

INDIANA DEPARTMENT OF TRANSPORTATION

LONG-RANGE TRANSPORTATION PLAN

2018-2045 Transportation
Needs Report



PERFORMANCE MEASURES AND TARGETS - ASSET MANAGEMENT



INDIANA DEPARTMENT OF TRANSPORTATION

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Eric Holcomb, Governor
Joe McGuinness, Commissioner

June 28, 2019

Ms. Mayela Sosa
Indiana Division Administrator
Federal Highway Administration
575 North Pennsylvania Street
Indianapolis, IN 46204

Dear Ms. Sosa:

This letter is to document the designation of the Indiana Department of Transportation's (INDOT) performance-based, 2019-2045 Indiana Long-Range Transportation Plan as required under 23 CFR 450.216 and 49 USC 5304(f). This document replaces INDOT's 2013-2035 INDOT Future Transportation Needs Report.

The INDOT 2045 Long-Range Transportation Plan remains a non-project specific, broad-based policy, statewide transportation planning document that allows for a more flexible and opportunistic framework for addressing multimodal transportation issues, trends, needs, and innovation for the next 20-25 years. The document defines specific strategic actions, targets, and performance measures to affect INDOT decision-making and accomplish desired results.

INDOT has leveraged extensive and innovative outreach to citizens, stakeholders, planning partners, and various agency departments within our planning process. Innovative outreach strategies include: virtual town hall meeting, public survey specific to bike and pedestrian planning, seven regional planning coordination meetings with stakeholders, crowd-sourcing technology, regional team meetings, Purdue presentations, and various open-house meetings across the state.

Lastly, INDOT has carried out this plan update in a manner that ensures support of subsequent State Transportation Improvement Programs (STIP). The document links the reader to Indiana's Next Level Initiatives, INDOT's Transportation Asset Management Plan, various mode-specific planning documents, and lists long-term agency improvement priorities and studies for future development commitments, including I-69 section 6, I-69 Ohio River Crossing, US 31 and US 30 corridor enhancements, and others.

Thank you and members of the Federal Highway Administration (FHWA) Indiana Division, FHWA Headquarters, and the Federal Transit Administration team for your participation and support of our statewide transportation planning process and in the development of this document.

Regards,

A handwritten signature in blue ink that reads "Heather Kennedy".

Heather Kennedy
Deputy Commissioner
Capital Program Management

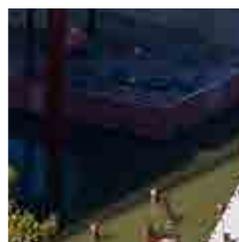
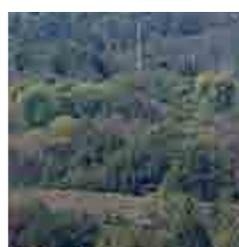
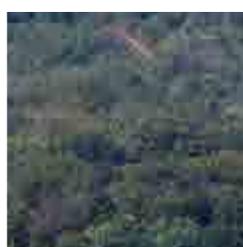
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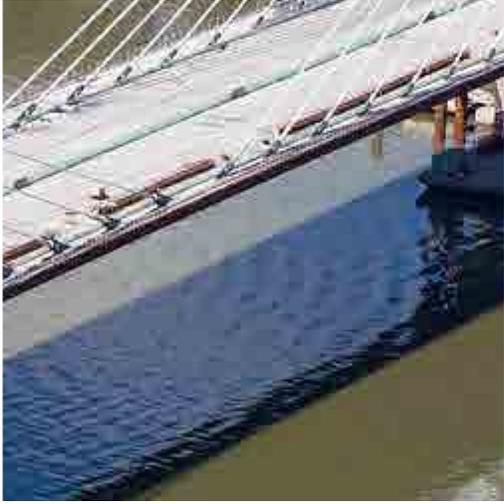
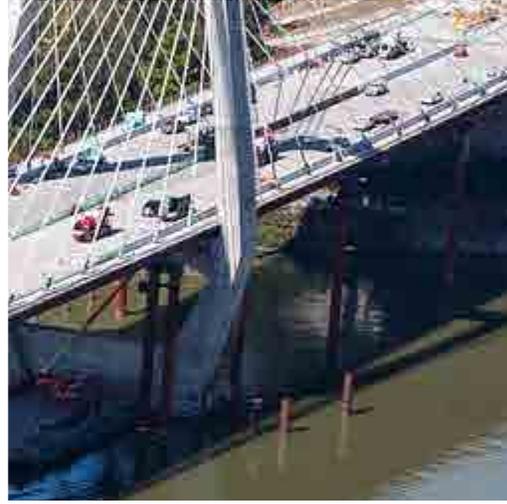
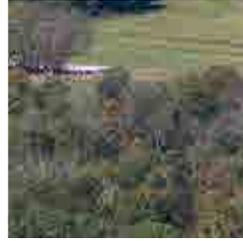


cc: Joe McGuinness - Commissioner
Roy Nunnally – Division Director, Technical Planning and Programming
Kathy Eaton-McKalip -- Division Director, LPA/MPO & Grant Administration
Jim Stark - Division Director, Multimodal Planning
Jay Mitchell --Supervisor, Technical Planning Section

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EXECUTIVE summary

2018-2045 Transportation Needs Report

WHAT IS THE LRTP?

The 2018-2045 Future Transportation Needs Report is Indiana's statewide, long-range transportation plan (LRTP). This plan is a broad-based policy document that is used to guide the development of Indiana's transportation system. The

purpose of the LRTP is to assure that the transportation infrastructure network will adequately serve future needs through the year 2045.

Why Have an LRTP?

As a blueprint for the future transportation system, the LRTP will outline the robust planning process that is needed to fulfill the vision for developing Indiana's desired transportation system through the year 2045. As a performance-based plan, the LRTP will be set up to specifically define its present status, recommended actions, and measurable outcomes. The Governor's Next Level Roads and Next Level Connections initiatives are incorporated in the LRTP.



Who is Involved in the LRTP?

While INDOT has primary responsibility for Indiana’s highway system and their responsibility varies for other modes, it does not act alone in statewide transportation planning. Governmental entities—including Federal and state agencies, the metropolitan planning organizations (MPOs), and local jurisdictions—partnered with INDOT and

played a critical role in the planning process. A variety of advocacy groups and industry organizations—including Conexus of Indiana, the Indiana Economic Development Corporation, and the Ports of Indiana—are also significant contributors. The plan will guide INDOT and its planning partners towards common goals.

“Indiana’s transportation system will be safe, efficient, and integrated and serve as the foundation of the state’s economic vitality and quality of life and support for its residents and industries.”



Public Involvement

Public outreach is critical in the development of the LRTP and associated policies and strategic actions. To understand the transportation needs and priorities of Indiana’s residents and businesses, INDOT conducted several public meetings to solicit stakeholder input. The project website, <https://www.in.gov/indot/3714.htm>, also provided regular updates on the plan’s progression.

Policy Goals

The vision of the LRTP was driven by policy goals that are consistent with national planning goals. Objectives are specific, measurable statements that define how each goal is to be achieved. They play a key role in shaping investment strategies and policy priorities.

Safe & Secure Travel	Move Indiana toward zero deaths and reduction of serious injuries by applying proven strategies and enhancing the safety and security of our transportation system for all users.
System Preservation	Going beyond taking care of what we have and maintain our multimodal transportation system and infrastructure in a state of good repair.
Economic Competitiveness and Quality of Life	Enhance the competitiveness of Indiana’s economy as the “Crossroads of America” through strategic multimodal transportation investments, reducing transportation costs, and the safe and efficient movement of people and goods.
Multimodal Mobility	Maximize the performance of our transportation system, ensuring efficient movement of people, goods, and regional connectivity by enhancing access to different modes of transportation.
Environmental Responsibility	Minimize the potential impacts of the transportation system on the natural and human environment.
New Technology and Advancements	Develop and deploy advanced transportation technologies and embrace a broad-based, comprehensive research program to plan for the future.
Strategic Policy Actions	Address multiple goal areas through key policy initiatives.

Demographic Changes

Indiana's population is expected to grow to 7.8 million by the year 2045. Population growth will continue to place greater demands on the transportation system, which may lead to increased traffic congestion in urban and suburban regions as well as longer trip lengths that may extend peak commuting periods. Employment growth is also expected to increase overall trip attractions, which may alter commuting patterns and levels.

EMPLOYMENT GROWTH

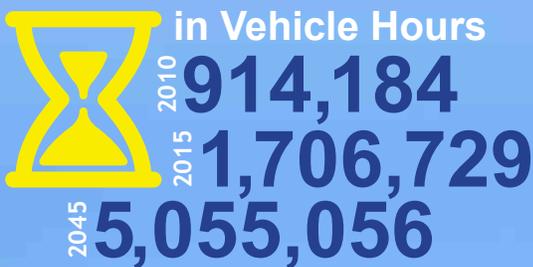


Mobility Trends

Several complex factors influence travel patterns and choices, such as fuel costs, job location, nearby services, land use, and changes in the size and number of households. More people are relying on interstate and state highways for local trips. Vehicle miles traveled (VMT) refers to the total number of miles traveled by Hoosiers and can place great demands on Indiana's roadway infrastructure. Due to the anticipated increase in total population, the statewide VMT will also grow. Traffic congestion is linked to population and VMT growth; as a result, travel time and/or delay is projected to increase significantly.

Note: Does not include all roadways; VMT estimates cover interstates, US and state highways, as well as a selection of non-state jurisdictional highways.

DAILY DELAY

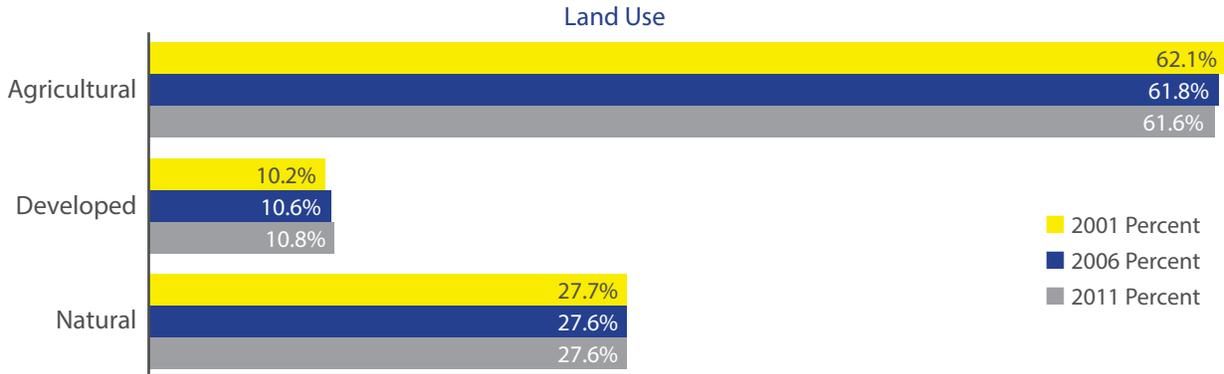


DAILY COST



Land Use Development

Shifts in land use can impact the amount of vehicle travel and the viability of transit, walking, and other modes. As such, land use development can be a driving factor for transportation improvements and transportation improvements can spawn development. As shown, the decrease in agricultural land compared to the increase development has been very minimal from 2001 to 2011. This trend will continue through 2045, as the agricultural industry is a large contributor to Indiana's economy.



Infrastructure Assets

Indiana relies on a mix of modes to move people and freight safely and efficiently. The following provides a snapshot of the various components of Indiana's extensive transportation system.

35,897,597 annual unlinked passenger trips via **PUBLIC TRANSIT**, including bus and commuter trains



105,928 miles of **PUBLIC ROADS**, of which 11,169 are State-owned

19,291 **BRIDGES**, of which 5,747 are State-owned

4,134 miles of **RAIL** with 1.5B tons of cargo annually

3 PORTS & 225 MARITIME TERMINALS

117 public-use **AIRPORTS**

3,600 miles of **TRAILS & BIKEWAYS**

90 miles from **SOUTH BEND** to **CHICAGO MILLENNIUM** station

428 miles of **INLAND WATERWAYS**

Multimodal Needs

A comprehensive multimodal approach aims to address Indiana's transportation needs, while improving system efficiency and supporting future mobility and economic growth. Effective decision-making relies upon an understanding of these needs

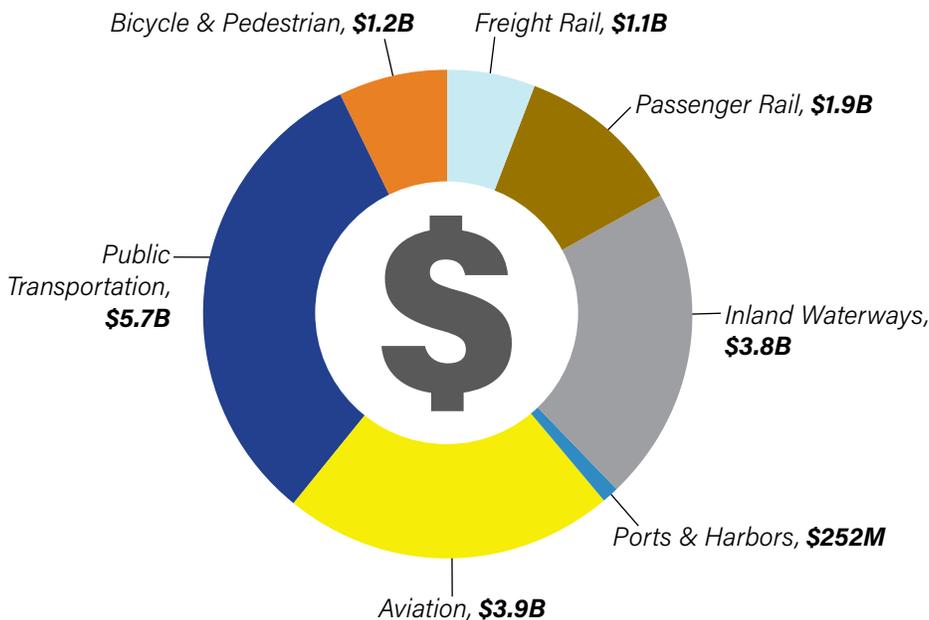
and the continuous coordination with planning partners. Below is list of statewide needs:

- Road pavement preservation—94 percent of INDOT’s interstates were in fair or better condition in 2016.
- Bridge clearances and repairs—97 percent of INDOT’s bridges were in fair or better condition in 2017.
- Additional rail capacity—Most rail lines are single track and at least 345 miles of rail lines are unable to accommodate the industry-standard 286,000-pound weight limit.
- Grade separations and crossing improvements—the average annual number of accidents at rail-highway at-grade crossings between 2007 and 2016 was 120, ranking 6th in the nation.
- Double tracking—25.9 miles of the South Shore Line between Gary and Michigan City would add more frequent train service, reduce delays, improve travel times, and double weekly ridership to 26,000 in the next 20 years.
- Maintenance dredging at Burns Harbor—Losses of between two and three feet of channel depth would increase transportation costs between \$3.5 million and \$6.8 million annually.
- Optimization of maritime connections between rail and highway modes—Each port is served by only a single Class I

railroad and the Mt. Vernon port is also constrained by inadequate direct highway access.

This plan identifies more than **\$1B** per year in **PAVEMENT & BRIDGE NEEDS** along with more than **\$9.2B** IN MAJOR CORRIDOR IMPROVEMENTS

COST OF MULTIMODAL NEEDS



- Runway pavement upgrades—Approximately 59 percent of airport pavements need preventative maintenance, 34 percent need more extensive rehabilitation, and seven percent need reconstruction.
- Increase frequency and coverage of public transit service—One percent of people (ages 16 and over) use public transportation to get to work.
- Trails and bikeways expansion and connectivity—Approximately 69 percent of state roadways are suitable for bicycles.
- Crosswalk visibility enhancements—An average of seven percent of severe vehicular accidents involved pedestrians between 2006 and 2016, ranking 18th in the nation.

Environmental Programs

The LRTP is intended to inform planning decisions that have the

potential to impact Indiana’s natural and human resources. Therefore, INDOT is committed to establishing sustainable and environmentally sound policies that comply with the National Environmental Policy Act and related Federal regulations. INDOT has established numerous environmental programs to specifically meet this commitment.

- Hoosier Roadside Heritage Program
- Recycling and Waste Diversion
- Adopt-A-Highway Program
- Indiana Stellar Communities Program
- Historic Bridge Marketing Program
- Alternative Fuel Vehicles
- Indiana Scenic Byway Program
- Storm Water Quality Management

Environmental Justice

Environmental Justice (EJ) populations include minority and low-income people. In addition, the elderly, persons with disabilities, and persons with limited English proficiency (LEP) should also be taken into account. Low-income populations and LEP households are concentrated in northern Indiana (Elkhart, LaGrange, and Noble Counties) and the Indianapolis metro area. INDOT has a responsibility to ensure “the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.” INDOT established EJ objectives and will continue to work with planning partners and stakeholders to ensure EJ populations throughout Indiana are represented in the transportation planning process and that they are not disproportionately or adversely impacted by transportation projects.

Performance Measures

INDOT’s performance measures are designed to be clear, quantifiable, and easily verifiable metrics of how well Indiana is achieving its adopted goals and objectives. Each measure identifies a numeric performance target, based on a desired change. Information in the Transportation Asset Management Plan is used to evaluate the condition and performance of the Indiana’s publicly-owned transportation system. This helps to report on the progress toward the achievement of performance targets and to track the effectiveness of LRTP strategies. INDOT will continue to collaborate with its planning partners and stakeholders to assess the factors that are influencing the performance level of various transportation modes, and to refine the performance targets to maintain or improve operational efficiency.

 GOALS	 PERFORMANCE AREA	 PERFORMANCE MEASURES
Safe & Secure Travel	Safety Performance Measures	<ul style="list-style-type: none"> • Number of Total Fatalities • Number of Total Serious Injuries • Rate of Fatalities • Rate of Serious Injuries • Number of Non-Motorized Fatalities and Serious Injuries
System Preservation	Pavement & Bridge Condition Performance Measures	<ul style="list-style-type: none"> • Percentage Good Interstate Pavements • Percentage Good Non-Interstate NHS Pavements • Percentage Poor Interstate Pavements • Percentage Poor Non-Interstate NHS Pavements • Percentage Good NHS Bridges • Percentage Poor NHS Bridges
Economic Vitality	Freight Reliability Performance Measure	<ul style="list-style-type: none"> • Truck Travel Time Reliability
Multimodal Mobility	Congestion Performance Measure	<ul style="list-style-type: none"> • Hours of Excessive Delay
	Travel Reliability Performance Measures	<ul style="list-style-type: none"> • Percentage Interstate Travel that is Reliable • Percentage Non-Interstate NHS Travel that is Reliable
	Ridesharing Performance Measure	<ul style="list-style-type: none"> • Non-Single Occupant Vehicle Travel
Environmental Responsibility	Air Quality Performance Measure	<ul style="list-style-type: none"> • On-Road Mobile Source Emissions Reductions

Current Funding Priorities

Every year, INDOT updates its State Transportation Improvement Program (STIP), which identifies the funding and timing of the state's transportation projects by fiscal year. The current 2018-2021 STIP identifies more than \$4.4 billion in projects. Funds are allocated to nine major project types.

Current Funding Programs

Most of Indiana's transportation projects and programs are funded from state and Federal sources, including fuel tax, vehicle and driver tax, sales tax, toll and user fees, and other miscellaneous fees. Among other funding programs, the Next Level Roads is a recently announced initiative. **Next Level Roads dedicates more than \$30 billion over the next 20 years for the maintenance and construction of roads and bridges.** The revenue stems from an increase in gas tax by 10 cents a gallon and increased special fuel and motor carrier surcharges. **The \$1 billion Next Level Connections plan will fund important infrastructure projects statewide, including the completion of major highway improvements, trails development, creating more nonstop international flights, rail expansion in northwest Indiana, and the potential building of a new fourth port at Lawrenceburg.** The revenue comes from an agreement with the toll concession, in which higher tolls for heavy commercial vehicles will be assessed.



\$1,513 M

Pavement Reconstruction / Maintenance

\$1,401 M

Bridge & Structure
Reconstruction / Maintenance



\$860 M

Added Capacity / Intersection
Improvements



\$178 M

Transit



\$215 M

Safety / ITS / Other



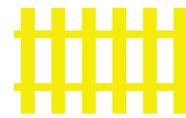
\$155 M

Bicycle / Pedestrian



\$54 M

New Bridges



\$53 M

Railroad



\$19 M

Other Maintenance



Anticipated Future Funding

Transportation funding must be adequate to deliver the LRTP vision. Transportation financial projections for INDOT are based on the current STIP, Next Level Roads, and Next Level Connections. It will be a challenge for Indiana's current revenue stream to address future transportation needs and increasing mobility demands—especially when combined with rising construction and real estate costs.

Between fiscal year 2018 and 2024, this plan has identified an average of \$2.7 billion available each year for INDOT. It is projected that \$2.75 billion will be available each year from fiscal year 2025 to 2045. The largest share of these resources come from State Federal-aid FHWA funds at 29 percent, local Federal-aid FHWA funds at 9 percent, and State highway funds at 54 percent.



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introduction

The Indiana Department of Transportation (INDOT) has developed this 2018-2045 Future Transportation Needs Report, more commonly referred to as a Long-Range Transportation Plan (LRTP). This report is an update to the previous 2013-2035 report, addressing the latest transportation needs in Indiana and conforming to new Federal and state transportation planning requirements. This 2018-2045 LRTP is a policy document that will guide INDOT in the development, management, and operation of a safe and efficient transportation system for the next 25-plus years.



BACKGROUND

The prior 2013-2035 LRTP provided an overview of transportation needs in Indiana that were driven by its growing population, employment, and overall economy. The LRTP provided an overview of transportation improvements to address those needs. Since that time, demographics, the economy, and the Gross State Product all have shown growth, and projections are that they will continue to grow and to have a significant impact on the demand for INDOT's transportation facilities.

New transportation funding as part of INDOT's Next Level Roads Plan and Next Level Connections Initiative drives the need for robust statewide planning to ensure that the limited available funding is spent on the best possible projects, in the best possible way. The Next Level Roads Plan is a five-year, \$4.7 billion road maintenance and construction plan. It raised the gas tax by 10 cents a gallon and increased special fuel and motor carrier surcharges. The Next Level Connections Initiative includes a new \$1 billion investment in infrastructure projects, possible due to an increase in toll rates for heavy vehicles by 35 percent. INDOT is seeking to deliver an effective plan to work towards the best possible integrated multimodal transportation system for Indiana. The LRTP update will provide strategic guidance to preserve, maintain, and expand the multimodal transportation system

(individual maps for each mode are shown in Chapter 4, Transportation Trends) to meet future mobility demands of people and goods.

INDOT Mission

INDOT's mission is to plan, build, maintain, and operate a superior transportation system enhancing safety, mobility, and economic growth. The LRTP update will help to serve that mission by performing an analysis of current and future needs for all transportation modes, with a concurrent analysis of transportation funding needs and issues. INDOT has set agency goals to take INDOT to the next level including:

- Deliver great service.
- Enhance Indiana's economic competitiveness and quality of life.
- Execute a 20-year road and bridge plan.
- Develop INDOT's 21st Century Workforce.

This plan, along with its proposed goals, objectives, policies, and strategies will help support INDOT in achieving these agency goals.



to the freight, aviation, railroad, transit, commuter rail, and water ports modes. INDOT also coordinates with the Indiana Department of Natural Resources for the bicycle and pedestrian modes of transportation. Additionally, INDOT oversees state and Federal programs directed to the county and city transportation systems.

Federal Requirements

Statewide transportation planning is required by Federal and state regulations, and provides a framework for decision-making at INDOT. Federal legislation, in the form of the 2012 MAP-21 (Moving Ahead for Progress in the 21st Century Act) and the 2015 FAST Act (Fixing America's Surface Transportation Act), requires INDOT to develop, adopt, and implement a Long-Range Transportation Plan (LRTP). Building on the reforms of MAP-21, the FAST Act retained most of its planning requirements and strengthened its emphasis on performance-based planning. States are generally required to update their LRTP's every five years to address new trends and issues, and to incorporate new state and Federal regulations. INDOT is updating its current LRTP, known as the 2013-2035 Future Transportation Needs Report, with a new base year of 2018 and a planning horizon extended to the year 2045.

It is important to note that the LRTP is not project-specific; rather it identifies investment priorities based on current and projected needs as well as anticipated funding to 2045. Specific major corridor and project initiatives will be discussed.

INDOT Responsibilities

INDOT is an active partner among a host of Federal, state, regional, and industry transportation players with interests in providing transportation in Indiana. INDOT administers and assists with a variety of programs serving multiple transportation modes.

The Indiana highway system is one of INDOT's primary responsibilities. INDOT is responsible for planning, construction, and maintenance of the Indiana highway system for non-tolled interstate highways, US highways, and state highways. Ancillary systems which are also INDOT's responsibility include adjacent overpasses, ramps, and bridges.

INDOT's Multimodal Offices support its responsibilities



OVERVIEW OF THE LRTP

What is the LRTP?

INDOT's LRTP is a broad-based policy document that is used to guide the development of Indiana's transportation system. The purpose of the LRTP is to assure that the transportation infrastructure network will adequately serve future needs through the year 2045. The major components of this plan call for INDOT to:

- **Identify existing and emerging transportation challenges** – Based on the impacts of Indiana's expanding population, employment, and economy, as well as on new trends in the demand for transportation, changing public expectations for the transportation system, the desire for improved multimodal choices, and changing Federal regulations.
- **Document Indiana's vision for its transportation system** – Recognizing the full community of public agencies, private businesses, advocacy groups, and general public who have interests in Indiana's transportation system, the LRTP update public outreach effort will work with all stakeholders to craft a common vision for the future system and its priorities. Input from stakeholders will be cultivated each step of the way in the LRTP development process.
- **Define what is needed to meet future transportation demands to 2045** – While the LRTP will not develop specific projects, it will identify general topic areas of needs to meet Indiana's vision for their future transportation system.
- **Recommend strategies to ensure regional mobility** – Multiple strategies are possible to implement the general topic areas of transportation projects. The LRTP update will explore various options and recommend a set of strategies that are compatible and support each other while efficiently addressing all requirements and constraints.
- **Establish funding priorities for needed improvements** – Needed improvements are constrained by available funding, planning requirements, construction phasing, and their general physical environment. All these factors will be considered in developing general priorities for projects for short-term, medium-term, and long-term implementation. Priorities are built on the Next Level Roads Plan and Next Level Connections Initiative.
- **Map a course for meeting Indiana's transportation vision** – Pursuing the complex vision for Indiana's transportation future while balancing needs and constraints will require careful and robust planning. The 2018-2045 LRTP will develop an implementation process that is responsive, efficient, and effective at building the course to accomplish Indiana's vision for its transportation system.

Federal regulations require state DOTs to continually monitor their LRTP and to update it regularly to ensure it covers at least 20-years. This planning cycle accommodates





the need to consider and incorporate a wide range of dynamic factors that affect the demand for transportation, the supply of transportation, and the transportation planning process. These dynamic factors include changes in demographics and land use, economic development, new tools, updated technologies, and new planning-related regulations and requirements. The periodic update of the LRTP also provides a platform for transportation planning to consider emerging trends, challenges, and opportunities that may have an impact on the system over the next 20-plus years.

Why Have an LRTP?

As a blueprint for the future transportation system, the LRTP will outline the robust planning process that is needed to fulfill the vision for developing Indiana's desired transportation system through the year 2045. As a performance-based plan, the LRTP will be set up to specifically define its present status, recommended actions, and measurable outcomes. This performance based LRTP includes:

Goals and objectives – The complex vision for the future Indiana transportation system will be quantified into specific goals and objectives for topical areas and for geographic areas.

Fiscal and financial analysis – Federal and state funding for transportation is distributed to different agencies such as the six INDOT Districts, the 14 Metropolitan Planning Organizations (MPOs), and the 12 Regional



Planning Organizations (RPOs). Funding is further grouped by Federal categories, with funding dedicated for specific purposes, such as new road construction, bridge replacements, congestion management and air quality, freight/rail, or transit capital assistance. Each group will be stratified by their programmatic requirements so that an accurate and practical picture of the transportation system's needs, applicable revenue streams, and funding gaps can be presented.

Strategic actions to meet the LRTP goals – Multiple strategies are available to implement the general topic areas of transportation projects. The LRTP update will explore various options and recommend a set of strategies that are compatible and support each other while efficiently addressing all requirements and constraints.



Performance measures – Specific and measurable performance measures will be developed so that progress towards the transportation system goals can be tracked. This feature is critical in allowing the LRTP to be monitored and adjusted as necessary to efficiently and effectively meet its adopted vision, goals, and objectives.



Federal guidelines state that the LRTP should be developed through a performance-driven, outcome-based approach. The planning process should be continuous, cooperative, and comprehensive, providing for consideration and implementation of projects, strategies,

and services that will address the ten Federal planning factors. Chapter 2 details how each planning factor is considered in the LRTP.

- 1 Support the economic vitality of the United States, individual states, metropolitan areas, and non-metropolitan areas, especially by enabling global competitiveness, productivity, and efficiency.
- 2 Increase the safety of the transportation system for motorized and non-motorized users.
- 3 Increase the security of the transportation system for motorized and non-motorized users.
- 4 Increase accessibility and mobility of people and freight.
- 5 Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and state and local planned growth and economic development patterns.
- 6 Enhance the integration and connectivity of the transportation system, across and between modes.
- 7 Promote efficient system management and operation.
- 8 Emphasize the preservation of the existing transportation system.
- 9 Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation.
- 10 Enhance travel and tourism.

Who is Involved in the LRTP?

While INDOT is a vital partner in transportation planning in Indiana, it does not act alone. The Indiana Toll Road Concession Company operates the tolled I-90, and local counties, cities, and towns are responsible for roadways



that are not on the state highway system as a designated state road, U.S. route, or interstate highway. Various Federal and state agencies, local jurisdictions, and private businesses are active partners in providing transportation functions. Advocacy groups and the Indiana public are also vital partners in the LRTP update. The various Federal and state agencies, local jurisdictions and other agencies, industry groups, and public partners providing transportation functions in Indiana include:

Public Partners

The general public forms an important set of partners for the development of the LRTP. To accurately capture the complete picture of public opinions and needs for all transportation options, public involvement is essential. This LRTP update follows a comprehensive plan put forth to provide ample, continuous opportunities for the public and stakeholders to have meaningful input into the transportation planning process.

Furthermore, the State followed the public involvement guidelines established under the FAST Act, to the maximum extent practicable, such as providing adequate notice of public participation activities; ensuring that public meetings

are held at convenient and accessible locations and times; using visualization techniques; responding to input received; and, adopting a collaborative and integrated approach to transportation decision-making. The outreach process also considers the needs of those traditionally underserved by transportation, such as low income and minority communities, the disabled, the elderly, and groups with limited English proficiency.

To share information and gather feedback on the L RTP, the public involvement process—detailed in Chapter 2— included public meetings, a telephone town hall, separate meetings with key stakeholders, and website updates.

Federal Agency Partners

- **Federal Highway Administration (FHWA)** – Provides support through financial and technical assistance to state and local governments for constructing and improving the National Highway System and various Federal- and tribal-owned lands. 
- **Federal Motor Carrier Safety Administration (FMCSA)** – Enacts and enforces regulations to improve the safety of the commercial motor vehicle industry.
- **Federal Railroad Administration (FRA)** – Duties include creating and enforcing rail safety regulations, administering railroad financial assistance programs, and conducting research and development towards improving railroad safety. 
- **Federal Transit Administration (FTA)** – Provides financial and technical assistance to urban and rural public transportation systems. 
- **U.S. Army Corps of Engineers (USACE)** – Maintains waterway channels, locks, and dams of the Inland Waterway System. 
- **U.S. Environmental Protection Agency (EPA)** – Responsible for the critical link between transportation and the environment, including the quality and impacts on air, endangered species, land uses, and wetlands. EPA is also an important partner in supporting planning for public involvement. 

State Agency Partners

- **Indiana Department of Environmental Management (IDEM)**– Provides expertise in planning for air quality issues, transportation’s impact on sensitive land, and water quality.

- **Indiana Department of Health (ISDH)** – Provides support and guidance for health and human services transportation and for the regional coordination of transportation across different transit providers. 
- **Indiana Department of Homeland Security (IDHS)** – Leads Indiana’s planning and response to natural and man-made disasters. Coordination with the transportation system is vital in responding to these types of incidents. 
- **Indiana Department of Natural Resources (DNR)**– Protects, enhances, preserves, and wisely uses natural, cultural, and recreational resources for the benefit of Indiana’s citizens through professional leadership, management, and education. DNR is also a vital partner in planning for the bicycle and pedestrian modes. 
- **Indiana Economic Development Organizations** – The Indiana Economic Development Corporation sponsors or supports numerous statewide and local organizations dedicated to promoting private business in Indiana. Organizations include the Ball State University Center for Business and Economic Research, the Indiana Economic Development Association, and the Conexus Indiana.
- **INDOT Office of Aviation** – Supports the development of the aviation mode in the state and encourages the establishment of airports, landing fields, and navigational facilities.
- **INDOT Office of Traffic Safety** – Administers programs to meet state and Federal safety goals. Although INDOT is responsible only for the state highway system, its Office of Traffic Safety works to reduce the frequency and severity of crashes on both the state highway system and local roads.
- **INDOT Office of Transit** – Provides financial and technical assistance to 17 fixed-route and 46 demand response public transit systems across the state, which results in support for more than 36 million passenger trips annually.
- **INDOT Districts** – INDOT has six regional districts that provide coverage for the entire state. Each district has either four or five subdistricts, and there is a total of 29 subdistricts. In addition to roadway operations, construction, and maintenance, Districts are active in transportation planning, asset management, and public involvement. A map of INDOT Districts is shown on page 24.
- **INDOT Freight Office** – Partners with others to

provide an integrated freight transportation and logistics system that ensures the efficient, reliable, safe, and secure movement of goods, materials and services, which supports the state's economic growth and competitive access to markets.

- **INDOT Rail Office** – Dedicated to preserving and developing freight and commuter rail corridors throughout the state.
- **Ports of Indiana** – As a statewide port authority it operates two ports on the Ohio River and one on Lake Michigan. Ports of Indiana is dedicated to growing the state's economy by developing and maintaining a world-class port system.

Other Agency and Organization Partners

- **Local Governments** – Include county, city, town, and councils of government. These partners are responsible for major services that include building and maintaining transportation infrastructure such as public roads and bridges, bicycle and pedestrian pathways, and ports. Smaller cities and towns, not included in an MPO area, partner with INDOT Districts for transportation planning. Coordination with local government is done through the Association of Indiana Cities and Towns and Association of Indiana Counties.

Metropolitan Planning Organizations (MPOs) – Work with local governments in an urbanized area to plan and implement transportation improvements for the region. There are 14 MPOs for urbanized areas in Indiana. As a group, MPOs are represented by the Indiana MPO Council, a statewide organization representing all 14 MPOs. The Council provides a forum for MPOs to discuss issues and share solutions. A map of each MPO's Metropolitan Planning Area is shown on page 24.

- **Native American Tribes** – Native American Tribes oversee tribal transportation infrastructure policy and transit programs as a sovereign entity. The National Park Service has identified 10 federally-recognized tribes with interests in the state, including bands of the Absentee Shawnee Tribe of Oklahoma, Delaware Nation of Oklahoma, Delaware Tribe of Indians, Oklahoma, Eastern Shawnee Tribe of Oklahoma, Forest County Potawatomi Community, Miami Tribe of Oklahoma, Peoria Tribe of Indians of Oklahoma, Pokagon Band of Potawatomi Indians, United Keetoowah Band of Cherokee Indians, and Wyandotte Nation. The Pokagon Band's 166 acres in South Bend is the first sovereign tribal land in the State.

- **Nonprofit Providers of Public Transportation** – Provide public transit service to the general public or to qualified clients. Providers may be sponsored by local governments or regional agencies, or may be privately operated.
- **Regional Planning Organizations (RPOs)** – Functioning similarly to MPOs, RPOs are regional councils of local governments serving defined multi-county geographic areas enabling citizens to address regional issues relating to transportation, the environment and community, and economic development. Indiana has 15 RPOs throughout the state. A map of each RPO and their planning areas is shown on page 24.

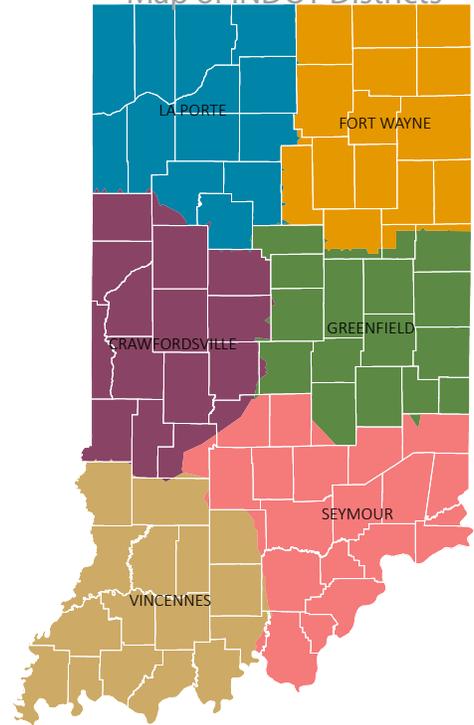
Industry Partners

- **AMTRAK Commuter Rail** – Provides commuter rail service on five routes with stations in Indiana: the Capitol Limited, Cardinal, Hoosier State, Lake Shore Limited, and Michigan Services routes. 
- **CONEXUS Indiana Logistics Council** – A non-profit statewide group of stakeholders representing air, rail, trucking, water freight, transportation infrastructure, warehousing, and freight distribution.
- **Freight Shippers** – Focus on operations and safety of freight shippers for the truck, rail, air, and water modes. Groups include carriers and brokers, and may focus on one transportation mode or have a fully multi-modal scope.
- **Highway Safety Groups** – Promote highway safety through the developing and supporting programs that reduce the number and severity of traffic crashes in Indiana.
- **Intercity Bus** – Six carriers provide 18 routes with 48 stops in 46 cities in the State.
- **Major Employers** – Represent the transportation interests of their businesses.
- **Motor Carrier Industry** – Groups concerned with the operations and safety of the trucking industry. The Indiana Motor Truck Association is one example of a motor carrier industry group.
- **Northern Indiana Commuter Transportation District (NICTD)** – A commuter rail line operating the South Shore Line between South Bend and Chicago. The 130-mile route 

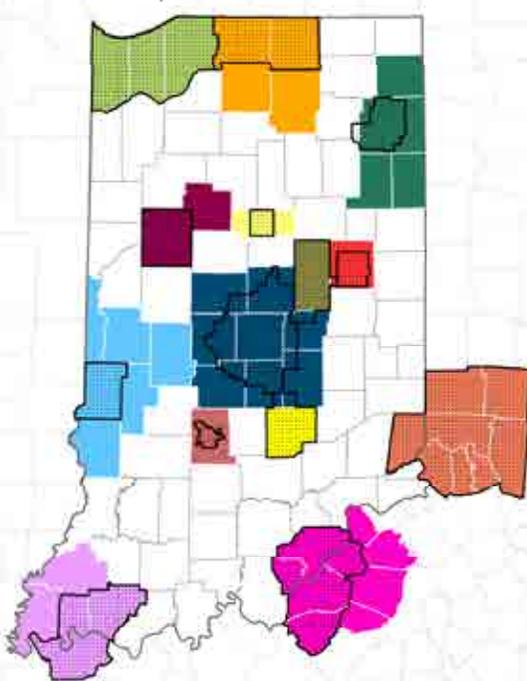
is served by 19 stations and flag stops.

- **Railroads** – Public and private companies operate and maintain railroad tracks and trains for the movement of freight. There are 46 separate freight rail operators in Indiana with tracks in all but two of Indiana’s 92 counties.
- **Toll Roads** – Indiana Toll Road – owned by the Indiana Finance Authority, the Indiana Toll Road Concession Company (ITRCC) operates eight travel plazas and 156 miles of I-80/90 that stretches across northern Indiana.
- **Louisville-Southern Indiana Ohio River Bridges** – The Kentucky-Indiana Joint Board operates three toll bridges over the Ohio River: the new Lewis and Clark Bridge (I-265), the new Abraham Lincoln Bridge (I-65), and revamped John F. Kennedy Memorial Bridge (I-65) in downtown Louisville.

Map of INDOT Districts



Map of INDOT MPOs

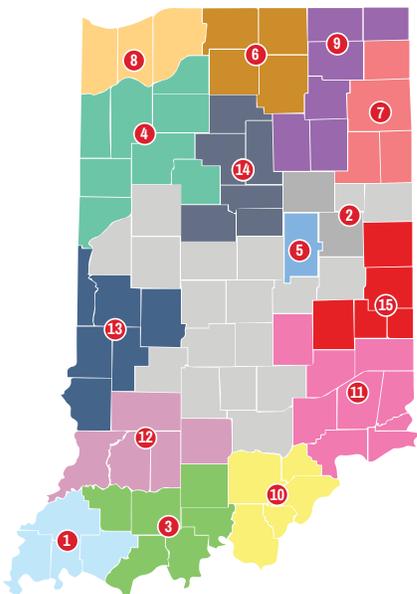


Metropolitan Planning Areas

Metropolitan Planning Organizations

NIRPC	MCCOG
MACOG	DMMPC
NIRCC	BMCMPPO
TCAPC	CAMPO
KHCGCC	EMPO
WCIEDD	KIPDA
IMPO	OKI

Map of Indiana RPOs



- 1 Economic Development Coalition of Southwest Indiana
- 2 East Central Indiana Regional Planning District
- 3 Indiana 15 Regional Planning Commission
- 4 Kankakee - Iroquois Regional Planning Commission
- 5 Madison County Council of Governments
- 6 Michiana Area Council of Governments
- 7 Northeastern Indiana Regional Coordinating Council
- 8 Northwestern Indiana Regional Planning Commission
- 9 Region III-A Economic Development District and Regional Planning Commission
- 10 River Hills Economic Development District and Regional Planning Commission
- 11 Southeastern Indiana Regional Planning Commission
- 12 Southern Indiana Development Commission
- 13 West Central Indiana Economic Development District

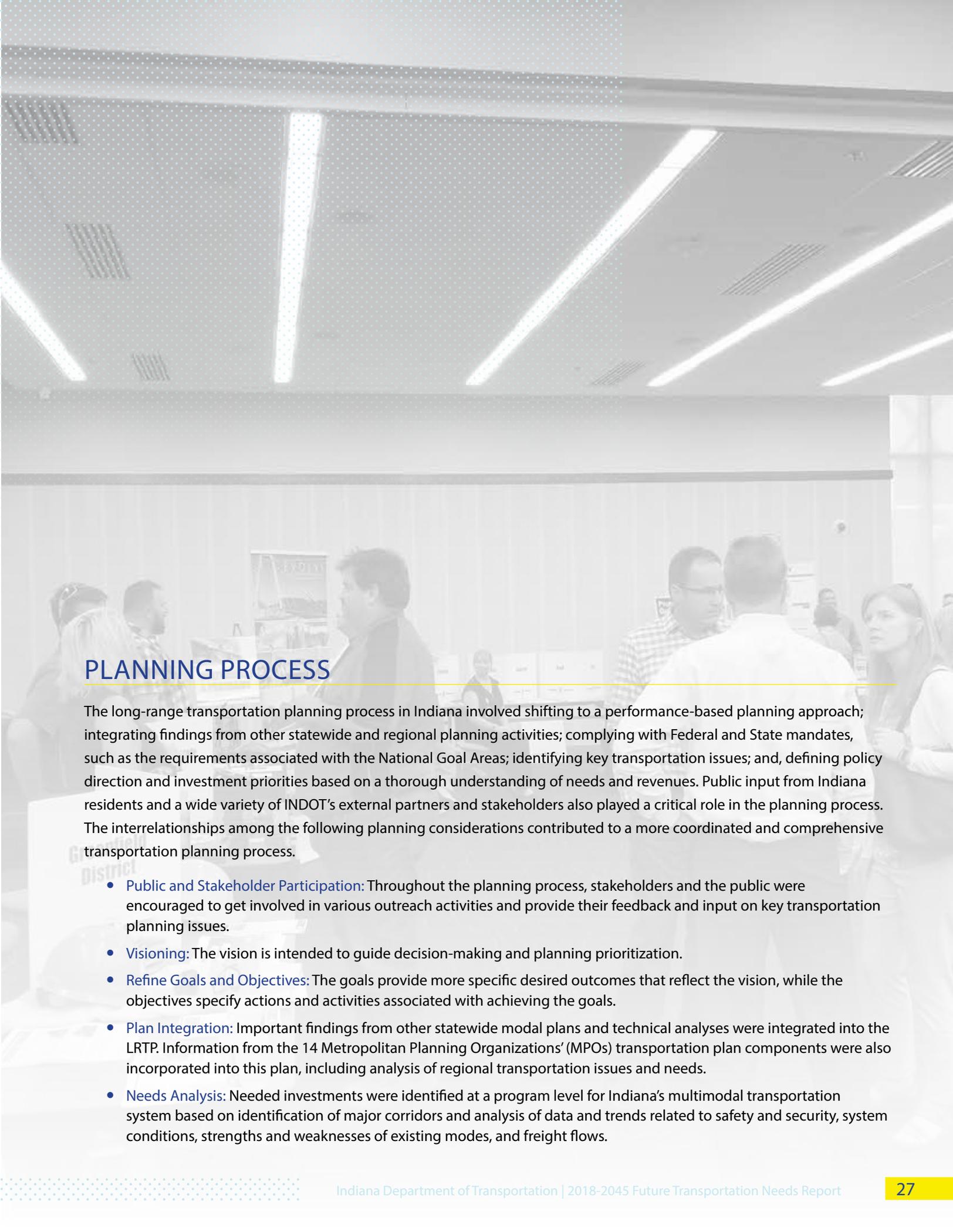
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An aerial photograph of a complex highway interchange, including a roundabout and several overpasses, with a semi-transparent blue overlay. A large yellow number '2' is positioned on the left side of the image.

2

plan development

The development of the LRTP focuses on overall system performance and providing policy guidance on how to best invest in Indiana's transportation resources. INDOT's LRTP no longer has an emphasis on identifying specific projects—although, the LRTP does generally incorporate long-term committed projects and investment corridors. This chapter describes the development efforts of this planning document.

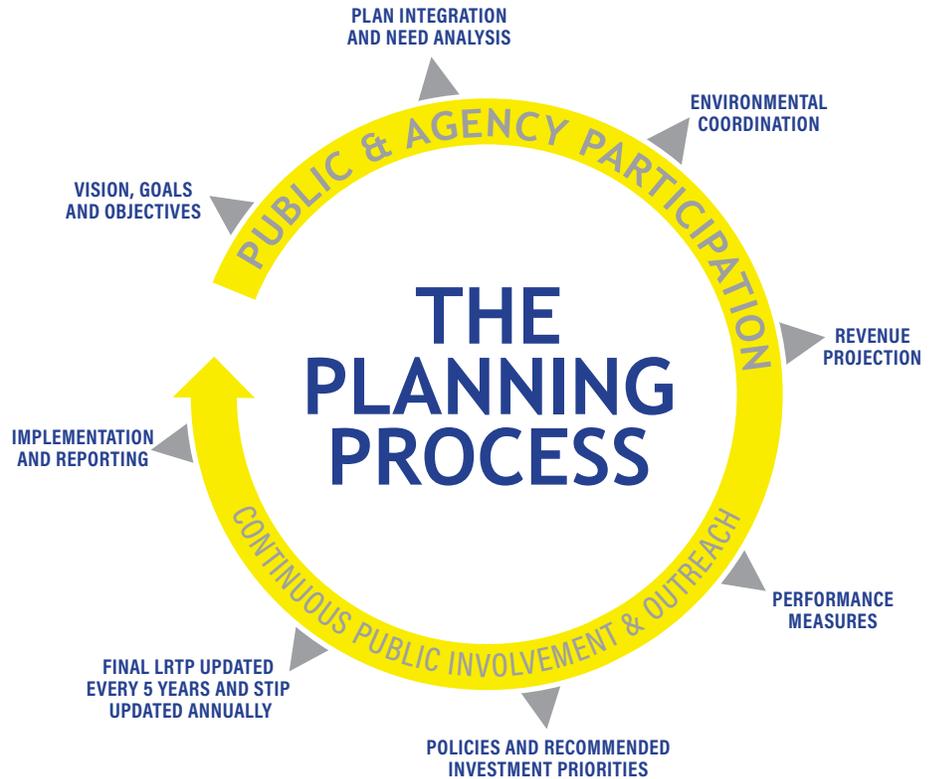


PLANNING PROCESS

The long-range transportation planning process in Indiana involved shifting to a performance-based planning approach; integrating findings from other statewide and regional planning activities; complying with Federal and State mandates, such as the requirements associated with the National Goal Areas; identifying key transportation issues; and, defining policy direction and investment priorities based on a thorough understanding of needs and revenues. Public input from Indiana residents and a wide variety of INDOT's external partners and stakeholders also played a critical role in the planning process. The interrelationships among the following planning considerations contributed to a more coordinated and comprehensive transportation planning process.

- **Public and Stakeholder Participation:** Throughout the planning process, stakeholders and the public were encouraged to get involved in various outreach activities and provide their feedback and input on key transportation planning issues.
- **Visioning:** The vision is intended to guide decision-making and planning prioritization.
- **Refine Goals and Objectives:** The goals provide more specific desired outcomes that reflect the vision, while the objectives specify actions and activities associated with achieving the goals.
- **Plan Integration:** Important findings from other statewide modal plans and technical analyses were integrated into the LRTP. Information from the 14 Metropolitan Planning Organizations' (MPOs) transportation plan components were also incorporated into this plan, including analysis of regional transportation issues and needs.
- **Needs Analysis:** Needed investments were identified at a program level for Indiana's multimodal transportation system based on identification of major corridors and analysis of data and trends related to safety and security, system conditions, strengths and weaknesses of existing modes, and freight flows.

- **Environmental Analysis:** Evaluation of environmental factors (e.g., accessibility, air, and water quality) and demographic, social, and economic trends.
- **Financial Outlook:** Revenues were projected to illustrate the amount of funding forecasted; this was compared to the future transportation needs identified in Indiana.
- **Performance Measures:** Success will be measured through meaningful performance measures consistent with Federal and State mandated planning factors. Performance measures use quantitative data to assess INDOT's effectiveness in meeting its goals.
- **Implementation:** Strategic actions and investment priorities were identified to address the goals and objectives. Plan policies and performance measures will be incorporated into ongoing programs and initiatives such as the annually-updated Statewide Transportation Improvement Program (STIP) and the Next Level Roads Plan to meet the LRTP goals and to support INDOT's vision. The development of the Next Level Roads Plan will bridge the gap between the LRTP and the five-year STIP.



PLANNING FACTORS

The FAST Act and MAP-21 are the federal legislations that outline the requirements for the transportation planning process. Both reinforce the ten planning factors, previously listed in Chapter 1, that states and MPOs should consider when developing their

LRTPs. The goals framework in Chapter 3 include key objectives and strategies that address all planning factors, including new planning factors for system resiliency and reliability, and travel and tourism. Additionally, each plan chapter includes discussions in support of the planning factors. Chapter 4 provides the background on existing transportation resources, traffic congestion, land use, mobility and vehicle miles traveled, and serious injury and fatality crashes. Chapter 5 details needed investments for achieving economic vitality, improving accessibility, enhancing connectivity, and maintaining infrastructure in good condition. Chapter 6 identifies specific strategies to protect the environment, improve quality of life, and environmental and social economic factors to consider during project development. Chapter 7 is devoted to the development of performance measures that track the condition and performance efficiency of the transportation system.

PUBLIC OUTREACH AND STAKEHOLDER PARTICIPATION

Public engagement in the development of the LRTP was a priority. Throughout the planning process, INDOT provided several opportunities for public input and feedback, such as hosting a telephone town hall and public meetings, utilizing social media feeds, and sponsoring a plan website. The overall goal was to reach a diverse audience of residents, businesses, and partner agencies, and to understand their perspectives on plan goals, transportation issues, feasibility of performance targets, and future recommended investments (e.g., preservation, modernization, and expansion).

Plan Website

INDOT set up a website, <https://www.in.gov/indot/3714.htm>, to provide regular updates on the plan's progression. The website content consisted of background information, overarching goals, project schedule information, FAQs, contact information, and announcements regarding future public meetings. The plan website was promoted through e-blasts and press releases to the media, as well as online through social media outlets.

Public Meetings

Public meetings served to provide opportunities for dialogue with INDOT staff and build momentum for the LRTP implementation. Display boards and other materials described project background and introduction, draft goals and objectives, performance measures, a brief inventory of existing transportation issues, and options for public involvement. Feedback was offered through verbal comments and written comment cards. Throughout June 2018, INDOT held meetings in Crawfordsville, Terre Haute, Columbus, Lawrenceburg, Indianapolis, and Yorktown on June 13, 14, 20, 21, 25, and 26, respectively.

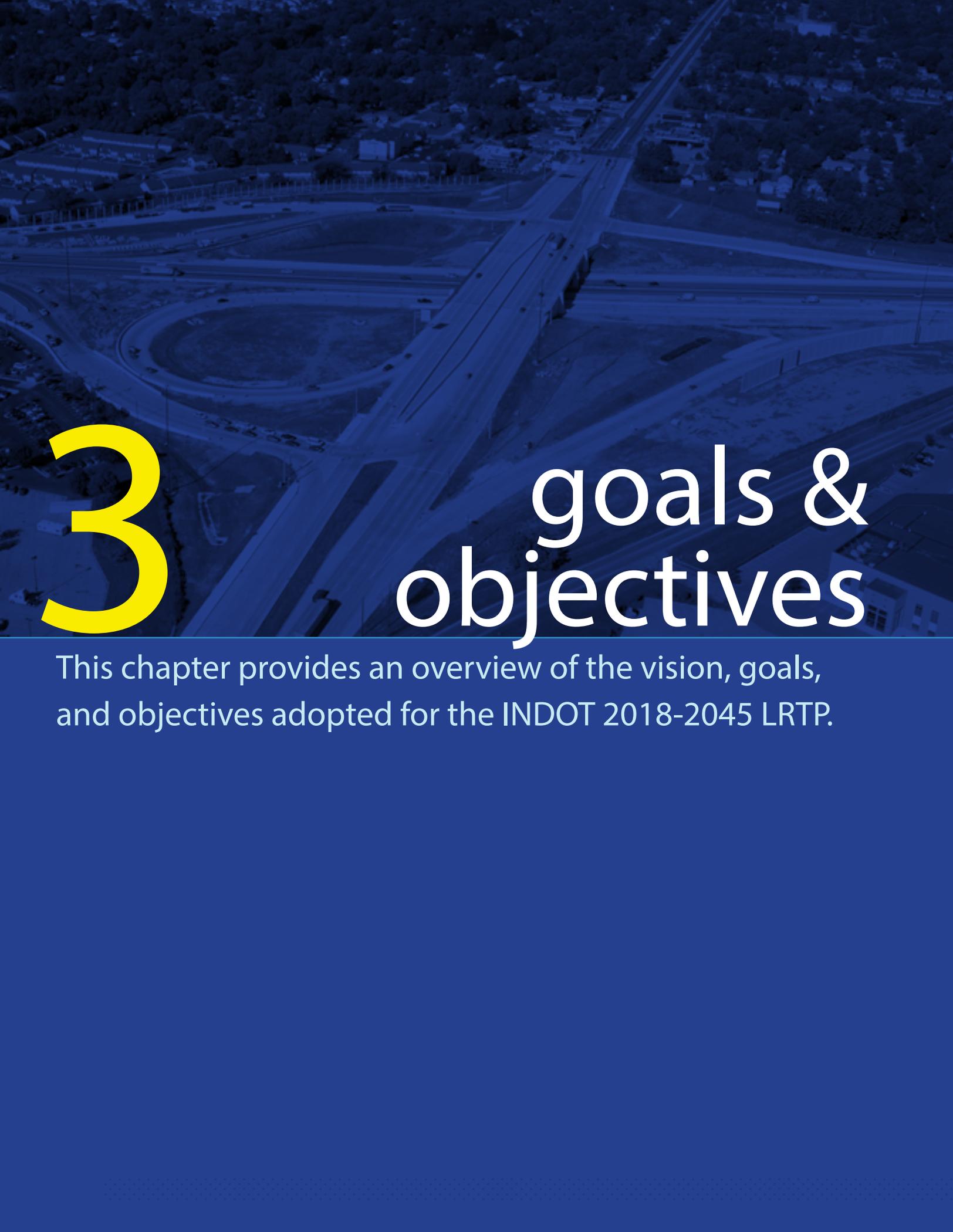
On the evening of November 28, 2018, INDOT held its first interactive telephone town hall, which solicited participant

feedback via open question and answer segments. See page 100 in the Appendix for a summary of the feedback received. To listen to the townhall, click on the Town Hall Audio File link available on the INDOT LRTP website (<https://www.in.gov/indot/3714.htm>)

Another statewide round of public open houses were held during the Spring of 2019. Two meetings (one in rural, one in urban areas of the state) were held in each INDOT District, a total of 12 meetings. These included Indianapolis, Winchester, Fort Wayne, Rochester, Evansville, Paoli, Clinton, Nappanee, Hammond, Lafayette, Columbus and Lawrenceburg. These meeting were promoted through news releases, social media posts, and mailings (including emails). For examples of these promotions, refer to the Appendix at the end of the document.

Document Distribution

A 50-day public comment period was held following the availability of the draft 2018-2045 LRTP document. Between March 27 and May 18, 2019, the plan was available on the project website and at INDOT headquarters and district offices. A summary of public comments received and their responses is included in the Appendix on pages 109-114.

An aerial photograph of a complex highway interchange, including a roundabout and several overpasses, with a semi-transparent blue overlay. A large yellow number '3' is positioned on the left side of the image.

3

goals & objectives

This chapter provides an overview of the vision, goals, and objectives adopted for the INDOT 2018-2045 LRTP.



VISION STATEMENT

The vision statement aims to describe the desired future for Indiana's transportation system and to explore issues and opportunities beyond traditional planning horizons. It provides strategic direction to plan, build, maintain and operate, and address the system's diverse needs. Decisions on future transportation investments should be made in the context of this long-term vision of sustainability and economic growth and development.

“Indiana’s transportation system will be safe, efficient, integrated, and serve as the foundation of the state’s economic vitality and quality of life and support for its residents and industries.”



POLICY GOALS AND OBJECTIVES

A key component of the LRTP is the establishment of goals that align with Indiana's transportation vision. The goals, identified herein, reflect key priorities for desired outcomes for the transportation system, as well as future challenges and opportunities. Supporting objectives are specific, measurable statements that support the achievement of goals, and play a key role in shaping investment and policy priorities.

The goals are not structured hierarchically and as such the achievement of one goal and its outcomes are as important as any other goal. The goals were developed through an iterative process that incorporated input from INDOT staff, MPOs and RPOs, FHWA, and other INDOT stakeholders (e.g., Conexus).

Safe & Secure Travel

Move Indiana toward zero deaths and reduction of serious injuries by applying proven strategies and enhancing the safety and security of our transportation system for all users.

- **Sharing Information:** Work closely with local, state, and federal agencies to improve information reporting on transportation and pedestrian crashes, safety risks, and safety trend analysis for the development of comprehensive strategies and solutions.
- **Work Zone Safety Enhancements:** Safe work zones for construction workers, enhance communication to travelers, enforcement, emergency response, educational media, and implementing work zone development best practices.
- **Address Complete Streets/ADA Needs:** Integrate sidewalks, curb ramps, cross-walks, pedestrian signals, bike facilities, transit amenities, and traffic calming strategies in identified areas to provide safe and accessible transportation connections and minimize pedestrian and vehicular crashes, injuries, and fatalities.
- **Targeted Safety Investments and Strategies:** Intersection improvements, railroad crossing enhancements, modernized traffic signals, signage, lighting, rumble stripes, and other solutions.
- **System Resiliency:** Reduce vulnerability to various threats and risks (e.g., severe weather, acts of terrorism, and cyber-attacks) and ensure redundancy and reliability to meet essential travel needs.
- **Implement the 4Es of Safety:** Education, enforcement, engineering, and emergency responses.
- **Support Safety Policies and Laws:** Distracted and impaired driving, law enforcement, yield to pedestrian crossing, and share the road and bike lane awareness.
- **Boost Security:** Coordinate communication needs with police, public safety, and security agencies, and emphasize enforcement practices and techniques with proven safety benefits.



System Preservation

Going beyond taking care of what we have and maintain our multimodal transportation system and infrastructure in a state of good repair.

- **Roadway Asset Management:**
 - Maximize the useful life of transportation assets while considering system performance, costs and impacts to the state's economy, environment, and quality of life.
 - Incorporate asset management principles in capital, maintenance and operations decisions to better align ownership and operations of state transportation assets with statewide, regional, and local priorities.
 - Execute the 10-year Transportation Asset Management Plan and the 20-year Next Level Roads Plan to improve pavement and bridge quality, safety, and mobility.
- **Smart Growth and Transportation Demand Management:** Study regional smart growth initiatives (mixed land-use development) and demand management strategies such as congestion pricing for efficient use of existing transportation facilities, park and ride facilities, parking costs, ride sharing, time of travel, and telework programs in major metropolitan areas and impacts to transportation demand and physical infrastructure needs.
- **Local Corridor Consideration:** Work with locals and rural portions of Indiana to develop regional mobility plans and to determine local corridor improvements in an effort to minimize system added capacity and allow for more efficient use of local and INDOT roadway facilities.

Economic Competitiveness and Quality of Life

Enhance the competitiveness of Indiana's economy as the "Crossroads of America" through strategic multimodal transportation investments, reducing transportation costs, and the safe and efficient movement of people and goods.

- **Transportation Connectivity and Accessibility:**
 - Provide urban and rural communities with an edge in competing for jobs and business locations; access to national and international trade markets; and connect people with economic opportunities.
 - Provide safe and efficient multimodal transportation access to diverse business, recreational, and cultural opportunities in Indiana.
 - Work with locals to ensure connectivity of regions and economic centers by various modes of travel.
- **Project Selection:** Consider economic benefits such as job creation, job access, and economic savings in project selection scoring and infrastructure investment decision-making.
- **Logistics Industry Coordination:** Coordinate infrastructure needs with freight carriers, freight forwarders, third-party logistics providers, and other stakeholders, including the MPOs, Conexus Indiana Logistics Council, Indiana Economic Development Corporation, and the Ports of Indiana.
- **Tourism Support:** Connect transportation to major tourism destinations and promote tourism benefits.



Multimodal Mobility

Maximize the performance of our transportation system, ensuring efficient movement of people, goods, and regional connectivity by enhancing access to different modes of transportation.

- **Enhance Multimodal Connections:**
 - Create incentives for more direct flights to national and international markets.
 - Establish a fourth water port in Southern Indiana.
 - Double track the South Shore Line to enhance travel between Northwest Indiana and the Chicago area.
 - Facilitate intermodal interface with Indiana's rail network in support of industrial development.
 - Incorporate non-motorized modes of travel (i.e., trails, bicycle facilities, and pedestrian paths) and public transportation (i.e., transit shelters, park-and-ride stations, bus bike racks, and bus ramps) into project development and prioritization.
- **Reduce Bottlenecks:** Monitor vehicle and freight probe data, and address the root cause of traffic bottlenecks (e.g., limited rail capacity, roadway geometry issues, lane-drops, weaving/interchange merging maneuvers, short-acceleration lanes, intersection turning movements, inconsistent highway designs, and traffic signal deficiencies).
- **Consider Non-Recurring Congestion Reducing Strategies:** Active transportation management, incident management services, and work zone management planning/implementation.
- **Consider Recurring Congestion Reducing Strategies:** Demand management strategy, congestion pricing, proactive use of managed lanes, added capacity improvements, intersection operations improvements, and access management options.
- **Freight Truck Mobility:** Link freight to transportation planning decisions, enhance access to truck parking, leverage intelligent transportation systems (ITS) for real-time truck parking availability, and use public private partnerships to develop new truck parking capacity.
- **Finish What We've Started:** Expand segments of I-70 and I-65 from four to six lanes, upgrade rural segments of US 31 (SR 26 to US 30) and US 30 (SR 149 to I-69) to interstate-like access, complete the new 26-mile north-south I-69 section 6, and complete the I-69 Ohio River Crossing.
- **Plan for the Future:** Support and develop regional mobility plans, use big data and prediction models to account for transformative technology, and respond to changes/shifts in demographics, land use, and industry trends.
- **Enhanced System Reliability:** Deploy strategic enhancements to Indiana's Statewide and Regional Mobility Corridors, including railroad grade separations and ITS technology investments (e.g., real-time traffic information and traffic signal timing).



Environmental Responsibility

Minimize the potential impacts of the transportation system on the natural and human environment.

- **Natural Hazards Mitigation:** Incorporate proactive extreme weather and natural disaster planning and infrastructure designs.
- **Practical Design Approach:** Use a collaborative decision-making approach that involves all stakeholders to develop transportation infrastructure that fits into its surroundings and preserves scenic, aesthetic, historic, and cultural needs while enhancing the overall transportation system.
- **Recycling and Waste Programs:** Support initiatives, operations, and construction program methods aimed at increasing recycled construction materials and reducing waste, energy usage, air pollution, and impacts to waterways.
- **Encourage Active Transportation:** Track commute mode shares and miles traveled by mode, support mixed-use development, consider complete streets designs, and look for opportunities to restripe urban roadways with bike lanes (if feasible).
- **Active Environmental Reviews:** Ensure all projects undergo timely and proper environmental reviews and follow the National Environmental Policy Act (NEPA) and State and Federal Statutes.
- **Environmental Justice:**
 - Improve public health and safety in transportation of people and goods.
 - Harmonize transportation policies and investments with environmental and socioeconomic issues.
 - Consider the interests and contributions of historically disadvantaged and disenfranchised communities, and provide opportunities for them to be involved in the decision-making process.
- **Smart Growth:** Encourage local smart growth initiatives to support efficient transportation for all modes, conserve energy, reduce motor-vehicle emissions, and future infrastructure needs.
- **Improved Quality of Life:** Partner and coordinate with Indiana Health Department, Department of Natural Resources, and Department of Energy to track health related impacts of transportation decisions and provide input on mitigation strategies to support more active life styles.

New Technology and Advancements

Develop and deploy advanced transportation technologies and embrace a broad-based, comprehensive research program to plan for the future.

- **New Online Platforms:** Consider the potential effects of new technology (e.g., grocery and restaurant delivery services, drone flyovers, integrated electronic payment, dynamic ride sharing programs, and guided public transit systems) in future transportation decision-making and system demands.
- **Big-data:** Evaluate and deploy the use of big-data throughout the INDOT process, including transportation planning, data collection, asset management, survey work, construction, system monitoring, crowd sourcing, and public outreach.
- **Unmanned Aerial Vehicles (UAVs):** Use of drones and UAVs for efficient non-intrusive asset inspections, field checks, and emergency response support to minimize disruptions and to enhance coordination and sharing of information.
- **Automated Transportation:** Consider and plan for potential impacts of autonomous, connected vehicles, and truck platooning technologies on safety, transportation demand, roadway design, infrastructure needs, human behavior, and policies.
- **Sharing of Information:** Work with auto and truck manufacturers to share data (e.g., traffic signal timing and vehicle information, such as speed, hard braking, acceleration, and wiper usage) for advanced roadway maintenance and improvements.

Strategic Policy Actions

Address multiple goal areas through key policy initiatives.

- **Performance Management:** Use of performance measures and targets to inform decision-making and show progress toward meeting national, statewide, regional and local goals.
- **Open Decision Making:** Make transportation system decisions through processes that are inclusive, engaging, and supported by data analysis and meaningful public input.
- **Integrating Operations:** Develop a regional operations plan and corridor operations plan to better focus cost-effective transportation systems management and operations solutions at the regional and corridor level.
- **Public-Private Partnerships:** Examine the potential for a public-private partnership to design and construct key multimodal projects and system maintenance.
- **Reduced Project Delivery Delays:** Reduce project costs and accelerate project completion through eliminating delays in project development and delivery.

CONSISTENCY WITH FEDERAL REQUIREMENTS

The goals and objectives herein, as adopted under this LRTP, support and reflect national transportation planning factors and goals, which ultimately help to prioritize projects and assess progress in implementing Indiana's transportation vision.

National Goals

The Moving Ahead for Progress in the 21st Century (MAP-21) Act established National Goals in the areas of safety, pavement and bridge infrastructure, congestion reduction, system reliability, freight movement, environmental sustainability, and project delivery. These National Goals were carried forward into the Fixing America's Surface Transportation (FAST) Act, which further requires INDOT and Indiana MPOs to have federally-funded transportation projects support National Goals.

National Goals

GOAL AREA	NATIONAL GOAL
Safety	To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.
Infrastructure condition	To maintain the highway infrastructure asset system in a state of good repair.
Congestion reduction	To achieve a significant reduction in congestion on the national highway system.
System reliability	To improve the efficiency of the surface transportation system.
Freight movement and economic vitality	To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.
Environmental sustainability	To enhance the performance of the transportation system while protecting and enhancing the natural environment.
Reduced project delivery delays	To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices.

Source: 23 U.S. Code § 150.

Federal Planning Factors

The goals and objectives are also consistent with the Federal Planning Factors listed in Chapter 1.

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An aerial photograph of a complex highway interchange with multiple lanes and ramps, overlaid with a semi-transparent blue filter. The number '4' is prominently displayed in yellow on the left side of the image.

4 transportation trends

Assessing future trends is a means to identifying future transportation needs. Changes in population, travel patterns, safety concerns, land use development, and maintenance considerations affect the demand for transportation. This chapter provides an overview of key trends that continue to influence transportation decision-making.

DEMOGRAPHICS

Population

According to the 1980 U.S. Census, Indiana had 5.5 million residents. By 2015, Indiana's population had increased to 6.5 million. According to the Indiana Statewide Travel Demand Model (ISTDM, 2018), it is estimated that the state's population will be 7.8 million by 2045—an increase of 42.1 percent and 18.91 percent from 1980 and 2015, respectively. Based on net population growth rate, Indiana's population would increase at a slower pace compared to the fastest growing areas of the country—the South and the West. According to the 2010 Census, Indiana's population grew 6.5 percent from 2000 to 2010, compared to 3.9 percent in the Midwest region and 9.7 percent nationally.

Increased population can create congestion and capacity issues, especially in urban areas. The population of urban areas is expected to increase at an annual growth rate of 0.24 percent through the year 2045. In comparison, the suburban and rural populations are expected to increase at a greater annual growth rate of 1.12 percent and 0.54 percent, respectively, through the year 2045 (ISTDM, 2018). This may lead to longer trip lengths, extending peak commuting times, from suburban to urban. As such, the existing transportation system would need to adapt to continuing demographic changes.



*Note that the base year and planning horizon of the Indiana Statewide Travel Demand Model is 2015 and 2045, respectively.

Household size

Indiana's average household size (the number of people residing in one household) is expected to decrease from 2.55 in 2015 to 2.44 in 2045 (ISTDM, 2018). This decline is a national trend largely due to the aging of the population with older residents having smaller households and an increase of single head of households, of individuals waiting longer to marry, and of couples having fewer children. Although there would be fewer people per household, the number of households in the state is expected to increase 23 percent from 2015 to 2045 due to population growth (ISTDM, 2018). This may increase per-capita auto ownership and the number of vehicle trips.

Employment

Total employment in the state is expected to increase from 3.6 million in 2015 to 4.7 million in 2045 (ISTDM, 2018). Suburban employment is estimated to increase at an annual growth rate of 1.04 percent through 2045, while urban and rural employment at 0.85 percent and 0.81 percent, respectively. With a greater increase in suburban employment, it may be possible that employers

could relocate for better proximity to localized workforce, altering regional travel patterns and levels. In general, employment growth would likely increase trip lengths and generate more trips, resulting in longer work trips, increased traffic, and congestion.

Employment by major industry sectors is expected to change through the year 2045 (ISTDM, 2018). Agriculture- and construction-related jobs would increase to 33 percent by 2045. Service sector jobs (e.g., retail, food, professional services, and other services) would increase 38 percent by 2045. This ongoing shift from an industrial economy to a more service-oriented economy could change peak commuting times and/or off-peak travel volumes throughout the day, potentially exacerbating congestion in urban and suburban areas of the state.



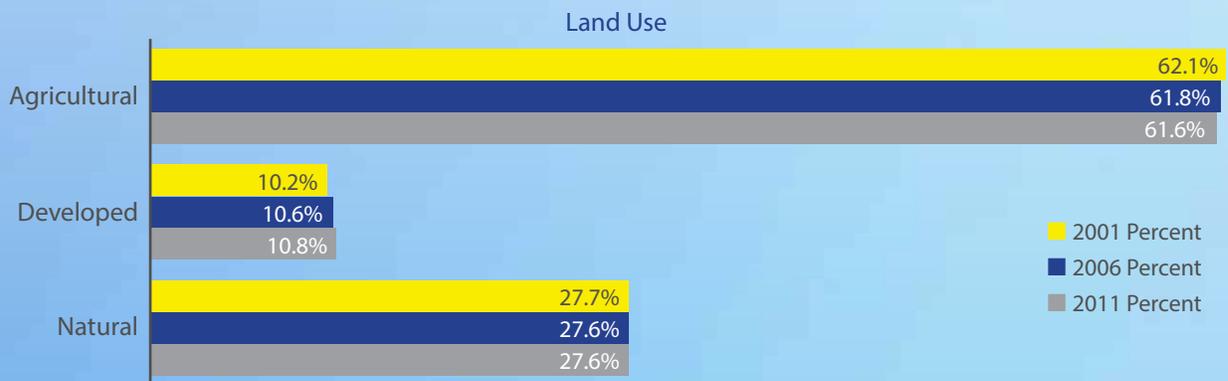
LAND USE DEVELOPMENT

Land use can impact the amount of vehicle travel and the viability of transit, walking, and other modes. Just over 60 percent of land in Indiana is used for agricultural purposes. As shown below, since 2001 there has been a slight decrease in the amount of agricultural land with a corresponding increase in developed land in Indiana. This trend will continue through 2045 and expected to be negligible because the agricultural industry is and will continue to be a large contributor to Indiana's economy.

There is a clear link between land use development and transportation. Land use development can be a driving factor for transportation improvements and, vice versa, transportation improvements can spawn development. In Indiana, this link is made clear in the strategic regional development plans prepared as part of the Indiana Regional Cities Initiative—a program that sets a framework

for neighboring communities to develop regional visions focused on quality of life and economic development. According to the Indiana Economic Development Corporation, as a result of the Regional Cities Initiative, 70 percent of the state's population now lives in a region with a viable plan for transforming its future. In 2015, seven Indiana regions created strategic regional development plans that include more than 420 projects. Some of these projects include:

- Lock on the St. Joseph River in Fort Wayne
- Evansville Regional Airport Update
- Line extension of the South Shore service into Lake County
- Creagor Avenue Greenway in Portland, Jay County



Note: Natural land uses refer to areas that consist of barren land, forests, shrub, herbaceous vegetation, or wetlands.



MODES

Indiana’s transportation system is a network of roadways and bridges, railways, airports, inland waterways and ports, public transit services, and bicycle and pedestrian facilities. The multimodal system is vital to the state’s economy because it facilitates the efficient, reliable, and safe movement of persons and goods.

Roads

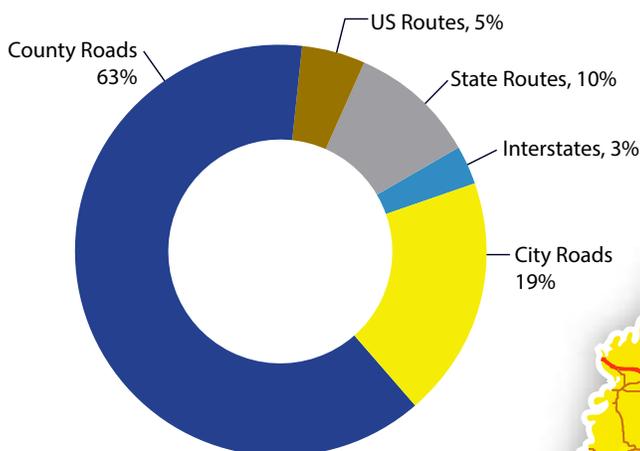
There are several jurisdictions of roadways across Indiana, including interstate highways, U.S. highways, state highways, county roads, and city streets. INDOT is responsible for the construction and maintenance of all roadways—except for county and city roads—and the Indiana Toll Road (I-90).

The Federal-Aid Highway Program provides states money for the construction, maintenance, and operations on the interstate system and other primary and secondary highways. Based on data from the Highway Performance

Breakdown of Federal-Aid Highway System

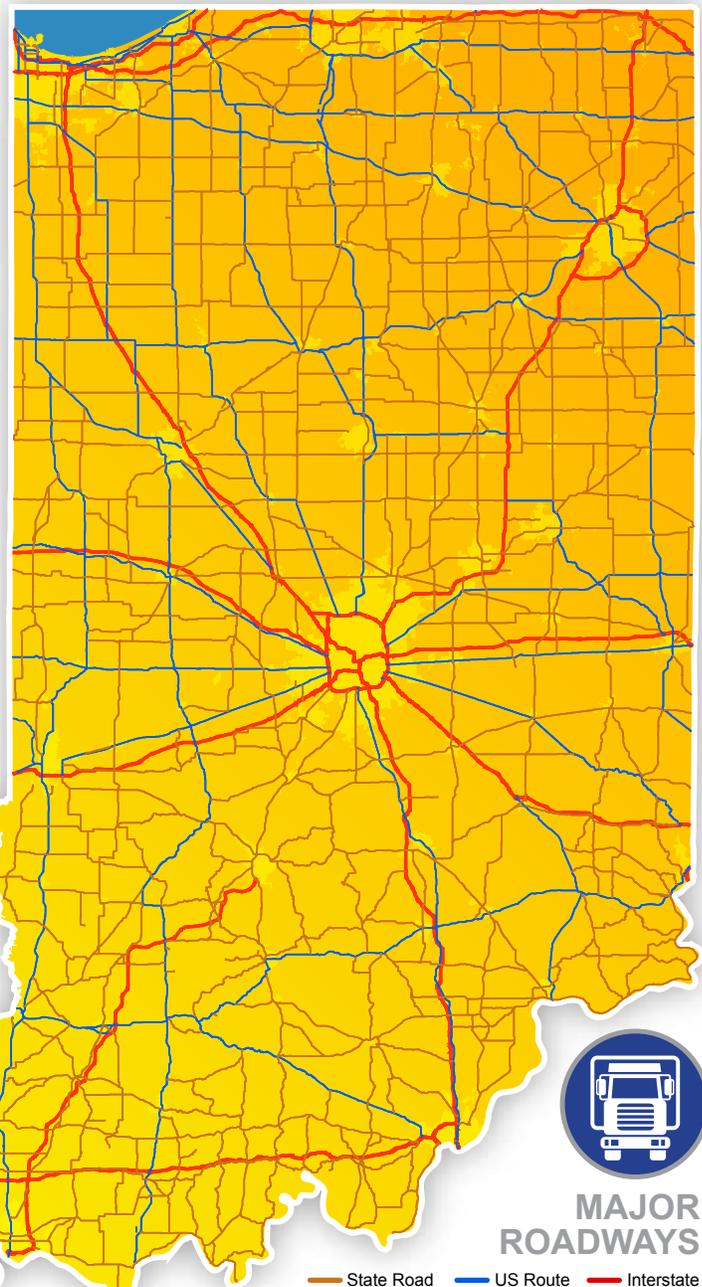
FUNCTIONAL CLASSIFICATION	CENTERLINE MILEAGE
Interstate	1,238 miles
Non-Interstate Freeways & Expressways	272 miles
Other Principal Arterials	2,510 miles
Minor Arterials	2,585 miles
Major Collectors	4,534 miles
Minor Collectors and Locals	30 miles
Total Federal Aid System	11,169 miles

Source: INDOT, 2014



Monitoring System (2016), there are almost 106,000 miles of Indiana roads, which includes 11,169 miles of State-owned routes.

Connected, autonomous, and highly automated vehicle technologies are important innovations that could improve roadway safety and change freight and passenger traffic patterns and congestion. There are significant near-term opportunities to establish a leadership position in the commercial uses of these vehicles (i.e., truck platooning on Indiana interstates). Therefore, the Innovation Hub for Connected and



Autonomous Transportation Technologies, a joint research effort led by Purdue University in partnership with private-sector businesses and government agencies (including INDOT), will focus on expanding the research and on the potential for economic development opportunities.

Bridges

There are over 19,000 bridges in Indiana, which is the 11th highest number of bridges in the U.S. based on the National Bridge Inventory (2017). In 2018, less than three percent of all INDOT-maintained interstate, U.S. highway, or state route bridges were rated as structurally deficient.

Breakdown of Bridge Counts

INDOT BRIDGES	
Interstate	1,427
Non-Interstate NHS	1,326
Non-NHS	2,969
Border Bridges	25
OTHER BRIDGES	
NHS Non-INDOT	268
Local Bridges	13,276
Total Federal Aid System	19,291

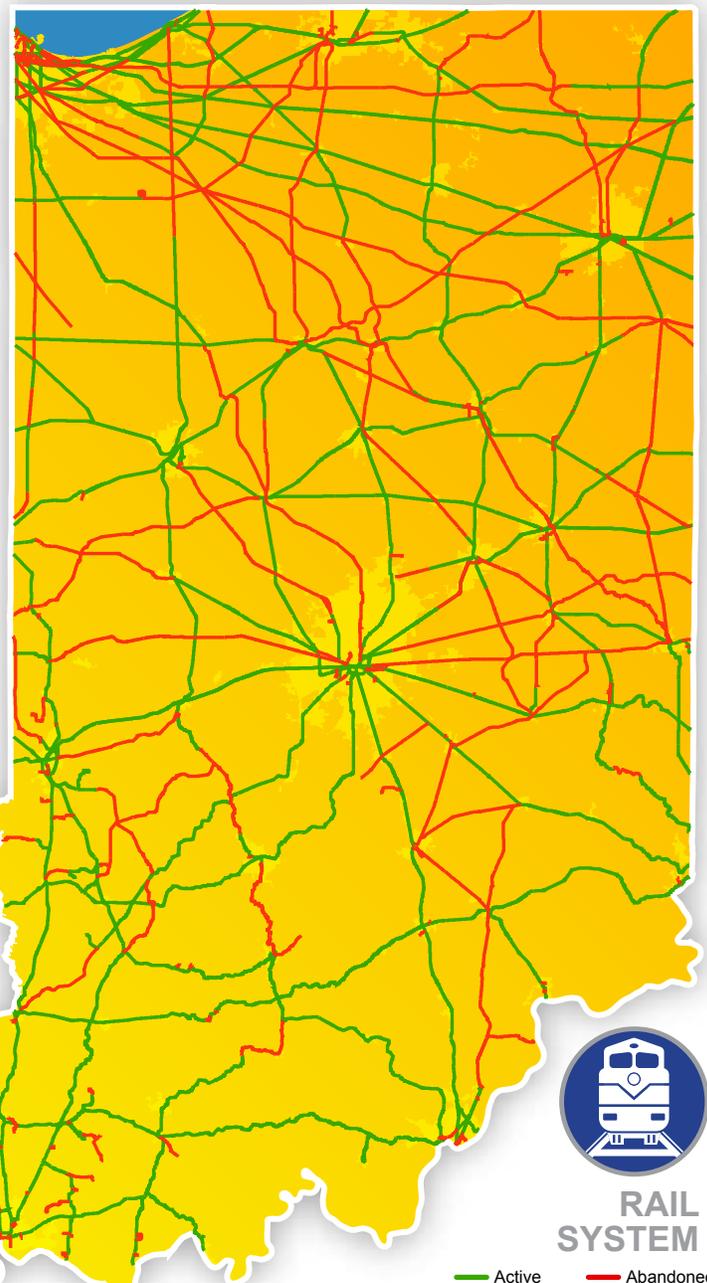
Freight Rail

Railroads are categorized as Class I, II, or III depending on annual operating revenues. Of the 2,457 miles of Class I railroads or 60 percent of the Indiana rail network, the breakdown of rail operations are as follows:



According to the Indiana Multimodal Freight Plan Update, there are approximately 1,504 miles of Class II and III railroads, collectively, or 38 percent of the Indiana rail network.

The state ranks 4th in the nation in the number of operating railroads, 7th in carloads handled, and 10th in tons handled. Each year, 1.5 billion tons of freight travel through Indiana, making it the 5th busiest state for commercial freight traffic. By 2040, freight flow is expected to increase by 60 percent. Trains carry a wide variety of cargo, mostly manufacturing inputs (e.g., metals, paper, and plastics) and bulk commodities (e.g., grains, coal, fertilizer, and gravel).



Rail Traffic in 2015

COMMODITY	ORIGINATED FROM INDIANA		TERMINATED IN INDIANA	
	CARLOADS	PERCENT	CARLOADS	PERCENT
Coal	170,100	23%	284,200	35%
Primary Metal Products	111,500	15%	74,700	9%
Grain	82,600	11%	N/A	N/A
Food Products	79,800	11%	N/A	N/A
Transportation Equipment	77,700	10%	N/A	N/A
Other/Unknown	228,600	30%	452,900	56%

Source: Association of American Railroads

Intermodal facilities are defined as terminals that provide for the transfer of freight from one transportation mode to another, as the freight moves from origin to destination.

Three major intermodal facilities serve Indiana in moving products to and from the rail system and other modes. CSX operates two of these facilities. The Indiana Rail Road (INRD) and Canadian National (CN) operate the other facility which connects Vancouver, British Columbia, and Indianapolis. This facility allows shippers to bypass the rail intermodal bottleneck of Chicago, thus enabling faster service to Indianapolis with no truck transfers between rail carrier intermodal ramps.

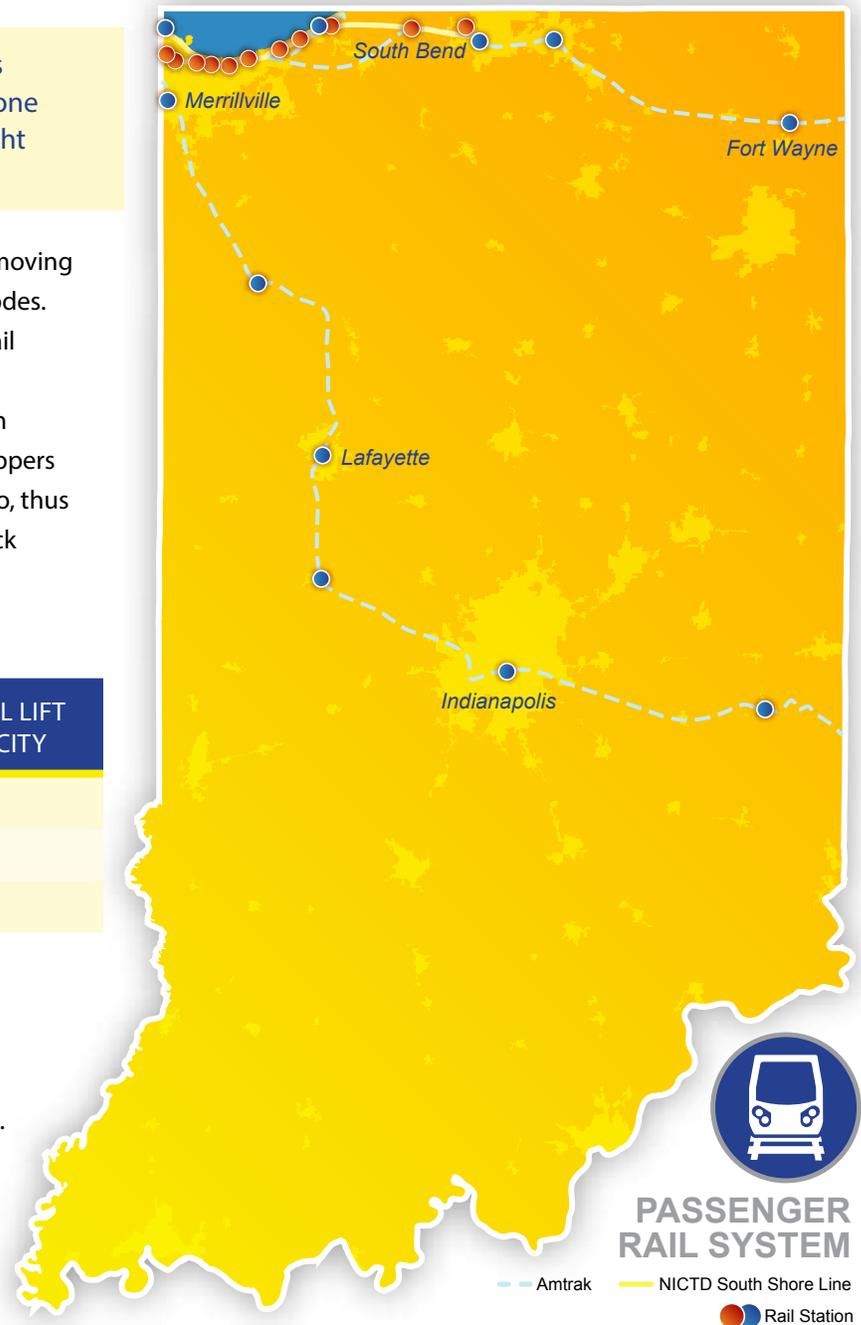
Truck/Rail Intermodal Facilities

NAME	SERVING RAILROAD	ANNUAL LIFT CAPACITY
Avon	CSX	100,000
Evansville	CSX	31,000
Indianapolis	CN, INRD	24,000

Source: Indiana State Rail Plan

Passenger Rail

In Indiana, there are approximately 413 miles of passenger rail primarily owned by freight railroads. Of this trackage, the Northern Indiana Commuter Transportation District (NICTD) operates 90 miles of commuter rail between South Bend and Chicago.



Intermodal connectors are those public roads that provide the first and last mile connection between major intermodal facilities and the National Highway System.

Number of Intermodal Connectors on Indiana's Highway System

8 Port Terminals

3 Rail/Truck Terminals

5 Air Cargo Hubs

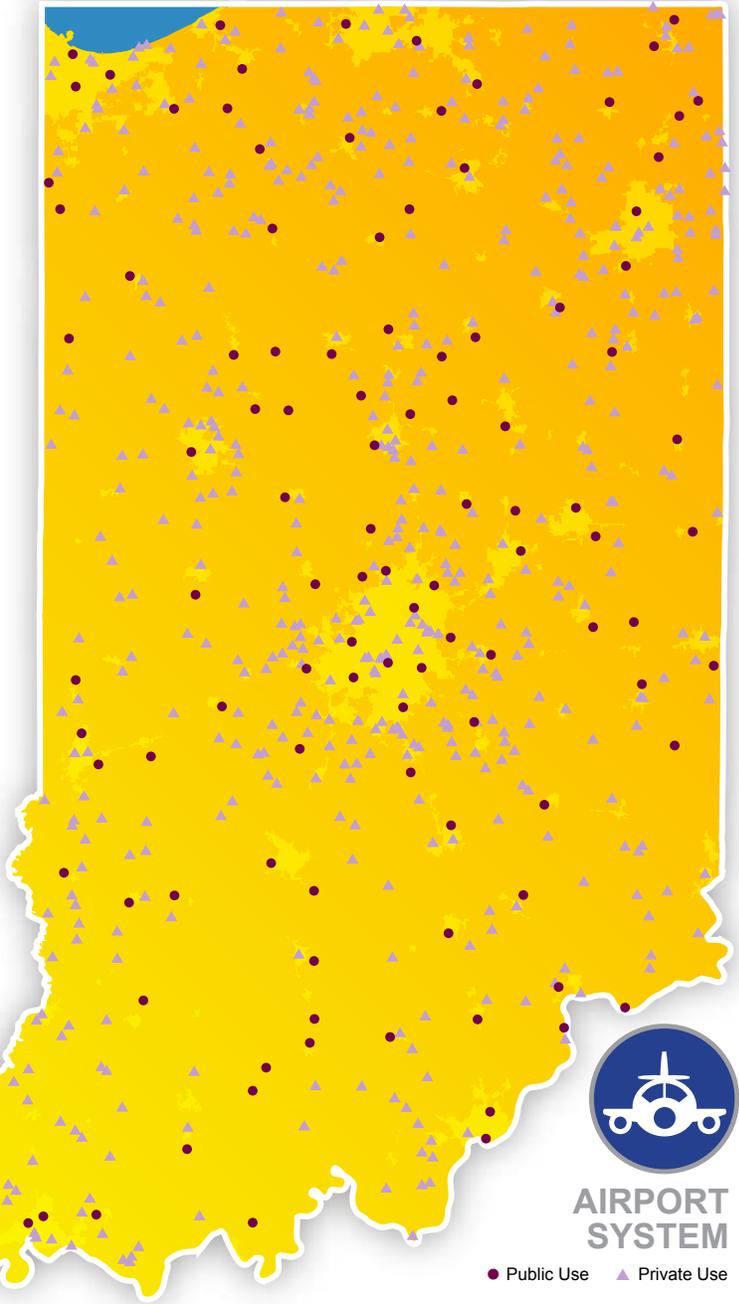
Source: USDOT FHWA BTS: Freight Facts and Figures 2017

Aviation

Indiana has approximately 117 public use airports, including four primary commercial service airports, one non-primary commercial service airport, seven reliever airports, and 105 general aviation airports. The airport system provides critical services to enhance the quality of life, health, safety, and welfare of Indiana residents and local businesses.



2. Fort Wayne International Airport (FWA)
3. South Bend International Airport (SBN)
4. Evansville Regional Airport (EVV)
5. Purdue University Airport (LAF)



Indianapolis International Airport (IND) is Indiana's largest commercial service airport with nearly 4.2 million enplanements in 2016, which ranks 45th in the U.S. IND is served by 10 airlines with nonstop service to 50 destinations on dozens of daily departures, and is also home to FedEx Express' second largest air cargo hub which, as a result, places it among the world's largest airports by annual air cargo tonnage throughput. The remaining top five busiest airports in Indiana are:



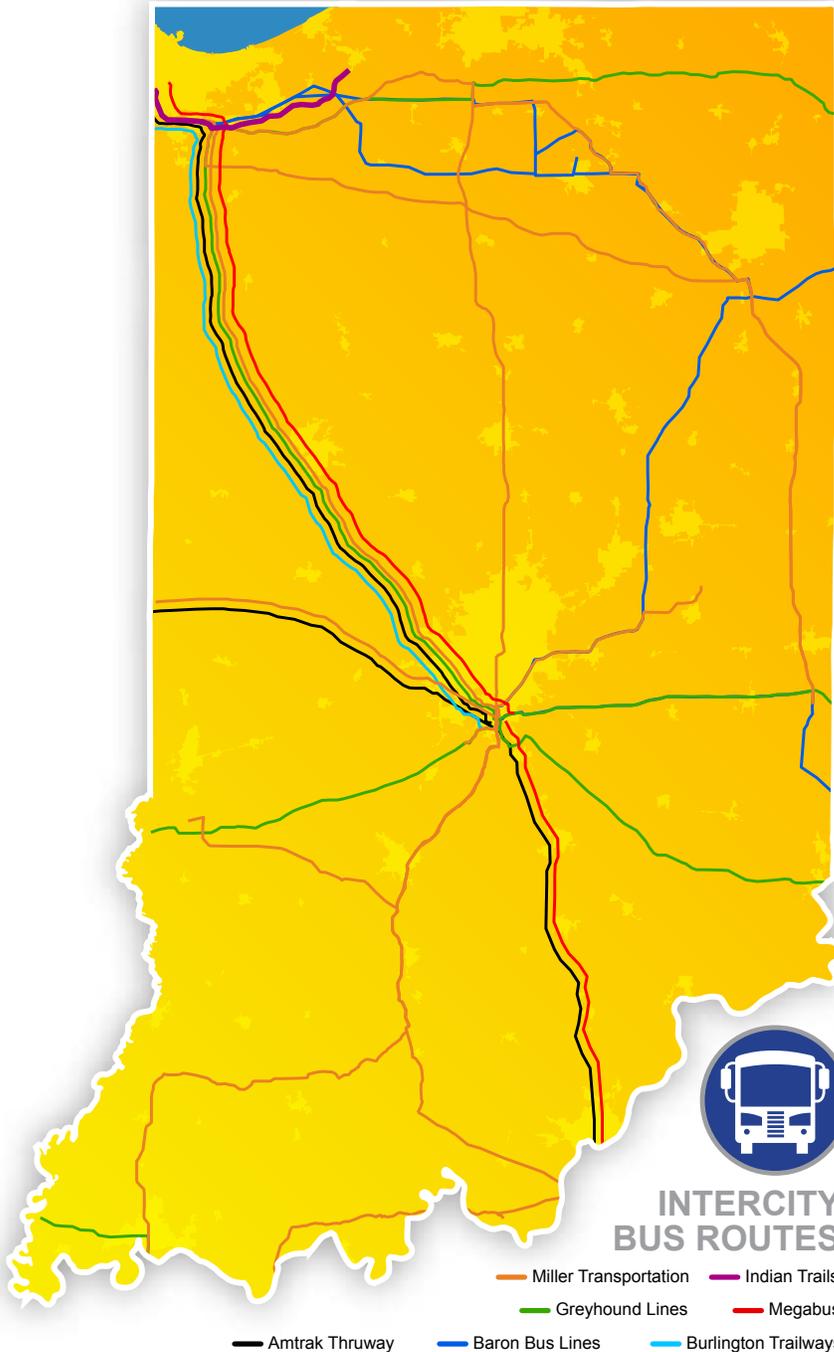
Public Transit

There are 21 urbanized and 44 rural transit systems providing service in Indiana. Indiana transit systems reported over 32.9 million passenger trips and covered over 47.2 million total vehicle miles in 2017. The largest transit agencies (more than two million boardings per year) include: Bloomington Transit, NICTD in the Chicago Region, Indianapolis Public Transportation Corporation (IndyGo), CityBus in Lafayette, and Transpo in South Bend.

Intercity bus service in Indiana is provided by five national and regional carriers: Burlington Trailways, Greyhound Lines, Indian Trails, Lakefront Lines, Megabus (Coach USA), Barons Bus Lines, Miller Transportation, and Amtrak Thruway.

Bicycle and Pedestrian

As alternative modes of travel, bicycle and pedestrian facilities are a valuable part of the transportation network in Indiana, effective in helping to attain social, environmental, land use, and energy conservation goals.



Bicycle and pedestrian facilities consist of multi-use trails, shared use paths, bicycle routes, and sidewalks.

3,600 MILES
Public Trails Statewide

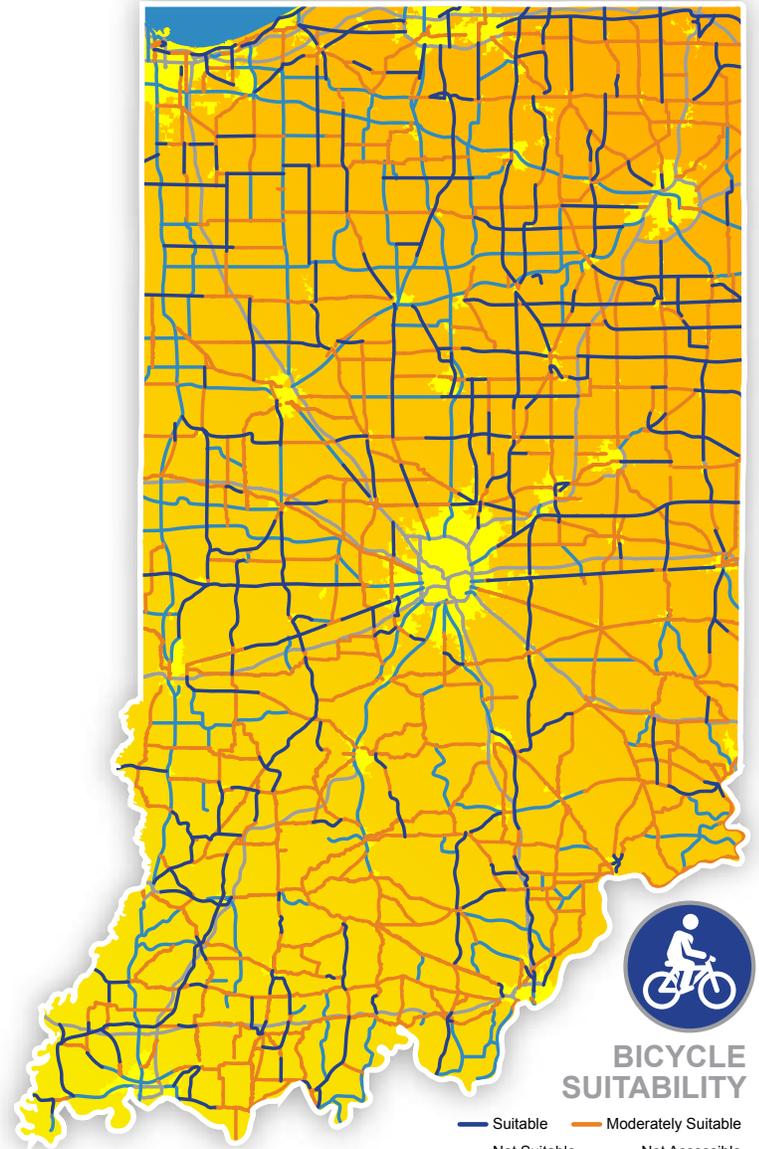
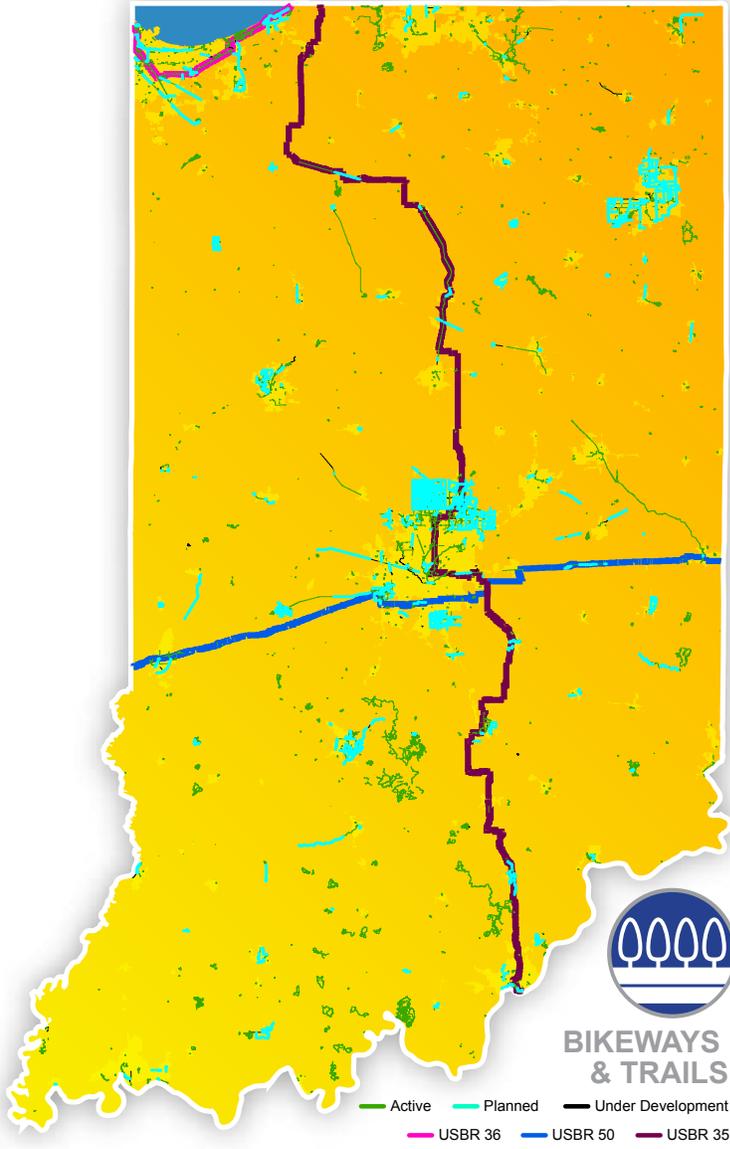
According to Indiana Department of Natural Resources (DNR), there are over 3,600 miles of public trails in Indiana. This includes natural surface hiking trails, hard surface trails for biking and hiking, and equestrian trails. There are approximately 1,214 miles of planned trails, 2,273 miles of potential trails, and 107 miles of trails currently under development.

1,214 MILES
Planned Trails Statewide

Three U.S. Bicycle Routes span Indiana, stretching a combined total of 600 miles.

As shown, the statewide suitability map shows current roadway suitability for bicycling by advanced and basic adult cyclists. It takes into account road conditions and the factors that impact bicyclists' level of comfort and safety.





Inland Waterways and Ports

Indiana's inland navigable waterways, the Ohio River and Lake Michigan, provide a viable system for transporting bulk commodities, thereby decreasing the burden placed on railroads and highways. There are five locks and dams and 225 maritime terminals in Indiana. Steel mills and other industries are provided the transportation option to use cost-effective methods for receiving raw materials (e.g., iron ore, coal, limestone) and shipping finished products (e.g., grain, aggregate, fertilizer, and petroleum products). The value of commodities coming through the maritime transportation system is approximately 59 million tons, worth \$10 billion.

The Ports of Indiana is the statewide port authority, operating three ports in Indiana—Burns Harbor, Jeffersonville, and Mt. Vernon.



The three ports combined generate over \$328 million of total state and local taxes and more than \$7.8 billion in business revenue annually. The ports also support more than 600,000 jobs and over \$3.8 billion in total wages and salaries.

Nationwide, Indiana ports rank 11th in maritime trade with approximately more than 11 million tons of cargo shipments per year; thus, together they play a major role in the state's economy.



CORRIDORS

Major corridors are a key part of the overall framework for the multi-modal transportation system. These corridors were determined by considering the statewide mobility corridors and corridors with major projects along them. For a brief description of each corridor, refer to Chapter 5.



MOBILITY

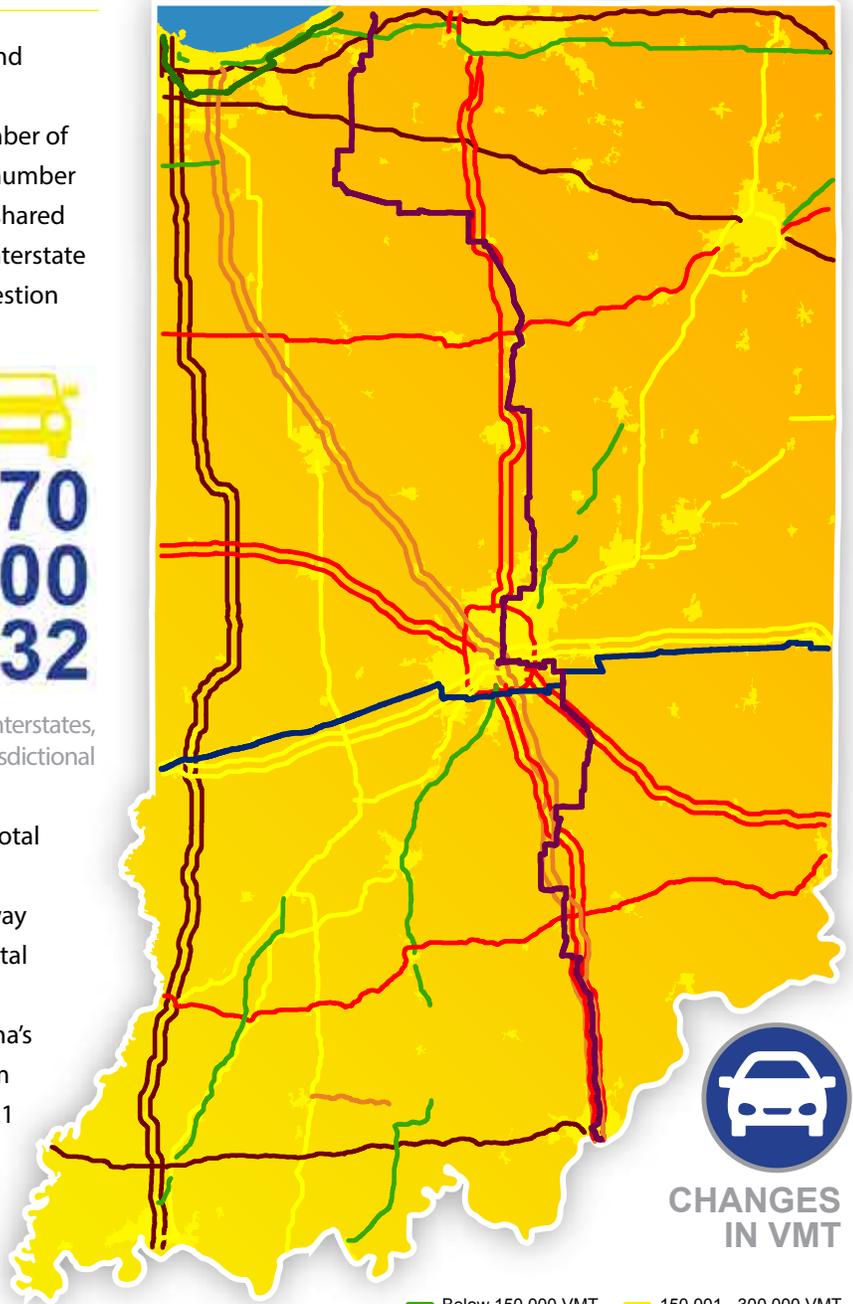
Several complex factors influence travel patterns and choices, such as fuel costs, job location and other services, land use, and changes in the size and number of households. Smaller household size increases the number of trips due to limits in transportation access (e.g., shared vehicles, carpooling). More people are relying on interstate and state highways for local trips. As a result, congestion issues may be most noticeable on highways.



Note: Does not include all roadways; VMT estimates cover interstates, US and state highways, as well as a selection of non-state jurisdictional highways.

Vehicle miles traveled (VMT)—which refers to the total number of miles traveled by every car on Indiana’s roadways—can place great demands on the roadway infrastructure. Due to the anticipated increase in total population, the total number of miles being driven statewide will grow. According to the ISTDm, Indiana’s overall VMT is projected to increase 27 percent from 2015 to 2045. Truck VMT is expected to increase 39.1 percent between 2015 and 2045, while personal VMT is forecasted to increase 23.2 percent. The VMT in rural areas is greater than the combined VMT in urban and suburban areas. The number of roadway miles in Indiana is increasing at a much slower rate when compared to VMT.

From 2010 to 2045, the total number of roadway miles is projected to increase by 1.2 percent (ISTDM, 2018). Traffic congestion is linked to population and VMT growth; as a result, travel time is projected to increase significantly.



CHANGES IN VMT

— Below 150,000 VMT
 — 150,001 - 300,000 VMT
— 300,001 - 500,000 VMT
 — 500,001 - 800,000 VMT
 — Over 800,001 VMT

DAILY DELAY in Vehicle Hours



DAILY COST Associated with the Daily Delay



SAFETY

Understanding the trends in crash incidents, especially severe crashes resulting in serious injury or loss of life, will help to develop performance measures (see Chapter 7) related to safety and focus more funding for significant safety improvements in the future. INDOT's Office of Traffic Safety administers safety programs/policies and improvements that aim to reduce the frequency and severity of severe crashes on the state highway system and local roads. Most of the recent long-range transportation plans prepared by metropolitan planning organizations in Indiana also discuss future improvement plans to address roadway safety issues. Examples of improvements that facilitate safety include railroad at-grade crossing upgrades,

crossing closures, grade separations, roadway design enhancements, and public awareness and education campaigns.

Based on data from the Fatality Analysis Reporting System, the fatality rate per 100,000 residents was 12.38 in 2016, compared to 14.24 in 2006—roughly 13 percent decrease. The fatality rate per 100 million VMT was 0.99 in 2016, compared to 1.27 in 2006—roughly 22 percent decrease. Additionally, according to the Indiana State Rail Plan, 146 fatalities occurred at highway-rail crossings between 2006 and 2016—with a high concentration in northwest Indiana.

Number of Fatalities

YEAR	PASSENGER CAR	LIGHT TRUCK	LARGE TRUCK	MOTORCYCLE	BUS	OTHER VEHICLE	PEDESTRIAN	PEDCYCLIST	OTHER NON-MOTORIST	TOTAL
2006	395	269	27	110	0	3	73	21	4	902
2007	358	310	24	122	1	7	59	15	2	898
2008	378	215	12	131	0	4	54	18	8	820
2009	292	208	17	111	0	5	50	7	3	693
2010	327	220	11	111	0	7	62	13	3	754
2011	308	208	25	118	0	6	62	11	13	751
2012	309	209	19	152	2	6	59	15	10	781
2013	321	224	16	115	4	9	76	14	5	784
2014	258	238	15	124	1	11	78	12	8	745
2015	326	245	16	108	0	9	96	12	5	817
2016	329	249	14	101	0	17	85	19	7	821
2017	527	71	8	138	3	17	102	9	21	896
2018	456	78	9	104	1	8	101	101	21	799

Source: National Highway Traffic Safety Administration



MAINTAINING THE SYSTEM

INDOT is charged with maintaining the roads and bridges on the state highway system and approaches maintenance duties through an asset management process. INDOT continually collects data on the existing conditions of its roads and bridges to help evaluate projections of future conditions and transportation investment decisions. Transportation asset management is a strategic approach with the goal of identifying which programs and projects might provide the best long-term benefit. It is about making informed decisions for the system by understanding the life-cycle costs and benefits and revenue funding constraints.

- **Maintenance:** Activities that include localized upkeep, select patching, and chip-seals and crack sealing of existing pavement.
- **Functional:** Capital improvements related to pavement smoothness.
- **Minor Structural:** Large capital improvements related to pavement smoothness and small structural projects.
- **Major Structural:** Large capital improvements related to significant structural projects.
- **Modernization:** Large capital improvements related to significant geometric and structural projects.

For pavement preservation, INDOT considers the following types of treatment programs:

Work Programs for Bridge Preservation

WORK PROGRAM	TYPICAL PROPOSED PROJECTS	DEVELOPMENT TIMEFRAME
Long-Term Call Program	Bridge replacements and major bridge component rehabilitation and reconstruction.	5-7 years
Short-Term Placeholder Program	Deck overlays and replacements, bridge painting, and culvert lining. They may require some environmental permits, but do not require right-of-way or railroad permits, or utility relocation.	2-3 years
Bridge and Culvert Preventive Maintenance Agreement Program	Deck patching, joint replacement, thin deck overlay, scour protection, railing repair, and culvert repair.	18-24 months





5 multimodal needs & plan integration

Indiana's multimodal transportation network facilitates the efficient, reliable, and safe movement of persons and goods. It is the foundation of the State's economic success—supporting jobs and businesses. However, the demands on and cost to maintain and improve the system will continue to increase. This chapter provides an overview of transportation issues and needs for each mode.

WHICH STAKEHOLDERS WERE INVOLVED?

The State's transportation planning agencies—the metropolitan planning organizations (MPOs)—partnered with INDOT and played a critical role in identifying and assessing statewide multimodal needs. It is anticipated that this updated LRTP will be useful in their local planning efforts and decision-making process. In addition, INDOT collaborated with a variety of modal interest groups, including Conexus of Indiana, the Indiana Economic Development Corporation, and the Ports of Indiana.

WHICH MODAL PLANS WERE CONSIDERED?

A variety of plans, reports, and studies were referenced throughout the development of this analysis, including:

- Indiana State Rail Plan
- Indiana Multimodal Freight and Mobility Plan
- Indiana State Aviation System Plan
- Indiana Intercity Bus Needs Assessment and Service Evaluation
- Indiana Economic Development Corporation's Regional Development Plans
- Indiana Strategic Highway Safety Plan
- Hoosiers on the Move, the Indiana State Trails, Greenways and Bikeways Plan
- Indiana Regional Cities Initiative Program
- Conexus Indiana Logistics Council's statewide and regional strategic plans
- Strategy for the Great Lakes-St. Lawrence River Maritime Transportation System
- Adopted long-range transportation plans from each of the 14 MPOs



WHAT ARE THE CRITICAL ISSUES FACING THE STATE'S TRANSPORTATION SYSTEM?



Freight Rail State of Good Repair

Railroad maintenance requires large investments in materials and construction labor on a regular basis. It is often deferred when revenues are marginal and rail traffic is down; as a result, maintenance needs accumulate. Several Indiana short line railroads have excessively worn rails and ties, damaged switches, and poor line and surface conditions. This may hinder the reliability and competitiveness of rail services offered, causing regional shippers to change transportation modes. Deteriorating rail conditions can place railroads in jeopardy of ceasing operations if left unresolved as they could be shut down involuntarily by the Federal Railroad Administration (FRA) due to unsafe operating conditions.

Weight Capacity

A total of 346 track miles in Indiana are unable to handle industry-standard 286,000-pound railcars. Shippers must either use smaller railcars or short-load their railcars. Class I railroads sometimes avoid interchanging traffic with short lines that are not 286,000-pound compatible. In other cases, rail traffic heading toward non-286,000-pound

compliant rail lines must be diverted onto alternate routes that can accommodate heavier railcars. These restrictions limit the railroads' efficiency and competitiveness. In general, the railroad industry is shifting to heavier, more expensive railcars.

Grade Separation

The increase in freight traffic may result in high volumes of trains blocking at-grade rail crossings on local roads. Railroad grade separation and crossing closures, where prudent, would help to enhance mobility and safety, and decrease road congestion caused by rail and truck traffic. INDOT recently announced availability of at least \$125 million for high-priority rail projects on local roads statewide through the new Local Trax rail overpass program. Local match details are described in Chapter 7, Revenue and Finance.

Corridor Preservation

Since 1950, nearly 3,500 miles of rail lines have been abandoned and are no longer in service. There are approximately 54 miles of rail lines with minimal traffic and about 61 miles of inactive rail lines but not abandoned. These rail lines could be at risk of abandonment, which



could subsequently result in the permanent loss of a corridor and prospective opportunities and benefits. When railroads continue to own rail lines that they do not use, these lines represent financial losses. Any applicable taxes and insurance must still be paid even though these lines generate no revenue. In many cases, ownership of portions of the corridor revert to adjacent landowners and the right-of-way is no longer continuous. It is more expensive and difficult to assemble and build a new right-of-way than it is to restore or rehabilitate an existing rail corridor.

Inadequate Intermodal Capabilities

Indiana is fortunate to have multimodal connectivity to national and global markets via the Class I rail system, supported by a network of short line rail providers. However, there is still a lack of efficient mode-to-mode connectivity, per the Conexus Indiana Logistics Council. Also, due to lack of intermodal service bypassing Chicago, Indiana relies on Chicago for intermodal service to West Coast

ports. Better rail interchange options would improve efficiency and help to avoid being routed through Chicago.



Passenger Rail Additional Capacity

Commuter rail service is not reaching its full potential. For instance, the South Shore Line may experience delays due to conflicts with freight rail operations. Also, it is single-tracked between Gary and Michigan City. Double tracking would improve operational flexibility and reliability. Other needed improvements include the West Lake Corridor extension, realignments, replacement of old railcars, terminal enhancements, station consolidations, and train schedule adjustments.





Inland Waterways

The inland waterway infrastructure provides the means for Indiana to grow maritime trade; however, system inefficiency and disruption may impact

its competitiveness with other modes of transportation. For instance, aging locks that exceed their design life are in desperate need of repair and/or replacement. Maintenance dredging is also a consistent issue, especially at Burns Harbor. Additionally, deepening the Ohio River is needed to allow barges to carry increased weight thereby saving shipper costs.

Uninterrupted service due to operating hours or other factors on the locks is a critical issue that if resolved could support the opportunity for economic growth along the Ohio River. Lock and dam closures—planned or unscheduled—can have a major impact on the inland waterway transportation system, resulting in costly delays and system reliability concerns. Similar to how a major closure of an interstate highway can disrupt the delivery and cost of transporting goods, a failed or closed lock and dam can have the same impact on the inland waterways. For example, according to a 2015 Department of Homeland Security study, if the Soo Locks in northern Michigan were shut down for six months, Indiana's

unemployment rate would jump to 22 percent due to the supply chain disruption. Nationally, it would result in the loss of 10.9 million jobs and \$1.1 trillion in gross domestic product. In this catastrophic scenario, Indiana's iron ore and other cargo would have to be shipped entirely by railroad or commercial trucks. However, these transportation modes do not have the handling-capacity. Even if it did, the amount of trains and trucks would add to an already heavily congested rail and highway system, further erode infrastructure conditions, impact safety, and produce more emissions.

In general, the sentiment is that inland waterways are taken for granted. Investments are not made on waterways as compared to roadway infrastructure. This poses a serious risk to the inland waterways of Indiana and the Midwest region. Thus, support for adequate federal funding for waterway infrastructure improvements is a high priority. For instance, the Federal Harbor Maintenance Tax collected from users of the maritime transportation system does not get fully allocated to fund the Army Corps of Engineer's operation and maintenance activities. Funding opportunities should be considered to cover the gap, including public-private partnerships and federal grants.





Ports and Harbors

For the Ports of Indiana—a self-funded port authority—indirect, poor landside access to/from port facilities is a major issue. It disrupts goods movement and results in freight trucks traveling through retail centers, school zones, and residential areas—creating bottlenecks on two-lane roadways. Therefore, optimized maritime connectors to/from the highway and rail network is a critical need, such as at Burns Harbor. Optimization should also consider adequate signage, bridge clearances, weight limit restrictions/permitting (i.e. heavy-duty truck routes), planning and coordination with construction projects, limiting landside impediments (e.g., roundabouts), construction of a siding to accommodate unit train delivery, and reconfiguration of the waterfront railroad infrastructure to increase operational efficiency.

The Ports of Indiana is considering establishing a fourth marine port at the former Tanners Creek Generating Station in Lawrenceburg. It aims to capitalize on existing industries, to provide additional capacity, and to accommodate future shipping requirements. A new port would likely require optimizing access to port tenants by developing a bypass connection to the major interstate highway and a short line connection to a Class I railroad. Other facilities may include an intermodal rail-truck terminal, warehousing with rail

and truck docks, communications infrastructure for modern freight management systems, and an industrial park for industries that need waterway access. Capital improvement grant programs and public-private partnerships can assist with facility construction, infrastructure support, and intermodal transportation project development.



Aviation

Approximately 59 percent of Indiana's airport pavements are at a condition level where they will benefit from preventive maintenance actions, such as crack sealing, joint sealing, patching, and surface treatment applications or nominal resurfacing projects. Approximately 30 percent of the pavement infrastructure at 65 airports needs more extensive rehabilitation such as overlays, while almost seven percent has deteriorated to the point where reconstruction may be the only viable option to restore the pavement, as described in the Indiana Airport Pavement Management System Update (2018). Extending pavement service life could reduce funding needed each year for rehabilitation or reconstruction. Additionally, runway upgrades can help to attract and accommodate larger aircraft, and as a result, improve efficiency in air cargo service.





Public Transportation

Indiana must address the increased demand for moving people, including the elderly and disabled persons. In urban areas of Central Indiana, for example, many people are dissatisfied with their current transit options because there are no transit systems in place to assist workers, especially those earning lower wages, in getting to work. In rural areas of Indiana, choices for public transit are limited due to poor connectivity to employment centers or markets. As a result, only one

percent of workers (aged 16 years and over) in Indiana use public transportation to get to work, according to the U.S. Census Bureau. In general, local tax revenues have not kept pace with the cost and demand to provide reliable transit choices. Local matching grants provide funding assistance to transit operators. However, lack of sufficient funds prevents them fully participating in these programs. A lower match requirement or an increase in state sources, such as the Public Mass Transportation Fund, would help transit operators.

Public Transportation Needs

SERVICES	ROUTES	VEHICLES & FACILITIES	CONNECTIVITY
<ul style="list-style-type: none"> • Increase frequency and local coverage • Decrease hour-long headways • Offer limited Sunday service • Expand weekend and overnight service hours • Improve capacity for demand response paratransit 	<ul style="list-style-type: none"> • Add dedicated lanes for rapid transit service • Offer express commute, crosstown routes • Offer neighborhood and employment shuttles • Consider route restructuring 	<ul style="list-style-type: none"> • Add benches and canopies at bus stops • Increase bus parking to accommodate larger buses • Make vehicles safe, clean, and comfortable • Enhance transit experience through technology • Replace buses with hybrid or alternatively fueled vehicles to reduce operating costs • Add centrally-located hubs • Install bus-mounted bike racks 	<ul style="list-style-type: none"> • Increase connectivity from residential areas to regional employment, shopping, health, and entertainment centers • Ensure accessibility

Source: MPO LRTPs



Bicycle and Pedestrian

Advocacy for bicycle and pedestrian safety continues to be a focus for Indiana legislators. According to the National Highway Traffic Safety Administration,

there were 96 pedestrian and 12 bicyclist fatalities reported statewide in 2015. To reduce the rate of fatalities, the Strategic Highway Safety Plan outlines strategies, such as infrastructure improvements, roadway and intersection design, and traffic control devices. The Safe Transportation for Every Pedestrian guide also offers countermeasures to enhance pedestrian safety and accessibility. Treatments

include road diets to accommodate pedestrians at unsignalized crossings; pedestrian hybrid and rectangular rapid-flashing beacons to alert motorists of pedestrian and school crossings; raised crosswalks to reduce speeding; pedestrian refuge islands; and crosswalk

visibility enhancements (e.g., curb extensions, advanced signs and markings, and improved design). Building sidewalks along major arterial and collector roadways is also critical to making Indiana communities more bicycle and pedestrian friendly.



Indiana can capture the health, economic, and active transportation benefits associated with bicycling and walking by installing bike parking, repairing and maintaining paved surfaces, and expanding multi-use trails. Indiana can also facilitate bicycle tourism by supporting connection improvements along various trail corridors, such as the American Discovery Trail, Cardinal Greenway, and Indianapolis Cultural Trail.

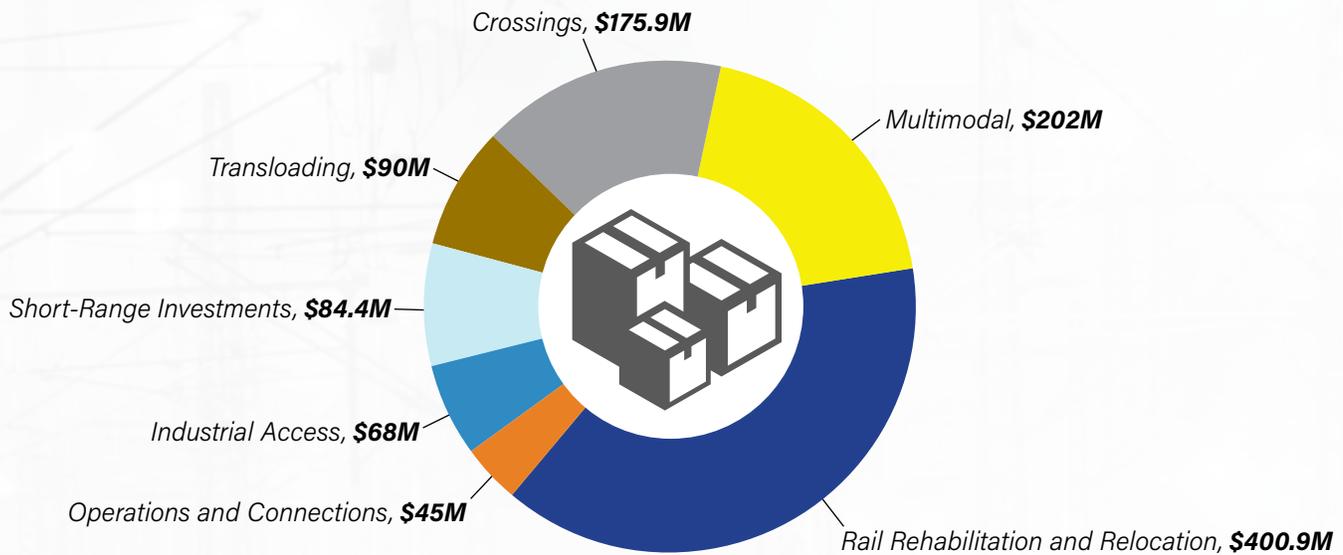


HOW MUCH IS NEEDED TO COVER THE COSTS?

Delay or failure to invest in Indiana's multimodal transportation system could impact economic development, diminish quality of life, and increase unmet infrastructure needs. It is important to pursue programs and policies that aim to integrate all modes of transportation, maintain and expand the network, and improve its performance. The following discusses the costs of infrastructure needs by mode.

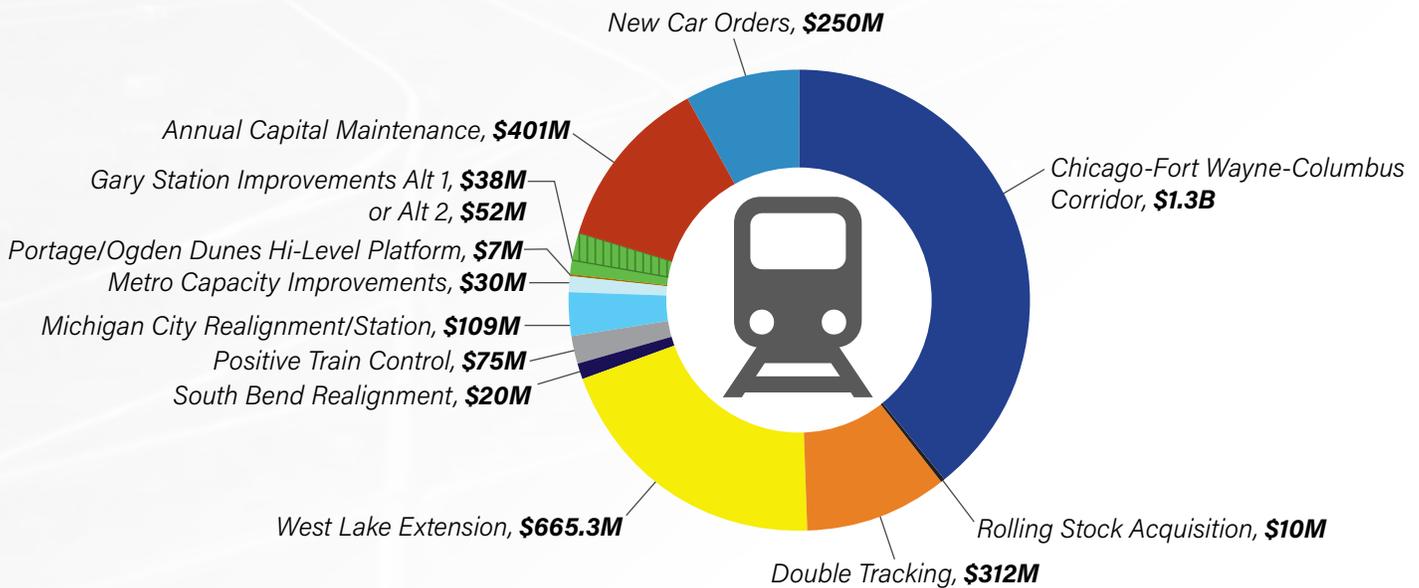


Freight Rail Needs



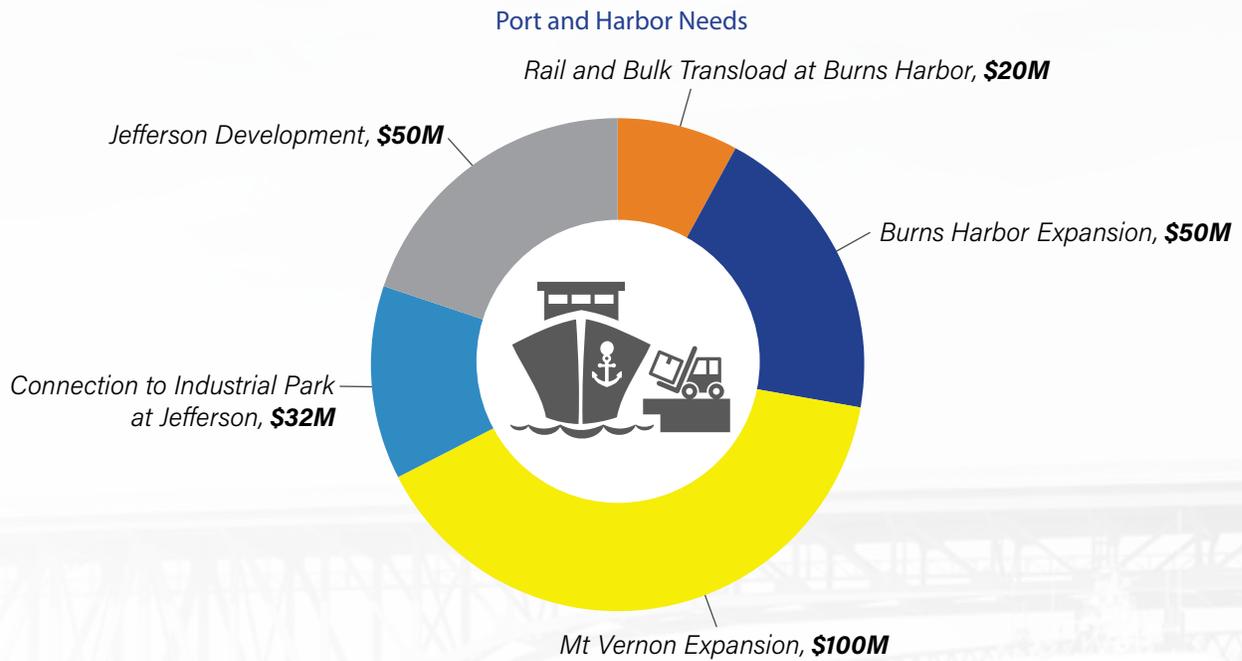
Freight rail needs are estimated at approximately \$84.4 million through year 2021. Thereafter, an additional \$981.8 million is estimated through the planning horizon of this LRTP, according to the Indiana State Rail Plan (2017).

Passenger Rail Needs

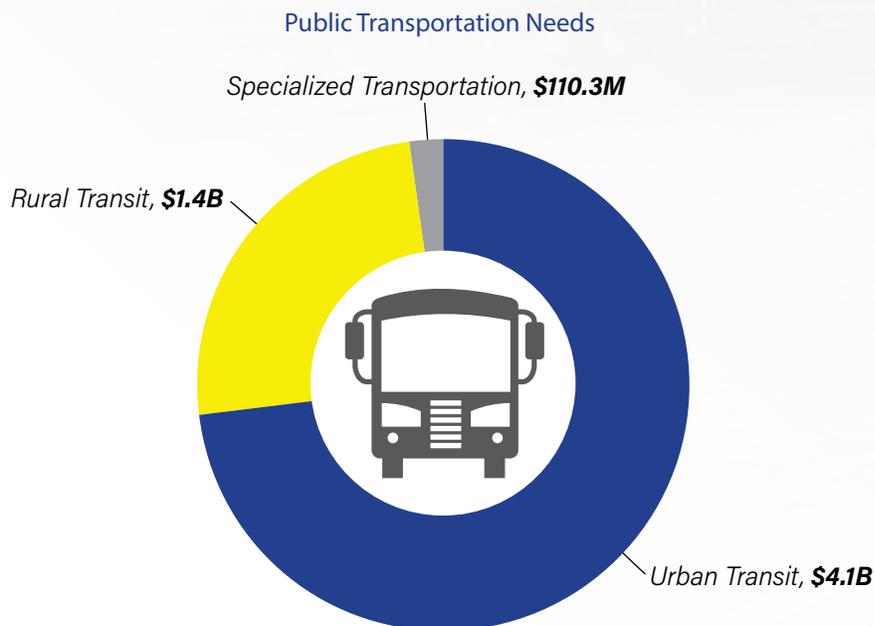


Passenger rail needs are estimated at approximately \$1.9 billion through year 2033. Thereafter, an additional \$900 million is estimated through the planning horizon of this LRTP.

Note: Extrapolation of passenger rail needs is based on the Indiana State Rail Plan (2017) and NICTD 20-year Strategic Business Plan.

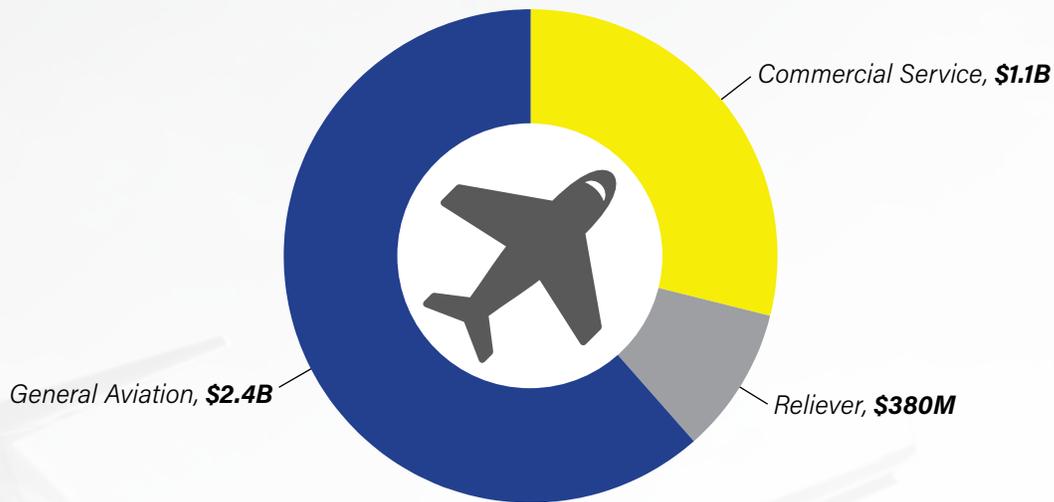


Port and harbor needs are estimated at approximately \$252 million, according to the Ports of Indiana. This amount does not include the future development of Indiana’s fourth port at the Tanners Creek Generating Station along the Ohio River in Lawrenceburg. According to the Governor’s office, the total cost to purchase the 725-acre property would be approximately \$8 million. Development costs of this potentially new port is pending further study. Inland waterway needs are estimated at approximately \$3.8 billion, according to the Conference of Great Lakes and St. Lawrence Governors and Premiers. This amount is for the Great Lakes-St. Lawrence River maritime system, which includes the Ohio River and Lake Michigan in Indiana.



Public transportation needs are estimated at approximately \$5.6 billion, based on forecasts in the State Transportation Improvement Program (STIP). The needed funds would serve to support administration and planning services, improve efficiency of management and operation, and accomplish capital improvements, vehicle replacements, and new facilities and technology.

Aviation Needs



Aviation needs are estimated at approximately \$3.9 billion based on forecasts in the Airport Capital Improvement Plan (CIP). Investments are centered on reducing impacts to Indiana airports, such as lack of access and signage; primary runway length; weather reporting systems; obsolete terminal facilities and hangars; technological advancements in the form of avionics and navigation; and overall underutilization.

Bicycle and pedestrian needs are estimated at approximately \$1.2 billion, according to the IEDC and Indiana MPOs. This amount does not include the Next Level Connections' \$90 million investment in the state's trail network. This funding will establish a grant program for local and regional governments to plan and develop hiking, biking, and horseback riding trails. At the state level, Indiana's legislative task force will be charged with examining priority bike trail corridors for ongoing development.

Bridge and pavement needs are estimated at approximately \$1 billion per year—with the goal of improving safety and mobility, strengthening economic competitiveness, easing traffic congestion, and reducing the cost of freight and passenger transportation.

MAJOR CORRIDOR IMPROVEMENT ANALYSIS

A variety of infrastructure improvements were identified for 21 major corridors of the Indiana highway network. The development and prioritization of these corridors considers the mobility corridor hierarchy system—Statewide Mobility Corridors, Regional Corridors, and Sub-Regional Corridors. Statewide Mobility Corridors serve high-speed connections for long-distance trips between the metropolitan areas of Indiana and those of the surrounding states. Regional Corridors serve high-speed connections for medium-distance trips between smaller cities and towns. Sub-Regional Corridors serve lower speed, short-distance trips between local land uses and the rest of the state network. This highway classification system incorporates the National Highway System, a system of roadways determined to have the greatest national importance to transportation, commerce, and defense in the United States.



The corridors, listed below, are critical to mobility and economic activity throughout all regions of Indiana. The following table lists major corridor improvement projects, but do not resemble a priority or ranking of importance.

Major Corridors

NO.	NAME	DESCRIPTION
HIGHWAY EXPANSIONS & MODERNIZATIONS		
1	I-69, Section 6	New 26-mile north-south interstate from south side of Martinsville to I-465 south junction in Indianapolis
2	I-69 Ohio River Crossing	New bridge crossing in Evansville
3	I-70	From 4-lane sections to 6 lanes across the state
4	I-65	From 4-lane sections to 6 lanes across the state
5	I-465	From West 86th Street to US 31 north junction northwest Indianapolis
6	I-465	From White River bridge north junction to Fall Creek northeast Indianapolis
7	I-465	From I-70 east junction to I-70 west junction Indianapolis south
8	I-94	Transportation Systems Management (TSM) treatments from Illinois state line to I-65
9	I-69 expansion	From SR 9/SR 109 Anderson north 15 miles to SR 332 Muncie
10	Items 10-14: I-65 and I-70	I-70 segment from 3 miles west of I-65 south junction to I-65 south junction
11	reconstruction inside the I-465	Eliminate weaving areas on the west leg of I-65/I-70 inner belt from South Split interchange to North Split interchange
12	beltway in Indianapolis	I-70 segment from the I-65 north junction east 7 miles to I-465 east junction
13	(north/south split as well as adjacent	I-65 segment from I-70 north junction north 6 miles to West 38th Street
14	spokes)	I-65 segment from I-465 south junction north 4 miles to I-70 south junction
15	US 31	From SR 38 in Hamilton County to south of Kokomo, the goal is freeway improvements; from Kokomo north to US 30, improvements to improve traffic flow and safety
16	US 30	Upgrade 100-mile stretch (from Fort Wayne to Valparaiso) to improve traffic flow and safety
17	US 36	From SR 267 east 7 miles to I-465 west junction, Indianapolis and Avon
18	US 20	Northern Indiana bridge and pavement preservation
19	I-64 and I-265	From Sherman-Minton bridge to SR 64, and from I-64 to I-65

Major Corridors continued

NO.	NAME	DESCRIPTION
FREIGHT/LOGISTICS		
20	Heavy-Haul Corridor, Mount Vernon Port	New road Improvements to SR-69 from to I-64 in Posey County to provide truck access to Mount Vernon Port
21	Heavy-Haul Corridor, Segment A	New road to connect the Ports of Indiana-Jeffersonville with SR 265

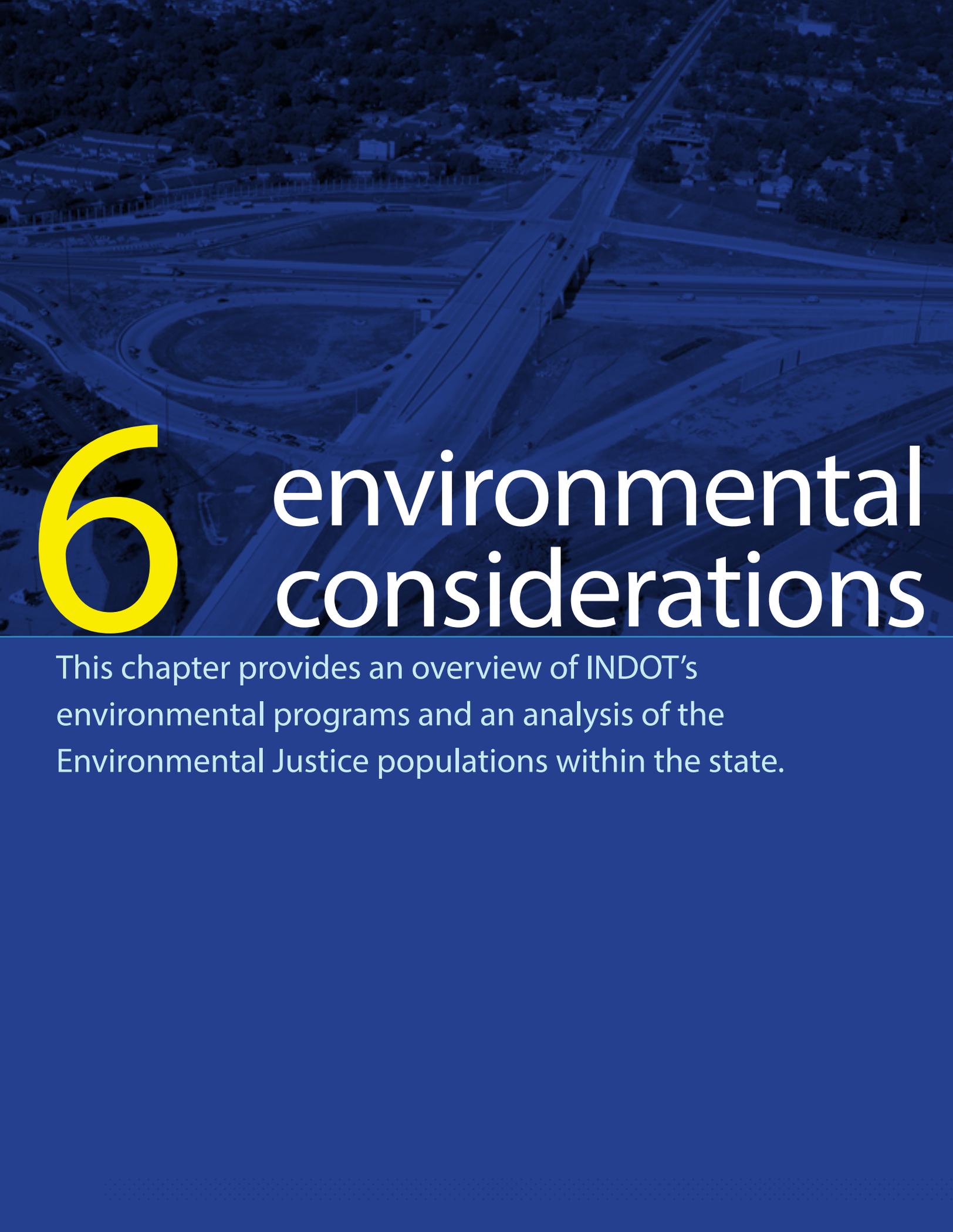
There are ongoing statewide efforts to consider long-term improvement needs, including investments along corridor systems and interchange areas. The Statewide Corridor Planning Study aims to develop corridor visions for state jurisdictional roadway facilities. The Statewide Interchange Planning Study aims to identify interchange enhancements and evaluate potential new interchange locations. These studies will serve as an input into the statewide and MPO planning process and help to support mobility asset management activities.

States are encouraged to take action to deploy alternative fuels and vehicles. To improve the mobility of alternative fuel vehicles, FHWA has helped build momentum

towards greater alternative fuel corridor planning and coordination among states. In Indiana, no corridors have been designated for alternative fuel vehicles. However, the Greater Indiana Clean Cities Coalition has recommended several corridors for nomination where there is demonstrated eligibility for designation. The I-465 loop and portions of I-70 could be designated corridor-ready for electric vehicle charging. The I-465 loop as well as portions of I-65, I-94, and I-70 could be designated as corridor-ready or corridor-pending for compressed natural gas. The I-465 loop as well as portions of I-65, I-69, and I-70 could be designated as corridor-ready or corridor-pending for liquefied petroleum gas.



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An aerial photograph of a complex highway interchange, including a roundabout and several overpasses, is shown with a semi-transparent blue overlay. The image serves as the background for the title page.

6

environmental considerations

This chapter provides an overview of INDOT's environmental programs and an analysis of the Environmental Justice populations within the state.

ENVIRONMENTAL PROGRAMS

INDOT is committed to sustainable and environmentally sound policies that meet the needs of current generations without impairing the ability of future generations to meet their own needs. INDOT has established numerous environmental programs to specifically meet this commitment. This commitment links to the LRTP's goals, objectives, and planning factors. INDOT's commitment to sustainable and environmentally sound policies helps meet the LRTP's Environmental Responsibility goal, as well as the Governor's focus on improving the quality of life in Indiana. Several of INDOT's environmental programs are discussed below.

Hoosier Roadside Heritage Program

In the late nineties, INDOT began an innovative program aimed at beautifying Indiana's roadways, saving taxpayer dollars, lessening the effects of erosion and improving safety. The Hoosier Roadside Heritage Program was developed in cooperation with the Federal Highway Administration, the Department of Natural Resources, and the Department of Environmental Management.

The primary goal of the Roadside Heritage Program is promoting and incorporating native plants and wildflowers into Indiana's roadside landscape. Additional information on the Hoosier Roadside Heritage Program can be found at <https://www.in.gov/indot/2583.htm>.





removed from INDOT vehicles are sold for retreading purposes generating a revenue stream for the department. Additional information on INDOT's recycling and waste diversion efforts is located at <https://www.in.gov/indot/2586.htm>.

Adopt-A-Highway Program

INDOT's Adopt-A-Highway program helps significantly reduce the roadside trash problem. This improves the look of Indiana's communities and helps uncover our state's natural heritage.

INDOT's Adopt-A-Highway program coordinates with community groups that provide highway trash and litter pick-up in local communities. More than 1,000 groups are already making this program a success across Indiana. The Adopt-A-Highway program helps recover Indiana's natural heritage, but it can't be done without your help. Additional information on INDOT's Adopt-A-Highway program is located at <https://www.in.gov/indot/2598.htm>.

Indiana Stellar Communities Program

Launched in 2011, the Stellar Communities Program is a multi-agency partnership between the Indiana Housing



Recycling and Waste Diversion

Each year INDOT recovers a great deal of waste materials for reuse produced during construction and maintenance activities. This is, by far, INDOT's largest waste stream, averaging more than 1 million tons of reclaimed concrete, asphalt and steel annually. INDOT recycling activities also target special and universal wastes produced at department facilities, construction projects and along Indiana roadways.

INDOT operates hundreds of vehicles throughout the state and maintains thousands of miles of state roadways. As part of department and roadway maintenance, scrap tires and scrap tires pieces are recovered and disposed of according to State regulations. In 2013 INDOT initiated a program with local vendors where whole waste tires



and Community Development Authority, Indiana Office of Community and Rural Affairs, and INDOT, designed to recognize Indiana's smaller communities that have identified comprehensive community and economic development projects and activities as well as next steps and key partnerships.

Through annual designation the Stellar Communities Designation Program provides resources for transformative quality of place community improvements by:

- Utilizing previous planning efforts.
- Leveraging existing assets.
- Fostering regional investments.
- Stimulating continued growth for long-term relevance.

Additional information on the Indiana Stellar Communities Program can be found at <http://www.in.gov/ocra/stellar.htm>.

Alternative Fuel Vehicles

INDOT is challenging traditional ways of thinking in transportation planning, materials and programs in favor of inventive ideas and innovative solutions. One of these innovative solutions is the use of alternative fuel vehicles.



Launched in June 2011, INDOT's alternative fuel vehicle program now involves 634 vehicles, including 32 compressed natural gas (CNG) trucks

which can run on CNG, gasoline or diesel fuel, 19 CNG-powered dump trucks, and 583 small and full-size pickup trucks and vans that have been converted to run on propane or gasoline. To support the propane-powered vehicles, INDOT installed 115 propane fueling sites at its facilities across the state as part of the largest statewide alternative fuel network. Fourteen CNG fueling stations are publicly available in Indiana. INDOT's alternative fuel fleet reduced fuel costs by more than \$1.17 million in FY 2013 and more than \$2.75 million since the program's inception. In addition, there are three interstates in Indiana; I-80, I-275, and I-94 that have been designated alternative fuel corridors by FHWA.



Historic Bridge Marketing Program

When an Indiana historic bridge is planned for bypassing or replacement, the bridge is offered to any group or individual that may want to take ownership of the bridge and manage or relocate it to another site. INDOT and the Federal Highway Administration are currently working to market these historic structures for preservation in-place and for relocation (storage or to a new site). Additional information on INDOT's Historic Bridge Marketing Program, including an inventory of bridges is available at <http://www.in.gov/indot/2532.htm>.

The Indiana Byway Program

The Indiana Byway Program is designed to preserve, protect, enhance and recognize transportation corridors of unique character. These corridors are notable examples of our nation's beauty, history, culture and recreational experience. Some byway routes are designated nationally while others are state designated byways.



Indiana currently has three nationally designated byways and five state designated byways. Additional information on these byways and the Indiana Byway Programs can be found at <http://www.in.gov/indot/2827.htm>.

Storm Water

INDOT is deeply involved in the treatment and management of storm water runoff. Runoff controls are essential to preventing polluted runoff from roads, highways, and bridges from reaching surface waters. Runoff control measures can effectively limit the entry of pollutants into surface waters and protect their quality, fish habitats, and public health. INDOT controls runoff by utilizing best management practices in agency operations, and in road and facility construction and maintenance. These efforts keep pollution out of storm water runoff during construction, and during everyday operations on roadways, rest areas, and maintenance facilities. Additional information on INDOT's storm water programs can be found at: <https://www.in.gov/indot/2892.htm>.

Environmental Justice

In accordance with Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, Federal agencies must identify and address disproportionately high and adverse human health or environmental effects of proposed projects on minority and low-income populations. Three underlying principles guide compliance with Environmental Justice requirements:

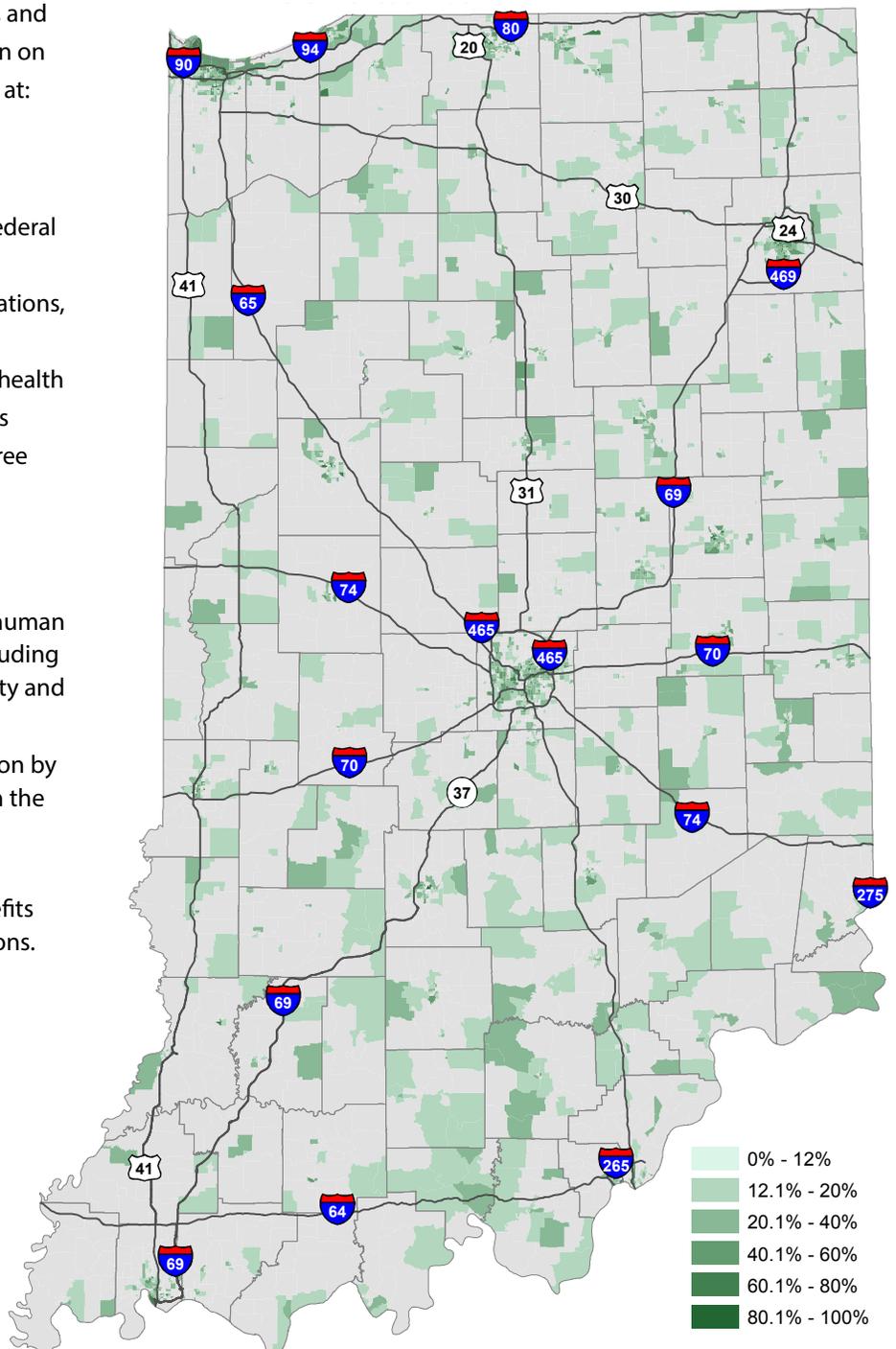
- Avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects on minority and low-income populations.
- Ensure meaningful and fair participation by all potentially affected communities in the decision-making process.
-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

INDOT's Environmental Justice Policies/Objectives

To ensure that the Environmental Justice populations identified above are involved in the transportation planning process and not disproportionately or adversely impacted by transportation projects, INDOT has established the following Environmental Justice objectives.

- Improve the environmental and public health and safety in transportation of people and goods, and the development of transportation systems and services.
- Harmonize transportation policies and investments with environmental concerns, reflecting an appropriate consideration of economic and social interests.
- Consider the interest, issues, and contributions of affected communities, disclose appropriate information, and give communities an opportunity to be involved in the decision-making.

Percent Low Income by U.S. Census Block Group (2015)



- INDOT has made special efforts to evaluate and improve the planning and program process to ensure compliance with environmental justice regulations. These efforts led to the development of a Public Involvement Procedures Manual containing special outreach methods to increase minority and low-income population participation.

INDOT is implementing a new Environmental Justice policy that builds on these objectives and should be followed in the transportation planning process along with INDOT's other relevant policies: Title VI of the Civil Rights Act, American with Disabilities Act (ADA), National Environmental Policy Act (NEPA), and public involvement.

In addition, MPOs throughout Indiana are addressing Environmental Justice issues and have developed policies and objectives consistent with INDOT's. During a workshop held on May 15, 2018 with representatives from the MPOs in Indiana, many of them discussed best practices for involving Environmental Justice populations in the transportation planning process, including holding meetings at popular minority community venues, providing activities for children, holding meetings at non-traditional times, connecting with already-established community groups or social service agencies, and reaching out to minority business owners as a means to make connections to smaller groups. INDOT will continue to follow the objectives listed above and to work with the MPOs to ensure Environmental Justice populations throughout the state are representative in the transportation planning process and that they are not disproportionately or adversely impacted by transportation projects.

Environmental Justice Areas

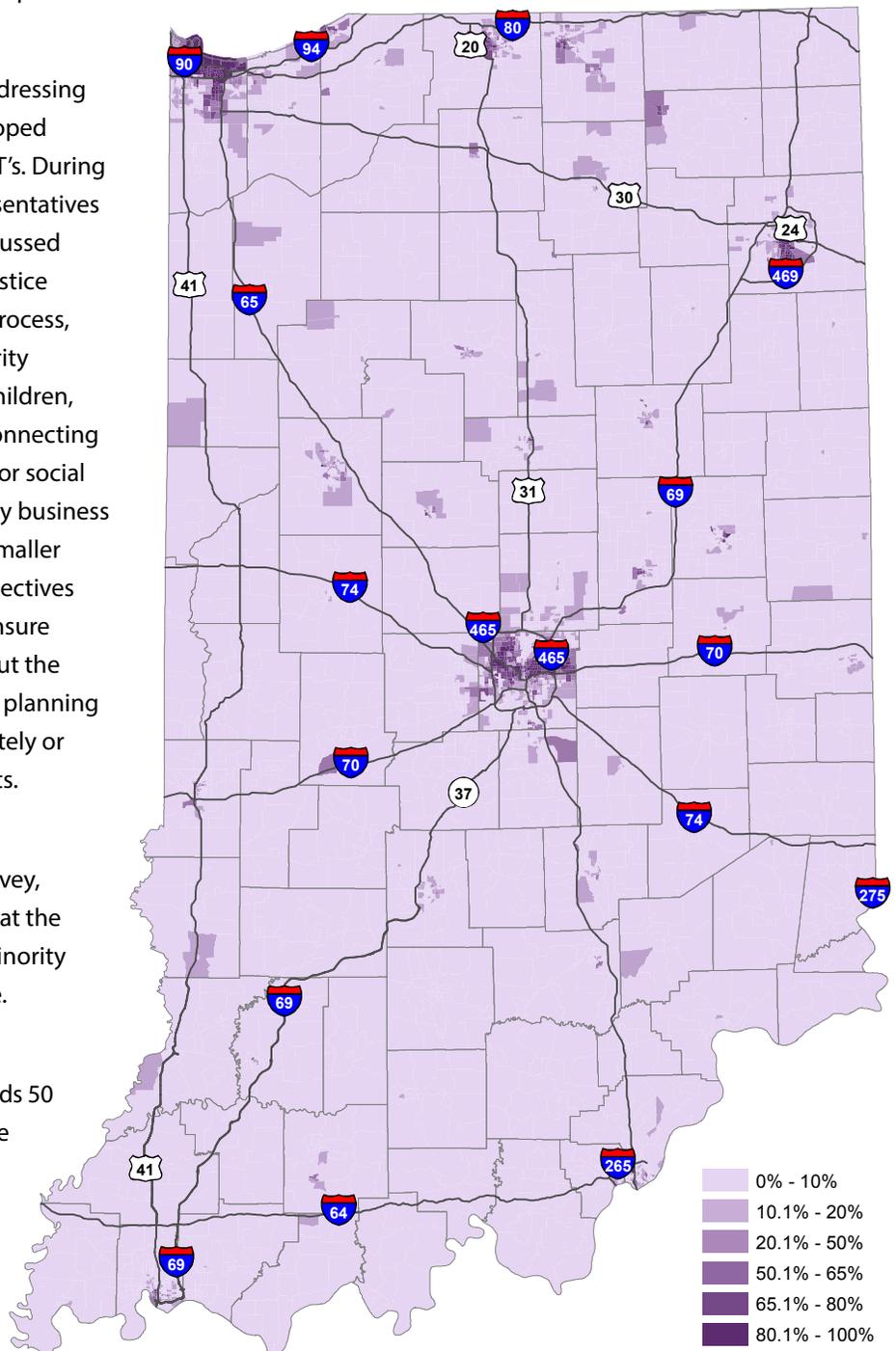
US Census Bureau, American Community Survey, 2011-2015, Five-Year Estimate data collected at the block group level was collected to identify minority and low-income populations within the State.

A minority population is defined as "either the minority population of the affected area exceeds 50 percent, or the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or another appropriate unit of geographic analysis." For this analysis, instead of using the hard

threshold of 50 percent, INDOT decided to use a relative threshold of 20 percent, one percent higher than the minority population of Indiana to ensure that no affected populations were overlooked. The map below shows the percent minority by block group. The highest four ranges of percents are above the 20 percent threshold.

The Office of Management and Budget (OMB) has designated the US Census Bureau's annual poverty measure as the official metric for program planning

Percent Minority by U.S. Census Block Group (2015)



and analysis by all Executive Branch Federal agencies (Statistical Policy Directive No. 14). The US Department of Transportation (USDOT) and the FHWA define low-income as a person whose median household income is at or below the Department of Health and Human Services poverty guidelines. For this high level statewide analysis, the ACS estimate on population below poverty was used to identify low-income populations. The Census Bureau defines poverty areas as an area where at least 20 percent of residents were below the poverty level. However, for this analysis, instead of using the hard threshold of 20 percent, INDOT decided to use a relative threshold of 12 percent, one percent higher than the low-income population of Indiana. The map on page 6 shows the percent low-income by block group. The highest four ranges of percents are above the 20 percent threshold.

While these are the parameters for identifying Environmental Justice populations that INDOT has identified for the LRTP, INDOT's existing project-level guidance will be followed when identifying Environmental Justice populations and evaluating potential impacts for individual projects.

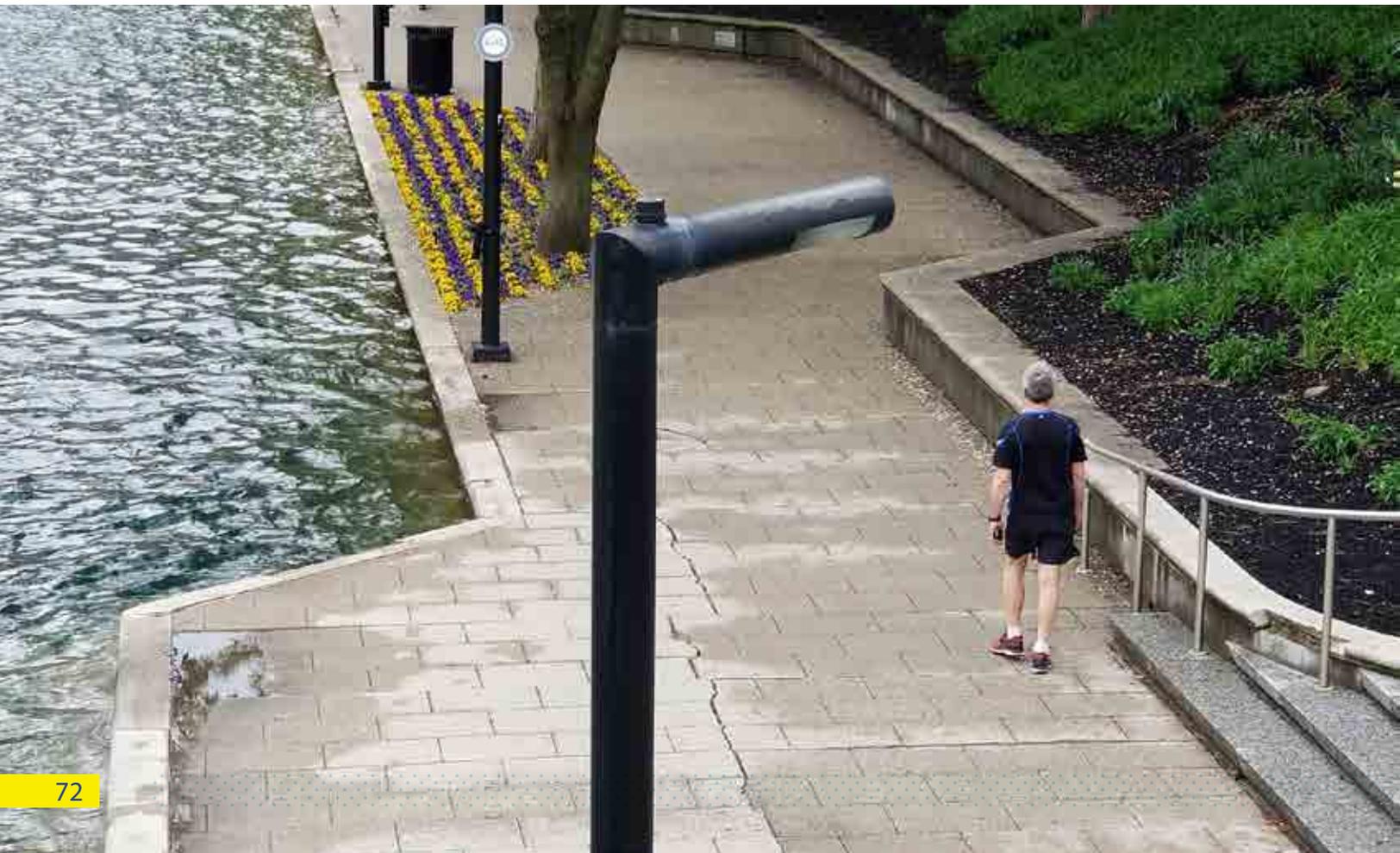
Beyond Environmental Justice

Whether they fit the definition of an Environmental Justice

population, all groups and individuals have the right to access and participate in the transportation decision-making process as protected by Title VI of the Civil Rights Act. In addition, Executive Order 13166, enacted in 2000, also requires improved access to services for persons with Limited English Proficiency (LEP).

Data was collected at the block group level on LEP households and compared to the percent of LEP households in Indiana to determine if the percent of LEP households in individual block groups was meaningfully greater than the state. Approximately two percent of households in Indiana are LEP households, so any block groups with greater than five percent or 2.5 times higher than the state average are considered meaningfully greater. This meets the USDOT guidance on translation of vital documents (<https://www.govinfo.gov/content/pkg/FR-2005-12-14/html/05-23972.htm>).

Like low-income populations, those block groups with a high percentage of LEP households are wide spread throughout the state with some concentration in northern Indiana (Elkhart, LaGrange, and Noble Counties) and the Indianapolis metro area. Spanish is the most commonly spoken language in Indiana, after English, with almost five percent of the population speaking Spanish. Of the Spanish



speakers, approximately one percent are considered LEP.

As transportation improvements move through the planning process, an analysis should be completed that includes not only Environmental Justice populations and LEP households, but other traditionally underserved populations. These include senior populations, persons with disabilities, and others protected by Title VI of the Civil Rights Act and Americans with Disabilities Act of 1990. This analysis should be tailored to the project and its area of concern.

Major Corridor Analysis

INDOT has identified 25 major corridors as shown in Chapter 5. These major corridors represent a variety of improvements to the Indiana transportation network that will be completed over the next 30 years. These improvements include new bridges, interstate expansion, new roadways, and commuter rail expansion.

The 25 major corridors are spread throughout the state and the associated projects will impact the daily life of many Hoosiers, including Environmental Justice populations. This section provides a brief discussion of those major corridors that are most likely to impact Environmental Justice populations based on the Environmental Justice areas identified earlier in this chapter. Please note that this is a high-level analysis and does not supersede INDOT's existing project-level guidance for identifying Environmental Justice

populations and evaluating potential impacts for individual projects.

Of the 21 major corridors, 15 of them, or 71 percent, are within block groups that have a minority population of 20 percent or higher. Nineteen, or 90 percent, of the major corridors are within block groups that have a low-income population of 12 percent or higher. Seventeen of the major corridors are in block groups that have both a minority population of 20 percent or higher and a low-income population of 12 percent or higher. Of these seventeen corridors, 12 are also in block groups where five percent or more of the population have limited English proficiency (LEP).

As the projects on these major corridors move forward, impacts to Environmental Justice populations will be evaluated. Potential impacts could include community cohesion, noise, air quality, property values, travel time, access to opportunities, and mobility options. Public outreach that provides opportunities for meaningful participation in the decision-making process will be a key part of these projects. These project teams will need to provide accessible, transparent information, as well as resources; provide accessible and culturally appropriate opportunities; and identify enhanced activities, additional resources, or engagement opportunities.





7 performance measures

Performance measures provide Indiana the strategic framework to evaluate how successfully transportation goals and objectives are met. Using a performance-based approach for investment decisions provides INDOT a transportation system more in-line with identified goals of safe and reliable travel, a well-maintained system, and efficient movement of people and goods across the state. The LRTP establishes performance measures that support the Goals and Objectives described in Chapter 1.

FEDERAL PERFORMANCE MEASURES

Indiana's performance measures are strategically developed to align with Federal performance measures to support national transportation performance goals. Federal performance measures became codified with the passage of the Moving Ahead for Progress in the 21st Century Act (MAP-21) in 2012.

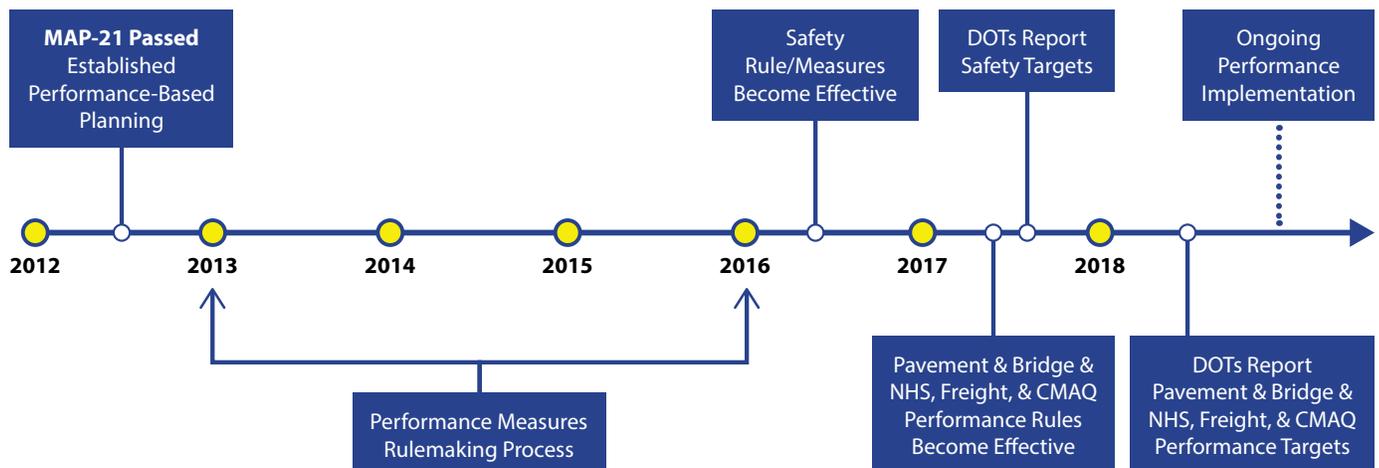
Since that time, the US Department of Transportation has gone through a lengthy rule-making process. The safety rule measures became effective in 2016. The pavement and bridge condition and National Highway System (NHS), freight, and Congestion Mitigation and Air Quality (CMAQ) performance rules became effective in 2017. Target setting and reporting has gradually begun to "go live" for the various performance categories since 2017. Thus, this LRTP is INDOT's first statewide, multimodal plan to define and apply Indiana's performance measures with an understanding of the national direction on transportation performance. A timeline of the Federal performance measure process is shown below.

FAST ACT & PERFORMANCE MEASURE IMPLEMENTATION

The Fixing America's Surface Transportation (FAST) Act was signed into law in December 2015. The authorization continued on the previous legislation's (MAP-21) emphasis on transportation performance management approach, along with adding funding for surface transportation,

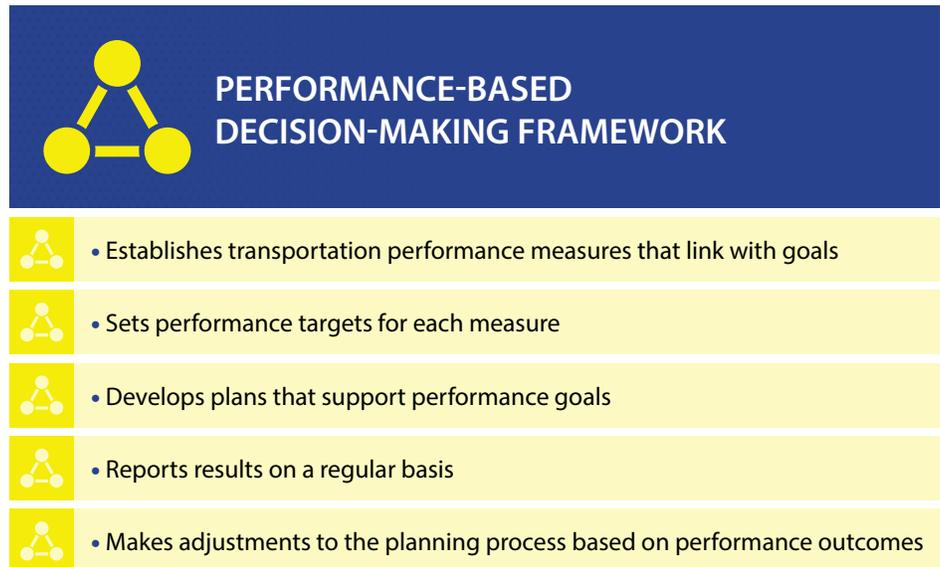
After passage of the FAST Act, the timeline for implementing performance measures evolved. The figure below reflects that ongoing process of implementing performance measures.

Federal Performance Measure Timeline



Establishing performance measures is a critical step in a performance-based transportation planning approach. The performance measures identified in the LRTP reflect Indiana's priorities and national performance goals. The performance measures included in the LRTP are consistent with other INDOT initiatives, such as the 2018 Transportation Asset Management Plan and the and the Next Level Roads Plan.

Performance-Based Decision Making Framework



GOALS & PERFORMANCE MEASURE CONNECTIONS

As shown, there is a relationship between the LRTP goals and performance measures. The performance measures are framed to promote the transportation system goals.

Relationship between Goals, Performance Areas and Measures



APPLICATION OF PERFORMANCE MEASURES

This section provides a summary of each of the performance measure areas, providing some additional discussion, data sources, and how the performance measures can be used in support of statewide planning. For each of these measures, INDOT has established targets, calculation methods, and in some cases, has begun the initial measures reporting. For the most current information on Transportation Performance Management, see the Appendix at the end of the document.

Safety Performance Measures

Summary: These measures were identified to track the number and rate of serious injury and fatal crashes. These measures support national and state goals to reduce traffic crashes, and directly support the Indiana Strategic Highway Safety Plan.

Data Sources and Calculation: Data includes Statewide crash-record database (most recent 5-years) and statewide vehicle-miles traveled (VMT) data from the Highway Performance Monitoring System (HPMS). Some MPOs may produce separate VMT estimates for their planning areas. Each reporting period is a 5-year “rolling average”, which averages the past 5 individual, consecutive years.

Application: Ongoing annual 5-year rolling average reporting. There is the potential to use corridor-based safety performance measures to help prioritize safety project selection.

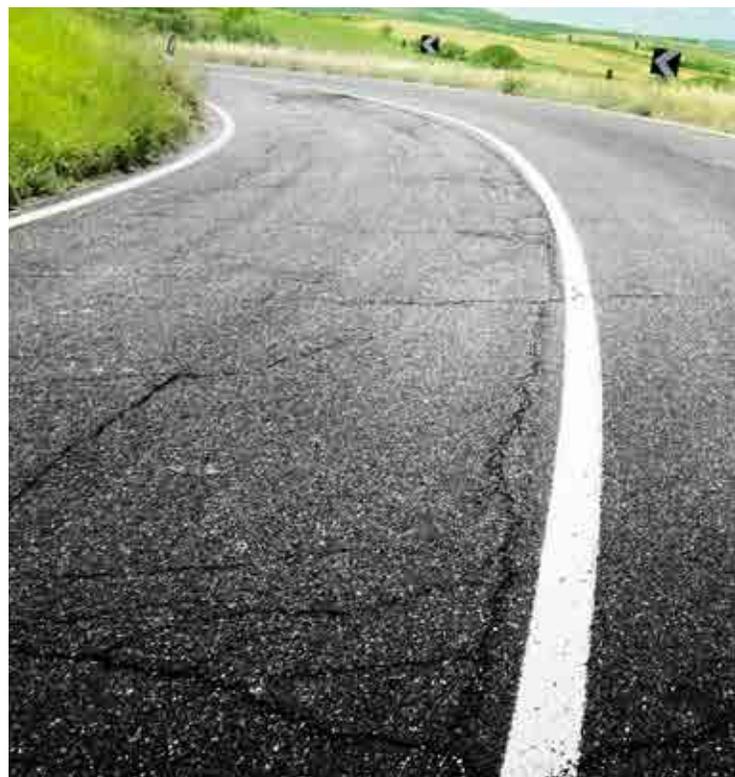


Pavement and Bridge Condition Performance Measures

Summary: These measures are established to evaluate and track the condition of pavement and bridges on the Interstate and National Highway System (NHS). They track infrastructure in good condition (bridges and pavement where major investment is not needed) and poor condition (bridges and pavement that likely need major reconstruction). These measures support the Indiana Transportation Asset Management Plan (TAMP). The TAMP is a strategic tool used by INDOT to manage the state’s roadway pavements and bridges, which provides a framework for improving the state’s transportation assets over the next 10 years. More information on the TAMP is available at: <https://www.in.gov/indot/3231.htm>.

Data Sources and Calculation: Pavement data comes from the state’s pavement condition database. Bridge data comes from National Bridge Inventory (NBI). Both databases are updated annually. The calculations used by INDOT combine four different measures to evaluate pavement conditions and three different condition ratings to evaluate bridge conditions, consistent with national performance guidance.

Application: Ongoing 2-year and 4-year condition reporting. There is the potential to use bridge conditions and performance measures to help prioritize pavement and bridge project selection.



Freight Reliability Performance Measure

Summary: This measure assesses how reliable truck travel times are on the Interstate system. Reliability is essentially a measure of how repeatable or predictable travel on a corridor is; reliable travel corridors do not have much travel time variation while unreliable corridors do. This measure supports the modern just-in-time delivery economy, providing predictable goods movement to businesses.

Data Sources and Calculation: National Performance Measure Records Data Set (NPMRDS) is available to INDOT from FHWA. This provides truck travel times on the Interstate system in 15-minute increments. This measure compares the 95th Percentile Truck Travel time to the 50th Percentile Truck travel time to derive the TTTR for five analysis periods: Morning Weekday, Midday Weekday, Afternoon Weekday, Weekends, and Overnight.

Application: Using the Truck Travel Time Reliability (TTTR) Measure for 2 year and 4-year reliability reporting. There is potential to give least reliable corridors higher priority for projects that would improve freight reliability.



Congestion Performance Measure

Summary: This measure tracks the annual “peak hour excessive delay” (PHED) per capita for NHS routes. This measure is only currently applied to urban areas: 1) with over 1 million people, and 2) are a designated air quality non-attainment area for ozone, carbon monoxide, or particulate matter. Based on current designations, this performance measure will apply to urbanized portions of Lake and Porter Counties in northwest Indiana. Starting in 2022, this measure will expand to all urban areas with populations over 200,000.

Data Sources and Calculation: The threshold for PHED is based on the amount of travel time at 20 miles per hour or 60% of the posted speed limit travel time, whichever is greater. The measure is also weighted according to vehicle occupancy and traffic volume. Similar to the Freight Reliability measure, the NPMRDS is used to calculate the travel speeds used for this performance measure. American Community Survey (ACS) 5-year estimates data for estimating population numbers for the “per capita” reporting.

Application: Ongoing 4-year performance reporting, switching to 2-year and 4-year performance reporting in 2020. There is the potential to use this measure as a corridor-based performance measure to help prioritize projects that reduce congestion in corridors that experience PHED.



Travel Reliability Performance Measures

Summary: This measure is similar to the Freight Reliability Performance measure, but measures reliability for all persons traveling on the roadway. This measure applies to both the Interstate and NHS.

Data Sources and Calculation: Similar to the Freight Reliability and Congestion measures, the NPMRDS is used to calculate the travel reliability measures. Level of Travel Time Reliability (LOTR) is defined as the ratio of the longer travel times (80th percentile) to a “normal” travel time (50th percentile) time to derive the LOTTR for four analysis periods: Morning Weekday, Midday Weekday, Afternoon Weekday, and Weekends. Average vehicle occupancy factors may be developed based on state data, or based on FHWA-supplied average vehicle occupancy factor of 1.7.

Application: The LOTTR Measure is used for 2-year and 4-year reliability reporting on the Interstate system, and 4-year reliability reporting on the non-Interstate NHS. The LOTTR is defined as the ratio of 80th percentile to the 50th percentile travel time. Similarly to the freight reliability measure, there is the potential to prioritize projects more highly that address the least reliable travel time corridors.



Ridesharing Performance Measure

Summary: This measure tracks the level of non-single-occupant vehicle (SOV) travel in the same urban areas as the congestion performance measure. The intent of this measure is to encourage more use of transit, carpooling, van pooling, and overall trip reduction.

Data Sources and Calculation: There are a few data source options for reporting non-SOV travel. The most straight-forward approach is to use ACS estimates. Other options are surveys and volume and person-usage counts of various modes. The measure calculates the portion of person trips that are vehicles with only the driver in them.

Application: The non-SOV measure is used in ongoing 2-year and 4-year performance reporting for each applicable urbanized area. There is potential to provide priority to projects that shift person trips from single-occupant vehicles.



Air Quality Performance Measure

Summary: This measure tracks the level of emissions from on-road vehicle sources. This applies to Indiana as it has non-attainment areas for ozone. The goal of this measure is to support the Congestion Mitigation and Air Quality Improvement (CMAQ) program.

Data Sources and Calculation: The primary data source is the CMAQ Public Access System, which provides a national database of air quality benefits from CMAQ investments. Total emissions reduction is calculated by summing 2-year and 4-year emissions reductions for all projects funded with CMAQ funds.

Application: The CMAQ Air Quality Performance Measure is used to report the 2-year and 4-year project-related emissions reductions. This is a project-based measure, so there is the potential to give a higher priority to CMAQ projects that provide the most benefits according to the Public Access System database.

More information on each of these performance measures is available through review of the US Code of Federal Regulations (CFR).¹



TARGET SETTING

Target setting identifies the quantifiable level of progress than an agency wants to achieve on a performance measure, by a given date. The target setting process requires INDOT and its partners to not only set its performance objectives, but to monitor and report performance targets by collecting and analyzing baseline data and applying planning tools. The goal of the target setting process is to provide a quantifiable way to measure how well INDOT’s strategies and investments are moving it towards its ultimate performance measure goals. The process is ongoing, so INDOT can adjust how it does business to respond to how well it is achieving its performance targets.

INDOT worked with its 14 MPO partners to set targets for each performance measure. Discussion that helped to establish performance targets was related to INDOT’s system assessment tools and capabilities, workflow processes, freight bottlenecks, refinements to the NHS to reduce non-state-owned roadway. INDOT will continue to coordinate with its MPO partners through semi-annual meetings. These meetings will aim to gather feedback on funding tradeoffs, performance gaps and necessary adjustments to performance targets, potential refinements to business rules and processes, any major changes to the STIP and TIPs, and bridge and pavement system assessment impact analyses.

More details on the target setting by performance area are described below.

Safety Targets

Safety performance measures were developed through a process of evaluating several economic, travel, and data trends to forecast a baseline set of crash projections. These projections were not safety goals—but provided a baseline assessment of likely outcomes to inform target setting. Within the context of the MPO working group meetings, INDOT then crafted a set of safety targets.

INDOT Safety Targets

MEASURE	2019 TARGET*
Traffic Fatalities	889.6
Number of Serious Injuries	3,501.9
Fatality Rate	1.087
Serious Injury Rate	4.234
Total Number of Non-Motorized Fatalities and Serious Injuries	393.6

* As reported to Federal Highway Administration



Pavement and Bridge Condition Targets

Pavement and bridge condition targets established in the TAMP provide a planning framework for INDOT's asset management investment plan. These 10-year targets provide goals for INDOT to achieve by 2028 for system condition. The TAMP and the resulting targets were also produced through the working group process with INDOT's MPO partners. With exception of the multi-state MPOs of Kentuckiana Regional Planning and Development Agency (KIPDA) for the Louisville metropolitan area and Ohio-Kentucky-Indiana Regional Council of Governments (OKI) for the Cincinnati metropolitan area, the Indiana MPOs decided not to establish individual targets for the NHS and agreed to adopt INDOT's bridge and pavement asset targets. The KIPDA and OKI will need to further coordinate with their other State DOTs on these targets.

INDOT Bridge Targets

PERFORMANCE MEASURE	BASELINE	2-YEAR TARGET (2018-2019)	4-YEAR TARGET (2018-2021)
Percentage of NHS Bridges Classified as in Good Condition	50.0%	48.3%	48.3%
Percentage of NHS Bridges Classified as in Poor Condition	2.3%	2.6%	2.6%

INDOT Pavement and Bridge Targets

MEASURE	TAMP TARGET*
Interstate NHS Pavements, Fair or Better Condition	96.1%
Non-Interstate NHS Pavements, Fair or Better Condition	93.1%
INDOT Bridges, Fair or Better Condition	96.1%

* Achieve by 2028

Congestion Management and Air Quality Targets

A CMAQ task group was formed to coordinate efforts between INDOT and the MPOs in setting the INDOT CMAQ performance targets. This group included three representatives from INDOT's Technical Planning Section, two representatives from the Indiana MPO Council (Fort Wayne and Evansville), and a representative each from the Indianapolis and Northwestern Indiana MPOs—the two larger MPOs with over one million in population. A representative from the Indiana Division of the FHWA also participated in the task group to provide guidance.

PERFORMANCE MEASURE		MEASURE UNIT	2-YEAR TARGET (2018-2019)	4-YEAR TARGET (2018-2021)
Level of Travel Time Reliability	Interstates–Statewide	% of person-miles reliable	90.5%	92.8%
	Non-Interstate NHS–Statewide			89.8%
Truck Travel Time Reliability (TTTR) for Interstates–Statewide		TTTR index	1.27	1.24
Peak Hour Excessive Delay (PHED) for NHS	Indianapolis Urbanized Area Entire Illinois-Indiana Chicago Urbanized Area	Annual hours of PHED per capita	Not required for first performance period	5.7
	Indianapolis Urbanized Area Entire Illinois-Indiana Chicago Urbanized Area		16.3%	15.4
Non-Single Occupancy Vehicle (SOV) Travel	Indianapolis Urbanized Area Entire Illinois-Indiana Chicago Urbanized Area	% of non-SOV travel	16.3%	16.3%
			31.6%	32.1%
CMAQ Project Emissions Reduction–Statewide	VOC	Emissions reduction (kg)	1,600.0	2,600.0
	CO		200.0	400.0
	NOx		1,600.0	2,200.0
	PM10		0.3	0.5
	PM2.5		20.0	30.0

OTHER STATE PERFORMANCE MEASURES

In addition to the Federal performance measures and those measures that are established and implemented within the TAMP, there are several other transportation initiatives that have performance-based metrics. These other initiatives are described below.

The Next Level Roads Plan was created in 2017. It is a five-year, \$4.7 billion road maintenance and construction plan. It provides a performance-based approach to attaining pavement and bridge condition targets. More details on the program are provided in Chapter 8, Revenue and Funding.

The Community Crossings program provides funding to cities, towns, and counties to fund shovel-ready local bridge and roadway construction projects. The projects are submitted by local communities, and evaluated and ranked by INDOT according to project need, traffic volume, local

support, the impact on connectivity and mobility within the community, and regional economic significance.

The Local Trax program provides grants to cities, towns, and counties for grade separation, crossing closure and other safety enhancement projects at local road crossings of railroads. Projects are scored on crossing characteristics, safety, mobility, financial participation, economic development benefits, environmental effect, quality of life, and number of crossing closures. Additional scoring benefits are provided for political and community support and tax base increases due to the projects. More details on program funding are provided in Chapter 8, Revenue and Funding.

The Indiana Multimodal Freight Plan Update (2018) provided 11 performance measures.

FREIGHT GOAL	PERFORMANCE MEASURE
Economic Impact	<ul style="list-style-type: none"> • Percent growth in jobs in freight-intensive industries • Percent growth in export value (domestic or foreign)
Capacity to Meet Demand	<ul style="list-style-type: none"> • Percent of lane-miles at level of service C or better • Reduction in hours of truck delay • Improvement in Truck Travel Time Reliability Index
Multimodal Integraion and Synergy	<ul style="list-style-type: none"> • Percent of intermodal connectors with "fair" or better pavement conditions • Number of intermodal or multimodal projects completed
Access to National and International Markets	<ul style="list-style-type: none"> • Hours of delay on roadways within 5 miles of ports and cargo airports
Quality of Life	<ul style="list-style-type: none"> • Reduction in truck-involved crashes • Reduction in truck-involved fatal crashes • Removal of rail/highway grade crossings

The Indiana State Rail Plan (2017) includes several performance metrics for both freight and passenger rail service. The freight rail performance objectives relate to measurable safety improvements, economic development objectives, and approaches to improving the reliability of the rail system. The passenger rail metrics relate to financial performance, on-time performance, and other service quality measures.

There are also aviation-related performance goals. For instance, approximately \$4.6 million from the Indiana Business Promotion and Innovation Fund aims to

increase the number of direct flights across the state. Additionally, the Indiana State Aviation System Plan (2012) identified several performance measures for the state's airports, including:

- Maintaining pavement condition to standards
- Recommended minimum service levels for runway length, runway strength, additional airport infrastructure standards, and appropriate zoning
- Standards for instrument approach procedures
- Technology and policy approaches to increase Indiana's competitiveness

An aerial photograph of a complex highway interchange, including a roundabout and several overpasses, with a semi-transparent blue overlay. A large yellow number '8' is positioned on the left side of the image.

8

revenue & funding

Due to the fiscal constraints on Federal, State, and local budgets, traditional funding approaches cannot meet all of Indiana's transportation investment needs. In this environment of transportation funding challenges, Indiana has taken steps to shore up its ability to preserve and maintain the transportation system with new funding sources. This chapter provides details on the financial picture for INDOT.



INDOT ROLES

INDOT serves a variety of roles when it comes to funding the state transportation system.



Planning for the state system. This includes looking at current and anticipated needs, identifying projects and programs related to providing a system that meets Indiana's mobility and safety goals, and planning for the optimal use of funds to maintain and preserve existing transportation infrastructure.



Routine maintenance of state routes. This includes mowing roadside vegetation, filling potholes, applying and maintaining highway signs and pavement markings, plowing snow, and maintaining traffic signals.



Construction projects on the state system. This includes major reconstruction of existing roads and bridges, expanding existing facilities to provide enhanced mobility and safety, and building new system links. In addition to construction efforts, projects can include acquisition of right-of-way, planning, permitting, and design.



Financial and technical support to local agencies. This includes support for multimodal facilities and systems such as public transit, airports, and bicycle and pedestrian systems.

Current Funding Priorities

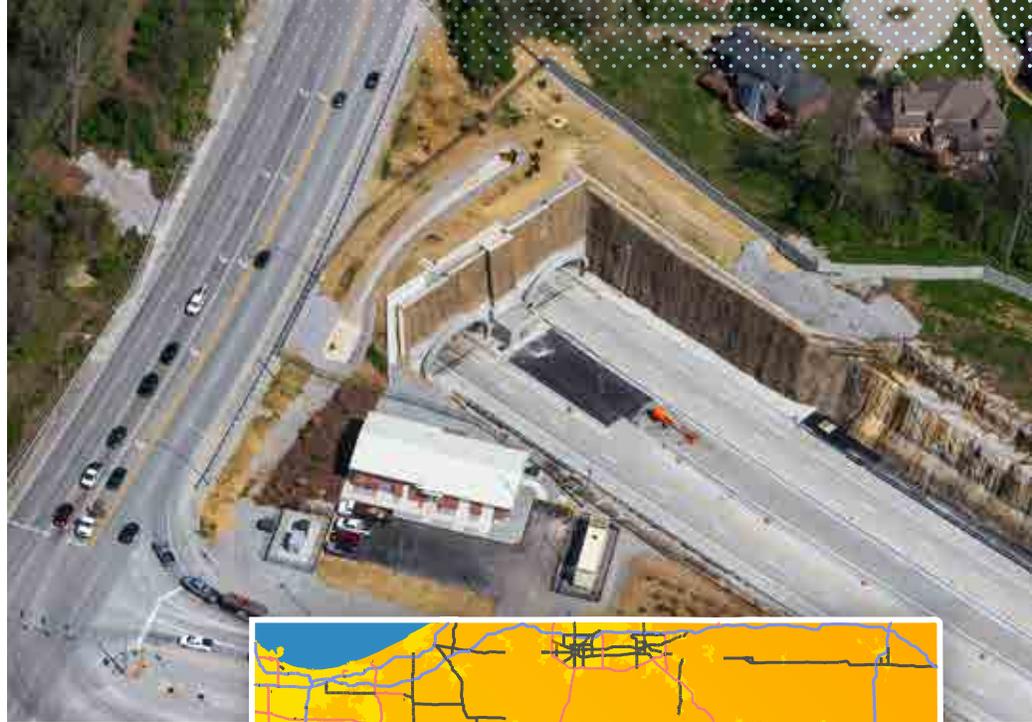
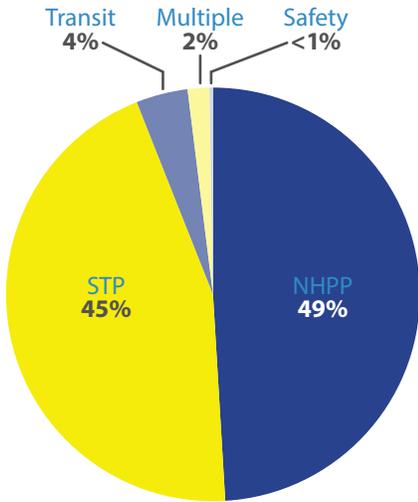
Every year, INDOT updates its four-year State Transportation Improvement Program (STIP), which identifies the funding and timing of the state's transportation projects by fiscal year. The current 2018-2021 STIP identifies more than \$4.4 billion in projects. It lists state and local projects that use either Federal highway and/or transit monies or State transportation funds only.

The STIP categorizes projects and programs into more than 100 work types, such as street and highway, passenger rail, freight, public transit, and bicycle and pedestrian—each with a funding allocation. Based on an analysis of the 2018-2021 STIP, there are generally nine major project types. Nearly two-thirds of the \$4.4 billion four-year program is allocated to reconstructing and maintaining INDOT's current pavement and bridge infrastructure. Other significant funding goes towards these project types:

- Roadway capacity and intersections
- Safety, intelligent transportation systems, and other (e.g., access control, environmental projects, and rest area improvements)
- Transit
- Bicycle and pedestrian



Breakdown of STIP Project Costs by Federal Category, 2018-2021



Federal Funding Programs

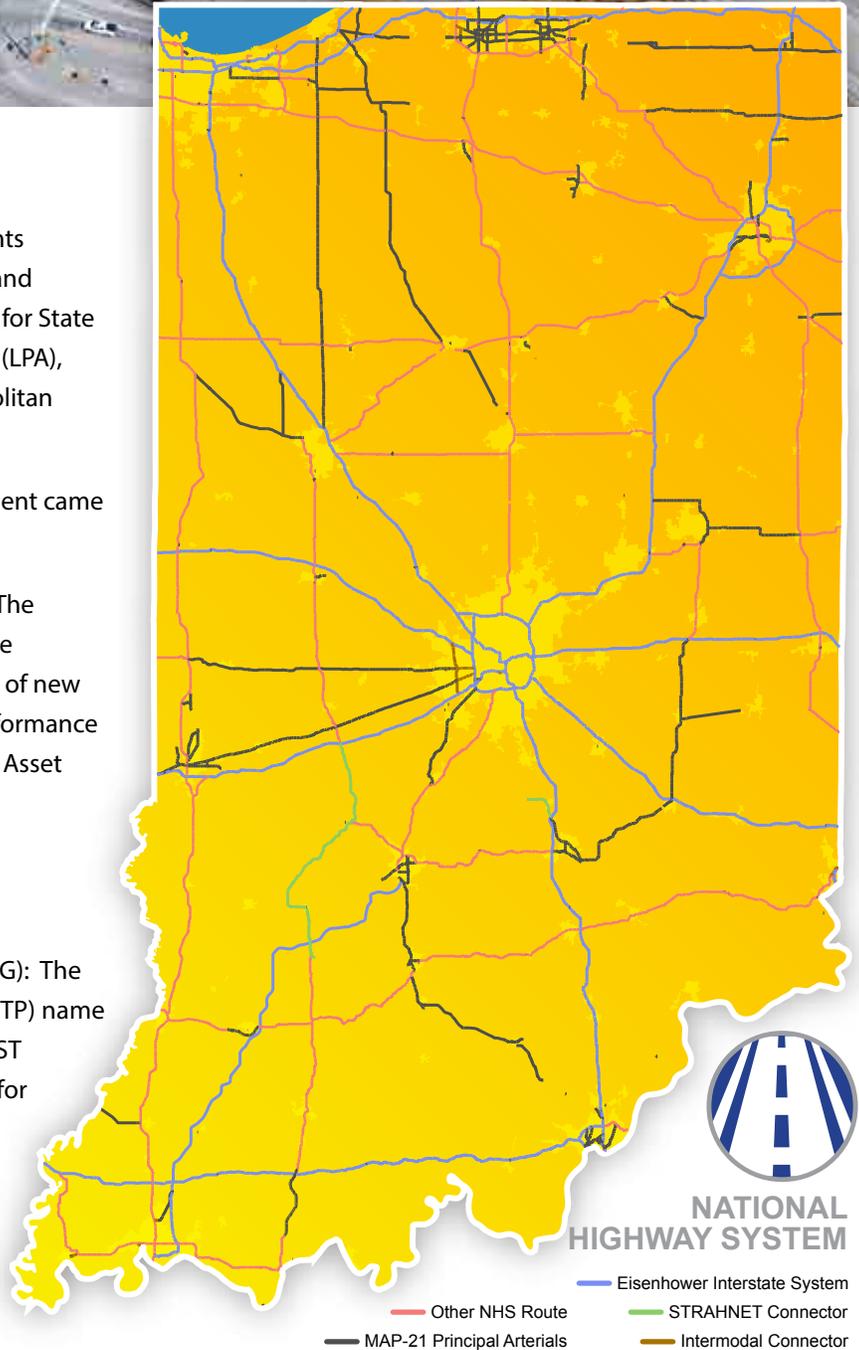
INDOT shares Federal funds with local governments in Indiana for transportation projects, programs, and operations. The Federal funds are split 75 percent for State projects and 25 percent for Local Public Agencies (LPA), which consists of local governments and Metropolitan Planning Organizations (MPOs).

The majority of INDOT's 2017 Federal apportionment came from the following programs.

National Highway Performance Program (NHPP): The NHPP provides support for the maintenance of the National Highway System (NHS), the construction of new facilities on the NHS, and the achievement of performance targets established under INDOT's Transportation Asset Management Plan for the NHS.

In 2017, INDOT's NHPP apportionment was \$533.3 million.

Surface Transportation Block Grant Program (STBG): The long-standing Surface Transportation Program (STP) name was changed to STBG with the passage of the FAST Act. The STBG provides a flexible funding source for use by State and local transportation decision-makers. The STBG funds can be used for a range of Federal-aid roadway projects, bridges on any public road, bicycle and pedestrian facilities, and public transit capital projects.



INDOT also uses a portion of its STBG funding for Transportation Alternatives (e.g., bicycle and pedestrian), environmental, historical, and Americans with Disabilities Act (ADA) improvements. Funding for these project types previously came from a separate Federal funding program called Transportation Alternatives Program (TAP). There are additional INDOT set-asides from the STBG funds for State Planning and Research and for bridges not on Federal-aid highways.

In 2017, INDOT's STBG apportionment was \$267.1 million.

Highway Safety Improvement Program (HSIP): The purpose of the HSIP is to achieve a significant reduction in fatal and serious injury crashes on all public roads, not just State-owned roads. The HSIP emphasizes a planning process based on the Strategic Highway Safety Plan (SHSP), which all states must develop. The SHSP should identify key safety issues, prioritize problem areas, and determine a performance-based approach to implementation. Another component of the HSIP is the Railroad-Highway Crossings Program. INDOT has a Highway-Rail Grade Crossing Safety Action Plan (2012) to address issues related to this program.

In 2017, INDOT's HSIP apportionment was \$52.7 million.

Congestion Mitigation and Air Quality (CMAQ): The CMAQ program provides funds to State and local governments to implement a range of transportation projects and programs (1) to help meet Clean Air Act requirements, (2) to reduce congestion, and (3) to improve air quality for areas that do not meet the National Ambient Air Quality Standards for ozone, carbon monoxide, or particulate matter (nonattainment areas) and for former nonattainment areas that are now in compliance (maintenance areas).

In 2017, INDOT's CMAQ apportionment was \$46.7 million.

Federal Transit Administration Programs: Indiana receives Federal Transit Administration (FTA) funding for several different transit programs.

Section 5307 – Urbanized Area Formula: This program provides grants to Urbanized Areas (UZA) for public transportation capital, planning, job access and reverse commute projects, as well as operating expenses in certain circumstances.

Section 5309 – Fixed Guideway Capital Investment: This program provides grants for new and expanded rail, bus



rapid transit, and ferry systems that reflect local priorities to improve transportation options in key corridors.

Section 5310 – Enhanced Mobility of Seniors and Individuals with Disabilities: This program is intended to serve the special needs of transit-dependent populations, such as seniors and persons with disabilities, by providing ADA complementary paratransit services.

Section 5311 – Formula Grants for Rural Areas: This program provides capital, planning, and operating assistance to states to support public transportation in rural areas with populations less than 50,000.

Section 5337 – State of Good Repair: A new formula-based program dedicated to repair and upgrade the nation’s rail transit and high-intensity motor bus systems that use high-occupancy vehicle lanes, including bus rapid transit (BRT).

Section 5339 – Bus and Bus Facilities: Provides capital funding to replace, rehabilitate and purchase buses and related equipment and to construct bus-related facilities.

In 2017, Indiana’s FTA programs apportionment was \$144.2 million.

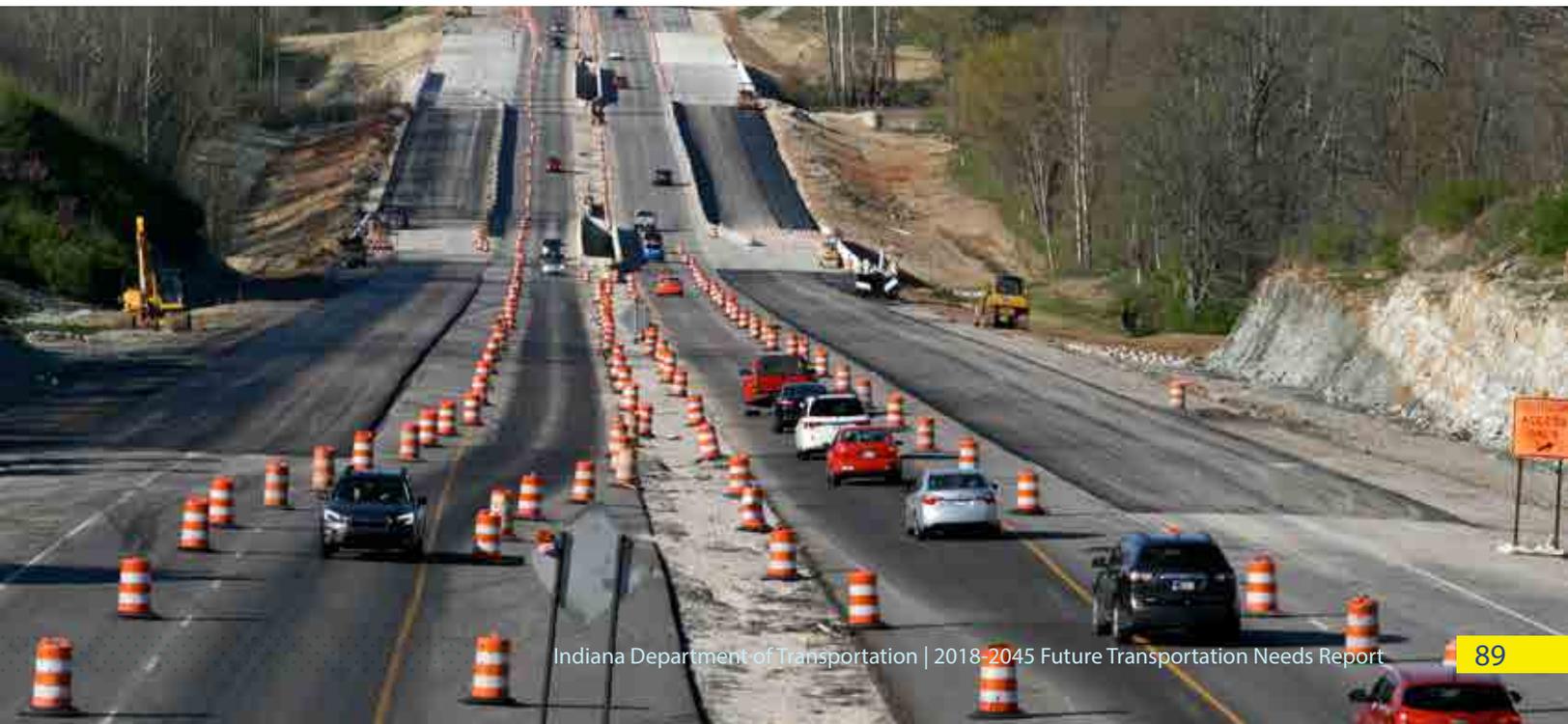
Federal Transportation Grant Programs: There are several Federal transportation grants that Indiana competes for to gain additional transportation funds. One key Federal grant program is the Better Utilizing Investments to Leverage Development Transportation Discretionary (BUILD) program. This program awards funds for investments on a competitive basis to projects

that will have a significant local or regional impact, including road, rail, transit and port projects that achieve national transportation objectives. Indiana was awarded \$40 million in 2018 BUILD grant monies for Interstate 65 expansion projects. A second key Federal program is the Infrastructure for Rebuilding America (INFRA) discretionary grant program. Projects eligible for the INFRA program are those that help rebuild infrastructure, providing direct Federal funding with the aim of leverage state, local, and private partner investments.

State Funding Programs

INDOT funds the maintenance and construction of roads and bridges on the State system through a combination of Federal and State funds. State revenue sources have traditionally included: fuel tax, vehicle and driver tax, sales tax, toll and user fees, and other miscellaneous fees. The Next Level Roads program, created in 2017 by the passage of the House Enrolled Act (HEA) 1002, is a five-year, \$4.7 billion road maintenance and construction plan. It raised the gas tax by 10 cents a gallon and increased special fuel and motor carrier surcharges. As a result, the Next Level Roads plan includes sufficient funding to meet the 20-year pavement and bridge needs identified in the Transportation Asset Management Plan and provides an additional \$342 million per year for local roads by 2024.

The Local TRAX program provides grants to local municipalities for railroad safety improvements for locations where local roads intersect railroads. Similar to the Next Level Roads program, Local TRAX was funded through HEA 1002. INDOT aims to partner with local



communities, businesses, and railroads to enhance performance with railroad grade separation (overpasses) and improve safety at-grade rail crossings. With an anticipated funding level of \$125 million, the projects from Local TRAX should be let by 2022 and are funded with 80 percent state funds and a 20 percent local match. INDOT will manage all Local TRAX projects for local jurisdictions.

The Community Crossings Matching Grant Program provides funding to cities, towns, and counties to fund bridge and roadway construction projects. Eligible local projects include road/bridge preservation, road reconstruction, small structure replacements, and ADA sidewalk improvements tied to road improvements.

The Public Mass Transportation Fund (PMTF) receives revenue from the State's General Fund. These funds are allocated using a performance-based formula, which looks at system operating expenses, passenger trips, total vehicle miles, and locally-derived income data.

The Commuter Rail Service Fund (CRSF) receives revenue from a small portion of Indiana general sales

and use tax. These funds are distributed to commuter transportation districts for maintenance, improvement, and operations of commuter rail service.

The Electric Rail Service Fund (ERSF) is a special state fund generated from property tax on a railroad company's distributable property that provides service with a commuter transportation district. These funds are used in commuter transportation districts that have most of their service powered by electricity. Currently, all funds go to the Northern Indiana Commuter Transportation District (NICTD), the only entity presently eligible for these funds.

The Next Level Connections initiative was announced in September 2018. Program revenues are coming from an agreement with the toll concessionaire. The increased revenues are from adjusting toll rates for heavy commercial vehicles so they are more consistent with rates charged by other states. Total revenues are \$1 billion, with \$400M received in 2018 and \$300M received in both 2019 and 2020.



The Next Level Connections will provide sufficient funding for programmed constructions projects along the Indiana Toll Road. This will free up state highway funding and allow INDOT to program the following projects:

- \$90M on trails
- \$600M to accelerate construction of I-69, Section 6
- \$190M for US 31 and US 20 projects
- \$20M for a range of other programs, including INDOT operations, attracting international direct flights to the Indianapolis airport, port development, and northwest Indiana rail planning.

In addition to \$900M in transportation funding, the Next Level Connections provides \$100M for broadband access to unserved and underserved areas of the state.

Anticipated Future Funding Levels

An important part of the LRTP is to look ahead and project future anticipated transportation funding levels. Transportation financial projections for INDOT are based on the current STIP and Next Level Roads program. Projections assume that Federal revenues do not change after 2022, that the Next Level Roads revenues do not change through 2024, and state revenues do not change after 2024.

INDOT Anticipated Funding Levels by Funding Category, 2018-2045, in Future Year Dollars

STIP FUNDING CATEGORY	CURRENT STIP				PROJECTION YEARS			
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY2025-2045*
State Federal-aid FHWA funds	\$786,700,000	\$799,300,000	\$813,500,000	\$808,300,000	\$808,300,000	\$808,300,000	\$808,300,000	\$808,300,000
Earmarks State	\$800,000	\$169,281	\$0	\$0	\$242,320	\$242,320	\$242,320	\$242,320
Local Federal-aid FHWA funds	\$246,900,000	\$252,500,000	\$276,633,333	\$252,500,000	\$252,500,000	\$252,500,000	\$252,500,000	\$252,500,000
Local Federal-aid FHWA Earmarks	\$10,788,764	\$1,862,263	\$2,205,934	\$7,557	\$0	\$0	\$0	\$0
Subtotal of Federal-aid FHWA funds =	\$1,045,188,764	\$1,053,831,544	\$1,092,339,267	\$1,060,807,557	\$1,061,042,320	\$1,061,042,320	\$1,061,042,320	\$1,061,042,320
Subtotal of Federal-aid FTA funds =	\$22,750,000	\$22,750,000	\$22,750,000	\$22,750,000	\$22,750,000	\$22,750,000	\$22,750,000	\$22,750,000
State Highway Funds	\$1,481,700,000	\$1,051,500,000	\$1,136,400,000	\$1,244,700,000	\$1,332,700,000	\$1,413,700,000	\$1,489,700,000	\$1,489,700,000
State Highway Road Construction Improvement Fund	\$70,000,000	\$70,000,000	\$70,000,000	\$70,000,000	\$70,000,000	\$70,000,000	\$70,000,000	\$70,000,000
Crossroads Fund	\$38,400,000	\$37,900,000	\$37,400,000	\$39,400,000	\$39,400,000	\$39,400,000	\$39,400,000	\$39,400,000
Next Level Connections	\$400,000,000	\$300,000,000	\$300,000,000	\$0	\$0	\$0	\$0	\$0
Operating Budget	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Toll Road Lease Proceeds	\$41,400,000	\$1,000,000	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal of State funds =	\$2,031,500,000	\$1,460,400,000	\$1,543,800,000	\$1,354,100,000	\$1,442,100,000	\$1,523,100,000	\$1,599,100,000	\$1,599,100,000
Subtotal of Local Highway funds =	\$64,422,191	\$63,590,566	\$69,709,817	\$63,126,889	\$63,126,889	\$63,126,889	\$63,126,889	\$63,126,889
Total of All Available Resources =	\$3,163,860,955	\$2,600,572,110	\$2,728,599,084	\$2,500,784,446	\$2,589,019,209	\$2,670,019,209	\$2,746,019,209	\$2,746,019,209

*Each Year



9 summary & implementation

A sound approach to plan implementation will add value to Indiana's transportation planning efforts, stakeholder partnerships, and public involvement practices.

Implementing policies and strategies proposed in this plan will best position INDOT to transition to more data-driven and performance-based decision-making to address future transportation needs in Indiana. This chapter defines specific strategic actions and clarifies roles and responsibilities for implementing this LRTP.

The background of the page features a faded, grayscale image of the Indiana State Capitol building, showing its prominent dome and classical architectural details. The image is overlaid with a light blue dot grid pattern.

ROADMAP FOR THE NEXT 10 TO 25 YEARS

Overall Investment Strategy

Transportation is a significant investment in Indiana's future. Without the development of an investment approach, the rising costs to preserve and expand Indiana's transportation infrastructure (i.e., pavement and bridges), in addition to travel demand growth, will exceed INDOT's ability to provide acceptable mobility and connectivity among all modes.

INDOT's Next Level Connections and Next Level Roads plans provide a foundation for the investment strategy of this LRTP. The Next Level Connections program includes a new \$1 billion investment in infrastructure projects, possible due to an increase in toll rates for heavy vehicles by 35 percent. The Next Level Roads plan dedicates more than \$30 billion over the next 20 years to improving the conditions of existing state and local roads and bridges.

INDOT's overall investment framework will be based on continual coordination with planning partners and other stakeholders. This would ensure consistency in strategic direction and priorities. To successfully deliver the LRTP vision, INDOT will apply appropriate processes and tools, such as performance measures and targets, statewide

modal plans, and program initiatives. The implementation of the TAMP, including asset management principles, will enable INDOT to link policies with program decisions and align infrastructure needs with available funding and staff resources. These transportation needs, especially for additional capacity, reflect population and economic growth, development and travel patterns, and desirable system service levels. Over the long-term, INDOT will focus on modernization improvements to major corridors to address needs related to safety and corridor functions.

Through the annual STIP, INDOT will also continue to administer a variety of programs and appropriately allocate funds across all modes of transportation. However, the state legislature provides the funding and budgetary authority necessary for implementation of the STIP and LRTP. Financial stability and revenue support are implementation challenges. Additionally, significant competition exists for Federal and state transportation funds. Therefore, to pursue long-term, sustainable sources of revenue, INDOT will explore innovative funding options, such as further demand management strategy initiatives.

Strategic Actions

To help Indiana achieve its transportation goals and guide its investment decisions, INDOT has identified strategic actions to focus on for the next 10 years of plan implementation. INDOT incorporated actions from various modal plans, topic plans, and recent program initiatives, as well as stakeholder and public input.

Looking below and on the following page, INDOT has identified six “Goals” that can be seen in the lefthand column of the strategic actions table. These goals are not prioritized by any ranking system:

- (1) Safe & Secure Travel
- (2) System Preservation
- (3) Economic Competitiveness & Quality of Life
- (4) Multimodal Mobility
- (5) Environmental Responsibility
- (6) New Technology and Advancements

Each “Goal” is accompanied by a list of various “Strategic Actions” that INDOT has developed for future operations

Performance Measures

In addition to policies and strategic actions, the performance measures serve to inform the investment decisions on Indiana’s future multimodal transportation system. In general, performance measures must monitor progress towards goals by using available data that is trackable over time. The TAMP provides such valuable data on the condition of Indiana’s transportation infrastructure assets, including service-level needs and demands on the system. This essential management tool helps to achieve an understanding to improve system performance, especially in the areas of safety, preservation, and mobility.

INDOT will define appropriate milestones to communicate plan implementation progress, similarly to the reporting mechanisms established by the Next Level Roads Plan for Indiana’s legislators. This will help INDOT to ultimately validate the LRTP’s proposed strategic goals and objectives over time and to refine its performance measures, outlined in Chapter 7, to comply with national transportation performance measurement requirements.

GOAL	STRATEGIC ACTION
Safe & Secure Travel	<ul style="list-style-type: none"> • Prioritize the Strategic Highway Safety Plan and Highway Safety Improvement Program in project planning and design processes • Emphasize bike-ped safety through education campaigns and design modifications • Facilitate selection of pedestrian crossing treatments at controlled and uncontrolled locations • Support General Assembly efforts to enact tougher laws that address distracted driving • Integrate pedestrian and bicycle accommodations into projects, where feasible • Implement mid-block crossings on state-owned roads in urban areas
System Preservation	<ul style="list-style-type: none"> • Incorporate condition information from the Transportation Asset Management Plan in project programming and decision-making • Prioritize state-of-good repairs that preserve transportation system assets (i.e., pavement and bridges) • Store, maintain, edit, and report on capital assets

GOAL	STRATEGIC ACTION
Economic Competitiveness and Quality of Life	<ul style="list-style-type: none"> • Encourage future development, including opportunities for public/private partnerships • Foster and promote development consistent with key economic drivers and initiatives including “Next Level Connections” • Raise awareness of freight’s value to Indiana’s economy and the related impacts on its transportation infrastructure • Expand trail development to increase tourism, health and wellness, and access to recreational opportunities • Integrate training and job development opportunities for businesses and individuals seeking transportation career training • Incorporate follow-up actions from Complete Streets peer review
Multimodal Mobility	<ul style="list-style-type: none"> • Optimize and enhance intermodal connections • Improve roadway and sidewalk surfaces for motorists, bicyclists, and pedestrians • Coordinate with local/county governments on traffic signal management and operations • Support community-based ride-share services • Partner with private sector freight carriers to investigate strategies for improving modal efficiency • Support the Indiana Bicycle Trails Task Force’s efforts to improve connectivity among statewide bike trails • Preserve the integrity of airport infrastructure, facilities, and operations • Advocate for additional funding for Indiana’s ports, locks, and dams
Environmental Responsibility	<ul style="list-style-type: none"> • Assess weather-related vulnerability in statewide and regional planning • Support the use of alternative fuels and related equipment and facilities • Set aside land for conservation purposes and opportunities for recreation and wildlife preservation • Establish and follow development standards that include socioeconomic and environmental considerations
New Technology and Advancements	<ul style="list-style-type: none"> • Support education and research programs in logistics, innovation and technology, and related areas • Investigate opportunities to incorporate technology and ITS across Indiana • Continue to plan for the arrival of autonomous/connected vehicles and lead research with higher education institutes regarding technology, modeling, and CV / AV • Implement operation efficiencies (such as signal timing) into roadway projects

ROLE OF INDOT IN PLAN IMPLEMENTATION

INDOT accepts responsibility for achieving plan implementation and preserving the value of Indiana's transportation system for current and future generations. The following activities is a critical responsibility for INDOT.

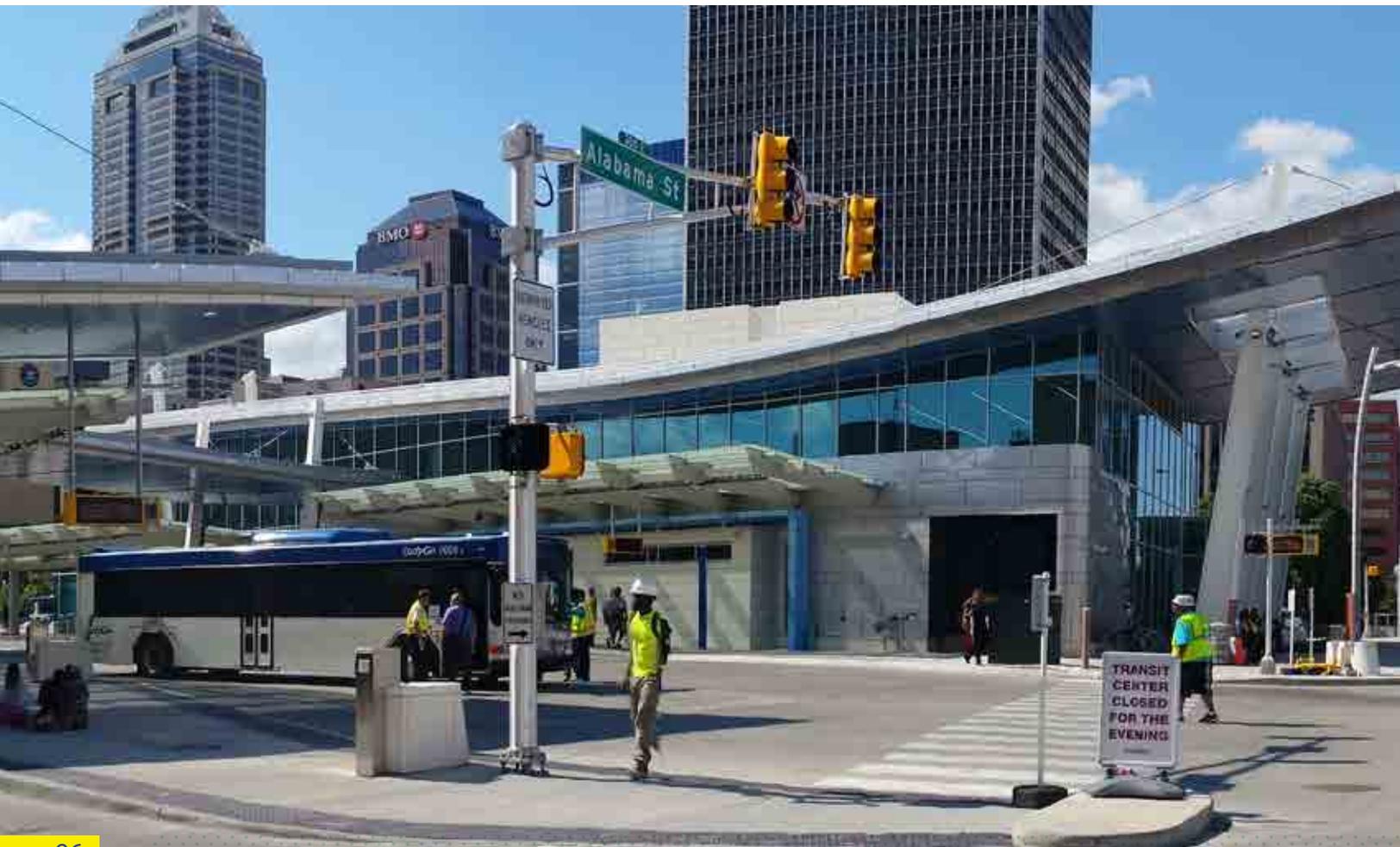
Development of statewide modal and work plans: INDOT will carry out the LRTP policies and investment strategies through its various modal/topic plans, including the TAMP and Strategic Highway Safety Plan.

Broader oversight and management: INDOT will take a comprehensive system level view of planning, programming, and project delivery issues. INDOT will also integrate LRTP policy commitments into regional and corridor-level day-to-day activities.

Next Level Connections and Next Level Roads Plan: INDOT's support and implementation of these initiatives will provide much-needed resources for various short- and long-term needs, such as speeding up major road and

bridge improvements, improving Indiana's rail system, attracting more nonstop international flights, continuing work on a potential fourth port in Lawrenceburg, and pursuing West Lake rail service and South Shore double-tracking in Northwest Indiana.

Ongoing and continuous coordination: INDOT is responsible for developing and distributing policies and decisions at the state level that involve consultations among air, rail, public transportation, trucking, and marine interests and business areas. Therefore, INDOT will continue to maintain and enhance working relationships with various stakeholders, including its internal modal divisions, Federal agencies, MPOs and RPOs, local governments, tribes, the private sector, and operators. INDOT will also participate in local planning processes to help ensure better transportation coordination.





SHARED ROLES OF INDOT, PLANNING PARTNERS, AND STAKEHOLDERS IN PLAN IMPLEMENTATION

Collaborate regularly: No single entity, including INDOT, has direct jurisdiction over the entire transportation system. Authority and responsibility are disbursed among state and Federal agencies (e.g., FHWA and FTA), MPOs and RPOs, and local governments. Plan implementation is dependent on the coordination and cooperation of these entities.

Monitor plan implementation and measure system performance: INDOT will lead its planning partners to track and expand the use of consistent performance measures and targets; to evaluate the progress toward efficiently and effectively meeting its goals and objectives; and, to potentially consider refinements in strategic actions and other priorities, if necessary, as a result of emerging or outstanding issues. Monitoring and reporting on Federally required performance measures and those developed for the Next Level Roads plan will be an important activity.

Project programming: Planning partners and stakeholders will provide significant input into the selection of STIP

projects and work to localize statewide short- and long-term planning priorities.

Address funding gap: At the regional level, cities and MPOs will engage in early coordination efforts to identify funding needs and available resources. At the state level, INDOT will explore innovative funding options (e.g., financing partnerships between public and private sectors). INDOT will also work with neighboring states to approach Congress for additional transportation investment funds.

Plan integration: Local governments and MPO partners will carry out and align regional and local transportation-related plans to reflect the policies and investment strategies set forth in this LRTP. Each partner should refine and, where needed, update or replace existing processes for consistency with statewide goals.

PUBLIC INVOLVEMENT

Effective public engagement is particularly important since full implementation of the LRTP relies on public support. The focus of public outreach will be on key transportation issues related to infrastructure and services, and to review corridor- or project-level priorities for all modes. Public involvement activities will be guided by the Public Involvement Policies and Procedures Manual (2012). The manual is intended to provide the public with information about INDOT's commitment to public involvement, in addition to how and where the public can meaningfully participate in the transportation planning process.





appendix

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Transportation Performance Management and Reporting	115-122

INDOT LRTP GLOSSARY

2015 FAST Act – 2015 Fixing America’s Surface Transportation Act

ACS – American Community Survey

ADA – Americans with Disabilities Act

BRT – Bus Rapid Transit

CFR – US Code of Federal Regulation

CIP – Airport Capital Improvement Plan

CMAQ – Congestion Mitigation and Air Quality

CN – Canadian National

CNG – Compressed Natural Gas

CRSF – Commuter Rail Service Fund

Coach USA – Megabus

DNR – Indiana Department of Natural Resources

EPA – Environmental Protection Agency

ERSF – Electric Rail Service Fund

EVV – Evansville Regional Airport

FHWA – Federal Highway Administration

FMCSA – Federal Motor Carrier Safety Administration

FRA – Federal Railroad Administration

FTA – Federal Transit Administration

FWA – Fort Wayne International Airport

HEA – House Enrolled Act

HPMS – Highway Performance Monitoring System

HSIP – Highway Safety Improvement Program

IEDC – Indiana Economic Development Corporation

IND – Indianapolis International Airport

INDOT – Indiana Department of Transportation

INRD – Indiana Rail Road

ISTDM – Indiana Statewide Travel Demand Model

ITRCC – Indiana Toll Road Concession Company

ITS – Intelligent Transportation Systems

IndyGo – Indianapolis Public Transportation Corporation

KIPDA – Kentuckiana Regional Planning and Development Agency

LAF – Purdue Regional Airport

LEP – Limited English Proficiency

LOTTR – Level of Travel Time Reliability

LRTP – Long Range Transportation Plan

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

MPO – Metropolitan Planning Organization

NBI – National Bridge Inventory

NEPA – National Environmental Policy Act

NHPP – National Highway Performance Program

NHS – National Highway System

NICTD – Northern Indiana Commuter Transportation District

NIPRA – Northern Indiana Passenger Rail Association

NPMRDS – National Performance Measure Records Data Set

OKI – Ohio-Kentucky-Indiana Regional Council of Governments

OMB – Office of Management and Budget

PHED – Peak Hour Excessive Delay

PMTF – Public Mass Transportation Fund

RPO – Regional Planning Organization

SBN – South Bend International Airport

SOV – Single Occupant Vehicle

STBG – Surface Transportation Block Grant

STIP – State Transportation Improvement Program

TAMP – Transportation Asset Management Plan

TTTR – Truck Travel Time Reliability

UAV – Unmanned Aerial Vehicles

USACE – U.S. Army Corps of Engineers

UZA – Urbanized Areas

VMT – Vehicle Miles Traveled

Long-Range Transportation Plan **telephone** **TOWN HALL**



The Indiana Department of Transportation (INDOT) held its first ever telephone town hall on November 28, 2018, at 7:00 p.m. to discuss the Long Range Transportation Plan (LRTP) update. The telephone town hall was an informative and interactive event, where State transportation system topics were discussed in a format resembling that of a radio call-in show.

Several transportation topics were covered during the telephone town hall, including:



- What a LRTP is
- What's included in Indiana's LRTP
- Why INDOT is updating the LRTP
- Public involvement that has been completed so far
- How to get involved in the LRTP planning process
- Why public involvement is important to the LRTP planning process
- Incorporation of bicycle/pedestrian and public transportation into the LRTP
- Asset management planning
- Emerging trends, specifically connected and autonomous vehicles
- Funding sources and the dispersion of funding across the various modes of transportation
- Inclusion of persons with disabilities in the LRTP planning process
- Addressing the need to eliminate fossil fuels in the LRTP

TELEPHONE TOWN HALL STATS

53  People pre-registered

23  Accepted when called

5  People spoke on air

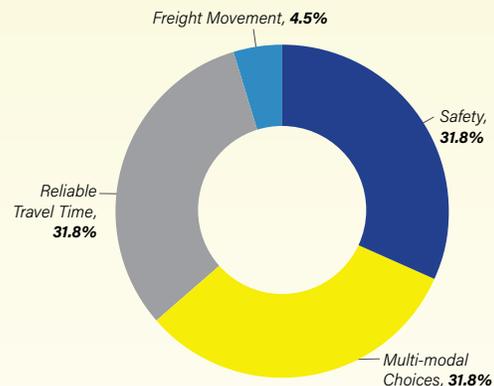
24  Called in through toll-free number

Audio clips of the Telephone Town Hall are available at <https://www.in.gov/indot/3714.htm>

POLL QUESTIONS

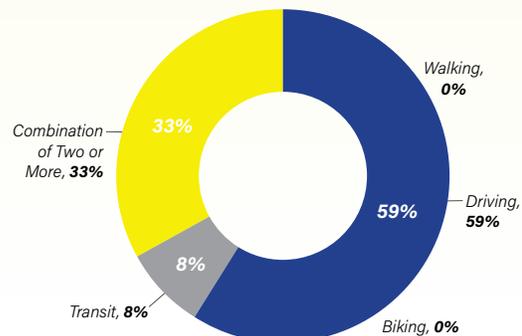
Of the following transportation issues/needs in Indiana, what would you consider the highest priority?

- Safety
- Multi-modal choices (driving, biking, walking, transit, etc)
- Reliable travel time
- Freight movement
- Access to opportunities



What mode of transportation do you use the most daily?

- Driving
- Biking
- Transit
- A combination of two or more of the above



PUBLIC INVOLVEMENT - TELEPHONE TOWN HALL

Subject: INDOT LRTP Telephone Town Hall audio now available



INDIANA DEPARTMENT OF TRANSPORTATION

INDOT held its first ever telephone town hall on Wednesday, November 28th, 2018 regarding the update to our Long Range Transportation Plan (LRTP). The telephone town hall was an informative and interactive event where State transportation system topics were discussed in a format resembling that of a radio call-in show.

An event summary is attached and audio of the one hour session is available on-line via the LRTP page <https://www.in.gov/indot/3714.htm>.

We invite you to review the LRTP Executive Summary and to provide input. The draft LRTP document is anticipated to be released for public review soon. INDOT anticipates adoption of the plan early next year.

Have a Safe and Wonderful Holiday Season.

Rickie Clark, Program Manager MBA
Indiana Department of Transportation
Office of Public Involvement / Central Office Communications Division
100 North Senate Avenue, Room N642
Indianapolis, Indiana 46204
Phone: (317) 232-6601
Email: rclark@indot.in.gov



PUBLIC INVOLVEMENT - OUTREACH MEETINGS 2019

INDOT hosting public open houses regarding the Statewide Transportation Improvement Program

Wednesday, March 27, 2019
5:00 PM - 7:00 PM (ET)

The Indiana Department of Transportation (INDOT) is hosting public open houses to solicit input regarding the Statewide Transportation Improvement Program (STIP) - Agency initiatives and programs highlighted during interactive, informal and informative sessions

The Statewide Transportation Improvement Program (STIP) is a federally mandated four year funding and scheduling document for surface transportation projects in Indiana.

Project types involving pavement and bridge facilities, projects addressing safety, congestion, mobility and emergency response can be found in the STIP. In addition, this document includes investment in various modes of transportation including transit, pedestrian trails, and bicycle facilities.

Only projects in which construction and operating funds can reasonably be expected to be available, are included in the STIP. The STIP is updated every two years.

States are required to develop STIPs and do so in coordination with:

- The Federal Highway Administration
- The Federal Transit Administration
- Metropolitan Planning Organizations (MPOs)
- Local Governments in Non-Metropolitan Areas

The STIP document will cover fiscal years 2020 through 2024 (INDOT fiscal year is July 1 thru June 30). More information coming soon regarding viewing the STIP on-line via the

INDOT website, ways to submit comments, the public comment period and related next steps prior to document approval.

As part of INDOT's commitment to public outreach and engagement, 12 public open houses are scheduled this spring to raise awareness of the STIP, its process and to solicit input from our customers as we meet with communities around the state.

During the open houses, INDOT team members will be available to engage in conversation, address questions and solicit input related to a variety of topics including project selection, multimodal, highway safety, economic opportunity, Americans with Disabilities (ADA) programs, Local Public Agency (LPA) programs, public involvement, district construction, maintenance, traffic operations and transportation planning.

Speaking of planning, INDOT is updating its long-range plan for improving Indiana's Transportation System.

INDOT's Long Range Plan establishes a vision for future transportation investments, examining critical trends, challenges and future-year needs to provide Indiana citizens (Hoosiers) the highest level of safety and mobility possible to meet the needs of economic development and quality of life.

The public open houses are opportunities for INDOT to meet with transportation stakeholders in an informal open house setting where discussions and conversations are welcomed and greatly appreciated.

PUBLIC INVOLVEMENT - OUTREACH MEETINGS 2019

JOIN THE CONVERSATION – PLAN TO ATTEND ONE OF THE INDOT OPEN HOUSES THIS SPRING

Wednesday, March 27th

Heritage Christian High School
6401 East 75th Street
Indianapolis, IN 46250
5pm to 7pm (local time)

Thursday, April 4th

Winchester Community High School
700 North Union Street
Winchester, IN 47394
5pm to 7pm (local time)

Wednesday, April 10th

Harrison Hill Elementary School
355 Cornell Circle
Fort Wayne, IN 46807
5pm to 7pm (local time)

Thursday, April 11th

Rochester High School
1 Zebra Lane
Rochester, IN 46975
5pm to 7pm (local time)

Wednesday, April 24th

Benjamin Bosse High School
1300 Washington Avenue
Evansville, IN 47714
5pm to 7pm (local time)

Thursday, April 25th

Paoli Jr. / Sr. High School
501 South Elm Street
Paoli, IN 47454
5pm to 7pm (local time)

Tuesday, April 30th

South Vermillion High School
770 West Wildcat Drive
Clinton, IN 47842
5pm to 7pm (local time)

Wednesday, May 1st

Northwood High School
1300 North Main Street
Nappanee, IN 46550
5pm to 7pm (local time)

Wednesday, May 8th

Hammond High School
5926 Calumet Avenue
Hammond, IN 46320
5pm to 7pm (local time)

Thursday, May 9th

Oakland High School
1100 Elizabeth Street
Lafayette, IN 47904
5pm to 7pm (local time)

Wednesday, May 15th

Columbus East High School
230 South Marr Road
Columbus, IN 47201
5pm to 7pm (local time)

Thursday, May 16th

Lawrenceburg High School
100 Tiger Boulevard
Lawrenceburg, IN 47025
5pm to 7pm (local time)

In accordance with the Americans with Disabilities Act (ADA), persons with disabilities requiring assistance and/or accommodation related to accessibility to program information and participation during the open house event, are encouraged to contact INDOT's Office of Public Involvement (317) 232-6601 rclark@indot.in.gov. Persons of Limited English Proficiency (LEP) requiring assistance related to program information and participation during the open house event are also encouraged to contact the Office of Public Involvement. Persons representing an ADA and/or LEP population are encouraged to contact INDOT with regard to coordinating services such as language, visual and audio interpretation services.

PUBLIC INVOLVEMENT - OUTREACH MEETINGS 2018

"Transportation Talk" - INDOT Open Houses June 2018

Do you enjoy talking transportation? Do you keep a sharp eye on transportation related trends and innovations? Do you have thoughts and ideas you'd like to share with Indiana's transportation agency about the future of transportation in our state? If so, the Indiana Department of Transportation would like to invite you to an informative open house session, where transportation-related topics will be informally discussed through old fashioned, one-on-one conversations.

INDOT seeks to have a conversation with Indiana communities regarding the current status and future development of transportation in Indiana, and our programs and initiatives. As a conversation starter, we invite the public to meet for "Transportation Talk", an informal open house. INDOT team members will be available to talk about their respective programs while addressing questions from the public and soliciting input. INDOT will host six "Transportation Talk" events in June at locations throughout west-central, southeastern and east central Indiana.

JOIN THE CONVERSATION

"Transportation Talk" – INDOT Open Houses June 2018

<p>Crawfordsville High School Wednesday, June 13 5 – 7 p.m. (local time) One Athenian Drive Crawfordsville, IN 47933</p>	<p>Terre Haute South Vigo High School Thursday, June 14 5 – 7 p.m. (local time) 3737 South 7th Street Terre Haute, IN 47802</p>
<p>Columbus East High School Wednesday, June 20 5 – 7 p.m. (local time) 230 South Marr Road Columbus, IN 47201</p>	<p>Lawrenceburg High School Thursday, June 21 5 – 7 p.m. (local time) 100 Tiger Boulevard Lawrenceburg, IN 47205</p>
<p>Ivy Tech (Main Indy Campus) Illinois Fall Creek Center Monday, June 25 5 – 7 p.m. (local time) 2535 North Capital Avenue Indianapolis, IN 46208</p>	<p>Yorktown High School Tuesday, June 26 5 – 7 p.m. (local time) 1100 South Tiger Drive Yorktown, IN 47396</p>

Long-Range Planning

INDOT is updating its Long-Range Transportation Plan (LRTP) for improving the State's transportation system and we want your input. Visit <https://www.in.gov/indot/3714.htm> to learn more about the LRTP and how to get involved.

More about these events

PUBLIC INVOLVEMENT - OUTREACH MEETINGS 2018

The “Transportation Talk” sessions will feature INDOT information stations focused on specific areas or initiatives. INDOT offices and departments scheduled to participate in the open house sessions are shown below:

<p>Transportation Planning – Future transportation needs, Long-Range Planning and Access Management</p> <p>Multi-Modal – Rail, Transit, Aviation and Freight</p>	<p>Economic Opportunity – Doing business with INDOT, DBE, MBE, WBE certification</p> <p>Transportation Services Call Center – Customer Service tools, toll-free number, self-service web portal and mobile applications</p>
<p>Environmental Services – Cultural Resources, Storm Water, Noise Abatement and Historic Structures</p> <p>Real Estate – Abstracting, Appraising, Buying and Relocation</p>	<p>Local Public Agency (LPA) – Federal-aid program for local transportation enhancement projects and the Community Crossings Program</p> <p>Bridge Program – Bridge design, types and maintenance program</p>
<p>Public Involvement – Requirements and responsibilities for public participation during the transportation decision-making process</p> <p>Talent Management – Recruitment and Employment Opportunities with INDOT</p> <p>ADA – INDOT’s Transition Plan, Community Advisory Working Group</p> <p>Environmental Justice (EJ) – Guidance and policy development</p>	<p>District Offices (INDOT Regional locations) – Project planning, development and coordination; construction and maintenance activities, traffic operations and preservation</p> <p>Statewide Transportation Improvement Program (STIP) – Four year planning document listing all projects expected to be funded during those four years; INDOT’s current STIP is for FY 2018 through FY 2021</p>

In accordance with the Americans with Disabilities Act, persons with disabilities requiring assistance and/or accommodation related to accessibility to program information and participation during the open house event, are encouraged to contact INDOT’s Office of Public Involvement (317) 232-6601 rclark@indot.in.gov. Persons of Limited English Proficiency (LEP) requiring assistance related to program information and participation during the open house event are also encouraged to contact the Office of Public Involvement. Persons representing an ADA and/or LEP population are encouraged to contact INDOT with regard to coordinating services such as language, visual and audio interpretation services.

We encourage everyone to join the conversation and plan to attend one of INDOT’s “Transportation Talk” Open House sessions.

INDIANA DEPARTMENT OF TRANSPORTATION LONG RANGE TRANSPORTATION PLAN UPDATE

WHAT IS THE LONG RANGE TRANSPORTATION PLAN (LRTP)?

The LRTP is a federally mandated policy document that guides transportation decision-making and investments over the next 25 years. It establishes strategies and priorities for addressing Indiana's current and future mobility trends and needs. The LRTP is generally updated every five years or amended as required. This LRTP covers a planning horizon through 2045.

WHY DOES THE LRTP NEED AN UPDATE?

Over time, changes occur in land use development, federal legislation, economic conditions, and fiscal capacity and available funding sources for transportation maintenance and improvements. In addition, there are ongoing changes in population and employment, and travel and traffic patterns. Updating the LRTP is an important step toward reassessing the adequacy of the transportation system for the existing and future Indiana population and economy.

WHAT ARE THE KEY ISSUES ADDRESSED IN THE LRTP?

- Existing infrastructure in need of more investment
- Lack of efficient multimodal connections
- Unpredictability and uncertainty of transportation funding
- Traffic flow and congestion
- Demand is outpacing capacity
- Safe movement of persons and goods



WHERE TO FIND MORE INFORMATION ON THE LRTP?

The Draft LRTP will be made available for review on INDOT's website, <https://www.in.gov/indot/3714.htm>. The website will be updated with new information on the process, as it becomes available.



WHY PROVIDE YOUR INPUT AND IDEAS?

The quality of Indiana's transportation system has an effect on safety, mobility, efficiency, and quality of life, including how you live, work, and recreate. Your thoughts and ideas about the future of transportation in our state is very important. INDOT aims for the planning process to be cooperative and comprehensive by focusing on the interests of residents, business and community leaders, local jurisdictions, external partners, and other stakeholders.

WHERE TO SUBMIT WRITTEN COMMENTS?

Comments may be mailed to the attention of:

Jay Mitchell
 Technical Planning Section
 Indiana Department of Transportation
 100 N. Senate Avenue, Room N955
 Indianapolis, IN 46204

Comments may also be emailed directly to jaymitchell@indot.in.gov. Please include your name, address, and, if applicable, the company or organization that you represent.

TELEPHONE TOWN HALLS

INDOT will host live, interactive telephone town hall meetings this summer to talk about future transportation needs and long-range planning. Residents across Indiana will be called through an automated telephone system and connected to the meeting from the comfort of their own homes. Sign up and receive a call from INDOT the day of the meeting. You can just listen to the conversation or ask questions and give feedback.

WHEN WILL THE LRTP BE ADOPTED?



INDIANA DEPARTMENT OF TRANSPORTATION LONG RANGE TRANSPORTATION PLAN UPDATE

GOALS & OBJECTIVES

SAFE & SECURE TRAVEL

Move Indiana toward zero deaths and reduction of serious injuries by applying proven strategies and enhancing the safety and security of our transportation system for all users

- **Support Safety Policies and Laws:** Distracted Driving, Law Enforcement, Impaired Driving, Yield to Pedestrian Crossing, Share the Road and Bike Lane Awareness
- **Work Zone Safety Enhancements:** Enhance communication to travelers, enforcement, educational media, and implementing work zone development best practices
- **Address Complete Streets/ADA Needs:** Require all state roads in urban contexts to incorporate a Complete Streets component
- **Targeted Safety Investments and Strategies:** Intersection improvements, railroad crossing, enhancements, modernized signals, signage, lighting, tumble stripes, crosswalks, and other
- **System resiliency:** Reduce vulnerability to various threats and risks (e.g., severe weather, acts of terrorism and cyber-attacks) and ensure redundancy and reliability to meet essential travel needs
- **Implement the 4Es of Safety:** Education, Enforcement, Engineering, and Emergency Responses



MULTIMODAL MOBILITY

Maximize the performance of our transportation system, ensuring efficient movement of people, goods, and regional connectivity by enhancing access to different modes of transportation

- Work with locals to ensure connectivity of regions and economic centers by various modes of travel
- Enhanced Intermodal Connections (Rail-Yards, Marine Ports, Airports, and Public Transportation Facilities)
- Mitigate Surface Transportation Congestion and Enhance System Reliability
- Deploy strategic enhancements to Indiana's Statewide and Regional mobility corridors, including investments in ITS and modernized traffic signals on those corridor
- Evaluate and implement managed lanes and tolling options
- Expand rural segments of I-70 and I-65 from 4 to 6 lanes
- Upgrade rural segments of US 31 (SR 26 to US 30) and US 30 Corridor (SR 149 to I69)
- Support Non-Motorized Modes of Travel

SYSTEM PRESERVATION

Maintain our multimodal transportation system and infrastructure in a state of good repair

- **Roadway Asset Management:** Maximize the useful life of transportation assets while considering system performance, costs and impacts to the state's economy, environment and quality of life
- Incorporate asset management principles in capital, maintenance and operations decisions. Better align ownership and operations of state transportation assets with statewide, regional and local priorities
- **Transportation Demand Management:** Study demand management strategies such as congestion pricing for efficient use of existing transportation facilities, park and ride facilities in major metropolitan areas.
- **Local Corridor Consideration:** Work with locals in determining improvements to local corridors to minimize system added capacity needs and impacts to state facilities and allow for more efficient use of local and INDOT roadway facilities.



ENVIRONMENTAL RESPONSIBILITY

Minimize the potential impacts of the transportation system on the natural and human environment

- Proactive Extreme Weather Planning
- **Active Environmental Reviews:** Ensure all projects undergo timely and proper environmental reviews and follow the National Environmental Policy Act (NEPA) and State and Federal Statutes
- **Environmental Justice:** Communicate with affected historically disadvantaged and disenfranchised communities at the earliest possible point in project development, including state plan updates and project development.
- Encourage and support local smart growth initiatives to reduce future transportation infrastructure needs.
- **Improved Quality of Life:** Coordination and partnership with Indiana Health Department, Department of Natural Resources, Department of Energy Management, and local health program on transportation planning decision and stakeholder involvement.

ECONOMIC VITALITY

As "The Crossroads of America" enhance the competitiveness of Indiana's Economy through strategic transportation investments and reduced cost of transportation

- **Transportation Connectivity and Accessibility:** Provide urban and rural communities with an edge in competing for jobs and business locations; access to national and international trade markets; and connect people with economic opportunities
- **Project Selection:** Consider and report economic benefits such as job creation, job access, and economic savings in project selection scoring and infrastructure investment decision-making
- **Logistic Industry Coordination:** Coordinate infrastructure needs with freight carriers and trucking institutions; transportation partners in neighboring states; economic development agencies, local entities, MPOs, and other stakeholders.
- **Tourism Support:** Connect transportation to major tourism destinations



NEW TECHNOLOGY

Develop and deploy advanced transportation technologies and embrace a broad-based, comprehensive research program to plan for the future

- Consider the potential effects of new technology in future transportation decision-making and system demands; unmanned aerial vehicle (UAV) delivery services, online grocery shopping and delivery, integrated electronic payment, dynamic ride sharing programs, guided public transit systems, and more.
- Evaluate and deploy advanced technology throughout the INDOT process, including asset management, survey work, and construction project
- Evaluate delivery services impacts (parcels, use of UAVs, grocery delivery services) and anticipate the impact to travel demand
- Autonomous and Connected Vehicles



INDIANA DEPARTMENT OF TRANSPORTATION
LONG RANGE TRANSPORTATION PLAN UPDATE

PERFORMANCE-BASED PLANNING

WHY IS PERFORMANCE MANAGEMENT IMPORTANT?

- To ensure accountability and transparency
- To monitor various aspects of system and agency performance
- To influence more performance-based decision-making
- To optimize transportation investments
- To ensure preservation and most efficient use of existing transportation system

WHAT IS A PERFORMANCE MEASURE?

Specific performance measures are designed to be clear, quantifiable and easily verifiable metrics of how well INDOT is achieving their adopted goals and objectives, and which goals need additional emphasis or resources. Each objective is accompanied by a performance measure or collection of performance measures that track the effectiveness of LRTP strategies.

WHAT IS A PERFORMANCE TARGET?

Targets are set based on a desired change and an understanding of the resources required to achieve the target.

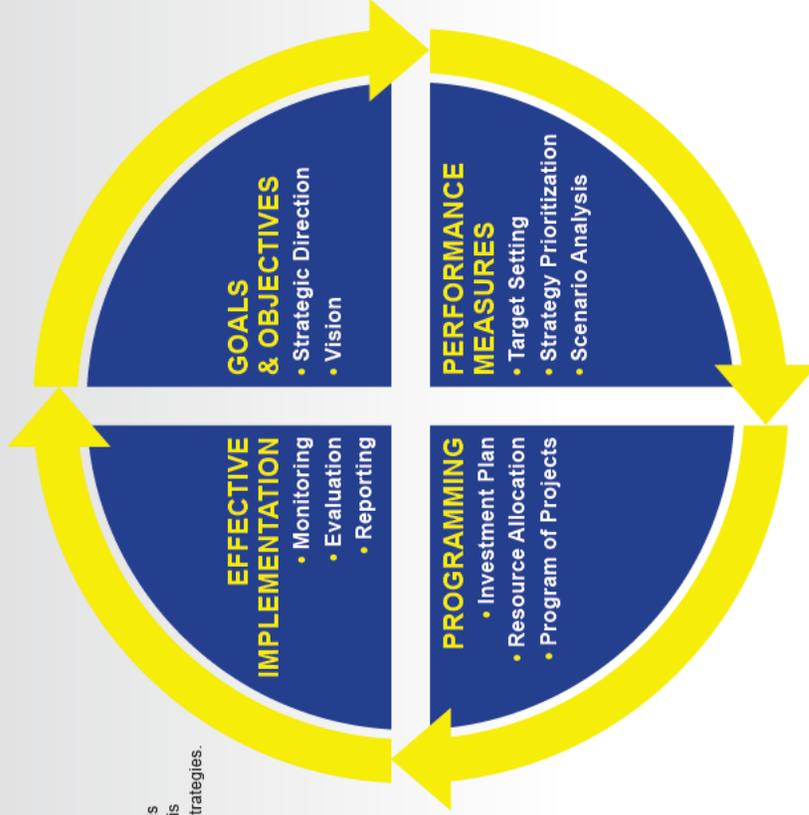
WHY IS PERFORMANCE MANAGEMENT IMPORTANT?

- Establish performance measures in the following categories:
 - Safety
 - Infrastructure Condition / Bridges and Pavement
 - System Performance and Travel Reliability
 - Freight Movement and Reliability
 - Traffic Congestion
 - Air Quality and Vehicle Emissions
- Set targets for each measure in collaboration with FHWA, FTA, and MPOs
- Integrate measures and targets with other transportation plans and processes
- Report on progress toward the achievement of targets by evaluating the condition and performance of the transportation system

HOW ARE THE MEASURES MONITORED?

The performance measures are tracked through a number of tools and plans, including:

- Draft LRTP
- Strategic Highway Safety Plan (SHSP)
- Asset Management Plan
- State Transportation Improvement Programs (STIP)
- Statewide Operations Plan
- Economics Analysis Tool
- Capital projects
- Modal programs



PUBLIC INVOLVEMENT - COMMENT RECEIVED

From: Clark, Rickie
Sent: Wednesday, November 28, 2018 12:20 PM
To: Belch, Stephanie <SBelch@indot.IN.gov>; Mitchell, Jay <JAYMITCHELL@indot.IN.gov>
Subject: TTH - customer response

Response to customer (Garen Carnes) regarding TTH.

From: Clark, Rickie
Sent: Wednesday, November 28, 2018 12:11 PM
To: 'Garen Carnes (6438)' <Garen.Carnes@subaru-sia.com>
Subject: RE: Enjoyed our conversation last week - I'll be sure to notify you once INDOT releases the DRAFT Long Range Transportation Plan early next year

Hi Garen,

At last check, I think we had about 60 or so registered but many people have indicated that they plan to just call into the session.....listen to the conversation. The pre-registration gives us (INDOT) permission to call out to the cell phone or landline at the start of the session. Many have indicated to us that having us call them doesn't work as they have minor scheduling conflicts but could call into the session a few minutes after – so many elected to not register but rather just call in.

Regarding whether or not you should call in tonight, I'd certainly encourage you to call into the session (if your schedule allows) and listen in.....you can dial "0" at any time to indicate to our call screener that you have a question you'd like to pose to the panel.

I'll look forward to our next conversation and check the calendar to suggest some possible dates we could schedule another call.

Rickie Clark, MBA Indiana Department of Transportation
Office of Public Involvement / Communications
100 North Senate Avenue, Room N642
Indianapolis, Indiana 46204
Phone: (317) 232-6601 **Email:** rclark@indot.in.gov

From: Garen Carnes (6438) [<mailto:Garen.Carnes@subaru-sia.com>]
Sent: Wednesday, November 28, 2018 11:44 AM
To: Clark, Rickie <RCLARK@indot.IN.gov>
Subject: RE: Enjoyed our conversation last week - I'll be sure to notify you once INDOT releases the DRAFT Long Range Transportation Plan early next year

****** This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email. ******

Good Morning, Rickie.

I appreciate your email. Thank you again for the time last week and for the chat over the various state DOT items we discussed off the top of my head:

- timeline for widening 65 and 70 to 3 lanes in general and if it will require tolling

PUBLIC INVOLVEMENT - COMMENT RECEIVED

- two 65 interchanges near Whitestown, one brand new
- my perplexion that Ronald Regan Parkway extension to 65 hasn't at all been part of the state-level discussions with the interchanges
- if 65 is tolled will there be a tax credit for daily commuters
- current 65 widening going on near Merrillville and from Columbus to Seymour
- you saying that a new 4 year plan will be rolled out this spring and things are re-evaluated every 2 years (and my strong biased hope that widening 65 to 3 lanes for the 27 miles from Lebanon to St Rd 38 will be on that plan!!)
- 69 to Indy by 2024
- 69 Ohio River Bridge
- Federal grants for local projects in general and how state monies are divided out

I also appreciate that you mentioned we could speak in the future about other state projects if I have a curiosity, I should just shoot you an email and we can establish a time to chat like this past time.

Are there many people registered for tonight's telephone conference?
Do you think there is value for me to register for it and speak on it tonight?

Thanks

Garen Carnes

Industrial Engineer
Production Control & Planning
Subaru of Indiana Automotive, Inc.
Garen.Carnes@Subaru-SIA.com
Office: 765-449-6438

From: Clark, Rickie <RCLARK@indot.IN.gov>
Sent: Tuesday, November 27, 2018 11:34 AM
To: Garen Carnes (6438) <Garen.Carnes@subaru-sia.com>
Subject: Enjoyed our conversation last week - I'll be sure to notify you once INDOT releases the DRAFT Long Range Transportation Plan early next year

This email contains a link that was sent from someone outside of the Subaru Group and could be harmful if followed. Please verify the source before clicking on the link to open it.



INDIANA DEPARTMENT OF TRANSPORTATION

Office of Public Involvement - Transportation Planning

Telephone Town Hall this Wednesday

INDOT is hosting a telephone town hall to engage transportation focused stakeholders regarding our Long Range Transportation Plan (LRTP).



Telephone town hall event **Wednesday, November 28, 2018 at 7:00pm (eastern time)**



More on the Telephone Town Hall?

The telephone town hall is an informative and interactive event where State transportation system topics will be discussed in a format resembling that of a radio call-in show. The public is invited to dial-in, listen to, or become involved during a lively panel discussion focusing on the future of transportation in Indiana. For more information about the LRTP and ways to get involved please visit the INDOT website.

Join the Conversation, Register Today

A registration web page is available for those interested in attending (via telephone) and/or participating as part of this event. Visit the telephone town hall registration page at <https://tthm.wufoo.com/forms/indot-telephone-town-hall/> to register.

We encourage everyone to register for this event, however should you wish to call into the telephone town hall on Nov. 28th you may call the toll free telephone number 1-877-353-4701 (the day of the event).



INDOT anticipates adoption of the LRTP early next year

Telephone Town Hall, Wednesday, November 28th beginning at 7:00 pm (eastern time) - Register Today

PUBLIC INVOLVEMENT - COMMENT RECEIVED



To: Michael McNeil, STIP Director

From: Steve Cook, President/CEO, Ability Indiana
Katy Stafford-Cunningham, Executive Vice President/COO, Ability Indiana

RE: Draft Long Range Transportation Plan (LRTP) 2018-2045 and update to INDOT Statewide Transition Improvement Plan (STIP)

Date: May 17, 2019

Thank you for the opportunity to comment on Version 8 of the draft Long Range Transportation Plan (LRTP) 2018-2045 update to the Indiana Department of Transportation (INDOT) Statewide Transition Improvement Plan (STIP). Ability Indiana applauds the state agency for the importance it places upon obtaining public input from a wide range of stakeholders in updating the Statewide Transition Plan, and is confident that the feedback received will be carefully considered in the final development of the plan. Please know that beyond our written comments, Ability Indiana is dedicated to assisting the state agency in any way appropriate to improve systems and services to individuals with disabilities.

Ability Indiana, Indiana's State Use Program, is a purchasing program, codified in IC 5-22-13 that encourages the State and municipalities to purchase products and services from Certified Ability Indiana Organizations (CAIOs) without competitive bidding. As part of its ongoing mission to promote the employment of persons with disabilities, Ability Indiana, Inc. is the Central Coordinating Agency for the program. The Ability Indiana Program was established in 1976 as a means to provide sustainable, fulfilling employment to individuals with disabilities. By partnering with CAIOs around the state, the program provides quality goods and services to state and local governments at reasonable prices. Every purchase provides the opportunity of employment for individuals with disabilities.

We appreciate in advance your thorough review of our comments, and we hope that you will carefully consider and incorporate our recommendations prior to finalization of the STIP.

We were pleased to see the inclusion of Rest Area modernization at the Kankakee Rest Area and Pigeon Creek Welcome Centers as part of the plan and believe that will continue to provide necessary facilities for travelers throughout the state. The Ability Indiana program has provided janitorial services to Indiana's rest areas for thirty years with more than a dozen CAIOs involved over the years employing people with disabilities. And, we hope to continue to do so in order to provide employment opportunities to Hoosiers with disabilities.

In addition, the partnership between INDOT and Ability Indiana has for several years included an array of products sold through a number of CAIOs on State QPAs. Products purchased by INDOT districts and sub-districts from multiple traffic and safety products, roadway attenuators, safety vests, work gloves to trash liners and more. Here again, as a result of the business with

615 N. Alabama St. | Suite 410 | Indianapolis, IN 46204 | 317-634-4957 | AbilityIN.org

INDOT, these participating CAIOs are able to continue employing many Hoosiers with disabilities.

As INDOT moves forward with its plans for improving transportation and infrastructure, we request that you continue to partner with Ability Indiana organizations to provide janitorial services for rest areas and welcome centers, and purchase products from State QPAs that employ people in the Ability Indiana program. The work afforded through INDOT contracts and purchases enables us to combat the 61% unemployment rate of Hoosiers with disabilities.

Included with our comments are letters from Ability Indiana organizations outlining the importance of the work their clients do with INDOT and their desire to continue working with INDOT on its long-range goals for the state.

Thank you very much for your consideration of our comments on the Statewide Transition Improvement Plan. We hope you find that they are constructive and will assist you in planning and implementing long-range transportation plans with employment opportunities and partnerships available for Hoosiers with disabilities.

Thank you for your letter regarding the Statewide Transportation Improvement Program and the 2045 Long Range Transportation Plan. Should you have any additional questions or concerns, please feel free to contact our INDOT Transportation services Call Center at 1-855-463-6848 or online at www.INDOT4U.com.

PUBLIC INVOLVEMENT - COMMENT RECEIVED

From: Nunnally, Roy
Sent: Friday, June 7, 2019 12:27 PM
To: Kaiser, Jason <JASONKAISER@indot.IN.gov>
Cc: Belch, Stephanie <SBelch@indot.IN.gov>
Subject: RE: Statewide Corridor Study Tool: Deliberative Not for Public Distribution
Thanks Jason,
I've CCed Stephanie Belch to make the suggested correction.
Roy

Roy Nunnally, Director
Technical Planning & Programming Division
Indiana Department of Transportation
Phone: (317) 234-1692

"If you want to go somewhere quickly, go alone. If you want to go far, go together." - African Proverb



From: Kaiser, Jason
Sent: Thursday, June 06, 2019 10:45 AM
To: Nunnally, Roy <RNUNNALLY@indot.IN.gov>
Subject: RE: Statewide Corridor Study Tool: Deliberative Not for Public Distribution
Roy,

On page 61 of the LRTP can the words "flow and safety" be added to the end of the US 30 description.

It would then read...

Upgrade 100-mile stretch (from Fort Wayne to Valparaiso) to improve traffic **flow and safety**.

"and safety" could also be added to the end of the US 31 description.

If it is not too late I would like to see these minor changes made.

Thanks,

Jason Kaiser P.E.

Technical Services Director

5333 Hatfield Road

Fort Wayne, IN 46808

Office: (260) 969-8229

Email: jasonkaiser@indot.in.gov

"In Indiana, the Crossroads of America is more than a motto: It's our mission."

-Governor Eric Holcomb

This sustainable, data driven plan dedicates more than \$30 billion over the next 20 years to improving the conditions of existing roads and bridges- both state and local, finishing major projects, and building for the future.



PERFORMANCE MEASURES AND TARGETS - ASSET MANAGEMENT

Measuring Our Performance

Reporting on the performance of the statewide transportation system is now a requirement of state departments of transportation through the submittals of Transportation Asset Management Plans (TAMPs) as well as this document ((23 CFR 450 (f)(1) and (2)).

The 2045 Long Range Transportation Plan is a performance driven plan; please see Chapter 7 for Indiana's required performance measures and targets. However, the LRTP's goals and objectives (stated in Chapter 3) were established independently of the federally required performance measures and targets and do not have quantitative measures or targets.

The first INDOT Transportation Asset Management Plan was submitted in Spring of 2018. See <https://www.in.gov/indot/3231.htm> on INDOT's website for background and the 2018 TAMP. This initial TAMP described existing conditions of the transportation network and provided a 10-year draft plan for managing the state highway system, including goals, performance targets, funding levels, and investment strategies.

In subsequent updates to this 2045 LRTP, INDOT will provide a more quantitative method to measure the performance of the system. The table below shows how this 2045 LRTP's Goals compare to the national performance measures.

MAP-21 National Goals

INDOT's 2018-2045 Long Range Transportation Plan has goals that are integrated and supportive of the National Goals implemented through MAP-21. The MAP-21 National Goals are described below, and the table on page X illustrates how INDOT'S LRTP goals overlap and work to address these National Goals in a comprehensive approach.

SAFETY: To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.

INFRASTRUCTURE CONDITION: To maintain the highway infrastructure asset system in a state of good repair.

CONGESTION REDUCTION: To achieve a significant reduction in congestion on the National Highway System (NHS).

SYSTEM RELIABILITY: To improve the efficiency of the surface transportation system.

FREIGHT MOVEMENT AND ECONOMIC VITALITY: To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.

ENVIRONMENTAL SUSTAINABILITY: To enhance the performance of the transportation system while protecting and enhancing the natural environment.

REDUCED PROJECT DELIVERY DELAYS: To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices.

LONG-RANGE TRANSPORTATION PLAN GOALS						
	SAFE AND SECURE TRAVEL	SYSTEM PRESERVATION	ECONOMIC VITALITY	MULTIMODAL MOBILITY	ENVIRONMENTAL SUSTAINABILITY	NEW TECHNOLOGY
	Move Indiana toward zero deaths and reduction of serious injuries by applying proven strategies and enhancing the safety and security of our transportation system for all users	Maintain our multimodal transportation system and infrastructure in a state of good repair	As "The Crossroads of America" enhance the competitiveness of Indiana's Economy through strategic transportation investments and reduced cost of transportation	Maximize the performance of our transportation system, ensuring efficient movement of people, goods, and regional connectivity by enhancing access to different modes of transportation	Minimize the potential impacts of the transportation system on the natural and human environment	Develop and deploy advanced transportation technologies and embrace a broad-based, comprehensive research program to plan for the future
SAFETY						
INFRASTRUCTURE CONDITION						
CONGESTION REDUCTION						
SYSTEM RELIABILITY						
FREIGHT MOVEMENT AND ECONOMIC VITALITY						
ENVIRONMENTAL SUSTAINABILITY						
REDUCED PROJECT DELIVERY DELAYS						



PERFORMANCE-BASED PLANNING, ASSET MANAGEMENT AND PERFORMANCE TARGETS

The Moving Ahead for Progress in the 21st Century Act (MAP-21) and FAST Acts require the incorporation of Performance-Based Planning and Programming (PBPP) in the development of the State's Long-Range Transportation Plan and the STIP. Incorporating INDOT's PBPP into the STIP will contribute to the achievement of National Performance goals (23 USC 150). The Statewide and Nonmetropolitan Transportation Planning; Metropolitan Transportation Planning; Final Rule further defined that the STIP shall include, to the maximum extent practicable, a description of the anticipated effect of the STIP toward achieving the performance measure targets identified in the statewide transportation or State Performance-based plan(s), linking investment priorities to those performance targets (23 CFR 450.218(q)).

23 USC 150: National performance measure goals are:

- **Safety** -To achieve a significant reduction in traffic fatalities and serious injuries on all public roads
- **Infrastructure Condition** -To maintain the highway infrastructure asset system in a state of good repair
- **Congestion Reduction** - To achieve a significant reduction in congestion on the National Highway System
- **System Reliability** - To improve the efficiency of the surface transportation system
- **Freight Movement and Economic Vitality** - To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development
- **Sustainability** -To enhance the performance of the transportation system while protecting and enhancing the natural environment
- **Reduced Project Delivery Delays** - To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices <https://www.fhwa.dot.gov/tpm/about/goals.cfm>.

PERFORMANCE MEASURES AND TARGETS - ASSET MANAGEMENT

The Indiana Department of Transportation's Long Range Transportation Plan (LRTP) and FY 2020-2024 STIP identifies the agency's policy and defines the agency's overall goals and objectives, primary of which are:

- Preservation of the existing State transportation network using asset management principles. This involves keeping the existing state transportation network in a good state of repair and functioning in an efficient manner.
- Completing projects that have begun on time and under budget - simply, finish what we started.
- Plan and build for the future. INDOT will continue to employ and improve the data driven Asset Management process to deliver the Next Level Road and Bridge Plan to improve pavement and bridge quality, safety and mobility.

The 2045 INDOT Long Range Transportation Plan (LRTP) provides the framework that guides the development of several planning documents and initiatives to help make decisions about transportation funding and asset management:

- The 2016 Strategic Highway Safety Plan (SHSP)
- The 2018 INDOT Freight Plan
- The INDOT Transportation Asset Management Plan (TAMP)
- The FY 2020-2024 Statewide Transportation Improvement Program (STIP)

The LRTP establishes performance measures that in turn support INDOT's goals and objectives. Performance measures provide INDOT with the strategic framework to evaluate how successfully transportation goals and objectives are met. Using a performance-based approach to investment decisions provides INDOT a transportation system more in-line with identified goals of safe and reliable travel, a well-maintained system, and efficient movement of people and goods across the state.

INDOT performance measures are strategically developed to align with Federal performance measures to support national transportation performance goals. Federal performance measures became codified with the passage of the FAST Act. Since that time, the US Department of Transportation has gone through a lengthy rule-making process. The safety rule measures became effective in 2016. The pavement and bridge condition and National Highway System (NHS), freight, and Congestion Mitigation and Air Quality (CMAQ) performance rules became effective in 2017.

The TAMP provides detailed information on initiatives, associated methods for prioritizing projects, agency goals, objectives and investment strategies, and resulting bridge and pavement conditions based on 10-year spending plans. INDOT also has a SHSP that sets priorities for the primary safety focused programs and guides the DOTs, MPOs, and other safety partners in addressing safety across the state. The INDOT freight plan and long range transportation plan are also used to inform the TAMP.

PERFORMANCE MEASURES AND TARGETS - ASSET MANAGEMENT

The TAMP is a management tool that brings together all related business processes, as well as internal and external stakeholders, to achieve a common understanding and commitment to improve the state's bridges and roads over the next 10 years. The TAMP describes INDOT's current asset management practices and identifies planned enhancements. The TAMP also describes existing conditions of the transportation network and provides a 10 year plan for managing the state highway system, including goals, performance targets, funding levels, and investment strategies.

INDOT's asset management program provides a framework for making decisions that will optimize, sustain, and modernize infrastructure performance. INDOT collects and synthesizes information about its facilities to help it make rational and well-informed investment decisions. In addition, INDOT has recently linked its asset management system with its capital programming process, resulting in a new Asset Management/Capital Program Management process that includes: needs identification, ranking, selection, and project portfolio development.

INDOT has two groups involved in developing and updating the TAMP - the Program Management Group (PMG); and the Asset Management Teams.

The PMG is supported by the Executive Funds Team and the Commissioner of INDOT. The PMG consists of senior managers and technical leaders who oversee the Asset Management Teams. The PMG meets regularly to review proposed changes and quarterly to discuss issues in asset management. The PMG provides overall guidance on development of all program prioritized project lists, and evaluates the performance of assets in relation to available funding.

In coordination with PMG, Asset Management Teams consider issues related to traffic mobility, roadway/pavement, bridge, and traffic safety. Each team consists of a committee chair, vice chair, and systems assessment or district representatives from each district. The teams meet every month to:

- Evaluate the merit of proposed projects
- Perform quality assurance on proposed projects
- Ensure that all proposed projects report accurate data
- Develop scoring systems to prioritize projects
- Establish statewide project rankings

Specific activities of each team are as follows:

- **Traffic Mobility Team:** makes recommendations on project priorities; reports on asset financials; serves as a change management reviewer to ensure that projects in development meet their purpose and need; and provides overall program fiscal management.
- **Roadway/Pavement Team:** assesses, scores, and prioritizes the merit of pavement-related candidate projects functioning to preserve or modernize road geometrics and pavement.

PERFORMANCE MEASURES AND TARGETS - ASSET MANAGEMENT

- **Bridge Team:** makes judgment on bridge priorities to maintain and enhance/modernize existing bridges and small structures.
- **Traffic Safety Team:** assesses, prioritizes, and makes recommendations for funding of infrastructure and non-infrastructure projects to improve safety performance on INDOT roads.

The Performance Targets that INDOT has adopted are listed in the following tables.

INDOT PERFORMANCE MEASURE TARGETS	
SAFETY PERFORMANCE TARGETS - Calendar Year 2020*	2020 Target
Number of Fatalities	907.7
Number of Serious Injuries	3,467.4
Fatality Rate	1.097
Serious Injury Rate	4.178
Total Number of Non-Motorized Fatalities and Serious Injuries	405.9
<i>*Based on 2016 – 2020 5 year average</i>	

PAVEMENT PERFORMANCE TARGETS		Baseline	2-Year	4-Year
Percentage of Pavements of the Interstate System in Good Condition				84.2%
Percentage of Pavements of the Interstate System in Poor Condition				0.8%
Percentage of Pavements of the Non-Interstate NHS in Good Condition		68.3%	78.7%	78.7%
Percentage of Pavements of the Non-Interstate NHS in Poor Condition		5.3%	3.1%	3.1%
Percentage of NHS Bridges Classified as in Good Condition		50.0%	48.3%	48.3%
Percentage of NHS Bridges Classified as in Poor Condition		2.3%	2.6%	2.6%
PM 3 Performance Targets	Measure Units	Baseline	2-Year	4-Year
#1: Level of Travel Time Reliability (LOTTR) for Interstates – Statewide	% of person-miles reliable	93.8%	90.5%	92.8%
#2: LOTTR for Non-Interstate NHS – Statewide	% of person-miles reliable	91.9%		89.8%
#3: Truck Travel Time Reliability (TTTR) for Interstates – Statewide	TTTR index	1.23	1.27	1.24

PERFORMANCE MEASURES AND TARGETS - ASSET MANAGEMENT

PM 3 Performance Targets	Measure Units	Baseline	2-Year	4-Year
#4: Peak Hour Excessive Delay (PHED) for NHS – Indianapolis Urbanized Area	Annual hours of PHED per capita	10.13		5.73
#4: Peak Hour Excessive Delay (PHED) for NHS – Entire Illinois-Indiana Chicago Urbanized Area	Annual hours of PHED per capita	14.8		15.5
#5: Non-Single Occupancy Vehicle (SOV) Travel – Indianapolis Urbanized Area	% of non-SOV travel	16.3%	16.3%	16.3%
#5: Non-Single Occupancy Vehicle (SOV) Travel – Entire Illinois-Indiana Chicago Urbanized Area	% of non-SOV travel	30.6%	31.6%	32.1%
#6: CMAQ Project Emissions Reduction – Statewide for VOC	Emissions reduction (kg)	2,641.02	1,600.0	2,600.0
#6: CMAQ Project Emissions Reduction – Statewide for CO	Emissions reduction (kg)	13,939.45	200.0	400.0
#6: CMAQ Project Emissions Reduction – Statewide for NOx	Emissions reduction (kg)	4,576.37	1,600.0	2,200.0
#6: CMAQ Project Emissions Reduction – Statewide for PM10	Emissions reduction (kg)	4.07	0.30	0.50
#6: CMAQ Project Emissions Reduction – Statewide for PM2.5	Emissions reduction (kg)	179.17	20.0	30.0

PERFORMANCE MEASURES AND TARGETS - ASSET MANAGEMENT

National Transit Database (NTD) Fleet Performance Targets

The INDOT produces the Transit Asset Management (TAM) plan. Each year, INDOT submits updated performance targets to the NTD. The NTD reported targets are based strictly on the number of vehicles which have or have not met their Useful Life Benchmark (ULB). The ULB for all vehicles covered by INDOT is four years. We have four types of vehicles Auto (AO), Cutaway (CU), Minivan (MV), and Van (VN). The current performance targets for these vehicles are listed below.

	Within ULB	Exceeds ULB
Auto (AO)	06 %	94 %
Cutaway (CU)	45 %	55 %
Minivan (MV)	34 %	66 %
Van (VN)	07 %	93 %

INDOT understands the importance of linking goals, objectives, and investment priorities to stated performance objectives, and that establishing this link is critical to the achievement of national transportation goals and statewide and regional performance targets. The FY 2020 - 2024 STIP planning process directly reflects the goals, objectives, performance measures, and targets as they are available and described in other State and public transportation plans and processes; specifically, TAMP, the Freight Plan, SHSP and, The INDOT LRTP and MPO Metropolitan Transportation Plans.

To support progress towards INDOT's statewide Performance targets, the FY 2020 -2024 STIP devotes a significant amount of resources to projects that will address passenger and highway freight reliability and delay, reduce SOV travel, and reduce emissions.

A total of \$ \$5,614,089,685 has been programmed FY 2020 – 2024 STIP to address system performance; averaging approximately \$ \$1,122,817,937 per year.

A total of \$ \$4,348,830,936,has been programmed in the FY 2020 – 2024 STIP to address truck travel time reliability; averaging approximately \$ \$869,766,187.21 per year.

A total of \$1,874,788,176 has been programmed FY 2020 – 2024 STIP to preserve and rehabilitate NHS pavement.

A total of \$1,300,854,891 has been programmed FY 2020 – 2024 STIP to preserve, rehabilitate and replace NHS bridges.

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