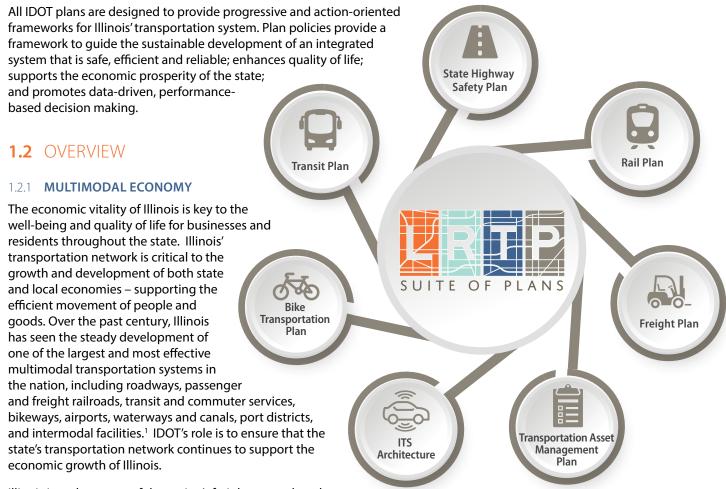


1.1 PURPOSE OF THE STATEWIDE LONG-RANGE TRANSPORTATION PLAN

The primary purpose of the Illinois Long-Range Transportation Plan (LRTP) is to provide strategic direction for the development of the Illinois transportation system. The LRTP vision for transportation in Illinois is to provide innovative, sustainable and multimodal transportation solutions that support local goals and grow Illinois' economy. This vision was established in conjunction with thousands of stakeholders who participated in outreach activities throughout the planning process, as outlined in Appendix A, Public Involvement Activities.

The LRTP is designed to provide the overarching framework for the development of Illinois Department of Transportation (IDOT) programs and specific modal plans. It establishes a set of policies to guide future system development, rather than specific improvements, which are programmed separately and released annually as part of IDOT's Multi-Year Highway Improvement and Multi-Year Multimodal Improvement Programs (MYP). The LRTP is also designed to act as the parent policy umbrella for other relevant policy and mode-specific plans developed by IDOT as part of a Suite of Plans. As depicted in the graphic n the following page, this suite of interrelated plans includes the Strategic Highway Safety Plan, Rail Plan, Freight Plan, Transportation Asset Management Plan, Intelligent Transportation Systems (ITS) Architecture, Bike Plan and Transit Plan, each of which are part of the appendices to this plan.



Illinois is at the center of the nation's freight network and provides key linkages between the east and west coasts. The state's role in goods movement supports Illinois' diverse array of industries that range from advanced research in biotechnical pharmaceuticals and production technologies to traditional agricultural and mining operations. Despite being a mature economy, Illinois continues to adjust to changes in global economic forces, increased automation and intelligent technology advances that create new levels of industrial efficiency. To meet the transportation implications of these pressures, it is IDOT's responsibility to ensure that necessary adjustments are made to the state's transportation network and that investments in the state system are not in conflict with local goals and objectives. Partnerships and collaboration are key to the success of the transportation system. IDOT seeks regular input from the industry groups and residents to identify new opportunities to address and improve the future needs of its multimodal assets.



MULTIMODAL VERSUS INTERMODAL:



In the LRTP, "Multimodal" refers to differing travel modes, whereas "Intermodal" refers to freight or cargo and associated shipping facilities where more than mode is involved in the movement of goods.

¹ For the purpose of the LRTP, "Multimodal" refers to differing travel modes, whereas "Intermodal" refers to freight or cargo and associated freight shipping facilities where more than one shipping company is involved in the movement of goods.

Illinois' transportation system includes an extensive multimodal network of roadways, bus routes, rail lines, airports, waterways, ports, bicycle and pedestrian facilities:

- The National Highway System (NHS) in Illinois is the 4th largest in the nation, containing 7,945 miles; only Texas, California and Florida have more.²
- In 2017, the total state highway system consisted of approximately 15,968 miles of roadways and the number of bridges under the Department's jurisdiction was 8,135.3
- Illinois' freight rail system is comprised of 45 railroads, including all seven Class I railroads, three regional and 26 shortline railroads, and nine terminal carriers, and nearly 10,000 miles of tracks. The rail network ranks second among all states in total railroad track mileage. Northeastern Illinois is the hub of the nation's rail system, boasting the largest intermodal system in the nation and the third largest in the world.
- There are 78 airports in Illinois that are publicly owned, open to the public and eligible for public funding.
- Illinois' maritime network includes Lake Michigan, 1,095 miles of navigable inland waterways, 29 river locks and 350 active ports.4
- Illinois transit system is comprised of 63 public transit operators/providers. There is some type of transit service in 96 of 102 Illinois' counties.⁵
- Two-thirds of Illinois state and local roads provide bicycle accommodations⁶, and according to the Alliance for Biking and Walking Benchmarking Report, in 2015, Illinois had approximately 1,875 miles of dedicated multi-use trails that have been funded through federal programs, state funds, and local resources⁷. in 2015, the League of American Bicyclists ranked Illinois the 14th most bicycle friendly state in the nation.



The single greatest challenge we face at IDOT is not just a lack of infrastructure funding, but the lack of understanding that our infrastructure is undeniably linked to the prosperity of our economy and our future."

—Illinois Secretary of Transportation, Randy Blankenhorn

1.2.2 **SUSTAINABLE FUNDING NEEDED**

Stakeholders have sent a strong message to IDOT supporting improved and increased multimodal options as part of the LRTP process. Illinois' vast multimodal network provides tremendous opportunity to better link existing and new segments of the system together to create more options; however, resource needs are outpacing available funds. IDOT is struggling to maintain the existing system, therefore new infrastructure is difficult to justify when it comes to the expenditure of existing funds. Currently, IDOT administers steady streams of funding for highways and bridges, but multimodal options do not receive the same level of attention and consideration for funding as highways and bridges, and as federal and state revenues decline, the ability to address all the state's multimodal needs is decreasing.

FHWA, Office of Planning, (March 2015)

³ IDOT FY 2018-2023 Proposed Highway Improvement Program

Maritime Performance Measures Report, UIC, 2015

IDOT Website, Accessed December 2017

IDOT Bike Plan, 2012

The League of American Bicyclists, Bicycle Friendly State 2015 Ranking http://www.bikeleague.org/sites/default/files/2015 state ranking chart.pdf

Sustainable revenues for transportation was identified as a key concern by stakeholders across the state. Additionally, the funding challenges IDOT has been facing were deepened in the latter portion of 2017 when, as part of the fiscal year (FY) 2018 budget, over \$300 million was cut from the FY2018 annual highway program, and language was included indicating that future years' funding would also see this level of loss. These cuts deepened a wide gap that already exists between infrastructure needs and available funding.

Although this plan looks out to the future, without addressing funding challenges today, the ability to continue to address Illinois' transportation system holistically will remain uncertain. To that end, this plan explores new ways to be effective stewards of public funds, adopting asset management planning and performance-based project selection tools in order to best leverage existing funds to meet Illinois' infrastructure needs. These operational and policy improvements represent steps toward effective fiscal management; yet, additional funding is required to pay for the escalating costs and strategic system expansions necessary to accommodate the needs of commerce, residents and travelers.

1.2.3 **EMERGING TRENDS**

As new transportation technologies emerge, Illinois is faced with new funding, policy and design challenges to accommodate these technologies and to guide their safe implementation. Even though much remains unknown in terms of how greatly these technologies will become part of the overall transportation system, IDOT must be proactive in planning for these changes and transformations. Many of these new technologies will provide opportunities to improve the transportation system whether it be by decreasing first-mile/last-mile issues through on-demand car services and other shared mobility options, through the improved safety features being built into vehicles to prevent collisions, or by the possibility of decreasing roadway congestion through truck platoons. Connected and autonomous vehicles (C/AV) and crowd-sourced data related to travel times, travel routes and travel mode options and other new technologies have arrived swiftly and without much warning. Regardless of the new technology or the certainty with which it will become part of the overall system, IDOT must be nimble and participatory in the discussions regarding implementation to help safeguard the travelling public, regardless of mode. Due to the relativiley long life cycle of infrastructure, IDOT must also consider policy changes that incorporate flexible system design to accommodate multiple modes and allow for new technologies to be tested or implemented as existing infrastructure undergoes updates and new infrastructure is put in place.



1.3 LRTP GOALS

In conjunction with stakeholder input, IDOT has identified five overarching goals that are the foundation of the LRTP. Each of these goals are accompanied by a series of objectives, strategies and performance measures that form a chapter of the LRTP. Each chapter discusses a series of topics contributed and vetted by thousands of stakeholders with an interest in improving the multimodal transportation system of our state. More information on stakeholder outreach that occurred as part of the development of the LRTP can be found in Appendix A. The five goals identified for the LRTP are economy, livability, mobility, resiliency and stewardship, as illustrated in the graphic below.



ECONOMY

Improve Illinois' economy by providing transportation infrastructure that supports the efficient movement of people and goods.

LIVABILITY

Enhance the quality of life across the state by ensuring that transportation investments advance local goals, provide multimodal options, and preserve the environment.

MOBILITY

Support all modes of transportation to improve accessibility and safety by improving connections between all modes of transportation.

RESILIENCY

Proactively assess, plan and invest in the state's transportation system to ensure that our infrastructure is prepared to sustain and recover from extreme events and other disruptions.

STEWARDSHIP

Safeguard existing funding and increase revenues to support system maintenance, modernization, and strategic growth of Illinois' transportation system.

performance goals

As mentioned earlier, the LRTP establishes a set of policies to guide the future development of the transportation system rather than specific improvements, which are programmed separately and released as part of IDOT's annual MYP. These goals will also provide the broad framework for new decision-making and future analysis tools, like the performance-based project selection tool and asset management plan. Tools such as this support data-driven decision-making and will serve to implement the goals, objectives and strategies of this plan. IDOT has developed a performance-based project selection tool to assist with data-driven decision making during the project programming process. In order to complement the use of this tool, each goal chapter of the LRTP contains certain specific actions/strategies that should also be considered during the project programming phase. These actions/strategies have been denoted with Programming in each goal chapter.

1.3.1 PLAN CHAPTERS

The LRTP has been developed as a policy-based plan linked to an interrelated *Suite of Plans* as discussed in Section 1.1. Following this introduction, there are six main chapters of the LRTP, followed by a series of appendices containing supplemental information related to IDOT's multimodal assets and programs, funding sources and challenges, stakeholder involvement, and other relevant IDOT plans that comprise the *Suite of Plans*. The six chapters that make up the main body of the LRTP appear in the document in the following order:

- Economy
- Resiliency
- ✓ Livability
- ✓ Stewardship
- ✓ Mobility

Transportation Funding

1.4 STATE AND FEDERAL PERFORMANCE TARGETS, MEASURES AND PROJECT SELECTION

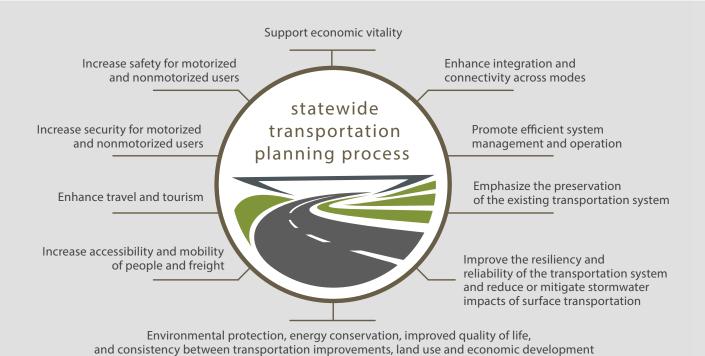
In addition to helping IDOT refine its vision, the LRTP was developed to respond to state and federal requirements.

State requirements include developing and maintaining a continuing, comprehensive and integrated planning process for the development of a statewide master plan for transportation. The plan shall include highway, waterway, aeronautic, mass transportation and railroad systems and identify priority subsystems or components of each system that are critical to the economic and general welfare of this state, regardless of public jurisdictional responsibility or private ownership. The plan must also include a comprehensive and multimodal freight component. The plan shall be developed or revised and submitted to the governor and General Assembly every five years.⁸



The intent of the transportation plan is **to guide program development** and to foster efficient and economical transportation services in ground, air, water and all other modes of transportation through the state.

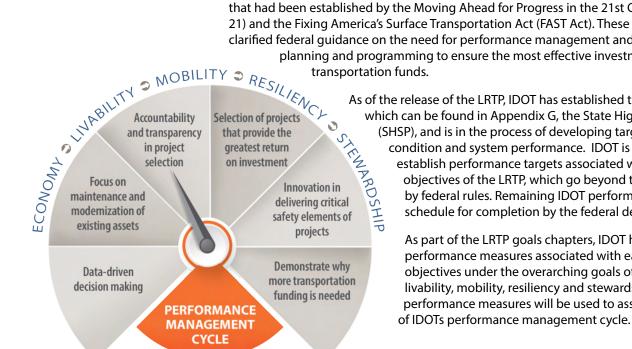
Federal requirements include the development of a long-range (minimum 20-year time frame) statewide transportation plan that provides for the development and implementation of a multimodal transportation system. The statewide long-range transportation plan should facilitate the safe and efficient management, operation and development of surface transportation systems that will serve the mobility needs of people and freight and foster economic growth and development within and between states and urbanized areas, while minimizing transportation-related fuel consumption and air pollution.⁹ The statewide transportation planning process scope includes the ten primary goals identified in the graphic below.



^{8 20} ILCS 2705/2705-200

⁹ U.S. Government Publishing Office, 23CFR 450.206 (April 2016)

In May 2016, the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) jointly issued the final rule on Statewide and Nonmetropolitan Transportation Planning and Metropolitan Transportation Planning, implementing changes to the planning processes that had been established by the Moving Ahead for Progress in the 21st Century Act (MAP-21) and the Fixing America's Surface Transportation Act (FAST Act). These changes further clarified federal guidance on the need for performance management and performance-based planning and programming to ensure the most effective investment of federal



As of the release of the LRTP, IDOT has established targets for safety, which can be found in Appendix G, the State Highway Safety Plan (SHSP), and is in the process of developing targets for infrastructure condition and system performance. IDOT is also working to establish performance targets associated with the goals and objectives of the LRTP, which go beyond the targets required by federal rules. Remaining IDOT performance targets are on

> As part of the LRTP goals chapters, IDOT has developed performance measures associated with each of the plan objectives under the overarching goals of economy, livability, mobility, resiliency and stewardship. The following performance measures will be used to assess progress as part

schedule for completion by the federal deadline in May 2018.

1.5 PLAN IMPLEMENTATION

Successful implementation of the LRTP goals will be embodied by the planning and programming of multimodal projects across the state. These projects will meet performance goals and will support economic stability and growth in communities. Selecting the best projects will require collaboration and planning between IDOT and multiple agencies including other state agencies, local governments, Metropolitan Planning Organizations (MPO), transit agencies, business groups, non-profit organizations and the residents of Illinois. IDOT is currently working with MPOs and transit agencies to establish and implement performance targets and to develop measures and data sources associated with MAP-21 and FAST Act performance goals covering the following areas:

Safety

- ✓ System Reliability
- Environmental Sustainability

- Infrastructure Condition
- Freight Movement and **Economic Vitality**
- **Congestion Reduction**

✓ Reduced Project **Delivery Delays**

In addition to the federal performance goals, the LRTP goal chapters, as well as the other IDOT modal plans, define additional performance goals that IDOT has identified through the planning processes associated with those plans. The LRTP goal chapters for Economy, Livability, Mobility, Resiliency, and Stewardship contain specific objectives and strategies that align with the federal performance goals as depicted graphically below.

IDOT LRTP GOAL

		IDOI LKI			IP GUAL			
	RAL-AID PROGRAM MANCE GOALS	ECONOMY	LIVABILITY	MOBILITY	RESILIENCY	STEWARDSHIP		
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.							

APPENDIX F

IDOT PERFORMANCE MEASURES REPORT March 29, 2019

Table of Contents

1.0	INTRODUCTION	,
	1.1 PURPOSE OF REPORT	
	1.2 REPORT ORGANIZATION	
2.0	FEDERAL PERFORMANCE MEASURES	4
	2.2 SAFETY (PM1)	
	2.3 PAVEMENT AND BRIDGES (PM2)	6
	2.4 SYSTEM PERFORMANCE (PM3)	
	2.5 TRANSIT ASSET MANAGEMENT	13

1.0 INTRODUCTION

1.1 Purpose of Report

The Moving Ahead for Progress in the 21st Century Act (MAP-21)¹, enacted in 2012, and the subsequent Fixing America's Surface Transportation Act (FAST Act)², enacted in 2015, required state Department of Transportations (DOTs) to establish and use a performance based approach in planning and programming to provide in the transportation planning process and funding transportation investments. The performance based approach must be used to support the seven national goal areas established in MAP-21. The seven national goal areas are: Safety, Infrastructure Condition, Congestion Reduction, System Reliability, Freight Movement and Economic Vitality, Environmental Sustainability, Reduced Project Delivery Delays.

The Illinois Department of Transportation (IDOT) Long Range Transportation Plan (LRTP) plays a fundamental role in system performance. The LRTP looks to the bigger picture while comprehensively considering the scope and impacts of the transportation system. The LRTP provides regular reviews of IDOT policy and projects to ensure optimal system performance. Through the LRTP, IDOT identifies goals and objectives, establishes meaningful strategies and supporting performance measures, and details implementation actions in achieving each goal's objective. As depicted in Table 1, the five IDOT LRTP goals align with the MAP-21 national goals and provide clear performance-based direction to support the effective movement of people and goods. This report indicates how IDOT's LRTP is supporting the achievement of the national goals and Illinois' targets.

¹ https://www.fhwa.dot.gov/map21/legislation.cfm

² https://www.fhwa.dot.gov/fastact/legislation.cfm

Table 1: Comparison of LRTP Goals to MAP-21 National Goals

Table 1: Comparison of I	TATE GOODS TO WA	21 National God	LRTP GOALS		
MAP-21 NATIONAL GOALS ³	ECONOMY: Improve Illinois' economy by providing transportation infrastructure that supports the efficient movement of people and goods.	EIVABILITY: Enhance the quality of life across the state by ensuring that transportation investments advance local goals, provide multimodal options, and preserve the environment.	MOBILITY: Support all modes of transportation to improve accessibility and safety by improving connections between all modes of transportation.	RESILIENCY: Proactively assess, plan and invest in the state's transportation system to ensure that our infrastructure is prepared to sustain and recover from extreme events and other disruptions.	STEWARDSHIP: Safeguard existing funding and increase revenues to support system maintenance, modernization, and strategic growth of Illinois' transportation system.
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		√	√	√	√
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.	√		✓		✓
		√	√	√	√
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.					√

 $^{^3}$ https://www.fhwa.dot.gov/tpm/about/goals.cfm

1.2 Report Organization

This document details the federally required (MAP-21/FAST Act) performance measures for a State DOT, organized around the aforementioned national goals. Each category is discussed in terms of answering the following questions:

What does this performance measure include?

 Includes the performance measures that comprise the category, and general background of the category.

Why is this important?

 Includes a discussion of the penalty of not making substantial progress of the established targets, if applicable.

What is the timeline?

 Provides detailed pre-defined dates for submittal of performance targets to Federal Highway Administration/Federal Transit Administration (FHWA/FTA).

• What are the targets? How are they measured? How is IDOT doing?

 Presents tables depicting the existing conditions against the planning baseline, targets, and identification if the target has been met, where applicable. The baseline data for each performance measure will vary, but information closest to the Fiscal Year (FY) 2018 was used, where possible.

What Goals and Objectives are included in the Long Range Transportation Plan to move Illinois toward achieving these targets?

 Summarizes anticipated implementation actions, as outlined in the LRTP, IDOT and its partners will implement in the years following the identification of the targets. The origin of each implementation action is noted, and follows how it is depicted in the LRTP: Goal/Objective/Recommended Actions or Strategies (i.e. Economy/1/1.1).

2.0 FEDERAL PERFORMANCE MEASURES

2.2 Safety (PM1)

What does this performance measure include? According to FHWA, "the Safety Performance Management Final Rule supports the Highway Safety Improvement Program (HSIP), as it establishes safety performance measure requirements for the purpose of carrying out the HSIP and to assess fatalities and serious injuries on all public roads. The Safety Performance Management Final Rule, known as "PM1", establishes five performance measures, as follows:

- 1. Number of Fatalities
- 2. Rate of Fatalities per 100 million Vehicle Miles Traveled (VMT)
- 3. Number of Serious Injuries
- 4. Rate of Serious Injuries per 100 million VMT
- 5. Number of Non-Motorized Fatalities and Non-Motorized Serious Injuries"4

Over the past decade, Illinois has experienced a general improvement in highway safety. The trend has been a decrease in fatalities and serious injuries, even though individual years have varied for each of the aforementioned measures. Targets for the performance measures pertaining to safety (PM1) are depicted as a rolling 5-year average to mitigate for atypical years, and are applicable to all public roads regardless of functional classification or jurisdiction.

Why is this important? IDOT is determined to have met, or made significant progress toward meeting its targets, when targets are met or the outcome is better than the baseline. If IDOT has not met, or made significant progress toward meeting, its safety performance targets for the next fiscal year, the federal guidance has a suggested approach. IDOT must use obligation authority, equal to the HSIP apportionment for the FY prior to the year for which the targets were not met, or significant progress was not made. IDOT will also be required to submit an HSIP Implementation Plan to FHWA that will describe the specific actions or components taken to meet its targets.

What is the timeline?

- IDOT first established targets in the August 2017 and again in the August 2018 HSIP Report.
- Annually, IDOT must adopt targets for each safety measure by August 31.
- State Metropolitan Planning Organizations (MPOs) establish targets within 180 days after IDOT.

⁴ https://safety.fhwa.dot.gov/hsip/spm/

		Five Yea	r Rolling A	verages	_	
Performance Measure	Metric/ Methodology	Baseline 2013-2017	2018 Target ¹	Actual 2014-2018	Target Achieved	Better than baseline?
Number of Fatalities	Uses traffic fatality data collected through the national Fatality Analysis Reporting System (FARS). The information is not considered final until approximately June of each year as data is reported late or needs verification.		997.4	TBD	TBD	TBD
Number of Non- Motorized Fatalities and Serious Injuries	Non-motorized refers to pedestrians and pedalcyclists. Serious injuries considered "A-Injury" (incapacitating injury).		1,460.9	TBD	TBD	TBD
Number of Serious Injuries	Serious injuries considered "A-Injury" (incapacitating injury)		11,966.7	TBD	TBD	TBD
Rate of Fatalities per 100 million	Fatalities related to vehicle crashes are calculated against vehicle miles traveled each calendar year to		0.94	TBD	TBD	TBD

What are the targets? How are they measured? How is IDOT doing?

generate the fatality rate per 100

million vehicle miles traveled.
Injuries related to vehicle crashes are

calculated against vehicle miles

traveled each calendar year to

generate an injury rate per 100

million vehicle miles traveled.

VMT

Rate of

Serious

VMT

Iniuries per

100 million

11.27

TBD

TBD

TBD

What Goals and Objectives are included in the Long Range Transportation Plan to move Illinois toward achieving these targets?

- Support new technologies that provide improved operational efficiencies and travel/route planning and safety. (Economy/4/4.5)
- Support all modes of transportation to improve accessibility and safety by improving connections between all modes of transportation. (Mobility/Goal)
- Evaluate existing and proposed innovative intelligent transportation systems (ITS) technology to improve safety. (Mobility/1/1.5)
- Increase route efficiency and safety for all users by improving infrastructure condition and addressing capacity issues. (Mobility/3)
- Incorporate safety design elements in all new roadway plans and ensure design policies support freight-friendly design elements in roadway plans. (Mobility/3/3.4)
- Promote safety through awareness programs and alerts regarding areas experiencing high crash rates. (Mobility/3/3.5)
- Promote rail and highway safety by identifying and improving hazardous highway at-grade crossings (Mobility/3/3.6)
- Support new technologies that provide improved operational efficiencies and travel/route planning and safety. (Mobility/4/4.3)Improve safety on the Illinois transportation system by reducing the number of injuries/fatalities attributable to extreme events. (Resiliency/1)
- Engage in close coordination with operations stakeholders to reduce injuries and fatalities from extreme events. (Resiliency/1/1.1).

¹ 2% Reduction Annually as Compared to 2013-2017 Baseline. Number of Fatalities, Rate of Fatalities, and Number of Serious Injuries targets must be identical to the targets established for the NHTSA Highway Safety Grants program in the HSP.

2.3 Pavement and Bridges (PM2)

What does this performance measure include? IDOT is responsible for more than 15,918 lane-miles of roadway and 7,835 bridges across the State.⁵ IDOT, in coordination with the state's MPOs, will set targets (regardless of jurisdiction) for these assets for the following performance measures, known as "PM2":

- 1. Percentage of pavements⁶ of the Interstate System in Good condition
- 2. Percentage of pavements of the Interstate System in Poor condition
- 3. Percentage of pavements of the non-Interstate National Highway System (NHS) in Good condition
- 4. Percentage of pavements of the non-Interstate NHS in Poor condition
- 5. Percentage of NHS bridges⁷ classified as in Good condition
- 6. Percentage of NHS bridges classified as in Poor condition

The Condition Rating Survey (CRS) method is used for rating pavement condition in Illinois, and is based on pavement distress, such as International Roughness Index (IRI), rutting, cracking, and deterioration. The CRS is a numerical rating that ranges from 0 to 9, with ratings 7.6 and higher classified as "excellent" condition. The following are FHWA's pavement performance metric thresholds. 8 An overall rating of Good, Fair, or Poor is based on a review of each metric's rating.

Rating	Good	Fair	Poor
International Roughness Index (IRI) [inches/mile]	< 95	95-170	> 170
Present Serviceability Rating (PSR) [only for routes with posted speed limit <40 mph]	≥ 4.0	2.0-4.0	≤ 2.0
Cracking (%)	< 5	CRCP: 5-10 Jointed: 5-15 Asphalt: 5-20	> 10 > 15 > 20
Rutting (inches)*	< 0.20	0.20-0.40	>0.40
Faulting (inches)	< 0.10	0.10-0.15	>0.15

^{*}Prior to 2017, the cracking percent was not calculated using the same automated tools used for IRI, Rutting, and Faulting; FHWA Final Rules amended wheel path width used to calculate cracking percent. Therefore, a comparison of cracking percentages from prior years with the current year is not comparing similar data and impacts the ability to model a trend.

IDOT performs bi-yearly safety inspections and condition assessments of bridges. This is the designated frequency in National Bridge Inspection Standards (NBIS). Through these inspections, condition rating data is collected for the deck, super structure, and substructure and an overall rating of Good, Fair, or Poor condition is assigned each bridge metric per calendar year. The following are FHWA's bridge metric condition thresholds. ⁹ An overall rating of Good, Fair, or Poor for each bridge is based on the review of each metric's rating. The overall performance measures are based on percentage of deck square footage in each category.

NBI Rating Scale	Good (9-7)	Fair (6-5)	Poor (4-0)
Deck (Item 58)	≥ 7	5 or 6	≤ 4
Superstructure (Item 59)	≥ 7	5 or 6	≤ 4
Substructure (Item 60)	≥ 7	5 or 6	≤ 4
Culvert (Item 62)	≥7	5 or 6	≤ 4

⁵ IDOT, Draft Transportation System Update, 2017.

⁶ Includes through travel lanes only; excludes ramps, shoulders, turn lanes, crossovers, and rest areas.

⁷ Bridges and associated on- and off-ramps connected to the NHS.

⁸ FHWA, National Performance Management Measures: Pavement and Bridge Condition to Assess the National Highway Performance Program, May 31, 2017.

⁹ FHWA, National Performance Management Measures: Pavement and Bridge Condition to Assess the National Highway Performance Program, May 31, 2017.

Why is this important?

- If greater than 5% of pavements are in poor condition, IDOT must obligate a portion of National Highway Performance Program (NHPP) and transfer a portion of Surface Transportation Block Grant Program (STBG) to address pavement condition of the NHS.
- No more than 10% of total deck area of NHS bridges can be classified as poor. If, for three consecutive years, the minimum condition level is not met, IDOT must obligate and set aside a portion of NHPP funds for eligible bridge projects on the NHS.

What is the timeline?

- January 1, 2018 Initial 4-year performance period begins.
- May 20, 2018 Initial 2- and 4-year targets established.
- October 1, 2018 Baseline Performance Period Report for the first performance period due. IDOT reports baseline, 2-year, and 4-year targets.
- Within 180 days of established IDOT targets MPOs must commit to support IDOT targets or establish separate quantifiable targets.
- October 1, 2020 Mid- Performance Period Progress Report for the first performance period due. IDOT report 2-year condition/performance; progress toward achieving 2-year targets.
- December 31, 2021 Initial 4-year performance period ends.
- October 1, 2022 Full Performance Period Progress Report for first performance period due. IDOT report 4-year condition/performance; progress toward achieving 4-year targets.
- October 1, 2022 Baseline report due for second performance period due. IDOT report 2- and 4- year targets; baseline condition.

What are the targets? How are they measured? How is IDOT doing?

Performance Measure ¹	Metric/Methodology	Baseline ²	Target 2020 ³	Target 2022 ³	Target Achieved?	Better than baseline?
Percent of Interstate Pavement in Good Condition	Percentage of mileage where all scores for international roughness index (IRI), cracking, rutting, and/or faulting (as applicable) are within thresholds established in FHWA rulemaking.			65%	TBD	TBD
Percent of Interstate Pavements in Poor Condition	Percentage of mileage where two or more scores for IRI, cracking, rutting, and/or faulting (as applicable) are within thresholds established in FHWA rulemaking.			<4.9%	TBD	TBD
Percent of Non- Interstate NHS Pavements in Good Condition*	Percentage of mileage where all scores for IRI, cracking, rutting, and/or faulting (as applicable) are within thresholds established in FHWA rulemaking.	37.6%	27%	27%	TBD	TBD
Percent of Non- Interstate NHS Pavements in Poor Condition*	Percentage of mileage where two or more scores for IRI, cracking, rutting, and/or faulting (as applicable) are within thresholds established in FHWA rulemaking.	19.4%	6%	6%	TBD	TBD
Percent of NHS Bridges Classified as in Good Condition	Percentage of bridges on Illinois NHS routes by deck area that have ratings of at least 7 out of 9 for the NBI deck, superstructure, AND substructure (and culverts where applicable) rating items.	29.41%	28%	27%	TBD	TBD
Percent of NHS Bridge Classified as in Poor Condition	Percentage of bridges on Illinois NHS routes by deck area that have ratings of a 4 out of 9 or lower for any one of NBI deck, superstructure, and substructure (and culverts where applicable) rating items.	11.6%	13%	14%	TBD	TBD

¹See Table A: Pavement Condition Thresholds and Table B: Bridge Condition Thresholds.

² **Pavement**: FHWA PMF report based on 2017 HPMS submittal. Baseline for non-interstate NHS is based solely on IRI when targets are based on all the performance measure criteria.

Bridges: FHWA PMF report based on 2017 NBI submittal.

³ Per a review of historic data classifying Structurally deficient bridges; IDOT-ISIS and IRIS databases; FHWA-HPMS and NBI databases; and, CFR.

What Goals and Objectives are included in the Long Range Transportation Plan to move Illinois toward achieving these targets?

- Enhance performance-based project selection process and accompanying tools to ensure consideration of land use and transportation connections. (Economy/3/3.3)
- Enhance intermodal connectivity by identifying and implementing improvements needed to truck routes, ports, airports and rail lines that provide access to Illinois intermodal facilities. (Mobility/1/1.1)
- Focus on roadway system preservation by performing needed maintenance before segments/structures are in critical need of repair. (Mobility/3/3.2)
- Focus on bridge repair and replacement by addressing the most critical needs and performing required maintenance. (Mobility/3/3.3)
- Safeguard existing funding and increase revenues to support system maintenance, modernization, and strategic growth of Illinois' transportation system. (Stewardship/Goal)
- Invest in improvements for airports, highways/streets, freight, ports, waterways and new traffic and transit technologies. (Stewardship/1)
- Enhance asset management process and accompanying tools. (Stewardship/2/2.2) Identify funding sources and leverage resources wisely to maximize the value of investments. (Stewardship/4)
- Explore increase in state transportation funding, including new revenue sources. (Stewardship/4/4.1)

2.4 System Performance (PM3)

What does this performance measure include? This third performance measure category, system performance, also known as "PM3", is a set of performance measures to assess the performance of the Interstate and non-Interstate NHS; to assess freight movement on the Interstate System; and to assess traffic congestion and on-road mobile source emissions for the purpose of carrying out the Congestion Mitigation and Air Quality Improvement (CMAQ) Program. For this performance measure, IDOT established targets for the following:

Two measures to assess reliability of system performance:

- 1. percent of reliable person-miles traveled on the Interstate
- 2. percent of reliable person-miles traveled on the non-Interstate NHS

One measure to assess freight movement on the Interstate System:

3. percent of Interstate system mileage providing for reliable truck travel time (Truck Travel Time Reliability Index - TTTRI)

Three measures to assess traffic congestion under the CMAQ program:

- 4. total emissions reductions
- 5. annual hours of peak hours excessive delay per capita
- 6. percent of non-single occupancy vehicle (SOV) travel

Percent of person-miles traveled on the Interstate that are reliable (#1), percent of person-miles traveled on the non-Interstate NHS that are reliable (#2), TTTRI (#3), Annual Hours of Peak hours Excessive Delay per Capita (#5), all require the use of the National Performance Management Research Data Set (NPMRDS). IDOT has procured The Regional Integrated Transportation Information System (RITIS) to analyze the NPMDRS with an easy to use interface. IDOT will provide access to RITIS for the MPOs within the state to use.

Percent of non- SOV travel (#4), Annual Hours of Peak Hour Excessive Delay Per Capita (#5), and Travel Total Emission Reductions (#6) targets only need to be set in areas that are in non-attainment or maintenance status for attainment of National Ambient Air Quality Standards (NAAQS). Rules state that IDOT should set the targets; however, IDOT has very minimal participation in selecting CMAQ projects, so the MPOs in non-attainment or maintenance status (CMAP and E/W Gateway) spearheaded the target setting process and data analysis with the assistance of IDOT.

Why is this important? The measure is met if actual condition/performance level is better than the baseline or equal to or better than the established target. There are no financial penalties if the targets are not met.

What is the timeline?

- January 1, 2018 Initial 4-year performance period begins.
- May 20, 2018 Initial 2- and 4-year targets established.
- October 1, 2018 Baseline Performance Period Report Target report deadline for all
 measures for the first performance period is due. DOTs submit MPO CMAQ Performance
 Plans (as applicable) as an attachment to the State Baseline Performance Period Report.
- Within 180 days of established IDOT targets and IDOT GHG measures MPOs set 4-year targets.
- October 1, 2020 Mid Performance Period Progress Report due. IDOT reports 2-year progress and adjusted 4-year targets. DOTs submit MPO CMAQ Performance Plans (as applicable) as an attachment to the State Mid Performance Period Progress Report.
- October 1, 2022 Full Performance Period Progress Report due. IDOT reports 4-year progress. DOTs submit MPOs CMAQ Performance Plans (as applicable) as an attachment to the State DOT Full Performance Period Progress Report.

 October 1, 2022 – Baseline report due for second performance period due. IDOT reports 2and 4-year targets; baseline condition.

What are the targets? How are they measured? How is IDOT doing?

Performance Measure	targets? How are t Metric/Methodology	Baseline ¹	Target 2020	Target 2022	Target Achieved?	Better than
Percent of person-miles traveled on Interstate highways that are reliable	Travel time reliability measures the extent of unexpected delay. We express that here as the percent of miles traveled where users do not experience significant unexpected delay on the Interstate system. A formal definition for travel time reliability is the consistency or dependability in travel times, as measured from day-to-day and/or across different times of the day.	80.8%	79%	77%	TBD	TBD
Percent of person-miles traveled on non-Interstate highways that are reliable	Travel time reliability measures the extent of unexpected delay. We express that here as the percent of miles traveled where users do not experience significant unexpected delay on non-Interstate highways. A formal definition for travel time reliability is the consistency or dependability in travel times, as measured from day-to-day and/or across different times of the day.	87.3%	N/A	83.3%	TBD	TBD
Truck Travel Time Reliability Index	The Truck Travel Time Reliability (TTTR) Index measures the extent of unexpected delay for freight movement. It is expressed as a ratio. When the ratio is higher, truckers Experience more unexpected delay on the roads. When it is lower (closer to 1), the roads are more reliable.	1.3	1.34	1.37	TBD	TBD
Annual Hours of Peak hours	Chicago IL/IN Urbanized Area	14.9 ¹	N/A	15.4	TBD	TBD
Excessive Delay per Capita	St. Louis MO/IL Urbanized Area	9.5	N/A	9.5	TBD	TBD
Percent of Non-Single Occupancy vehicle	CMAP: MPA E/W Gateway: IL MPA	30.6%	32.1%	31.9%	TBD	TBD
(SOV)	L/ W Galeway. IL WIFA	17.070	16.7%	17.0%	TBD	TBD

Total	St. Louis-St. Charles –	voc	395.602	128.035	251.070	TBD	TBD
Emission Reductions (kg/day)	Farmington MO – IL Nonattainment Area	NOx	1273.800	3386.959	6708.818	TBD	TBD

¹ Sources: Trend data from the Regional Integrated Transportation Information System's (RITIS) National Performance Management Research Data Set (NPRMDS), and construction and agency policies and goals.

² MPOs combined total daily emissions for the current 5-year CMAQ program (2018-2022) to develop an annual estimate, which was then used to generate the targets.

 $^{^3}$ Included for PM $_{10}$ emissions, since region is listed in EPA's Green Book. Lyons Township, Cook County is listed as a maintenance area for PM $_{10}$. The maintenance area is not the result of mobile source emissions but a point source problem related to quarry activities within the township. Since the emissions are unrelated to transportation and mobile sources, the targets are listed as zero.

What Goals and Objectives are included in the Long Range Transportation Plan to move Illinois toward achieving these targets?

- Encourage regional coordination in the identification of solutions to transportation problems to provide for efficient movement of freight, people and services supporting economic growth. (Economy/1)
- Support projects that improve connectivity and coordination of services to enhance continuity
 and accommodate the efficient movement of people, goods, and services across all modes to
 address intermodal efficiency. (Economy/2)Collaborate and consult with freight and passenger
 stakeholders to address regional, statewide and multi-state freight and passenger
 transportation issues. (Economy/4/4.1)
- Provide investment and technical support to transportation projects that improve freight and transportation connectivity through the integration of multimodal service options. (Economy/4/4.2)
- Support new technologies that provide improved operational efficiencies and travel/route planning and safety. (Economy/4/4.3)
- Enhance the effectiveness of the multimodal transportation system through better traveler information, utilizing technology where possible, to maximize efficiency of existing facilities and services. (Livability/3)
- Reduce emissions by implementing performance-based project selection. (Livability/5/5.3)
- Support reduction in the use of single occupancy vehicles (SOVs). (Livability/5/5.4)
- Realize positive air quality gains and reduced energy consumption with efficient passenger and freight operations. (Livability/5/5.5)
- Work collaboratively with freight stakeholders to identify and address issues related to transporting freight within Illinois. (Mobility/1/1.2)
- Enhance intermodal connectivity by identifying and implementing improvements needed to truck routes, ports, airports and rail lines that provide access to Illinois intermodal facilities. (Mobility/1/1.3)
- Establish procedures to use the National Performance Management Research Data Set (NPMRDS) to calculate performance. (Mobility/1/1.4)
- Explore ITS technologies to foster the most efficient movement of freight. (Mobility/1/1.6)
- Invest in and support multimodal transportation infrastructure improvements and strategic performance-based expansion of services that support the effective movement of passengers. (Mobility/2)
- Increase route efficiency and safety for all users by improving infrastructure condition and addressing capacity issues. (Mobility/3)
- Identify and rank worst bottlenecks and chokepoints to establish an action plan to remediate selected areas. (Mobility/3/3.1)
- Explore various congestion management strategies for implementation within Illinois metropolitan areas. (Mobility/3/3.7)
- Safeguard existing funding and increase revenues to support system maintenance, modernization, and strategic growth of Illinois' transportation system. (Stewardship Goal)
- Invest in improvements for airports, highways/streets, freight, ports, waterways and new traffic and transit technologies. (Stewardship/1)
- Complete current ongoing major infrastructure improvements. (Stewardship/1/1.1)
- Identify needed capacity enhancements, capital improvements and new technology implementation. (Stewardship/1/1.2)
- Identify new "mega" projects which will improve the existing transportation system and infrastructure and identify alternative funding opportunities. (Stewardship/1/1.3)

2.5 Transit Asset Management

What does this performance measure include? Transit asset management (TAM) is applicable to providers who are recipients or sub-recipients of Federal financial assistance under 49 U.S.C. Chapter 53. Providers are categorized as either Tier I or Tier II. Tier I operates rail or over 100 vehicles in peak revenue service, and are required to set targets. Tier II providers do not operate rail and have 100 or fewer vehicles in peak revenue service, and establish targets in coordination with MPOs, if applicable. IDOT produced a group Tier II Asset Management plan, which Tier II transit providers can opt in to participate. Tier I providers are responsible for creating their own Transit Asset Management Plan and in turn targets.

"State of good repair" is the fundamental theme of TAM. Essentially, TAM is an effort to keep assets and equipment in transit systems in a state of good repair, so the systems contribute to the safety of the system as a whole. This supports the idea that a vehicle in good repair will minimize risk and maximize safety. TAM measures performance for the following asset categories¹⁰:

- 1. Equipment
- 2. Facilities
- 3. Infrastructure
- 4. Rolling Stock

Why is this important? There is no penalty for missing a target.

What is the timeline?

- October 1, 2018 Providers established initial targets.
- Within four (4) months of the end of a provider's FY Submit to National Transit Database (NTD) their Asset Inventory Module (AIM); and performance targets for next FY.
- No later than October 1, 2018 Complete TAM Plan (covers 4 years; updated at least every 4 years)
- October 1, 2018 IDOT reflect performance measures and subsequent targets in Long Range Transportation Plan (LRTP) and STIP for all providers.
- 180 days later MPOs either accept or develop their own TAM performance targets.

13 | Page

¹⁰ https://www.transit.dot.gov/PerformanceManagement#Target%20Setting

What are the targets? How are they measured? How is IDOT doing?							
Performance Measure	Metric	Baseline ¹ FY2019	2020	2022	Trend	Target Achieved	Better than baseline?
Equipment – State of Good Repair	Percentage of non- revenue service vehicles (by type) that exceed the useful life benchmark (ULB) ² .	50%	TBD	TBD	TBD	TBD	TBD
Facilities – State of Good Repair	Percentage of facilities (by group) rated less than 3.0 on the Transit Economic Requirements Model (TERM) ³ Scale.	16%	TBD	TBD	TBD	TBD	TBD
Infrastructure – State of Good Repair	Percentage of track segments (by mode) that have performance restrictions. Track T		TBD	TBD	TBD	TBD	TBD
Rolling Stock – State of Good Repair	Percentage of revenue vehicles (by type) that exceed the ULB.	48%	TBD	TBD	TBD	TBD	TBD

¹ Source: IDOT Group TAM Plan for Participating Tier II Agencies, September 2018. The expected lifecycle of a capital asset for a particular transit provider's operating equipment, or the acceptable period of use in service for a particular transit providers operating equipment.

² ULB: The expected lifecycle of a capital asset for a particular transit provider's operating equipment, or the acceptable period of use in service for a particular transit providers operating equipment.

What Goals and Objectives are included in the Long Range Transportation Plan to move Illinois toward achieving these targets?

- Advocate for the success of Illinois' passenger rail program. (Economy/2/2.4)
- Incorporate and support sustainable technology in operations of current and future IDOT assets, including multimodal transportation services. (Livability/5/5.1)
- Support reduction in the use of single occupancy vehicles (SOVs). (Livability/5/5.4)
- Support all modes of transportation to improve accessibility and safety by improving connections between all modes of transportation. (Mobility/Goal)
- Increase route efficiency and safety for all users by improving infrastructure condition and addressing capacity issues. (Mobility/3)
- Safeguard existing funding and increase revenues to support system maintenance, modernization, and strategic growth of Illinois' transportation system. (Stewardship/Goal)
- Ensure selection and prioritization decisions on projects is transparent and guided by sound data and performance-based decisions. (Stewardship/2)
- Enhance asset management process and accompanying tools. (Stewardship/2/2.2)
- Identify opportunities to support non-highway funding program(s) for all multimodal transportation projects. (Stewardship/4)

³ The TERM scale assigns numerical ratings based on a conditional scale of 1.0 (Poor) to 5.0 (Excellent); https://www.transit.dot.gov/PerformanceManagement#Target%20Setting.

Appendix E - Implementation Matrix

OBJECTIVE #	OBJECTIVE	RECOMMENDED ACTION/STRATEGY	PERFORMANCE MEASURE	IMPLEMENTATION
GOAL: Economy				
Improve Illinois' economy	by providing transportation infrastructure that su	upports the efficient movement of people and goods.		
Objective 1:	Encourage regional coordination in the identification of solutions to transportation problems to provide for efficient movement of freight, people and services supporting economic growth.	Support multimodal transportation projects that create growth and employment opportunities throughout the state.	Support the incorporation of freight movement and economic vitality objectives within IDOT-funded regional studies	 Commit IDOT staff to participate in the planning and programming processes of the 16 MPOs to support projects consistent with IDOT goals, including economic growth Lead: IDOT Districts, IDOT Office of Planning and Programming, IDOT Office of Intermodal Project Implementation Partners: MPOs
		Enhance coordination and collaboration in planning, programming and implementation activities with regional and local partners.	Regular IDOT participation in regional planning and programming meetings held by the state's 16 MPOs	 Expand consultation, coordination and outreach for development of multiyear plans and programs Lead: IDOT Office of Planning and Programming, IDOT Office of Communication, IDOT Districts, IDOT Office of Intermodal Project Implementation Partners: Illinois State Freight Advisory Council, MPOs, other planning partners
		Ensure the development of state multi-year and annual multimodal plans and programs includes consultation and coordination with regional and local planning partners.	Ensure preparation of state multi-year and annual multimodal plans and programs includes consultation and coordination with regional and local planning partners	 Conduct before-after studies of IDOT supported transportation projects and their economic impacts Lead: IDOT Office of Planning and Programming Partners: IDOT Office of Highways Project Implementation Enhance the measurement of mobility-related objectives in the PBPS tool by developing a statewide traffic model Lead: IDOT Office of Planning and Programming Partners: IDOT Districts, MPOs, other planning partners
Objective 2:	Support projects that improve connectivity and coordination of services to enhance	Review and evaluate intermodal connections across the state.	Prepare regular assessment of performance of designated National Highway System (NHS) intermodal connectors	Develop regular report on Illinois NHS Intermodal Connectors Lead: IDOT Office of Planning and Programming
	continuity and accommodate the efficient movement of people, goods, and services across all modes to address intermodal efficiency.	Improve efficiency of transfers of freight and passengers between modes.	Number of aviation, highway, and rail program investments that support improved use, safety and ease of access to intermodal facilities	 Partners: IDOT Districts, Illinois State Freight Advisory Council, MPOs, other planning partners Develop regular report on Illinois Waterborne Transportation Lead: IDOT Office of Planning and Programming Partners: Illinois Department of Commerce and Economic Opportunity, Army Corps of Engineers,
		Work collaboratively with ports and waterways stakeholders to identify and address issues related to transporting commerce via navigable waterways.	Prepare regular waterborne commerce report assessing the utilization of port districts and other port terminals	 Illinois State Freight Advisory Council, Port Districts/Terminals Develop new marketing campaign for intercity passenger rail Lead: IDOT Office of Communications Partners: IDOT Office of Intermodal Project Implementation
		Advocate for the success of Illinois' passenger rail program.	Increased education and marketing of passenger rail options and transfer options between modes	
		Identify shifts in population and employment centers and ensure that there are adequate airport services provided to those population and employment centers.	Percent of population and employment with drive access to a commercial airport	
Objective 3:	connectivity. in sta	Support land use and transportation connectivity, especially in and near intercity passenger rail and commuter rail stations, through planning studies, project analyses and public education programs.	Amount of funds supporting land use and transportation connectivity and the number of funded studies	 Develop regular report on land use and connectivity Lead: IDOT Office of Planning and Programming Partners: IDOT Districts, MPOs, other planning partners Enhance the measurement of land use and connectivity-related objectives in the Performance Based
		Enhance consideration of land use and transportation connectivity through coordination and collaboration in planning and programming efforts.	Regular participation in MPO and regional planning and programming efforts that implement land use and transportation connectivity	Prioritization System (PBPS) tool Lead: IDOT Office of Planning and Programming Partners: IDOT Districts, MPOs, other planning partners
		Enhance performance-based project selection process and accompanying tools to ensure consideration of land use and transportation connections.	Additional factor(s) within performance based project selection tool to address land use and transportation connections	

OBJECTIVE #	OBJECTIVE	RECOMMENDED ACTION/STRATEGY	PERFORMANCE MEASURE	IMPLEMENTATION
Objective 4:	Identify and address issues affecting freight commerce and passenger services.	Collaborate and consult with freight and passenger stakeholders to address regional, statewide and multi-state freight and passenger transportation issues.	Amount of funding specifically for freight and/or passenger connection improvement projects	Continued participation and consultation with freight and passenger transportation industry partners through the Mid-America Freight Coalition, Illinois State Freight Advisory Council, Will County Freight Advisory Council, and other stakeholder groups Description:
		Provide investment and technical support to transportation projects that improve freight and transportation connectivity through the integration of multimodal service options.	Amount of funding for innovative freight vehicle improvement studies and tests	Lead: IDOT Office of Planning and Programming Partners: IDOT Districts, Illinois State Freight Advisory Council, Mid-America Freight Coalition, MPOs, other planning partners • Develop and implement Illinois Competitive Freight Grant Program
		Support new technologies that provide improved operational efficiencies and travel/route planning and safety.	Measure the progress toward full implementation of the web-based roadway information system	Lead: IDOT Office of Planning and Programming Partners: IDOT Districts, Illinois State Freight Advisory Council, MPOs, other planning partners • Develop research program with Illinois Universities targeting innovative freight vehicle improvement
		Support state funding to public aviation to assist the local community efforts to keep and attract additional business to their communities.	Amount of funding for improved airport access	Lead: IDOT Office of Planning and Programming Partners: Illinois Universities • Establish Illinois State Autonomous Vehicle Advisory Council
		Address policy and planning implications of autonomous vehicles being introduced within both passenger and commercial/freight fleets.	Number of new policies and/or processes to address autonomous vehicles	Lead: IDOT Office of Planning and Programming Partners: IDOT Districts, autonomous vehicle representatives, safety and insurance representatives
Objective 5:	Support economic development in Illinois communities.	Support Illinois communities through economic development grants under programs like the Economic Development Program.	Number of communities that benefit and the number of jobs supported (created/retained) from IDOT economic development grants	 Commit IDOT staff to supporting economic development through transportation improvement projects and economic development grant programs Lead: IDOT Office of Planning and Programming Partners: IDOT Districts, Illinois Department of Commerce and Economic Opportunity, economic
		Invest in highway projects that improve access to intermodal facilities in order to improve economic competitiveness.	Number of highway and transit investments that provide access to intermodal and multimodal facilities	 Develop regular report on the economic benefits of Illinois transportation infrastructure investments
		Invest in intermodal projects that meaningfully increase and improve access to economic growth opportunities.	Number of freight related projects that enhance access to supply chains or that enhance access to economic growth opportunities	Lead: IDOT Office of Planning and Programming Partners: IDOT Districts, IDOT Office of Intermodal Project Implementation • Enhance the measurement of economy-related objectives in the PBPS tool using REMI and state traffic
			Number of studies funded that support economic development	model development Lead: IDOT Office of Planning and Programming Partners: IDOT Districts, Illinois Department of Commerce and Economic Opportunity, MPOs, Other planning partners
GOAL: Livability Enhance the quality of li	fe across the state by ensuring that transportation i	investments advance local goals, provide multimodal options, an	d preserve the environment.	
Objective 1:	Enhance collaboration and coordination between IDOT and regional and local transportation agencies and adjoining states	Collaborate with Metropolitan Planning Organizations (MPOs) and adjoining states to collectively benefit from joint multimodal planning efforts.	Number of executed planning intergovernmental agreements	Develop consistent outreach and engagement strategies for IDOT Districts to utilize on projects. Lead: IDOT Office of Communications, IDOT Bureau of Design & Environment, IDOT Bureau of Local Roads and Streets. Roads and Streets.
	in transportation decision-making.	Enhance coordination with MPOs on freight and multimodal planning.	Participation in industry stakeholder/user groups	Partners: IDOT Districts Facilitate and encourage the collaboration and development of a waterways forum to provide
		Seek partnerships with stakeholders to support the promotion of Illinois' intermodal system.	Number of agencies utilizing a performance-based project selection process	guidance to IDOT on ports and waterways issues. Lead: IDOT Office of Planning and Programming Partners: IDOT Office of Legislative Affairs
				Encourage performance based project selections processes for local project selection. Lead: IDOT Office of Planning and Programming Partners: IDOT Bureau of Local Roads and Streets
				Partitiers, IDOT bureau of Local noaus and streets

OBJECTIVE #	OBJECTIVE	RECOMMENDED ACTION/STRATEGY	PERFORMANCE MEASURE	IMPLEMENTATION
Objective 2:	Support projects that enhance the livability of Illinois - making connections between people, and the places they need to go.	Use performance-based project selection tool results to prioritize projects for funding.	Percent of funding spent on projects that provide access to multimodal choices	Develop sustainability/livability best practices to be verified in the preliminary phases of project development.
		Develop livability measures to prioritize non-highway projects for funding.	Number of multimodal connections within Illinois	Lead: IDOT Bureau of Design and Environment Partners: IDOT Bureau of Local Roads and Streets
		Consider enhanced multimodal connectivity when prioritizing projects for funding.	Number of livability measures used to prioritize projects	 Promote sustainable multimodal transportation services, in an effort to reduce single occupancy vehicle (SOV) travel. Lead: IDOT Office Planning and Programming, IDOT Bureau of Operations Partners: IDOT Office of Communications, IDOT Office of Highways Project Implementation
				 Refine and review livability data and performance management for project prioritization. Lead: IDOT Office Planning and Programming Partners: Local Stakeholders
Objective 3:	Enhance the effectiveness of the multimodal transportation system through better traveler information, utilizing technology where	Better understand the need for and implement Intelligent Transportation Systems (ITS) statewide and invest in proven ITS strategies.	Compare changes in vehicle speed, crash rates and traffic volumes from the incorporation of ITS in major metro areas	 Utilize the state ITS Architecture and Strategic Plan Update to align funding for planning and installation of ITS strategies and improvement of existing facilities. Lead: IDOT Office of Planning and Programming, IDOT Bureau of Operations
	possible, to maximize efficiency of existing facilities and services.	Provide General Transit Feed Specification (GTFS) data to Google for inclusion in Google Maps.	Percentage of transit vehicles and routes supplying General Transit Feed Specification (GTFS) data	 Partners: MPOs, Counties, Municipalities Collaborate planning efforts between transit providers to increase service connectivity, technological
		Improve transit ridership levels and riders' experiences through the use of rider-oriented technology.	Creation or expansion of mobility management projects	 improvements for riders and overall promotion of multimodal transportation. Lead: IDOT Office of Intermodal Project Implementation, IDOT Bureau of Planning Partners: Regional Transportation Authority, Counties, Transit Providers Review current incident management and notification systems and align funding for improvements Lead: IDOT Bureau of Operations, IDOT Office of Communications Partners: IDOT Bureau of Safety Programs and Engineering Support transit agencies providing GTFS data to Google. Lead: IDOT Office of Intermodal Project Implementation Partners: IDOT Bureau of Planning
		Improve transit connectivity between service areas and providers.	Create a quantitative and comprehensive framework to enhance transportation agency social media programs	
		Promote multimodal transportation through the use of social media.	Review typical incident management times	
		Centralize incident notification, to provide timely incident information to travelers.		
		Implement ITS architecture.		 Research how social media can be used to enhance the transportation system and provide best practices/resources to local transportation agencies. Lead: IDOT Office of Communications Partners: IDOT Bureau of Local Roads and Streets, IDOT Office of Planning and Programming
Objective 4:	Enhance existing policies and practices related to under-served populations so outreach and inclusion are effective and go beyond meeting the minimum federal requirements.	Review and enhance existing IDOT policies and practices related to environmental justice and under-served populations.	Number of policies and practices changed to better accommodate under-served populations	 Facilitate communication and promote collaboration between under-served population areas a transit agencies and organizations via the state MPOs. Lead: IDOT Office of Planning and Programming Partners: MPOs, Transit Agencies, Municipalities, Under-Served Population Stakeholders
		Improve effectiveness in receiving feedback from under- served populations during the transportation planning and design process.	Number of outreach opportunities specifically directed at under-served populations	 Update IDOT policies and practices related to environmental justice and under-served populations. Lead: IDOT Bureau of Design and Environment, IDOT Office of Communications, IDOT Office of Planning and Programming
		Identify unique ways to mitigate impacts of new projects on under-served populations.	Number and availability of affordable alternative modes of transport for under-served populations	Partners: Environmental Justice Population Organizations, MPOs, Under-Served Population Stakeholders
		Explore options to implement supply and demand based pricing to support additional service or infrastructure.		 Identify ways to add equity considerations into project priotization processes. Lead: IDOT Office of Planning and Programming Partners: IDOT Bureau of Design and Environment
		Develop a public involvement manual for use on transportation projects.		

OBJECTIVE #	OBJECTIVE	RECOMMENDED ACTION/STRATEGY	PERFORMANCE MEASURE	IMPLEMENTATION
Objective 5:	Utilize a sustainable approach to transportation planning, design, construction and operation which promotes environmental stewardship and energy conservation.	Incorporate and support sustainable technology in operations of current and future IDOT assets, including multimodal transportation services.	Number of sustainability audits of IDOT facilities	 Incorporate sustainable solutions in the operation of IDOT's Transportation System. Lead: IDOT Office of Highway Project Implementation Partners: IDOT Office of Planning and Programming Facilitate the use of sustainable technology and update requirements on usage of the technology in existing and future IDOT guidance (i.e. plans and manuals). Lead: Office of Highway Project Implementation Partners: Local Stakeholders, IDOT Bureau of Local Roads and Streets Enhance Performance Based Project Selection by consideration of metrics for air quality improvemen Lead: IDOT Bureau of Programming Partners: IDOT Bureau of Planning
		Increase the use of recycled materials in construction projects.	Percentage of recycled materials used on construction projects	
		Reduce emissions by implementing performance-based project selection.	Percent of non-SOV travel	
		Support reduction in the use of single occupancy vehicles (SOVs).	Total emissions reductions of Congestion Mitigation and Air Quality (CMAQ) funded projects	
		Realize positive air quality gains and reduced energy consumption with efficient passenger and freight operations.	Percent of per capita emissions of greenhouse gases reduced	Increase the use of I-LAST during project development. Lead: IDOT Bureau of Design and Environment Partners: IDOT Office of Planning and Programming
			Number of energy/fuel efficient vehicles added annually to IDOT and other fleets statewide	
			Number of TDM efforts implemented and coordinated in Illinois.	
GOAL: Mobility				
Support all modes of tra		improving connections between all modes of transportation.		
Objective 1:	Enhance intermodal freight connectivity and mobility to improve continuity and accommodate the efficient movement of goods and services.	Explore scenarios where modal connections can be improved to facilitate shipments by rail, water and air.	Modal breakdown of annual shipping volumes	 Begin outreach efforts to freight companies and stakeholders in an effort to identify and address related to freight transportation in Illinois. Lead: IDOT Office of Planning and Programming, IDOT Bureau of Communications Services
		Work collaboratively with freight stakeholders to identify and address issues related to transporting freight within Illinois.	Number of intermodal facilities for freight movements	Partner(s): IDOT Districts, Freight Companies, Freight Stakeholders Support efforts to freight stakeholders to explore where modal connections can be improved to
		Enhance intermodal connectivity by identifying and implementing improvements needed to truck routes, ports, airports and rail lines that provide access to Illinois intermodal facilities.	Number of intermodal facilities with NHS connections	facilitate shipments by rail, water and air. Lead: IDOT Office of Planning and Programming Partner(s):Local Government, Planning Agencies, Freight Companies, Freight Stakeholders
		Establish procedures to use the National Performance Management Research Data Set (NPMRDS) to calculate performance.	Truck Travel Time Reliability (TTTR) index	 Provide resources to MPOs on using the NPMRDS data source to measure performance. Lead: IDOT Office of Planning and Programming Partner(s):MPOs Identify how ITS can improve freight movement within and through the state.
		Evaluate existing and proposed innovative intelligent transportation systems (ITS) technology to improve safety.	ITS Statewide Architecture and Strategic Plan Update	Identify now his can improve freight movement within and through the state. Lead: IDOT Office of Planning and Programming, IDOT Bureau of Operations Partner(s):Freight Stakeholders

Live, internet-based, intermodal dashboard of approved freight routes, current travel times and rerouting

on the freight transportation network

Number of studies concerning commercial CAV and impacts

suggestions

Explore ITS technologies to foster the most efficient movement of freight.

Investigate potential use of commercial connected/autonomous vehicles (CAV) for the movement of freight.

Develop live, internet-based, intermodal dashboard of approved freight routes, current travel times and rerouting suggestions.
 Lead: IDOT Bureau of Operations
 Partner(s): Freight Stakeholders, IDOT Office of Planning and Programming

OBJECTIVE #	OBJECTIVE	RECOMMENDED ACTION/STRATEGY	PERFORMANCE MEASURE	IMPLEMENTATION
Objective 2:	Invest in and support multimodal transportation infrastructure improvements and strategic performance-based expansion of services that support the effective movement of passengers.	Identify and define regional multimodal demands and needs, and/or associated costs across the state.	Percent of funding programmed on projects that provide access to multimodal choices	Continue to develop technology enhancements to relay information to the traveling public. Lead: IDOT Office of Intermodal Project Implementation, IDOT Office of Communications Partner(s): Transit Providers
		Identify shifts in population and employment centers and ensure adequate services are provided to these areas.	Establishment of facilities inventory	 Begin analyzing NPMRDS data for Illinois and generate initial data sets for performance measures. Lead: IDOT Office of Planning and Programming Partner(s): Metropolitan Planning Organizations Maintain and adjust policies that will ensure the continued efficacy and improvement of multimodal facilities/connection points and HTSP providers. Lead: IDOT Office of Intermodal Project Implementation Partner(s): IDOT Office of Planning and Programming Monitor all STIP projects featuring pedestrian and bicycling facilities. Lead: IDOT Office of Planning and Programming Partner(s): IDOT Office of Intermodal Project Implementation
		Develop tools for identification and development of Complete Streets projects.	Number of multimodal facilities for passenger movement and use	
		Work with Human Services Transportation Planning (HSTP) coordinators and adjacent transit providers to determine feasible times and locations for transit transfers between providers.	Percent of funding programmed on projects with bicycle/ pedestrian/alternative transportation elements	
		Identify the need for transit signal prioritization and other related technologies/ strategies for improving multimodal corridors.	Creation or expansion of the Transit Riders Information Project (TRIP), or similar system	
		Increase the coordination between freight rail, intercity passenger rail, and commuter rail networks and other transportation modes.	Number of transit signal priority measures implemented	
		Develop statewide bike/pedestrian facilities inventory and prioritize projects to fill in gaps in the overall system.	Percentage of completion of passenger rail system	
		Ensure use of performance-based project selection processes on all new IDOT projects.	Number of Complete Streets projects completed	
		Foster a collaborative environment for CAV work and innovations, specifically focusing on the movement of freight.		
Objective 3:	Increase route efficiency and safety for all users by improving infrastructure condition and addressing capacity issues.	Identify and rank worst bottlenecks and chokepoints to establish an action plan to remediate selected areas.	 Federally required performance measures: Number and rate of fatalities (per 100 Million VMT and mode) Number and rate of serious injuries (per 100 Million VMT and mode) Number of non-motorized fatalities and non-motorized serious injuries Percentage of NHS bridges classified as being in good condition Percentage of NHS bridges classified as being in poor condition Percentage of Interstate pavement in good condition Percentage of Interstate pavement in poor condition Percentage of non-Interstate NHS pavement in good condition Percentage of non-interstate NHS pavement in poor condition Percentage of person-miles traveled on the Interstate considered reliable Percentage of person-miles traveled on the non-Interstate NHS considered reliable Truck travel time reliability index Annual hours of peak hours excessive delay, per capita Percent of non-SOV travel Mileage of highly congested routes Number of rail-crossing fatalities, serious injuries and crashes reported Number of congestion management strategies 	 Increase participation in and continue support of the Strategic Highway Safety Plan, working towards Driving Zero Fatalities to a Reality. Lead: IDOT Bureau of Safety Programs and Engineering Partner(s): MPOs, Counties, Municipalities Develop and share crucial safety information and support educational programs aimed at reducing dangerous behaviors committed by transportation users and operators. Lead: IDOT Bureau of Safety Programs and Engineering Partner(s): IDOT Office of Communications Develop and share bottleneck analysis and action plan to remediate selected areas. Lead: IDOT Office of Planning and Programming Partner(s): IDOT Districts, MPOs, Local Governments Prepare and implement the Transportation Asset Management Plan Lead: IDOT Office of Planning and Programming Partner(s): IDOT Districts Work to coordinate transportation demand programs occurring throughout the state. Lead: IDOT Office of Planning and Programming Partner(s): IDOT Districts, MPOs, Local Governments
		Focus on roadway system preservation by performing needed maintenance before segments/structures are in critical need of repair.		
		Focus on bridge repair and replacement by addressing the most critical needs and performing required maintenance.		
		Incorporate safety design elements in all new roadway plans and ensure design policies support freight-friendly design elements in roadway plans.		
		Promote safety through awareness programs and alerts regarding areas experiencing high crash rates.		
		Promote rail and highway safety by identifying and improving hazardous highway at-grade crossings.		
		Promote non-motorized safety by identifying and improving high accident locations for non-motorized users.		
		Explore various congestion management strategies for implementation within Illinois metropolitan areas.		

OBJECTIVE #	OBJECTIVE	RECOMMENDED ACTION/STRATEGY	PERFORMANCE MEASURE	IMPLEMENTATION	
GOAL: Resiliency					
Proactively assess, plan a		sure that our infrastructure is prepared to sustain and recover fro			
Objective 1:	Improve safety on the Illinois transportation system by reducing the number of injuries/fatalities attributable to extreme events.	Engage in close coordination with operations stakeholders to reduce injuries and fatalities from extreme events.	Number of flood-flow deficient bridges and culverts	 Enhance the roadway closure and detour information available to travelers during extreme events so as to increase traveler's ability to make informed decisions. Lead: IDOT Office of Communications Partners: IDOT Bureau of Operations, IDOT Districts Improve and enhance coordination between IDOT maintenance leads and traffic operations/incident management staff, and local and state emergency response professionals to identify any conclusions to be drawn from extreme event response activities. Lead: IDOT Bureau of Operations Partners: IDOT Districts, Local and State Emergency Response Professionals 	
		Increase use of preemptive road closures for extreme events.	Number of state route closures due to flooding		
		Address known and/or recurring roadway flooding areas.	Number and proportion of extreme events for which outreach/social media campaigns are undertaken		
				 Hold annual multi-department and multi-agency coordination meetings to discuss emergency response methods and available tools and develop a plan to increase detour planning efforts and improve system outage communication efforts. Lead: IDOT Bureau of Operations, Bureau of Traffic Partners: IDOT Districts, IDOT Office of Communications, State Police, FEMA, Illinois Emergency Management Agency 	
Objective 2:	Minimize the frequency and duration of facility closures due to extreme events and other disruptions.	Improve capabilities for dealing with extreme events by enhancing real-time traffic operations capabilities. Enhance emergency response plans that consider strategic planning for events.	Number of facility closures (or capacity limitations) attributable to extreme events Number of response plans incorporating natural or manmade disasters	 Coordinate with maintenance staff and consult the All Hazards vulnerability assessment to identify regular/recurring flood conditions on state highways and have design engineers utilize that information to act to improve flooding conditions through the capital improvement program. Lead: IDOT Bureau of Operations, IDOT Bureau of Design and Environment Partners: IDOT Districts, IDOT Office of Planning and Programming 	
		Continue active involvement in the critical infrastructure sub-committee of the Illinois Terrorism Taskforce.		 Develop contractor emergency response on-call contracts and agreements with local governments and surrounding states to provide response and recovery support during future events. Lead: IDOT Districts, IDOT Bureau of Operations Partners: IDOT Office of Planning and Programming, Illinois Emergency Management Agency 	
				 Develop a severe storm index, which will allow IDOT to better understand the frequency of extreme weather events. Lead: IDOT Office of Planning and Programming Partners: IDOT Bureau of Design and Environment 	
				Enhance coordination with maintenance staff and emergency response staff to identify and implement strategies for reducing the impact of events, and develop and document a set of strategies for reducing the impact of events on the transportation system. Lead: IDOT Bureau of Operations Partners: IDOT Districts	
Objective 3:	Enhance transportation system redundancy.	Coordinate with appropriate state and local agencies to update emergency response plans	Number of major roadways with at-risk areas having pre- planned detour routes/closure plans and similar measures for other modes	Develop detour plans for at-risk areas on major state routes based on information from the All Hazards Transportation System Vulnerability Assessment. Lead: IDOT Bureau of Operations Partners IDOT Districts IDOT Bureau of Decign and Environment.	
		Create a comprehensive system of detour routes and closure plans for major roadways	Total length of major roadways with at-risk areas having detour route signage (or plans for rapid reaction temporary signage).	 Partners: IDOT Districts, IDOT Bureau of Design and Environment Develop detour signage and digital information plans for at-risk areas on major state routes based on information from the All Hazards Transportation System Vulnerability Assessment. 	
		Coordinate activities across agencies and modes to create comprehensive and consistent multimodal response plans.		Lead: IDOT Bureau of Operations Partners: IDOT Districts, IDOT Bureau of Design and Environment	
		Create a signing and digital information plan for detours.			
		Enhance the resiliency of new projects by considering system redundancy and emergency operation			

OBJECTIVE #	OBJECTIVE	RECOMMENDED ACTION/STRATEGY	PERFORMANCE MEASURE	IMPLEMENTATION
Objective 4:	Identify current and future transportation system vulnerabilities to extreme events and climate change.	Better define system vulnerabilities from current extreme events Prioritize next steps from the vulnerability analysis that need addressing	System-wide vulnerability analysis results that are based on the latest information	 Identify actions needed to incorporate climate change into decision-making by coordinating with climate scientists and other state adaptation planning efforts to get an official set of projections for use in IDOT activities, educating staff on climate science basics and findings of vulnerability analysis, and getting broad agency-wide buy-in on recommended methodology and prioritization systems. Lead: IDOT Bureau of Design and Environment, IDOT Office of Planning and Programming Partners: IDOT Districts, IDOT Bureau of Operations
		Expand the assessment to additional assets and stressor types		Apply official climate projections for use by project-level staff. Lead: IDOT Bureau of Design and Environment Partners: IDOT Districts, IDOT Bureau of Operations
		Develop prioritization scheme through internal coordination to enable action in addressing noted system vulnerabilities		 In coordination with the state climatologist, develop educational materials on incorporating resilience and climate change into efforts across IDOT. Lead: IDOT Office of Planning and Programming, IDOT Bureau of Design and Environment Partners: IDOT Districts, IDOT Bureau of Operations
Objective 5:	Address transportation system vulnerabilities to extreme events and climate change within the transportation planning, design, and asset management processes	Address noted system vulnerabilities to extreme weather and climate change effects.	Number of and funding amount for resiliency-related projects	 Commit IDOT resources to begin a broader roll-out of the concepts of resiliency to climate change and extreme weather by holding an informational event with representation from planning, design,
		Incorporate prioritization of resiliency needs into transportation planning process and project scoring systems.	Number/weight of resilience factors in the performance- based project selection tool	operations, asset management and maintenance to define requirements, targets and required actions. Lead: IDOT Office of Planning and Programming Partners: IDOT Bureau of Design and Environment, IDOT Bureau of Operations, IDOT Districts
		Develop a risk-based design approach for new projects, considering climate change projections and the need for adaptation.	Number of design projects using a risk-based design approach, considering climate change projections	 Incorporate potential facility disruptions as a part of all ongoing maintenance and asset management, and facilitate activities and implement strategies to reduce future system impacts. Lead: IDOT Office of Planning and Programming, IDOT Bureau of Operations Partners: IDOT Districts
		Undertake detailed adaptation analysis on all high- vulnerability facilities.	Number of specific asset types of high-vulnerability assets for which a detailed adaptation analysis has been conducted	 Incorporate resiliency into ongoing practices and develop projects that address identified system vulnerabilities.
		Incorporate system resiliency measures into project design efforts and the asset management system.	Number of extreme weather risks identified and addressed in the asset management plan	Lead: IDOT Office of Planning and Programming Partners: IDOT Districts, IDOT Bureau of Design and Environment
				 Coordinate with the project scoring system team to develop and implement a project scoring method and risk-based design approach to project design. Lead: IDOT Office of Planning and Programming Partners: IDOT Bureau of Design and Environment
				 Coordinate with asset management team to incorporate climate change and extreme events into their activities. Lead: IDOT Office of Planning and Programming Partners: IDOT Districts

OBJECTIVE #	OBJECTIVE	RECOMMENDED ACTION/STRATEGY	PERFORMANCE MEASURE	IMPLEMENTATION		
GOAL: Stewardship						
	ng and increase revenues to support system maint					
Objective 1:	Invest in improvements for airports, highways/streets, freight, ports, waterways and new traffic and transit technologies.	Complete current ongoing major infrastructure improvements.	Volume/number of projects completed	Deliver completed projects within the ongoing major infrastructure programs. Lead: IDOT Office of Highways Project Implementation		
		Identify needed capacity enhancements, capital improvements and new technology implementation.	Number of projects evaluated through performance based project selection tool	 Partner(s): MPOs, IDOT District Offices, IDOT Regional Offices, Transportation Agencies Identify new projects and/or partnerships with the private sector in order to foster the implementation 		
		Identify new mega projects which will improve the existing transportation system and infrastructure and identify alternative funding opportunities.	Funds anticipated to be spent (programmed) on strategic capital and expansion plans addressing system preservation, capacity expansion and technology implementation	of CAVs and other new technologies within the transportation industry. Lead: IDOT Office of Intermodal Project Implementation, IDOT Office of Highways Project Implementation Partner(s): MPOs, IDOT District Offices, IDOT Regional Offices, Transportation Agencies • Create a long-term plan of major capacity enhancement, infrastructure expansion, and preservation projects, and the associated funding necessary to implement each (i.e., Expressway Vision). Lead: IDOT Office of Planning and Programming, IDOT Office of Highway Project Implementation Partner(s): MPOs, IDOT District Offices, IDOT Regional Offices, Transportation Agencies		
		Identify potential projects or partnerships to address connected/autonomous vehicles (CAV) being introduced within both passenger and commercial/freight fleets.	Number of new projects and/or partnerships to address CAVs utilizing the transportation system			
Objective 2:	Ensure selection and prioritization decisions on projects is transparent and guided by sound data and performance-based decisions.	Develop performance-based project selection process and accompanying tools.	Volume/number of projects selected utilizing a performance-based project selection process	Develop web-based/app-based tools, dashboards and websites, and expand feedback opportunities order to demonstrate to stakeholders and the public how projects advance through the development.		
		Enhance asset management process and accompanying tools.	Pavement/infrastructure/vehicle condition	process and how funding is spent. Lead: IDOT Office of Communications Partner(s): IDOT Bureau of Communication Services		
		Develop tools, dashboards, websites and feedback opportunities to demonstrate how projects progress and how funding is spent and the benefits of that funding.	Increased life span of pavements and bridges	 Enhance internal IDOT tracking tools in order to ensure projects are achieving timely schedules and progressively advancing through the development process. Lead: IDOT Office of Planning and Programming 		
		Ensure projects are meeting established schedules.	Number of tools developed to share project and funding information with the public	Partner(s): IDOT Office of Highways Project Implementation Fully integrate the recently developed performance-based project selection tool into project		
			Number of projects meeting established schedules	programming and planning to track results (e.g., public-facing tools ranking projects). Lead: IDOT Office of Planning and Programming		
			Federally required performance measures:	Partner(s): IDOT Bureau of Planning, IDOT Bureau of Programming, IDOT Bureau of Local Roads		
			 Transit equipment - state of good repair Transit facilities - state of good repair Transit infrastructure - state of good repair Transit rolling stock - state of good repair Percentage of Interstate pavement in good condition Percentage of Interstate pavements in poor condition Percentage of non-Interstate National Highway System (NHS) pavements in good condition Percentage of non-interstate NHS pavements in Poor condition Percentage of NHS bridges classified as in good condition Percentage of NHS bridge classified as in poor condition 	 Expand and enhance asset management tools both for IDOT and local transportation partners. Lead: IDOT Office of Planning and Programming, IDOT Office of Intermodal Project Implementation Partner(s): MPOs, Transit Agencies 		

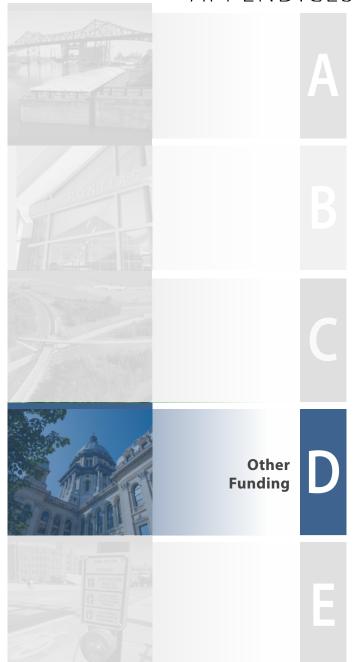
OBJECTIVE #	OBJECTIVE	RECOMMENDED ACTION/STRATEGY	PERFORMANCE MEASURE	IMPLEMENTATION
Objective 3:	Support innovative project delivery opportunities.	Support public-private partnerships (P3s) and private sector project financing initiatives.	Number of P3 projects in the state	• Conduct outreach and education events for MPOs and local government officials on innovative project financing and delivery methods in order to increase knowledge and understanding of methods and
		Explore innovative project financing and delivery methods.	Number of events and publications, per year, providing information on innovative financing and delivery programs and financing-related opportunities	benefits, and uses in other states. Lead: IDOT Office of Communications, IDOT Office of Planning and Programming Partner(s): MPOs, Local transportation officials
		Work with industry to gain authority for Design-Build and Construction Manager/General Contractor through legislation.	Number of events focused on outreach to MPOs and local governments on innovative financing and delivery programs	 Educate stakeholders and the public on innovative project financing and delivery methods in order to increase knowledge of methods and use in other states. Lead: IDOT Office of Planning and Programming Partner(s): IDOT Bureau of Innovative Project Delivery, MPOs, Local government officials Study innovative project financing and delivery methods and their use within Illinois to advance various major projects. Lead: IDOT Office of Planning and Programming Partner(s): IDOT Bureau of Innovative Project Delivery Review project processes for efficiency and effectiveness. Lead: IDOT Office of Fiscal Administration Partner(s): IDOT Bureau of Local Roads and Streets, IDOT Bureau of Design and Environment, Local Agencies
		Explore outreach and education for MPOs and local government officials on innovative project financing and delivery initiatives.	Time to implement projects	
		Explore processes within the department to make administration of projects more efficient yet effective.		
Objective 4:	Identify funding sources and leverage resources wisely to maximize the value of investments.	Identify opportunities to support non-highway funding program(s) for all multimodal transportation projects.	Number of successful joint procurements and estimated cost savings	Work with regional and local transportation agencies and other local transportation partners on joint tools to save time/money/effort. Local DOT Office of Planning and Draggers and
		Develop time/money/effort saving platforms across transportation agencies.		Lead: IDOT Office of Planning and Programming Partner(s): IDOT Bureau of Local Roads and Streets, Transportation Agencies
		Expand Economic Development Program (EDP) to better define projects that provide greater benefits for investments.		 Work with state and/or federal legislators to create dedicated non-highway funding program(s) for multimodal transportation projects. Lead: IDOT Office of Planning and Programming, IDOT Office of Legislative Affairs, IDOT Office of Intermodal Project Implementation Partner(s): Multimodal stakeholders, Transportation Agencies

ILLINOIS DEPARTMENT OF TRANSPORTATION





APPENDICES



D. Other Transportation Funding

Though IDOT is a major spender of transportation dollars in Illinois, it is not the only one. Municipalities, counties, transit systems, airports, railroads, and the Illinois State Toll Highway Authority all fund infrastructure improvements in the state. In some cases, the State of Illinois provides transportation funding to other entities or acts as a pass through for federal funds, while in other instances, these entities raise funds directly via tolls, fees, or local taxes. This appendix describes some of these other transportation programs and funding sources by transportation mode.

D.1 ROADS AND HIGHWAYS

As described in the main body of this document, numerous federal and state funding sources supply IDOT with the revenue it needs to carry out the multi-year highway program (MYP). Beyond the funding for IDOT programs, local governments receive 54.4 percent of motor fuel tax proceeds (of this, 49.1 percent goes to municipalities, 16.74 percent goes to counties with populations over 1 million, 18.27 percent goes to counties with populations under 1 million, and 15.89 percent goes to road districts/townships). Local governments also receive the local grant component of the state's Series D Bonds from the Illinois Jobs Now! Program, and have access to federal Surface Transportation Program (STP) funds, either through the local metropolitan planning organization (MPO) in urbanized areas or through IDOT in rural and small urban areas.

Local jurisdictions may also assess taxes and fees to support their transportation needs. Depending on the type of jurisdiction, local governments are permitted to enact a property tax, a real estate transfer tax, a sales tax, a local option fuel tax, vehicle license fees, a vehicle rental tax, or some combination to fund transportation activities. In addition, counties and cities are authorized to operate toll bridges. The extent to which different local governments have introduced these dedicated revenue streams varies. For example, DuPage, Kane, and McHenry Counties have imposed a tax on the retail sale of motor fuel at a rate of 4 cents per gallon (the maximum rate). Cook County and the City of Chicago also assess a motor fuel tax of 6 cents and 5 cents, respectively.

D1.1 ILLINOIS STATE TOLL HIGHWAY AUTHORITY

The Illinois State Toll Highway Authority (ISHTA) operates 292 miles of roadway. The primary source of revenues for ISTHA is tolls collected on the system.

The ISTHA is implementing a 15-year \$12 billion capital program, called Move Illinois: The Illinois Tollway Driving the Future, to complete the rebuilding of its 50+ year-old system, improve mobility, and relieve congestion. The program includes \$8.32 billion to fund necessary improvements to the existing toll highway system to keep the existing 292 miles in a state of good repair. In addition, the program commits \$3.83 billion to new priority projects that focus on system expansion. This 2012 to 2026 program is funded by bonds and toll revenue generated through a toll rate increase for passenger vehicles in 2012 and a previously approved increase for commercial vehicles that began in 2015.

The Move Illinois program includes:

- → Reconstructing and widening the Jane Addams Tollway (I-90) as a 21st century, state-of-the-art corridor linking Rockford to O'Hare International Airport;
- → Constructing a new, all-electronic interchange to connect the Tri-State Tollway (I-294) to I-57;
- → Building the new, all-electronic Elgin O'Hare Western Access Project;
- → Reconstructing and widening the central Tri-State Tollway (I-294) and Edens Spur (I-94)

- → Preserving the Reagan Memorial Tollway (I-88)
- → Preserving the Veterans Memorial Tollway (I-355)
- → Planning studies for the Illinois Route 53/120 Project and other emerging projects.

The ISTHA's FY 2017 Move Illinois program budget reinvests more than 75 percent of the revenue collected back into roads, bridges, and infrastructure. The Move Illinois budget is a balanced spending plan that anticipates \$1.4 billion in revenues that will be allocated to fund maintenance and operations, debt service transfers, and capital investments.

D.2 BICYCLE AND PEDESTRIAN

The Illinois Transportation Enhancement Program (ITEP) provides funding for community based projects that expand travel choices and enhance the transportation experience by improving the cultural, historic, aesthetic, and environmental aspects of our transportation infrastructure. Project sponsors may receive up to 80 percent reimbursement for eligible project costs. Under ITEP, IDOT works jointly with other state agencies, local governments, interest groups, and citizens in enhancing the transportation system and building more livable communities. This program is supported by the federal Transportation Alternatives (TA) program. Illinois's Safe Routes to School program is also supported by the TA program. As part of the FAST act, the TA program is funded through a set a-side of Surface Transportation Block Grant funds. The TA funds that support ITEP and Safe Routes to school also requires that 50% of the set a-side be spent in urban areas over 50,000 in population. For those urban areas 50,000-199,999 in population, IDOT programs the funds through the ITEP competitive process. For urban areas over 200,000 in population, the Metropolitan Planning Organization in that urban area programs TAP funds.

Other funding for bicycle and pedestrian infrastructure comes from the federal Congestion Mitigation and Air Quality (CMAQ) program. CMAQ funding is available only to those areas of the state where the region's air quality does not meet federal air quality standards; these are called "non-attainment" areas. In Illinois, the St. Louis and Chicago regions have access to CMAQ funding. Bicycle and pedestrian projects compete for CMAQ funds against other projects that are designed to improve air quality and mitigate congestion in the region.

D.3 PUBLIC TRANSIT

The State provides operating assistance to transit operators in Illinois. For the six-county northeastern Illinois region, the primary source of revenue is the RTA sales tax, which is comprised of two parts. Part I is the original RTA sales tax of one percent in Cook County (one percent on food and drugs, and 0.75 percent from all other sales), and 0.25 percent in DuPage, Kane, Lake, McHenry and Will Counties, and Part II is the 2008 authorized additional sales tax (increase of 0.25 percent in Cook County, and 0.5 percent in DuPage, Kane, Lake, McHenry and Will Counties with half going to the RTA and half to the county where it was collected). The second largest revenue source is the Public Transportation Fund (PTF), which is comprised of two parts. PTF Part I is the state provided funding composed of a 25 percent match of Sales Tax I receipts. PTF Part II, authorized by the 2008 RTA funding reform, is State provided funding equal to a 5 percent match of Sales Tax I receipts and a 30 percent match of Sales Tax II receipts, and the City of Chicago real estate transfer tax (RETT) receipts.

Per the RTA budget, an estimated \$412 million is expected for the PTF in FY 2017. The state also provides partial reduced fare and free ride reimbursement for discounts provided to students, the elderly, and riders with disabilities. The reduced fare reimbursement is subject to annual appropriations by the Illinois General Assembly. The RTA budget assumes restoration of the reduced fare reimbursement funding of \$17.5 million in State FY2017-2020 budgets. In addition, the RTA is assuming \$8.5 million in state funding for Pace's Americans with Disabilities (ADA) paratransit service.

Table E-1 illustrates the FY 2017 Downstate Operating Assistance Program (DOAP), which provides funding for downstate transit operations. The General Revenue Fund amount transferred to the Downstate Public Transportation Fund for operating assistance is equal to 2/32 of 80% of the state sales tax collected from the areas served by the transit agencies. The total for SFY 2017 downstate operating assistance is \$309 million.

For transit capital funding in northeastern Illinois, the state provides reimbursements for debt service for the RTA's Strategic Capital Improvement Program (SCIP) Bonds. The RTA is assuming \$131 million in State Financial Assistance will continue in 2017.

Table D.1: Downstate Operating Assistance Program

Southwestern	Amount	Non-Urbanized Area	Amount
Madison County MTD	27,116,400	Hancock County	233,600
St. Clair County MTD	68,053,200	Henry County	490,700
Total	\$95,169,600	Jackson County MTD	566,600
Urbanized	Amount	Jersey County (w service to Greene & Calhoun)	363,000
Bloomington-Normal (Connect Transit)	10,436,100	Jo Davies County	671,700
Champaign-Urbana MTD	36,558,100	Kankakee County	873,500
Danville (City of)	3,323,800	Kendall County	2,090,100
Decatur (City of)	9,138,000	Lee & Ogle Counties	966,000
DeKalb (City of)	4,291,300	Macomb (City of)	2,868,000
Greater Peoria (CityLink) (w service to Pekin)	28,310,200	Logan County (w service to Macon Co.)	515,400
River Valley Metro MTD	6,131,300	Macoupin County	483,100
Rockford MTD	19,132,900	Marshall County (w service to Stark Co.)	161,000
Rock Island County Metro (MetroLINK)	23,051,300	McLean County	1,999,000
Sangamon MTD	18,606,300	Monroe-Randolph MTD	1,180,400
Stateline MTD (w service to South Beloit)	487,300	Ottawa (City of) (w service to LaSalle Co.)	1,288,400
Total	\$159,466,600	Peoria County	609,100
Non-Urbanized Area	Amount	Piatt County	585,200
Bond County	418,200	Quincy (City of)	4,569,300
Boone County	161,000	Rides MTD (w service to Edgar & Clark Cos.)	8,911,200
Bureau County (w service to Putman Co.)	951,400	Rock Island-Mercer Counties	370,400
Carroll County	193,300	Sangamon County (w service to Menard Co.)	532,400
Champaign County	768,800	Shelby County (w service to Christian Co.)	1,159,500
Coles County	639,700	Shawnee MTD	2,642,900
CRIS Rural MTD	900,100	Southern Central Illinois MTD	6,945,100
DeKalb County	604,000	Tazewell County	900,000
Douglas County	142,900	Warren County	225,400
Effingham County	483,100	West Central MTD (w service to Cass- Schuyler Cos.)	1,552,200
Freeport (City of)/Stephenson County	1,114,500	Whiteside County	797,300
Fulton County	322,100	Woodford County	395,100
Galesburg (City of)	2,077,500	Total	\$54,292,200
Grundy County	570,000	Grand Total	\$308,928,400

D.4 AIRPORTS

There are 107 public use airports in Illinois, of which 78 are publicly owned and eligible for public funding. Capital funding is primarily provided by the Federal Aviation Administration (FAA) from the Federal Airport and Airway Trust Fund. Through this fund, the FAA provides formula and discretionary funds to IDOT for distribution to Illinois airports for aviation projects.

The FAA also provides formula and discretionary funds directly to the City of Chicago for the O'Hare Modernization Program (OMP). In FY 2017, the FAA approved \$60 million in federal Airport Improvement Program (AIP) grants for the OMP. Federal regulations require state and local taxes on aviation fuel (except those already in effect on December 30, 1987) to be expended for aviation purposes, including state aviation programs.

State capital assistance is provided through the sale of Series B Bonds. The availability of these funds is determined by the General Assembly. Since FY2009 state funding for aviation projects has been appropriated from the Road Fund. FY 2017 appropriations for Aeronautics include:

- → Federal Airport Improvement Program (State Match) \$4 million (State Road Fund), plus \$1,527,684 reappropriation from the State Road Fund
- → State Airport Improvement Program \$11 million (Series B bond funds)
- → Statewide Air Navigation \$13 million (Series B bond funds)
- → Statewide Financial Assistance to Airports (Federal & Local share) \$110 million plus \$671 million reappropriation (Federal/State/Local Airport Fund)
- → South Suburban Airport \$2 million (South Suburban Airport Improvement Fund), plus \$31 million reappropriation (Series B bonds for re-appropriation)

D.5 RAIL

While user fees are the primary funding source for freight and passenger rail services, Illinois has been providing financial assistance to the rail industry for more than three decades.

D5.1 AMTRAK

Since Amtrak's establishment in 1971, Illinois has provided operating funding to support supplemental intercity passenger service. In FY 2017, the General Assembly appropriated \$50 million for Amtrak passenger rail operating assistance.

The initial goals of the Chicago-St. Louis high speed intercity passenger rail program are to operate trains at top speeds of 110 mph, reducing travel time from St. Louis to Chicago from 5.5 to 4.5 hours, increase service reliability, and enhance safety. The high-speed trains will share track with freight trains. In support of high speed rail, the state has provided \$300 million, combined with the infusion of \$1.65 billion in federal funds including the Federal Railroad Administration's (FRA) High Speed Intercity Passenger Rail Program. Most of the infrastructure work between Joliet and Alton will be completed in 2017, resulting in increased speeds and the resulting reduction in travel time by about an hour.

In addition to the Chicago-St. Louis corridor, IDOT is making improvements to other intercity passenger rail corridors, including \$45 million for the Chicago-Moline corridor, which is being used to match \$177 million in federal funds.

D5.2 FREIGHT

For freight railroads, following up on the federal Regional Rail Reorganization Act of 1973, the Illinois Rail Freight Program was established in 1983 to facilitate government investments in rail service that provide for statewide

economic development. In FY 2017, the General Assembly provided \$1.7 million for the Rail Freight Loan Repayment Program. The freight program provides grants and low interest financing to capital rail projects that benefit economic development in Illinois. Projects are evaluated based on a benefit/cost ratio.

D5.3 CREATE

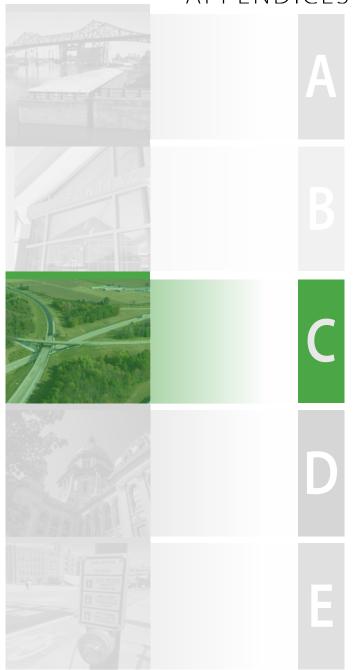
Another element of IDOT's efforts to support freight and passenger rail service is the Chicago Region Environmental and Transportation Efficiency (CREATE) program. CREATE is a partnership between the U.S. Department of Transportation, the Illinois Department of Transportation, the City of Chicago Department of Transportation, Cook County, the Association of American Railroads, Amtrak, Metra, the six Class I freight rail carriers in the Chicago area (BNSF Railway, Canadian Pacific Railway, Canadian National Railway, CSX Transportation, Norfolk Southern Corporation, and Union Pacific Railroad), the Belt Railway Company of Chicago, and the Indiana Harbor Belt Railroad. The proposed CREATE program includes 70 rail and grade separation projects that will result in increased efficiency and reliability of rail service within the Chicago region, while also providing additional benefits to highway users through the elimination of at-grade crossing delays and other conflicts. To date, the CREATE partners have committed over \$1.4 billion to the CREATE program, which is estimated to have a total cost of approximately \$4.4 billion.

ILLINOIS DEPARTMENT OF TRANSPORTATION





APPENDICES



C. Funding + Financing Opportunities

LRTP Chapter 7.0, Transportation Funding and Financing, describes recommended strategies for IDOT to increase funding levels and pursue financing to provide transportation infrastructure for Illinois. This appendix offers additional detail on federal funding and financing programs, as well as innovative revenue-generating techniques used by other states.

C.1 FEDERAL PROGRAMS

Congress authorizes the federal government to spend its transportation revenue on programs that support public policy interests for a given amount of time. Authorizing legislation sets the maximum amount of funding that can be appropriated to programs each fiscal year. The current authorization, Public Law 114-94, the Fixing America's Surface Transportation (FAST) Act, is five-year legislation intended to improve the Nation's surface transportation infrastructure, including our roads, bridges, transit systems, and rail transportation network. Each year, Congress reviews appropriation bills to allocate funding for all federal agencies, departments, and programs. This action provides the legal authority for federal agencies to spend money during the upcoming fiscal year on administered programs. The Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) are the main providers of federal transportation funding. These Administrations allocate funding to states based on statutory formulas and to local and state public agencies through competitive discretionary grant programs.

Beyond fiscal year (FY) 2020, the size of the federal program is yet to be determined, given the change in leadership in Washington, DC. Should ideological gridlock, dwindling fuel tax receipts, and a lack of consensus on the goals of a federal program continue to remain the status quo, formula, and grant funds are likely to remain low relative to demand for such grant funding. At the same time, Congress has expanded low-cost, flexible federal loans for highway and transit projects tenfold. Low-cost federal loans and other financing options may help supplement traditional grant support.

Some key federal funding and financing programs are described below. This is not a comprehensive list of all federal funding and financing programs, but a sample.

C1.1 FORMULA FUNDING PROGRAMS

FEDERAL HIGHWAY ADMINISTRATION

Surface Transportation Block Grant (STBG) Program

The FAST Act converts the long-standing Surface Transportation Program (STP) into the Surface Transportation Block Grant Program (STBG), though it remains a formula funding program. The program retains STP flexibilities, promoting flexibility in state and local transportation decisions and providing flexible funding to best address state and local transportation needs. STBG program funds are apportioned to states in the form of contract authority, subject to the overall federal-aid obligation limitation. Each state's STBG apportionment is calculated based on a percentage specified in law. Certain set-asides are required by law from a state's STBG apportionment, including funding for Transportation Alternatives, two percent for State Planning and Research, and funding for bridges not on federal-aid highways (off-system bridges). The Transportation Alternatives (TA) set-aside of the STBG program provides funding for projects and activities that promote alternative

transportation methods such as pedestrian and bicycle facilities, recreational trails, safe routes to school projects, community improvements such as historic preservation and vegetation management, and environmental mitigation related to storm-water and habitat connectivity. In Illinois, this funding is used to support the Illinois Transportation Enhancement Program (ITEP), which provides funding for community based projects that expand travel choices and enhance the transportation experience by improving the cultural, historic, aesthetic and environmental aspects of our transportation infrastructure.

Congestion Mitigation and Air Quality (CMAQ) Improvement Program

The FAST Act continued the Congestion Mitigation and Air Quality (CMAQ) program to provide a flexible funding source to state and local governments for transportation projects and programs to help meet the requirements of the Clean Air Act. Formula funding is apportioned to states for projects that contribute to the attainment or maintenance of a national ambient air quality standard, with a high level of effectiveness in reducing air pollution. In addition, vehicle-to-infrastructure communications equipment and electric vehicle and natural gas vehicle infrastructure are eligible projects under the CMAQ program. In Illinois, the St. Louis and Chicago regions have access to CMAQ funding.

National Highway Freight Program (NHFP)

The FAST Act established the National Highway Freight Program (NHFP), which provides \$6.3 billion in formula funds over five years for states to invest in freight projects on the National Highway Freight Network. Up to 10 percent of these funds may be used for intermodal projects. Beginning on December 4, 2017, a state may not obligate NHFP funds unless it has a federally approved a freight plan.

Highway Safety Improvement Program (HSIP)

The FAST Act continues the Highway Safety Improvement Program (HSIP), which is intended to achieve a significant reduction in traffic fatalities and serious injuries on all public roads, including non-state-owned public roads and roads on tribal lands. FHWA apportions this formula funding as a lump sum for each state, which then divides that total among apportioned programs. HSIP funds are to be used for safety projects that are consistent with the state's strategic highway safety plan (SHSP) and that correct or improve a hazardous road location or feature or address a highway safety problem. Eligible projects include installation of vehicle-to-infrastructure communication equipment, pedestrian hybrid beacons, and roadway improvements that provide separation between pedestrians and motor vehicles, including medians and pedestrian crossing islands.

National Highway Performance Program (NHPP)

The National Highway Performance Program (NHPP) provides formula funding to states to use for construction on national highways (including the interstate system and other principal arterials), and for efforts to maintain and repair highways to meet performance targets set in states' asset management plans. Eligible project types include construction and rehabilitation/restoration of highways and bridges, and ferry boats and facilities; bridge and tunnel inspection; and those related to safety, intelligent transportation systems (ITS), bicycle and pedestrian infrastructure. Under some circumstances, transit capital projects and non-federal aid highway improvements are also permitted through the NHPP program.

FEDERAL TRANSIT ADMINISTRATION

State of Good Repair Grants

This formula program (Section 5337) replaces the fixed guideway modernization program (Section 5309). Funding is limited to fixed guideway systems (including rail, bus rapid transit, and passenger ferries) and high intensity bus (buses operating in high occupancy vehicle (HOV) lanes). Projects are limited to replacement and rehabilitation (rolling stock, track, line equipment and structures, signals and communications, power equipment and substations, passenger stations and terminals, security equipment and systems, maintenance facilities and equipment, operational support equipment), or capital projects required to maintain public transportation systems in a state of good repair, as well as development and implementation of transit asset management plans.

Grants for Buses and Bus Facilities Formula Program

The Grants for Buses and Bus Facilities program (Section 5339) makes federal resources available to states and direct recipients to replace, rehabilitate, and purchase buses and related equipment and to construct bus-related facilities including technological changes or innovations to modify low- or no-emission vehicles or facilities. Funding is provided through formula allocations (part a), with competitive grants also available (parts b and c, described below under discretionary grant programs). The purpose of the Buses and Bus Facilities Program is to assist in the financing of buses and bus facilities capital projects, including replacing, rehabilitating, purchasing or leasing buses or related equipment, and rehabilitating, purchasing, constructing, or leasing bus-related facilities.

Urbanized Area Formula Funds

FTA Section 5307 Urbanized Area Formula funds are allocated to urban areas according to a formula. These funds offer capital assistance to transit providers in urbanized areas; urbanized areas of less than 200,000 inhabitants may also use the funding to support operations.

C1.2 DISCRETIONARY GRANT PROGRAMS

U.S. DEPARTMENT OF TRANSPORTATION (USDOT)

Transportation Investment Generating Economic Recovery (TIGER)

Congress has appropriated \$500 million in FY 2017 discretionary grant funding for transportation projects across the country in the ninth round of the highly competitive Transportation Investment Generating Economic Recovery (TIGER) grant program. Over eight rounds since 2009, the TIGER grant program has provided a combined \$5.1 billion to 421 projects in all 50 states, the District of Columbia, Puerto Rico, Guam, the Virgin Islands, and tribal communities. These federal funds leverage money from private sector partners, states, local governments, metropolitan planning organizations, and transit agencies. The 2016 TIGER round alone leveraged nearly \$500 million in federal investment to support \$1.74 billion in overall transportation investments.

The purpose of the TIGER grant program is to support innovative projects, including multi-modal and multi-jurisdictional projects, which are difficult to fund through traditional federal programs. Awards under the prior Administration focused on capital projects that generate economic development and improve access to reliable, safe and affordable transportation for communities, both urban and rural. TIGER grant funds have historically been awarded for construction activities, but some rounds have included funds for planning and preliminary engineering.

USDOT recently released its Notice of Funding Opportunity (NOFO) for FY 2017 TIGER funding. Applications were due October 16, 2017. Illinois was successful in receiving funding during this call for projects. Illinois received \$7.6 million in federal funds for safety improvements and capacity enhancements on I-57 in southern

Illinois in Williamson and Franklin Counties. The total project cost is \$13.3 million. The TIGER benefit/cost analysis indicated that the project benefits were over 18 times greater than the cost of implementing the project. The TIGER 9 funding will be available to be obligated to awarded projects until September 30th, 2020.

Demand for the TIGER grant program has historically far exceeded available funds. During the previous eight rounds, the Department received more than 7,500 applications requesting more than \$152 billion for transportation projects across the country. In addition, because the TIGER program was not authorized under the FAST Act, further rounds cannot be administered without specific Congressional appropriations for the program. As such, the program's survival may depend on Congress appropriating TIGER funds.

Infrastructure for Rebuilding America (INFRA)

The United States Department of Transportation's (USDOT) Nationally Significant Freight and Highway Projects program, named Fostering Advancements in Shipping and Transportation for the Long-term Achievement of National Efficiencies (FASTLANE) during the Obama administration and now termed the Infrastructure for Rebuilding America (INFRA) competitive grant program, could be pursued as a potential source of federal funds for projects. The program is authorized at \$4.5 billion from Fiscal Year (FY) 2016 through FY 2020. USDOT awarded \$759 million to 18 projects in the initial FY 2016 round.

Up to \$1.5 billion in FY 2017 and FY 2018 INFRA funds are available for projects and programs that leverage federal funds with private and toll revenues, improve safety, and hold the greatest promise to eliminate freight bottlenecks and improve critical freight movements. Applications are due in early November 2017. Unlike the FTA Section 5339, FHWA CMAQ, and USDOT TIGER programs, INFRA grants are somewhat larger, ranging from \$5 million to \$165 million in the FY 2016 round.

FEDERAL HIGHWAY ADMINISTRATION (FHWA)

Advanced Transportation and Congestion Management Technologies Deployment (ATCMTD) Program

The FAST Act established the Advanced Transportation and Congestion Management Technologies Deployment (ATCMTD) grant program to make competitive grants for the development of model deployment sites for large scale installation and operation of advanced transportation technologies to improve safety, efficiency, system performance, and infrastructure return on investment. Administered by the FHWA and authorized at \$60 million each fiscal year from FY 2016 to FY 2020, the ATCMTD program provides competitive discretionary grants to highway projects that deploy advanced transportation and congestion management technologies, including advanced traveler information systems, advanced transportation management technologies, infrastructure maintenance, monitoring, and condition assessment, advanced public transportation systems, transportation system performance data collection, analysis, and dissemination systems, advanced safety systems, including vehicle-to-vehicle and vehicle-to-infrastructure communications, technologies associated with autonomous vehicles, and other collision avoidance technologies, including systems using cellular technology, integration of intelligent transportation systems with the Smart Grid and other energy distribution and charging systems, electronic pricing and payment systems, and advanced mobility and access technologies, such as dynamic ridesharing and information systems to support human services for elderly and disabled individuals.

ATCMTD grant funds are available for both pre-construction and construction activities, though grant recipients are only allowed to use up to 5 percent of the funds awarded each fiscal year to carry out planning and reporting requirements. Demand for the ATCMTD program exceeds available funds. For each fiscal year from 2016

through 2020, a maximum of \$60 million, less up to \$2 million for DOT administrative expenses, will be available to make 5 to 10 awards not exceeding \$12 million each depending on the number of awards and the amount reserved for DOT administrative expenses. In addition, the federal share for the program is 50 percent, requiring grantees to fund the other half of such projects from non-federal sources.

Surface Transportation System Funding Alternatives (STSFA) Program

The FAST Act established the Surface Transportation System Funding Alternatives Program (STSFA), a competitive discretionary grant program for states to demonstrate user-based alternative revenue mechanisms that utilize a user fee structure to maintain the long-term solvency of the Highway Trust Fund. The objectives of the program are to test the design, acceptance, and implementation of two or more future user-based alternative mechanisms, improve the functionality of the user-based alternative revenue mechanisms, conduct outreach to increase public awareness regarding the need for alternative funding sources for surface transportation programs, and to provide information on possible approaches, provide recommendations regarding adoption and implementation of user-based alternative revenue mechanisms, and minimize the administrative cost of any potential user-based alternative revenue mechanisms.

In the FY 2016 STSFA round, eight state Departments of Transportation received \$14.2 million in grant funds. The program requires a pilot initiative and the federal share for the program is 50 percent, requiring grantees to fund the other half of such projects from non-federal sources.

FEDERAL TRANSIT ADMINISTRATION (FTA)

Capital Investment Grants (CIG) (New Starts, Small Starts, Core Capacity)

The Capital Investment Grants (CIG) program (Section 5309) is the FTA's primary grant program for funding heavy rail, commuter rail, light rail, streetcars, and bus rapid transit. CIG funding supports major transit projects in four distinct categories. New Starts are fixed guideway projects costing above \$300 million or seeking more than \$100 million in CIG funding, while Small Starts are fixed guideway or bus rapid transit (BRT) projects with a total cost under \$300 and seeking less than \$100 in CIG funding. Core Capacity projects must increase capacity on existing fixed guideway systems by at least 10 percent in corridors at (or soon to be at) capacity. Finally, Programs of Interrelated Projects may combine these project types, so long as the projects in the programs relate to one another and begin construction within a similar timeframe.

Projects seeking CIG funding are required to complete a series of steps over several years to be eligible for funding. For New Starts and Core Capacity projects, the law requires completion of Project Development and Engineering in advance of receipt of a construction grant agreement. For Small Starts projects, the law requires completion of Project Development in advance of receipt of a construction grant agreement. The law also requires projects to be rated by FTA at various points in the process according to statutory criteria evaluating project justification and local funding commitment.

CIG funds have historically been awarded for construction activities, following the completion of a Full Funding Grant Agreement (FFGA). The Expedited Project Delivery for Capital Investment Grants Pilot program has also been authorized to allow up to eight projects over the life of the program to be selected for expedited grant awards. Projects must be supported through a public-private partnership and demonstrate local financial commitment, technical capacity, and a certification that the existing transit system is in a state of good repair (SOGR). Certification that a transit system is in a SOGR would entail FTA certification of its Transit Asset

Management Plan, though there's been no rulemaking for the Expedited Project Delivery for CIG Pilot program. An exception is provided to the state of good repair requirement if the proposed project is a core capacity project that will allow the project sponsor to make substantial progress toward achieving a state of good repair.

Bus and Bus Facilities Discretionary Program and Low-No Emission Vehicle Program

A sub-part of Section 5339, which also supports a formula grant program for buses (described above, under formula funding programs), the Bus and Bus Facilities Discretionary Program (Section 5339(b)) funds projects that improve the condition of the country's bus fleets. In FY 2017, \$226.5 million was made available with no more than 10 percent of funds to be awarded to a single grantee. These funds can be used for a maximum of 80 percent of the cost of selected projects, which generally include capital projects to replace, rehabilitate, purchase, or lease buses, vans, and related equipment, and to rehabilitate, purchase, construct, or lease bus-related facilities, including stations, bus shelters, and maintenance facilities. During this round, FTA may prioritize projects that demonstrate how they will address significant repair and maintenance needs, improve the safety of transit systems, and deploy connective projects that include advanced technologies to connect bus systems with other networks.

Another sub-program, the Low- or No-Emission Vehicle Program (Section 5339(c)), provides competitive grants for bus and bus facility projects that support low- and zero-emission vehicles. In FY 2016, the FTA awarded \$55 million to 20 recipients under the competitive grant program. The federal share of eligible capital costs is 80 percent of the net capital project cost, unless the grant recipient requests a lower percentage.

Transit Oriented Development (TOD) Pilot Planning

The Pilot Program for Transit Oriented Development (TOD) Planning provides funding to local communities to integrate land use and transportation planning with a transit capital investment that is seeking or recently received funding through the Capital Investment Grant (CIG) program. Comprehensive planning funded through the program must examine ways to improve economic development and ridership, foster multimodal connectivity and accessibility, improve transit access for pedestrian and bicycle traffic, engage the private sector, identify infrastructure needs, and enable mixed-use development near transit stations. In FY 2016, FTA awarded \$14.7 million to 15 recipients.

Commuter Rail Positive Train Control (PTC) Grants

Authorized by the FAST Act, the Commuter Rail Positive Train Control Grant Program (Section 3028) offers competitive grant funding to states, local governments, and transit agencies that operate commuter rail systems to install positive train control (PTC) systems required under 49 U.S.C. 20157. Grant funds may be used to pay for capital costs of installing PTC systems and related activities such as back office systems, wayside, communications and onboard hardware equipment and software, equipment installation, and spectrum acquisition. Preventive maintenance and overhaul costs, new vehicle procurement, real estate property acquisition, building construction and acquisition, and operating expenses are not eligible costs. The federal share of eligible capital costs is 80 percent of the net capital project cost, unless the grant recipient requests a lower percentage.

Safety Research and Demonstration (SRD) Program

The Safety Research and Demonstration (SRD) Program is part of a larger safety research effort at the USDOT that provides technical and financial support for transit agencies to pursue innovative approaches to eliminate or mitigate safety hazards. In FY 2016, the SRD program targeted collision avoidance and mitigation, as well as transit worker safety protection, and provided \$8.5 million in competitive grants for seven transit agencies to

demonstrate technologies and safer design. The federal share of eligible capital costs is 80 percent, unless the grant recipient requests a lower percentage.

FEDERAL RAILROAD ADMINISTRATION

FAST Act FRA Grant Programs

The FAST Act authorizes \$2.2 billion over five years for three new competitive grant programs for rail development, which have not been appropriated by Congress nor had funding availability announced by USDOT:

- → The Federal Railroad Administration (FRA) Federal-State Partnership for State of Good Repair program seeks to reduce the state of good repair backlog on publicly-owned or Amtrak-owned infrastructure, equipment, and facilities. Eligible activities include capital projects to (1) replace existing assets in-kind or with assets that increase capacity or service levels, (2) ensure that service can be maintained while existing assets are brought into a state of good repair, (3) bring existing assets into a state of good repair.
- → The FRA Restoration and Enhancement Grant program provides operating assistance to initiate, restore, or enhance intercity passenger rail transportation. Grants are limited to three years of operating assistance per route and may not be renewed.
- The FRA Consolidated Rail Infrastructure and Safety Improvements (CRISI) Program seeks to improve the safety, efficiency, and reliability of passenger and freight rail systems. Eligible activities include a wide range of capital, regional and corridor planning, environmental analyses, research, workforce development, and training projects.

Railroad Safety Infrastructure Improvement Grants

In its FY 2016 Consolidated Appropriations Act, Congress appropriated \$25 million for FRA to fund safety improvements to railroad infrastructure. Eligible projects included the acquisition, improvement, or rehabilitation of intermodal or rail equipment, such as rolling stock, locomotives, and passenger cars; or rail facilities, including track, bridges, tunnels, yards, buildings, passenger stations, and maintenance and repair shops. Projects that make improvements to highway-rail at-grade crossings, including grade separations and grade crossing closures, are also eligible, as are improvements necessary to establish a quiet zone. The federal share of eligible capital costs is 50 percent. Each application was requested to limit its request to \$5 million.

Positive Train Control Grants

In its FY 2016 Consolidated Appropriations Act, Congress appropriated \$25 million for FRA to fund railroad safety technology projects belonging to agencies implementing PTC systems or otherwise benefitting from PTC systems on freight, intercity passenger, and commuter railroads. The federal share of eligible capital costs is 80 percent. Each application was requested to limit its request to \$3 million.

In May 2017, USDOT announced 17 grant recipients in 13 states who will receive \$197 million in competitive PTC grant funding, authorized under the FAST Act, to help commuter and intercity passenger railroads meet the December 31, 2018 deadline to implement PTC systems to improve safety. FRA and FTA received 27 eligible applications requesting \$455 million, more than double the \$197 million that Congress authorized. FRA was responsible for the selection of the grant recipients, and FTA will award and administer the grants.

FEDERAL AVIATION ADMINISTRATION

Airport Improvement Program

The Airport Improvement Program (AIP) provides grant funding for airport capital planning and development. Eligible projects include those that improve airport safety, security, and capacity, or respond to environmental concerns. For example, runway, taxiway, and apron construction or rehabilitation; airfield lighting, signage, and drainage projects; and planning and environmental studies are all eligible, while expenses such as maintenance equipment and vehicles, and office space and equipment are not.

C1.3 FINANCING MECHANISMS

U.S. DEPARTMENT OF TRANSPORTATION (USDOT)

Transportation Infrastructure Finance and Innovation Act (TIFIA) Loans

Administered by the Build America Bureau, the Transportation Infrastructure Finance and Innovation Act (TIFIA) credit program provides important financing options (direct loans, loan guarantees, and standby lines of credit) for large projects and public-private partnerships. Broadly speaking, TIFIA provides credit assistance for qualified projects of regional and national significance. By offering loan guarantees and more favorable credit-terms than the private capital market, TIFIA enables recipients to more easily attract private investment. TIFIA offers fixed interest rates at a level equal to Treasury rates, which are typically less than those offered in the private market. Loan terms may last up to 35 years past substantial completion, and the first payment may be deferred for up to five years after completion. In addition to the initial funding, TIFIA offers a standby line of credit that can supplement project revenues if needed within the first 10 years after substantial completion.

The FAST Act authorized TIFIA at \$285 million for FY 2018 and \$300 million for FY 2019 and FY 2020, representing a cut to the TIFIA program from prior levels (\$750 million in FY 2013 and \$1 billion in FY 2014) that could constrain growth in the program's lending capacity over the course of time.

Any highway project and transit capital project eligible for federal aid is eligible for the TIFIA program, including intelligent transportation systems (ITS), international bridges and tunnels, intercity passenger bus and rail facilities and vehicles, publicly-owned freight rail facilities, private facilities providing public benefit for highway users, intermodal freight transfer facilities, projects that provide access to such facilities, service improvements on or adjacent to the National Highway System, and projects located within the boundary of a port terminal under certain conditions.

Major requirements include a capital cost of at least \$50 million (or 33.3 percent of a state's annual apportionment of Federal-aid funds, whichever is less) or \$15 million in the case of ITS and \$10 million for transit-oriented development, local, and rural projects. TIFIA credit assistance is limited to a maximum of 33 percent of the total eligible project costs, unless the sponsor provides compelling justification for up to 49 percent. Senior debt must be rated investment grade. The project also must be supported in whole or in part from user charges or other non-federal dedicated funding sources and be included in the state's transportation plan. Qualified projects are evaluated by the US Transportation Secretary against eight statutory criteria, including among others, impact on the environment, significance to the national transportation system, and the extent to which they generate economic benefits, leverage private capital, and promote innovative technologies.

TIFIA credit assistance is available for construction activities. Eligible candidates must meet the following requirements:

- Creditworthiness:
 - Ability to satisfy applicable creditworthiness standards
 - Rate covenant, if applicable
 - Adequate coverage requirements to ensure repayment
 - Ability to obtain investment grade ratings on senior debt;
- → Fosters partnerships that attract public and private investment for the project;
- → Ability to proceed at an earlier date or reduced lifecycle costs (including debt service costs);
- → Reduces contribution of federal grant assistance for the project; and
- → Construction contracting process can commence no more than 90 days from execution of a TIFIA credit instrument.

Private Activity Bonds

Private Activity Bonds (PABs) incentivize private investment by allowing private entities to benefit from the lower costs of tax-exempt bonds when investing in transportation infrastructure. Public entities act as conduit issuers of PABs, issuing tax-exempt debt for transportation projects with substantial private sector participation. The 2005 Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) authorized up to \$15 billion in PABs to be used for highway and freight transfer facilities. As of January 23, 2017, \$6.6 billion in PABs have been issued for 17 projects, including \$325 million for the CenterPoint Intermodal Center in Joliet (with the Illinois Finance Authority acting as the conduit issuer).

Eligible projects include any surface transportation project or facility for the transfer of freight from truck to rail or vice versa receiving federal funding under Title 23 of the United States Code, including projects receiving TIFIA credit assistance. HR 1 (the federal Tax Cut and Jobs Act) as currently written excludes PABs from the financing tools available for transportation projects. If this bill passes in the U.S. Senate, this tool will no longer be available.

State Infrastructure Banks

State Infrastructure Banks (SIBs) are state-managed revolving loan funds intended to support infrastructure investment. Pilot SIB programs were introduced in the National Highway System Designation Act of 1995 (NHS) and the Transportation Equity Act for the 21st Century (TEA-21), and a permanent program was authorized by Congress in 2005. Thirty-three states, not including Illinois, have participated in one of these programs. To introduce a new SIB program, states may use 10 percent of federal funds received, matched with 25 percent in non-federal funding.

FEDERAL HIGHWAY ADMINISTRATION (FHWA)

Grant Anticipation Revenue Vehicles (GARVEEs)

Grant Anticipation Revenue Vehicles (GARVEEs) are debt-financing instruments repaid with future Federal-aid highway funds. As of March 2016, 25 states and 3 territories have issued over \$19.1 billion in GARVEEs. GARVEEs are available to states and territories receiving federal highway aid, and highway projects financed with GARVEE proceeds must follow all Federal-aid requirements.

GARVEE financing generates up-front capital for major highway projects at generally tax-exempt rates and enables a state to construct a project earlier than if using traditional pay-as-you go grant resources. With projects

in place sooner, costs are lower due to inflation savings, and the public realizes safety and economic benefits. By paying with future federal highway reimbursements, the cost of the facility is spread over its useful life, rather than just the construction period. GARVEEs can expand access to capital markets as a supplement to general obligation or revenue bonds. The upfront monetization benefit of these techniques needs to be weighed against consuming a portion of future years' receivables to pay debt service. This approach is appropriate for large, long-lived, non-revenue generating assets. Potential disadvantages of GARVEE financing are a reduction in financial, programmatic, and political flexibility for those years in which debt service consumes a portion of the annual transportation program, capacity constraints with respect to availability of contractors, consultants, construction materials, and labor and public agencies, and the possibility of induced inflation as GARVEE proceeds affect the market.

FEDERAL TRANSIT ADMINISTRATION (FTA)

Revenue Bonds

There are two types of revenue bonds that are generally used for public transit projects in the United States. The first, farebox revenue bonds, use farebox revenues and anticipated grant receipts as collateral for revenue bonds, which can only be backed by farebox revenues if the level of state and local funding committed to transit for the three years following the bond issue are higher than the funds that were committed in the three years prior to the bond issue. Transit agencies must identify another source of funds for the agency's operating expenses before issuing a farebox revenue bond.

Like GARVEEs, transit agencies can also borrow against future federal-aid funds (FTA Title 49 grants) that are allocated by formula (Section 5307) or by project (Section 5309). These transit debt mechanisms are known as Grant Anticipation Notes (GANs), and do not include debt-related financing costs such as interest and issuance costs. An agency issues GANs secured with a pledge of federal-aid assistance, thus amassing up-front capital, and pays down the bonds over a period as the Federal funds are received. GANs are available to agencies receiving federal transit aid.

Discretionary grants for projects requiring more than one year of federal funding are required to have an FTA Full Funding Grant Agreement that defines the project scope and maximum federal participation levels. However, the amount and schedule of payments may shift; as a result, GANs backed by discretionary grants are considered riskier than those backed by formula funds.

FEDERAL RAILROAD ADMINISTRATION (FRA)

Railroad Rehabilitation & Improvement Financing (RRIF) Program

FRA Railroad Rehabilitation & Improvement Financing (RRIF) provides direct loans and loan guarantees to acquire, improve, or rehabilitate intermodal or rail equipment or facilities, including track, bridges, yards, buildings and shops; refinance outstanding debt incurred for the purposes listed above; and develop or establish new intermodal or railroad facilities. The Build America Bureau administers the program, providing direct loans and loan guarantees up to \$35 billion to finance development of railroad infrastructure. Up to \$7.0 billion is reserved for projects benefiting freight railroads other than Class I carriers. The funding may be used to acquire, improve, or rehabilitate intermodal or rail equipment or facilities, including track, components of track, bridges, yards, buildings and shops; refinance outstanding debt incurred for the purposes listed above; and develop or establish new intermodal or railroad facilities. Direct loans can fund up to 100 percent of a railroad

project with repayment periods of up to 35 years and interest rates equal to the cost of borrowing to the government.

FEDERAL AVIATION ADMINISTRATION

Passenger Facility Charge

The Passenger Facility Charge (PFC) program permits commercial service airports to charge passengers a fee, ranging between \$1 and \$4.50, and use the revenue to fund FAA approved projects (including to meet the nonfederal share of costs in combination with AIP funds or other federal grants) and pay debt service costs. Eligible projects must improve airport safety, security or capacity; reduce or mitigate airport noise; or enhance competition between air carriers. Use of PFC may reduce an airport's receipt of AIP funding for medium and large hub airports.

C.2 PUBLIC PRIVATE PARTNERSHIPS

P3 enabling legislation typically includes provisions that specify which entities have authority to use P3 and which models and processes are approved for use (such as project type, sector type, and / or delivery model), as well as the geographic location where P3 projects may be located. In Illinois, the Public-Private Partnerships for Transportation Act (III. Rev. Stat. Ch. 630 §5/5 et seq.; the "Act") broadly gives authority to IDOT and the Illinois State Toll Highway Authority to use P3 as a project delivery method, except for airports. That authority, however, is subject to several conditions. The Act outlines project types, length of term, delivery models, compensation terms, procurement processes, and oversight mechanisms that impact IDOT's P3 projects. Many of these conditions are common across P3 enabling statutes in the U.S.

Legislative approval is also required for new toll highways (630 ILCS 5/1 et seq.; 20 ILCS 2705/2705-450). As a result, the state legislature passed separate measures to provide project-specific authority for the Illiana Expressway (605 ILCS 130/1 et seq.) and the South Suburban Airport (620 ILCS 75/2-1 et seq.).

C2.1 COMPARISON TO PEER STATES

Many of the Act's terms and conditions are common across the 36 states that have enabling legislation in place for P3. There is some difference across U.S. states in these conditions – some states are more permissive and others are more stringent – but Illinois' Act is generally considered moderate in terms of its prescriptive nature. Conditions for revenue use, applicable funding and financing, and oversight mechanisms are areas for greatest variance between IDOT and other states. It is common for P3 enabling statutes to limit or define how revenue may be generated for P3 concessions. It is also common for P3 enabling statutes to define oversight mechanisms. The difference is the degree to which those limitations define state DOTs' ability to identify P3 projects or successfully bring a project forward and move it toward financial close.

Revenue Use and Applicable Funding /Financing

The Act defines IDOT's ability to use tolling on P3 projects as well as defines how funding/financing and revenues may be used. These are important provisions because they affect IDOT's ability to structure a P3 agreement for optimal financial results. The Act's provisions, however, are fairly market standard, and not particularly burdensome, in comparison to other states. Usually these provisions reflect each state's approach to tolling, revenue generation, or use of existing financing tools.

Oversight Mechanisms

Twenty-four out of 36 states have some form of oversight built into their respective enabling statutes for P3, including Illinois. Oversight can range from the requirement of an independent authority to review selected proposers, to the approval of a legislative body, to the role of an elected official as the final decision-maker. On one hand, oversight mechanisms are intended to protect the public interest. On the other hand, these mechanisms can be used to restrict the advancement of P3 projects or cancel P3 projects that have gone through the procurement process. Most states with P3 legislation have one of these oversight mechanisms in place. Illinois, by comparison, has four oversight checkpoints that may impede the expedient identification and procurement of a P3 project. While these oversight mechanisms are intended to advance P3 projects that benefit the State of Illinois and its constituents, they may pose onerous barriers if the political climate is difficult.

As with provisions related to revenue use and funding / financing, oversight mechanisms are largely a reflection of the state's approach to legislative involvement. In Illinois, IDOT is an active participant in the legislative process and the General Assembly provides an oversight role in the allocation of state / federal funds, administrative rules, and appropriations. IDOT is also subject to audits by the legislature's Office of the Auditor General. In many ways, then, the P3 statute mirrors IDOT's existing relationship with the General Assembly. As currently written, the Act requires a higher level of oversight for P3 projects compared to Illinois' peer states. There may be an opportunity to reduce the level of oversight without sacrificing its purpose in ensuring P3 is applied to projects with the greatest benefit to the public.

P3 Offices and Advisory Bodies

Many states with successful P3 programs have created a P3 office and P3 advisory body that are structured to provide ongoing authority to procure P3 projects. States where elected officials make approvals on P3 projects, particularly any approvals occurring after a procurement has advanced significantly, have had much less success implementing P3 projects because the private sector views these approvals as unacceptable risks.

P3 offices provide centralized, dedicated, and specialized expertise to screen and deliver P3 projects. Such offices typically oversee significant aspects of P3 project delivery, including leading procurement efforts, conducting value-for-money analyses, managing the implementation of projects, negotiating contract terms, and coordinating review and approval with other public entities. Although P3 offices provide significant benefits, there are challenges to consider. For a P3 office to succeed, it needs to be adequately staffed with internal (and potentially external) experts and advisors. Moreover, the benefits of this structure are best realized when there is a steady pipeline of projects, allowing for efficient use of internal resources.

P3 advisory bodies are typically composed of members appointed by executive and legislative branch officers, and provide the approvals necessary for the P3 projects promoted by the P3 office. Sometimes the Transportation Commission serves as the P3 advisory body. P3 advisory bodies also present certain challenges related to the vulnerability of the P3 approval process to political risk, but less so than elected officials making the approvals. Political influence on the P3 advisory body can introduce greater unpredictability, and if widely apparent, can decrease the private sector's confidence in the P3 process.

C2.2 KEY ELEMENTS OF A PUBLIC-PRIVATE PARTNERSHIP

To understand how P3s may be used in reaching Illinois' long-term transportation goals, one must understand the key elements that make up a P3, and related benefits. P3 differs from traditional public sector contracting because the private sector is assuming responsibility for some role(s) or some services/functions that traditionally were provided by the public sector. To summarize, the key elements of a P3 include:

- Roles of the Public and Private Sectors: The private sector party engaged in the P3 assumes varying degrees of responsibility for the design, construction, financing, operation, and maintenance of a public asset. The public-sector entity retains ownership and oversight of the asset. Contractual agreements often take the form of concession or lease contracts, in which the private party operates and maintains the asset for a period post-construction. These role changes represent shifts in responsibility and reduction in risk to the public entity, albeit at a cost.
- → Procurement Processes: The P3 agreement is the central contract formed between the public entity and the private party. To establish this contract and appropriate terms that allow the public entity to reach its goals for the project, the procurement process requires greater coordination to ensure the best value proposer for the project is selected.
- Transfer of Risk: P3 is distinguished by transfer of financial, technical, and operational risks to the private sector, which varies depending on the specific contractual model selected. Each party shares in risks and rewards in the delivery of assets and services. The primary benefit to the public entity is knowing they don't have to pay unless the private sector partner delivers what they are contractually obligated to do, both for capital and operational items, as prescribed in the project specifications.
- → Performance-Based Specifications: The private party provides assets and services for use by the public to prescribed performance-based specifications, which are linked to contractual agreement terms. Payment, particularly for "availability payment" P3 structures, is often contingent on meeting these specifications, so as noted above, the risk of the contractor not performing is reduced by the ability to withhold payment.
- → Project Finance: The project may be structured such that a private party assumes responsibility for the financing and its lenders and equity-holders are repaid through revenues generated by the asset (or funding committed by the public entity). Equity-holders are "paid last", meaning that a return on their investment in the project is not paid until lenders are satisfied first. However, the equity investment return is usually much higher, often in the 12 to 18 percent range relative to interest rates on debt, which may be in the four to eight percent range.

As a project delivery tool, P3 differs significantly from traditional means of procuring and financing transportation projects. The use of P3 in Illinois, then, must be carefully considered in light of the state's long-range transportation goals, context and conditions of individual projects, and the complexity of P3 delivery. Special legal, financial, and technical advisors are recommended to help structure the deal during the procurement to ensure goals are met through proper contract development.

C2.3 BENEFITS AND COSTS OF PUBLIC-PRIVATE PARTNERSHIPS

Projects and owner-agencies goals for projects and project delivery differ significantly, therefore owners need to think carefully about what they want to achieve from using an alternative delivery approach and weigh the costs and benefits.

Potential Benefits

Due to the consolidated nature of the P3 legal agreement and the use of project finance, P3s can provide greater budget and schedule certainty to the public entity. The private party's lenders drive rigorous fiscal management and incentivize the private party to adhere to contractual terms to meet repayment schedules. The private party is also incentivized to meet the public entity's schedule and is often rewarded for expediting project delivery – both elements are tied to payments made by the public entity to the private party, which in turn expedites repayment to lenders and equity-holders.

Cost savings can be achieved when all phases of the project are integrated into one contract, which reduces friction costs between phases of project development. Usually, the private party must estimate the life-cycle costs and build those costs into their financial model as well. The private party is incentivized in a variety of other ways to seek cost savings in all phases of the project development, using innovation to accelerate investor returns.

The transfer of risk between the public and private sector is another potential benefit. Risk is allocated to the party best able to manage that risk. In a P3, that means that the private party may assume risks that are typically borne by the public entity – such as demand, operations and maintenance, project site risks (such as geotechnical or environmental risks). The private party takes on these risks because they believe they can mitigate them in a more efficient or cost-effective way than the public entity.

Improved performance and innovation are other potential benefits of the P3 delivery method. The public entity can specify performance conditions by which the private party must meet to secure repayment. A private party may seek innovative ways to approach the project – by improving service delivery, using different materials, designing the project differently or any number of innovative ways – to reduce costs and / or help meet performance conditions more effectively. Public entities, like IDOT, must carefully consider their project's goals and objectives when prioritizing and weighing the potential benefits of P3 project delivery.

Potential Costs

There are several potential costs to P3 project delivery. As described above, P3 transactions can be complex and require more management than traditional contracting. There is a need to align the public entity's goals with the private sector's appetite for the project, along with a need to anticipate all possible financial, legal, and technical contingencies. As a result, P3 projects tend to have higher transactional costs than traditional delivery. In some cases, these higher costs are offset by lower design costs, given most design is passed on to the private partner.

Although P3s can offer access to capital, they do not provide states with new funding; in fact, P3s need a revenue stream to work. If a project does not generate a discrete stream of revenue, the public entity will often seek state or federal grant funding or other forms of funding to repay the private party. Considering that private capital is more expensive than capital derived from public sources such as bonds or taxes, P3 may also not be cost-effective or appropriate if there is not sufficient risk transfer to justify higher costs of capital. Public entities generally weigh the benefits and costs of P3 delivery by analyzing the "value for money", or the difference in cost of delivery between a private capital approach and a public approach. This form of study allows the public entity to quantify and analyze the costs and benefits of a variety of procurement models. As Illinois considers its long-range transportation needs, a robust dialogue around the potential benefits and costs of P3 delivery must be applied to any projects considered for this method.

C2.4 SELECTING OPTIMAL PROJECTS FOR PUBLIC-PRIVATE PARTNERSHIP DELIVERY

Like most organizations, IDOT is developing their own project screening framework to help identify what projects are appropriate to consider for P3 delivery. The screening framework allows the public entity to consider how the delivery method may leverage project-specific characteristics to drive better "value for money", such as scalability, replicability, properly allocating risks, or improving service delivery. Screening projects for P3 project delivery may consider the following:

Available funding and financing: The public entity would consider its ability to fund the project and its ability to utilize financing mechanisms to reduce the cost of the project overall.

- → Community support: The public entity would consider which projects are critical to meeting their long-range needs and would identify those projects that enjoy community support. Community support often indicates that the project planning and development would go smoothly and provide a final asset that meets the needs of its stakeholders.
- → Large, complex scope: Since P3 has higher transactional costs and relies on the transfer of risk to deliver the highest "value for money," the public entity would prioritize those projects with large, complex scope of work.
- → Stable, long-term revenue stream: The public entity would work to identify the projects that can generate revenue, which would attract private investment and allow the public entity to shift financial resources to other projects.
- → Completed (or nearly complete) environmental processes: Projects that have completed significant efforts to plan for development are projects that are most likely to succeed and move forward. Those projects that have not completed the requisite environmental and planning processes are those that are likely to be delayed while those efforts are completed.

C.3 MANAGED LANES AND ROAD PRICING

Managed lane strategies have gained popularity in recent years to actively manage demand on existing roadways. Demand management strategies include pricing (traditional tolling and congestion-based pricing), vehicle-eligibility restrictions (e.g., truck only, high-occupancy vehicles only), and access control (e.g., express lanes with fewer entrance/exit opportunities). Figure D-1 illustrates various types of managed lanes and how they relate to these three broad strategies.

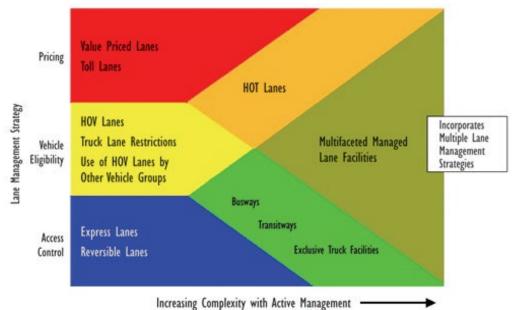


Figure C-1. Managed Lane Applications

Source: Federal Highway Administration

Often, when people use the term "managed lanes," they are referring specifically to strategies that combine pricing with access or vehicle eligibility restrictions. Though priced managed lanes charge users and contribute to the costs of the project, the charges often do not cover all costs of building and maintaining the lanes. The

Moving Ahead for Progress in the 21st Century Act (MAP-21) legislation expanded the potential use of priced managed lane strategies by authorizing tolling of new lanes on previously toll-free highways, if the same number of toll-free lanes remains, and permitting tolling for initial construction on the Interstate System (rather than just non-Interstate facilities as before).

Priced managed lanes may rely on static or variable pricing (also called congestion or value pricing), and controlled or continuous access:

- → Variable/Congestion/Value Pricing: The use of pricing to moderate demand during peak periods is common in sectors such as power and air travel. Similarly, the concept of value pricing within the highway sector involves the introduction of road user charges that vary with the level of congestion and/or time of day, providing incentives for motorists to shift some trips to off-peak times, less-congested routes, or alternative modes. Higher prices may also encourage motorists to combine lower-valued trips with other journeys or eliminate them entirely. When peak-period volumes are high, a shift in a relatively small proportion of trips can lead to substantial reductions in overall congestion levels and more reliable travel times. In managed lane systems that use variable pricing, motorists typically receive information on price levels and travel conditions via variable message signs, providing potential users with information they need to decide whether to use the priced lanes or the general-purpose lanes.
- → Access: Controlled access lanes include barriers that permit entry and exit only at designated areas. This lane style reduces demand by limiting access, and requires tolling technology only at designated entry and exit points (see Figure D-2). Continuous access lanes enable vehicles to enter and exit the managed lane anywhere, as if it were a traditional lane (see Figure D-3). One challenge of continuous access express toll lanes is the need for more complex tolling mechanisms.

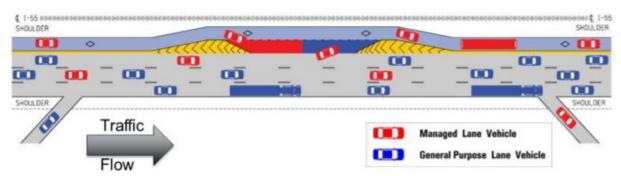
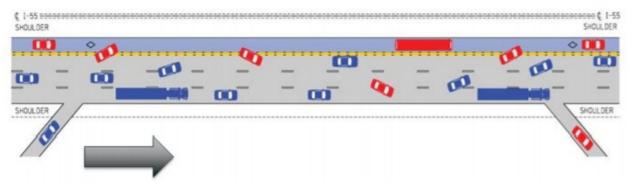


Figure C-2. Controlled Access Express Toll Lane Configuration

Source: I-55 Managed Lane Project Study Project Report

Figure C-3. Continuous Access Express Toll Lane Configuration



Source: I-55 Managed Lane Project Study Project Report

Types of priced managed lanes include High Occupancy Toll (HOT) lanes, Express Toll Lanes (ETL), Truck Only Toll (TOT) lanes, and Bus Toll Lanes (BTL), described in more detail in the following subsections. Each of these options can be configured for controlled or continuous access, and may include constant or congestion-based pricing.

EXPRESS TOLL LANES

ETLs operate alongside free general-purpose lanes and require payment for vehicles to use the lanes. They are typically located next to the median to encourage travel for longer distance trips. Unlike HOT lanes, ETLs charge all vehicles—including HOVs—for passage. In some cases, they may also offer discounted passage for HOVs, but ETLs do not incentivize ride sharing to the extent that HOT lanes do. Enforcement is much simpler and less costly than HOT lanes because there is no need to enforce vehicle occupancy. ETL concepts are also attractive to transportation agencies that want to use toll revenues to cover the cost of new construction and operation.

HIGH-OCCUPANCY TOLL LANES

HOT lanes are a variant of ETLs in which high-occupancy vehicles are permitted to use the lane for free (or at a discount), while all other vehicles must choose between the general-purpose lanes or paying for premium conditions in the HOT lane. HOT lanes are typically introduced where traditional HOV lanes already exist, thereby allowing low-occupancy vehicles to pay to use a lane previously unavailable to them. The threshold for "high-occupancy" is typically set at two or three occupants, including the driver. In some cases, other vehicle types may also be excluded from the toll, such as hybrid or electric vehicles.

TRUCK-ONLY TOLL LANES

Another variation on ETLs are TOT lanes, which allow commercial vehicles to pay a toll to use an exclusive lane. Most often commercial vehicles are given the option to remain on normal use lanes and avoid the toll. Currently, there are no TOT lanes in the U.S., although there have been a few studies and proposals to implement TOTs (such as the I-70 Truck Lane Study from Missouri to Ohio and the Austin Texas area TOT Study). Truck lanes are best suited to locations where merge/diverge maneuvers can be improved with a dedicated lane or roadway for a short distance.

BUS TOLL LANES

BTLs represent the pricing of a managed lane or lanes with up to 10 percent of the capacity dedicated to bus transit. BTL is not a HOT lane. Only transit buses would be allowed to use the lane(s) without paying a toll.

C3.1 MANAGED LANES IN ILLINOIS

Illinois presently utilizes simple demand management strategies, including traditional toll lanes, express lanes, and reversible lanes, and not priced managed lanes. However, IDOT has begun exploring priced managed lane strategies in recent years, as part of the I-55 Managed Lane Project and the I-290 Phase 1 Study.

For I-55, IDOT studied ETL and HOT lane options, in addition to vehicle restriction strategies like HOV lanes and truck only lanes (TOL). An ETL using congestion pricing was identified as the preferred alternative, due to the simpler enforcement effort required and optimum ability to respond to real-time traffic conditions.

The I-290 study considered HOT lanes, as well as HOV lanes and general toll lanes, and identified a HOT3+ lane (HOT lane with high-occupancy defined as three or more occupants) as the preferred alternative. West of Austin Boulevard a new lane would be constructed as a HOT3+ lane, and east of Austin Boulevard a general-purpose lane would be converted to the HOT3+ lane under FHWA's Value Pricing Pilot Program, resulting in three general-purpose lanes and one HOT3+ lane in each direction for the entire project.

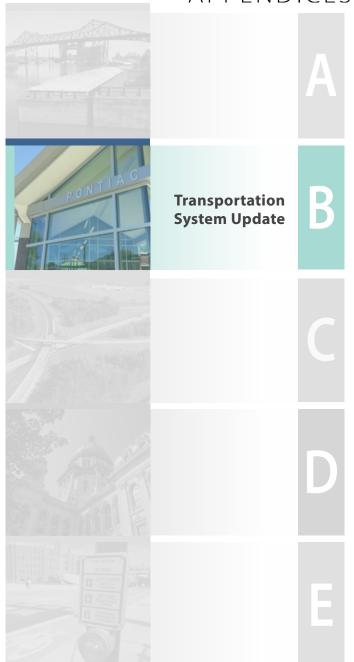
In Illinois, the Illinois State Toll Highway Authority has jurisdiction over all toll facilities, and any new tollways must be approved by the state legislature.

ILLINOIS DEPARTMENT OF TRANSPORTATION





APPENDICES



ILLINOIS DEPARTMENT OF TRANSPORTATION LONG-RANGE TRANSPORTATION PLAN

TRANSPORTATION SYSTEM UPDATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

DOCUMENT VERSION: DRAFT 7.0

PROJECT NO.: 16952B DATE: DECEMBER 2018

B1. Introduction

B1.1 BACKGROUND

The Transportation System Update report is prepared as part of the Illinois Department of Transportation (IDOT) 2017 Long Range State Transportation Plan (Plan) to provide information about IDOT's multimodal assets and programs.

Illinois lies at the heart of the nation's transportation network. Illinois businesses, residents, and visitors have access to one of the greatest multimodal transportation systems in the nation including the second largest public transportation system, the second largest rail system, the third largest interstate system, the fourth largest highway system, and one of the busiest airport systems. The success of Illinois, its residents, businesses, and visitors relies on a safe, effective, accessible, and progressive transportation system where all modes connect in ways that improve travel options and help build communities.¹

The main purpose of this plan is to provide strategic direction for the Illinois transportation system. The guiding strategic priorities of the plan are to improve safety and mobility, support economic growth, promote livability, increase resiliency, and to provide stewardship.

1

¹ Illinois Department of Transportation Website, July 2017

B2. Aviation

B2.1 DESCRIPTION

Aviation plays a critical role in Illinois, in terms of passenger travel, air cargo and other aeronautical activities. For example, O'Hare International Airport is ranked third in the nation in enplanements, and fourth in air cargo activity.² The St. Louis Downtown Airport in Cahokia and Sauget is a thriving general aviation airport. It has eight air charter providers, seven maintenance companies, one aircraft parts and supplies wholesaler, the nation's oldest certified flight school, and an Air and Space museum. Chicago/Rockford International Airport is home to UPS' second largest domestic air hub sorting facility, and is Foreign Trade Zone 176. Furthermore, the airport showed a 16% increase in landed weight from 2015 to 2016, and is anticipated to exceed one million pounds in landed weight in 2017, which will likely -place the airport in the top 25 airports in the U.S. by landed weight³,⁴. In total, a recent study indicates that the state's aviation facilities support more than 312,581 jobs and contributes \$54 billion to the state's economy.⁵

Across Illinois there are 116 public use aviation landing facilities and 12 airports that offer scheduled commercial air carrier service. 678 of these airports are publicly owned, with 38 privately owned. 7 These facilities foster connections between communities large and small, provide landing space for medical transporters, provide access to local businesses, enable aviation services such as aerial application or survey, and enhance aviation enthusiasts' quality of life.

IDOT, empowered by the Illinois Aeronautics Act (620 ILC/5)8, encourages, fosters, and assists in the development of aeronautics in the state and encourages the establishment of airports and other air navigation facilities. Additionally IDOT administers the State Block Grant Program (SBGP) for the Federal Aviation Administration (FAA), with "responsibility for administering Federal Airport Improvement Program (AIP) grants at airports classified as "other than primary" airports – that is, nonprimary commercial service, reliever, and general aviation airports. IDOT is responsible for determining which locations will received funding for ongoing project administration". Overall, IDOT supports public airports through financial assistance, inspections and technical oversight, and supports the aviation industry with safety and other education programs offered to pilots, aircraft owners, mechanics, and industry professionals. IDOT is managing the State's investment in a third metropolitan Chicago airport, the South Suburban Airport, with the intention of providing additional capacity for the metropolitan region and the state.

Systems goals for aviation in Illinois include:

- → To promote an aviation system that improves Illinois' quality of life by supporting health, welfare, and safetyrelated services and actives.
- → To promote a safe aviation system, as measured by compliance with applicable State and FAA standards.

² US Department of Transportation, Federal Aviation Administration. Passenger Boarding (Enplanement) and All- Cargo Data for U.S. Airports. www.faa.gov/airports/planning_capacity/passenger_allcargo_stats/passenger/. Accessed June 7, 2017.

³ U.S. DOT Federal Aviation Administration. CY2016 Final All-Cargo Landed Weights.

https://www.faa.gov/airports/planning_capacity/passenger_allcargo_stats/passenger/media/preliminary-cy16-cargo-airports.pdf. Accessed September

⁴ Rockford Register Star. "Cargo activity surges 39 percent at Rockford airport in first half of 2017". http://www.rrstar.com/news/20170725/cargo-activitysurges-39-percent-at-rockford-airport-in-first-half-of-2017. Accessed September 2017.

⁵ U.S. DOT Federal Aviation Administration. The Economic Impact of Civil Aviation on the U.S. Economy. Economic Impact of Civil Aviation by State. https://www.faa.gov/about/plans_reports/media/2017-economic-impact-report.pdf September, 2015.

⁶ Illinois DOT. Airport Inventory. P. 39. http://www.idot.illinois.gov/Assets/uploads/files/Transportation-System/Reports/Aero/2012inventory.pdf. Accessed June 7, 2017.

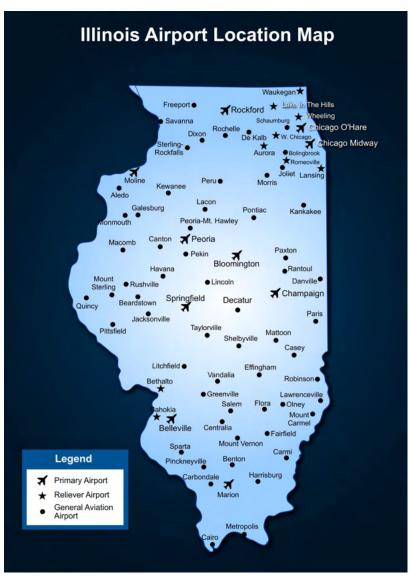
⁷ lbid. p. 56

⁸ Illinois General Assembly. http://www.ilga.gov/legislation/ilcs/ilcs3.asp?ActID=1803&ChapterID=48. Accessed July 18, 2017.

- → To advance a system of airports that is supportive of Illinois' economy, ensuring that the aviation system is matched to Illinois' socioeconomic and demographic characteristics.
- → To protect and support an aviation system that maintains the flexibility to respond to changes in future needs in Illinois, while considering the environment.
- → Determine where Illinois' aviation system of public airports is currently adequate and where there are deficiencies
- → Identify the need for change in the aviation system and the Department's policies to meet Illinois' future aviation needs.⁹

Figure 2.1 is a map of all public use aviation facilities throughout Illinois.

Figure 2.1 Public Use Airports in Illinois



Source: IDOT Aviation Inventory, 2017

3

⁹ IDOT. Aviation White Paper. May 12, 2016.

B2.1.1 BASED AIRCRAFT

As a measure of aviation activity, IDOT utilizes an FAA metric that accounts for thenumber of planes and other aircraft, operational and airworthy, stored at a specific airport or storage facility for the majority of a given year. This count is called "based aircraft" and is self-reported by airport operators. Aircraft owners choose a facility to house their aircraft based on a number of factors including:

- → the physical characteristics of the facility (runway length and instrument approach capabilities)
- proximity to business or home
- → the availability of services (fuel and maintenance)
- → the cost and availability of aircraft storage options

In late 2017, at nonprimary public-use public-owned airports, Illinois had 4,418 based aircraft, classified as follows:

- → 3,317 single-engine propeller airplanes
- → 462multi-engine propeller airplanes
- → 324 jet airplanes
- → 122 rotorcraft (helicopters)
- → 27 gliders
- → 57 military aircraft
- → 109 ultralight aircraft

Aurora Municipal Airport has the highest number of based aircraft at 311, followed by Chicago Executive Airport in Wheeling with 263. ¹⁰ It is important to note that the busiest airports in the state do not necessarily have the most based aircraft. The combination of airport purpose, congestion, and the premium on available land at busy airports often dictate that local aircraft are parked at other airports. Chicago's O'Hare International Airport is an example of this situation, as it does not have any based aircraft.

Many aircraft that call Illinois home are not necessarily captured in the FAA based aircraft metric. IDOT utilizes the metric because of its importance to planning and programming federal airport improvement program monies at eligible airports. However, IDOT does track total aircraft in Illinois at primary commercial service airports, and other Illinois registered aircraft not captured in the FAA metric for other purposes. Depending on the selection and criteria, IDOT numbers range from a total of 5,256 aircraft to 8,562 aircraft.

B2.1.2 AIRCRAFT OPERATIONS

An aircraft operation is defined as a takeoff or a landing. Counts are recorded by the Federal Aviation Administration (FAA) control tower activity or for airports without a tower, by visual assessment or machine, but counts are not completed every year for all airports; for airports without a tower, FAA counts should be supplemented by independent counts for the most accurate and timely information however, the most recent counts for Illinois airports are from 2012, for select airports. Throughout all of 2017 at all publicly operated airports in Illinois where there is air traffic control there were nearly 1.8 million air operations recorded according to the FAA. A detailed breakdown of air operations is shown in Table 2.1.

4

¹⁰ Ibid. pp. 19 – 24.

Table 2.1 Total Air Operations in Illinois - 2016

Itinerant ¹¹				Local				
Air Carrier	Air Taxi	General Aviation	Military	Total	Civil	Military	Total	Total Operations
1,056,382	530,126	412,010	22,218	2,020,736	431,615	19,081	450,696	2,471,432

Source: Federal Aviation Administration: Air Traffic Activity System, 2017

B2.1.3 PASSENGER ENPLANEMENTS

In 2017 twelve airports in Illinois recorded passenger enplanements (boardings). Table 2.2 details total enplanements at all Illinois airports for 2016 and 2017. The table also provides each airport's ranking of all 550 airports in the United States based on enplanements. The top three most active airports in the state are O'Hare International, Midway International, and Quad Cities International. In 2017 the State of Illinois had nearly 50.1 million enplanements, an increase of almost 2% from 2016.¹²

Table 2.2 Total Enplanements in Illinois 2016 - 2017

Rank (of 544)	ST	City	Airport Name	CY 17Enplanements	CY 16Enplanements	% Change
3	IL	Chicago	Chicago O'Hare International	38,593,028	37,589,899	2.67%
27	IL	Chicago	Chicago Midway International	10,912,074	11,044,387	-1.20%
151	IL	Moline	Quad City International	335,940	364,393	-7.81%
157	IL	Peoria	General Downing - Peoria International	312,378	307,189	-1.69%
193	IL	Bloomington- Normal Airport	Central IL Regional Airport at Bloomington-Normal	163,475	188,490	-13.27%
214	IL	Belleville	Scott AFB/MidAmerica	123,841	79,988	54.82
221	IL	Rockford	Chicago/Rockford International	112,682	101,790	10.88%
231	IL	Savoy	University of Illinois-Willard	100,133	89,318	12.11%
239	IL	Springfield	Abraham Lincoln Capital	92,048	93,269	-1.31%
394	IL	Marion	Williamson County Regional	11,029	10,044	9.81%
415	IL	Decatur	Decatur	8,324	8,453	-1.53%
408	IL	Quincy	Quincy Regional-Baldwin Field	7,709	7,847	-1.76%
			Total 2017 Illinois Enplanements	50,672,761		

Source: FAA - Passenger Boarding Data for U.S. Airports, 2017

B2.1.4 AIR CARGO

Air cargo, by tonnage, is the fifth most utilized mode of freight shipment in Illinois behind truck, rail carload, rail intermodal, and water Freight moved by air is usually of high value, time sensitive, and low-weight, because of cost and

Accessed October 2018.

^{11 &}quot;Itinerant" movements are those in which aircraft proceed to or arrive from another location; or where aircraft leave the circuit but return without landing at another airport. Local movements are where aircraft do not leave the circuit.

¹² FAA. Passenger Boarding for U.S. Airports. https://www.faa.gov/airports/planning_capacity/passenger_allcargo_stats/passenger/media/cy17-allenplanements.pdf

competing transportation alternatives. Chicago's O'Hare International Airport is one of the nation's primary air hubs, particularly for international trade, and it stands out as the state's principal air cargo facility. As shown in **Table 2.3 Inbound Air Cargo Shipments to Illinois, 2014** handled 91.2 percent of Illinois inbound air tonnage and as shown in Table 2.4 Outbound Air Cargo Shipments from Illinois, 2014, O'Hare handled 87.5 percent of outbound air tonnage, as well as held equally predominant positions in both belly and freighter activity, with inbound tonnage percentages of 94.5 and 90.1, respectively and outbound tonnage percentages of 93.3 and 85.6, respectively.

The airport in Rockford (Chicago Rockford International Airport), which is a regional air hub for the United Parcel Service (UPS), is second to O'Hare in both inbound and outbound air cargo, with 5.6 percent of inbound tonnage and 8.6 percent of outbound tonnage. The UPS regional air hub influence is reflected in the belly and freighter percentages at the Rockford Airport. The belly percentages for both inbound and outbound are virtually nonexistent, indicating freighter shipment is predominant at 7.5 percent for inbound tonnage and 11.4 percent for outbound tonnage.

Peoria's General Wayne A. Downing Peoria International Airport and Chicago's Midway International Airport are ranked third and fourth, for both inbound and outbound air cargo. For inbound tonnage, Peoria is at 1.5 percent and Midway at 1.4 percent, with Peoria having slightly more total tons at 15,312, compared to 14,049 for Midway. For outbound tonnage, Peoria is at 1.8 percent and Midway at 1.6 percent, with Peoria having slightly more total tons at 15,532, compared to 14,132 for Midway. A more detailed discussion of air cargo and a breakdown by airport is in the *Air Cargo Traffic Highlights* section of the 2017 Illinois State Freight Plan.

Table 2.3 Inbound Air Cargo Shipments to Illinois, 2014

Airmort Nome	Belly		Freighter		Grand Total	
Airport Name	Tons	% Tons	Tons	%Tons	Tons	%Tons
Chicago O'Hare International	242,166	94.5%	705,432	90.1%	947,598	91.2%
Chicago Midway International	14,048	5.5%	0	0.0%	14,049	1.4%
General Downing - Peoria International	5	0.0%	15,307	2.0%	15,312	1.5%
Chicago/Rockford International	119	0.0%	58,497	7.5%	58,616	5.6%
Total	256,338	100%	779,236	99.6%	1,035,575	99.7%

Source: BTS T-100. Due to statistically small numbers, some percentages above are shown as 0.0%.

Table 2.4 Outbound Air Cargo Shipments from Illinois, 2014

Airmout Nome	Belly		Freighter		Grand Total	
Airport Name	Tons	% Tons	Tons	%Tons	Tons	%Tons
Chicago O'Hare International	197,471	93.3%	560,730	85.6%	758,201	87.5%
Chicago Midway International	14,132	6.7%	0	0.0%	14,132	1.6%
General Downing - Peoria International	4	0.0%	15,529	2.4%	15,532	1.8%
Chicago/Rockford International	127	0.1%	74,370	11.4%	74,497	8.6%
Total	211,734	100.0%	650,629	99.4%	862,362	99.5%

Source: BTS T-100. Due to statistically small numbers, some percentages above are shown as 0.0%.

B2.2 IMPLEMENTATION STRATEGIES AND PROGRAMS

B2.2.1 FEDERAL AIRPORT IMPROVEMENT PROGRAM STATUS

Federal Aviation Administration reauthorization legislation, H.R. 658 (P.L. 112-095), the FAA Modernization and Reform Act of 2012, enacted on February 14, 2012 authorized appropriations to the FAA from Fiscal Year 2012 through Fiscal Year 2015. H.R.636 (P.L. 114-190), the FAA Extension, Safety, and Security Act of 2016 extended FAA's authority and funding through September 2017. Since October 1, 2017, FAA has operated under two short-term extensions of FAA's legislative authority: H.R.3823 (P.L. 115-63), the Disaster Tax Relief and Airport and Airway Extension Act of 2017, extended FAA's funding and authorities through March 31, 2018; and H.R. 1625 (P.L. 115-141), the Consolidated Appropriations Act, 2018, further extended FAA's funding and authority through September 30, 2018. IDOT expects a multiyear reauthorization completing Fiscal Year 2018.

The reauthorization will ultimately affect Fiscal Year 2019 and for programmatic purposes assumes funding levels and requirements will remain very similar to prior authorizations. IDOT anticipates some minor programmatic shifting will occur due to overall language in the bill and due to the Fiscal Year 2018 Omnibus bill, which was signed into law by President Trump on March 23, 2018 and included a 1-billion-dollar boost in supplementary airport funding nationwide, from the general fund, rather than funds associated with the Airport and Airway Trust Fund. Regardless, projects utilizing federal funds will include: design, construction, safety, security, capacity enhancement, equipment, maintenance, noise mitigation, environmental, planning and land acquisition.

B2.2.2 ILLINOIS AVIATION SYSTEM PLAN

The Illinois Aviation System Plan (IASP) should be considered a continual planning process which produces, periodically, a formal narrative and analysis of the overall Illinois Aviation System. This document, which has not been fully updated since 1994, identifies system needs and sets short-to-long term goals and objectives in consideration with the National Airspace System and aviation industry evolution as well as coordination with industry stakeholders and other IDOT planning processes, such as the LRTP. The formal narrative and analysis of the IASP should be based in part on routinely updated and maintained individual system plan components and studies such as an Aircraft operations at non-towered airports, the Illinois Aviation Inventory Report, regional specific planning, and the Illinois Statewide Aviation Economic Impact Study. Several individual system plan components and the overall Illinois Aviation System Plan process are used in project ranking/planning/programming/design *and* evaluation. A quick review of aviation system planning documents across the nation reveals that Illinois may be the state running on the longest time span without a full system plan update. The average system plan completion date among states falls at 2010 with the greatest amount of updates occurring in 2016. The FAA provides funding for aviation system planning.

B2.2.3 STATE-LOCAL AIRPORT IMPROVEMENT PROGRAM

For FY 2017, Illinois has programmed a single-year State-Local Airport Improvement Program, for which a continuous program was last in effect in FY 2004, followed by a one year State-Local Program funded in FY-2012 which resulted in \$7.5 million in improvements. The program supports improvements at airports that are ineligible or low priority for the federal Airport Improvement Program but are a high priority for the state or for the local community. For FY 2017, the State of Illinois has identified airport improvement projects and has committed \$9.8 million with \$1.7 million in local

matching funds for these improvement projects.¹³ A continual State-Local program has numerous advantages over single year sporadic spending. For instance, a continual program allows airports to better plan, coordinate, and compete for these dollars – by knowing program priorities and criteria in advance. The Illinois Aviation System Plan would help determine the criteria where continual State-Local Program would be guided to adderess system needs not captured by the Federal AIP.

B2.2.4 ESSENTIAL AIR SERVICE PROGRAM

The Airline Deregulation Act (ADA), passed in 1978, gave air carriers almost total freedom to determine which markets to serve domestically and what fares to charge for that service. The Essential Air Service (EAS) program was put into place to guarantee that small communities that were served by certificated air carriers before airline deregulation continue to maintain a minimal level of scheduled air service. The United States Department of Transportation is mandated to provide eligible EAS communities with access to the National Air Transportation System. This is generally accomplished by subsidizing two round trips a day with 30- to 50-seat aircraft, or additional frequencies with aircraft with 9-seats or fewer, usually to a large- or medium-hub airport. USDOT currently subsidizes commuter and certificated air carriers to serve approximately 60 communities in Alaska and 115 communities in the lower 48 contiguous states that otherwise would not receive any scheduled air service. ¹⁴

There are three communities in Illinois in the EAS program: Decatur, Marion and Quincy. Details of these three communities' annual subsidy provided by the EAS program is provided in

Table 2.5 Essential Air Service Program in Illinois - 2015

Community	Nearest Hub Airport	Annual Subsidy (2015)	Per Passenger Subsidy
Decatur	St. Louis	\$2,667,922	\$208
Marion	St. Louis	\$2,104,616	\$107
Quincy	St. Louis	\$1,956,856	\$99
	Total Illinois EAS Subsidy	\$6.729.394	

B2.2.5 MIDWAY MODERNIZATION PROGRAM

In August, 2015 Mayor Rahm Emanuel announced a program to modernize and improve Chicago – Midway Airport. The program would direct approximately \$250 million to improve and upgrade restaurants, shops, parking and security checkpoints. The initial phase of the project is focused on improvements to retail and concessions and totals approximately \$75 million. This project will include 21 new food and retail outlets, creating 1,000 new employment opportunities. Future phases of the program will expand the security checkpoint areas and expand parking locations near the airport.

B2.2.6 O'HARE MODERNIZATION PROGRAM

The O'Hare Modernization Program (OMP) is transforming O'Hare International Airport into an airport with six parallel east-west runways, two crosswind runways, a new terminal and other enhancements, with the goals of reducing weather related delays and increasing capacity at the third busiest airport in the nation.

The OMP runway projects currently completed include the new Runway 9L/27R on the north airfield and the extension of Runway 10L/28R on the south airfield, opened in 2008, and the new Runway 10C/28C opened in 2013. The City of Chicago

¹³ IDOT. FY-2017 State-Local Airport Improvement Program Project List. http://www.idot.illinois.gov/Assets/uploads/files/Transportation-System/Reports/OP&P/AIP/FY17%20State-Local%20Project%20List.pdf. Accessed June 8, 2017.

¹⁴ USDOT. Essential Air Service Overview. https://www.transportation.gov/policy/aviation-policy/small-community-rural-air-service/essential-air-service. Accessed June 8, 2017.

¹⁵ Karp, Gregory. Midway Airport to get \$248 million upgrade. http://www.chicagotribune.com/business/ct-midway-airport-upgrades-0807-biz-20150806-story.html. Chicago Tribune. August 6, 2015. Accessed June 8, 2017.

¹⁶ Lazare, Lewis. Midway Airport modernization project begins Friday with debut of new eateries. http://www.bizjournals.com/chicago/news/2017/05/11/midway-airport-modernization-project-begins-friday.html. Chicago Business Journal. May 11, 2017. Accessed June 8, 2017.

has modified the construction schedule for the completion of the other runways planned in the OMP, but is completing the OMP airfield improvements reflected in the approved build out.¹⁷ Since its inception the OMP has adjusted and schedules have shifted. In 2016 the City of Chicago reached agreement with two major airlines serving O'Hare to construct another new runway, 9C/27C, to increase capacity and further reduce delays. The estimated cost for the new runway is estimated a \$1.3 billion.¹⁸ An illustration of O'Hare runway reconfiguration is displayed in Figure 2.2.¹⁹ The OMP projects are largely within the purview of the FAA and City of Chicago, and therefore IDOT does not hold construction lettings, manage, or oversee the OMP program; even so it is discussed in this report due to the important role O'Hare Intenational Airport plays in the larger system of Illinois airports.

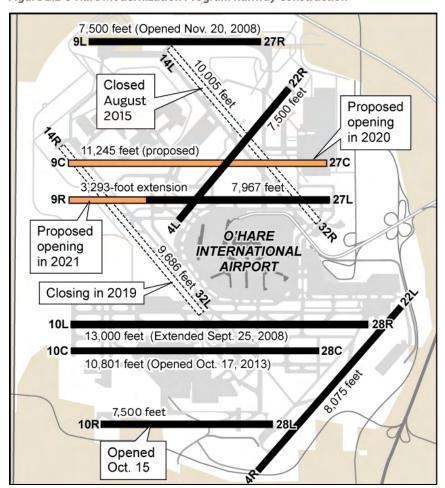


Figure 2.2 O'Hare Modernization Program Runway Construction

Source: Chicago Tribune, 2015

B2.2.7 SOUTH SUBURBAN AIRPORT

The concept of a third airport in the metropolitan Chicago region has been considered since 1984. In 1998, a South Suburban Airport site was selected near Peotone (approximately 40 miles south of the Chicago) and environmental studies began.

¹⁷ FAA. Final Re-Evaluation of the O'Hare Modernization EIS. Pp. 1-1. ftp://public-ftp.agl.faa.gov/2015%20re-eval/final%20re-eval/chapter 1.pdf. 2015. Accessed June 8, 2017.

¹⁸ Schaper, David. O'Hare to Get 6th Runway, But Without Expanded Terminals, Delays May Continue. http://www.npr.org/sections/thetwo-way/2016/02/01/465101435/ohare-will-get-a-sixth-runway-but-without-expanded-terminals-delays-may-continue. National Public Radio. February 1, 2016. Accessed June 9, 2017.

¹⁹ Tribune Graphics. http://www.chicagotribune.com/ct-map-of-new-runway-opened-at-ohare-airport-20151015-htmlstory.html. October 15, 2015. Accessed June 9, 2017.

Taking a phased approach to airport development, the project studies are concentrated on a five- year inaugural airport program and an ultimate airport build-out. The inaugural airport program consists of a single runway, a passenger terminal with six to nine gates, and air cargo and general aviation facilities on approximately 5,000 acres. The ultimate airport, envisioned to be constructed twenty years or more after the inaugural airport is operational, is planned to have six parallel runways and a passenger terminal complex with 250 gates on approximately 20,000 acres.

In 2000, the State, in conjunction with the FAA, initiated a two tiered environmental approval process. The Tier 1 Environmental Impact Statement (EIS) was prepared to determine a preferred location. The Tier 1 EIS study received a FAA Record of Decision (ROD) in 2002, which allowed the project to move forward with further study and land acquisition. The Tier 2 EIS was initiated shortly after the Tier 1 EIS ROD was issued and is still underway. An airport master plan study is also being conducted in conjunction with the Tier 2 EIS, and land acquisition began in 2002. To date, approximately 4,500 acres have been acquired. In 2017, IDOT sought proposals from private interests to potentially develop and operate the future airport.

Both the Tier 2 EIS and Master Plan study are in progress. The Master Plan study,²⁰ following FAA guidance, is comprised of several reports documenting study findings. These reports are listed below, with FAA approval dates in parentheses:

- → Existing Conditions (December, 2011)
- → Aviation Forecasts (March, 2011)
- → Facility Requirements (November, 2011)
- → Alternatives Analysis (June, 2012)
- → Interchange Access Justification Report (December, 2016)
- → Airport Access Plan
- → Airport Layout Plan
- → FAA Airspace Analysis
- → Environmental Considerations
- → Facility Implementation Plan
- → Financial Feasibility Report
- → Community Involvement

The Tier 2 EIS process requires a significant amount of analysis which culminates with the issuance of the Tier 2 Final EIS and ROD.

²⁰ South Suburban Airport, Master Plan Process. <u>www.southsuburbanairport.com/MasterPlan/MP-process.htm.</u> Accessed June 30, 2017.

MONEE

PARK

MONEE

MONE

MONEE

MONE

MONEE

MONE

MONEE

Figure 2.3 South Suburban Airport and Layout with Land Acquisition Status

Source: South Suburban Airport Project Office, July 2017

B3. Bicycle and Pedestrian Facilities

B3.1 DESCRIPTION

Bicycling and walking, sometimes referred to as non-motorized or active transportation, are important modes for local transportation in Illinois. Walking is most conducive for trips under one mile (5 to 20 minutes of travel), while bicycling is often used for trips between one and five miles (5 to 30 minutes). Bicycling and walking can be independent modes, but are often combined with public transit to facilitate longer distance trips. Bicycling and walking do not require significant amounts of pavement or fossil fuel to operate, but do require physical activity, which is why they are referred to as active transportation modes.

IDOT has a role in supporting these modes beyond administering federal funding for federally specified programs. Adding multi-use paths or trails, sidewalks, or on-road bicycle facilities along state roads promotes safer connections for pedestrians and bicyclists. A designated statewide long-distance bicycle route system can foster bicycle tourism as well as add connections in rural areas where non-motorized transportation infrastructure may be limited.

IDOT chairs the Inter-Agency Bikeway Coordinating Working Group (BCWG), which at a minimum is comprised of representatives from Illinois Department of Natural Resources (IDNR), Illinois Department of Commerce and Economic Opportunity, Illinois State Board of Education, Illinois Association of County Engineers, and the Cook County Forest Preserve District. This group meets quarterly and focuses on non-motorized issues such as Transportation Alternatives funding, State Bikeway Plan development, and Complete Streets implementation.

Other agencies also have a significant role in planning for and developing the bicycle and pedestrian network. For example, the IDNR has been involved in developing multi-use trails throughout the state. IDNR cooperates with IDOT and the Federal Highway Administration in administering the Recreational Trails Program, which is funded through federal transportation legislation. IDNR also administers the Bicycle Path Grant Program, which supports the development of linear paths on non-road right-of-way, although IDNR is not accepting funding applications for this program at this time.

Local agencies' actions to build multi-use trails, bicycle routes, and sidewalks make important contributions to bicycle and pedestrian activity and the State's overall network of facilities. Many individual communities have developed bicycle and pedestrian plans, and building these facilities increases the multimodal options in a community. Metropolitan Planning Organizations (MPOs) include bicycle and pedestrian plans in their long-range transportation plans. MPOs are responsible for programming some federal funds to local jurisdictions for planning and construction of bicycle and/or pedestrian facilities through the Transportation Alternatives Program (TAP), Surface Transportation Block Grant Program (STP), Congestion Mitigation and Air Quality (CMAQ) Program and others. IDOT also supports bicycle planning in local communities by granting State Planning and Research Funds for bicycle planning.

B3.1.1 STATE RANKING AND STATISTICS

The Alliance for Biking and Walking (ABW) collects data from across the U.S. in order to release periodic reports detailing each individual State's levels of bicycling and walking, adopted policies, and funding information. According to ABW's 2016 Benchmarking Report²¹, 3.1 percent of Illinois commuters walk to work and 0.6 percent cycle to work; Illinois ranks 18th in the number of walking commuters and 19th overall in number of cycling commuters; and Illinois ranks 29th in per capita spending on bike/walk projects, spending \$2.20 per capita.

The U.S. Department of Transportation-Bureau of Statistics, State Transportation Statistics 2015 Report, further supports the ABW's 2016 Benchmarking Report, which suggests 3.7 percent of Illinois commuters either walked (3.1 percent) or

²¹ The League of American Bicyclists, Bicycle Friendly State 2015 Ranking http://www.bikeleague.org/sites/default/files/2015 state ranking chart.pdf

biked (0.6 percent) to work in 2013 (Table 3.1). These values are equal to the national average for biking to work (0.6 percent) and slightly more than the national average for walking to work (2.8 percent).

The League of American Bicyclists (LAB) runs a program called The Bicycle Friendly State, which is designed to establish best practices to help improve safety, comfort, and accessibility of bicycling. The ranking compares all 50 states across five distinct attributes: Legislation & Enforcement, Programs & Policies, Infrastructure & Funding, Education & Encouragement, and Evaluation & Planning. According to their 2015 Ranking and Report Card, Illinois is ranked 14th most Bicycle Friendly State out of all 50 states; lower than in 2012, when Illinois was ranked 9th. Illinois scored 4 out of 5 points for its Legislation & Enforcement and Education & Encouragement, 3 out of 5 for its Policies & Programs, and 2 out of 5 for both its Infrastructure & Funding and Evaluation & Planning. Planning. Planning.

Table 3.1: 2013 Commuter Mode Share, All Person Trips

Mode	Illinois (%)	U.S. (%)
Drove Alone	73.6	76.4
Carpool	8.3	9.4
Public transit	9.1	5.2
Bicycle	0.6	0.6
Walked	3.1	2.8
Other (motorcycle, taxi, ferry, school bus, airplane)	1.0	1.3
Worked at Home	4.2	4.4

Source: US Department of Transportation, Bureau of Transportation Statistics, Illinois Transportation by the Numbers, 2013.

B3.1.2 MULTI-USE FACILITIES

According to the ABW Benchmarking Report, in 2015, Illinois had approximately 1,875 miles of dedicated multi-use trails that have been funded through federal programs, state funds, and local resources. Most trails are suitable for a variety of users, like walkers, runners, and bicyclists. Trails are often located in parks or natural areas, and may be circular or wandering, making them less attractive for point-to-point destination travel. However, linear trails and segments between communities may be an option for transportation purposes.

Some of the longer linear trails in the state include²⁴:

→ Chicago Lakefront Trail. Paralleling Lake Michigan, the 20-mile trail runs from the far north to the far south sides of the city. The path is paved and is often used by bicyclists and walkers for commuting to work or accessing social and recreation activities in the adjacent neighborhoods and along the waterfront.

²² The League of American Bicyclists, Bicycle Friendly State Report Card Illinois http://bikeleague.org/sites/default/files/BFS2015 Illinois.pdf

²³ Illinois Department of Transportation, Bicycle and Pedestrian Infrastructure. http://www.idot.illinois.gov/Assets/uploads/files/Transportation-System/Fact-Sheets/Bicycle%20Facts 041216.pdf

²⁴ IDOT, Alphabetical Listing of Trails. <u>www.dot.il.gov/bikemap/trailist.htm.</u> Rails-to-Trails Conservancy, TrailLink www.traillink.com/.

- Fox River Trail and Illinois Prairie Path. Starting in Aurora, the 35-mile north-south Fox River Trail connects to the Illinois Prairie Path at Batavia, Elgin, Geneva and continues further north to Algonquin. The 62-mile Illinois Prairie Path travels from Elmhurst to Wheaton, and splits into four other paths that terminate at the Fox River, in the communities of Aurora, Batavia, Elgin, and Geneva.
- → Great River Trail. This 60-mile trail parallels the Mississippi River, between Savanna and Rock Falls, in the Quad Cities region. The trail is a combination of on and off street facilities.
- → Hennepin Canal Parkway. This 105-mile trail is the longest in Illinois.

 The east-west segment travels between Bureau Junction near the

 Illinois River and the Quad Cities area with a trail head at the Rock River. The 29-mile north-south segment connects Sterling and Rock Falls, at the Rock River, to the east-west corridor.
- → Rock Island Trail and Greenway. This is the first state-owned trail. The 27-mile greenway on old railroad right-of-way connects Alta (Peoria County) and Toulon (Stark County) and communities in between. A 13 mile extension was completed in 2014 and now connects Alta and Peoria.
- → Tunnel Hill State Trail. This trail connects Harrisburg (Saline County) to Karnak (Pulaski County), for a total trail length of 45 miles. The trail passes through ten communities and the Cache River Natural Area, and is near the Shawnee National Forest.

B3.1.3 ON-STREETBICYCLE FACILITIES

Throughout the state, there are approximately 5,000 miles (31 percent) of the nearly 17,000- mile state highway system identified as being suitable for bicycling.²⁵ Bicycling is at least somewhat comfortable on more than 63 percent of all roads, out of the 146,000 plus miles of all roads in the state.

On-road facilities range from:

- → Suggested routes that are unsigned and unmarked, but are identified on maps.
- → Signed bike routes, usually found on local or very low volume roads.
- → Sharrows, which are painted arrows with a bicycle symbol, indicating that the road is to be shared by bicycles and motor vehicles.

Figure 3.1 Chicago's Lakefront Trail

Figure 3.2 Rock Island Trail



 $^{^{25} \} US\ DOT\ Bureau\ of\ Statistics,\ State\ Transportation\ Statistics\ 2015,\ https://www.rita.dot.gov/bts/sites/rita.dot.gov.bts/files/STS_2015.pdf$

- → Bicycle lanes, which are generally 5 feet wide, next to either the sidewalk or parked cars and adjacent to moving traffic. These may sometimes be buffered with a few feet between the bicycle lane and moving traffic. The buffer is usually a series of white painted lines intended to indicate that motor vehicles should not cross.
- Separate, on-street protected bicycle lanes, known as protected bike lanes or cycle tracks. These differ from buffered bicycle lanes because there is usually a physical barrier between the bike lane and the motor vehicle traffic lane. Physical barriers include planters, curbs, parking vehicles, bollards, medians, or other physical separation. Protected bike lanes are usually adjacent to the parkway or sidewalk.

Paved shoulders or an extra wide outside lane are other options that provide space for pedestrians and bicyclists when no other facility is available. Paved

shoulders often have rumble strips to prevent run-off-the-road vehicle incidents, so IDOT adjusts the width of the strips when the paved shoulder serves as a bicycle accommodation. Extra width on

an outside lane provides a similar benefit to bicyclists and walkers providing room to travel adjacent to traffic flow.

Figure 3.3 West Kinzie St. Cycle Track - Chicago



B3.1.4 OTHER BICYCLE FACILITIES

Other infrastructure important for bicyclists includes bicycle parking, bicyclistspecific signaling at traffic lights, public bicycle rental programs, wayfinding, and bicycle stations. Bicycle stations are a premium amenity, as they are usually buildings that can house bicycle repair facilities, showers and clothing lockers, temporary bicycle parking, and temporary bicycle rental / bicycle share services. Bicyclist specific signals at traffic lights are common in Europe, but are now beginning to be utilized throughout the U.S. Locations where these signals are installed include Long Beach and Davis, California and Denver, Colorado. In 2012 new bicycle lanes and bicycle signals were added to a 1.2 mile section of the Dearborn corridor from Polk to Kinzie in downtown Chicago.²⁶

Bicycle parking is a necessity for ensuring bicycling activity. Bicycle parking takes many forms, including racks, lockers, corrals, stations, and is sheltered or unsheltered. Bicycle parking should be installed at locations where bicyclists need secured parking. Locations include transit stations, activity centers like schools and recreational facilities, and commercial centers. Commercial centers

Figure 3.4: Bicycle Traffic Signal on Dearborn St. - Chicago



Source: Chicagonow.com. 12/9/13

include office locations, retail streets and centers, dining establishments, neighborhood stores of all types, and entertainment locations. Sheltered parking is preferable, to protect from rain and other weather conditions. Many commercial centers in Chicago provide private bike parking and valet services.

Bicycle parking corrals are either permanent or temporary. Permanent bicycle corrals are located on-street, and replace automobile parking with rack(s) that store multiple bicycles. Temporary bicycle corrals are set up to support a specific event. The corrals are similar to coat-check or automobile valet services, in that a bicyclist receives a claim ticket needed to retrieve their bicycle at the end of their visit.

²⁶ Kuhrt-Brewer, Carole. Chicago Bike Lanes: Dearborn St. Lane Named Best in the Country. http://www.chicagonow.com/show-mechicago/2013/12/chicago-bike-lanes-dearborn-st-lane-named-best-in-the-country/. Accessed July 18, 2017.

Temporary public bicycle rental or bicycle share services are gaining in popularity in the U.S. The first programs offered free bicycles, usually painted a noticeable color, and were unlocked, parked throughout the community, and available to anyone. Due to theft, vandalism, or maintenance problems, these services faded although some still exist - primarily in communities with college students.

The second generation of bicycle share services are either for-profit or are supported through advertising revenues, and require pre-registration. A system of bicycles is installed at various locations throughout a densely populated area such as a business district. Bicycles are available to members for a small fee and are either reserved in advance or are used on-demand. Rentals are sometimes free for the short period (e.g., half-hour) after which a small fee is assessed. Members sign-in, unlock a bicycle from the bicycle docking station, and borrow the bicycle for a set period. Bicycles can be returned at any open docking station. Currently, bicycle-share services are in use in Washington, D.C., New York and Boston, with more underway. Divvy, owned by the Chicago Department of Transportation and operated by Motivate, is Chicago's bicycle share system. Initial startup costs for Divvy were supported by CMAQ funding that was administered by IDOT. Divvy started in June 2013 and currently (2017) includes 580 stations and 5,800 bikes across Chicago. In 2016, Divvy expanded to the suburban Chicago communities of Oak Park and Evanston. 13 stations were added in Oak Park and 10 stations were added in Evanston.²⁷

B3.1.5 PEDESTRIAN FACILITIES

Pedestrian facilities – sidewalks and paths, benches, crosswalks, pedestrian signals – are often located in urbanized areas. These facilities provide safe spaces for community residents to walk to jobs, shopping, visiting neighbors, or for health. Streets in urban communities often have sidewalks while suburban and exurban developments may not. Rural roads may have paved shoulders that can serve as pedestrian walkways although many do not.

Figure 3.5 Pedestrian Crossing with Median Island



 $Pedestrian\ infrastructure\ also\ includes\ dedicated\ bridges\ or\ underpasses,$

streetlights, special pavements or painted crosswalks, signage, medians and islands, push-button signals, and other traffic calming devices like corner bump- outs. New strategies such as in-pavement flashing lights at crosswalks, rapid-flash beacons for safer crossings on high volume roads, and advance stop bars are being installed to reduce pedestrian fatalities and injuries.

Because sidewalks offer access to buildings and land uses, they must be accessible under the Americans with Disabilities Act (ADA). Guidance on sidewalk width, acceptable slope, curb cuts and corner access is defined by the US Access Board, and additional proposed ADA guidance for public rights-of way is included in the Public Rights-of-Way guidelines and addendum guidance for shared-use paths.²⁸, ²⁹

Pedestrian facilities are most often the responsibility of local communities. IDOT's commitment to providing pedestrian facilities along roads under its jurisdiction is detailed in the Complete Streets policy.

²⁷ DIVVY. Expansion. https://www.divvybikes.com/expansion. Accessed July 18, 2017.

²⁸ US Access Board. Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way. https://www.access-board.gov/attachments/article/743/nprm.pdf. Accessed September 2017.

²⁹ Federal Register, Vol. 78, No. 30. Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way; Shared Use Paths. https://www.access-board.gov/attachments/article/1108/sup-snprm.pdf. Accessed September 2017.

B3.2 IMPLEMENTATION STRATEGIES AND PROGRAMS

The Illinois Complete Streets law was enacted in October 2007.³⁰ A "complete street" is one that can accommodate all users safely including the most vulnerable whom are identified as youths, persons with disabilities, and the elderly. The legislation requires IDOT to give full consideration to bicycle and pedestrian facilities in the planning, design, and construction of state transportation facilities with some exceptions.

The Complete Streets legislation reads:

605 ILCS 5/4-220. Bicycle and pedestrian ways.

1. Bicycle and pedestrian ways shall be given full consideration in the planning and development of transportation facilities, including the incorporation of such ways into State plans and programs.

2.In or within one mile of an urban area, bicycle and pedestrian ways shall be established in conjunction with the construction, reconstruction, or other change of any State transportation facility except:

(1)in pavement resurfacing projects that do not widen the existing traveled way or do not provide stabilized shoulders; or

(2) where approved by the Secretary of Transportation based upon documented safety issues, excessive cost or absence of need.

3. Bicycle and pedestrian ways may be included in pavement resurfacing projects when local support is evident or bicycling and walking accommodations can be added within the overall scope of the original roadwork.

4.The Department shall establish design and construction standards for bicycle and pedestrian ways.

Beginning July 1, 2007, this Section shall apply to planning and training purposes only. Beginning July 1, 2008, this Section shall apply to construction projects.

(Source: P.A. 95-665, eff. 10-10-07.)

In 2010 the Illinois Legislature amended the Illinois Vehicle Code to require motorists to stop and yield the right-of-way to a pedestrian crossing the roadway within a crosswalk or approaching the roadway. (P.A. 625 ILCS 5/11-1002).³¹

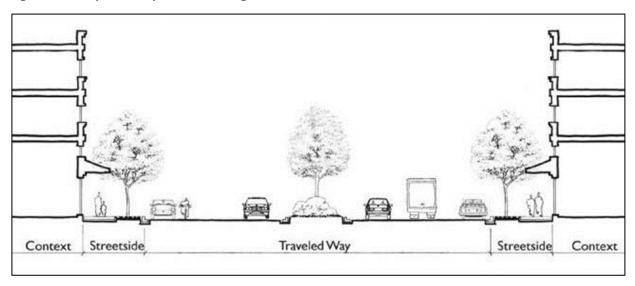
The Complete Streets statute only applies to local agencies where work is being performed on a state-maintained highway as part of a local improvement project. However, there is guidance for provision of pedestrian facilities on local projects in Chapter 41 of the Bureau of Local Roads and Streets manual.

Figure 3.6 is an example of a complete street layout which includes sidewalks separated from the road with a planted parkway and a bicycle facility (lane, sharrows, or other) adjacent to the parking lane. The road provides accessibility for all users.

³⁰ Illinois General Assembly, Public Act 095-0665. www.ilga.gov/legislation/publicacts/fulltext.asp?Name=095-0665.

³¹ Illinois General Assembly: http://ilga.gov/legislation/publicacts/fulltext.asp?Name=096-1165. Accessed July 19, 2017.

Figure 3.6 Example of Complete Street Design



Source: Institute of Transportation Engineers, Designing Walkable Urban Thoroughfares: A Context Sensitive Approach, 2010. Page 70.

In June 2010, IDOT amended its Bureau of Design and Environment manual to incorporate the new law in Chapter 5 Local Agency Agreements and Chapter 17 Bicycle and Pedestrian Accommodations.³² The manual details the decision process for excluding a facility, exceptions and partial exceptions to considering accommodations, and details the warrants that must be met before bicycle accommodations can be made. In March 2011, IDOT amended Section 17-1.03 of the manual to reflect that if any of the following conditions exist, the state shall provide adequate on or off-road accommodation:

- → The highway or street is designated as a bikeway in a regionally or locally adopted bike plan or is published in a regionally or locally adopted map as a recommended bike route.
- → The projected two-way bicycle traffic volume (see Section 17-1.04) approximate 25 ADT or more during the peak three- months of the bicycling season five years after completion of the project.
- → The route provides "primary access" to a park, recreational area, school, or other significant destination.
- → The route provides unique access across a natural or man-made barrier (e.g., bridges over rivers, bridges over railroad yards, bridges over freeways or expressways, highways through a National Forest). Bicyclists will be accommodated on the bridge unless bicycles are otherwise prohibited to operate on the roadway approaches. For projects that meet no other warrants, a minimum shoulder width of 4 ft. (1.2 m) shall satisfy this warrant.
- → The highway project will negatively affect the recreational or transportation utility of an independent bikeway or trail. Highway projects will negatively affect at-grade paths and trails when they are severed, when the projected roadway traffic volumes increase to a level that prohibits safe crossings at-grade, or when the widening of the roadway prohibits sufficient time for safe crossing.

Additional details regarding project submittals, calculating demand, engaging the public and building support, design criteria and standards, and other considerations are also in the manual.

For pedestrian accommodations, conditions that require pedestrian accommodation (Section 17-4.03, BDE Manual, May 2017) are:

³² Illinois Department of Transportation, Bureau of Design and Environment Manual

- → If there is current evidence of frequent pedestrian activity (dirt trails / paths).
- → If there is a history of pedestrian-related crashes.
- → The new road or improvement will create a safety issue for pedestrian travel.
- → There is a urban or suburban development that would attract pedestrian travel along the route to be improved.
- → Pedestrian-attracting development adjacent to the road exists, or is expected within the next five years.
- → The road provides "primary access" to a significant destination, including parks, recreational areas, and other significant destinations or across a natural or man-made barrier.

B3.2.1 TRANSPORTATION ALTERNATIVES

The aforementioned MAP-21, enacted in July 2012, consolidated a number of previous federal programs that funded bicycle and pedestrian projects. MAP-21 combined the Transportation Enhancements, Recreational Trails, and Safe Routes to Schools programs. Other changes in MAP-21 include:

- → Reduced the total amount of funding available.
- → Kept the funding share at 80 percent federal and 20 percent local.
- → Made the Recreational Trails Program an optional set-aside.
- → Changed some of the types of projects that can be funded. For example, projects that address Americans with Disabilities Act (ADA) compliance are now identified as being eligible for these resources. MAP-21 also allocated programming authority of a portion of the funds to the Metropolitan Planning Organizations (MPO) with urban populations of more than 200,000.

Out of the \$233 million of Transportation Enhancement funds allocated to Illinois under the previous federal transportation legislation, IDOT has committed \$199 million, with the last round of projects announced on October 12, 2016 funding 33 projects for \$30.7 million. The next round of ITEP applications is being accepted from October 2 to December 1, 2017 with an award announcement projected in Spring 2018. Since the start of the Transportation Enhancements program in 1991, pedestrian and bicycle facilities, including trails, have received about half of all funding available – nearly \$217 million out of the \$410 million that has been programmed. Other eligible project types that do not involve pedestrian and bicycle facilities are landscape/streetscape and other scenic beautification, conversion of abandoned railroad corridors to trails, historic preservation, vegetation management in transportation rights of way, archaeological activities relating to impacts from implementation of transportation projects, stormwater management, and construction of turnouts or viewing areas.

For the Safe Routes to Schools program, IDOT has committed approximately \$43.5 million since the program began in 2005; as of June 2012, awardees are reported to have spent a little more than \$12.6 million (28%). Twenty-one educational and encouragement projects that have been funded include bike rodeos in Matteson and Lena, designated days to walk to school in Marysville and Plano, training programs to teach students how to be safe bicyclists and walkers, crossing guard trainings, planning for 'walking school bus' events and a variety of other educational and encouragement programs.

Per the ABW's 2016 Benchmarking Report, the percentage of federal funds obligated for biking and walking projects totaled nearly \$153 million from FY 2009 to FY 2014. Table 3.2 depicts a percentage breakdown of these funds, per federal program, for FY 2009 to FY 2014.

Table 3.2 Federal Funding Programs for Biking and Walking Projects (FY 2009 - 2014)

Federal Program	Percentage of Funds (%)
CMAQ	26
STP/TE TAP/TE*	27
Other STP	4
SRTS	17
RTP	1
HSIP	0
NHPP	6
TAP	2
ARRA	12
All Other Programs	5
Total	100

^{*}At this time Transportation Enhancement part of STP funding source.

Illinois has experienced an increase in federally funded bicycle and pedestrian projects in recent years. From FY 2006-2008 to FY 2009-2011, the total amount of funds for bicycle and pedestrian projects tripled. The increase from FY 2009-2011 to FY 2012-2014 was not as noticeable; however, funding still increased over 20 percent. Table 3.3 details federal funds obligated from FY 2006 to FY 2014.

Table 3.3 Federal Funds Obligated to Bicycle and Pedestrian Projects (FY 2006 - 2014)

FY	Total Amount of Funds (\$)
2006-2008	22,020,429
2009-2011	67,802,006
2012-2014	85,031,839
Total	174,854,274

Source: Alliance for Biking and Walking, 2016 Benchmarking Report.

B3.2.2 CONGESTION MITIGATION AND AIR QUALITY PROGRAM (CMAQ)

With passage of the Clean Air Act Amendments of 1990, the Congress made great strides in America's efforts to attain the National Ambient Air Quality Standards (NAAQS). The 1990 amendments required further reduction in the amount of allowable vehicle tailpipe emissions, initiated more stringent control measures in areas that still failed to meet the NAAQS-known as nonattainment areas-and provided for a stronger, more rigorous link between transportation and air quality planning. Further establishing this link, one year later, the Congress passed the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991. This far-reaching legislation brought transportation into the multi-modal arena and also set the stage for an unprecedented focus on environmental programs. Part of this approach was the Congestion Mitigation and Air Quality Improvement Program. The CMAQ program was implemented to support surface transportation projects and other related efforts that contribute air quality improvements and provide congestion relief. Administered by FHWA, the CMAQ program has been reauthorized under every successive Transportation Bill up to and including the FAST Act in 2015. Through the close of the MAP-21 period in 2015, the CMAQ program has provided more than \$30 billion to fund over 30,000 transportation related environmental projects for State DOTs, metropolitan planning organizations, and other sponsors throughout the US. As with its predecessor legislation, the FAST Act provides funding to areas in nonattainment or maintenance for ozone, carbon monoxide, and/or particulate matter. In addition, those States that have no nonattainment or maintenance areas still receive a minimum apportionment of CMAQ funding for either air quality projects or other elements of flexible federal aid highway spending. The FAST Act provides from \$2.3 to almost \$2.5 billion in CMAQ funding for each year of the authorization-2016 through 2020. While project eligibilities remain largely the same, the legislation places increased emphasis on diesel engine retrofits including

construction equipment, port-related landside non-road or on- road equipment and alternative fuel infrastructure in designated alternative fuel corridors. ³³

The State of Illinois receives an allocation of federal CMAQ funds. Under the Intermodal Surface Transportation Efficiency Act (ISTEA), Transportation Equity Act for the 21st Century (TEA-21), and the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), funding apportionments for each state were calculated based on a formula using weighted populations in ozone and PM2.5 nonattainment and maintenance areas. Under MAP-21 and the FAST Act, the federal funds are allocated using the proportions from the final year of SAFETEA-LU. In Illinois, CMAQ funds are distributed between the nonattainment areas of the state based on the same formula used in ISTEA, TEA-21, and SAFETEA-LU. Currently, the only two MPOs with ozone and PM2.5 nonattainment areas in Illinois are CMAP and the East-West Gateway Council of Governments (EWGCOG). CMAP receives approximately 95.21 percent of the annual apportionment and EWGCOG receives approximately 4.79 percent. As of MAP-21, 25% of the funds must be obligated on projects that improve PM2.5.34

B3.2.3 STATE BIKEWAYS PLAN

Illinois completed its first statewide bicycle plan in 2014. This plan provides IDOT with a foundation for bicycle and pedestrian planning in Illinois. The plan draws on existing policies as defined in the Bureau of Design and Environment and the Bureau of Local Roads and Streets manuals, including previous planning and programming implemented by IDOT. The plan includes an assessment of current conditions, identifies goals for future enhancements to infrastructure and education and encouragement programs, and sets a path for implementation. Based on the existing conditions analysis, plan recommendations included the following:

- → Bicycling related planning and policy recommendations,
- → Bikeway safety, design and maintenance recommendations,
- → Regional-scale bikeway network recommendations,
- → Bikeway network implementation and prioritization recommendations,
- → State bicycling performance measures,
- → Education, outreach and enforcement recommendations, and
- → Funding recommendations.

B3.2.4 BICYCLE MAPS

Mapping a network of suitable bicycle routes was one of the first initiatives of IDOT's bicycle program. These maps cover the state and provide measures of suitability for bicycling on roadways in the state. These recommendations have six different levels, ranging from "most suitable" to "not recommended for bicycling" and two other classifications ("bicycles prohibited," generally on interstates, and "use at your discretion," for roads that are unpaved). IDOT assessed the roads using a Bicycle Level of Service calculation, which considers traffic volume and speed, pavement condition, lane and shoulder widths, the number of lanes, on-street parking, and the percentage of truck traffic on the road. In addition, the ratings assume an average or better than average level of skill for an adult bicyclist, who is comfortable with sharing the road with vehicular traffic.

State bicycle maps are available in print by request, or on line by county, in downloadable printable format.³⁵ IDOT-produced maps rely on data from the Illinois Roadway Information System (IRIS), a Geographic Information System (GIS) database that includes information on most Illinois roadways.

³³ Federal Highway Administration. Air Quality: CMAQ Program. https://www.fhwa.dot.gov/environment/air_quality/cmaq/. Accessed July 19, 2017

³⁴ IDOT, MPO Cooperative Operations Manual. P. 12. http://www.idot.illinois.gov/Assets/uploads/files/Transportation-System/Manuals-Guides-&-Handbooks/Highways/Metropolitan%20Planning%20Organization%20Cooperative%20Operations%20Manual.pdf. Accessed July 19, 2017.

³⁵ http://www.idot.illinois.gov/travel-information/recreation/trails-paths-streets/index

B3.2.5 GO GREEN

Illinois has committed to bicycling as a priority, as part of the State's sustainability initiative. There is a bicycling information page on the Green. Illinois. gov website under the Sustainable Transportation tab, which compiles a listing of all efforts and program by all state agencies involved with bicycling. 36

As an example of how bicycling (and walking) are becoming embedded into state government activity, the 2014 Annual Report of the Green Governments Coordinating Council notes the efforts by various agencies to promote the use of bicycling by providing bicycle parking at facilities, as ways to reduce greenhouse gas emissions and to improve employee health.

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 $^{^{36}\,}Green Il lino is. Gov. \underline{\ \ https://www.illino is.gov/gov/green/Pages/BikeContents.aspx.}$

B4. Freight System

B4.1 DESCRIPTION

The efficient movement of goods is critical to the economy of Illinois and the United States. Illinois is the freight epicenter of the nation due to its critical role in the movement of freight nationwide. Freight of all kinds is being shipped to and from Illinois on a daily basis by truck, rail, water, and air. Illinois is served by all seven Class I railroads and the National Highways System in Illinois contains 7,945 miles³⁷; the 4th largest in the nation. IDOT plays an important role supporting the infrastructure that allows freight to effectively and reliably move in and out of the state. In addition to this section, more detailed information on freight modes, goods movement, and conditions can be found in 2017 Illinois State Freight Plan.

B4.1.1 OVERVIEW OF FREIGHT FLOWS

Freight traffic flows by mode, commodity, and geography are a fundamental way to understand the demand on Illinois infrastructure, and the connection between freight and the economy of the state. Several datasets, as described in the 2017 Illinois State Freight Plan, were combined to develop an accurate overview of Illinois' freight flows.

In 2014, 1.23 billion tons of freight was moved to, from, or within Illinois. This cargo was valued at \$2.97 trillion. The modal breakdown and directional flow of this freight movement is shown below in Table 4.1. The top half of Table 4.1 shows tonnage and value for inbound, outbound, and within state flows. The bottom half shows the mode share percentages based on these tonnages and values.

Table 4.1	Mode and	Type of Flow	Overview	2014
I able T. I	Mode alla	IVDEULION	OVELVIEW,	ZVIT

	Inbound		Outb	ound	Within		Grand	Total
	Tons 2014	Value 2014						
	(M)	(BUSD)	(M)	(BUSD)	(M)	(BUSD)	(M)	(BUSD)
Truck - FAF Dis	129.1	\$296.3	133.8	\$415.2	401.4	\$360.8	664.2	\$1,072.3
Rail Intermodal - STB	48.8	\$647.3	56.2	\$662.4	0.1	\$3.9	105.1	\$1,313.6
Rail Carload - STB	195.2	\$198.1	129.5	\$161.9	24.2	\$11.1	348.9	\$371.2
Water - TS	21.2	\$10.6	80.0	\$19.7	6.6	\$1.2	107.8	\$31.5
Air - T100	1.0	\$97.7	0.9	\$87.0	-	\$0.7	1.9	\$185.4
Grand Total	395.3	\$1,250.0	400.4	\$1,346.2	432.3	\$377.7	1,227.9	\$2,974.0
Truck - FAF Dis	32.7%	23.7%	33.4%	30.8%	92.9%	95.5%	54.1%	36.1%
Rail Intermodal - STB	12.3%	51.8%	14.0%	49.2%	0.0%	1.0%	8.6%	44.2%
Rail Carload - STB	49.4%	15.8%	32.3%	12.0%	5.6%	2.9%	28.4%	12.5%
Water - TS	5.4%	0.8%	20.0%	1.5%	1.5%	0.3%	8.8%	1.1%
Air - T100	0.3%	7.8%	0.2%	6.5%	0.0%	0.2%	0.2%	6.2%
Grand Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: WSP Combined Commodity Flow Dataset, Only Truck, Rail, Air, and Water

A comparison of inbound, outbound, and within state flows, by tonnage and by value is presented below in Figure 4.1. As shown on the left side of Figure 4.1, by tonnage, freight flows inbound, outbound, and within the state are roughly evenly distributed, at 32.2 percent, 32.6 percent, and 35.2 percent, respectively. These percentages are

^{*} STB: Surface Transportation Board; TS: Transearch; T100: 2014 Bureau of Transportation Statistics T-100 Segment Database (value calculated based on average value per ton figures from FAF)

³⁷ FHWA. NHS Estimated MAP-21 NHS Mileages.

based on the total tonnages for inbound, outbound, and within state flows shown in Figure 4.2: Mode and Type of Flow Overview, 2014, divided by the grand total of 1,227.9 million tons.

As shown on the right side of Figure 4.1, the value of inbound and outbound freight was roughly equal at 42.0 percent and 45.3 percent, respectively, whereas, the value of freight moving only within the state was much lower, at 12.7 percent. These percentages are based on the total values of inbound, outbound, and within state freight flows shown in Figure 4.3: Mode and Type of Flow, 2014, divided by the grand total of \$2,974.0 billion.

These figures exclude freight that passes through the state, such as transcontinental rail shipments hubbed in and around Chicago or interstate truck trips from Wisconsin to Indiana.

Within 12.7% 35.2% Within Outbound 45.3% 32.6% Outbound. Inbound 42.0% Inbound 32.2% 500.00 1.500.00 1.000.00 100.00 200.00 300.00 400.00 500.0 Billions of Dollars 2014 Millions of Tons 2014

Figure 4.1 Freight Flow Overview (Shares Labeled), 2014

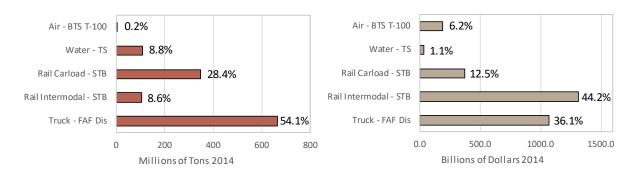
Source: WSP Combined Commodity Flow Dataset, Only Truck, Rail, and Water

A comparision by mode share is shown below. This comparison summarizes the modal breakdown from the Grand Total column in Table 4.1: Mode and Type of Flow Overview, 2014.

As shown on the left side of Figure 4.2: Modal Overview, 2014, over half (54.1 percent) of all tonnage is transported by truck. Rail intermodal shipments represent 8.6 percent of tonnage. Rail shipments by carload represent 28.4 percent of tonnage. Water represents 8.8 percent of tonnage. Air represents 0.2 percent of tonnage.

As shown on the right side of Figure 4.2: Modal Overview 2014, the rail intermodal mode jumps to a mode share of 44.2 percent in terms of value, which is larger than the mode share for truck of 36.1 percent. This reflects the importance of intermodal to the region and the relatively high value commodities that use this mode. The truck mode in Illinois carries a significant tonnage of gravel and other low value commodities which accounts for its lesser value share of 36.1 percent. Rail carload value also drops considerably from a tonnage share of 28.4 percent to a value share of 12.5 percent due to a large percentage of bulk commodities, such as coal and cereal grains. Water's mode share also decreases considerably going from a tonnage share of 8.8 percent to a value share of only 1.1 percent due once again to its concentration in bulk commodities. On the other hand, the air mode increases to 6.2 percent in terms of value.

Figure 4.2 Modal Overview, 2014



Source: WSP Combined Commodity Flow Dataset, Only Truck, Rail, and Water

Several other findings from Figure 4.2: Modal Overview, 2014, also stand out:

- → The inbound rail carload tonnage is substantially larger than the truck inbound tonnage, which are 195.2 and 129.1 million tons, respectively.
- → The inbound and outbound truck tonnage is essentially balanced (129.5 and 133.8 million tons, respectively), and trucking handles the vast majority of traffic that stays within the state (401.4 million tons).
- → There is roughly four times more tonnage outbound by water than inbound by water (80.0 and 21.2 million tons, respectively).
- → Most of these outbound water flows are lower value commodities, as the gap is smaller by value, with total values of \$19.7 billion for outbound and \$10.6 billion for inbound, which by percentage of overall value correlates to 1.5 percent and 0.9 percent, respectively.
- → Inbound air cargo³⁸ represents 7.8 percent of the value and outbound air cargo represents 6.5 percent of the value, but air cargo is negligible in terms of tonnage share.

Understanding the flow of individual commodities is necessary to characterize the drivers of freight activity. Figure 4.3 through Figure 4.6 show commodity flows by tonnage, value, mode, and type.

As shown in Figure 4.3, the largest commodity flow in 2014 by tonnage is coal, representing 14.9 percent of all tons moved to, from, and within the state, with the majority of these flows heading inbound. As shown by Figure 4.5,: Mode Share of Top 15 Commodities by Tonnage, 2014, 76.8 percent of coal is transported by rail carload in unit trains, although the water mode is used more intensely than other states, accounting for 18.0 percent of tons moved of this commodity. Inbound flows of coal are primarily supplying power plants for local energy generation. Figure 4.3 also shows that cereal grains are the second largest commodity by tonnage, representing 10.7 percent of all flows to, from, and within Illinois. This is unsurprising given the importance of this industry to Illinois' economy. Most of these cereal grain movements are internal, heading to consumption markets and food processing facilities around the state, although outbound flows to other states are also substantial.

As shown in Figure 4.5: Mode Share of Top 15 Commodities by Tonnage, 2014, approximately 61.8 percent of these grain tons were carried by truck, with an additional 22.3 percent being transported by rail carload.

Figure 4.3: Top 15 Commodities by Tonnage by Type of Flow, 2014, also shows that the third largest commodity by tonnage is gravel, representing 7.6 percent of tons. Gravel is used primarily in the construction sector. Because of its

³⁸ Air cargo totals are included in Figure 4.1 and 4.2 but are excluded from subsequent tables and figures because they were generated from a database that did not contain commodity level information.

high weight to value ratio, gravel is typically only shipped short distances, which is why the majority of gravel shipments that start in Illinois have destinations in Illinois.

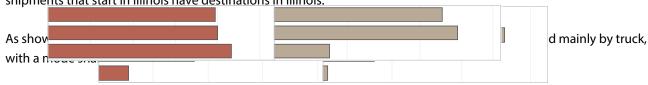
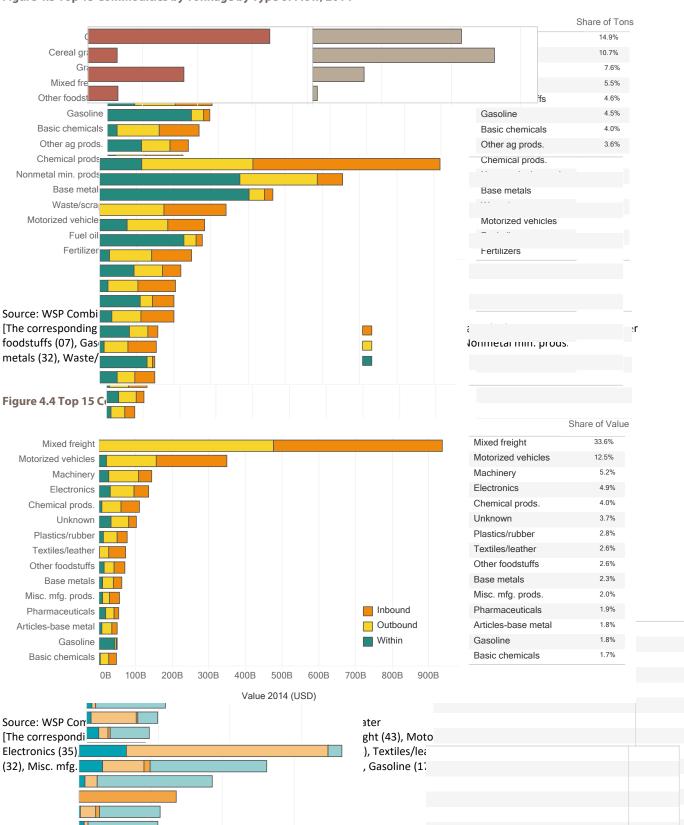


Figure 4.3 Top 15 Commodities by Tonnage by Type of Flow, 2014



Analyzing commodity flows by value provides an overview of the supply-chains that are most important to the state's economy. As shown in Figure 4.4: Top 15 Commodities by Value by Type of Flow, 2014, shipments of Mixed Freight are by far the largest commodity flow in the state (33.6 percent); however, this is a special category used for rail intermodal traffic and it can be composed of a wide range of products. Given the importance of Chicago in nationwide intermodal logistics and the movement of international trade, it is expected that this commodity group appears prominently in the data. An issue that might be overstating the importance of these shipments is that some rail intermodal containers that pass through Chicago on transcontinental shipments are rebilled (issued a second waybill) in Chicago as they switch railroads. It is possible these shipments are counted twice as shipments that terminate in the state and then originate again. Rebilling generally occurs at any east/west rail interchange and thus can affect data at St. Louis as well, although Chicago is the chief location. Adjusting for it is not simple—there is no way to perfectly connect rebilled shipments. However, the effect of this data issue on total results is likely to be of secondary importance: it tends to exaggerate volumes more than it distorts broad traffic patterns.

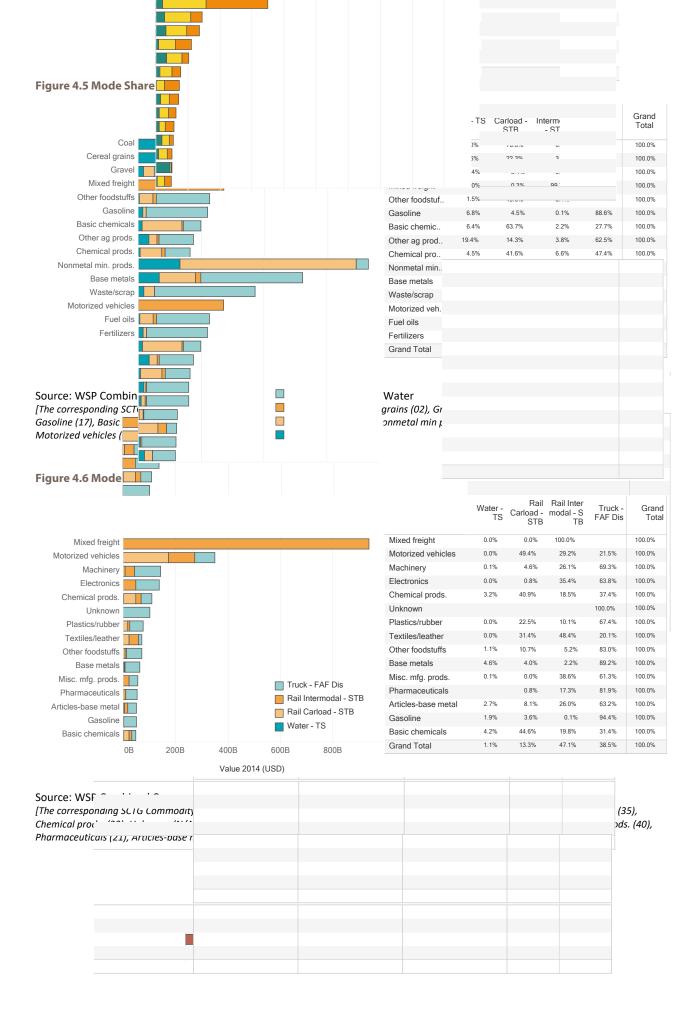
Figure 4.4: Top 15 Commodities by Value by Type of Flow, 2014, is also useful to highlight the key outbound commodities for the state. For commodities such as machinery, electronics, chemical products, and plastic/rubber, the state ships more to other states than it receives for local consumption. Outbound flows of these high value commodities are important for the local economy because they are an indication of manufacturing activity and high value added production.

As shown in Figure 4.6: Mode Share of Top 15 Commodities by Value 2014, with the exception of chemical products, truck is the most important mode for these commodities. The truck mode share for chemical products was only slightly less than that for rail carload. The truck mode share for these commodities is as follows:

- → Machinery (69.3 percent)
- → Electronics (63.8 percent)
- → Chemical Products (37.4 percent)
- → Plastic/Rubber (67.4 percent).

As shown by Figure 4.4: Top 15 Commodities by Value by Type of Flow, 2014, the second largest commodity group in Illinois by value is motorized vehicles, representing 12.5 percent of flows in the whole state. This reflects the importance of this sector to the state's economy.

As shown by Figure 4.5: Mode Share of top 15 Commodities by Tonnage, 2014, around half of these flows are moving by rail carload (50.9 percent) and the rest are split between truck (27.3 percent) and rail intermodal (21.8 percent).



B4.2 IMPLEMENTATION STRATEGIES AND PROGRAMS

B4.2.1 ILLINOIS RAIL PLAN

The 2017 Illinois State Rail Plan, as a coordinated part of the overall Illinois State Transportation Plan, reviews the existing rail infrastructure, provides recommendations for improving the rail system, and explores possible connections between rail and other modes of transportation. As the Rail Plan is a stand-alone comprehensive planning document that includes both freight and passenger rail, it is not entirely focused on freight movement in Illinois. However, in its description of the rail lines and railroads operating in Illinois, the Rail Plan provides a valuable resource to understanding the data presented in the 2017 Illinois State Freight Plan regarding rail freight mode share and rail freight commodity flows.

The primary goal of the Rail Plan is to create a vision of what rail services will look like in the future. The Plan identifies anticipated trends, needs and issues that will affect rail service and demand over the next two or three decades. It also provides a long range investment program framework for rail services within the State.

B4.2.2 RAIL FREIGHT LOAN PROGRAM

The Rail Freight Loan Program provides capital assistance to communities, railroads, and shippers to improve rail freight service and promote statewide economic development. Through the Rail Rreight Loan Program, IDOT provides capital funding in the form of low interest loans, creating a revolving, self-sufficient funding program. In FY 2018, the General Assembly provided \$1.7 million for the Rail Freight Loan Program. Each project considered for financial support must produce economic benefits that meets or exceeds the funding provided by the state, as determined through a benefit/cost analysis.

B4.2.3 REGIONAL, MULTI-STATE AND NATIONAL EFFORTS

IDOT is also engaged in several efforts to improve freight movement from a local, regional, multi-state and national perspective. Some of these efforts are briefly reviewed here, and are discussed in more detail in the 2017 Illinois State Freight Plan.

CREATE PROGRAM

The existing Chicago railroad system has infrastructure limitations that result in motorist, public transit, passenger rail, and freight rail delays and congestion on a daily basis. Recognizing that rail capacity improvements within the Chicago metropolitan area contribute directly to local and national economic growth and environmental improvements, the Chicago Region Environmental and Transportation Efficiency Program (CREATE) program was formed in 2003. CREATE is a public-private partnership between the U.S. Department of Transportation, the Illinois Department of Transportation, the City of Chicago Department of Transportation, Cook County, the Association of American Railroads, Amtrak, Metra, and the six Class I freight rail carriers in the Chicago area

The C R E A T E Programs a multi-billion dollar investment in the metropolitan Chicago region's railroad infrastructure. To date, 28 projects have been completed, with 42 under development. The CREATE program improvements will benefit the nation by increasing the efficiency and safety of the railroad network, and reducing costs due to delays and crashes

(BNSF Railway, Canadian Pacific Railway, Canadian National Railway, CSX Transportation, Norfolk Southern Corporation, and Union Pacific Railroad), the Belt Railway Company of Chicago, and the Indiana Harbor Belt Railroad. The CREATE program includes 70 rail and grade separation projects that will result in increased efficiency and reliability of rail service within the Chicago region, while also providing additional benefits to highway users through the elimination of at-grade crossing delays and other conflicts. To date, the CREATE partners have committed over \$1.4 billion to the program, which is estimated to have a total cost of approximately \$4.4 billion.

Thus far, 28 of the 70 projects have been completed, with the remaining 42 projects in various phases of development. Figure 4.7 shows the status of the projects as of January 2017.

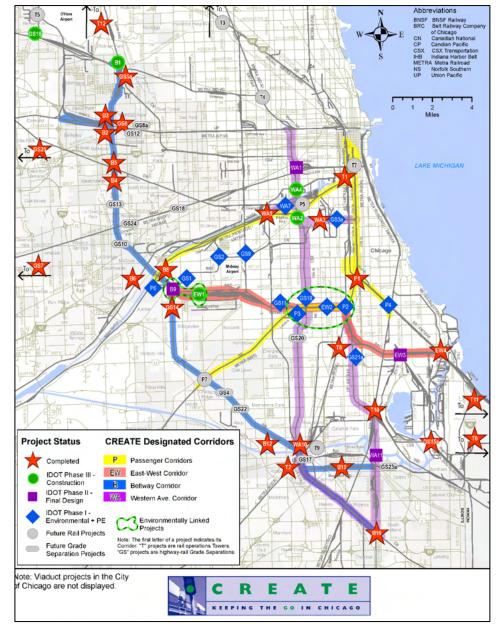


Figure 4.7 Status of CREATE Projects as of January 2017

Source: Chicago Region Environmental and Transportation Efficiency Program, http://www.createprogram.org/projects.htm#other, Accessed April 2017.

MID-AMERICA FREIGHT COALITION

The Mid-America Freight Coalition³⁷ (MAFC) is a regional organization of ten midwestern states that cooperates in the planning, organization, preservation, and improvement of transportation infrastructure. The ten states that are members of MAFC are Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Ohio, and Wisconsin. The ten member states share key interstate corridors, major inland waterways. MAFC members submit and review

proposed research projects that may be of interest to the group. Typically, several projects are completed and published each year based on those selected from this slate of proposed projects.

WILL COUNTY COMMUNITY FRIENDLY FREIGHT MOBILITY PLAN

The Will County Community Friendly Freight Mobility Plan³⁹ is a partnership between Will County and the Will County Center for Economic Development (CED), with additional support from the Illinois Department of Transportation, the Workforce Investment Board of Will County, Three Rivers Association of Realtors, Federal Highway Administration, and the Chicago Metropolitan Agency for Planning (CMAP). With the development of two large, modern intermodal centers and the addition of over 100 million square feet of new industrial space, and more intermodal centers and industrial spec planned, Will County is the largest inland port in North America. The Will County Community Friendly Freight Mobility Plan will be multimodal and will provide strategies and goals to guide freight policies, programs, projects and investments throughout Will County in a community-friendly manner. The Will County Community Friendly Freight Mobility Plan will encompass a holistic planning approach covering freight mobility, land-use integration, workforce development, education/training and community livability. The Will County Community Friendly Freight Mobility Plan began in October 2016 and is slated for completion in late 2017.

HOUBOLT ROAD BRIDGE

IDOT, CenterPoint Properties, Will County, and the City of Joliet have partnered to deliver the Houbolt Road Bridge project over the Des Plaines River, connecting I-80 to North America's largest inland port located in the municipalities of Elwood and Joliet in Will County. The project will help facilitate the movement of goods throughout the region, relieve congestion and safety concerns in nearby communities, and further strengthen the state's economy. The project has a cost estimate of \$170 million to \$190 million. Under the agreement, CenterPoint will build and operate a new toll bridge on Houbolt Road over the Des Plaines River and the BNSF Railroad tracks at a cost of \$150 million to \$170 million. Will County has passed a resolution allowing tolls to be issued and collected by CenterPoint. An IDOT contribution of \$21 million will widen Houbolt Road and reconfigure the existing interchange with I-80 to a diverging-diamond design to accommodate the increased traffic demand. The City of Joliet will work with IDOT to implement and oversee the improvements³⁹.

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³⁹ Governor Bruce Rauner Press Release, July 11, 2016

B5. Rail

B5.1 DESCRIPTION

With the rise of fuel prices and increase in congestion, alternatives to driving are in higher demand than ever before; therefore, the use of the Illinois rail system is trending positively. The recent growth in rail passenger ridership in Illinois is a strong indicator of the importance of rail travel in maintaining a balanced transportation system and demonstrates the need for an efficient passenger rail network.

Illinois has long advocated for and invested in the passenger rail network, resulting in a mature commuter rail system and an intercity rail system that links to the national rail network. As such, passenger rail in Illinois is not a stand-alone network but rather an integral element of the transportation system network. Illinois represents a major crossroads in the nation's rail network and Chicago represents the largest rail hub in North America. The Illinois rail system provides residents and visitors with various rail alternatives for all activities ranging from the daily commute for business to leisurely getaways.

B5.1.1 INTERCITY PASSENGER RAIL

The Passenger Rail and Improvement Act of 2008 (PRIIA) requires States to submit a State Rail Plan if they are receiving federal funding for facilities, infrastructure, and equipment to provide or develop intercity passenger rail transportation⁴⁰. The U.S. Department of Transportation will not officially approve PRIIA grants for a project unless the project is part of the State Rail Plan⁴¹. Since PRIIA defines passenger rail as intercity and commuter rail, this section will only discuss these types of rail systems in Illinois, which include Amtrak, Metra, and the Northern Indiana Commuter Transportation District (i.e. South Shore Line), as well as their intermodal connections.

AMTRAK

In 1970, Congress created Amtrak to take over intercity passenger rail services that twenty, financially distressed railroad companies operated in the United States⁴². Most of these companies were looking to unload their moneylosing passenger rail operations, even though they provided a vital public service. Over fifty years later, Amtrak operates 44 routes that serve over 500 destinations in 46 states and three Canadian provinces⁴³. These services are comprised of long-distance routes, medium-distance (regional or corridor) routes, state-supported routes, and state-supported commuter rail routes.

Illinois is at the center of Amtrak's national passenger rail system. Of the 38 national Amtrak trains, 11 Amtrak routes traverse Illinois, creating a hub for travelers and an opportunity for Illinois to provide quality service that affects nationwide travel⁴⁴. As detailed in Table 5.1 below, Amtrak operates eight long-distance routes and four medium-distance routes (regional) to and from Chicago's Union Station as well as four in-state routes. Each of these rail segments are depicted in Figure 5.1.

⁴⁰ Subdivision information for this and other Class I railroads has been temporarily transferred from the 2012 State Rail Plan and will be verified to ensure that all information is up-to-date.

⁴¹ United States Code 49 Section 24402(b)(1)

 $^{42\} https://www.amtrak.com/ccurl/998/601/Amtrak-National-Fact-Sheet-FY2015, 0.pdf$

⁴³ Amtrak, https://www.amtrak.com/national-facts, accessed July 27, 2017.

⁴⁴ Amtrak Illinois, http://illinoisrail.org/amtrak illinois/, accessed July 27, 2017

Figure 5.1 Amtrak in Illinois



Source: Amtrak website, <u>www.amtrak.com</u>

Table 5.1 Amtrak Routes in Illinois

Route		Route Length	Track Owners	Travel Time	Service Cars	No. of Cities Served
Long-Distance I	Routes					
California Zephyr	Chicago-Galesburg- Emeryville, CA	2,438 miles	Burlington Northern Santa Fe, Union Pacific	52 hrs.	Superliner Sleepers and Coach Service	42
Capitol Limited	Chicago-Cleveland- Washington DC	780 miles	Norfolk Southern, CSX	18 hrs.	Coach and First Class	16
Cardinal	Chicago-Cincinnati- New York	1,147 miles	Norfolk Southern, CSX, Buckingham Branch RR, Amtrak	26.5 hrs.	First Class Sleeper, Reserved Business Class, Reserved Coach Class	32
City of New Orleans	Chicago-Champaign- New Orleans	934 miles	Canadian National	19 hrs.	Coach and First Class Sleeper	19
Empire Builder	Chicago-St. Paul/Minneapolis- Seattle, WA/Portland, OR	2,206 miles (Chicago- Seattle) 2,257 miles (Chicago- Portland)	Metra, Canadian Pacific, Burlington Northern Santa Fe	46 hrs., 10 min. (Chicago to Seattle) 45 hrs., 55 min (Chicago to Portland)	Superliner Sleeper and Coach	46
Lake Shore Limited	Chicago-Cleveland- New York or Boston	1,017 miles (Chicago to Boston) 959 miles (Chicago to NYC)	Norfolk Southern, CSXT, Metro North RR, Amtrak	22 hrs., 40 min. (Chicago to Boston) 20 hrs. (Chicago to NYC)	Heritage or Viewliner Diner Cars, Amfleet Coaches and Lounges, Viewliner Sleeper	24
Southwest Chief	Chicago-Kansas City- Los Angeles	2,265 miles	Burlington Northern Santa Fe	43 hrs., 15 min.	First Class Sleeper, Reserved Business Class, Reserved Coach Class	33

Route		Route Length	Track Owners	Travel Time	Service Cars	No. of Cities Served
Texas Eagle	Chicago-St. Louis-San Antonio (some continue onto Los Angeles)	1,306 miles (Chicago to San Antonio) 2,265 miles (Chicago to Los Angeles) Canadian National, Union Pacific, Burlington Northern Santa Fe		32 hrs., 10 min. (Chicago to San Antonio) 65 hrs., 50 min. (Chicago to Los Angeles)	Reserved Coach and Superliner Roomettes and Bedrooms	41
Medium-Distan	ice Routes					
Blue Water	Chicago-Port Huron, MI	319 miles	Canadian National/Grand Trunk Western, Amtrak, Michigan DOT, Norfolk Southern	7 hrs.	N/A	11
Hoosier State	Chicago-Indianapolis	196 miles	Norfolk Southern, CSX	5 hrs.	Coach	6
Pere Marquette	Chicago-Grand Rapids, MI	176 miles	CSXT, Norfolk Southern	4 hrs.	Coach	5
Wolverine	Chicago- Detroit/Pontiac (connects to Amtrak's Thruway Program mid- way)	304 miles	Norfolk Southern, Canadian National, Amtrak, Conrail	6 hrs., 40 min.	Coach	N/A
In-State Routes						
Lincoln Service	Chicago- Bloomington/Normal- Springfield-St. Louis	284 miles	Canadian National, Union Pacific, Norfolk Southern, Kansas City Southern, Terminal Railroad Association of St. Louis	5.5 hrs.	Coach	11
Illini and Saluki Service	Chicago-Champaign- Carbondale	310 miles	Illinois Central (Canadian National)	5.5 hrs.	N/A	11
Carl Sandburg and Illinois Zephyr Services	Chicago-Quincy	258 miles	Burlington Northern Santa Fe	4 hrs., 28 min.	N/A	10
Hiawatha Service	Chicago-Milwaukee	85 miles	Metra, Canadian Pacific	1.5 hrs.	Coach	5

Source: Draft Rail Plan, May 17, 2017.

Figure 5.2 Amtrak Routes in Illinois

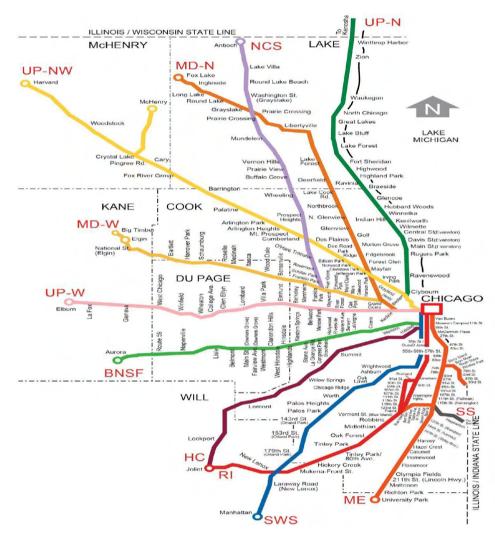


Source: IDOT, http://www.idot.illinois.gov/Assets/uploads/images/Travel-Information/passenger-rail/Amtrak%20Map%20for%20Travelers.jpg, accessed June 29, 2017.

B5.1.2 COMMUTER RAIL

Metra and the Northern Indiana Commuter Transportation District (NICTD) provide commuter rail service within Illinois. Metra and NICTD commuter transportation districts are depicted in Figure 5.3. The following discusses the rail operations for each provider.

Figure 5.3 Metra Commuter Rail Lines



Source: Metra, www.metrarail.com, accessed June 29, 2017.

METRA

Metra is one of the largest commuter rail systems in the nation serving a six-county region of 8,364,162 people living on 5,112 square miles⁴⁵. Metra operates 11 rail lines with 488 route miles. It uses 1,100 miles of track, 800 bridges, and 2,000 signals each weekday⁴⁶.

Figure 5.4 Metra Train in Chicago



Source: Metra Facebook Page, https://www.facebook.com/MetraRail/

In 1974, the Illinois General Assembly created the Regional Transportation Authority to coordinate public transportation throughout Chicago's metropolitan region. The Regional Transportation Authority created the Northeast Illinois Regional Commuter Railroad Corporation (NIRC) in the early 1980's to operate commuter service on rail lines threatened by private carrier bankruptcy and line sales. The Northeast Illinois Regional Commuter Railroad Corporation began operating commuter services on the bankrupt Rock Island Railroad in June 1981 and on the former Milwaukee Road commuter rail lines a year later⁴⁷. In 1983, the Regional Transportation Authority was reorganized to provide three service boards responsible for day-to-day operations of system wide bus, rapid transit, and commuter rail service. In 1984, the Commuter Rail Service Board introduced "Metra" as the service mark for their commuter rail system.

Today, Metra oversees all commuter rail operations within Northeastern Illinois (except for the Hegewisch Station which is on the Northern Indiana Commuter Transportation District's South Shore Line). Metra is responsible for day-to-day operations, fare and service levels, capital improvements, and planning. The Metra directly operates seven of its lines and contracts with two freight carriers, the Burlington Northern Santa Fe Railway and the Union Pacific Railroad, to run four others. These 11 separate lines radiate out of Chicago's Loop with 241 stations in more than 100 communities. Under Purchase of Service Agreements (PSAs), the freight carriers use their employees and own or control the rights-of-way and most of the other facilities required for operations. Metra owns the rolling stock and controls fares, service, and staffing levels. The following provides a general description of Metra's lines.

Table 5.2 Metra Transit Lines

Route		Route Miles	Owner/Operator	No. of Trains (Weekdays)	No. of Trains (Weekends)	Notes
Union Pacific North Line	Ogilvie Transportation Center to Kenosha, WI	51.6	Union Pacific	35 (each direction)	13-14 (Sat.) 9-10 (Sun.)	

⁴⁵ U.S. Census, 2016

⁴⁶ Metra, <u>www.metrarail.com</u>, accessed June 29, 2017.

⁴⁷ RTAMS, http://www.rtams.org/rtams/home.jsp, accessed June 29, 2017.

Route		Route Miles	Owner/Operator	No. of Trains (Weekdays)	No. of Trains (Weekends)	Notes
Milwaukee District North Line	Chicago Union Station to Fox Lake	51.6	Metra	30 NB & 31 SB	12 each direction (Sat.) 10 each direction (Sun.)	Several other rail services operate on this line.
North Central Service	Chicago Union Station to Antioch	52.8	Metra & Canadian National/Metra	11 NB & SB	None	Can transfer onto Milwaukee District West Line.
Union Pacific Northwest Line	Ogilvie Station to Harvard or McHenry	61.3 (Harvard) 55.7 (McHenry)	Union Pacific	33 NW & 32 SE Harvard has 11 and McHenry has 3 in each direction.	12 NW & SE (Sat.) 9 stop in Harvard and none in McHenry 8 NW & 7 SE (Sun.) 7 to Harvard and none to McHenry.	
Milwaukee District West Line	Chicago Union Station to Big Timber (Elgin)	39.8				
Union Pacific West Line	Ogilvie Station to Elburn	43.6	Union Pacific	30 W & 29 E	10 W & E (Sat.) 9 W & E (Sun.)	No service to Kedzie on weekends.
Burlington Northern Santa Fe Line	Chicago Union Station to Aurora	37.5	Burlington Northern Santa Fe	47 each direction	14 each direction (Sat.) 9 each direction (Sun.)	No weekend service to Halsted, LaVergne, Congress Park, Highlands, and West Hinsdale
Heritage Corridor Line	Chicago Union Station to Joliet	37.2	Canadian National/Metra	3 NB & 4 SB	None	
Southwest Service Line	Chicago Union Station to Manhattan	40.8	Norfolk Southern/Metra	15 each direction (3 serving Laraway Road and Manhattan)	3 each direction (Sat.)	
Rock Island District Line	LaSalle Station to Joliet (express mainline) and Beverly Branch	46.8 (collectively)	Metra & CSX/Metra	36 each direction (16 express, 14 Beverly Branch, 6 all stops)	20 each direction (6 express, 6 Beverly Branch, 4 all stops)	All stops: except 95 th Street Longwood and 103 rd Street Washington Heights
Metra Electric District Line	Millennium Station to University Park (mainline) 93 rd Street (South Chicago Branch) Blue Island (Blue Island Branch)	40.6 (collectively)	Metra	N/A	N/A	Only Metra line using electric propulsion.

Source: Draft Rail Plan, May 17, 2017.

NICTD

The Northern Indiana Commuter Transportation District (NICTD) operates the South Shore Line, which serves Chicago's southeast side, northwestern and north central Indiana, and southwestern Michigan. The NICTD assumed ownership of this line when the South Shore Line's private operator went bankrupt in 1989. Overall, the South Shore Line spans 89.7 miles from Millennium Station in Chicago to the South Bend International Airport in Indiana. People boarding or alighting this train can only use the South Shore Line if they are traveling to or from Chicago's Hegewisch Station or stations within Indiana. This train cannot serve commuter trips that Metra can make.

The NICTD runs the aforementioned South Shore Line on tracks that Metra and they own. The South Shore Line uses an overhead catenary wire system rather than diesel locomotives. The Northern Indiana Commuter Transportation District operates 21 westbound and 22 eastbound trains on weekdays. Two of these trains travel only between Carroll Avenue and the South Bend Airport. On weekends, the Northern Indiana Commuter Transportation District operates nine westbound and 11 eastbound trains. Two of the eastbound trains travel only between Carroll Avenue and the South Bend Airport.





Source: South Shore Line Facebook, https://www.facebook.com/SouthShoreLine/

MULTIMODAL CONNECTIVITY

Intermodal connections are key to providing efficient transportation options to users. Intermodal connections are defined as an intercity passenger rail service facility's ability to let passengers conveniently connect with other transportation modes⁴⁸. This section profiles but does not include all existing intermodal connections at intercity passenger rail stations in Illinois, which includes: Chicago Union Station, Glenview, Homewood, Joliet, La Grange, Naperville, and Summit.

⁴⁸ IDOT, Illinois State Rail Plan, December 2012.

Table 5.3 Illinois Stations with Intermodal Connections

Station	Intermodal Connections							
	Chicago Transit Authority (Rail and Bus)	Amtrak (Rail)	Amtrak Thruway Motorcoach (Bus)	Metra (Rail)	Pace (Bus)	Illinois Highway Network (Road)	Megabus (Bus)	Other or Local Bus Service
Chicago Union Station	X	Х	X	Х	Х	Х	Х	
Glenview		X		X	X	Х		
Homewood		X		X	X	Х		
Joliet		Χ		Χ	Χ	Х		
La Grange Road		X		X	X	Х		
Naperville		Χ		Χ	Χ	Х		
Summit		Χ		Χ	X	X		
Champaign Illinois		X	X			Х		
Terminal								
Carbondale		Χ				X		Х
Multimodal Station								

Source: IDOT, Draft Rail Plan, May 2017.

B5.2 IMPLEMENTATION STRATEGIES AND PROGRAMS

B5.2.1 HIGH-SPEED RAIL

The Federal Railroad Administration (FRA) launched the High-Speed Intercity Passenger Rail Program in June 2009 as part of the American Recovery and Reinvestment Act (ARRA). Illinois was selected in January 2010 to receive a federal award to bring high-speed passenger rail service (the High Speed Rail Project (HSR) to Illinois.

Approximately 99 percent of the 35 million annual trips made in the Chicago to St. Louis corridor are accomplished through automobile and air travel⁴⁹. The Chicago to St. Louis Rail Corridor is 284 miles long, with various configurations and owners. The HSR project would work to establish a more balanced modal use of the transportation network, with passenger trains designated to operate up to 110 miles per hour. Work is limited to infrastructure improvements and safety component improvements, as the current corridor operates on a single-track mainline for much of its length. A full build out of an additional second track is a future vision, but not currently funded. Construction activities along the corridor are scheduled to be largely complete in 2017.

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⁴⁹ IDOT, Illinois High Speed Rail website, accessed July 2017.

Figure 5.6 Quad Gate Arms in Odell, Illinois



Source: City of Bloomington, Illinois website, http://www.cityblm.org/government/departments/public-works/traffic/high-speed-rail.

In September 2010, one of the first construction projects of the HSR project began. Since then, construction has continued along the corridor yearly between April and August. Construction is anticipated to be completed by the end of 2017. Construction work includes: building new/reconstructing sidings and second track, upgrades to bridges and culverts, drainage improvements, installation and upgrades to signal and wayside equipment, continued crossing and approach improvements, fencing installation, and utility improvements. Operations of trains up to 110 miles per hour began in 2012 between Dwight and Pontiac.

As further development of the HSR project, a feasibility study for 220 mile per hour trains from downtown Chicago, to Champaign-Urbana, and on to St. Louis and/or Indianapolis was conducted in 2013. This would connect the University of Illinois to Chicago, as well as three of the region's key cities together. It was determined the cost to build this project would be substantial and required further study⁵⁰.

B5.2.2 RE-INSTATEMENT OF PASSENGER RAIL SERVICE

Supporting intermodal connections is a very important part of having an efficient transportation system. Intermodal not only refers to passenger rail transit, but also freight rail. Promoting and expanding intermodal connectivity was included in the 2012 Illinois State Rail Plan.

The 2012 Rail Plan discussed the re-instatement of two intercity passenger rail services which would provide new intermodal connections. The Chicago-Rockford-Dubuque intercity passenger rail service has been put on hold due to insufficient funds⁵¹. IDOT and Iowa Department of Transportation applied for High-Speed Intercity Passenger Rail funding in 2009 for service between Chicago and Iowa City. New stations would provide new intermodal

 $^{^{\}rm 50}$ IDOT, 220 mph High Speed Rail Preliminary Feasibility Study, September 24, 2013.

⁵¹ Chicago Tribune, http://www.chicagotribune.com/news/local/breaking/chi-plan-for-amtrak-service-from-chicago-to-rockford-on-hold-20150209-story.html. Accessed in July 2017.

connections. Funding was awarded in 2010 and service was scheduled to begin in 2015⁵². However, the project was also put on hold due to the state budget impasse. IDOT has since moved forward with the project within the Chicago to Moline portion, with Iowa DOT declining to fund its portion of the project from Moline to Iowa City in 2014⁵³. Currently, the Chicago to Moline project has completed environmental studies along the BNSF portion of the route from Chicago to Wyanet, and is continuing environmental studies along the Iowa Interstate Railroad (IAIS) portion from Wyanet to Moline.⁵⁴.

B5.2.3 RAIL SAFETY AND SECURITY

Rail safety has historically been and continues to be a priority for the railroads, the Illinois Commerce Commission (ICC), and IDOT. Safety has potential impacts on the general public and the efficiency of rail operations. Although the major railroads have long had their own police and security forces, the focus of rail safety is more recent, with an emphasis on the potential threat of terrorists using rail to disrupt transportation, or to harm large numbers of citizens.

A number of federal and Illinois state agencies, in concert with railroads and rail operators, continue to make progress with regard to rail safety and security. The following is a summary of these issues and ongoing activities in Illinois.

RAIL SAFETY IN ILLINOIS

Rail safety requirements are provided through a combination of federal and state laws. A majority of safety-related rules and regulations fall under the jurisdiction of the FRA, as outlined in the Rail Safety Act of 1970⁵⁵ and other legislations, such as the most recent Rail Safety Improvement Act of 2008⁵⁶. Many of FRA's safety regulations are found in Title 49 Code of Federal Regulations Parts 200-209⁵⁷.

For rail passenger operations, the same FRA safety standards apply, with the addition of specific regulations regarding passenger equipment safety standards and passenger train emergency preparedness. Recommendations from the FRA's Railroad Safety Advisory Committee (RSAC) for proposed improvements to continually upgrade existing safety standards are generated as passenger equipment technology improves. FRA then issues the final rule at the conclusion of its rule-making process.

⁵² Senator Dick Durbin website, https://www.durbin.senate.gov/newsroom/press-releases/durbin-harkin-announce-230-million-in-funding-for-new-rail-service-from-chicago-to-iowa-city-through-the-quad-cities. Accessed in July 2017.

⁵³ The Dispatch/The Rock Island Argus, http://www.qconline.com/news/local/illinois-commits-to-chicago-moline-passenger-rail/article-fd9a15d9-6b9c-59a0-8912-23f88dc5df01.html. Accessed in July 2017.

⁵⁴ The Gazette, the-track-20141027. Accessed in July 2017.

⁵⁵ http://uscode.house.gov/statutes/pl/91/458.pdf, accessed July 26, 2017.

⁵⁶ https://www.fra.dot.gov/eLib/Details/L03588, accessed July 26, 2017.

⁵⁷ https://www.gpo.gov/fdsys/granule/CFR-2010-title49-vol4/CFR-2010-title49-vol4-part209, accessed July 26, 2017.

Figure 5.7 Fencing Installed in Dwight, Illinois as Part of Illinois High Speed Rail Project



Source: IDOT, HSR website, http://www.idothsr.org/media center/

Rail safety issues generally fall into the following broad categories:

- → Employee safety
- → Inspection and maintenance of track, signals, bridges, and infrastructure
- → Inspection of locomotives and cars
- → Operating rules and practices
- → Radio communications
- → Control of drug and alcohol use
- → Accident reporting
- → Rail-highway grade crossing safety
- → Passenger equipment safety standards
- → Passenger train emergency preparedness
- → Movement of hazardous materials
- Development and implementation of new technology
- → Other areas specific to the rail industry.

The primary responsibility for enforcement of federal rail and safety regulations falls under FRA's jurisdiction. In Illinois, the ICC also actively participates in the enforcement of regulations as authorized by 49 CFR Part 212⁵⁸. IDOT is also involved in efforts to improve the safety of the rail system.

⁵⁸ https://www.gpo.gov/fdsys/granule/CFR-2010-title49-vol4/CFR-2010-title49-vol4-part209, accessed July 26, 2017.

GRADE CROSSING SAFETY IN ILLINOIS

The rail safety area most visible to the public and the most potential harm to the public is the interface between the rail and highway systems at grade crossings. Currently in Illinois, there are 7,651 public at-grade crossings, 3,649 at-grade crossings on private property (which are not under the jurisdiction of the State), and 320 pedestrian crossings⁵⁹.

IDOT is committed to an effective relationship with the ICC for grade crossing safety. IDOT currently has safety strategies and efforts being implemented which they refer to as the Three E's – Education, Enforcement, and Engineering⁶⁰ as follows:

- → **Education** The state is active in developing programs to educate the dangers at grade crossings. The ICC is involved in Operation Lifesaver, which targets both motorists and pedestrians in a continuing effort to reduce train-related incidents in these categories. It also aims to improve driver and pedestrian behavior at railroad crossing by being compliant with traffic laws in place regarding crossing signs and signals.
- → **Enforcement** It is key to enforce the existing laws regarding traffic and trespassing on railroads, especially when warning signals have been activated.
- → **Engineering** IDOT continuously works to identify and implement physical and system improvements to improve safety. This includes installation and upgrading of grade crossing warning signs, automatic warning devices, and grade separations, where necessary. The State of Illinois Highway-Rail Grade Crossing Safety Action Plan focuses on the engineering of capital improvements to further railroad crossing safety on local roads.

RAIL SAFETY INSPECTION

Through a cooperative agreement with the FRA, the Rail Safety Section of the ICC provides oversite responsibility through the enforcement of State laws and rules. This oversight is conducted on freight railroads in Illinois, as well as the Illinois portion of the MetroLink light rail system. There are four main areas of rail safety handled by the Rail Safety Section. These include track safety, transportation of hazardous materials, railroad signals and train control, and railroad operating practices⁶¹.

- → **Track Safety**: Inspect railroad tracks to determine compliance with the FRA and State Track Safety Standards; investigate complaints of unsafe/defective trackage, excessive train speeds, and improper yard procedures.
- → **Hazardous Materials**: Conduct equipment inspections at railroad yards, sidings and interchange tracks, railroad terminals, and along mainlines to observe and note violations in marking, placarding, and the placement of hazardous material cars.
- → Railroad Signals and Train Control: Inspect railroad signal systems to determine compliance with FRA and State Signal Safety Standards, investigate complaints of unsafe or defective signal systems, and perform railroad crossing signal inspections.
- → Railroad Operating Practices: Conduct inspections for the purpose of determining compliance with all sections of the Federal Operating Practice Regulations and Hours of Service Act, and inspection of railroad facilities to determine compliance with standards regarding structural clearances, employee facilities, and sanitary regulations.

⁵⁹ ICC Crossing Safety Improvement Program FY 2018-2022 Plan, https://www.icc.illinois.gov/reports/report.aspx?rt=20. Accessed September 2017.

⁶⁰ IDOT Rail Safety website, http://www.idot.illinois.gov/transportation-system/safety/rail-safety/index. Accessed July 2017.

⁶¹ Illinois Commerce Commission, Inspection Program website, https://www.icc.illinois.gov/railroad/InspectionsProgram.aspx. Accessed July 2017.

HAZARDOUS MATERIALS

The Secretary of the Department of Transportation is responsible for regulation of the transportation of hazardous materials, as defined in the Hazardous Materials Transportation Act (HMTA). Hazardous material regulations are applicable to interstate, intrastate, and foreign carriers by rail car, aircraft, motor vehicle, and vessel⁶². The State of Illinois also adheres to the Illinois Hazardous Materials Transportation Act (430 ILCS 30) 63. The Illinois Environmental Protection Agency regulates the transportation of used tires, special waste including hazardous waste, and potentially infectious medical waste⁶⁴.

The ICC enforces the hazardous materials regulations in Illinois in cooperation with the FRA. The ICC's Hazardous Materials Safety Program is comprised of four main components:

- → Inspection of railroad equipment and shipper/consignee facilities
- → The provision of technical assistance to shippers/consignees and rail carriers
- → The inspection and escort of nuclear materials
- → Education and outreach activities to shippers/consignees, rail carriers, emergency responders and the general public

POSITIVE TRAIN CONTROL

Positive train control (PTC) refers to technologies designed to automatically stop or slow a train before certain accidents occur. PTC is designed to prevent collisions between trains and derailments caused by excessive speed, trains operating beyond their limits of authority, incursions by trains on tracks under repair, and by trains moving over switches left in the wrong position. PTC systems are designed to determine the location and speed of trains, warn train operators of potential problems, and take action if operators do not respond to a warning. The Rail Safety Improvement Act of 2008 required railroads to place PTC systems in service by December 31, 2015 on Class I railroads (lines with over 5 million gross tons annually) over which any poisonous- or toxic-by-inhalation hazardous materials are transported, and on main lines with regularly scheduled commuter or intercity passenger operations. PTC requirements currently exclude Class II or Class III railroads that have no passenger service. However, trains of Class II and III railroads that operate on lines that must have PTC are also required to be PTCequipped. The December 31, 2015 deadline was extended by three years to December 31, 2018 with an additional two years if certain requierments are met.⁶⁵ As part of the extension, railroads are also required to submit a PTC Implementation Plan outlining when and how they would have their PTC systems fully installed and activated. PTC projects in Illinois include the following 66:

- Illinois Department of Transportation (IDOT): \$18.87 million to complete the design, delivery, installation, and testing of a fully integrated Interoperable Electronic Train Management System (I-ETMS) PTC system on two routes for Amtrak's use on 14.7 route miles of Terminal Railroad Association of St. Louis (TRRA) right-of way in a dense urban area of St. Louis on both the Illinois and Missouri banks of the Mississippi River. Amtrak ridership figures for 2014 show 1,136,271 passengers pass through the St. Louis Station that would directly benefit from PTC system implementation on this rail line.
- → Regional Transportation Authority (Metra): \$20.2 million for three subprojects on Metra's Commuter Rail Division to implement wayside PTC signals, reconfigure signals, and upgrade an existing PTC

⁶² United States Department of Transportation, Federal Motor Carrier Safety Administration. https://www.fmcsa.dot.gov/regulations/hazardousmaterials/how-comply-federal-hazardous-materials-regulations. Accessed in July 2017.

⁶³ Illinois General Assembly, http://www.ilga.gov/legislation/ilcs/ilcs3.asp?ActID=1650&ChapterID=39. Accessed in July 2017.

⁶⁴ Illinois Environmental Protection Agency, Transportation of Wastes, http://www.epa.illinois.gov/topics/waste-management/waste- disposal/special-waste/transportation-permits/index. Accessed in July 2017.

⁶⁵ USDOT-FRA, https://www.fra.dot.gov/ptc, accessed August 25, 2017. ⁶⁶ USDOT-FRA, https://www.fra.dot.gov/eLib/details/L18716, accessed July 26, 2017.

automatic block signaling systems on Metra's Milwaukee District West (MD-W) and North (MD-N) lines in Northeastern Illinois. Metra's commuter rail network is the fourth busiest in the country, with nearly 14 million passenger trips on the MD-W and MD-N lines each year. Each day, over 1,300 Metra, freight, and Amtrak trains operate in the region. Since they frequently share the same track, precise scheduling and close coordination among railroad partners are required to plan the complex interaction between these trains each day.

RAIL SECURITY

The Department of Homeland Security (DHS) and IDOT are the responsible parties for security related to transportation modes in Illinois. These agencies have addressed transportation security largely through identifying critical infrastructure assets, developing protection strategies, and developing emergency management plans. The lead state agency for rail security in Illinois is the ICC, in coordination with IDOT and the Illinois Terrorism Task Force (ITTF). There are currently five committees that serve the ITTF, and IDOT is the chair of the Critical Infrastructure Committee⁶⁷.

The Critical Infrastructure Committee includes organizations ranging from institutions and industry representatives to emergency responders and labor organizations. They use these work groups to provide guidance on specific topics and areas deemed to be of greatest priority. One such group is the Railroad Safety subcommittee, which focuses on areas of common interests within the railroad industry to address all aspects of railroad security. The subcommittee works to provide a common goal of making Illinois a leader in railroad security that other states will easily be able to adopt using combined talents to achieve the maximum assistance from resources available through DHS.

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⁶⁷ IEMA, https://www.illinois.gov/iema/ITTF/Pages/Committees.aspx, accessed July 26, 2017.

B6. Multimodal Connectivity

B6.1 DESCRIPTION

Multimodal connectivity encompasses the interaction of several modes of transportation. Multimodal transportation networks provide choices for users and provide users with the ability to trade between a variety of factors, such as time, cost, environmental impact, social interaction, lifestyle preferences, and others. Building a multimodal transportation network also provides redundancy in the system, so that if one mode is unusable, another mode can be accessed, which may be important in the event of an emergency. A multimodal facility can be as simple as a bus stop, where a pedestrian becomes a transit rider or more complex where intercity passenger rail, intercity bus, local bus service, and other modes connect and interact.

Multimodal connections are increasingly important for the movement of people throughout communities and regions. Multimodal connections for passengers also affect economic activity by providing transportation options and choices. These options are increasingly important in efforts to control vehicle congestion, reduce energy consumption, and improve system operations. IDOT's role is to foster multimodal connections to ensure an efficient and effective transportation system and transportation choices for travelers.

B6.1.1 MULTIMODAL PASSENGER FACILITIES AND CONNECTIONS

Multimodal passenger facilities are those that provide passengers a place to transfer from one mode to another, such as airport terminals and transit stations. Connectors are those important links between a facility and the larger transportation network; for example, a connector might be a road from an airport used by both buses and personal vehicles, which leads to an expressway.

In Illinois:

- → As of 2012, Illinois has 115 public-use airports. Of these, seven offer connections to transit, at least parttime. Midway International Airport in Chicago has sidewalks to the terminal from the surrounding neighborhood and bicycle access, making walking and bicycling viable access options.
- → Amtrak has 30 train stations on the 15 services that travel in Illinois. Of the 30 stations, 16 are served by bus transit, one has ferry connections, six connect with intercity bus, and seven eight have transfers to commuter rail. Five stations do not have a transit stop directly at the station. Three have other transit connections a short distance away. Moreover, as all of the Amtrak stations are located within municipal boundaries, they are accessible by bicycle or walking, although some stations are more pedestrian- and bicycle-friendly than others.
- → Intercity bus services in Illinois have a mix of multimodal facilities. Some sites are stops on the road, business locations, or school buildings. Other sites are at Amtrak stations, local transit or airport facilities, and some are intercity bus company buildings. In some cases, the internet has facilitated on-line ticket purchases, eliminating the need for ticketing agents and station areas.
- → Most transit rail stations in Illinois light rail in metropolitan St. Louis as well as heavy and commuter rail in metropolitan Chicago have bus transit connections, and are accessible by foot or bicycle. Some suburban rail stations are accessible only by personal motor vehicle.

Figure 6.2 shows the locations of multimodal passenger facilities in Illinois; Figure 6.3 shows those in the metropolitan Chicago region.

B6.1.2 MULTIMODAL TRAVEL

In addition to multimodal connection points and facilities, multimodal travel occurs daily throughout Illinois. Multimodal travel combines modes or uses infrastructure in new ways to speed travel and increase access or mobility for users. For example:

- → Nine of the 15 urban bus transit systems operating in Illinois have bicycle racks on buses to assist riders with their multimodal transportation. All Illinois rail transit providers also allow bicycles on their trains, with some travel time restrictions.
- → The two water-taxi services in the state (Chicago and Rock Island) have stops that connect to local transit services and carry pedestrians and bicyclists.
- → The two IDOT ferries between Grafton and Brussels (Illinois Route 100) and between Kampsville and Eldred (Illinois Route 108) and the for-profit ferry that operates on the Mississippi River out of Golden Eagle in Calhoun County carry walkers, automobiles, bicyclists, buses, and semi-trailers.
- → Although buses share roads with automobiles and trucks daily, a program is underway that allows Pace express buses to operate on I-55 shoulders during peak periods. Riding on the shoulder lets the bus and its riders bypass peak-period congestion. On-time performance of the two Pace routes utilizing the bus on shoulder lanes have increased to 92 percent from the 68 percent of on-time performance prior to the start of the program, and ridership has doubled. In 2014, the Illinois General Assembly enacted legislation permanently allowing bus-on-shoulder service and expanding that permission to all the region's expressways and tollways. Pace and the Illinois State Toll Highway Authority constructed a "flex lane" on the Jane Addams Tollway (I-90), which opened for Pace buses on September 5, 2017 as part of the 16-mile I-90 SmartRoad enhancement⁶⁸. Pace and IDOT are also studying future bus-on-shoulder services on the Edens Expressway (I-94).⁶⁹

B6.2 IMPLEMENTATION STRATEGIES AND PROGRAMS

B6.2.1 COMPLETE STREETS

After the passage of Complete Streets legislation in 2007, IDOT began developing policies and implementing practices to more fully integrate multimodal designs into its roadway improvements. The provision of facilities to provide for the safe and efficient movement of bicyclists and pedestrians in roadway corridors is now considered in every IDOT improvement.

As stated in the Design Manual:

- → IDOT will consider the travel needs of all users of a transportation corridor including bicyclists and pedestrians.
- → Bicycle and pedestrian travel demand in the vicinity of a project is determined; when sufficient demand is indicated, IDOT will provide the appropriate accommodations.
- → The proper application of criteria and guidelines will result in consistent designs and subtle roadway design changes that will facilitate bicycle and pedestrian travel.
- → Facilities for the safe travel of bicyclists and pedestrians within an improvement corridor are considered an integral part of a highway project for funding purposes and thus are eligible for cost participation.
- → Adequate bicycle and pedestrian accommodations shall be included where they can be accommodated.

⁶⁸ Pace Bus. http://constance.pacebus.com/sub/news events/Pace 2017.asp. Accessed September 2017.

⁶⁹ Pace Bus. http://www.pacebus.com/sub/vision2020/expressway brt.asp. Accessed 6/30/17.

While there are exceptions based on project scope and/or facility type identified in the manual, highway improvements currently being developed by IDOT give full consideration to the provision of bicycle and pedestrian accommodations.

B6.2.2 MULTIMODAL PASSENGER FACILITIES

Interest in supporting multimodal connections is growing, as communities and transportation agencies recognize the value and need for facilitating multimodal travel. Centers are planned for Carbondale and in multiple communities along the developing Illinois High Speed Rail corridor.

CHICAGO UNION STATION

In 2012 a partnership of Chicago Department of Transportation, Metra, Amtrak and Regional Transportation Authority published a Master Plan for the redevelopment of Chicago's Union Station located between Canal and Clinton Streets in downtown Chicago. Union Station is one of the region's key transportation facilities and economic drivers. It is the third-busiest railroad terminal in the United States, serving over 300 trains per weekday carrying about 120,000 arriving and departing passengers – a level of passenger traffic that would rank it among the ten busiest airports in the U.S. Most travelers at Union Station take Metra commuter trains. The Station is also the hub of Amtrak's network of regional trains serving the Midwest as well as most of the nation's overnight trains, which connect to the Atlantic, Gulf, and Pacific coasts. Goals for the Master Plan and future development of Union Station included:

- → Providing capacity for increases in Metra and intercity ridership
- → Making the terminal more inviting for passengers
- → Providing direct and convenient transfers to buses, CTA trains, taxis, shuttles, etc.
- → Creating a terminal that is vibrant, civic asset and catalyst for growth in the West Loop.

In 2016 an importation part of the Master Plan was implemented with the opening of a new bus transit center on Canal Street. The transit center has space to accommodate up to nine buses at a time and serves six CTA bus routes. The project total cost was approximately \$41.5 million and will improve connections for passengers between rail and buses as well as relieve congestion problems around Union Station by moving the bus transfer facility off-street. According to CTA the six routes serving Union Station carry an estimated 3,400 riders daily.⁷¹

CARBONDALE STATION

Planning work has been conducted for a new multimodal station centered around the construction of a new Amtrak station in Carbondale, Illinois. The project would facilitate connections between Amtrak, passenger vehicle, pedestrians, buses, bicycles, transit, and taxi. Total design and construction costs are estimated to be approximately \$18.5 million.⁷² In 2016 the City of Carbondale and its partners submitted a TIGER grant application seeking funds to support the construction of the new Carbondale multimodal facility. The application was unsuccessful, but the community continues to identify alternative funding options.

⁷⁰ Union Station Master Plan. http://www.unionstationmp.com/background/2012master.php. Accessed July 19, 2017.

⁷¹ Wisniewski, Mary. Union Station Transit Center for CTA Buses to Open Sunday. Chicago Tribune, 8/30/16.

http://www.chicagotribune.com/news/local/breaking/ct-union-station-transit-center-20160829-story.html. Accessed July 19, 2017.

⁷² City of Carbondale: 2016 TIGER Application. http://explorecarbondale.com/sites/default/files/images/multimodal/01-Carbondale%20Station.pdf. Accessed 6/30/17.

Figure 6.1 Rendering of Proposed Carbondale Station, 2016



Source: Carbondale Station TIGER Application, 2016

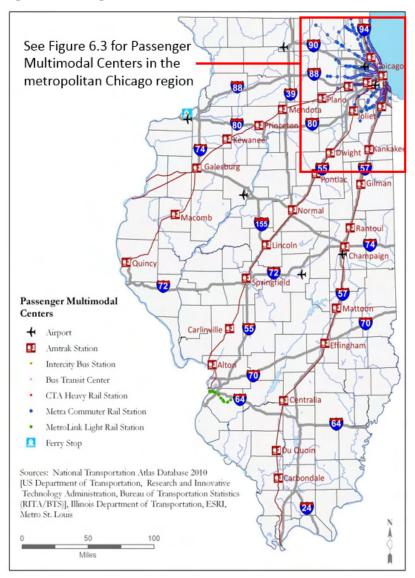
ILLINOIS HIGH SPEED RAIL MULTI MODAL STATION IMPROVEMENTS

The Illinois Department of Transportation (IDOT) continues to move forward with station planning and construction for communities along the Chicago to St. Louis corridor. Funded through the Federal Railroad Administration's (FRA) High-Speed Intercity Passenger Rail (HSIPR) program, the Chicago-St. Louis High Speed Rail project includes provisions for upgraded station facilities with improved passenger safety and convenience, better transportation connectivity, technology enhancements, and promoting economic development. New construction or improvements to existing stations include:

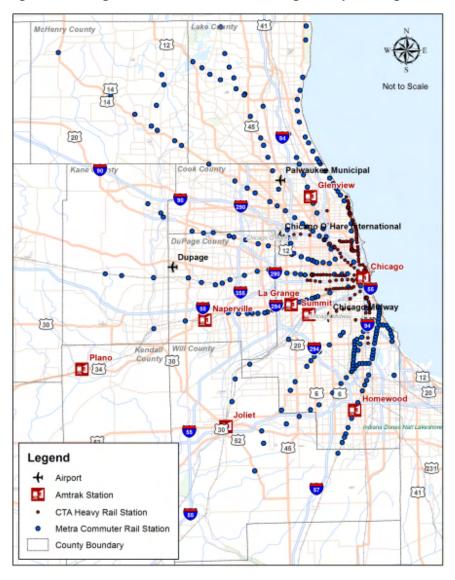
- → **Joliet** The City received a discretionary grant from IDOT to construct a multi-modal facility and to make safety improvements at this station. Construction is being led by the City and is ongoing.
- → **Dwight** A new station was built south of the current location on property owned by the Village. The station officially opened for service on October 28, 2016.
- → **Pontiac** A new station is being built southwest of the existing station on property owned by the City. Construction was completed summer 2017.
- → **Normal** A new multi-modal facility, funded outside of this project with a Transportation Investments Generating Economic Recovery (TIGER) grant received by Normal, was opened in July 2012. The High-Speed Rail project is funding a second platform and upgrades to the south waiting room. Construction is ongoing and is anticipated to be completed in 2017.
- → **Lincoln** The existing station and related facilities are planned to receive upgrades. Construction is underway and is anticipated to be completed in 2017.
- → **Springfield** Upgrades to the Springfield station, including access and parking lot improvements, are in the final design stage. Construction is anticipated to begin in 2018.
- → **Carlinville** A new station is planned to be built near the current facility. Construction is underway and is anticipated to be completed in 2017.
- → **Alton** A new station and multi-modal facility is being built northwest of the existing station on property owned by the city. Construction is underway and was completed in the summer of 2017.⁷³

⁷³ Illinois High Speed Rail. http://www.idothsr.org/2010 const/improvements.aspx. Accessed 6/30/17.

Figure 6.2 Passenger Multimodal Centers







B7. Highways

B7.1 DESCRIPTION

Streets and highways are fundamental elements of our integrated transportation system. Due to its size, location, and historic function as a transportation hub, Illinois has the fourth largest highway system in the nation, and the third largest Interstate network. In 2016, the combined state and local roadway systems in Illinois encompassed 146,958 miles 74 and 26,775 bridges. 75

This network ranges from heavily traveled urban streets and expressways to lightly used rural roads. In 2016, this network carried nearly 294 million vehicle miles of travel on an average day. Multiple agencies – the state, counties, townships, and municipal governments – are responsible for the highway system.

B7.1.1 ILLINOIS HIGHWAY NETWORK

Illinois was among the first states to begin building Interstate highways and opened its first Interstate route to traffic in the late 1950s. In urban areas, the construction of the Interstate highway system provided an alternative to local streets for long-distance truck and automobile traffic. In addition, the Interstate system improved access and mobility for Illinois citizens and visitors passing through Illinois. Today, portions of two coast-to-coast Interstates (I-80 and I-90) cross Illinois. Five major east-west Interstates (I-24, I-64, I-70, I-74,

Illinois is third in the nation in the number of miles of Interstates. The 2,185 miles of the State's Interstate system comprise 1.48 percent of all roads in the State, but carry 31 percent of all traffic.

Source: Illinois Travel Statistics, 2016

I-88 and I-94) and three major north-south Interstates (I-55, I-57 and I-39) provide access for freight and travelers through Illinois.

Out of the 146,958 miles of roads in the state, IDOT is responsible for 15,918 miles. 77 The roads under IDOT's

jurisdiction are comprised of the Interstates, US Highways, and State Routes. Out of the 15,918 miles, 2,185 miles are Interstates. IDOT manages the majority of these while the Illinois State Toll Highway Authority (Tollway) manages 293 miles as toll roads. The state highway system (including all road miles managed by the Tollway) represents approximately 11 percent of all road miles in Illinois and carries 41 percent of all travel in Illinois.

In addition to Interstates, the State has 165 miles of other freeways, 5,243 miles of principal arterials, 8,925 miles of other arterials, 22,731 miles of collectors and 107,708 miles of local roads.

Source: Illinois Travel Statistics, 2016

Augmenting the Interstate system are 144,773 miles of state, county,

township, and local highways and roads, making the Interstate network accessible from every region of Illinois. The state and local road systems are classified as urban or rural to respond to federal funding guidelines. Urban roads (within urban areas of 5,000 residents or more) make up 34 percent of the system and carry 76 percent of all traffic. Rural roads make up 66 percent of the network and carry the remaining 24 percent of the total daily vehicle miles.

⁷⁴ Illinois Highway and Street Mileage Statistics, Tables HS-1, December 2016

⁷⁵ Illinois Highway Statistics Sheet 2016.

⁷⁶ Illinois Travel Statistics 2016, Table M-1. February 2017.

⁷⁷ Illinois Highway and Street Mileage Statistics, Tables HS-1, December 2016. Total does not include ramp or collector-distributor mileage.

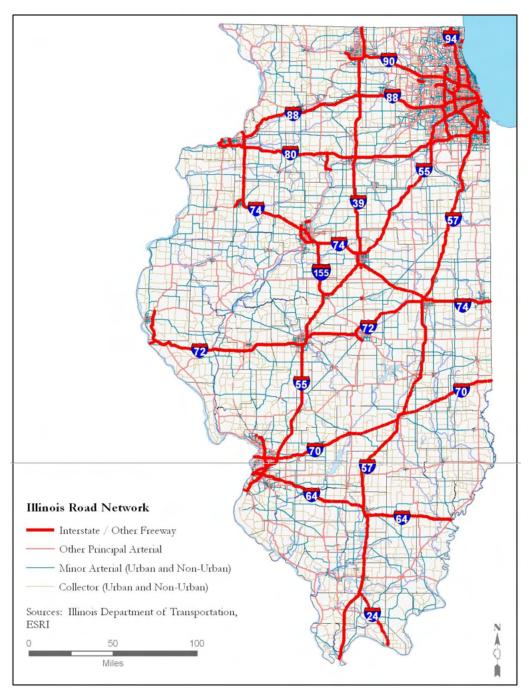
⁷⁸ Illinois Highway and Street Mileage Statistics, Tables HS-C, December 2016.

⁷⁹ Illinois Travel Statistics 2016, Table S-1. February 2017. Travel percent does not include Tollway travel.

Figure 7.1 is a map of the Illinois roadway network by functional classification. The local street network is not shown.

Figure 7.2 shows the total miles of each functional classification and the traffic carried by each class. This figure graphically illustrates the relationship between roadway classification and the level of traffic that uses each type of road.

Figure 7.1 Illinois Road Network by Functional Classification



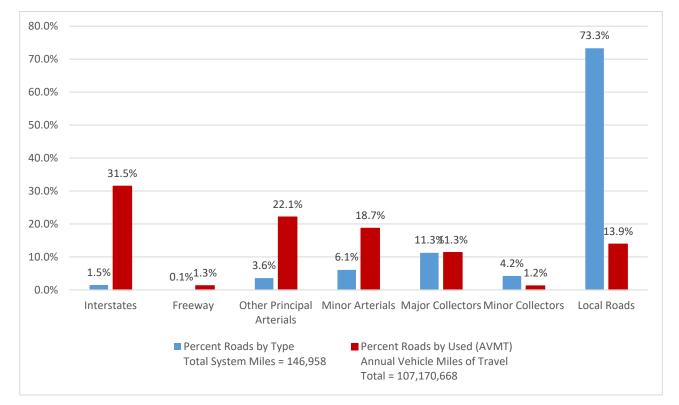


Figure 7.2 Illinois Road Network Composition and Usage

Source: Illinois Department of Transportation. Illinois Travel Statistics 2016, Table FC-1

B7.1.2 ILLINOIS STATE TOLL HIGHWAY AUTHORITY

The Illinois State Toll Highway Authority (Tollway) was created by legislation in 1967 "to promote the public welfare and to facilitate vehicular traffic by providing convenient, safe, modern, and limited access highways." Under the direction of the Tollway Board of Directors, the Tollway builds, operates, and maintains the roads under its jurisdiction. The Tollway is authorized to issue bonds to expand and make capital improvements to its system and to collect tolls to fund its operations and to repay bonds.

The Tollway operates and maintains 293 miles (2016) of the state's Interstate highways, the majority located in the Chicago metropolitan area. A map of the Illinois Tollway system is Figure 7.3.

Recent (2016) accomplishments by the Tollway include:

- → Completion of the 4-year, 62-mile I-90 Rebuilding and widening project from Rockford to Chicago.
- → Addition of the Illinois Route 390 Tollway, with the implementation of cashless tolling.
- → \$1.15 billion in Capital Program expenditures for roadway construction, expansion, and system wide maintenance.

Figure 7.3 Illinois Toll Highway Network



Source: Illinois Tollway, www.illinoistollway.com, accessed June 20, 2017.

B7.1.3 BRIDGES AND STRUCTURES

As of 2016, there are 26,770 bridges in Illinois that must be inspected. IDOT is responsible for 7,835 bridges (29 percent), the Tollway is responsible for 571 (2.0 percent) and the remaining 18,364 (69 percent) belong to others (counties, townships, municipalities and others, like private companies such as railroads). There are 39 bridges that cross the three major rivers that make up 71 percent of the state's boundaries and crossing the three rivers – the Mississippi, the Ohio and the Wabash – requires coordination with the adjacent states of lowa, Missouri, Kentucky, and Indiana.

IDOT also has a number of other structures it is responsible for including pedestrian / bicycle crossings, tunnels, culverts, and pipeline structures. The majority (70 percent) of the nearly 34,200 bridges and other structures traverse some form of water.

B7.1.4 LOCAL HIGHWAY AGENCIES

Collectively, the counties, townships, and municipalities of Illinois are responsible for the operation and maintenance of 130,745 miles of roads.⁸⁰ These local agencies use a mix of federal transportation funds, state motor fuel tax funds, and locally generated funds to address the needs of the roads and bridges under their jurisdiction.

B7.1.5 COMMERCIAL VEHICLE OPERATIONS

Illinois is a center for motor carrier transportation. With a vast economic base to serve; motor carriers serve all elements of the Illinois economy as they:

→ transport manufactured products from industries to all parts of the country

⁸⁰ Illinois Travel Statistics 2016, Table C-1. February 2017

- → make farm-to-market shipments to Illinois grain processors and rail and water terminals
- → deliver coal and other minerals to and from Illinois ports
- → ship consumer goods to retailers throughout the state

The Surface Transportation Assistance Act of 1982 provided for the designation of a national network of highways to promote uniformity throughout the nation for legal truck sizes and weights on a National Truck Network. The network includes all Interstate highways and large portions of the Federal-aid primary system. In addition, the act required that "reasonable access" be provided along other designated routes to allow trucks to travel from the National Truck Network to terminals and to points of loading and unloading.

As a result, IDOT developed and implemented a "Designated State Truck Route System for Large Vehicles and Combinations" to govern the movement of these vehicles. Over time, this system has evolved to respond to new federal and state mandates. IDOT maintains an interactive map of the Designated State Truck Route System that includes state and local streets and highways that have been designated as truck routes. These maps can be found on IDOT's website.⁸¹

In 2014, trucks in Illinois carried \$664 million tons of freight valued at nearly \$1.2 billion. The inbound and outbound truck tonnage is essentially balanced (129.1 and 133.8 million tons, respectively), and trucking handles the vast majority of traffic that stays within the state (401.4 million tons). A full discussion of the trucking industry's contribution to the movement of freight in Illinois is contained in the *Truck Traffic Highlights* section of the 2017 Illinois State Freight Plan.

B7.2 IMPLEMENTATION STRATEGIES AND PROGRAMS

B7.2.1 HIGHWAY PROGRAM

Each year IDOT develops a multi-year capital improvement program that weighs the need to preserve the existing system in a state of good repair with the need to enhance or expand the highway network to address congestion and economic development demands. Before being included in the Highway Program improvements are evaluated based on goals, needs, and available resources.

For the highway program, IDOT uses a mix of federal transportation funds, state motor fuel tax and vehicle registration fees, bonds and miscellaneous revenue sources to build, operate, and maintain the roads under its jurisdiction. For the FY 2017 to 2022 program, IDOT has committed \$7.680 billion for the highway network, with \$1.368 billion allocated for FY 2017.82

IDOT has a number of strategies in place that address the multitude of road maintenance, preservation, operations, and planning issues. Some of these strategies require coordination with other state agencies, other transportation agencies, and local jurisdictions. Strategies include:

→ Performance Based Project Selection Tool for enhancement and expansion projects

⁸¹ www.gettingaroundillinois.com

⁸² Illinois Department of Transportation, Proposed Highway Improvement Program

- → Transportation Asset Management Plan for maintenance of pavement and bridges
- → Pavement management, with the Pavement Condition Rating Program
- → Bridge management, with the Illinois Structure Information System (ISIS), Structures Information Management System (SIMS), SIMS-County, Bridge Inspection Program (BIS), and Township Bridge Program
- → Environmental coordination
- → Traffic management strategies, including Intelligent Transportation Systems (ITS) technologies
- → Traveler information and communication programs, such as the Getting Around Illinois website⁸³
- → Safety, with the Strategic Highway Safety Plan
- → Emergency response to incidents, with the Emergency Traffic Patrol Program
- Enforcement activities
- Commercial motor carrier programs

B7.2.2 SCENIC BYWAYS PROGRAM

Illinois has seven nationally designated scenic byways. The National Scenic Byways Program was created to highlight roads that "possess outstanding scenic, historic, recreational, cultural, archeological and/or natural qualities" and new off-site advertising is prohibited as a way to ensure the continued scenic beauty of the road. The seven Illinois National Scenic Byways⁸⁴ are:

- Great River Road
- → Historic National Road
- → Historic Route 66
- → Illinois Lincoln Highway
- → Illinois River Road
- → Meeting of The Great Rivers
- → Ohio River Scenic Byway

Figure 7.4 Great River Road



Source: USDOT-FHWA, www.fhwa.dot.gov, accessed June 20, 2017.

The Historic National Road is also designated an "All-American Road". A road with the All-American designation is deemed a tourist destination by itself, and is considered one of the most scenic with unique features not found in other places. The Historic National Road in Illinois is part of the National Road, the first federally funded interstate highway, which travels through Indiana, Maryland, Ohio, Pennsylvania, and West Virginia and ends in East St. Louis.

B7.2.3 COMPLETE STREETS

Illinois passed Complete Streets legislation in October 2007. This legislation requires IDOT to fully consider including bicycle and pedestrian facilities on any new construction or additional capacity on state roads, with some exceptions. The criteria for including these facilities include safety, current or future projected need, and local support. The Complete Streets program is discussed in more detail in the Bicycle and Pedestrian section (3.0) of this report.

^{83 &}lt;u>www.gettingaroundillinois.com/</u>

⁸⁴ www.dot.state.il.us/byways.html#a. Accessed July 16, 2012.

B7.2.4 REGIONAL, MULTI-STATE, AND NATIONAL EFFORTS

IDOT is engaged in several efforts to improve conditions for local, regional, multi-state, and national motor carrier traffic. In addition to coalitions focused on policy advocacy, IDOT is involved in several on-going studies that have implications for improved freight movement. These efforts are briefly reviewed here, and are also discussed in the 2017 Illinois State Freight Plan.

I-290

Preliminary engineering and environmental studies (Phase I) for the improvement of the I-290 Eisenhower Expressway from Mannheim Road to Racine Avenue in DuPage and Cook Counties were recently completed resulting in a combined Final Environmental Impact Statement and Record of Decision that explored multimodal alternatives related to specific transportation needs identified including: improve mobility for regional and local travel, improve access to employment, improve safety, improve transit connections and opportunities, and improve facility deficiencies. Due to anticipated costs and revenue options, public/private partnerships are being investigated for this project.

I-55

Preliminary engineering and environmental studies (Phase I) for the improvement of I-55 from I-355 (Veterans Memorial Tollway) to I-90/94 (Dan Ryan Expressway) in DuPage and Cook Counties are currently underway. This project is examining the addition of one managed lane in each direction (generally within the existing median of I-55). The study was started in the spring of 2012 and is following the Federal National Environmental Policy Act (NEPA) process, as well as IDOT's Context Sensitive Solutions (CSS) policy. Due to anticipated costs and revenue options, public/private partnerships are being investigated for this project.

I-74 BRIDGE

The lowa Department of Transportation and IDOT have worked together to complete the I-74 Mississippi River Bridge. The existing I-74 Mississippi River bridge is an important east-west link between lowa and Illinois. With growing population and employment, traffic projections estimate that 99,900 vehicles per day will travel the bridge by 2035, an increase of nearly 26,000 cars from 2016 data. It was determined the existing bridges would be replaced in an effort to improve the I-74 corridor from Moline, Illinois to Davenport, lowa.

The new I-74 bridges will be along a new alignment that is to the east of the existing bridges. It will include a pedestrian/bike path on the downstream side of the southbound bridge, with a pedestrian overlook at the center of the arch. An elevator would be installed for accessibility to the path on the bridge. In addition to the bridge replacement the project includes interchange ramp reconfigurations and local roadway improvements. Overall, the project will improve mobility, operations, and safety.

Currently, construction phases 0 and 1 have been completed, which included road improvements. Phase 2, which includes road improvements and the new Mississippi River bridge construction will conclude in 2022. Existing bridge demolition is scheduled for 2021. Phase 3 will include landscaping, trail, and road work.⁸⁵

⁸⁵ I-74 Mississippi River Bridge project website, http://www.i74riverbridge.com/. Accessed in July 2017.

MISSISSIPPI RIVER BRIDGE, ST. LOUIS

The New Mississippi River Bridge was completed in February 2014, creating a new gateway between Illinois and Missouri that provides better connections to and through St. Louis. The project was completed in order to ease traffic congestion on other bridges, reduce traffic crashes, improve travel times, and enhance economic growth. In addition to the completion of the 1,500 foot cable-stayed bridge, the project included two interchange projects and a roadway connection project. The total estimated cost was \$667 million. The bridge carries two lanes in each direction, but is wide enough to be re-striped for three lanes in each direction if traffic volumes warrant. Five additional components were included as a future phase of this project. One of these includes a companion bridge with four additional lanes of traffic.⁸⁶

MID-AMERICA FREIGHT COALITION

The Mid-America Freight Coalition⁸⁷ (MAFC) is an organization of ten state transportation agencies in the mid-west that share the Great Lakes, key Interstate corridors or major inland waterways. The coalition works together for planning, operating, preserving and improving transportation infrastructure throughout the member states. MAFC is currently working on an Upper Midwest Freight Corridor Study; analysis of truck parking management systems, and benefits and limitations of J-turn intersections.

⁸⁶ New Mississippi River Bridge Project website, http://www.newriverbridge.org/index.html. Accessed in July 2017.

⁸⁷ Mid-America Freight Coalition. <u>midamericafreight.org/</u>. Accessed April 3, 2012. MAFC was formerly known as the Mississippi Valley Freight Coalition.

B8. Public Transit

B8.1 DESCRIPTION

Public transit service is an essential transportation service, vital to the state's economic well-being, especially if Illinois is to remain competitive in the global marketplace. Transit, by moving more people per vehicle, offers solutions to traffic congestion and reduces oil dependency. Transit also improves community quality of life, because it provides transportation options to work, education, shopping, health care, recreation, and other trips that might not have been possible for some users.

Illinois actively supports transit services throughout the state with

There are 55 public transit agencies in Illinois. Three provide services in the metropolitan Chicago region in Illinois and two provide service to the Illinois portion of metropolitan St. Louis (Metro East). The remaining 50 provide services in 85 counties representing small urban and rural areas.

many programs that help both rural and urban transit providers. IDOT's Office of Intermodal Project Implementation (OIPI) provides technical assistance and financial resources to public transportation providers to create mobility options for people throughout Illinois. In Illinois, 55 public transit operators provide a mix of rail, bus, and on-demand service. Many other human services agencies provide specialized services to persons with disabilities, low-income people, and seniors.

B8.1.1 DOWNSTATE TRANSIT

Downstate transit, according to the 2017 IDOT Transit Asset Report, is considered as those agencies outside of metropolitan Chicago (northeastern) and metropolitan St. Louis (southwestern). This classification includes 50 public transit agencies: 14 in urbanized areas and 36 in small urban or rural areas. Services funded by the 50 agencies range from fixed-route, fixed-schedule transit, to multi-county, demand-responsive vehicles.

URBANIZED AREAS

Services in the 14 downstate urbanized areas consist of a mix of fixed route bus and/or paratransit service. Transit ridership and vehicle fleet information for agencies are summarized in Table 8.1.

⁸⁸ There are 55 providers that receive funding from Illinois; the Northern Indiana Commuter Transportation District operates the South Shore Line into Millennium Station in Chicago and is partially funded by the Chicago RTA, but is not funded by IDOT. www.idot.illinois.gov/transportation-system/Network-Overview/transit-system/index, accessed June 20, 2017.

Table 8.1 Downstate Urbanized Areas Transit Utilization

Ridership (Millions)
13.29
2.59
0.64
1.46
0.13
0.15
3.48
0.52
0.96
3.30
1.74
0.56
1.90
n/a

MTD = Mass Transit District

Sources: Agency websites, US Department of Transportation, Federal Transit Administration, National Transit Database, American Public Transportation Association, Illinois Statewide Public Transportation Plan website: http://ilpublictransportation.businesscatalyst.com/map transit.htm.

Connect Transit (formerly Bloomington-Normal PTS): ⁸⁹ Operates 17 fixed route buses with a late night program (9:30 p.m. to 12:00 a.m.) Monday through Saturday, excluding major holidays. All buses are accessible to people with disabilities and have bike racks. Connect Transit, in cooperation with Illinois State University (ISU), operates Redbird Express, a free campus shuttle service available to the community during the school year from 7:00 a.m. to 3:00 a.m., Monday through Sunday, on days when ISU is in session. Connect Transit operates a Bloomington Tripper Route and Normal Tripper Route, which only operate at set times Monday through Friday, excluding major holidays.

Champaign-Urbana MTD (CUMTD): Operates 22 fixed route buses during the day on weekdays, with fewer buses at night and on Saturdays and Sundays. All buses are accessible to people with disabilities and have bike racks. In addition to paratransit service, CUMTD provides a half-fare cab program for registered seniors and people with disabilities. Finally, CUMTD offers Safe Rides, which is a seasonal program for late night travel for University of Illinois Urbana-Champaign students that cannot be completed by a fixed route bus.

Danville Mass Transit: ⁹¹ Operates 14 fixed routes, Monday through Saturday, except on major holidays. All buses are accessible to people with disabilities. Paratransit services are available. Evening dial-a-ride is available from 6:15 p.m. to 9:40 p.m.

⁸⁹ Connect Transit website: https://www.connecttransit.com/default.asp

⁹⁰ Champaign-Urbana MTD website: <u>www.cumtd.com</u>

⁹¹ Danville MT website: <u>www.ridedmt.org/</u>

Decatur Public Transit System(DPTS): ⁹²_DPTS operates 15 fixed routes and a downtown trolley, Monday through Saturday, except on major holidays. All buses and trolleys are accessible to people with disabilities, but do not have bike racks. "Operation Uplift" is provided as a paratransit service for those unable to use the fixed route bus system due to disability.

DeKalb / Sycamore: Two providers operate bus service in the DeKalb / Sycamore area. Northern Illinois University's (NIU) Huskie Bus operates 11 fixed routes; service levels vary based on the NIU schedule. Three of these routes are specifically weeknight routes. There is one route specific for weekends and NIU breaks. A shuttle bus to the Elburn Metra station is available on Fridays and Sundays. The Barsema Express, a residential hall peak time route, operates Monday through Thursday. Additionally, NIU operates "Freedom Mobile," the university's paratransit system, to supplement when Huskie Line is not a reasonable option.

The Voluntary Action Center (VAC) provides two circular routes, which operate from 7 a.m. to 9 p.m. Monday through Friday, except on holidays. Kishwaukee College contracts for a separate service available to students, faculty and staff of the college. The VAC also provides demand response service throughout DeKalb County, for registered residents.

Galesburg Transit: ⁹⁴ Galesburg Transit operates four fixed bus routes with one-hour headways; meaning it will take up to an hour to reach the location a person left from. Service is provided Monday through Saturday 7:00am until 6:15pm. Galesburg Handivan is a curbside transportation system operated by the city of Galesburg to provide accessible public transportation to individuals who are unable to utilize the bus system or other regular forms of transportation because of a permanent or temporary disability which severely restricts their mobility. Handivan provides non-emergency, lift-equipped service to a variety of destinations within the city limits.

Peoria CityLink: ⁹⁵ CityLink operates 20 fixed route bus lines in the greater Peoria area, Monday through Saturday, with some Sunday service. A few routes are only operational Monday through Friday. An additional route provides transportation from various residential facilities to the Community and Workshop Training Center. All fixed route buses are accessible to people with disabilities and are equipped with bike racks. CityLink provides a paratransit service call CityLift for those not capable to use fixed-routes. CityLink also provides half-fares for veterans.

Quincy Transit Lines: ⁹⁶ The Quincy Transit Lines offers fixed route services, paratransit services, and senior citizen transportation in the City of Quincy. Bus services are offered seven days per week with the exception that no buses operate on Thanksgiving or Christmas. Quincy Transit Lines (QTL) operates eight fixed-route buses Monday through Friday and two fixed-route buses on Saturday and Sunday. QTL also operates four Para-transit buses and four senior citizen vans Monday through Friday and one Para-transit bus on Saturday and Sunday.

MetroLINK [Rock Island County Metropolitan Mass Transit]: ⁹⁷ MetroLINK operates 12 fixed route bus lines, Monday through Saturday, with fewer routes operating on Sundays. MetroLINK also operates "The Connect" route Monday through Friday for Western Illinois University. All buses are accessible to people with disabilities and have bike racks. Additionally, MetroLINK operates a paratransit service. The Channel Cat Water Taxi provides services on

⁹² Decatur PTS website: http://www.decaturil.gov/departments/transit/routes-and-schedules

⁹³ DeKalb transit websites: City of DeKalb, http://cityofdekalb.com/473/Transit: Huskie Bus, www.huskieline.com/:voluntary-Action-Center, http://cityofdekalb.com/555/Voluntary-Action-Center

⁹⁴ Galesburg Transit: http://www.ci.galesburg.il.us/services/transit/

⁹⁵ Greater Peoria Mass Transit: http://www.ridecitylink.org/

⁹⁶ Quincey Transit Lines: http://www.quincyil.gov/government/CityDepartments/Transit

⁹⁷ Rock Island County Metropolitan Mass Transit: www.gogreenmetro.com/

the Mississippi River seven days a week from Memorial Day through Labor Day. Nearly the entire Metro fleet runs on clean burning, compressed natural gas.

Rockford MTD: 98 Operates 18 daytime fixed route buses, six night routes and two late night shuttles. Service is daily, year round, except for major holidays and with reduced service on Saturday and Sunday (five routes on Sunday). Rockford MTD also provides paratransit service. Buses are accessible to people with disabilities and bike racks are available.

River Valley Metro MTD: ⁹⁹ Operates 10 fixed-routes in Kankakee and surrounding cities, Monday through Saturday year round with the exception of major holidays. River Valley Metro also operates commuter routes to the University Park Metra Station and Chicago Midway Airport. All buses are accessible to people with disabilities and have bike racks. MetroPLUS provides paratransit services.

Saluki Express [Carbondale]: ¹⁰⁰ The Saluki Express Bus Service has two routes (Summer East and Summer West) during the eight week summer semester. There is no bus service on July 4 and one week in August between summer session and fall semester. Regular academic year routes begin four days prior to the start of the fall semester. The regular academic year routes consist of six weekday routes and three weekend routes (while school is in session).

Sangamon MTD:¹⁰¹ Operates 16 daytime and five night routes, Monday through Saturday, with reduced services on Saturday. Operations do not run on major holidays. They also offer several supplemental service routes. All buses are lift-equipped, and most have a kneeling feature for access. All fixed-route buses are equipped with bike racks. SMTD currently use 3 types of environmentally-friendly alternative fuels. Per the Illinois Green Fleets database, the MTD operates 25 CNG buses.

Stateline MTD: ¹⁰² Operates demand response only for the SMTD area and connects to the Rockford and Beloit (WI) transit systems. Service is available seven days a week with fewer hours on Saturday and Sunday. No service is provide on major holidays.

RURAL AREAS

There are 85 downstate counties classified as rural areas and covered by public transit services. Figure 8.1 is a map of rural public transit service throughout Illinois. A number of these agencies – along with many others – receive human services transportation funding (5307). Human services transportation is discussed in section B8.2.4. Human services transportation differs from public transportation in that public transportation is open to all users, while human services transportation provides transportation exclusively for persons with disabilities, senior citizens, and low-income people.

There are four counties currently without any rural public transit service (Winnebago, Knox, Henderson, and Adams,). Henderson is working on an independent application. In 2016 Sangamon County initiated a new on-

99 River Valley Metro MTD: www.rivervalleymetro.com/

⁹⁸ Rockford MTD: www.rmtd.org/

¹⁰⁰ Saluki Express: <u>http://studentcenter.siu.edu/services/saluki-express/</u>

¹⁰¹ Sangamon MTD: <u>www.smtd.org/</u>

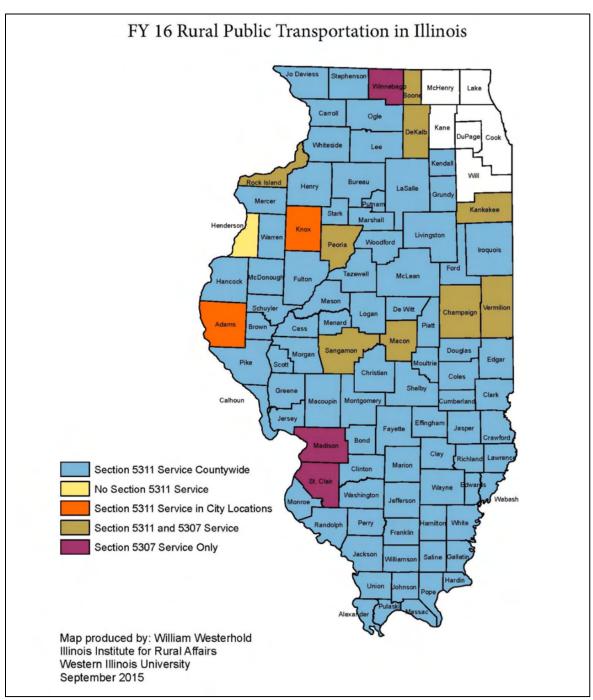
¹⁰² Stateline MTD: <u>www.smtd.biz/</u>

demand transit service for Sangamon and Menard Counties. Sangamon/Menard Area Regional Transit (SMART) acquired vehicles through IDOT.

Table 8.2 and Table 8.3 lists the small urban and rural areas with public transit that receive funding (5311) through IDOT. Transit service ranges from intra-city to out-of-state transportation. A number of counties share the same transportation provider, while others have a transit system for their county only. Some agencies provide comprehensive information through a website, while others have a Facebook page or a telephone number. Most providers are demand response, meaning that customers must call in advance for service, although some have fixed route bus service.

The Rural Transportation Assistance Center (RTAC) supports these rural area transit providers with a number of programs. RTAC is discussed in more detail in section B8.1.4.

Figure 8.1 FY 2016 Public Transit Services in Illinois



Source: Rural Transit Assistance Center. http://www.iira.org/wp-content/uploads/2014/09/fy16ruralpublicTrans.pdf, accessed June 20, 2017.

Notes: Per <u>www.transit.dot.gov</u>: The Formula Grants for Rural Areas (Section 5311) program provides capital, planning, and operating assistance to states to support public transportation in rural areas with populations of less than 50,000, where many residents often rely on public transit to reach their destinations. The Urbanized Area Formula Grants (Section 5307) makes federal resources available to urbanized areas and to governors for transit capital and operating assistance in urbanized areas and for transportation-related planning.

A number of these agencies – along with many others – receive human services transportation funding (5307). Human services transportation is discussed in section B8.2.4. Human services transportation differs from public transportation in that public transportation is open to all users, while human services transportation provides transportation exclusively for persons with disabilities, senior citizens, and low-income people.

There are four counties currently without any rural public transit service (Winnebago, Knox, Henderson, and Adams,). Henderson is working on an independent application. In 2016 Sangamon County initiated a new on-demand transit service for Sangamon and Menard Counties. Sangamon/Menard Area Regional Transit (SMART) acquired vehicles through IDOT.

Table 8.2 Downstate Rural Area Public Transportation Providers

Agency	Website or Contact	Service Area
Bond County Senior Center	www.bondseniors.org	Bond
Boone County Council on Aging	http://www.keenage.org/transportation.html	Boone
Bureau & Putnam Area Rural Transit (BPART)	www.ridebpart.org/	Bureau, Putnam
Carroll County Transit	www.ccseniorcenter.org/Transportation.html	Carroll
C-CARTS (Champaign County Rural Transportation System)	http://c-carts.com/	Champaign
Central Illinois Public Transit (CIPT)	www.cefseoc.org/CIPT/CIPT.htm	Clay, Effingham, Fayette, Montgomery, Moultrie, Shelby, Christian
Coles County Council on Aging (Diala- a-Ride)	http://www.colescouncilonaging.org/dialaride.html	Coles, Douglas
CountyLink (Rural Peoria County Public Transportation)	http://www.ridecitylink.org/countylink	Peoria County, Outside of Peoria city limits and City Link service area
CRIS Rural MTD	www.ruraltransits.org/	Vermillion
East Central Illinois MTD	217-465-8143	Clark, Edgar
Fulton County Rural Transit (FCRT)	http://www.fultoncountyruraltransit.com/p/blog- page.html	Fulton
Grundy Transit System	www.grundyco.org/about/public-transport	Grundy and certain stops in Joliet
Hancock County	www.hancockhealth.info/rides/index.html	Hancock
Henry County Public Transportation (Abilities Plus)	http://www.ride-hcpt.com/	Henry, Stark and western portions of Bureau
Jackson County MTD	http://www.jcmtd.com/	Jackson
Jo Daviess County Transit (The Workshop)	http://www.theworkshopgalena.org/jo daviess county _transit_bus_seniors_disabled.html	Jo Daviess
Kendall Area Transit	http://www.co.kendall.il.us/kendall-area-transit/	Kendall
Lee Ogle Transportation System	www.lotsil.org/	Lee, Ogle
Logan- Mason County Public Transportation	http://www.capcil.org/transportation.htm	Logan, Mason
Macoupin County Public Transit	www.mcphd.net/general_information_transpertation.p hp	Macoupin

Table 8.3 Downstate Small Urban and Rural Public Transportation Providers (Continued)

Agency	Website or Contact	Service Area
Marshall-Stark Transportation	309-364-2287	Marshall, Stark
McDonough County Public Transportation / Go West Transit	http://www.837ride.com/	McDonough County, City of
	http://www.wiu.edu/student services/go west/	Macomb
Monroe-Randolph MTD	618-443-4433 ext. 201	Monroe, Randolph
North Central Area Transit	www.cityofottawa.org/government/transportation	City of Ottawa, LaSalle County
Piattran (Piatt County Public Transportation)	www.piattran.org/index.php	Piatt
Pretzel City Area Transit	www.seniorresourcecenter.net/services/transportation/ #pretzel	Stephenson
Rides MTD	www.ridesmtd.com/	Crawford, Cumberland, Edwards, Gallatin, Hamilton, Hardin, Jasper, Lawrence, Pope, Richland, Saline, Wabash, Wayne, White, Williamson, Clark, Edgar, Effingham
RIM Rural Transit	www.ridetherim.org	Mercer, Rock Island
Sangamon/Menard Area Regional Transit (SMART)	(217) 679-5009	Menard (Sangamon not funded)
Shawnee MTD	www.shawneemtd.com	Alexander, Johnson, Massac, Pulaski, Union
SHOW BUS	http://www.showbusonline.org/	DeWitt, Ford, Iroquois, Kankakee, Livingston, McLean, Macon
South Central Transit MTD	www.southcentraltransit.org	Clinton, Franklin, Jefferson, Marion, Perry, Washington
Tri-County Rural Transit	1-844-TRI-RIDE, or 1-844-874-7433	Calhoun, Greene, Jersey
Voluntary Action Center (TransVac & MedVac)	http://vacdk.com/transportation/	DeKalb
Warren Achievement Center (Warren County Public Transportation)	http://www.warrencountyil.com/about-us/public- transportation	Warren
WeCare, Inc.	https://www.wecareofmorton.com/services/transportation/ (309) 263-7708 or (800) 538-6906	Tazewell, Woodford
West Central MTD/City of Beardstown, Illinois River Valley Public Transit	www.wcmtd.org www.cityofbeardstown.org/index.aspx?nid=1091	Brown, Morgan, Pike, Scott, Cass, Schuyler
Whiteside County Public Transportation	www.whitesidecountyseniorcenter.org/transportation.h tml http://tranpro.utc.uic.edu/php/provInfo.php?p_cid=940	Whiteside

Note: This list contains 37 transit services providers. Some services are funded by multiple transit agencies.

Sources: Provider websites, Urban Transportation Center, UIC TRANPRO website, www.utc.uic.edu/tranpro/index.html

B8.1.2 SOUTHWEST ILLINOIS TRANSIT (METRO EAST)

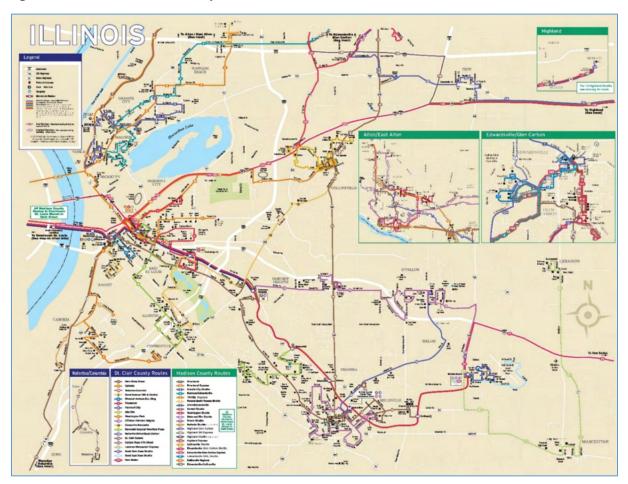
Two different agencies provided transit service in southwestern Illinois (the St. Louis region): St. Clair County Transit District (SCCTD)/Metro and Madison County Transit (MCT). The SCCTD and MCT are part of the Metro-East Mass Transit District, which is the taxing authority for transit funds. Figure 8.2 shows the transit system map for service in Illinois; ridership for fiscal year 2016. Table 8.4 lists ridership for fiscal year 2016.

Table 8.4 Southwestern Illinois 2016 Ridership

Agency	Ridership (Millions)
MCT, Fixed Route Bus	2.6
SCCTD/MetroBus and MetroLink	2.2

Sources: MCT website, www.mct.org/MCTInfo/MCT Overview.aspx, SCCTD website, http://www.scctd.org/ Bi-State Development Agency 2016 Comprehensive Annual Financial Report

Figure 8.2 Southwest Illinois Transit System



Source: Metro Transit, 2016. https://www.metrostlouis.org/wp-content/uploads/2016/02/IL_WEB-MAP.pdf

ST. CLAIR COUNTY TRANSIT DISTRICT AND METRO

The St. Clair County Transit District (SCCTD) contracts for Metro service in Illinois. ¹⁰³ The Bi-State Development Agency provides transit operations, under the name Metro in Missouri and Illinois. Metro operates MetroLink, a light rail transit (LRT) service and MetroBus, the fixed route bus network. Metro operates 18 fixed route bus lines in St. Clair County:

- → Scott Air Force Base shuttles (2)
- Metrolink Station Shuttle
- → Sauget Industrial Parkway bus line
- → Waterloo bus line in Monroe County
- → Lebanon and Mascoutah express bus route
- → 12 fixed route services

Figure 8.3 MetroLink to Shilo-Scott Station



Ten of Metro Link's 11 Illinois stations have park-and-ride facilities, and all have bus connections with the exception of East Riverfront. Figure 8.2 is a map of all transit service in the Illinois portion of the St. Louis region.

Metro's bus and rail system in Illinois is 100 percent accessible. Alternative Transportation System provides paratransit service in St. Clair County, on behalf of SSCTD.

Bicycles can be brought on board MetroLink trains at all times, and must be loaded on the first two train cars. Bicycle parking is available at eight of the 11 MetroLink stations in Illinois. All Metro buses have bike racks. Metro provides service information to customers by a variety of methods.

Trip Planner, Metro's Tripfinder (Metro's Mobile App), assists riders via phone or with printed maps and schedules. Additionally, trip planning is available through Google Transit. Rider and service alerts are available on its web site, Twitter and RSS feeds. Metro has a presence on social media. Metro also sends out an e-mail newsletter, called the Metro Memo. Metro sponsors a blog, Next Stop, which is one more way to disseminate information about the agency and transit to the public and its users.

The SCCTD provides additional information for Illinois residents. In addition to purchasing transit and paratransit service, SCCTD contracts for special event transit with Metro. SSCTD has also worked with Metro to build a bicycle trail adjacent to portions of the MetroLink right-of-way, which extends from Shiloh-Scott MetroLink station to the Memorial Hospital MetroLink station.

MADISON COUNTY TRANSIT

Madison County Transit ¹⁰⁴ (MCT) provides 24 fixed route bus lines throughout Madison County and into St. Louis, with varying schedules. In addition to fixed route, MCT provides paratransit service, a guaranteed ride home service for MCT Express passengers, and express services to special events. MCT coordinates with Metro and SCCTD on their half-fare program. MCT also operates the eight county St. Louis region's car and vanpooling service, RideFinders.

¹⁰³ Metro: <u>www.metrostlouis.org/.</u> St. Clair County Transit District: <u>www.scctd.org.</u>

¹⁰⁴ Madison County Transit: www.mct.org

All MCT buses are accessible to people with disabilities and are equipped with bicycle racks. MCT Express buses have free wi-fi. MCT also develops and maintains a series of trails throughout Madison County, with the goal of preserving abandoned rail corridor right-of-way for potential future transit use. MCT keeps in touch with its customers via its website and its e-news service, which provides e-mail updates on routes and general information. It also has a Facebook page and a text alert system. Madison County has partnered with the East-West Gateway Commerce Center to improve transit services between the community and new job centers.

B8.1.3 NORTHEASTERN ILLINOIS TRANSIT

Transit operations in the six-county northeastern Illinois region are extensive, covering a 3,700- square-mile service area ¹⁰⁵. Three service boards report to the Regional Transportation Authority (RTA): the Chicago Transit Authority (CTA), Metra (commuter rail), and Pace (suburban bus).

CTA provides bus and rail rapid transit service within Chicago and its immediate suburbs. Metra provides commuter rail service between Chicago and nearly 100 other communities in the region. Pace operates the suburban bus services, and all paratransit, vanpool, and rideshare services for the entire region. The Northern Indiana Commuter Rail District (NICTD), which operates the South Shore line between downtown Chicago and South Bend International Airport in Indiana, is a State of Indiana agency which receives RTA operating funding (through Metra via a purchase-of-service agreement) for service provided on its route between downtown Chicago and the state line.

While the service boards have operational responsibility, the RTA provides funding, planning and fiscal oversight for these operations. The RTA ¹⁰⁶ publishes the region's transit map in English and Spanish and provides on-line regional trip planning for transit users. The RTA is also responsible for coordinating the Program Management Plan for the FTA 5316 Job Access Reverse Commute and 5317 New Freedom Programs. The RTA supports planning, capital, and operating projects sponsored by transit providers, local governments, and other agencies through a variety of technical assistance and funding. Table 8.5 shows ridership and vehicle fleet information for the three service boards under the RTA.

Table 8.5 Northeast Region 2015 Ridership and Fleet Information

Agency	Ridership (Millions)	Fleet ¹
CTA Fixed Route Bus	274.3	1,888
CTA Heavy Rail	241.7 ²	1,492
Metra Commuter Rail		843 passenger cars 146 locomotives
Pace Fixed Route Bus, Vanpool and Paratransit	' ' '	720 buses 680 vans, 503 paratransit vehicles

Source: Regional Transportation Authority – Mapping and Statistics, accessed May 2, 2017.

¹ 2015 Comprehensive Financial Report.

 $^{^2\} http://w.transitchicago.com/assets/1/ridership_reports/2015_Annual.pdf$

¹⁰⁵ 2015 Comprehensive Annual Financial Report for the RTA. www.rtachicago.org/files/documents/businessandfinance/financialreports/2015%20Comprehensive%20Annual%20Financial%20Report.pdf ¹⁰⁶ RTA system maps: http://www.rtachicago.org/index.php/plan-your-trip.html

CHICAGO TRANSIT AUTHORITY

The CTA operates 140 bus routes. Buses make over 25,000 trips daily, and serve nearly 12,000 bus stops. ¹⁰⁷ The CTA rail system, referred to as "The 'L'", has eight transit routes, with 145 stations, and approximately 224.1 miles of track. Two routes—the Red and Blue Lines — provide service 24 hours, every day. Altogether, annual ridership for CTA system was 497 million trips in 2016. ¹⁰⁸

All CTA buses and trains are accessible to people with disabilities and more than 60 percent of all rail stations have accessible elevators or ramps. The CTA is working to achieve 100 percent station accessibility.

The CTA is becoming more sustainable and multi-modal through the use of a variety of fuels in its bus fleet and support vehicles. ¹⁰⁹ The CTA purchased two all-electric buses, which produce zero tailpipe emissions. The CTA converted the entire remaining bus fleet to ultra-low sulfur diesel. CTA currently operates more than 250 hybrid buses, which make up nearly 15 percent of the total bus fleet. Hybrid buses achieve at least 20 percent greater fuel efficiency than standard diesel buses.

Figure 8.4 CTA Bus Bike Rack



The CTA is using outdoor power cords to plug in hybrid buses during cold weather and is installing additional bus fuel-efficiency technologies. All CTA buses are equipped with racks that carry two bicycles. Support vehicles include hybrid-electric, vehicles that can run on ethanol, and vehicles that run on compressed natural gas. The CTA has introduced a new family of 'L' railcars into service, known as the 5000 Series. These are equipped with a regenerative braking system that can transfer electricity back to the third rail, supplementing power to nearby CTA trains. Bicycles are permitted on board CTA rail trains most times (with exceptions for peak periods and certain holidays). More than 80 CTA rail stations have indoor or sheltered bicycle racks for secure storage.

CTA has about 12,000 bus stops ¹¹⁰, and has more than 400 displays installed at bus shelters and rail stations which provided estimated arrival times. In addition to the visual display, a push button will provide verbal updates of bus arrival times. All rail stations are equipped with variable message signs that provide updated arrival times of trains. Audible announcements inform customers of an approaching train. The CTA Train Tracker and CTA Bus Tracker information systems allow people with smartphones or web access to determine when the next few buses or trains will be arriving at their location. The CTA also provides updates on arrival times by text message. In addition, other non-CTA applications present the CTA data in different user interfaces, adding information options for transit users.

The CTA stays in touch with the public and riders through its website, Twitter, Facebook, text message or e-mail, and RSS feeds. In addition to the RTA trip planner, trip planning for CTA service is available through Google Transit.¹¹¹ The CTA also has a number of informational videos available on YouTube.¹¹²

¹⁰⁷ Chicago Transit Authority: <u>www.transitchicago.com/</u>

¹⁰⁸ Chicago Transit Authority, Planning and Development, Planning Analytics. Annual Ridership Report, Calendar Year

^{2015.} www.transitchicagp.com/assests/1/ridership_reports/2015_Annual.pdf Accessed May 3, 2017.

¹⁰⁹ Chicago Transit Authority, Going Green: http://www.transitchicago.com/goinggreen/vehicles.aspx

¹¹⁰ Chicagobus.org, Accessed August 2017

¹¹¹ Google Transit: <u>transit.google.com</u>

¹¹² CTA Connections: www.transitchicago.com/news initiatives/connections.aspx

METRA

Metra contracts for or directly operates commuter rail service on 11 routes radiating out of downtown Chicago. There are 241 stations on the 487-route-mile system. In 2016, Metra provided over 80.4 million rides, which requires more than 1,000 pieces of rolling stock (including locomotives, trailer and cab coaches, and multiple-unit electric cars). Metra train lines are fully accessible, and most stations are accessible or have partial accessibility. Riders needing assistance are encouraged to call to determine the accessibility level of a particular station. A limited number of bicycles are permitted on Metra trains with a few travel time exceptions (e.g., peak periods and certain holidays). Most Metra stations offer outdoor bicycle parking.

Figure 8.5 Metra Commuter Station



Metra communicates with the public in a number of ways. There are variable message signs and audible announcements with train arrival times at stations. Metra's website and a separate mobile phone version, provide schedules, fare, and additional information about the system. Metra offers service alerts via e-mail or Twitter and posts on its websites. Its "My Metra" service allows users to arrange for automatic ticket purchases, personalize service alerts and provides real-time arrival information. Mobile tickets can be purchased via the Ventra app.

PACE

For its bus operations, Pace¹¹⁴ currently provides services on 209 fixed routes in more than 202 communities, as well as express service to many events and activities. There are nine Pace-owned fixed-route service divisions, which recorded 28.1 million unlinked passenger trips in 2015. Pace's contracted service ridership totaled 2.6 million in 2015.¹¹⁵ Pace has several different types of paratransit services. Pace's Dial-a-ride paratransit network serves mostly senior citizens and persons with disabilities. It is available in all six counties in the metropolitan region, and provided 0.9 million unlinked trips in 2015. Ridership on the ADA Paratransit service was 4.2 million unlinked

Figure 8.6 PACE Bus



Source: www.pacebus.com, accessed June 2017.

trips. Pace's vanpool ridesharing operations, provided 2.1 million unlinked trips in 2015.116 Pace operates RideShare, 117 a ride-match service for commuters interested in carpooling or signing up for a new or existing vanpool. Pace's Call-n-Ride offers reservation-based shared-ride service to anyone within the six county service area.

Pace continues to implement its Vision 2020 plan. Current initiatives according to their website include: New Arterial Bus Rapid Transit Network (Pulse), I-90 Market Expansion Program, North Avenue Corridor Study, North Shore Study, and Pace Illinois Route 390 Tollway Corridor Service Study. Pace has continued its I-55 Bus on Shoulders service, which began in late 2011. It has added several trips and routes in response to passenger requests, and eliminated others due to low ridership. In 2014, the pilot project became permanent after enacted legislation in the Illinois General Assembly. A flex

¹¹³ Metra: metrarail.com/about-metra/our-history

¹¹⁴ Pace: <u>www.pacebus.com/</u>

¹¹⁵ 2015 RTA Regional Ridership 2015 Report.

¹¹⁶ RTAMS, Ridership Statistics, Pace Paratransit and Vanpool. www.rtams.org/rtams/paceVanRidership.jsp. Accessed May 3, 2017.

¹¹⁷ Pace RIDESHARE: <u>www.pacerideshare.com</u>

lane on the Jane Addams Tollway (I-90) is scheduled to be open for Pace buses in spring 2017. Pace and IDOT are studying possible bus-on-shoulder services on the Edens Expressway (I-94).¹¹⁸

All Pace buses are handicap accessible. Pace has a combination of bus shelters and signed bus stops, and is working toward improving passenger amenities at its bus stops, as Pace moves toward adopting a posted-stop-only boarding and alighting policy. All Pace buses have bicycle racks that accommodate up to two bicycles. Throughout its system, Pace owns twelve Park-n-Ride lots for use by its riders, and has agreements in place with the owners of nineteen additional lots for Park-n-Ride use.

Pace provides information on its services through its website, Facebook, Twitter, You Tube, RSS feeds, text messaging, and real-time e-mail notifications through its bus tracking system. Pace has a version of Bus Tracker suitable for mobile phones. Some Pace shelters contain QR codes for use in the QR code scanning application. The mobile application, Ventra, provides real-time data for Pace, CTA, and Metra services.

B8.1.4 HUMAN SERVICES TRANSPORTATION

"Human services transportation" refers to transportation for persons with disabilities, low-income populations, the elderly and sometimes veterans and youth. In the past, transportation for these groups was often uncoordinated, resulting in duplicative, fragmented, underutilized or non-existent service. In 2005, SAFETEA-LU included language requiring that human services transportation (HST) be coordinated and in 2007, the FTA developed guidelines for locally developed coordination plans for the federal human services transportation funding programs.

Illinois began to work on the issue in 2004 and created the Interagency Coordinating Committee on Transportation (ICCT). The ICCT serves in an advisory role to IDOT for HST plans and implementation. To facilitate the development of these plans, IDOT created eleven HST planning regions, and support a plan coordinator each responsible for the development and implementation of the plan within the planning region. An additional region, which covers the metropolitan Chicago area, is administered by the RTA. Figure 8.7 shows the planning regions.

To date, all regions have developed plans. For each region to develop a plan, a Regional Transportation Committee was formed, an analysis of demographics, needs and current services in the area is completed, and extensive discussions with stakeholders are conducted to establish services needed in the district. Each plan, which is suggested to be updated every three years, includes a list of projects that are reviewed and incorporated into the STIP.

¹¹⁸ Pace, Bus-on-Shoulder Service. www.pacebus.com/sub/vision2020/expressway-brt.asp. Accessed May 4, 2017.

Jo Daviess Stephenson Winnebago Boon 90 Carroll 88 Whitesid Rock Island 80 W Marshall **1** Woodford Iroquois McDonough 155 Schuyler De Witt Champaign 72 Menard **HSTP Regions** Region Douglas 72 Scott Christian 55 70 Jersey Jasper Madison 70 Marion Washington Jefferson 10 Perry White 11 Metropolitan Chicago Region Jackson Gallatin Urbanized Area Sources: Illinois Department of 57 24 Transportation, ESRI Miles

Figure 8.7 Illinois Human Services Transportation Planning Regions

B8.2 IMPLEMENTATION STRATEGIES AND PROGRAMS

B8.2.1 PUBLIC TRANSPORTATION PROGRAM

To meet the needs of the state's residents, workers, employers and visitors, IDOT supports public transit by distributing federal and state funds. A number of federal programs allocate resources to different public transit initiatives and state and local programs contribute money necessary to meet federal funding requirements for these initiatives. The federal funding programs, along with information on human services transportation funding programs, are discussed in more detail in the Transportation Funding report.

For the FY 2016 – 2021 multi-year public transportation program, IDOT has identified a total of \$3.5 billion for public transit from state sources. An additional \$3.2 billion will come from the federal government, with approximately \$1.4 billion to come from local sources, for a total of more than \$8.1 billion statewide from all sources.

B8.2.2 TRANSIT PLANNING ACTIVITIES

ILLINOIS DEPARTMENT OF TRANSPORTATION

The Illinois Statewide Public Transportation Plan is integrated within the state Long Range Transportation Plan. This plan is meant to assess existing public transportation services and create an inventory. This helps in determining gaps and needs for future service, and develops and proposes strategies for meeting needs. An update of this plan is anticipated to coincide with the completion of this Long Range Transportation Plan.

A fundamental topic of discussion in development of the current plan is the potential for increasing the amount of technology used in the state to support transit operations and to make it easier and more attractive for potential passengers to use¹¹⁹. The following technologies are available and are suggested for urban fixed route systems within Illinois in the future: schedule system, trip planning, computer-aided dispatch/automatic vehicle location (CAD/AVL), onboard 'next stop' audio and visual annunciator system, automatic passenger counts, 'next bus' information, and fare collection. Currently, the CTA, Connect (Bloomington-Normal), and St. Clair County Transit have deployed a majority of the aforementioned technology systems, with minimal exceptions. CUMTD (Champaign-Urbana, MetroLink (Rock Island), Rockford, Springfield, Danville, Madison County, and Go West (Macomb) are at various stages of implementing the suggested technology systems. In contrast, Peoria, River Valley (Kankakee), Decatur, Quincy, and Galesburg have yet to implement any of the technology systems.

A trend and suggestion for the rural demand systems in Illinois is to move toward 'cloud-based computing', relieving the rural transit agencies the responsibility to provide a person skilled to manage their system and instead a service, or individual, would operate the system remotely. Currently, nearly half of the rural transit agencies operate this type of system.

¹¹⁹ Technology Applications, Draft Technical Memorandum for the Statewide Public Transportation Plan, September 2016.

REGIONAL TRANSPORTATION AUTHORITY (RTA)

In addition to transit planning conducted by IDOT, the RTA publishes the Regional Transit Strategic Plan (the Strategic Plan) every five years. The current plan is due to be replaced in 2018. The plan provides a visionary roadmap for near-term transit investment in the RTA six-county area. This plan helps the Chicago region's transit agencies in planning and funding future projects, as well as unique day-to-day activities, that are needed to meet passenger needs. Current projects, as a result of the Strategic Plan's efforts, include 120:

- → Regional Transit Signal Priority Implementation Program: Transit Signal Priority (TSP) utilizes existing vehicle location and wireless communication technologies to advance or extend the green light of a traffic signal to allow a CTA or Pace bus to continue through an intersection when the bus is running behind schedule helping to reduce travel times and ensure on-time arrivals. TSP is currently (July 2017) deployed along 13 priority corridors to help CTA and Pace buses travel along 100 miles of roadway and through about 400 intersections operated by IDOT, CDOT, and other local departments of transportation throughout the region.
- → Interagency Signage: The RTA has developed a new system of signs, maps, route diagrams and schedules to help riders more easily navigate the regional transit system. All the products are designed to complement and reinforce each other, making transferring between services as seamless and intuitive as possible. The overall plan is to deploy these sign and information products at train stations where CTA, Metra, and Pace services connect. The first phase of the project was completed in 2013, installing interagency signs at four demonstration locations. In August of 2014, the RTA, CTA, Metra, and PACE completed a manual to promote consistency across the RTA transit services. The next phase of the program is to install signage at an additional 19 locations.
- → Community Planning: The RTA's Community Planning program provides funding as well as technical assistance to applicants for implementation and planning projects that benefit the community and the regional transit system. Eligible projects include transit-oriented development (TOD) plans, transit corridor plans, TOD zoning code updates, TOD developer discussion panels, transit neighborhood mobility improvement plans, plans to develop special funding districts in transit areas, and other innovative implementation approaches. The Community Planning program strives to not just plan for the future but to provide assistance that achieves results. To date (July 2017), the program has completed more than 100 transit-oriented development and implementation plans since the late 1990's using a combination of RTA, local and federal funds, totaling nearly \$10 million.
- → Innovation, Coordination, and Enhancement (ICE): The ICE program was established as part of the 2008 Mass Transit Reform Legislation. The program provides funding assistance to enhance the coordination and integration of public transportation and to develop and implement innovations to improve the quality and delivery of public transportation. Projects funded through this program advance the vision and goals of the RTA by providing reliable and convenient transit services and enhancing efficiencies through effective management, innovation, and technology.
- → Section 5310: The Enhanced Mobility of Seniors and Individuals with Disabilities Program (Section 5310) aims to improve mobility for seniors and individuals with disabilities by removing barriers to transportation service and expanding transportation mobility options. This program supports transportation services planned, designed, and carried out to meet the special transportation needs of seniors and individuals with disabilities. The RTA and IDOT are co-designated recipients of Section 5310 funding for Northeastern Illinois.
- → Access to Transit Improvement Program: The RTA established the Access to Transit Improvement Program to seek capital funding for small-scale projects that increase pedestrian and bicycle access to the transit

¹²⁰ RTA, Plans and Programs website, http://www.rtachicago.org/index.php/plans-programs.html. Accessed in July 2017.

system. The Access to Transit Improvement Program is intended to leverage RTA and local funds with federal <u>Congestion Mitigation and Air Quality Improvement Program (CMAQ)</u> funding to help implement recommendations contained in studies completed through the RTA's Community Planning program or CMAP'S Local Technical Assistance (LTA) program. Projects selected as part of the RTA's Access to Transit Improvement Program will be assisted by RTA staff in developing information required for a CMAP application.

→ **Green Transit Plan:** The RTA and its partners have developed the Chicago Regional Green Transit Plan, which calculates the environmental benefits of transit in the region and provides a roadmap to making the regional transit system greener. The plan includes a series of strategies aimed to grow transit ridership and market share, promote transit-orientated communities, and improve operational efficiency and green the transit system.

B8.2.3 REGIONAL MAINTENANCE CENTERS

Regional Maintenance Centers (RMC) provide maintenance services for IDOT grantee and not-for- profit agency paratransit vehicles in a specified region. Currently, IDOT has contracted with the Rockford MTD and Sangamon MTD. These agencies provide for non-routine maintenance and repair for paratransit vehicles for other agencies within a 60-mile radius. The RMC ensures that smaller providers can maintain their equipment with trained repair staff and without having significant delays in repairs. The RMC charges for its services; costs are paid by the respective transportation provider.

B8.2.4 RURAL TRANSPORTATION ASSISTANCE CENTER

The Rural Transportation Assistance Center (RTAC) is a unit of the Illinois Institute for Rural Affairs at Western Illinois University in Macomb.¹²¹ The mission of RTAC is to promote the safe and effective delivery of public transportation in rural areas, and more efficiently use public and private resources. RTAC has two primary responsibilities: it runs the Rural Transit Assistance Program (RTAP), which is funded by the Federal Transit Administration, and it serves as the clearinghouse for the ICCT, a state legislated body created in 2003.

The ICCT is chaired by the Office of the Governor, co-vice chaired by IDOT and a representative of a community-based organization involved in transportation, and supported by ICCT Clearinghouse staff. The ICCT has produced a Transportation Coordination Primer that guides counties in developing a coordinated public transportation system and provides technical assistance as counties work through the planning and implementation process.

¹²¹ Illinois Institute for Rural Affairs. http://www.iira.org/

B9. Waterways and Ports

B9.1 DESCRIPTION

The State of Illinois has 1,095 miles of navigable waterways bordering or traversing the state, comprising the Illinois Marine Transportation System (IMTS). A navigable waterway is defined as waters of the United States that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for the use to transport interstate or foreign commerce¹²². From a transportation perspective, the State's rivers and Lake Michigan are primarily used for freight traffic. Passenger travel on the waters is most often for recreation.

IDOT's role in managing the State's waterways, harbors and ports includes freight planning, providing land and roadway access to and from the water terminals, and providing planning and construction funding for port improvements. Since lakes and rivers are an important environmental resource, the Water Resources Division of the IDOT was transferred to the Illinois Department of Natural Resources (IDNR) in 1995. IDNR and the Illinois Environmental Protection Agency (IEPA) coordinate with the US Army Corps of Engineers (Corps) in supervising the State's waterways. IDOT is proposing to regain oversight of transportation functions related to Illinois Ports and Illinois Inland Waterways in an effort to fill a void that remains over state government's involvement and multimodal planning over transportation issues on the IMTS. Through the involvement in port and inland waterways, IDOT will lead the way in the planning, development, and implementation of strategies that will support a truly comprehensive transportation system in Illinois.

The jurisdictional authority of the Corps over the nation's rivers was established in the Rivers and Harbors Act of 1899¹²³ and the Corps' involvement continues. IDNR Office of Water Resources Division of Resource Management works with the Corps to ensure that the waterways remain navigable while the IEPA is primarily concerned with water quality. Activity generated from Illinois ports and waterways has a significant impact on the state. Waterways and ports support nearly 50,000 jobs and contributes \$6.4 billion to the state's economy.¹²⁴

B9.1.1 LAKES AND RIVERS

The IMTS is a link between the Atlantic Ocean (via the St. Lawrence Seaway) and the Gulf of Mexico. Lake Michigan is an important water resource, with three major ports along the waterfront in Illinois and many others in the other bordering states. Commercial traffic on Lake Michigan and the river network facilities is almost exclusively bulk freight and the ships and barges mainly carry coal, agricultural products, fertilizers, and petroleum products.

NAVIGABLE WATERWAYS

The primary navigable waters in Illinois include Lake Michigan, the Illinois River and canal system, and the Mississippi, Ohio, and Kaskaskia rivers. Other waters in the state are also navigable although most are used for recreation. Illinois waterborne traffic totaled 107.8 million tons in 2014, representing 8.8 percent of the freight tonnage in the state. The movement of waterborne freight through Illinois is predominately north-to-south, since the Illinois River and canal system connects Lake Michigan to the Mississippi River and allows for transport to occur between the Great Lakes and the Gulf of Mexico. Other major freight flows by water in Illinois occur on the Mississippi River along the western border

¹²² U.S. Government Publishing Office. Definition of Navigable Waters of the United States. 33 CFR 329 - DEFINITION OF NAVIGABLE WATERS OF THE UNITED STATES. https://www.qpo.gov/fdsvs/pkg/CFR-2010-title33-vol3/pdf/CFR-2010-title33-vol3-part329.pdf.

¹²³ US Army Corps of Engineers. A Brief History. <u>www.usace.army.mil/About/History/BriefHistoryoftheCorps/Introduction.aspx.</u> Accessed June 1, 2017. ¹²⁴ United States Chamber of Commerce. Waterways Work for Illinois.

https://www.uschamber.com/sites/default/files/legacy/lra/docs/Illinois USChamb Waterway StateFactSheet 071213a.pdf. Accessed June 3, 2017.

of Illinois and on the Ohio River at the southern end of Illinois. The Kaskaskia River also has freight traffic. Illinois' waterborne freight is heavily skewed in the outbound direction, led by coal and agricultural products including cereal grains and other agricultural products heading down the Mississippi River to New Orleans. Of the 107.8 million tons of Illinois waterborne freight in 2014, 74 percent was outbound, 20 percent inbound and 6 percent was within-state. Illinois has 1,095 miles of navigable waterways that either border or pass through the state, including the nation's only all-water connection between the Great Lakes and the Mississippi River system. As shown in Figure 9.1: Illinois Waterway System, the five major waterways used to transport freight in Illinois are:

- Lake Michigan
- The Illinois River System connecting Lake Michigan to the Mississippi River including:
 - Chicago River
 - Calumet River
 - Des Plaines River
 - Chicago Sanitary and Ship Canal connecting the Chicago River to the Des Plaines River
 - Calumet-Sag Channel connecting the Calumet River to the Des Plaines River
- The Mississippi River on Illinois 'western border
- The Ohio River on the state's southern border,
- The Kaskaskia River

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Figure 9.1: Illinois Waterway System

Source: Illinois Department of Natural Resources

A more detailed discussion of waterborne freight flows is in the *Water Traffic Highlights* section of the 2017 Illinois State Freight Plan.

LOCKS AND DAMS

Navigation on the four major rivers in the state is controlled by a series of locks and dams. There are 15 lock and dam structures along the Mississippi River. The Illinois River and canal system have nine lock and dam facilities; on the Ohio River, along the Illinois border with Kentucky, there are currently three lock and dam structures. The final lock and dam in the state is on the Kaskaskia River, in Modoc. Table 9.1 details all locks and dams on navigable waterways in Illinois.

Table 9.1 Locks and Dams in Illinois

Name	Location [River Bank]	River Milepoint	Corp District
[Upper] Mississippi Rive	er		
12	Bellevue, Iowa [R]	567	Rock Island
13	Fulton, Illinois [L]	522	Rock Island
14	Pleasant Valley, Iowa [R]	493	Rock Island
15	Rock Island, Illinois [L]	483	Rock Island
16	Illinois City, Illinois [L]	457	Rock Island
17	New Boston, Illinois [L]	437	Rock Island
18	Gladstone, Illinois [L]	410	Rock Island
19*	Keokuk, Iowa [R]	364	Rock Island
20	Canton, Missouri [R]	343	Rock Island
21	Quincy, Illinois [L]	325	Rock Island
22	New London, Missouri [R]	301	Rock Island
24	Clarksville, Missouri [R]	273	St. Louis
25	Winfield, Missouri [R]	241	St. Louis
Melvin Price*	Alton, Illinois [L]	201	St. Louis
Chain of Rocks / 27	Granite City, Illinois [L]	185.5	St. Louis
Illinois River and Canal	System: River Milepoint from Grafton, Illi	nois	
Chicago Harbor	Chicago [R]	327 [Main]	Chicago
T.J. O'Brien	Chicago [R]	327 [South]	Rock Island
Lockport	Lockport [L]	291	Rock Island
Brandon Road	Joliet [R]	286	Rock Island
Dresden Island	Morris [L]	272	Rock Island
Marseilles [Lock]	Marseilles [L]	245	Rock Island
Starved Rock	Ottawa [R]	231	Rock Island
Peoria	Creve Coeur [L]	158	Rock Island
LaGrange	Versailles [R]	80	Rock Island
	point from Pittsburgh Point	<u> </u>	
Smithland	Hamletsburg [L]	919	Louisville
52	Brookport [R]	939	Louisville
53	Grand Chain [R]	963	Louisville
Kaskaskia River			
Kaskaskia	Modoc [R]	0.8	St. Louis

^{*}Main lock length = 1,200 feet

River milepoints run north/east to south/west

Source: US Army Corps of Engineers, various websites

The IDNR Office of Water Resources owns and maintains a number of low head dams along the Fox River, one on the Rock River, and operates Stratton Lock and Dam to allow recreational navigation between the Chain O' Lakes and the Fox River down to the Algonquin Dam.

On the Illinois Waterway, four lock and dams (Brandon Road, Dresden, Marseilles and Starved Rock) are located on property owned by the State of Illinois, but the lock and dam structures are owned, operated and maintained by the Corps. The Lockport Lock and Dam was originally constructed by the Metropolitan Water Reclamation District, but today

is operated and maintained by the Corps. The Chicago River Lock and Dam was also similarly constructed and today is operated and maintained by the Corps. On the Calumet River, the Corps owns, operates and maintains the O'Brien Lock and Dam. The remaining two lock and dams on the lower Illinois River (LaGrange and Peoria), along with the other locks and dams on the remaining Illinois rivers (Mississippi, Ohio and Kaskaskia) are operated and maintained by the Corps per their federal responsibility to maintain the inland waterway system, which also includes flood control and ecosystem restoration. On the Upper Mississippi River, Locks 11 through 22 are managed by the Rock Island District. The Rock Island District also operates and manages all locks on the Illinois River and canal system, except for the Chicago Harbor, which is under the Chicago District. On the Mississippi, Locks 24 through 27 are under the purview of the St. Louis District, which also is responsible for the Kaskaskia Lock and Dam. 125 Figure 9.2 illustrates the location and jurisdiction of locks and dams within and bordering Illinois.

Mississippi UPPER & LOWER ST. ANTHONY FALLS ST. PAUL DISTRIC Vicinity Map ST. ANTHONY FALLS TO L/D 10 LA CROSSE L/D 8 LAKE MICHIGAN L/D 10 L/D 11 ROCK ISLAND DISTRI DUBUQUE L/D 11 TO L/D 22 L/D 12 DRESDEN \ BRANDON ISL. L/D L/D 15 L/D 16 RD. L/D Marseilles STARVED ROCK L/D L/D 17 PEORIA PEORIA L/D L/D 20 QUINCY MISSOURI LA GRANGE L/D L/D 21 ST. LOUIS DISTRICT L/D 24 L/D 24 TO L/D 27 Mel Price L/D

Figure 9.2 Lock and Dam Locations and Controlling Jurisdictions in Illinois

Source: US Army Corps of Engineers

¹²⁵ Illinois Department of Natural Resources, Email to IDOT, November 13, 2017

B9.1.2 PORTS AND HARBORS

Ports and harbors are two water facility terms that are often used interchangeably. A port provides infrastructure and services for loading and unloading cargo and passengers, while a harbor is where ships are sheltered and can anchor close to a shore. Harbors are more often along lakes, seas, and oceans, while ports are in harbors and along rivers.

In Illinois, Lake Michigan has three harbors for large ocean going vessels and more for recreational boats. The harbors along Lake Michigan that handle freight-bearing ships are the Waukegan Harbor, Chicago Harbor, and the Calumet Harbor. Waukegan is also a port, while the Calumet Harbor connects to the Illinois International Port / Port of Chicago via the Calumet River and Lake Calumet. The Chicago Harbor is not a port, but some freight cargo passes through, to access the Chicago River and the Illinois River and canal system. The Chicago District of the Corps has jurisdiction for the harbor facilities on Lake Michigan.

Port development and activity in Illinois involves private industry and the State, which uses enabling legislation to create port districts. The enabling legislation gives ports tax-exempt status and the ability to issue bonds for port development. Port districts are required to submit financial reports to the Office of the State comptroller. The 19 legislatively created public port districts in Illinois are displayed in Figure 9.3.

IDOT can provide technical and operating assistance to port districts in coordination with Illinois Department of Commerce and Economic Opportunity (DCEO). DCEO often works with port districts to facilitate economic development in the area. IDOT also supports water freight movement by providing freight planning, planning and construction dollars for improvements, and by providing land and roadway access to and from the water terminals. Private industry creates loading and unloading facilities on riverfront sites for their own use after obtaining approvals from the municipal jurisdiction, the Corps, and the IDNR. These facilities include docks, wharves, mooring sites, terminals, and other storage facilities, loading and unloading equipment, and other supportive structures.

Upper Mississippi Waukegan River International Port Port District District Illinois Valley International Regional Port Port District District Heart of Illinois Regional Port District Joliet Regional Port District Havana Regional Port District Seneca Regional Port District Ottawa Port District Mid-America Intermodal Authority Port District America's Central Port District Mt Carmel Regional Port Southwest District Regional Port District Kaskaskia White Regional Port County Port District District Jackson-Union Shawneetown Counties Regional Legend Regional Port Port District District IDOT Ferry Massac-Alexander-Metropolis Cairo Port Port District District

Figure 9.3 Active Port Districts in Illinois

Source: Illinois Department of Transportation, 2017

B9.1.3 FERRIES AND WATER TAXIS

IDOT operates two free ferries across the Illinois River. These ferries are located in southwestern Illinois and operate all hours, year round. One ferry is the Illinois Route 108 connecting link between Kampsville and Eldred. Illinois Route 108, which is the eastern branch of the Great River Road Scenic Byway connects to Illinois Route 100, which is the main branch of the scenic byway. The second IDOT ferry, which is further south, connects Illinois Route 100 near Grafton to County Highway 1 / Illinois River Rd, which leads to the town of Brussels. This ferry is near Pere Marquette State Park and the mouth of the Illinois River, where it merges with the Mississippi. The two IDOT ferries are operated 24 hours a day, seven days a week. Other ferries include one at Cave-in-Rock. This ferry, operated by the Kentucky Transportation Cabinet in agreement with IDOT, crosses the Ohio River and connects Illinois Route 1 to Kentucky Route 91. The Cave-in-Rock Ferry operates year round from 6:00 a.m. to 9:30 p.m.

Along the Mississippi River, there are ferries / water taxis in Moline (Rock Island County), Meyer (Adams County), Golden Eagle (Calhoun County) and Modoc (Randolph County). The furthest ferry service south on the Mississippi River boarding Illinois is the Ste. Genevieve-Modoc Ferry, operated by the New Bourbon Regional Port Authority in Missouri.

The Channel Cat water taxi in Moline is operated by MetroLink, the public transit provider for the Quad Cities region. The taxi operates daily from Memorial Day to Labor Day and then on weekends only in September. There are four landing sites: two in Moline and two in Iowa, in Bettendorf and East Davenport. The taxi takes passengers and bicycles, but no motor vehicles: 126

In Calhoun County, the Calhoun Ferry Company operates two for-profit ferry services between Calhoun County, Illinois and Missouri. The Golden Eagle Ferry takes vehicles across the Mississippi River between Golden Eagle in Calhoun County and Kampville in St. Charles County, Missouri. The Winfield Ferry crosses the Mississippi River near Batchtown in Calhoun County into Lincoln County, Missouri connecting with Route 79. 127

Chicago has two services that operate water taxis. Chicago Water Taxi operates on the Chicago River between Michigan Avenue and Chinatown / Ping Tom Memorial Park, with two additional stops at LaSalle / Clark and Madison streets. The Madison Street landing offers access to Metra's Ogilvie Transportation Center. 128 Shoreline Sightseeing operates on the Chicago River with four stops, at Michigan Avenue, Erie Street, Wacker at Wells, and the Willis (Sears) Tower / Union Station. Other taxi options include service between the Museum Campus and Navy Pier, and between Navy Pier and Michigan Avenue or the Willis Tower. 129

B9.2 IMPLEMENTATION STRATEGIES AND PROGRAMS

A number of state agencies are involved with the State's waterways and ports. IDNR and IEPA address environmental issues, while DCEO assists with economic development activities by administering the Port Development Revolving Fund and the River Edge Redevelopment Zone Program. IDOT can provide technical, capital, and operating assistance to port districts in coordination with DCEO, and is involved with port development by ensuring access to the state road network.

B9.2.1 PORT DEVELOPMENT REVOLVING LOAN FUND

DCEO maintains the Port Development Revolving Loan Fund to facilitate and enhance the utilizations of Illinois' waterways. Funds from the program are available to active port districts in the state through a competitive process. The maximum loan request is \$3,000,000 and may be used for up to 50% of a project's financing. The maximum loan term is 20 years with a top interest rate of 5% per annum.¹³⁰

B9.2.2 RIVER EDGE REDEVELOPMENT ZONE PROGRAM

The River Edge Redevelopment Zone (RERZ) Act supports municipalities with river access to remediate environmentally-challenged property located adjacent to or surrounding an Illinois River. The law enables communities to designate an area as a redevelopment zone, and allows the municipality to access grants or to provide tax incentives to remediate and cost-effectively clean the environmentally-challenged land. The River Edge Redevelopment Zone Act took effect in 2006

¹²⁶ Channel Cat Water Taxi. General Information. https://www.gogreenmetro.com/231/Channel-Cat. Accessed June 2, 2017.

¹²⁷ Great River Road. http://www.greatriverroad.com/SecondaryPages/ferries.htm#Calhoun County, Illinois. Accessed June 2, 2017.

¹²⁸ Chicago Water Taxi. Route Map. https://www.chicagowatertaxi.com/Chicago-River-Boat-Map Accessed June 2, 2017.

¹²⁹ Shoreline Sightseeing. Water Taxis. http://shorelinesightseeing.com/water-taxi/. Accessed June, 2, 2017.

¹³⁰ FindLaw. Illinois Statutes Chapter 30. Finance § 750/9-11. Port Development Revolving Loan Program. http://codes.findlaw.com/il/chapter-30-finance/il-st-sect-30-750-9-11.html. Accessed June 5, 2017.

and is administered by DCEO. RERZ offers several incentives for the redevelopment along Illinois rivers, largely focused on sales tax exemptions and property tax abatements. The DCEO has designated River Edge Development Zones in Aurora, East St. Louis, Elgin, Peoria, and Rockford.

B9.2.3 MARINE HIGHWAY CORRIDORS

In 2010, the USDOT, as part of a national initiative (America's Marine Highway Program) to facilitate the use of the nation's waterways system for transportation purposes to relieve landside traffic congestion, improve air quality, and other environmental concerns. The Marine Highway System currently include 24 all-water Marine Highway Routes that serve as extension of the surface transportation system.¹³¹ Figure 9. displays all Marine Highway Corridor in the United States. Illinois is part of three corridors: M-55, which includes the Mississippi and Illinois Rivers, from New Orleans to Chicago; M-70, which includes the Mississippi, Missouri, and Ohio Rivers, from Kansas City to Pittsburgh; and M-35 that links the Upper Mississippi River with the M-55 Corridor. The M-55 corridor was selected to address congestion on I-55; M-70 will provide additional support for travel along I-70. The M-35 and M-55 Corridor forms a continuous all-water route from the beginning of the Mississippi River to the Gulf of Mexico.



Figure 9.4 United States Marine Highway Corridors

Source: www.marad.dot.gov

¹³¹ U.S. DOT Maritime Administration. America's Marine Highway Program. https://www.marad.dot.gov/ships-and-shipping/dot-maritime-administration-americas-marine-highway-program/. Accessed June 5, 2017.

B9.2.4 AMERICA'S CENTRAL PORT

The Tri-City Regional Port District was created in 1959 by the Illinois State Legislature as an economic development tool for the communities of Venice, Madison and Granite City in southwestern Madison County, Illinois and was re-branded as "America's Central Port" in 2011. The \$50 million South Harbor project in Madison added a new space for "multi-modal capacity" — allowing companies transporting goods to transfer them among rail, truck, river barge and other modes of transportation, and was completed in late 2015. The project funding included a \$14.5 million USDOT grant and a \$4 million DCEO grant, along with a private loan. The South Harbor improvement is anticipated to generate an additional 25% of Port District cargo in the five years following its completion, up from its nearly 3 million tons of cargo handled in 2015. 132

B9.2.5 KASKASKIA REGIONAL PORT DISTRICT

The Kaskaskia Regional Port District (KRPD) is another example of a successful port district development. The KRPD was created by state statute on June 22, 1965, and currently encompasses four terminals along the 90-mile navigable portion of the Kaskaskia River in southwestern Illinois. Its 2015 Annual Report cited its standing as the 76th port district in the nation among the top 150 by volume as ranked by the Corps of Engineers, and an increase in cargo moved through the terminals from approximately 0.8 million tons in 2011 to 1.4 million tons in 2015, an increase of 76% over four years. Along with fertilizer and chemicals, the port moves grain, steel, stone used in scrubbers at a coal power plant, and sands used in the hydraulic fracturing, or fracking, process for drilling oil and gas.In 2015, construction started on a new road connecting Illinois Route 15 to a proposed entrance to the planned new, 128-acre port terminal in Fayetteville. Much of the acreage for the planned terminal was acquired from IDNR in 2012.¹³³

¹³² Belleville News-Democrat. "America's Central Port to christen South Harbor soon". http://www.bnd.com/news/local/article38351142.html. Accessed September 2017.

¹³³ Kaskaskia Regional Port District. 2015 Annual Report. http://www.kaskaskiaport.com/2015%20Annual%20Report.pdf. Accessed September 2017.

ILLINOIS DEPARTMENT OF TRANSPORTATION





APPENDICES



A1. Public Involvement

Public involvement is a critical component in the development of the Illinois Long Range Transportation Plan (LRTP). To actively engage Illinois residents throughout the entire development process of the LRTP, several tools and techniques have been implemented, utilizing a variety of high-touch (personal interaction) and high-tech methods for collecting public input and opinion. These methods included engaging a diverse group of Illinois Department of Transportation (IDOT) personnel, transportation partners, stakeholders and the public across the state using a combination of traditional and innovative communication and visualization tools. The following, listed in chronological order, represents the basis of the public involvement effort:

- > LRTP website
- → Overarching goals survey
- → Web-based interactive survey (All Our Ideas survey)
- → MPO outreach
- Conversation cafes

This chapter discusses the public information tools and techniques used during the development of the LRTP. It is intended to document the public involvement effort and provide guidance for future public participation for planning initiatives on the LRTP.

A1.1 PUBLIC INVOLVEMENT EFFORTS

A1.1.1 LRTP WEBSITE

In early 2016, IDOT revamped the LRTP website¹ to include updated material on the forthcoming LRTP. The website provided a video statement from the Secretary of Transportation and created a central location for all materials regarding the LRTP and its development.

A1.1.2 OVERARCHING GOALS SURVEY

In mid-2016, in one of the first efforts to engage the public in the LRTP, IDOT developed a survey asking participants to rank the six draft goals² of the LRTP from one to six, with one being the most important. The survey also offered the opportunity to add additional goals and provide an email for continued updates on development of the plan. The survey was made available to the public via a web-based format on the LRTP website, as well as a paper-based format at the August 2016 Illinois State Fair in Springfield and the June 2016 Transport Chicago Conference in Chicago. Advertisement for the web-based survey was accomplished via social media and with the help of the state's Metropolitan Planning Organizations (MPOs) and other stakeholders. No limitations were in place on who could take the survey.

A total of 669 surveys were collected from transportation officials and the general public across Illinois; 558 respondents completed the web-based survey and 111 respondents completed the paper-based survey. As detailed in **Table 1.1** and **Figure 1.1**, IDOT staff compiled the responses and determined safety was ranked most important, followed by economic growth, access, livability, stewardship and resilience, respectively.

1

 $^{1\} http://www.idot.illinois.gov/transportation-system/transportation-management/planning/index, accessed September 18, 2017.$

² Economic Growth, Livability, Access, Resilience, Stewardship, and Safety.

A1.1.3 ALL OUR IDEAS SURVEY

The centerpiece of the public involvement effort for the LRTP was the web-based interactive survey referred to as 'All Our Ideas,' conducted by IDOT in cooperation with the University of Illinois at Chicago (UIC). The survey allowed the public to vote for ideas to improve transportation in Illinois and provided IDOT staff a statistically significant representation of public ideas.

The All Our Ideas survey consisted of two phases, summarized as follows and graphically represented in **Figure 1.2.**³ For further details of the survey, see the entire survey report in **Attachment 1.1**, A New Approach to Public Engagement: Capturing Better Ideas and Representative Priorities from the Public for the Illinois Department of Transportation (UIC, August 15, 2017).

PHASE 1: PUBLIC IDEA GENERATION

Phase 1 consisted of a pairwise comparison online survey, ⁴ a process by which residents could choose between two ideas or select an "I can't decide option" in response to the prompt: "Which idea do you think is more important for transportation in Illinois?" The ideas were derived from a list of 64 "seed" ideas developed by IDOT and UIC that closely represented the objectives for each goal. The survey also allowed the public to submit their own ideas for inclusion into the bank of ideas. This phase of the survey opened on February 8, 2017, to all residents of Illinois, with IDOT publicizing the survey link through existing channels of communication (e.g., social media), and closed on March 8, 2017.

PHASE 2: REPRESENTATIVE PUBLIC PRIORITIZATION

Phase 2 repeated the pairwise comparison process using ideas generated in Phase 1, but used representative sampling techniques to identify two groups of 500 Illinois residents: Group 1-In IDOT Region 1 (Cook, Lake, McHenry, Kane, DuPage and Will counties) and Group 2-Outside IDOT Region 1. In this phase, respondents also indicated the percentage of IDOT's budget they would invest in competing transportation goals and modes. The pairwise comparison for each region also gave IDOT the opportunity to see how the different groups prioritize their transportation issues. IDOT and UIC partnered with YouGov⁵ for this phase of data collection, due to their unique, empirically proven method of capturing representative public input. This phase of the survey opened on May 1, 2017, and closed on June 2, 2017.

A1.1.4 RESULTS

PHASE 1: PUBLIC IDEA GENERATION

During Phase 1, the survey site had 823 unique visitors, 698 of which were from Illinois, and 70 percent of those visitors were from the Chicago metropolitan area. In total, site visitors voted 36,353 times, submitting 322 ideas, though only 121 were carried forward into Phase 2 as a result of removing duplicates and other data misnomers (e.g., comments). The final dataset was comprised of 134 competing ideas, 63 of which were IDOT seed ideas and 71 of which were submitted by survey respondents. Additionally, eight of the top ten ideas were user-submitted. These results provided a better picture of transportation concerns and laid the foundation for the second phase of the engagement process.

PHASE 2: REPRESENTATIVE PUBLIC PRIORITIZATION

The following presents a summary of the results for information captured in Phase 2 of the All Our Ideas survey, including how the public prioritized, in terms of financial distribution, the six LRTP draft goals and transportation modes. This

³ A New Approach to Public Engagement: Capturing Better Ideas and Representative Priorities from the Public for the Illinois Department of Transportation, UIC, August 15, 2017.

⁴ AllOurldeas.org/IDOTideas

⁵ For an extensive description of YouGov, see https://today.yougov.com/about/faqs/

summary also includes the public's top 10 transportation ideas. General notes about these findings include the following:

- → The dataset for this phase consisted of 134 ideas, where 63 were IDOT seed ideas and 71 were from user-submitted ideas from Phase 1.
- → All dollar amounts are the average dollar amount given to that area.
- → Findings are generalized to the entire state.

PUBLIC PRIORITIZATION OF IDOT GOALS

When asked to distribute \$100 across the six LRTP goal areas (see **Figure 1.3**), safety was the most important (\$21.1), followed by economic growth (\$18.7) and resilience (\$17.9) for Illinois residents. Group 1 ranked safety first (\$21.1), followed by resilience (\$17.8) and then economic growth (\$17.6). In Group 2, safety (\$20.4) and economic growth (\$20) were more equally prioritized, followed closely by the resilience (\$17.8) goal. The economic growth and access goals had the largest difference when comparing the results between the two groups (difference of \$2.4 and \$2.2, respectively).

PUBLIC PRIORITIZATION OF TRANSPORTATION MODES

When asked to distribute \$100 across the seven transportation modes in Illinois (see **Figure 1.4**), road network (\$25.5) was most important for Illinois residents, followed by public transit (\$21.5). Group 1 ranked public transit first (\$24.3), followed by road network (\$22.1) and then bikes and pedestrians (\$14.3). Group 2 ranked road network first (\$28.2), followed by public transit (\$18.8), truck (\$12.6) and rail freight (\$12.1), respectively. Road network (difference of \$6.1) depicted the greatest differences between the two groups.

PUBLIC PRIORITIZATION OF TRANSPORTATION IDEAS

Utilizing the pairwise comparisons' resulting ideas in Phase I, each idea was included in roughly 200 head-to-head matchups. Ideas related to road networks and repairs were most frequently in the top 10 highest-ranked ideas for all residents statewide (see **Table 1.2**), as well as for residents from both regions. The top five ideas in both groups, and overall (for Illinois residents), were related to roads and/or repairs and maintenance.

Additionally, Group 1 was more likely to prioritize ideas related to public transit and bikes and pedestrians, while Group 2 was more concerned with issues related to rural highways, railroad freight, safety and IDOT's advocating for sound transportation policy and funding. For example, the following idea, "better distribute projects through the state to maximize benefits to all regions," ranked second for Group 2, sixth for overall Illinois residents and 17th for Group 1. Group 1 voiced more for alleviating traffic jams, ranking it sixth, while Group 2 ranked the topic 43rd. This shows the difference of idea importance by regions and the state.

A1.1.5 MPO OUTREACH

The LRTP represents a significant set of decisions that determine how the MPOs in the state will meet the transportation needs of their specific regions. As such, IDOT staff presented the status and development of the LRTP in an hour-long meeting with each of the 16 MPOs in the state in June and July of 2017. A copy of the presentation can be found in **Attachment 1.2**. The purpose of each meeting aimed to gain participation from the respective MPOs in developing this important policy, planning and programming document.

All 16 MPO meetings were well attended. For a complete list of attendees and details (e.g., date, location, time) for each of the 16 meetings, please refer to the MPO outreach matrix in **Attachment 1.3**. A detailed list of questions asked regarding the LRTP, per MPO, are also included in the matrix. In general, questions focused on whether the LRTP will be

a policy document, and the status of the various plans (e.g. freight plan, transit plan, bicycle/pedestrian plan) being incorporated into the LRTP.

A1.1.6 CONVERSATION CAFES

Three meetings, termed 'conversation cafes,' were held to identify and refine the objectives, strategies and measures for each of the LRTP's goals. The two-hour meetings included:

- → Wednesday, July 19, IDOT Central Office, Springfield, IL
- → Friday, July 21, Chicago Metropolitan Agency for Planning (CMAP), Chicago, IL
- → Monday, July 31, IDOT District 8 Office, Collinsville, IL

At each meeting, a list of transportation professionals and officials were invited to participate via email. Attendees at each meeting (see **Attachment 1.4**) for a list of attendees at each meeting) were divided into five groups and presented a goal and their associated objectives for discussion. Each group of attendees rotated every 20 minutes, until all five goals had been discussed. The group discussions were facilitated by IDOT staff and included refining the goal and its resulting objectives, strategies and measures. Ideas from the group discussions were captured by IDOT staff and reviewed further after the meetings.

A total of 42 transportation professionals attended the three conversation cafe meetings. The results of this public involvement effort provided a wide range of additions and subtractions to the draft goals, objectives, strategies and measures.⁷ See **Attachment 1.5** for a draft copy of all discussion points noted at each of the three meetings. General takeaway points from the group discussions are summarized below:

→ Goals:

- The wording for several goals was discussed in detail, suggesting the wording was too specific.
- Attendees suggested safety should be added as a goal, or incorporated more effectively into each of the five draft goals.

→ Objectives:

- Objectives should be applicable to the entire state, not specific regions.
- Several objectives were suggested to be combined, deleted or clarified further, due to the overall meaning repeated in several goals.

→ Strategies:

- Strategy development should be a coordinated effort with planning stakeholders (e.g., MPOs, county government officials, etc.).
- Strategies developed for each goal should focus on existing network assets.

→ Measures:

- Measures should be developed with different metrics for different regions, since these could be quantifiable.
- Tracking of the measures should be a coordinated effort between IDOT and planning stakeholders.

⁶ Earlier public involvement efforts resulted in the incorporation of safety into each of the five remaining goals; thus, safety was removed as a standalone goal. 7 For a complete list of the final goals, objectives, strategies, and measures see the LRTP Goals Matrix, **Page 8** in **Chapter 1**.

A1.2 LRTP PUBLIC COMMENT

IDOT sent an email on April 20, 2018 to a Listserv of transportation stakeholders identifying the LRTP was available for public review and comment on IDOT's website (http://www.idot.illinois.gov/transportation-system/transportation-management/planning/lrtp/index) through May 16, 2018. As part of the release of the LRTP, the email also included a call for projects for Statewide Planning and Research (SPR) Funds. SPR projects would establish a cooperative, continuous and comprehensive framework for making transportation investment decisions throughout the state, as well as implement a goal, strategy, or objective outlined within the LRTP or one of its associated plans. Applications for the SPR Funds were due on May 16, 2018, the same date as the conclusion of the public comment period for the LRTP.

Comments received on the LRTP were submitted through a Google Form. On the comment form, respondents were asked to select the stakeholder type that best described them: general public, municipality/township, county, state government, private freight provider, federal government, elected official, planning organization, or IDOT employee. All respondents identified with a type, with the majority (6 respondents, 50 percent) of stakeholders identifying themselves as 'general public'. The remaining respondents included the following types: 1-county, 1-elected official, 1-IDOT employee, 1-municipal/township, and 2-planning organization. No respondents identified themselves of the following types: state government, private freight provider, federal government, or other.

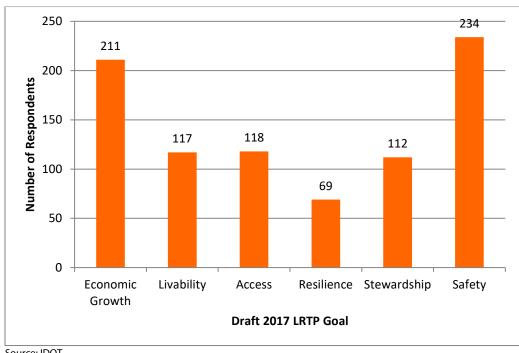
Respondents were also asked to provide comments on the LRTP. In summary, the respondents provided nearly 100 comments. These comments and IDOT's responses are summarized in the disposition of comments accompanying this appendix.

Table 1.1: Results of Overarching Goals Survey

GOAL AVERAGE RATING¹ Safety: Ensure the highest standards in safety across the 2.87 state's transportation system. **Economic Growth**: Improve Illinois' economy by providing 3.01 transportation infrastructure that allows for the efficient movement of people and goods. **Access:** Support all modes of transportation to improve accessibility and safety by improving connections between all 3.29 modes of transportation. **Livability:** Enhance quality of life across the state by ensuring that transportation investments advance local goals, provide 3.35 multimodal options and preserve the environment. **Stewardship:** Safeguard existing funding and increase 3.52 revenues to support system maintenance, modernization and strategic growth of Illinois' transportation system. **Resilience:** Proactively plan and invest in the state's 3.79 transportation system to ensure that our infrastructure is prepared to sustain extreme weather events.

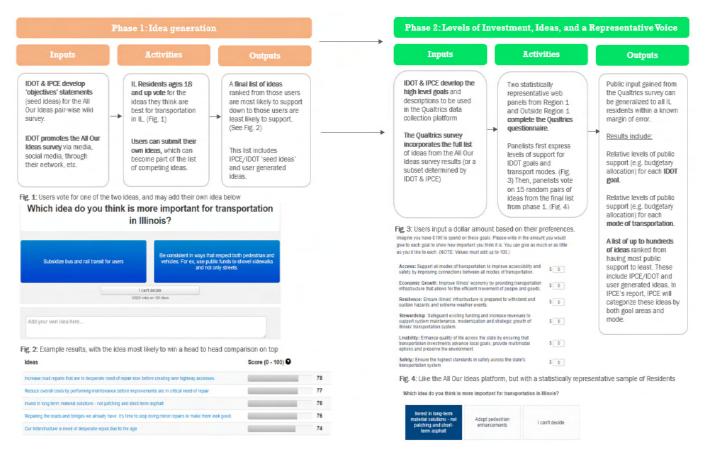
¹On a scale of 1 to 6, with 1 being the most important. Source: IDOT

Figure 1.1: Overarching Goals Survey Goal Rankings



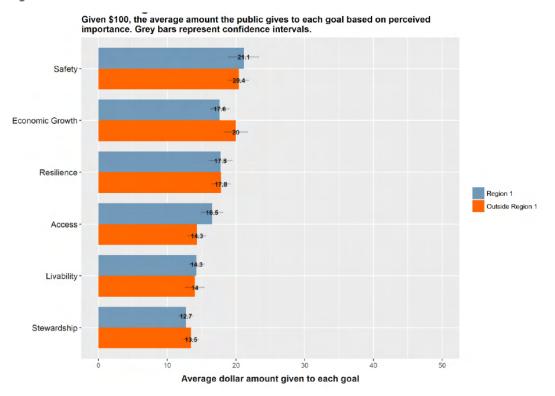
Source: IDOT

Figure 1.2: Overview of All Our Ideas Survey



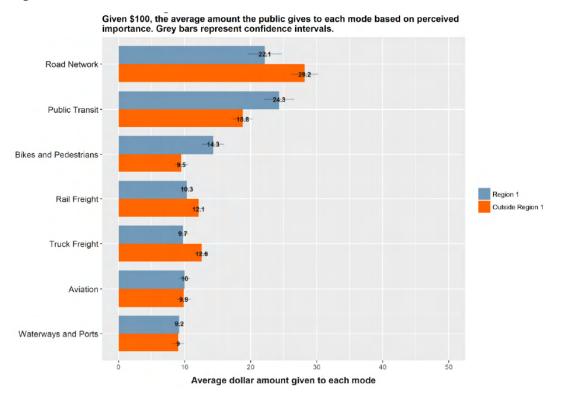
Source: A New Approach to Public Engagement: Capturing Better Ideas and Representative Priorities from the Public for the Illinois Department of Transportation, UIC, August 15, 2017.

Figure 1.3: The Illinois Public's Prioritization of IDOT Goals



Source: A New Approach to Public Engagement: Capturing Better Ideas and Representative Priorities from the Public for the Illinois Department of Transportation, UIC, August 15, 2017.

Figure 1.4: The Illinois Public's Prioritization of IDOT Modes



Source: A New Approach to Public Engagement: Capturing Better Ideas and Representative Priorities from the Public for the Illinois Department of Transportation, UIC, August 15, 2017.

Table 1.2: Top 10 List of All Our Ideas Prioritization of Transportation Ideas

Idea	Final Score ALL	Final Score REGION 1	Final Score OUTSIDE REGION 1	Public Idea?
Increase road repairs that are in desperate need of repair now before creating new highway accesses	85	83.3	88	YES
Invest in streets that enable safe and comfortable travel for users of all abilities and for all modes of transportation	84.6	86	80.8	NO
Increase the standards that roads are built with to ensure they last	83.1	87.2	76	YES
Invest in long-term material solutions - not patching and short-term asphalt	79.2	82.2	72.6	YES
Reduce overall costs by performing maintenance before improvements are in critical need of repair	78.8	78.5	76.4	NO
Better distribute projects throughout the state to maximize benefits to all regions	73.4	66	81.8	NO
Reduce vehicle damage due to deteriorated infrastructure	73	69.7	74	NO
Match transit mode to ridership demand, with all modes on the table including priority bus and light rail	72.8	74.8	69.7	YES
Invest in construction of major transit improvements	72.1	68.1	75.3	NO
Create more visionary long-term plan for transportation assets for all modes and works to ensure Illinois regains its place as USA's crossroad	70.9	68.6	73.8	YES

Source: A New Approach to Public Engagement: Capturing Better Ideas and Representative Priorities from the Public for the Illinois Department of Transportation, UIC, August 15, 2017.

NUMBER	COMMENT	RESPONSE
1	"Overall- in the multiple locations in the document where construction costs are rising at a higher rate than inflation is mentioned along with the reasons for this trend, nowhere does it mention the largest reason that our large local government has observed: State policies, bureaucratic procedures and review processes, and interpretation of ADA compliance measures continue to become more stringent and continue to raise engineering and construction costs astronomically. Local governments have found they can improve infrastructure at 50% of the costs and at no additional liability."	Language added to Stewardship chapter identifying that State requirements can delay projects and in turn add costs.
2	60/83 widening in Mundelein must be a priority along with at grade crossings for 60/83 and Diamond Lake Road. We are locked in a railroad triangle!	Language in the plan has not been changed as we do not refer to this project specifically. The plan does encourage strategic expansion of the system as needed. We have shared this comment with the appropriate district. The MYP outreach that occurs in the fall would be the appropriate public comment opportunity to provide this input.
3	Public transportation is badly needed along Weber Road in Will County. There are no bus stops along this stretch of road from Crest Hill up to Bolingbrook. There is an unused parking lot at Weber and 135th St. in Romeoville that would be a perfect Park & Ride location.	Language in the plan has not been changed as we do not refer to this project specifically. The plan does encourage strategic increased transit service. We have shared this comment with the appropriate district. The MYP outreach that occurs in the fall would be the appropriate public comment opportunity to provide this input.
4	I would like to urge my support for the proposed improvements to the Route 60/83 corridor through Mundelein. This is a project that I believe needs to proceed to accommodate the ever-increasing traffic flow through this location.	Language in the plan has not been changed as we do not refer to this project specifically. The plan does encourage strategic expansion of the system as needed. We have shared this comment with the appropriate district. The MYP outreach that occurs in the fall would be the appropriate public comment opportunity to provide this input.
5	I want to see 60/83 improved. I avoid going that way now an instead travel through local neighborhoods in Mundelein. When I go 60/83 either the traffic or trains, make it impossible to get anywhere on time. This road is long overdue for improvement.	Language in the plan has not been changed as we do not refer to this project specifically. The plan does encourage strategic expansion of the system as needed. We have shared this comment with the appropriate district. The MYP outreach that occurs in the fall would be the appropriate public comment opportunity to provide this input.
6	Cook County provided a letter in support of the LRTP. The following are excerpts of the supporting statements: The draft Long Range Transportation Plan (LRTP) is an excellent document and represents a significant development in IDOT's policy positions compared to previous plans. Broadly, the LRTP is consistent with Cook County's policy priorities, as described in the Connecting Cook County plan. It is encouraging that so many of LRTP's recommendations include meaningful specificity. The LRTP also identifies many technical needs — such as new data collection, regular reporting on key topics, and the development of a statewide traffic model — and calls for new information to be incorporated into the Performance Based Project Selection tool as it develops over time. The County supports competitive funding programs like the IDOT Economic Development Program and Illinois Competitive Freight Program, and appreciates that these programs receive explicit support in the LRTP. The County encourages IDOT to provide similar support in the LRTP for the Rail Freight Loan Program, which also plays an important role in catalyzing local economic development given its identification of a few rail improvement projects that would benefit from it. For both the Performance Based Project Selection tool and the competitive programs, the County urges IDOT to include a strong qualitative review in its evaluation of projects. While the LRTP includes many strengths, it does not set policy goals to improve administrative efficiency, particularly in IDOT's role as a regulator of local transportation agencies. Excessive delays in the receipt of grant funds or approval of documentation, including routine studies and agreements, impose significant time and budget costs on the delivery of projects. The County recommends that the LRTP go a step further to allow competent local agencies to pursue low-risk, commonplace engineering and construction work without IDOT approval. In essence, time is money, and an expedited process can translate in	Language added to Stewardship chapter identifying that State requirements can delay projects and in turn add costs.

NUMBER	COMMENT	RESPONSE
7	Widen 60/83 from Diamond Lake Road to Route 176. Mundelein needs at-grade crossings! They are completely locked in a railroad triangle.	This comment was not addressed as we do not refer to this project specifically. The plan does encourage strategic expansion of the system as needed. We have shared this comment with the appropriate district. The MYP outreach that occurs in the fall would be the appropriate public comment opportunity to provide this input.
8	Source for Total Air Operations in Illinois is Incorrect. The source and numbers referenced only include airports with air traffic control facilities	Language has been edited to clarify that these numbers reflect only airports with ATC
9	Calendar Year 2016 data became available/finalized in October 2017 for Passenger Enplanements, should be updated to reflect most recent numbers	Language and and table have been updated to reflect 2017 passenger enplanement data.
10	Pounds are typically used for air cargo numbers, and FAA data should be used to help validate or support BTS data/vice versa - Calendar Year 2016 data became available/finalized in October 2017 for air cargo	Language in the plan has not been changed as the existing language has been retained to provide consistency with the Illinois Freight Plan.
11	Federal Airport Improvement Program Status will likely change before publishing. Also, it mentions that IDOT anticipates receiving 160 million in FY17. We know what we received for 17 at this point and will know the 18 program by July of this year. This was recently written for the MYP – "Federal Aviation Administration reauthorization legislation, H.R. 658 (P.L. 112-095), the FAA Modernization and Reform Act of 2012, enacted on February 14, 2012 authorized appropriations to the FAA from Fiscal Year 2012 through Fiscal Year 2015. H.R.636 (P.L. 114-190), the FAA Extension, Safety, and Security Act of 2016 extended FAA's authority and funding through September 2017. Since October 1, 2017, FAA has operated under two short-term extensions of FAA's legislative authority: H.R.3823 (P.L. 115-63), the Disaster Tax Relief and Airport and Airway Extension Act of 2017, extended FAA's funding and authorities through March 31, 2018; and H.R. 1625 (P.L. 115-141), the Consolidated Appropriations Act, 2018, further extended FAA's funding and authority through September 30, 2018. IDOT expects a multiyear reauthorization completing Fiscal Year 2018. The reauthorization will ultimately affect Fiscal Year 2019 and for programmatic purposes assumes funding levels and requirements will remain very similar to prior authorizations. IDOT anticipates some minor programmatic shifting will occur due to overall language in the bill and due to the Fiscal Year 2018 Omnibus bill, which was signed into law by President Trump on March 23, and included a 1-billion-dollar boost in supplementary airport funding nationwide, from the general fund, rather than funds associated with the Airport and Airway Trust Fund. Regardless, projects utilizing federal funds will include: design, construction, safety, security, capacity enhancement, equipment, maintenance, noise mitigation, environmental, planning and land acquisition."	Language has been updated per the comment and FY'17 AIP funds received have been added.
12	The quote from Elliott Black is referencing FAA carrying out AIP. "State Block Grant Program puts a high priority on reliever airports" is not an entirely true statement, from the states perspective. Needs are certainly greater at these facilities, but there is no "higher" priority or flag for reliever airports. They are simply general aviation airports that typically have much greater need due to demands and use and as such compete better to garner funds.	Language has been removed per the comment.
13	CMAP provided a letter supporting the LRTP, and specifically outlined support for the following toopics within the LRTP: LRTP themes, Collaboration and coordination with metropolitan planning organizations (MPOs), Sustainable funding, Changing technology and data, Transit, Bicycle/pedestrian safety, Public private partnerships, Inclusive growth, Implementation.	The comment is generally supportive, so no changes made to the plan language.
14	The "transportation system update" references the fact that Illinois Aviation System Planning is needed, for a variety of reasons. How does this end up in the "update" but is not called out as a specific action item within the long range plan? It seems that those items called out within the long range plan relating to aviation (performance/action targets) would be enforced and carried out through an aviation system plan, just like all of the other "modal" plans like bike, rail, etc. I believe one of the goals of the long range plan should include regular and continual Aviation System Planning, especially since Federal funding is available.	Language in the plan has not been changed as the Mobility and Stewardship chapters do discuss the need to invest in airport improvements, to provide non-highway funding programs related to airports, and to provide better multimodal connectivity and intermodal connections with airports.
15	Ensure that "ports and waterways" is referred to as the Illinois Marine Transportation System (not Illinois maritime transportation system) when appropriate. I acknowledge that it's not always appropriate to refer to the "system", but constancy is important when available. Marine System instead of Maritime System is currently being utilized by the Feds, by the way.	Language has been changed to reflect Illinois Marine Transportation System.
16	Page 3 references that there are 350 active ports. I do not think this is accurate. There are approximately 350 terminal facilities which are defined differently than "ports". Illinois to my knowledge has approximately 18 public ports districts created by legislation not all are active.	Language stating 350 port districts has been removed.
17	Update the transportation system update section on waterways and ports to state that freight transportation related functions of the Illinois Marine Transportation System are now within IDOT.	Language has been added regarding IDOTs ability to provide freight planning and other planning and construction support to the Illinois Marine Transportation System.

NUMBER	COMMENT	RESPONSE
18	I don't think this statement on page 87 is entirely accurate and other areas within that section also reinforce the statement: "IDOT can provide technical and operating assistance to port districts in coordination with Illinois Department of Commerce and Economic Opportunity (DCEO). DCEO often works with port districts to facilitate economic development in the area. IDOT supports water freight movement by providing the roads to and from the water terminals. Private industry creates loading and unloading facilities on riverfront sites for their own use after obtaining approvals from the municipal jurisdiction, the Corps, and the IDNR. These facilities include docks, wharves, mooring sites, terminals, and other storage facilities, loading and unloading equipment, and other supportive structures". IDOT can in fact fund construction of various port projects, as well as fund planning efforts, without DCEO coordination, and with a variety of funds. It is my understanding that some (or all) planning efforts must be approved by the IDNR office of water resources, per IL statute.	Language has been added regarding IDOTs ability to provide freight planning and other planning and construction support to the Illinois Marine Transportation System.
19	From my understanding, IDOT is working toward creating a Marine Transportation System Plan that all stakeholders, including USACE and DOT-MARAD support (not necessarily monetarily) Similar to the aviation system plan comment, why is this not specifically identified within the long range plan as an action item to complete? The one action item relating to maritime data within the long range plan is technically a marine system planning component. I think the long range plan should specifically call out completing a marine transportation system plan.	Language in the plan has not been changed as the Mobility and Stewardship chapters do discuss the need to invest in waterway improvements, to provide non-highway funding programs related to waterways, and to provide better intermodal connections with waterways.
20	My hope is that the comments made on this plan are recorded and made available via the IDOT website I don't suggest they be included in the printed document or stand-a-lone digital format, but they should be easily accessible perhaps on the landing page.	Comments on the plan will be available in the Public Involvement Appendix of the plan which is posted on IDOTs website.
21	I see no consideration to reassess the performance of IDOT and the State to implement this plan in the near future. I believe that this action should be taken, in summary, as part of this specific plan, at its half-life. Which would be about the time IDOT and the State start work on the next Long Range Plan.	The plan identifies several performance measures which will be tracked by IDOT and used to assess progress being made towards the goals and objectives identified by this plan.
22	Suggest changing "do not receive the same level of fiscal attention" to clearer phrasing. Note: Aren't most Federal transportation funds (STP) flexible and allowed to be used on any mode? Is the issue prioritization among modes? Transit, bike and pedestrian projects may offer more ROI/better corridor throughput than roadway projects for autos.	Change made as requested.
23	Recommend change: "based on need and anticipated outcomes of selected alternative"	Change made as requested.
24	"Some of the negative impacts could include vehicle parking, increased VMT"	Change made as requested.
25	Consider tweaking this phrasing. Maybe, "support coordinated land use and transportation planning"	Language in the plan has not been changed because it is an objective of the plan which is repeated throughout the plan document and other materials.
26	What does this mean? Market services more? Increase frequency? Fund? Upgrade other routes?	No clarification was provided. It means all of these items as well as more. It is an overall statement to support the Illinois Passenger rail program.
27	Higher speed rail is in the final phase May be risky to overuse "high speed rail" when max speed is 110 mph. CA dedicated corridor is true high speed rail.	Change made as requested.
28	ensure there are adequate airport services provided to new/ growing population and employment centers	Language in the plan has not been changed as the desire is to represent all, not just new/growing.
29	Please include passenger rail transportation stakeholder groups IDOT is involved with – or should be	Change made as requested.
30	Is there a threshold for IDOT support? If population or enplanements decreases past a certain threshold should support be discontinued?	There is a threshold for federal support. If that threshold is not met, IDOT support is considered on a case by case basis.
31	Is this related to AVs? Not mentioned under actions/strategies	This fits into 4.1.
32	This is a great tool! Recommend establishing a policy that I-LAST scoring be done at the beginning of each project, which provides an opportunity to identify additional elements that may be added to the project to boost its livability score.	Added recommending establishing a policy that I-LAST scoring be done at the beginning of each project under an implementation item.
33	Please add some passenger groups as examples; what about Bike Illinois? IL Transit Association?	Change made as requested.
34	How about: Number of events conducted in low income or predominantly non-white communities? Conduct them in partnership with community organizations to get the word out.	Number of opportunities is included as a performance measure.

NUMBER	COMMENT	RESPONSE
35	Required use of I-LAST in design would be one option. How else can IDOT institutionalize sustainability? Should have a PM for each strategy	This was added as an implementation item.
36	Consider requiring this for any project receiving Federal or State funding (since IDOT is held accountable for reaching state targets, they need to ensure every dollar is working toward achieving them)	At this point in time, IDOT is in the best position to encouraging performance based project selection.
37	Need to incorporate bike/ped in here somewhere with respect to sustainable transportation planning. And ensure the IDOT bike/ped planner is one of the partners	Language in the plan has not been changed. Bike/Ped planner is within the Office of Planning and Programming. Transit/Active Transportation is indicated as an effective form of the transportation system in the Mobility Chapter and its sustainability is discussed in the Transportation System Update appendix.
38	"Want to confirm that the intent here is to make non-highway project more competitive with highway projects when using the PBPS tool by adding measures of livability. This is great. Please consider bike/ped projects for core transportation funding and not only segregated into TAP funding."	Confirmed.
39	Suggest: Improve transit service and riders experiences (ridership is the result – you need to improve service to increase ridership)	IDOT agrees, but finds ridership easier to track and representative of improved transit service.
40	IDOT should develop a comprehensive transportation demand management program including policies, incentives, etc. This is a major deficiency in the greater Chicago region	A similar strategy is included in the Mobility Chapter under objective 3. It is strategy 3.8.
41	Suggest IDOT should consider developing statewide One-Click mobility management program that eases information access for users.	IDOT agrees however finds the first step to be identifying and tracking the number of mobility management projects.
42	We need to get beyond taking a Title VI view of only preventing negative impacts to disadvantaged populations. We need to proactively seek provide benefits to these populations. Please add equity criteria to the Performance Based Project Selection Tool to prioritize investments to these populations.	Change made as requested.
43	Suggest that IDOT should conduct a comprehensive equity analysis of outcomes for each MYP and for the system as a whole to evaluate how well its investments are improving mobility for low income and non-white populations.	Language in the plan has not been changed as this as a next step.
44	Address TIMS in a separate strategy	Language in the plan has not been changed as IDOT believes the strategy is in the appropriate section.
45	Does this mean increase rail to reduce overall transportation energy consumption? Does this mean reduce emissions of the rail sector?	Change made as requested.
46	Why is construction of energy efficient facilities the strategy – why not retrofitting existing facilities? Our state is not experiencing population growth so would not think we need to be building lots of new facilities	Change made as requested.
47	Strongly recommend that the PM is development of a comprehensive TDM plan – IL desperately needs this – can resurrect and update the one developed by MPC a few years ago that IDOT was very close to procuring. The plan will identify opportunities for enhancement and collaboration. The currently proposed measure of number of TDM efforts will be extremely difficult to measure statewide and not useful if we have no plan to create and incentivize programs.	IDOT agrees however the comment is not addressed because IDOT believe the first step needs to be identifying and tracking the number of TDM efforts.
48	Add implementation element of TDM study – need to have something related to TDM. Could also measure VMT growth/reduction per capita or similar as a measure of success of TDM programs	Language has not been changed as IDOT believes tracking this data is the first step.
49	Please add an implementation element for equity metric in Performance Based Project Selection tool	Change made as requested.
50	"Recommend retooling the first 3 paragraphs. P.1 Change "time in traffic congestion" to "travel time increases" p.3 – change "access points" to "destinations" change "throughout multimodal connections" to "often using multiple modes"	Change made as requested.
51	Recommend deletion – diminishes the importance of the point and that in every life span there are periods when one cannot drive (under age 16) and for many in older age, plus many people deal with family members who cannot drive, and we must consider the disability community. Virtually everyone faces this issue at some point.	Change made as requested.
52	Meaning is unclear for: "complementary programs are usually unsupported"; is the range of stakeholder in rural areas more than in urban areas?	Change made as requested.

NUMBER	COMMENT	RESPONSE
53	Need to acknowledge that AVs are still cars and that policies regarding their use will impact whether their introduction results in huge increases in VMT or reduces congestion.	Change made as requested.
54	Add reference to IDOT's role in developing and sharing information about travel across modes?	Change made as requested.
55	Change to later date or link to document if it's done.	Change made as requested.
56	Please clarify what is meant here	Change made as requested.
57	Suggest noting that that transit is part of the consideration for alternatives when upgrades are considered for major corridors where IDOT is leading the planning	Change made as requested.
58	What types of projects are these? Can you provide an example?	Change made as requested.
59	Include more recent data	More recent data is not available.
60	"Need to note that Amtrak funds state-supported Amtrak services – there is currently no mention of it now in the strategies. Maybe there should be an intercity passenger rail section? IDOT has a large role. Be clearer about the investments in railroad improvements – that they are going toward the first "higher speed rail" for passengers in IL of up to 110mph."	This information is included in the Transportation System Update appendix
61	Have invested \$1.4 B and are seeking \$3B more (approx.) to complete the 70 projects	
62	"Assessing the effectiveness of the current system in providing needed mobility"	Change made as requested.
63	Recommend deletion or major rewording.	Change made as requested.
64	Why is this a good measure? Why not the throughput of intermodal facilities? More is not necessarily better – the point is that they are effective and efficient	IDOT worked to select measures that have consistent, available data today. As new and better data becomes available, IDOT plans to update the tool/process to incorporate better measures.
65	This is confusing. Is there no standard? Or get rid of "changing"	Change made as requested.
66	Add an implementation step for the dashboard – this is a good goal!	Change made as requested.
67	Need to add "potential improvements" - aren't you assessing the cost of the potential improvements?	IDOT is working to assess the cost of delay.
68	Skipping a stepneed to identify potential improvements and costs. Need to be careful of setting up IDOT to be just chasing sprawl. What about adequate services in historically disinvested areas?	IDOT does not preclude this.
69	Be consistent in calling this "transit signal priority"	Change made as requested.
70	Add "person" before throughput. This is a critical distinction when talking multimodalism.	Change made as requested.
71	Please add: "pedestrian and bicycle facilities" to this list	Change made as requested.
72	Please define this and how it differs from projects that include multimodal transportation	The intent is to specific access to multimodal choices.
73	Please do not use the term "alternative transportation" in this document. Please use bicycle/pedestrian/transit.	IDOT prefers alternative transportation because of the new technologies being researched/developed currently. I.e. Hyperloop, Autonomous/Connected vehicles.
74	Please change to: "providing information on transit routes and schedules will improve transit riders' experience and make riding transit a more appealing choice"	Change made as requested.
75	Change to: Number of transit signal priority measures implemented	Change made as requested.

NUMBER	COMMENT	RESPONSE
76	Please add new PM for # of Complete Streets projects completed. Also should include evaluation as part of Complete Streets efforts to measure person throughput, speeds, and safety performance	Change made as requested.
77	Previously it was noted that all new capacity or operations projects would use this process. So is this necessary? Want to strongly denote that it's not optional to use this new process.	Change made as requested.
78	Please add Update of Complete Streets policies in IDOT guidance	Complete Streets policies are being included in IDOT guidance.
79	Suggest that safety be a separate objective and not bundled with efficiency. This plan has very little reference to safety and should have at least one objective dedicated to it. Then separate out actions 2.4, 3.5 and 3.6 as strategies for a separate safety objective.	Safety is imbedded in all IDOT does.
80	Please make sure to highlight that proven effective safety countermeasures must be used to accomplish substantive safety. Speed must also be managed to improve safety.	Change made as requested.
81	Please clarify. VMT is flat and transit ridership is down, and population is down for past few years. Please provide a reference here on what demand is referred to. There is some confusion over whether this refers to current or predicted travel demand. Recommend this strategy address not only congestion but person throughput. Some congestion will always exist – but what can be improved is person thoughput on corridors by using high capacity modes of transit. Additionally it is important to recognize the role of bike/ped infrastructure in addressing congestion by providing nonmotorized alternatives for shorter trips along corridors.	Change made as requested.
82	Suggest adding new measure of person throughput on major routes.	Federally required performance measures for congestion are related to person through-put.
83	May want to check how this content and that of ON TO 2050 draft document align – there is quite a bit on infrastructure resiliency	There were no conflicting objectives/strategies/etc.
84	"Suggest adding more content about stormwater management by integrating significant, innovative green infrastructure in IDOT projects. What about techniques such as those in the NACTO Urban Street Stormwater Guide? Recommend references like that?"	While all great suggestions, the LRTP is a policy document and content like this is better implemented through IDOT's Design and Environment Manual.
85	Potentially add a PM be # of green infrastructure installations, potentially from a toolbox provided by IDOT? Or # of green stormwater management installations?	While all great suggestions, the LRTP is a policy document and content like this is better implemented through IDOT's Bureau of Design and Environment (BDE) Manual.
86	Suggest adding – high ROI investments that deliver desired outcomes. Suggest the focus is on the outcomes, not the projects themselves.	Language in the plan has not been changed as many of the goals and objectives in the plan are aimed at outcomes.
87	Strongly suggest adding an evaluation component: conduct analysis of outcomes for previous major roadway projects including on safety and person throughput to identify effective projects and inform future investments	Language in the plan has not been changed as performance measures are identified within each chapter of the plan and IDOT is using a performance -based project selection tool to evaluate projects that may be part of future investments.
88	Encourage emphasis not on only building projects but measuring the outcomes of the projects – can PMs but more like increased person throughput, increased access at project locations?	Language in the plan has not been changed as performance measures are identified within each chapter of the plan.
89	Suggest adding outcomes to these dashboards – what did projects deliver for transportation system users?	Change made as requested.
90	"Should this be: Support Innovative project funding/financing/delivery opportunities?"	Language in the plan has not been changed as "innovative" includes funding/financing/delivery opportunities.

ILLINOIS DEPARTMENT OF TRANSPORTATION





ATTACHMENT 1.1
A New Approach to Public Engagement: Capturing Better Ideas and Representative Priorities from the Public for the Illinois Department of Transportation



A New Approach to Public Engagement:

Capturing Better Ideas and Representative Priorities from the Public for the Illinois Department of Transportation

Matt E Sweeney
Roy Rothschild
Joseph Hoereth, Ph.D.
Project Manager: Robert Ginsburg, Ph.D.

August 15th, 2017



Institute for Policy and Civic Engagement

Urban Transportation Center

Executive Summary

Introduction

In recent years, the Illinois Department of Transportation (IDOT) has devoted time and resources to improving its public engagement program and the quantity and quality of the feedback and ideas it receives from residents of Illinois. In 2016, as part of these ongoing efforts, IDOT commissioned the Institute for Policy and Civic Engagement (IPCE) and the Urban Transportation Center (UTC), both of the University of Illinois at Chicago (UIC), to study effective public engagement strategies for statewide Departments of Transportation and create the report: *Recommendations to Enhance Quality Engagement*.¹

Building on the 2016 report, IPCE conducted a statewide engagement process for IDOT in early 2017. This engagement process utilized an innovative online approach to supplement IDOT's traditional public engagement methods. The unique strength of this multi-phased process was its ability to capture high quality ideas from the public *and* statistically representative public priorities – it was both open and representative. The findings of this report will inform the development of IDOT's 2017 Long-Range Transportation Plan (LRTP).

Methodology

IPCE's public engagement process consisted of two phases. Both phases included pairwise comparisons, a process by which residents were able to choose between two ideas or select an "I can't decide option" in response to the prompt: "Which idea do you think is more important for transportation in Illinois?"

Phase 1: public idea generation. This phase consisted of a pairwise comparison wiki survey, hosted by *All Our Ideas*, which allowed the public to submit an original idea to be included in the bank of ideas. All residents of Illinois were able to participate in this phase and the link to the survey was publicized by IDOT.

Phase 2: representative public prioritization. This phase repeated the pairwise comparison process using ideas generated in Phase 1, but used representative sampling techniques to identify two groups of 500 Illinois residents each in IDOT Region 1 and outside of IDOT Region 1. In this phase, respondents also indicated the percentage of IDOT's budget they would invest in competing transportation goals and modes. IPCE partnered with YouGov for this phase of data collection due to their unique, empirically proven method of capturing representative public input.

2

¹ Institute for Policy and Civic Engagement, "Recommendations to the Illinois Department of Transportation to Enhance Quality Public Engagement," June 2016. https://utc.uic.edu/research/recommendations-to-the-illinois-department-of-transportation-to-enhance-quality-public-engagement/. Accessed July 30, 2017.

² https://www.allourideas.org/IDOTideas

This multi-phased process allowed for input from a wide range of the involved public in Phase 1, which informed the design of the Phase 2 survey. Given that a representative sample of Illinois residents took the Phase 2 survey, findings are generalizable to the entire state.

Section 1: Public Prioritization of IDOT Goals

Illinois residents were asked to complete a budget allocation exercise related to IDOT's six overarching goals for the 2017 LRTP: Safety, Economic Growth, Access, Livability, Stewardship, and Resilience. When asked to distribute \$100 across the goal areas (Figure 4), residents prioritize Safety (\$21) as most important based on the average amount given to that goal area. Economic Growth (\$19) and Resilience (\$18) follow next. In Region 1, Safety is prioritized more than Economic Growth, while for Outside Region 1, Safety and Economic Growth are more equally prioritized. Moreover, Region 1 residents place greater priority on Access compared to residents living Outside Region 1, but place comparatively less priority on Stewardship.

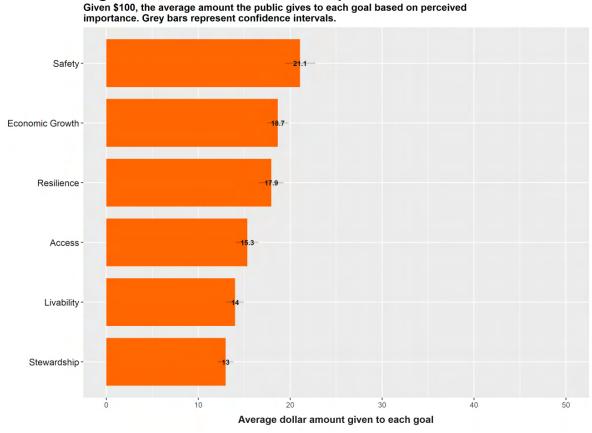


Fig. 4: The Illinois Public's Transportation Priorities

Section 2: Public Prioritization of IDOT Modes

With regard to the budget allocation exercise related to transportation modes (Figure 10), the public overwhelmingly prioritizes Road Network (\$25) and Public Transit (\$22) as most important. For Region 1, Public Transit is of higher priority, while for Outside Region 1, Road Network is a higher priority. Bikes and Pedestrians is the third highest priority for Region 1;

however, for Outside Region 1, Bikes and Pedestrians is a lower priority and instead Truck Freight and Rail Freight are of next highest priority.

Fig. 10: The Illinois Public's Transportation Priorities

Table 7³ Final **Final Score** Final Score ALL IL Score OUTSIDE **Public** Residents Top 10 Ideas **REGION 1 REGION 1** Idea? Increase road repairs that are in desperate need of repair 85 83.3 88 Yes now before creating new highway accesses Invest in streets that enable safe and comfortable travel for 84.6 86 80.8 No users of all abilities and for all modes of transportation

This section includes an analysis of the ideas included in and voted on in the Phase 2 pairwise comparisons. Each idea was included in roughly 200 head-to-head match-ups. Ideas related to road networks and repairs were most frequently in the top 10 highest-ranked ideas for all residents statewide (Table 7) as well as for residents from both regions. This was true for both

Average dollar amount given to each mode

40

Section 3: Public Prioritization of Transportation Ideas

IDOT seed ideas and ideas submitted by the public.

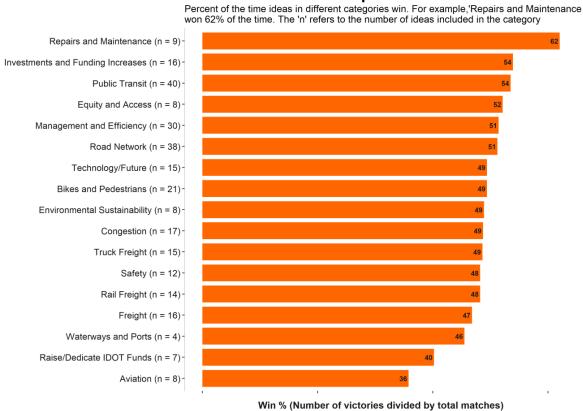
4

³ See Appendix II for the full list of ideas

Increase the standards that roads are built with to ensure they last	83.1	87.2	76	Yes
Invest in long-term material solutions - not patching and short-term asphalt	79.2	82.2	72.6	Yes
Reduce overall costs by performing maintenance before improvements are in critical need of repair	78.8	78.5	76.4	No
Better distribute projects throughout the state to maximize benefits to all regions	73.4	66	81.8	No
Reduce vehicle damage due to deteriorated infrastructure	73	69.7	74	No
Match transit mode to ridership demand, with all modes on the table including priority bus and light rail	72.8	74.8	69.7	Yes
Invest in construction of major transit improvements	72.1	68.1	75.3	No
Create more visionary long-term plan for transportation assets for all modes and works to ensure Illinois regains its place as USA's crossroad	70.9	68.6	73.8	Yes

Finally, in this section, IPCE utilized two types of thematic categories: IDOT's modes and an IPCE-created group similar to IDOT's Goals, but more comprehensive and inclusive of the public's contributed responses. Using these categories, ideas categorized as 'Repairs and Maintenance' had the highest win percentage by a substantial margin (Figure 16). The following categories also had win percentages over 50%: Investments and Funding Increases, Public Transit, Equity and Access, Management and Efficiency, and Road Network.

Fig. 16: The Types of Transporation Ideas Illinois Residents Think are Important



In regard to ideas with the greatest disparity in rankings between the regions (Table 5), Outside Region 1 residents were more likely to prioritize ideas related to Rural Highways, Roadway Freight, Safety, and "IDOT's Ability to Advocate for Sound Transportation Policy and Funding," the idea with the greatest rank disparity. Region 1 residents, on the contrary, were more likely to prioritize ideas related to public transit (buses, trains and rail) and bikes and pedestrians.

Table 5*

Top Ideas by Difference in Rank between Regions	Absolute RANK Difference	Region 1 RANK	Outside Region 1 RANK	Public Idea?
Enhance IDOT's ability to advocate for sound transportation policy and funding	93	114	21	No
Improve road safety by making roads more freight-friendly	77	107	30	No
Improve highway access for rural populations	63	83	20	No
Charge trucks a toll on all expressways if they operate during AM and PM peak hours as a way to reduce congestion	54	60	114	Yes
Make sure new or improved roads don't interfere with residents' way of life	52	67	15	Yes
Support sustainable practices in the delivery of public transportation	49	72	23	No
Safety for cyclists and pedestrians where there are gaps in local networks and/or dangerous conditions	47	33	80	Yes
Make IDOT data publicly available and easy to share	46	75	29	No
Prioritize multiuse trails for walking and biking for transportation and recreation across the state	46	63	109	Yes
Identify gaps in transit service	45	20	65	No

^{*}The ideas highlighted in orange indicate that residents from outside Region 1 ranked the idea HIGHER than Region 1.

Conclusion

In its efforts to update and improve its public engagement processes, IDOT commissioned IPCE to create this report utilizing an innovative online survey design. This new methodology for obtaining robust and detailed feedback from Illinois residents led to a wealth of data for analysis and incorporation into the 2017 LRTP. Additionally, this process has exciting potential applications for future IDOT public outreach efforts, both at the statewide and local levels. For example, for the current project, IPCE had to remove ideas related to specific locations and projects in order to make each idea applicable to all IL residents. On the local level, however, those insightful, publicly-submitted ideas would not only be allowed, but encouraged.

Acknowledgements

Thank you to the Illinois Department of Transportation for investing in the improvement of public engagement and for their support of innovative engagement methods.

We gratefully acknowledge Professor Matthew Salganik and the All Our Ideas research group for developing All Our Ideas and for making it open and free to all. We hope that this study contributes in some way to your excellent work.

For their support in drafting and editing this report, thanks to Katie James, Research Specialist, and Callie Silver, Research Assistant, at the Institute for Policy and Civic Engagement.

Lastly, thank you to all members of the public who participated in the engagement process by taking part in the All Our Ideas wiki survey, sharing your ideas, and getting others involved. Your contributions form the foundation of this study and we are deeply grateful to you.

Index

Introduction	9
About the Research Team	9
About the Long-Range Transportation Plan	10
Research Questions	11
Methodology	11
Section 1: Public Prioritization of IDOT Goals	18
All Illinois Resident Priorities	18
Resident Priorities by Regions	20
Summary	23
Section 2: Public Prioritization of IDOT Modes	24
All Illinois Resident Priorities	24
Resident Priorities by Regions	26
Summary	29
Section 3: Public Prioritization of Transportation Ideas	30
All Illinois Resident Idea Prioritization	31
Resident Idea Prioritization by Regions	32
Priorities Based on Ideas Categorization	35
Summary	37
Conclusion	38
Annendices	40

Introduction

The Illinois transportation network is a rightful source of pride for residents of the Prairie State. Illinois boasts more than 100 public-use aviation landing facilities, one of the nation's largest freight rail systems, nearly 150,000 miles of highways, streets, and roads, and tens of thousands of bridges. The state also counts dozens of public transportation systems, more than a thousand miles of navigable waterways, and hundreds of miles of bicycle and pedestrian paths.

Though this large, diverse transportation system plays an important role in supporting both Illinoisans' quality of life and the state's economic competitiveness, it also complicates efforts to effectively plan for future development and maintenance. As part of its mission to provide safe, reliable, and sustainable transportation options for nearly 13 million residents, the Illinois Department of Transportation (IDOT) must balance competing needs, priorities, and visions for the future. The agency's task is further complicated by the state's wide spectrum of rural and urban environments.

In order to assist IDOT in effectively gauging public priorities, the University of Illinois at Chicago's Institute for Policy and Civic Engagement (IPCE) conducted a statewide public engagement process in early 2017. The findings of that process will inform the development of IDOT's 2017 Long-Range Transportation Plan (LRTP).

IPCE's public engagement process was designed to engage more Illinoisans and improve the quality of public input, while also obtaining a final set of findings that is statistically representative of the statewide population. Researchers accomplished these goals by conducting engagement in separate phases: first, by allowing all interested residents to submit feedback and respond to others' suggestions, and second, by convening a representative sample to complete an online survey and provide responses to statewide transportation goals, modal prioritization, and specific ideas about transportation. The unique strength of this multiphased process was its ability to capture high quality ideas from the public *and* statistically representative public priorities – it was both open and representative.

This report summarizes the findings of the aforementioned engagement process. It is intended to provide additional context for IDOT personnel as they attempt to draft an LRTP that represents the needs and concerns of the citizens they serve.

About the Research Team

Institute for Policy and Civic Engagement (IPCE): Based at the University of Illinois at Chicago, IPCE focuses on transforming democracy by creating a more fully engaged citizenry with more effective leaders. As a catalyst for learning and action, the Institute creates opportunities for scholars, concerned citizens, students, and government officials to actively participate in social discourse, research, and educational programs on policy issues and social trends.

Urban Transportation Center (UTC): The Urban Transportation Center (UTC) at the University of Illinois at Chicago is dedicated to conducting research, inspiring education and providing technical assistance on urban transportation planning, policy, operations and management. Since 1979, the UTC has delivered innovative research and education to solve real-world transportation problems. The strategic goal of UTC transportation research is to promote livable communities throughout the nation.

About the Long-Range Transportation Plan

IDOT is federally mandated to prepare an LRTP every five years in accordance with 23 USC 135(f), 49 USC 5304(f), and 23 CFR 450-210.⁴ State law also requires the creation of an LRTP, as outlined in Public Act 097-0032.⁵ The Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) expect these plans to inform the development and implementation of Illinois' multimodal transportation system while also identifying how the network will meet the state's economic, transportation, development, and sustainability goals. Federal requirements dictate the plan account for a 20+ year period.

Illinois' most recent LRTP was completed in 2012. That document – *Illinois State Transportation Plan: Transforming Transportation for Tomorrow* – focuses on a wide range of local transportation goals and challenges confronting the state. IDOT sought public input through traditional venues, including telephone, online, and paper surveys, as well as at public meetings. Information about public involvement in the plan can be found in IDOT's supplemental report to the 2012 LRTP entitled *Agency Coordination and Public Involvement*. ⁶

In anticipation of its 2017 LRTP, IDOT prioritized improving its public outreach process. In 2016, IPCE and UTC produced a report for IDOT entitled *Recommendations to Enhance Quality Engagement*. As the report describes, IDOT commissioned the report in order to "study ways in which it could improve and enhance its public engagement practices, especially those involving underserved or disadvantaged populations. The agency wished to increase the quality and quantity of public feedback received and extend its reach into disadvantaged communities."⁷

This report is a continuation of last year's work, building on its suggestions and expanding IDOT's public outreach methods using an innovative web survey platform.

⁴ Long-Range Statewide Transportation Plan. Federal Transit Administration. https://www.transit.dot.gov/regulations-and-guidance/transportation-planning/long-range-statewide-transportation-plan. Accessed May 11, 2017.

⁵ Illinois General Assembly, Public Act 097-0032.

http://www.ilga.gov/legislation/publicacts/fulltext.asp?Name=097-0032. Accessed on July 30, 2017.

⁶ Illinois Department of Transportation, "Statewide Transportation Plan: Agency Coordination and Public Involvement," Dec. 2012.

http://www.illinoistransportationplan.org/pdfs/final_report/08_agency_coordination.pdf. Accessed July 30, 2017.

This institute for Policy and Civic Engagement, "Recommendations to the Illinois Department of Transportation to Enhance Quality Public Engagement," June 2016. https://utc.uic.edu/research/recommendations-to-the-illinois-department-of-transportation-to-enhance-quality-public-engagement/. Accessed July 30, 2017.

Research Questions

The purpose of this report is to generate high quality and representative input from the public regarding priorities and ideas for the transportation network in Illinois. In order to do so, this study sought to answer three main questions:

- 1. To what extent does the public prioritize the transportation goals put forth in the LRTP?
- 2. To what extent does the public prioritize the transportation modes included in the LRTP?
- 3. What specific ideas does the public feel are most important for transportation in Illinois?

Methodology

In this section, IPCE seeks to be as explicit and transparent as possible regarding the methodologies employed in the current study. This is in keeping with American Association for Public Opinion Research (AAPOR) recommendations, which emphasize that "transparency is essential" and "a clear description of methods and assumptions is essential for understanding the usefulness of the estimates," especially when working with a non-probability sample where respondents are self-selected and not randomly chosen to participate.⁸

The two primary phases of the engagement process designed by IPCE:

Phase 1: Public idea generation

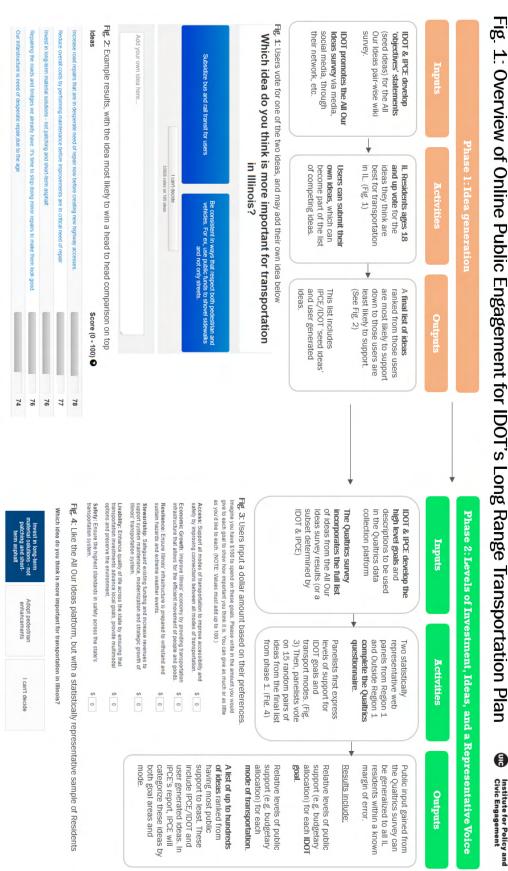
Phase 2: Representative public prioritization

IPCE's multi-phase study enabled researchers to obtain information that satisfied goals of both openness and generalizability. A wide range of the involved public was reached through the pairwise comparison wiki survey in Phase 1, while the online survey in Phase 2 was completed by a representative sample of the population, allowing for findings to be generalized to the entire population of Illinois. The research process is depicted in the Figure 1 on the next page:

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⁸ Baker and Brick, et. al., "Report of the AAPOR Task Force on Non-Probability Sampling," June 2013. https://www.aapor.org/AAPOR Main/media/MainSiteFiles/NPS_TF_Report_Final_7_revised_FNL_6_22_13.pdf. Accessed on July 30, 2017.

Fig. 1: Overview of Online Public Engagement for IDOT's Long Range Transportation Plan



Phase 1: Public idea generation

This initial phase involved launching a publicly accessible pairwise comparison wiki survey prompting Illinois residents to answer the question: "Which idea do you think is more important for transportation in Illinois?" (Figure 2). Researchers utilized an open-source wiki survey platform called *All Our Ideas*⁹ for this phase, due to its unique features not found in traditional survey research.

As the creators of the *All Our Ideas* platform explain, wiki surveys are inspired by online information aggregation systems such as Wikipedia as well as traditional survey research. ¹⁰ Such tools function by presenting users with two randomly selected pieces of information (in this case, project and/or priority ideas for transportation in Illinois) and allowing them to select a preferred response, indicate they cannot decide between the two, or offer an alternative. User submissions that meet a set of researcher-specified criteria (see Appendix V) are then added to the pool of ideas from which the *All Our Ideas* algorithm selects to present to users.

Which idea do you think is more important for transportation in Illinois?

Be consistent in ways that respect both pedestrian and vehicles. For ex, use public funds to shovel sidewalks and not only streets.

Leant decide
33926 votes on 185 ideas

The wiki survey format has numerous characteristics that are valuable for collecting public input, which the *All Our Ideas* creators enumerate in their article *Wiki Surveys: Open and Quantifiable Social Data Collection*.¹¹ It allows for "greediness" in that it permits users to contribute as much (or as little) information as they would like. It is "collaborative," as many of the best ideas are submitted by users and their distinctive phrasings can reveal the public's preferences. It is also "adaptive," as it is "continually optimized to elicit the most useful information, given what is already known." Finally, by randomly generating pairs that users are not able to control, the pairwise comparison format prevents users from gaming or

⁹ http://allourideas.org/

¹⁰ Salganik MJ, Levy KEC, "Wiki Surveys: Open and Quantifiable Social Data Collection," *PLoS ONE* 10(5): e0123483, 2015. https://doi.org/10.1371/journal.pone.0123483. Accessed July 30, 2017. 11 Ibid, p. 2-4.

manipulating the results, while also preventing collective effects where users become increasingly more likely to vote for only the top-rated ideas. Following the conclusion of the voting process, researchers are able to generate a ranked list that identifies which items are mostly likely to be preferred by the public.

On the day IPCE launched its public-facing *All Our Ideas* survey, it contained 64 "seed" ideas that IDOT and IPCE developed, many of which were based on the *Transforming Transportation for Tomorrow* 2012 LRTP. The wiki survey opened on February 8, 2017 and closed on March 8, 2017. During this time, there were 823 unique visitors to *allourideas.org/IDOTideas*, of which 698 were from Illinois. Seventy percent of the participating Illinoisans were from the Chicago metro area. In total, visitors voted 36,353 times and eight of the top ten ideas were user-submitted. Seventy percent of the participating Illinoisans were user-submitted.

It is important to note that participants in this phase were not representative of the overall Illinois population. In fact, because the survey was publicized by IDOT staff through existing channels of communication, it is likely that a large percentage of users were disproportionately aware of or otherwise involved in IDOT's work. Still, the results generated in this phase provided a foundation for the second phase of engagement that sought to build on Phase 1 results, while generating a clearer picture of the transportation concerns of the broader Illinois population.

Transition to Phase 2

In total, 322 ideas were submitted by users in Phase 1, though only 121 were included in the *All Our Ideas* survey for others to vote for or against.¹⁴ In preparation of Phase 2, IPCE and IDOT created the final idea dataset by removing duplicates, comments, specific locations, and very low-ranking ideas. The final dataset was comprised of 134 competing ideas, 63 of which were IDOT seed ideas and 71 of which were submitted by users in Phase 1.

As IPCE deliberated on how to proceed with Phase 2, selecting the appropriate research firm became a primary focus. One concern was the quality of non-probability surveys. The authors of an AAPOR study of 60 non-probability surveys in 2013 found that these surveys varied widely in efficacy and accuracy. Though the authors raise numerous concerns about non-probability surveys, they also note that it is difficult to generalize about non-probability surveys, as there is a wide variety of methodologies rather than one simple non-probability framework. The authors do maintain, however, that technology is constantly evolving and improving and that some online vendors perform substantially better than others as a result of their methodology.

¹² Google.com. (2017). *Features – Google Analytics*. Available at: http://www.google.com/analytics/features/Accessed Mar. 10, 2017.

¹³ To see the full list of results from phase 1, see https://www.allourideas.org/IDOTideas/results

¹⁴ The number 121 is a better indicator of the actual number of ideas submitted. Of the ideas NOT included, the main reasons for not being included were: 108 were actually comments (often about one of the ideas they saw or about the survey itself); 60 were not applicable to all IL residents (i.e. they were too specific); and 32 ideas were duplicates. See appendix V for a complete breakdown.

With these concerns in mind, IPCE researched online vendors of non-probability panels with the primary goals of the study being high-quality, cost-effective, and generalizable to the entire population of Illinois. An invaluable resource during this effort was a Pew Research Center report entitled, "Evaluating Online Nonprobability Studies." This study provided some similar observations to the AAPOR study (for example, non-probability studies are not monolithic and vary in quality), while also highlighting more specific insights, such as:

A representative demographic profile does not predict accuracy. For the most part, a sample's unweighted demographic profile was not a strong predictor of the accuracy of weighted survey estimates...The implication is that what matters is that the respondents in each demographic category are reflective of their counterparts in the target population. It does not do much good to get the marginal distribution of Hispanics correct if the surveyed Hispanics are systematically different from Hispanics in the larger population.

In other words, online vendors must do more than simply fill demographic quotas. The Pew report also ran a quantitative experiment to compare the performance of eight non-probability samples. One vendor consistently came out ahead of all other non-probability samples in these tests: YouGov (Sample I). It even outperformed Pew's in-house probability sample, ATP, by multiple metrics. Due to its sophisticated methodology and exceptional performance, IPCE decided to work with YouGov for Phase 2.

YouGov's multi-staged sampling method is called *sample matching*.¹⁶ First, YouGov draws a *target sample* from the existing target population. Then, in the second stage, YouGov creates a *matched sample*, whereby it matches respondents to the sampling frame using a few different methods and then assigns variables a weight. These details, provided by YouGov, describe the sampling process and margin of error for this study:

YouGov interviewed 1282 respondents who were then matched down to a sample of 1000 to produce the final dataset (500 in Cook, Lake, McHenry, Kane, DuPage, and Will counties, and 500 in other Illinois counties). The respondents were matched to a sampling frame on gender, age, race, and education. The frame was constructed by stratified sampling from the 2013 American Community Survey (ACS) sample (subset on the relevant geographic areas) with selection within strata by weighted sampling with replacements (using the person weights on the public use file).

In each sample group of 500, the matched cases were weighted to the sampling frame using propensity scores. The matched cases and the frame were combined and a logistic regression was estimated for inclusion in the frame. The propensity score function included age, gender, race/ethnicity, and years of education. The propensity scores were grouped into deciles of the estimated propensity score in the frame and post-stratified according to these deciles. A four-way post-stratification was then applied to these weights on age, gender, race, and education level, to produce the final country group weight.

¹⁵ Pew Research Center, May 2016, "Evaluating Online Nonprobability Surveys."

¹⁶ For an extensive description of YouGov's sampling method, see: Ansolabehere and Rivers "Cooperative Survey Research," *Annual Review of Political Science*, 2013. http://www.annualreviews.org/doi/abs/10.1146/annurev-polisci-022811-160625. Accesssed on July 30, 2017.

¹⁷ For a detailed description of response rates, see appendix VI.

The sample was then combined and the group weights were post-stratified to the country group distribution, as well as a four-way post-stratification on age, gender, race, and education level, to produce an overall weight

The sample from Cook, Lake, McHenry, Kane, DuPage, and Will counties has a weighted margin of error of +/-5.35, and the sample from other Illinois counties has a weighted margin of error of +/-5.54. The full sample has a weighted margin of error of +/-4.09. Each was calculated at a 97.5% confidence level.¹⁸

The total sample contains 1,000 IL residents consisting of two geographically bound groups each containing 500 people: the "Region 1" group represents residents from the NE corner of Illinois in Cook, Lake, McHenry, Kane, DuPage and Will counties, and the "Outside Region 1" group represents residents of Illinois who live in an area other than Region 1. The resulting weighted summary statistics can be seen in Table 1 below:

Table 1: Weighted Summary Statistics By Geographic Area

	1	LLINOIS		R	EGION 1		OUTSIDE REGION 1			
Demographic	Unweighted Sample	Weighted Sample	Frame	Unweighted Sample	Weighted Sample	Frame	Unweighted Sample	Weighted Sample	Frame	
Unweighted N	1,000	1,000	10,000	500	500	10,000	500	500	10,000	
GENDER										
Male	46%	48%	48%	47%	48%	48%	45%	49%	49%	
Female	54%	52%	52%	53%	52%	52%	55%	51%	51%	
AGE										
18-29	16%	22%	22%	19%	23%	22%	13%	20%	21%	
30-44	25%	27%	26%	30%	28%	28%	19%	24%	24%	
45-64	41%	34%	34%	35%	33%	34%	46%	35%	35%	
65+	19%	18%	18%	17%	16%	16%	21%	21%	20%	
RACE										
White	79%	67%	66%	67%	56%	56%	91%	85%	85%	
Black	9%	13%	14%	14%	17%	17%	4%	8%	8%	
Hispanic	6%	13%	14%	11%	18%	19%	2%	4%	4%	
Other	6%	6%	6%	9%	8%	8%	4%	3%	3%	
EDUCATION										
HS or Less	30%	39%	39%	26%	36%	37%	33%	43%	43%	
Some College	35%	32%	31%	32%	31%	29%	39%	35%	35%	
College Grad	24%	18%	19%	27%	21%	21%	20%	15%	14%	
Post Grad	12%	11%	11%	15%	13%	13%	8%	7%	7%	

¹⁸ Also provided by YouGov: "The 'margin of error' is calculated using model-based standard errors, which estimate the variability of estimates from repeated application of the same procedures. Model-based standard errors depend on the assumption that responses are independent and that the selection mechanism is 'missing at random.' (See R.J.A. Little and D.B. Rubin, Statistical Analysis with Missing Data, 2nd ed., Wiley, 2002.) This means that . . . given any specific combination of matching and weighting variables, we assume that panelists have the same likelihood [answering other questions in the survey] as non-panelists with the same characteristics. It does not assume that the data come from a probability sample with known probabilities of selection."

Phase 2: Representative public prioritization

The Phase 2 survey asked YouGov's sample of 1,000 Illinois residents to complete three tasks:

- 1. Indicate what percentage of IDOT's budget they would invest in various transportation goals. Their submissions were required to add up to 100. Options included:
 - a. Economic growth
 - b. Livability
 - c. Access
 - d. Resilience
 - e. Stewardship
 - f. Safety
- 2. Indicate what percentage of IDOT's budget they would invest in various transportation modes. Their submissions were required to add up to 100. Options included:
 - a. Aviation
 - b. Bicycle and pedestrian
 - c. Freight
 - d. Rail
 - e. Public transit (trains and busses)
 - f. Road network
 - g. Waterways and ports
- 3. Vote on 15 randomly selected pairs of ideas.
 - a. 134 competing ideas: 63 of these were (IDOT) seed ideas and 71 were submitted by the public in Phase 1^{19}

In designing this survey, IPCE randomized nominal response options to prevent any bias introduced by the ordering of response options (e.g. 'satisficing' bias). As a result:

- For the goals and modes questions, the order was randomized for each respondent.
- b. For the pairwise comparisons, the selection of 2 of 134 ideas was randomized for 14 of the 15 comparisons. Pairwise comparison #5 was a data quality check.²⁰

¹⁹ These ideas only appear in the pairwise comparisons part of the survey (i.e., the 15 questions that all begin with the question: "Which idea do you think is more important for transportation in Illinois?")

²⁰ For the pairwise comparison questions, the left response option was a randomly selected idea, the right idea option stated "Please select this response to show that you are reading through all response options in this survey," and the final option was the 'I can't decide option' that appeared in all pairwise comparisons. Only respondents who passed the data quality check were included in the final sample.

Section 1: Public Prioritization of IDOT Goals

IDOT's LRTP will address the following transportation goals: Economic Growth, Livability, Access, Resilience, Stewardship, and Safety.

All Illinois Resident Priorities

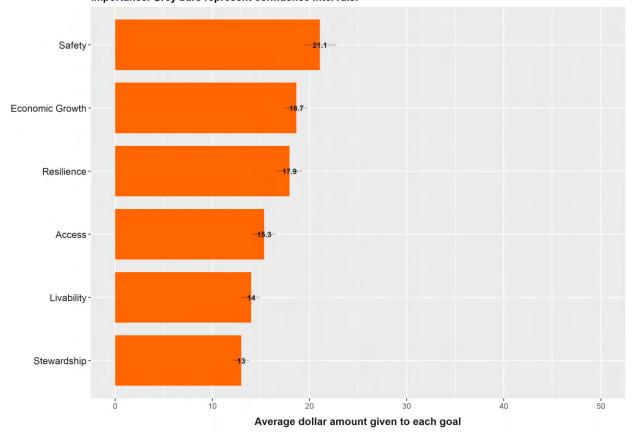
Illinois residents were asked to imagine they had \$100 to spend on these goals and to indicate the amount they would give to each transportation goal to demonstrate its level of importance. Figure 3 shows what the respondents saw for this budget priorities question, and Figure 4 shows the results: the average amount residents give to each goal based on perceived importance.

Fig 3. Snapshot from the online questionnaire

IDOT's Long Range Plan must address the following goals.	
We want to know how important you think these transportation goals are for Illinois.	
Imagine you have \$100 to spend on these goals. Please write in the amount you would give to each to show how important you think it is. You can give as much or as little as you'd like to each. (NOT Values must add up to 100.)	
Economic Growth: Improve Illinois' economy by providing transportation infrastructure that allows for the efficient movement of people and goods.	\$ 0
Livability: Enhance quality of life across the state by ensuring that transportation investments advance local goals, provide multimodal options and preserve the environment.	\$ 0
Access: Support all modes of transportation to improve accessibility and safety by improving connections between all modes of transportation.	\$ 0
Resilience: Ensure Illinois' infrastructure is prepared to withstand and sustain hazards and extreme weather events.	\$ 0
Stewardship: Safeguard existing funding and increase revenues to support system maintenance, modernization and strategic growth of Illinois' transportation system.	n\$ 0
Safety: Ensure the highest standards in safety across the state's transportation system.	\$ 0
Total	\$ 0

Fig. 4: The Illinois Public's Transportation Priorities
Given \$100 the average amount the public gives to each goal based on perceived

Given \$100, the average amount the public gives to each goal based on perceived importance. Grey bars represent confidence intervals.



The public prioritizes Safety and, on average, gives \$21.10 toward this goal. Economic Growth and Resilience are the next two most important goals identified by the public. On average, people allot \$18.70 and \$17.90 to these goals, respectively. For the goal of Access, residents give an average of \$15.30. Livability and Stewardship are low priorities for the public, as seen by the averages attributed to each; the public gives an average of \$14 to Livability and \$13 to Stewardship.

Figure 5 provides another way of looking at how Illinois residents prioritize transportation goals and reveals patterns hidden when looking just at averages. For example, 23% of residents distribute one-third or more of their money to Safety, while only 6% of residents give that amount to the Stewardship goal.

Fig. 5: Transportation Goals Priorities for Illinois Residents

Given \$100, the average amount the public gives to each GOAL based on perceived importance Safety 26% 12% 17% 3% 10% 11% 24% **Economic Growth** 7% 10% Resilience 26% 14% 22% 5% 11% Access 20% 12% 29% 9% 12% Livability 19% 31% 12% 9% 15% Stewardship 18% 11% 32% 10% 18% 100% 0%

Over one-half of residents (58%) distribute \$21 or more to Safety, and nearly one-third (32%) of residents give over one-quarter of their dollars to this goal. For Economic Growth, almost one-half (49%) of residents allot \$21 or more to this goal, and just over one-quarter (26%) of residents give over one-quarter of their money. The results were similar for Resilience, where 48% of residents give \$21 or more to this goal, and 22% give \$26 or more. However, for Access, Livability, and Stewardship, over one-half of residents distribute \$15 or less to these goals, demonstrating their low priority. More specifically, 50% of residents give \$15 or less to Access, 55% give \$15 or less to Livability, and 60% give \$15 or less to Stewardship. Nearly one-quarter of residents (24%) give \$10 or less to Livability, and 28% of residents give \$10 or less to Stewardship.

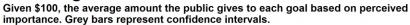
■\$30 and up ■\$26 to 30 ■\$21 to 25 ■\$16 to 20 ■\$11 to 15 ■\$6 to 10 ■\$0 to 5

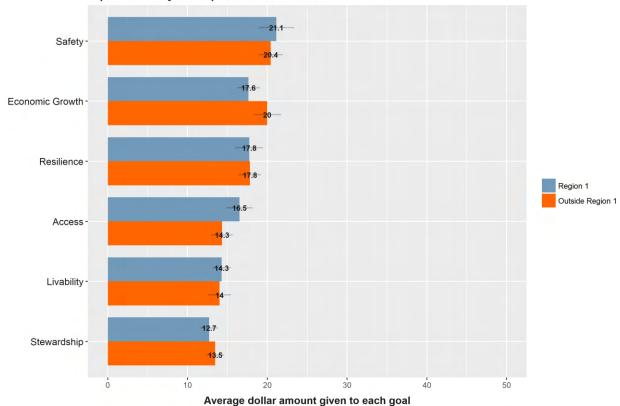
Resident Priorities by Regions

Analyzing residents' prioritization of goals by group reveals differences in how residents of Region 1 prioritize goals versus those from other parts of the state. For Region 1, the priority order of goals nearly matches that of All Illinois residents, where the public prioritizes Safety first and attributes an average of \$21.10 to this goal. However, unlike All Illinois Residents,

Resilience is prioritized second, followed closely by Economic Growth. In Region 1, the public gives an average of \$17.80 to Resilience and an average of \$17.60 to Economic Growth. In terms of Access, the public allocates an average of \$16.50. For Livability and Stewardship, residents give \$14.30 and \$12.70, respectively.

Fig. 6: The Illinois Public's Transportation Priorities by IDOT Region





For those living outside of Region 1, the priority order of goals is the same as All Illinois residents. The public indicates Safety as the number one priority and, on average, gives \$20.40 to this goal. This is closely followed by Economic Growth, where the public gives an average of \$20. Regarding Resilience, they attribute an average of \$17.80. For the lower priorities, the public gives Access an average of \$14.30, Livability an average of \$14, and Stewardship an average of \$13.50.

The high similarity of ranking of goals by region is notable. The two goal areas with the largest difference between regions are Economic Growth and Access, and these differences are statistically significant (p-value is below 0.05).

Figure 7 below shows how Region 1 residents distribute \$100 based on importance. As it is for All Illinois residents, Region 1 residents tend to assign the largest amounts to the Safety goal,

with 22% assigning \$30 or more to that goal. One interesting observation is that for Region 1 residents, although the average amount given to Resilience is slightly higher than Economic Growth, a higher percentage give more than \$30 to Economic Growth (16%) than to Resilience (13%).

Fig. 7: Transportation Goals Priorities for Illinois Residents Living within IDOT Region 1 (the Chicago Area) Given \$100, the average amount the public gives to each GOAL based on perceived importance

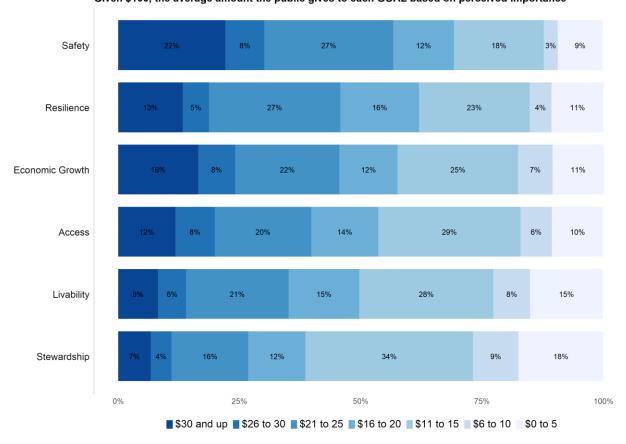
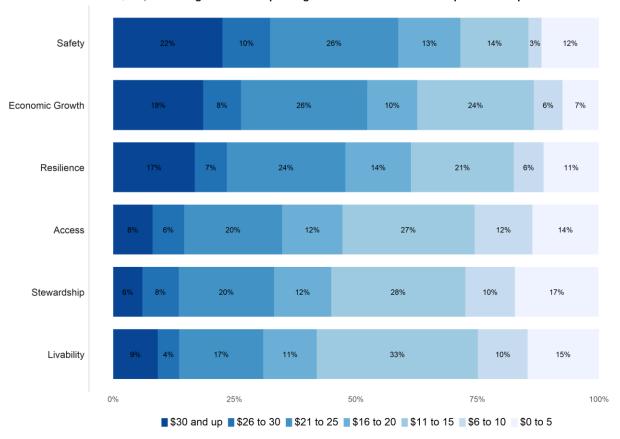


Figure 8 below shows how Outside Region 1 residents distribute \$100 based on importance. Again, Outside Region 1 residents tend to assign the largest amounts to the Safety goal, with 22% of those who give money to it assigning \$30 or more to that goal. Outside Region 1 residents give \$30 or more to Economic Growth at a slightly higher rate than Resilience, which flips the order of those two goal areas compared to the Region 1 residents. Overall, Outside Region 1 residents more evenly distribute \$100 across all goal areas than Region 1 residents.

Fig. 8: Transportation Goals Priorities for Residents living outside of IDOT Region 1

Given \$100, the average amount the public gives to each GOAL based on perceived importance



Summary

When asked to distribute \$100 across the IDOT LRTP goal areas, residents clearly prioritize Safety as the most important goal, based on the average amount given to that goal area. Economic Growth and Resilience goals follow next, although Outside Region 1 residents rank Resilience slightly higher than Economic Growth. Access consistently ranks in the middle, while Stewardship and Livability rank the lowest as priority goal areas.

Section 2: Public Prioritization of IDOT Modes

IDOT's LRTP must also address the following modes of transportation: Aviation, Bicycle and Pedestrian, Truck Freight, Rail Freight, Public Transit (trains and buses), Road Network, and Waterways and Ports.

All Illinois Resident Priorities

To understand how important each mode of transportation is to the public, Illinois residents were again asked to imagine they had \$100 to spend on these modes and to indicate how much they would give to each mode based on its importance. Figure 9 shows what the respondents saw for this budget priorities question, and Figure 10 shows the results: the average amount residents give to each goal based on perceived importance.

Fig 9. Snapshot from the online questionnaire

IDOT's Long Range Plan must address the following modes of transportation.	
We want to know how important you think these modes of transportation are for Illinois.	
Imagine you have \$100 to spend on these modes of transportation. Please write in the amount you would give to each mode to show how important you think it is. You can give as much or as little like to each. (Note: Values must add up to 100.)	
Aviation	\$ 0
Bicycle and Pedestrian	\$ 0
Truck Freight	\$ 0
Rail Freight	\$ 0
Public Transit (Trains and buses)	\$ 0
Road Network	\$ 0
Waterways and Ports	\$ 0
Total	\$ 0

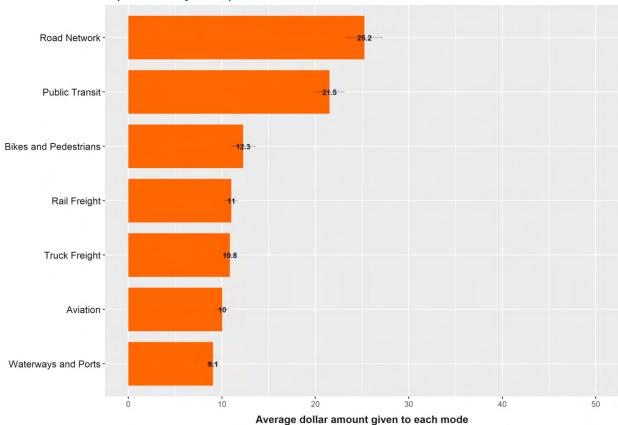


Fig. 10: The Illinois Public's Transportation Priorities

Given \$100, the average amount the public gives to each mode based on perceived importance. Grey bars represent confidence intervals.

Road Network and Public Transit emerged as the most important modes based on the average attribution of dollars to each. Illinois residents give an average of \$25.20 to Road Network, and \$21.50 to Public Transit. Bikes and Pedestrians ranks third most important. The public gives an average of \$12.30 to this mode, which is nearly half of that which they give to road networks. They also attribute an average of \$11 to Rail Freight, \$10.80 to Truck Freight, and \$10 to Aviation. Waterways and Ports is least important, as residents indicate an average of \$9.10 for this mode.

Figure 11 shows how Illinois residents tend to distribute \$100 across the modes. The Road Network and Public Transit modes are by far given the highest amounts most often, with 31% and 28%, respectively, giving \$30 or more to those modes. The next highest percentage of those assigning \$30 or more to a mode is 8% given to the Bikes and Pedestrians mode category. The distribution within the remaining modes of Rail Freight, Truck Freight, Aviation, and Waterways and Ports is fairly similar, with the largest percentages giving between \$11 and \$15 of \$100 to these categories.

Given \$100, the average amount the public gives to each MODE based on perceived importance 22% 11% 16% Road Network **Public Transit** Bikes and Pedestrians 13% 10% 19% 20% 28% 14% Rail Freight 13% 36% 12% 19% Truck Freight 12% 38% 14% 19% Aviation 12% 36% 13% 23% Waterways and Ports 40% 17% 23% 100% ■\$30 and up ■\$26 to 30 ■\$21 to 25 ■\$16 to 20 ■\$11 to 15 ■\$6 to 10 ■\$0 to 5

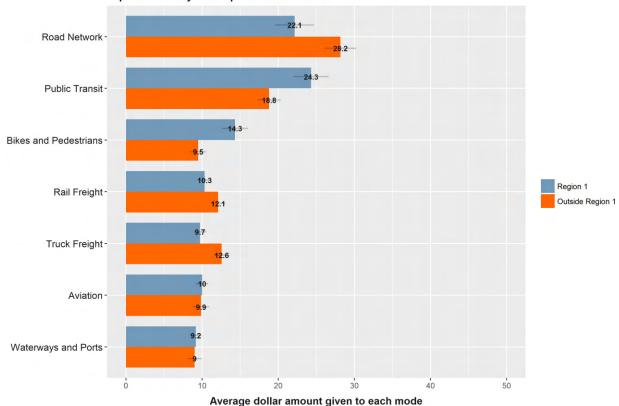
Fig. 11: Transportation Modes Priorities for Illinois Residents

Resident Priorities by Regions

Region 1 residents prioritize Public Transit over Road Network, giving Public Transit an average of \$24.30. However, Road Network is a close second priority, as Region 1 attributes an average of \$22.10 to this mode. Bikes and Pedestrians receives an average of \$14.30, and Rail Freight receives \$10.30. Unlike with All Illinois residents, Region 1 residents prioritize Aviation over Truck Freight, giving Aviation an average of \$10 and Truck Freight an average of \$9.70. As the least important mode, Waterways and Ports receives \$9.20 from Region 1.

Fig. 12: The Illinois Public's Transportation Priorities by IDOT Region

Given \$100, the average amount the public gives to each mode based on perceived importance. Grey bars represent confidence intervals.



Outside Region 1 residents give the highest priority to Road Network at \$28.20. The next highest priority is nearly \$10 less, with \$18.80 being given to Public Transit. While Bikes and Pedestrians ranks third most important for All Illinois residents and for Region 1, it proves to be a low priority for those living Outside Region 1. Instead, they identify Truck Freight and Rail Freight as the third and fourth most important modes, with Truck Freight receiving an average of \$12.60 and Rail Freight an average of \$12.10. Residents attribute an average of \$9.90 to Aviation, \$9.50 to Bikes and pedestrians, and \$9 to Waterways and Ports.

There are evident differences between how residents from the two regions prioritize modes; the greatest differences are with respect to Road Network, Public Transit, and Bikes and Pedestrians. The difference between the regions is statistically significant (p-value is below 0.05) for Road Network, Public Transit, Bikes and Pedestrians, Rail Freight, and Truck Freight.

Figure 13 shows how Region 1 residents distribute \$100 across modes based on level of importance. Public Transit and Road Network are given the largest amounts most frequently at 30% and 25%, respectively. Note that this distribution order flips the order of the two highest

ranked priorities based on average amount given. Bikes and Pedestrians is third with 10% of Region 1 residents assigning \$30 or more. Less than 3% of Region 1 residents give \$30 or more to the remaining modes of Aviation, Rail Freight, Truck Freight, and Waterways and Ports, in that order.

Fig. 13: Transportation Modes Priorities for Illinois Residents living within IDOT Region 1 (the Chicago Area) Given \$100, the average amount the public gives to each MODE based on perceived importance

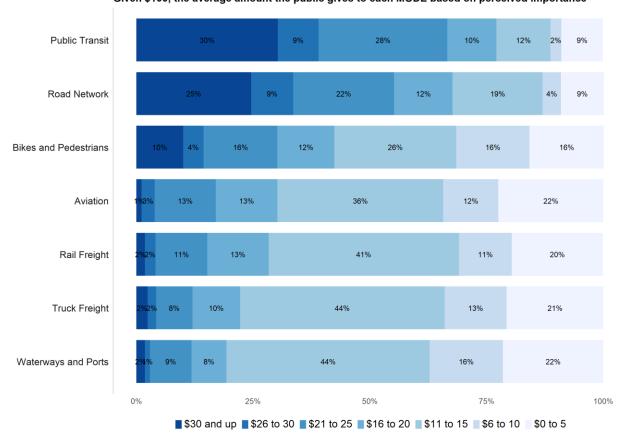


Figure 14 shows the distribution of \$100 for Outside Region 1 residents. With 39% giving \$30 or more, Outside Region 1 residents give the most to the mode Road Network far more frequently than other mode categories. Public Transit ranks second highest with 22% assigning more than \$30 of their \$100 to that mode. The remaining categories of Truck Freight, Rail Freight, Bikes and Pedestrians, Aviation, and Waterways and Ports all have less than 5% giving \$30 or more. It is notable that the last three categories, Bikes and Pedestrians, Aviation, and Waterways and Ports, have large percentages of residents (23% or more) assigning \$0 to \$5 of their \$100 allocation to them.

Fig. 14: Transportation Modes Priorities for Illinois Residents living outside of IDOT Region 1
Given \$100, the average amount the public gives to each MODE based on perceived importance

Road Network

Public Transit

22% 5% 22% 12% 22% 6% 12%

Public Transit 12% Truck Freight 12% 32% 12% 16% Rail Freight 14% 32% 12% Bikes and Pedestrians 7% 32% 23% 23% 10% 12% 37% 14% 23% Aviation Waterways and Ports 10% 38% 17% 24% 100% ■\$30 and up ■\$26 to 30 ■\$21 to 25 ■\$16 to 20 ■\$11 to 15 ■\$6 to 10 ■\$0 to 5

Summary

Within modes, the public prioritizes Road Network and Public Transit as most important. For Region 1, Public Transit is of higher priority, while for Outside Region 1, Road Network is a higher priority. Bikes and Pedestrians is the third highest priority for Region 1; however, for those classified as Outside Region 1, Bikes and Pedestrians is a low priority and instead Truck Freight and Rail Freight were of next highest priority.

There are statistically significant differences between the two regions in how they prioritized Road Network, Public Transit, Bikes and Pedestrians, Rail Freight, and Truck Freight.

Section 3: Public Prioritization of Transportation Ideas

This section presents findings from the pairwise comparisons completed by the representative YouGov sample.²¹ As discussed in more detail in the Methodology section, pairwise comparison is a process by which survey takers choose among two different ideas or a third, "I can't decide," option. In this survey, Illinois residents responded to the question: "Which idea do you think is more important for transportation in Illinois?" (Figure 15) Each of the 1,000 residents completed up to 15 randomly selected pairwise comparisons, which led to 13,370 total matches included in the analysis.²² The resulting data from these head-to-head match-ups will provide IDOT with unique insights about the transportation ideas and priorities of Illinois residents.

Fig. 15: Questionnaire snapshot. Users who select "I can't decide" see the follow-up question "Please tell us why you can't decide"

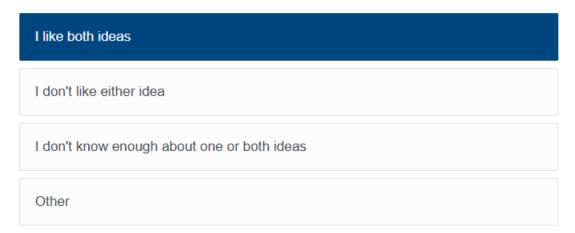
Which idea do you think is more important for transportation in Illinois?

Use the application of roundabouts where possible

Support data-driven decision-making

I can't decide

Please tell us why you can't decide:



²¹ Note: this pairwise comparison wiki survey was based on the *All Our Ideas* format, but was hosted on the Qualtrics online survey platform.

²² Of 15,000 possible pairwise comparisons: 1,000 were excluded because they were part of the data quality check (see footnote 20 on page 17 for more information); 553 were excluded as "I don't know enough about one or both ideas" responses; 77 were excluded as "other" responses or skips; 12,404 were included as a win or a loss; and 966 were included as a tie ("I don't like either idea" or "I like both ideas" responses).

Each idea included in the Phase 2 pairwise comparisons was ranked based on its performance. IPCE ranked the ideas using an Elo rating, rather than a pure winning percentage, because Elo takes into account the strength of an opponent and it allows for the incorporation of ties (in addition to wins and losses) and survey weights.²³ The three tables below show the top 10 highest-rated ideas statewide and within each region. Among these top-performing ideas, there was a relatively even distribution between user-submitted and IDOT seed ideas, with Illinois and Region 1 both having five user-submitted ideas in the top 10 and Outside Region 1 having four. Table 2 depicts the results for the entire sample of Illinois residents. The Final Score is the likelihood the idea will beat a randomly chosen idea.

All Illinois Resident Idea Prioritization

Table 2

Top 10 Ideas - All Illinois Residents	Rank	Final Score	Public Idea?
Increase road repairs that are in desperate need of repair now before creating new highway accesses	1	85	Yes
Invest in streets that enable safe and comfortable travel for users of all abilities and for all modes of transportation	2	84.6	No
Increase the standards that roads are built with to ensure they last	3	83.1	Yes
Invest in long-term material solutions - not patching and short-term asphalt	4	79.2	Yes
Reduce overall costs by performing maintenance before improvements are in critical need of repair	5	78.8	No
Better distribute projects throughout the state to maximize benefits to all regions	6	73.4	No
Reduce vehicle damage due to deteriorated infrastructure	7	73	No
Match transit mode to ridership demand, with all modes on the table including priority bus and light rail	8	72.8	Yes
Invest in construction of major transit improvements	9	72.1	No
Create more visionary long-term plan for transportation assets for all modes and works to ensure Illinois regains its place as USA's crossroad	10	70.9	Yes

The first four ideas of the top 10 ideas, as ranked by the panel representative of All Illinois residents, are explicitly related to road networks. Additionally, Illinois residents express a strong desire for investment in repairs and maintenance. Half of the top 10 ideas explicitly request more spending on repairs, particularly related to roads, as well as investing in long-lasting materials before infrastructure deteriorates. The top three user-submitted ideas, ranked first, third, and fourth, all call for road repairs and investment. Support for large public transit

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²³ For more on the Elo calculations in this study, please see Appendix III. Much of the work using Elo ratings in this study is based on: Langville, Amy N. and Meyer, Carl D., "Who's #1: The Science of Rating and Ranking," *Princeton University Press*, Dec. 2013.

investments is also evident in the top 10 ideas, with one highly-rated transit idea submitted by residents (seventh) and one by IDOT (ninth).

Resident Idea Prioritization by Regions

IPCE also compared the ten highest-scoring ideas in each region, which are represented in Table 3 (Region 1) and Table 4 (Outside Region 1) below.

Table 3

Top 10 Ideas - Region 1	Rank	Final Score	Public Idea?
Increase the standards that roads are built with to ensure they last	1	87.2	Yes
Invest in streets that enable safe and comfortable travel for users of all abilities and for all modes of transportation	2	86	No
Increase road repairs that are in desperate need of repair now before creating new highway accesses	3	83.3	Yes
Invest in long-term material solutions - not patching and short-term asphalt	4	82.2	Yes
Reduce overall costs by performing maintenance before improvements are in critical need of repair	5	78.5	No
Match transit mode to ridership demand, with all modes on the table including priority bus and light rail	6	74.8	Yes
Plan to quickly alleviate traffic jams due to crashes/fatalities/construction	7	74.7	Yes
Ensure all schools areas are safe for pedestrians and cyclists	8	71.9	No
Provide transit service or increased transit services in areas where viable demand exists	9	71.9	No
Identify rail freight bottlenecks and prioritize rail improvement for reducing highway freight traffic and improving passenger rail	10	70.1	Yes

Table 4

Top 10 Ideas – Outside Region 1	Rank	Final Score	Public Idea?
Increase road repairs that are in desperate need of repair now before creating new highway accesses	1	88	Yes
Better distribute projects throughout the state to maximize benefits to all regions	2	81.8	No
Invest in streets that enable safe and comfortable travel for users of all abilities and for all modes of transportation	3	80.8	No
Reduce overall costs by performing maintenance before improvements are in critical need of repair	4	76.4	No
Increase the standards that roads are built with to ensure they last	5	76	Yes
Invest in construction of major transit improvements	6	75.3	No
Improve capacity and promote congestion relief on road and rail networks	7	74.3	No
Reduce vehicle damage due to deteriorated infrastructure	8	74	No

Create more visionary long-term plan for transportation assets for all modes and works to ensure Illinois regains its place as USA's crossroad	9	73.8	Yes
Be holistic in thinking about repairs and improvements. Savings can be made if all departments work together and are updated on initiatives	10	73.5	Yes

Exploring the differences between the relative performance of ideas in different regions will enable IDOT to glean insights related to how populations in the different regions of Illinois prioritize transportation issues differently. Some observations include:

"Increase road repairs that are in desperate need of repair now before creating new highway accesses" was the top performing idea among all residents in Illinois. It ranked third in Region 1 and first in Outside Region 1. This aligns with broader results, as the top five ideas in both regions and throughout Illinois were all related to roads and/or repairs and maintenance.

"Better distribute projects throughout the state to maximize benefits to all regions" was an IDOT seed idea that was ranked second among residents outside of the Chicago region. It was so popular among these residents that it was ranked sixth for All Illinois residents, despite it placing 17th among Region 1 residents.

Interestingly, public transit appeared explicitly for the first time in the sixth highest-ranked idea for the residents of both Region 1 and Outside Region 1. This is perhaps indicative of the value that the majority of Region 1 residents still place on cars, driving and roads, despite the Chicago region's robust public transit network.

Differences in Idea Rankings by Region

Beyond examining the top ten performing ideas in each region, IPCE ranked every idea by Elo score in Region 1 and Outside Region 1. It then compared the rankings, took the absolute value of the difference and sorted them by largest rank difference. Table 5 lists the 20 ideas with the largest difference in ranking irrespective of which region ranked each idea higher.

Table 5*

Top Ideas by Difference in Rank between Regions	Absolute RANK Difference	Region 1 RANK	Outside Region 1 RANK	Public Idea?
Enhance IDOT's ability to advocate for sound transportation policy and funding	93	114	21	No
Improve road safety by making roads more freight-friendly	77	107	30	No
Improve highway access for rural populations	63	83	20	No
Charge trucks a toll on all expressways if they operate during AM and PM peak hours as a way to reduce congestion	54	60	114	Yes
Make sure new or improved roads don't interfere with residents' way of life	52	67	15	Yes
Support sustainable practices in the delivery of public transportation	49	72	23	No

Safety for cyclists and pedestrians where there are gaps in local networks and/or dangerous conditions	47	33	80	Yes
Make IDOT data publicly available and easy to share	46	75	29	No
Prioritize multiuse trails for walking and biking for transportation and recreation across the state	46	63	109	Yes
Identify gaps in transit service	45	20	65	No
Expand funding for mass transit in Chicago and other urban areas. It's by far the most efficient, cost-effective, and sustainable mode	45	24	69	Yes
Increase rail service access for low-income, elderly, and special needs groups	43	12	55	No
Minimize roadway freight by supporting more waterway and rail freight	42	82	40	Yes
Do more to get high-speed rail built	41	58	99	Yes
Increase rail safety	39	112	73	No
Invest in construction of major rail improvements	39	55	94	No
Enhance connections from public transit to the bike, car, and ride-sharing network	38	28	66	No
Improve transit user experience	38	29	67	No
Improve efficiencies between service providers	37	40	77	No
Plan to quickly alleviate traffic jams due to crashes/fatalities/construction	36	7	43	Yes

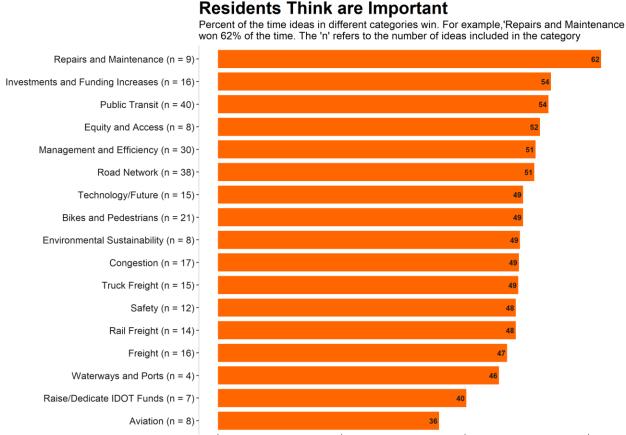
^{*}The ideas highlighted in orange indicate that residents from outside Region 1 ranked the idea HIGHER than Region 1.

The three ideas with the greatest disparity are all IDOT seed ideas that residents outside of Region 1 rank much more highly than Region 1 residents. Based on this metric, residents living outside of Region 1 are more concerned with issues related to rural highways, roadway freight, safety, and "IDOT's ability to advocate for sound transportation policy and funding," which was the idea with the greatest disparity in ranks. Seventy-five percent of the ideas that Outside Region 1 residents value more highly than Region 1 are IDOT seed ideas rather than user-submitted ideas.

By contrast, 50% of the ideas that are more highly-prioritized by Region 1 residents were submitted by users during Phase 1 of this project. Though only one of the ideas in this category mentions freight, it is also the idea with the highest disparity in favor of Region 1. Interestingly, it mentions tolls and reducing congestion in the context of freight, which the residents outside of Region 1 do not address. Most of the ideas that Region 1 residents are more likely to prioritize compared to Outside Region 1 residents are related to public transit (buses, trains and rail) and bikes and pedestrians. Finally, Region 1 expressed a strong desire for more rapid alleviation of traffic jams; that idea ranked sixth but was less popular outside of Region 1 (43rd).

Priorities Based on Ideas Categorization

In addition to grouping ideas by IDOT's predetermined categories, IPCE also utilized qualitative data analysis software (QDA Miner) to classify ideas into thematic categories. IPCE used two groups of categories to perform data analysis: the modes group as defined by IDOT and an IPCE created group similar to IDOT's goals, but more comprehensive and inclusive of residents' contributed responses. The winning percentage of each category was then calculated and the results for All Illinois residents are listed below in Figure 16.



Win % (Number of victories divided by total matches)

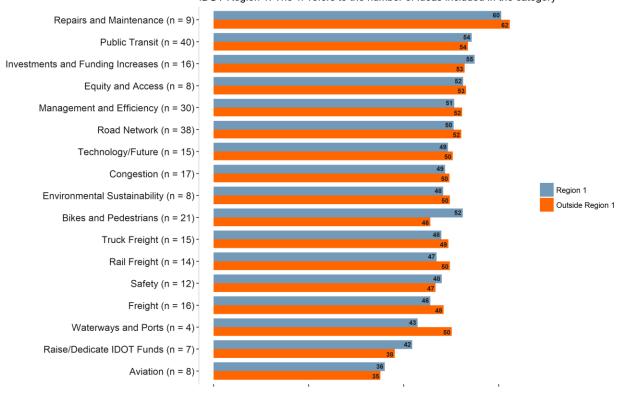
Fig. 16: The Types of Transporation Ideas Illinois

Repairs and Maintenance (62%), though a relatively small category, dramatically outperforms all other categories by this metric. Especially notable is the fact that the top category and the second-place category are separated by eight percentile points, while the following 14 categories have a range of eight percent (46% - 54%). Conversely, Aviation-related ideas (36%) has the lowest winning percentage of any category. Ideas about Public Transit (54%) are slightly more likely to win as compared to Road Network (51%) ideas, which conflicts with the results of the budget allocation exercise, where Illinois residents allocate more money to the Road Network than to Public Transit. Though the Investments and Funding Increase category has the

second-highest winning percentage, indicating strong levels of support from the public for increased transportation spending, the category with the second lowest winning percentage was Raise/Dedicate IDOT funds. These results are perhaps contradictory, but also not surprising, as the public both recognizes the need for increased infrastructure investment and demands this of public officials but does not approve of increased taxes to fund such spending.

Fig. 17: The Types of Transporation Ideas Illinois Residents Think are Most Important by Region

Percent of the time ideas in different categories win, by IDOT Region. For example, Waterways and Ports' ideas won 50% of the time for residents living outside of IDOT Region 1. The 'n' refers to the number of ideas included in the category



Win % (Number of victories divided by total matches)

IPCE also ran these calculations for each region as depicted above in Figure 17. The most notable regional differences in the winning percentages of these categories are related to Bikes and Pedestrians, as well as Freight-related categories. The Bikes and Pedestrians category is six percent more likely to win for Region 1 residents than for residents living outside of Region 1. Conversely, Freight-related ideas perform better outside of Region 1 with Waterways and Ports seven percent more likely to win in other regions and Truck Freight, Rail Freight, and Freight all performing moderately worse in Region 1, too.

Finally, IPCE examined the ideas that received the greatest number of "I don't know" votes. The ten ideas that were involved in pairwise comparisons for which respondents clicked on the "I don't know enough about one or both ideas" button are listed below in Table 6.

Table 6

Top Ten Ideas for which "I Don't Know" was chosen most often	Don't Know	Final Score	Public Idea?
Implement a Transportation Demand Management Program (TDM)	24	38.3	Yes
Support Illinois business by improving access to ports and waterways	22	32.2	No
Increase transparency in project selection	21	40.1	No
Enhance IDOT's ability to advocate for sound transportation policy and funding	20	49.8	No
Leverage aviation infrastructure for economic development	19	32.5	No
Design with physical disabilities in mind	18	50.2	No
Reduce freight congestion	18	42.4	No
Support data-driven decision-making	18	34.1	No
Involve citizens in determining where freight traffic is allowed	17	37	Yes
With the Federal Performance Measures requirements, provide sufficient resources for data collection/management for decision-making	17	36.2	Yes

Notably, though the first idea was submitted by the public, the next 7 ideas with the most "I don't know" votes were IDOT seed ideas. In addition to being the hardest ideas to understand, these ideas also performed poorly overall.

Summary

Road Networks and Repairs and Maintenance are mentioned most frequently in the top 10 highest-ranked ideas for all statewide residents, as well as residents from both regions independently. This is true for both IDOT seed ideas and ideas submitted by the public. Regarding ideas with the greatest disparity in rankings between the regions, Outside Region 1 residents are more likely to prioritize issues related to Rural Highways, Roadway Freight, Safety, and "IDOT's ability to advocate for sound transportation policy and funding," which is the idea with the greatest disparity in ranks. Region 1 residents, on the other hand, are more likely to be concerned with issues related to Public Transit (buses, trains and rail) and Bikes and Pedestrians.

Finally, in this section, IPCE used qualitative data analysis software to create thematic categories in two groups: IDOT's modes and an IPCE-created group similar to IDOT's goals, but more comprehensive and inclusive of residents' contributed responses. Using this metric, Repairs and Maintenance is the category with the highest win percentage by a substantial margin. The following categories also had win percentages over 50%: Investments and Funding Increases, Public Transit, Equity and Access, Management and Efficiency, and Road Network. These IPCE-created categories perform similarly both in Region 1 and Outside Region 1 other than Bikes and Pedestrians, which is more favored by Region 1 residents and Freight-related categories, which are more favored by Outside Region 1 residents.

Conclusion

As noted in the introduction to this report, IDOT has devoted institutional attention and resources towards improving its public outreach processes. This study serves as a continuation of those efforts and builds on the suggestions outlined in the 2016 *Recommendations to Enhance Quality Engagement* report that IPCE and UTC prepared for IDOT in 2016. In particular, this IPCE engagement process was commissioned to bolster IDOT's efforts to address Recommendation #8 in that report, "Use Technology to Enhance and Complement Outreach." ²⁴

At IDOT's request, IPCE sought to provide data for the following research questions:

- 1. To what extent does the public prioritize the transportation goals put forth in the LRTP?
- 2. To what extent does the public prioritize the transportation modes included in the IRTP?
- 3. What specific ideas does the public feel are most important for transportation in Illinois?

IPCE utilized an innovative web platform (*All Our Ideas*) to maximize the amount and quality of feedback that IDOT could generate from an online survey of Illinois' residents. The online survey was structured in two phases and IPCE partnered with YouGov on Phase 2 to create statistically-representative groups of 500 Illinois residents each in two geographic areas of the state: IDOT Region 1 and Outside Region 1. The unique strength of this multi-phased process was its ability to capture high quality ideas from the public and statistically representative public priorities – it was both open and representative.

Upon completion of the data collection process, Illinois residents had provided IDOT with substantial amount of data that reflect the transportation priorities of the residents of Illinois (both statewide and for Region 1 and Outside Region 1). The wealth of high-quality, representative data presented in this report allows IDOT to examine Illinois residents' responses in the budget simulation exercises, to compare regional differences among Illinois residents' transportation ideas and priorities, and to incorporate the public's feedback into the 2017 LRTP.

Beyond the LRTP planning process, this new methodology for obtaining high quality and representative from Illinois residents also has exciting potential applications for future IDOT public outreach efforts, both at the statewide and the local level. For example, IPCE removed ideas related to specific locations and projects in order to make each idea applicable to all IL residents. On the local level, however, those insightful, publicly-submitted ideas would not only be allowed, but encouraged. Furthermore, IDOT could partner with municipalities, counties and Metropolitan Planning Organizations (MPOs) to conduct regionally-specific, pairwise

²⁴ See: https://utc.uic.edu/eight-recommendations-proposed-to-guide-idot-to-engage-in-more-effective-public-engagement-practices-news-story/

comparison wiki surveys to generate fresh ideas and local priorities about upcoming projects, discretionary transportation spending, and long-term planning efforts.

Finally, this type of public outreach process provides an opportunity to broaden IDOT's reach and engagement with many different populations throughout the state. As one publicly-submitted idea noted, public transportation hearings can occasionally be dominated by the loudest voices in the room, yet those voices don't necessarily speak for all residents in the state. IDOT's continued experimentation and implementation of new outreach methods will enable the department to improve its ongoing engagement with Illinois residents, while elevating the voices and perspectives of residents whose opinions and priorities can be difficult to accurately ascertain through traditional IDOT outreach methods.

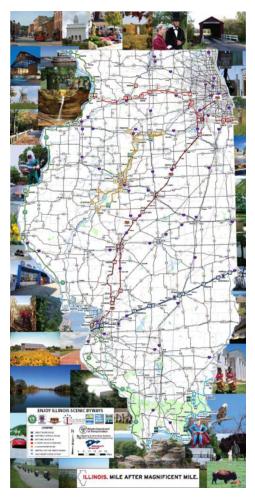
Appendices

APPENDIX I: Survey Questionnaire



The purpose of this survey is to provide Illinoisans an opportunity to tell policy makers how the state transportation system can best meet residents' needs. Illinois has one of the largest, most diverse and most economically vibrant transportation networks in the United States, and its maintenance and modernization are crucial for the state's long-term wellbeing. Your participation in this survey will help the Illinois Department of Transportation (IDOT) formulate strategies that address the needs of Illinois' diverse communities while reflecting shared priorities and making progress toward essential statewide goals.

The results of this survey will inform IDOT's Long Range Plan, which will be completed toward the end of 2017. This plan provides the strategic direction and overarching framework for the development of IDOT budgets and programs.



IDOT's Long Range Plan must address the following goals.

We want to know how important you think these transportation goals are for Illinois.

Q1: Imagine you have \$100 to spend on these goals. Please write in the amount you would give to goal to show how important you think it is. You can give as much or as little as you'd like to ea (NOTE: Values must add up to 100)			
\$ Economic Growth: Improve Illinois economy by providing transportation infrastructural allows for the efficient movement of people and goods. \$ Livability: Enhance quality of life across the state by ensuring that transportation invadvance local goals, provide multimodal options and preserve the environment. \$ Access: Support all modes of transportation to improve accessibility and safety by inconnections between all modes of transportation. \$ Resilience: Ensure Illinois' infrastructure is prepared to withstand and sustain hazard extreme weather events. \$ Stewardship: Safeguard existing funding and increase revenues to support system maintenance, modernization, and strategic growth of Illinois transportation system. \$ Safety: Ensure the highest standards in safety across the state transportation system.	estments nproving Is and		
IDOT's Long Range Plan must address the following modes of transportation. We want to know how important you think these modes of transportation are for Illinois.			
Q2: Imagine you have \$100 to spend on these modes of transportation. Please write in the amo would give to each mode to show how important you think it is. You can give as much or as you'd like to each. (Note: Values must add up to 100)	-		
\$ Aviation \$ Bicycle and Pedestrian \$ Truck Freight \$ Rail Freight \$ Public Transit (Trains and Busses) \$ Road Network \$ Waterways and Ports			
Q3: How informed, if at all, do you feel about IDOT projects (road repairs, construction) in your () Very informed () Somewhat informed	area?		
() Not very informed() Not at all informed			

For the next 15 questions, you will be asked to respond to the same question:

Which idea do you think is more important for transportation in Illinois?

You will be presented with two ideas at a time. Though these ideas may seem unrelated, we ask that you choose the idea that you think is most important for transportation in Illinois. If you cannot decide, choose the option 'I can't decide.'

Note that some of the ideas were created by IDOT staff and some of them were created by the public. May the best ideas win!

Q4 – (Q18 ²⁵
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Which idea do you think is more important for transportation in Illinois?
() [Randomly chosen idea] () [Another randomly chosen idea] () I can't decide
[Please tell us why you can't decide:
 () I like both ideas () I don't like either idea () I don't know enough about one or both ideas () Other]

Thank you for taking part in this survey!

For more information about IDOT's Long Range Transportation Plan, visit bit.ly/2hB9akR

²⁵ Except for Q8 (the fifth pairwise comparison), which was a data quality check. For this question, the left response option was a randomly selected idea, the right idea option stated "Please select this response to show that you are reading through all response options in this survey," and the final option was the 'I can't decide option' that appeared in all pairwise comparisons.

APPENDIX II: List of All Idea Rankings

Table 7

Idea	Final Score ALL	Final Score REGION 1	Final Score OUTSIDE REGION 1	Public Idea?
Increase road repairs that are in desperate need of repair now before creating new highway accesses	85	83.3	88	YES
Invest in streets that enable safe and comfortable travel for users of all abilities and for all modes of transportation	84.6	86	80.8	NO
Increase the standards that roads are built with to ensure they last	83.1	87.2	76	YES
Invest in long-term material solutions - not patching and short-term asphalt	79.2	82.2	72.6	YES
Reduce overall costs by performing maintenance before improvements are in critical need of repair	78.8	78.5	76.4	NO
Better distribute projects throughout the state to maximize benefits to all regions	73.4	66	81.8	NO
Reduce vehicle damage due to deteriorated infrastructure	73	69.7	74	NO
Match transit mode to ridership demand, with all modes on the table including priority bus and light rail	72.8	74.8	69.7	YES
Invest in construction of major transit improvements	72.1	68.1	75.3	NO
Create more visionary long-term plan for transportation assets for all modes and works to ensure Illinois regains its place as USA's crossroad	70.9	68.6	73.8	YES
Be holistic in thinking about repairs and improvements. Savings can be made if all departments work together and are updated on initiatives	70.5	68.8	73.5	YES
Improve capacity and promote congestion relief on road and rail networks	69.5	66.5	74.3	NO
Ensure all schools areas are safe for pedestrians and cyclists	69.2	71.9	57.2	NO
Plan to quickly alleviate traffic jams due to crashes/fatalities/construction	68.8	74.7	56.8	YES
Provide transit service or increased transit services in areas where viable demand exists	68.5	71.9	64.4	NO
Identify rail freight bottlenecks and prioritize rail improvement for reducing highway freight traffic and improving passenger rail	66.8	70.1	61.9	YES
Help the state and municipalities secure funds for public transit	65.8	65.5	67.9	NO
Develop projects that support the goals of the state, surrounding community, and users	64.5	63.3	65.9	NO
Support freight transportation projects that create growth and employment opportunities in all regions throughout the state	64.2	65.5	60.4	NO
Improve access to essential destinations such as hospitals and employment centers	64	61.6	70.3	NO
Use construction applications that reduces impacts on the environment	63.4	63	63	YES
Better coordinate with regional transit agencies to improve statewide transportation connections	63.1	55.9	70.1	NO
Increase rail service access for low-income, elderly, and special needs groups	61.7	69.2	52.1	NO
Invest in new traffic and transit technologies	61.6	57.3	66.3	NO
Prepare transportation network for more severe weather conditions	60.9	58.2	62.7	NO
Invest in transportation alternatives for low-income/rural areas	60.6	56.4	68.9	NO
Be consistent in ways that respect both pedestrian and vehicles	60.6	62.2	53.5	YES
Incorporate road improvements for multi-modal transportation in regularly scheduled projects	60.6	57	60.2	YES
Make sure new or improved roads don't interfere with residents' way of life	59.8	50.3	69.5	YES

	-: ·	Final	Final Score	5.11
Idea	Final Score ALL	Score REGION 1	OUTSIDE REGION 1	Public Idea?
Prioritize designs and investments that attract more people to take transit instead of driving	59.5	61.8	61.4	YES
Improve reliability, convenience, and efficiency of rail transportation	59.3	58.7	59.3	NO
Expand mass transit along all interstate corridors	59.3	57.4	62.7	YES
Help local governments re-design roads dangerous for walking and biking	58.9	65.1	52.1	YES
Better coordinate with other state transportation departments to efficiently move freight and passenger trains	58.8	55.3	63	NO
State routes that have railroad crossings should have either an overpass or viaduct constructed if feasible	58.6	60.7	54.9	YES
Leverage technology to improve transportation	58.4	57	56.6	NO
Identify gaps in transit service	58	65.3	49.8	NO
Encourage freight traffic to use designated truck routes	57.8	61.1	59.3	YES
Improve coordination and connectivity between transportation service providers	57.7	55.4	59.1	NO
Improve intercity rail passenger service and expand to new markets	57.2	56.9	53.9	YES
Implement best practices to improve return on transit investments	56.9	60	52.9	NO
Build active, ground-level support for transit among residents, businesses, and local leaders	56.8	53.3	61.4	NO
Reduce freight shipments on roads by improving freight connections to rail, water, and air	56.8	53.3	59.3	NO
Increase transit and intercity rail funding	56.8	58.8	53.8	YES
Emphasize environmental sustainability in construction and network expansion	56.5	56.9	54.3	NO
Support highway investment	56.4	52	58.3	NO
Public involvement should consider that the people with the loudest voices don't represent the majority and shouldn't derail projects	56.4	56.6	51.6	YES
Make IDOT data publicly available and easy to share	56.1	47.3	61.7	NO
Expand funding for mass transit in Chicago and other urban areas. It's by far the most efficient, cost-effective, and sustainable mode	55.8	62.4	49.1	YES
Improve transit user experience	55.4	61.5	49.5	NO
Enhance connections from public transit to the bike, car, and ride-sharing network	55.1	61.5	49.5	NO
Emphasize environmental sustainability in design and planning of projects	54.6	49.5	57.2	NO
Replace aging traffic signals with modern equipment	54.3	55.5	54.1	YES
Support sustainable practices in the delivery of public transportation	53.9	48.6	63.1	NO
Design to increase the flow of people and decrease the flow of cars: more commerce, less congestion	53.8	58	52.8	YES
Safety for cyclists and pedestrians where there are gaps in local networks and/or dangerous conditions	53.3	59.5	47.3	YES
Improve efficiencies between service providers	52	57	47.4	NO
Improve highway access for rural populations	52	44.7	65.2	NO
Pass a state budget that includes a more sustainable revenue source for transportation – i.e. update the gas tax	51.9	51	50.2	YES
Reduce congestion by investing in other modes of transportation such as bikes and transit	51.3	54.6	47.9	NO
Price the monetary benefit of reduced roadway congestion provided by transit and increase funding to transit agencies by that amount	51.1	50.6	52	YES

		Final	Final Score	
Idea	Final Score ALL	Score REGION 1	OUTSIDE REGION 1	Public Idea?
Continue to expand pedestrian and/or bicycle facilities near urban areas to allow multiple user types within public right-of-ways	51	56	50.9	YES
Improve road safety by making roads more freight-friendly	50.7	36.8	61.6	NO
Design with physical disabilities in mind	50.2	48.9	48.9	NO
Use more environmentally friendly practices in right of way management	50.2	55.1	47.4	YES
Improve ability to identify locations that are least safe for pedestrians and cyclists	50.1	54.8	46.9	NO
Minimize roadway freight by supporting more waterway and rail freight	50	44.9	58	YES
Enhance IDOT's ability to advocate for sound transportation policy and funding	49.8	34.4	64.9	NO
Create an app allowing drivers to notify IDOT of needed road repairs	49.6	46.4	53.6	YES
Explore better bike/transit/pedestrian trip counting to help prioritize transportation dollars	48.8	50.8	42.8	YES
Use newer methods of ice removal such as road heating	48.4	45.7	50.1	YES
Invest in construction of major rail improvements	48.3	54.1	42.1	NO
Prevent pedestrian fatalities by improving rail safety	48.1	42.8	52.7	NO
Businesses that bring us all the traffic should be required to pay a good portion of road repairs	48.1	49.1	46.3	YES
Support the development of residential units near transit and rail stations	48	48.2	44.5	NO
Ensure there are adequate airport services provided to the state's largest population and employment centers	47.8	51.4	42.5	NO
Increase funding for transit	47.7	49.1	45.4	YES
Promote the use of new technologies for ride sharing to reduce traffic during peak hours	47.6	53.3	47.4	YES
Improve department efficiency, particularly for minor permits and local agencies	47.5	48.3	45.2	YES
Add acceleration and deceleration lanes for future intersection improvements	47.1	42.3	51.3	YES
Continue work to make inter-city bus stations (Megabus, Greyhound, Trailways, etc) co-located at intermodal rail stations	46.6	46.5	49	YES
Charge trucks a toll on all expressways if they operate during AM and PM peak hours as a way to reduce congestion	46.3	52.3	36	YES
Build a dedicated high-speed rail corridor not using existing rail infrastructure	45.7	45.3	47.6	YES
Articulate strategies for future priorities based on technologies, market, industry, and societal trends - not on dated infrastructure/modes	45.6	42.9	50.4	YES
Ensure airports are respectful of wildlife and surrounding environment	45.5	47.1	38.9	NO
Prioritize multiuse trails for walking and biking for transportation and recreation across the state	44.7	51.3	37	YES
Work with surrounding states to sponsor new passenger rail routes	44.5	41.4	50.4	YES
Improve ability of businesses to connect freight shipments between transportation modes (such as rail to waterways)	44.4	41.4	47.6	NO
The highest ridership transit corridors should have dedicated lanes and signal priority	44.3	42.9	49.4	YES
Adopt pedestrian enhancements	43.5	44.7	38.2	YES
Do more to get high-speed rail built	43.5	53.3	38.8	YES
Increase safety for freight transportation	42.9	39.1	47.7	NO
Increase speed limits on rural interstates to improve traffic flow	42.9	44.7	44.2	YES
Minimize roadway freight	42.6	40.2	46.5	YES

			Final	
	-· ·	Final	Score	5
Idea	Final Score ALL	Score REGION 1	OUTSIDE REGION 1	Public Idea?
Reduce freight congestion	42.4	39.4	46.8	NO
Make first and last mile easy for people of all abilities	42.2	42.5	45.5	YES
Increase safety for cyclists	42	44.4	38.4	NO
Give local government more design control over roads owned by IDOT	41.3	34.8	44.7	YES
Increase transparency in project selection	40.1	46.9	36.4	NO
Increase rail safety	40	35.4	47.8	NO
Establish rail environmental sustainability programs	39.4	39.5	41.9	NO
Implement a usage tax (miles driven) in lieu of gas tax, so all users (hybrid & electric) contribute to road improvements	39.3	42.8	38.6	YES
Find ways to encourage drivers to drive during non-peak hours	39.2	41	37.1	YES
Improve pedestrian crossing signage and enforcement	39.1	37.1	35.3	YES
Implement a Transportation Demand Management Program (TDM)	38.3	40.5	36.1	YES
Support improvements to rural roads for better bicycle safety/friendliness	37.5	36.3	33.3	YES
Utilize taxes collected on aviation fuel sales to fund a dedicated State/Local Airport Improvement Program	37.5	38.1	38.4	YES
Involve citizens in determining where freight traffic is allowed	37	37.9	34.1	YES
Fund sidewalk and trail development	37	38	37.2	YES
With the Federal Performance Measures requirements, provide sufficient resources for data collection/management for decision-making	36.2	36.4	38.6	YES
Support freight transportation projects that have access to global markets	35.6	34	36.8	NO
Involve stakeholders in transportation planning processes	35.5	32.4	38.5	NO
Enhance airport compliance with state and federal standards	35.3	35.7	44.8	NO
Mark minimum speed limits by lane	35.2	30.5	40.4	YES
Increase aviation safety	34.5	37.8	31.8	NO
Support data-driven decision-making	34.1	32.2	40	NO
Install more electronic message boards statewide to communicate travel times to motorists	33	30.8	29.4	YES
Leverage aviation infrastructure for economic development	32.5	33.7	32	NO
Utilize green space to create pollinator gardens	32.4	36.3	34	YES
Support Illinois business by improving access to ports and waterways	32.2	29.8	38.1	NO
Identify and plan public-private partnership opportunities	31.8	27.8	35.3	NO
Adopt drones for infrastructure maintenance and traffic accident investigations to reduce time and costs	31.5	32.2	33.2	YES
Convert an existing lane to a priced lane to test demand before adding new lanes	31.4	41.1	23.9	YES
The amount of space devoted to parking should decline as a city becomes more dense and populous to encourage transit and reduce congestion	31.4	30.5	28.8	YES
Embrace and plan for the coming of autonomous vehicles	31.3	32.2	34.8	YES
Increase bike safety	30.3	29.3	30.4	NO
Support a connected, statewide bike network	29.4	34.2	25.3	NO
Use the application of roundabouts where possible	29.4	24.9	36.7	YES
Decrease regulatory burdens on freight movement	27.9	32.5	22	YES

Idea	Final Score ALL	Final Score REGION 1	Final Score OUTSIDE REGION 1	Public Idea?
Invest in airport improvements	27.8	27.1	26.7	NO
Improve airport access for rural populations	26.1	25	28.2	NO
Gather appropriate funding by raising the gas tax for all personal vehicle drivers on the road	24.2	33.7	17.1	YES
Increase no passing zones on rural state routes	21.1	22.8	21.7	YES
Support increased user fees for transportation	17.6	16.3	18	YES

APPENDIX III: R Programming Package Citations

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APPENDIX IV: The Elo Rating Method

For this study, the Elo rating method ranks the 134 ideas included in the survey based on the set of 13,370 pairwise comparisons (matches) completed by the respondents. The Elo rating method was used because its formula includes a mechanism for incorporating ties and survey weights, and because the final scores take into account the strength of opponent, meaning that it "rewards a weaker player for defeating a stronger player to a greater degree than it rewards a stronger player for beating a weaker opponent."²⁶

The Elo Formula

```
r(old) = current Elo score (before the match)
```

K = a constant that affects how many points each player can win or loss at each match. A larger K means that more points may be won/lost.

```
i = refers to idea i. So, r_i(old) = the current Elo score for idea i j = refers to idea j
```

 d_{ij} = the difference in Elo scores between i and j. So, d_{ij} = r_i (old) - r_j (old)

 μ_{ij} = the number of points that idea i is expected to score against idea j. This assumes that μ_{ij} is a logistic function of the difference in ratings such that $\mu_{ij} = 1 / (1 + 10^{-d}_{ij})^{400}$. For example, if idea i has the current Elo score of 100 and idea j has the current Elo score of 20, $\mu_{ij} = 1 / (1 + 10^{-80/400})$

= .61. This means that idea i is expected to win .61 points, i.e. has a 61% chance of winning.

 S_{ij} = result of the match (1 = i beats j, .5 = tie, 0 = j beats i)

r(new) = updated Elo score (after the match). For i, $r_i(new) = r_i(old) + K(S_{ij} - \mu_{ij})$. For j, $r_j(new) = r_i(old) + K(S_{ji} - \mu_{ji})$.

For example, if $r_i(old) = 200$ and $r_i(old) = 300$, $S_{ij} = 1$ (meaning that idea i beats idea j), and we set the K value to 40, then the new score for idea is:

```
r_i(new) = r_i(old) + K(S_{ij} - \mu_{ij})

r_i(new) = 200 + 40(1 - (1 / (1 + 10^{100/400})))

r_i(new) = 200 + 40(1 - .36)

r_i(new) = 200 + 26

r_i(new) = 226
```

AND the new score for idea j is:

```
r_j(new) = r_i(old) + K(S_{ji} - \mu_{ji})

r_j(new) = 300 + 40(0 - (1 / (1 + 10^{-100/400})))

r_j(new) = 300 + 40(0 - .36)

r_j(new) = 300 - 26

r_j(new) = 274
```

²⁶ Langville, Amy N. and Meyer, Carl D., "Who's #1: The Science of Rating and Ranking," *Princeton University Press*, Dec. 2013, p. 55.

Tuning the K value and incorporating weights

The K value used in this study is K = 40, which is the value that minimized squared error (which is the square of the difference between the predicted S and actual S).

A beneficial feature of the Elo method is that is has a "built-in mechanism for weighting" via the K value. In order to incorporate the survey weights, the following adjustment was made to the Elo formula presented above:

w = weight. This is the survey weight associated with the respondent for each match. K = 40 * w

For example, if respondent z has a survey weight of 2.4, then all matches for this respondent have $K_z = 40 * w_z = 40 * 2.4 = 96$. Since the survey weights for all respondents average to 1, the K value averages to 40.

Calculating the Final Elo Scores for each idea

The raw order of matches is chronological based on the time when each respondent responded to the survey. Unlike the use of Elo in other applications where time matters, in this case it does not, and in fact, cases where an idea happen to win or lose a high percentage of its final games are problematic as the idea's ending score is likely not representative of its true strength. In order to address this issue, the order of matches was randomized 500 times, and the average final Elo score for each of the 500 tournaments was used to create the Final Score for each idea. To improve the accuracy of the scores, starting with tournament #2 the rolling average of final tournament scores was used as the starting score for each idea.

Tournament #1:

Step 1: The starting Elo scores for all 134 ideas are set to 0.

Step 2: Randomize the order of all 13,370 matches.

Step 3: Calculate updated Elo scores for all 134 ideas based on the results of the 13,370 matches.

Step 4: Record the final tournament Elo scores for all 134 ideas.

Tournaments #2 through #500:

Step 1: The starting Elo score for each of the 134 ideas is set to its current average final tournament Elo score. For example, if idea i has final tournament Elo scores of 132, 80, 120 and 62 for tournaments #1, 2, 3, and 4 (respectively), then it's current average final tournament Elo

²⁷ Ibid, p. 150

score is (132 + 80 + 120 + 62) / 4 = 98.5. Accordingly, for tournament #5 idea i will have a starting Elo score of 98.5.

Step 2: Randomize the order of all 13,370 matches.

Step 3: Calculate updated Elo scores for all 134 ideas based on the results of the 13,370 matches.

Step 4: Record the final tournament Elo scores for all 134 ideas.

The Final Elo Score for each idea is its average final tournament Elo score for all 500 tournaments.

Converting the Final Elo Score to Final Score (it's win probability)

As stated on the first page of this appendix, μ_{ij} is the number of points that idea i is expected to score against idea j -- this assumes that μ_{ij} is a logistic function of the difference in ratings such that $\mu_{ij} = 1 / (1 + 10^{-d}_{ij})^{400}$.

In order to convert Final Elo Scores for each idea into a more interpretable measure of strength, for each idea we take the average number of points that the idea is expected to win against all other ideas, based on all of the other ideas' Final Elo Score. This gives us the average win probability for each idea against all other ideas.

For example, let's say we have 5 ideas i, j, k, l, and m – and we want to calculate the average win probability for idea i against the other 4 ideas, and we have the following Final Elo Scores for each idea:

```
r_i(final) = 230

r_i(final) = 100

r_k(final) = 30

r_i(final) = -20

r_m(final) = 400
```

First, we calculate the expected number of points idea i will win in each matchup:

$$\mu_{ij} = 1 / (1 + 10^{-130/400}) = .68$$

 $\mu_{ik} = 1 / (1 + 10^{-200/400}) = .76$
 $\mu_{il} = 1 / (1 + 10^{-250/400}) = .81$
 $\mu_{im} = 1 / (1 + 10^{170/400}) = .27$

Then, we average these to get the average win probability against these four ideas:

$$(.68 + .76 + .81 + .27) / 4 = .63$$

Appendix V: Criteria for Excluding Publicly-Submitted Ideas in Phase 1

Exclusion Criteria Definitions	Number of Exclusions
Entry is a comment rather than an idea for improving transportation	108
Scope of idea is too narrow or specific, meaning that not all IL residents can evaluate it	60
Idea contains information that would compromise user privacy	1
Idea suggests action outside of IDOT's authority	2
Idea was rewritten and resubmitted to account for faulty grammar or the inclusion of two separate ideas	8
Idea contained offensive content	1
Idea is a repeat of previous entry by same user	1
Idea is imprecise or otherwise incomprehensible	3
Idea is a repeat of previous entry	32

Appendix VI: Outcome Rate Information for Phase 2 provided by YouGov

Table of AAPOR Outcome Rates

Table of AAPOR Outcome Rates		1
	Counties	Rest of State
Interview (Category 1)		
Complete	741	599
Partial	106	103
Eligible, non-interview (Category 2)		
Refusal	0	0
Unknown eligibility, non-interview (Category 3)		
No answer	1671	1069
Not eligible (Category 4)		
Out of sample – other strata than originally coded	456	162
Total email addresses used	2974	1933
I=Complete Interviews (1.1)	741	599
P=Partial Interviews (1.2)	106	103
R=Refusal and breakoff (2.1)	0	0
NC=Non Contact (2.2)	0	0
O=Other (2.0, 2.3)	0	0
Estimate of e is based on proportion of eligible households among all numbers for which a definitive determination of status was obtained (a very conservative estimate). This will be used if you do not enter a different estimate in line 62.	0.650	0.813
UH=Unknown household (3.1)	1671	1069
UO=Unknown other (3.2, 3.9)	0	0
Response Rate 1		
I/(I+P) + (R+NC+O) + (UH+UO)	0.294	0.338
Response Rate 2 $(I+P)/(I+P) + (R+NC+O) + (UH+UO)$	0.336	0.396
Response Rate 3	0.000	0.570
I/((I+P) + (R+NC+O) + e(UH+UO))	0.383	0.381
Response Rate 4		
(I+P)/((I+P) + (R+NC+O) + e(UH+UO))	0.438	0.447

Cooperation Rate 1		
I/(I+P)+R+O)	0.875	0.853
Cooperation Rate 2		
(I+P)/((I+P)+R+O))	1.000	1.000
Cooperation Rate 3		
I/((I+P)+R))	0.875	0.853
Cooperation Rate 4		
(I+P)/((I+P)+R))	1.000	1.000
Refusal Rate 1		
R/((I+P)+(R+NC+O)+UH+UO))	0.000	0.000
Refusal Rate 2		
R/((I+P)+(R+NC+O)+e(UH+UO))	0.000	0.000
Refusal Rate 3		
R/((I+P)+(R+NC+O))	0.000	0.000
Contact Rate 1		
(I+P)+R+O / (I+P)+R+O+NC+ (UH + UO)	0.336	0.396
Contact Rate 2		
(I+P)+R+O / (I+P)+R+O+NC + e(UH+UO)	0.438	0.447
Contact Rate 3		
(I+P)+R+O / (I+P)+R+O+NC	1.000	1.000

ILLINOIS DEPARTMENT OF TRANSPORTATION





ATTACHMENT 1.2 MPO Outreach Presentation

ILLINOIS DEPARTMENT OF TRANSPORTATION





Overview

- Why does Illinois need a Statewide Plan?
- 2012 State Plan: Transforming Transportation For Tomorrow 2017 Plan Update
- Performance Measures
- Modal Strategies
- Outreach
- Next Steps





Why does the state need a Long Range Transportation Plan (LRTP)?

"We want our Long Range Transportation Plan to drive how we operate as an agency and how we are making investment decisions. By working together with members of the public and our industry partners, we are confident we can develop a solid vision for how we are going to invest in transportation in Illinois over the next 10 to 20 years."

-Illinois Transportation Secretary Randy Blankenhorn

Federal Requirements

- 23 USC 135(f) and 49 USC 5304(f)
- 23 CFR 450.210

State Requirements

Public Act 097-0032





2012 Transforming Transportation for Tomorrow

- □ IDOT considered eight policy factors in development of the 2012 Plan
- □ 184 action items were established, examples include:
 - Establish a statewide advisory committee for freight
 - Develop a Climate Change Adaptation Plan
- □ 135 are complete or in process as of today
- ☐ The 2017 Plan Update will continue to build on these action items with updated objectives & strategies







2017 LRTP Goals

- **Economic Growth:** Improve Illinois' economy by providing transportation infrastructure that allow for the efficient movement of people and goods.
- Livability: Enhance quality of life across the state by ensuring that transportation investments advance local goals, provide multimodal options and preserve the environment.
- Access: Support all modes of transportation to improve accessibility and safety by improving connections between all modes of transportation.
- Resilience: Proactively plan and invest in the state's transportation system to ensure that our infrastructure is prepared for extreme weather events.
- Stewardship: Safeguard existing funding and increase revenues to support system maintenance, modernization, and strategic growth of Illinois' transportation system.
- Safety: Ensure the highest standards in safety across the state's transportation system.





Making Progress...

- Measuring LRTP Implementation
- Project Selection
- ☐ Federally Required Performance Management





Measuring LRTP Implementation

Sample objective:

Goal	Mode	Objective	Strategy	Implementer(s)	Proposed Measure	Data
Livability	Highways	Ensure highway projects achieve local goals	When developing the purpose and need of a project, consult the goals of the State, surrounding community, and fiscal realities		Increase in project accomplishment, decrease in environmental impacts, reduced congestion, decrease in incidents and incident severity	accomplished,





Project Prioritization

IDOT utilized a Performance Based Project Selection Process to evaluate and help prioritize major expansion projects within the FY2018-2023 Proposed Highway Improvement Program.

The measures developed based on the LRTP goals:

- ☐ Traffic Operations/Congestion
- Safety, Economic Development
- Accessibility/Multimodalism
- Livability/ Environmental Impacts
- Regional Ranking







Federal Performance Measures

National Goals

- 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.

[23USC §150(b)]





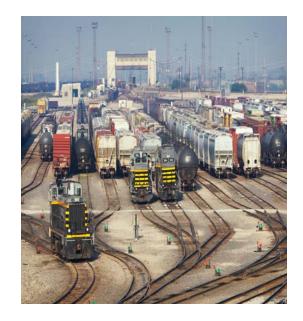
Coordinated Plans





Freight Plan

- The FAST Act provides freight formula funds to states with an FHWA approved freight plan
- The Freight Plan will:
 - Identify trends, needs, bottlenecks, goals, and performance measures,
 and develop strategies for improving freight movement in Illinois.
 - Projects slated to use these funds, and how we are identifying & measuring projects.
 - This plan will contribute to the national freight goals established under the FAST Act and align with the goals of the 2017 LRTP.
 - Designate Illinois critical urban & rural freight corridors with input from the MPOs
- Slated for release in November 2017







Rail Plan

- ☐ The Illinois State Rail Plan will present a vision for the role of passenger rail and freight services in Illinois and illustrate what these services will look like in the future
- The Rail Plan will:
 - Present existing and future passenger and freight rail services, conditions, and needs in Illinois
 - provide a framework to implement rail initiatives in Illinois and guide future rail investments
- The Rail Plan will be included in the December LRTP







Asset Management Plan

- ☐ Federal transportation requires all states to develop an Asset Management Plan .
- The Plan will include:
 - Description and condition of pavements and bridges on the National Highway System
 - Asset Management objectives and measures
 - Summary of gaps between targeted and actual performance
 - Life-cycle cost and risk management analysis
 - Financial plan that addresses performance gaps
 - Investment strategies and anticipated performance
- Interim Transportation Asset Management Plan is due on April 30th 2018, with the final plan slated for FHWA review on or before June 30th 2019.







Transit Plan

- Bolster the competitiveness of our urbanized areas
- ☐ Improve mobility and access for all Illinoisans
- Maximize coordination of public transportation resources
- Result in the achievement of concrete deliverables like the provision of GTFS feeds for every fixed-route system in Illinois, new geospatial analysis tools, and performance and management tools that can be used to pursue Plan goals into perpetuity







Outreach

- Outreach for the LRTP started in the summer of 2015 with communication amongst key internal and external stakeholders.
- In the summer of 2016, IDOT produced a Draft Goals survey and promoted the survey through social media and at the 2016 Illinois State Fair. This survey was available online and received over 700 responses were received.
- In early 2017, IDOT enlisted the help of UIC to conduct 2 rounds of outreach pertaining to objectives for the goals.
 - February, saw the release of the interactive outreach site <u>AllOurldeas.org/IDOTideas</u>. We received 541 visitors, provided 36,353 votes on individual objectives.
 - May, IDOT solicited feedback on budgeting prioritization six goals, continued refinement of the objectives
 - June/July MPO Presentations, Transport Chicago
 - July IDOT will hold 3 stakeholder workshops:
 - Chicago
 - Springfield
 - Metro East







Current Status

- Working with consultant to draft Chapters:
 - System Update
 - Integrate Modal Plans
 - Identify Priorities
 - Financial Plan
 - Appendixes & detailed research, requirements







Next Steps

• MPO/Stakeholder outreach • Statewide workshops • Internal staff meetings June/July • Public comment period on draft chapters August • Revisions made to plan based on public comments Sept/Nov • Final plan released December





Questions?

Updates on the IDOT LRTP can be found at: goo.gl/5DITzf

Specific questions about the plan can be emailed directly to

Christopher.Schmidt@illinois.gov

Connect with us!











Subscribe to **IDOT** in **Motion** for IDOT news and announcements at **idot.illinois.gov**.





ILLINOIS DEPARTMENT OF TRANSPORTATION





ATTACHMENT 1.3 MPO Outreach Matrix

LRTP Outreach Schedule for MPOs 2017

		*Plea	se make sure tha	t you provide 1 meeting per MPC	D in either June or July. Please try and not double book for we have limited staff. If	
Name of MPO		ate of Meeting Tin	ne of Meeting	Metro Manager for MPO		Attendance Doug Staske, Vermillon County Highway Robert Nelson, IDOT District S Chris Milliken, City of Danville Lisa Belth, Danville Mass Tansit Amy Brown, City Silling Miller Potter, Vermillon Regional Airport Jim Wilson, Newell Township Shelley Dannell, Willage of Cattin Tom Caldwell, IDOT Chris Schmidt, IDOT
DATS	David Schnelle/dschnelle@cityofdanville.org Ryan Shrimplin <rshrimplin@cityofcapegirardeau.org></rshrimplin@cityofcapegirardeau.org>	6/7/2017	11:00am	C. Jones	No Questions No Questions	Mr. David Blalock, Bootheel Regional Planning & Economic Development Commission (Bootheel BPC) Mr. Bodney Bollinger, City of Jackson Mr. Cardhey Bollinger, Southeast Missouri Regional Planning & Economic Commission Mr. Cary Harbison, Southeast Missouri Regional Planning & Economic Commission Mr. Cary Harbison, Southeast Missouri Regional Port Authority (SEMO Port) (alternate for Mandi Brink), City of Cape Girardeau Area MAGNET Mr. Joek Millian, Missouri Department of Transportation (MoDOT) Mr. Lary Payne, Cope Girardeau Area MAGNET Mr. Lary Payne, Cape Girardeau Area MAGNET Mr. Lary Payne, Cape Girardeau Area MAGNET Mr. Kirk Sandfort, Southeast Missouri State University (SEMO University) (alternate for Beth Glaus) Ms. Selley Waston, Cape Girardeau County Transit Authority (CTA) Ms. Elquin Auala, Missouri Department of Transportation (MoDOT) Mr. Curtis Jones, Ellinois Department of Transportation (MODOT) Mr. Brian Okenfuss, Missouri Department of Transportation (MODOT) Ms. Betsy Tracy, Federal Highway, Administration (HYMO) (via teleconference) Ms. Eva Voss, Missouri Department of Transportation (MoDOT) (via teleconference) Ms. Ray Shyringhin, City of Cape Girardeau Ms. Kelly Green, KLG Engineering
SEWIFO	Nyan Simmpini Nismmpinie Cityorcapecin ardead.org/			C. Julies	NO QUESTIONS	
		7/13/2017	12:00 PM			
DMATS	Chandra Ravada/ Cravada@ecia.org			Doug DeLille	No Questions	Buol, Timmerman, Hecimovic*, DeLille, Connors, Rios, Barklow*, Klein, Lynch, Nagle*, Deutmeyer* *serving as proxy
DUATS	Joselyn Stewart/JStewart@decaturil.gov	6/13/2017	10:30am	Tom Caldwell	Asked about when the Freight Plan will be coming out. Tom gave them Jim's Contact info	Scanned Copy Attached
CUUATS	Rita Black/rmorocoi@co.champaign.il.us	6/14/2017	10:30am	Tom Caldwell	Where can I find progress status information for the 2012 IDOT LRTP? Are there objectives for each of the IDOT goals/modes? Lengthy question I recommended sending to Chris Schmidt.	Amy Smyder Rob Kowalski Chris Sokotowski Libby Tyler Lorrie Pearson Craig Shonkwiler Betsy Tracy (via conference call) Tom Caldwell Brian Trygg
СМАР	Teri Dixon/TDixon⊜cmap.Jilinois.gov	6/16/2017	9:30am	Erin Aleman	Ms. Becker asked if the bicycle/pedestrian plan will be integrated into the long range plan and Ms. Aleman replied it will be integrated as well. Mr. Zucchreo complimented the survey and requested that the feedback be shared with the committee. Ms. Aleman agreed to send the feedback to staff for distribution to the committee.	Jennifer Killen – Cook County, Chair, Jennifer Becker– Kendall County, Gabrielle Bicliuns – NIRPC, Darwin Burkhart – IEPA (via phone), Brian Cartson – IDOT District 1, Michael Connelly – CTA, John Donoran – FHVA), Doug Ferguson – CAMPA, Jackie Forbers– Kane County, Tomy Greep – FTA, Jessica Hector-Hsu – FTA, Emily Karry – Lake County, Tom Kelso – IDOT Central Office, Dould Knille. Metrat, Christian Kupkowski – Willi County, Mayor Uson Rockingham – Council of Mayors, Duee Seglin – CDOT, Lorraine Sonden – Pace, Chris Snyder – DuPage County, Audrey Wennink – MPC, Rocco Zuchero – Illinois Tollway, Dianiel Aguirre, Milke Albin, Erin Aleman, Garland Armstrong, Heather Armstrong, Ryan Bigbie, Suan Borucki, Len Cannata, Kevin Carrier, Sherry Chen, Bruce Christensen, Jacke Forbes, Mike Rehmen, Barbara Killyp, Dennis Latto, Ashley Lucas, Leah Mooney, Brian Pigeon, Chad Riddle, Adam Rod, David Spacek, Anthony Vega, Milke Maicas, Alex Beack, Anthony Cefall, For Dixon, Kama Dobb, Jesse Elam, Augusta Markach, Alex Beack, Anthony Cefall, For Dixon, Kama Dobb, Jesse Elam, Augusta
	Eric Miller/emiller@tricountyrpc.org	6/21/2017	9:00am	Chris Schmidt	No Questions	IDOT x Jim Ardis, City of Peoria x Terrisa Wonsfold,* IDOT x Leen Ricca, Bartonville x Tom O'Neil, Peoria County x Bob Lawless,* Bartonville x Stephen Morris, Peoria County x James Dillon, West Peoria x Greg Sinn, Tazewell County x Kinga Krider,* West Peoria x X Mike Harris, Tazewell County x Kinga Krider,* West Peoria x Greg Menold*, Tazewell County x Jeff Kauffman, Village of Morton x Greg Menold*, Tazewell County x Greg Menold*, Tazewell County x Singer Herman,* Village of Morton x Doug Huser, Woodford Co. x Matt Fick Peoria Heights x Donald White, Cillicothe x Kyle Smith,* Peoria Heights x Donald White, Cillicothe x Kyle Smith,* Peoria Heights x Donal McCabe, City of Pekin x Fred Lang, Creve Coeur x Dave Mingus, City of E. Peoria x Terry Keogel*
		6/23/2017	10:30am			
MCRPC	Jennifer Sicks/JSicks@mcplan.org			Tom Caldwell	No Questions	Scanned Copy Attached

LRTP Outreach Schedule for MPOs 2017

BSI		Gena McCullough/gmcccullough@bistateonline.org Geoff Oison/golson@k3county.net	6/27/2017	12:00 PM	Doug Detille Tom Caldwell	Will the LRTP be a Policy document, similar to what it has been in the past, or will it include more specifics on projects?	MEMBERS PRESENT Jon Burgstrum Scott County John Dowd City of Eldridge Nicole Gleason City of Davenport Jim Grathon City of Saivs Scott Hinton City of Moline Tim Kammler City of Saix Moline Mike Xane City of Rock Island Brent Morick City of Seat Moline Mike Xane City of Rock Island Brent Morick City of Bettendorf Brian Schadt City of Davenport Brian Schadt City of Davenport Sam Shea lowa Department of Transportation – District 6 Gary Stat City of Davenport OTHERS PRESENT Doug DeLille Illinois Department of Transportation – Springfield Gena McCullopy Bi-State Regional Commission Brandom Melton Bi-State Regional Commission Clay Merritt City of Davenport Jonnie Miller Bettendorf Tao Pan Bi-State Regional Commission Becky Passman Bi-State Regional Commission Becky Passman Bi-State Regional Commission Bryan Schmid Bi-State Regional Commission
	400		7/3/2017	1:00pm	C.Jones	N. O	Chris Wallace City of Carbondale
SIN	мро	Joe Zdankiewicz joezdankiewicz@greateregypt.org	7/6/2017	8:30AM	Liones	No Questions	John Crawford City of Carteville Shoun Resex, Wec Chair Sangamon Mass Transit District Nathan Bottom. City of Springfield Brian Davis Sangamon County Norm Sims Springfield Sangamon County Regional Planning Commission Jeff Myers* Illinois Dept. of Transportation (IDOT): Region 4, District 6 * Represented by Wes Clark Technical Committee Advisors – Non-Voting Members Holly Ostdick IDOT: Urban Program Planning JO Stevenson Federal Highway Administration: Illinois Division Office Chris Isbell IDOT: District 6: Local Roads & Street Chris Isbell IDOT: District 6: Local Roads & Street Mike Stead Illinois Commerce Commission Mark Hanna* Springfield Airport Authority Francesco Bedini-Jacobini IDOT: Office of Intermodal Project Implementation Represented by Roage Blickenderfer Others Stan Hancon – Crawford, Murphy, & Tilly Shannan Karrick - Regional Planning Commission Neta Son – Regional Planning Commission Brian Sheehan – Regional Planning Commission Jason Sass – Regional Planning Commission
SA.	TS				Chris Schmidt		
SA	13	Channel Vanish (Channel V On annual V V			Chris Schmidt		
		Shannan Karrick/ShannanK@co.sangamon.il.us>	7/12/2017	3:00 PM		Will the MPO's (Policy/Tech committees) have an opportunity to provide comments on the state Rail Plan? Will the MPO be given an opportunity to provide comments on the LRTP draft chapters, draft plan, or both? DSATS policy committee also asked about having someone from IDOT attend a policy meeting to provide an update on the state Rail Plan and Freight Plan efforts. They have some questions and concerns regarding blocked crossing times, types of materials being transported, and speed limits on rail. DSATS also stated that the MPO has been contact about input on the critical urban and rural freight corridors in the area.	
	ATS	Shannan Karrick/ShannanK@co.sangamon.il.us> Brian Dickson/Brian.Dickson@CITYOFDEKALB.com	7/12/2017	3:00 PM	Doug DeLille	comments on the state Rail Plan? Will the MPO be given an opportunity to provide comments on the LRTP draft chapters, draft plan, or both? DSATS policy committee also asked about having someone from IDOT attend a policy meeting to provide an update on the state Rail Plan and Freight Plan efforts. They have some questions and concerns regarding blocked crossing times, types of materials being transported, and speed limits on rail. DSATS also stated that the MPO has been contact about input on the critical	Unknown at this time
	ATS		7/12/2017 6/20/2017	3:00 PM		comments on the state Rail Plan? Will the MPO be given an opportunity to provide comments on the LRTP draft chapters, draft plan, or both? DSATS policy committee also asked about having someone from IDOT attend a policy meeting to provide an update on the state Rail Plan and Freight Plan efforts. They have some questions and concerns regarding blocked crossing times, types of materials being transported, and speed limits on rail. DSATS also stated that the MPO has been contact about input on the critical	Unknown at this time John Griesheimer Presiding Commissioner Franklin Courty Vice Chair Mark A. Kern Chairman, St. Clair County Board Zhot Vice Chair Steve Stenger County Executive St. Louis County Executive St. Louis County Executive County Executive St. Charles County Executive Steve Ellmann County Executive St. Charles County Robert Elmore Chairman, Board of Commissioners Morroe County Lyda Krewson Mayor, City of St. Louis Kurt Prenziler Chairman, Madison County Board Chairman, Madison County Board Chairman, Madison County Board Mayor, Executive Jefferson County Lefferson County Members Chuck Cavery St. Louis County Municipal League Jason Fullinght

LRTP Outreach Schedule for MPOs 2017

yor Mike Chamberlain, City of Belvidere
airman Frank Haney, Winnebago County
. Ken Terrinoni, Boone County
. Todd Cagnoni, City of Rockford
. Tim Savage, Village of Machesney Park
. Dan Jacobson, City of Loves Park
. Steve Ernst, RMTD
. Kris Tobin, IDOT District #2
thael P. Dunn, Jr.
ristina Washington
Paul Diipla
na Ma,
n Rohr,
Iney Turner
in Belle
Hood, RMAP
ug DeLille, IDOT Planning & Programming;
n Massier
1 Halldee
ck Armstrong
nn Trommels
nGIS Policy Board
icy Committee Members Present (7): Adams, Luebke (10:23 AM), McKearn, Jencius,
ninger,
nderwerff, Koprowski
icy Committee Members Absent (3): Marchek, Sweeney, Anclam
icy committee Members Absent (3): Marchek, Sweeney, Anciam
icy committee wembers Absent (5): Warchex, Sweeney, Anciam
thrical Committee Members Present (9): Flesch, McKearn, Boysen, Coopman,
chnical Committee Members Present (9): Flesch, McKearn, Boysen, Coopman,
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hnical Committee Members Present (9): Flesch, McKearn, Boysen, Coopman, ninger, Hecox, nderwerff, Koprowski, Pennington chnical Committee Members Absent (6): Gavin, Long, Rock Co. Planning, Barber,
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ILLINOIS DEPARTMENT OF TRANSPORTATION





ATTACHMENT 1.4 Conversation Café Attendance Sheets





CONVERSATION CAFÉ SIGN-IN SHEET

Meeting Date: July 19th 2017 Place/Room: IDOT Auditorium

Name	Company/Organization	E-Mail
Justin Knoff	SSCI	developmenta Sseci.org
BIL F229	AECI	Arey@agcil.org
Shannen Karrick	SSCRPC	snannan-keco.sangamor.ita
Bru Marian	NOW.	WILLAM, MUDISA Q ICCOURS, GOD
Tom MagoLaw	IDST D3	THOMAS. MAGOLANC ILLINOIS. GOV
Terry Heffron	IPOT ITS	rerrence, he from Illinois. 500
Page 1 of 2		



CONVERSATION CAFÉ SIGN-IN SHEET

Meeting Date:

July 21st 2017

Place/Room:

CMAP Cook County Room

Name	Company/Organization	E-Mail
Tigna Brazzale	Ray Graham Assoc	. tianab@raggraham.org
Daniel Payth	BHRC	deniel. payette & blackhamkhills.com
Geoff Olson	Kankakee MPO	golson@k3 county .net
Christina Kupkawski	wwoot	Ckupkowski @ willcounty 11.70 is com
Kristen Andlersen	Metra	Kandersen@metrarr.com
Sis Killen	Cook County	jennifer. Killen@cookcountyil.80v
Tomohiko Music	Cook Comby	tomoliko. mus. & @ cook combil. you.
Kelwin Harris	CMAP	
Wei Luc	CMAP	Khanis O cmay. Minor. gor Who @ conap. illino, s.gov.
Jane Grover	CMAP	(jgvover g cmap: illinois, gov
Jamy Lyne	1259	jamy. 14ne Dwsp. com
Stacy Mayers	Genlands	Smeyers Copen lands org
JAMIE SIMONE	IDOT	JAMIE. SIMONE PILLINOIS
David Phillips	Transystems	dphillips atomosys tems com
P.S. SRIRAT	VIÉ	sñraj@uic-edu
Pers Elinchan	IDOT	Missell flinchen Billinois gov
Henry Guernier	Bluge	houerico @ getipess.com
Andrey Wennink	MPC	awennink@ metaplenning.
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B



Name	Company/Organization	E-Mail
GINA TRIMARIO	Transystems	erin allman @ illinois, gov
Erin Allman	(DOT	ern aleman @ illinois . gov
		0



CONVERSATION CAFÉ SIGN-IN SHEET

Meeting Date:

July 31st 2017

Place/Room:

District * - Collinsville, IL

	- C	
Name	Company/Organization	E-Mail
Kent Ahrenholtz	KEG	Kahrenholtz@
		Kaskaskia eng. (om
Kning Carrow	IT COME (D)	rgeorgene Stelaircohuy.com
Andrew Parker	Transystems	arparkin Q transystems, con
MOUY BARLETTA	KEG	mbarletta & kaskaskia Eng. com
James hopseld	ВМЬ	James Le Barber Murphy broup, com
Dennis Kress	City of Collinsville	dkressecollinsvilleil.org
Tray Turner	City of Collinsville	Hurner @collinsvilleil.org
mitch Bair	City of Collinso. 16	mbaire collections
Josh Schaufelbergy	So. III. Builders Assor	
Donna Richber	SU. III. Bulchy ASSOC	
John Miller	City of collinarile	juiller@ collinsville; lorg
Jim Moller	IDOT LOCAL ROCAS	James. molle + ellh nois-gov
Kevin Jemison	IDOT - Programming	Kevin, jemison Dillinois, gov
DAN SOMMER	100T BLRS	Daniel Sommer @ 146165.96V
JAME SIMONE	IDOT	JAMIE. SIMONE (2) ILLINOIS, GOV
Dave Clark	ESI Consultants	ddarkeesiltd.com
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ILLINOIS DEPARTMENT OF TRANSPORTATION





ATTACHMENT 1.5 Conversation Café Final Report





<u>Intro</u>

In late July the Illinois Department of Transportation (IDOT) embarked on its latest round of public outreach to support the upcoming 2017 Long Range Transportation Plan (LRTP). Three conversation cafes were held across the state to help identify objectives, strategies, and in some cases measures for each of the 5 overarching goals. The conversation cafes were held in Springfield on Wednesday July 19th, Chicago on Friday July 21st, and Collinsville on Monday July 31st.

Structure

For each location a list of transportation professionals and officials were invited to participate. The attendees were broken up into small groups and each group was presented with each goal separately for discussion. Each goal had two IDOT staff members assigned to help facilitate the group conversation. The attendees spent approximately 20 minutes with each goal. Within this 20 minute block the IDOT staff would define the goal, spur discussion on what the goal's objectives should be, the strategies associated with the given objective, and finally if time permitted - measures to help track the goals progress towards achieving said objectives. Ideas from the group were captured on a poster board and then later reviewed and typed up in greater detail by IDOT staff. The results provide a wide range of possible additions and subtractions to the draft objectives, strategies, and measures. Below you will find the results from the conversation café as written on the flip boards and then reviewed by the facilitators. Please note that some groups were not able to get to all the objectives.



Results

Economic Growth - Improve Illinois' economy by providing transportation infrastructure that supports the efficient movement of people and goods.

Objective #1- Encourage regional coordination in the identification of solutions to transportation problems to provide for efficient movement of goods, people, and services allowing for economic growth.

Notes for Objective #1



Conversation Café Final Report Objective

- Regional coordination should include interaction with MPOs, particularly coordination of STIPs/TIPS.
- Participants felt this objective is too broad; concentrate on areas where you want growth to happen. Ex., "Encourage coordination with Midwest MPO's in the identification of solutions to transport problems to provide for efficient movement of goods, people, and services to enhance economic growth"
- Change the wording in Obj. #1 instead of using "allowing for economic growth", maybe use "to enhance economic growth" to make the statement more productive
- Participants also mentioned that IDOT should focus on areas that do not have transit systems
- Should be a stronger verb instead of "allowing for economic growth", use "ensure" or "enhance".

<u>Strategy</u>

- Coordination of all MPOs; particularly when a project involves a lineal corridor
- Assess/improve poor passenger rail routes in downtown Chicago and O'Hare areas
- Promote Complete Streets
- Focus on existing freight assets and utilize them to improve poor rail routes
- Establish better interaction/coordination between state/local agencies
- More dynamic message signs for regional movement.
- Establish economic growth grants

Measure

- Number of coordination meetings with MPOs
- Passenger satisfaction No other input from participants on PMs for Obj. 1

Objective #2 - Improve and increase connectivity and efficiency between modes and services to promote system usage and economic growth.

Objective #4 - Support projects that improve intermodal connectivity and coordination of services to enhance continuity and accommodate the efficient movement of people, goods, and services across all modes to address intermodal efficiency.

Notes for Objective #2

(In many cases the attendees thought that objective 2 and 4 where very much the same. Consequently, staff at the direction of the stakeholders combined objectives 2 and 4)

Objective 2 & 4

Obj. 2 - Issue was with the definition of "economic growth" and who will benefit from this growth —
Is this all things freight? Ex., "Support rail freight projects that increase intermodal connectivity
and efficiency between modes and coordinate services to promote rail freight system usage and
economic growth".



- Obj. 4 Definition needs clarification –this objective is more intermodal specific. Is it just for
 Freight? Participants also asked "Who is benefitting from these policies"? State? Industry?
 Municipalities? Industry differential was also mentioned how to balance the stakeholders to try
 to get a "buy-in" from different industries.
- Participants asked "What role does the private sector play? How do we balance economic growth"?
- Obj. 2 is more economic/freight related; Obj. 4 is more livability/quality of life related.

Strategy 2 & 4

- Better communication with stakeholders
- Adding signage/notification and alternate routes/times (ex., lane signage such as arrows for accidents)

Performance Measures

• Increase in number of investments; reliability of passenger services increased

Objective #3 - Support transit-oriented development land use and transportation planning connectivity.

Notes for Objective #3

Objective 3

- Support TOD to ensure connectivity between land use and transportation planning. Participants
 asked how this objective would apply to smaller towns; make objective broader so that it would
 apply more to the entire state.
- Provide pedestrian, bicycle, and connecting transit access
- More MPO/local authority related than IDOT related and pertains more to transit than economic growth.

Strategy

- Focus on development of a statewide guide (like PACE) to encourage development of TOD investments
- Develop hubs of transit development and prioritize pedestrian/bike infrastructure along IDOT transit corridors
- Ensure IDOT standards encourage Transit-Oriented Development

<u>Performance Measures</u>

- Transit ridership figures
- On-Time Performance measurements
- Measure population/employment in TOD area.



Objective #5 - Support autonomous/connected freight vehicles.

Notes for Objective #5

Objective 5

 Support small scale autonomous vehicle pilot projects for smaller sites (ex., logistics parks, parking lots)

Overall Top 3 Takeaways

- Advanced communication for participants Provide material before the meeting so participants will be aware of type of feedback we are requesting
- Break up meetings by organizations/agencies: one meeting for MPOs, one meeting for local governments, one for public, and one for IDOT District personnel.
- Provide more visual aids PowerPoint and/or story boards to explain the LRTP process and their role in the process.

Livability - Enhance quality of life across the state by ensuring that transportation investments advance local goals, provide multimodal options and preserve the environment.

Objective #1 - Enhance the transportation experience through better traveler information; utilizing technology, where possible, to maximize efficiency of existing facilities and services.

Objective #1

- Issue with lack of detail of state/local bidding process
- Communication with local authorities
- Move obj 1 to Access Goal
- Remove "Where possible" not necessary
- "Equitable" and "affordable" emphasis could be added as well as "efficiency" (to be maximized)
- Issue with lack of communication of local authorities (mentioned but may not be applicable to this objective)
- Technology improves traveler experience
- Add equitable
- Add efficiency and equity; Remove where

Strategies

- Increase level of detail
- Active traffic management, dynamic message focus
- Vehicle information integration
- New technology pilot testing, partner with private firms and develop technologies
- Increase level of detail in letters/communication such as list type of materials that will be used in improvements: oil and chip vs. HMA



- Increase dynamic messaging
- Active traffic management
- E-signage: Do not just mention a delay yet give multi-modal options and driving detours
- Interface partnership dynamic messaging
- Vehicular technology navigational system and audible guide which sync to provide real-time multimodal and detour information "Crash ahead, consider train departing in X minutes X miles away off Exit X."
- Be adaptable to future
- Fiber in place?
- Pilot testing of new technology
- Work towards legislation and funding

<u>Measure</u>

- Measure with camera on freeway yet only shows one portion of their ride
- Leverage technology as a way to fund
- Develop a comprehensive survey
- RTA customer service survey allowing for comments
- App-based travel surveying (need statewide data)
- Custom satisfaction survey(s)
- Charge E.J. to "equity" definition unclear
- Increase or enhance equity
- Remove bare minimum etc.
- How well, how much congestion during construction and after improvement

Objective #2 - Enhance existing policies related to Environmental Justice so these activities occur early and often and go beyond meeting the bare minimum requirements.

Objective #2

- EJ Clarify meaning
- Federal objectives = goals? Is this what we need?
- Underserved pops instead of EJ
- Promote instead of enhance
- Remove "often"
- Promote existing
- Remove the word "often"
- Change environmental justice equity
- Enhance ex. Policies to increase or enhance equity
- Remove "go beyond the bare minimum"
- If "going beyond" then identify in the goal

Strategies



- Non-traditional outreach meetings
- Connect and collaborate with events already occurring and established bus stops, set up table at community events
- Partner with respected liaison of trust within community
- Ensure projects are actually benefiting community and not just those in power
- Ensure long-term planning has goal of connectivity
- Shared use path outside Right of Way (ROW)
- Create standard so people know what to expect
- Get people involved
- Accessible utility information for more than just those involved in infrastructural changes – think of businesses – may want to do an improvement simultaneously
- Add equity performance measure as a part of project prioritization
- Engage community
- Decrease commutes times especially for low income; ease job access

Measure

- Count number of meetings, events, people reached, attendees, repeat contacts, time before in efforts to contact early
- How much of the affected population in community was contacted through outreach; then increase their engagement

Objective #3 – Utilize a sustainable approach to transportation planning and engineering which promotes environmental stewardship and energy conservation.

- Remove "sustainable" or place it after "environmental"
- Add "repeatable or reproducible" approach
- Investments seem to have equitable connections
- Multimodal aspects applicable to Access goal
- Add "experience"
- Replace environment, add "comfort, safety, services"
- Local connection
- Use "energy conservation" in strategy not necessarily
- Pay-as-you drive insurance plans
- Check with other states for best practices
- Environmental performance measures optimal performance measures
- Emissions vehicular miles traveled
- Include local input
- Multimodal implies modes should work well together (coordination)
- Emphasize number of people moving rather than single occupancy vehicles moved
- Being on cutting edge of new materials
- Amount of energy



- Assess carpooling and how to increase
- Integrate rural demand response systems
- Consider context sensitive solutions Complete Streets in consideration of all users

Strategies

- Communication with local communities?
 - * Informing local officials of funds, projects, opps
- EV charging station
- Merge projects what you have done and what you are looking to do
- Use recyclable roadway materials, LED for aviation

Measures

- Looking at transit ridership
- Look at benefits of zero car households
- How many people use more than 1 mode of transportation
- Prioritize "Road congestion" "should be assessed increase mode options and increase capacity and shifting from road to rail
- See immediate reactions to congestion
- Develop different metrics for different regions throughout state with local engagement on necessary measure
- Ensuring integration
- Look at availability of longer mileage trips and increase of such
- Trip planning across modes which are user friendly and get users from door to door
- Long distance bus trips

Access - Support all modes of transportation to improve accessibility and safety by improving connections between all modes of transportation.

Objective #1 — Enhance intermodal connectivity and coordination of services to improve continuity and accommodate the efficient movement of people, goods, and services.

- Coordinate access efforts ports/air/hwy access.
- Freight mobility re-establish freight stops/stations in rural communities to promote economic activity.
- Define Movements
- Examine intermodal connectivity
- Prioritize investments in bike facilities/signs
- Enhance bike mobility
- Provide truck parking



Objective #2 – Establish a bicycle facilities Inventory and identify areas for improvement to better the total network to provide safe, efficient, multi-modal access to bicycle facilities.

Objective #2

- Identify first/last mile connections trails/paths to from stations.
- Invest in bike infrastructure on transit modes
- Maintain existing facilities
- Identify and prioritize gaps.
- Add "safe efficient" delete "strategic".
- Designate funding for bike/ped project around ITEP for non-motorized projects.
- Better way finding and traveler info to promote transfer to and from bike to other modes.
- Identify and prioritize needed linkages on high volume roads.
- Make bike facility info available on traveler info systems.
- Add bike improvement requirement in IDOT private development permitting.
- Consider both transportation and recreation in project prioritization.

Strategies

- Make bike facility and destination info more accessible to users and from users.
- Promote 1st mile/last to improve bike usage
- Make more bike sharing available
- Utilize a larger, consistently applied, and pragmatic vision when implementing "complete streets".
- Support legislation/policy when needed.
- ID and prioritize critical bike connections to fill gaps.
- Privacy protected facilities
 - o Particularly on high volume roads.

Objective #3 – Improve accessibility of truck, rail, ports, and waterway freight information through innovative communication techniques to provide more accurate data sets.

Objective #3

- Information on facilities for truck parking availability.
- Truck route info type of route
- Identify needs of agencies and companies
- Prioritize funding

Objective #4 – Invest and support multi-modal transportation infrastructure improvements and strategic performance-based expansion of services that support the efficient movement of people, goods, and services.



- Prioritize enhancements to existing infrastructure rather than system expansion.
- Promote multimodal access for all users.
- Strategy- higher project programming weight for multimodal projects
- Strategy- collect more data using common measures across jurisdictions to achieve common programming practices.
- Bring private sector data into use.
- Innovative communication technique to get valuable info to users.
- Integrate and display information so that is easily understood and accessed.
- Data available in multiple media formats and channels.
- "Transport infrastructure" also should mean "services" that support/promote multi-modal trips.

Strategies

- Facilitate holistic planning across regions and locals to support balanced land uses. Purpose and need to statement that better reflect the broad plan.
- Coordinating information and structure investment w/municipalities
- Break out of silo project thinking projects need to include or consider all modes of transportation.
- Sharing info across agencies with common data standards.

Resilience - Proactively assess, plan and invest in the state's transportation system to ensure that our infrastructure is prepared to sustain extreme weather events.

<u>Goal Notes -</u> Much discussion centered on the actual Goal wording, before the groups jumped into the Objectives. General consensus being that the wording is too specific. The lowest impact change would be deleting the word weather from the goal definition. This would open up to the goal to any extreme event obviously. Hazardous material spills, acts of terror, asset damaged due to vehicle impact, design flaws.

Objective #1 - Improve access to data, information, and people needed for effective resiliency planning.

Objective #1

- Not only improve the access to the data but the relationships with the different local and state
 agencies that have the data so that when changes happen that agency will have buy-in to
 provide that information.
- Add in a new objective that focuses on maintaining established relationships
- Make that data available to the public so they can stay informed
- This is stakeholder building, remember that
- Define that data you need, find out what you have and then work with partners to fill in the gaps where the data you seek does not exist.

Objective #2 - Minimize impacts to natural, cultural, and historic resources and promote sustainability in project design and delivery.



- Don't start the objective with minimize, it sounds like hey we already do this but we are going to try and do less. Replace Minimize with Avoid.
- A rewrite: Promoting sustainability in project design and delivery, while avoiding impacts to natural, cultural and historical resources.
- Some said this does not fit with Resilience
- Change the objective to focus on context sensitive solution.
- Enhance the value of all objectives

Strategies

- Identify cultural and historical resources that the local community identifies as historic or cultural. Just because it is not on the national register of historic places does not mean that that site is not important to the community.
- Plan for weather events, design with nature in mind, areas that flood don't build in those areas.
- Minimize the impact by designing new projects which work with the natural landscape as
 opposed to defying it. Just because you can build a 2 mile bridge over a canyon does not
 mean you should.
- The assets should work with the natural landscape

Objective #3 - Utilize asset management to increase the lifecycle of infrastructure for improved maintenance performance.

Objective #3

- Some folks felt like this should go under the Access and Mobility goal.
- Remove, "for improved maintenance".
- Does IDOT have a Chief Sustainability Officer?

Overall Top Takeaway

Many folks asked about why Safety was not a goal of the plan, this was asked in all three
locations. Folks at the Chicago meeting said they would think that safety would be a greater
priority to the department than some of these goals.

Stewardship - Safeguard existing funding and increase revenues to support system maintenance modernization, and strategic growth of Illinois' transportation system.

Objective #1 - Invest in improvements for airports, streets, freight, ports, waterways, and new traffic and transit technologies

Objective #1

Strategies

Measures

OF TRANSPORTATION LONG RANGE

Conversation Café Final Report

Objective #2 - Ensure prioritization of projects is guided by sound policy, data, and performance.

Objective #2

- Perception
 - we are transparent
 - we use data
 - o invite feedback
- Lessons learned/measure actual benefits
- Performance rate
- Leverage funds
- Encourage locals to document project prioritization methods
- Multi-criteria prioritization methods
- Transportation asset management plan

Measures

How much \$ we receive.

Objective #3 - Collaborate with freight providers to create sustainable rail programs.

Objective #3

- Remove Rail Programs
- Provide incentives renewable fuel
- Provide disincentives manage traffic
- Overreaching goals with model specific considerations
- Develop evaluations matrix within mode
- Specific for each mode.
- How well are projects prioritized in MPO?
- Shared Rail
 - research
 - collaboration
- First /Last mile
 - Connections need to be maintained for sustained success.
 - o Recovery ratio
- Look at best practices in Europe.

Strategies

- Data sharing with locals
- Measure road & bridge conditions
- Performance of the system
- Look at before & after of project
- Develop better tools and data



• Communicate data and performance

Measures

Objective #4 - Support public-private partnership opportunities.

Objective #4

- Communicate data and performance
- Best practices
- Communication of education
- Evaluate projects
- Protect public interest
- Make sure a good value you can't afford to now but is it less expensive to build yourself.
- Pass 3P supportive legislation.
- Proposed projects need to be evaluated.
- Require exploratory for all major projects.
- Support but don't undercut public interest/accessibility/control.
- Private investment to match state/local funds.
- Normalize borrowing b/w public & private financing.
- Buildout maintenance with stewardship without giving up control.
- Quality not quantity
- What is the incentive for private sector?
- Delineation of benefits to public & private.
- Increase communication
- Involve more private involvement in planning/policy making.
- Leverage private development because they are ??? usage.

Measures

- How much interest there is from private groups?
- Measure performance the same as non-P3s

Objective #5 - Identify funding sources and leverage resources wisely to maximize the value of investments.

Objective #5

Strategies

<u>Measures</u>

Objective #6 - Increase transparency in project selection by making data and performance-based decisions and presenting them in a user-friendly format.



Conversation Café Final Report Strategies

<u>Measures</u>







6. Stewardship

In order to achieve the vision and goals set forth in this LRTP, purposeful and regular stewardship between IDOT and the state's transportation stakeholders is key. Implementation of the LRTP will help Illinois enjoy enhanced stewardship of transportation resources through effective planning, efficient decision making, wise investments, proper accountability, and rigorous performance measurement and reporting. Advancing innovative financial approaches, minimizing environmental impacts and continuously collecting information on stakeholder preferences defines IDOT's overall approach to stewardship1.



Safeguard existing funding and increase revenues to support system maintenance, modernization, and strategic growth of Illinois' transportation system.

and the Illinois Division of the Federal Highway Administration (FHWA) have a joint Stewardship and Oversight Agreement that defines stewardship as the efficient and effective management of public funds. While the Stewardship and Oversight Agreement's primary concern is federal-aid programs, IDOT believes it is imperative that this principle is applied to all public funds whether they are federal, state or local. Stewardship is an ethic that embodies the responsible planning and management of resources and can be applied to the environment and nature, economics, health, property, information and other resources.

FHWA has defined stewardship and oversight as follows:

STEWARDSHIP IS THE EFFICIENT AND EFFECTIVE MANAGEMENT OF THE PUBLIC FUNDS THAT HAVE BEEN ENTRUSTED TO THE FHWA. OVERSIGHT IS THE **ACT OF ENSURING THAT THE FEDERAL HIGHWAY** PROGRAM IS DELIVERED CONSISTENT WITH APPLICABLE LAWS, REGULATIONS AND POLICIES.

https://www.fhwa.dot.gov/federalaid/stewardship/ agreements/il.pdf, accessed September 6, 2017

6.1 TRANSPORTATION STEWARDSHIP IN ILLINOIS

Within the transportation industry, stewardship and oversight encompasses the broad management of a wide range of issues:

- Financial stewardship and oversight of funding programs
- Environmental stewardship and streamlining to advance projects more efficiently
- Stewardship of a Disadvantaged Business Enterprise (DBE) and Equal Employment Opportunity (EEO) program in order to assist small and disadvantaged businesses
- Resource management to effectively monitor and track the use of various supplies and materials

As it relates to IDOT's goal above, stewardship is defined here as the safeguarding of the Illinois transportation funding system used to provide maintenance, preservation, strategic expansion and modernization of Illinois' transportation network and identifying new ways to enhance the system. While the definition is slightly different from the one FHWA is focused on, the intent is the same, which is the efficient and effective management of the public funding within Illinois.

6.2 STEWARDSHIP AND IDOT

With such a large amount of state maintained facilities, stewardship is an important part of making sure the state remains mobile. While the overarching role for IDOT is to provide and maintain a transportation network that offers options and alternatives for its users, IDOT is also responsible for effectively managing the funding that Illinois receives from its various sources. In this era of increased funding challenges, IDOT is exploring new ways to be good stewards of public funds in order to best leverage its existing funds to provide the infrastructure that Illinois needs, both now and in the future.

Illinois boasts the fourth-largest highway system in the nation and the third-largest Interstate network. In 2016, the combined state and local roadway systems in Illinois encompassed 146,958 miles², and 26,770 bridges³. IDOT is responsible for 15,918 miles, which is comprised of Interstates, U.S. Highways, and State Routes.⁴ According to the Illinois Highway Statistics Sheet for 2016, the Annual Vehicle Miles of Travel (AVMT) was 107,171 million miles.

6.2.1 MULTI-YEAR PROPOSED HIGHWAY IMPROVEMENT PROGRAM (MYP) 5

Resource needs are outpacing available funding sources and financing mechanisms. Aging infrastructure requires greater investments to maintain its safety and extend its useful life. Expansion of the transportation system, while relatively limited, has become expensive. Illinois utilizes all of the conventional funding sources for operation, maintenance and preservation of its system. These funding sources include state and formula federal motor fuel tax revenues, vehicle registration and license fees, bond issuances, and the pursuit of opportunities for competitive federal funding opportunities. However, there remains a long-term funding gap between stagnating revenue streams and rising costs; therefore, the state must consider identifying long-term sustainable funding sources that are protected from the cyclical nature of short-term funding measures. This issue is further addressed within Chapter 7, Funding; however, the following details the MYP, which is utilized by IDOT to help them be better stewards of funding sources.

Illinois Highway and Street Mileage Statistics, Tables HS-1, December 2016.

Illinois Highway Statistics Sheet 2016.

Illinois Highway and Street Mileage Statistics, Tables HS-1, December 2016. Total does not include ramp or collector-distributor mileage.

FY 2018-2023 Proposed Highway Improvement Program, IDOT, http://www.idot.illinois.gov/Assets/uploads/files/Transportation-System/Reports/ OP&P/HIP/2018-2023/2018-23%20MYP%20Book.pdf, accessed January 9, 2018.

IDOT annually develops a fiscally constrained six-year program, the MYP, detailing how it will invest transportation dollars in the state and local highway system. For FY 2018-2023 the MYP totals \$11.65 billion, and includes a FY 2018 annual highway program of \$2.2 billion. The FY 2018-2023 MYP will:

- Provide funding to maintain 2,463 miles of state maintained roads and replace or rehabilitate 707 bridges.
- Provide funding to maintain 743 miles and 274 bridges on the locally maintained system.
- Provide funding for railroad crossing safety improvements throughout the state.
- Provide funding for traffic and safety improvements that further enhance highway safety as part of IDOT's regular highway improvement program by targeting specific fatal and severe crash locations.
- Enhance public right-of-way accessibility as part of IDOT's regular highway improvement program by removing barriers to accessibility as identified in IDOT's Americans with Disabilities Act (ADA) Transition Plan.

Illinois continues to rank sixth in the nation in terms of aggregate federal funding for highway and bridges under Fixing America's Surface Transportation (FAST) Act. The aforementioned \$11.65 billion available for FY 2018-2023 includes \$8.02 billion for improvements to the state highway system. It is estimated the proposed six-year program will maintain 2,463 miles of highways and rehabilitate 707 bridges. The FY 2018-2023 state program includes:

- Roadway Maintenance: \$4.33 billion is scheduled for reconstruction, resurfacing/widening and safety projects. This includes \$730 million for interstate resurfacing projects and \$466 million for safety improvements.
- Bridge Maintenance: \$2.6 billion is scheduled to address bridge needs across the state.
- Congestion Mitigation and Expansion: \$1.09 billion is scheduled to address traffic congestion. This includes \$326 million for construction of the new I-74 bridge over the Mississippi River and \$12 million for Phase II engineering on I-39.

IDOT also provides local governments funding for the following special programs, which total \$431 million:



\$24 million \$60 million FOR HIGH-GROWTH CITIES

FOR NEEDY **TOWNSHIPS**

\$90 million FOR THE TOWNSHIP **BRIDGE PROGRAM**

\$42 million FOR UPGRADING LOCAL TRUCK ROUTES

\$24 million FOR STATE MATCHING **ASSISTANCE**

\$60 million TO FOSTER ECONOMIC DEVELOPMENT

6.2.2 TRANSPORTATION ASSET MANAGEMENT PLAN (TAMP)

IDOT is currently in the process of developing the Transportation Asset Management Plan (TAMP), a proactive planning tool to aid IDOT in being good stewards of future highway and bridge investments. The TAMP is a data-driven and performance based document, required by the FHWA, outlining investment strategies for preserving existing assets over the duration of 10 years. A draft of the IDOT TAMP is anticipated in January 2018, with implementation no later than June 30, 2019. Asset management planning is important, as it keeps infrastructure in better overall condition, prevents projects from being delayed until action is absolutely needed, and consistent asset investments overtime helps grow the economy and ensures the system remains competitive.

6.2.3 PUBLIC/PRIVATE PARTNERSHIPS AND INNOVATIVE PROJECT DELIVERY

Public-Private Partnerships (P3) are a form of project delivery permitted by the State of Illinois for use in transportation projects. As opposed to motor fuel tax and other similar tools, P3s are not a source of funding. Instead, they are a way to provide specific project financing, expedite project delivery, stimulate innovation and generate cost-efficiency through the use of a legal agreement between the public and private sector parties to construct specific projects. There are multiple forms of P3s, ranging from a model in which a developer designs and builds an asset under a single contract ("Design-Build" or "DB") to a model where the private party designs, builds, finances, operates and maintains an asset ("Design-Build-Finance-Operate-Maintain" or "DBFOM").



IDOT currently has limited P3 authority, and is one of five DOTs across the country that does not have the ability to utilize the Design-Build delivery method. Expanding P3s and other innovative project delivery methods through work with the state legislature will be important to further enhance IDOT's project delivery toolbox.

6.2.4 PERFORMANCE-BASED PROJECT SELECTION PROCESS

IDOT utilized a performance-based project selection process to evaluate and prioritize major expansion projects within the Proposed Multi-Year Highway Improvement Program (FY 2018-2023) in 2017. The goal of this tool is to identify projects that provide the state with the highest return on investment. The process quantifies the economic development, livability, mobility and other benefits of each project. Through a data-driven process, the tool helps IDOT identify and prioritize projects that provide the greatest benefit to local communities.



Although not all projects will come out on top, a secondary benefit of this process is identifying ways to address individual needs that may be driving the need for a project.

By understanding the need, IDOT can then identify ways to move forward with targeted spot improvements, delivering a portion of the original project's intended benefit for less money. Use of this tool exhibits IDOT's recognition of the importance of stewardship as it relates to the future transportation network within the state. Additionally, this informed and open decision-making process provides the following for state taxpayer dollars:

- Evaluates projects using a consistent set of criteria.
- Aligns funding with projects that provide high return on investment.
- Connects transportation solutions with corridor needs.
- Provides opportunity for ongoing public and stakeholder engagement.

6.2.5 **PROJECT ADMINISTRATION**

IDOT is responsible for administration of most of the transportation projects accomplished within the state of Illinois regardless of whether they are on the state system or the local system. This is governed by the **stewardship agreement** with FHWA, the **Bureau of Local Roads and Streets Manual**, and the **Bureau of Design and Environment Manual**. IDOT ensures that federal and state regulations are met for these projects. The implementation of this sometimes may be delayed due to issues with the project and/or processes within IDOT. To be good stewards of public funds, IDOT must ensure they are working as efficiently and effectively to accomplish projects while meeting all federal, state, and public requirements.

6.3 IMPORTANCE OF STEWARDSHIP

What constitutes good stewardship is defined differently throughout the U.S., as previously noted; however, the components of the IDOT Long Range Transportation Plan (LRTP) significantly impact stewardship within the state and its communities. There are often parallels between stewardship and the four other fundamental goals of the LRTP. The following details the importance of stewardship as it relates to the other LRTP goals:



ECONOMY

Economic activity within Illinois is driven by the entire system, of which transportation, logistics and intermodalism are integral parts.

Stewardship means making smart investments in infrastructure and operations increase the economic vitality of the state as a whole.

LIVABILITY

Efficient management of its resources can help to build consensus about how IDOT manages physical change and the correlating livability changes within the state. Stewardship advances responsible management and strategic investment in Illinois' existing resources and assets, and taking steps to enhance the integrity of the state's natural resources.

MOBILITY

IDOT's overarching goal for the state's transportation network is to move people and freight as effectively as possible. Stewardship recognizes the importance of funding and financing for all modes of transportation and the interaction between them.

RESILIENCY

By improving its response to extreme weather and other events, IDOT effectively manages Illinois' transportation network and ensures the resiliency of the system. A stewardship approach to resiliency aims to prevent undesirable changes and prepares for adaptation to rapid and uncertain changes that cannot be avoided within the state.

importance of stewardship

6.4 OBJECTIVES AND STRATEGIES

IDOT has developed four objectives to guide its decisions that support stewardship. Each objective contains recommended actions, performance measures, data sources and implementation strategies that IDOT will pursue. The LRTP content as a whole will be considered guidance for programming decisions; however, each objective below also denotes some of the more specific recommended actions/ strategies that will be used to guide programming decisions. These have been denoted with .

The four objectives are:



Invest in improvements in airports, roads, bridges, rail, freight, ports, waterways, bicycle and pedestrian infrastructure, and new traffic and transit technologies.



Ensure transparency in project selection and prioritization and that project selection is guided by sound data and performance-based processes.



Support innovation in project delivery opportunities.



Maximize funding and leverage resources wisely.

6.4.1 OBJECTIVES, STRATEGIES, PERFORMANCE MEASURES, AND IMPLEMENTATION

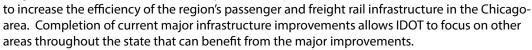
OBJECTIVE 1.

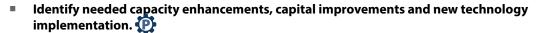
Invest in improvements for airports, highways/streets, freight, ports, waterways and new traffic and transit technologies.

RECOMMENDED ACTIONS/STRATEGIES:

Complete current ongoing major infrastructure improvements.

IDOT has made strides to its existing facilities in an effort to improve the user experience. Improvements include the Jane Byrne Interchange, I-74 Mississippi River Bridge, Chicago to St. Louis High Speed Rail, and the O'Hare Modernization Program. Programs like CREATE invest in critically needed improvements





Illinois is in the heart of the country, and therefore serves as an important link in travelers destinations. IDOT will analyze data and work with stakeholders to identify areas where congestion or improvements are needed to enhance safety and the overall travel experience. Reviewing current and past data and information on file will aid in prioritization of areas needing work.

Identify new "mega" projects which will improve the existing transportation system and infrastructure and identify alternative funding opportunities.

Mega Projects are multi-billion dollar endeavors that address current and emerging multimodal transportation needs. Typically, the projects span two or more governing jurisdictions and last several years. Current projects include High Speed Rail, Jane Byrne Interchange, I-74 Mississippi River Bridge, and CREATE. Potential projects include the managed lanes project for I-55 and I-290 in DuPage and Cook counties. IDOT should continue to review projects and gather public opinions for potential mega projects, as well as determining ways to fund these multi-billion projects.

Identify potential projects or partnerships to address connected/autonomous vehicles
 (CAV) being introduced within both passenger and commercial/freight fleets.

IDOT will work with partners to identify ways and strategies to best implement the use of CAVs. These vehicles will likely be introduced in a transitional phase with existing traffic. This means changes will be required to existing pavement markings, traffic signals, and installing CAV technology.



PERFORMANCE MEASURES:

✓ Volume/number of projects completed

Utilizing the For the Record (FTR), IDOT's annual report of the awards and obligations made for the Annual Highway Improvement Program, IDOT can track projects for each fiscal year (FY). While FTR covers highways, resources like regional transportation agencies, local transportation agencies, and MPOs can provide information regarding other projects.

- ✓ Number of projects evaluated through performance based project selection tool

 New capacity projects are to be evaluated using the performance based project selection tool before funds are identified for the project. Using this tools assists in prioritizing mega projects but also quantifying the benefits achieved by the project.
- ✓ Funds anticipated to be spent (programmed) on strategic capital and expansion plans addressing system preservation, capacity expansion and technology implementation Plans like the IDOT Statewide Transportation Improvement Program (STIP) and the MPO Transportation Improvement Programs (TIP) are documents of proposed projects within a four-year period. These are developed to secure project funding, but also provide an easy way to classify the type of project. IDOT's Multi-Year Improvement Program (MYP) is a fiscally constrained six-year program detailing how it will invest transportation dollars in the state and local highway system; thus, providing another way of analyzing the distribution of funds. Additionally, regional and local transportation agencies and local partners and organizations can provide information regarding their distribution of funds to project types.
- Number of new projects and/or partnerships to address CAVs utilizing the transportation system

In order to effectively implement CAVs, IDOT will need to work hand-in-hand and with the assistance of regional and local transportation agencies and local transportation partners/ organizations. A transparent working relationship allows for discussion regarding the requirements and implementation of CAVs. From this, IDOT can begin to compile a list of projects which will require support.

IMPLEMENTATION:

✓ Deliver completed projects within the ongoing major infrastructure programs.

Lead: IDOT Office of Highways Project Implementation

Partner(s): MPOs, IDOT District Offices, IDOT Regional Offices, Transportation Agencies

Identify new projects and/or partnerships with the private sector in order to foster the implementation of CAVs and other new technologies within the transportation industry.

Lead: IDOT Office of Intermodal Project Implementation, IDOT Office of Highways Project Implementation

Partner(s): MPOs, IDOT District Offices, IDOT Regional Offices, Transportation Agencies

✓ Create a long-term plan of major capacity enhancement, infrastructure expansion, and preservation projects, and the associated funding necessary to implement each (i.e., Expressway Vision⁶).

Lead: IDOT Office of Planning and Programming, IDOT Office of Highway Project Implementation

Partner(s): MPOs, IDOT District Offices, IDOT Regional Offices, Transportation Agencies

The Expressway Vision is a multijurisdictional, multimodal approach to guide future capital investments, coordinate transportation operations, address growing freight congestion, and provide game-changing public transit options for the existing expressway system in northeastern Illinois. The vision is due in mid-2018, and is funded by IDOT and the Illinois Tollway, but developed by CMAP. The vision will define key implementation steps, including new policy and management strategies needed to advance recommendations. The vision will also include a financial strategy. http://www.cmap.illinois.gov/mobility/roads/expressway-vision, accessed January 3, 2018.

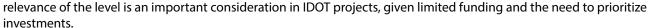
OBJECTIVE 2.

Ensure selection and prioritization decisions on projects is transparent and guided by sound data and performance-based decisions.

RECOMMENDED ACTIONS/STRATEGIES:

 Develop performance-based project selection process and accompanying tools.

IDOT should develop a tool that evaluates projects on their anticipated performance. Additionally, IDOT should complete an inventory of needs that identify what level of funding would be required to achieve a certain level of performance. The relevance of the level is an important consideration in IDOT project.





IDOT is in the process of developing a Transportation Asset Management Plan. Additionally, large transit agencies within Illinois are required to develop a Transit Asset Management Plan. IDOT is developing a Tier II (smaller transit agencies) Group Transit Asset Management Plan, which will help in the asset management process. The TAMP documents outline investment strategies for preserving existing assets and the anticipated condition of those assets after the horizon of the plan.

 Develop tools, dashboards, websites and feedback opportunities to demonstrate how projects progress and how funding is spent and the benefits of that funding.

Currently, several IDOT projects have associated project websites, where the public can find information regarding the project, including pamphlets, informative brochures, meeting announcements, and other interactive features. Utilizing the Internet to allow the public the opportunity to provide feedback, outside of the public comment period, would give instant feedback during the progression of a project. An internal IDOT interface would allow for tracking, document organization, and fund tracking. Developing tools, dashboards, and websites for IDOT performance in achieving identified goals and performance measures will allow stakeholders to understand the performance of IDOT.

Ensure projects are meeting established schedules.

IDOT should develop schedules for all projects and work to ensure projects are accomplished within those schedules. Timely implementation of projects saves costs and produces the project more quickly.

PERFORMANCE MEASURES:

✓ Volume/number of projects selected utilizing a performance-based project selection process

IDOT's MYP uses system performance metrics as a determining factor in creating the program. IDOT will provide support to regional and local transportation agencies in an effort to utilize a performance-based project selection processes.

✓ Pavement/infrastructure/vehicle condition

With an extensive network of interstates, highways, transit vehicles, transit facilities and bridges, IDOT has many transportation features to manage and maintain. The Illinois Capital Needs Assessment, Illinois Roadway Information System and Illinois Structure Information System help organize the large amount of data into various databases. IDOT and regional/local transportation agencies should work together to streamline tracking and monitoring pavement/infrastructure/vehicle conditions.

Increased life span of pavements and bridges

IDOT tracks the condition of bridges and pavements, which provides a record of infrastructure over a period of time. This information is retained and can be accessed via the Illinois Roadway Information System and Illinois Structure Information System. Reports on infrastructure from regional and local transportation agencies will also be crucial to monitoring life spans. This information is used to develop the TAMP which also identifies investment strategies for increasing the life span of pavements and bridges.



Number of tools developed to share project and funding information with the public

IDOT is divided into supporting offices, which have individual coordination responsibilities. IDOT also has a suite of publications (IDOT MYP and IDOT FTR) to provide information to the public regarding projects and their funding. IDOT should continue to expand the methods and media types they use in disseminating this information to the public.

Number of projects meeting established schedules

IDOT's FTR compares road, bridges and safety, and traffic improvements planned to be accomplished during a FY, relative to those actually accomplished. This report, in combination with other documents, should be used to track the progression of a project from conception to completion. Tools for public consumption, such as a dashboard should be considered when relaying project accomplishment information.

✓ Federally required performance measures

In 2012, the Moving Ahead for Progress in the 21st Century Act (MAP-21) mandated—and in 2015 the Fixing America's Surface Transportation Act (FAST) reauthorized—USDOT to measure the performance of the system. MAP-21 created a performance-based and multimodal program to strengthen the U.S. transportation system, which is comprised of a series of nine rules overseen by FTA and FHWA. The following required MAP-21 performance measures will be integrated throughout IDOT's planning and programming process, regarding Objective 2 of the overall stewardship goal. These measures are comprehensive in nature and require no further explanation:

- Transit equipment state of good repair
- Transit facilities state of good repair
- Transit infrastructure state of good repair
- Transit rolling stock state of good repair

- Percentage of Interstate pavement in good condition
- Percentage of Interstate pavement in poor condition
- Percentage of non-interstate National Highway System (NHS) pavement in good condition
- Percentage of non-interstate NHS pavement in poor condition
- Percentage of NHS bridges classified as in good condition
- Percentage of NHS bridges classified as in poor condition

IMPLEMENTATION:

✓ Develop web-based/app-based tools, dashboards and websites, and expand feedback opportunities in order to demonstrate to stakeholders and the public how projects advance through the development process and how funding is spent.

Lead: IDOT Office of Communications

Partner(s): IDOT Bureau of Communication Services

✓ Enhance internal IDOT tracking tools in order to ensure projects are achieving timely schedules and progressively advancing through the development process.

Lead: IDOT Office of Planning and Programming

Partner(s): IDOT Office of Highways Project Implementation

✓ Fully integrate the recently developed performance-based project selection tool into project programming and planning to track results (e.g., public-facing tools ranking projects).

Lead: IDOT Office of Planning and Programming

Partner(s): IDOT Bureau of Planning, IDOT Bureau of Programming, IDOT Bureau of Local Roads

Expand and enhance asset management tools both for IDOT and local transportation partners.

Lead: IDOT Office of Planning and Programming, IDOT Office of Intermodal Project Implementation

Partner(s): MPOs, Transit Agencies

OBJECTIVE 3.

Support innovative project opportunities.

RECOMMENDED ACTIONS/STRATEGIES:

 Support public-private partnerships (P3s) and private sector project financing initiatives.

Public-private partnerships (P3s) and private sector funding provides a new way to drive projects without solely relying on state resources. Subsequently, this could result in shorter construction times and savings on project budgets.



Innovative project financing allows multiple ways for a project to be funded, or a project to be funded that would not have originally received consideration due to cost. Additionally, looking outside of typical delivery methods provides the opportunity for more projects to be completed and possibly better completion times.

 Work with industry to gain authority for Design-Build and Construction Manager/ General Contractor through legislation.

Design-Build (DB) and Construction Manager/General Contractor (CMGC) provide more certainty, or earlier certainty, when it comes to project schedule and budget/cost. They also provide innovation, with increased opportunity and better constructability. As of 2016, Illinois is authorized to use DB with certain limitations, and does not have authority for CMGC usage.

Explore outreach and education for MPOs and local government officials on innovative project financing and delivery initiatives.

MPOs and local governments should partner with the state; thus, providing a new route for project funding and delivery. Outreach and education allows MPOs and local governments to see how valuable of a role they can play in improvements throughout the state.

 Explore processes within the department to make administration of projects more efficient yet effective.

At times, project administration through IDOT can be delayed or hit bureaucratic road bumps. This can cause project costs to increase as over time materials and other resources become more expensive. While the department must ensure all federal, state, and public requirements are met, efficiencies may be found with review of processes.

PERFORMANCE MEASURES:

✓ Number of P3 projects in the state

IDOT publishes several documents or reports, like the MYP and For the Record, which provide details on funding, processes, and proposed projects and initiatives. Reviewing these and budgets for various agencies (i.e. IDOT, regional, local, partners) can determine the number of P3 projects in the state.



✓ Number of events and publications, per year, providing information on innovative financing and delivery programs and financing-related opportunities

IDOT views their role as one of providing resources on IDOT initiatives. Providing resources, events, or training on innovative financing, delivery programs, and financing-related information is a way to support these initiatives. Each year, the IDOT Fall Planning Conference is hosted, providing discussion on topics regarding metropolitan and rural transportation. Events like this can expand and briefly touch on financing topics, or events can be developed specifically to discuss financing and delivery programs.

✓ Time to implement projects

IDOT should review processes for administration of projects and attempt to identify efficiencies. Tracking project delivery from programming to final invoice will allow the department to understand the time expected for project accomplishment.

Number of events focused on outreach to MPOs and local governments on innovative financing and delivery programs

IDOT should look to expand current conferences or publications aimed to MPOs and local governments to include financing and delivery discussion. Alternatively, IDOT should look to possibly create events specifically catered to discussion of financing and delivery.

IMPLEMENTATION:

Conduct outreach and education events for MPOs and local government officials on innovative project financing and delivery methods in order to increase knowledge and understanding of methods and benefits, and uses in other states.

Lead: IDOT Office of Communications, IDOT Office of Planning and Programming

Partner(s): MPOs, Local transportation officials

 Educate stakeholders and the public on innovative project financing and delivery methods in order to increase knowledge of methods and use in other states.

Lead: IDOT Office of Planning and Programming

Partner(s): IDOT Bureau of Innovative Project Delivery, MPOs, Local government officials

✓ Study innovative project financing and delivery methods and their use within Illinois to advance various major projects.

Lead: IDOT Office of Planning and Programming

Partner(s): IDOT Bureau of Innovative Project Delivery

Review project processes for efficiency and effectiveness.

Lead: IDOT Office of Fiscal Administration

Partner(s): IDOT Bureau of Local Roads and Streets, IDOT Bureau of Design and Environment, Local Agencies

OBJECTIVE 4.

Identify funding sources and leverage resources wisely to maximize the value of investments.

RECOMMENDED ACTIONS/STRATEGIES:

 Explore increase in state transportation funding, including new revenue sources.

IDOT should work with the legislature to identify where funding opportunities are available. For example, the "lockbox" amendment to the Illinois Constitution (passed in November 2016), requires revenues raised from transportation-related fees and taxes to be spent only on transportation projects.

Additionally, working with partners may open access to new revenue sources.



Identify opportunities to support non-highway funding program(s) for all multimodal transportation projects.

IDOT should work with regional and local agencies to identify Areas where funding would be beneficial to the overall improvement of multimodal transportation. Illinois has the second largest public transportation system, second largest rail system, and one of the busiest airports in the nation. Maintaining non-highway transportation features is critical for maintaining Illinois' success and accessibility.

Develop time/money/effort saving platforms across transportation agencies.

Central Management Services (CMS) currently offers local governments joint purchasing for many commodities, services and equipment, which is a beneficial partnership between local governments and the State. IDOT and other agencies throughout the state should look into options like joint purchasing and common management tools, among others, to help save time and money.

 Expand Economic Development Program (EDP) to better define projects that provide greater benefits for investments.

The purpose of the EDP is the provide state assistance in improving highway access to new or expanding industrial, distribution or tourism developments. By evaluating the project benefits, the limited funding will be distributed to projects that help meet the focus of the EDP.

PERFORMANCE MEASURES:

✓ Value of new transportation revenue sources

Budgets from IDOT, regional and local transportation agencies, and local transportation partners will help classify incoming revenue, which can be linked to a source.

✓ Number of successful joint procurements and estimated cost savings

IDOT is only authorized to handle construction related procurements. The Chief Procurement Office is responsible for advertising procurements, and the Chief Procurement Officer contains information including awards of procurements.

IMPLEMENTATION:

✓ Work with regional and local transportation agencies and other local transportation partners on joint tools to save time/money/effort.

Lead: IDOT Office of Planning and Programming

Partner(s): IDOT Bureau of Local Roads and Streets, Transportation Agencies

✓ Work with state and/or federal legislators to create dedicated non-highway funding program(s) for multimodal transportation projects.

Lead: IDOT Office of Planning and Programming, IDOT Office of Legislative Affairs, IDOT Office of Intermodal Project Implementation

Partner(s): Multimodal stakeholders, Transportation Agencies

6.4.2 IMPLEMENTATION SUMMARY

The IDOT LRTP has a long-term horizon, but several short-term and long-term actions are necessary prerequisites to long-term results. The following provides more specific guidance about how to implement the various objectives supporting the goal of stewardship and begin transforming ideas into action. The actions to implement the stewardship goal have been delineated into four categories; whereby, each category clearly defines the desired directive of the action.

TABLE 6.1: Implementation Actions

IMPLEMENTATION ACTION	LEAD	PARTNER(S)
Collaboration/Outreach & Engagement		
Deliver completed projects within the ongoing major infrastructure programs.	IDOT Office of Highways Project Implementation	MPOs, IDOT District Offices, IDOT Regional Offices, Transportation Agencies
Identify new projects and/or partnerships with the private sector in order to foster the implementation of C/AVs and other new technologies within the transportation industry.	IDOT Office of Intermodal Project Implementation, IDOT Office of Highways Project Implementation	MPOs, IDOT District Offices, IDOT Regional Offices, Transportation Agencies
Develop web-based/app-based tools, dashboards and websites, and expand feedback opportunities in order to demonstrate to stakeholders and the public how projects advance through the development process and how funding is spent.	IDOT Office of Communications	IDOT Bureau of Communication Services
Enhance internal IDOT tracking tools in order to ensure projects are achieving timely schedules and progressively advancing through the development process.		IDOT Office of Highways Project Implementation
Conduct outreach and education events for MPOs and local government officials on innovative project financing and delivery methods in order to increase knowledge and understanding of methods and benefits, and uses in other states.	IDOT Office of Planning and Programming	MPOs, Local transportation officials
Educate stakeholders and the public on innovative project financing and delivery methods in order to increase knowledge of methods and use in other states.	IDOT Office of Communications, IDOT Office of Planning and Programming	IDOT Bureau of Innovative Project Delivery, MPOs, Local government officials
Plans/Guidance		
Create a long-term plan of major capacity enhancement, infrastructure expansion, and preservation projects, and the associated funding necessary to implement each (i.e., Expressway Vision).	IDOT Office of Planning and Programming, IDOT Office of Highway Project Implementation	MPOs, IDOT District Offices, IDOT Regional Offices, Transportation Agencies
Fully integrate the recently developed performance-based project selection tool into project programming and planning to track results (e.g., public-facing tools ranking projects).	IDOT Office of Planning and Programming	IDOT Bureau of Planning, IDOT Bureau of Programming, IDOT Bureau of Local Roads
Review project processes for efficiency and effectiveness.	IDOT Office of Fiscal Administration	IDOT Bureau of Local Roads and Streets, IDOT Bureau of Design and Environment, Local Agencies
Work with regional and local transportation agencies and other local transportation partners on joint tools to save time/money/effort.	IDOT Office of Planning and Programming	IDOT Bureau of Local Roads and Streets, Transportation Agencies

IMPLEMENTATION ACTION	LEAD	PARTNER(S)
Multimodal		
Expand and enhance asset management tools both for IDOT and local transportation partners.	IDOT Office of Planning and Programming, IDOT Office of Intermodal Project Implementation	MPOs, Transit Agencies
Funding		
Study innovative project financing and delivery methods and their use within Illinois to advance various major projects.	IDOT Office of Planning and Programming	IDOT Bureau of Innovative Project Delivery
Work with state and/or federal legislators to consider dedicated non-highway funding program(s) for multimodal transportation projects.	IDOT Office of Planning and Programming, IDOT Office of Legislative Affairs, IDOT Office of Intermodal Project Implementation	Multimodal Stakeholders, Transportation Agencies

Resiliency



5. Resiliency

The state's transportation system provides connectivity within and through the state and is a critical link in the economic and social viability of its residents and businesses. Any disruption to the performance of this system could result in serious impacts, including costs extending beyond those associated with a road closure or repair. Potential disruptions to the state's transportation system could come from a range of natural hazards (flooding, snowstorms, extreme heat, earthquakes) and man-made hazards (accidents, hazmat spills, cyber-attacks, terrorism, etc.), which all need to be considered and planned for as part of a comprehensive process. The state's transportation system needs to be resilient to shocks or impacts from hazards or other disruptions to reduce/ eliminate the broader effects. The state has established a resiliency goal, which is to "Proactively assess, plan and invest in the state's transportation system to ensure that our infrastructure is prepared to sustain and recover from extreme events and other disruptions."



Proactively assess, plan and invest in the state's transportation system to ensure that our infrastructure is prepared to sustain and recover from extreme events and other disruptions.

changing environmental conditions and human threats could impact IDOT assets and then taking action to address identified issues. Impacts to understand include present day concerns – like how land development and the loss of impervious surfaces has impacted localized flooding - as well as likely conditions in the future when changing weather patterns, due to climate change, will increase the frequency of system disruptions from flooding and other hazards. Technological advances in automobile operation or intelligent transportation systems, including signals, may also introduce new vulnerabilities over what is found today (e.g., from cyber-attack). A long-term perspective on resiliency is critical for transportation infrastructure as decisions made today have implications for decades to come given the long lifecycles of

transportation assets.

Achieving this goal requires consideration from various perspectives. FHWA, in identifying the definition of resilience, noted that, "Resilience is the ability to anticipate, prepare for, and adapt to changing conditions and withstand, respond to, and recover rapidly from disruptions." From IDOT's perspective, this requires action from maintenance, operations, planning, design and emergency response staff to achieve resiliency across the department. Efforts need to be proactive and coordinated to achieve the state's goal of reducing system disruptions.

FHWA, in identifying the definition of resilience in the context of the transportation system, states that:



Resilience is the ability to anticipate, prepare for, and adapt to changing conditions and withstand, respond to, and recover rapidly from disruptions.

FHWA has been helping to lead the dialogue on resiliency in the transportation profession and their resilience website (https://www.fhwa.dot.gov/environment/sustainability/resilience/) provides a wealth of information. The site contains the results of a number of resiliency pilot studies conducted across the country, climate projections geared towards transportation professionals, detailed case studies showing how resiliency can be incorporated into transportation projects, and syntheses of best practices in this emerging and rapidly developing field of study.

5.1 RESILIENCY AND IDOT

Illinois has experienced a range of impacts to its transportation system from various natural and man-made disasters over the past decades. Notable events include the 1993 flooding along the Mississippi River, the November 2015 snowstorm in the northern part of the state, the July 2017 flooding in Chicago's northern suburbs (see Figure 1), and the July 2017 oil train derailment in Plainfield (see Figure 2). While IDOT responded efficiently to these events, there is always room for improvement. Better mitigation techniques and closer collaboration with local officials will dramatically reduce the impacts of extreme events on the transportation system. A commitment to taking a proactive approach to avoiding or reducing impacts from similar events in the future will be required to achieve the goal outlined in this plan.



IDOT has taken a first step towards this goal with the completion of the Illinois All-Hazards Transportation System Vulnerability Assessment in October 2017.

This assessment established a framework for evaluating the vulnerability of the state's transportation system to various natural and man-made hazards. Man-made hazards studied included chemical. biological, radiological, and nuclear incidents; explosives and small arms attacks; electro-magnetic pulse; and cyber-attacks. Natural hazards studied included precipitation, temperature, wind, and geologic threats (landslides, earthquakes, etc.). Natural hazards were evaluated under both current and future climate conditions. Impacts to state transportation assets were evaluated and the consequences assessed (based on asset criticality and sensitivity) to assign a vulnerability score to each asset.

The resulting scores can be used by IDOT to determine where to prioritize resiliency activities.

- ✓ Critical an asset is to the transportation network;
- ✓ **Exposed** an asset would be to a defined hazard; and
- ✓ **Sensitive** an asset is to each hazard. The resulting scores can be used by IDOT to determine where to prioritize resiliency activities2.

The resulting scores can be used by IDOT to determine where to prioritize resiliency activities.

¹ https://www.fhwa.dot.gov/legsregs/directives/orders/5520.cfm, accessed September 28, 2017

² Illinois All Hazards Transportation System Vulnerability Assessment, October 2017

1.6%
BRIDGES

3.4%ROAD
CORRIDORS

4%
RAIL
CORRIDORS

9.5% OPERATIONS

5.2 IMPORTANCE OF RESILIENCY

Illinois' transportation system provides critical connectivity within and through the state and is a key link in the economic and social viability of its residents and businesses. Any disruption to this system could result in serious impacts, including costs extending beyond those associated with a road closure or repair. The state's transportation system needs to be made resilient to such shocks from either natural hazards or other human-caused disruptions to reduce/eliminate negative effects for residents, businesses and users.

While detailed asset and location cannot be provided due to security reasons, the vulnerability assessment performed as part of the recently completed **Illinois All-Hazards Transportation System Vulnerability Assessment** concludes that the following percentage of IDOTs assets should be given priority as part of the state transportation planning process, based on the importance of and risk to the asset.



State Route 132 (Grand Avenue) in Lake County was closed to traffic at the Des Plaines River in July 2017 after several inches of rain fell on the area. Many arteries in Chicago's northern suburbs, including many major east-west roads crossing the Des Plaines River, were closed due to flooding, causing travel headaches and disrupting commutes. (Image source: Paul Valade, Associated Press



An oil train derailed in Plainfield in July 2017 shutting down a Canadian National rail line and many roads in the area including State Route 126. About 40,000 gallons of oil leaked from ruptured rail cars. Fortunately, no fire or explosion occurred as the result of the accident, limiting the effects. (Image source: Fox 32 News)

Resilience should be represented in major policy considerations, as well as in system operation and management. The following describes the importance of resiliency as it relates to the other LRTP goals:

- **Safety** Resiliency involves providing a safer transportation system for system users, while also reducing the dangers for first responders
- **Mobility** Resiliency involves minimizing disruptions which can impact the user experience, causing delays and/or major inconveniences
- **Economy** Resiliency involves minimizing the socioeconomic costs of disruptions caused by impairment of travel/goods movement
- **Stewardship** Resiliency involves minimizing long-term costs for infrastructure repair/maintenance

5.3 OBJECTIVES AND STRATEGIES

IDOT has developed five objectives to guide its actions on resiliency across the agency. These objectives will assist in increasing the resilience of the transportation system to both natural and man-made hazards. Each objective contains a list of recommended actions, performance measures and implementation strategies that IDOT will pursue. The LRTP content as a whole will be considered guidance for programming decisions; however, each objective below also denotes some of the more specific recommended actions/strategies that will be used to guide programming decisions. These have been denoted with in Section 5.3.1.

The five objectives identified for the resiliency section include:



5.3.1 **OBJECTIVES, STRATEGIES, PERFORMANCE MEASURES, AND IMPLEMENTATION**

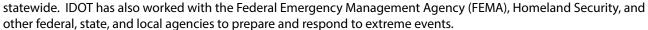
OBJECTIVE 1.

Improve safety on the Illinois transportation system by reducing the number of injuries/fatalities attributable to extreme events

RECOMMENDED ACTIONS/STRATEGIES:

 Engage in close coordination with operations stakeholders to reduce injuries and fatalities from extreme events.

IDOT has worked hard to assure readiness for extreme events and will continue to work closely with highway safety, maintenance, traffic operations and state police personnel to implement effective strategies to reduce injuries and fatalities





IDOT will increase the use of preemptive road closures during flooding and major snowfalls to improve safety. This could include the use of immovable barriers to block roads that have been closed due to flooding to prevent attempts at bypassing them. IDOT and its partners will also refine the use of dynamic message boards and cellphone applications to provide the motoring public with the most up-to-date road conditions and closures. With the implementation of ITS technology, weather-dependent variable speed limits can be used based on real time conditions.

Address known and/or recurring roadway flooding areas

Known and recurring roadway flooding areas will be prioritized for improvement, including upgrading drainage, addressing low capacity bridges and culverts so they can handle greater flood flows, and, in limited cases, raising the profile and/or using more damage-resistant materials for roadways in low-lying and flood-prone areas. (P)

PERFORMANCE MEASURES:

Number of flood-flow deficient bridges and culverts

IDOT will maintain an inventory of flood-flow deficient bridges and culverts. Near-term maintenance and longer-term opportunities to efficiently and effectively address these facilities will be identified and prioritized to improve safety and provide cost-effective benefits.

Number of state route closures due to flooding

Closures of state routes could have safety, economic, and mobility impacts. IDOT will track the number of state routes closed due to flooding. This will include the information associated with the closure, such as rainfall amount, extent of flooding, the duration of road closure, and methods used to communicate and implement the road closure.

✓ Number and proportion of extreme events for which outreach/social media campaigns are undertaken

Social media has the ability to quickly and broadly reach the traveling public. The use of outreach/social media during extreme events by IDOT to inform and encourage the public to avoid closed roads will be tracked.

IMPLEMENTATION:

✓ Enhance the roadway closure and detour information available to travelers during extreme events so as to increase traveler's ability to make informed decisions.

Lead: IDOT Office of Communications

Partners: IDOT Bureau of Operations, IDOT Districts

✓ Improve and enhance coordination between IDOT maintenance leads and traffic operations/incident management staff, and local and state emergency response professionals to identify any conclusions to be drawn from extreme event response activities.

Lead: IDOT Bureau of Operations

Partners: IDOT Districts, Local and State Emergency Response Professionals

✓ Hold annual multi-department and multi-agency coordination meetings to discuss emergency response methods and available tools and develop a plan to increase detour planning efforts and improve system outage communication efforts.

Lead: IDOT Bureau of Operations, Bureau of Traffic

Partners: IDOT Districts, IDOT Office of Communications, State Police, FEMA, Illinois Emergency Management Agency

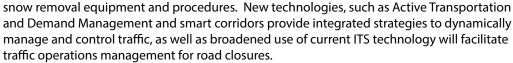
OBJECTIVE 2.

Minimize the frequency and duration of facility closures due to extreme events and other disruptions

RECOMMENDED ACTIONS/STRATEGIES:

 Improve capabilities for dealing with extreme events by enhancing real-time traffic operations capabilities.

IDOT was an early adopter of real-time traffic operations/ incident management techniques, including the long-standing Emergency Traffic Patrol (Minutemen) service, highway advisory radio, real-time road condition websites, dynamic message signs, road weather information systems, as well as extensive





IDOT will partner with other federal, state, and local agencies to enhance emergency response plans to broaden planning for extreme events. A critical component is the real-time communication and coordination with IDOT partners required to prepare and respond to these events.

 Continue active involvement in the critical infrastructure sub-committee of the Illinois Terrorism Taskforce.

The Illinois Terrorism Taskforce includes a Critical Infrastructure Committee. These groups have broad composition ranging from institutions and industry representatives to emergency responders and labor organizations. The Illinois Terrorism Task Force is addressing prevention, protection, mitigation, response, and recovery capabilities. For example, potential recovery strategies for addressing extreme events could include having extra materials/components/ equipment on hand in noted areas of concern and putting contracts in place with private contractors and/or local/state governments to assist with repair as needed after events to eliminate any contracting lag.



PERFORMANCE MEASURES:

- ✓ Number of facility closures (or capacity limitations) attributable to extreme events IDOT will annually track damage from extreme events, such as flooding, extreme heat, or landslides on the IDOT system normalized by the number of events and their severity.
- ✓ Number of response plans incorporating natural or man-made disasters IDOT will track the number of enhancements to response plans that incorporate natural or man-made hazards.

IMPLEMENTATION:

✓ Coordinate with maintenance staff and consult the All Hazards vulnerability assessment to identify regular/recurring flood conditions on state highways and have design engineers utilize that information to act to improve flooding conditions through the capital improvement program.

Lead: IDOT Bureau of Operations, IDOT Bureau of Design and Environment

Partners: IDOT Districts, IDOT Office of Planning and Programming

 Develop contractor emergency response on-call contracts and agreements with local governments and surrounding states to provide response and recovery support during future events.

Lead: IDOT Districts, IDOT Bureau of Operations

Partners: IDOT Office of Planning and Programming, Illinois Emergency Management Agency

 Develop a severe storm index, which will allow IDOT to better understand the frequency of extreme weather events.

Lead: IDOT Office of Planning and Programming **Partners:** IDOT Bureau of Design and Environment

Enhance coordination with maintenance staff and emergency response staff to identify AND implement strategies for reducing the impact of events, and develop and document a set of strategies for reducing the impact of events on the transportation system.

Lead: IDOT Bureau of Operations

Partners: IDOT Districts

OBJECTIVE 3.

Enhance transportation system redundancy

RECOMMENDED ACTIONS/STRATEGIES:

 Coordinate with appropriate state and local agencies to update emergency response plans

IDOT will coordinate with its partners to update emergency response plans to include a comprehensive detour routing and communication plan for all state facilities, including methods to coordinate outages early to purveyors of mapping software applications which provide routing information for drivers.



Create a comprehensive system of detour routes and closure plans for major roadways

IDOT will develop a comprehensive statewide system of detour routes by IDOT District beginning with interstates, freeways, and expressways, and followed by other principal arterials, which includes scenarios for outages in at-risk areas.

 Coordinate activities across agencies and modes to create comprehensive and consistent multimodal response plans.

IDOT's comprehensive system of detour routes will include coordination across agencies and emergency response documents and incorporation of multiple modes, since the potential for modal changes exists during extreme events.

Create a signing and digital information plan for detours.

IDOT currently prepares traffic control and detour plans for construction projects. To specifically address detours resulting from extreme events, IDOT will develop a plan for signing and digital information for detour routes, and investigate the potential for web-based interactive detour route mapping.

 Enhance the resiliency of new projects by considering system redundancy and emergency operation

During the planning and design process, IDOT will consider system redundancy and emergency operations, including detour requirements to better incorporate resiliency into its projects.

PERFORMANCE MEASURES:

✓ Number of major roadways with at-risk areas having pre-planned detour routes/closure plans and similar measures for other modes

Based on the identification of at-risk areas on major roadways from the *All Hazards Transportation System Vulnerability Assessment*, detour plans will be developed that include alternate routings and coordination/integration of other modes, as applicable.

✓ Total length of major roadways with at-risk areas having detour route signage (or plans for rapid reaction temporary signage)

Based on the identification of at-risk areas on major roadways from the *All Hazards Transportation System Vulnerability Assessment*, detour route signage plans will be developed and sufficient rapid reaction temporary signage will be available for these signage plans.

IMPLEMENTATION:

✓ Develop detour plans for at-risk areas on major state routes based on information from the All Hazards Transportation System Vulnerability Assessment.

Lead: IDOT Bureau of Operations

Partners: IDOT Districts, IDOT Bureau of Design and Environment

 Develop detour signage and digital information plans for at-risk areas on major state routes based on information from the All Hazards Transportation System Vulnerability Assessment.

Lead: IDOT Bureau of Operations

Partners: IDOT Districts, IDOT Bureau of Design and Environment

OBJECTIVE 4.

Identify current and future transportation system vulnerabilities to extreme events and climate change

RECOMMENDED ACTIONS/STRATEGIES:

 Better define system vulnerabilities from current extreme events.

The vulnerability of an asset is based on its importance (criticality), and the risk (exposure and sensitivity) to a given event. IDOT will continue to refine and improve the determination of vulnerability based on these factors for a range of potential natural and man-made hazards.



Prioritize next steps from the vulnerability analysis that need addressing.

A number of next steps were identified in the All-Hazards Transportation System Vulnerability Assessment. These next steps will be systematically prioritized by IDOT to provide the most effective improvements to the vulnerability analysis.

Expand the assessment to additional assets and stressor types.

IDOT's transportation system vulnerability analysis will continue to be improved by incorporating recent comprehensive asset inventory data as it becomes available, and newer, improved climate and other hazard information in order to better define vulnerabilities for all system assets.

 Develop a prioritization scheme through internal coordination to enable action in addressing noted system vulnerabilities.

IDOT will develop prioritize assets based on their vulnerability and develop near and longerterm improvement programs to create a more resilient transportation system that meets current and future concerns.

PERFORMANCE MEASURES:

✓ System-wide vulnerability analysis results that are based on the latest information.

Number of database systems, system-wide vulnerability analysis results are integrated within.

IMPLEMENTATION:

✓ Identify actions needed to incorporate climate change into decision-making by coordinating with climate scientists and other state adaptation planning efforts to get an official set of projections for use in IDOT activities, educating staff on climate science basics and findings of vulnerability analysis, and getting broad agency-wide buy-in on recommended methodology and prioritization systems.

Lead: IDOT Bureau of Design and Environment, IDOT Office of Planning and Programming

Partners: IDOT Districts, IDOT Bureau of Operations

✓ Apply official climate projections for use by project-level staff.

Lead: IDOT Bureau of Design and Environment

Partners: IDOT Districts, IDOT Bureau of Operations

✓ In coordination with the state climatologist, develop educational materials on incorporating resiliency and climate change into efforts across IDOT.

Lead: IDOT Office of Planning and Programming, IDOT Bureau of Design and Environment

Partners: IDOT Districts, IDOT Bureau of Operations

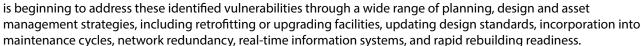
OBJECTIVE 5.

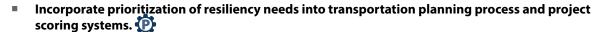
Address transportation system vulnerabilities to extreme events and climate change within the transportation planning, design, and asset management processes

RECOMMENDED ACTIONS/STRATEGIES:

 Address noted system vulnerabilities to extreme weather and climate change effects.

IDOT's All-Hazards Transportation System Vulnerability Assessment evaluated the resiliency of the transportation system in terms of its ability to both handle stresses and quick recover when those stresses result in damage. IDOT





IDOT's All-Hazards Transportation System Vulnerability Assessment classified the state's transportation assets for vulnerability in terms of both the importance of the asset and risk to the asset. This vulnerability information will be used to identify and assess adaptation and mitigation strategies in the transportation planning process and incorporated into IDOTS PBPS tool to ensure appropriate consideration of resiliency in the programming process.

Develop a risk-based design approach for new projects, considering climate change projections and the need for adaptation.

IDOT will develop a process for better incorporating resiliency into their design approach for new projects. This will include a risk-based approach for incorporating the best available and actionable scientific and engineering data. For example, for hydraulic design, consideration of the changes in the frequency and severity of storms and floods that might result from a changing climate is needed. IDOT will also incorporate potential adaptation options in the design process to address the vulnerabilities identified in the All-Hazards vulnerability assessment. These design approach improvements will be incorporated into the IDOT Bureau of Design and Environment Manual.

Undertake detailed adaptation analysis on all high-vulnerability facilities.

Based on the All-Hazards Transportation System Vulnerability Assessment, IDOT is focusing on adaptation efforts for those assets identified as most at-risk or vulnerable. Adaptation is responsible risk management and represents a more holistic planning approach. Adaptation strategies for these vulnerable assets can include a wide range of solutions, including natural, structural, or policy-based adaptation strategies, and can range from site-specific to regional adaptation strategies. The many different adaptation options have differing costs and benefits. IDOT also recognizes the importance of engaging stakeholders in analyzing adaptation strategies.

Typical asset management systems rely on gradual, predictable deterioration curves based on the past performance of assets. It is now necessary to include preparation for the unpredictable impacts of major external threats. This necessitates a risk-based asset management program that considers redundancy, robustness, and resiliency. IDOT will develop a risk-based approach for planning and asset management that incorporates resilience through potential processes, including mitigation and adaptation programs, prioritization process for restoring asset functionality, and emergency response contracts for rapid mobilization.



PERFORMANCE MEASURES:

✓ Number of and funding amount for resiliency-related projects.

IDOT will track the amount of funding and number and types of projects that are resiliency-related.

Number/weight of resilience factors in the performance-based project selection tool.

IDOT will incorporate resilience factors in their PBPS tool. Initially, the focus for incorporation of resilience will be related to transportation assets with high vulnerability classifications.

✓ Number of design projects using a risk-based design approach, considering climate change projections.

IDOT will track the number of design projects that use a risk-based design approach that considers climate change projections.

✓ Number of specific asset types of high-vulnerability assets for which a detailed adaptation analysis has been conducted.

IDOT will track the number of specific asset types for which adaptation analysis has been performed.

 Number of extreme weather risks identified and addressed in the asset management plan.

IDOT will track the number of extreme weather risks that are identified and addressed in the asset management plan.

IMPLEMENTATION:

✓ Commit IDOT resources to begin a broader roll-out of the concepts of resiliency to climate change and extreme weather by holding an informational event with representation from planning, design, operations, asset management and maintenance to define requirements, targets and required actions.

Lead: IDOT Office of Planning and Programming

Partners: IDOT Bureau of Design and Environment, IDOT Bureau of Operations, IDOT Districts

✓ Incorporate potential facility disruptions as a part of all ongoing maintenance and asset management, and facilitate activities and implement strategies to reduce future system impacts.

Lead: IDOT Office of Planning and Programming, IDOT Bureau of Operations

Partners: IDOT Districts

✓ Incorporate resiliency into ongoing practices and develop projects that address identified system vulnerabilities.

Lead: IDOT Office of Planning and Programming

Partners: IDOT Districts, IDOT Bureau of Design and Environment

✓ Coordinate with the project scoring system team to develop and implement a project scoring method and risk-based design approach to project design.

Lead: IDOT Office of Planning and Programming

Partners: IDOT Bureau of Design and Environment

✓ Coordinate with asset management team to incorporate climate change and extreme events into their activities.

Lead: IDOT Office of Planning and Programming

Partners: IDOT Districts

5.3.2 IMPLEMENTATION SUMMARY

Implementation of IDOT's resiliency goal to proactively assess, plan and invest in the state's transportation system to ensure that our infrastructure is prepared to sustain and recover from extreme events and other disruptions will require the development of new internal policies, and more targeted coordination with partner agencies at the federal, state and local levels. IDOT will take the following actions to realize the goals and objectives laid out in this chapter. The following (**Table 5.1**) are proposed to successfully implement the overarching resiliency goal and its five objectives:

TABLE 5.1: Implementation Actions

IMPLEMENTATION ACTION	LEAD EQUITY	PARTNERS			
Improve safety on the Illinois transportation system by reducing the number of injuries/fatalities attributable to extreme events					
Enhance the roadway closure and detour information available t travelers during extreme events so as to increase traveler's ability make informed decisions.		IDOT Bureau of Operations, IDOT Districts			
Improve and enhance coordination between IDOT maintenance and traffic operations/incident management staff, and local and emergency response professionals to identify any conclusions to drawn from extreme event response activities.	state Operations	IDOT Districts, Local and State Emergency Response Professionals			
Hold annual multi-department and multi-agency coordination meetings to discuss emergency response methods and available and develop a plan to increase detour planning efforts and impresystem outage communication efforts.		IDOT Districts, IDOT Office of Communications, State Police, FEMA, Illinois Emergency Management Agency			
Minimize the frequency and duration of facility closures due to extreme e	vents and other disruptions				
Coordinate with maintenance staff and consult the All Hazards vulnerability assessment to identify regular/recurring flood conditions on state highways and have design engineers utilize to information to act to improve flooding conditions through the comprovement program.		IDOT Districts, IDOT Office of Planning and Programming			
Develop contractor emergency response on-call contracts and agreements with local governments and surrounding states to p response and recovery support during future events.	IDOT Districts, IDOT rovide Bureau of Operations	IDOT Office of Planning and Programming, Illinois Emergency Management Agency			
Develop a severe storm index, which will allow IDOT to better understand the frequency of extreme weather events.	IDOT Office of Planning and Programming	g IDOT Bureau of Design and Environment			
Enhance coordination with maintenance staff and emergency response staff to identify and implement strategies for reducing impact of events, and develop and document a set of strategies reducing the impact of events on the transportation system.	IDOT Bureau of the Operations or	IDOT Districts			
Enhance transportation system redundancy					
Develop detour plans for at-risk areas on major state routes base information from the All Hazards Transportation System Vulneral Assessment.		IDOT Districts, IDOT Bureau of Design and Environment			
Develop detour signage and digital information plans for at-risk on major state routes based on information from the All Hazards Transportation System Vulnerability Assessment.	areas IDOT Bureau of Operations	IDOT Districts, IDOT Bureau of Design and Environment			

	IMPLEMENTATION ACTION	LEAD EQUITY	PARTNERS			
Identify co	Identify current and future transportation system vulnerabilities to extreme events and climate change					
	Identify actions needed to incorporate climate change into decision-making by coordinating with climate scientists and other state adaptation planning efforts to get an official set of projections for use in IDOT activities, educating staff on climate science basics and findings of vulnerability analysis, and getting broad agency-wide buyin on recommended methodology and prioritization systems.	IDOT Bureau of Design and Environment, IDOT Office of Planning and Programming	IDOT Districts, IDOT Bureau of Operations			
	Apply official climate projections for use by project-level staff.	IDOT Bureau of Design and Environment	IDOT Districts, IDOT Bureau of Operations			
	In coordination with the state climatologist, develop educational materials on incorporating resiliency and climate change into efforts across IDOT.	IDOT Office of Planning and Programming, IDOT Bureau of Design and Environment	IDOT Districts, IDOT Bureau of Operations			
Address transportation system vulnerabilities to extreme events and climate change within the transportation planning, design, and asset management processes						
	Commit IDOT resources to begin a broader roll-out of the concepts of resiliency to climate change and extreme weather by holding an informational event with representation from planning, design, operations, asset management and maintenance to define requirements, targets and required actions.	IDOT Office of Planning and Programming	IDOT Bureau of Design and Environment, IDOT Bureau of Operations, IDOT Districts			
	Incorporate potential facility disruptions as a part of all ongoing maintenance and asset management, and facilitate activities and implement strategies to reduce future system impacts.	IDOT Office of Planning and Programming, IDOT Bureau of Operations	IDOT Districts			
	Act to incorporate resiliency into ongoing practices and develop projects that address identified system vulnerabilities.	IDOT Office of Planning and Programming	IDOT Districts, IDOT Bureau of Design and Environment			
	Coordinate with the project scoring system team to develop and implement a project scoring method and risk-based design approach to project design.	IDOT Office of Planning and Programming	IDOT Bureau of Design and Environment			
	Coordinate with asset management team to incorporate climate change and extreme events into their activities.	IDOT Office of Planning and Programming	IDOT Districts			





4. Mobility

A robust transportation system that offers multiple modal options, whether by car, train, bus, bicycle, or foot and high-quality infrastructure is crucial to achieving mobility of people and goods. Planning for a large state with a diverse mix of urban and rural areas is challenging. Meeting the transportation and mobility needs of such a diverse population is practicable; but, requires a comprehensive approach to transportation planning.

Mobility is a core component of the vision of the Illinois' LRTP. Furthermore, IDOT's vision for mobility is to develop a multimodal network, moving people from place to place to support economic development. The strategies and implementation programs outlined in this chapter look at all modes of transportation in Illinois in an effort to link transportation and planning intended to improve mobility, while also managing existing issues.



Support all modes of transportation to improve accessibility and safety by improving connections between all modes of transportation

need to go. Achieving mobility requires the coordination of strategic, long range land use planning and transportation planning. The level of performance of a transportation system/network can be evaluated by means which relate to users (e.g. Was the route congested?), modes (e.g. What mode did you use?), land use, cost (How much did it cost?), environmental impacts, and more. Modes of transport are largely considered mobility as it is the main component in the movement of people and freight. A decrease in mobility performance, or transit modes that support mobility, can result in increased user costs. These include fuel consumption increases, travel time increases, traffic congestion, and an overall negative quality of life.

Mobility encompasses the interactions between all modes of transportation and are increasingly important for the movement of people and goods. A well-designed transportation network provides mobility choices for users, to move both goods and people, alike.

From the user perspective, mobility is the ability to utilize the transportation network effectively to reach destinations via effective multimodal transitions. From a goods perspective, mobility is the ability to utilize the transportation network to effectively provide the delivery of products often using multiple modes to their end users. This, in turn, will continue to drive economic activity in Illinois.

4.1 MOBILITY OF PASSENGERS AND GOODS IN ILLINOIS

Illinois boasts an extensive transportation network, comprised of numerous transportation modes and publicly- and privately-owned facilities. This includes the state's substantial roadway network, multiple aviation facilities, pedestrian and bicycle infrastructure, public transit entities, the second-largest rail and freight system in the nation, and a number of waterways, canals, and ports. The interconnected nature of this network is defined as multimodal connectivity.

The overall system continues to grow and improve due in part to Illinois' central location within the United States and its distinction as a top agricultural and industrial producer. The progress is most notable near the larger population regions surrounding Chicago to the north and St. Louis to the south. This system of interconnected transportation methods is crucial to providing and maintaining accessible and reliable transportation for both people and goods.

Mobility is both the

willingness and capability

for movement, and the

location decisions related to

mobility create relationships

changes to the infrastructure:

which require continuous

by physical change (e.g.

construction), space (e.g.

living or working), or local

connection (e.g. identity,

Optimized mobility is of particular interest to commercial and private passengers, especially those traveling on urban corridors or heavily traveled rural corridors that experience heavy congestion. Mobility options such as passenger rail, commuter rail, bicycle and pedestrian facilities are increasingly important in efforts to manage congestion, reduce energy consumption and improve system operations. Each of these options are essential to the success of mobility within the state.

The availability of transportation options contributes to improved quality of life in communities across the state. In general, a lack of choice in a transportation network and subsequent reduction in mobility forces users to choose driving as their only mode of transportation. Those who are unable to drive (due to age, disability, vehicle access, etc.) are left with an absence of mobility. As a result, the lack of mobility for users impedes economic activity by reducing the transportation options for people to get to work, appointments and run daily errands.

The structure of the rural economy is different from urban areas, requiring different transportation infrastructure. Hence, mobility is fundamental to one's locational behaviors. For example, a rural resident will have a different set of challenges than an urban resident when accessing health care providers and services. Furthermore, an urban resident on the edges of a city will experience challenges different than the resident living in the city's central business district (e.g. downtown). These challenges can range from limited choice, options to access, and even quality of health care providers and services. Within Illinois, these challenges are most apparent in downstate Illinois, particularly in the more rural portions of the state. Reviewing mobility within the various areas of the state in terms of the context of urban and rural, results in several overall challenges (see Table 4.1).

✓ Specialized and human services transportation services are limited.

✓ Ease of connections between modes or service providers.

✓ Services lack coordination.

TABLE 4.1: Mobility and Context of the State

RURAL RURAL Reliable and cost-effective transit service is a challenge. Wide range of stakeholders. Programs that connect larger geographies are typically unsupported. SMALL URBAN Political boundaries limit mobility, due to counties and municipalities operating specific services. Dispersed land-use patterns create challenges to providing service in growing communities. Regional connectivity.

In terms of the future, mobility of the Illinois transportation network is anticipated to be greatly impacted by the development and deployment of autonomous vehicles. Currently, many automobiles have features such as automatic braking, collision warning and lane departure warning, which all aid in safe driving on the roads. Future technological advances will extend these capabilities and foster an environment for others to create autonomous vehicles in which the vehicle can take over the task of a human driver. Autonomous vehicles will fundamentally impact passenger travel and improve safety, productivity and mobility of people. In general, time used driving could be utilized in a more constructive way, and travel times could decrease. Those who cannot drive, including our aging populations, may gain increased access and mobility, and autonomous taxi services may increase mobility for those who do not own a vehicle. Several of the contextual identifiers outlined in Table 4.1 for why mobility is problematic could potentially be addressed with the development of autonomous vehicles. The creation of multimodal mobility platforms offering mobility as a service is an essential way to connect urban mobility services now and in the future. While a fully automated vehicle is still under development, it will eventually be integrated onto roadways as technology advances. For example, the National Highway Traffic Safety Administration (NHTSA) has already developed several guidance documents in an effort to help states with legislation, procedures and conditions for automated driving systems¹. These policies will play a large role in determining the impact autonomous vehicles will have in increases to VMT or reducing congestion so they must be considered wisely.

4.2 MOBILITY AND IDOT

An overarching role for IDOT is to provide and maintain a transportation network that offers options and alternatives for its users. IDOT is committed to maintaining a safe environment and improving the quality of life for transportation users and the surrounding communities. IDOT enables this process through its integrated and engaging multi-modal planning and programming approach. Example projects that support this approach include CREATE², the 606³, and Bikeshare. Through this approach, it is the Department's goal to provide needed and dynamic logistical links among highway, rail, public transportation, air, water, bicycle and pedestrian options. Each of these multimodal options are described further in the TSU, which is an appendix of this plan.

IDOT fundamentally supports mobility, and in turn, all other goals of this plan, by exploring opportunities to combine resources with other units of government, take advantage of technological enhancements and continue to research best practices. That said, IDOT recognizes the importance of the state-local partnership when considering mobility of the transportation network and strives to promote a dynamic planning relationship with all local agencies. Therefore, the IDOT District-level planning process is essential to improved mobility at the local level. To effectively plan for improved mobility across the state and beyond, IDOT District planning efforts are a coordinated effort with local Metropolitan Planning Organizations (MPOs) and local officials. IDOT consults with local officials on the allocation of funding, transportation planning, highway and transit program development, project development and other transportation issues⁴.

IDOT recognizes the importance of the state-local partnership in delivering a safe and efficient transportation system. The department strives to promote a dynamic and effective working relationship with all local agencies. In Illinois, the coordination of transportation activities between the state and local officials include the entire transportation planning, programming, and implementation process. While the consultation process in urbanized areas is very structured, state coordination with local agencies in rural and small urban areas follows a process that is more flexible in order to meet the needs of local officials.

¹ NHTSA website, https://www.nhtsa.gov/technology-innovation/automated-vehicles, accessed on September 21, 2017.

² The CREATE program identifies approximately 70 improvement projects to provide over \$31 billion in benefits in the Chicago metropolitan region.

³ The 606! is 2.7 miles of multi-use recreational trail and park alternative transportation corridor in the City of Chicago. https://www.the606.org/, accessed January 9, 2018.

⁴ IDOT, Local Planning website, http://www.idot.illinois.gov/transportation-system/local-transportation-partners/local-planning/index, accessed September 21, 2017.

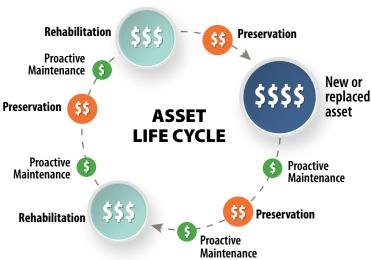
While the following sections detail what IDOT's role is related to mobility in terms of highways and bridges, transit, aviation, and railways; if we are to achieve the vision set out for mobility at the outset of this chapter, more must be done to integrate all modes of transportation. The future must include local priorities, comprehensive planning, sharing of information, and funding in order to be successful.

4.2.1 HIGHWAYS AND BRIDGES

IDOT continuously assesses and identifies the highway system's needs for improvement, repair and strategic expansion. This involves road and bridge performance-based assessments, identification of high crash locations, identification of segments with regular congestion issues, and pavement/ structural condition reports. It is through this data gathering and analysis that IDOT is able to take a comprehensive approach to planning for state-maintained highways and bridges.

The majority of the planning for highways and bridges can be found in the annual multi-year program, called the Proposed Highway Improvement Program for fiscal years 2018 – 2023 (MYP). This program details how it will invest transportation dollars in the state and local highway system⁵. IDOT anticipates spending a total of \$11.65 billion over the six-year 2018-2023 program horizon. However, the majority of the funds will go to improve the existing system. Due to limited dollars for expansion of the system, IDOT utilized a performance-based project selection process to evaluate and prioritize major expansion projects within the MYP in 2017. The process aligns with the goals in this LRTP.

IDOT recently developed the Transportation Asset
Management Plan (TAMP), another planning tool for
highways and bridges. The TAMP is a data-driven and
performance-based document, required by FHWA, outlining
investment strategies for preserving existing assets over the
duration of 10 years. The intent of the plan is to achieve a desired state
of acceptable condition over the life cycle of the assets. A draft of the
IDOT TAMP was released in April 2018, with implementation of the TAMP
no later than June 30, 2019.



Asset management planning is important, as it keeps infrastructure in better overall condition, prevents projects from being delayed until action is absolutely needed, and consistent asset investments overtime helps grow the economy and ensures the system remains competitive.

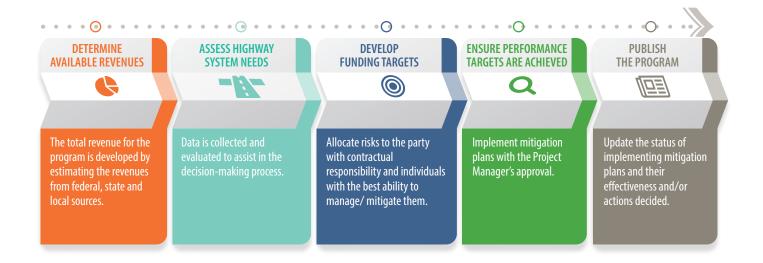
4.2.2 TRANSIT

IDOT's role in Illinois' transit system includes the oversight of state and federal funding for transit projects across the state. IDOT reviews proposed capital projects submitted by transit operators in downstate and northeastern Illinois⁶. It is anticipated that IDOT will spend \$1.85 billion in funding for transit-centric projects and improvements between FY 2018-2023 as indicated in the multi-modal multi-year improvement program. The recently completed, Illinois Statewide Public Transportation Plan, which includes a discussion on correlating transit with other modes, and depict improvements for mobility in Illinois.

IDOT's role in the transit system is not always tangibly defined as with highways. For example, IDOT invests in the planning of transit by identifying overall transit strategies for issues seen across the systems and reviewing the public's relationship with transit. Specifically, IDOT looks at transit as a way to create productivity by enhancing workforce accessibility, or reviews how transit can reduce the amount of money spent to move people. Ultimately, IDOT's role with transit is more planning driven and economically-focused. Transit helps drive the economy, as it provides access to jobs, schools, appointments, and various other activities. Transit is also considered as an opportunity to mitigate congestion during major corridor planning initiatives.

⁵ FY 2018 – 2023 Proposed Highway Improvement Program, IDOT, May 2017.

⁶ Transforming Transportation for Tomorrow FY 2015-2020 Proposed Multimodal Transportation Plan, page 16-17, IDOT, April 11, 2014.





The CTA 2016 Annual Ridership Report stated that it experienced its highest one-day rail ridership total ever when it provided 1.15 million rail rides for the World Series Championship parade.⁷

In terms of transit and IDOT, of note, is a result from the recent (2016) annual Illinois Traveler Opinion Survey conducted by IDOT. The purpose of the survey is to provide a snapshot of public opinion in a given year on multiple issues related to transportation in Illinois. The survey aims to provide IDOT with actionable insights which aid in future planning. Most notable from the 2016 survey is how strongly those surveyed support public transit.⁸ Further public support is depicted in actual ridership numbers across the state. In northeastern Illinois (e.g. Chicago region) in 2015, the Regional Transportation Authority (RTA) recorded 634.9 million trips, with the Chicago Transit Authority (CTA) having a ridership of 516.0 million trips, Metra had 81.6 million trips, and Pace made 33.1 million trips.⁹ Downstate, urban bus systems provided nearly 40 million rides in 2013, while six million demand response rides were provided in the same year.¹⁰

4.2.3 **AVIATION**

Airports may not be the first thing most people associate with IDOT; however, IDOT plays an important role in the development of airports across the state. Airports are one of the most vital economic assets and transportation links in a state. Illinois has ten primary airports (i.e. airports that have schedule enplanements of at least 10,000 passengers within a single calendar year); Chicago O'Hare International is consistently rated as one of the busiest airports in the nation. In 2014, O'Hare was ranked third in passenger boardings and fourth in freight movement, moving more than 3.7 million tons¹¹, and Chicago Rockford International Airport is a key freight hub for the United Parcel Service (UPS).

Likewise, airports are critical freight connectors, and are a fundamental conduit to bringing freight shipments to the state. Goods are commonly shipped by truck to and from airports to sorting centers throughout the state. Therefore, as road and rail networks improve, airports are able to capitalize and develop as national freight nodes.

^{7 2016} Calendar Year, Annual Ridership Report, CTA, February 1, 2017.

^{8 2016} Illinois Traveler Opinion Survey, IDOT, December 2017, page 3.

^{9 2015} Regional Ridership Report, RTA.

¹⁰ http://www.idot.illinois.gov/transportation-system/Network-Overview/transit-system/index, IDOT, January 4, 2018.

¹¹ Aviation in Illinois Fact Sheet, IDOT, April, 2016.

Since Illinois participates in the State Block Grant Program (SBGP), IDOT regulates and monitors all airport activity in the state of Illinois for airports classified as "other than primary." Activity includes the coordination and implementation of programs focused on improving the state's airport and aviation facilities and the prioritization of safety, system preservation, capacity and operational abilities, airport upgrades, and capacities. The data for the airport system is collected from IDOT's annual airport pavement condition survey, the Airport Inventory Report, and airport inspections results.

4.2.4 **RAILWAYS**

IDOT partners with the Federal Railroad Administration (FRA), privately owned railroads, Amtrak and local governments to provide rail passenger service, operate stations and improve freight mobility by investing in rail infrastructure. The FY 2015-2020 Proposed Multimodal Transportation Program (a component of the FY 2015-2020 MYP) includes a \$3.090 billion component reserved for railroad improvements. IDOT is responsible for assisting in project development, overseeing the funding and planning of new or enhanced higher-speed and conventional-speed passenger rail routes, mitigating the negative impacts of rail abandonment and attracting new rail passengers.

The management of the movement of goods is an essential aspect of mobility and livability needs. Illinois has 46 freight railroad companies operating within the state and is the only state in which all seven Class 1 railroads operate. The Chicago region is the world's third busiest intermodal hub, covering 16,000 acres where six of the seven Class I railroads converge, and where nearly a quarter of the nation's rail shipments arrive or pass through.¹²

Further freight details are outlined in the TSU (Appendix B). To that end, IDOT is a key partner of the Chicago Region Environmental and Transportation Efficiency Program (CREATE) program, a public-private partnership between the U.S. Department of Transportation, IDOT, the City of Chicago Department of Transportation, Cook County, the Association of American Railroads, Amtrak, Metra, and the six Class I freight railroads in the Chicago area (BNSF Railway, Canadian Pacific Railway, Canadian National Railway, CSX Transportation, Norfolk Southern Corporation, and Union Pacific Railroad), the Belt Railway Company of Chicago, and the Indiana Harbor Belt Railroad. New overpasses and underpasses will reduce the time Chicago-area motorists spend waiting at railroad crossings, reduce accidents at existing grade crossings and improve emergency vehicle routes. Rail commuter travel times, schedule reliability and capacity will improve as well. Emissions from cars, trucks and locomotives will be greatly reduced, as will noise from idling or slow-moving trains. Green space will also be restored along Lake Michigan.¹³



The CREATE partners will invest billions to increase rail infrastructure efficiency and residents' quality of life by improving transportation flow through the Chicago region. It will reduce rail and motorist congestion, improve passenger rail service, enhance public safety, promote economic development, create jobs, improve air quality, and reduce noise from idling or slow-moving trains.

The CREATE program identifies approximately 70 improvement projects to provide over \$31 billion in benefits. A majority of the projects are grouped along or near four rail corridors running through the Chicago region. Currently, 28 of the 70 overall projects are considered complete. Example completed projects at the core of keeping freight moving in the Chicago area include: adding a new track on a new bridge in Melrose Park, Illinois, affecting 27 freight trains; construction of a rail flyover in Chicago, Illinois, affecting 46 freight trains, 78 Metra trains, and 14 Amtrak trains; and, grade separation of tracks in Bridgeview, Illinois, affecting 80 freight trains. Furthermore, the CREATE program will help address the increase of freight rail trade in Chicago, which is anticipated to double from the year 2012 to 2045. 14

¹² https://www.fhwa.dot.gov/ipd/project_profiles/il_create.aspx, January 5, 2018.

¹³ http://www.createprogram.org/index.htm, accessed August 16, 2017.

¹⁴ U.S. DOT Freight Analysis Framework 4.0, https://ops.fhwa.dot.gov/freight/freight_analysis/faf/, January 5, 2018.

4.3 IMPORTANCE OF MOBILITY

Just as previous transportation decision makers invested in the interstate highway system to provide for the mobility needs of future generations, IDOT is investing in the State's transportation system to provide a legacy for future users. This LRTP is intended to guide the future legacy by assessing the effectiveness of the current system in providing needed mobility, identifying infrastructure investments, and realizing various new innovative initiatives. Together, with the other LRTP goals, mobility within the state will improve and the users experiences will be enhanced. The following details the importance of mobility as it relates to the other LRTP goals:

The ultimate goal of transportation is 'access'; one's ability to reach desired goods, services, and activities. Transportation decisions often involve tradeoffs between different forms of access, which assumes mobility is an end in itself, rather than a means to an end. Therefore, the context of mobility may be perceived differently when reviewed in parallel with the four other goals of the LRTP.

- **Livability** Mobility is crucial to the livability of a state. Positive influences in mobility in the state will lead towards greater livability.
- **Economic Growth** Building new transportation infrastructure generates construction and engineering jobs in the short-term; however, the long-term benefit of the infrastructure investment can be attributed to the greater mobility the investment provides.
- **Stewardship** Mobility of goods and people is fundamental to a functional society. IDOT, in an effort to be a good steward for society, is anticipated to start trending transportation investments from moving vehicles to moving people and goods.
- **Resilience** IDOT strives to develop and maintain a transportation system that responds to and recovers from adverse conditions with resilience. Improvements in mobility will, in turn, increase resilience in the transportation system.

4.4 OBJECTIVES AND STRATEGIES

IDOT has developed three objectives to guide its investment decisions to improve statewide mobility. Each objective contains recommended actions, performance measures, data sources and implementation strategies which IDOT will pursue. The LRTP content as a whole will be considered guidance for programming decisions; however, each objective below also denotes some of the more specific recommended actions/strategies that will be used to guide programming decisions. These have been denoted with \square .

The three objectives are:



Enhance intermodal freight connectivity and mobility to improve continuity and accommodate the efficient movement of goods and services.



Invest in and support multimodal transportation infrastructure improvements and strategic performance-based expansion of services that support the effective movement of passengers.



Increase route efficiency and safety for all users by improving infrastructure condition and addressing capacity issues.

4.4.1 OBJECTIVES, STRATEGIES, PERFORMANCE MEASURES, AND IMPLEMENTATION

OBJECTIVE 1.

Enhance intermodal freight connectivity and mobility to improve continuity and accommodate the efficient movement of goods and services.

RECOMMENDED ACTIONS/STRATEGIES:

 Explore scenarios where modal connections can be improved to facilitate shipments by rail, water and air.

IDOT will develop scenarios that offer the opportunity for state and regional agencies, municipalities, and communities to collectively plot a future strategy, allowing a system-wide approach that considers multimodal and intermodal

connections. An example would be the corridor management approach, which focuses on specific corridors within the state.



Work collaboratively with freight stakeholders to identify and address issues related to transporting freight within Illinois.

Typically, freight stakeholders often have interests that cover a much broader area (i.e. their interests and travel patterns might involve several MPOs or states, and beyond). Furthermore, given the diversity of freight stakeholders, there is no single approach to their stakeholder engagement. IDOT will exhibit the following characteristics to increase the effectiveness of freight stakeholder outreach in determining issues related to transporting freight in Illinois: develop custom outreach approaches; recognize the importance of timing; engage the freight community early; include freight in non-freight projects and plans; and, use freight stakeholders to inform highway design.

 Enhance intermodal connectivity by identifying and implementing improvements needed to truck routes, ports, airports and rail lines that provide access to Illinois intermodal facilities.

Intermodal shipping provides many benefits to both businesses and the public. It is the fastest growing sector of the freight industry and is projected to continue growing in the future. IDOT will work with the freight industry to determine the combination of modes and routes that make the most cost effective and efficient transportation path for their goods, and then identify projects to implement along those routes.

 Establish procedures to use the National Performance Management Research Data Set (NPMRDS) to calculate performance.

FHWA's NPMRDS is used by states to monitor system performance. NPMRDS provides comprehensive and consistent data for passenger and commercial freight roadway performance across the NHS. Furthermore, NPMRDS is defined as the baseline dataset to meet the newly established federal congestion and freight performance reporting regulation. IDOT will provide resources to MPOs to use the NPMRDS.

Evaluate existing and proposed innovative intelligent transportation systems (ITS)
 technology to improve safety.

Intelligent Transportation Systems (ITS) technologies advance transportation safety and mobility, and enhance productivity by integrating advanced communications technologies into transportation infrastructure and into vehicles. ITS encompasses a broad range of wireless and traditional communications-based information and electronic technologies. IDOT will evaluate familiar ITS technologies which include electronic toll collection, in-vehicle navigation systems, rear-end collision avoidance systems, and dynamic message signs. The evaluation will determine which ITS technologies are further promoted and implemented by IDOT in other areas of infrastructure development (i.e. work zones).

Explore ITS technologies to foster the most efficient movement of freight.



Successful implementation of ITS technologies for the benefit of the freight industry depends on interagency cooperation and strong partnerships with industry stakeholders. IDOT will analyze the intermodal freight transportation system in Illinois and identify physical and information exchange bottlenecks.

Investigate potential use of commercial connected/autonomous vehicles (CAV) for the movement of freight.

In 2016, more than 70 percent of freight tonnage moved in America was via truck. The figure is expected to grow steadily in the coming years, per the latest American Truck Association estimates. Connected/Autonomous vehicles (CAVs) have great potential for improving existing, high-demand transportation services. Increasing automation in the movement of freight is anticipated to address driver shortage and improve safety. IDOT will accelerate the investment, development, and testing of CAV capabilities to further the efficient movement of freight within Illinois and beyond.

PERFORMANCE MEASURES:

Modal breakdown of annual shipping volumes

IDOT will utilize the Freight Analysis Framework (FAF) to determine the modal breakdown of freight volumes. The FAF, produced through a partnership between the Bureau of Transportation Statistics (BTS) and the Federal Highway Administration (FHWA), integrates data from a variety of sources to create a comprehensive picture of freight movement among states and major metropolitan areas by all modes of transportation. Starting with data from the 2012 Commodity Flow Survey and international trade data from the Census Bureau, FAF incorporates data from agriculture, extraction, utility, construction, service, and other sectors.

Number of intermodal facilities for freight movements

Intermodal facilities have become a more important component of freight movements as containerized freight is increasingly used to transport goods. Intermodal movements allow shippers to use a combination of modes and thereby utilize the efficiencies of each mode to reduce cost. Through the FAF, IDOT will determine the number of intermodal facilities utilized for freight movements.

Number of intermodal facilities with National Highway System (NHS) connections

Intermodal connectors serve heavy truck volumes moving between freight terminals and the NHS, primarily in major metropolitan areas. Connectors are short, averaging less than two miles in length and generally have a lower design than mainline NHS routes, which are primarily Interstates and arterials. IDOT will determine the number of NHS connections that currently meetexpectations of connecting intermodal facilities to the National Highway System.

✓ Truck Travel Time Reliability (TTTR) index

Truck travel time reliability is a federally required performance measure, per MAP-21. TTTR is defined as the consistency of dependability in travel times, as measured from day-t0-day and/ or across different times of the day. Data source options for this include the NPMRDS or an equivalent data set. IDOT will use NPMRDS and set targets by the federal deadline.

✓ ITS Statewide Architecture and Strategic Plan Update

The purpose of the ITS Statewide Architecture and Strategic Plan is to assist stakeholders in using the architecture for project definition and program planning. Furthermore, stakeholders can better ensure they take advantage of system integration opportunities, develop a correct system design, and create systems that interoperate with other technical systems throughout the state. IDOT will provide an annual project status of the update of the plan.

✓ Live, internet-based, intermodal dashboard of approved freight routes, current travel times and rerouting suggestions

An interactive dashboard on the IDOT website will help IDOT manage the complexities of freight movements and streamline the delivery of freight within Illinois.

✓ Number of studies concerning commercial CAV and impacts on the freight transportation network

Autonomous vehicle technology is rapidly advancing, and as these vehicles are incorporated into the transportation network, adaption will be essential. For example, operations may become more productive, freight may move faster, and federal regulations could be dramatically altered to accommodate a new driving environment. IDOT will work with freight industry leaders to analyze the potential changes and challenges via various studies, and help prepare the industry for a new trucking environment.

IMPLEMENTATION:

 Begin outreach efforts to freight companies and stakeholders in an effort to identify and address issues related to freight transportation in Illinois.

Lead: IDOT Office of Planning and Programming, IDOT Bureau of Communications Services

Partner(s): IDOT Districts, Freight Companies, Freight Stakeholders

 Support efforts to freight stakeholders to explore where modal connections can be improved to facilitate shipments by rail, water and air.

Lead: IDOT Office of Planning and Programming

Partner(s): Local Government, Planning Agencies, Freight Companies, Freight Stakeholders

✓ Provide resources to MPOs on using the NPMRDS data source to measure performance.

Lead: IDOT Office of Planning and Programming

Partner(s): MPOs

✓ Identify how ITS can improve freight movement within and through the state.

Lead: IDOT Office of Planning and Programming, IDOT Bureau of Operations

Partner(s): Freight Stakeholders

✓ Develop live, internet-based, intermodal dashboard of approved freight routes, current travel times and rerouting suggestions.

Lead: IDOT Bureau of Operations

Partner(s): Freight Stakeholders, IDOT Office of Planning and Programming

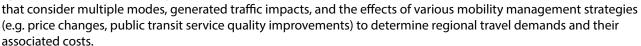
OBJECTIVE 2.

Invest in and support multimodal transportation infrastructure improvements and strategic performance-based expansion of services that support the effective movement of passengers.

RECOMMENDED ACTIONS/STRATEGIES:

Identify and define regional multimodal demands and needs, and/or associated costs across the state.

To be efficient and fair, a transportation network must serve diverse demands. Physically, economically, and socially disadvantaged people in particular need diverse mobility options. IDOT will utilize comprehensive transportation models





It is necessary to understand demographic and socioeconomic trends to better estimate the future characteristics of a population, as well as forecast its demand for services and the extent to which those demands can be met. IDOT will work with local governments to understand future characteristics of a population and forecast demand for services. From these development forecasts, estimates of magnitude and distribution of future land uses are used to project future trips and travel in the region.

Develop tools for identification and development of Complete Streets projects.

The Complete Streets movement aims to develop an interconnected street network that is accessible and safe for users of all ages, abilities, and modes of transportation. Complete Streets support not only changes to community streets, but also a shift in the decision-making process and policies. IDOT will develop best practices to integrate into their own policy documents to foster effective development of Complete Streets projects.

Work with Human Services Transportation Planning (HSTP) coordinators and adjacent transit providers to determine the feasible times and locations for transit transfers between providers.

Human Service Transportation generally refers to transportation services catered to the "transportation disadvantaged" elderly, disabled, and low-income populations. The State of Illinois is divided into 11 HSTP regions, each of which develops their own human service transportation plan. IDOT will work with them to identify feasible times and locations for transit transfers between providers.

Identify the need for transit signal prioritization and other related technologies/strategies for improving multimodal corridors.

Several corridors throughout the state present significant transportation challenges. Signal priority is simply the idea of giving special treatment to transit vehicles at signalized intersections. Implementing signal prioritization on multimodal corridors will increase the person throughput of a corridor and address several corridor challenges. Other technologies/strategies for improving multimodal corridors include bus rapid transit, bus-only/managed lanes, bicyclist signals or express bus.

Increase the coordination between freight rail, intercity passenger rail, and commuter rail networks and other transportation modes.

Both freight rail and passenger rail have experienced increased demand in recent years throughout the state on many parts of the Illinois rail network. The differing operational needs for freight and passenger railroads can make operations coordination challenging, and it is important for IDOT when implementing increased freight and/or passenger rail operations to understand those issues.

Develop a statewide bike/pedestrian facilities inventory and prioritize projects to fill in gaps in the overall system.

The inventory will be summarized in an existing conditions report, and will be catalogued using GIS software for ease of future use. This inventory will assist IDOT to prioritize existing facilities and plan for building future facilities. The inventory should be updated periodically to reflect changes made at the county level.

Ensure use of performance-based project selection processes on all new IDOT projects. 🕐



Illinois residents deserve to understand how priorities are set for investments in maintaining, modernizing, and expanding the state's roads, bridges, bicycle and pedestrian facilities and transit. The use of a performance-based project selection process is a transparent process IDOT will use in the selection of projects. The data-driven collaborative process leads to clear transportation priorities.

Foster a collaborative environment for CAV work and innovations, specifically focusing on the movement of freight.

In an effort to set standards for connected, autonomous vehicles, IDOT should form a coalition between state agencies and academic institutions. The overall goal of the coalition will be to support research, testing, policy, funding pursuits and deployment, as well as share data and provide unique opportunities for the movement of freight by connected, autonomous vehicles.

Percent of funding programmed on projects that provide access to multimodal choices

IDOT will review the STIP and MYP to determine projects with an accessibility component to another transportation mode. The costs of the selected projects will be totaled and compared against the total programmed on all projects in that fiscal year. The resulting amount will be analyzed to determine whether IDOT is focusing enough of its funding on projects with multimodal accessibility.

Establishment of facilities inventory

IDOT will develop a scope of work outlining what is specifically to be included in the facilities inventory and how the data is to be collected. The inventory will include all facilities managed by IDOT within the State of Illinois.

Number of multimodal facilities for passenger movement and use

IDOT will determine the number of multimodal facilities within the State of Illinois using the proposed inventory of IDOT facilities database. IDOT will further analyze these facilities to determine their fundamental use, including but not limited to, number of transfers at the facility, number of rides performed at the facility, and origin/destination routes possible for a user of the facility.

Percent of funding programmed on projects with bicycle/pedestrian/alternative transportation elements

IDOT will review the STIP and MYP to determine projects with a bicycle/pedestrian/alternative transportation element. The costs of the selected projects will be totaled and compared against the total programmed on all projects in that fiscal year. The resulting amount will be analyzed to determine whether IDOT is focusing enough of its funding on bicycle/pedestrian/alternative transportation projects.

Creation or expansion of the Transit Riders Information Project (TRIP), or similar system

Providing information on transit routes and schedules will improve transit riders' experience and make riding transit a more appealing choice. One tool for providing that information is a website or cell phone application that provides route and schedule information for riders. IDOT will create or expand a technology system for relaying that information.

Number of transit signal priority measures implemented

IDOT will determine, using data collected in the proposed facilities inventory, the number of corridors operating with signal priority measures (i.e. advanced traffic controls and bus automatic vehicle location systems).

Percentage of completion of passenger rail system

IDOT will annually track passenger rail projects completed within the state by cross-referencing the STIP. The most recent passenger rail project, still under construction in segments throughout the state, is the high-speed rail initiative.

Number of complete street projects completed

IDOT will review the For the Record publication to identify how many complete street projects are completed.

IMPLEMENTATION:

 Continue to develop technology enhancements to relay information to the traveling public.

Lead: IDOT Office of Intermodal Project Implementation, IDOT Office of Communications

Partner(s): Transit Providers

✓ Begin analyzing NPMRDS data for Illinois and generate initial data sets for performance measures.

Lead: IDOT Office of Planning and Programming

Partner(s): Metropolitan Planning Organizations

Maintain and adjust policies that will ensure the continued efficacy and improvement of multimodal facilities/connection points and HTSP providers.

Lead: IDOT Office of Intermodal Project Implementation

Partner(s): IDOT Office of Planning and Programming

 Monitor all STIP projects featuring pedestrian and bicycling facilities. Log all newly constructed facilities.

Lead: IDOT Office of Planning and Programming

Partner(s): IDOT Office of Intermodal Project Implementation

OBJECTIVE 3.

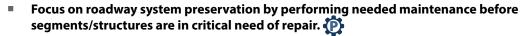
Increase route efficiency and safety for all users by improving infrastructure condition and addressing capacity issues.

RECOMMENDED ACTIONS/STRATEGIES:

 Identify and rank worst bottlenecks and chokepoints to establish an action plan to remediate selected areas.

Precise bottleneck identification is one of the best ways traffic engineers can demonstrate the need for, and the benefits of, investing in transportation improvements. IDOT should identify potential bottlenecks, rank bottlenecks to obtain candidate locations, and conduct detailed analysis of the candidates to

obtain accurate performance characteristics and to identify specific problems causing the bottlenecks.



The demands on IDOT's highway network and available transportation funding are greater than ever. These demands, combined with growing, public expectations for safety, quality, and performance, require highway agencies to maintain the highest level of service practical. To meet these demands, IDOT is developing a Transportation Asset Management Plan to maximize asset life while maintaining assets regularly. Therefore, IDOT is working to make the system work better, run more smoothly, and last longer.

 Focus on bridge repair and replacement by addressing the most critical needs and performing required maintenance.

IDOT is faced with significant challenges in addressing highway bridge preservation and replacement needs. A successful bridge program seeks a balanced approach to preservation and replacement. The objective of a good bridge preservation program is to employ cost effective strategies and actions to maximize the useful life of bridges. The process for accomplishing this is through the Transportation Asset Management Plan where the goals are to maximize asset life by providing maintenance solutions at appropriate intervals in asset life.

 Incorporate safety design elements in all new roadway plans and ensure design policies support freight-friendly design elements in roadway plans.

Safety is the principal design consideration on all IDOT projects. All roadway plans have maximum safety as their overall objective. IDOT should develop a framework for integrating safety into roadway design using proven effective safety counter measures and managing speed, taking into consideration safety effects of design variations, thinking beyond nominal design values, consider supplementing safety effects of variations in different design elements. Given Illinois' level of freight moving through the system – freight friendly design elements should be considered as well.

Promote safety through awareness programs and alerts regarding areas experiencing high crash rates.

IDOT develops average crash rates for different types of intersection and roadway segment cross-sections for statewide analyses. IDOT should update the Safer Roads Index (SRI) Ratings to include potential safety promotion programs.

 Promote rail and highway safety by identifying and improving hazardous highway at-grade crossings.

To avoid at-grade collisions, warning/control devices are required at grade crossings. IDOT should work with the FRA and the FRA GradeDec¹⁵ evaluation tool to improve hazardous at-grade crossings. GradeDec provides a full set of standard benefit cost metrics for a rail corridor, a region, or an individual grade crossing. Model output allows a comparative analysis of grade crossing alternatives designed to mitigate highway-rail grade crossing accident risk and other components of user costs.

- Promote non-motorized safety by identifying and improving high accident locations for non-motorized users.
- IDOT should work to identify high accident locations for non-motorized users and develop and implement effective counter measures to increase safety of non-motorized users.
- Explore various congestion management strategies for implementation within Illinois metropolitan areas.

Congestion continues to rise in Illinois. Existing road infrastructure is not able to keep pace with this increase in congestion – actually, it is impractical to build enough roads and infrastructure to effectively accommodate the demand. Therefore, congestion management strategies are essential to managing predicted future demand. IDOT should consider transportation demand management for the State's metropolitan areas, reviewing the following strategies and the application of each: conventional toll roads, high occupancy vehicle lanes, variable priced lanes, bicycle and pedestrian infrastructure, transit, and others determined through stakeholder involvement.

PERFORMANCE MEASURES:

The Moving Ahead for Progress in the 21st Century (MAP-21) Act and the Fixing America's Surface Transportation (FAST) Act placed an increased emphasis on performance measurement, requiring the establishment of national performance measures. These national measures will help IDOT evaluate the effectiveness of transportation investments, and better communicate the performance of Illinois' transportation system to the public. The following required MAP-21 performance measures will be integrated throughout IDOT's planning and programming process, regarding Objective 3 of the overall mobility goal. These measures are comprehensive in nature and require no further explanation:

- Number and rate of fatalities (per 100 Million VMT and mode)
- ✓ Number and rate of serious injuries (per 100 Million VMT and mode)
- ✓ Number of non-motorized fatalities and non-motorized serious injuries
- Percentage of NHS bridges classified as being in good condition
- Percentage of NHS bridges classified as being in poor condition
- Percentage of Interstate pavement in good condition
- ✓ Percentage of Interstate pavement in poor condition

- Percentage of non-Interstate NHS pavement in good condition
- Percentage of non-Interstate NHS pavement in poor condition
- Percentage of person-miles traveled on the Interstate considered reliable
- ✓ Percentage of person-miles traveled on the non-Interstate NHS considered reliable
- ✓ Truck travel time reliability index
- Annual hours of peak hours excessive delay, per capita
- ✓ Percent of non-SOV travel

In addition to the required reporting for MAP-21, as identified above, IDOT has identified the following performance measures to help track route efficiency and related capacity issues. Again, the majority of these are comprehensive in nature and need no further explanation.

- Mileage of highly congested routes
- Number of rail-crossing fatalities, serious injuries and crashes reported
- Number of congestion management strategies

Congestion management strategies are required in metropolitan areas with population exceeding 200,000. Example strategies include managed lanes, bus-on-shoulder, car pools, and employer flex hours. IDOT will determine the number of strategies utilized within required metropolitan areas in Illinois.

IMPLEMENTATION:

✓ Increase participation in and continue support of the Strategic Highway Safety Plan, working towards "Driving Zero Fatalities to a Reality."

Lead: IDOT Bureau of Safety Programs and Engineering

Partner(s): MPOs, Counties, Municipalities

✓ Develop and share crucial safety information and support educational programs aimed at reducing dangerous behaviors committed by transportation users and operators.

Lead: IDOT Bureau of Safety Programs and Engineering

Partner(s): IDOT Office of Communications

✓ Develop and share bottleneck analysis and action plan to remediate selected areas.

Lead: IDOT Office of Planning and Programming

Partner(s): IDOT Districts, Metropolitan Planning Organizations, Local Governments

✓ Prepare and implement the Transportation Asset Management Plan

Lead: IDOT Office of Planning and Programming

Partner(s): IDOT Districts

✓ Work to coordinate transportation demand programs occurring throughout the state.

Lead: IDOT Office of Planning and Programming

Partner(s): IDOT Districts, Metropolitan Planning Organizations, Local Governments

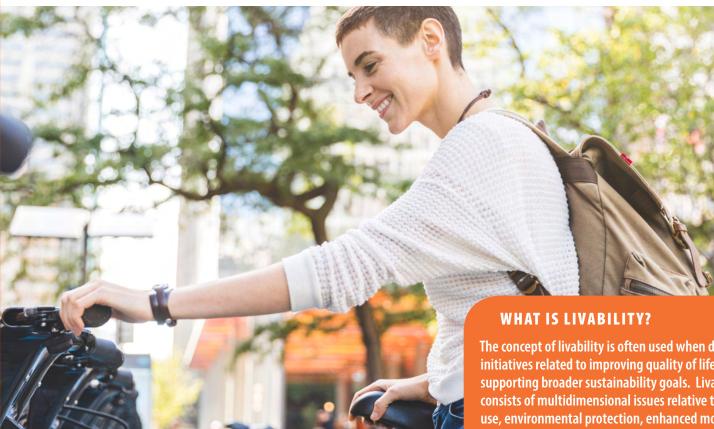
4.4.2 **IMPLEMENTATION SUMMARY**

Mobility is always evolving and as such, implementation strategies will continue to evolve; however, the State's long-term vision will remain to provide support for the implementation of mobility projects. Taken as a whole, the following implementation strategies represent the State's current understanding on what actions could be taken to ensure the LRTP's objectives are achieved. The implementation strategies are organized into four defined categories, pertinent to the aspect it implements.

TABLE 4.2: Implementation Actions

	IMPLEMENTATION ACTION	LEAD EQUITY	PARTNER(S)				
Collaborat	Collaboration/Outreach & Engagement						
	Begin outreach efforts to freight companies and stakeholders in an effort to identify and address issues related to freight transportation in Illinois.	IDOT Office of Planning and Programming, IDOT Bureau of Communications Services	IDOT Districts, Freight Companies, Freight Stakeholders				
	Support efforts to freight stakeholders to explore where modal connections can be improved to facilitate shipments by rail, water and air.	IDOT Office of Planning and Programming	Local Government, Planning Agencies, Freight Companies, Freight Stakeholders				
	Develop live, internet-based, intermodal dashboard of approved freight routes, current travel times and rerouting suggestions.	IDOT Bureau of Operations	Freight Stakeholders, IDOT Office of Planning and Programming				
	Continue to develop technology enhancements to relay information to the traveling public.	IDOT Office of Intermodal Project Implementation, IDOT Office of Communications	Transit Providers				
	Increase participation in and continue support of the Strategic Highway Safety Plan, working towards "Driving Zero Fatalities to a Reality."	IDOT Bureau of Safety Programs and Engineering	MPOs, Counties, Municipalities				
	Work to coordinate transportation demand programs occurring throughout the state.	IDOT Office of Planning and Programming	IDOT Districts, MPOs, Local Governments				
Plans/Guid	dance						
	Begin analyzing NPMRDS data for Illinois and generate initial data sets for performance measures.	IDOT Office of Planning and Programming	Metropolitan Planning Organizations				
	Maintain and adjust policies that will ensure the continued efficacy and improvement of multimodal facilities/connection points and HTSP providers.	IDOT Office of Intermodal Project Implementation	IDOT Office of Planning and Programming				
	Develop and share bottleneck analysis and action plan to remediate selected areas.	IDOT Office of Planning and Programming	IDOT Districts, MPOs, Local Governments				
	Provide resources to MPOs on using the NPMRDS data source to measure performance.	IDOT Office of Planning and Programming	Metropolitan Planning Organizations				
	Prepare and implement the Transportation Asset Management Plan	IDOT Office of Planning and Programming	IDOT Districts				
Multimod	al						
	Identify how ITS can improve freight movement within and through the state.	IDOT Office of Planning and Programming, IDOT Bureau of Operations	Freight Stakeholders				
	Develop and share crucial safety information and support educational programs aimed at reducing dangerous behaviors committed by transportation users and operators.	IDOT Bureau of Safety Programs and Engineering	IDOT Office of Communications				
Funding							
	Monitor all STIP projects featuring pedestrian and bicycling facilities. Log all newly constructed facilities.	IDOT Office of Planning and Programming	IDOT Office of Intermodal Project Implementation				





3. Livability

A transportation system that provides reliable, safe access to jobs, education, health care and goods and services is as important to rural communities as it is to urban communities. By integrating livability principles into transportation planning, Illinois can maximize the efficiency of existing transportation investments and provide improved access within the state and beyond. IDOT is approaching livability in transportation with innovative and practical strategies – using a collaborative transportation planning process to guide successful implementation.

Incorporating livability into transportation planning is not a new concept. Transportation stakeholders have been making places more livable through transportation initiatives for several generations. Although most livability initiatives are implemented at the regional level, a focus at the state level is just as feasible and beneficial. Therefore, IDOT is

GOAL

Enhance the quality of life across the state by ensuring that transportation investments advance local goals, provide multimodal options, and preserve the environment.

The concept of livability is often used when describing initiatives related to improving quality of life while supporting broader sustainability goals. Livability consists of multidimensional issues relative to land

use, environmental protection, enhanced mobility and accessibility, public health, and economic well-being.

Livability in transportation is about integrating the quality, location and type of transportation facilities. As such, livability can be understood as a set of flexible principles to guide transportation decision-making, including:

- » Access: Provide access to jobs, schools, recreational facilities, shopping and businesses via transportation and land-use planning.
- » **Choice:** Offer a range of multimodal transportation options, affording people choices to destinations.
- » **Quality of life:** Support the public's overall well-being - including health, social, economic and other types of well-being —within one's own community.

Fostering livability in transportation projects and programs results in improved quality of life; creates more efficient, robust and accessible transportation network; promotes active lifestyles; and serves the mobility needs of transportation users. Livable transportation systems provide better access to jobs, services and housing, thereby helping to reduce impacts on and enhance the natural and built environment, and support more efficient land-use development patterns. Furthermore, livable transportation systems accommodate a range of modes by creating mobility choice within balanced multimodal transportation networks.

incorporating the goal of livability into the LRTP to help define transportation needs or problems prior to developing solutions.

The Livability in Transportation Guidebook developed by the U.S. Department of Transportation's (USDOT) Federal Highway Administration (FHWA) and Federal Transit Administration (FTA)¹ describes livability in the following way:



Livability is about using the quality, location, and type of transportation facilities and services available to help achieve broader community goals such as access to good jobs, affordable housing, quality schools, and safe streets. This includes addressing road safety and capacity issues through better planning and design, maximizing and expanding new technologies such as intelligent transportation systems (ITS) and quiet pavements, and using travel demand management (TDM) approaches in system planning and operations. It also includes developing high quality public transportation to foster economic development, and community design that offers residents and workers the full range of transportation choices. And, it involves strategically connecting the modal pieces—bikeways, pedestrian facilities, transit services, and roadways—into a truly intermodal, interconnected system.



LIVABILITY PRINCIPLES

Several national efforts and initiatives have goals that align with livability: context-sensitive solutions, new urbanism, complete streets and walkable communities. The national discussion of livability became more significant with the creation of the joint Interagency Partnership for Sustainable Communities between the USDOT, U.S. Department of Housing and Urban Development (HUD), and the Environmental Protection Agency (EPA) in June 2009. The initiative of this interagency partnership resulted in the identification of six principles of livability²:

- **Provide more transportation choices.** Develop safe, reliable and economical transportation choices to decrease household transportation costs, reduce our nation's dependence on foreign oil, improve air quality, reduce greenhouse gas emissions and promote public health.
- Promote equitable, affordable housing. Expand location- and energy-efficient housing choices for people of all ages, incomes, races and ethnicities to increase mobility and lower the combined cost of housing and transportation.
- Enhance economic competitiveness. Improve economic competitiveness through reliable and timely access to employment centers, educational opportunities, services and other basic needs by workers, as well as expanded business access to markets.
- Support existing communities. Target federal funding toward existing communities through strategies like transit-oriented, mixed-use development and land recycling – to increase community revitalization and the efficiency of public works investments and safeguard rural landscapes.
- Coordinate and leverage federal policies and investment. Align federal policies and funding to remove barriers to collaboration, leverage funding, and increase the accountability and effectiveness of all levels of government to plan for future growth, including making smart energy choices such as locally generated renewable energy.

https://www.fhwa.dot.gov/livability/case_studies/guidebook/livabilitygb10.pdf, accessed August 10, 2017.

² https://www.fhwa.dot.gov/livability/case_studies/guidebook/livabilitygb10.pdf, accessed August 10, 2017.

Value communities and neighborhoods. Enhance the unique characteristics of all communities by investing in healthy, safe and walkable neighborhoods, whether they be rural, urban or suburban.

3.1 LIVABILITY AND IDOT

All states administer livability-related federal funding programs. Furthermore, some states have developed initiatives that combine multiple livability-related issues³. There are a number of initiatives IDOT has undertaken in recent years to enhance livability and bring a greater focus on improving livability to projects selected and implemented across the state. These initiatives range from joint councils, to analytical tools, to cutting edge research and policy, some of which are described in greater detail below.



Our roads are your main streets."

—Illinois Secretary of Transportation, Randy Blankenhorn

3.1.1 **I-LAST**

IDOT links livability and sustainability together in the belief that sustainable transportation choices create a more livable environment. One example of this is the Illinois-Livable and Sustainable Transportation (I-LAST) Rating System and Guide. In January 2010, the American Council of Engineering Companies – Illinois (ACEC-IL), alongside IDOT and the Illinois Road and Transportation Builders Association (IRTBA), formed a Joint Sustainability Group and created I-LAST. The I-LAST is a practical manual for transportation infrastructure practitioners, and serves as both a rating system and a guide for livable and sustainable transportation infrastructure in Illinois. The purpose of I-LAST is as follows⁴:

- Provide a comprehensive list of practices that have the potential to bring sustainable results to highway projects.
- Establish a simple and efficient method of evaluating transportation projects with respect to livability, sustainability and effect on the natural environment.
- Record and recognize the use of sustainable practices in the transportation industry.
- Encourage the use of innovative and experimental sustainable concepts.

I-LAST is not an official policy or procedure IDOT follows, and is purely advisory in nature. I-LAST includes a point system for evaluating the following eight measures in a project at the beginning and end of the design phase, and during construction:

- Planning
- Environmental
- Transportation
- Materials

- Design
- Water Quality
- Lighting
- Innovation

The overall impact of I-LAST has been to serve as an inventory of best practices and to provide a simple framework for evaluating different scales and phases of transportation projects.



IDOT continues to develop and encourage the use of the I-LAST rating system to incorporate livability into every phase of project development.

https://www.fhwa.dot.gov/livability/fact_sheets/statedotsandlivability.cfm, accessed September 8, 2017.

⁴ I-LAST, Illinois-Livable and Sustainable Transportation Rating System and Guide, September 27, 2012

312 PERFORMANCE-BASED PROJECT SELECTION PROCESS

IDOT utilized a performance-based project selection process to evaluate and prioritize major expansion projects within the Proposed Multi-Year Highway Improvement Program (FY 2018-2023) in 2017. The process aligns with the goals of the LRTP. This informed and open decision-making process provides the following for state taxpayer dollars:

- Evaluates projects using a consistent set of criteria.
- Aligns funding with projects that provide high return on investment.
- Connects transportation solutions with corridor needs.
- Provides opportunity for ongoing public and stakeholder engagement.

The process focuses on a series of performance measures alongside community input on the importance of each goal. The following details the goals and supporting performance measures developed for the performance selection process⁵:

TRAFFIC OPERATIONS/ CONGESTION	SAFETY	ECONOMIC DEVELOPMENT	LIVABILITY
✓ Annual average daily traffic✓ Volume/capacity ratio✓ Hours of delay	✓ Safer roads index ✓ Safety benefit	 ✓ Travel time reliability ✓ Freight hours of delay ✓ Intermodal accessibility ✓ Economic development proximity index 	✓ Access to jobs✓ Access to multimodal choices✓ Active transportation accessibility✓ Environmental impact

The performance measures for livability are used to quantify the benefits of each major project in coordination with four other overarching transportation goals and subsequent performance measures. When funding becomes available, this process allows IDOT to select those projects that provide the greatest benefit for the cost. The overall purpose of this process is to identify what factors are most critical in driving needs and may help IDOT move forward with targeted spot improvements, delivering a portion of the original project's intended benefit for less money. Integrating livability into this process exhibits IDOT's emphasis on livability as it relates to the future transportation network within the state.

3.1.3 SUSTAINABLE HIGHWAY CONSTRUCTION (ILLINOIS CENTER FOR TRANSPORTATION)

IDOT, through an intergovernmental agreement with the Illinois Center for Transportation (ICT), uses research to support green and other sustainable programs throughout the transportation industry. IDOT and ICT have worked together to identify and implement sustainable solutions in various areas of the Department, and strive to incorporate sustainable aspects in each research project.

One major focus of this research is the performance of asphalt pavements with varying levels of recycled materials, including recycled binders, to ensure that these recycled pavements are not only utilizing fewer virgin resources, but also are providing the performance that the public requires on the roadways. IDOT and ICT have also collaborated on efforts to protect the water supply, both during construction and through the appropriate use of salt during the snow and ice season. ICT has also worked with IDOT to identify types of native vegetation that can be used to prevent soil erosion, and the most effective species of trees to populate wetland mitigation projects. Projects on LED lighting, bus on shoulder programs and the use of wind energy to power rest areas are also in various stages of implementation. These projects assist in mitigating the environmental impacts of IDOT's regular operating and maintenance of the transportation system. Mitigating environmental impacts enhances the livability of Illinois.

⁵ Transportation Investment Performance Selection presentation, May 17, 2017.



CSS was used in the I-74 upgrade project through Peoria, and allowed The Sisters of the Third Order of St. Francis Medical Center to provide input on how construction would be conducted in an effort to keep operations at the hospital minimally impacted. This included discussion on ways to keep the emergency room entrance open and timing on medical helicopter landings to prevent construction debris impacts.

3.1.4 **CONTEXT SENSITIVE SOLUTIONS (CSS)**

The Federal Highway Administration defines CSS as a collaborative, interdisciplinary approach that provides all stakeholders the opportunity to develop a transportation facility that fits its physical setting and preserves scenic, aesthetic, historic and environmental resources, while maintaining safety and mobility.⁶ In much simpler terms, the transportation network should be designed in response to its surroundings – its context. Therefore, CSS represents flexibility in the application of design controls, guidelines and standards to design a facility that is safe and meets the needs of all users.

IDOT's CSS policy was adopted in 2005. Since then, IDOT has used the CSS approach on numerous projects. IDOT's BDE Manual (July 2015, Chapter 19) outlines the CSS process and policy.⁷ Stakeholder involvement is a critical element of any good CSS process and helps to ensure that local issues, such as preservation of scenic landscapes or historic neighborhoods and the ability to walk, bike and access public transit, are considered with more traditional measures such as safety and congestion. A CSS process helps IDOT identify and address these local concerns and is useful for all transportation projects to improve the quality of life (i.e., livability) for all stakeholders involved. It is a method of involving the public early and often in projects before decisions are made. The CSS process works as a partnership between IDOT and stakeholders (e.g., business owners, homeowners, commuters) to come up with working solutions to transportation needs on projects.

In terms of livability, CSS provides an opportunity for IDOT to gain an understanding from stakeholders regarding accessibility issues of adjacent facilities related to projects (e.g., hospitals, airports). In some instances, these facilities are impacted, and CSS is imperative to ensuring operations and accessibility will not be affected, or will be minimally affected, by construction.

https://www.ite.org/css/, accessed September 22, 2017.

IDOT BDE Manual, Chapter 19 (July 2015).

3.2 IMPORTANCE OF LIVABILITY

The overall theme of what constitutes livability is challenging to define; however, transportation investments significantly impact livability within the state and its communities. Transportation projects in and of themselves are not economic development; rather, the communities and businesses supported by each project foster improved livability and drive economic growth.

There are often parallels between livability and the four other fundamental goals of the LRTP. The following details the importance of livability as it relates to the other LRTP goals:

- **Mobility** IDOT's overarching goal for the state's transportation network is to move people and freight as efficiently as possible. Livability realizes the importance of all modes of transportation and the quality of space, urban or rural, that the transportation system supports.
- **Economic Growth** Building and maintaining infrastructure can be cost-prohibitive, but by improving the efficiency and effectiveness of existing infrastructure, the livability results are realized. Strategic investments in infrastructure by IDOT increase the economic vitality and livability of the state.
- **Stewardship** Effective transportation planning consists of informed choices regarding future planning. Comprehensive planning can build consensus about how IDOT manages transportation investments and the correlating livability changes.
- Resilience By understanding elements of the system that are at risk to natural or man-made disasters, IDOT can improve the response to extreme conditions. In doing so, IDOT increases the livability of the transportation network and ensures the resiliency of the system.

3.3 OBJECTIVES AND STRATEGIES

IDOT has developed five objectives to guide its investment decisions that support livability and the environment. Each objective contains recommended actions, performance measures, data sources and implementation strategies that IDOT will pursue. The LRTP content as a whole will be considered guidance for programming decisions; however, each objective below also denotes some of the more specific recommended actions/strategies that will be used to guide programming decisions. These have been denoted with in Section 2.2.3.

The five objectives are:



Enhance collaboration and coordination between IDOT and regional and local transportation agencies and adjoining states in transportation decision-making.



Support projects that enhance the livability of Illinois – making connections between people, and the places they need to go.



Enhance the effectiveness of the multimodal transportation system through better traveler information, utilizing technology where possible, to maximize efficiency of existing facilities and services.



Enhance existing policies and practices related to under-served populations so outreach and inclusion are effective and go beyond meeting the minimum federal requirements.



Utilize a sustainable approach to transportation planning, design, construction and operation which promotes environmental stewardship and energy conservation.

3.3.1 OBJECTIVES, STRATEGIES, PERFORMANCE MEASURES, AND IMPLEMENTATION

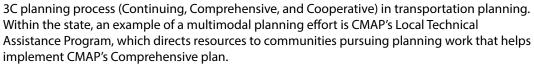
OBJECTIVE 1.

Enhance collaboration and coordination between IDOT and regional and local transportation agencies and adjoining states in transportation decision-making.

RECOMMENDED ACTIONS/STRATEGIES:

 Collaborate with Metropolitan Planning Organizations (MPOs) and adjoining states to collectively benefit from joint multimodal planning efforts.

IDOT should explore options for a symposium to discuss potential partnerships for projects. The focus of the symposium would be to ensure agencies responsible for planning utilize the





IDOT should meet with MPOs to discuss specific freight and multimodal issues present within their boundaries. These meetings represent an opportunity to address freight needs and issues in a comprehensive fashion and integrate freight planning into the ongoing multimodal transportation planning process.

Seek partnerships with stakeholders to support the promotion of Illinois' intermodal system.

IDOT should assist in facilitating and organizing meetings with public and private stakeholders, users, and groups to promote the strategic investments and efficiency improvements made in all modes of transportation (e.g. air, rail, and water). The Context Sensitive Solutions (IDOT policy since 2005) concept aims to achieve a transportation network that is sensitive to and inclusive of all users, and should be one of IDOT's fundamental conduits to achieve this action.



PERFORMANCE MEASURES:

✓ Number of executed planning intergovernmental agreements

An intergovernmental agreement (IGA) is any agreement that involves or is made between two or more governments in cooperation to solve problems of mutual concern. IDOT uses IGAs for cooperative planning, development review, or resource sharing between or among a broad range of governmental entities. IDOT will support any IGA that affords local government's opportunities to collaborate, pool resources, and improve the provision of services to citizens.

✓ Participation in industry stakeholder/user groups

Focusing on the needs of stakeholders is an integral part of IDOT. Engaging with stakeholders helps IDOT to understand their needs and identify opportunities and challenges. Federal legislation does not require IDOT to start or maintain stakeholder groups; however, IDOT has found that such groups provide valuable input as a part of the state (or regional) public involvement process for transportation planning and programming, including for example the Illinois State Freight Advisory Council, Inter-Agency Bikeways Coordinating Working Group, Bike Illinois, Illinois Public Transportation Association, etc. IDOT will determine participation in stakeholder events via the review of meeting attendance records.

✓ Number of agencies utilizing a performance-based project selection process IDOT will provide support to agencies (i.e. MPOs) utilizing a performance-based project selection process that supports different types of projects designed to implement the objectives in this LRTP; then uses specific data driven evaluation criteria for each project type that are used for scoring and ranking projects.

IMPLEMENTATION:

✓ Develop consistent outreach and engagement strategies for IDOT Districts to utilize on projects.

Lead: IDOT Office of Communications, IDOT Bureau of Design & Environment, IDOT Bureau of Local Roads and Streets

Partners: IDOT Districts

✓ Facilitate and encourage the collaboration and development of a waterways forum to provide guidance to IDOT on ports and waterways issues.

Lead: IDOT Office of Planning and Programming

Partners: IDOT Office of Legislative Affairs

 Encourage performance based project selections processes for local project selection.

Lead: IDOT Office of Planning and Programming

Partners: IDOT Bureau of Local Roads and Streets

✓ Strengthen the existing Illinois State Freight Advisory Council (ISFAC).

Lead: IDOT Office of Planning and Programming, ISFAC

Partners: Public/Private Sector Representatives, Freight Stakeholders

OBJECTIVE 2.

Support projects that enhance the livability of Illinois – making connections between people, and the places they need to go.

RECOMMENDED ACTIONS/STRATEGIES:

 Use performance-based project selection tool results to prioritize projects for funding.

IDOT should explore what level of funding would be required to achieve a certain level of performance for indicators of livability. The relevance of the level is an important consideration in IDOT projects, given limited funding and the need to prioritize investments.



- Develop livability measures to prioritize non-highway projects for funding.
 - The Performance Based Project Selection tool is focused on capacity improvements for highway projects. IDOT should work to develop investment and policy priorities by identifying data on performance, along with public involvement and policy considerations, for how to prioritize non-highway projects. This process of prioritization should account for performance outcomes using analytical methods, as well as policy priorities, and concerns such as equity, environmental justice, and other considerations.
- Using a strategic prioritization and programming process allows IDOT to prioritize projects based on quantitative data addressing factors such as congestion and safety; however, it also accounts for assigning higher prioritization of projects with multimodal characteristics. This process would ensure IDOT projects and plans are developed, and funding is programmed in a consistent, goal-oriented manner.

PERFORMANCE MEASURES:

✓ Percent of funding spent on projects that provide access to multimodal choices

Utilizing the For the Record (FTR), IDOT's annual report of the awards and obligations made for the Annual Illinois Highway Improvement Program, IDOT will be able to determine the percentage of funding spent on projects providing multimodal choices. IDOT will establish a percentage applicable to funding spent on projects providing multimodal choices on a regional level.

✓ Number of multimodal connections within Illinois

Key regional areas in the state need to be connected to each other through multiple modes of transportation. A successful performance measure to evaluate multimodal connectivity will measure access and amenities. Therefore, IDOT will review its existing network inventory and quantify multimodal connections, and then work to increase connections to underserved populations by linking services to existing services at connecting points.

✓ Number of livability measures used to prioritize projects

Performance measures are often used to assess the impacts of projects after they have been implemented; however, this measure aims to evaluate and prioritize projects *before* they take effect. IDOT will support a set of livability criteria used to evaluate projects and should be used to determine which project best support the livability goals and should therefore be prioritized for implementation.

IMPLEMENTATION:

✓ Develop sustainability/livability "best practices" to be verified in the preliminary phases of project development.

Lead: IDOT Bureau of Design and Environment

Partners: IDOT Bureau of Local Roads and Streets

✓ Promote sustainable multimodal transportation services, in an effort to reduce single occupancy vehicle (SOV) travel.

Lead: IDOT Office Planning and Programming, IDOT Bureau of Operations

Partners: IDOT Office of Communications, IDOT Office of Highways Project Implementation

Refine and review livability data and performance management for project prioritization.

Lead: IDOT Office Planning and Programming

Partners: Local Stakeholders

OBJECTIVE 3.

Enhance the effectiveness of the multimodal transportation system through better traveler information, utilizing technology where possible, to maximize efficiency of existing facilities and services.

RECOMMENDED ACTIONS/STRATEGIES:

 Better understand the need for and implement Intelligent Transportation Systems (ITS) statewide and invest in proven ITS strategies.

IDOT is currently updating the Illinois Statewide Architecture and Strategic Plan, which is a review of the current use of ITS in

Illinois and provides recommendations to the integration and deployment of ITS. IDOT should support the overall advancement of ITS through investments in major initiatives, such as Connection Protection, which provides real-time transit information to predict whether a user will make their connection.



Google Maps is a readily used geographic locater service that helps people plan trips; whereby, GTFS data is public transit agency data published to allow the public to view public transportation schedules with associated geographic information. IDOT should assist transit agencies in publishing GTFS data into Google applications, as well as other wayfinding applications.

Improve transit ridership levels and riders' experiences through the use of rider-oriented technology.

An example of rider-oriented technology includes a rider mobile application which identifies transit schedules, stops, services in an area, and schedules demand response trips. IDOT should assist in implementing this technology with the State's transit agencies. For example, the Regional Transportation Authority's (RTA) service boards (CTA, Pace, and Metra) have mobile and computer applications; specifically, Ventra, which helps manage and pay fares for many of the public transit providers in the RTA boundary.

Improve transit connectivity between service areas and providers. 🏚

Stakeholders consistently request a convenient and seamless transit system. To that end, IDOT should work with transit providers to identify areas that lack services, and determine potential extensions of services to provide improved connectivity.

Promote multimodal transportation through the use of social media.

Transportation agencies are increasing their use of social media, which calls for a better understanding of social media usage characteristics. IDOT should engage in interactive communications through social media to improve the overall image of the agency. Additionally, IDOT should collaborate with transportation agencies throughout the state, and utilize their social media platforms to further promote projects, endeavors, and other notable moments.

Centralize incident notification, to provide timely incident information to travelers.

IDOT should review the specialized needs for incident reporting and management required to efficiently capture, track, and automatically notify transportation users to relevant incidents and accidents. The review should be regionally and statewide, and result in an effort that could be implemented statewide, to assist in achieving IDOT's goal of zero fatalities.

Implement ITS architecture.

IDOT should provide a framework to guide planning and interoperable deployment of ITS architecture and identify an interface for standardization. An example of efficient, interoperable, and cost-effective ITS architecture are regional traffic management centers (TMCs). Currently within Illinois, Lake, DuPage, and Kane counties, along with the City of Chicago, implement and operate arterial TMCs with great success. Since many major routes in the areas covered by the TMCs are under state jurisdiction, IDOT's cooperation has been critical to the success of the TMCs.





PERFORMANCE MEASURES:

- ✓ Compare changes in vehicle speed, crash rates and traffic volumes from the incorporation of ITS in major metro areas

 The focus of this measure, once reported, will be the accountability assessment of each IDOT District's ITS program.

 Data collected to assess this measure will include: IDOT traffic data and IDOT crash data. This performance measure is intended to assist IDOT in meeting the goals and objectives established by IDOT's ITS program.
- Percentage of transit vehicles and routes supplying General Transit Feed Specification (GTFS) data

 The successful use of this performance measure is linked to the availability of technical resources to generate the measure. IDOT will work with state transit providers to evaluate vehicle GTFS data at the regional and statewide levels. Analysis of this GTFS data can unveil important transit performance profiles such as ridership-by-hour, by-trip, and by-stop, trip activity ranking, stop activity ranking, and activity-by-period.
- ✓ Creation or expansion of mobility management projects

 IDOT will support state and local transportation agencies to utilize their data to effectively create or expand mobility management projects (i.e. Transit Riders Information Project in Champaign County, Illinois). A mobility management project manages a coordinated community-wide transportation service network comprised of the operations and infrastructures of multiple trip providers in partnership with each other. IDOT will track the number of or expansion of mobility management projects.
- ✓ Create a quantitative and comprehensive framework to enhance transportation agency social media programs

 Social media permeates every aspect of modern life, and transportation is no exception. Most transportation agencies currently measure social media effectiveness through built-in metrics such as the number of friends and followers or "likes", or by using third-party applications such as Google analytics. However, collecting this information does not provide meaningful analysis as to the understanding of the social media's true effectiveness. IDOT will work with state and local transportation agency data (e.g. CTA) to quantify and provide effective information to enhance their social media programs.
- Review typical incident management times

As an agency, IDOT is focused on receiving the most benefit of its existing infrastructure and resources, and key to accomplishing this is understanding the performance of the system. Through the review of IDOT's incident reports, IDOT will determine the performance of incident management (e.g. notification, response, duration, clearance and recovery time) and develop a plan for moving forward with enhancing any issues identified in incident management.

IMPLEMENTATION:

✓ Utilize the state ITS Architecture and Strategic Plan Update to align funding for planning and installation of ITS strategies and improvement of existing facilities.

Lead: IDOT Office of Planning and Programming, IDOT Bureau of Operations

Partners: MPOs, Counties, Municipalities

✓ Collaborate planning efforts between transit providers to increase service connectivity, technological improvements for riders and overall promotion of multimodal transportation.

Lead: IDOT Office of Intermodal Project Implementation, IDOT Bureau of Planning

Partners: Regional Transportation Authority, Counties, Transit Providers

Review current incident management and notification systems and align funding for improvements.

Lead: IDOT Bureau of Operations, IDOT Office of Communications

Partners: IDOT Bureau of Safety Programs and Engineering

Support transit agencies providing GTFS data to Google.

Lead: IDOT Office of Intermodal Project Implementation

Partners: IDOT Bureau of Planning

Research how social media can be used to enhance the transportation system and provide best practices/ resources to local transportation agencies.

Lead: IDOT Office of Communications

Partners: IDOT Bureau of Local Roads and Streets, IDOT Office of Planning and Programming

OBJECTIVE 4.

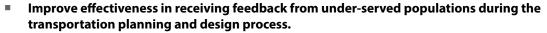
Enhance existing policies and practices related to under-served populations so outreach and inclusion are effective and go beyond meeting the minimum federal requirements.

RECOMMENDED ACTIONS/STRATEGIES:

 Review and enhance existing IDOT policies and practices related to environmental justice and under-served populations.

Many government agencies are responsible for engaging environmental justice and under-served populations. IDOT should look to best practices and compare existing efforts

to ensure the state is utilizing the best methods available and the use of best practices are supported by IDOT policy.



IDOT should ensure there are multiple avenues for receiving public feedback on projects - from digital engagement to public meetings, and postcards to paper comment forms - IDOT should make it easy and simple for the public to tell them what they think about projects and policies. This also means project information should be conveyed in meaningful, non-technical ways so everyone understands the project scope and how it will support the local community.

Identify unique ways to mitigate impacts of new projects on under-served populations.

Effective outreach with under-served populations will not only provide opportunities to participate, but will increase understanding of differing perspectives related to community-specific issues and concerns not previously known, identify potential controversies and issues, and develop viable solutions to mitigate adverse impacts and to address existing transportation problems. Strategies, methods, approaches, and techniques that can be used to reach members of under-served populations may include: utilizing existing stakeholder networks, specialized meetings, and incorporating best practices that go beyond traditional methods and techniques.

 Explore options to implement supply and demand based pricing to support additional service or infrastructure.

An efficient and flexible transportation system that meets mobility demands is essential for the health of Illinois' economy and standard of living. IDOT should provide transportation alternatives for under-served populations through assessing gaps in service where demand is high, adjusting pricing based on ability to pay for services and building infrastructure in areas that have grown.

Develop a public involvement manual for use on transportation projects.

IDOT will work with the Office of Communications, Bureau of Outreach, BDE, Highways, and the District offices to develop public engagement standards and templates that will make it easier for District staff to have the support needed to effectively engage the public throughout the life of a project.



 Number of policies and practices changed to better accommodate underserved populations

Communities across the state have expressed the need to provide access and enhanced livability to all areas of the state. Under-served populations should be considered in the planning phases of all transportation projects – both roads and transit. IDOT should ensure outreach strategies and methods afford everyone the opportunity to be engaged at the outset of transportation planning initiatives. IDOT's Bureau of Design and Environment (BDE) manages the statewide design manual for projects (https://idot.illinois.gov/Assets/uploads/files/Doing-Business/Manuals-Guides-&-Handbooks/Highways/Design-and-Environment/Illinois%20 BDE%20Manual.pdf). The BDE Manual provides uniform policies for IDOT and consultant personnel, to prepare the required documentation in the development of a typical roadway project.

Number of outreach opportunities specifically directed at under-served populations

As the state develops its plans and programs, staff should work to seek out underserved populations and find opportunities to engage local stakeholders.

 Number and availability of affordable alternative modes of transport for under-served populations

The number and availability of alternative modes of transportation is largely governed by local agencies and is directly impacted by the resources available to them. To achieve this recommended strategy, IDOT will have to work with partner agencies to align funding, policies, and performance standards to support the recommended actions, and also coordinate on tracking the number and availability. To this point, IDOT tracks project information through numerous documents and databases including, the Statewide Transportation Improvement Program (STIP) Multi-Year Multi-Modal Program (MYP), and For the Record. The MPOs develop a Transportation Improvement Program which includes the projects identified in the MYP, including any changes to projects

IMPLEMENTATION:

 Facilitate communication and promote collaboration between under-served population areas and transit agencies and organizations via the state MPOs.

Lead: IDOT Office of Planning and Programming

Partners: MPOs, Transit Agencies, Municipalities, Under-Served Population Stakeholders

 Update IDOT policies and practices related to environmental justice and underserved populations.

Lead: IDOT Bureau of Design and Environment, IDOT Office of Communications, IDOT Office of Planning and Programming

Partners: Environmental Justice Population Organizations, MPOs, Under-Served Population Stakeholders

✓ Identify ways to add equity considerations into project prioritization processes.

Lead: IDOT Office of Planning and Programming

Partners: IDOT Bureau of Design and Environment

OBJECTIVE 5.

Utilize a sustainable approach to transportation planning, design, construction and operation which promotes environmental stewardship and energy conservation.

RECOMMENDED ACTIONS/STRATEGIES:

 Incorporate and support sustainable technology in operations of current and future IDOT assets, including multimodal transportation services.

IDOT is committed to incorporating sustainable solutions in the operation of their transportation system. Current solutions

implemented by IDOT include the Curb Your Car Week event and International Walk to School Day, or the use of hybrid and alternative fuel vehicles in the IDOT vehicle fleet. Currently, IDOT recognizes and records the use of sustainable practices statewide; and, IDOT should continue this effort as sustainable practices become more typical. IDOT should perform an audit of its facilities, focusing on utility usage/consumption, waste management, and recycle practices. The results of the audit should be used as guidance to determine areas for improvement.

Increase the use of recycled materials in construction projects.

Research has proven that recycled pavements offer the same durability as non-recycled pavements. That said, IDOT currently uses recycled pavements in projects, when applicable, and should continue to be used and improved upon. Furthermore, IDOT should continue to identify and develop methods for quality assurance of pavement aggregate substitutes that do not lessen the durability or performance of pavement.

Reduce emissions by implementing performance-based project selection.

IDOT should develop guidance for integrating reducing emissions into a performance-based funding approach, taking into consideration appropriate emission reduction performance measures, and using performance measures to support investment choices and enhance decision-making. The guidance should include consideration of reducing greenhouse gas emission reduction.

Support reduction in the use of single occupancy vehicles (SOVs).

The fundamental strategy to reduce travel demand, or to redistribute this demand is through the use of Transportation Demand Management (TDM). TDMs aim to alleviate highway congestion and traveler delay, which can be achieved through a variety of strategies, including: carpooling/ride shares, traveler information, and pedestrian/bike facilities. IDOT should determine which metropolitan areas would benefit from the promotion of TDM programs.

Realize positive air quality gains and reduced energy consumption with efficient passenger and freight operations.

Anticipated development of the Illinois transportation network will inevitably lead to the increase of transportation energy consumption and emissions, resulting in a substantial growth on transportation energy demand. IDOT needs to evaluate current and forecasted emission and energy consumption estimates in operating the transportation system to determine areas where improvements can be made such as making passenger and freight operations more efficient.



Number of sustainability audits of IDOT facilities

In an effort to be fiscally and environmentally responsible, IDOT is continuously working to improve its sustainability practices. IDOT will conduct sustainability audits of its facilities to assess the application of sustainability practices (e.g. pounds of recycled materials per year) at each facility. In support of this, IDOT will determine a reasonable number of energy efficient facilities to be constructed or rehabilitated annually, to assist in reaching overall sustainability goals and objectives.

✓ Percentage of recycled materials used on construction projects

The problems associated with the environmentally safe and efficient disposal of waste continue to grow. The highway construction industry can effectively recycle large quantities of the construction material used in transportation projects. IDOT-Construction Services will calculate the percentage of recycled materials used on construction projects within a one-year time period.

✓ Percent of non-SOV travel*

Percent of Non-SOV travel, where SOV stands for single-occupancy vehicle, refers to a measure of the single occupancy vehicle mode share. FHWA provides data options for use in calculating this federally required performance measure, per MAP-21. IDOT Office of Planning and Programming will calculate the percentage of non-SOV travel on a two year basis.

✓ Total emissions reductions of Congestion Mitigation and Air Quality (CMAQ) funded projects*

Total emissions reduction refers to the 2-year and 4-year cumulative reported emission reductions for all projects funded by CMAQ funds, of each criteria pollutant and applicable precursors under the CMAQ program for which the area is in non-attainment or maintenance. IDOT will utilize data from the non-attainment areas within Illinois to calculate emissions reductions on CMAQ projects, which is federally required per MAP-21.

✓ Percent of per capita emissions of greenhouse gases reduced

IDOT is taking an innovative approach to reviewing transportation air quality. Traditional transportation air quality analysis has only considered localized impacts of short-lived pollutants, but using the FHWA's Infrastructure Carbon Estimator (ICE) tool, IDOT will analyze air quality impacts in a non-traditional manner. FHWA's ICE is a spreadsheet tool that estimates the lifecycle energy and greenhouse gas emissions from the construction and maintenance of transportation facilities. This tool will help IDOT in its planning and pre-engineering analysis of projects.

✓ Number of energy/fuel-efficient vehicles added annually to IDOT and other fleets statewide

In an effort to decrease transportation costs for IDOT vehicles, more fuel-efficient vehicles have been introduced to the statewide fleet in recent years. IDOT will track the number of fuel-efficient vehicles utilizing IDOT fleet data that is updated on a regular basis.

✓ Number of TDM efforts implemented and coordinated in Illinois.

Transportation Demand Management (TDM) refers to various strategies that change travel behavior in order to increase transport system efficiency and achieve specific planning objectives. There are numerous TDM strategies using various approaches to influence travel decisions. Some improve transportation options; some provide incentives to change travel mode, time, or destination; others improve land use accessibility; some involve transport policy reforms and new programs

that provide a foundation for TDM. IDOT's Office of Planning and Programming will work with regional transit and transportation agencies (e.g. MPOs) to determine estimates for TDM efforts currently incorporated in their transportation network. Specifically, IDOT will study opportunities for collaboration and enhancement of the TDMs used throughout the state.

*Federally required performance measures per MAP-21.

IMPLEMENTATION:

✓ Incorporate sustainable solutions in the operation of IDOT's Transportation System.

Lead: IDOT Office of Highway Project Implementation

Partners: IDOT Office of Planning and Programming

✓ Facilitate the use of sustainable technology and update requirements on usage of the technology in existing and future IDOT guidance (i.e. plans and manuals).

Lead: Office of Highway Project Implementation

Partners: Local Stakeholders, IDOT Bureau of Local Roads and Streets

✓ Enhance Performance Based Project Selection by consideration of metrics for air quality improvement.

Lead: IDOT Bureau of Programming **Partners:** IDOT Bureau of Planning

✓ Increase the use of I-LAST during project development.

Lead: IDOT Bureau of Design and Environment

Partners: IDOT Office of Planning and Programming

3.3.2 **IMPLEMENTATION**

Implementation of livability into transportation is fundamentally focused on improving system performance and coordinating funding efforts. Aligning transportation investments with the livability goal to achieve these practical improvements and efforts is essential to the success of this LRTP. The following (**Table 3.1**), delineated into four categories, are proposed to successfully implement the overarching livability goal and its five objectives:

TABLE 3.1: Implementation Actions

	IMPLEMENTATION ACTION	LEAD EQUITY	PARTNER(S)		
Collaboration/Outreach & Engagement					
	Develop consistent outreach and engagement strategies for IDOT Districts to utilize on projects.	IDOT Office of Communications, IDOT Bureau of Design and Environment, IDOT Bureau of Local Roads and Streets	IDOT Districts		
	Encourage performance based project selection processes for local project selection.	IDOT Office of Planning and Programming	IDOT Bureau of Local Roads and Streets		
	Develop sustainability/livability "best practices" to be verified in the preliminary phases of project development.	IDOT Bureau of Design and Environment	IDOT Bureau of Local Roads and Streets		
	Refine and review livability data and performance management for project prioritization.	IDOT Office of Planning and Programming	Local Stakeholders		

	IMPLEMENTATION ACTION	LEAD EQUITY	PARTNER(S)
	Support transit agencies providing GTFS data to Google.	IDOT Office of Intermodal Project Implementation	IDOT Bureau of Planning
	Facilitate communication and promote collaboration between under-served population areas and transit agencies and organizations via the state MPOs.	IDOT Office of Planning and Programming	MPOs, Transit Agencies, Municipalities, Under-Served Population Stakeholders
	Update IDOT policies and practices related to environmental justice and under-served populations.	IDOT Bureau of Design and Environment, IDOT Office of Communications, IDOT Office of Planning and Programming	Environmental Justice Population Organizations, MPOs, Under-Served Population Stakeholders
Plans/Gui	dance		
	Facilitate and encourage the collaboration and development of a waterways forum to provide guidance to IDOT on ports and waterways issues.	IDOT Office of Planning and Programming	IDOT Office of Legislative Affairs
	Research how social media can be used to enhance the transportation system and provide best practices/resources to local transportation agencies.	IDOT Office of Communications	IDOT Bureau of Local Roads and Streets, IDOT Office of Planning and Programming
	Incorporate sustainable solutions in the operation of IDOT's Transportation System.	IDOT Office of Highway Project Implementation	IDOT Office of Planning and Programming
	Identify ways to add equity considerations into the project prioritization processes.	IDOT Office of Planning and Programming	IDOT Bureau of Design and Environment
	Facilitate the use of sustainable technology and update requirements on usage of the technology in existing and future IDOT guidance (i.e. plans and manuals).	Office of Highway Project Implementation	Local Stakeholders, IDOT Bureau of Local Roads and Streets
	Enhance Performance Based Project Selection by consideration of metrics for air quality improvement.	IDOT Bureau of Programming	IDOT Bureau of Planning
	Increase the use of I-LAST during project development.	IDOT Bureau of Design and Environment	IDOT Office of Planning and Programming
Multimod	al		
	Strengthen the existing Illinois State Freight Advisory Council (ISFAC).	IDOT Office of Planning and Programming, ISFAC	Public/Private Sector Representatives, Freight Stakeholders
	Promote sustainable multimodal transportation services, in an effort to reduce single occupancy vehicle (SOV) travel.	IDOT Office of Planning and Programming, IDOT Bureau of Operations	IDOT Office of Communications, IDOT Office of Highways Project Implementation
	Collaborate planning efforts between transit providers to increase service connectivity, technological improvements for riders and overall promotion of multimodal transportation.	IDOT Office of Intermodal Project Implementation, IDOT Bureau of Planning	Regional Transportation Authority, Counties, Transit Providers
Funding			
	Utilize the state ITS Architecture and Strategic Plan Update to align funding for planning and installation of ITS strategies and improvement of existing facilities.	IDOT Office of Planning and Programming, IDOT Bureau of Operations	MPOs, Counties, Municipalities
	Review current incident management and notification systems and align funding for improvements.	IDOT Bureau of Operations, IDOT Office of Communications	IDOT Bureau of Safety Programs and Engineering





2. Economy

The economic vitality of Illinois is key to the well-being and quality of life for businesses and residents throughout the state. Illinois' geographical location near the center of the nation and the diversity of statewide transportation options have made the Illinois multimodal transportation network an economic keystone and a vital hub for national and regional travel and freight movement. Over the past century, Illinois businesses, residents and visitors have benefited from the steady development of one of the largest and most effective multimodal transportation systems in the nation, including roadways, passenger and freight railroads, transit and commuter services, bicycle and pedestrian infrastructure, airports, waterways and canals, port districts, and intermodal facilities.

While Illinois' central location will continue to play a major role in its economic achievements, location alone will not quarantee Illinois' success long term. The movement of people and goods must occur efficiently and cost-effectively in order for Illinois to remain a desirable place to live and do business. IDOT will need to

GOAL Improve Illinois' economy by providing transportation infrastructure that supports the efficient movement of people and goods.

The economy, in the broadest sense, can be described as "the organized system of human activity involved in the production, consumption, and distribution of good and services." The vitality, or health, of all economies are intricately linked to how people and goods are moved, or rather, how well the mobility of people and goods occurs. How well or effective the mobility of people and goods are impacts production, consumption and distribution; all three of the main tenets of the definition of the economy. The overall effectiveness of the transportation system has a direct impact on the mobility of people and goods, and therefore it has a direct impact on the economy. If the transportation system does not provide seamless linkages between modes, adequate multimodal options, safety and security, resiliency to disruptions, or the system is in significant disrepair, then people and goods do not move efficiently and cost-effectively. If people and goods do not move efficiently and costeffectively, then the economy either suffers or does not prosper as a result.

adjust transportation planning processes and policies to consider changes in current and emerging demographic trends, travel trends and freight movement so that it can effectively determine where reinvestment, maintenance and strategic expansion projects will best support economic growth throughout the state. IDOT must also examine these changes to support economic and community diversity throughout different parts of the state.

2.1 ECONOMY AND IDOT

Today, economic vitality and competitiveness remain key to the future of the state. Illinois is the center of the nation's Class I Railroad system, the interstate highway network and the North American inland waterway system. Chicago O'Hare Airport is one of the world's top three busiest airports, handling the complex needs of domestic and international travelers and freight shippers. Illinois is host to several large inland intermodal ports, such as CenterPoint Intermodal Center in Joliet/Elwood, one of North America's largest master-planned inland ports, which encompasses more than 6,500 acres of rail- and highway-adjacent land and includes both Burlington Northern – Santa Fe and Union Pacific intermodal parks.

Illinois is a leading state in agriculture, industrial production, business services and higher education. Annually, Illinois is a national leader in corn and soybean production. The state is also a national leader in pork production. In 2014, Illinois ranked third among states in manufacturing production with over \$99 billion in total output. The state is home to 34 Fortune 500 corporate headquarters, including economic giants like ADM, Allstate, Boeing, Caterpillar, John Deere, McDonalds, Mondelez International, State Farm, United Airlines and Walgreens. The diversity of these major companies ranges from major manufacturers to national retail operators to agricultural processors. Illinois serves as a global market center for corporate finance, national wholesale business, warehousing/logistics and international commodity trading. Over the past two decades, IDOT has worked closely with the Illinois Department of Commerce and Economic Opportunity and the Illinois Department of Agriculture to identify key elements of the transportation system that can improve the state's global competitiveness and support the location or retention of jobs in Illinois communities.

In the future, connected and autonomous vehicles (C/AV), 3D printing, automation and other advanced technologies will have the potential to change all aspects of mobility – from the way we commute to how we plan and develop freight movement and economic vitality for Illinois. While there may be many safety benefits associated with C/AV and other new technologies, they also have the potential to disrupt traditional transportation modes and the current way we do business. Disruptions like this have the potential to create both positive benefits and to have negative impacts that must be mitigated or managed. As an example, in addition to the potential safety benefits of C/AV, a few other examples of positive changes include better first-mile/last-mile connectivity, the ability for people to work while commuting and reduction in waste due to less personal vehicle-ownership. Some of the negative impacts could include vehicle parking, increased VMT, curb-side management, potential idling and air quality impacts. The positive and negative aspects of these large-scale changes need to be examined, understood and addressed with the appropriate policy changes, all while considering the impacts they have on our economy.

It is the role of IDOT to provide reliable and effective access for Illinois residents, communities and businesses. At the network level, IDOT is responsible for the state highway system and the quality of roadways needed to deliver products to economic markets and consumers. At the local level, IDOT works with local governments to provide access to regions, communities and sites that provide opportunities for immediate economic development and employment growth. At this local level, IDOT works with local providers to improve access to rail services, ports, air transportation, transit services and local highway access. Where it can, IDOT assists communities pursuing economic development opportunities by resolving key transportation issues due to the location or expansion of industrial activity that will result in significant employment gains or retention.

¹ Facts about Illinois Agriculture", Illinois Department of Agriculture, 2017.

Beyond economic development, transportation provides significant benefits to the quality of life in Illinois communities. IDOT must also consider that residents and visitors need suitable access to health care services, education, job opportunities and social activities, such as entertainment and recreation. IDOT evaluates these benefits when it works to improve and enhance its existing system, and also endeavors to improve safety by reducing the number of fatalities/ injuries through funding assistance to local agencies working to improve local streets and roads, transit services, and pedestrian and bicycle access.

2.1.1 PERFORMANCE BASED PROJECT SELECTION PROCESS

The success of Illinois largely depends upon the ability for people and goods to move throughout the state, but increasing funding constraints have hampered IDOT's ability to perform system expansion work. Due to limited resources, IDOT needed to establish a process by which strategic system expansions could be evaluated, so that those with the most benefits could be considered. IDOT developed the Performance-Based Project Selection (PBPS) tool to help evaluate capacity enhancement projects. Economic impacts rose to the top of the criteria IDOT chose to include in the PBPS for project evaluations. In 2017, IDOT utilized this tool to evaluate and prioritize major expansion projects within the FY 2018-2023 Multi-Year Highway Improvement Program (MYP). The PBPS tool includes the following performance measures for considering economy in project evaluations:²

✓ Travel time reliability

✓ Intermodal accessibility

✓ Freight hours of delay

Economic development proximity index

2.2 IMPACT OF TRANSPORTATION INVESTMENT

The most direct impacts of transportation investments that support the economy are improved safety, operating efficiency of the transportation system, increased capacity to meet travel demand, and new access to places, services and markets. More importantly, these impacts improve the quality of life for the average resident of Illinois and support the state's economy. Having good transportation access creates jobs and business opportunities, while access to healthcare, educational institutions and government services provide opportunities to improve quality of life across communities statewide.

Because Illinois benefits from being a national transportation hub with an extensive multimodal transportation system, the cost of shipping and receiving goods are reduced for both businesses and consumers. On a daily basis, the state's multimodal transportation system provides vital linkages for workers to jobs, students to schools, families to shopping, and individuals to health care providers. IDOT works in conjunction with and provides funding for other modal providers, such as public transit and aeronautic providers, as well as local government agencies, to ensure these needs are met with dependability and responsiveness.

2.3 OBJECTIVES AND STRATEGIES

IDOT has developed five objectives to guide its investment decisions to support the economy. Each objective contains recommended actions/strategies, performance measures, data sources and implementation strategies that IDOT will pursue. The LRTP content, as a whole, will be considered policy guidance for programming decisions; however, each objective below also denotes some of the more specific recommended actions/strategies that will be used to guide programming decisions. These have been denoted with programming decisions. These have been denoted with programming decisions.

² Transportation Investment Performance Selection presentation, May 17, 2017.

The five objectives are:



Encourage multimodal regional coordination in the identification of transportation solutions to provide for efficient movement of freight, people and services supporting economic growth.



Support projects that improve intermodal efficiency, connectivity and coordination of services to enhance continuity and accommodate the efficient movement of people, goods and services across all modes.



Support land use and transportation connectivity.



Identify and address issues affecting freight commerce and passenger services.



Support economic development in Illinois communities.

2.3.1 OBJECTIVES, STRATEGIES, PERFORMANCE MEASURES, AND IMPLEMENTATION

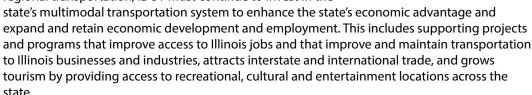
OBJECTIVE 1.

Encourage regional coordination in the identification of solutions to transportation problems to provide for efficient movement of freight, people and services supporting economic growth.



 Support multimodal transportation projects that create growth and employment opportunities throughout the state.

To maintain Illinois' position as a vital hub for national and regional transportation, IDOT must continue to invest in the



Enhance coordination and collaboration in planning, programming and implementation activities with regional and local partners.

A key component of directing the transportation investments that support the Illinois economy is effective coordination with the metropolitan planning organizations, local governments, transportation agencies, modal and transportation industry representatives, businesses and institutions, and residents and users of the state's transportation system. The need for enhanced coordination and collaboration is especially true in this environment of limited resources.

 Ensure the development of state multi-year and annual multimodal plans and programs includes consultation and coordination with regional and local planning partners. P

The Illinois transportation system is a complex combination of public and private services and facilities. In developing state multimodal plans and programs, it is imperative that close, effective coordination with regional and local planning stakeholders, including adjacent states, occurs to ensure understanding of needs, priorities, constraints, and resources to maximize the effectiveness and efficiency of IDOT's plans and programs.



 Support the incorporation of freight movement and economic vitality objectives within IDOT-funded regional studies

To ensure consistency with IDOT goals, IDOT will support the inclusion of economic vitality objectives, including the movement of goods, as part of local, regional and statewide studies that include IDOT funding.

✓ Regular IDOT participation in regional planning and programming meetings held by the state's 16 MPOs

To ensure coordinated planning and programming consistent with IDOT goals, IDOT will actively participate in the regional planning and programming meetings for all of the state's MPOs.

 Ensure preparation of state multi-year and annual multimodal plans and programs includes consultation and coordination with regional and local planning partners

IDOT will continue to enhance their public involvement process to provide timely and meaningful consultation and coordination with regional and local planning stakeholders as part of the development process for the state's multi-year and annual multimodal plans and programs.

IMPLEMENTATION:

✓ Commit IDOT staff to participate in the planning and programming processes of the 16 MPOs to support projects consistent with IDOT goals, including economic growth

Lead: IDOT Districts, IDOT Office of Planning and Programming, IDOT Office of Intermodal Project Implementation

Partners: MPOs

 Expand consultation, coordination and outreach for development of multiyear plans and programs

Lead: IDOT Office of Planning and Programming, IDOT Office of Communication, IDOT Districts, IDOT Office of Intermodal Project Implementation

Partners: Illinois State Freight Advisory Council, MPOs, other planning partners

✓ Conduct before-after studies of IDOT supported transportation projects and their economic impacts

Lead: IDOT Office of Planning and Programming

Partners: IDOT Office of Highway Project Implementation

 Enhance the measurement of mobility-related objectives in the PBPS tool by developing a statewide traffic model

Lead: IDOT Office of Planning and Programming

Partners: IDOT Districts, MPOs, other planning partners

OBJECTIVE 2.

Support projects that improve connectivity and coordination of services to enhance continuity and accommodate the efficient movement of people, goods and services across all modes to address intermodal efficiency.

RECOMMENDED ACTIONS/STRATEGIES:

 Review and evaluate intermodal connections across the state.

IDOT will work with its partners to identify and evaluate the performance of intermodal connections in the state and identify needed improvements. There are approximately 140 designated

National Highway System Intermodal Connectors in the state that provide access from the highway system to major intermodal facilities (transit, truck, rail, aviation, port terminals, and multimodal passenger facilities). There are also over 200 intermodal freight facilities (connections between some combination of air, rail, truck, waterway and pipeline).

- Improve efficiency of transfers of freight and passengers between modes. Intermodal transportation improves the efficiency of the overall transportation system. By improving intermodal connections that are designed to improve the flow of people and goods movement, the service efficiencies of each system are incorporated. The objective is to work towards a seamless intermodal transportation system.
- Work collaboratively with ports and waterways stakeholders to identify and address issues related to transporting commerce via navigable waterways.

The Illinois waterway system provides a relatively low cost means of transporting heavier lower-valued commodities, such as coal and agricultural products. IDOT will work closely with stakeholders, including the Illinois State Freight Advisory Council and port districts/terminals, agriculture and energy industries,

Advocate for the success of Illinois' passenger rail program.

The State of Illinois provides financial support for 30 daily Amtrak trains that travel to Milwaukee, St. Louis, Quincy and Carbondale. Higher speed rail is in the final phase of implementation from Chicago to St. Louis with new or upgraded train stations in Dwight, Pontiac, Normal, Lincoln, Springfield, Carlinville and Alton. IDOT will continue to advocate for enhancing the state's passenger rail program.

Identify shifts in population and employment centers and ensure that there are adequate airport services provided to those population and employment centers.
Illinois has nearly 830 aviation facilities (including heliports, seaplane, balloon, glider, and ultra-light facilities and grass landing strips), including 110 publicly-owned aviation landing facilities. These aviation facilities provide connections between communities large and smal

facilities. These aviation facilities provide connections between communities large and small, allow for rapid medial transport, and serve aviation enthusiasts across the state. IDOT will continue to monitor the state's aviation facilities and demographic shifts to ensure access is provided.

Prepare regular assessment of performance of designated National Highway
 System (NHS) intermodal connectors

To identify needs and monitor performance, IDOT will regularly assess the performance of designated NHS intermodal connectors across the state.

- ✓ Number of aviation, highway, and rail program investments that support improved use, safety and ease of access to intermodal facilities
 - IDOT will track the number of intermodal project and program investments.
- ✓ Prepare regular waterborne commerce report assessing the utilization of port districts and other port terminals

IDOT will prepare a waterborne commerce report regularly that tracks the utilization and expansion plans of port districts and other major port terminals in the state.

✓ Increased education and marketing of passenger rail options and transfer options between modes

To support the state's investments that are improving intercity passenger rail, IDOT will increase coordination and support for education and marketing of passenger rail options, including transfer options.

 Percent of population and employment with drive access to a commercial airport

To ensure statewide access to aviation facilities, IDOT will evaluate the percentage of population and employment within a reasonable drive of a commercial airport.

IMPLEMENTATION:

 Develop regular report on Illinois National Highway System Intermodal Connectors

Lead: IDOT Office of Planning and Programming

Partners: IDOT Districts, Illinois State Freight Advisory Council, MPOs, other planning partners

✓ Develop regular report on Illinois Waterborne Transportation

Lead: IDOT Office of Planning and Programming

Partners: Illinois Department of Commerce and Economic Opportunity, Army Corps of Engineers, Illinois State Freight Advisory Council, Port Districts/Terminals

Develop new marketing campaign for intercity passenger rail

Lead: IDOT Office of Communications

Partners: IDOT Office of Intermodal Project Implementation

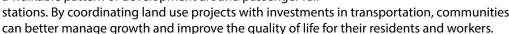
OBJECTIVE 3.

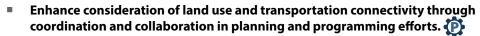
Support land use and transportation connectivity.

RECOMMENDED ACTIONS/STRATEGIES:

 Support land use and transportation connectivity, especially in and near intercity passenger rail and commuter rail stations, through planning studies, project analyses and public education programs.

To better capitalize on transit investments in passenger rail stations, it is desirable to bring potential riders closer to these stations to increase ridership. This requires planning and public education to encourage denser, livable mixed-use and a walkable pattern of development around passenger rail





Transportation investment decisions should consider the effects on land use and development, including consistency with applicable short-range and long-range land use and development plans. This requires increased coordination with agencies and local jurisdictions to ensure transportation planning and programming decisions are compatible with the surrounding community.

 Enhance performance-based project selection process and accompanying tools to ensure consideration of land use and transportation connections.

There are many benefits to incorporation of land use and transportation connectivity. These benefits include improved mobility options, improved public security, increased transit ridership, and reduced air pollution and energy consumption. IDOT will continue to enhance their PBPS tool to better consider land use and transportation connectivity benefits.



 Amount of funds supporting land use and transportation connectivity and the number of funded studies

IDOT will track the amount of funding and the number of studies that include consideration of land use and transportation connectivity, including transit-oriented development and context-sensitive and complete street studies.

 Regular participation in MPO and regional planning and programming efforts that implement land use and transportation connectivity

To ensure coordinated planning and programming consistent with IDOT goals, IDOT will increase their participation in MPO and regional planning and programming efforts that address land use and transportation connectivity.

✓ Additional factor(s) within performance-based project selection tool to address land use and transportation connections

To improve the alignment of IDOT goals and their programming priorities, IDOT will identify and implement additional factors within their PBPS tool that address the benefits of land use and transportation connectivity.

IMPLEMENTATION:

✓ Develop regular report on land use and connectivity

Lead: IDOT Office of Planning and Programming

Partners: IDOT Districts, MPOs, other planning partners

✓ Enhance the measurement of land use and connectivity-related objectives in the PBPS tool

Lead: IDOT Office of Planning and Programming

Partners: IDOT Districts, MPOs, other planning partners

OBJECTIVE 4.

Identify and address issues affecting freight commerce and passenger services.

RECOMMENDED ACTIONS/STRATEGIES:

 Collaborate and consult with freight and passenger stakeholders to address regional, statewide and multi-state freight and passenger transportation issues.

It is critical to actively involve freight and passenger stakeholders to identify and address transportation issues at local, regional, and state levels, including multi-state efforts. In fact, IDOT is required by state law to use the principles of Context Sensitive Solutions for their projects, which includes



stakeholder involvement from the earliest stages of a project and for the entire life of these facilities. In support of this type of collaboration and consultation IDOT created the Illinois State Freight Advisory Council (ISFAC,) comprised of freight industry and public sector representatives, economic development organizations, academics, and industry (agricultural, manufacturing, energy) representatives. IDOT has also been an active participant in the Mid-American Freight Coalition (formerly the Mississippi Valley Freight Coalition) since its founding in 2006. The Coalition consists of ten states that cooperate in the planning, operation, preservation, and improvement of freight transportation infrastructure. IDOT is also a key partner in the Chicago Region Environmental and Transportation Efficiency (CREATE) program with USDOT, Amtrak, the nations freight railroads and the City of Chicago, and the Will County Freight Advisory Council with the Will County Center for Economic Development, USDOT, the Illinois Trucking Association, Midwest Truckers Association, and others.

IDOT also coordinates with passenger rail stakeholders such as the States for Passenger Rail Coalition, the Midwest Regional Rail Initiative, the Midwest Interstate Passenger Rail Commission, Amtrak, Midwest High Speed Rail Association, and other passenger rail stakeholders.

 Provide investment and technical support to transportation projects that improve freight and transportation connectivity through the integration of multimodal service options.

The efficient use of the state's transportation system requires intermodal and multimodal connectivity. To achieve the goal of seamless integration requires continued investment and technical support for effective and efficient projects that improve this connectivity.

 Support new technologies that provide improved operational efficiencies and travel/ route planning and safety.

Over the past few years, there has been tremendous growth in new technology. An example is the dramatic growth of transportation network companies that provide user-friendly apps that connect riders to drivers using their own personal vehicle who are providing real-time ridesharing services – such as Uber and Lyft. The availability of real-time travel information extends to when packages are going to be delivered, to when the next bus or train will be arriving, to dynamic route navigation that provides the shortest travel time route. As technology continues to advance, it will be very beneficial to employ technologies that can provide improved operational efficiencies and effectiveness.

 Support state funding to public aviation facilities to assist the local community efforts to keep and attract additional business to their communities.

Public aviation facilities play a critical role for passenger travel and air cargo, and can attract and retain businesses to their communities. With steady demand for aviation services likely to continue, IDOT's role includes encouraging, fostering and assisting in the development of aeronautics in the state. IDOT should continue and expand its financial assistance, its safety and education programs, and its inspections and other technical oversight.

 Address policy and planning implications of autonomous vehicles being introduced within both passenger and commercial/freight fleets.

The rapid advancement of autonomous vehicle technology will result in driverless vehicles being introduced for both passenger and freight movement. IDOT and its planning stakeholders need to closely monitor these advancements and the associated policy and planning implications. This includes understanding evolving issues regarding regulation, safety, testing and deployment, coordination with autonomous vehicle stakeholder, support for testing activities, and consideration of the future implications of autonomous vehicles.

PERFORMANCE MEASURES:

✓ Amount of funding specifically for freight and/or passenger connection improvement projects

IDOT will track the funding and the number of intermodal/multimodal freight and/or passenger connection improvement projects.

✓ Amount of funding for innovative freight vehicle improvement studies and tests

IDOT will track the funding and the number of studies and tests involving innovative freight vehicle improvement, including digital communications and vehicle-embedded automated systems.

✓ Measure the progress toward full implementation of the web-based roadway information system

IDOT will continue to monitor progress of implementing the web-based roadway information system, including information needs and speed of information being delivered to all service areas in the state.

✓ Amount of funding for improved airport access

IDOT will track the amount of funding and number of projects that improve airport access.

Number of new policies and/or processes to address autonomous vehicles

IDOT will track the implementation of new policies and processes on driverless vehicles utilizing the transportation system.

IMPLEMENTATION:

✓ Continued participation and consultation with freight and passenger transportation industry partners through the Mid-America Freight Coalition, Illinois State Freight Advisory Council, Will County Freight Advisory Council, and other stakeholder groups

Lead: IDOT Office of Planning and Programming

Partners: IDOT Districts, Illinois State Freight Advisory Council, Mid-America Freight Coalition, MPOs, other planning partners

✓ Develop and implement Illinois Competitive Freight Grant Program

Lead: IDOT Office of Planning and Programming

Partners: IDOT Districts, Illinois State Freight Advisory Council, MPOs, other planning partners

✓ Develop research program with Illinois Universities targeting innovative freight vehicle improvement

Lead: IDOT Office of Planning and Programming

Partners: Illinois Universities

✓ Establish Illinois State Autonomous Vehicle Advisory Council

Lead: IDOT Office of Planning and Programming

Partners: IDOT Districts, autonomous vehicle representatives, safety and insurance representatives

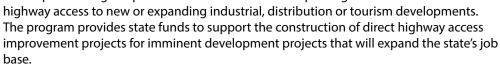
OBJECTIVE 5.

Support economic development in Illinois communities.

RECOMMENDED ACTIONS/STRATEGIES:

 Support Illinois communities through economic development grants under programs like the Economic Development Program.

IDOT will support economic development in Illinois communities by encouraging new or expanded development through grant programs that improve access. IDOT's Economic Development Program provides state assistance for improving





Improved access to intermodal facilities (air, rail, truck, water and pipelines) is critical to improving the movement of goods in Illinois. IDOT will support transportation projects that provide more efficient access to intermodal facilities across the state.

 Invest in intermodal projects that meaningfully increase and improve access to economic growth opportunities.

IDOT will support increased economic growth opportunities in Illinois communities through support of intermodal projects. This support includes transportation improvement projects for better access, reduced travel times, and improved safety.



✓ Number of communities that benefit and the number of jobs supported (created/retained) from IDOT economic development grants

IDOT will track the number of jobs that are created and the number of communities that benefit from the IDOT Economic Development Program and similar economic grant programs.

✓ Number of highway and transit investments that improve access to intermodal and multimodal facilities

IDOT will track the number of projects that improve access to airports, river ports, heavy traffic generators, rail passenger stations and intermodal facilities.

✓ Number of freight related projects that enhance access to supply chains or that enhance access to economic growth opportunities

IDOT will track the number of airport, rail, port or intermodal projects that enhance access to markets and suppliers, or that enhance access economic growth opportunities.

✓ Number of studies funded that support economic development

IDOT will track the amount of funding and the number of studies that support economic development in the state.

IMPLEMENTATION:

✓ Commit IDOT staff to supporting economic development through transportation improvement projects and economic development grant programs

Lead: IDOT Office of Planning and Programming

Partners: IDOT Districts, Illinois Department of Commerce and Economic Opportunity, economic development groups

✓ Develop regular report on the economic benefits of Illinois transportation infrastructure investments

Lead: IDOT Office of Planning and Programming

Partners: IDOT Districts, IDOT Office of Intermodal Project Implementation

 Enhance the measurement of economy-related objectives in the PBPS tool using REMI and state traffic model development

Lead: IDOT Office of Planning and Programming

Partners: IDOT Districts, Illinois Department of Commerce and Economic Opportunity, MPOs, Other planning partners

2.3.2 **IMPLEMENTATION SUMMARY**

The implementation actions to align transportation investments with the economy goal to achieve these practical improvements and efforts is essential to the success of this LRTP. The following (**Table 2.1**) are proposed to successfully implement the overarching economy goal and its five objectives:

TABLE 2.1: Implementation Actions

	IMPLEMENTATION ACTION	LEAD EQUITY	PARTNERS		
Encourage regional coordination in the identification of solutions to transportation problems to provide for efficient movement of freight, people and services supporting economic growth.					
	Commit IDOT staff to participate in the planning and programming processes of the 16 MPOs to support projects consistent with IDOT goals, including economic growth	IDOT Districts, IDOT Office of Planning and Programming, IDOT Office of Intermodal Project Implementation	MPOs		
	Expand consultation, coordination and outreach for development of multiyear plans and programs	IDOT Office of Planning and Programming, IDOT Office of Communication, IDOT Districts, IDOT Office of Intermodal Project Implementation	Illinois State Freight Advisory Council, MPOs, other planning partners		
	Conduct before-after studies of IDOT supported transportation projects and their economic impacts	IDOT Office of Planning and Programming	IDOT Office of Highway Project Implementation		
	Enhance the measurement of mobility-related objectives in the PBPS tool by developing a statewide traffic model	IDOT Office of Planning and Programming	IDOT Districts, MPOs, other planning partners		
	Support projects that improve connectivity and coordination of services to enhance continuity and accommodate the efficient movement of people, goods and services across all modes to address intermodal efficiency.				
	Develop regular report on Illinois National Highway System Intermodal Connectors	IDOT Office of Planning and Programming	IDOT Districts, Illinois State Freight Advisory Council, MPOs, other planning partners		
	Develop regular report on Illinois Waterborne Transportation	IDOT Office of Planning and Programming	Illinois Department of Commerce and Economic Opportunity, Army Corps of Engineers, Illinois State Freight Advisory Council, Port Districts/ Terminals		
	Develop new marketing campaign for intercity passenger rail	IDOT Office of Communications	IDOT Office of Intermodal Project Implementation		
Support la	and use and transportation connectivity.				
	Develop regular report on land use and connectivity	IDOT Office of Planning and Programming	IDOT Districts, MPOs, other planning partners		
	Enhance the measurement of land use and connectivity-related objectives in the PBPS tool	IDOT Office of Planning and Programming	IDOT Districts, MPOs, other planning partners		
Identify a	Identify and address issues affecting freight commerce and passenger services.				
	Continued participation and consultation with freight and passenger transportation industry partners through the Mid-America Freight Coalition, Illinois State Freight Advisory Council, CREATE program, Will County Freight Advisory Committee, and other stakeholder groups	IDOT Office of Planning and Programming	IDOT Districts, Illinois State Freight Advisory Council, Mid-America Freight Coalition, CREATE program partners, Will County Freight Advisory Council, MPOs, other planning partners		

	IMPLEMENTATION ACTION	LEAD EQUITY	PARTNERS
	Develop and implement Illinois Competitive Freight Grant Program	IDOT Office of Planning and Programming	IDOT Districts, Illinois State Freight Advisory Council, MPOs, other planning partners
	Develop research program with Illinois Universities targeting innovative freight vehicle improvement	IDOT Office of Planning and Programming	Illinois Universities
	Establish Illinois State Autonomous Vehicle Advisory Council	IDOT Office of Planning and Programming	IDOT Districts, autonomous vehicle representatives, safety and insurance representatives
Support	economic development in Illinois communities.		
	Commit IDOT staff to supporting economic development through transportation improvement projects and economic development grant programs	IDOT Office of Planning and Programming	IDOT Districts, Illinois Department of Commerce and Economic Opportunity, economic development groups
	Develop regular report on the economic benefits of	IDOT Office of Planning and	IDOT Districts, IDOT Office of
	Illinois transportation infrastructure investments	Programming	Intermodal Project Implementation