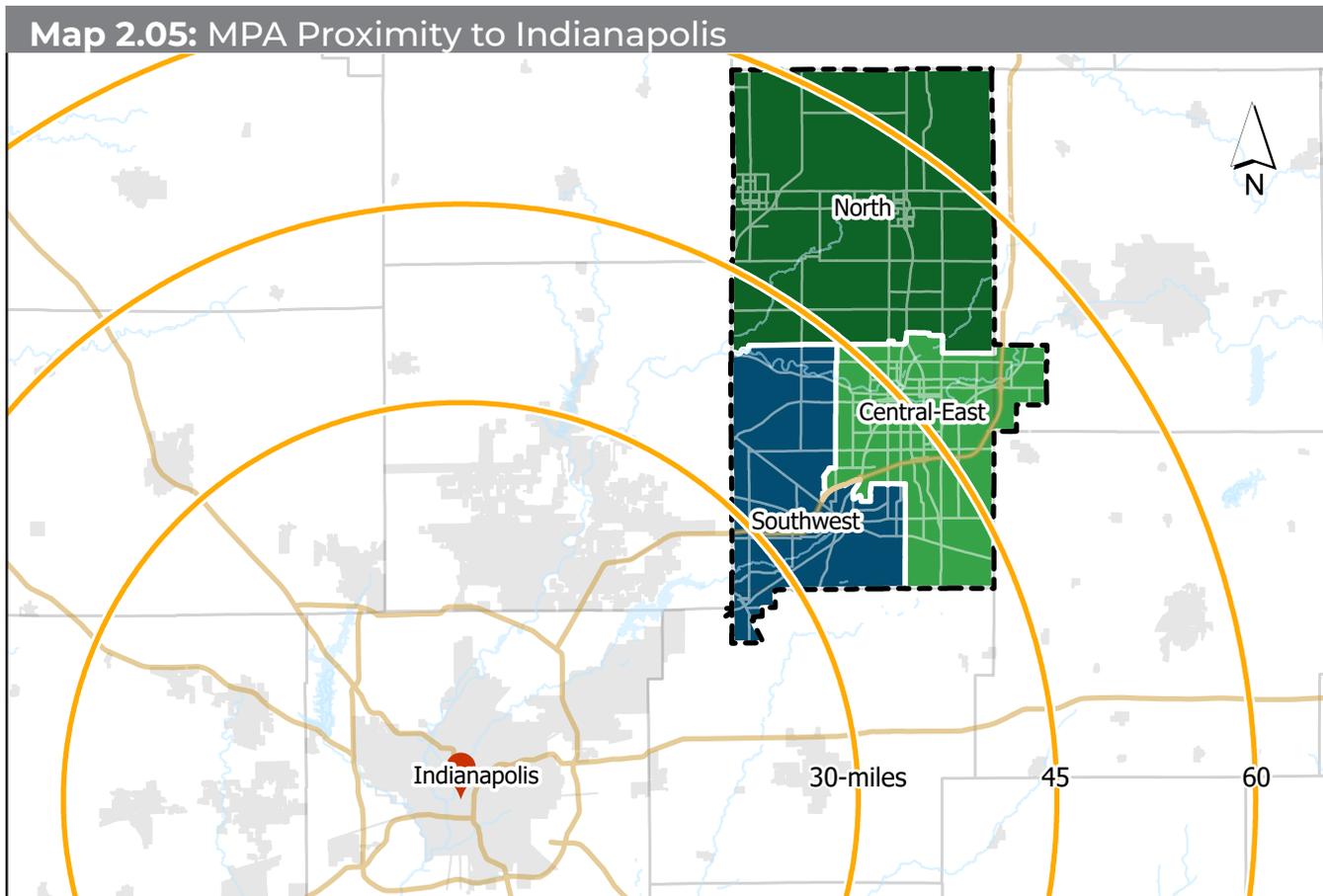
subregion gained over 5,800 people. Meaning, the North and Central-East subregions lost a combined 7,900 people. As the other two regions experience population loss, the Southwest subregion has grown to represent a larger share of the MPA population with its modest gains. Even though the region only contained 18% of the MPA's population in 2000, by 2015 it accounted for over 22%.

Population pyramids, also known as age-gender pyramids, plot the population by age group and gender to illustrate median age. Using a population pyramid, the median age of the Anderson MPA is estimated to be 40 years old. The median age of the nine-county central Indiana region is 37, the State of Indiana is 35, and the United States is 38. Thus, the population of the Anderson MPA is older by comparison.

Interpreting Population Pyramid Shapes

young population/high growth

old population/ population loss

balanced ages/stagnant growth
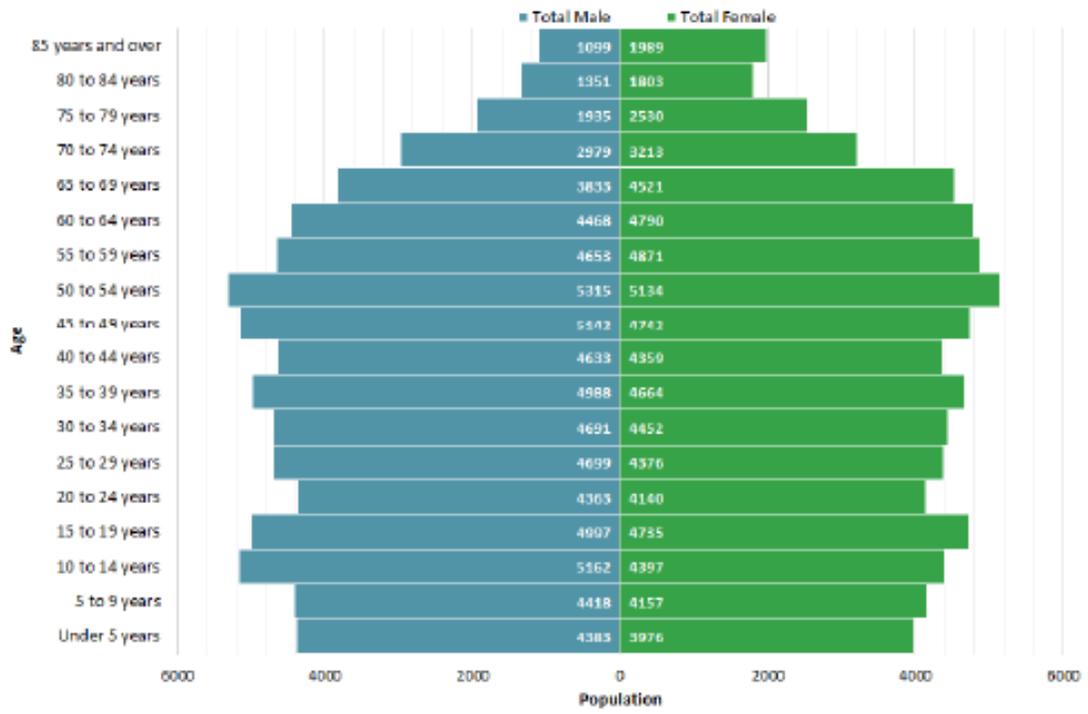
Figure 2.03: MPA Total Population by Age and Sex

Age	Total Male	Total Female
85 years and over	1099	1989
80 to 84 years	1351	1803
75 to 79 years	1935	2530
70 to 74 years	2979	3213
65 to 69 years	3833	4521
60 to 64 years	4468	4790
55 to 59 years	4653	4871
50 to 54 years	5315	5134
45 to 49 years	5142	4742
40 to 44 years	4633	4359
35 to 39 years	4988	4664
30 to 34 years	4691	4452
25 to 29 years	4699	4376
20 to 24 years	4363	4140
15 to 19 years	4907	4735
10 to 14 years	5162	4397
5 to 9 years	4418	4157
Under 5 years	4383	3976

In addition to median age, the shape of a population pyramid indicates expected population growth patterns. There is a relatively flat distribution for the Anderson MPA, meaning there is a stagnant population growth trend corroborating the population growth trend identified previously. There are slight differences in the growth trends of each subregion according to their specific population pyramids:

North

- Median Age – 41.3
- Population Pyramid – larger for older ages, indicating a loss of population historically that could continue without in-migration.

Central-East

- Median Age – 40.3
- Population Pyramid – mimics the larger region with a relatively flat distribution, indicating a flat or stagnant growth rate historically.

Southwest

- Median Age – 38.0
- Population Pyramid – shows a small portion of the population above the age of 55, indicating an influx of population with the potential for significant growth from young families.

Total Male   Total Female

North

Age	Total Male	Total Female
85+	2.1%	3.4%
80-84	2.3%	2.5%
75-79	3.3%	3.0%
70-74	4.8%	5.0%
65-69	5.5%	6.4%
60-64	7.3%	7.2%
55-59	7.0%	6.8%
50-54	7.5%	6.6%
45-49	7.2%	7.9%
40-44	5.8%	5.3%
35-39	6.5%	5.7%
30-34	4.5%	4.9%
25-29	5.6%	6.1%
20-24	5.4%	5.2%
15-19	6.9%	5.9%
10-14	6.9%	6.2%
5-9	5.8%	5.7%
Under 5	5.5%	6.2%

Central-East

Age	Total Male	Total Female
85+	1.9%	2.9%
80-84	1.8%	2.9%
75-79	2.6%	4.0%
70-74	3.9%	4.3%
65-69	5.7%	6.8%
60-64	6.5%	6.2%
55-59	6.3%	7.3%
50-54	6.8%	7.0%
45-49	5.9%	6.0%
40-44	6.4%	5.4%
35-39	5.7%	5.8%
30-34	6.4%	6.3%
25-29	6.8%	6.0%
20-24	7.1%	7.0%
15-19	6.1%	6.2%
10-14	6.8%	5.2%
5-9	6.5%	5.4%
Under 5	6.6%	5.3%

Southwest

Age	Total Male	Total Female
85+	0.3%	1.6%
80-84	1.6%	1.5%
75-79	2.1%	2.8%
70-74	3.8%	4.2%
65-69	4.2%	4.6%
60-64	4.5%	6.7%
55-59	5.9%	5.3%
50-54	8.0%	7.6%
45-49	8.8%	6.3%
40-44	6.6%	7.9%
35-39	8.9%	8.3%
30-34	8.0%	6.9%
25-29	6.5%	6.1%
20-24	4.4%	3.2%
15-19	8.0%	7.8%
10-14	7.6%	7.7%
5-9	5.4%	6.4%
Under 5	5.4%	5.1%

Figure 2.04: Subregion Population by Age and Sex

Underserved Populations

2050 inMotion examines racial minority, low-income, and disabled populations as typically underrepresented groups. Each of these categories represent groups that have been historically overlooked and face challenges in accessing opportunities.

Minority Populations

Although it does not typically play a role in travel choice, the geographic distribution of minority populations is relevant to the planning process. Understanding if there is a concentration of minority populations within a specific geographical area helps direct public outreach efforts in those areas to ensure a balance of input. Nearly 14% of the Anderson MPA's population is considered an ethnic or cultural minority. Anderson has the most diverse population, and the greatest concentration of ethnic or cultural minorities in the MPA (approximately 66%) is found on the west side of the city. Targeted engagement activities in this area help ensure that minority communities are included in the planning process.

Poverty Level

Poverty is defined as the condition of lacking financial resources and essentials to maintain a minimum standard of living. The US government establishes a threshold of household income, or poverty level, determined by the cost of living by location and household size. Even though it does not provide a complete picture of a minimum standard of living or what conditions are realized for those near this threshold, poverty level is a way to begin examining whether a transportation system supports all income levels.

Just under 16% of households in the MPA are below the poverty level. There are concentrations of poverty in Alexandria, northern Elwood, and throughout downtown Anderson, with the highest concentrations southeast of the downtown core. This area is estimated to have over 50% of households living in poverty.

Persons with Disabilities

According to the US Census Bureau, approximately 16% of the non-institutionalized population is disabled. The census defines disability status based on serious difficulties in any of four areas of basic function, as well as two activity categories:

- Functions
    - Hearing
    - Vision
    - Cognition
    - Ambulation
- Activities
    - Self-Care
    - Independent living

Six census tracts in the MPA have a population where more than 25% of persons have a disability. These six represent downtown and the census tracts just east and west of downtown Anderson. The census tract including most of Pendleton has the lowest percentage of persons with a disability with 9.9% of its population.

Windfall

W 1900 N
W 1800 N
W 1850 N
W 1600 N
W 1650 N
W 1400 N
W 1300 N
N 200 W
E 1800 N
N-125-E
N-150-E
N-300-E
Gaston

Summitville
9

13

28
Elwood
Orestes
Alexandria
28
E 1400 N
E 1300 N

13
37
W 1100 N
E 1100 N

N 700 W
N 900 W
Frankton
9

128
128
E 800 N
Yorktown
Muncie

W 600 N
E 600 N

W 500 N
N 200 W
E 500 N
N 500 E

W 300 N
E 300 N

69
32
W-8th-St-Rd
E 200 N
W 400 S
Daleville

13
9
Chesterfield
67

32
Edgewood
32
S 500 E

Anderson
232
Middletown

W 38th St
W 200 S
S 600 W

Lapel
W 300 S
W 53rd St
236
S 300 E

Old SR 132
S New Columbus Rd
S 200 E

69
Sulpher
Springs

38
Noblesville
Pendleton
36
E 700 S
109
S 400 E

13
67
38

W 800 S
Ingalls
Markleville

Fishers

S 300 W

W 1100 S
E 1100 S
Fortville
9

McCordsville

234
Wilkinson
Shirley
Lawrence

Kennard

Greensboro

% Minority

0

100

Miles
0   1.25 2.5   5

N

Map legend

% Below Poverty

0

100

Miles
0 1.25 2.5 5

Kennard

N

W 1900 N
W 1800 N
W 1850 N
E 1800 N
Windfall
13
W 1600 N
W 1650 N
N 200 W
E 1650 N
N 125 E
N 150 E
N 300 E
Gaston
Summitville
9
W 1400 N
E 1400 N
W 1300 N
E 1300 N
28
28
Elwood
Orestes
Alexandria
E 1100 N
13
37
W 1100 N
N 700 W
Frankton
128
128
E 800 N
N 900 W
9
E 600 N
W 600 N
N 200 W
E 500 N
N 500 E
Yorktown
W 500 N
Muncie
N 600 W
E 300 N
W 300 N
69
32
W 8th St Rd
E 200 N
W 400 S
13
9
Daleville
Chesterfield
Edgewood
32
32
67
232
Anderson
S 500 E
32
W 200 S
W 38th St
Middletown
Lapel
W 300 S
W 53rd St
236
S 600 W
Old SR 132
S 300 E
Noblesville
38
69
Sulpher
Springs
13
Pendleton
S 100 W
36
E 700 S
S New Columbus Rd
S 200 E
W 800 S
67
38
109
S 400 E
Fishers
Markleville
Ingalls
E 1100 S
9
Fortville
McCordsville
Kennard
234
Lawrence
Wilkinson
Shirley
Greensboro

% with Disability

0

100

Miles

0   1.25   2.5   5

N

Health

In 2016, Indiana was ranked 10th in the nation as the most obese state, and this ranking continues to be a significant concern for public health and planning officials. In a state with poor health rankings, the Anderson region ranks among the worst. The connection between chronic health diseases, such as obesity and diabetes, and physical activity levels is well documented. Since the built environment plays a major role in physical activity and access to services, MCCOG developed a *Health Impact Assessment* (HIA) that takes a detailed look at community health and recommends strategies for improvement.

Health trends

The MCCOG HIA uses data from the Center for Disease Control (CDC) and Robert Wood Johnson Foundation (RWJF) County Health Rankings to gain insight on three interrelated health measures: physical inactivity, obesity, and diabetes.

Compared to the other eight counties of the Indianapolis Metropolitan Region, Madison County consistently ranks the worst across all three measures[1,2]. While Delaware and Hancock Counties generally rank better than Madison County, they still show opportunity for improvement.

Health Vulnerability Index

Health data is generally not available at smaller geographies than the county level, so it is difficult to identify health trends at a smaller, local scale. The MCCOG HIA included the development of a simple Health Vulnerability Index (HVI) to identify areas that are likely to have greater health issues within the MPA. The HVI combines six census tract characteristics that have been tied to health through research:

- Age – Percent of the population 60 years and older
- Minority Status – Percent of the population racial or ethnic minority
- Poverty Status – Percent of the population below the poverty level
- SNAP Benefits – Percent of households receiving SNAP benefits
- Vehicle Availability – Percent of households without a vehicle
- Insurance Availability – Percent of the population without insurance

Age, minority status, and poverty status are the most prevalent in research and are weighted higher than the other three characteristics as part of the HVI. The latter three characteristics were included to add sensitivity for measures of access to nutritional food, transportation, and healthcare.

The HVI illustrates areas of higher vulnerability throughout the City of Anderson and communities in the North subregion. The results especially highlight the south and west sides of the downtown Anderson area.

Figure 2.05: Health Trends - Physical Inactivity

Total percentage (%) of population that is physically inactive, age 20 and older
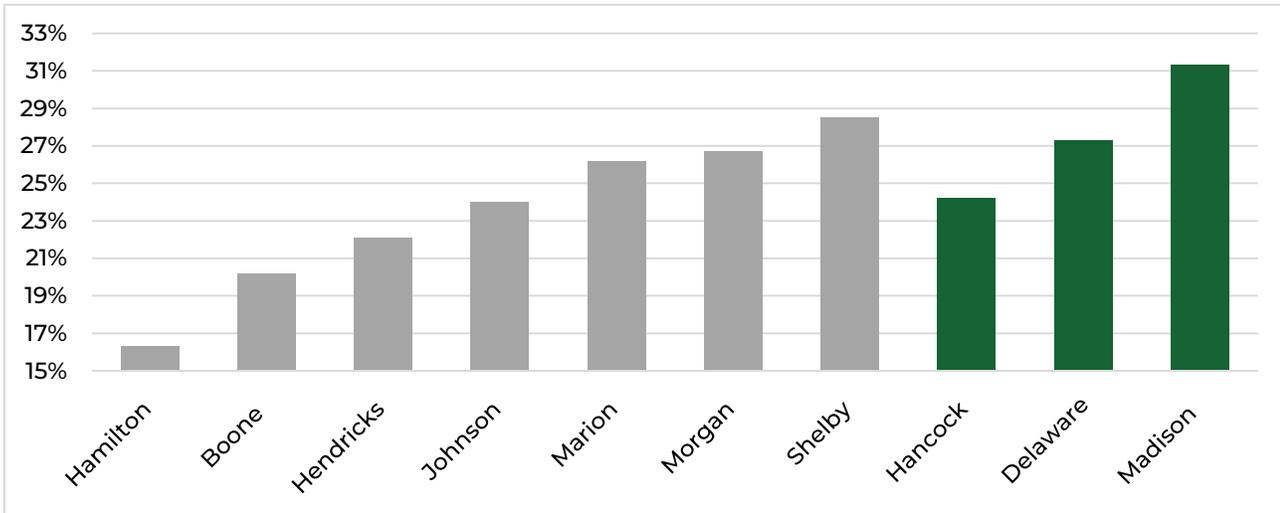
Figure 2.06: Health Trends - Obesity

Total percentage (%) of population that is obese, age 20 and older
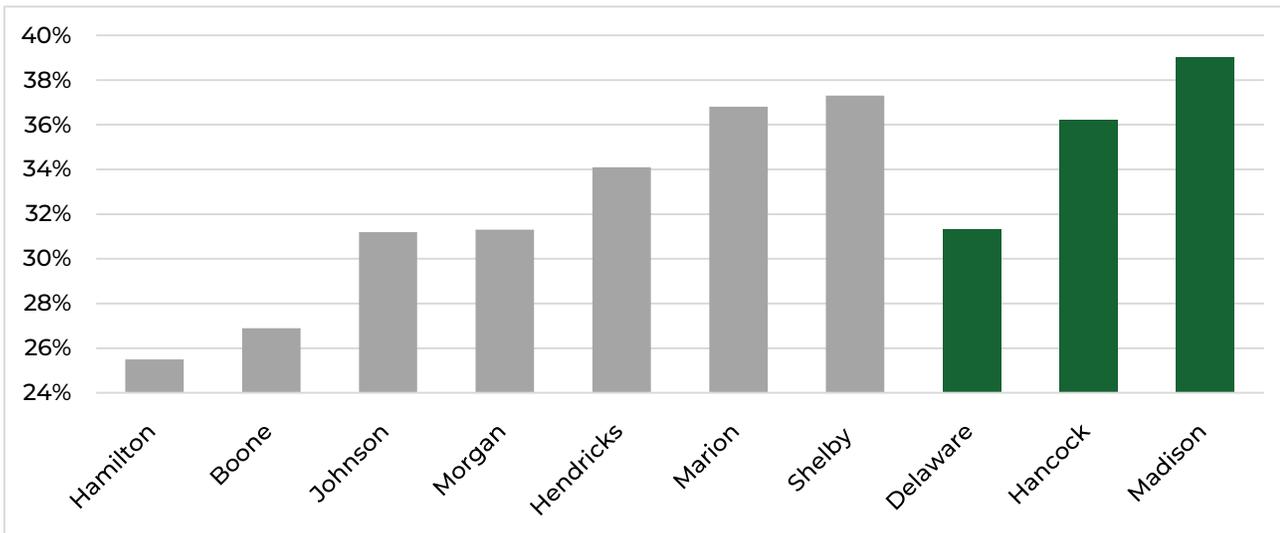
Figure 2.07: Health Trends - Diabetes

Total percentage (%) of population that is diabetic, age 20 and older
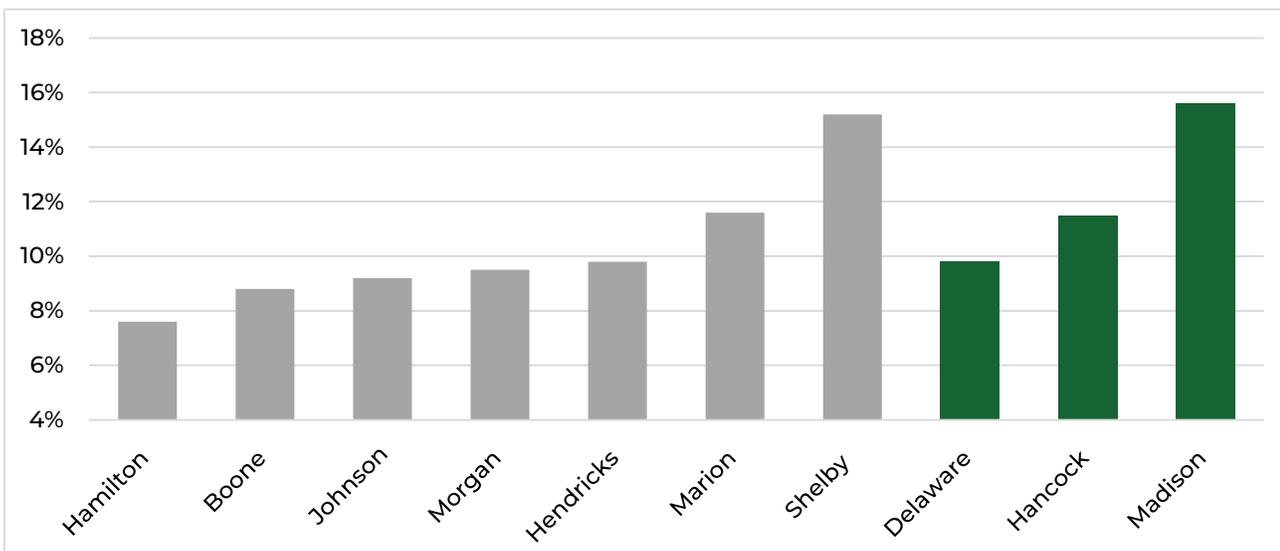
Walk Access Tool

In addition to the HVI, the MCCOG HIA uses a Walk Access Tool to illustrate the level of walk access to certain destinations across the MPA. The tool uses a network-based approach including sidewalk and trail infrastructure to determine the amount of population and jobs within set walk times from one of six destination types:

- Parks
- Bus stops
- Grocery and food stores
- Schools
- Medical services
- Government services

Based off the Walk Access Tool results, parks had the highest level of walk accessibility and primary care facilities had the lowest. However, overall, the analysis revealed low levels of accessibility for five out of the six Destination Types in relation to the estimated population. Three of these destination types are especially emblematic of the effect that transportation can have on health: grocery and food stores, medical services, and parks.

Overlaying the results of the walk access tool with the HVI identifies locations with the greatest potential for positive impacts on health through built environment improvements,

such as adding sidewalk infrastructure. Only 10% of the MPA is within a 10-minute walk of a grocery store, and a significant gap is evident on the west side of Anderson's downtown area--one of the most vulnerable populations identified in the HVI. Access to medical facilities is especially important for the elderly, a population with higher representation in the North subregion. Since only 7% of the MPA population is within a 10-minute walk of a health care provider, the North subregion illustrates a gap in connectivity to vital services. Finally, while the MPA offers many parks and open spaces, only 16% of the population is within a 10-minute walk of these amenities. This presents a significant barrier to physical activity levels.

The HVI and Walk Access Tool give insight into the MPA's state of health by highlighting potentially sensitive or underserved areas of the community. The HVI reveals which parts of the region have the highest proportion of health-vulnerable people, while the Walk Access Tool shows areas where limited access to services hampers public health. Where the two overlap indicates locations that are most likely to continue struggling with physical inactivity, obesity, and diabetes; however, these locations may also benefit the most from infrastructure investment.

HVI

0.00

1.00

Miles

0   1.25 2.5   5

N

Edgewood

Raible Ave

Nichol Ave

32

Madison Ave

E 14th St

W 22nd St

Anderson

W 38th St

Madison Ave

MLK Jr Blvd

32

9

32

232

9

Access Overlay
— Sidewalk
— Trail
Grocery Access
■ 5-min walk
■ 10-min walk
■ 20-min walk

Miles
0   0.5   1
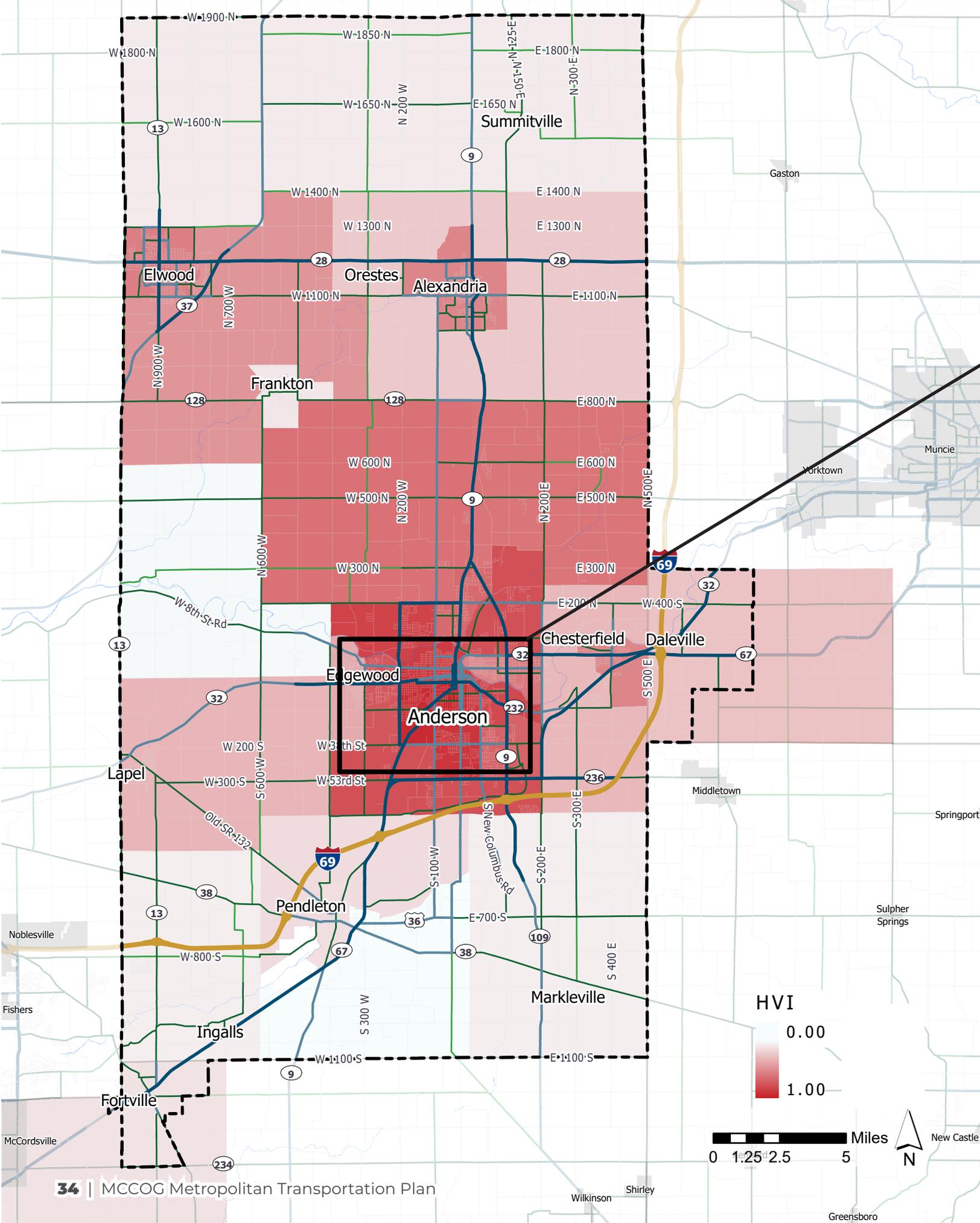
N
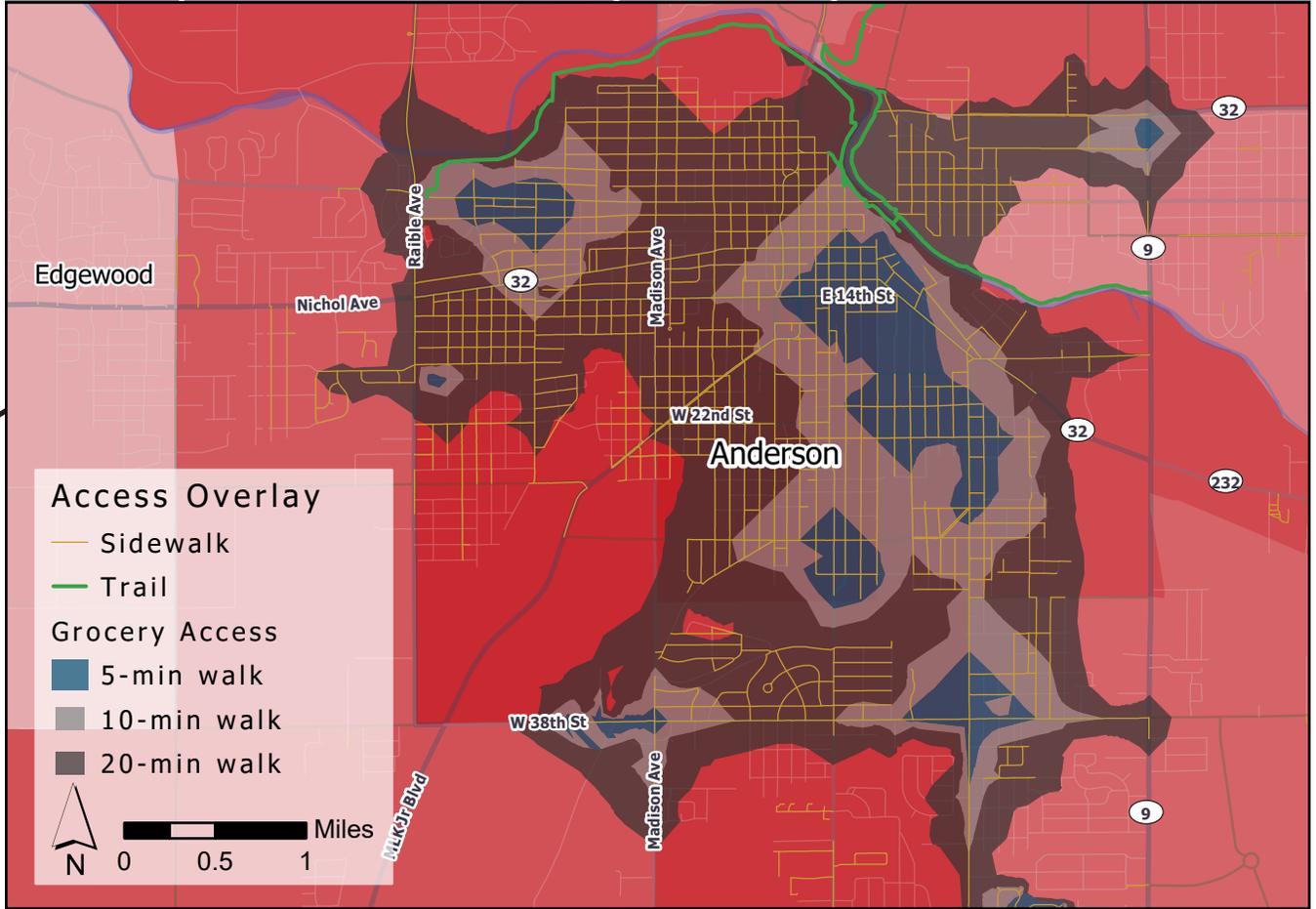
These maps depict health vulnerability around the MPA. The most intense red represents the most vulnerable areas. Walk access to grocery stores is overlaid in the example above, showing the area within a 5 minute, 10 minute, and 20 minute walk to a grocery store. The table of results below shows what percentage of the population is covered within this area. More information on the walk study and HVI method can be found in the appendix.

Table 2.01: Summary of Walk Access Study Results

Destination Type	% of Population			% of Employment		
	5-minute	10-minute	20-minute	5-minute	10-minute	20-minute
Parks	6.4	16.4	30.0	12.7	24.1	36.9
Grocery & Food Stores	3.4	9.7	23.0	3.5	15.3	30.1
Bus Stops	6.8	13.7	19.9	13.1	22.3	27.9
Primary Care Facilities	2.5	7.3	15.3	5.1	14.4	23.5
Schools	2.5	9.7	21.0	4.2	16.4	28.2
Government Services	3.8	10.5	24.2	11.4	18.6	33.3

Figure 2.08: Fatal Crashes per 100mVMT
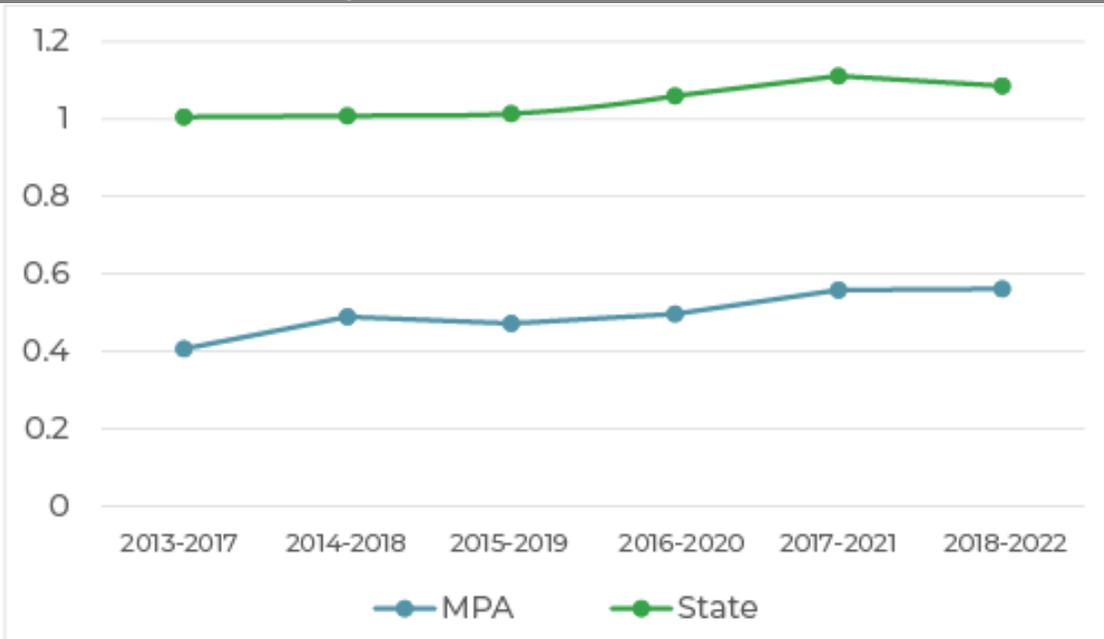
Figure 2.09: Rolling Average Serious Injury Rate
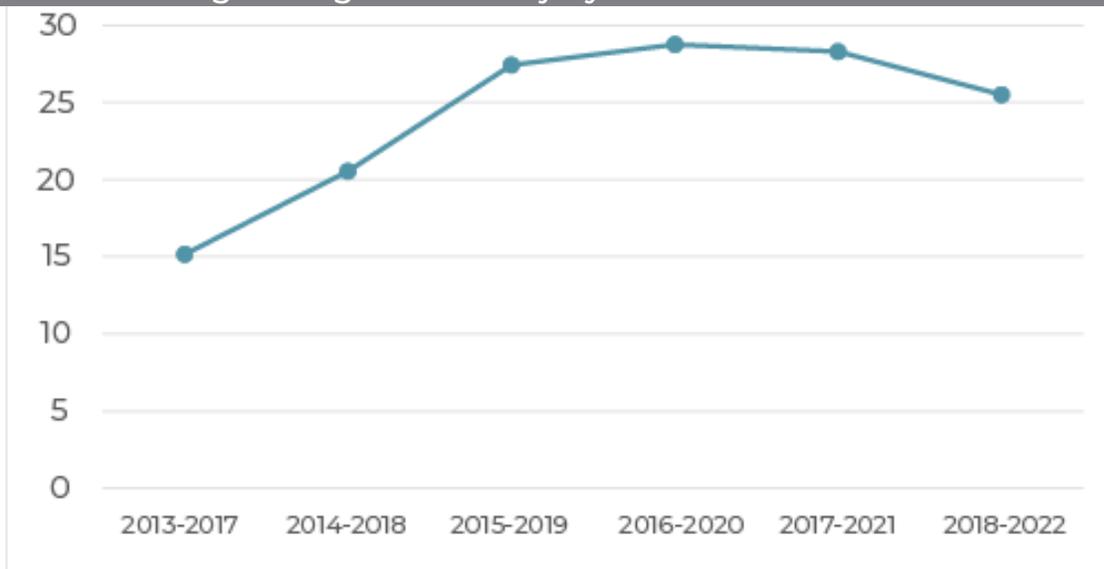
Figure 2.10: Nonmotorized Crashes
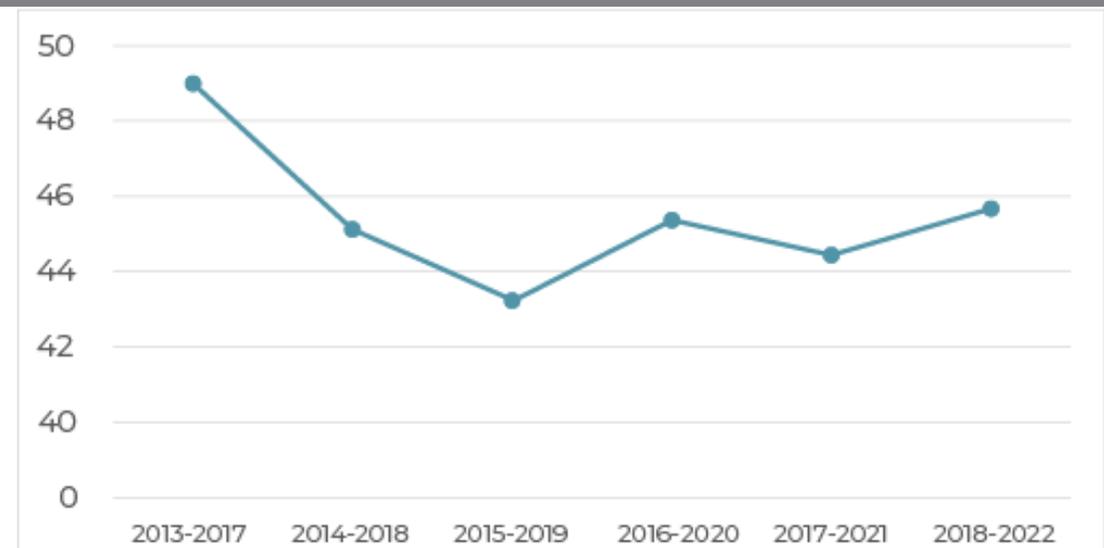
Crash Severity Ratings – KABCO

The KABCO injury scale categorizes crashes by severity for use in crash intensity and cost analyses. KABCO ratings can be used to weight crash densities by severity to identify locations where there are not only high numbers of crashes, but concentrations of more severe crashes.

K	Fatal Injury: any injury that results in death within a 30-day period after the crash occurred.
A	Incapacitating Injury: a non-fatal injury that prevents the injured person from walking, driving, or normally continuing they were capable of before the injury. Hospitalization is usually required.
B	Non-incapacitating Injury: an injury, other than fatal or incapacitating, which is evident to the officer at the scene. Hospitalization is not usually required.
C	Possible Injury: any injury reported or claimed which is not visible.
O	No Injury: no injury reported or claimed. Property damage only.

Safety

Safety is an important consideration when reviewing community health and the role of the transportation system. Safety is evaluated by using five measures:

- Number of fatalities
- Fatalities per 100 million vehicle miles traveled
- Number of serious injuries (KABCO A level)
- Serious injuries per 100 million vehicle miles traveled
- Number of non-motorized fatalities and serious injuries.

Rolling five-year crash statistics were calculated to compare the Anderson MPA with the State of Indiana. A rolling five-year average limits year to year variations from the random nature of crashes to provide a clear trend. Between 2019 and 2021, the Anderson MPA consistently increased in its number and rate of fatalities. Indiana's rate of fatalities remained around 1.00 in the same time period and the number of fatalities has increased.

At first glance, the number and rate of serious injuries increases rapidly from 2013-2017 to 2015-2019. This increase is likely due to a KABCO definition change in 2015, but there is no way to re-analyze the crash records because the definition change directly modified the reporting. The definition change was reversed in 2017 and changed again in 2022. An updated comparison for serious injury crashes is not meaningful until the 2015,2016 and 2022 data is no longer used, which should return the number and rate of serious injuries to average levels shown during the 2017 to 2021 rolling period.

In 2020, despite a reduction in vehicular travel due to COVID-19, fatalities increased. In 2021 the increase in fatalities continued, though the fatality rate dropped slightly as travel returned. The Anderson MPA & Indiana mirror national trends, with similar stabilization and a spike in 2020 and 2021.

Places

The Anderson MPA consists of 3 cities, 12 towns, and 24 unincorporated communities. Each one includes a variety of places with their own unique characteristics that attract people and generate activity. Understanding the relationships between various places within a transportation system is key to future decision-making.

Specific places can be grouped into Place Types. Each type exhibits similar traits, and this helps explain the role they play in the MPA. For *2050 inMotion*, types were identified for further review based on the following unique characteristics:

- Accessibility
- Character
- Activity Diversity
- Walkability
- Natural Areas

Place Overview
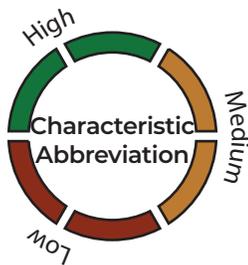
To simplify comparison, characteristics of each place are summarized with an overview graphic. The overview graphic for each characteristic illustrates how the specific place generally scores on a scale of low, medium, and high with two bars per ranking. In other words, a place with incredibly high accessibility will have a complete circle for AC.

Accessibility

When identifying places, accessibility refers to the ease of reaching and interacting with destinations. Both the destination type and the measure of ease or cost can be defined in various ways; however, the higher the number of destinations that can be reached with as little cost as possible results in a higher level of accessibility. Estimated driving times were assessed to measure accessibilities to employment, retail, and general activities.

Character

The character of a place can be defined in various ways, but here it is the urban-rural classification as determined by economic intensity. Rural, suburban, mixed urban, and central business district areas support different travel behaviors, personal interactions, and activity levels. *2050 inMotion* examines the concentration of employment and household population while identifying the natural breaking points to determine the urban-rural character of each area within the MPA.

Activity Diversity

Places attract more activity where there is a mix of opportunities for people to eat, live, work, and play. By identifying both the availability and the likelihood of interaction between nearby housing, general employers, and retail or service employers, the diversity of activities can be measured. The proximity of diverse activity types encourages short non-motorized trips, which in turn reduces the pressure on the roadway network. These non-motorized connections include sidewalks, trails, and bike lanes.

Walkability

Places are built for people, and the simplest way for people to move is by walking. Walkability, the measure of how friendly an area

is to walk, is an important aspect in defining "place." Walkability can be defined by reviewing population densities, employment densities, the balance of jobs and housing, the availability/comfort of pedestrian facilities, and the number of people, households, and businesses within walking distance of each other.

Natural Areas

Nature is consistently identified as an essential element in creating and sustaining places. Nature contributes to social cohesion, thriving people, thriving neighborhoods, and thriving communities, which is illustrated through the popularity of parks, greenways, and waterfronts.

Examining each of these aspects both individually and holistically helps define the types of places that attract people and generate activities across the MPA. For *2050 inMotion*, five specific place types were identified:

- Downtown Areas
- Corridors
- Neighborhoods
- Interchanges
- Attractions

These were identified for further review to understand their locations, connections to other places, and the activities each one supports. Examples of specific places within the Anderson MPA illustrate the variation in place types and associated issues.

Downtown Areas

Typically, the commercial, cultural, and historic core of a community is its downtown area. Downtown areas represent the central location of activity, and in most cases are considered the Central Business District (CBD). Downtown areas are often the most walkable and include more live-work buildings, mixed-use structures, and governmental/community service offices.

Anderson

Downtown Anderson consists of approximately 50 blocks in the city's core, roughly bordered by the White River along the north and east, the CSX railroad to the south, and Brown-Delaware Street to the west. Portions of downtown Anderson and its adjacent areas are included in three historic districts listed on the National Register of Historic Places (NRHP), which are evidence of the historic character that remains today. These include the Anderson Downtown Historic District, West 8th Street Historic District, and the West Central Historic District.

Following traditional downtown development, the street grid was designed with relatively consistent block sizes and sidewalks throughout. Anderson was one of the largest manufacturing employment centers in the State of Indiana, so the roadway network

Place Types

- **Downtown Area**
- **Corridor**
- **Neighborhood**
- **Interchange**
- **Attraction**

Miles
0   1.25 2.5   5

N
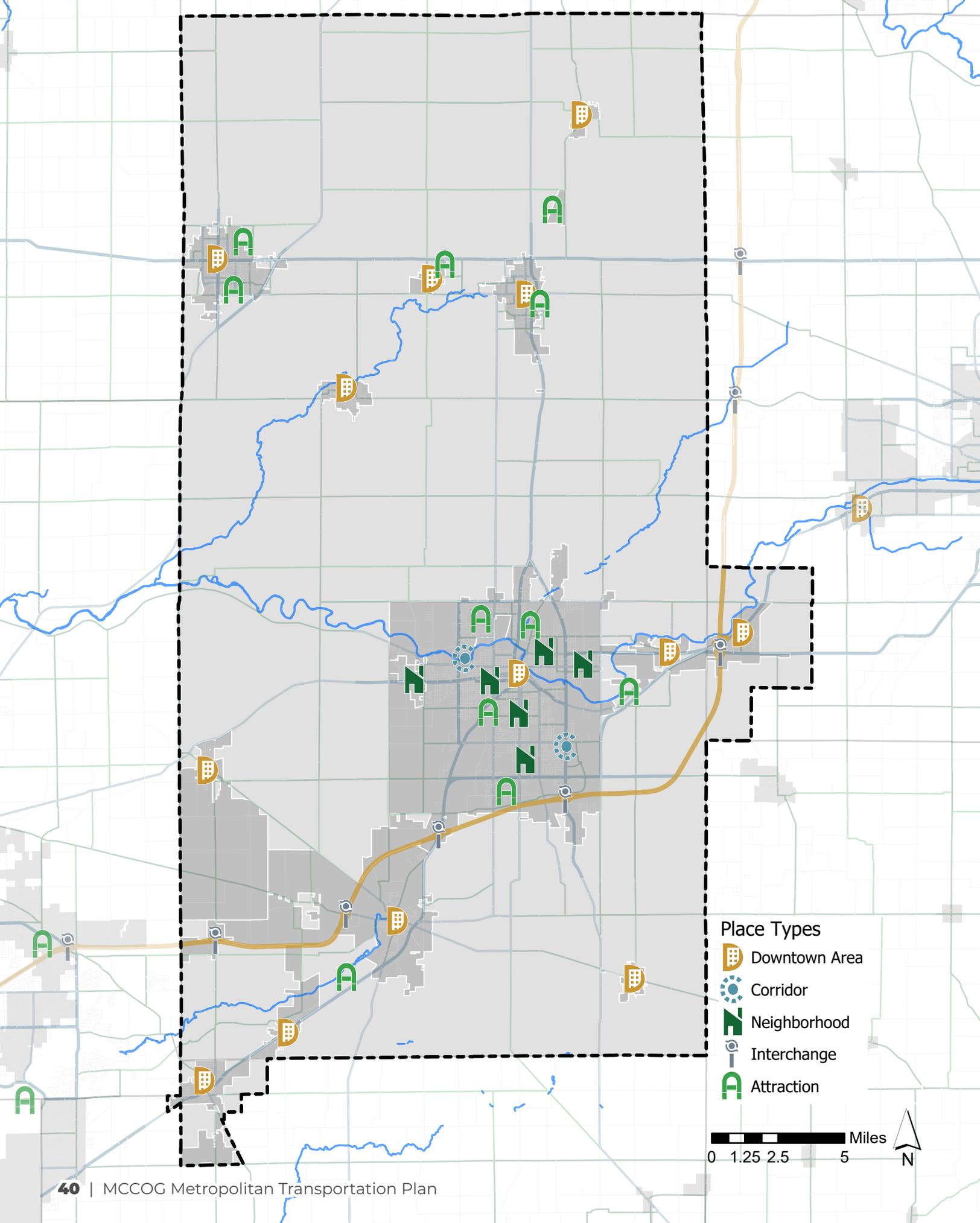
evolved to support it. The roadway network was designed with sets of wide, multi-lane one-way paired streets to serve high traffic volumes during shift changes. However, with the decline of the manufacturing industry, these one-way pairs are now too wide for the existing levels of traffic and are confusing to visitors.

Although there are still a variety of employers in downtown Anderson, they largely consist of governmental and community services. Nearly 9% of the Anderson MPA's employed workforce works in downtown. Downtown is relatively active during the day since the employment density is over 10 times the average. However, the area has little activity in the evenings due to several factors: the limited number of businesses open after 5 pm, the limited population living downtown, and the perception that the area is unsafe.

Pendleton

For the first five years of Madison County's formation, the Town of Pendleton served as the county seat and the epicenter of activity. Although the county seat moved to Anderson in 1828, Pendleton has continued to grow. In 1991, the Town of Pendleton became the second community in the State of Indiana to have the entirety of its early boundaries entered onto the NRHP.

Downtown Pendleton benefits from its proximity to Fall Creek, a tributary of the White River, and Falls Park, a 284-acre public park. Like downtown Anderson, downtown Pendleton serves as the economic and social center for the town by supporting approximately 1,300 people and 600 employees. It was also built using a gridded street system with an extensive sidewalk network that supports both motorized and non-motorized transportation.

Like many small towns in Indiana, downtown Pendleton is located at the intersection of two major roadways, and one of them connects directly to the interstate as well as supports significant commuter traffic. State Street, the Pendleton-controlled portion of SR-38, can experience significant levels of congestion during peak periods. As the only east-west connection through Pendleton, it links the town to both I-69 and the Noblesville area. As the town continues to experience growth pressure from the Indianapolis region, local traffic issues are expected to worsen.

Fortville

The Town of Fortville was built on a shifted street grid because it was originally located along the CSX rail line parallel to US-36. The downtown is split by the railroad, terminates at US-36, and consists of numerous restaurants, offices, and boutique shops. In addition to commercial activity, downtown Fortville is

home to nearly 2,500 people and is experiencing significant growth much like Pendleton.

Main / Maple Street links downtown Fortville to the cities of Fishers and Greenfield, while US-36 / SR-67 connects it to Indianapolis and Anderson. However, US-36 represents a major barrier to pedestrian connectivity between downtown and the neighborhoods to the south. The four-lane highway has limited signalized intersections and operates at speeds above 30 mph, which are dangerous conditions for non-motorized traffic.

Neighborhoods

Neighborhoods are areas where people live and interact with one another. Defining exact boundaries of a neighborhood is often difficult unless it is delineated by a specific subdivision or development. However, neighborhoods are typically developed organically over time by those who live there and by the corporation limits of an elementary school, a central gathering place, or a specific employment center. They may have unique identities or a distinct sense of place, for example a historic neighborhood or ethnic community.

West Anderson – Sweet 16

The area just west of downtown Anderson or *West Anderson* includes over 4.5% of the population and 5% of the employed workforce. The neighborhood was one of the first areas that developed adjacent to the downtown Anderson and includes portions of the West Central and 8th Street Historic Districts. In addition, this area includes the site of the original Anderson High School built in 1873 and its successor. In 2018, the neighborhood was redefined and reorganized as the "Sweet 16 Neighborhood" through a neighborhood planning process that resulted in the *Sweet 16 Quality of Life Plan* guided by the following vision statement:

> *"Anderson's Sweet 16 neighborhood is a community of choice for people of all ages... Bike and walking paths encourage residents to enjoy the area parks, and residents and visitors feel safe and enjoy the neighborly atmosphere."*

The Sweet 16 Quality of Life Plan outlined three transportation and infrastructure goals along with numerous action items to improve access and movement throughout the neighborhood. The goals focus on infrastructure improvements for transit, bicycles, and pedestrians that ensure safe connections for residents to jobs, services, and each other.

Anderson University – Park Place

Anderson University is a private Christian Church of God liberal arts college established in 1917 as the Anderson Bible Training School. The university has approximately 1,600 students enrolled and is closely linked with the surrounding Park Place neighborhood east of downtown Anderson. The neighborhood comprises just over 4% of employees in the MPA, most of whom work at the university. Anderson University-Park Place is bordered on the west by the White River and includes over 85 acres of park space.

The campus supports non-motorized transportation with an extensive sidewalk network connecting university facilities to surrounding residential areas. Since the neighborhood sits between downtown Anderson and Scatterfield Road, there are two main roadways linking the adjacent areas: University Boulevard / Main Street and 8th Street. In 2017, 8th Street was re-marked to include a shared parking and bike lane as part of a repaving project.

Corridors

While not often considered places themselves, some corridors maintain a continuous linear identity with significant features and characteristics. Corridors often have a subset of locations without sufficient density or a distinct identity to be considered individual places. These characteristics are especially evident along waterways like rivers or canals, as well as primary roadways and state-owned roads.

White River

One of the primary waterways in Indiana is the White River that generally travels north to south through most of the state. In Madison County, the river runs through the City of Anderson, the Town of Chesterfield, and the Town of Daleville. The area surrounding the White River corridor contains an estimated 5% of the Anderson MPA's population and just under 7% of its employed workforce. There are several parks and public open spaces linked by the corridor, including Mounds State Park and the Rangeline Nature Preserve; thus, the corridor is a significant recreation area for the region. In addition, five miles of the corridor include paved multi-use paths or trails interspersed with segments of undesignated dirt paths. The corridor is also actively used for both canoeing and kayaking with many designated boat launches.

Mega-regionally, the White River corridor connects the downtowns of the Cities of Muncie, Anderson, Noblesville, and Indianapolis with approximately 84 miles of riverfront that also

includes the Cities of Fishers and Carmel. The White River represents a significant opportunity to link the 60-mile-long Cardinal Greenway in Muncie and the Monon Trail in Indianapolis to create a mega-regional recreational trail. The White River Trail Systems have been identified as important intersecting links in the Visionary Trail System in the *2016 Indiana State Trails Plan*.

Scatterfield Road

The Scatterfield Road corridor represents a significant economic generator for the City of Anderson and all of Madison County, because it links several significant destinations along a portion of the SR-9 corridor beginning at I-69 Exit 226 and intersecting northward with SR-32/University Boulevard. The corridor links Hoosier Park Racing & Casino, the Flagship Enterprise Center, Purdue Polytechnic Institute, and Anderson University. While downtown Anderson represents the city's central business district, development along the Scatterfield Road corridor (SR-9) is primarily centered on retail businesses, service industries, restaurants, and hotels. This corridor supports nearly 14% of the Anderson MPA's employed workforce and the area includes over 9% of the population.

The Scatterfield Road corridor was originally built as a bypass to make it possible to move quickly from north to south through the city, because no other direct north-south connections existed previously. The area developed over time, beginning with businesses attracted by the high level of access to the interstate and consequently supporting interstate traffic, including trucking industries. As development spread farther north along the corridor, Scatterfield gained its own sense of place. It transitioned from moving cars quickly north to south into a situation where access to businesses and attractions became required. The combination of high access and high speed typically associated with a bypass increases the likelihood of more severe automobile crashes. These six miles of corridor account for nearly 14% of crashes within the Anderson MPA.

Since the corridor relies on I-69, the businesses are auto-centric, meaning nearly every location along the corridor includes large parking areas and provides little to no facilities for non-motorized movement. The corridor presents significant concerns for non-motorized safety. In 2019, MCCOG developed the *State Road 9 Non-Motorized Safety Study* to further investigate crashes involving non-motorized users and highlight opportunities for corridor safety improvements.

Beyond the core corridor, Scatterfield Road extends south of I-69 and eventually connects to I-70 and Knightstown at US-40. Scatterfield Road also extends north of SR-32 through North Anderson, merges with Broadway Street, and runs on to Alexandria, Marion, Huntington, and Fort Wayne.

Interchanges

Intersections along interstates at arterial and collector roads are known as interchanges. These nodes often develop with businesses that support auto-centric interstate traffic like fast food restaurants, gas stations, and truck stops. In addition, easy access is attractive for industrial land uses related to warehousing, transportation, and logistics. While interchanges are not traditionally considered attractions, the characteristic conglomeration of land uses and the challenges that arise define them as a type of place. There are five interchanges in the MPA along the I-69 corridor: Exits 214, 219, 222, 226, and 234.

Exit 214

This interchange is at the intersection of SR-13 & I-69 linking Lapel and Fortville. It is just one mile east of the Madison County line, so it is the closest interchange to the Indianapolis Metropolitan Area. This interchange is a significant node warranting specific attention as growth pressures continue to inch closer to the Madison County line.

Currently, over 3,000 people reside in the Summerlake housing development just south of the interchange at CR-800/136th Street. This area is under significant development pressure, and is not very walkable, lacks activity diversity, and its economic intensity/development density is below average for the

Anderson MPA. However, this place is unique since the municipalities of Ingalls, Pendleton, Lapel, Madison County, and Hamilton County intersect here along the SR-13 Corridor. This intersection poses significant challenges of development control, land use, and walkability.

Exit 219

This interchange is completely within the incorporated boundary of the Town of Pendleton at the intersection of SR-38 (State Street) and I-69. The Town of Pendleton continues to expand its incorporated boundaries to the north and west, but the interchange poses a significant barrier towards linking new development areas to downtown Pendleton and its historic core neighborhood. This interchange supports a relatively diverse number of activity types employing over 1,000 people. Some of the major employers and attractions are:

- Tractor Supply Company (TSC) - Pendleton Distribution Center
- South Madison Community School Corporation (SMCSC) - Administration Offices
- Pine Lake Fishing & Camping Resort
- GVC Mortgage, Incorporated
- Community Hospital Sports & Wellness Center
- Pendleton Place Apartment Complex

Even though the area is currently not very walkable, the Town of Pendleton has been working to improve pedestrian and bicycle connectivity. The town partnered with INDOT and MCCOG in 2019 to construct a pedestrian bridge over I-69. This area also continues experiencing development pressures as growth continues to move outward from the Indianapolis Metropolitan Area. Since there are many large undeveloped parcels available surrounding the interchange, it will evolve significantly.

Exit 222

This interchange is at the intersection of Martin Luther King, Jr. Boulevard, Pendleton Avenue (SR-9/SR-67), and I-69 where the incorporated areas of the City of Anderson and the Town of Pendleton connect. Developing in this area is often challenging because these neighboring communities are served by different utilities whose service areas do not always coincide with incorporated area boundaries. There is a large gravel pit operated by Irving Materials Incorporated (IMI) in the interchange's southeast corner and a residential subdivision to the southwest. This interchange's most significant feature is a regional business incubator and advanced stage business center, the Flagship Enterprise Center. The area contains more than 2,500 acres of land, only half of which has been developed, and provides a base of operations for numerous businesses and industries

including the Nestle Corporation, NTN & NTK, Federal Express, Conduent, and Carter Express.

Freight ingress and egress to the area is critical to its continued success because many of these businesses are either production or warehousing facilities. Another key component of this area is the dual high-speed freight rail (CSX) that connects several of these businesses through spurs. Even though this dual rail line strengthens the site's economic attractiveness, it often impedes access to Enterprise Drive, because the line crosses the road. This issue continues to be discussed and several infrastructure improvements have already been made to provide alternative access via 67th Street and Layton Road (CR 400).

Attractions

In addition to these place types, there are various destination types like parks, colleges, and large employment centers scattered throughout the Anderson MPA. These destinations have unique characteristics that attract people and generate activity.

Regional, community, and neighborhood parks provide direct access to natural spaces, recreational opportunities, and social gatherings. There are nearly 100 parks in the Anderson MPA varying in size and scale. Larger parks in the region include a trail system for walking and biking, but in most cases, they are not directly connected to the community. The MCCOG *Health Impact Assessment* estimates that just over 6% of the population is within a 5-minute walk of a park and only 30% are within a 20-minute walk.

Standalone businesses, industries, community services, and colleges such as Ivy Tech rely on driving accessibility to support operations and attract visitors. These destinations are more likely to locate near major roadways such

as I-69, US-36, and SR-9. Unique attractions across the Anderson MPA include but are not limited to:

- Ivy Tech Community College (Anderson)
- Community Hospital (Anderson)
- Shadyside Park (Anderson)
- Beulah Park & Madison County 4-H Fairgrounds (Alexandria)
- Callaway Park (Elwood)
- State Correctional Facilities (Pendleton)
- Poet Biorefining (Alexandria)
- Anderson Speedway (Anderson)
- Red Gold Distribution Center (Orestes)
- Red Gold Corporate Office (Elwood)

Activities

The purpose behind each trip a person takes is linked to the activity that is planned at the end—we take a trip to the store to shop, the park to play, or the office to work. Activities are also generated by businesses as they produce goods and provide services. The activity level of the Anderson MPA can be better understood by reviewing trip-making behavior and evolving regional employment.

Personal Activity

Daily activity varies significantly from person to person and family to family, but average trip rates and personal travel can be estimated by conducting surveys and collecting traffic counts to get an idea of regional activity. MCCOG conducted the *Heartland in Motion Transportation Study* (HIM) in 2014 to gain insight on regional travel and activity. HIM is the first household travel survey for the Anderson MPA since the 1970s and provides extensive household, person, and trip level data. Household trip rates illustrate the approximate amount of activity generated for each household. Trip rates vary significantly

Figure 2.11: Trip Rate by Household size
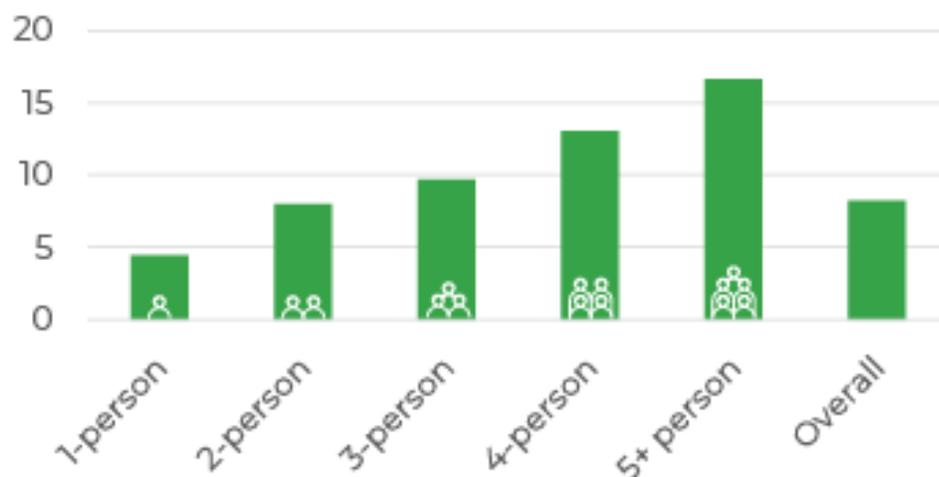
Figure 2.12: Per Capita Vehicle Miles Traveled
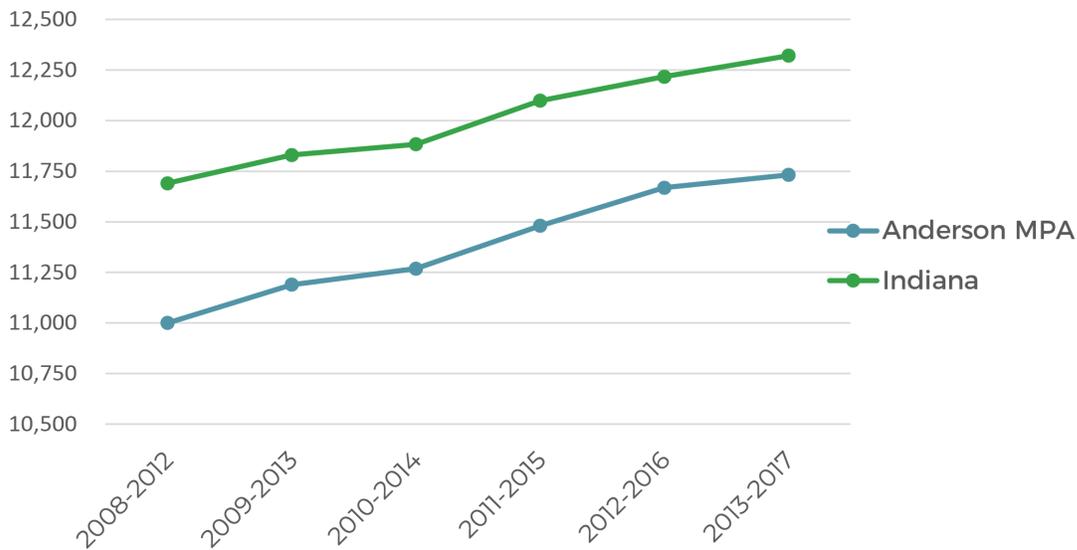
depending on the characteristics of the household and people living there but are typically shown by household size. After applying these estimated trip rates, the data indicated that the Anderson MPA produces over 400,000 personal trips daily.

To better illustrate the connection between personal daily trips and the use of the transportation system, *2050 inMotion* considers the number of vehicle miles traveled (VMT). VMT is an estimate of the total miles traveled on roadways within a defined area. VMT is generally assessed at two levels, daily and annual per capita vehicle miles traveled. Following national trends, the MPA has seen an increase in both daily and per capita VMT. Although there was a national reduction in VMT during the Great Recession from 2007 to 2009, rolling averages show that there is an overall upward trend.

Since 2008, the MPA's increasing VMT trend is nearly identical to that of the State of Indiana. The VMT per person has been and remains approximately 500 miles per year less than the state average. Within the Anderson MPA,

the annual VMT per person (average number of miles driven in a year by each person) is approximately 11,700 miles.

The distribution of VMT is usually linked to population density and the number of available amenities. In the Anderson MPA, the Central-East subregion is the most densely populated, followed by the Southwest subregion, and then the North subregion. A closer review of each subregion shows that even though the Central-East subregion comprises over 55% of the Anderson MPA's population, it only contributes to 44% of the total daily VMT. Conversely, the North subregion includes only 22% of the population but contributes to over 31% of the VMT. Proportionally more miles are traveled in the North subregion than in other subregions because the area is more rural; therefore, destinations are farther apart. The Southwest subregion also generates a slightly higher percentage of VMT than its population percentage of the MPA, which is likely due to its proximity to Indianapolis and the available jobs and amenities.
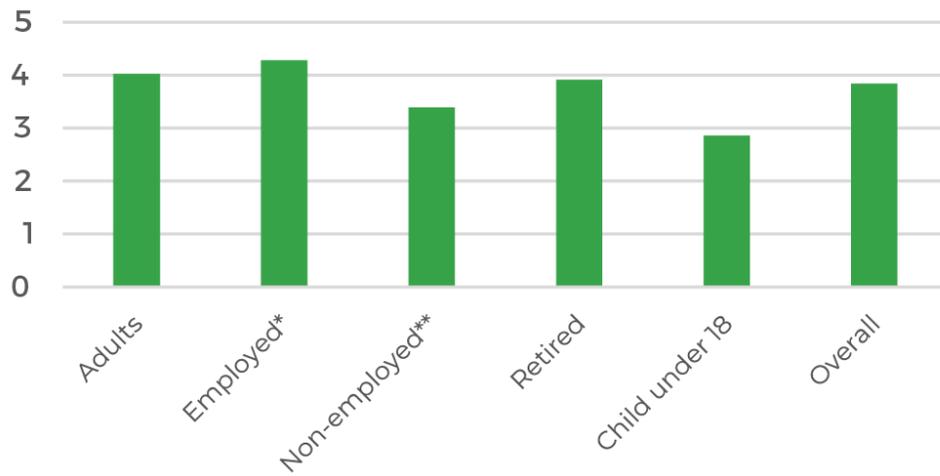
*Includes full-time, part-time, and self-employed adults
**Includes homemakers and unemployed adults

Commuting Patterns

Another way to look at trip rates is by employment status. Trips to and from work are generally the most consistent and are vital to understanding the impacts of economic development activities on regional employment opportunities.

Commuting patterns highlight vital corridors and indicate where future issues are likely to occur. The Census Transportation Planning Product (CTPP) is a version of American Community Survey (ACS) that has been specially tabulated by the US Census Bureau to support transportation planning efforts. One unique option available within the CTPP is County-to-County Flows that provide estimates of commuters from their home county to their work county. The most updated CTPP uses 2017-2021 ACS data.

2050 inMotion uses this information in three ways:

- Commuters coming to Anderson MPA Counties (Madison, Hancock, and Delaware)
- Commuters leaving from Anderson MPA Counties
- Commuters traveling between Anderson MPA Counties

However, when reviewing County-to-County Flow data, it is important to understand the difference between the home county labor force, county-employed labor force, and work county employees. Each county has an estimated labor force that represents the population over the age of 16 who are employed or actively seeking employment. The county labor force is not required to work in the county where they live to be counted as part of that county's labor force. The county labor force is further split into employed and unemployed participants. In addition, while each county has an estimated number of total employees who work in the county, they may not be included in the county labor force if they do not reside in the same county in which they work.

Map 2.12: Commuters from Anderson MPA
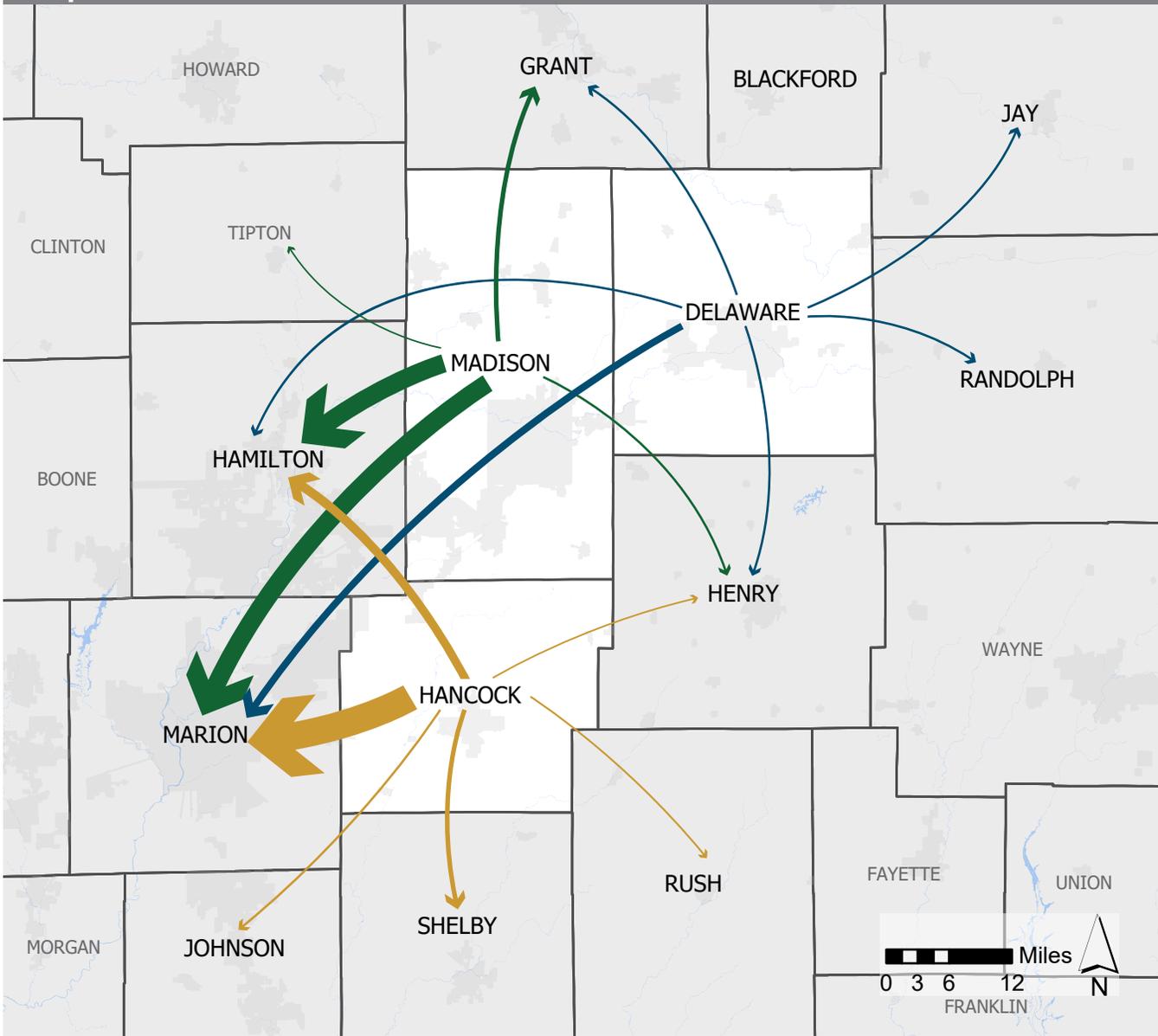
Table 2.02: Commuters from Anderson MPA

Delaware County, Indiana			Hancock County, Indiana			Madison County, Indiana		
To County	**Num**	**Pct**	**To County**	**Num**	**Pct**	**To County**	**Num**	**Pct**
Delaware	40,240	80.20	Marion	17,015	41.86	Madison	33,330	58.54
Madison	3,080	6.14	Hancock	16,250	39.98	Marion	7,805	13.71
Marion	1,485	2.96	Hamilton	2,820	6.94	Hamilton	7,470	13.12
Grant	1,085	2.16	Shelby	1,105	2.72	Delaware	2,840	4.99
Hamilton	955	1.90	Madison	990	2.44	Hancock	1,405	2.47
Henry	700	1.40	Henry	380	0.93	Grant	920	1.62
Randolph	500	1.00	Johnson	330	0.81	Tipton	630	1.11
Jay	485	0.97	Rush	325	0.80	Henry	630	1.11
Blackford	350	0.70	Hendricks	270	0.66	Howard	435	0.76
Wayne	225	0.45	Boone	205	0.50	Hendricks	315	0.55
Emp. Labor Force	50,172	97.87	Emp. Labor Force	40,643	97.66	Emp. Labor Force	56,931	97.98

Table 2.03 Commuters to Anderson MPA

Delaware County, Indiana			Hancock County, Indiana			Madison County, Indiana		
To County	**Num**	**Pct**	**To County**	**Num**	**Pct**	**To County**	**Num**	**Pct**
Delaware	40,240	80.35	Hancock	16,250	57.31	Madison	33,330	75.23
Madison	2,840	5.67	Marion	4,375	15.43	Delaware	3,080	6.95
Henry	1,565	3.12	Hamilton	1,775	6.26	Hamilton	2,625	5.92
Randolph	1,370	2.74	Henry	1,630	5.75	Henry	1,585	3.58
Hamilton	715	1.43	Madison	1,405	4.95	Hancock	990	2.23
Jay	660	1.32	Shelby	955	3.37	Marion	965	2.18
Grant	625	1.25	Rush	590	2.08	Grant	640	1.44
Blackford	535	1.07	Johnson	340	1.20	Tipton	245	0.55
Marion	350	0.70	Delaware	160	0.56	Randolph	160	0.36
Wayne	290	0.58	Fayette	150	0.53	Blackford	110	0.25
Total Employees	50,082	98.22	Total Employees	28,357	97.44	Total Employees	44,307	98.70

HOWARD

GRANT

BLACKFORD

JAY

TIPTON

RANDOLPH

DELAWARE

3,080

2,840

MADISON

70

HAMILTON

1,405

990

HENRY

160

WAYNE

HANCOCK

MARION

RUSH

FAYETTE

Miles
0 2 4   8

N

SHELBY

JOHNSON
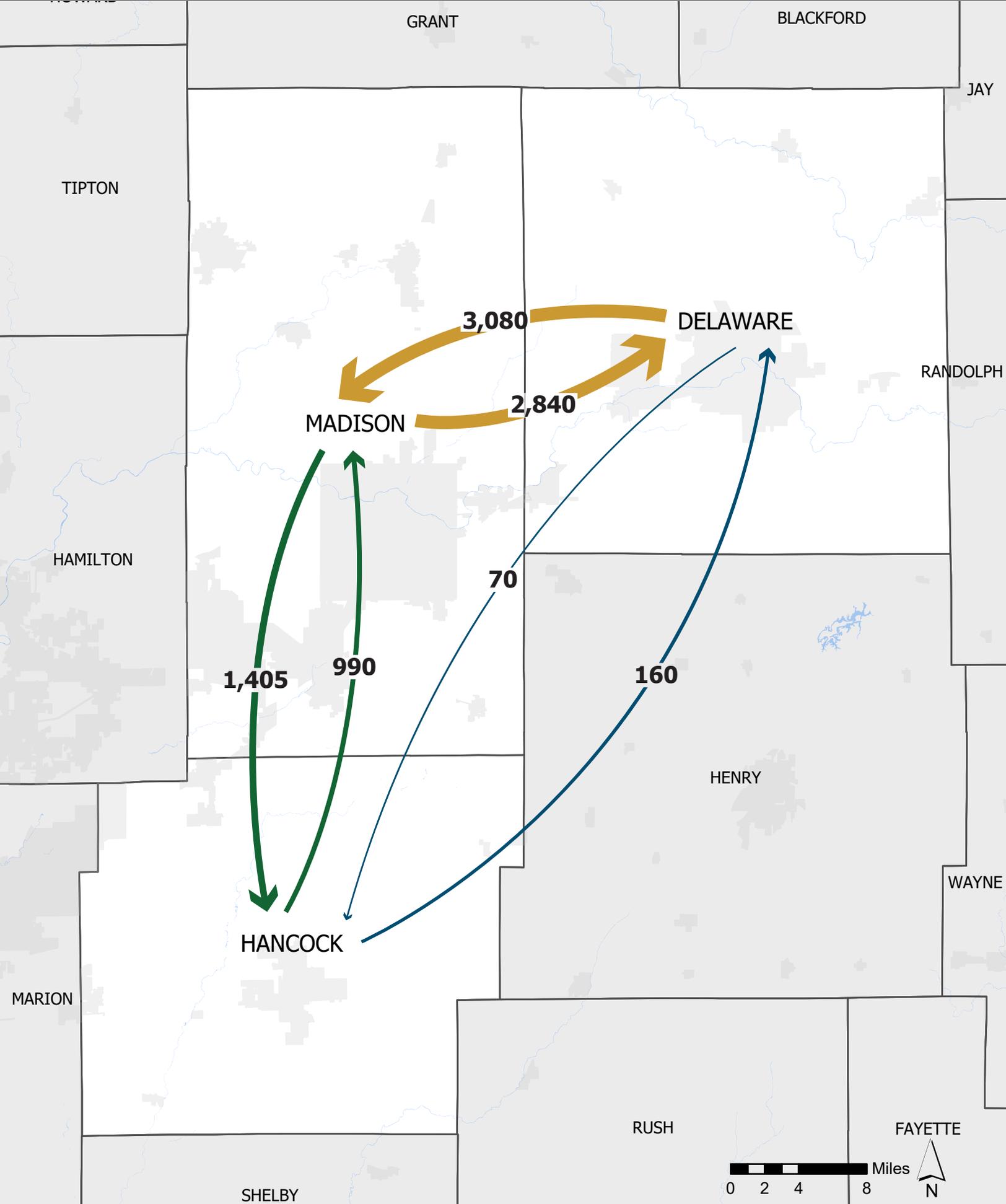
Commuters From

Commuters leaving from the Anderson MPA Counties represent a portion of the employed labor force. Of the nearly 148,000 employed residents of Madison, Hancock, and Delaware Counties, approximately 26% work in Marion, Hamilton, and Grant Counties, with Marion employing over 26,000 or nearly 18% of the Anderson MPA counties' employed labor force.

Commuters To

Commuters coming to the Anderson MPA counties represent a portion of the employees who work in the three MPA counties. Of the more than 122,000 employees of Madison, Hancock, and Delaware Counties, just over 12% are from Henry, Marion, and Hamilton Counties, and each one provides a relatively equal number of employees.

Commuters Between

There is also an exchange of employment between the counties that compose the Anderson MPA. Madison and Delaware County exchange around 3,000 employees daily. Hancock County sends over 90 more employees to Delaware County than Delaware County sends to Hancock County daily. However, Hancock County receives over 400 more employees from Madison County than it sends to Madison County.

The County-to-County Flow data reveals the extent of the interdependence of the Anderson MPA with the surrounding region and highlights its reliance upon Marion and Hamilton Counties for employment opportunities. Considering these trends, the data further illustrates the importance of the SR-28, SR-37, SR-32, I-69, and US-36 corridors as these directly link the Anderson MPA counties to both Hamilton and Marion Counties.

Employment Change

In addition to personal activity, we must consider activity generated by businesses as different types of industries generate different levels of activity. The first step in understanding business activity levels is to review the changing employment environment.

The number of persons working within the Anderson MPA has generally been declining

Figure 2.14: Employment by Industry
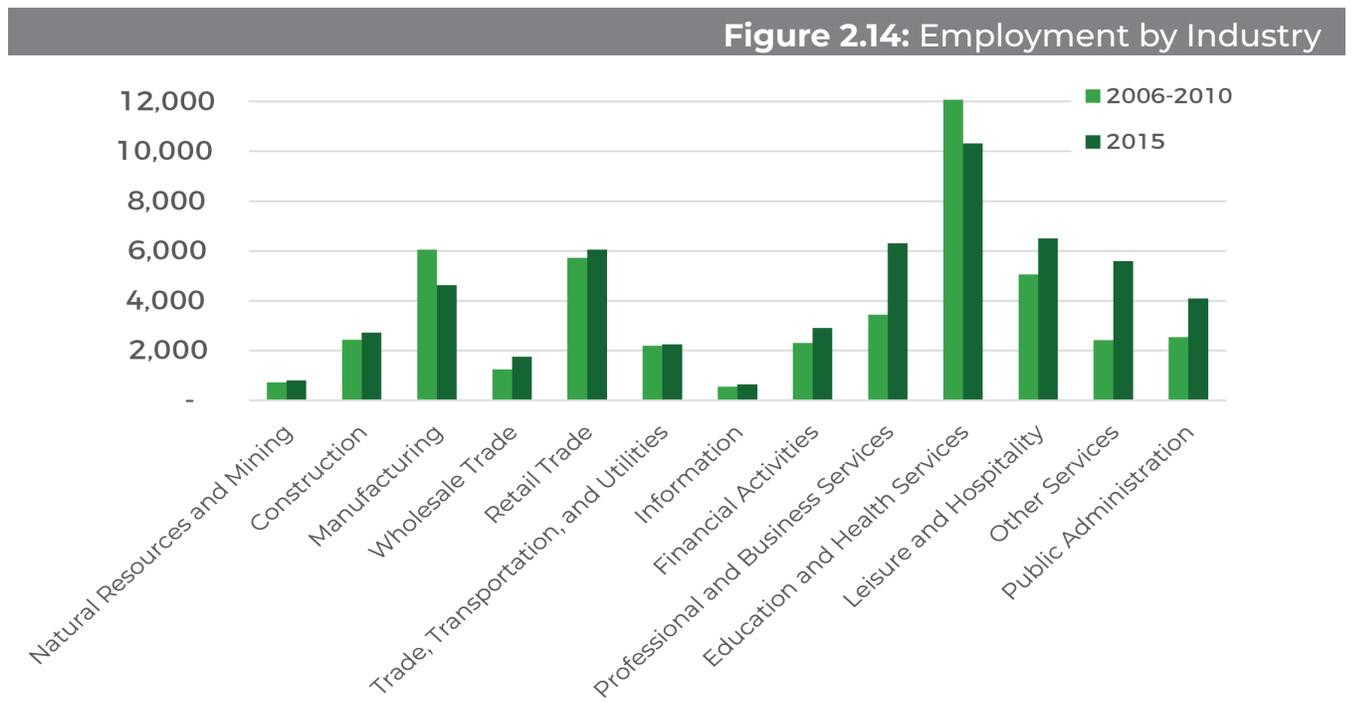
since the 1960s due to losing major manufacturing facilities. Employment has shifted to services and wholesale trade industries. Despite the overall loss, employment has increased since the Great Recession ended in 2009, and the region has been more successful at attracting new businesses. Comparing the 2006-2010 census estimates to those in 2015 demonstrates there has been an overall growth rate of nearly 17%. While the long-term trends indicate employment loss, more recent data illustrates some regional employment growth.

Location quotient and shift share analyses provide a better understanding of the changing trends by industry, which allows a comparison of the Anderson MPA to the nine-county central Indiana region. According to the US Census Bureau, 13 industries generalized through the North American Industry Classification System (NAICS), the Education & Health Services, and

Components of a Shift Share Analysis

Shift share attempts to explain what causes local employment growth. It divides growth into three components: regional effect, industry mix, and local competitiveness.

Regional Effect This assumes an equal growth rate across all industries. For example, if employment in the overall region grew by 10%, then each industry should also grow by 10%.

Industry Mix - The difference between the regional industry growth and overall regional growth. For example, if the overall region grew by 10% and the specific industry grew by 15%, the effect of the industry mix is 5%.

Local Competitiveness – This represents the difference between the expected change and the actual change. For example, if the expected change is 15%, but actual growth was 25%, then the effects of local competitiveness is 10%. This example indicates a significant local advantage over the region in this industry.

Table 2.04: Shift Share Results

Industry	Regional Effect	Industry Mix	Expected Change	Competitive Effect	Total
Natural Resources and Mining	186	-295	-109	-2	-111
Construction	544	-701	-157	-252	-409
Manufacturing	1,688	-3,973	-2,285	-3,187	-5,472
Wholesale Trade	19	-22	-3	28	25
Retail Trade	1,417	-1,321	95	-2,330	-2,235
Trade, Transportation, and Utilities	468	184	652	-1,188	-536
Information	122	-149	-27	-116	-143
Financial Activities	575	234	810	-858	-48
Professional and Business Services	740	1,372	2,112	-495	1,617
Education and Health Services	1,363	2,671	4,034	-2,947	1,087
Leisure and Hospitality	1,029	600	1,629	-1,285	344
Other Services	711	224	934	-998	-64
Public Administration	1,236	-386	850	-1,594	-744
Total Industries	**10,098**	**-1,561**	**8,538**	**-15,227**	**-6,689**

Leisure & Hospitality industries are the most prevalent within the Anderson MPA, as shown in the graph below.

Shift Share Analysis

In review of employment data provided by the Bureau of Economic Analysis (BEA) of the US Department of Commerce (DOC), between 2001 and 2015 the Anderson MPA struggled to compete with other portions of the central Indiana region in nearly all areas of industry. Except for wholesale trade, when employment rates decrease in central Indiana for any industry, they decrease even more in the Anderson MPA. Conversely, when there is an increase in central Indiana, there is a smaller increase in the Anderson MPA.

Location Quotient Analysis

A location quotient provides additional insight into the industries that offer the most opportunities for growth looking forward. From this

Location Quotient Explained

Location Quotient (LQ) is an analytical tool used to compare the local concentration of some quality to a larger reference region. It is most often used for industry comparisons to understand which local industries make the economy unique. LQs compare the industry's share of local employment with its share of regional employment. For example, assume that while the wholesale trade industry accounts for 2% of the local economy, it only accounts for 1% of the regional economy. The LQ for Wholesale Trade in this example would be 2.00. Any industry with an LQ greater than 1.00 is noted as a *basic industry* responsible for supporting the local economy.

LQs can also be used to track growth over a period by comparing local growth to regional growth. The LQ chart plots each industry by existing size, current LQ, and change in LQ to help categorize each. While most industries will hover around the 1.00 and 0.00 change in LQ, other industries will diverge. Through this process, industries that are distinguished locally from the larger region can be highlighted for updated attraction and retention policies.

Figure 2.15: Location Quotient Chart
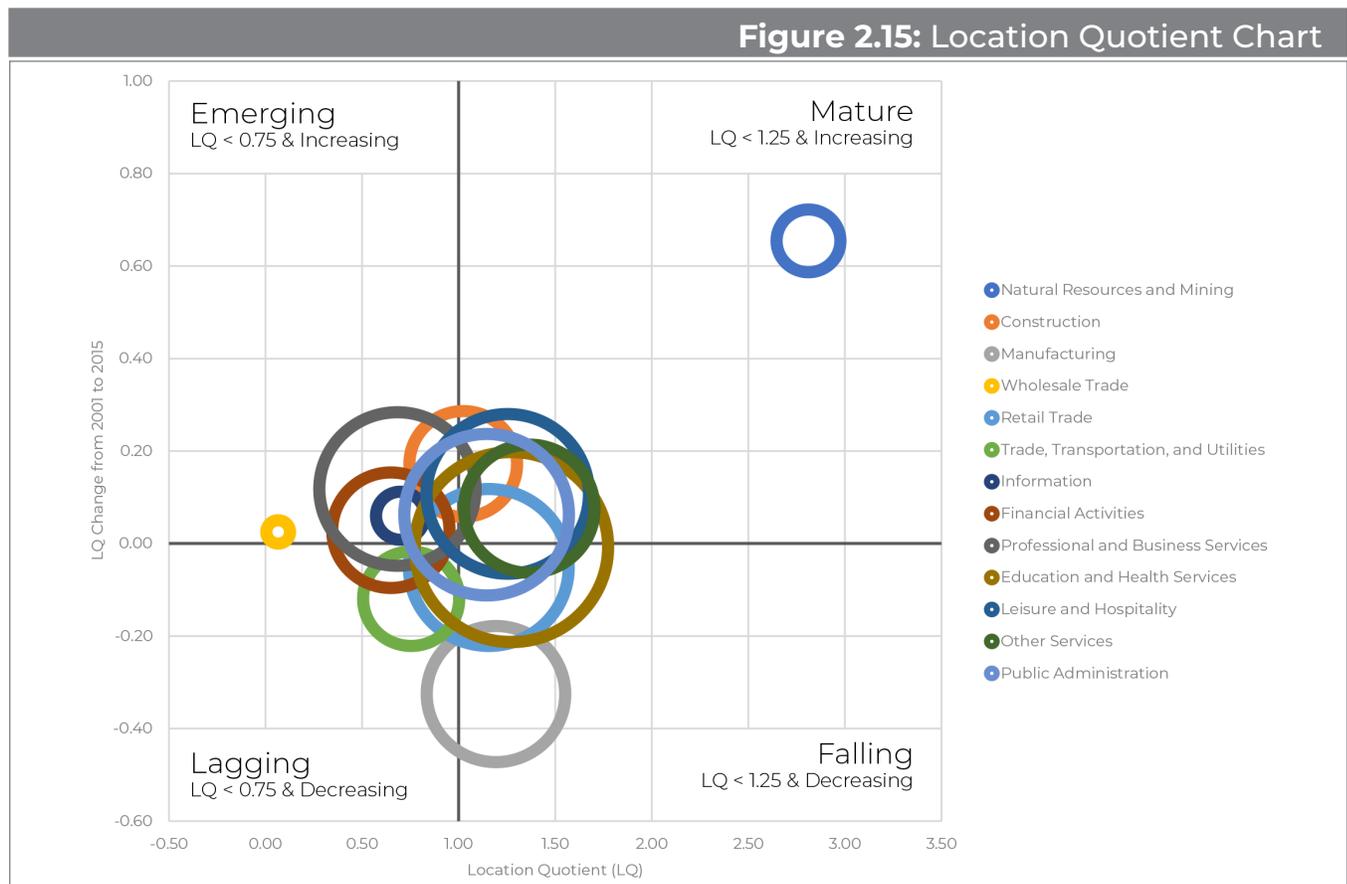
analysis, the Natural Resources & Mining, Construction, and Leisure & Hospitality industries are considered "basic," which means that they begin strong and will likely see growth within the analysis period. Other important industries include Public Administration and Professional & Business Services. The analysis also indicates that the Wholesale Trade and Information industries are considered emerging strengths that have shown growth, growth potential, and regional competitiveness. Industries such as Manufacturing, Retail Trade, and Transportation show declining competitiveness and poor growth, so they will likely be limited in the future.

These analyses further stress how significantly the Anderson MPA relies on the Indianapolis region for access to employment opportunities within most industries. They also show that Leisure & Hospitality, Wholesale Trade, Information, and Natural Resources industries rely on attracting business from Indianapolis and central Indiana residents, though the level and type of activity generated varies significantly. The Leisure & Hospitality industry relies on attracting people and generating additional personal trips. The Information industry generates very little business activity using the transportation system since most businesses can connect virtually. Finally, the Wholesale Trade and Natural Resource industries generate a significant amount of commercial or truck activity for deliveries and the movement of goods.

Movement of Goods

Goods are moved primarily along I-69 and US-36 within the Anderson MPA. Both corridors currently carry 3,000 to 7,000 trucks per day and industrial activity along I-69 between exits 219 and 222 continues to expand.

I-69 was established as a critical freight corridor as part of the North American Free Trade Agreement (NAFTA) in 1994. The corridor links Canada and Mexico across the United States and represents a vital connection for regional growth. NAFTA established the corridor's importance and set in motion several improvements as well as identified missing links to be completed to create a continuous corridor. Several missing links were identified in many states, one of which is the I-69 expansion project in Indiana that will connect I-465 on the southwest side of Indianapolis to Bloomington, Evansville, and across the Ohio River into Kentucky. Truck traffic is expected to continue to increase along the corridor as more links are completed offering significant economic development opportunities for the Anderson MPA and significant increases in overall commercial and truck activity.

In addition to general activity, Truck Travel Time Reliability (TTTR) can be used to identify a corridor's ability to deliver goods on time and further inform the potential for increased truck activity. TTTR compares travel time along a corridor during congestion times to travel times with little to no traffic. The comparison results in a value greater than or equal to 1.00, where 1 means there is no difference along the corridor throughout the day. The TTTR on I-69 is less than 1.5, which is lower than the national goal of 2.12 and indicates relatively reliable travel[3]. This also indicates that the corridor could reliably serve even higher activity levels. The primary connecting corridors of SR-9, SR-109, US-36, and SR-67 have TTTR values between 1.5 and 3 with a few key bottleneck locations reporting a TTTR in excess of 3. This indicates that these corridors are less reliable and unlikely to grow at the same rate as I-69.

Conclusion

The Anderson MPA is composed of a variety of people, places, and activities supported by the regional transportation system. Each of these components is vital to understanding how and where to prioritize transportation investments. Reviewing the shifting population pattern illustrates a need to balance investment in areas of rapid growth and deteriorating infrastructure where population is being lost through both funding and technical support. The discussion on regional activities demonstrates the increasing nature of activity following national trends and the necessity of supporting economic activity through infrastructure improvements. The location of unique places across the Anderson MPA that support daily activities further highlight the importance of downtowns and the influx of suburban sprawl that could significantly impact historic and natural resources within the Anderson MPA.

Chapter 3

Establishing the Direction

2050 inMotion was developed through a robust public engagement process of uncovering challenges, discovering opportunities, formulating a direction, testing that direction, and prioritizing specific action items. The plan is built from hundreds of hours of discussion with the public. The public engagement process ensured inclusivity so that anyone interested in the Anderson MPA's future would have an opportunity to participate.

Multiple public engagement methods were utilized to gather input from MPA residents, community leaders, and business owners. These methods included both in-person and virtual tools so the public could be involved in the process from beginning to end through various platforms.

One of the process's primary goals was identifying challenges and opportunities in mobility. When discussing mobility, the public was asked to consider the experience of moving between Point A and Point B. Participants considered how individuals generally move throughout the region, what challenges they might face day-to-day, and how the transportation system could be improved. These community-based conversations will help coordinate future investments in the Anderson MPA's transportation system and establish a unified vision that will benefit all residents and business owners.

Public Engagement

Although people generally understand existing issues and have action items they would like to see completed, in long-range planning it is important to look beyond today's issues. Initial public engagement typically asks participants to highlight existing issues to facilitate discussing a vision of the future.

Long-range planning processes are built around a set of guiding statements that highlight priorities moving forward. The process typically begins with developing a vision statement that paints a picture of what the world should look like once the plan is fully implemented. Supporting goals, objectives, and actions are identified through the public engagement process and summarized in the vision statement. A visual representation of the traditional relationship between these items is shown in Figure 3.01. It is this guiding structure that allows planners to align analysis and identification of new action items with publicly supported priorities.

Figure 3.02 on the next page illustrates the various steps, concurrent public input opportunities, and public engagement events included in the planning process for *2050 inMotion*.

Figure 3.01: Guiding Direction Framework

Process Timeline

Figure 3.02

April 2019

1 Stakeholder Committee Project Kick-Off

2 Stakeholder Committee Communication Strategy

June 2019
Created key messages and communication strategies for the process

3 Stakeholder Committee Mobility Conversations

Developed mobility question prompts and activities for engagement

Mobility Conversations

August 2019

4 Stakeholder Committee Preliminary Findings

Future Land Use Meetings

Mobile engagements held during existing events, meetings, and public occasions to further encourage participation.

November 2019
Analyzed public input for initial findings to guide future mobility enhancement

5 Stakeholder Committee Focus Group Development

Prepared for testing the mission, vision, and goals supported by a summary of public input

April 2020

8 Stakeholder Committee Public Input Summary

Destination 2045

7 Stakeholder Committee Destination 2045 Coordination

6 Stakeholder Committee Goal Development

Focus Group Conversations

February 2020
Developed draft mission, vision, and goals to guide the plan structure and recommendations for the region

9 Stakeholder Committee Action Refinement

Refined the action list and incorporated all engagement material into an initial draft

Regional Exhibition

October 2020
2045 inMotion Adopted

---- 2022
2050 inMotion Adopted

10 Stakeholder Committee Process Wrap-up

1 April CAC/TAC Meeting

2 July CAC/TAC Meeting

Prioritization Survey

3 October CAC/TAC Meeting

Analyzed public input to prepare priority action list and final MTP document for adoption

April 2021
2050 inMotion Process Begins

Developed strategy for engaging under-represented groups

Heartland in Motion Transportation Study

The 2014 *Heartland in Motion* Transportation Study (HIM) was an extensive survey of households located within the Anderson MPA regarding their daily travel patterns and transportation preferences. The information gathered from this study provided not only a base understanding of regional activity, but also insight on funding priorities, transportation issues, and preferences for further analysis of mass transit feasibility. Over 1,900 households and 4,300 individuals participated in the survey, which laid the foundation for crafting messaging and identifying priorities

based off input for the *2050 inMotion* public engagement process. Figure 3.03 shows transportation preferences ranked by priority.

Stakeholder Committee

2050 inMotion builds on *2045 inMotion*, which officially began in spring 2019 with the formation of a Stakeholder Committee to guide the planning process. The 30-member committee was created through an open application process. To ensure the Anderson MPA was well-represented, individuals were included from a wide range of interests and backgrounds, including different demographic categories like age, race, gender, and geographic distribution. The committee held ten meetings with unique, specific goals and outcomes throughout the planning process.

While the committee's primary role was to assist in guiding the planning process, they were also instrumental in encouraging the public to participate. Committee members assisted by reviewing research and analysis materials and ultimately defined the direction of the plan. Their guidance helped develop a vision statement, mission statement, goals, recommendations, and specific actions.

Meeting 1 – Project Kick-Off

The first committee meeting served as an important introduction to the *2045 inMotion* process. Members were introduced to the planning team who provided an overview of the Anderson MPA, the intent of a Metropolitan Transportation Plan (MTP), and the overall outline for the *2045 inMotion* planning process. The committee spent most of this meeting discussing messaging, how to motivate participation from all communities, potential challenges for the public engagement process, and what community networks

Figure 3.03: HIM Study Results

could be utilized to reach the public. The group highlighted the importance of different messaging focuses based on community and subregion:

- The North subregion—increasing access to amenities that have been consistently moving further away

- The Central-East subregion—underserved communities and non-vehicular transportation options

- The Southwest subregion—ongoing growth pressures and preparations to support increasing traffic and congestion issues

Figure 3.04 Steering Committee Meeting

Meeting 2 – Communication Strategy

The second committee meeting focused on preparing for the first round of public engagement activities. Committee members also assisted the planning team in developing a series of six workshops called Mobility Conversations held in different communities across the Anderson MPA. Communication strategies to encourage public participation were formulated with clear delineations between the concurrent processes of *2045 in-Motion* and the *Forward Madison County Comprehensive Plan*.

Meeting 3 – Mobility Conversations

The third committee meeting continued the discussion about developing activities for the Mobility Conversation Workshops and tested some of those activities with the committee. Members were shown the workshop presentation along with key prompts the public would be asked regarding opportunities and challenges. Committee members provided input on their hopes and concerns for the Anderson MPA and identified specific areas to address them. They were asked to begin thinking about specific programs, projects, and policies that would enhance mobility throughout the region. Committee members highlighted the importance of health and safety as considerations for public input and noted that the public engagement process should be centered around these topics.

Meeting 4 – Preliminary Engagement Findings

The fourth committee meeting included a review of the preliminary results of the Mobility Conversation Workshops, as well as any mobile events held to date. During these events, the public identified hopes and desires for the future that included beautification, improved infrastructure, and connections to natural features. Specific concerns identified included transit access, infrastructure maintenance, and safety measures for pedestrians. The planning team also presented regional trends and future demands with the committee, sharing the technical analysis process that would assist in identifying future programs, policies, and projects. The committee also noted the need to narrow scenario planning efforts to only a

few select scenarios since it would likely be difficult to work with the public on a more complicated scenario process.

Figure 3.05 Steering Committee Meeting

Meeting 5 – Focus Group Development

The fifth committee meeting included the complete summary of findings from the Mobility Conversation Workshops and Mobile Engagements conducted to date. Those findings included major opportunities for technology, trail connectivity, and bicycle & pedestrian infrastructure improvements. In addition, challenges identified included ongoing safety concerns, infrastructure maintenance, and missing sidewalk/trail connections. The planning team used this input to develop Focus Groups to discuss specific topics and gather more input on recurring themes emerging from public comments. The committee challenged the planning team to identify short-term outcomes that would encourage focus group participation.

Meeting 6 – Goal Development

The sixth committee meeting initiated the second round of public engagement and represented the halfway point in the public engagement process. After reviewing a summary of public input received to date, the committee assisted the planning team in developing an agenda for a community summit event, Destination 2045. A draft vision statement was discussed at length, as well as what specific goals and actions could be developed. The committee asked the planning team to add a mission statement as a distinct way to illustrate the process for accomplishing the plan's future vision. In addition, the committee identified specific questions that should be asked during Destination 2045.

Meeting 7 – Destination 2045 Coordination

The seventh committee meeting focused on further refining the vision statement for *2045 inMotion*. Committee members provided input on testing this draft statement at the upcoming event. The planning team provided a preview of the activities planned, including an online polling activity for questions related to mobility, the mission/vision statements, goals, and specific community priorities. The committee was challenged to identify individuals in their network who could be invited to participate in Destination 2045.

Meeting 8 – Public Input Summary

Due to COVID-19, the eighth committee meeting was held virtually to protect members' health and safeties. Committee members used this meeting to prepare online engagement tools for those who were unable to attend Destination 2045. Members also provided final thoughts on the mission, vision, and goal statements. This meeting included an explanation of the transition from guiding structure to specific action items. Committee members were asked to begin providing program, policy, project, and plan ideas to include as action items.

Meeting 9 – Action Refinement

With COVID-19 still a concern, the ninth committee meeting was also held virtually to ensure the process continued as scheduled. The planning team shared various types of actions identified through public input, as well as identifying those that had already been programmed for implementation. The committee shared additional thoughts on the types of action items that should be included to further enhance mobility through a series of breakout sessions identifying priority investments and improvements.

Meeting 10 – Process Wrap-up

The final committee meeting outlined future opportunities to continue conversations from the *2045 inMotion* planning process. A brief overview of the draft MTP was presented to the committee and next steps following the planning process were highlighted. Committee members discussed the final fiscally constrained project list and identified any other issues. The planning team used this meeting to thank the committee members for their work and dedication in reviewing, refining, and developing the plan.

Online Engagement

Throughout the planning process, in-person events and conversations were duplicated online to gather additional input from those unable to attend public engagement opportunities. Several methods were utilized to allow the public to ask questions, respond to specific survey items, promote ideas/actions, and engage with other people participating in the planning process.

MindMixer was an online platform used for public engagement. MindMixer provided a location for members of the public to follow the planning process and provide input mirroring in-person events. In addition, a *2045 inMotion* website was developed to link visitors to the MindMixer platform as well as provide copies of various materials, information sources, and documents. The website provided a forum to connect communities to the process through updates to upcoming events, online surveys, discussion forums, and a resource center for all reports, presentations, and agendas developed throughout the process. Online engagement opportunities supplemented in-person events by allowing people to offer their input if they were unable to attend an event, which ensured everyone could participate in a way that was convenient for their schedules. Social media outlets like Facebook supplemented MindMixer and generated discussion around core topics of in-person meetings.

- MindMixer – 4,000 total page views on MindMixer connecting people to 2045 inMotion.
- Facebook – 8,300+ people reached through Facebook posts and engagement.
- Project Website – 100+ people identified their opportunities and challenges for mobility in the region.

Each of these online engagement opportunities served an important role in increasing the accessibility of public engagement. The planning team used diverse online tools to gather additional feedback on in-person meeting prompts about community strengths and opportunities. These tools became more vital with COVID-19 since all engagement was limited to virtual or online participation, but *2045 inMotion* had the methods for continuing discussions at a crucial time in the planning process.

Mobile Engagement

In addition to structured public engagement like the Mobility Conversations and Focus Group meetings, MCCOG solicited input by attending existing events and public gatherings. These mobile engagement opportunities encouraged participation by taking the conversation to the public in a nonstandard setting and allowed for the formulation of talking points to use in future engagement activities.

Figure 3.06 Steering Committee Meeting

Although these engagements were hosted throughout the process, most occurred near the beginning due to the availability of annual summer events. A range of activities were conducted at each Mobile Engagement, which allowed participants to spend as little or as much time providing input as they liked. The planning team used both paper and online surveys to identify existing challenges and opportunities, while also gathering demographic and background information from each participant. In addition, mapping activities gave participants an opportunity to identify specific conflict locations or best practice examples for mobility in the region. These discussions reinforced focus areas for organizing the plan and identified potential strategies to support the mission, vision, and goal statements for *2045 inMotion*. Each individual engagement

provided additional insight into public opinions and priorities, as well as directly connected participants to the process by supporting on-site registration assistance into the MindMixer platform.

Mobile Engagement opportunities were convenient for taking activities and surveys directly to the public. Over 400 individuals participated in these events and provided hundreds of comments.

Community Hospital Anderson

The planning team coordinated two mobile engagement opportunities at Community Hospital Anderson (CHA). CHA is one of the largest employers in the Anderson MPA, and the Stakeholder Committee indicated a key interest in the transportation system's connection to health. Participants were intercepted in the CHA cafeteria during the lunch and 3rd shift break periods. Results focused on the lack of sidewalk and trail connections around the hospital campus and the importance of mass transit connections to the Indianapolis region for supporting hospital and treatment connections. The 3rd shift was actively engaged to provide input on the system from a unique perspective and represented an opportunity to hear from community members who do not typically have the option to attend public meetings. Discussion with participants focused on the need for lighting as a protective measure for 3rd shift commuters.

> "We are planning for the future of our prosperity."

Fortville Summer Concert Series

The Town of Fortville hosts a series of concerts in Landmark Park near downtown Fortville. The planning team attended the final concert of the summer to gather additional input on the transportation system and bring attention to the *2045 inMotion* process. Residents expressed concern about US-36, denoting the high speeds and lacking pedestrian safety. Discussion further highlighted US-36 as a barrier separating the north and south portions of the community.

Madison County 4-H Fair

The planning teams for the *2045 inMotion* and *Forward Madison County 2035 Comprehensive Plan* co-hosted an engagement opportunity during the Madison County 4-H Fair. The week-long event provided opportunities to gather input and promote the ongoing Mobility Conversations. Partnering with the Comprehensive Plan team allowed for discussions to cover a broad range of topics that impact transportation like land use and drainage issues. Input received for both discussions and the mapping activity focused on the importance of maintenance for roadways, sidewalks, and trails.

Elwood Glass Festival

The 48th annual Elwood Glass Festival was hosted in mid-August 2019 in Elwood's Callaway Park. The event is an arts, crafts, and entertainment tribute to the unique handblown art glass produced in Elwood since the gas boom nearly 100 years ago. One notable interaction from the event was a discussion with an individual who uses a wheelchair. He provided the planning team with a lot of insight into sidewalk and curb ramp issues as well as the vital role of mobility in supporting independence. Other discussions from the

event focused on system safety for all road users and access to rural transit opportunities for people without a reliable vehicle.

Madison County Health Fair

The Madison County Health Fair varied somewhat from previous mobile engagements. The event is sponsored by the Madison County Health Department and the Madison County Department of Human Resources. Activities focused on the nexus between the built environment and public health by comparing development types and their associated walk access levels. Posters showed the approximate percentage of the population within a five-minute walk to various locations like parks, schools, and hospitals for each of three development types: interstate, infill, redevelopment. After reviewing the comparisons, participants were asked a series of questions, such as what scenario they expect to see, what they want to see, and why they want to see it. Although most participants expect to see growth continue near the interstate, the vast majority noted a preference for infill development as the most cost-effective and health-supporting option. As the first introduction to scenario planning within the process, this event was a major milestone that helped craft further messaging later in the process.

The survey and poster used during the Health Fair can be found in the appendix.

> "We are starting to plan – rather than just sprawl!"

Mobility Conversation Workshops

In July and August of 2019, a series of six public workshops and two targeted workshops were held in communities across the region to engage community leaders, stakeholders, and other members of the public in open discussions. Each workshop was intended to collect as much feedback from participants as possible to begin identifying themes for technical analysis and review by the planning team. All feedback assisted the planning team in defining the critical pathways forward through the planning process. The six public workshops included:

- Fortville
- Anderson Public Library
- Alexandria Emery Lee Building
- Chesterfield Millcreek Civic Center
- Anderson Impact Center
- Pendleton Community Library

Each workshop presented information on regional mobility and provided a series of activities to encourage participants to think broadly about how they get around the region. To begin, participants proposed a headline for the result of *2045 inMotion*, thinking about where they hope the region will be once the plan is fully implemented. The remainder of the event was spent facilitating small group discussions attempting to answer three questions:

- What makes you optimistic when thinking about the future of mobility?
- What are your greatest concerns?
- What specific actions or ideas do you believe would enhance mobility?

Although action items were typically focused on the community where the workshop was hosted, general themes were apparent throughout all workshops. Technology, trail connections, and road improvements were a few of the top optimistic themes, with technology representing 12% of all comments received. Some of the top concerns focused on safety, aging infrastructure, and system gaps in service, with safety comprising nearly 25% of the comments received.

In addition to the six public workshops, two targeted workshops were also conducted using the same activities as the mobility conversation workshops. Like the Mobile Engagements, each of these workshops was part of an exist-

Figure 3.07 Mapping Exercise

ing event. The targeted workshops offered an opportunity to engage with specific segments of the population with interests in mobility and the transportation system or typically underrepresented in planning: runners, cyclists, older adults, and cultural minorities.

Anderson Road Runners

The planning team coordinated with the Anderson Road Runners regularly scheduled Thursday evening runs. Once each month, the run ends with an informal meeting and cookout. The planning team was able to join the event to walk attendees through a condensed version of the small group discussions included in the mobility conversation workshops, as well as providing the mapping exercise, as seen in Figure 3.07, from other mobile engagements. Club members provided numerous locations with trail and sidewalk maintenance

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94 comments gathered as part of the mapping exercise

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issues, areas with too little lighting to feel safe running alone, and dangerous roadway crossings. In addition, there was specific discussion on the Mounds Greenway trail proposal to link Anderson and Muncie along the White River. Finally, in the small group conversations, multiple groups discussed a lack of education across the MPA for cyclists, pedestrians, and motorists, especially when interacting together and the hazardous conditions created when individuals do not know what to expect from other road users.

Impact Center Senior Luncheon

The Anderson Impact Center (AIC), located in West Anderson also known as the Sweet 16 neighborhood, plays a key role in providing programs and services to assist residents in achieving health, employment, and economic stability. As part of the senior program, the AIC hosts a monthly luncheon and invited the Planning Team to present to the group and

solicit feedback. Most of the event was spent in facilitated small group discussions about transportation concerns, optimisms, and specific actions. Attendees noted the need for additional education on newer system designs such as roundabouts and new technology or mobility options like ride sharing. Attendees also expressed growing concern for their individual abilities to move within the region and to Indianapolis to visit family, friends, hospitals, and the multitude of amenities. Discussions noted the potential for mass transit connections to support the aging population and growing number of commuters in the region; furthermore, they often referenced the interurban railway system that connected the region's communities in the early 20th century.

Growth & Development Meetings

The *2045 inMotion* team partnered with the *Forward Madison County 2035 Comprehensive Plan* team to gain insight on land use and transportation connections through the growth & development meetings series. The transportation system is directly linked to land use, so the partnership provided an opportunity to illustrate the connection to the public and gather input to support *2045 inMotion* scenario planning work. A total of eight meetings were held in Madison County at the following locations:

- Anderson Museum of Art
- Summitville Public Library
- Frankton Police Department
- Alexandria Emery Lee Building
- Elwood Public Library
- Lapel Fraternal Order of Eagles Building
- Markleville Town Hall
- Pendleton Gallery 119

Attendees were led through a series of questions about locating various land uses, such as single-family homes and industrial facilities, highlighting areas for preservation, and identifying roadway and trail expansion opportunities. Discussion group facilitators mapped input to be used for developing a future transportation and land use map. Participants expressed support for controlling growth to preserve agricultural and natural resources through infill and redevelopment projects, while noting they expect large subdivision development in southwest Madison County. A proposed rail-to-trail project between Anderson and Elwood called the Panhandle Trail was highlighted as an important regional trail connection to link communities countywide.

Transportation system improvement discussions focused on roadway and sidewalk maintenance as well as expanding sidewalk networks within communities. CR-800 S near I-69 Exit 214 was noted as a problem area to be studied further, especially as new development is added. Finally, conversation on the potential and desire for mass transit connecting Madison County to Indianapolis was brought up in multiple communities.

> "Looking ahead to the future is paramount."

Focus Group Meetings

Following the mobility conversation workshops, the planning team and Stakeholder Committee identified seven topic areas for additional targeted discussions to fill gaps in input. Three to ten participants involved personally or professionally in the topic area were invited to attend a focus group meeting. Conversations began with a brief overview of the process before opening the discussion to concerns, optimisms, and action items in today's transportation system. Finally, the discussion shifted to focus more on the future as participants reviewed four development scenarios that outlined unique development patterns that could potentially impact the Anderson MPA.

- Improved Status Quo – Future development is heavily dependent on roads and growth is limited, meaning the population continues to age over time.
- Investing in Place – There is greater reinvestment in the city center; development is largely downtown and infill (building on existing vacant lots).
- Waterfront Development – A large catalytic waterfront project occurs along the White River spurring additional growth.
- Connected World – Technological change such as automated vehicles have a large effect on the region.

The participants were presented the scenarios and asked to consider the implications of supporting each unique development pattern. The planning team outlined the likely level of growth, core industry focus, and other distinct changes for each focus group to consider as well. Discussion varied significantly between each of the seven focus groups.

Vulnerable Road Users

This focus group discussed ways to protect people when they travel through the transportation system. Participants included local/county/state police, public safety personnel, emergency management personnel, and towing personnel. Discussion topics included congestion, interstate pinch points, infrastructure programming, and interactions with railroads. Forecasting and strategic alignment were deemed essential to support the future transportation system and attendees specifically noted potential programs such as Traffic Incident Management (TIM) and designated detour routes during crashes for supporting quick and safe traffic re-routing.

Safety & Emergency Management

This focus group discussed ways to protect people in the region when travelling through the transportation system. Participants included local, county, and state police; public safety; emergency management; and towing personnel. Discussion topics included congestion, interstate pinch points, infrastructure programming, and interactions with railroads. Forecasting and strategic alignment were deemed essential to support the future transportation system and attendees specifically noted potential programs such as Traffic Incident Management (TIM) and designated detour routes during crashes for supporting quick and safe traffic re-routing.

Underserved Populations

This focus group discussed access to opportunities, essential services, and the disparate impacts of transportation projects in the past. Attendees noted the importance of connecting rural and urban communities, the significance of libraries as central services,

strategic alignment across multiple organizations and communities to increase the impact of future investment, scheduling and access to public transit, and pedestrian safety. Participants also discussed the opportunity of ridesharing programs such as Uber and Lyft to increase access to opportunities for low-income populations but noted the importance of policy to encourage supporting these opportunities.

Transit

This focus group discussed ways to provide local and regional transit connections from neighborhoods to employment centers and entertainment nodes. Community Hospital Anderson developed its MedExpress program to provide residents with a way to get to the hospital after a survey determined that transportation was one of the main barriers keeping people from getting healthcare. Attendees discussed the gap in transit service and implications for residents, including the opportunity for a mass transit connection to Indianapolis. Other discussion topics included developing a transit access plan, carpooling opportunities, identifying best practices, and transit education programs.

Freight & Logistics

This focus group discussed the importance of the movement of goods across the transportation system. Discussion topics included train grade conflict points, multi-jurisdictional coordination, distracted driving concerns, workforce support, and ensuring that infrastructure is maintained. Attendees directly noted the pros and cons of CAVs for the trucking industry by discussing major impacts to personnel as well as expected safety and efficiency improvements.

Business & Development

This focus group discussed the various communities across the region and their differences in development. Attendees noted the rapid residential growth in the Southwest subregion and its impact on small towns such as Fortville and Pendleton, including the transportation issues that have emerged in these areas. When discussing development patterns, attendees noted the lack of regional or community policies counteracting the ease of greenfield development, and the resulting automobile reliance. In addition, attendees provided insight into homebuilding trends, the economic impact of the Anderson Airport, leveraging railroad connections, and exploring the cost of utilities and permitting fees.

Innovation & Technology

This focus group discussed emerging technologies that bring mobility into the 21st century and beyond. Discussion topics included the Pacers Bikeshare Program, funding mechanisms for supporting new technology, return-on-investment for public funding, potential private partnerships for innovation, and electrification of vehicles such as BRT and carshare. Attendees agreed that even high growth scenarios around connected and autonomous vehicles need to focus on increasing density and encouraging mixed-use development to reduce overall reliance on vehicles for mobility.

These comments provided the planning team with more robust understanding on the topical areas and how the community experiences existing challenges. These small stakeholder discussions encouraged in-depth insight, as well as highlighting specific areas of concern for short-term programmatic and long-term policy changes. In addition to high-level discussions, the planning team gained input on existing priority issue areas to concentrate improvements and align with the needs of various professional groups.

Destination 2045

In March 2020, the planning team hosted *Destination 2045: A Community Summit on our Region's Future* as the transition point from today's challenges to those that might be faced over the next 25 years. Attendees were updated on major themes from the public engagement process to date and presented an overview of regional growth trends and transportation issues before a keynote speaker set the stage for thinking about the future. The keynote speaker, Gabe Klein, directly discussed impacts of technological advances for redefining how people experience the transportation system and notable disruptions to consider as part of the planning process. Group activities, live polling, and table discussions gave attendees opportunities to provide feedback on the guiding direction and identify investment priorities.

More than 104 comments & thoughts provided by stakeholders at the focus group discussions

Live Polling

The live online poll directed participants to think about their daily experiences with local and regional mobility. Questions included: "What type of community do you live in?", "Does your neighborhood have sidewalk connections?", "How do they get to work or school?", and "How long their commute is among others?". Then the poll shifted towards thinking about future investments and how

they can influence existing concerns. Questions included: "What makes a strong quality of place?", "What initiatives would you support to reduce emissions?", and "How would you invest $100 million in the transportation sys-

Figure 3.08 Destination 2045

tem?". Other polling examples can be found in Figure 3.09. The final portion of the poll tested the guiding structure of the MTP by presenting the draft mission, vision, and principle statements developed with the Stakeholder Committee. Participants were asked to rate how much they support the existing statements and identify what is missing.

Table Discussions

The second activity involved table discussions about the online poll results and outlining specific action items that would enhance mobility. Table discussions centered around three central questions: "Did anything surprise you?", "Was there anything you found interesting?", and "What specific programs, policies, and projects could enhance and strengthen the mobility network?". These discussions yielded many unique comments about measuring quality of life factors of mobility, improving

Figure 3.09: Polling Examples

Aside from weather, what would encourage you to walk more?

In-person
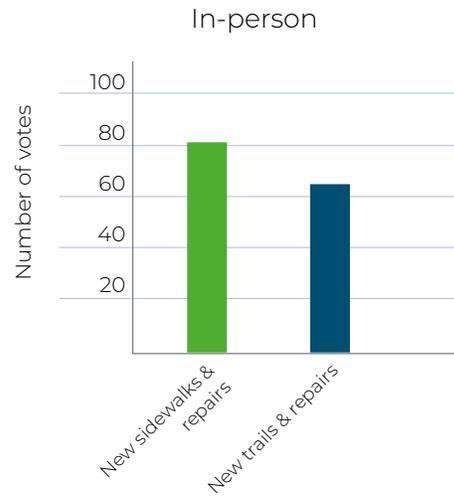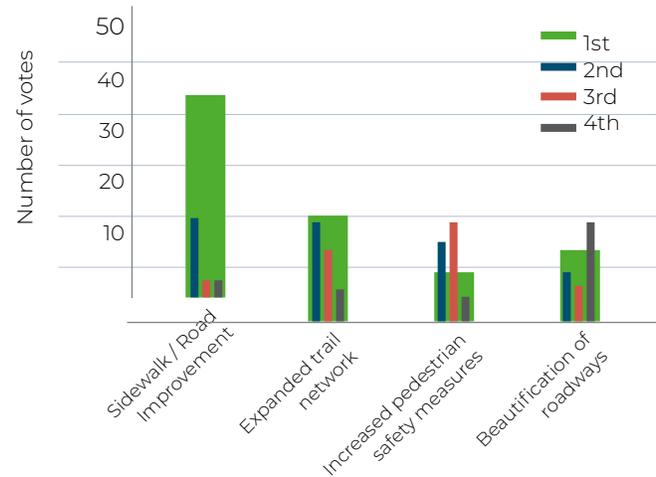
Facebook

What types of initiatives would you support to reduce emissions?

Transition public vehicle fleet to EVs - 5%
Incentivize electric vehicles (EV) - 20%
Incentivize public transit - 31%
More trails/sidewalks - 44%
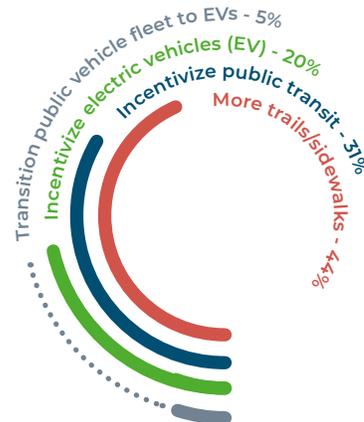
How do you get to work or school everyday?

Percent of responses

Bar chart categories (top to bottom): Drive alone, I work at home, I'm retired, Bike or Walk, Other, Carpool, Bus, Taxi or Ride Hailing App.

X-axis: 15%, 30%, 45%, 60%, 75%

Does the area around your house have sidewalks?

I live in a rural context - 7%
Yes - 21%
Yes, but not complete - 21%
No - 51%

In-person

Yes - 35%
No - 65%
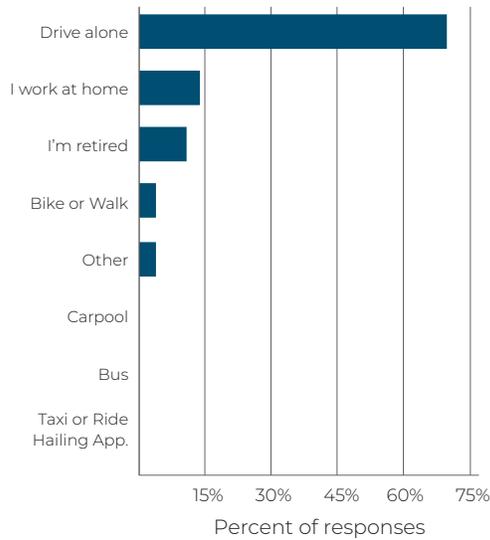
Facebook

Figure 3.10 Destination 2045

safety for pedestrians and bicyclists, increasing public involvement in mobility planning, and defining the walkability factors of the region.
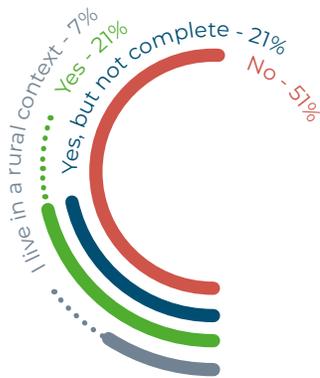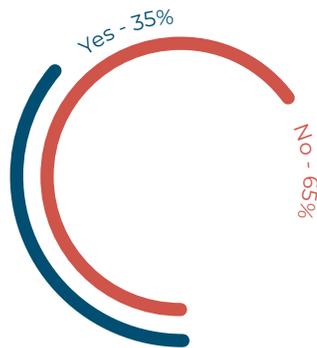
Guiding Structure

This event also allowed the planning team to affirm that the mission, vision, and principle statements reflected the comments, thoughts, and ideas collected. The final activity presented the attendees with this guiding structure and explained the relationship between these final draft statements and how they will guide the final plan's development. Figure 3.11 shows the final guiding structure for *2050 inMotion*.

Mission Statement – [Approach or Process]

"We aspire to create a safe & complete transportation system that puts people first."

Vision Statement – [Desired Future Position or Outcome]

"Through 2050 inMotion, we aim to realize a transportation system that is efficient, effective, and equitable."

Principle Statements

The principle statements illustrate the goals or desired outcomes in the simplest terms. They directly support the vision statement by further explaining its components. Each principle was crafted from public input and directly updated by the Stakeholder Committee.

Efficient – Emphasize strategic investments through collaboration that enhances existing assets, community connectivity, and use of land.

Figure 3.11: Final Guiding Structure

Effective – Seamlessly integrate multiple modes of transportation and embrace innovation to safely connect our community locally and regionally.

Equitable – Ensure all residents have access to the growing opportunities of the broader region with sensitivity to environmental and health impacts.

Actions

In standard practice, each goal is supported by unique objectives. However, this guiding structure outlines action categories that support all three principles. By modifying the standard approach, *2050 inMotion* acknowledges that actions can and should advance more than one principle at a time.

An action can be a project, program, policy, or plan that needs to be completed to accomplish the regional vision. Some actions may be completed in the short-term or are ready for immediate implementation, while others are significant in scale and scope requiring long-term efforts for support and implementation.

Each action has been organized into categories or objectives based on main concerns throughout the public engagement process. The action categories represent a method for combining actions that are strategically focused and define methods for measuring their implementation over time. The categories were specifically developed to align the principal goals with the mission statement and are defined by what the action does "to" or "for" people.

Protect – Cover or shield from danger or injury. Action items within this category ensure the safe transportation of people and goods throughout the MPA.

Move – Advance people from one place to another. Action items within this category facilitate the transport of people and goods in a regional manner.

Connect – Join or link people, places, and activities. Action items within this category facilitate linkages between local land uses, people, and goods.

Educate – Develop by teaching. Action items within this category increase awareness and provide opportunities for the exchange of knowledge between community members, elected officials, and planning staff.

Presenting these statements and subsequent confirmation from the public was an important step to "test the direction" that would guide the remainder of the planning process. This guiding structure was later finalized with the Stakeholder Committee based on input from Destination 2045.

Regional Exhibition

Following Destination 2045 and finalizing the guiding structure, *2050 inMotion* highlights key actions for achieving the desired future. Actions are identified through public input and transportation system analysis. The Regional Exhibition was intended to provide an opportunity for the public to weigh in on the initial *2045 inMotion* action items. Though the Regional Exhibition was initially planned as a series of in-person meetings throughout the MPA, it was redefined in the wake of the COVID-19 pandemic. Public input was gathered using online activities that were available for the entire month of September 2020 through the project website. The event was promoted by multiple area newspapers, as well as targeted social media campaigns to encourage maximum participation.

The online activities were organized into two primary components. The first component included an opportunity to review the draft plan document and provide general comments. A link to the document was provided and updated periodically as comments were incorporated. Participants were also provided with an interactive map of the Anderson MPA to understand the regional context for the MTP. Many participants were appreciative of the plan direction and multiple opportunities for engagement throughout the process. Improvements for Broadway Street and trail extensions across Madison County represent-

148 Facebook Links connecting people to the 2045 inMotion website

ed a few specific projects that participants supported. Others noted concerns that the action list would cause traffic problems in already congested areas.

The second component asked participants to identify priority actions for each of the four action categories along with general feedback on the types of actions. Participants could review the entire list of actions with an optional dropdown description of each individual action. Participants were then asked to respond to a series of four prompts to identify priorities or missing projects from the listed actions.

The four prompts were repeated for each of the categories:

- What are your top three priority infrastructure actions?
- What are your top three priority non-infrastructure actions?
- Do these actions align with the future vision for the region's transportation system?
- Is there anything missing from the action recommendations?

Each category could be completed individually allowing for participants to return later to finish the activities. Projects involving trail connections or extensions were considered among the top priorities such as the White River Trail Extension Project and Beulah Park Trail Construction Project. Priority programs focused on identifying missing sidewalk connections in neighborhoods and ensuring appropriate safety measures for pedestrians and bicyclists. Several participants noted a general comment to assist smaller communities throughout the region. They felt that all the actions represented opportunities to improve transportation but wanted to ensure that connectivity between communities was a focus for future investments.

The intent of the Regional Exhibition communicated the results of the planning process through a preliminary list of actions. This engagement opportunity allowed the public to ensure that their input had been incorporated

14 unique responses refining the recommendations of the MTP

into the draft plan and was representative of

Race of Participants

Gender of Participants

Age of Participants

How long have you lived in the region?
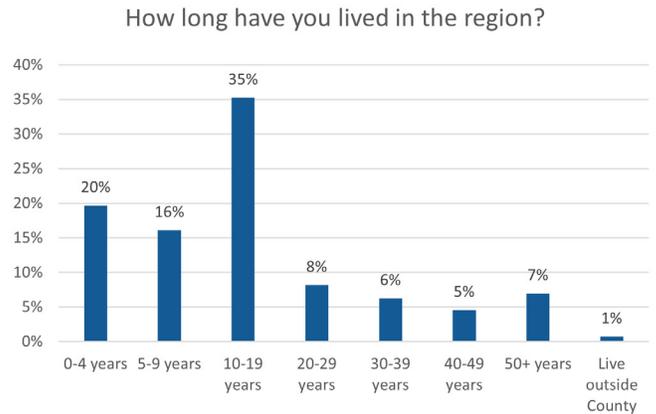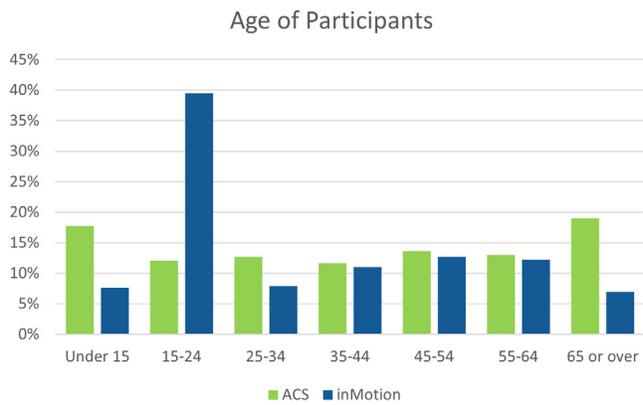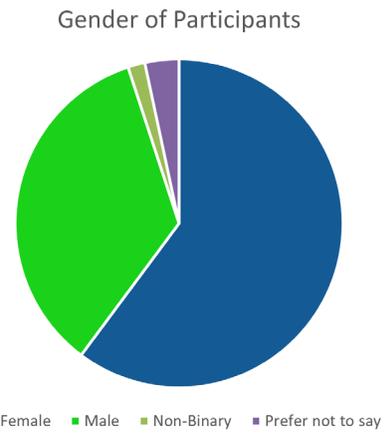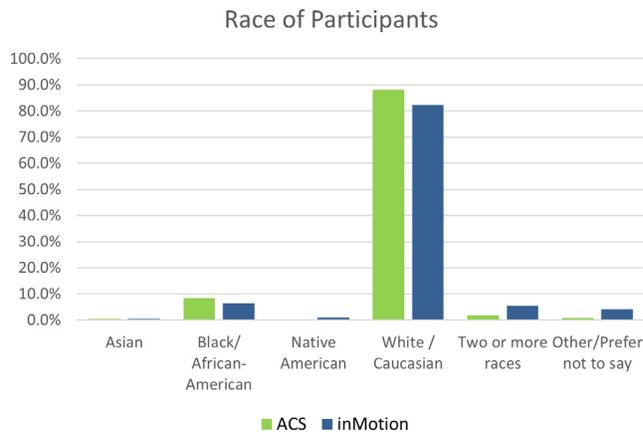
Figure 3.12: Participant Demographics

the feedback, thoughts, and ideas that had been gathered throughout the public engagement process.

Citizen Advisory Committee (CAC) and Technical Advisory Committee (TAC)

Due to the limited extent of the *2050 inMotion* update, a project-specific stakeholder committee was not established, and the CAC and TAC were utilized to inform the update instead. CAC and TAC Meetings are held quarterly with an active participation of approximately 15 to 25 stakeholders at each meeting. This approach allowed the MCCOG team to target discussions on the public involvement and technical update components of the process. This approach allowed the MCCOG team to target discussions on the public involvement

and technical update components of the process.

The April 2021 CAC and TAC meetings both introduced the *2050 inMotion* process and the purpose behind an update only one year after the initial adoption, as opposed to the standard 4-year cycle— to align the MCCOG and Indianapolis MPO MTP update cycles and simplify coordination between the two MPOs. The CAC meeting then transitioned to discuss the lack of engagement from young people (ages 15-24) and people with limited English proficiency in the *2045 inMotion* process. Attendees provided guidance on reaching these populations and suggested contacting high schools, colleges, and churches. The TAC meeting transitioned from the purpose of *2050 inMotion* to a general discussion on population and employment change within each

subregion. Attendees discussed growth along I-69, Elwood's access to Hamilton County via SR 37, and how redevelopment and affordable housing is key to growth in the Central-East subregion.

The July 2021 CAC meeting focused on action items developed through the *2045 inMotion* process. The MCCOG team updated attendees on the status of action item implementation throughout the MPA. Additionally, the first version of the *Action Item Prioritization Survey* was tested. The MCCOG team walked through 37 non-infrastructure action items that do not have set deadlines or mandated update cycles, explaining each to attendees and asking them to rank priorities within each action category, according to their own opinion. A handout with basic descriptions and an associated action item code was included with the survey for attendees to reference. Overall, attendees found the survey usable if the explanation of each action item was provided in addition to the action name.

The July 2021 TAC meeting included an online mapping exercise for allocating population and employment changes. Attendees were split into two small groups to provide an opportunity for in-depth discussion and results were reported back to the entire group. The exercise was intended to ensure that land use assumptions follow local expertise. Most attendees noted the Southwest subregion was expecting the largest increases in population and employment with the majority of growth expected along I-69 at the 214 and 219 interchanges. The Central-East subregion was identified for high employment increases, especially at the I-69 Exit 222 interchange, but low population growth overall. Finally, there was some discussion about the North

subregion and the disconnect between expectations and forecasted decline in that area.

The October 2021 TAC and CAC meetings began with an update on the new 2050 population and employment forecasts, as the forecasts were revised for the MTP update. The committees were then updated on public input efforts. The action item prioritization survey, the first draft of which was tested by the CAC in July, was simplified, and distributed to target audiences beginning in September. The committees were then briefed on the survey results to date, with particular attention on the large bump in responses from the 15-24 age group.

Action Item Prioritization Survey

The *Action Item Prioritization Survey* was released to the general public in September. The survey included action items from the MTP that are discretionary and do not have specific timelines for completion, as opposed to actions with Federally mandated update or adoption cycles. Respondents were asked to rank action items according to what they considered the highest to lowest priority within each of the 4 categories (Protect, Move, Connect, and Educate). After ranking within each category respondents were asked to identify their top 3 most important actions regardless of category. Prior to the survey release and following discussion with the CAC, action item descriptions were simplified for clarity and planning jargon was eliminated to make the survey as accessible for all age categories as possible.

Targeted outreach was conducted for the two demographic groups that were underrepresented in the *2045 inMotion* public engagement process: under 25-year-olds and people with limited English proficiency (LEP).

In addition to English, the survey was translated into Spanish, as the most prominent language spoken in limited English proficiency households, for distribution. MCCOG worked with a local coalition of organizations to expand outreach efforts directly into the Spanish-speaking population. Additionally, MCCOG coordinated with all high schools in the MPA that were willing to directly distribute the survey link to students.

In addition to social media posts, flyers were created in both English and Spanish to advertise the survey by providing a link and QR code for community members to directly access it. These flyers were distributed around the MPA at more than thirty locations including groceries, restaurants, libraries, post offices, civic buildings and churches. Particular attention was paid to distribute flyers and survey information to primarily Spanish-speaking congregations and in Mexican groceries in the MPA.

Within the "Connect" category, respondents strongly favored assisting local governments in creating spaces that address issues of accessibility and discrimination, as well as coordinating various community plans to work more cohesively. Action items regarding the inventory, expansion, and completion of sidewalk networks were also popular. In the "Educate" category, respondents favored options that increase awareness of air pollution, as well as reduce adverse effects on low-income and minority communities. For the "Move" category, the two favored actions both involved cross-county connections: community members expressed a desire for a rural bus service that traverses county lines, and to make it easier to take advantage of carpooling by connecting users and providing designated lots to carpool from. Finally, the "Protect"

category was dominated by the desire for policies that require developers to accommodate multi-modal forms of transportation, as well as initiatives that incorporate health considerations into the planning process and increase safety by reducing the number of driveways on high traffic roads.

Overall, actions incorporating air pollution, accessibility, and non-discrimination were consistently ranked high within individual categories, as well as within the top 3 priority question. Open-ended responses generally favored safety improvements, greater local connections, system maintenance, and transit investments. Survey results clearly articulated the values of the community and the direction it wants to head by 2050.

Input & Involvement

The combination of events, activities, and locations aimed to collect feedback from the public to align transportation investments with need while providing an educational opportunity to better understand the MTP's role. Throughout the planning process, participants at events and meetings were asked to complete exit questionnaires to track event effectiveness and participant demographics. Moving forward, this information will help identify target populations where a gap of input exists and indicate the most effective methods for involvement.

The graphics in Figure 3.12 show various demographics of participants involved in the development of this plan. Reviewing the demographics indicates most of the participants were female, an underrepresented group in standard planning processes. Comparing age and race distributions to those collected through the American Community Survey (ACS) illustrates a relatively balanced level of

input from each race category. Though the under 25 age category illustrated underrepresentation through the *2045 inMotion* process, the targeted outreach conducted as part of the *Action Item Prioritization Survey* resulted in an oversampling of 15- to 24-year-olds and shifted the age distribution of participants to a more balanced level. Finally, it is typically difficult to gain input from new residents, yet 20% of *2050 inMotion* participants have lived in the region for less than 5 years.

The public engagement process for *2050 inMotion* included:

Hours of Conversation – 65+ hours of conversation occurred during in-person workshops and events. Even more discussion happened online, which laid the foundation for countless more conversations about the Anderson MPA's future.

Spreading the Word – Over 30% of participants heard about one or more events through Facebook, Instagram, or Twitter. This revealed a valuable online engagement opportunity to notify the public of events and may continue supporting future engagement.

Participant Satisfaction – 99% of process participants felt their input was heard and recorded. Ensuring everyone was included and comfortable providing their input allowed the planning team to gather thousands of unique comments.

Facebook Polling – 700+ individuals provided responses to Destination 2045 prompts through the organization's Facebook account. This alternative kept the conversation going when it was impossible to host in-person events due to COVID-19.

Website Participation – Over 400 individual survey forms were completed through the process website, which built upon feedback

obtained during in-person events by providing an alternative format to completing engagement activities.

Input was collected from a diverse and inclusive representation of the region with additional opportunities to seek feedback in the future. Providing multiple events across the MPA is essential to public engagement given the size and diversity of its communities. Online platforms were important for expanding participation options and making participation easily accessible to those unable to attend in-person events. This also formed a communication network for the process by using previous or active participants to further engage the community. Balancing in-person events with online opportunities is an important strategy for future public engagement and will allow efforts to build off the foundation established by *2050 inMotion*.

While the scheduled in-person events were well attended, mobile events taking place during other community events also proved to be an effective method for expanding outreach. The events held during the Madison County 4-H Fair, Elwood Glass Festival, and Madison County Health Fair were especially beneficial for gathering feedback by aligning engagement opportunities with entertainment and recreational activities in the community. Coordinating opportunities with local governments will also strengthen MCCOG's presence in the community, building upon previous engagement to develop a robust public network.

Social media served as a critical communication and engagement platform throughout the entire process. Almost one-third of participants at in-person events heard about it through Facebook, Twitter, or Nextdoor mobile applications. This communication method

was the most direct line to the public with word-of-mouth being second. In addition, Facebook was a forum for stimulating discussions around major themes, challenges, and action recommendations that directly shaped the plan. Future engagement events should continue leveraging social media for communication and outreach by partnering with local organizations to assist in communicating future engagement opportunities. Communication strategies connecting social media platforms and engagement activities will enhance public feedback while continuing to refine mobility improvements for the region.

Continuing the Conversation

Although this process ends in the completion of an initial version of the *2050 inMotion* planning document, it is considered a living document that should be updated on a regular basis. Over time, this document will evolve and adapt depending on changes, challenges, and opportunities that may occur in the future. The intent of a living document is to encourage continuous conversation on how investments can enhance or complete essential portions of the transportation system. MCCOG welcomes all feedback on defining the roadmap for the future and will continue to engage the public to discuss how to connect the region.

97% of participants stated they would continue to participate

Chapter 4

Disrupting the Direction

Transportation systems throughout the world are continually reshaped by disruptions in technology, demographics, and other emerging issues in society. Innovations including Transportation Network Companies (TNCs), bike and scooter rental programs, and the first stages of car automation are becoming more prevalent, requiring changes in how transportation systems must operate and how decision-making can influence a community's adaptability. Across the country, an aging and migrating population poses new challenges for physical and economic accessibility in transportation.

Many of the disruptions identified above have already reached the Anderson MPA. This chapter will examine existing and potential disruptions to the transportation system and identify some critical concerns that must be acknowledged and incorporated into this plan's recommendations.
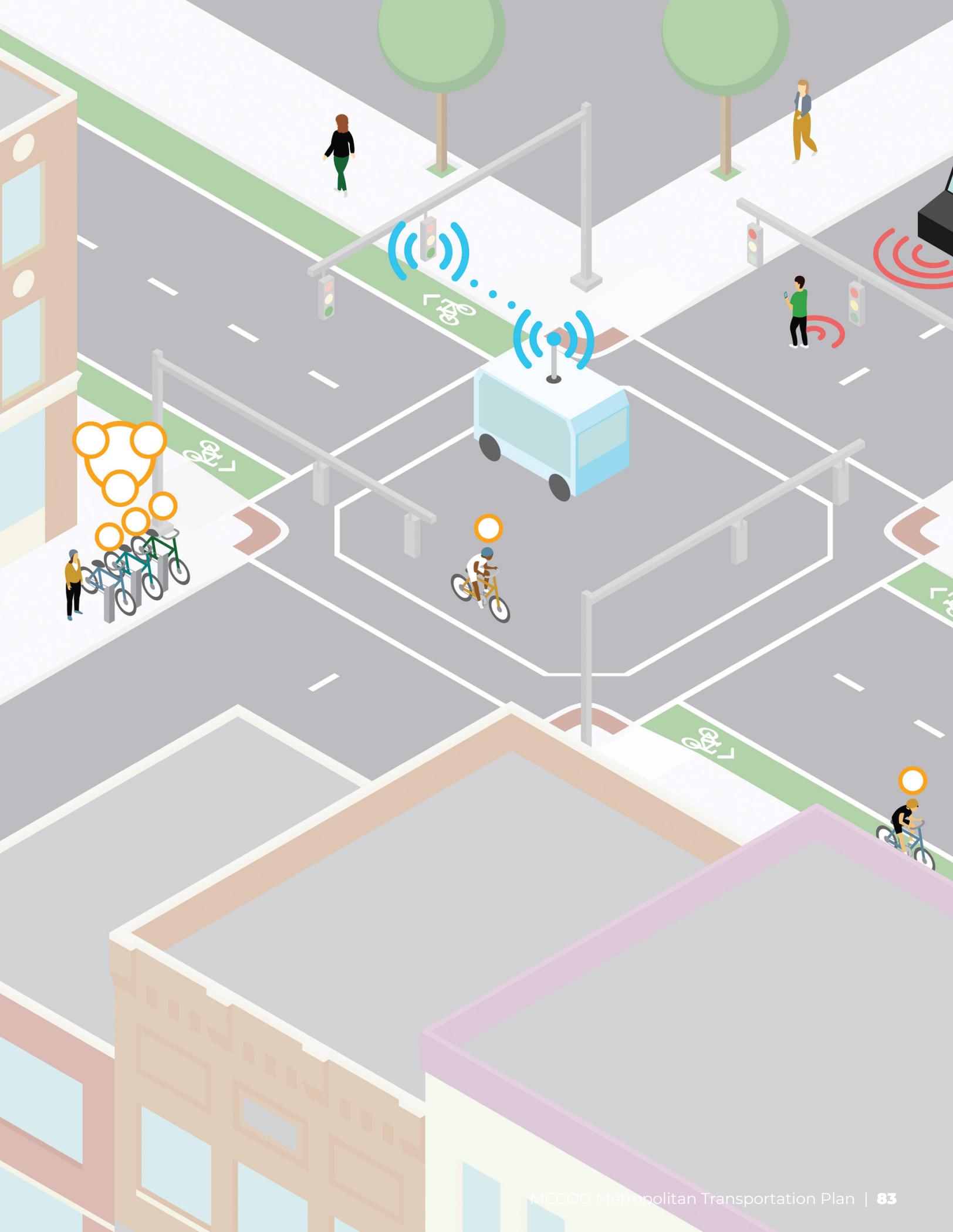
Transformative Technologies

Transportation Network Companies (TNC)

TNCs like Uber and Lyft match passengers with vehicles and drivers to arrange rides on short notice. Since 2012, these companies have developed mobile phone applications to connect users with rides, which has had a dramatic impact on mobility. TNCs are convenient for users for whom driving is not an option. Vehicles arrive on demand and passengers can choose any pick-up or drop-off location instead of walking to a station like traditional mass transit options. TNCs can supplement the coverage of public transportation and serve as a "first mile, last mile" solution in cases where transit stops are far from the desired destination.

However, the trade-off for convenience is cost. The average cost-per-mile for a passenger using a TNC is between $0.65 and $2.00, compared to $0.26 for public transportation[4]. TNCs cannot currently be considered equitable replacements for public transportation, even though shared autonomous vehicles may reduce fares in the future.

The impact of TNCs on traffic is often debated because some research suggests that they reduce traffic by encouraging ridesplitting or ridesharing. This practice is like carpooling where rides are shared, and costs are divided among passengers. However, ridesplitting only accounts for a portion of TNC trips. Other research finds that TNCs increase traffic, especially in city centers. One study found that between 2010 and 2016, hours of traffic delay increased 62% compared to 22% in a hypothetical scenario without TNCs[5]. Another factor contributing to traffic is deadheading or out-of-service movement between trips. In San Francisco, 20% of TNC traffic is out of service[5].

TNCs, like taxi services, also disrupt traffic flow in curb lanes during pick-ups and drop-offs.

TNCs may not impact the Anderson MPA on the same level as larger cities like New York and San Francisco, but it is still important to plan for these changes. Some governments regulate or ban the networks, but infrastructural changes can help accommodate them better. These changes may include designated areas for pick-up and drop-off or expanding existing public transportation as a competitive travel alternative.

Connected and Autonomous Vehicles

Though not yet available in commercial markets, Connected and Autonomous Vehicles (CAVs) may significantly affect the transportation system's future. Autonomous vehicles are commonly referred to as self-driving cars; however, automation can occur at different levels of capability. There are currently many newer model vehicles used throughout the US with low levels of automation in the form of driver-assist features. While the highest level of automation would be a system that can drive a car independently in all conditions, no model currently being tested is fully automated in all locations and conditions. CAVs are expected to improve safety as well as efficiency, since most crashes are caused by human error[6].

It is less clear how CAVs will impact land use. Shared autonomous vehicles could reduce the need for parking, because after dropping off one passenger, a car could simply move on to pick up another. If this occurs, communities could eliminate or reduce parking requirements, which in turn allows for densification and infill of downtown areas. Conversely, eliminating the need to drive would enable commuters to live further away from home,

Level 0
The human driver is in complete control of all functions of the car.

Level 1
The human driver controls the car, aside from some assist features.

Level 2
More than one function is automated, but the driver must remain attentive.

Level 3
Driving functions are automated, but the driver must sometimes take back control.

Level 4
The car itself can drive with no human intervention in certain environments.

Level 5
The automated system can perform all tasks under all conditions.

therefore incentivizing sprawl development. In addition, CAVs could contribute to increases in traffic with "deadheading" or idle travel between passengers like TNCs. Since CAVs have yet to appear on the market, their overall impact is uncertain; however, planners and policymakers should acknowledge the likelihood that CAVs will drastically affect the urban landscape.

Personal Rapid Transit

Personal Rapid Transit (PRT) combines desirable aspects of both public transportation and personal vehicles. Like many public transit systems, PRT follows a relatively fixed route along a track network. However, PRT trips are specialized by the requests of individuals or small groups of passengers. A fleet of low capacity "podcars" offers a more private, less congested alternative to conventional mass transit. Ideally, the low weight of individual pods makes both the vehicles and their supporting infrastructure less expensive and visually obtrusive to build.

Today, there are less than a dozen PRT systems worldwide, including examples in The United Kingdom, South Korea, and the United Arab

Emirates. There are no city-wide examples yet, but the largest example in the country is located at the University of West Virginia.

Electric Vehicles

The first electric cars were produced as early as the 1880s, but they were soon replaced by gasoline-powered vehicles. In recent decades, electric vehicles have returned and are now more popular and accessible than ever. As of 2019, despite higher upfront costs than diesel or petrol cars, electric cars are cheaper to own and run. Local and federal governments across the globe have pushed legislation to incentivize electric vehicle use. In California in 2017, Governor Jerry Brown signed an executive order aiming for 5 million electric vehicles to be on the state's roads by 2025. In Norway, electric cars consist of 22% of the market share due to incentives like toll exemptions and free parking.
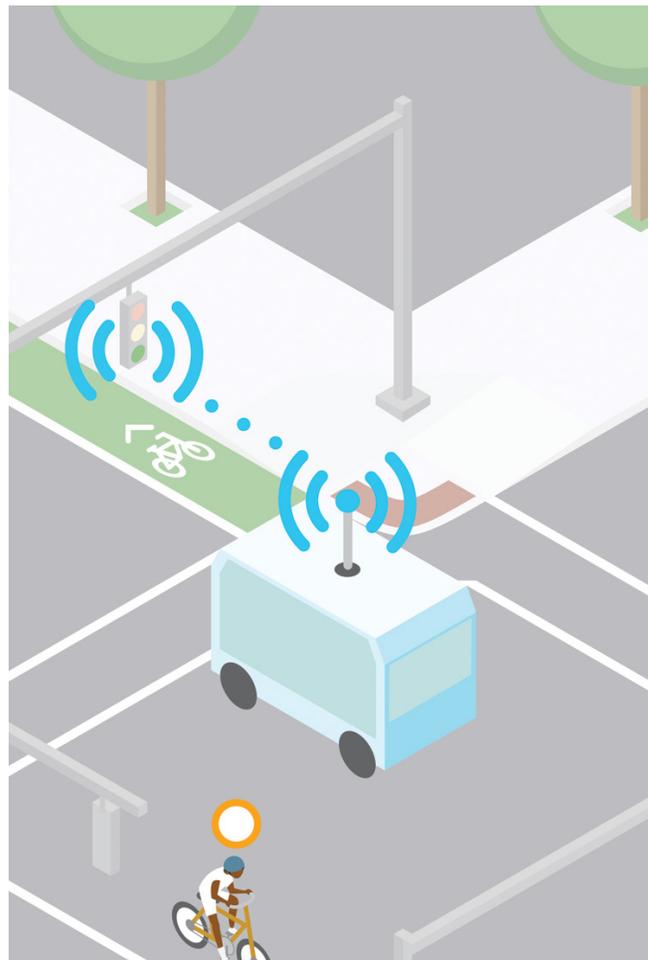
Indiana Energy Consumption Estimates, 2018
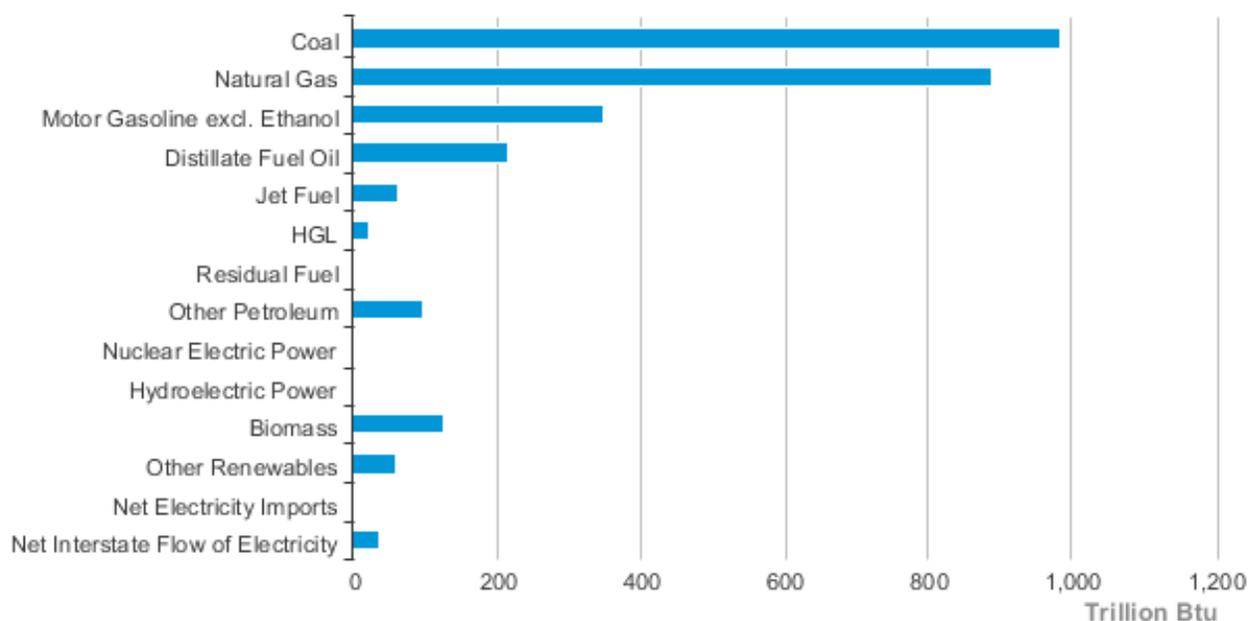
Source: Energy Information Administration, State Energy Data System

Figure 4.02: Indiana Energy Consumption[7]

Electric cars produce little to no air pollution when running, and thus will reduce dependence on fossil fuels. However, reduction depends on which resources are used to produce energy in the existing power grid. While Madison County has expanded its renewable energy yield in recent years, Indiana is still one of the top five states in the share of energy produced from coal. Coal accounted for 70% of the state's energy use in 2018[7]. For electric vehicles to reach their greatest environmental potential, their use must be paired with renewable energy production.

Bike & Scooter Share Systems

Bikeshare systems are gaining popularity in cities across the globe. In 2017, the number of shared bikes in the US doubled. These programs, which have existed in some form since 1965, let users rent bikes and dock them in stations across a given area. Recent innovations include anti-theft technology in the docking stations and dockless bikes unlocked using mobile applications.
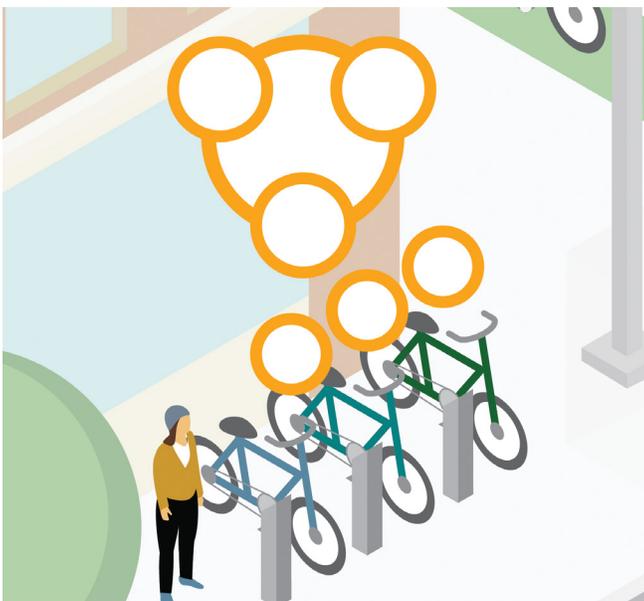
While dockless bikeshares do not exist in central Indiana, dockless electric scooter services are available. These programs rapidly appeared in cities across the US in 2018. However, these dockless systems are controversial because those bikes and scooters are often left in sidewalks and other public rights-of-way obstructing pedestrian and parking spaces, as well as limiting Americans with Disabilities Act (ADA) accessibility. In November 2018, 37 electric scooters were found in the Indianapolis Canal, which raised concerns of theft and vandalism.

Nevertheless, bikeshare programs are a vital opportunity to expand mobility options and reduce car emissions. To accommodate these systems, cities have implemented new bike infrastructure like bike lanes and docking stations in public right-of-way space. As of 2019, the Indianapolis Pacers Bikeshare Program had 525 bikes and 52 docking stations. Increasing the number of docking stations expands the number of commuters who could use them for travel.

Developing Demographics

Factors that shape the landscape of mobility involve technology as well as people. The US has witnessed economic and cultural changes in education, workforce participation, and housing trends. The youngest generations are now slower to enter the job market and have children, leaving gaps in the job market. Retiring Americans, soon to outnumber youth, have pressing concerns for physical accessibility in transportation. Demographic and population shifts pose unique challenges and opportunities for the Midwest. Culturally, there is a shift in how Americans view and participate in mobility, because there is less dependence on cars for both financial and environmental reasons. To adapt transportation resources for the future, there is a consistent, fundamental need for effective, accessible options in the way people move.

Generational Trends

Two recent generations, Millennials (born between 1981 and 1996) and Generation Z (born between 1997 and 2013), have entered the job market and impacted the landscape of mobility. These generations face unique challenges, such as the Great Recession of 2008, which left Millennials the most indebted generation. These issues make young adults more reluctant to have children, purchase cars, or own homes than prior generations at comparable ages.

This economically precarious situation has changed the state of housing in the US and consequently, the needs of a transportation system. In 2017, nearly a third of American households were burdened by the cost of housing, meaning that housing costs consumed more than 30% of their household income. A populace with trouble finding affordable housing is more likely to commute further to get to work. In addition, as housing prices continue to rise in the City of Indianapolis, people are incentivized to move further from the central city into exurban communities to secure affordable housing. In recent years, this exurban expansion has directly affected the population growth of the Southwest subregion of the Anderson MPA.

Teenagers are increasingly delaying applying for drivers' licenses, as well as foregoing their application altogether[8]. Younger generations are more likely to favor a car-free lifestyle. During the *inMotion 2050* public engagement process, stakeholders and respondents were chiefly interested in greater pedestrian and bicycle amenities like multi-use trails.

Nationwide Migration Patterns

In the past few years, national trends have shown the fastest population growth in the southern states of Texas, Florida, North Carolina, Georgia, and Virginia. Among the 15 fastest-growing cities in the US, eight were in the South and six were in the West[9]. This geographic range represents the Sun Belt, a region that has steadily grown in population since the 1960s. However, Midwestern cities have not seen the same rates of growth. Columbus, Ohio is the only Midwestern city to rank among the top 15 fastest growing. Within Indiana, the fastest-growing counties are those in or surrounding major cities including Indianapolis, Carmel, Fort Wayne, and Lafayette, which shows that people are increasingly favoring urban areas over rural areas.

Aging Populations

The average population age is expected to increase nationwide. According to 2019 Census population estimates, growth for the past decade peaked in 2014-2015, but it is now decreasing. As fewer children are born, the average age is shifting higher. This is true in Indiana as well, especially since trends point to population increase slowing or stagnating in the Midwest as compared to other regions in the country.

In the coming years, it is expected that the population of the MPA will continue to be older. The growth of grand families or kinship families, in which children are primarily raised by grandparents, creates further need for older adults to be mobile so they can access a variety of resources to support childcare.

In addition, strengthening pedestrian infrastructure and expanding ADA compliance in pedestrian rights-of-way must become a priority to support these aging populations. The American Association of Retired Persons (AARP) recommends that local governments adopt a Complete Streets policy to ensure that considerations are made for pedestrians, bicyclists, and other vulnerable road users in transportation projects[10]. These policies are important for older users, as many older adults will reach a stage in which they can no longer drive, and safe pedestrian access will provide alternative transportation options and support independence.

In addition, improving transit including the City of Anderson Transportation System (CATS) and Transportation for Rural Areas of Madison County (TRAM) can connect those who cannot drive or walk to resources outside their neighborhood. The National Science and Technology Council advocates that transit be made more age-friendly both through the design of infrastructure and route navigation considerations[11]. For example, adopting a real-time bus app can alleviate the confusion of using the CATS system for residents and visitors. CATS system users have cited their unfamiliarity with the schedule as a primary barrier to utilizing transit.

Older adults who drive may also have reduced vision and/or a slower reaction time. To support their mobility, the Federal Highway Administration (FHWA) recommends a set of specific design guidelines known as the *Handbook for Designing Roadways for the Aging Population*. These guidelines identify design alterations that can make roads easier for older adults to use, such as preferred lane widths or increased visibility of striping and signage.

Extreme Weather Events

Average temperatures are expected to rise across the State of Indiana in the coming years. While this may seem like a positive change in some ways, there are many negative implications. In a public heath context, warmer temperatures raise concerns about more extreme heat events and heat-related death. Furthermore, deteriorating local air quality can exacerbate individual health problems. Transportation infrastructure may experience more wear due to increased annual precipitation and higher temperatures, which increases maintenance costs. Finally, as floods become more frequent, it will be important to plan for alternative routes and other safety considerations.

Temperature

Extreme heat events threaten public health because they result in fatalities either due to the heat itself, or due to preexisting conditions worsened by the heat. For example, those who have asthma or allergies may have their health worsened by the increased pollen that accompanies a longer allergy season, and increase in ground-level particulate matter can trigger asthma or heart attacks. In addition to heat, greater rainfall is expected, which may create conditions that promote pathogens and disease vectors like mosquitoes[12]. The immediate health effects of excessive heat and poor air quality are problematic because they could also discourage road users from choosing to walk or bike to their destinations. Reducing car trips is an important part of lowering emissions but deteriorating outdoor conditions could counteract governmental and community efforts to reach this goal.
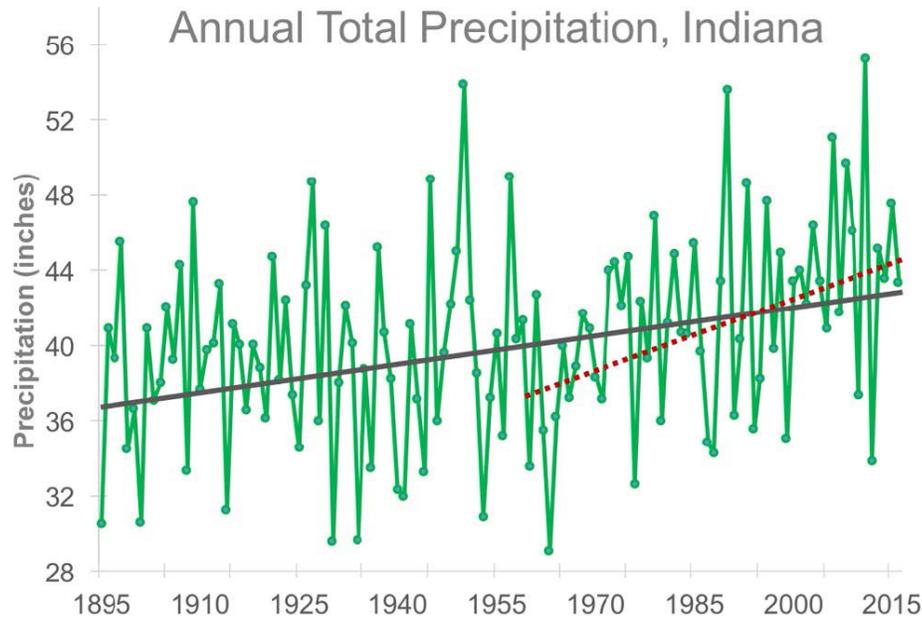
Figure 4.03: Past Rise in Precipitation[13]
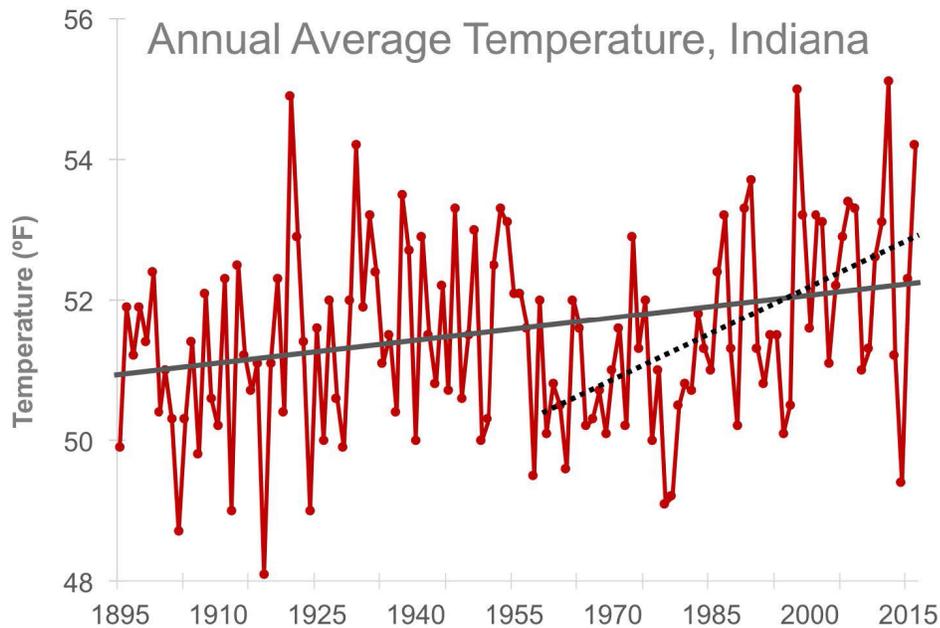
Figure 4.04: Past Rise in Temperature[13]

Rainfall

Extreme rainfall and flooding can lead to water contamination due to the combined sewer overflow systems common to the area. Many rural residents rely on wells for drinking water, which can become contaminated during heavy precipitation. Since some communities in the Anderson MPA are located within or directly adjacent to floodplains, this is a primary concern. Average annual precipitation in the state is expected increase by 6-8% by mid-century, with most precipitation expected to occur in winter and spring[13]. Increased rainfall and snowfall lead to more flooding, a risk which should not be ignored. Floods may cut off transportation routes, affecting the mobility of private road users, commercial freight, and first responders. Communities must gauge

their level of risk and plan detour and evacuation routes as appropriate, as well as prepare systems of effective communication so the public receives warnings about local hazards.

Trees & Plants

The role of the urban treescape is not often considered in conversations about walkability, but it may become more important in the future. An extensive urban forest can provide shade and combat the urban heat island effect that renders urban populations most vulnerable to heat events. However, certain tree species may be threatened. Plant populations are expected to shift, and some tree species including those commonly planted in Midwestern urban contexts are expected to die off or migrate out of the region over time due to changes in temperature and precipitation[14]. Urban foresters and park managers should be prepared for this scenario by taking into consideration what amount and in which locations the treescape is most at risk, what steps must be taken to mitigate that risk, and whether alternate tree species should be considered for new plantings.

Infrastructure Maintenance

The possibility of more extreme weather cycles, including increased heat as well as snow and rain indicates that there will be greater wear on infrastructure[15]. Bridge structures are especially sensitive to extreme rainfall. Overloaded streams and rivers can cause erosion, or bridge scour, around piers, which is a common cause of bridge failure. A simple preparatory step that communities can take to address these potential issues is creating an inventory of transportation assets. Communities can decide which corridors are the most critical, the most vulnerable, or in need of protection.

COVID-19 Impacts

From mid-March to August 2020, the State of Indiana was under a stay-at-home order because of COVID-19. During these months, the public was advised to remain at home and avoid contact with others except for performing essential tasks. As a result, many workers began telecommuting and many more were furloughed or lost their jobs altogether.

Travel during this period was greatly reduced because of these limitations and provides a unique opportunity for further study on disruptive trends. A COVID-19 study could provide additional insight and understanding of the transportation system effects from a widespread state of emergency. In this case the disruption was a public health issue but similar reductions in travel might occur in any emergency scenario where people are advised to shelter in place. For example, if people are required to shelter in place because of deteriorating outdoor conditions, their travel might be affected in a similar manner.

In addition to gaining insight for situations where people are advised to shelter in place, COVID-19 travel levels could be used to adjust analysis assumptions for future scenarios with population losses and reductions in commuting due to increased telecommuting. By studying the effects of COVID-19, decision makers could be better informed about conditions in a wide range of scenarios and be further prepared if a similar crisis occurs again.

Summary

Extrapolating past trends can form a basis for what to expect in the future, but the MPA must be prepared for novel disruptions as well. In most cases, the extent of their effects or their exact impacts on the transportation system are uncertain. However, based on current

knowledge, communities should consider some likely outcomes to prepare for those impacts.

For example, the availability and use of autonomous vehicles will likely increase significantly over the next five to ten years. In combination with TNC services, these new technologies may drastically change the future of the transportation system. In the future, the automobile may evolve from being chiefly personal property that sits idle most of the time into a shared, continuously running service, though it remains to be seen whether shared autonomous vehicles can compare with public transit in terms of affordability and access.

As the population's average age increases, more care must be taken to ensure access for older adults. Mobility for all ages can be better supported by investing in trails and pedestrian infrastructure, adopting Complete Streets policies, ensuring ADA compliance, and designing roadways to increase pedestrian safety. Consequently, many of these changes also support a climate that attracts amenities that younger generations prefer.

Chapter 5

Testing the Direction

The future offers unlimited possibilities including both challenges and opportunities that will impact Anderson MPA residents. People may continue demanding walkable places and delay or forgo getting a driver's license, automobiles may become connected and driverless, core industries today may disappear tomorrow, the world may be hit with a global pandemic that halts travel, or population growth may slow. Scenario planning is an analytical tool that can better prepare us for what lies ahead by testing various future alternatives. More specifically, scenario planning looks at how projects, programs, and policies may react under various conditions. For example, developing vacant property in downtowns versus building subdivisions around major interchanges are two different yet possible ways that residential growth can take shape. Studying these two development approaches can provide valuable insight into transportation impacts and can then be used to inform zoning codes and development ordinances.

Scenario planning departs from traditional long-range planning techniques, which often

exclusively focus on projections based on current trends and leave little room to consider new possibilities or unexpected challenges. The vast uncertainty of what the future holds is being felt now more than ever. *2050 inMotion* includes minor updates to the first scenario planning component included as part of the *2045 inMotion* MTP planning process and establishes a baseline for future scenario planning efforts.

Developing Scenarios

The process of developing future scenarios is not a one-size-fits-all approach; instead, it is a scalable process that can create a better understanding of emerging issues or build consensus around policy changes or investment priorities[16]. All scenario planning processes include at least one trend scenario, often called a baseline scenario, for comparing other scenarios with different futures. The baseline scenario typically reflects current policies, plans, and community values and is compared directly with other scenarios. Comparisons between scenarios illustrates actions that can be taken to achieve a more desirable future or which actions are most desirable under different circumstances.

To further explain the scenario planning process, the graphic below provides FHWA's six-phase scenario planning framework, which was used to guide the *2050 inMotion* scenario planning effort.

The planning team and stakeholder committee chose to integrate scenario planning throughout the process and focused public involvement on step three, the visioning component. However, before visioning, the planning team worked with stakeholder committee members to identify the elements or hypothetical dials that can be turned for
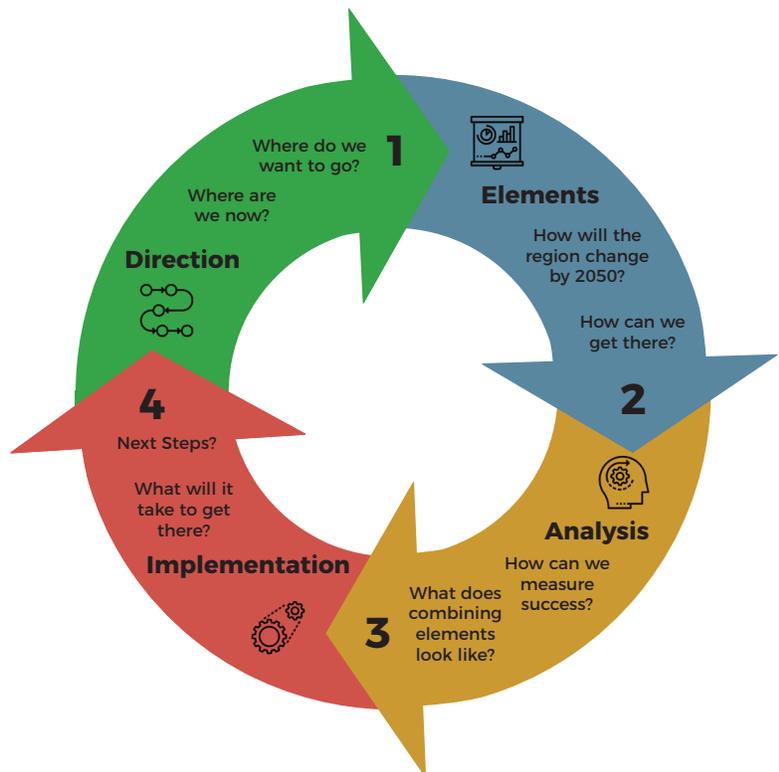
Figure 5.01: Testing the Direction, adapted from[17]

Figure 5.02: FHWA Scenario Framework[16]

Within the figure:

- 1 — *How should we get started?* — Process goals and objectives, engage with stakeholders — **Output:** Work Plan
- 2 — *Where are we now?* — Analyze and identify regional trends in land use and transportation — **Output:** Transportation systems inventory, land suitability analysis, evaluation of trends
- 3 — Who are we and where do we want to go? — Establish future goals informed by the key values of the region — **Output:** Set of working principles that document state, community, region, or study-area goals
- 4 — *What could the future look like?* — Visualize alternative transportation and land use scenarios — **Output:** Identification of appropriate scenario analysis tool or refinement of travel demand model
- 5 — *What impacts will scenarios have?* — Access scenario impacts and how they would perform — **Output:** Refined analysis tools or models, assessment of scenario impacts and performance measures
- 6 — *How will we reach our desired future?* — Craft a comprehensive vision — **Output:** Comprehensive vision, action steps, performance measures, plan to moniter progress

Side labels: Stakeholder Involvement; Identify, Prepare, and Refine Analysis Tools; Data Collection

creating a future scenario. Multiple changes must be analyzed simultaneously to develop distinct scenarios that simplify comparisons of results. After working with the public to establish a vision, individual elements were combined to create the final scenarios.

Identifying Elements

Scenario planning analyzes various elements that impact the study area like demographics, economics, politics, health, transportation, environmental trends, and land use. A trademark of scenario planning is identifying land development patterns as elements that could impact transportation networks, investments, and operations. Land development patterns

illustrate what future growth might look like on the ground[17]. While scenario planning can be implemented in many ways, the general method is:

- Using scenarios to compare interactions between multiple factors, such as transportation, land use, and economic development.
- Analyzing how different land use, demographic, or other types of scenarios could impact transportation networks.
- Identifying possible strategies that lead a state, community, region, or study area toward achieving elements of the preferred future.
- Engaging the public throughout the process.

Through the *2050 inMotion* process, the planning team and stakeholder committee developed scenarios by combining the following seven elements:

- Industry Concentrations
- Regional Investment Strategies
- Demographic Changes
- Technological Disruptions
- Behavioral Trends
- Population Projections
- Employment Projections
- Land Development Patterns

The Regional Overview discussed impacts of various industries and place types on the transportation system, as well as the impacts these industries have on regional mobility. Each industry type utilizes the transportation system differently and the overall industry

concentration can significantly shift investment priorities. Disrupting the Direction explains demographic and technological disruptions that will impact our future, informing scenario considerations for future technologies Connected and Autonomous Vehicles (CAVs). These disruptions can drastically change our direction. Regional investment strategies can help ease the burden of uncertain futures to overcome challenges that might arise, but the approach can vary. While population and employment projections dictate a region's amount of growth, development patterns determine where growth occurs.

Accounting for the elements listed above begins the process of testing the future direction. While each element represents a unique consideration, they are interconnected. Demographic changes like an aging population contribute to different behavioral trends, land development patterns, and so on. Combining these elements creates a framework to identify priorities, recommendations, and investments connecting where we are to where we want to be.

Population & Employment Projections

Projections for population and employment change are the result of demographic, socioeconomic, and land use models. Models generate expected population and employment levels which are further refined based on local expertise from real estate developers, planners, engineers, researchers, and elected officials. Each of these models use past trends to inform projections but are limited in accuracy when the projection is made further from current information. For *2050 inMotion*,

population and employment projections are estimated from 2015 to 2050 with an increasing range of possibilities the further the forecast year is from 2015.

To simplify analysis, projections can be split into analysis periods—set time frames in which disruptions or different assumptions can be made. Even though it is nearly impossible to predict exactly when something will happen, it's easier to predict that a disruption may occur within a certain timeframe. The

projections for *2050 inMotion* were split into four analysis periods:

- 2015 to 2020
- 2020 to 2030
- 2030 to 2040
- 2040 to 2050

Scenarios consider the range of growth options and the potential disruptions in each analysis period that can profoundly impact
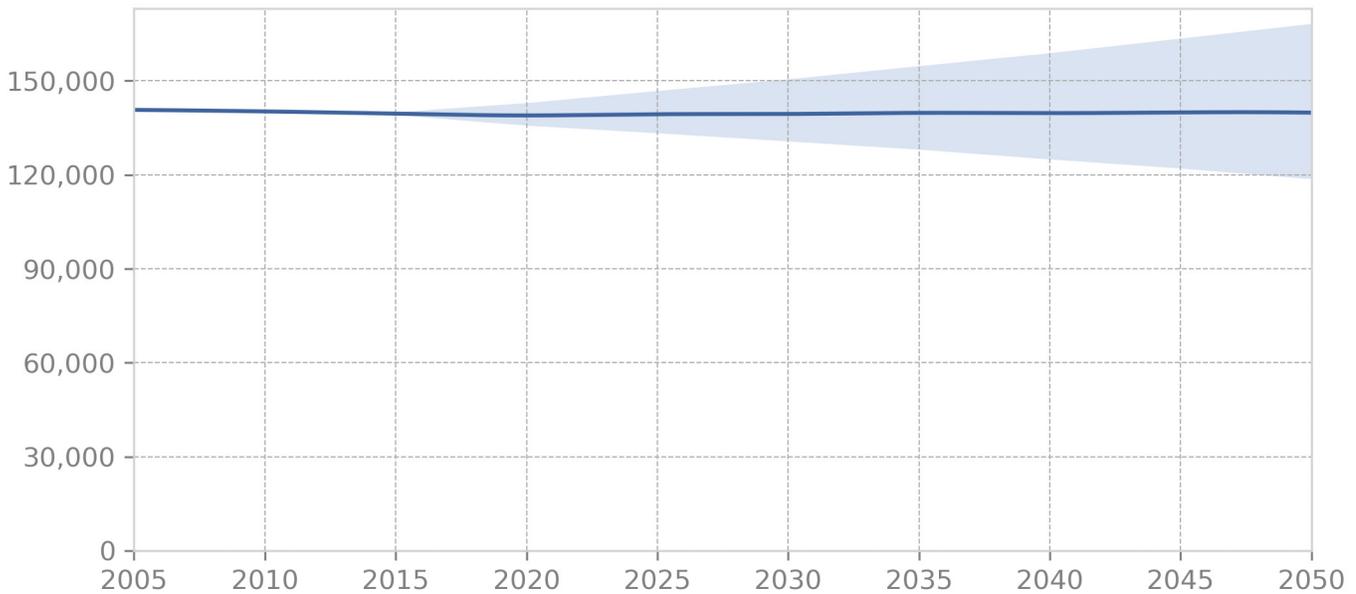
Figure 5.03: Population Projection Ranges
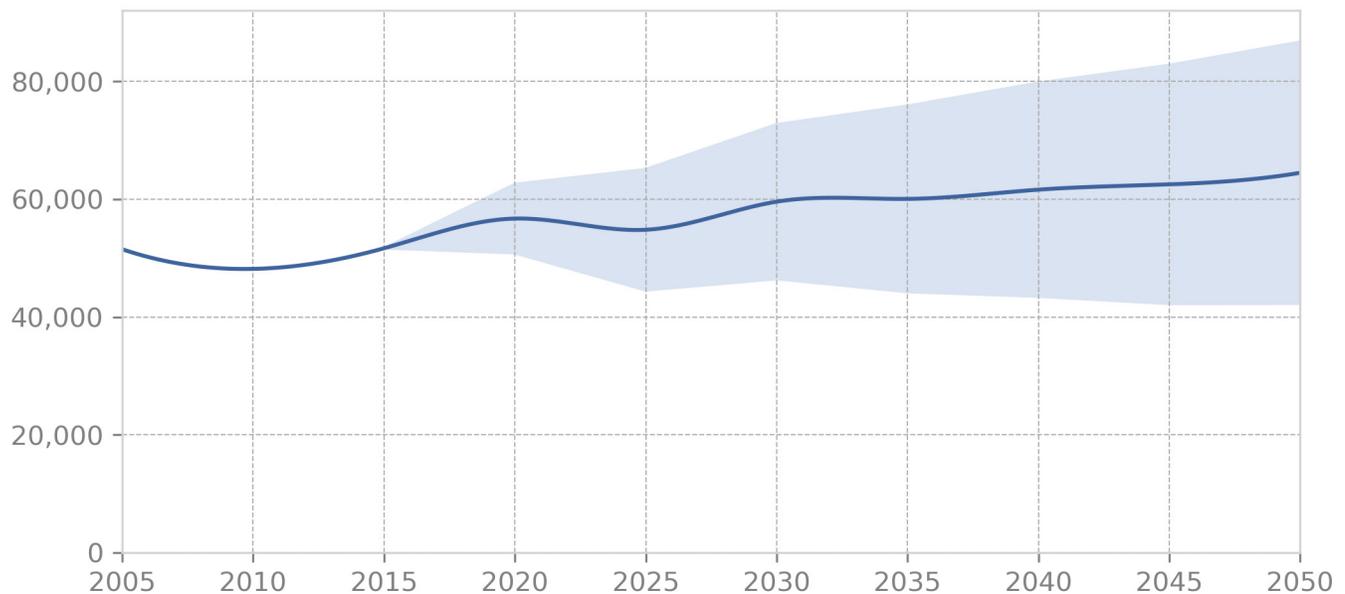
Figure 5.04: Employment Projection Ranges

future growth. In this way, scenarios can incorporate multiple growth rates while remaining in the overall range of possibilities. For example, a scenario could follow a medium growth rate from 2015 to 2030 and assume a catalytic project occurs between 2030 and 2040 to spur higher growth; conversely, an economic downturn could slow growth within any of the analysis periods.

Development Patterns

Development patterns define how available land is utilized for residential, employment, and other purposes based on demographic, economic, political, and geographical conditions. Three development patterns were considered: Roadway Corridor, Infill & Redevelopment, and Waterfront Corridor.

Roadway Corridor

Development could occur along interstates and major arterial corridors like I-69, US-36, SR-9, and SR-13. Roadway Corridor represents a future where development mainly occurs on greenfield, or previously undeveloped agricultural land, and is accessed by major roadways. Due to a lack of utility infrastructure, the cost of utility expansions should be considered by communities to ensure they can achieve economic longevity after development. Figures 5.05 and 5.06 show examples of the Roadway Corridor development pattern.

Infill & Redevelopment

Development is integrated into existing communities by building on vacant parcels in urban or suburban areas, and land uses are intensified resulting in increased densities.

Figure 5.05 Roadway Corridor Pattern

Figure 5.07 Infill Pattern

Figure 5.06 Roadway Corridor Pattern

Figure 5.08 Infill Pattern

These areas are already served by public infrastructure, such as transportation, water, wastewater, and other utilities. Ideally, this development pattern aims for better use of property so that it provides an economic return to the community. Figures 5.07 and 5.08 depict the Infill & Redevelopment development pattern.

Waterfront Corridor

Development is concentrated along the White River and adjacent creeks. Office and industrial development occur as a mix between corridor and infill locations. Figure 5.09 depicts the Waterfront Corridor development pattern.

Figure 5.09 Waterfront Pattern

Combining Elements

The seven scenario elements are combined to create distinct futures for analyzing the path that aligns most closely with the desired vision. As noted previously, the elements are interconnected and turning the knob of one may change another. It is important to understand these connections, how they evolve, and how they impact the transportation system.

The planning team began combining elements by noting which were most closely linked together and establishing predominant concerns of the stakeholder committee and

public. The stakeholder committee helped influence each scenario through meetings dedicated to scenario planning elements, methodology, and terminology. Focus groups informed the scenario planning process by reacting to initial tests and development patterns to further improve the scenarios. Consistent messages of preserving agricultural land, adapting to new technologies, investing in downtowns, and considering impacts of a catalytic project led to four initial considerations:

- A future based around the roadway corridor development pattern
- A future based around CAVs
- A future based around small business & infill development
- A future based around waterfront development

From these four considerations, each element was reviewed, and assumptions were made based on available research and expertise. For example, in a future based around CAVs and technology:

- The information industry sector would thrive.
- Development would largely occur around roadways but could also include redeveloping parking lots for a higher use.
- More people would be attracted to the MPA due to lower cost of living and increased flexibility for commuting to Indianapolis (i.e., working while driving and increase in telecommuting).

The planning team worked with the stakeholder committee to balance the shifting elements and generate the scenarios that were of greatest interest to the public. The seven elements

were combined to create three scenarios: Status Quo, Investing in Place, and Connected World.

Each scenario paints a different future for the region, and the names generally represent the combination of elements that define the scenario.

Final Scenarios

The final scenarios were created with a sketch planning tool that utilizes nationally available datasets such as census information to provide insight on the impacts of changing development patterns and densities. Scenarios were built, mapped, and analyzed. Each scenario was built from a "base scenario," a map of the MPA at present time containing information about population, employment, housing, and land use for every parcel and census block. The tool includes a library of representative building and place types that describe different land uses and their associated population, housing, and employment characteristics. Areas of the MPA can then be redefined into different place types that simulate changes in land uses, population numbers, and employment numbers according to modeled projections for each future time period.

Status Quo

Status Quo maintains a lot of the same assumptions that can be seen in the Anderson MPA now, so this scenario should be considered the baseline scenario. The growth projection is low to mimic current growth rates. The dominant industry is manufacturing and logistics to build upon the development that has taken place throughout the Anderson MPA along the I-69 corridor. To support manufacturing and logistics growth as well as transportation focused on personal automobile travel, Road Corridor is the primary development pattern. An aging population represents the predominant demographic change consistent with current conditions in the region and further contributes to the low growth rate.

Investing in Place

Investing in Place focuses on redevelopment in existing downtown areas. The growth projection is medium to simulate more growth from Indianapolis moving toward the Anderson MPA. The dominant industry is small business because redevelopment has led to entrepreneurs repurposing existing buildings. Revitalization has already started in Anderson and the Investing in Place scenario builds upon it. To support small business growth, Infill & Redevelopment is the primary development pattern. Finally, the transportation system is focused on walking, biking, and transit since destinations are closer in existing towns and cities.

Connected World

Connected World is the biggest change to our future region because of the impact of CAVs. CAVs prioritize roadway corridor development but also infill downtown parking lots that are no longer needed. The region sees greater population growth because it is well placed for an easy commute to Indianapolis. In Connected World, commuters can work on their way to work or choose to telecommute more regularly. The dominant industry also changes to technology as the local economy adapts between now and 2050. In addition, electrified CAVs result in emission reduction and shopping online leads to more small truck traffic.

Comparing Scenarios

Even though the sketch planning tool provides a high-level overview of scenarios, it does not represent localized conditions like Prometheus, the MCCOG Travel Demand Model (TDM) does. Moreover, it does not have the flexibility to consider all seven elements combined. Each scenario was compared using the sketch planning tool to identify which scenario(s) would be incorporated into Prometheus for additional analysis. Scenarios were evaluated using a variety of measures:

Land Consumption – Quantifies the land converted for development in future scenarios.

Energy Use – Estimates residential/commercial electricity and natural gas use for existing buildings and new growth as represented by future scenarios.

Water Use – Estimates the residential and commercial water use for existing buildings and new growth as represented by future scenarios.

Walk Accessibility – Measures proximity to amenities and accessibility to specific features

Table 5.01: Comparison of Final Scenarios			
	Status Quo	**Investing in Place**	**Connected World**
Growth	Low	Medium	High
Industry	Manufacturing & Logistics	Small Business	Tech
Development	Roadway Corridor	Infill & Redevelopment	Mix of Roadway Corridor and Infill & Redevelopment
Miscellaneous	Aging Population	Increase in walk/bike/ transit trips	· Telecommuting increases · Driverless cars (CAVs) · Increase in online shopping (small truck traffic increases) · Increase in shared mobility services (vehicle ownership decreases)

or opportunities by the available sidewalk network.

Transit Accessibility – Measures proximity to amenities and accessibility to specific features or opportunities by foot and transit.

Transportation – Is a high-level travel model that produces estimates of different transportation metrics for future scenarios.

Emissions – Estimates emissions associated with passenger vehicle transportation and building energy/water use.

Household Costs – Estimates annual household costs associated with passenger vehicle

transportation, residential energy use, and residential water use.

Risk– Measures the potential impacts of natural hazards and supports analyzing flood and fire risks across the US.

The following graphs compare the three scenarios and, where applicable, include the base scenario to illustrate changes from existing conditions. The base scenario describes the existing built environment, constituting a baseline assessment of land use, demographic characteristics, and other conditions to provide context for analysis scenario.

Scenario	Population
Status Quo	140,791
Investing in Place	149,682
Connected World	169,077
Base Scenario	132,352
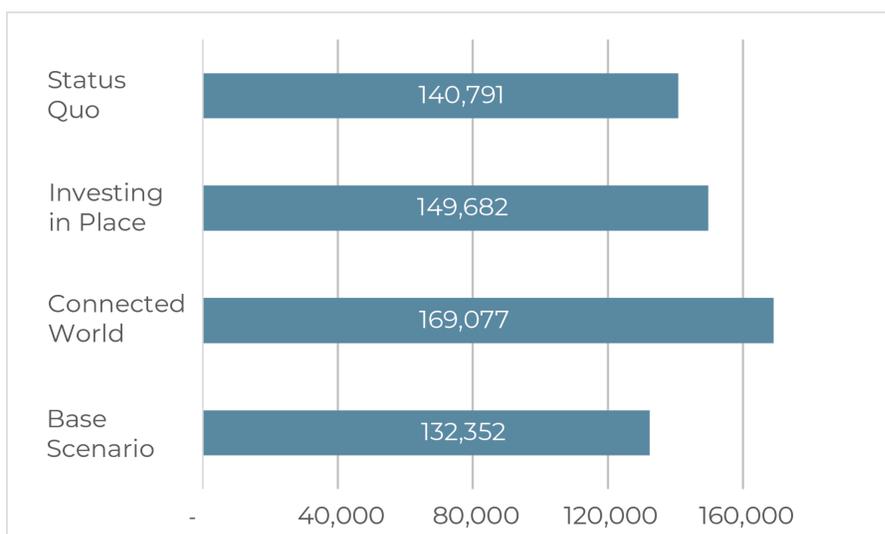
Figure 5.10: Population in Each Scenario

Scenario	Employment
Status Quo	46,533
Investing in Place	53,268
Connected World	68,988
Base Scenario	40,439
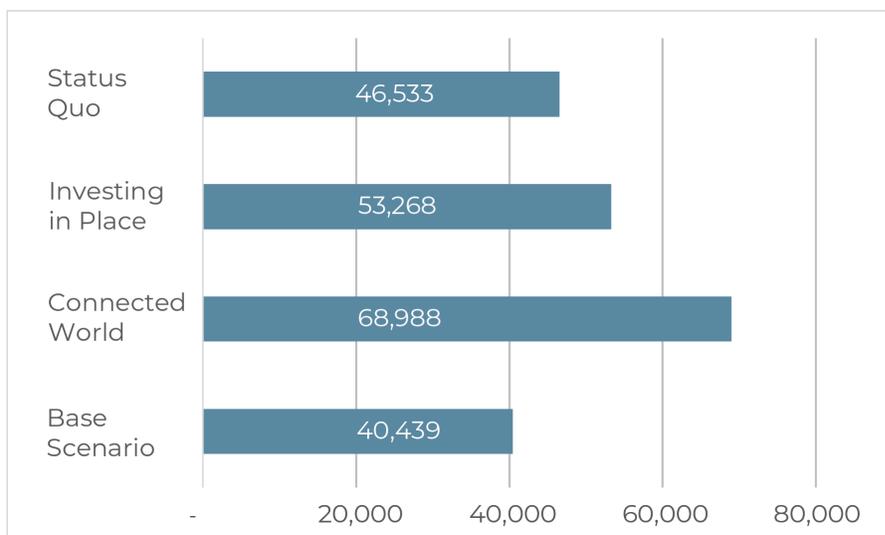
Figure 5.11: Employment (jobs) in Each Scenario

As the only high growth scenario, Connected World has significantly more people and jobs than Investing in Place and Status Quo. Scenarios can be compared in various ways to get a more in-depth understanding of the underlying assumptions. Measures can generally be considered at three levels: total, rate per capita, and rate per additional person/job. Using per capita and per additional person/job rates eliminates some of the difference seen strictly due to the population and employment differences.

Land consumption is the ideal measure for illustrating the difference between total and rate comparison values. Connected World has the most land consumed total largely due to the high population and employment numbers, but also accounting for the Roadway Corridor development pattern that results in sprawling growth. Status Quo is only like Connected World in development pattern because both include Roadway Corridor development. This development pattern's impact is illustrated by land consumption since these two scenarios consume more agricultural land and more total land in general.

Figure 5.12: Total Land Consumed (acres) in Each Scenario
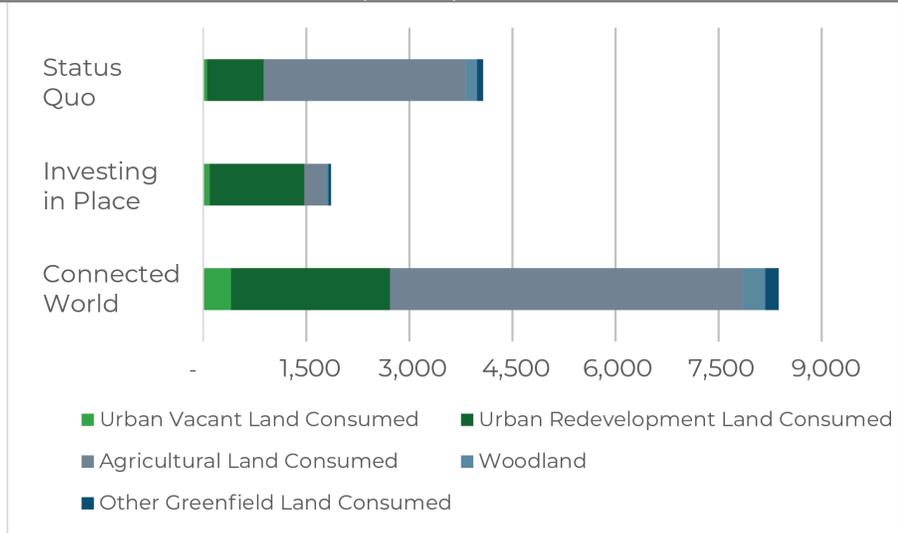
Figure 5.13: Land Consumed per Additional Person in Each Scenario
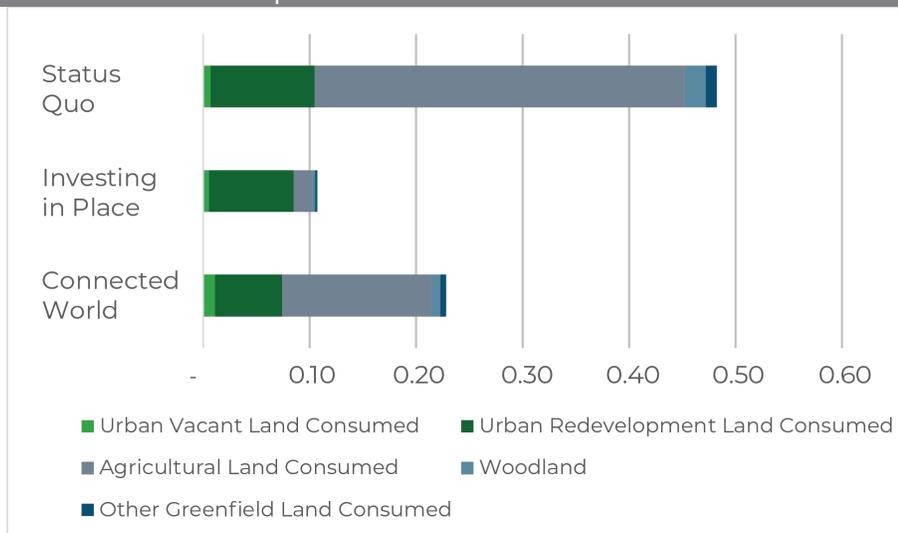
Figure 5.14 Percent of People within 15 min walk to a School

Scenario	Percent
Status Quo	31.20%
Investing in Place	36.80%
Connected World	30.70%
Base Scenario	34.00%
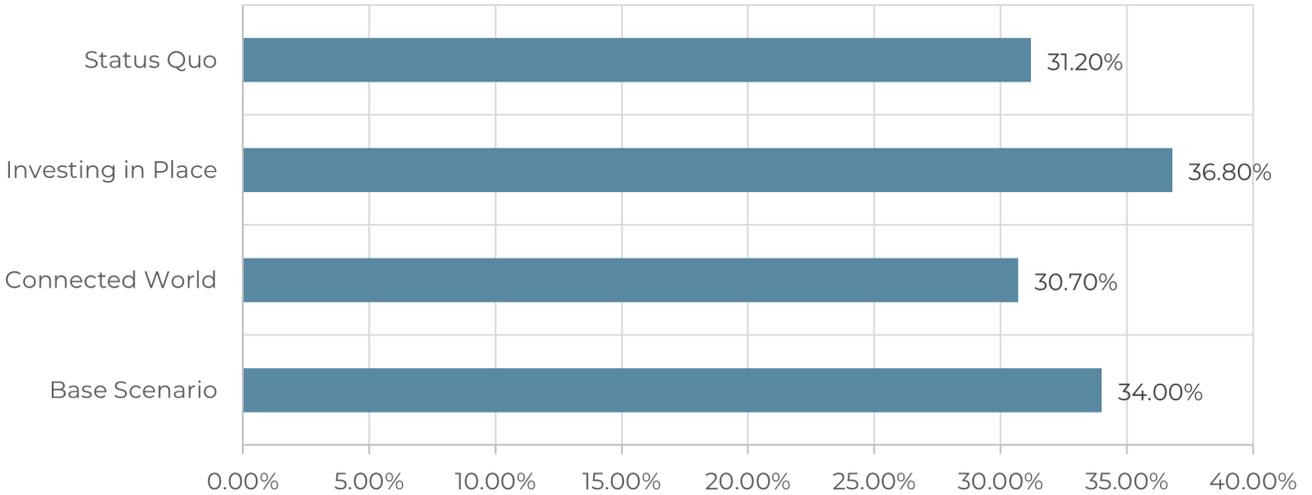
Figure 5.15: Percent of People within 20 min Transit Trip to a School

Scenario	Percent
Status Quo	45.90%
Investing in Place	50.90%
Connected World	46.50%
Base Scenario	49.70%
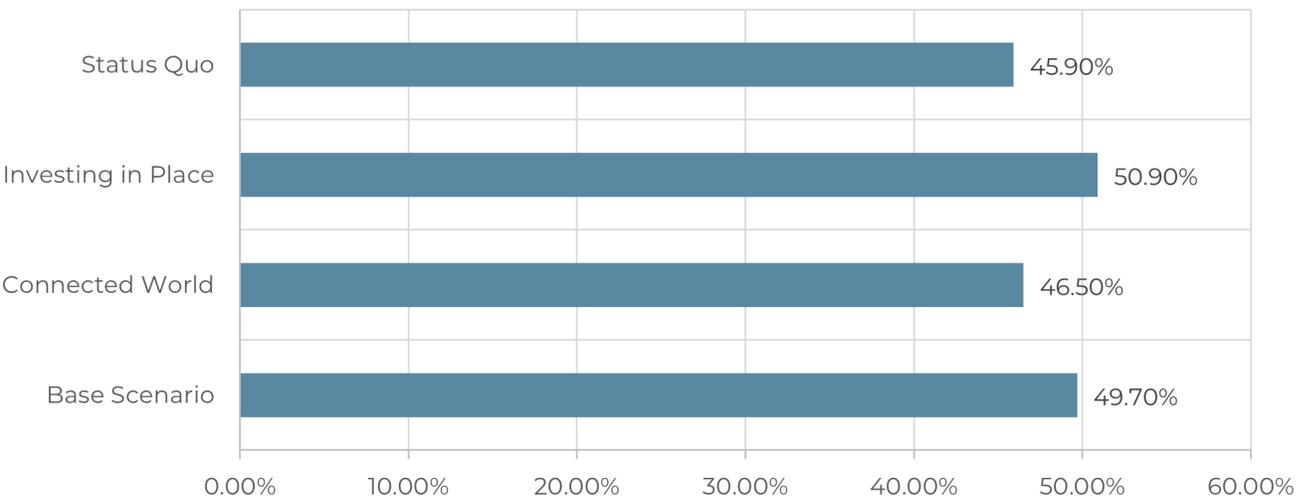
Investing in Place best represents public feedback on desired development patterns by utilizing existing assets, filling in vacant properties, and generally investing in the cores of cities and towns throughout the Anderson MPA. When compared to the increase in population, Status Quo consumes the most land per additional person at a rate nearly five times the rate of Investing in Place and more than double the rate of Connected World.

For both walk and transit accessibility, Investing in Place locates the greatest percentage of residents near parks, schools, hospitals, and transit stops because the development pattern is naturally adjacent to existing amenities.

It is also important to note that all scenarios result in lower access when compared to the Base Scenario, which is likely because of the amount of growth concentrated in the Southwest subregion.

The sketch planning tool application had its limitations: some baseline assumptions for place type amenities were not changed that, in hindsight, should have been. For example, since hospital access is already low in the Southwest subregion, adding more people there than locations with high access to hospitals reduces the total access. Future sketch planning efforts will attempt to overcome this limitation by actively identifying the threshold

Figure 5.16: Per Capita Annual Residential VMT (miles/year/person)

Scenario	VMT
Status Quo	8,840
Investing in Place	8,523
Connected World	8,851
Base Scenario	8,942
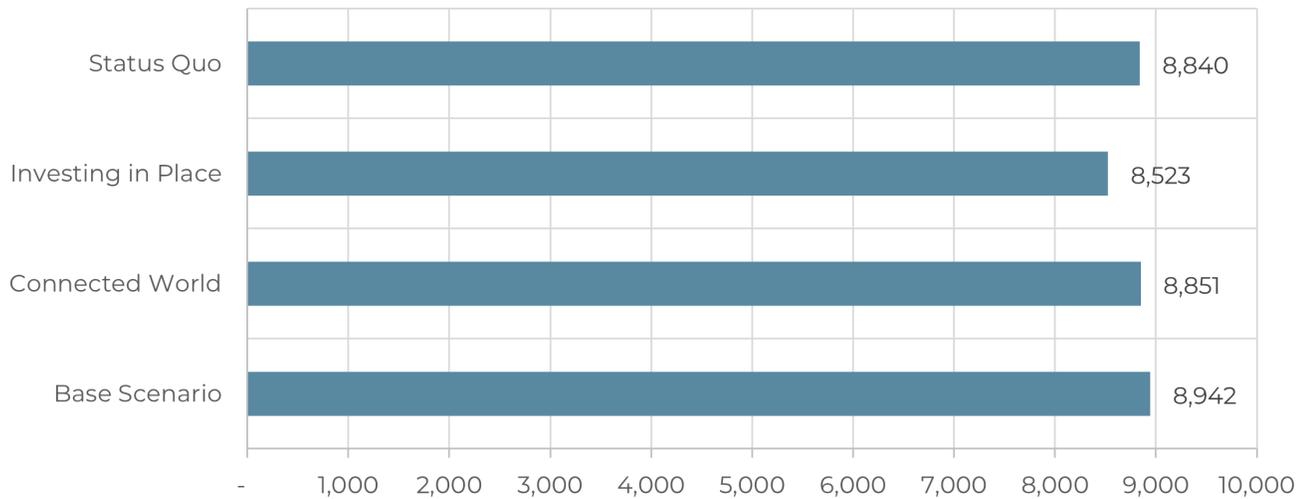
Figure 5.17: Passenger Vehicle Emissions per Household (metric ton/year)

Scenario	Emissions
Status Quo	12.23
Investing in Place	11.77
Connected World	12.20
Base Scenario	12.42
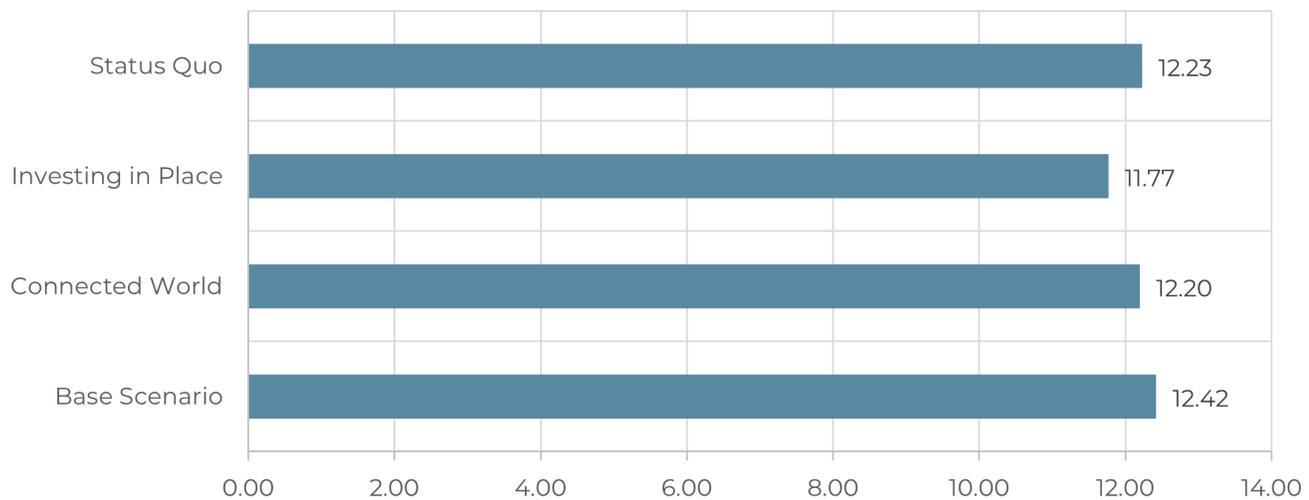
for when these specific amenities would be added then attempt to locate them based on underlying assumptions within each scenario.

As noted earlier, VMT is an important measure for understanding the amount of travel in our region. VMT directly illustrates the use of roadways. Investing in Place has the lowest VMT rate due to improved walk and transit access, and concentrated population and employment growth. Residents in this scenario are less likely to rely on the roadway network to travel, so they generate lower VMT rates.

Vehicle emissions can also be compared across scenarios. However, they follow the trend of VMT and further highlight the air quality benefits of the Investing in Place scenario compared to the other three. Furthermore, per household annual auto and utility costs illustrate the cost savings from Investing in Place.

Investing in Place aligns with the established direction and community desires the most as illustrated by nearly all measures. Public input highlighted the importance of utilizing existing assets; preserving agricultural land; encouraging walking, biking, and transit trips; and reducing emissions to improve air quality. Investing in Place further supports investing in community health and results in the lowest direct and indirect household costs according to the sketch planning outputs. However, the public also expressed great interest in new technologies and understanding their impacts to our transportation system. Both the public and local planning partners also note the amount and pattern of growth in the Connected World scenario more closely reflects the outgrowth of Indianapolis into the southwest subregion. Therefore, a combined scenario, Investing in Connected Places, was developed as the preferred scenario for analysis. The combination maintains Investing in Place assumptions for the north and central-east subregions, while using the higher growth and corridor growth pattern in the southwest subregion.

Chapter 6

Considering the Direction

While potential disruptions and scenarios help to further define the long-term needs of the transportation system, the final recommendations must account for funding availability and the project impact. Federal, State, and local policies establish a framework for determining a project list that represents the final path for achieving the desired future. In conjunction with government policies, MPO policies & procedures play a significant role in developing the final recommendations and projects to be included in the MTP.

Funding an MPO

The Infrastructure Investment and Jobs Act currently outlines funding levels, programs, and policies for the USDOT, State DOTs, MPOs, and Transit Systems. Under this Federal Transportation Bill, the Federal Transit Authority (FTA) issues annual apportionment reports for 5307 Urban Transit & 5311 Rural Transit funding programs for eligible City and County recipients. Similarly, the Federal Highway Administration (FHWA) issues an annual Local Share of Federal Formula Apportionments Report. These reports outline the estimated funding available by funding type to each MPO based upon their Urban Area (UA) population.

Windfall

Gaston

13

Summitville

9

Elwood

28

28

37

Orestes

Alexandria

13

N 200 W

Yorktown

Muncie

Frankton

128

9

E 200 N

W-8th-St-Rd

9

69

13

Chesterfield Daleville

32

Edgewood

32

69

32

232

13

Anderson

Lapel

9

236

Old-SR-132

67

Middletown

S 100 W

Sulpher
Springs

38

E-700-S

Noblesville

13

Pendleton

36

109

67

Ingalls

69

38

Markleville

Fishers

67

Cadiz

9

Fortville
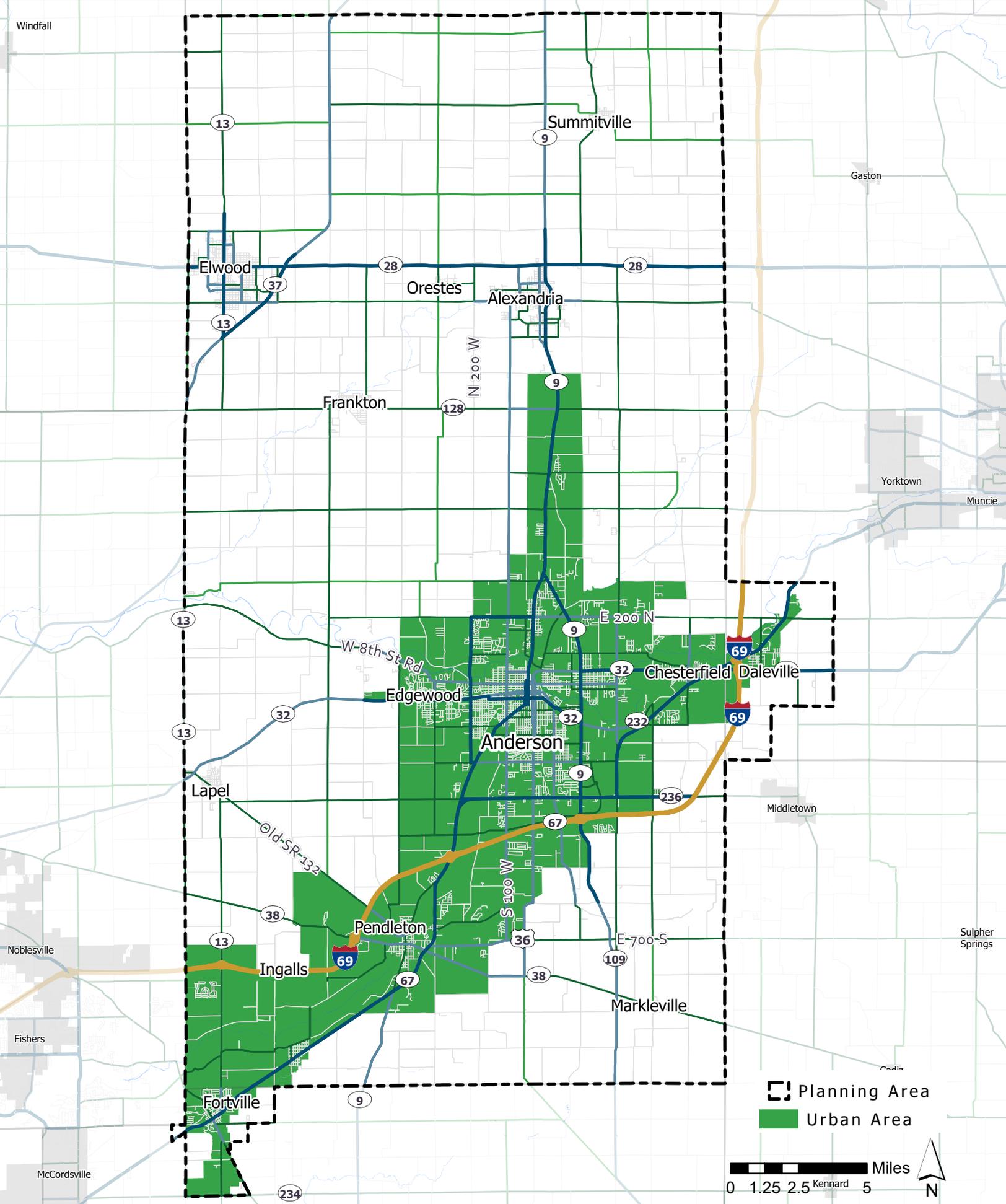
Planning Area

Urban Area

McCordsville

Kennard

Miles

Lawrence

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N

234

Wilkinson

Greensboro
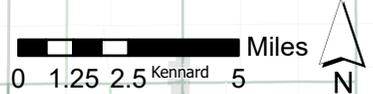
Funding Availability

Title 23, Part 450 of the Code of Federal Regulations (CFR) identifies the requirements of the Metropolitan Transportation Planning Process for all MPOs. This responsibility is conducted for each area of contiguous population surrounding a community of at least 50,000 people, as defined, and updated by each decennial census.

For MPOs that share Urban Area boundaries (UAs), such as Anderson and Indianapolis, they must coordinate to adjust boundaries for affected municipalities, ultimately determining an adjusted boundary. The final adjusted boundary must be approved by FHWA and INDOT and an agreement established to update the funding split between the MPOs. UA population changes can significantly impact the amount of funds available to an MPO. In addition to the UA, a Metropolitan Planning Area (MPA) must be defined, at a minimum, to encompass the entire UA plus the adjacent area expected to become urbanized within the 20-year forecast period of the MTP.

Although there are many factors limiting funding availability, one critical rule affecting MPOs in the State of Indiana is the INDOT "Use it or Lose it" rule. Prior to 2014, the State of Indiana allowed MPOs to carry forward the remaining balance of funds from year to year, but in 2014, a revised policy discontinued the carry-over of funds. This change significantly increased requirements to monitor project timelines, which is addressed through quarterly project meetings, and significantly limited the ability to build up a balance to entirely fund the construction of larger projects.

Funding Types

Since federal apportionments are approved annually, amounts for each funding type are based upon the previous year and are subject to change. MPOs receive Federal Transportation funding from seven (7) main FHWA sources:

- Metropolitan Planning (PL/5303)
- Surface Transportation Block Grant (STBG)
- Highway Safety Improvement Program (HSIP)
- Congestion Mitigation and Air Quality Program (CMAQ) Carbon Reduction Program (CRP)
- PROTECT
- Transportation Alternatives (TA)

Each program includes an outline of eligible projects and set of limitations for expenditure. For example, projects using HSIP funds must include a demonstrable safety improvement component. These limitations are in place to ensure that transportation improvements meet Federal goals, as well as local.

In addition to these FHWA programs, the Anderson MPA includes transit funding from three

(3) sources:

- 5307 Urban Transit
- 5311 Rural Transit
- Indiana Public Mass Transit Funds (PMTF)

Transit funding is made available to the City of Anderson Transit System (CATS) and Transit for Rural Areas of Madison County (TRAM) each year to supplement costs of operations and capital improvements. While transit funds are

not awarded through an MPO, the tracking and accounting of transit funding expended in an MPA is required. However, MPO funds can be transferred from the FHWA to FTA to supplement transit projects including infrastructure improvements within a half mile of a transit route.

Recent Developments

The Coronavirus Aid, Relief, and Economic Security (CARES) Act was signed into law on March 27, 2020 to provide emergency assistance for individuals, families, and businesses affected by the COVID-19 pandemic. The act included provision of $25 billion for transit agencies to prevent, prepare for, and respond to impacts of COVID-19. Across the nation, transit ridership dropped significantly during statewide stay-at-home orders and is expected to be slow in returning to pre-COVID numbers. Transit funding provided through the CARES Act is meant to alleviate operational costs from reduced fare revenue and requires no local match. Both CATS and TRAM received funding through the CARES Act.

Programming a Project

Federal transportation funding directed through MPOs is meant to support regional transportation projects. Although regional transportation needs and associated projects are identified through the MTP, they are ultimately sponsored by municipalities and must be listed in the project list of an MPO Transportation Improvement Program (TIP) document, as well as the overall state project list or STIP document. The MTP and TIP are closely related because the MTP informs the needs and intention of proposed projects by building a list of recommendations, while those projects ultimately selected for an

MPO funding award must be listed in the TIP in order for a municipality to access that funding. Therefore, when building a list of recommendations that will achieve the desired future defined through public input received, limitations and constraints of MPO funds must be considered to shift projects from conception to reality.

Eligibility Requirements

To maintain eligibility for utilizing Federal Transportation funds municipalities must have:

- At least one full-time employee maintaining annual certification through the INDOT ERC Training Program,

- An ADA Transition Plan updated within at least the previous two years on file, and

- A Title VI Plan updated within at least the previous two years on file.

The ERC, or Employee in Responsible Charge, can be neither a consultant nor a contract employee and does not need to be a technical expert. Instead, they are required to be fully engaged in the FHWA-funded project, understanding project goals and milestones to advance toward timely completion.

Additionally, ADA Transition & Title VI Plans (often combined) must include grievance policies, procedures, and forms indicating the process for ADA & Title VI complaints that may be filed and addressed. These plans also typically include an inventory and self-evaluation to identify steps for improving access to public facilities and programs, as well as a timeline for improvements to attain ADA compliance.

Project Eligibility Review

In addition to funding eligibility, projects must meet MPO requirements. Because MPO funds are based on the UA, communities within the MPA but not within the UA such as Elwood, Summitville, and Lapel in the Anderson MPA, are not eligible for an MPO Funding Award unless no other recipient can be identified. Although not typically awarded funding through the MPO, these communities are still vital to include in the regional planning process. Projects in these areas are instead funded directly through INDOT, but still co-ordinated through the MPO.

In addition to project location, consideration is given to the proposed project scope and associated level of fundability. To be funded, projects must address transportation issues that align with the guiding structure of the MTP. Another consideration during the scoping process that can determine project eligibility is the functional classification of a roadway or adjacent roadway facility. Local roads are ineligible to receive federal funding except in limited cases. While projects on local roads typically do not receive funding from the MPO, they often receive technical assistance for an expanded review of conditions to provide design recommendations.

MPO policies guide the process of issuing funding awards and the recipient requirements. The funding award process is defined by a series of policies, which are coordinated through the Project Eligibility Review (PER)

policy (see appendix). Projects funded through the TIP typically follow these steps:

- MTP or TIP initiates the PER process
- Local Public Agencies (LPAs) submit general project ideas
- MPO works with LPAs to refine the project scope
- MPO completes a Red Flag Investigation (RFI) for each project submitted
- LPAs determine project cost and identify local funding year availability
- MPO prioritizes remaining projects
- MPO issues funding awards

Instead of a traditional "Call for Projects" where a specific amount of funds is made available to applicants annually, it is the intent of the Anderson MPO to promote regular collaboration and communication between MPO staff, community leaders, and elected officials within the MPA. Ongoing communication ensures that as local needs and priorities evolve projects can be planned, programmed, and funded. It is the intent that each time an update is made to the MTP or TIP, MPO staff coordinates with communities to gather project needs, wants, and ideas to build an updated list of recommendations, including a list of projects either funding or intended for a future MPO funding award.

As part of the PER Process, LPAs must provide information regarding their level of preparedness for future planning. An evaluation of existing documents and ordinances that have been publicly vetted and locally adopted establishes their level of preparedness. Communities actively maintaining regular document and ordinance updates that respond to changing local and regional

conditions, development pressures, and travel demands are considered more prepared for implementing a project that meets desired public expectations and addresses local concerns. Those project sponsors that are most prepared will be selected for an MPO funding award.

Project Cost

One of the most critical limitations to a project is its overall cost. Project ideas submitted through the PER process must be translated into a scope of work or a written description of specific elements that must be included in the project. The details included in a project scope illustrate the expected outcome and what must be included in initial cost estimates.

An inaccurate cost estimate can cause significant issues for both the MPO and LPA, but the scope development process helps to ensure that the most accurate costs associated with the project are included. The overall costs associated with the federal process can be greater than the cost of the proposed project scope. In these cases, either federal funding is not applied, or the scope is expanded to accomplish more than originally intended. To assist in scope development process, several considerations must also be applied including the MPO Complete Streets Policy, Access Management, and the information identified through the Red Flag Investigation (RFI).

Complete Streets

The MCCOG Complete Streets Policy requires projects funded through the MPO to consider the complete transportation system. In a traditional roadway design process, elements such as bicycle and pedestrian facilities, street furniture like benches and trash cans, and bus stops must be justified

to be included. The Complete Streets approach essentially switches the process to require justification for the removal of transportation elements. The purpose is not to force all projects to include facilities for every mode but to ensure that the greater context of the project and system connectivity is considered prior to inclusion in the TIP and application of funding. More specifically, each project scope must be developed in manner that is consistent with the following criteria:

- Adapt to fit local community needs,

- Use to direct future transportation planning,

- Incorporate community values and qualities including environmental, scenic, aesthetic, historic, and natural resources, as well as safety and mobility,

- Design and build to adequately accommodate all users of a facility, including pedestrians, bicyclists, users of mass transit, people with disabilities, the elderly, motorists, freight providers, emergency responders, and adjacent land users,

- Contribute to a comprehensive, integrated, and connected transportation network that supports compact development,

- Accommodate all modes of transportation so that they can function safely and independently in current and future conditions,

- Ensure design solutions fit within the context of the community or area within a community, such as a known enclave, commercial area, or designated neighborhood (not subdivision).

Access Management

While no official organizational policy exists to formally require the inclusion of access management techniques in each scope of work, it is an important consideration to ensure the safe and efficient flow of traffic. Proposed projects are reviewed to identify inclusion of potential access control components such as raised center lane medians, right-in / right-out only turning channels, and reduced driveway cuts with shared access for adjacent properties. These elements generally reduce cross-access movement along a corridor to reduce crashes and improve corridor operations.

Red Flag Investigation (RFI)

The National Environmental Policy Act (NEPA) of 1969 required that a review process be conducted on all federal undertakings—projects receiving federal funding—to identify potential environmental impacts. Physical, visual, audible, and indirect impacts on both the direct project area and adjacent areas must be considered to determine if additional mitigation to negative impacts must be incorporated in the project. FHWA adopted the policy of managing the development of an Environmental Review Document (often referred to as the NEPA Document) and decision-making process as an "umbrella," under which all applicable environmental laws, executive orders, and regulations are considered and addressed prior to the final project decision and document approval. The conclusion of the NEPA process results in a decision that addresses multiple concerns and requirements, both federal and state, including:

- Migratory Bird Treaty Act – 1918
- Fish & Wildlife Coordination Act - 1934
- General Bridge Act – 1946
- Civil Rights Act – 1964
- Highway Beautification Act - 1965
- Land & Water Conservation Fund Act - 1965
- National Historic Preservation Act (NHPA) – 1966
- US Department of Transportation Act - 1966
- Federal Aid Highway Act - 1970
- Uniform Relocation Assistance & Real Property Acquisition Policies Act - 1970
- Clean Air Act - 1970
- Clean Water Act - 1972
- Endangered Species Act - 1973
- National Forest Management Act (NFMA) - 1976
- Resource Conservation & Recovery Act (RCRA) - 1976
- Comprehensive Environmental Response, Compensation, & Liability Act (CERCLA) - 1980
- Farmland Policy Protection Act (FPPA) - 1981
- Native American Graves Protection & Repatriation Act (NAGPRA) - 1990
- Indiana Cemetery Law

The NEPA process allows transportation officials to make project decisions that balance engineering and transportation needs with social, economic, and natural environmental factors. The first step in the NEPA process is the completion of a Red Flag Investigation (RFI)

report. According to the INDOT Site Assessment & Management (SAM) Manual, the purpose of an RFI is to provide a general overview of the environmental condition of a project area, highlight areas that may need additional environmental work or coordination, identify areas that need to be avoided, and assist in prioritizing projects. Overall, the RFI is a cursory review conducted prior to the completion of an Environmental Review Document.

The preliminary findings of an RFI and the complete findings of the NEPA Process can have a significant impact on project cost. An RFI is completed per INDOT standards by MCCOG for all projects submitted through the PER process or sponsored by an LPA to assist

> "The project scope provided, and all of the elements described must be completed with the project, regardless of what length, phasing, or cost is determined. All awarded projects will be carefully monitored to ensure that the project scope, as provided by the MPO, will be specifically completed."

the project selection and prioritization process. Because the RFI requires specific project details for completion, it is conducted after establishing an agreed upon project scope with the MPO and LPA.

The RFI Report is provided to the LPA to (1) determine more accurate cost estimates, (2) provide ongoing design guidance, and (3) for submission as an attachment to the NEPA Document submitted as part of the Project Development Process (PDP) through INDOT

(See appendix - Red Flag Investigation Policy adopted by resolution on August 1, 2013.)

Finally, although most components of a proposed or awarded project may be federally-participating—meaning they are allowable activities to apply federal funds —there are circumstances where an LPA may want to include a component that is not necessary for the project, but is within the proposed project area. For example, the LPA may want to use pedestrian-oriented lighting that matches existing installations rather than the standard lighting. The LPA is required to pay the difference between the standard and preferred option. These "betterments" can still represent significant cost savings but are typically identified during the scope development process to ensure non-participating items are not included in the MPO funding award.

Project Selection & Prioritization

Projects advanced through the PER process are scored based on several criteria focused mainly on inclusion in the MTP, ability to address issues identified within the MTP, and impacts on transportation system performance. Examples of criteria used in the project scoring process are included in Figure 6.01, though not every project is expected to address each criterion and weighted changes depending on the intent of the project. Projects are then selected comprehensively and not strictly by score to ensure that all goals and objectives are supported.

Finally, projects are prioritized before final funding award recipients are determined. The prioritization process strives to ensure that

High Priority
Emergency
1. Emergency

Medium Priority
Currently in the MTP
2. Committed
3. Critical
4. Essential
5. Desirable

Low Priority
Not currently in the MTP
6. Unplanned
7. Non-Essential

projects are awarded by level of importance and need, as defined by seven levels:

- Emergency – addressing immediate threats to health, safety, and welfare.

- Currently in the MTP

  - Committed – requiring additional funding for completion of an existing project.
  - Critical – addressing minimum compliance with performance measures, law, or LOS
  - Essential – addressing significant capacity or LOS issues
  - Desirable – necessary to obtain ideal operations or services

- Not currently in the MTP

  - Unplanned – necessary to obtain ideal operations or services
  - Non-Essential – does not improve operations or services

Projects are further split as single- or multi-segment. Multi-segment projects have a higher priority as the overall timeline to completion is expected to take more time and funding.

Programming the MTP

The MTP represents the first step to identify transportation projects that will be funded through the MPO. Potential projects are filtered through three lenses to be included in the final MTP program of projects:

- Fiscal Constraint
- Air Quality Conformity
- Performance Impacts

Fiscal Constraint

In addition to identification of transportation system needs, the MTP must conduct a financial analysis to determine if the planned projects meet federal requirements for Fiscal Constraint. Fiscal Constraint is a demonstration that the entire program of projects can

Figure 6.02: The Final Path

be implemented, accounting for estimated revenues and projected costs. *2050 inMotion* considers the available federal transportation funds and local public agency (LPA) revenues between 2020 and 2050 that can reasonably fund transportation improvement projects before producing the final, fiscally constrained project list.

To allow for flexibility within an MTP, the fiscally constrained list does not have to specify the funding year of each project but instead identifies funding periods that each project is likely to fall within. Typically, the first period is represented by the TIP and only includes the first five (5) years of the total program. Projects unable to be funded as part of the fiscally constrained list but meeting the intent of the MTP can be included in an illustrative list to support the identification and acquisition of alternative funding sources, as well as to promote local community planning efforts.

Local Constraints

Federal transportation funding is typically formulated as a match program, requiring the project sponsor to fund at least a portion of the total project cost. The MTP financial analysis must also consider the limitation for LPAs to fund their portion of a project. For example, assume the Town of Pendleton is awarded a $2 million roundabout project using CMAQ funds with a required 20% local match. For this project, $1.6 million of federal transportation funds (80% of the total project cost) and $400,000 (20% of the total project cost) from the Town of Pendleton must be available to contribute to the project.

While the MTP accounts for these limitations on a less detailed scale than defining each project funding year, the requirement for local funding availability illustrates an important assumption: a single community would not typically be the only location for projects within an analysis period. It would not make sense to assume a small town would have the required match for numerous multi-million-dollar projects within a single analysis period without directly addressing why that assumption is reasonable.

Estimating LPA financial resources and availability for local match as part of the MTP considers various sources of revenue. *2050 inMotion* uses a baseline report developed by reviewing five years of disbursements and receipts from the Indiana Department of Local Government Finance (DLGF) and coordinating with LPAs to determine accuracy. These baseline values are then projected to estimate future availability of LPA funds for transportation projects.

Muncie Area

Indianapolis
Area

AIRSHED

⬛ INDIANAPOLIS

⬛ MUNCIE

MPO

🟩 ANDERSON

🟦 INDIANAPOLIS

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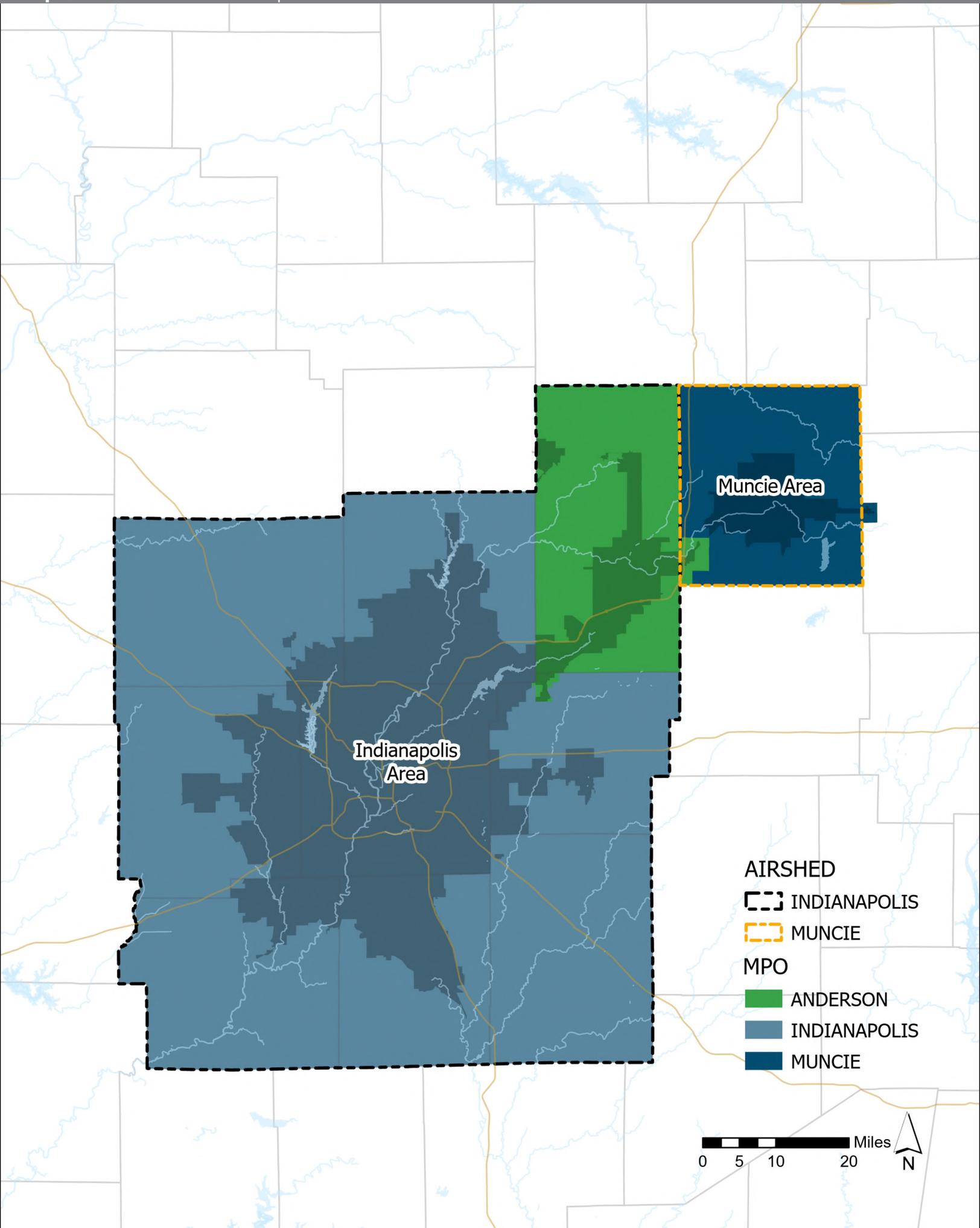
Air Quality Conformity

As determined by the US EPA, airsheds that are impacted by a certain level of pollution must consider air quality impacts of programmed projects. EPA establishes health-based standards referred to as the National Ambient Air Quality Standards (NAAQS) for six criteria air pollutants:

- Carbon Monoxide (CO)
- Nitrogen Oxide (NOx)
- Ozone (O3)
- Lead (Pb)
- Particulate Matter (PM)
- Sulphur Dioxide (SO2)

The Clean Air Act, adopted in 1963 and amended several times, requires states to develop a State Implementation Plan (SIP) that identifies the process for reducing air pollution and maintaining air quality levels to meet the NAAQS. MPOs must demonstrate transportation plans, programs, and projects conform to the SIP. The conformity process ensures that transportation projects included in the MTP, and subsequently in the TIP, do not degrade the region's air quality or impede its progress toward meeting the NAAQS.

The Anderson MPA is included in two airsheds: Central Indiana and Delaware County. MC-COG works through Interagency Consultation Groups (ICGs) to review projects in determining regional air quality impacts in each respective airshed.

- 9-County Air Quality Conformity Consultation Group – This group represents the 9-county non-attainment area of Indianapolis-Marion County. It began meeting in August 2004 and includes members from the Indianapolis MPO, Anderson MPO, Columbus MPO, INDOT

Office of Environmental Services, IN-DOT Office of Planning, INDOT Office of Engineering, IDEM Air Quality, FHWA/FTA, and EPA.

- Madison-Delaware County Air Quality Conformity Consultation Group – This group represents those MPOs covering Delaware County, which includes members from the Anderson MPO, Muncie MPO, INDOT Office of Environment, INDOT Office of Planning and Engineering, IDEM Office of Air Quality, FHWA, FTA, and EPA.

Title 23 CFR 450.324(c) mandates that the MTP must be updated at least every four years when the MPO is in a nonattainment or maintenance area to confirm the MTP's validity. Any update or amendment to the MTP must be accompanied by a Transportation Conformity Determination Report. This report demonstrates that the total emissions projected for the MTP are within the "on-road" Mobile Source Emission Limits or "budgets" as established by the SIP to protect public health. To achieve project-level conformity, the

Definitions:

Airshed – The geographic area that produces a significant amount of the emissions that contribute to atmospheric deposition in a watershed.

Atmospheric Deposition – The process whereby airborne particles and gases are deposited on the earth's surface by wet deposition (precipitation) or by dry deposition (process such as settling, impaction, and adsorption).

Watershed – The land area that drains into a river, stream, or lake. Watershed boundaries follow the highest ridgeline around the stream drainage area. The bottom of the watershed or pour point is the lowest point of the land area where water flows out of the watershed.

determination must demonstrate the project is consistent with the regional conformity determination and that potential localized emission impacts on health-based pollutant standards are addressed. This process of ensuring Fiscal Constraint in coordination with projected airshed emissions, must also be considered when developing a fiscally constrained project list for both the MTP and the TIP documents as the project list cannot include the programming and award of MPO Funds that would negatively impact the state emissions budget.

Recent Developments

On February 16, 2018, the US Court of Appeals for the District of Columbia Circuit issued a decision on the case South Coast Air Quality Management District v. EPA that challenged the EPA's final rule for implementing the NAAQS issued in 2008 for Ozone. The 1997 standard revoked via amendment in 2008 required nonattainment and maintenance areas to track air quality impacts over a 20-year period. Areas required to track impacts for 20 years but re-designated as attainment in 2008 no longer needed to complete the 20-year tracking. The court case challenged the legality of revoking this tracking period and the resulting decision defined areas that were re-designated in 2008 as "orphan maintenance areas." These orphan areas, which include both the Indianapolis and Muncie Airsheds, must continue tracking air quality impacts to fulfill the original 1997 requirements.

Performance-Based Planning

The IIJA continues requirements for performance measurement, established in the Moving Ahead for Progress in the 21st Century Act, to ensure the efficient investment of Federal Transportation Funds. These laws require states and MPOs to invest resources in projects to make progress in seven key national goal areas:

- Safety
- Infrastructure Condition
- Congestion Reduction
- System Reliability
- Freight Movement & Economic Vitality
- Environment
- Reduction of Project Delivery Delays

Each state DOT is required to establish baseline performance levels and adopt targets for maintaining or improving performance within each of the national goals. MPO targets must meet or exceed the DOT targets. Currently, MCCOG has adopted the same performance targets as INDOT. Whether MPOs adopt the same targets as the state DOT or more aggressive targets, they must ensure that projects are selected to move the region and state forward to improve the national goal areas. The following tables provide an overview of the performance measures for Indiana and the targets that have been set.

Safety

The safety measures are the most comprehensive at this time. Extensive data is collected and reported on annually across the country. Tracking the number and rate of serious injury and fatal crashes enables agencies to measure success in reducing the number and severity of crashes. Due to the inconsistency in the number and severity of crashes each year, safety performance is measured by averaging the previous five years. Indiana used averages from 2016 to 2020 and 2018 to 2022 to establish a base line understanding of performance and set the first targets in 2022. Official averages for 2023 and 2024 have not been completed yet.

Table 6.01 - Indiana Safety Performance Measures					
Year	**2021**	**2022**	**2023**	**2024**	**2025**
Number of Crash Fatalities					
5-Year Average	883.0	895.0	902.6 ✗	--	--
Target	817.3	876.0	894.2	876.3	812.4
Crash Fatality Rate (per 100 million VMT)					
5-Year Average	1.102	1.082	1.082 ✓	--	--
Target	1.006	1.076	1.088	1.072	1.009
Number of Serious Injuries					
5-Year Average	3,295.0	3,402.0	3,453.6 ✗	--	--
Target	3,311.4	2,998.2	3,348.1	3,281.1	3,031.9
Rate of Serious Injuries (per 100 million VMT)					
5-Year Average	4.112	4.104	4.130 ✗	--	--
Target	4.088	3.675	4.068	3.987	3.402
Number of Non-Motorized Fatalities & Serious Injuries					
5-Year Average	518.0	529.4	501.4 ✗	--	--
Target	393.6	344.5	399.6	391.6	363.4

Infrastructure Condition

The infrastructure condition measures highlight the state of interstate, non-interstate, and bridge conditions for roads and bridges on the National Highway System (NHS). Pavement conditions are reported using the International Roughness Index (IRI) combined with INDOT's full distress measure that assesses pavement using 4 to 19 different considerations depending on pavement type. Bridge conditions are reported using documented inspections from initial construction, routine monitoring, and damage impacts.

Table 6.02 - Indiana Infrastructure Performance Measures					
Year	**2021**	**2022**	**2023**	**2024**	**2025**
Percent of Interstate Pavement in Good Condition					
Condition / Performance	73.2	71.0	--	--	--
Target	--	--	60.0	--	62.0
Percent of Interstate Pavement in Poor Condition					
Condition / Performance	0.4	0.4	--	--	--
Target	--	--	1.0	--	1.0
Percent of Non-Interstate NHS Pavement in Good Condition					
Condition / Performance	--	55.5	--	--	--
Target	--	--	50.0	--	48.0
Percent of Non-Interstate NHS Pavement in Poor Condition					
Condition / Performance	--	0.7	--	--	--
Target	--	--	1.5	--	1.5
Percent of NHS Bridges in Good Condition					
Condition / Performance	50.6	52.4	--	--	--
Target	--	--	49.0	--	47.5
Percent of NHS Bridges in Poor Condition					
Condition / Performance	2.3	2.2	--	--	--
Target	--	--	3.0	--	3.0

System Performance

The system performance measures identify the reliability of travel time estimated using the National Performance Management Research Data Set (NPMRDS). The NPMRDS contains field-observed travel time and speed data collected anonymously from a fleet of probe vehicles (cars and trucks) equipped with mobile devices. System reliability is estimated by comparing travel times to the base line established in 2022. An additional measure, the Truck Travel Time Reliability Index, focuses specifically on the ability for trucks to reliably travel across the transportation system to provide timely deliveries and support economic vitality.

Table 6.03 - Indiana Reliability Performance Measures					
Year	2021	2022	2023	2024	2025
Percent of Person Miles Reliable on Interstate					
Condition / Performance	94.3	93.8	--	--	--
Target	--	--	93.0	--	93.5
Percent of Person Miles Reliable on Non-Interstate					
Condition / Performance	96.7	96.7	--	--	--
Target	--	--	93.0	--	93.5
Interstate Truck Travel Time Reliability Index					
Condition / Performance	1.26	1.24	--	--	--
Target	--	--	1.32	--	1.30

Emissions Reduction

The emissions reduction performance measures focus on the impact of Congestion Mitigation and Air Quality (CMAQ)-funded projects for decreasing on-road, mobile source air pollutants. Note that because the goal is to reduce emissions, the desired trend is to have a higher number in the reported values compared to the target values.

Year	2021	2022	2023	2024	2025
Table 6.04 - Indiana Emissions Reduction Performance Measures					
PM 2.5 Reduction through CMAQ Projects					
Condition / Performance	--	--	--	--	--
Target	--	--	--	--	--
PM 10 Reduction through CMAQ Projects					
Condition / Performance	168.058	--	--	--	--
Target	--	--	0.020	--	0.030
Nitrogen Oxides (NOx) Reduction through CMAQ Projects					
Condition / Performance	3,373.765	--	--	--	--
Target	--	--	690.000	--	725.000
Carbon Monoxide (CO) Reduction through CMAQ Projects					
Condition / Performance	--	--	--	--	--
Target	--	--	--	--	--
Volatile Organic Compounds (VOC) Reduction through CMAQ Projects					
Condition / Performance	863.370	--	--	--	--
Target	--	--	590.000	--	600.00

Conclusion

Each of these targets must be met annually and as a contributor to the statewide targets, MCCOG must account for project impacts annually as well. Accountability toward these targets is linked to the ongoing availability of annual funding allocation. Although individual projects do not necessarily have to improve every measure, project impacts must be considered even within specific years or range of years to mitigate the potential for cumulative negative effects on performance targets.

Unfortunately, the need for improvements in the planning, design, and funding of the transportation system is far greater than the availability of funding. Analysis of current regional operations and trends; input from system users, gathered through the public engagement process; and consideration of what disruptions the future will bring, highlight project priorities. However, the final plan must also consider and respond to fiscal limitations, air quality impacts, and performance targets. Through these filters, the final path is determined.

Final Path

The route to achieve the *2050 inMotion* desired vision accounts for potential disruptions, explores the impacts of distinctly different futures, and incorporates limitations. A comprehensive list of recommendations was developed, and specific actions defined, from these considerations to adequately address the Anderson MPA's needs.

Early in the *planning process*, the stakeholder committee stressed the importance of looking at both the long-term needs of the next 30-years and the short-term activities that could result in direct, tangible 'wins' generated from the planning process. Short-term recommendations illustrate progress and assure the public that their voices have been heard. A combination of short- and long-term action items are necessary to address the Anderson MPA's wide range of challenges.

Figure 7.01: Number of Actions by Type

24

63

● Non-Infrastructure ● Infrastructure
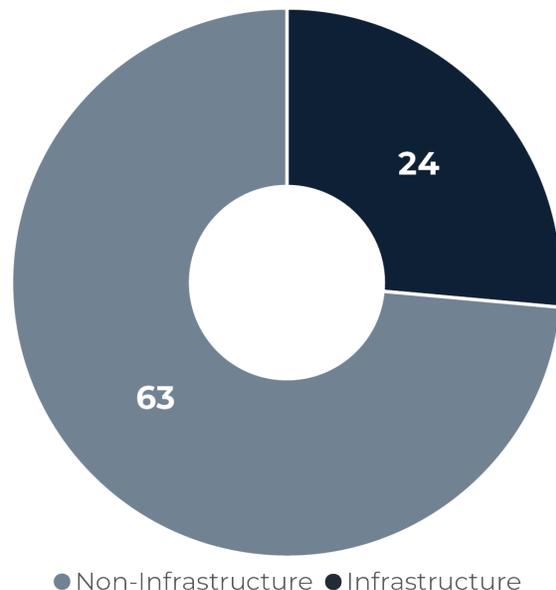
Actions

Four categories—Connect, Educate, Move, and Protect—were used to group actions depending on their primary impact on *people*.

Even though the criteria for assigning actions to one of the four categories by answering the question: "What is the impact on people?" seems relatively simple, this approach is a shift away from the conventional method of categorizing infrastructure projects by the specific project design items. The purpose of categorizing actions this way is to better align recommendations with the overall vision and mission of *2050 inMotion*.

Protect

Actions that protect people, aim to shield them from danger. There are 27 actions in this category accounting for approximately 31% of all recommendations within *2050 inMotion*.

Figure 7.02: Number of Actions by Category and Type

● Protect ● Move ● Connect ● Educate
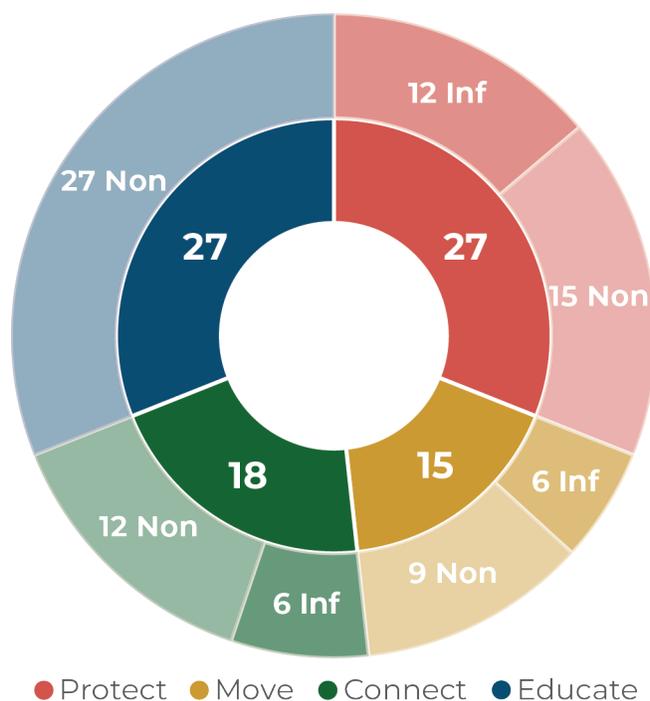
Of the 27 actions, 12 are infrastructure projects and 15 are non-infrastructure policies, plans, or programs.

The most common infrastructure projects included in this category are centered around safety, including improvements that physically separate people from vehicles. Intersection improvements (i.e., roundabout installations) and roadway lane or width reductions (i.e., road diets) typically reduce crashes; therefore, further supporting transportation system safety.

Many of the non-infrastructure actions within this category are intended to increase technical capacity for identifying infrastructure projects that improve the Anderson MPA's overall health and safety, such as developing a transportation safety plan and integrating the MPO health impact assessment into decision-making procedures. The protect category is also intended to include actions that encourage active lifestyles and improve community health.

Since *2045 inMotion* was adopted in October 2020, 3 protect infrastructure projects and 3 non-infrastructure actions including access management policies, crash data reporting, and health impact assessment integration are moving forward.

Move

Actions that move people, aim to advance them from one place to another with a focus on regional mobility and efficiency. There are 15 actions in this category accounting for approximately 17% of all recommendations within *2050 inMotion*. Of the 15 actions, 6 are infrastructure projects and 9 are non-infrastructure policies, plans, or programs.

The most common infrastructure projects included in this category are centered around regional transportation links and primary freight corridors. Roadway expansion, new terrain roadway construction, regional trail construction, and Intelligent Transportation Systems (ITS) installation typically support swift and efficient travel between communities; therefore, enhancing transportation system mobility.

Many of the non-infrastructure actions within this category are intended to expand connections through existing carpooling and regional transit initiatives in addition to incorporating mass transit considerations into local decision-making processes. Although a mass transit connection to Indianapolis was noted throughout the *2050 inMotion* public input process, it requires further study and land use changes before a system could be feasibly supported.

Since *2045 inMotion*, 1 move infrastructure project and 3 non-infrastructure actions including developing an I-69 Corridor Master Plan and building on the partnership with CIRTA to launch a Park & Ride Parking Lot Pilot Program are moving forward.

Connect

Actions that connect people, aim to provide them with access to other people, places, and activities. There are 18 actions in this category accounting for approximately 21% of all recommendations within *2050 inMotion*. Of the 18 actions, 6 are infrastructure projects and 12 are non-infrastructure policies, plans, or programs.

The most common infrastructure projects included in this category are centered around the local transportation network and multi-modal integration. Roadway reconstruction, sidewalk

construction, bike lane construction, and transit operations typically increase personal reach within communities; therefore, enhancing the transportation system's accessibility.

Many of the non-infrastructure actions within this category are intended to identify opportunities for expanding multi-modal connections and supporting inclusive design. These projects are often funded at the local level, but technical assistance can improve the effectiveness of local actions by coordinating local and regional improvements.

Since *2045 inMotion*, 2 connect infrastructure projects and 3 non-infrastructure actions including ADA-Title VI integration, right-of-way dedication policies, and development of integrated comprehensive & thoroughfare plans are moving forward.

Educate

Actions that educate people, aim to increase the knowledge, awareness, and transparency of transportation decisions. There are 27 actions in this category accounting for approximately 31% of all recommendations within *2050 inMotion*. All 27 actions in the Educate category are non-infrastructure policies, plans, or programs.

Even though all existing actions are non-infrastructure, they may lead to educational infrastructure projects in the future. For example, the Clean Air Aware Program is investigating the feasibility and impacts of installing bicycle racks with an educational display. Displays could link the shift from using a personal vehicle to walking or biking for a trip to a reduction in emissions and improvement in air quality. Similarly, installing dynamic signs to display an automatically updating number of multi-use path, bike lane, and sidewalk users per day, week, month, or year could be used as

an educational tool illustrating the importance of these facilities.

The non-infrastructure actions within this category are intended to build on existing partnerships, improve support for local decision-makers, and establish a more effective two-way communication channel between community members and professional planning staff. It is vital that the public is aware and informed of planning efforts and that planners are educated on public needs and community issues.

Since *2045 inMotion*, 4 non-infrastructure actions including establishing a Citizen Advisory Committee, expanding the Technical Advisory Committee, piloting non-motorized traffic counts, and refining local and regional scenario planning are moving forward.

Categorizing Actions

This approach can result in identifying multiple categories for some infrastructure projects because of the breadth of elements and issues they address. Therefore, it is important to consider more than the basic scope of a project when categorizing it.

For example, a new multi-use path construction project can:

- Connect people within a community,
- Move people between communities, or
- Protect people from vehicles.

Multi-use paths constructed along existing roadways to separate people from vehicles are categorized as Protect. Multi-use paths that are not constructed along an existing roadway and link places within a community are categorized as Connect. Finally, multi-use paths that are not constructed along an existing roadway and link people between communities are categorized as Move.

The criteria used to categorize actions should be recognized as guidelines and not strict rules that will always drive to the intent of an action. Thus, continually refining these criteria will encourage consistent treatment and reporting.

Category
- Connect
- Educate
- Move
- Protect

Type
I   Infrastructure
NI Non-Infrastructure

Table 7.01 - Recommendations Overview		
Type	**Action**	**Community**
● I	22nd Street Corridor Improvement Project	Elwood
● I	Beulah Park Trail Construction Project	Alexandria
● I	Indiana Railroad Trail Construction Project	Anderson
● I	Transit Bicycle & Pedestrian Construction Program	Anderson
● I	Transportation Center Construction Project	Anderson
● I	Washington Street Corridor Improvement Project	Alexandria

Recommendations Overview

Type	Action	Community
● NI	ADA Transition & Title VI Plan Development Program	MPA
● NI	Asset Management Assistance Program	MPA
● NI	CATS Urban Transit Operations Study	Anderson
● NI	Comprehensive Transportation Planning Program	MPA
● NI	Driveway Permit Review Program (INDOT & LPA)	MPA
● NI	LPA Micromobility Development Program	MPA
● NI	MPO Bike & Pedestrian Plan (Updates)	MPA
● NI	Public Transportation Corporation Feasibility Study	Anderson / Madison County
● NI	Right-of-way Dedication Policy Integration Program	MPA
● NI	Sidewalk Gap Identification & Prioritization Tool	MPA
● NI	Street Design Standards Development Program	MPA
● NI	Transit Bicycle & Pedestrian Connectivity Program	MPA
● NI	Citizen Advisory Committee Program	MPA
● NI	Clean Air Aware Program	MPA
● NI	Community Development Assistance Program	Anderson
● NI	Environmental Awareness & Education Program	MPA
● NI	Financial Forecast Tool Development	MPA
● NI	Geographic Information System Management	MPA
● NI	Impact Fee Development & Coordination Program	MPA
● NI	INDOT-MPO Project Programming & Coordination Program	MPA
● NI	Metropolitan Transportation Plan (Updates & Amendments)	MPA
● NI	Microsimulation Study Development & Integration Initiative	MPA
● NI	MIRE Database Development & Management	MPA
● NI	MPO Public Involvement Plan (Updates)	MPA
● NI	Performance Target Monitoring Program	MPA
● NI	Planning Academy Initiative	MPA
● NI	Project Eligibility Review Program	MPA

Recommendations Overview

Type	Action	Community
🔵 NI	Quarterly Tracking Program	MPA
🔵 NI	Red Flag Investigation Report Development Program	MPA
🔵 NI	Regional Household Travel Survey Coordination Program	MPA
🔵 NI	Regional Transportation Summit Education Program	MPA
🔵 NI	RPO Traffic Count Program	INDOT
🔵 NI	Scenario Planning Development & Integration Program	MPA
🔵 NI	SO-NSOFAR Traffic Count Program	INDOT
🔵 NI	Technical Project Review Program	MPA
🔵 NI	TIP Development & Management	MPA
🔵 NI	Transportation Education Outreach & Training Program	MPA
🔵 NI	Travel Demand Model Management	MPA
🔵 NI	Underserved Community Coordination Program	MPA
🟡 I	67th Street Extension Project	Anderson / Pendleton
🟡 I	CR 800 S (136th Street) Corridor Improvement Project	Ingalls
🟡 I	Madison Street (SR 13) Extension Project	Fortville
🟡 I	Traffic Signalization Systems Modernization Project	Anderson
🟡 I	US 36 Corridor Relocation / Water Street Extension Project	Pendleton
🟡 I	White River Trail Extension Project	Anderson
🟡 NI	Commuter Connect Integration Program	MPA
🟡 NI	Congestion Management System Program	MPA
🟡 NI	County Connect Integration Program	MPA
🟡 NI	Functional Classification & NHS Evaluation Program	MPA
🟡 NI	I-69 Corridor Development Planning Program	MPA
🟡 NI	Mass Transit Simulation & Feasibility Tool Development	MPA
🟡 NI	Park and Ride Lot Program	MPA
🟡 NI	TRAM Rural Transit Operations Study	Madison County
🟡 NI	Workforce Connect Integration Program	MPA

Recommendations Overview

Type	Action	Community
I	11th Street SRTS Project	Alexandria
I	6th Street SRTS Project	Alexandria
I	Arrowhead Trail Construction Project	Pendleton
I	Business Park Trail Construction Project	Pendleton
I	Central Avenue SRTS Project	Alexandria
I	CR 200 W & Fortville Pike Intersection Improvement Project	Fortville
I	Main Street Pedestrian Improvement Project	Fortville
I	Mt. Vernon Trail Construction Project	Fortville
I	Panhandle Trail Transit-Pedestrian Connector Project	MPA
I	Silver Street Corridor Improvement Project	Anderson
I	State Street & Heritage Way Intersection Improvement Project	Pendleton
I	US 36 (SR 9/SR67) Pedestrian Connectivity Project	Pendleton
NI	Access Management Policy Integration Program	MPA
NI	Active Anderson Initiative	Anderson
NI	Complete Streets Policy Coordination Program	MPA
NI	Crash Data Reporting Program	MPA
NI	Health Data Linkage Program	MPA
NI	Health Impact Assessment Integration Initiative	MPA
NI	Healthy Places for Healthy People Program	MPA
NI	MPO Transportation Safety Plan	MPA
NI	Non-motorized Monitoring & Data Collection Program	MPA
NI	Road Diet / Road Right-Sizing Tool Refinement	MPA
NI	Road Safety Audit Report Program	MPA
NI	Safe Routes to School & Wellness Planning Initiative	MPA
NI	Safety Technical Assistance Program	MPA
NI	Traffic Incident Management Program	MPA
NI	Transportation & Air Quality Conformity Program	MPA

Regionally Significant Projects

Infrastructure projects noted in Table 7.02 are defined according to the *Interagency Consultation Group Conformity Consultation Guidance* as *regionally significant*, meaning they are not exempt from project-level air-quality analysis. They must be evaluated to ensure that the resulting air pollution is in accordance with National Ambient Air Quality Standards (NAAQS). More information on air quality conformity can be found in Chapter 6.

DES	Sponsor	Location & Description	Phase	Cost	Period
Table 7.02 - Regionally Significant Projects					
MPO-Funded Project Phases					
2100092	Ingalls	**CR 800 S (136th Street) Corridor Improvement Project: Phase 1**, E. CR 168 (Atlantic Road) to SR 13	PE	$1,026,354	2020 to 2029
2100092	Ingalls	**CR 800 S (136th Street) Corridor Improvement Project: Phase 1**, E. CR 168 (Atlantic Road) to SR 13	RW	$150,100	2020 to 2029
2101290	Ingalls	**CR 800 S (136th Street) Corridor Improvement Project: Phase 2**, Roundabout @ E. CR 168 (Atlantic Road)	RW	$1,500	2020 to 2029
LPA-Funded Project Phases					
2100092	Ingalls	**CR 800 S (136th Street) Corridor Improvement Project: Phase 1**, E. CR 168 (Atlantic Road) to SR 13	CN	$11,449,620	2020 to 2029
2101290	Ingalls	**CR 800 S (136th Street) Corridor Improvement Project: Phase 2**, Roundabout @ E. CR 168 (Atlantic Road)	CN	$2,025,730	2020 to 2029
1592299	Anderson	**67th Street Extension Project: Phase 1**, Layton Road (CR 400) to .13 miles west of Foster Branch Ditch	PE	$3,484,700	2020 to 2029
1592299	Anderson	**67th Street Extension Project: Phase 1**, Layton Road (CR 400) to .13 miles west of Foster Branch Ditch	RW	$70,000	2020 to 2029
1592299	Anderson	**67th Street Extension Project: Phase 1**, Layton Road (CR 400) to .13 miles west of Foster Branch Ditch	CN	$8,136,025	2020 to 2029
INDOT-Funded Project Phases					
1702936	INDOT	**US 36 (SR 9/SR 67)**, .28 miles S. of SR 38 to N. Junction of SR 9/SR 67	PE	$192,400	2020 to 2029
1702936	INDOT	**US 36 (SR 9/SR 67)**, .28 miles S. of SR 38 to N. Junction of SR 9/SR 67	RW	$960,000	2020 to 2029
1702936	INDOT	**US 36 (SR 9/SR 67)**, .28 miles S. of SR 38 to N. Junction of SR 9/SR 67	CN (RR)	$125,000	2020 to 2029
1702936	INDOT	**US 36 (SR 9/SR 67)**, .28 miles S. of SR 38 to N. Junction of SR 9/SR 67	CN	$7,514,000	2020 to 2029
1802854	INDOT	**SR 9/SR 67**, US 36 N. Junction to Huntsville Rd (Pendleton).	PE	$177,000	2020 to 2029
1802854	INDOT	**SR 9/SR 67**, US 36 N. Junction to Huntsville Rd (Pendleton).	RW	$146,000	2020 to 2029
1802854	INDOT	**SR 9/SR 67**, US 36 N. Junction to Huntsville Rd (Pendleton).	CN (RR)	$50,000	2020 to 2029
1802854	INDOT	**SR 9/SR 67**, US 36 N. Junction to Huntsville Rd (Pendleton).	CN	$3,610,000	2020 to 2029

DES	Sponsor	Location & Description	Phase	Funds	Period
Regionally Significant Projects
1900171	INDOT	**SR 13 @ CR 800 S**	PE	$125,000	2020 to 2029
1900171	INDOT	**SR 13 @ CR 800 S**	RW	$41,900	2020 to 2029
1900171	INDOT	**SR 13 @ CR 800 S**	CN	$2,214,056	2020 to 2029
MPO- or LPA-Funded Anticipated Project Phases -- Not in Current TIP --
NO AWARD	Anderson	**67th Street Extension Project: Phase 2**, Replacement of the Foster Branch Bridge	RW	$1,148,434	2040 to 2049
NO AWARD	Anderson	**67th Street Extension Project: Phase 2**, Replacement of the Foster Branch Bridge	CN	$17,992,134	2040 to 2049
NO AWARD	Anderson	**67th Street Extension Project: Phase 3**, Foster Branch Bridge to Old SR 132. (approx. 1.87 miles)	RW	$831,625	2040 to 2049
NO AWARD	Anderson	**67th Street Extension Project: Phase 3**, Foster Branch Bridge to Old SR 132. (approx. 1.87 miles)	CN	$13,028,787	2040 to 2049
NO AWARD	Pendleton	**US 36 Corridor Relocation / Water Street Extension Project**, SR 9/SR 67 @ Water Street to west side of US 36 Bridge over Spring Branch	PE	$268,185	2040 to 2049
NO AWARD	Pendleton	**US 36 Corridor Relocation / Water Street Extension Project**, SR 9/SR 67 @ Water Street to west side of US 36 Bridge over Spring Branch	RW	$134,093	2040 to 2049
NO AWARD	Pendleton	**US 36 Corridor Relocation / Water Street Extension Project**, SR 9/SR 67 @ Water Street to west side of US 36 Bridge over Spring Branch	CN	$2,681,853	2040 to 2049

Performance Impacts

The actions developed through *2050 inMotion* are intended to align with federal and state goals for performance-based planning and positively impact performance measures while supporting the defined guiding direction. Although the MCCOG travel demand model, Prometheus, does not currently include functionality for estimating impacts on all performance targets, a range of metrics provides insight into expected impacts and can be assessed in conjunction with qualitative information. Several non-infrastructure actions specifically improve the ability to track and project performance, including the continued refinement and enhancement of Prometheus.

As indicated in Chapter 5, the Investing in Connected Places scenario, identified as the preferred scenario or future direction, provides a base to forecast the impact and performance of the transportation system. The preferences for redevelopment, investment in the current system, support of small business, and management of growth were all incorporated in Prometheus to assess proposed transportation system improvements. Where feasible,

measures are evaluated for underserved populations as well as the Anderson MPA to gain a better understanding of community impacts.

Each analysis topic highlights key metrics and, where possible, provides a comparison between today, a no-build scenario (the future without *2050 inMotion)*, and a build scenario (the future with *2050 inMotion)*. These metrics are intended as high-level indicators of impacts to performance measures.

System Utilization and Reliability

There are many measures to track the transportation system's use and the effects that over-use can have. *2050 inMotion* includes four primary metrics:

- Vehicle miles traveled (VMT)
- Annual vehicle miles traveled per capita
- Percent of time spent in congestion
- Average commute times

In each case, the desire is to reduce overall travel and travel times to improve reliability. The guiding structure, preferred scenario, and final action items are intended to mitigate existing issues while encouraging more localized

Table 7.03 - Annual Vehicle Miles Traveled				
Type	Desired Trend	Base	Without 2050 inMotion	With 2050 inMotion
Total	⬊	1,391 (in millions)	2,156 54.99%	2,158 55.13%
Per Capita	⬊	10,458	13,199 26.20%	13,211 26.32%

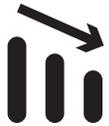| Table 7.04 - Percent of Annual Time Spent in Congestion			
Desired Trend	Base	Without 2050 inMotion	With 2050 inMotion
	46.98%	48.19% 2.58%	44.94% -4.34%

Table 7.05 - Average Commute Time (minutes)				
Type	Desired Trend	Base	Without 2050 inMotion	With 2050 inMotion
MPA		17.44	18.01 3.28%	16.74 -4.00%
Under-served		13.27	14.11 6.36%	12.52 -5.66%

travel to decrease long-distance trips. Overall travel, as measured by either VMT or Annual VMT per Capita, is projected to continue following current trends while new terrain facilities, such as the 67th Street Extension Project, induce additional demand compared with the no-build scenario.

Despite the trend of increasing VMT, the overall time spent in congestion is estimated to slightly decrease due to the additional projects included in the fiscally-constrained project list. Similarly, average commute times for both the MPA as a whole and specific underserved communities indicate improvements through *2050 inMotion*.

By improving system efficiencies and encouraging walk, bike, transit, and carpool trips, the recommendations support growth while decreasing congested travel. Even though they are separate goals, reducing congestion is closely tied to system reliability. Corridors such as I-69, SR 9 / Scatterfield Road, and US 36 / SR 67 are vital to ensure reliability through the mitigation of congestion issues. Continued analysis, monitoring, and scenario testing is expected to further improve system reliability and combat congestion moving forward.

System Access

Access to jobs, active infrastructure like sidewalks and bike lanes, and transit are vital to supporting economic vitality and underserved communities. A review of employment, sidewalk, and transit access measures illustrates significant improvements from *2050 inMotion*. Although it cannot be directly overlaid with all underserved populations, these measures do indicate improvements in sidewalk access for senior households. The only reduction is in the percentage of transit access.

One of the most profound programs within *2050 inMotion* for supporting transit is the Transit Pedestrian & Bicycle Connectivity Program that concentrates bicycle and pedestrian improvements around transit. There is a significant opportunity to integrate multi-modal networks within the Anderson MPA to increase transit ridership. It is important to note that the transit system overall is expected to remain the same as it currently is until specific studies and recommendations for improvements can be made. Studies for both the CATS and TRAM transit operations are recommended in the non-infrastructure action items.

Table 7.06 - Percent of Jobs by Drive Access				
Type	Desired Trend	Base	Without 2050 inMotion	With 2050 inMotion
within 15 minutes		21.35%	19.61% -8.15%	22.79% 6.74%
within 30 minutes		58.66%	56.95% -2.92%	62.78% 7.02%

Table 7.07 - Percent with Sidewalk Access (within 200 ft of a sidewalk)				
Type	Desired Trend	Base	Without 2050 inMotion	With 2050 inMotion
Population		28.20%	29.88% 5.96%	30.41% 7.87%
Jobs		35.65%	38.62% 8.35%	39.44% 10.63%
Senior Households		25.48%	28.25% 10.86%	28.77% 12.92%

Table 7.08 - Percent with Transit Access (within 10-minute walk)

Type	Desired Trend	Base	Without 2050 inMotion	With 2050 inMotion
Population	↗	11.23%	9.54% / -15.12%	9.57% / -14.84%
Jobs	↗	18.37%	13.18% / -28.26%	13.19% / -28.19%
Senior Households	↗	11.64%	11.04% / -5.16%	11.13% / -4.44%

Environment

Transportation plays a significant role in the quality, preservation, and maintenance of our environment. Transportation directly supports land consumption by expanding access to locations, resulting in the increase of air pollutant emissions. Public engagement participants stressed the importance of preserving land, curbing sprawl, and encouraging the more compact development patterns that Investing in Connected Place assumes. Comparing emissions rates and land consumption between today and the future with and without *2050 inMotion* shows significant improvements.

Table 7.09 - Land Consumption (in acres) by Type

Type	Desired Trend	Without 2050 inMotion	With 2050 inMotion
Total	↘	4,072	1,860 / -54.32%
Greenfield (Natural / Agricultural)	↘	3,187	384 / -87.95%
Urban	↗	885	1,476 / 66.78%

Table 7.10 - Air Quality by Pollutant (in tons)

Type	Desired Trend	Base	Without 2050 inMotion	With 2050 inMotion
NOx (ozone)		3.08	1.41 -54.33%	1.45 -52.88%
VOC		0.40	0.18 -55.81%	0.17 -56.85%

Transportation Options

2050 inMotion aims to support the integration of transportation modes to increase the viability of transportation options that reliably move people throughout the MPA. An integrated transportation system focuses less on the personal vehicle or single-occupancy vehicle (SOV) trips and more on balancing efforts to improve other modes. Prometheus is designed to approximate the percentage of trips that are made using four modes:

- Single-occupancy Vehicle (SOV)
- High-occupancy Vehicle (HOV – 2+ occupants)
- Transit
- Walk & Bike

Table 7.11 - Mode Percent of Total MPA Trips

Mode	Desired Trend	Base	Without 2050 inMotion	With 2050 inMotion
SOV		53.08	53.89 1.51%	53.84 1.43%
HOV		42.25	41.52 -1.74%	41.56 -1.65%
Transit		0.64	0.62 -3.21%	0.62 -3.26%
Walk & Bike		4.02	3.98 -1.12%	3.98 -1.02%

Table 7.12 - Mode Percent of Total Underserved Population Trips

Mode	Desired Trend	Base	Without 2050 inMotion	With 2050 inMotion
SOV		49.31	52.74 6.94%	52.67 6.80%
HOV		43.24	39.39 -8.90%	39.48 -8.69%
Transit		1.61	1.87 16.35%	1.86 15.37%
Walk & Bike		5.84	6.00 2.81%	5.99 2.70%

Accounting for adjustments in walk, bike, and transit access allows analysis of different scenarios to compare changes in mode choice. Overall, there is a mix of outcomes in shifting modes. There is little difference in the MPA between the base and with/without *2050 inMotion.* However, there is a more noticeable increase in both transit and walk/bike for underserved communities.

Safety

Recently, a lot of attention has been drawn to tracking safety performance targets and evaluating the ability of projects to reduce crash rates within the State of Indiana. *2050 inMotion* illustrates how safety is a priority of decision-making, because Protect is included as an action category.

Actions not directly categorized as Protect can also include a safety element. Moreover, all projects scoped by MCCOG consider how to address safety issues. However, MCCOG policies will be expanded to include a more formal integration of Road Safety Audit (RSA) reporting in the project scope development process. RSAs are 1 of the 20 FHWA Proven Safety Countermeasures, providing a safety benefit of approximately 10-60% reduction in total crashes.

In addition to RSAs, *2050 inMotion* includes projects with at least six other FHWA Proven Safety Countermeasures: corridor access management, roundabouts, medians/pedestrian crossing islands, pedestrian hybrid beacons, road diets, and walkways. Crash reduction estimates vary across the countermeasures from 10-80% fewer crashes.

In addition to total crash reductions, non-motorized crashes are a noted concern within Indiana generally, and the Anderson MPA specifically. Even though the Transit Pedestrian &

Bicycle Connectivity Program is not included in the Protect category, the program is expected to reduce non-motorized crashes in Anderson. Installing sidewalks along roadways without them has proven to reduce crashes involving pedestrians walking along roadways by 65-89%[18].

Approximately 44 miles of sidewalk, 15 miles of trail, or 82 miles of bike lanes could be installed through the Transit Pedestrian & Bicycle Connectivity Program. If the program funds a mix of facilities and accounts for the addition of ADA-compliant curb ramps, it could still fund 20 miles of sidewalk, 20 miles of bike lanes, 400 curb ramps, and 4 miles of paved trail.

Prometheus is not capable of predicting overall system safety improvements. However, including Proven Safety Countermeasures as well as non-infrastructure actions for integrating safety analysis is expected to result in crash reductions and enhanced capabilities for identifying future impacts.

Overall, the performance of the *2050 inMotion* actions bring the Anderson MPA significantly closer to its desired future regional vision and aligns with state targets. Continually analyzing and monitoring system improvements will be vital to tracking impacts and understanding the implications of system performance moving forward.

Financial Analysis

The recommendations identified in this chapter represent the fiscally constrained actions needed to overcome existing challenges while beginning to address the impacts of future growth. This final list of actions was developed based on the available financial resources of the MPO and LPAs to ensure Fiscal Constraint. However, the needs identified through the *2050 inMotion* planning process significantly outweigh the available funding. Therefore, the final list of actions also includes an "illustrative list" of projects that represent needs identified in the MTP but outside of the fiscal means of *2050 inMotion*. As other funding sources are identified or projected funds increase, projects from this illustrative list will be considered for MPO funding awards.

The full fiscally constrained and illustrative action lists are included in the appendix.

Table 7.13 -Fiscal Constraint Overview				
Funding Program Level	**2020 to 2029**	**2030 to 2039**	**2040 to 2049**	**Total**
State				
Revenue	$263.62	$20.68	$-	**$284.30**
Project Costs	$263.62	$20.68	$-	**$284.30**
Fiscally Constrained	TRUE	TRUE	TRUE	TRUE
MPO & LPA				
Federal				
MPO Funds	$40.99	$37.65	$43.69	**$122.32**
Special Funds	$11.99	$3.06	$2.78	**$17.83**
Total Available	$52.97	$40.70	$46.47	**$140.15**
Local				
Available for Match	$40.04	$49.43	$63.87	**$153.34**
Project Costs				
Federal Funds Required	$51.43	$40.45	$46.45	**$138.33**
Local Match Required	$35.02	$19.21	$44.90	**$99.13**
Additional Local O&M	$1.58	$2.44	$6.31	**$10.32**
Total Local Required	$36.60	$21.65	$51.21	**$109.45**
Fiscally Constrained	TRUE	TRUE	TRUE	TRUE
Transit				
Federal				
5307 & 5311	$19.38	$23.80	$30.09	**$73.27**
Special Funds	$4.70	$3.90	$4.71	**$13.31**
Total Available	$24.08	$27.70	$34.80	**$86.58**
Revenue				
Local	$12.44	$17.07	$20.81	**$50.32**
State	$4.37	$4.84	$5.29	**$14.50**
Available for Match	$20.26	$49.68	$38.76	**$108.70**
Project Costs				
Federal Required	$21.45	$27.52	$34.29	**$83.27**
Local Match Required	$18.75	$24.73	$31.14	**$74.63**
Fiscally Constrained	TRUE	TRUE	TRUE	TRUE

Analysis Assumptions

As Chapter 6 discusses, there are many considerations to account for when determining Fiscal Constraint. The Fiscal Constraint Overview table summarizes these considerations to highlight available funds and compare them to estimated project costs within each analysis period and for the entire MTP program through 2050. The table is split into three primary programs that must each illustrate Fiscal Constraint: State, MPO, and transit.

State Program

The State analysis primarily serves to illustrate the amount of State funds currently allocated to projects within the MPA through the STIP. The INDOT Long Range Transportation Plan (LRTP) is a policy document that does not establish a fiscally constrained project list the way that MPOs are required to do. Therefore, the State analysis only includes projects listed in both the current TIP and STIP. In general, however, this value is an overestimate of what will be spent directly within the region, as it includes funds grouped by project type that will be installed in various locations across either the state or the Greenfield District. Following guidance from INDOT, the revenue value is assumed to meet or exceed the project costs without further analysis required. Since INDOT is required to ensure Fiscal Constraint for the STIP, it is reasonable to assume that a project will not be included in the MTP unless it is fiscally constrained at the State level.

While an MPO does not program state DOT funding for specific projects, the MTP public participation process typically has a significant focus on the state-managed facilities, as they are often the primary transportation arteries through a community. Similarly, public comments collected during the *2050*

inMotion planning process included significant interest in and concern regarding many state-managed facilities. Furthermore, these state-managed facilities are a significant part of the Travel Demand Model (TDM) and usually generate specific results regarding existing and anticipated deficiencies of these facilities.

The appendix includes a list of state-managed facility deficiencies identified through the MTP process. The funding period and proposed cost estimates are not included in this list as they have not yet been vetted by INDOT, identified as specific projects, or considered for programming of funds.

MPO & LPA Program

At the MPO level, one of the most important assumptions to make is accounting for the difference in annual inflation rates for revenues compared to project costs. Following trends, conservative inflation rates (approximately 1.5%) were applied to recent federal funding allocations to estimate available MPO funds for each analysis period, while higher inflation rates (approximately 3.5%) were applied to estimate project costs. This assumption represents the real-world challenge of the decreasing power of federal funding to meet the need for system improvements.

In addition to MPO funds, financial analysis can include the allocation of special funds such as INDOT Group 3 / 4 or USDOT discretionary programs like Safe Streets and Roads for All (SS4A) program funds. Based on previous success of obtaining these special funding types, approximately $18 million is included in the overall financial analysis to fund portions of the regionally significant project list.

Finally, the MPO analysis includes an estimate of local funds. Most federal funding requires

a community sponsor to provide a portion of the final project cost. Typically, the community is responsible for 20% of the total project. Local revenues were estimated using Indiana Department of Local Government Finance (DLGF) disbursements for eligible matching accounts. System expansion projects (i.e., new roads, trails, sidewalks or added travel lanes) also add on-going costs for operations and maintenance that must be accounted for. These costs are assumed based on average per mile annual expenses and build from analysis period to analysis period (i.e., all O&M costs in the 2020 to 2029 period are inflated and included in the 2030 to 2039 and 2040 to 2049 periods). Following the trend above, local revenue is inflated at a lower rate than project or operation and maintenance costs.

Approximately $138.33 million of federal funding and $109.45 million of local funding is required to finance the full *2050 inMotion* MPO program. The project list is fiscally constrained considering that the analysis illustrates $140.15 million of federal funding and $153.34 million of local funding is available.

Transit Program

Transit is also separated within the analysis, because there are two transit systems operating exclusively within the MPA: CATS and TRAM. Both CATS and TRAM receive funding directly from FTA. The Hancock Area Rural Transit (HART) system also operates within the MPA; however, HART apportionments are accounted for in the Indianapolis MPO long-range transportation plan instead of 2050 inMotion, because HART has a limited service area within the Anderson MPA.

CATS and TRAM are independent of MCCOG, but our organizational purposes overlap. All agencies must coordinate with the MPO to ensure both operating and capital improvement funds are included in the TIP. The financial analysis for transit is similar to the MPO analysis with conservative inflation rates applied to recent federal funding allocations and higher inflation rates applied to estimated costs. Special funds can also be included in the financial analysis and, in this case, funds from the CARES Act (noted in Chapter 6) as well as other FTA programs like 5339 and 5310 have been considered in the financial analysis. Finally, local revenues are generated through fares, advertising fees, and state public mass transit funds, which can be used as required local matching funds.

Approximately $86.58 million of federal funding and $74.63 million of local match is required to fund the full *2050 inMotion* Transit program. Although transit funding can require only 20% match for capital improvements, both CATS and TRAM typically use the funding for operations, which requires a 50% match. Despite the higher proportion of local match required, both the federal transit funds and local funds available for match exceed the required amounts, so the Transit project list is also fiscally constrained.

COVID-19 Impacts

There are many potential implications from COVID-19 to consider for future financial analyses because the virus' full impacts are currently unknown. Both the FHWA and FTA funding allocations are expected to decrease following COVID-19 and transit is likely to decrease significantly more. Both funds rely on revenues generated through travel, which was drastically limited during the early stages of COVID-19 and continues to be limited. Furthermore, it is possible that the amount of household travel and typical travel patterns may never return

to pre-COVID levels, considering the potential shift in travel for work as companies embrace work-from-home policies. The reduction in travel results directly in a reduction in revenues for funding transportation improvements and could potentially have drastic impacts on the funding assumptions made within *2050 inMotion*.

In addition to impacts on federal funding revenues, the availability of funding for local match may be reduced. It is expected that within the first few years following the outset of the COVID-19 pandemic municipalities will be faced with reduced revenues paired with the need to provide residents with as much financial flexibility as possible. Municipalities can be expected to limit financial risk and limit commitment to new projects until the anticipation of projected revenues stabilizes.

Funding Summary

The 87 actions identified through public input and technical analysis as part of the fiscally constrained list for *2050 inMotion* can be reviewed in two ways:

- Comparing the total actions.
- Comparing the percent of total funding.

The number of actions by category and type are highlighted within the recommendations, but additional insight can be gained by reporting the percentage of total funding dedicated to each category. However, when it comes to funding, non-infrastructure items must be combined and compared to the infrastructure funding dedicated to each category. Since the Educate category is entirely non-infrastructure, it is not illustrated separately.

63 non-infrastructure actions compose over 72% of the action list and 36% of the total funding. These policies, plans, and programs support all four categories and work to enhance future infrastructure projects while providing valuable services across the MPA. The remaining 64% of funding is split between Move, Connect, and Protect with Move constituting the greatest portion of funding. Overall, the balance of funding and actions by categories aligns with the Investing in Connected Places scenario by strengthening local safety, connectivity, and movement through reconstruction, transit/trail/sidewalk expansion, and intersection improvements.

Figure 7.03: Percent of Funds by Category
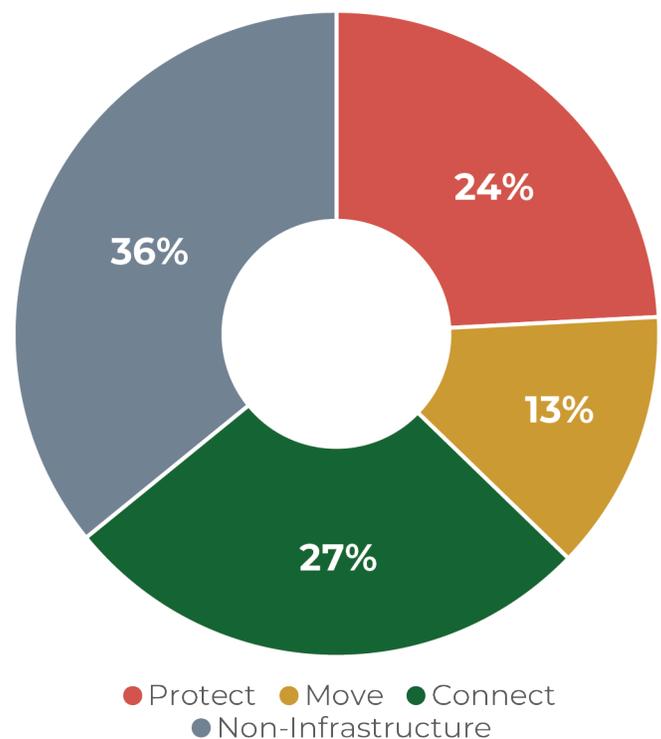
Moving Forward

Developing a Metropolitan Transportation Plan (MTP) is a requirement for all MPOs as well as a critical activity identifying the needs of people who rely on the Anderson MPA's transportation system. Even though it is likely that the need will always outweigh the available financial resources, public input and technical analysis can highlight actions that will have the greatest impact to move our region forward.

The MTP must be updated every 4 years to incorporate the latest analyses and public input to ensure that the action list continues to support the guiding direction. However, due to air quality and transportation conformity requirements dictated by the Environmental Protection Agency (EPA) for the Central Indiana Airshed, coordination with the lead agency requires aligning timelines for multiple documents including the MTP. *2045 inMotion* has been updated and extended to *2050 inMotion* in conjunction with the Indianapolis MPO timeline to ensure strategic alignment before the required 4-year timeline.

The next steps for *2050 inMotion* include:

- Prometheus refinements (ongoing)
- Data set updates and normalization (traffic counts and crash information)
- MPO supporting plan development and refinement (between MTP updates)
- MTP updates (every five years)
- MTP amendments (every 6 months or as needed)
- Transportation Conformity Report (every 6 months or as needed)

Continuously developing and refining analytical tools like Prometheus will help provide a greater understanding of project impacts, program projects, and prioritize projects.

As highlighted throughout the non-infrastructure recommendations, other MPO planning documents can inform future MTP updates by further delving into specific components of the transportation system. It is vital to continue developing supporting documents and tools like the Safety Plan, Bicycle and Pedestrian Plan, and Health Impact Assessment during the interim period between MTP updates.

2050 inMotion built on MCCOG's first scenario planning effort that is a step towards enhanced analysis; however, this effort only skims the surface of possibilities. Prometheus was designed to support exploratory analysis of connected and autonomous vehicles and impacts under various conditions to improve the Connected World scenario that *2050 inMotion* was unable to fully investigate. Future work should build on the scenarios of *2050 inMotion* to analyze impacts of catalytic investments, economic downturns, global pandemics, and connected and autonomous personal aircraft.

Between making major updates and following air quality and transportation conformity requirements, any regionally significant project as identified by the Central Indiana Airshed Interagency Consultation Group (ICG) not included in *2050 inMotion* will require an amendment to the MTP. Per EPA requirements, amendments must be made even if the project is not funded by the MPO, such as qualifying INDOT projects within the Anderson MPA. In coordination with the Indianapolis MPO, applicable projects will be amended into *2050 inMotion* every six months.

Some action items are implemented following Federally mandated cycles, but discretionary activities can also be completed following public input in pursuit of addressing community

needs. The *Action Item Prioritization Survey* provided significant input to help establish the order of implementation for discretionary activities. The following actions illustrate those items that align the most with input from the survey.

- ADA Transition & Title VI Plan Development Program
- CATS Urban Transit Operations Study
- Clean Air Aware Program
- Environmental Awareness & Education Program
- Commuter Connect Integration Program
- County Connect Integration Program
- Underserved Community Coordination Program
- Park & Ride Lot Program
- Safe Routes to School & Wellness Planning Initiative

The recommendations identified in *2050 inMotion* will be reviewed, amended, and reprioritized based upon community needs and available funding. *2050 inMotion* is designed to support the prioritization and programming of MPO funds through the TIP and UPWP. Regular updates to these items will assist the MPO in developing a fiscally constrained TIP document every two years with specific infrastructure improvement projects throughout the Anderson MPA. Similarly, an assessment of progress in non-infrastructure recommendations will guide the annual UPWP update to allocate agency resources for developing interim tools and plans that expand the local and regional understanding of the transportation system.

We can expect the outcomes identified in 2050 inMotion to happen if the future matches the assumptions made. But the future may not match. In fact, maybe it shouldn't.

What really happens depends on all of us, working together to reach a better future.

And now the real work begins.