DRAFT

Chapters 1 to 6

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2045
Long Range Transportation Plan
Decatur Urban Area Transportation Study

Chapter 1
OVERVIEW

This chapter provides the framework for the DUATS 2045 Long Range Transportation Plan (LRTP), *including the* Purpose of the LRTP, *an overview of the* DUATS Study Area *and the* Governing Legislation *that directs the transportation planning process.*

PURPOSE OF THE LONG RANGE TRANSPORTATION PLAN

The Decatur Urbanized Area Transportation Study (DUATS) is the designated Metropolitan Planning Organization (MPO) that oversees transportation planning activities for the Decatur region. DUATS is responsible for transportation planning for the Metropolitan Planning Area (MPA), which includes most of Macon County. One of the primary functions of DUATS is the development of the region's Long Range Transportation Plan (LRTP). The last LRTP update, completed in 2014, had a 2040 horizon year; this update has a horizon year of 2045. The 2045 LRTP addresses multimodal improvements to identify, plan, and guide transportation decision-making and future year investments within the DUATS MPA.

Within the context of the LRTP, mobility is viewed in terms of the movement of people and goods, not just vehicles. While the plan analyzes specific transportation modes (e.g., roadways, public transportation, biking, walking, rail, and aviation), it focuses on the interrelationships between modes to promote their integration into a comprehensive system that efficiently and cost-effectively meets the mobility needs of the area's citizens, businesses, industries, and the traveling public. It also coordinates transportation planning with community planning activities that address land use, human and natural resources, and economic development.

The LRTP is federally required to be fiscally constrained, which means the recommended projects are based on reasonable projections of available federal, state and local revenue. The plan also provides broad policy direction which allows DUATS to respond to new or changing conditions during the life of the plan. Land use and transportation studies which impact local and regional travel are regularly being completed—correspondingly, the LRTP is updated every five years, though amendments may occur more frequently in response to the changing realities that affect the region's transportation system.

Perhaps most importantly, the LRTP reflects the vision and direction of local officials, relevant agencies, stakeholders, and the public. The LRTP development process is consistent with the DUATS public outreach plan, which provides the public an opportunity to be involved in the planning process. The DUATS Public Involvement Plan is available upon request from DUATS staff.

The public plays an important role in the planning process by providing valuable information that helps develop, maintain, and carry out an effective transportation plan. The public involvement process provides opportunities to educate the public about transportation planning, creating an informed community and leading to better planning.

Regional Planning

As part of the transportation planning process, the relationships between land use, economic development, mobility, and environmental conditions are considered. Long range planning helps communities think strategically as a region and link the policy direction of the LRTP with project selection. Moreover, the U.S. Department of Transportation (USDOT) mandates a comprehensive, cooperative, and continuing (3-C) approach to transportation planning in the MPA be carried out in order to be eligible to receive federal transportation funding. DUATS is the agency authorized to carry out this Federal mandate in the Decatur region.

DUATS "3-C" Planning Process

- **Comprehensive |** Examination of how all transportation modes—roads, transit, bicycles, pedestrians, rail operations, and aviation—contribute to the overall system
- **Coordinated |** Efforts are conducted collectively among federal, state, local, and private transportation providers
- **Continuing |** Changing transportation needs within the community are acknowledged, anticipated, and responded to over the course of the 2045 planning horizon

The transportation planning process recognizes the interdependence between land use and

transportation decisions. Rarely are transportation issues (i.e., congestion, connectivity, accessibility, etc.) confined to one jurisdiction or unit of local government. Instead, the impact of transportation and development decisions frequently extends beyond defined city and village boundaries and can have significant regional impacts. The process of preparing the LRTP is intended to analyze the transportation system from a regional perspective and to identify priority improvements to address the area's future transportation demands. As a result, individual communities are able to more effectively manage their transportation resources and better address their future needs.

Transportation planning has a major impact on development in the MPA. This LRTP continues a major theme established in the DUATS 2040 LRTP—to promote sustainable development practices and the efficient use of resources, including balanced land development and conservation, and more compact land uses. Clustered development within and adjacent to existing municipalities promotes greater density, which may encourage more efficient use of transportation resources. The development of compact and carefully planned residential, industrial, commercial and mixed-use districts also helps encourage the use of public transit and alternative transportation modes.

The type and location of transportation infrastructure also has a powerful effect on the location and intensity of land use development. Therefore, it is crucial that the transportation plan be consistent with the land use plan, in terms of both the location and the level of service to be provided by different modes. Well planned and located transportation facilities combined with appropriate levels of service are vital to the success of a sensible development initiative, efficient use of limited community resources, enhancement of local and regional security, improvement of the quality of life for residents, provision of an accessible and connected transportation system, and improvement of the local economy.

DUATS History and Structure

DUATS was designated in 1964 to conduct the transportation planning activities in the MPA. The organization and structure of DUATS was re-authorized in 2002 through the execution of an intergovernmental agreement. In early 2006 amendments to that agreement were adopted to move the lead agency planning functions from Macon County to the City of Decatur. DUATS consists of a Policy Committee and Technical Committee and is supported by City of Decatur staff. DUATS' mission, goals and objectives are included in Chapter 2 and are reviewed every five years as part of the LRTP update.

Transportation planning activities are undertaken by DUATS in cooperation with the Illinois Department of Transportation (IDOT), Federal Highway Administration (FHWA), Federal Transit Administration (FTA), and member entities. The Policy Committee makes final decisions regarding budget expenditures, project selection, and other policy matters affecting the overall operation of DUATS. The Policy Committee includes representatives from the following:

- IDOT District 7;
- Macon County;
- City of Decatur;
- Village of Forsyth; and
- Village of Mt. Zion.

The Policy Committee is currently chaired by the representative from the Village of Mt. Zion. Election of a chairperson and vice-chair occurs during even-numbered years. Any voting member, with the exception of the IDOT Regional Engineer, can be elected to chair the Policy Committee.

Under the general direction of the Policy Committee, the Technical Committee manages the overall transportation planning efforts for DUATS. This committee has the responsibility of professional and technical review of work programs, policy recommendations, and transportation planning activities. The Technical Committee is comprised of thirteen members representing local

governments within the MPA and IDOT District 7 personnel. The Technical Committee is currently chaired by the Director of Public Works for the City of Decatur. Elections occur during even-numbered years.

DUATS is the only intergovernmental planning entity in Macon County and it strongly encourages consultation and communication among the jurisdictions. DUATS also conducts outreach to gather input about issues affecting the region from interested parties such as the League of Illinois Bicyclists, the Decatur Bicycle Club, the Macon County Environmental Resource Council, the Macon County Farm Bureau, and other businesses, industries, and stakeholders.

In 2005 DUATS was the sponsoring agency for a countywide comprehensive planning initiative that looked to formulate a cooperative, mutually beneficial, and unified plan that considered land use, housing, economic development, natural resources, and transportation issues. The process recognized that it was important to formulate a plan identifying how individual jurisdictions within the County could promote these regional concepts and espouse the notion of a unified community. In August 2009, the Comprehensive Plan was unanimously adopted by the Macon County Board and Decatur City Council. DUATS continues to rely on the *Macon County/Decatur Comprehensive Plan* to help guide regional growth and transportation decision making within the Decatur region.

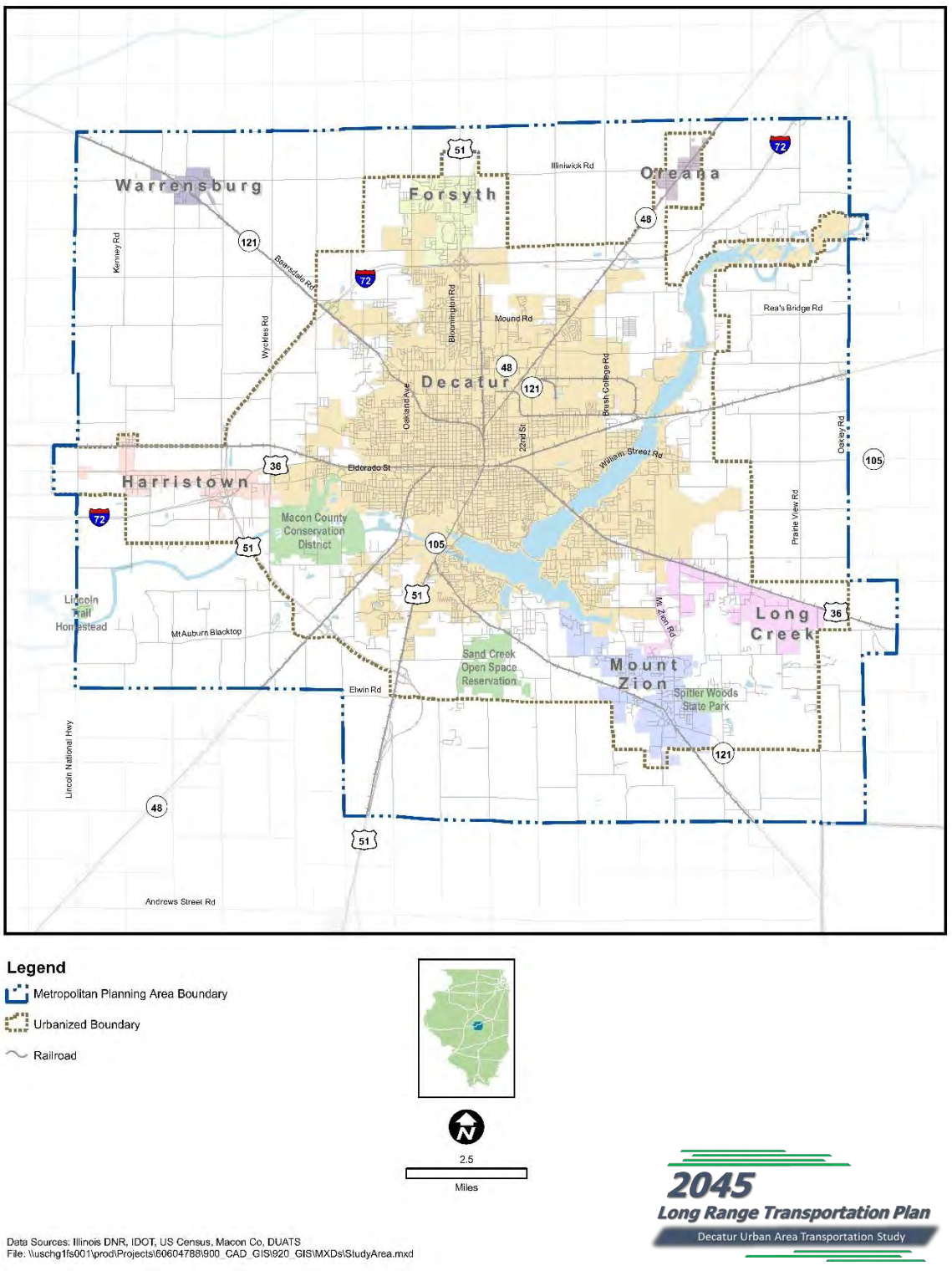
DUATS Study Area

The two geographical boundaries that make up the DUATS study area are described below. **Figure 1-1** displays the Urbanized Area and MPA and boundaries.

- **Urbanized Area Boundary |** Established by the U.S. Bureau of the Census and updated every 10 years as part of the U.S. Census, Urbanized Areas are defined areas that include a central city and contiguous territory that combined has at least 50,000 people and a density of over 1,000 people per square mile. This area can be expanded by coordination between IDOT and local officials but must include all of the Urbanized Area identified through the Census. FHWA and the Governor must approve any changes. The Urbanized Area boundary is typically reviewed/updated every three, but not more than five, years and may be done in conjunction with the LRTP update. The Urbanized Area encompasses approximately 111 square miles and is used to determine which projects are eligible for urban or rural funding.
- **Metropolitan Planning Area (MPA) Boundary |** The MPA must include the Urbanized Area and should include all contiguous areas that may become urbanized by the LRTP horizon year (for this plan, 2045). This boundary is established by agreement between DUATS and the Governor through IDOT. A copy of the boundary is provided to FHWA. This boundary is used to determine which projects are to be included in the LRTP and ultimately programmed in the Transportation Improvement Plan (TIP), making them eligible for federal funding. The MPA boundary was last modified/approved following the 2010 U.S. Census. The current MPA encompasses approximately 220 square miles and includes the majority of Macon County and these seven municipalities:

  - Decatur (MPA central city)
  - Mt. Zion
  - Forsyth
  - Long Creek
  - Oreana
  - Harristown
  - Warrensburg

Figure 1-1: DUATS Study Area



GOVERNING LEGISLATION

The current transportation authorization bill is the Fixing America's Surface Transportation (FAST) Act, passed in 2015. It authorized $305 billion in federal funding for fiscal years 2016 to 2020 for highway, safety, public transportation, motor carrier safety, hazardous materials safety, rail, research, technology, and statistics programs. The FAST Act also provided the first dedicated source of federal funding for freight projects. It is part of the larger movement toward performance-based transportation planning, which came to the fore with the Moving Ahead for Progress in the 21st Century (MAP-21) Act. As such, it emphasizes a performance-driven process to support investment decision-making for physical assets, including the identification of performance measures to track and evaluate the area's progress toward meeting its goals. It also promotes the development of risk-based asset management planning. Prior federal transportation-related legislation includes the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991, the Transportation Equity Act for the 21st Century (TEA-21) of 1998, and the Safe, Accountable, Flexible, Efficient Transportation Equity Act - A Legacy for Users (SAFETEA-LU) of 2005. Taken together, the past 30 years of federal legislation have guided the transportation planning process to its current emphasis on the robust multimodal planning, public engagement, and the need to maintain existing infrastructure in a state of good repair.

Other relevant legislation is the Clean Air Act Amendments of 1990 (CAAA). The CAAA recast the planning function to confirm that transportation planning will help and not hinder the region in meeting federal air quality standards. It encourages reduced auto emissions, and fewer trips by single-occupant vehicles, and it promotes the use of alternative transportation (transit and bicycles) as a more viable part of the transportation system. Making the receipt of federal funding dependent upon a region's ability to meet air quality standards reinforces the linkage between transportation planning and federal air quality standards. The MPA is in attainment, currently meeting all air quality standards and is not subject to the regulations defined in the CAAA.

LRTP DEVELOPMENT PROCESS

The DUATS 2045 LRTP has been developed through a continuing, comprehensive, and cooperative process that included the active participation of DUATS, FHWA, FTA, IDOT, the City of Decatur, the Decatur Park District, the Village of Forsyth, the Village of Mt. Zion, and Macon County government along with other local government, agency, and stakeholder input. The 2045 LRTP provides a blueprint to build upon an ever-evolving process of goal-setting, needs analysis, and the identification of appropriate transportation improvements. The 2045 LRTP defines a balanced program of capital development and systems operations. It provides a structure and follows a planning process for examining how all modes of transportation can be integrated to collectively serve the mobility and economic development needs of the region. The future transportation system will evolve as the region's priorities and conditions change, demographics shift, and new technologies develop.

DUATS Work Products

To optimize use of transportation resources, transportation projects and programs must be carefully planned in advance using a 3-C planning process that results in a transportation plan consistent with the needs of the area. The three primary products of this process are the Unified Planning Work Program (UPWP), the TIP, and the LRTP. These documents are described as follows:

- **Unified Planning Work Program |** The annually updated UPWP outlines proposed tasks and estimated costs associated with conducting the area's transportation planning research plus the administrative activities necessary for the development of the LRTP and TIP.
- **Transportation Improvement Plan |** The TIP is an annually updated, short-range, four-year programming document which allocates funding for specific transportation projects and activities in the area. The TIP must include all projects that will use federal and state funds within the MPA, including but not limited to roadway, transit, bicycle, and pedestrian modes.
- **Long Range Transportation Plan |** The LRTP is the long-range planning document that provides a framework for addressing the area's transportation needs. This includes an overview of existing and future needs, with defined strategies to meet those needs. The LRTP must be updated every 5 years and must have a minimum horizon of 20 years.

Public Involvement

Public involvement is an important element of the transportation planning process and the development of the 2045 LRTP. DUATS staff and local officials actively solicit comments from those who know the community best: the people who live and work here. Public involvement informs and educates the public about transportation planning activities, which in turn leads to better planning. Moreover, it gives the public a sense of ownership of their community and its development. Regular meetings are attended by the member entities, planning and engineering professionals, stakeholders, and other representatives of the community. Each meeting provides an opportunity for members of the community to participate in the planning and decision-making processes that affects the community at large.

For the 2045 LRTP update, DUATS conducted the following outreach:

- **Stakeholder Surveys |** Key stakeholders in the region were contacted to discuss transportation mobility and infrastructure issues. In total, 12 individuals provided input.'
- **Community Survey |** 957 Decatur area residents, or frequent travelers to the area, responded to a 23-question survey addressing roads/freight, transit, and biking within the Decatur region.
- **Short Questionnaire |** DUATS staff distributed a short questionnaire (5 questions) during a neighborhood event. Nearly 90 questionnaires were returned.
- **Public Open Houses |** Public open houses were held December 4, 2019 (5:00 p.m. to 7:00 p.m.) and December 5, 2019 (3:00 p.m. to 5:00 p.m.) at the Decatur Public Library Staley Room. Draft LRTP recommendations were available for the public to review/comment. One person attended the open house and no written comments were received.
- **Public Review of the LRTP |** A draft of the LRTP was made available for a minimum 30-day public review beginning on December 11, 2019 and ending January 13, 2020.

2045 LRTP Organization

The 2045 LRTP is organized as follows:

- **Chapter 1 | Overview** provides background on the LRTP development process and information on the regional setting and transportation system
- **Chapter 2 | Goals and Objectives – Performance Measures** outlines the 2045 LRTP vision statement, goals and objectives. This chapter discusses system performance which documents DUATS progress toward addressing FAST Act performance measures.
- **Chapter 3 | Existing Demographics** summarizes existing population and employment data. It also summarizes education attainment and a peer region review.
- **Chapter 4 | Existing Conditions** summarizes the existing transportation conditions and identifies transportation deficiencies within the MPA.
- **Chapter 5 | Future Needs Analysis** identifies year 2045 population and employment projections which serve as the basis for the needs analysis, including the identification and review of potential transportation improvements. The needs analysis documents the challenges and opportunities related to transportation and land use leading up to the planning horizon year 2045.
- **Chapter 6 | Priorities and Recommended Plan** outlines the recommended multimodal transportation projects. This chapter provides the financial analysis which demonstrates a fiscally constrained plan and also includes environmental justice, environmental mitigation analysis, and supporting policies and strategies.

2045 Long Range Transportation Plan
Decatur Urban Area Transportation Study

Chapter 2
GOALS AND OBJECTIVES – PERFORMANCE MEASURES

This chapter defines the plan's **vision statement** *and* **goals and objectives.** *This foundation guides the selection of recommended transportation improvements identified in Chapter 6 and reflects the values of the area citizens, businesses, industries, and the traveling public.* **Performance measures** *related to FAST Act are also discussed.*

VISION STATEMENT

A vision statement is a brief description of a desired future condition. The DUATS LRTP vision statement defines the end state for the region's transportation system if policies and strategies supported by DUATS and its partner communities and agencies are implemented to address the goals and objectives. The vision statement also frames the development of the goals and objectives, which in turn drive the identification and implementation of the recommended transportation strategies and improvements. Table 2-1 summarizes the DUATS LRTP vision statement.

Table 2-1: DUATS LRTP Vision Statement

DUATS will continue to develop a regionally integrated multimodal transportation system to meet the values, needs, and goals of the area's citizens, businesses, industries, and the traveling public.

REVIEW OF 2040 LRTP GOALS AND OBJECTIVES

The process of developing the DUATS 2045 LRTP goals and objectives began with a review of the previous 2040 LRTP goals and objectives. The following highlights the discussion which is framed around the respective transportation modes.

Roadways

In developing the 2040 LRTP, safety performance measures and targets were developed to reflect the plan's priority of a safe regional roadway system. This 2045 LRTP summarizes progress toward meeting the safety targets, and also reinforces DUATS commitment to enhance safety for the traveling public.

Maintaining infrastructure and focusing on a state of good repair was also a focus of the 2040 LRTP. While a concern in the 2040 LRTP, pavement condition has since become an even more important priority. The 2045 LRTP survey results support efforts within the DUATS MPA to prioritize investment in the existing infrastructure. Specific actions that were identified including completing the Industrial Transportation Plan for the Midwest Inland Port. This study was placed on hold but is currently programmed for FY 2020 in the FY 2020-FY 2023 TIP. Another action was to develop a regional ITS architecture and this is currently in process.

Moving forward, the 2045 LRTP will continue to develop performance measures and targets as future guidelines to evaluate progress toward meeting specific measures.

Transit

The 2040 LRTP goals and objectives outlined a short-term transit target of continuing to grow fixed-route transit ridership in order to reach 1,750,000 passenger trips by 2020. At the time, this anticipated an increase of approximately 5 percent per year. For various reasons, discussed in more detail in Chapter 4, the transit ridership has been gradually declining since the 2040 LRTP update and the 2018 ridership totaled 1,134,274.

Another 2040 LRTP transit goal focused on expanding transit service coverage with a 2025 timeframe for implementation. Current service coverage is considered good in the DUATS region and there does not appear to be an immediate need to expand coverage. The issue of service coverage can be revisited as part of a planned Comprehensive Operational Analysis (COA) that Decatur Public Transit System (DPTS) will conduct in 2020. In addition, a more detailed review of transit ridership can also be examined as part of the COA.

The 2040 LRTP recognized the negative impact that at-grade rail crossing delays have on DPTS service, and as such the plan supported the construction of grade-separated structures at key locations to improve travel time reliability. The construction of the Brush College Road overpass at Faries Parkway, which is currently being designed, will improve travel time reliability and benefit DPTS operations. Additional grade separations would further enhance transit operations in the region and remain an important infrastructure priority.

Bike / Pedestrian

The 2040 LRTP goals and objectives focus on efforts to continue to implement the regional bicycle improvements. Portions of this network have been completed in the past four years and the partner agencies remain committed to developing a comprehensive, connected regional bicycle network.

Aviation

The 2040 LRTP goals and objectives identified the need to improve access to the airport and constructing the first phase of the Beltway goes a long way in providing the improved access. The plan also envisioned the airport reaching 10,000 annual enplanements. The most recent enplanement data from the past few years show that the facility is on pace to surpass 10,000 enplanements in 2019, or 2020.

FAST ACT PLANNING REQUIREMENTS

The FAST Act sets the course for transportation investment with an emphasis on improving mobility on America's highways, creating jobs and supporting economic growth, accelerating project delivery, and promoting innovation. The DUATS LRTP supports the ten federal planning requirements identified below. Since the last LRTP, the FAST Act expanded the scope of consideration of the metropolitan planning process to include improving transportation system resiliency and reliability; reducing (or mitigating) the stormwater impacts of surface transportation; and enhancing travel and tourism. [23 U.S.C. 134(h)(1)(I) & (J)]

Support Economic Vitality	Especially by enabling global competitiveness, productivity, and efficiency.
Increase Safety	For motorized and non-motorized users of the transportation system.
Increase Security	For motorized and non-motorized users of the transportation system.
Increase Accessibility	By enhancing the mobility of people and freight.
Protect & Enhance Environment	By promoting energy conservation, improving quality of life, and promoting consistency between transportation improvements and State and local planned growth and economic development.
Enhance Integration and Connectivity	Across and between modes, for people and freight.
Promote System Efficiency	By implementing efficient system management and operations.
Emphasize System Preservation	By focusing on preservation of existing transportation infrastructure and assets.
* Resiliency and Reliability	By reducing or mitigating stormwater impacts on surface transportation, among other methods.
* Enhance Travel and Tourism	By supporting and promoting projects pertaining to travel and tourism.

* New factors introduced under FAST Act.

DUATS 2045 LRTP GOALS AND OBJECTIVES

The DUATS technical and policy committees met in June 2019, at which time they reviewed the 2040 LRTP goals and objectives. The committee confirmed that the 2040 LRTP goals and objectives continue to address the primary transportation concerns and issues within the region. As such, the DUATS 2045 LRTP goals and objectives remain for the most part unchanged from the previous LRTP. Some of the targets and measures for the goals and objectives have been modified to address recent updates to transportation performance measures. References to the new FAST Act planning factors are also included. DUATS will continue to review, update, and report on progress toward achieving the measures. Table 2-2 summarizes the 2045 LRTP goals and objectives.

Table 2-2: DUATS 2045 Goals and Objectives

Goals	Objectives	Targets	Measures	Strategies
1. Create a safe transportation system that balances the travel needs of all users including the general public and area businesses.	a) Enhance travel safety by reducing the number of fatalities and serious injuries. b) Improve travel safety by reducing the rate of fatalities and serious injuries per 100 million VMT. c) Improve travel safety by reducing the total number of bicycle- and pedestrian-related serious injuries and fatalities.	a) DUATS supports the statewide safety targets established by IDOT. a) Complete the Midwest Inland Port study by 2021; begin implementation of projects identified.	a) Number of Fatalities b) Fatality Rate per 100 Million Vehicle Miles Traveled (VMT) c) Number of Serious Injuries d) Serious Injury Rate per 100 Million VMT e) Number of Non-Motorized Fatalities and Serious Injuries *(specific targets and measures identified earlier in chapter 2)*	• Prioritize transportation improvements that have a direct impact on reducing fatalities and serious injuries, for all transportation modes. • Use Complete Streets principles in project designs to accommodate all users of all abilities. • Reduce modal conflicts to enhance the movement of people and goods. • Use innovative design strategies and new technologies to reduce crash exposure and improve traffic flow along major roadways. • Develop regional policies to encourage through trips on major streets (expressways, arterials) and discourage such trips on local streets. • Incorporate safety design elements in all transportation planning efforts to support freight-friendly roadway plans.
2. Preserve and maintain the existing transportation system to make the most efficient and most cost-effective use of existing infrastructure investments.	a) Improve pavement condition within the MPA. b) Improve the condition of bridge/structures within the MPA. c) Enhance roadway facilities and system connectivity to better accommodate truck traffic within the MPA. d) Improve the efficiency of roadway operations through intelligent transportation system (ITS) and transportation system management (TSM) techniques to enhance traffic flow and reduce travel delay. e) Improve the efficiency of rail traffic through the MPA with an emphasis on reducing at-grade rail crossing delays and increasing safety for the traveling public.	a) DUATS supports the statewide pavement and bridge condition targets established by IDOT. b) Complete the development of an ITS Architecture by 2020; begin implementation of projects identified.	a) Percentage of pavements on the Interstate System in Good condition b) Percentage of pavements on the Interstate System in Poor condition c) Percentage of pavements on the NHS (excluding the Interstate System) in Good condition d) Percentage of pavements on the NHS (excluding the Interstate System) in Poor condition e) Percentage of NHS bridges in Good condition f) Percentage of NHS bridges in Poor condition *(specific targets and measures identified earlier in chapter 2)*	• Support projects that maximize the performance of existing transportation facilities. • Improve the efficiency of roadway facilities by updating traffic operations or improving route design to upgrade road capacity in congested areas. • Focus on roadway system preservation by performing needed maintenance before segments/structures are in critical need of repair. • Work with public and private development to leverage funding resources. • Maximize the utilization of existing infrastructure by encouraging innovative and compact development strategies and coordination of regional land use decisions. • Seek additional funding to maintain and modernize the regional transportation system.

Goals	Objectives	Targets	Measures	Strategies
3. Promote and expand the utilization of the regional multimodal transportation system to move people and goods to, from, within, and through the MPA to support the growth of the local and regional economy.	a) Enhance access to the Airport to increase air passenger service and support local, regional, and global industries and businesses located in the Decatur area. b) Promote the MPA as a regional freight distribution center by enhancing existing facilities and constructing new facilities using public-private development strategies. c) Leverage transportation projects to support local, regional, and global economic development opportunities. d) Support efforts to develop a statewide high-speed passenger rail service that connects to the Decatur region. e) Support transportation improvements that enhance recreational activities and support increased tourism within the region.	a) DUATS supports the statewide system performance targets established by IDOT. b) Exceed 10,000 annual airport boardings by 2021. c) Increase the number of freight-related jobs within the region.	a) Percent of Reliable Person-Miles Traveled on the Interstate. b) Percent of Reliable Person-Miles Traveled on the Non-Interstate NHS. c) Truck Travel Time Reliability Index d) Number of airport boardings per year. Track and report on an annual basis toward reaching target. e) Local employment data.	• Support and implement improvements identified in the Supply Chain Optimization Study. • Develop a Midwest Inland Port Transportation Plan and Infrastructure Improvement Plan to better accommodate freight movement and support economic development within the region. • Support efforts to retain, expand and enhance passenger and air freight services at the Decatur Airport. • Continue to expand the regional hierarchy of area roadways (functional classification system) to concentrate vehicular movements on major thoroughfares. • Integrate air transportation with local travel modes. • Promote the use of the Decatur Airport to efficiently and affordably serve regional and national passenger and cargo movements. • Develop transportation centers and inter-city terminals to promote intermodal travel and regional and global expansion. • Plan for intermodal terminals to foster efficient transfer of people and goods between different modes of transportation.

Goals	Objectives	Targets	Measures	Strategies
4. Improve and promote a countywide public transit system that provides area citizens with a safe, competitive alternative to the private automobile.	a) Grow fixed-route ridership on the Decatur Public Transit System (DPTS). b) Increase the percentage of the Macon County population and employers served by public transportation. c) Reduce the impact of rail crossing delays on public transit operations. d) Improve the state of good repair of DPTS assets. e) Reduce the rate of fatalities and serious injuries per VMT (of transit vehicles).	a) Complete Comprehensive Operations Analysis in 2020. *(additional targets to considered and adopted in the COA planning efforts)*	a) Fixed route passenger trips (UPT) recorded by the DPTS and reported to the National Transit Database (NTD). b) Percent of population and percent of geographic area within the public transit service area. c) Update DPTS rail crossing delay data annually and compare results to Decatur Area Transportation Efficiency Study (DATES) baseline findings. d) Programmed vehicle life in years as specified by the FTA, and actual vehicle life in years as recorded by DPTS. e) Transit system crashes involving fatalities and injuries recorded by the DPTS and reported to the NTD.	• Implement strategies identified in the upcoming Comprehensive Operational Analysis. • Monitor fixed-route service between existing and future residential areas, employment centers, and key destinations to determine if service expansion is needed. • Explore opportunities to implement expanded service hours (evenings and Sunday service). • Seek a reliable funding source to replace vehicles as soon as they reach their programmed vehicle life. • Promote site planning and mutually beneficial land use development strategies that encourage the use of public transit and make public transit more efficient and easier to use. • Explore cost-effective transit services (such as subsidized taxi and van pools) to serve major activity centers during principal hours of operation, outside of the normal DPTS hours of operation.

Goals	Objectives	Targets	Measures	Strategies
5. Promote alternative modes of transportation and develop transportation facilities to accommodate alternative modes.	a) Plan, develop, and promote bicycle and pedestrian facilities as viable and efficient forms of transportation. b) Comply with the Americans with Disabilities Act and the State of Illinois requirements by providing clearly marked and maintained walkways, sidewalks, crosswalks, ramps, and curb cuts.	a) Construct new non-motorized facilities including focusing on new trails consistent with the DUATS bike plan. b) Upgrade, replace, or construct, sidewalks within the MPA as opportunities present themselves.	a) Baseline trail and bicycle facility mileage. (Identify current miles of existing trails and on-street bicycle facilities; track additional miles of improvements added on an annual basis.) b) Baseline ADA compliant sidewalks. (track sidewalk improvements—either replacement or new—and report on annual basis.)	• Prioritize the completion of a connected north-south trail system through the MPA that connects residential areas, neighborhoods, schools, parks, services, shopping, and employment centers. • Require new developments and major reconstructions to include sidewalks and other non-vehicular infrastructure. • Promote community walkability by requiring that consideration of alternate modes of transportation be incorporated into all new construction and major reconstruction projects.
6. Coordinate land use and transportation improvements to ensure compatibility and sensitivity with the social, economic, and ecological environments.	a) Preserve agricultural areas, parks, and forested areas by minimizing transportation-related impacts. b) Incorporate appropriate design features into infrastructure investments to increase the resiliency and reliability of the transportation.	a) Minimize impacts on environmentally sensitive areas within the region. b) Identify opportunities to reduce or mitigate stormwater impacts as part of regional transportation improvements. c) Support projects that benefit Environmental Justice areas.	a) Complete environmental mitigation analysis as part of LRTP updates. b) Complete environment justice analysis as part of LRTP updates; consider impacts/benefits when programming projects in the TIP.	• Support initiatives that expand transportation options that are affordable, reliable, and improve quality of life through greater access to education and new job opportunities. • Preserve adequate rights-of-way for future transportation facilities, including the Beltway corridor, through appropriate land use regulations and other legislative action(s). • Review potential transportation improvements for consistency with the Macon County-Decatur Comprehensive Plan to promote a strong relationship between land use development and transportation improvements. • Apply transportation standards that are consistent with USDOT and IDOT design guidelines that incorporate context sensitive solutions where appropriate.

TRANSPORTATION PERFORMANCE MANAGEMENT

With the passage of the Moving Ahead for Progress in the 21st Century Act (MAP-21), and continuing as part of the FAST Act, Congress established Transportation Performance Management (TPM). Federal Highway Administration (FHWA) defines TPM as a strategic approach that uses system information to make investment and policy decisions to achieve national performance goals.

Another requirement is Performance Based Planning and Programming (PBPP), which impacts the development of the 2045 LRTP, as well as being incorporated into the Transportation Improvement Program (TIP) process. PBPP refers to the application of performance management principles within the planning and programming processes of transportation agencies to achieve desired performance outcomes for the multimodal transportation system.

Transportation performance measures and targets describe how well the transportation system is functioning in quantitative terms. The data is used to set future targets for system performance based on calculated values and recent trends. States and Metropolitan Planning Organizations (MPOs) are required to incorporate FHWA and Federal Transit Administration (FTA) performance measures and targets into their planning practices. MPOs have the option of supporting statewide targets or setting their own, along with assuming the responsibility of achieving them. DUATS has chosen to support IDOT-established targets.

Federal Highway Performance Goals

According to FHWA, TPM represents the opportunity to prioritize needs and align resources to optimize system performance in a collaborative manner. The national Federal highway program performance goals as established by Congress are summarized in **Table 2-3**.

Table 2-3: Federal Highway Performance 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 & Economic Vitality	•To improve the national freight highway network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.
Environmental Sustainability	•To enhance the performance of the transportation system while protecting and enhancing the natural environment.
Reduced Project Delivery Delays	•To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices.

SOURCE: Federal-Aid Program [23USC §150(b)]

DUATS PERFORMANCE MEASURES

The following outlines DUATS' progress toward addressing the established TPM measures. The section also discusses opportunities that could move the DUATS region closer toward achieving the established targets.

Safety

DUATS and its partner agencies place a high priority on providing a safe transportation system for the traveling public. This is consistent with IDOT's *Highway Safety Improvement Program* (HSIP), which states, "Our goal is to reduce the number of deaths and serious injuries due to crashes in the state of Illinois." In establishing the 2045 LRTP goals, the DUATS Technical and Policy committees reaffirmed safety as a top priority and National safety performance measures further reinforce the importance of prioritizing safety for the traveling public. The five safety performance measures that are required include:

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

Every August, IDOT establishes their highway safety targets as part of the HSIP that must be submitted to FHWA. As mentioned above, DUATS has elected to adopt the statewide targets. As reference, Table 2-4 summarizes the statewide safety performance targets established by IDOT using a five-year rolling average.[1] The current targets are for the 2014 to 2018 timeframe, the 2015 to 2019 timeframe reflects desired values if the current performance targets are met.

Table 2-4: Statewide Safety Performance Targets

	Rolling 5-Year Average			
	2012 to 2016	2013 to 2017	2014 to 2018	2015 to 2019 *
Number of Fatalities	989.4	1,017.80	997.4	977.5
Fatality Rate per 100 Million VMT	0.94	0.96	0.94	0.92
Number of Serious Injuries	12168.6	12,210.90	11,966.70	11727.4
Serious Injury Rate per 100 Million VMT	11.7	11.5	11.3	11
Number of Non-Motorized Fatalities and Serious Injuries	1,499.40	1,490.70	1,460.90	1,431.70

* The 2019 target is the desired value of the 2015-2019 rolling average for each of the measures.

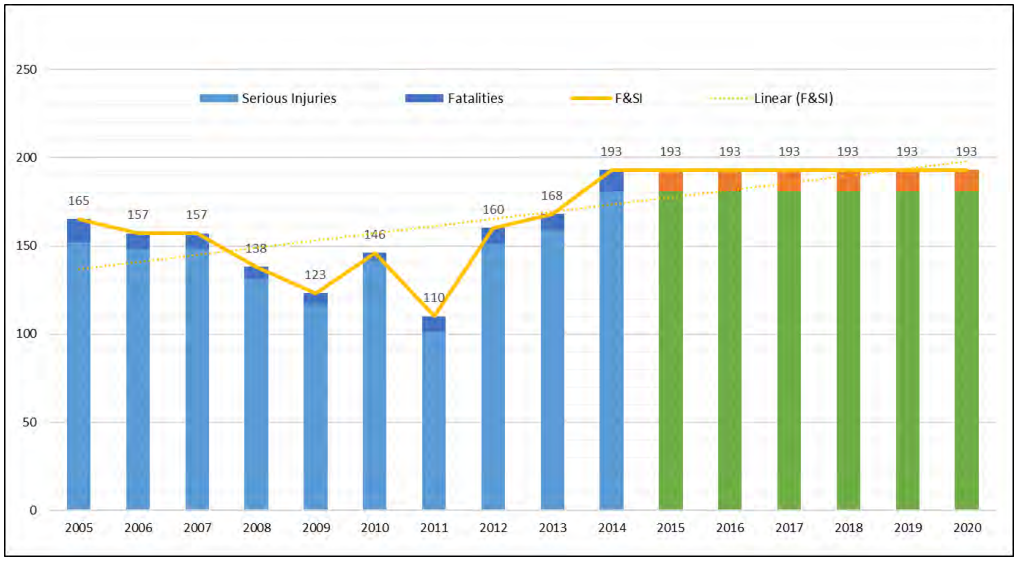
Figure 2-1 displays the original DUATS targets for serious injuries and fatalities. In this figure, years 2015 to 2020 (green and orange bars) were projected using the historical crash rate per 100 million annual vehicle miles of travel (according to IDOT notes, AVMT data for 2013 and before was estimated using 2014 and 2015 values).

[1] Due to numerous factors, traffic crash related injuries and fatalities vary from year to year and as such a five-year rolling average is used to smooth the data.

While Figure 2-1 displays the projected number of crashes and injuries between 2015 and 2020 based on the assumption that historical crash rates will continue to apply over that period of time, Figure 2-2 reflects the number of serious injuries and fatalities that actually occurred, using updated crash statistics through 2017. The 2018, 2019, and 2020 targets (green/orange bars) represent the desired value (-2 percent annual reduction) of the five-year rolling average for each of the measures. Approximately 89 percent of fatalities and 87 percent of serious injuries within Macon County were identified to have occurred within the DUATS MPA boundary (based on a six-year average between 2009 and 2014 assuming the historical spatial distribution of crashes remains the same).

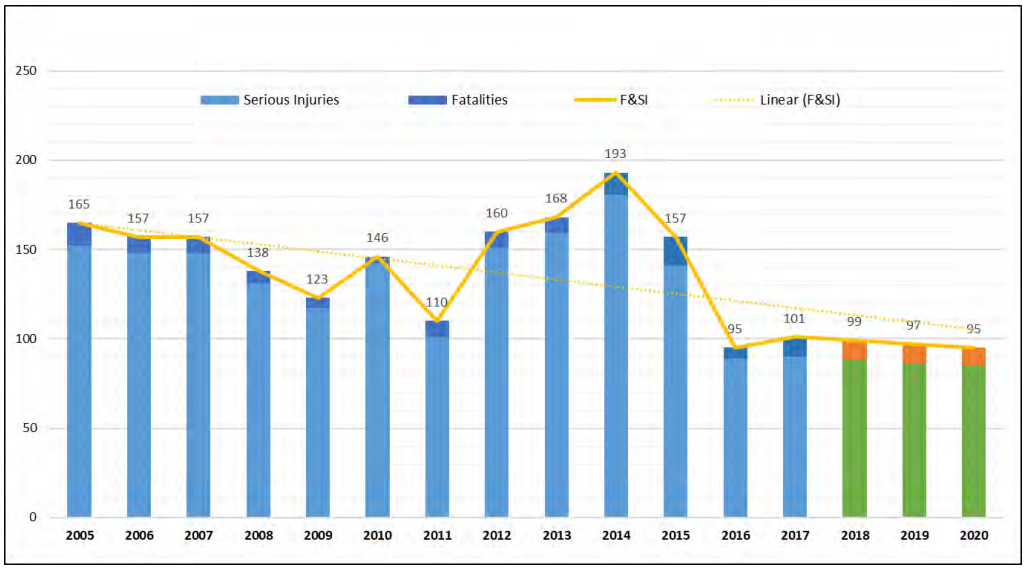
Years 2015 through 2017—and years 2016 and 2017 in particular—saw significant declines in the number of serious injuries and fatalities within the DUATS MPA. This decline reversed what was a spike in serious injuries and fatalities between 2012 and 2014. This rather sharp drop in serious injuries and fatalities in 2016 and 2017 also helped reverse the trendline which now projects a gradual decline through year 2020.

Figure 2-1: DUATS Original Serious Injury and Fatality Targets



SOURCE: IDOT Crash Data.

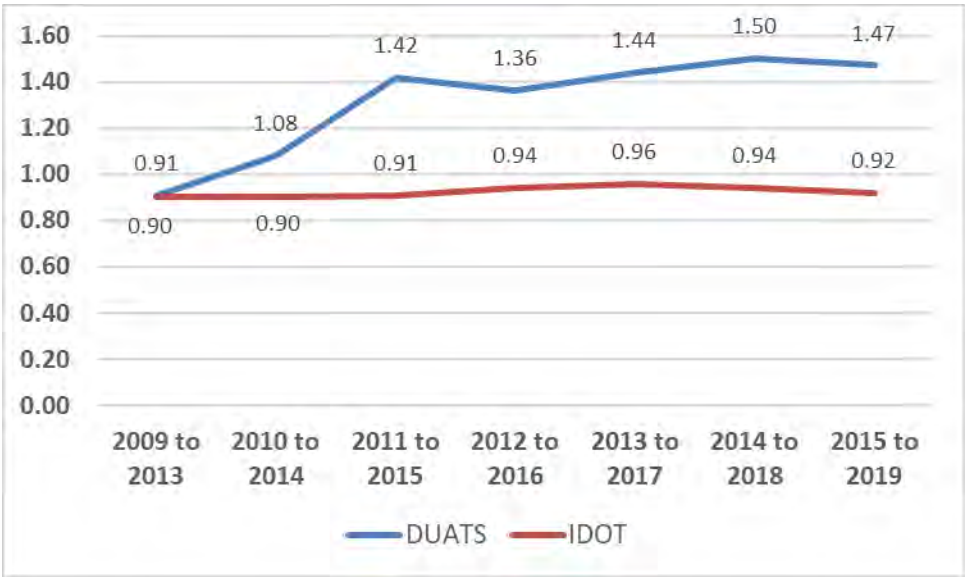
Figure 2-2: DUATS Serious Injury and Fatality Targets (updated with 2015 – 2017 data)



SOURCE: IDOT Crash Data.

Figure 2-3 compares the DUATS five-year rolling average for fatality rates to the Illinois statewide rates. As this figure shows, in 2013 (based on the 2009 to 2013 five-year rolling average) the DUATS fatality rate per 100 vehicle miles of travel was essentially the same as the statewide rate. Since 2014, the DUATS rate has steadily increased, causing the DUATS rate to exceed the statewide average. Much of this increase is due in large part to a number of years that saw high fatalities, including 2016 in which there were 18 fatalities in Macon County.

Figure 2-3: Fatality Rate (per 100 Million VMT; 5-Year Rolling Average)

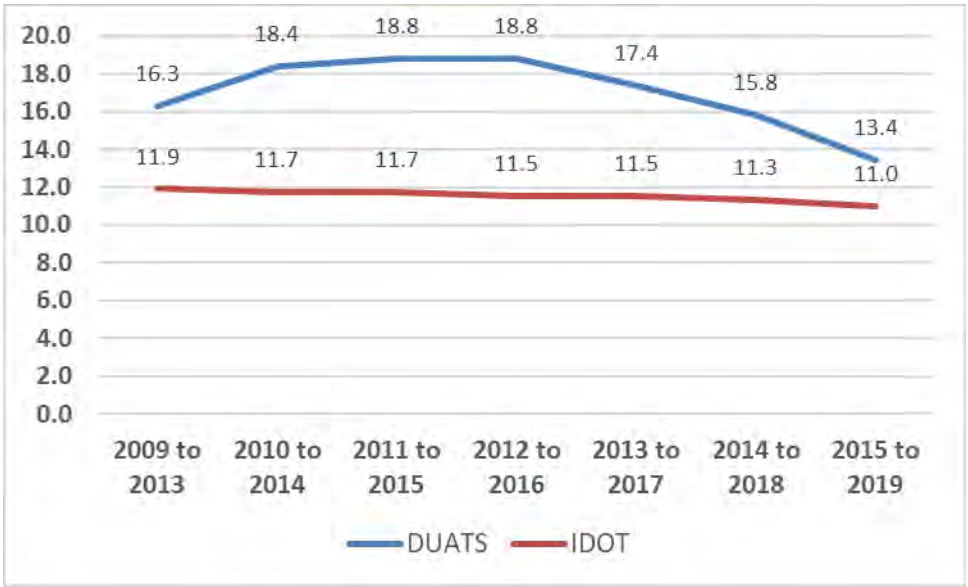


SOURCE: IDOT Crash Data.

Figure 2-4 compares the DUATS five-year rolling average for serious injury rates to the statewide rates. This figure shows an opposite trend compared to fatalities in that in 2013 (based on the

2009 to 2013 five-year rolling average) the DUATS serious injury rate per 100 million vehicle miles of travel was higher than the statewide rate. In 2015 and 2016 the DUATS rate peaked at 18.8 per 100 vehicle miles of travel but starting in 2017 the rate started to decline. Should this trend continue DUATS could see a serious injury crash rate more consistent with the statewide rates in the next few years.

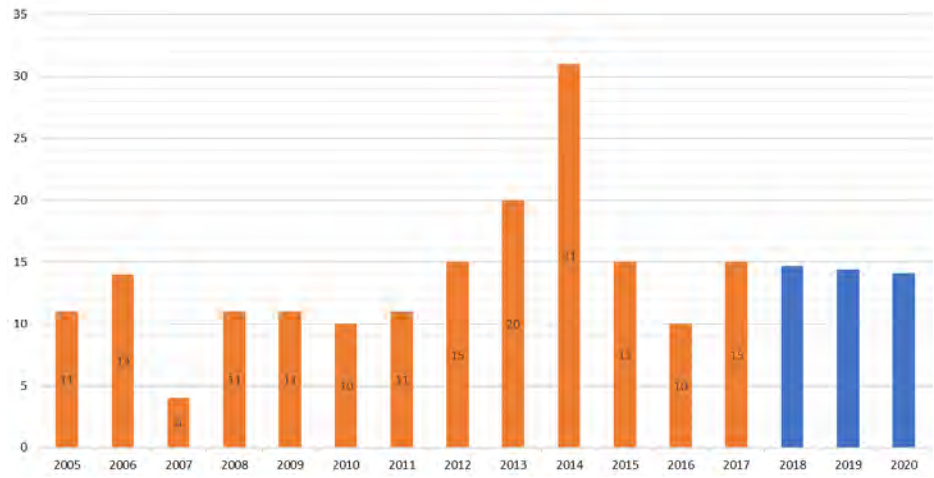
Figure 2-4: Serious Injury Rate (per 100 Million VMT; 5-Year Rolling Average)



SOURCE: IDOT Crash Data.

Figure 2-5 displays the total number of non-motorized serious injuries and fatalities within the DUATS MPA dating back to 2005. With the exception of 2013 and 2014, the combined total of non-motorized crashes that resulted in a serious injury or fatality has remained below 20. The blue columns in the figure reflect an anticipated decline in non-motorized crashes through the year 2020 (2018 and 2019 data not available at the time of this update).

Figure 2-5: Non-Motorized Serious Injuries and Fatalities



SOURCE: IDOT Crash Data.

Progress/Opportunities Toward Reaching Safety Targets

DUATS places a high priority on programming projects that will enhance safety for the traveling public in an effort to reduce fatalities and serious injuries. The current DUATS TIP for fiscal year (FY) 2020-2023 identifies projects that are programmed to address safety concerns and as previously mentioned the 2045 LRTP again prioritizes safety.

Generally speaking, the data shows an improvement in that the number of serious injuries and fatalities appears to be declining since 2014. Additionally, the most recent crash data for serious injuries and fatalities is below the previous low observed in 2011. As for the DUATS fatality rate, this performance measure has consistently been higher than the statewide average. For the most part this has also been true with the serious injuries rate; however, recent serious injury rates are starting to decline.

It appears that DUATS should continue to focus efforts to reduce fatalities and serious injuries. While there is no direct correlation, better accommodating truck traffic in the region and eliminating major at-grade rail crossing delays could help improve overall traffic operations that in turn would have safety benefits for the traveling public. Additionally, conducting a detailed review of intersections with the highest crash exposure could also potentially help improve overall safety by reducing serious injuries and fatalities. The top 20 intersection crash locations are identified in chapter 4.

Pavement and Bridges

A second performance measure that State DOTs carry out as part of the National Highway Performance Program (NHPP) is to assess the condition of pavements on the non-Interstate National Highway System (NHS); pavements on the Interstate System; and bridges carrying the NHS. The final rule addresses the following six measures:

- percentage of pavements on the Interstate System in Good condition
- percentage of pavements on the Interstate System in Poor condition
- percentage of pavements on the NHS (excluding the Interstate System) in Good condition
- percentage of pavements on the NHS (excluding the Interstate System) in Poor condition
- percentage of NHS bridges in Good condition
- percentage of NHS bridges in Poor condition

Table 2-5 summarizes the statewide pavement targets and Table 2-6 summarizes the statewide bridge targets (both established by IDOT). DUATS has adopted these statewide targets.

Table 2-5: IDOT Pavement Performance Targets

Performance Measure	2017 Baseline	2020 Target	2022 Target
Percentage of Interstate Pavements in Good Condition	--	--	65.0%
Percentage of Interstate Pavements in Poor Condition	--	--	<4.9%
Percentage of non-Interstate NHS Pavements in Good Condition	37.6%	27.0%	27.0%
Percentage of non-Interstate NHS Pavements in Poor Condition	19.4%	6.0%	6.0%

Source: IDOT Performance Measures Report, March 2019.

Table 2-6: IDOT Bridge Performance Targets

Performance Measure	2017 Baseline	2019 Target	2021 Target
Percentage of NHS Bridges in Good Condition	29.4%	28.0%	27.0%
Percentage of NHS Bridges in Poor Condition	11.6%	13.0%	14.0%

Source: IDOT Performance Measures Report, March 2019.

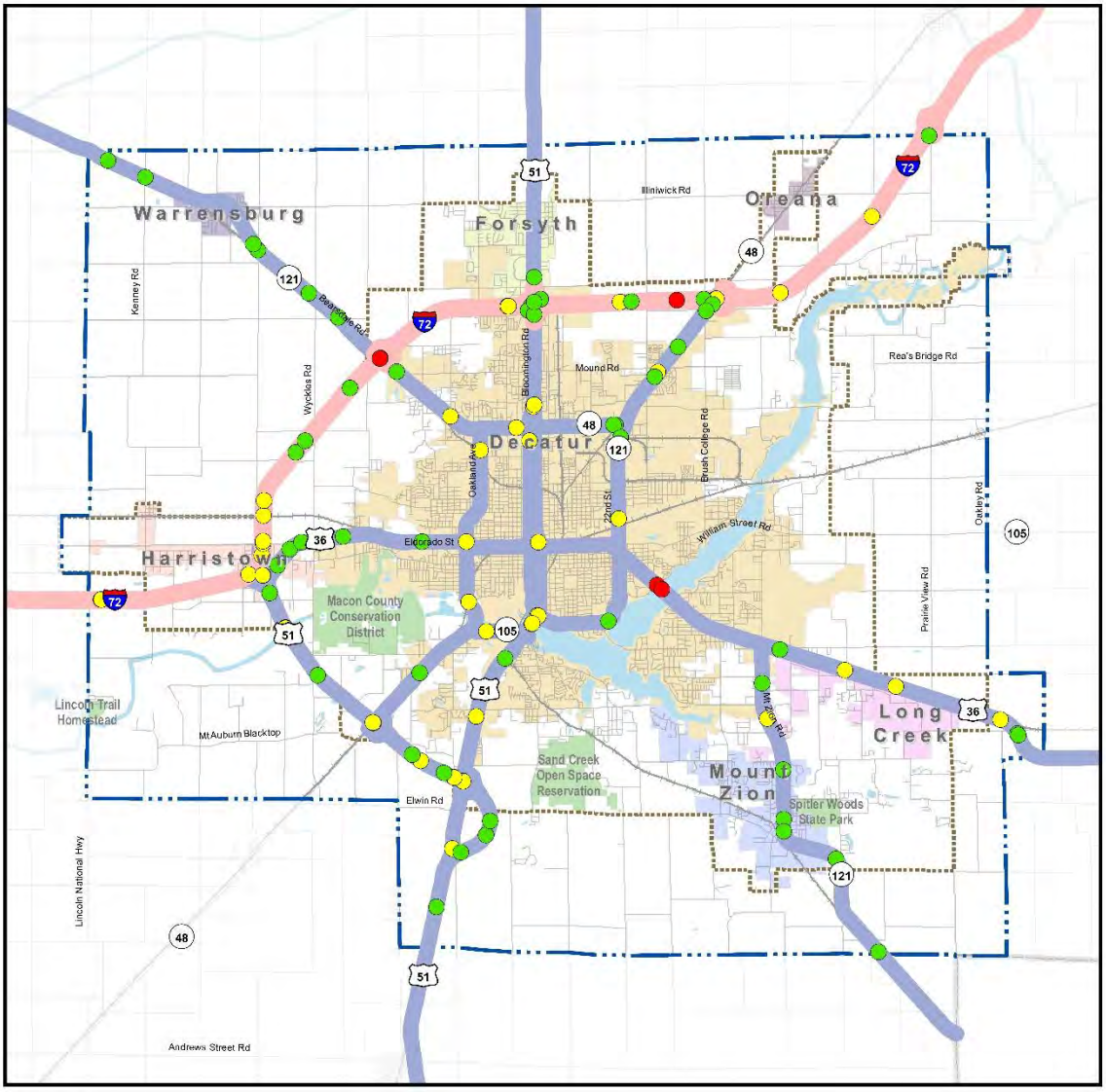
For the 2045 LRTP, DUATS reviewed IDOT pavement condition data for the NHS interstate and NHS non-interstate road segments to identify the percentage in "good" and "poor" condition. Based on the most recent data, 44.5 percent of the interstate pavement within the DUATS MPA is classified in "good" condition and 1.6 percent in "poor" condition. Comparing this to the 2022 targets in Table 2-4, the DUATS MPA is not on track to meet the 65 percent "good" target; however, the DUATS MPA does currently meet the less than 4.9 percent "poor" threshold target. The majority of interstate pavement within the DUATS MPA is rated "fair" which if left as is could result in additional roadway segments declining to "poor" condition.

Currently, 25.7 percent of the NHS non-interstate pavement within the DUATS MPA is classified in "good" condition and 15.3 percent in "poor" condition. In comparing this to the 2020 targets in Table 2-4, the DUATS MPA is nearly on par with the statewide target of 27 percent for "good" pavement. The 15.3 percent "poor" condition total is currently more than twice the statewide target of 6 percent. Additional investment to improve the NHS non-interstate pavement condition will be needed in order for the DUATS MPA to reach the desired NHS non-interstate targets.

Regarding bridge condition, there were 110 bridges identified as being located on the NHS within the DUATS MPA. The target for bridges in "good" condition is 29.4 percent and the DUATS MPA currently has 49.1 percent (54) of bridges classified as "good." The target for "poor" condition is 11.6 percent and the DUATS MPA currently has 4.5 percent (5) bridges classified as "poor." Based on this most recent data, the DUATS MPA is exceeds the bridge condition performance targets. Figure 2-6 displays the NHS bridge condition ratings within the DUATS MPA.

While NHS bridge conditions meet the performance targets, pavement conditions are a significant issue for the region. This is supported by the 2045 LRTP public survey that found that 93 percent of respondents indicated they are either very dissatisfied (67 percent) or dissatisfied (27 percent) with current condition of roadways within the DUATS MPA. Both in the open response and multiple-choice sections of the survey, respondents consistently reported that the road conditions need to be a priority (over 60 percent of responses mentioned road conditions as the most important transportation issue that should be addressed in the LRTP). Open responses cite specific problematic roadways and major routes were particular concerns. For example, many participants mentioned US-51 and US-36 as roads that are in very poor condition.

Figure 2-6: NHS Bridge Ratings



Travel Time Reliability and Freight Reliability

State DOTs and MPOs will use travel time reliability and freight reliability measures to report on the following characteristics within their jurisdiction:

- the performance of the Interstate and non-Interstate NHS to carry out the NHPP;
- freight movement on the Interstate system; and
- traffic congestion and on-road mobile source emissions for the purpose of carrying out the Congestion Mitigation and Air Quality Improvement (CMAQ) Program.

This System Performance/Freight/CMAQ Performance Measures final rule includes six measures:

- Interstate Travel Time Reliability Measure: Percent of Person-Miles Traveled on the Interstate that are Reliable
- Non-Interstate Travel Time Reliability Measure: Percent of Person-Miles Traveled on the Non-Interstate NHS that are Reliable
- Freight Reliability Measure: Truck Travel Time Reliability Index
- Peak Hour Excessive Delay (PHED) Measure: Annual Hours of PHED Per Capita
- Non-Single Occupancy Vehicle (non-SOV) Travel: Percent of non-SOV Travel
- On-Road Mobile Emissions: Total Emissions Reduction

The CMAQ measures do not apply to the DUATS region, so the final 3 bullet points—PHED, Non-SOV and on-road mobile emissions targets—are not addressed. Table 2-7 summarizes the system reliability targets established by IDOT.

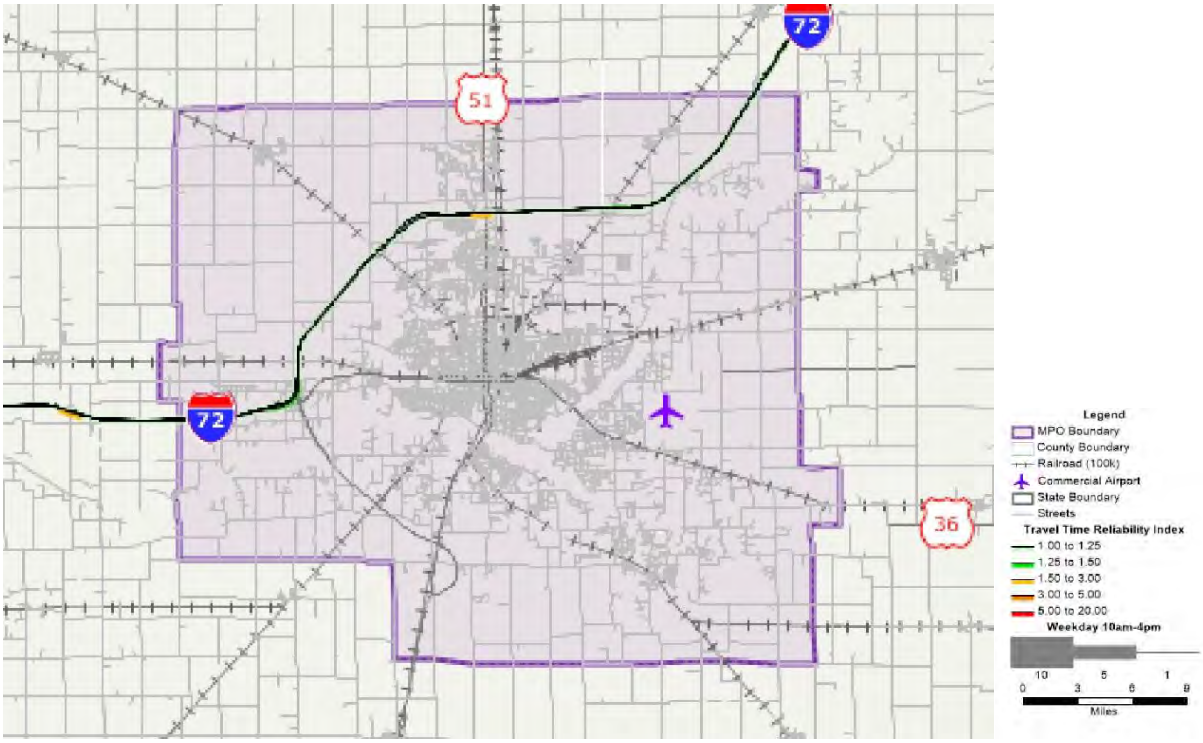
Table 2-7: IDOT System Reliability Performance Targets

Performance Measure	2017 Baseline	2020 Target	2024 Target
Percent of Reliable Person-Miles Traveled on the Interstate	80.8%	79.0%	77.0%
Percent of Reliable Person-Miles Traveled on the Non-Interstate NHS	87.3%	N/A	83.3%
Truck Travel Time Reliability Index	1.3	1.34	1.37

Source: IDOT Performance Measures Report, March 2019.

DUATS has adopted the established statewide targets as set forth in Table 2-7 and will evaluate progress toward meeting the target when data is available in 2020. In the meantime, Figure 2-7 displays a recent snapshot of truck travel time reliability index from August 2019. As this figure shows, the interstate system through the DUATS region provides a high level of reliability as indicated by a rating near 1.00. The one area that shows a slightly higher index is near the US-51 interchange; however, this index value is still within an acceptable range. Furthermore, given the relatively low traffic volumes on I-72, as compared to typical interstate facilities, it is not anticipated that travel time reliability will be an issue within the DUATS MPA.

Figure 2-7: Truck Travel Time Index



Transit Asset Management

The National Transit Asset Management System Final Rule (49 U.S.C. 625) requires all agencies that receive federal financial assistance under 49 U.S.C. Chapter 53 and own, operate, or manage capital assets used in the provision of public transportation to create a Transit Asset Management (TAM) Plan. Agencies can meet this requirement either through an Individual or Group TAM Plan. Group TAM Plans are meant to collect TAM information about groups (smaller subrecipients of 5311 or 5310 grant programs) that do not have a direct financial relationship with FTA. The Decatur Public Transportation System (DPTS) is considered a tier II provider (does not operate rail and 100 or fewer vehicles in peak revenue service) and as such is part of the group TAM plan produced by IDOT. Table 2-8 displays the IDOT TAM targets. 2020 and 2022 targets are yet to be determined.

Table 2-8: IDOT Transportation Asset Management Targets

Performance Measure	2019 Baseline	2020 Target	2022 Target
Equipment – State of Good Repair (% of non-revenue service that exceed the useful life benchmark)	50%	TBD	TBD
Facilities – State of Good Repair (% of facilities rated less than 3.0 on the Transit Economic Requirements Model scale)	16%	TBD	TBD
Rolling Stock – State of Good Repair (% of revenue service vehicle that exceed useful life benchmark)	48%	TBD	TBD

Source: IDOT Performance Measures Report, March 2019.

The FTA has determined that, at a minimum, facilities should be rated 3.0 ("adequate condition") on the Transit Economic Requirements Model (TERM) scale. An assessment of DUATS assets was completed as part of the TAM Plan, finding no facilities rated at less than 3.0. Information on DPTS current vehicle fleet is summarized in Chapter 4.

Conclusion

The PBPP process is still relatively new in terms of implementation and monitoring, and as such the 2045 LRTP provides a high-level assessment of progress toward addressing the federally mandated transportation performance measures. The most current data suggests that the biggest concern for DUATS is reaching the NHS pavement condition targets (both "good" and "poor") for non-interstate facilities. As such, the 2045 LRTP show prioritize efforts to improve pavement condition ratings in the short-term. Furthermore, the 2045 LRTP goals are consistent in supporting the PBPP process and moving the region and IDOT toward meeting established performance targets.

2045 Long Range Transportation Plan
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Chapter 3
EXISTING DEMOGRAPHICS

This chapter outlines the current demographics of the Decatur Region. It includes an overview of population, employment, education, *and* peer city comparison.

POPULATION

According to U.S. Census data, the 2015 population of Macon County was 109,193, which is approximately 1,500 fewer people than in 2010 and 5,500 fewer than in the year 2000. Since 1980, the overall population trend in Macon County has been steadily declining; from 1980 to 2015, the population dropped by about 17 percent which equals approximately 22,200 fewer people. The vast majority of Macon County residents live in the MPA, which is estimated at approximately 107,200 residents in 2015, or 98 percent of the county population.

However, not all parts of the MPA are declining in population as observed by growth in Forsyth and Mt. Zion. Forsyth has increased from just over 1,000 residents in 1980 to nearly 3,500 residents in 2015. Mt. Zion has added nearly 1,600 residents since 1980 to reach over 6,100 residents in 2015. Table 3-1, and Figure 3-1 and Figure 3-2, summarize the historic population for the incorporated areas within the MPA, as well as the total population for Macon County. Figure 3-3 and Figure 3-4 display the respective 2015 population and population density in the MPA.

Table 3-1: Historic Population, for Macon County and MPA Communities (1980 – 2015)

Community	1980	1990	2000	2010	2015	% Change (1980–2015)	% Change (2010–2015)
Decatur	94,081	83,885	81,860	76,122	74,654	-21%	-2%
Forsyth	1,072	1,275	2,434	3,490	3,493	226%	0%
Harristown	1,456	1,379	1,338	1,367	1,330	-9%	-3%
Long Creek	N / A	1,250	1,364	1,328	1,528	22%*	15%
Mt. Zion	4,563	4,522	4,845	5,833	6,118	34%	5%
Oreana	999	N / A	892	875	885	-11%	1%
Warrensburg	1,372	1,274	1,289	1,210	1,217	-11%	1%
Macon County	131,375	117,206	114,706	110,768	109,193	-17%	-1%

* Percent change for Long Creek is for 1990 to 2015.

Figure 3-1: Macon County and Decatur Population

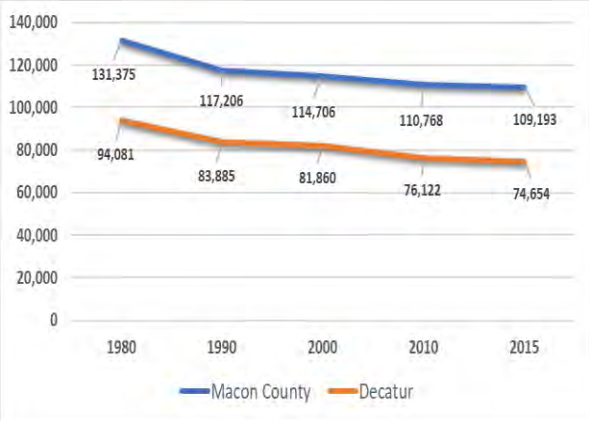
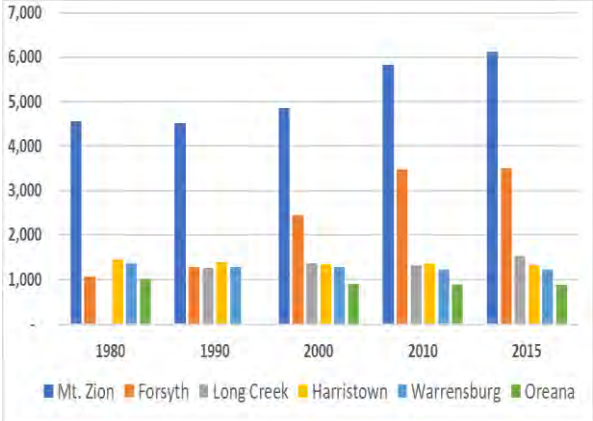
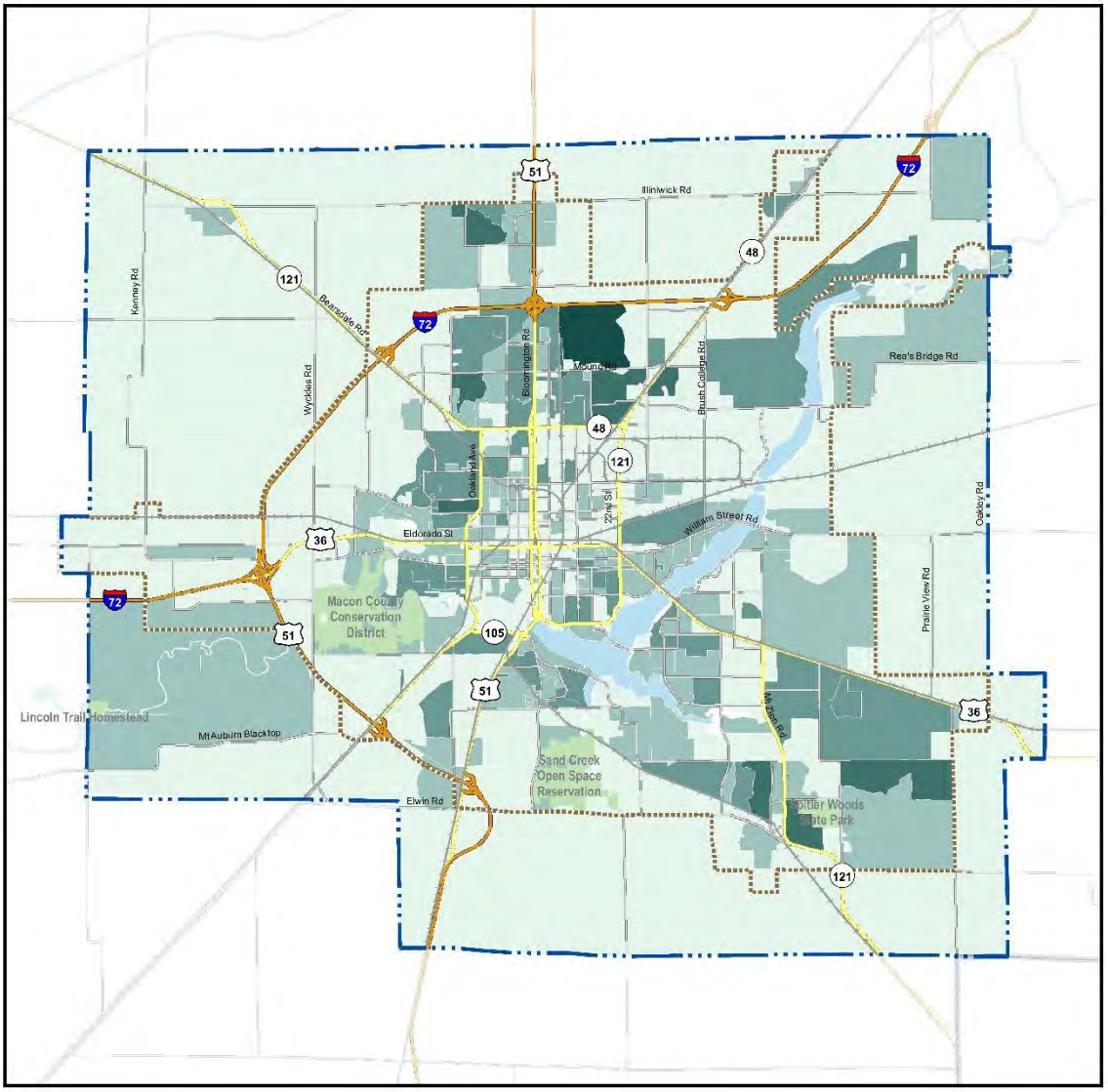


Figure 3-2: Community Population



Source: US Census Bureau, Census of Population and Housing 1980, 1990, 2000, and 2010, American Community Survey 5-year estimates 2015. (2019)

Figure 3-3: 2015 Population



Legend

- 20-Year MPA Boundary
- DUATS Urbanized Boundary
- Railroad
- Interstate
- Principal Arterial

2015 Population

- Less than 200
- 201 to 500
- 501 to 1,000
- 1,001 to1,500
- Greater than 1,500

2.5
Miles

Data Sources: Illinois DNR, IDOT, US Census, Macon Co, DUATS
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2045 Long Range Transportation Plan
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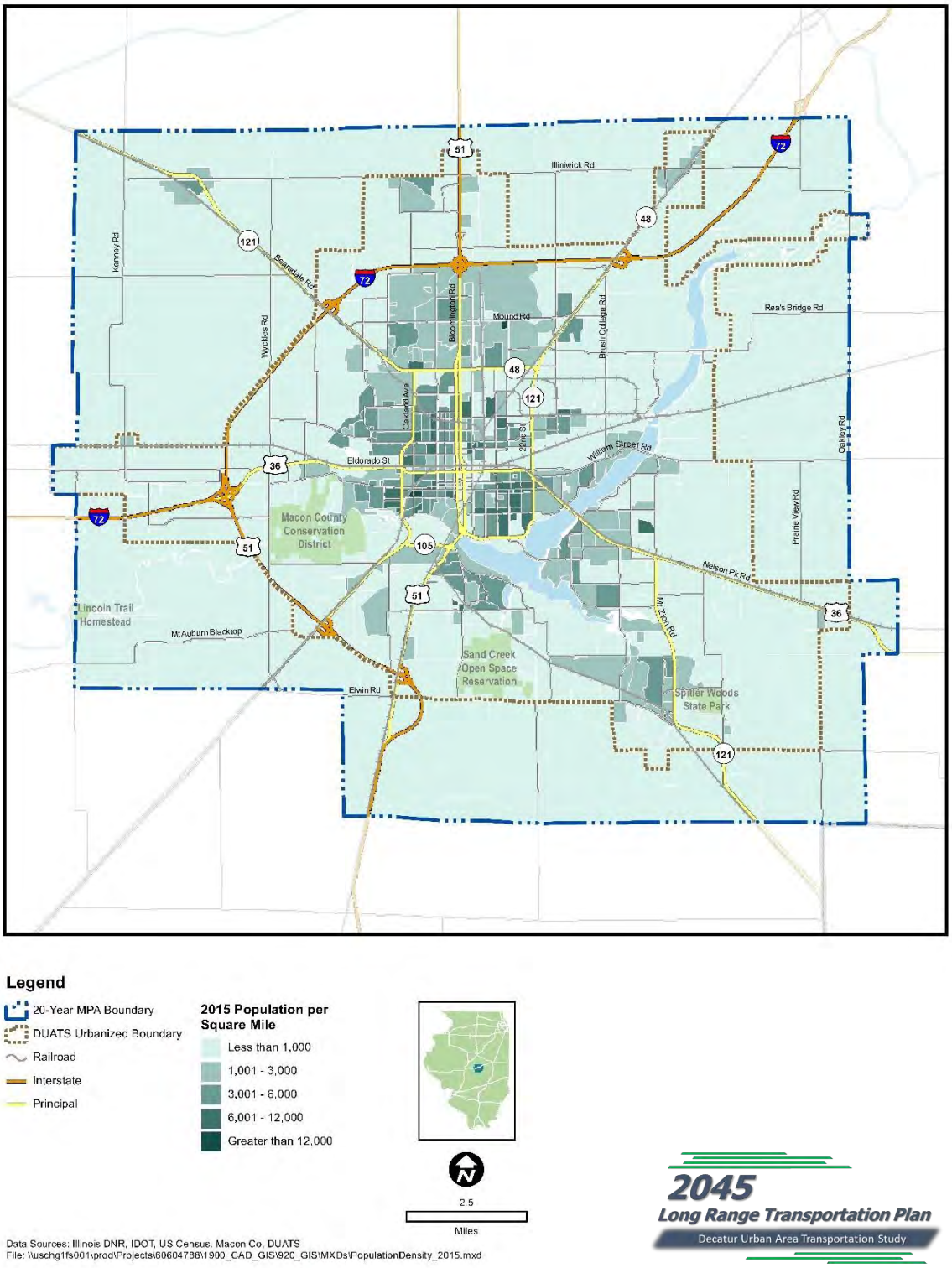
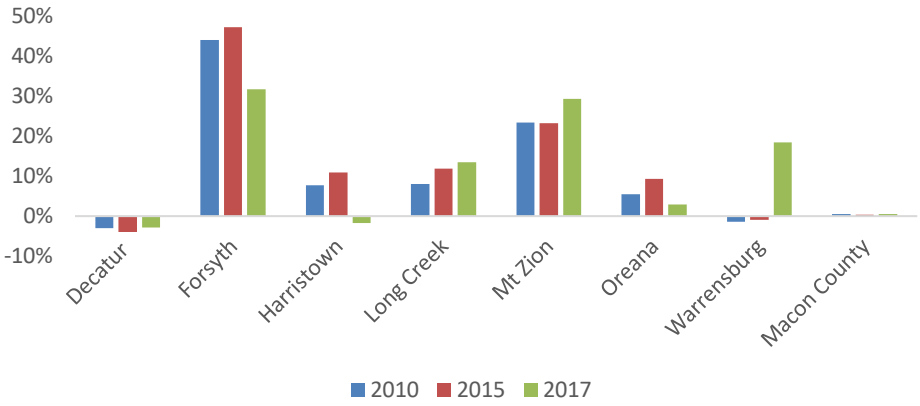
Figure 3-4: 2015 Population Density



Since 2000, the MPA has experienced a small increase in housing while simultaneously losing population. The increase in housing and loss of population have been unevenly distributed in the MPA. Since 2000, population and housing units increased in Hickory Point, Oakley, and Mt. Zion Townships. Population decreased, but housing units increased in Harristown, Whitmore, Long Creek and South Wheatland townships. The Villages of Forsyth and Mt. Zion experienced the largest percentage increases in population and housing while the City of Decatur has lost population and housing units. Figure 3-5 displays the percent change in housing units by community.

Figure 3-5: Housing Units (percentage change compared to 2000)



Source: U.S. Census 2000, 2010; ACS 2015, 2017.

Recent development trends continue toward the urban fringes, which pulls the housing market and associated commercial development further from older core neighborhoods. This trend leaves certain areas with transportation and infrastructure that is underutilized, while requiring large investments in the construction and installation of new utility and infrastructure to service new development.

In terms of the demographic makeup, Macon County is generally older and less racially diverse when compared to nationwide averages. There are 19,177 millennials (ages 20-34) in the County, which is below the national average for an area this size. Retirement risk is also high, with 35,664 people 55 or older. There are 25,032 people identified as racial or ethnic minorities in the area, whereas the national average for an area this size is over 40,000. Figure 3-6 summarizes the demographic benchmarks.

Figure 3-6: Demographic Benchmarks

Source: Emsi (2019), based on Census ACS Data.

EMPLOYMENT

The *Decatur Supply Chain Network Planning and Optimization Study* estimated to have a total of approximately 64,500 jobs in 2018 for Macon County. Employment locations are somewhat scattered throughout the MPA, but generally fall within the urbanized area. High numbers of employment locations are found along major roadways including:

- The ADM, Caterpillar, and Tate & Lyle facilities in the eastern part of Decatur (featuring the largest volumes of employment among these areas);
- Eldorado Street and Franklin/Main and Water Streets (US-36 and US-51, respectively);
- The intersections of Water Street and Pershing Road;
- The Hickory Point Mall;
- The area near US-51 and IL-105; and
- A large area of land south of Camp Warren Road and east of Mt. Zion Road in the far southeast corner of the MPA.

Figure 3-7 displays the distribution of employment throughout the MPA, while Figure 3-8 shows employment density per square mile. The employment on the map represents year 2015 data which has been allocated to the traffic analysis zones. Downtown Decatur and the surrounding area feature the highest concentration of jobs, as well as the ADM and Caterpillar facilities and commercial businesses along Pershing Road / IL-48.

Figure 3-7: 2015 Employment

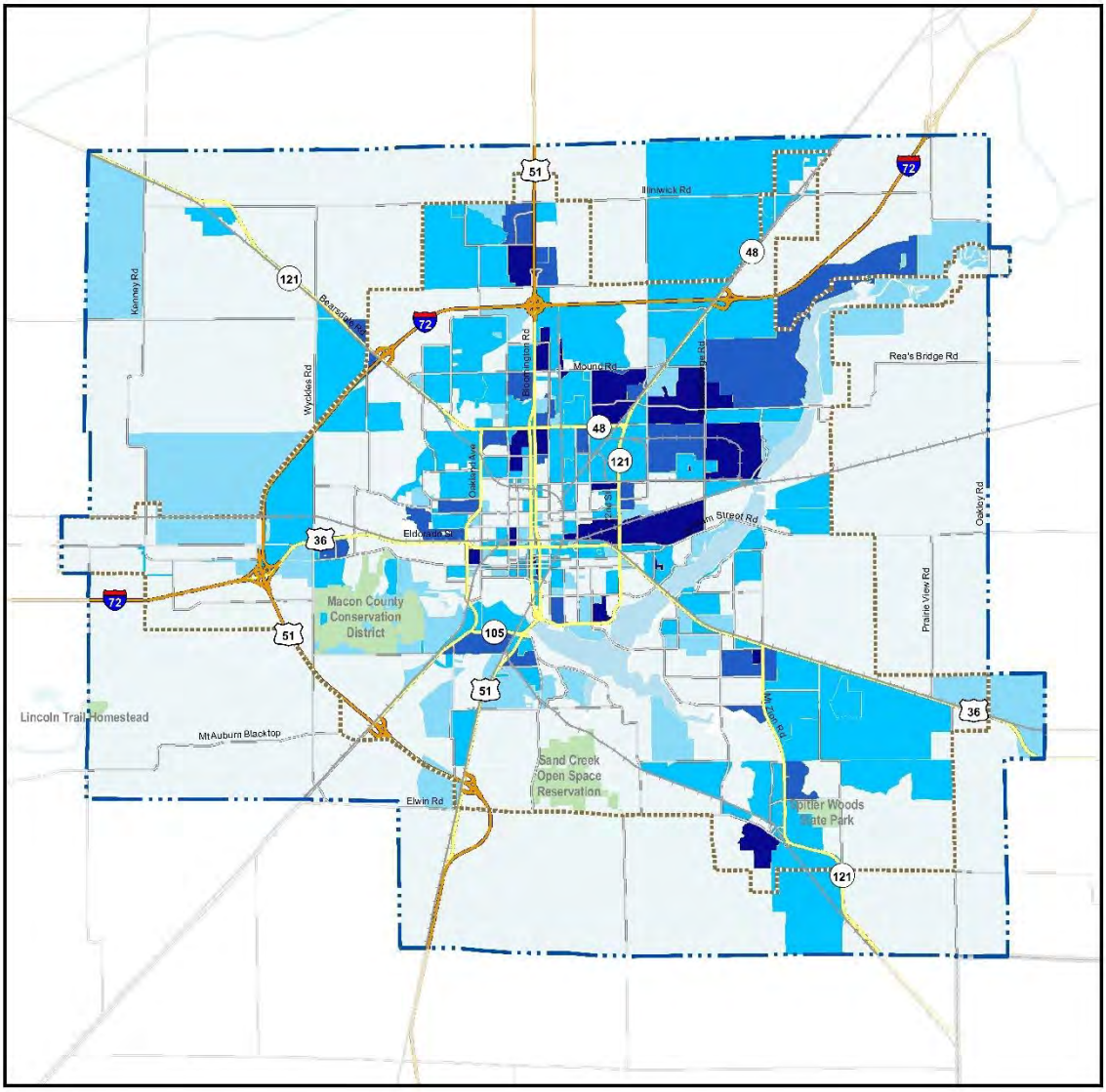
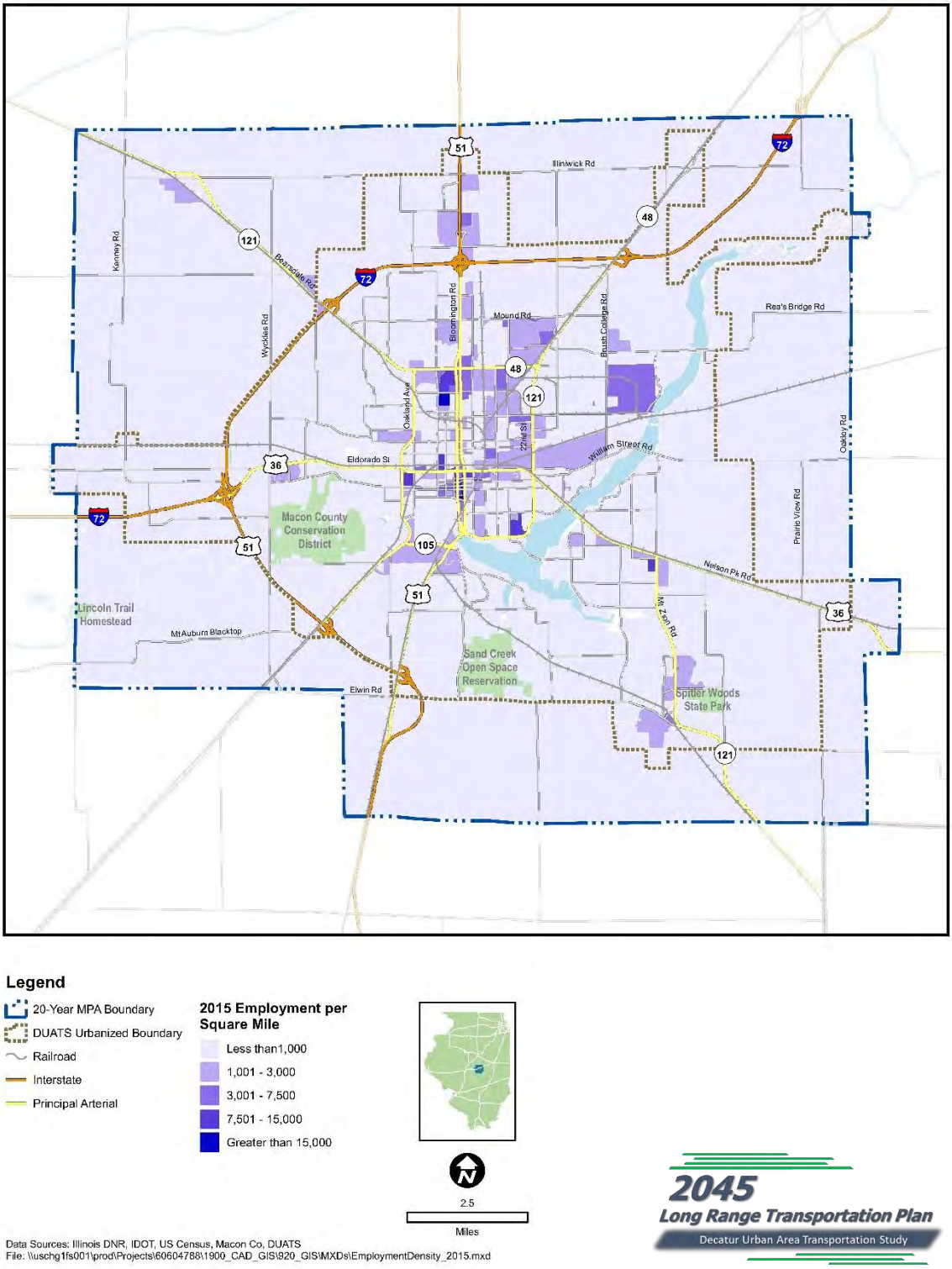


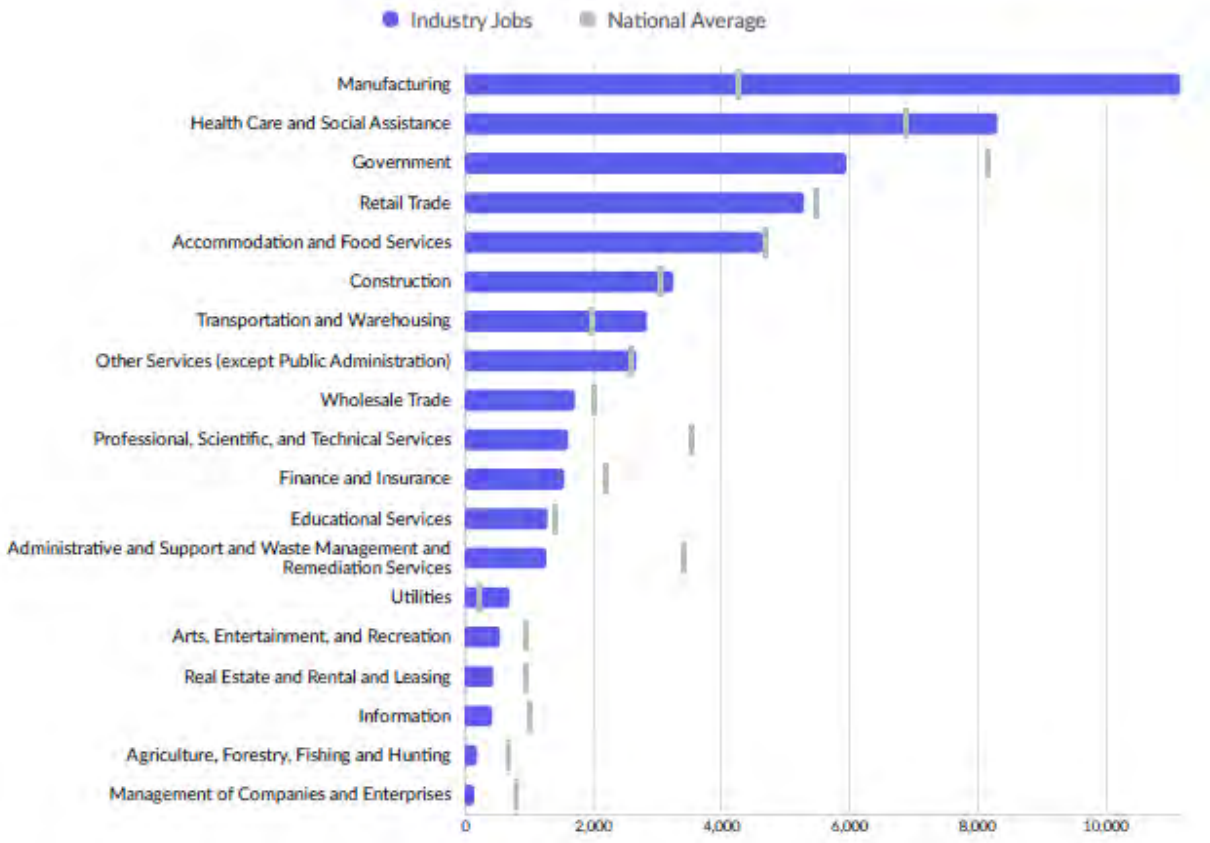
Figure 3-8: Employment Density



According to Quarterly Census of Employment and Wages data, as reported by Emsi, jobs in the Decatur MSA (i.e., Macon County) increased by 2 percent from 2013 to 2018, but this growth fell well short of national trends (8 percent over the same period). The top three industries in 2018 are Grain and Oilseed Milling, Restaurants and Other Eating Places, and General Medical and Surgical Hospitals. The largest supersectors (2-digit NAICS) are Manufacturing, Health Care and Social Assistance, Government, Retail Trade, and Accommodation and Food Services. As can be seen in Figure 3-9, there are far more workers in manufacturing in Macon County than would be expected based on nationwide averages—more than twice as many. There are also more health care and social workers than nationally. By comparison, there are far fewer government workers and slightly fewer retail trade workers than would normally be expected based on the national average.

The fastest growing industries are Manufacturing and Health Care and Social Assistance, by a wide margin. Manufacturing is by far the largest contributor ($2.4 billion) to the gross regional product and has the third highest earnings per worker (behind only Management of Companies and Utilities). The fastest growing occupations are Healthcare Practitioners and Transportation and Material Moving Workers (Emsi 2019).

Figure 3-9: Largest Industries (Macon County and Nationwide Average)



Source: Emsi (2019)

In terms of industry diversity, it is comparatively low in the Decatur MSA, meaning that employment is distributed less evenly between the 12 industry clusters compared to the typical MSA. A region with high diversity can signal economic stability and more easily withstand economic pressures, while a region with low diversity can signal potential economic instability, should a shock occur in one of its industry concentrations. Figure 3-10 illustrates the industry diversity in the MSA—the purple bars show how the Decatur MSA has far more concentration in capital-intensive manufacturing, engineering-intensive manufacturing, and healthcare than a typical MSA. Correspondingly, there is less diversification into other industries such as knowledge-intensive business services; finance, insurance, and real estate; media, entertainment, and recreation; etc.

Figure 3-10: Industry Diversity

Source: Emsi (2019)

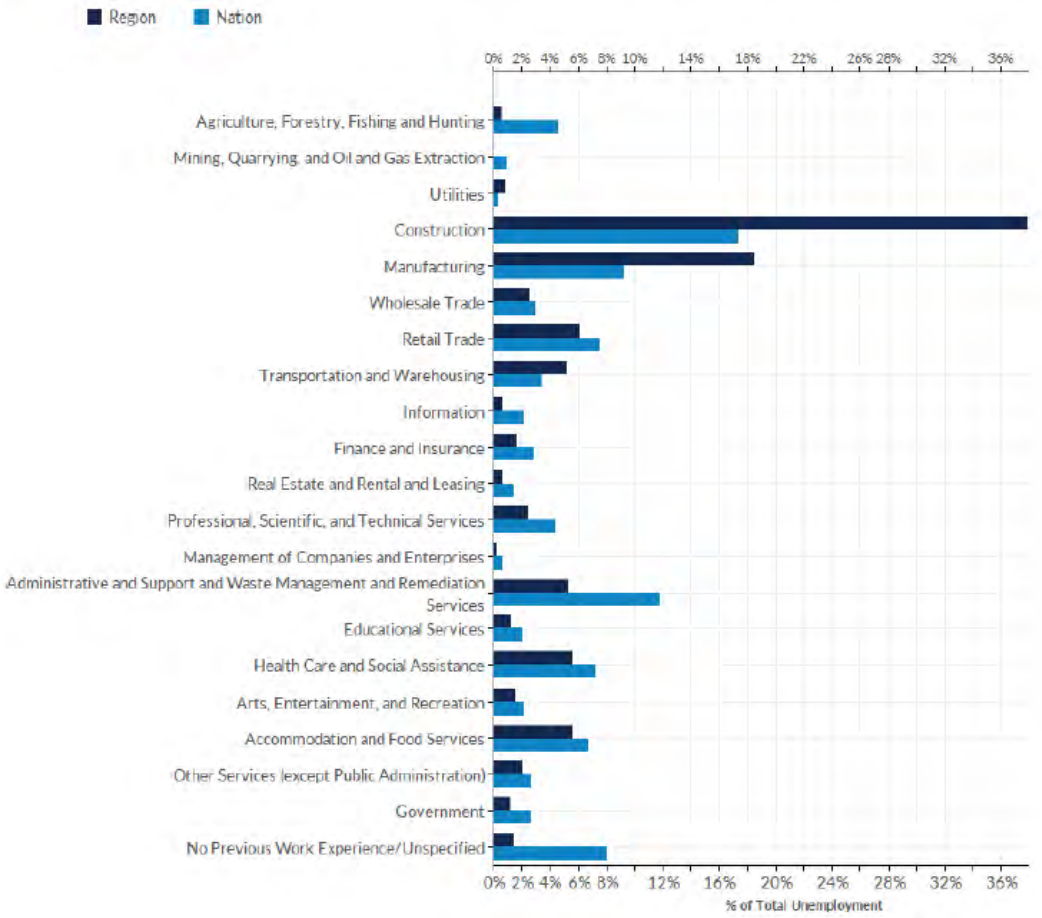
Within the Decatur MSA, roughly 81 percent of the population is working age, and among this group the labor force participation rate is estimated at 58 percent, or 49,557 of 85,580 people (Figure 3-11). According to the Bureau of Labor Statistics, unemployment stands at 4.9 percent as of September 2019, having decreased from 8.5 percent over the prior 5 years, but still above state and national averages (3.4 percent and 3.9 percent, respectively). Nevertheless, 4.9 percent is considered full employment by the Federal Reserve. The share of Total Unemployment that is represented by a given industry supersector is provided in Figure 3-12. In the Decatur MSA, the largest share of unemployment is in the construction industry (38 percent of all unemployment), followed by manufacturing—though this is due in part to the outsized proportion of total employment that manufacturing claims.

Figure 3-11: 2018 Labor Force Breakdown

	Population
Total Working Age Population	85,580
Not in Labor Force (15+)	36,023
Labor Force	49,557
Employed	46,488
Unemployed	3,069
Under 15	19,500

Source: Emsi (Q1 2019)

Figure 3-12: Unemployment by NAICS Industry (Decatur MSA vs. National Average)



Source: Emsi (2019), based on BLS Local Area Unemployment Statistics, Department of Labor Characteristics of the Insured Unemployed, and Illinois Department of Employment Security.

EDUCATION

Macon County has a somewhat below average share of high education attainment: in 2010, 30 percent had an Associates Degree or higher, versus 38 percent statewide or 37 percent nationwide; in absolute numbers, there were 22,356 such individuals in 2010 and 21,709 in 2018. Figure 3-13 illustrates the highest educational attainment level across the population. The most common education level is a high school diploma, at just over one third of the population, followed by some college education at nearly a quarter. A combined 30 percent of the population have a tertiary degree, with the most common being a Bachelors. Approximately 11 percent did not complete the equivalent of a high school education.

Figure 3-13: Educational Attainment

	% of Population	Population
Less Than 9th Grade	3.7%	2,702
9th Grade to 12th Grade	7.4%	5,384
High School Diploma	35.1%	25,465
Some College	23.7%	17,178
Associate's Degree	8.0%	5,768
Bachelor's Degree	13.9%	10,099
Graduate Degree and Higher	8.1%	5,852

Source: Emsi, based on ACS and Emsi demographic data. Educational attainment data cover only the population aged 25 years or more.

As displayed in Figure 3-14, in 2017 there were about 1,525 college graduates in Macon County, IL, and this pipeline had shrunk by 2 percent over the past 5 years. The highest share of these graduates came from Nursing Assistants/Aides, Liberal Arts and Sciences, and Automotive Mechanics Technician programs.

Figure 3-14: Education Pipeline

School	Total Graduates (2017)	Graduate Trend (2013 - 2017)
Richland Community College	959	
Millikin University	566	

Source: Emsi (2019)

PEER REGION COMPARISONS

Socioeconomic data were gathered for a number of peer regions (Metropolitan Statistical Areas, or MSAs) in Illinois: Peoria, Champaign-Urbana, Springfield, Bloomington, Ottawa, Kankakee, and Danville. Michigan City-La Porte, Indiana was also included in the comparison.

Statistics regarding these peer MSAs, including socioeconomic trends between 2010 and 2018, are provided in **Table 3-2**. The only two MSAs to grow during this time were Champaign-Urbana and Bloomington, both notable for their student populations (University of Illinois and Illinois State University). The two smallest MSAs, Decatur and Danville, experienced the largest proportional drops in population between 2000 and 2018. Decatur has more jobs than the slightly more populous MSAs of Kankakee and Michigan City-La Porte, though there was a slight decline between 2010 and 2018. The cost of living index (99.2) is slightly below the US average (100), but above comparably sized peer MSAs. Median household income is about $49,000, lower than all but Peoria, Michigan City-La Porte, and Danville. Education level is higher than most MSAs at the smaller end of the population scale (22 percent with a bachelor's or higher, versus high teens).

The Gross Regional Product of Decatur MSA is $6.6 billion. Controlling that figure for employment count, Decatur MSA's gross regional product per worker is about $122,000, which is higher than all other peer MSAs except Bloomington. This is likely due in part to the major presence of export-oriented industries such as manufacturing, as well as the benefits and economies of regional specialization.

Table 3-2: Peer MSA Comparison

	Decatur	Peoria	Champaign-Urbana	Springfield	Bloomington	Ottawa	Kankakee	MI City-La Porte	Danville
Population (2018)	105,080	406,707	227,226	208,625	172,687	148,331	109,245	109,810	77,430
Pop. Change (2010-2018)	(5%)	(2%)	4%	(1%)	2%	(4%)	(4%)	(1%)	(5%)
Total Industry Jobs (2018)	54,161	190,517	104,693	139,582	91,308	61,446	48,208	44,189	29,573
Jobs Change (2010-2018)	(1%)	(3%)	3%	2%	(3%)	(2%)	6%	(2%)	(4%)
Cost-of-Living Index	99.2	100.2	102.0	102.2	101.3	100.9	97.4	91.7	95.0
Bachelor's Degree or Higher %	22.0%	26.0%	43.2%	33.1%	42.9%	17.2%	18.1%	17.5%	14.1%
Gross Regional Product (billions)	$6.6	$22.4	$10.4	$15.8	$11.5	$6.7	$5.3	$4.1	$3.1
Unemployment (2019)	6.9%	6.9%	5.4%	5.7%	5.4%	8.1%	7.5%	5.5%	7.0%
Median HH Income (2017)	$49,052	$48,599	$50,720	$58,956	$63,333	$54,830	$56,542	$49,921	$44,930

Source: Emsi (Q2 2019), based on employment data from BLS, BEA, IDES, among others; cost of living data from the Council for Community and Economic Research; demographic data from the US Census Bureau and the US Health Department; and Emsi's multi-regional social account matrix input-output model.

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Chapter 4
EXISTING CONDITIONS

This chapter outlines the current conditions of the regional transportation system. It includes an evaluation of individual travel modes and the interaction and connectivity between modes. Transportation modes include roadways, public transportation, non-motorized, rail, *and* aviation *systems.*

ROADWAYS

The MPA consists of a grid roadway network that is altered by topography, conservations areas, Lake Decatur, and I-72. It is connected to the surrounding rural area and the region by a system of federal, state, and county highways. The primary roadways in the MPA are:

- **I-72 |** Provides an east-west connection to the national Interstate highway system;
- **US-51 |** A four-lane restricted access highway connecting Bloomington to the north and Pana to the south;
- **IL-48 |** Travels northeast-southwest through Macon County, providing an alternate route between I-55 and St. Louis, and I-57 and Chicago;
- **IL-121 |** Extends northwest-southeast between I-55 and Lincoln and I-57 and Mattoon;
- **US-36 |** Provides an important link between the City of Decatur to the west and the Illinois-Indiana border to the east; and
- **IL-105 |** Another east-west route that extends from the junction of IL-48 in southwest Decatur, east to the Piatt-Macon County line.

As mentioned, topography, Lake Decatur, and I-72 interrupt and form obstacles to the grid system. For example, there are five bridge crossing locations to facilitate the movement of traffic to areas primarily east and west of the Sangamon River and Lake Decatur. To the south, southwest, across the Sangamon River and its tributaries, traffic movement is limited to a few bridge locations. Several residential developments in the MPA use curvilinear street patterns to limit through traffic.

Functional Classification

Functional classification is a process by which streets, roads, and highways are grouped into "classes" to describe the service level provided and typical roadway operation within the transportation network. The functional classification system facilitates the safe and efficient movement of people and goods.

The majority of the area's roadway mileage is within the jurisdiction of the City of Decatur. The State of Illinois has jurisdiction over the Interstate, expressways, and most of the major arterials. Many of the minor arterials and collectors, based on roadway mileage, are under the jurisdiction of the Macon County Highway Department. Table 4-1 displays the miles of each functional classification in the MPA (Source: *Illinois Travel Statistics*, 2018). Table 4-2 describes the typical street design characteristics associated with the respective functional classification.

Table 4-1: Functional Classification

Functional Classification	Miles
Interstate	18.9
Freeway and Expressway	12.4
Principal Arterial	64.5
Minor Arterial	78.1
Major Collector	131.5
Minor Collector	41.7
Local Road or Street	646.9
Total	994.0

One area that lacks sufficient high classification routes is in the east and southeastern portion of the MPA. This area is generally southeast of Lake Decatur, near Mt. Zion and Long Creek. The Beltway is a project that has been identified in previous planning efforts to address this concern by creating a major thoroughfare. Related studies have demonstrated significant mobility benefits in terms of accessibility and regional connectivity that would support existing industries and future development in this area.

The urban portion of the classified system generally provides for the efficient movement of traffic. The system is well connected and provides for continuous traffic flow resulting in good circulation.

Exceptions are found during peak travel periods on Lake Decatur bridge crossings, on Pershing between Woodford and Monroe Streets, and US-51, north from Mound Road through Forsyth. At-grade rail crossings, which are frequently blocked by train movements, are also a cause of traffic delays. Table 4-2 summarizes typical functional classification design criteria while Figure 4-1 displays the Decatur MPA functional classification system.

Table 4-2: Street Design Criteria (IDOT and DUATS sanctioned)

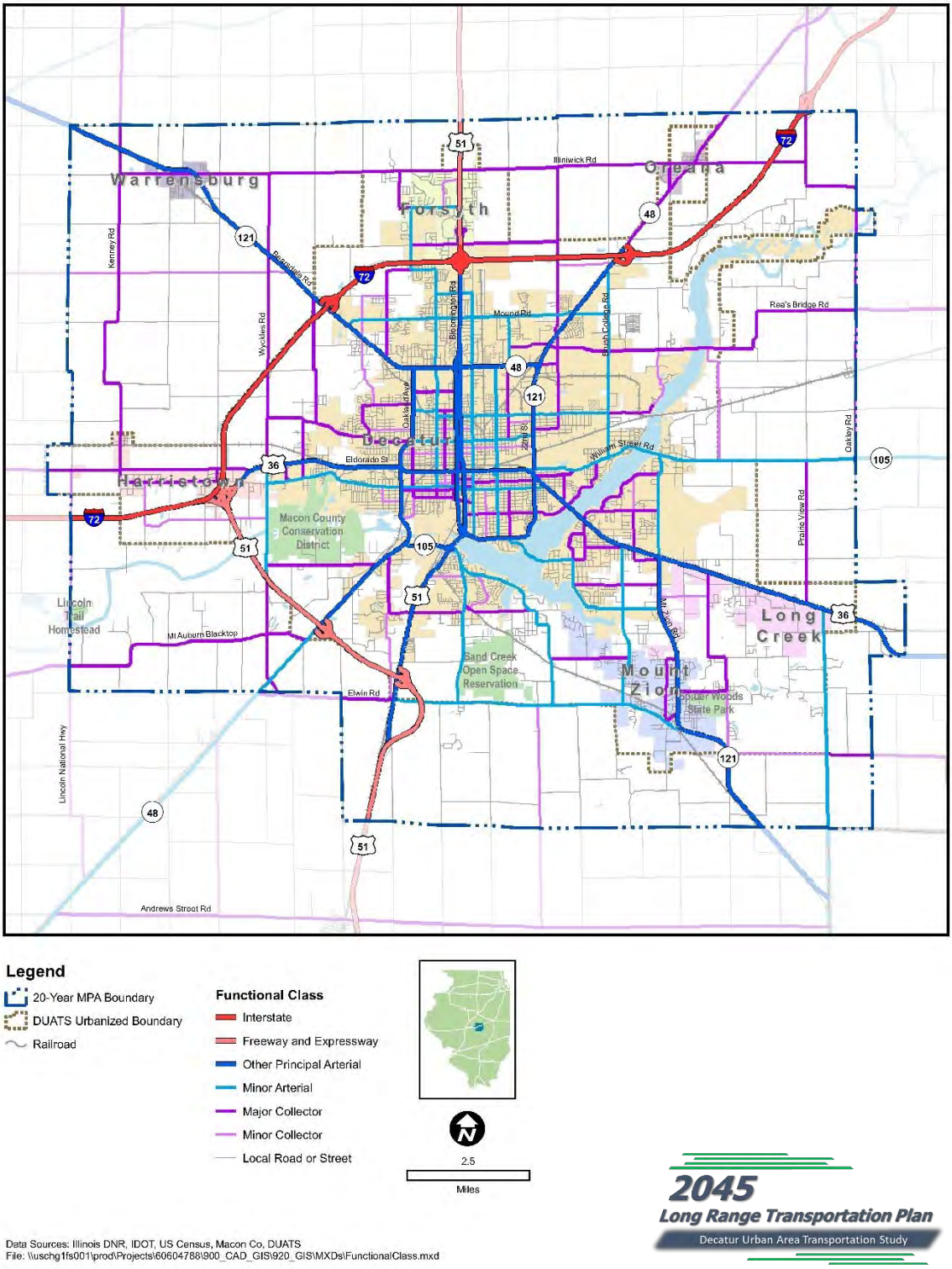
Principal Arterials (Interstates, Expressways, and Other Principal Arterials)	
Service	Principal arterials provide a high degree of continuity of travel around the MPA.
Connection	Principal arterials typically connect to other principal arterials.
Form	Principal arterials normally have at least four lanes with a traffic median or turn lane.
Frequency	Spacing of principal arterials should relate to the need to connect major destinations.
Access	Properties abutting the principal arterial should not have direct access onto Arterials.
Land Use	Land uses adjoining principal arterials should be protected from the negative effects of traffic by large setbacks and landscaping techniques including vegetative screens and berms.

Minor Arterials (Major Streets)	
Service	Minor arterials provide continuous travel through the MPA.
Connection	Minor arterials provide connection to areas of high activity and connect the County Highway System to the road network.
Form	Minor arterials are typically four lanes wide with opposing traffic separated by a median, or two lanes wide with a third lane used for turning movements.
Frequency	Minor arterials should occur no more often than one every mile intervals within the MPA.
Access	Access to minor arterials from abutting property should be limited to public roads.
Land Use	Land uses along minor arterials should be protected from the negative effects of traffic by large setbacks and landscaping techniques including vegetative screens and berms.

Urban Collector Streets and Roads	
Service	Collectors link local streets and roads to minor arterials. Urban collectors should not provide a high degree of continuity for travel or serve as alternatives to minor arterials.
Connection	Collectors should collect traffic from local streets and distribute it to the minor arterials.
Form	Collectors vary from two to four lanes wide and are usually less than two miles long.
Frequency	Collectors occur throughout the urban area.
Access	Abutting properties normally have access to urban collectors.
Land Use	When urban collectors only provide connection between local streets and minor arterials no special land use considerations are needed.

Local Streets (Minor Residential Streets and Roads)	
Service	Local streets provide for travel from individual properties to urban collectors.
Connection	Local streets connect local traffic to collectors.
Form	Local streets typically are no more than two lanes wide in residential areas.
Frequency	Local streets occur universally throughout the MPA.
Access	Properties are allowed direct access to local streets and roads.
Land Use	Local streets typically require no special land use considerations.

Figure 4-1: Functional Classification System



Average Daily Traffic

Average daily traffic (ADT) volumes on Federal and State roadways within the MPA were obtained from IDOT. Interstate highways, freeways, and arterials carry the largest traffic volumes within the region with the highest daily volume found on US-51, north of I-72 in Forsyth. The segment of US-51, near Barnett Street, carries nearly 28,000 vehicles per day (vpd) and provides access to regional shopping destinations. The next highest daily volumes are observed at the Main/Franklin (US 51) bridge with 24,600 vpd. Figure 4-2 displays selected daily traffic volumes for the MPA and Figure 4-3 displays a close-up of Decatur area volumes. Figure 4-4 displays the ADT change between 2011 and 2018. The data indicate that roadways on the fringe areas of the MPA are seeing a steady increase in volumes while several segments within the central portion of Decatur have declined. The traffic volume increase generally correlates to areas that are experiencing growth within the MPA, while areas that are experiencing a decline in population have generally seen some decline in volumes.

The Decatur region is unique in that the Interstate system carries considerably less daily traffic compared to many of the local area roadways. In 2012, I-72 carried on average between 10,600 vpd, east of IL-48, and 13,600 vpd near Harristown. In 2018 these volumes showed a slight increase to 12,800 vpd east of IL-48 and 15,700 vpd near Harristown; however, these volumes are still well below typical interstate volumes. Just east of US-51, I-72 carried 13,400 vpd in 2018.

DUATS continues to monitor bridge volumes and Table 4-3 summarizes historic ADTs at the major bridges crossing Lake Decatur. Most of the crossings show a decrease in volumes. The Main/Franklin (US-51) bridge showed a 10 percent decrease in volumes between 2005 and 2017; however, it remains the second highest overall volume observed in the region.

Table 4-3: Historic Bridge Volumes

Bridge Crossing	2005	2009	2013	2017	Percent Change (2005 - 2017)	Percent Change (2013 - 2017)
William Street Bridge (IL-105)	11,400	11,400	11,200	10,800	-5.3%	-3.6%
Main / Franklin Street (US-51) Bridge	30,100	28,400	27,300	24,600	-18.3%	-9.9%
US-36 (IL-121) Bridge	25,600	24,400	23,800	21,300	-16.8%	-10.5%
Taylorville Road (IL-48) Bridge	9,700	10,600	10,300	10,000	3.1%	-2.9%

	2005	2010	2012	2015	Percent Change (2005 - 2015)	Percent Change (2012 - 2015)
Reas Bridge (IL-24)	2,550	2,300	2,650	2,450	-3.9%	-7.5%
Lost Bridge Road	N/A	9,600	9,600	8,800	N/A	-8.3%

SOURCE: IDOT Traffic Counts.

Number of Lanes

The majority of roadways within the MPA are two-lane roadways. Most of the roadway miles have an assigned functional classification featuring four-lanes, many which include dedicated turn-lanes. One exception is the Main Street/Water Street arterial couplet that runs north-south from south of the Decatur Central Business District (CBD) north to Pershing Road. Many segments along this one-way couplet have three or more traffic lanes and, in some places, left- and/or right-turn lanes. The number of lanes within the MPA is shown in Figure 4-5.

Figure 4-2: Average Daily Traffic Volumes (2018)

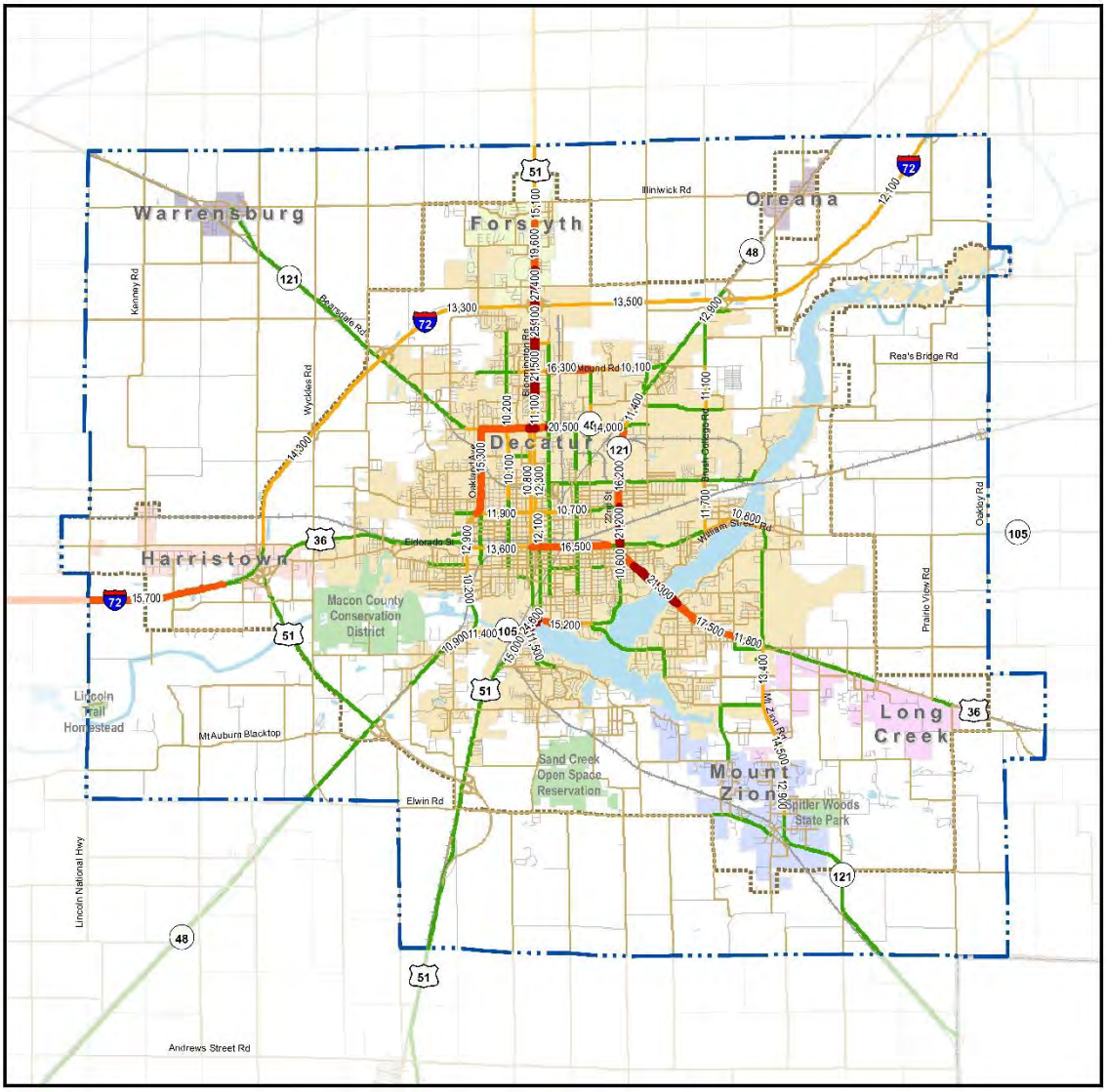
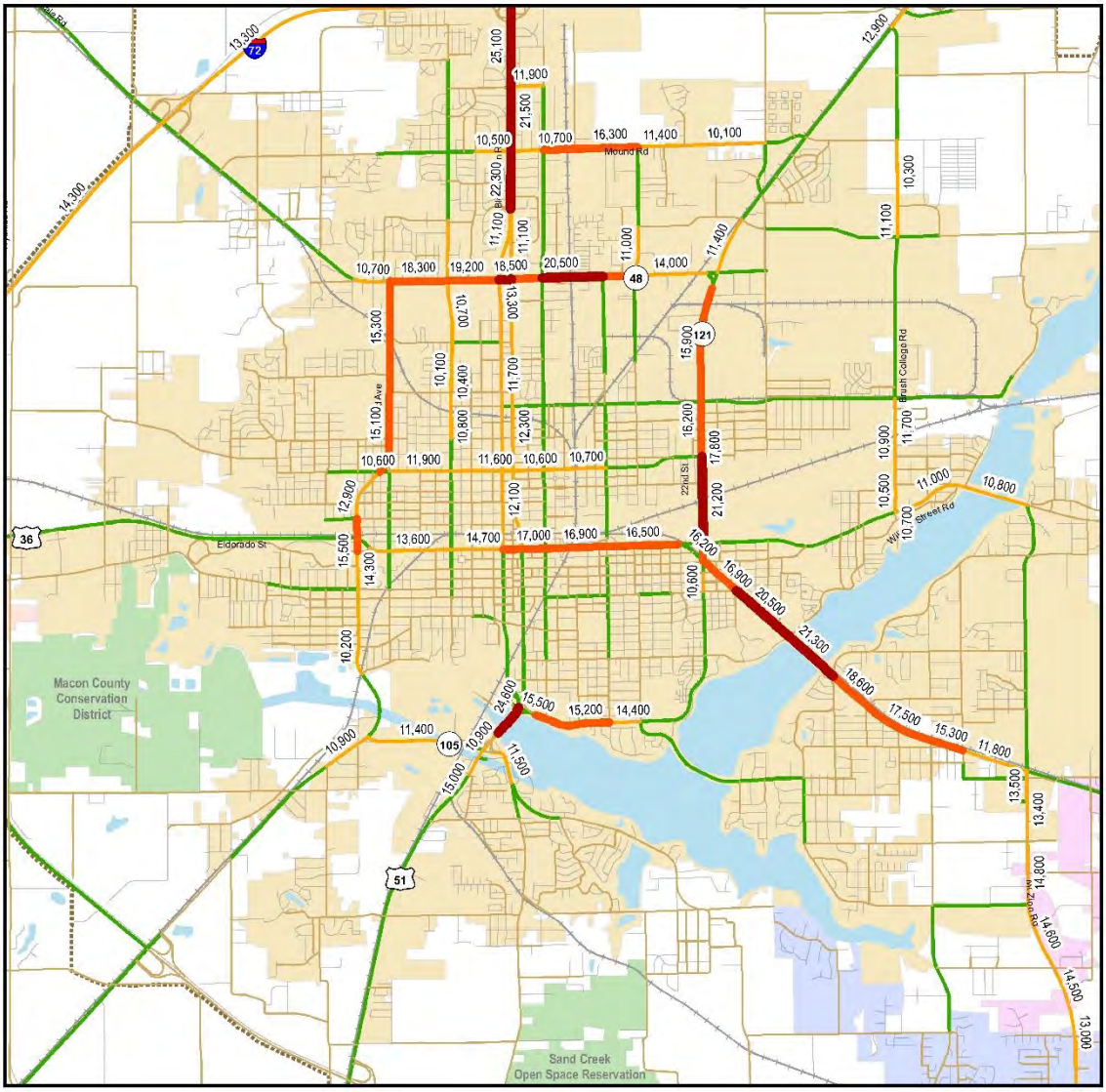


Figure 4-3: Average Daily Traffic Volumes (Decatur Area)



Legend

- 20-Year MPA Boundary
- DUATS Urbanized Boundary
- Railroad

Annual Average Daily Traffic

- < 5,000
- 5,001 - 10,000
- 10,001 - 15,000
- 15,001 - 20,000
- > 20,001

1
Miles

2045 Long Range Transportation Plan
Decatur Urban Area Transportation Study

Data Sources: Illinois DNR, IDOT, US Census, Macon Co, DUATS
File: \\uschg1fs001\prod\Projects\60604788\1900_CAD_GIS\920_GIS\MXDs\Annual Average Daily Traffic_Zoom.mxd

Figure 4-4: AADT Change (2011 to 2018)

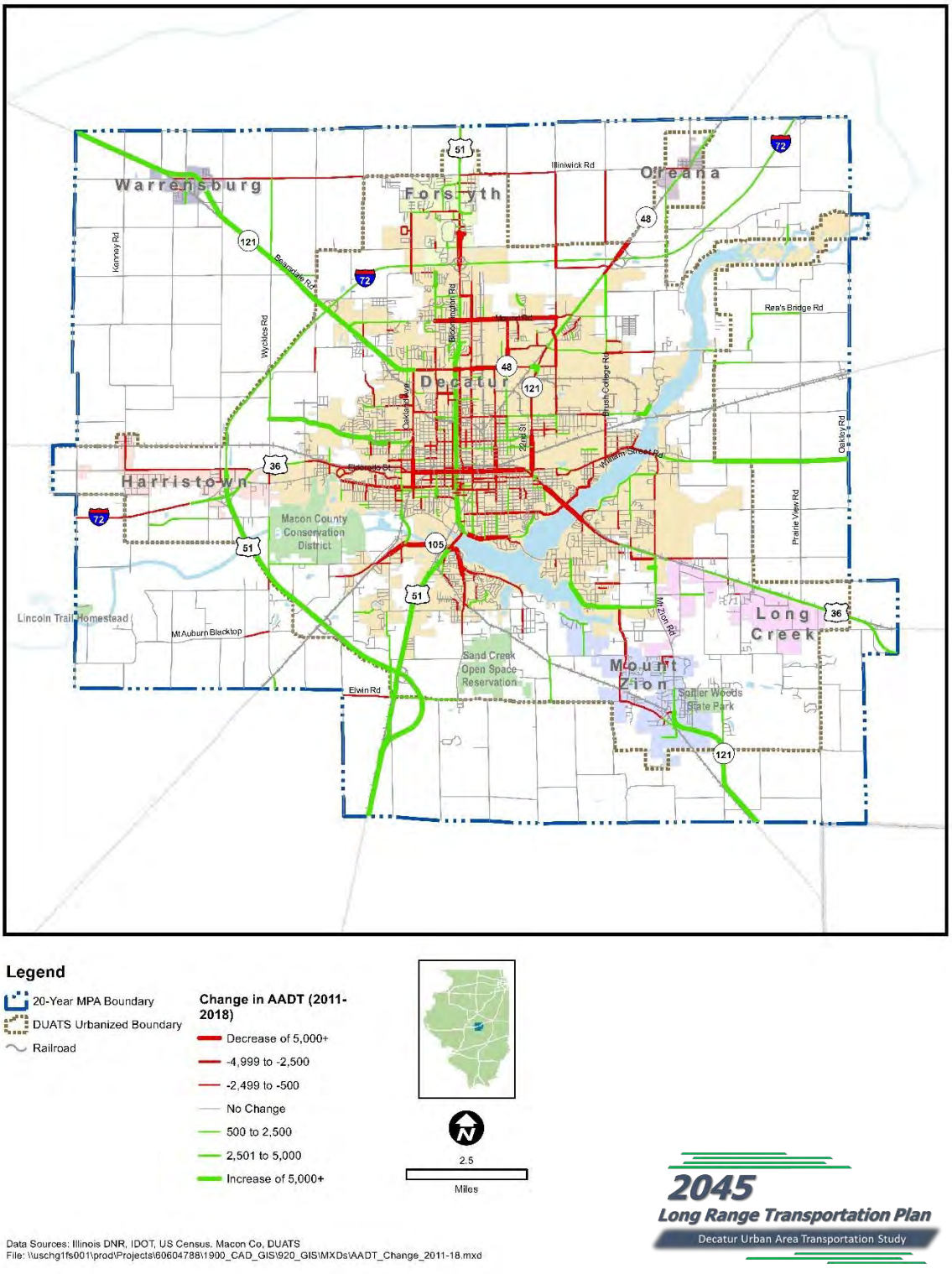
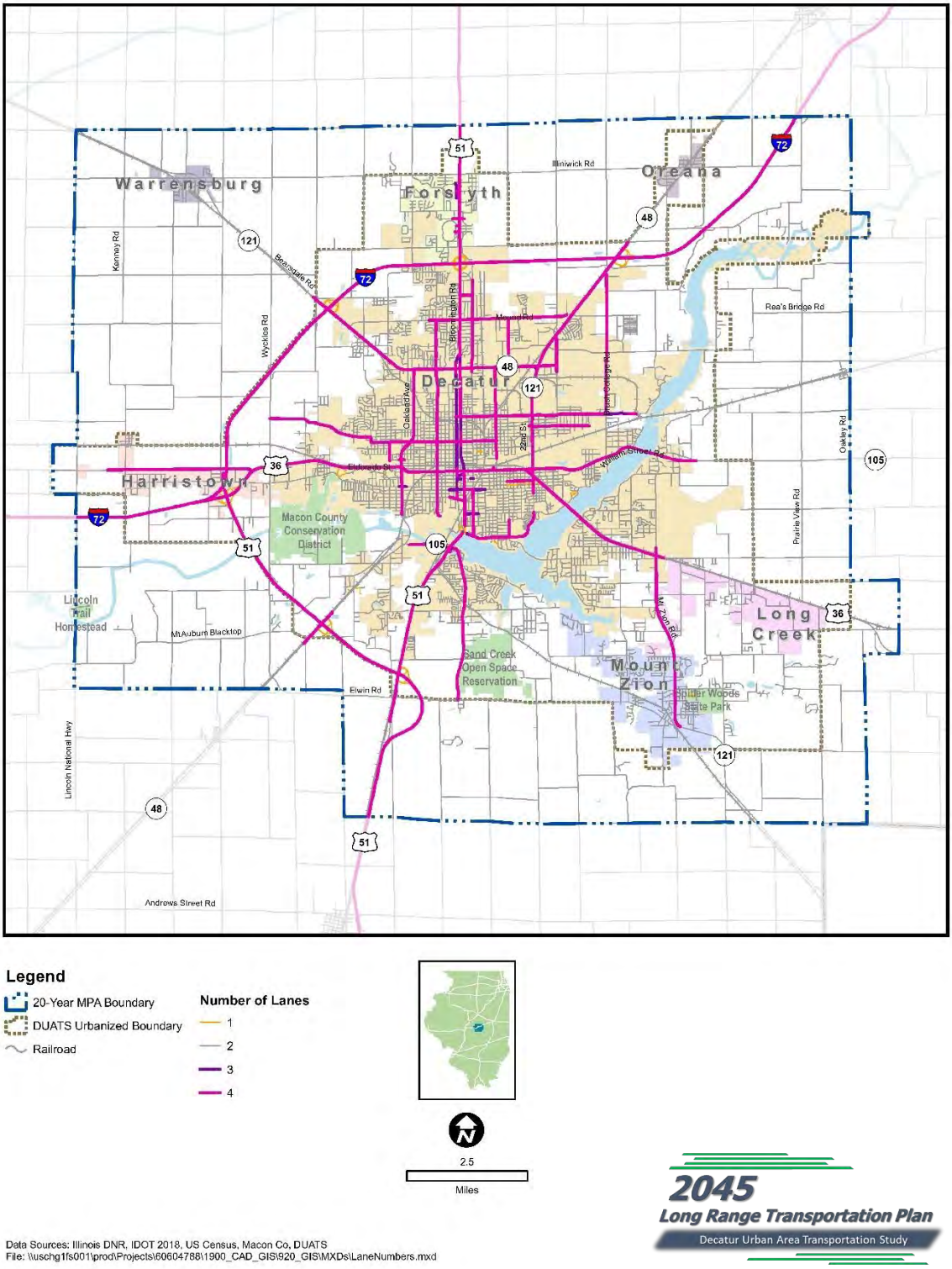


Figure 4-5: Number of Lanes



Data Sources: Illinois DNR, IDOT 2018, US Census, Macon Co, DUATS
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Designated Truck Routes

There are nineteen designated state truck routes within the MPA. State truck route classifications are generally based on truck weight, maximum load allowances, and vehicle size. There are two Class 1 truck routes designated by IDOT in the MPA, along with seventeen Class 2 routes. Class 1 truck routes are approved for all load widths of 8'6" or less. Typically, Class 1 truck routes include interstate facilities, as is the case in the MPA. Class 2 truck routes are approved for all load widths of 8'6" or less with a wheel base no greater than 55 feet. In general, trucks can typically travel on local roads within five miles of a designated Class 2 truck route and within one mile of a Class 1 truck route. The main truck route in the MPA is I-72 which provides same-day access to more than 60 large markets including Chicago, St. Louis, Detroit, Minneapolis, Kansas City, and Cincinnati.

Most of the designated truck routes direct truck traffic around the City of Decatur. The exceptions are US-36, which accommodates east-west truck travel through the northern boundary of Decatur's CBD and IL-48 between Brush College Road and I-72 which carries substantial truck traffic to industries such as ADM and Caterpillar. Both are Class 2 Truck Routes and carry significant truck volumes. US-51 and IL-121 carry a large number of freight trucks through the Villages of Forsyth and Mt. Zion, respectively.

Historically, trucks accounted for a substantial amount of traffic within Decatur's Central Business District (CBD) on Business US-51 (Business Route (BR)-51 from US-51 to Eldorado Street (US-36). In response to the need for a viable alternate truck route, the 6W route was introduced in 2012 to divert traffic around the CBD. The route uses a portion of East Wood Street and South MLK Jr. Drive to Eldorado Street (US-36) to carry through trucks around the CBD. This modification has greatly reduced the adverse impact of large commercial carriers hauling loads through the CBD and supported an initiative to provide a pedestrian-friendly environment to support Decatur's CBD as a historic, cultural, governmental, and entertainment center.

Even though truck traffic through downtown Decatur has been addressed, heavy truck movements throughout the region remain a concern. Therefore, it is extremely important that issues related to transportation improvements, security, safety, the environment, and maintenance be continually analyzed. **Table 4-4** and **Figure 4-6** identify the designated truck routes within the MPA. Several one-to-two block segments are also present in the MPA that are not listed in **Table 4-4** (all are offshoots of other main Class 2 routes). Unless noted otherwise, routes are designated Class 2.

Table 4-4: Designated Truck Routes within the MPA

Illinois Department of Transportation (IDOT)

I-72 (Class 1)	Sangamon County Line to Piatt County Line
US-51 (Class 1)	I-72 (Exit 133) to BR-51
US-36	I-72 (Exit 133) to Piatt & Moultrie County Lines
US-51	Dewitt County Line to I-72 (near Exit 141)
BR-51	S. Franklin Street to Grand Avenue (via Wood Street and MLK Drive)
BR-51	(North of Elwin) US-51 exit to S. Franklin Street
IL-48	(north segment) Piatt County Line to I-72 (Exit 144)
IL-48	(south segment) Christian County Line to BR-51 (via Southside Drive)
IL-105	Piatt County Line to 22nd Street (Decatur)
IL-121	(north segment) Logan County Line to I-72 (Exit 138)

Illinois Department of Transportation (IDOT)

IL-121	(south segment) US-36 - Airport Rd. Intersection

Macon County

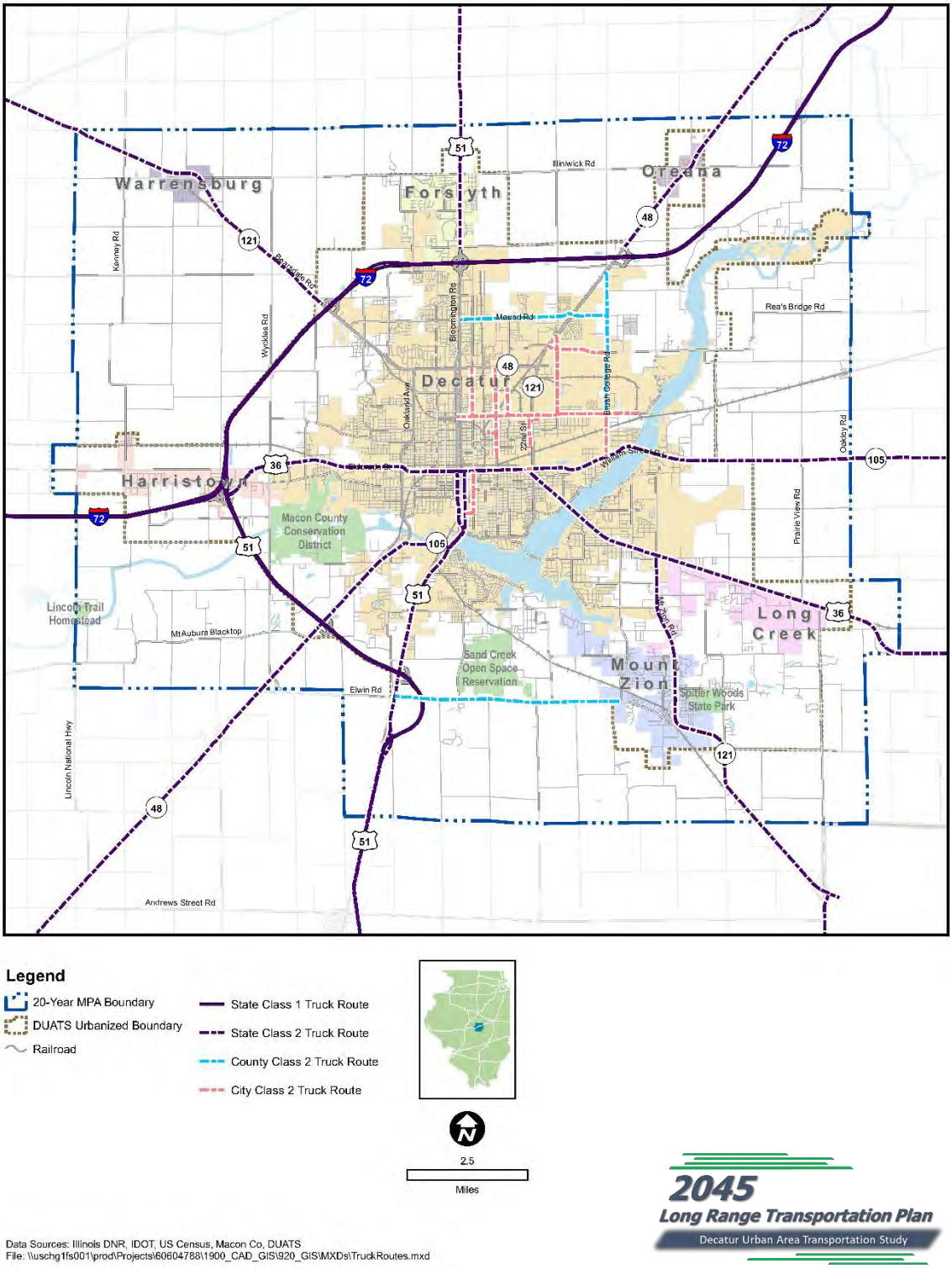
Bear Road	Hill Road to Cantrell Street
Brush College Road	Faries Parkway to IL-48
Cantrell Street	Bear Road to Wyckles Road
Elwin Road	US-51 (BR) to Turpin Road
Mound Road	US-51 (BR) to Brush College Road
Wyckles Road	Cantrell Street to US-36

Decatur (Municipal)

21st Street	Condit Street to Garfield Avenue
23rd Street	Logan Street to Garfield Avenue
27th Street	Garfield Avenue to IL-48
Brush College Road	IL-105 to Faries Parkway
Cantrell Street	S. Franklin Street to S. Martin Luther King Jr. Drive
E. Hickory Street	N. Calhoun Street to N. Jasper Street
E. Wood Street	S. Main Street to S. Martin Luther King Jr. Drive
Faries Parkway	27th Street to East City Limits
Franklin (Old BR US-51)	E. Cleveland Avenue to E. Wood Street
Garfield Avenue	US-51 (BR) to 27th Street
Gault	Jackson Street to Martin Luther King Jr. Drive
Grand Avenue	US-51 (BR) to Clinton Street
Hubbard	IL-48 to Brush College Road
Jasper Street	Sangamon Street to IL-121
Logan Street	IL-121 to 23rd Street
Main Street (Old BR US-51)	W. Wood Street to E. Cleveland Avenue
Martin Luther King Jr. Drive	Cantrell Street to US-36
Martin Luther King Jr. Drive	Garfield Avenue to IL-121
Martin Luther King Jr. Drive	US-36 to Grand Avenue
N. Calhoun Street	E. Hickory Street to North End
Olive Street	21st Street to IL-121
Samuels Street	Division Street to Faries Parkway
William Street	Martin Luther King Jr. Drive to Hilton Street
Woodford Street	Garfield Avenue to IL-48

SOURCE: IDOT Designated State Truck Route System, City of Decatur, DUATS.

Figure 4-6: Designated Trucks Routes



Truck Volumes

Truck volumes, or Heavy Commercial Vehicle (HCV) volumes, were obtained from IDOT for 2018. Table 4-5 displays the ten highest HCV volume locations identified within the MPA. HCV volumes are divided into two categories, multi-unit vehicles (semi-trucks, tractor-trailers, etc.) and single-unit vehicles (box trucks, flatbeds, moving vans, tow trucks, etc.). The total daily traffic for the segment is also provided.

Table 4-5: Top Ten Truck Route Segments in the MPA

Location	From	To	Heavy Commercial Vehicle (HCV)	Multiple Unit (MU)	Single Unit (SU)	Average Daily Traffic (ADT)
I-72	IL 48	US 51	3,650	3,200	450	13,500
I-72	US 51	IL 121	3,450	3,000	450	13,300
I-72	SR 121	Harristown Blvd	3,425	2,900	525	14,300
IL 48	I-72 WB	Boyd Rd	3,275	2,900	375	14,300
I-72	US 51	Lincoln Nat'l Hwy	2,950	2,500	450	15,700
I-72	US 48	Jordan Rd	2,900	2,350	550	12,100
I-72	Harristown Blvd	US 36	2,550	2,200	350	9,500
Bloomington Rd	Shellabargar Rd	Shafer St	1,800	1,250	550	12,400
22nd St	Garfield Ave	Locust St	1,800	1,150	650	16,200
22nd St	Pershing Road	Garfield Ave	1,575	1,100	475	15,900

Source: IDOT

I-72 carries the highest truck volumes within the MPA for the three highest volume segments, featuring between approximately 3,425 to 3,650 HCV daily. I-72, between SR 48 and US 51, had the highest truck volume at 3,650 per day, which represents 27 percent of all traffic along this segment. In general, HCV volumes account for between 10 percent and 27 percent of all traffic observed on these top ten highest truck volume roadway segments.

Figure 4-7 shows truck volumes in the study area. Note that while not necessarily among the top ten highest segments in the MPA, Brush College Road, Faries Parkway, and Eldorado Street are each traversed by up to 1,200 HCV daily. The major contributing factor to these volumes is the connectivity to major industrial facilities such as ADM, Caterpillar, and Tate & Lyle.

Figure 4-8 displays the change in truck volumes between approximately 2011 and 2018 (exact year varies based on actual traffic count year). Increases in truck volumes have mostly been observed on the fringe area roadways within the MPA. Truck volumes have also been increasing along E. Lake Shore Drive.

Figure 4-7: Truck Volumes

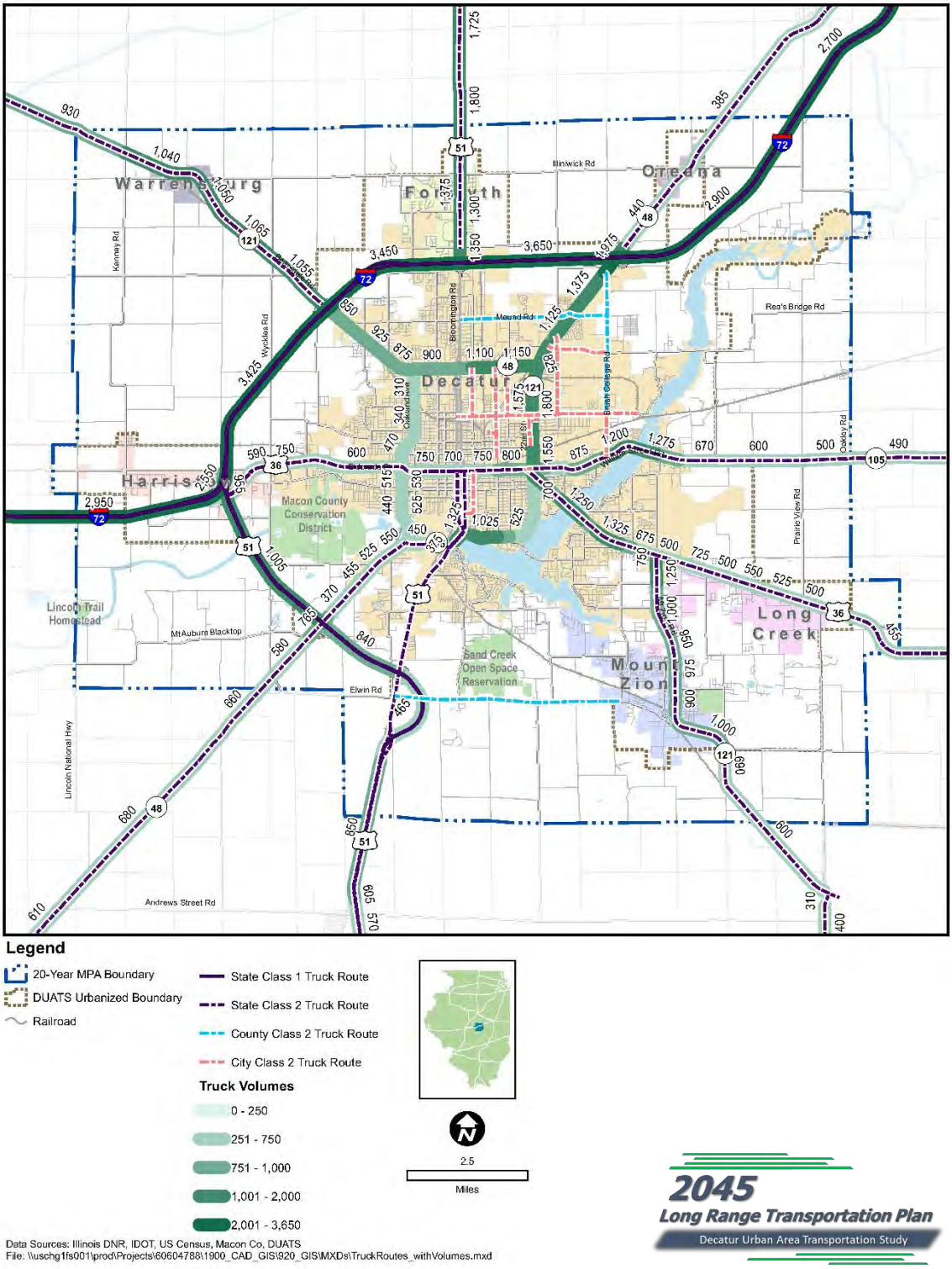
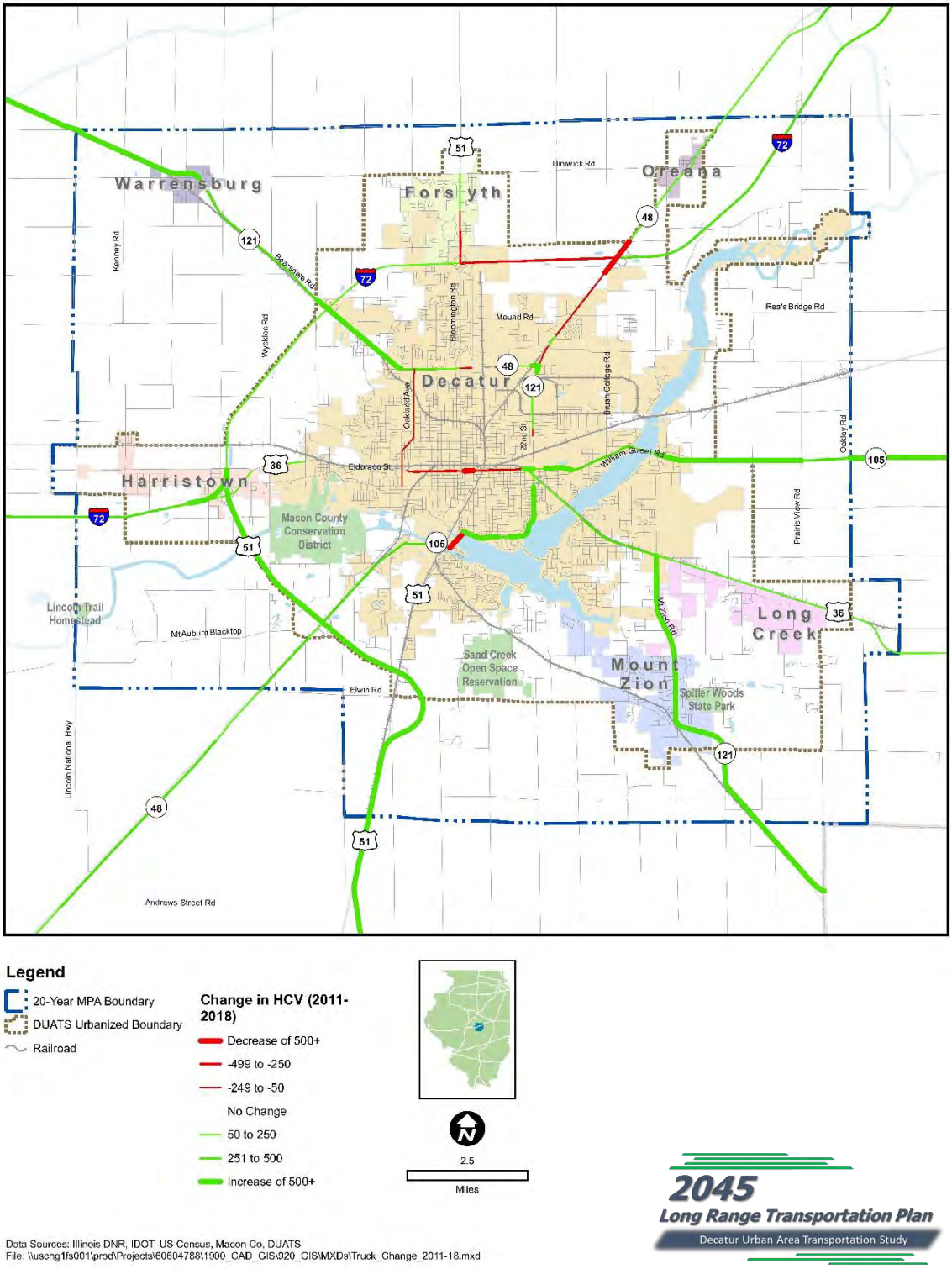


Figure 4-8: Truck Volume Change (2011 to 2018)



Legend

- 20-Year MPA Boundary
- DUATS Urbanized Boundary
- Railroad

Change in HCV (2011-2018)

- Decrease of 500+
- -499 to -250
- -249 to -50
- No Change
- 50 to 250
- 251 to 500
- Increase of 500+

2.5 Miles

Data Sources: Illinois DNR, IDOT, US Census, Macon Co, DUATS
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Capacity Analysis

Travel Demand Model Results

DUATS maintains a travel demand forecasting model to assist in identifying potential roadway capacity issues. The model results, along with planning-level capacities can be used to compare traffic volumes (existing or future) to typical daily roadway capacities (based on number of lanes and functional classification) to calculate a volume-to-capacity (V/C) ratio. The V/C ratios can then be compared to general planning level of service (LOS) thresholds to identify roadway segments that are approaching-capacity, at-capacity, or over-capacity.

The DUATS travel model and corresponding socioeconomic data was updated in 2018 as part of the *Decatur Supply Chain Network Planning and Optimization Study*. As part of this update, the consultant added a delay feature to the model to replicate the numerous at-grade train crossing delays that occur on a daily basis throughout the region. Given the unique traffic conditions within the DUATS MPA, a typical LOS analysis does not necessarily provide an accurate representation of actual traffic conditions. The delay feature helps provide a better representation of traffic conditions that can be used for high-level planning, such as the LRTP modeling.

The Decatur region is difficult to analyze from a regional model perspective, due in large part to the rail delays previously described. Generally speaking, the regional roadways have sufficient capacity to accommodate current traffic volumes and I-72 in particular is well below typical interstate volumes. It is also important to point out that the terms “congested” and “approaching or at-capacity” are normative terms and thus relative. The user experience typically equates to the inconvenience of having to wait multiple traffic signal sequences for vehicles to move, or in the case of the Decatur region, having to wait an extended time for train blockage.

Figure 4-9 displays the approximate roadway level of service for 2015 for the DUATS MPA. Generally speaking, the areas identified as over-capacity (red segments) occur during peak travel periods (a.m. or p.m. peak) or are in locations where at-grade rail crossings are common. In all instances where the segments are shown as congested, approaching- or at-capacity, there is limited right-of-way (ROW) that could be utilized for additional lanes. Property improvements and land uses are very close to or on the existing ROW. Purchasing additional land at market values for the property improvements is financially problematic, as is widening any of the Lake Decatur bridge crossings. Currently, with the exception of at-grade rail crossing delays, there are no areas identified that would be considered significant capacity concerns that require immediate attention.

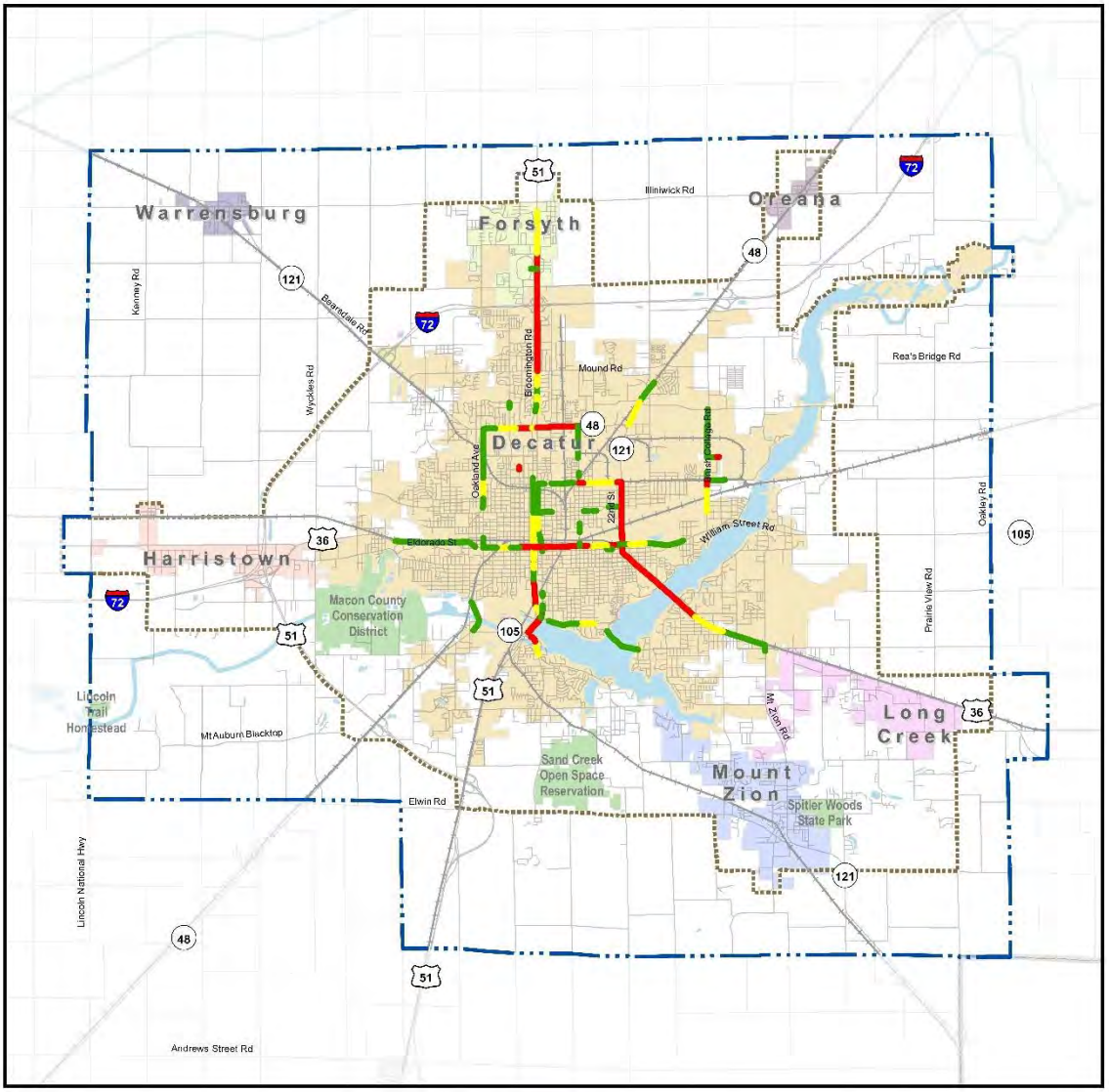
At-Grade Rail Crossing Impacts on Roadway Capacity

As discussed, there are relatively few capacity issues that exist in the region. The Decatur region is unusual in that the biggest traffic operation concern is at-grade rail crossing delays, which can easily be perceived by the public as a traffic congestion or capacity issue. If at-grade crossings did not exist within the region, the area roadways would have sufficient capacity and operate at acceptable levels. In a 2019 LRTP survey, 84 percent of respondents identified the issue of at-grade rail crossings as the top priority to address within the DUATS region.

The 2013 Decatur Area Transportation Efficiency Study (DATES) identified several at-grade rail crossings that significantly impact local and regional traffic operations. The primary area of concern is the Norfolk Southern (NS) crossing on Brush College Road at Faries Parkway. The DATES report indicated that this crossing averages 17.2 hours of delay per week, resulting in

multiple vehicular backups throughout the day for the traveling public and truck/freight shippers. The Brush College Road at Faries Parkway crossing is currently being designed for a grade-separated facility and is programmed in the DUATS FY 2020 – 2023 TIP. However, current plans for the Brush College grade separation do not include an additional grade separation of the NS underpass, which was also identified in the original analysis as being an important improvement to enhance traffic flow along the corridor. This improvement is still considered a regional priority but currently no funding has been identified.

Figure 4-9: Roadway Level of Service (2015)



Legend

- 20-Year MPA Boundary
- DUATS Urbanized Boundary
- Railroad
- Approaching-Capacity
- At-Capacity
- Over-Capacity

2.5

Miles

NOTE: The model level of service (LOS) accounts for at-grade rail crossing delays. As such, the LOS results displayed on this map do not necessarily indicate capacity issues. The LOS results presented are for planning purposes and are not intended to be a substitute for a detailed LOS analysis.

Data Sources: Illinois DNR, IDOT, US Census, Macon Co, DUATS
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Pavement Condition

IDOT collects pavement condition data on Federal and State routes every two years. The data is reported in the Condition Rating Survey (CRS). As part of the continuing transportation planning process, this information is placed in the GIS database and reviewed as it becomes available. Table 4-6 summarizes the IDOT ratings while Figure 4-10 displays the pavement condition ratings.

	2013		2018		Actual
	Rated Miles	Percent	Rated Miles	Percent	Change
Excellent	18.5	11.5%	38.1	17.0%	5.6%
Good	25.2	15.6%	37.5	16.8%	1.1%
Fair	91.7	56.9%	93.6	41.8%	-15.0%
Poor	25.9	16.1%	54.5	24.4%	8.3%
	161.3		223.7		

Within the MPA there were a total of 223 miles of IDOT-rated pavement in the year 2018. Of this total, 17.0 percent were rated as excellent and another 16.8 percent were rated as good. Among the remaining mileage, 41.8 percent was fair, and 24.4 percent was poor. The percentage of fair pavement condition has declined in recent years while the percentage of poor rated pavement has increased and now represents one-quarter of the IDOT rated roadways.

Roadways classified as excellent or good can be described as being adequately maintained, recently built or reconstructed, with a sound existing sub-base, base, and surface. Fair roadways are described as having older surfaces that have been well maintained and are generally smooth, free of potholes, and devoid of high and low areas. Roadways classified as poor are those that should be scheduled for at least a surface overlay or other minor reconstruction. These roadways may remain in this condition for many years before deteriorating to a state of critical condition where the pavement has deteriorated to the point that major reconstruction may be warranted.

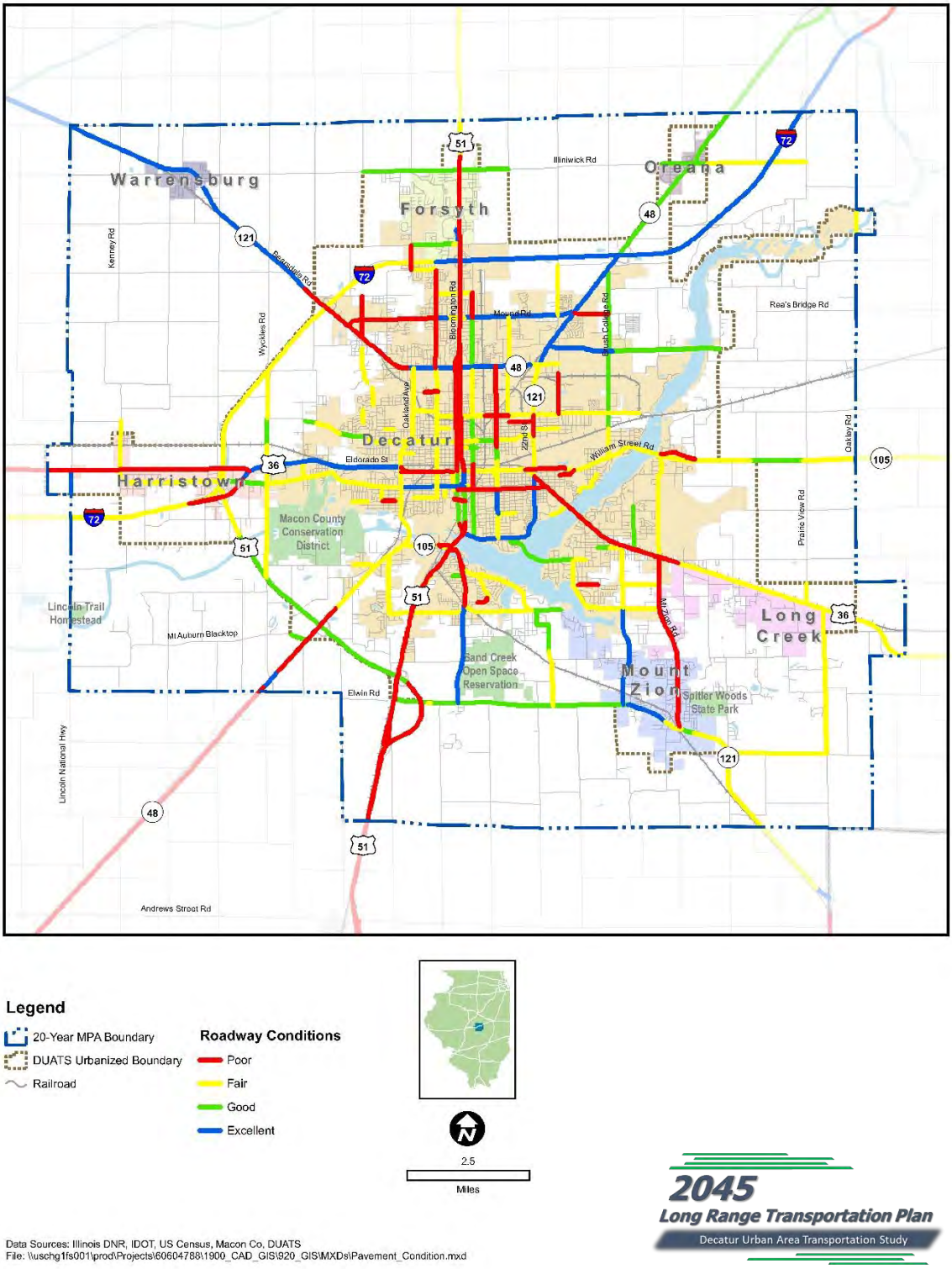
Table 4-7 summarizes the City of Decatur pavement condition ratings for 2018 and Figure 4-11 displays the pavement conditions. Approximately 30 percent of the City of Decatur pavement is rated as good or excellent. The majority of pavement, at 56 percent, is rated as fair. Less than 1.5 percent of the City of Decatur pavement was rated as very poor or failing.

Table 4-7: City of Decatur Rated Miles (2018)

	Rated Miles	Percent
Excellent	36.2	9.5%
Good	79.7	20.9%
Fair	213.8	56.0%
Poor	46.9	12.3%
Very Poor	4.4	1.2%
Failing	0.7	0.2%

SOURCE: City of Decatur.

Figure 4-10: Pavement Conditions Ratings (IDOT Roadways)



Legend

- 20-Year MPA Boundary
- DUATS Urbanized Boundary
- Railroad

Roadway Conditions

- Poor
- Fair
- Good
- Excellent

2.5 Miles

Data Sources: Illinois DNR, IDOT, US Census, Macon Co, DUATS
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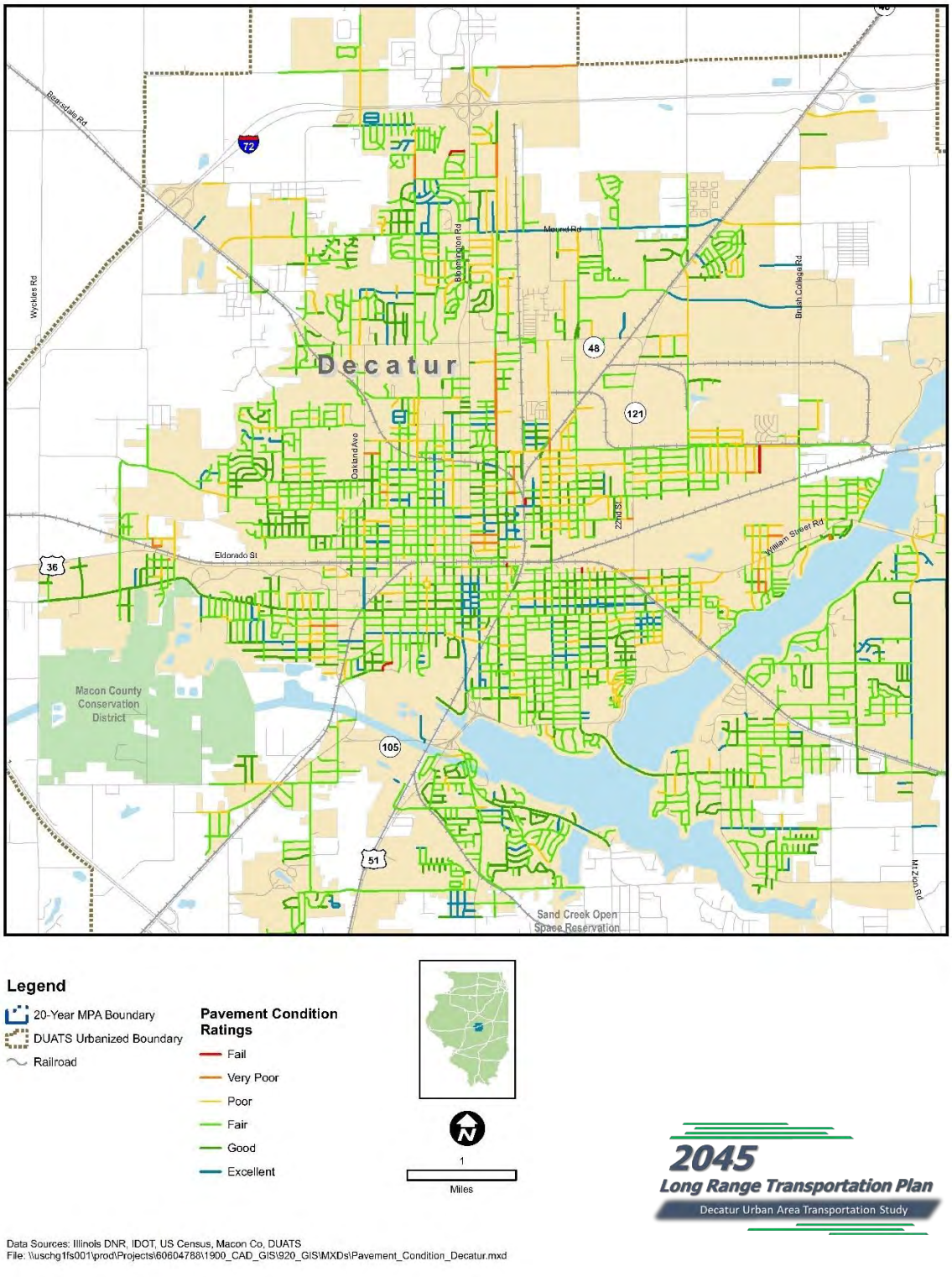
Figure 4-11: Pavement Conditions Ratings (Decatur Area Roadways)



Bridges and Structural Condition

Jurisdiction and Type

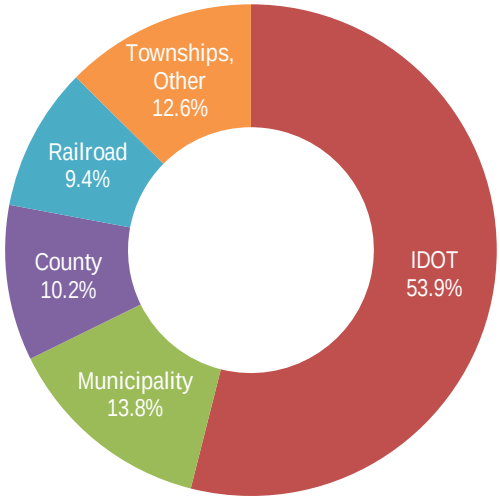
According to recent IDOT bridge data, there are 254 numbered bridges or drainage structures within the DUATS MPA. These structures range in age from early steel truss bridges dating to around 1900 to modern reinforced concrete box culverts and bridges. The lengths range from the twenty-foot State minimum[2] up to more than two thousand feet.

IDOT maintains 137 structures in the MPA, many of which were built in the late 1970s in conjunction with the I-72 and US-51 bypass project. Macon County maintains 26 bridges within the MPA, various townships maintain 31 bridges, and the City of Decatur has maintenance responsibility over 27 bridges. Private rail companies maintain 24 railroad bridges. Table 4-8 and Figure 4-12 display bridge structures by ownership / maintenance within the MPA.

Table 4-8: Bridge Structures by Jurisdictional Ownership/Maintenance

Ownership / Maintenance	Count	Percent of MPA Total
IDOT	137	53.9%
Municipality	35	13.8%
County	26	10.2%
Railroad	24	9.4%
Long Creek Township	6	2.4%
Whitmore Township	6	2.4%
Mt Zion Township	4	1.6%
South Wheatland Township	4	1.6%
Hickory Point Township	3	1.2%
Illini Township	3	1.2%
Blue Mound Township	2	0.8%
Oakley Township	2	0.8%
Decatur Township	1	0.4%
Other	1	0.4%
Municipality/Rail	1	0.4%
Grand Total	254	100.0%

Figure 4-12: Percent Bridge Structure Jurisdictional Ownership/Maintenance



Vertical Clearance

For arterials and freeways, the minimum vertical clearance is 14 to 16 feet, and 17 feet for sign trusses and pedestrian overpasses. Collector and local streets have a 14-foot minimum clearance.

The majority of bridges within the MPA meet the minimum standard vertical clearances.[3] One exception is the bridge at Garfield over 22nd Street (058-6001), which is maintained by the City of

[2] Twenty-foot bridge structure minimum, as defined by the State of Illinois.

[3] United States Department of Transportation (USDOT) Federal Highway Administration (FHWA). Mitigation Strategies for Design Exceptions (July 2007); A Policy on Geometric Design of Highways and Streets, AASHTO (2007)

Decatur. In addition, several railroad overpasses within the MPA do not meet the minimum vertical clearance standards. These include overpasses at:

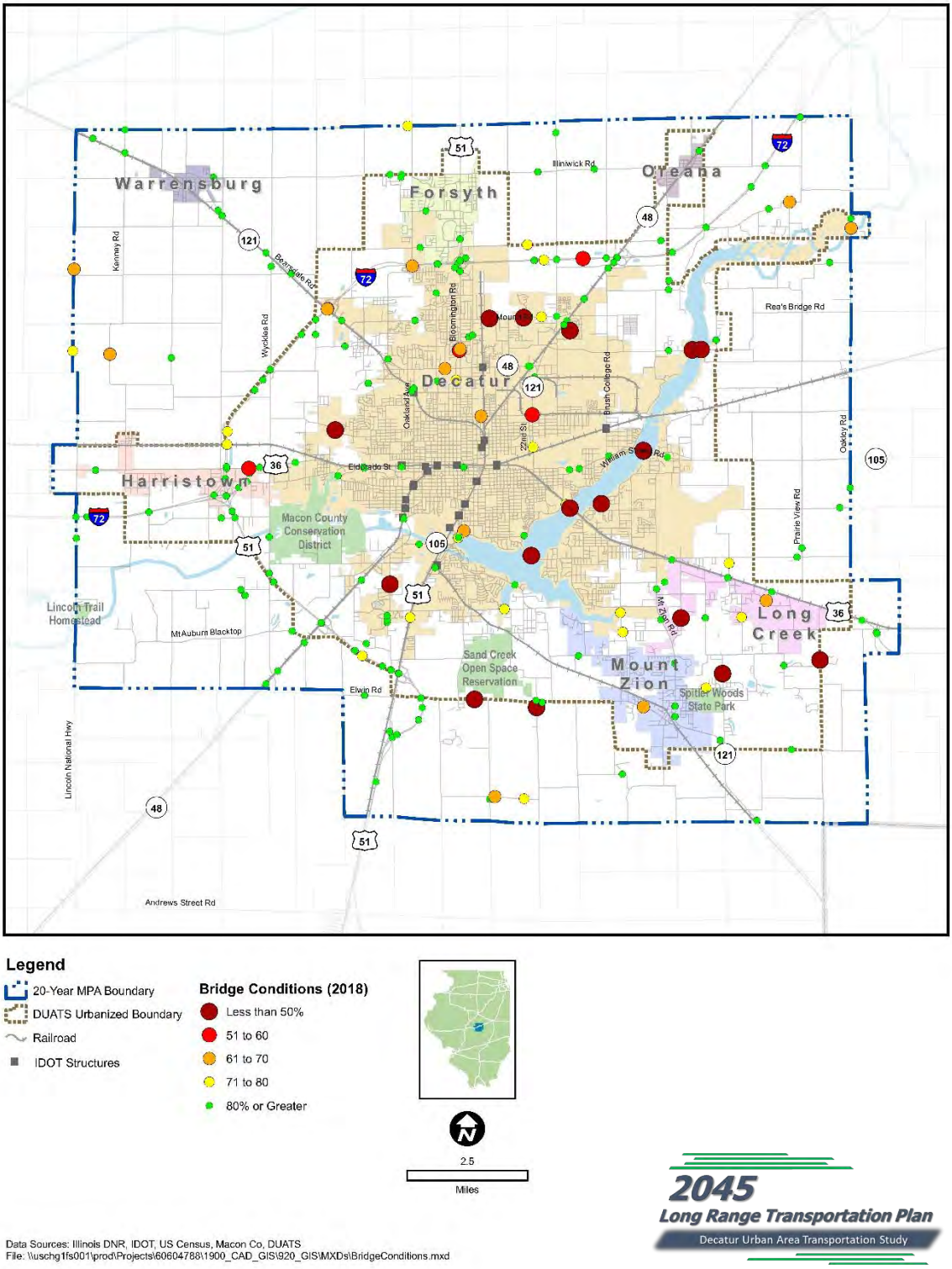
- N. Main Street
- E. Condit Street
- W. Forrest Street
- N. Jasper Street
- Becker-E. Lake Shore Drive (near US-36)
- W. Main Street (near Oakland)
- N. Monroe Street
- E. Prairie Street
- N. Van Dyke Street

Structural Condition

Structural condition ratings are based on criteria provided in the Illinois Structure Information System (ISIS) manual. Figure 4-13 displays bridge sufficiency ratings ranging from 80 percent and greater to 50 percent or less. Structures identified with a rating of less than 50 percent are considered to be the top priority bridges for potential improvement.

Bridge performance measurements were previously discussed in Chapter 2. The performance measures use a different condition rating approach and focus on just NHS roadway segments.

Figure 4-13: Bridge Conditions



A SR under 50 is eligible for bridge repair/replacement program funding, and SR less than 80 are "deficient" and eligible for federal aid funding for rehabilitation. https://www.ilsoyadvisor.com/sites/default/files/documents/REP-ISA%20Road%20%26%20Bridge%20Study-20130916.pdf

SYSTEM SAFETY

Safety has been—and will continue to be—a priority for DUATS. DUATS MPA safety data for 2012 to 2016 (which is the most current available data at the time of this study) was assessed to identify potential areas of concern. Identifying these locations as part of the LRTP can help in identifying potential projects or improvements to enhance safety for the traveling public.

As previously discussed, Federal legislation places an increased focus on safety performance measures. MPOs and state DOTs are required to report on their performance in reducing fatalities and serious injuries. DOTs, in conjunction with MPOs, set the safety performance targets which are discussed in Chapter 2. The Highway Safety Improvement Program (HSIP) remains an important document which aims to contribute to reduce the number and rate of fatalities and serious injuries on all public roads.

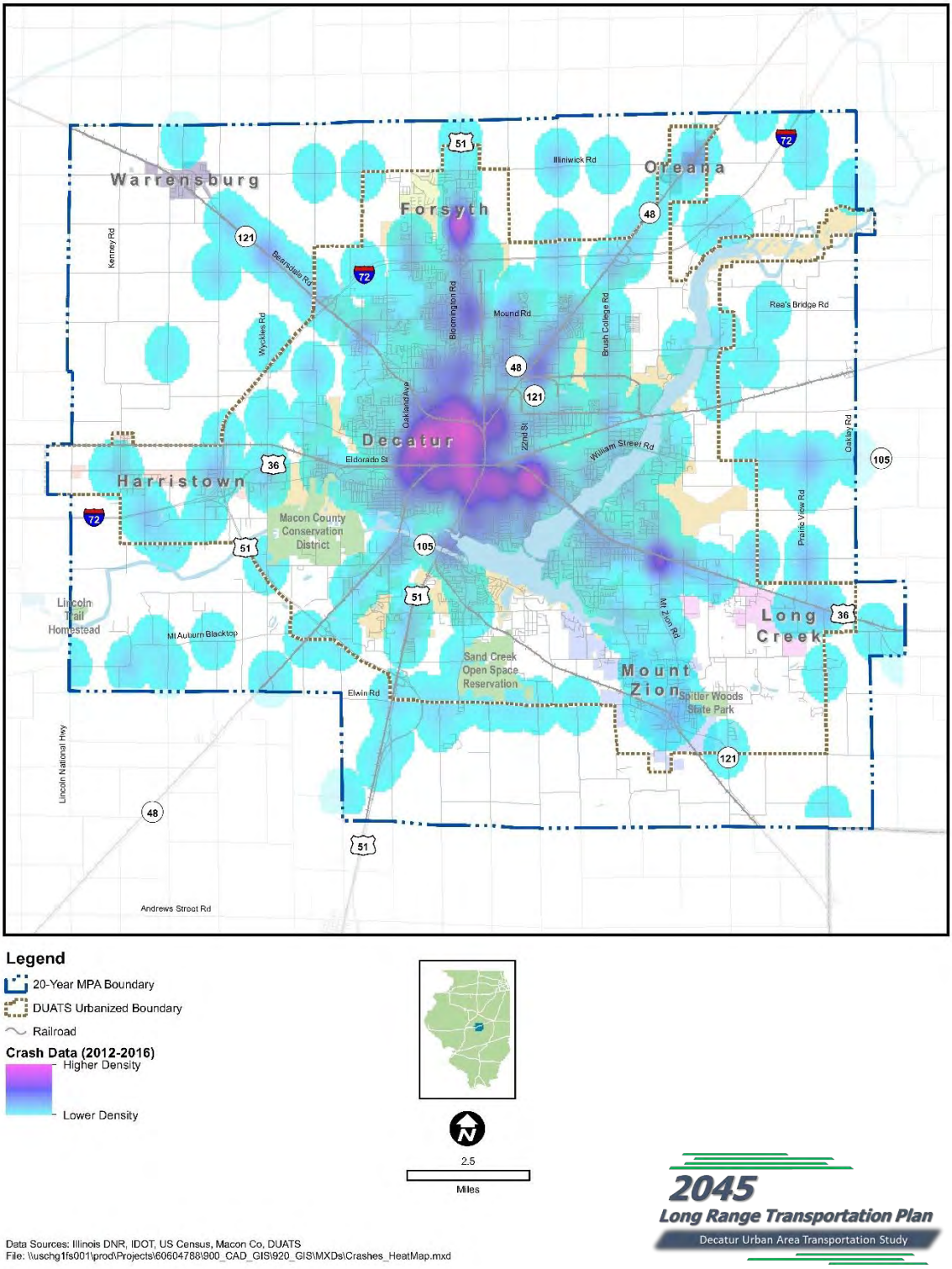
Table 4-9 summarizes historical crash data for the DUATS MPA and Figure 4-14 displays a heat map identifying the location of weighted crashes within the DUATS MPA between 2012 and 2016. Figure 4-15 (Figure 4-16 zoom-in view) displays the top 20 crash intersection locations within the DUATS MPA. A review of the data identifies the central portion of the MPA as having the greatest frequency of crashes. Further analysis of the top 20 intersection crash locations shows the top crash locations concentrated along the US-51 corridor through the MPA. The top location, in terms of number of crashes, is along US-51 at Barnett Avenue (121 crashes between 2012 and 2016).

Table 4-9: DUATS Historical Crash Data

	2012 - 2016							2007 - 2011	
	2012	2013	2014	2015	2016	Total	5-year Avg	5-year Total	5-year Avg
Fatal	9	9	12	12	6	48	9.6	30	6.0
Injury	538	521	536	558	562	2,715	543	1,578	316
PDO	1,638	1,663	1,593	1,581	1,760	8,235	1,647	9,949	1,990
	2,185	2,193	2,141	2,151	2,328	10,998	2,200	11,557	2,311
Fatal	0.4%	0.4%	0.6%	0.6%	0.3%	0.4%		0.3%	
Injury	24.6%	23.8%	25.0%	25.9%	24.1%	24.7%		13.7%	
PDO	75.0%	75.8%	74.4%	73.5%	75.6%	74.9%		86.1%	

Source: IDOT Crash Data.

Figure 4-14: Crash Heat Map, weighted by Crash Type (2012 – 2016)



Legend

- 20-Year MPA Boundary
- DUATS Urbanized Boundary
- Railroad

Crash Data (2012-2016)

- Higher Density
- Lower Density

2.5 Miles

Data Sources: Illinois DNR, IDOT, US Census, Macon Co, DUATS
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Figure 4-15: Intersection Crashes (Top 20 Locations)

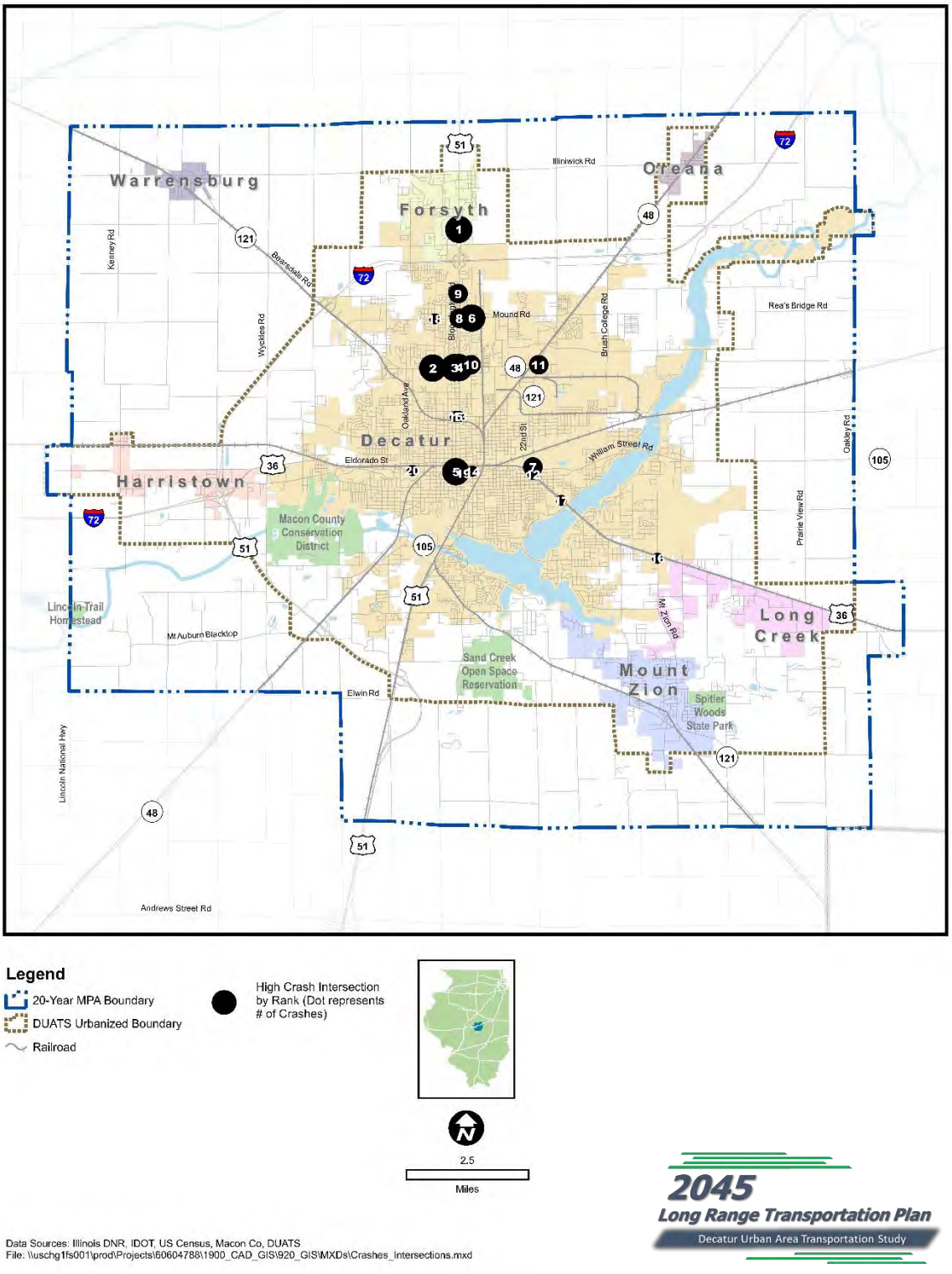
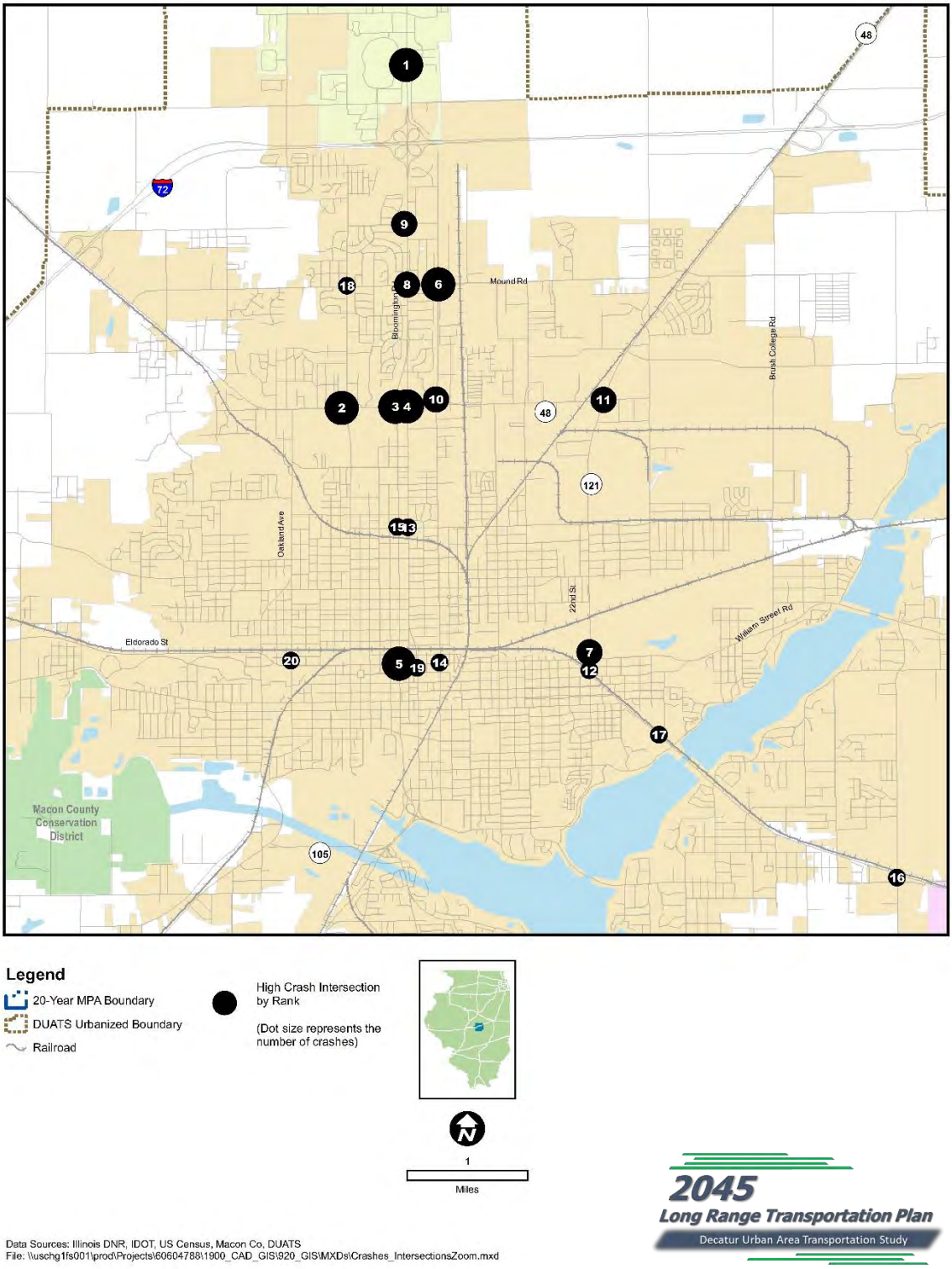


Figure 4-16: Intersection Crashes (Top 20 Locations) – Zoom-In View



Data Sources: Illinois DNR, IDOT, US Census, Macon Co, DUATS
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Table 4-10: Top Crash Locations (2012 – 2016)

Roadway #1	Roadway #2	Crash Count
US 51	Barnett Ave	121
Pershing Rd	Macarthur Rd / Monroe St	103
Pershing Rd	US 51 S	98
Pershing Rd	US 51 N	95
N Main St	Eldorado St	93
Mound Rd	M L King Jr Dr	89
Pershing Rd	22nd St	83
22nd St	Eldorado St	77
Mound Rd	Bloomington Rd	76
Bloomington Rd	Ash Ave	75
22nd St	Eldorado St	73
Pershing Rd	M L King Jr Dr	65
William St	22nd St	56
Garfield Ave	US 51 N	53
M L King Jr Dr	Eldorado St	53
N Main St	Garfield Ave	51
Mount Zion Rd	IL 36	51
27Th St	IL 36	49
Macarthur Rd	Mound Rd	49
Eldorado St	US 51 N	48
Oakland Ave	Eldorado St	47
I 72	US 51	47
Eldorado St	Monroe St	43
Monroe St	Grand Ave	42
Mt Zion Rd	Maryland St	42
Brush College Rd	Fairies Pkwy	42
Woodford St	IL 48	41
Garfield Ave	M L King Jr Dr	41
Nelson Pk Rd	Prairie St	41
Grand Ave	US 51 S	40
Fairview Ave	Grand Ave	40

SOURCE: IDOT Crash Data (2012 – 2016).

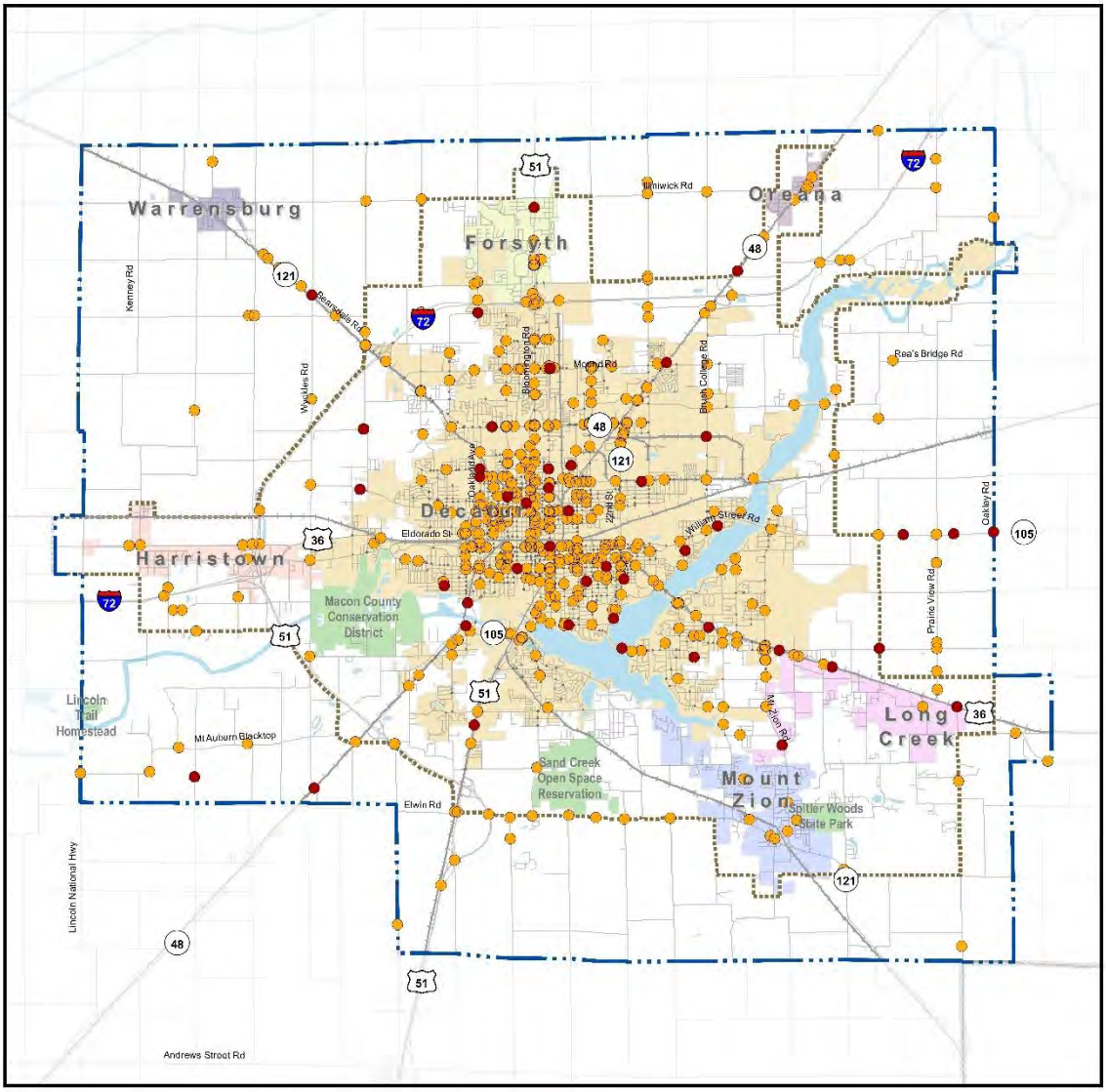
Serious Injuries and Fatalities

The primary focus of the national safety performance standards, and a focus of the IDOT HSIP, is to reduce the number of crashes resulting in a serious injury or fatality. The classification system for injuries (used by both IDOT and DUATS) is as follows:

- **Type A |** Includes crashes where a person suffered a serious injury (requiring immediate medical care);
- **Type B |** Includes crashes where a person suffered a minor injury; and,
- **Type C |** Includes crashes where an injury was reported but not substantiated.

Figure 4-17 displays the location of fatalities and serious injuries (type A) that occurred within the DUATS MPA between 2012 and 2016. Generally speaking, there does not appear to be any obvious pattern that would be contributing to crashes resulting in fatalities. The fatalities appeared to be fairly evenly distributed, while the serious injury crashes seem to follow the overall distribution of crashes, with the most crashes occurring within the central portion of Decatur.

Figure 4-17: Fatal & Serious Injury Crash Locations (2012 – 2016)



PUBLIC TRANSPORTATION

Transit service within the DUATS MPA is operated by the City of Decatur Public Transit System (DPTS). The following describes the existing transit operations within the DUATS MPA.

Transit System Overview

DPTS contracts with a management firm, MV Transportation, Inc., which employs approximately 70 employees who operate the transit system. Of this total, there are approximately 45 full-time and part-time bus drivers, six van drivers, six mechanics, and additional personnel including managers and office staff. DPTS operates fifteen fixed bus routes and complementary paratransit service for people with disabilities, serving primarily the City of Decatur with limited service to most of the Village of Forsyth and portions of the Villages of Harristown and Long Creek. DPTS also operates one trolley route which circulates around downtown Decatur. The adjacent photograph shows a typical DPTS fixed-route service vehicle.

DPTS fixed-route service operates on a pulse system: all of the buses arrive at the transit center at the same time, to allow passengers to transfer between bus routes. With only a few exceptions, all of the bus routes "pulse" at 15 and 45 minutes past each hour throughout the service day. The transit system operates Monday through Friday from 5:30 a.m. to 7:15 p.m. and Saturday from 6:15 a.m. to 7:15 p.m. There is no service currently provided on Sunday and on six major holidays.

Typical DPTS fixed-route service vehicle, a 30-foot long low-floor bus

DPTS also provides complementary paratransit services to individuals with disabilities who are unable to use the fixed-route system. This door-to-door service uses seven wheelchair accessible vans operated by the DPTS and a subsidized taxicab and livery program. Paratransit service is available during the same hours and days of operation as the fixed-route system but operates on a demand-responsive basis. The area served is all of the City of Decatur plus areas outside of the City that are within three quarter-miles of a fixed bus route.

Transit Facilities

The Senator Severns Transit Center, located on the west side of Jackson Street, between Prairie Street and William Street, was built in 2002. This 5,000 square-foot multimodal facility serves as the primary transfer point for passengers using the fixed-route system. The transit center includes a number of passenger amenities such as an indoor waiting area, restrooms, and a vending area. The transit center also staffs full-time, on-site DPTS employees who can assist passengers with route and schedule information. Transit users are also able to purchase transit tokens, passes and punch cards on-site. The transit center is intended to operate as a multimodal facility, as a drop-off and pick-up point for a variety of privately-operated services including:

Senator Severns Transit Center

DPTS Administrative Office Building

- Taxicab operators and livery service operators;
- Inter-city bus lines, such as Greyhound; and
- Shuttle services to Amtrak stations and airports throughout central Illinois.

DPTS Administrative Office Building and Maintenance Garage is located at 555 East Wood Street in Decatur. The facility was constructed in 1996. The bus storage building located directly behind the Administrative Office Building at 100 Industry Court was constructed in 1980.

Transit Services

As mentioned above, DPTS operates fixed transit routes (including bus and trolley) and complementary paratransit service for people with disabilities. The following sections describe these services in greater detail.

Fixed-Route Bus Service

DPTS fixed-route service is all located within the City of Decatur with one exception: US-51, Water St - Hickory Point Mall. This route serves the Hickory Point Mall in the Village of Forsyth, under a formal agreement between the City of Decatur and the Village of Forsyth. Major destinations and service areas for the 15 DPTS bus routes are identified in **Table 4-11**. The fixed-route bus service network is displayed in **Figure 4-18** and **Figure 4-19**.

Table 4-11: DPTS Fixed-route Major Destinations / Service Areas

No.	Route	Service Areas
11	Martin Luther King - Meadowlark	Martin Luther King Jr. Dr -- north of Eldorado / Wabash Crossing / K-Mart / County Market / Driver's License Facility / Wellington Way and Portage Place Apartments / Decatur Correctional Center / Meadowlark Subdivision
12	Airport - Wal-Mart East	Thomas Jefferson School/ Baum School / East Eldorado Street / St. Patrick's Elementary School / Pines Shopping Center / Decatur Airport / Macon County Historical Society Museum / Wal-Mart Plaza East
21	Monroe - Wal-Mart North	Decatur Memorial Hospital / Spring Creek Plaza / Aldi's / Social Security Office / Wal-Mart Plaza North / Shadow Lane / Bristol Gardens
21c	Monroe - Wal-Mart North via McKinley & N. Taylor / W. Mound	Decatur Memorial Hospital / N. Oakland Ave. / Aldi's / Social Security Office / W. Mound Rd. / Wal-Mart Plaza North / Shadow Lane / Bristol Gardens
22	St. Mary's Circulator	E. Eldorado Street / Tate & Lyle / Pine's Shopping Center / E. Wood Street / Eisenhower High School / St. Mary's Hospital
31	W. Grand - Ravina Park	Van Dyke Street / Bintlinger's / Ravina Park Subdivision / MacArthur High School
32	South Shores	South Water Treatment Plant / South Shores Shopping Center / Imboden Creek Nursing Home / South Shores School / Holy Family School
41	E. Grand - Richland Community College	Senior Center / DMH Occupational Health / ADM Corporate Office / Richland Community College / N. 22nd Street – north of Grand
51	Jasper - Park 101	Wabash Crossing / Municipal Services Center / K-Mart / County Market / Driver's License Facility / Park 101 / Macon Resources / Caterpillar Inc.
52	West Main - Wyckles Road	Millikin University / West End / W. Main St. / MacArthur High School / Fairview Plaza / Fairview Park / Decatur Conference Center and Hotel
53	Enterprise - Taylor Rd	Martin Luther King Jr. Dr. south of Eldorado / Illinois Power Plaza / South Shores Shopping Center / WAND - TV / Enterprise School / Decatur Township Office
61	Water - Hickory Point Mall	Insight Cable Office / CHIC Clinic / Brettwood Village Shopping Center / Wal-Mart North / Hickory Point Mall / Forsyth
62	Oakland	Millikin University / The Woods Apartments / MacArthur High School / Fairview Plaza
63	Decatur	W. Decatur St. / The DISC / Millikin University / MacArthur High School / Fairview Plaza
71	Lost Bridge - Wal-Mart East	Eisenhower High School / St. Mary's Hospital / Airport Plaza (Kroger) / Wal-Mart Plaza East

Source: Decatur Public Transit System.

Figure 4-18: Fixed-Route Bus Service

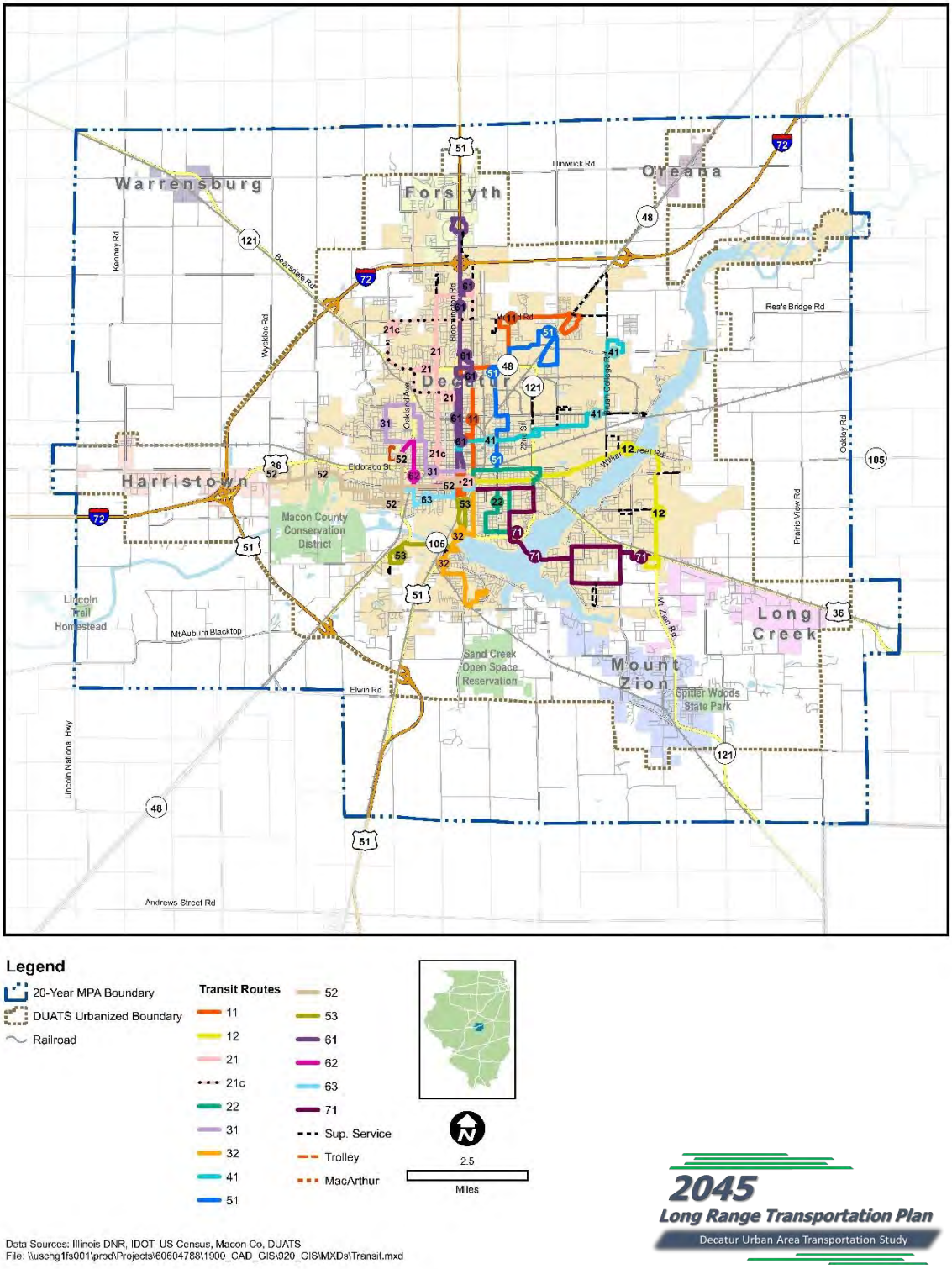
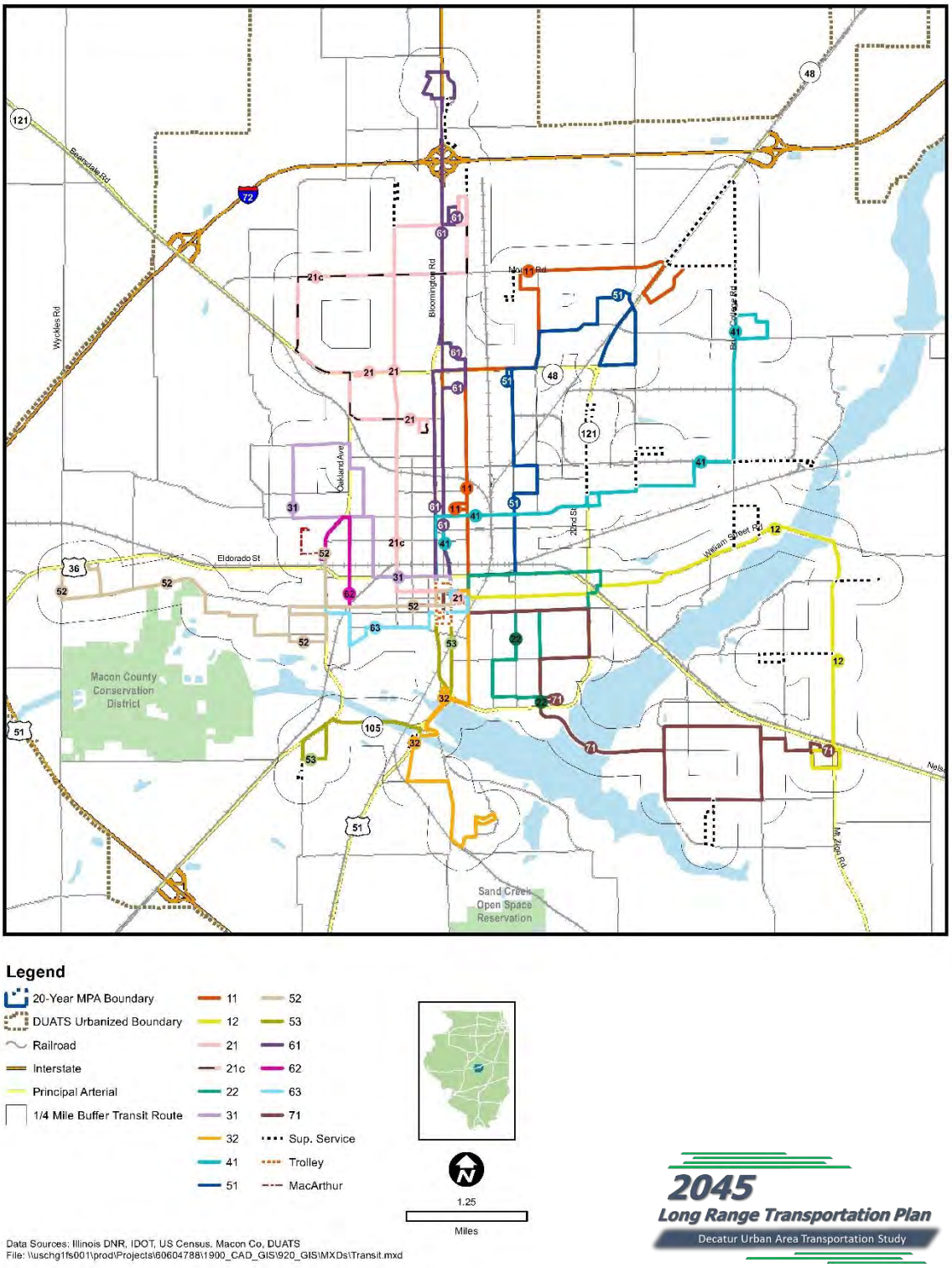


Figure 4-19: Fixed-Route Bus Service (Zoom-In)



Trolley Service

The DPTS operates one trolley route that serves downtown Decatur. The Downtown Trolley route has been in service for more than ten years.. One trolley operates along the route, which departs from the transit center every 15 minutes, starting on the hour. The Downtown Trolley service begins at 7:00 a.m. on weekdays and at 8:00 a.m. on Saturdays. The last trip of the day starts at 6:00 p.m. There is no charge to ride the Downtown Trolley.

Operation Uplift

All DPTS fixed-route buses and trolleys are wheelchair accessible. However, the DPTS also provides Operation Uplift: complementary paratransit services for individuals with disabilities who are unable to use the fixed-route bus system because of their disabilities. This paratransit service uses wheelchair-accessible vans operated by the DPTS as well as subsidized taxicabs and livery service vehicles, under a formal agreement with one or more local private companies. The rider may choose to use either the DPTS vans or the private taxis or livery vehicles. The fares, rules, and regulations of Operation Uplift apply equally to all service providers.

Paratransit service is available during the same hours and days of operation as the fixed-route system, but it operates on a demand-responsive, door-to-door basis. The geographic service area for Operation Uplift is all of the City of Decatur plus areas outside of the City that are within ¾-mile of a DPTS bus route. Individuals using Operation Uplift pay a one-way fare of $2.00. Personal care attendants or escorts may accompany an eligible rider. Personal care attendants may ride free of charge while escorts are required to pay $2.00 per one-way trip.

Individuals must apply for eligibility for Operation Uplift and submit proof of their disability. The following are categories of people who are eligible for Operation Uplift:

- Persons who are unable to board, ride, or disembark from a bus, even if the bus is wheelchair or handicapped accessible;
- Persons who cannot use buses without lifts or other accommodations. These persons are eligible for Operation Uplift only if accessible fixed-route buses are not available on the route on which they need to travel;
- Persons with specific impairments or related conditions who cannot travel to a boarding location or from a disembarking location to their final destination; and,
- In general persons with disabilities who are presently riding fixed-route buses are not eligible for Operation Uplift.

Fare Structure

The current DPTS fixed-route adult bus fare is $1.00. The last fare increase occurred on January 1, 2010, when the DPTS implemented a 25-cent fare increase from the previous adult fare of 75-cents. Youths, ages five through eighteen and those with an approved high school card, ride for a reduced fare of 80 cents. Individuals with disabilities and senior citizens 65 years and older are eligible to ride the fixed-route bus system for a reduced fare of 50 cents. Senior citizens and individuals with disabilities who are eligible for the State's Circuit Breaker program and children less than five years of age may ride for free. Free transfers are issued for connections with other DPTS routes. Table 4-12 summarizes the current DPTS fare structure for the fixed-route buses and for Operation Uplift.

Table 4-12: DPTS Fare Structure

TYPE of FARE	CASH	TOKENS	PUNCH CARDS[1]	MONTHLY PASSES[2]	SATURDAY PASSES[3]
BUS FARES					
Adult (over 18 years of age)	$1.00	$1.00	$18.40	$36.80	$2.00
Youth (5 – 18 years of age and those with an approved high school card)	$.80	$ .80	$14.70	$29.45	$1.60
Child (under 5 years of age, when accompanied by a fare paying passenger)	FREE	N / A	N / A	N / A	N / A
Disabled Passenger (with Medicare Card or DPTS ID card)	$ .50	$ .50	$9.20	$18.40	$1.00
Senior Citizen (65 years of age or older with ID card)	$ .50	$ .50	$9.20	$18.40	$1.00
Disabled or Senior Citizen with Circuit Breaker ID card	FREE	N / A	N / A	N / A	N / A
Transfers	FREE	N / A	N / A	N / A	N / A
OPERATION UPLIFT FARES					
Certified Disabled Rider with DPTS ID card	$2.00	N / A	$36.80	$73.60	$4.00
Escorts (5 years of age and older, if space is available)	$2.00	N / A	N / A	N / A	N / A
Escorts (under 5 years of age, if space is available)	FREE	N / A	N / A	N / A	N / A
Personal Care Attendant (PCA)	FREE	N / A	N / A	N / A	N / A

[1] Good for 20 rides.
[2] Unlimited rides, good only in the month of issue.
[3] Unlimited rides, good only for one Saturday.

Source: Decatur Public Transit System.

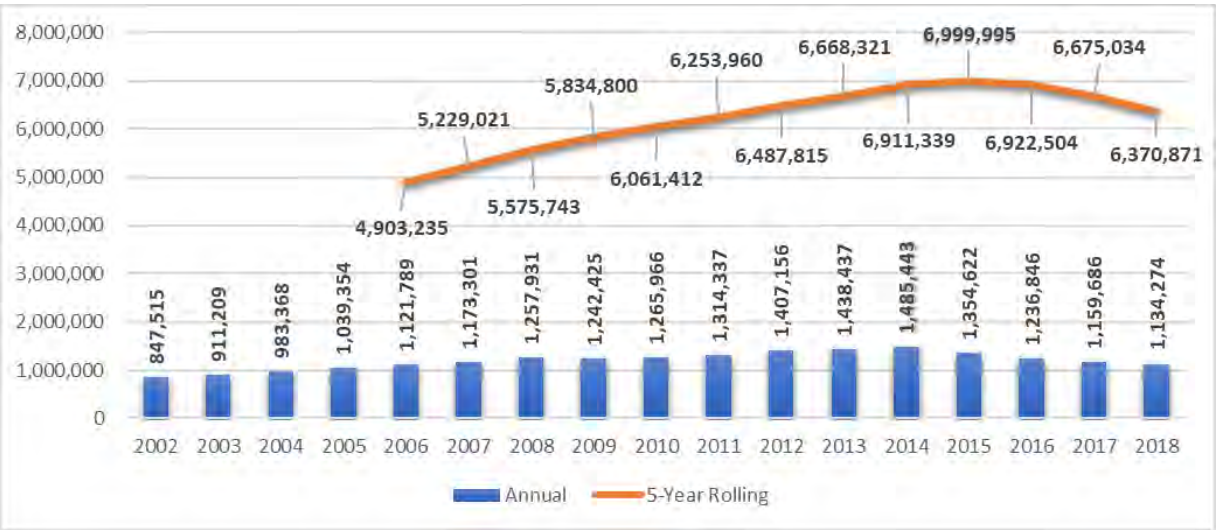
Operational Characteristics

Ridership

Since 2005, transit ridership in the Decatur area has exceeded 1,000,000 annual passenger trips. In 2014, ridership peaked at 1,485,443 passenger trips but has since been steadily declining to 1,134,274 trips in 2018—an approximate decline of 351,000, or 23 percent, over a four-year period. However, to the current riders making a combined 1.1 million trips annually, transit remains a vital means of travel, and in some cases represents a person's only travel option.

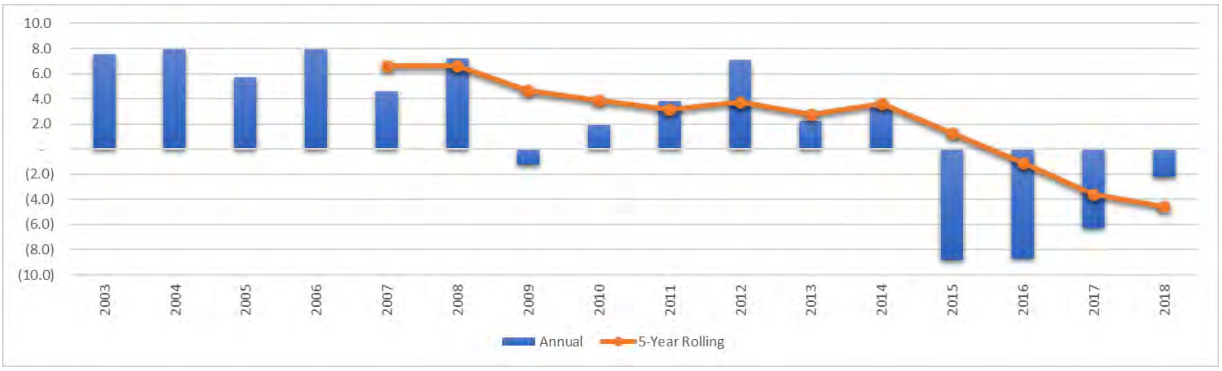
Figure 4-20 displays the annual, and five-year rolling average, ridership from 2002 through 2018. Figure 4-21 displays the percent change in ridership during this same time period.

Figure 4-20: Transit Ridership (2002 – 2018)



SOURCE: Decatur Public Transit System, July 2019.

Figure 4-21: Transit Ridership (Annual Percent Change)



SOURCE: Decatur Public Transit System, July 2019.

There are several factors impacting transit ridership. Nationally, over the past five years there has been a slight overall decline in transit ridership, which may be attributed in part to the sustained economic recovery. In many cases the cost of an automobile is relatively inexpensive, and some individuals may decide to purchase a vehicle as opposed to riding the bus. Gas prices have dropped compared to five years ago, further lowering costs. Aside from the strictly monetary considerations, a person may need a personal vehicle to access jobs at locations or times when

the bus does not operate. Regardless of the exact cause, the DPTS staff recognizes the changing mobility needs of the public and as such plans to conduct a comprehensive operational analysis in 2020 to identify potential service modifications to address the needs of the area residents.

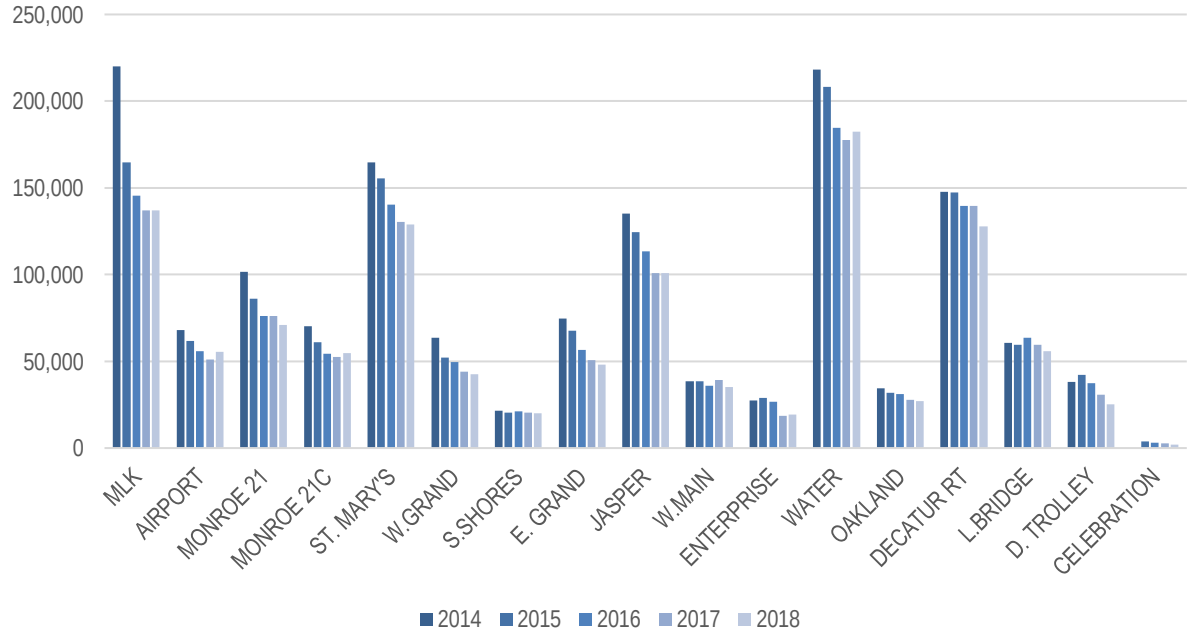
Table 4-13 and Figure 4-22 show ridership by route (including the trolley) from 2014 to 2018. The Water Route had the highest number of riders, followed by MLK and Decatur routes. Nearly all routes declined in ridership in the last five years; however, many stabilized and did not decline further between 2017 and 2018. The Celebration route began service in August 2015.

Table 4-13: Ridership by Route (2014 – 2018)

	2014	2015	2016	2017	2018
MLK	220,110	164,846	145,650	137,091	137,180
AIRPORT	68,069	61,599	56,001	51,210	55,352
MONROE 21	101,522	86,219	76,187	76,041	71,149
MONROE 21C	70,414	60,946	54,473	52,406	54,673
ST. MARY'S	164,777	155,653	140,389	130,506	129,054
W.GRAND	63,521	52,138	49,441	43,894	42,677
S.SHORES	21,504	20,431	21,340	20,611	20,135
E. GRAND	74,808	67,549	56,628	50,589	48,236
JASPER	135,121	124,355	113,562	100,856	100,735
W.MAIN	38,580	38,564	36,109	39,264	35,319
ENTERPRISE	27,487	28,982	26,882	18,694	19,326
WATER	218,361	208,281	184,759	177,622	182,600
OAKLAND	34,393	32,033	31,308	27,938	26,943
DECATUR RT	147,713	147,483	139,759	139,760	127,701
L.BRIDGE	60,773	59,508	63,633	59,703	55,823
D. TROLLEY	38,290	42,266	37,554	30,932	25,235
CELEBRATION	0	3,769	3,171	2,569	2,136
	1,485,443	1,354,622	1,236,846	1,159,686	1,134,274

Source: Decatur Public Transit System, 2019.

Figure 4-22: Fixed-Route Ridership (2014 – 2018)



Source: Decatur Public Transit System, 2019.

The paratransit services of Operation Uplift include trips provided by DPTS vans and by private taxicabs and livery vehicles. Ridership for calendar years 2002 through 2018 is provided in Figure 4-23. In 2018, DPTS paratransit carried approximately 22,200 riders. This ridership total is down significantly from almost 54,000 riders in 2002. This declining ridership is something that should be examined in more detail as part of the COA.

Figure 4-23: Paratransit Ridership

Source: Decatur Public Transit System, 2019.

Vehicle Fleet

DPTS currently has 21 buses and two trolleys for fixed-route service, and eight vans for paratransit service. Historically, the transit system's revenue vehicles are purchased using nearly 100 percent state and federal grant funds.

Under Federal Transit Administration (FTA) regulations, the 12 buses placed in service in 2001 were eligible for replacement in 2013. The actual replacement year depends on the availability of matching state and/or federal funds and the amount of lead time the manufacturer needs to

build and deliver the vehicles. The lead time for new buses is from 12 to 18 months. The DPTS took delivery of four new buses in 2009 and four new buses in 2010. When those eight buses went into service, all of the 1993 buses were eliminated from service.

The DPTS fleet of eight wheelchair accessible vans was acquired during each of 2008, 2010, 2013, and 2017. FTA regulations allow the replacement of vans after five years and as such the 2008, 2010, and 2013 vans are eligible for replacement, and the two vans put into service in 2017 will be eligible for replacement in 2022. Table 4-14 displays the DPTS fleet inventory.

Table 4-14: DPTS Vehicle Fleet Inventory

Fleet #	Year in Service	Make	Model / Type	Length	Expected Life	FTA Eligible Replacement
Fixed-route						
1921	2001	Dbl K	Trolley Replica	28'	12 Yrs	2013
1922	2001	Dbl K	Trolley Replica	28'	12 Yrs	2013
9101	2001	Gillig	Low Floor	30'	12 Yrs	2013
9102	2001	Gillig	Low Floor	30'	12 Yrs	2013
9103	2001	Gillig	Low Floor	30'	12 Yrs	2013
9104	2001	Gillig	Low Floor	30'	12 Yrs	2013
9105	2001	Gillig	Low Floor	30'	12 Yrs	2013
9106	2001	Gillig	Low Floor	30'	12 Yrs	2013
9107	2001	Gillig	Low Floor	30'	12 Yrs	2013
9108	2001	Gillig	Low Floor	30'	12 Yrs	2013
9109	2001	Gillig	Low Floor	30'	12 Yrs	2013
9110	2001	Gillig	Low Floor	30'	12 Yrs	2013
9111	2001	Gillig	Low Floor	30'	12 Yrs	2013
9113	2001	Gillig	Low Floor	30'	12 Yrs	2013
9914	2009	Gillig	Low Floor	30'	12 Yrs	2021
9916	2009	Gillig	Low Floor	30'	12 Yrs	2021
9917	2009	Gillig	Low Floor	30'	12 Yrs	2021
9918	2009	Gillig	Low Floor	30'	12 Yrs	2021
9019	2010	Gillig	Low Floor	35'	12 Yrs	2022
9020	2010	Gillig	Low Floor	35'	12 Yrs	2022
9021	2010	Gillig	Low Floor	35'	12 Yrs	2022
9022	2010	Gillig	Low Floor	35'	12 Yrs	2022
9323	2019			40’	12 Yrs	2031
Paratransit						
1013	2008	ElDorado Nat’l Aerolite		18’	5 Yrs	2013
1014	2008	ElDorado Nat’l Aerolite		18’	5 Yrs	2013
1016	2010	ElDorado Nat’l Aerolite		18’	5 Yrs	2015
1017	2010	ElDorado Nat’l Aerolite		18’	5 Yrs	2015
1019	2013	Braun Entervan		15’	5 Yrs	2018
1020	2013	Braun Entervan		15’	5 Yrs	2018
1026	2017	E450			5 Yrs	2022
1027	2017	E450			5 Yrs	2022

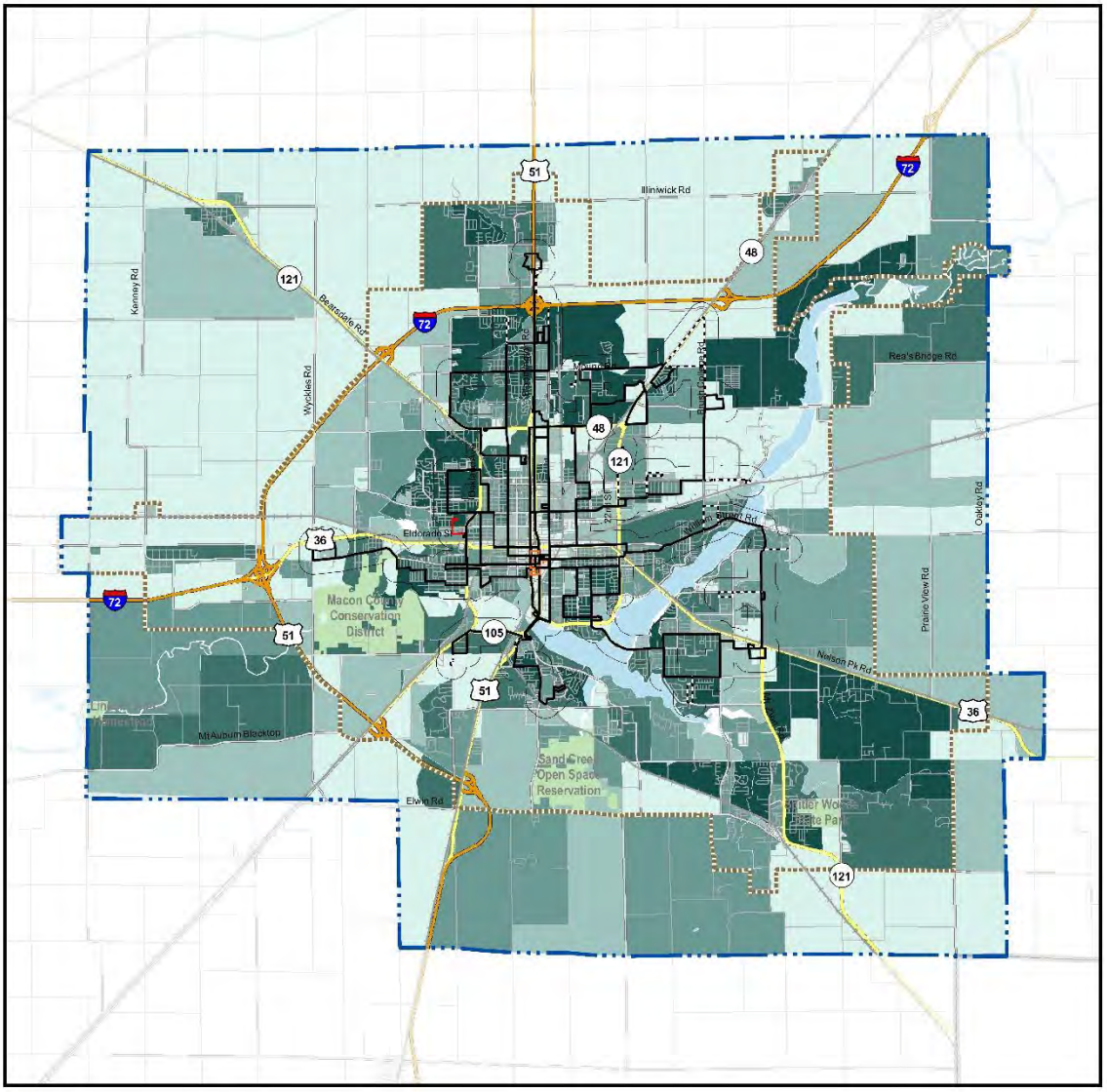
Transit Service Coverage

DPTS primarily operates within the Decatur city limits with the exception of limited service to Forsyth, Harristown, and Long Creek. Transit service coverage in proximity to population and employment was evaluated using Geographic Information System (GIS) along with the travel demand model traffic analysis zones. A quarter-mile buffer on each side of the transit routes was applied to identify the approximate population and number of jobs that falls within the existing service area. A quarter-mile represents the typical walking distance to a transit stop.

Based on recent population estimates completed for the *Decatur Supply Chain Network Planning and Optimization Study*, it is estimated that approximately 61 percent of the current population falls within the existing DPTS service area. Figure 4-24 displays the transit service coverage within a quarter-mile proximity to households/residences within the MPA.

Transit coverage in proximity to employment was also evaluated using GIS to determine the approximate number of jobs served by transit. Existing DPTS service currently covers the majority of non-residential destinations within the MPA. Specifically, the Hickory Point Mall, the Decatur Airport, ADM and other major employers, currently have access via the DPTS fixed-route service. Based on recent employment estimates completed for the *Decatur Supply Chain Network Planning and Optimization Study*, approximately 71 percent of jobs are located within a quarter-mile radius of the DPTS service area. Figure 4-25 displays the transit service coverage in in a quarter-mile proximity to non-residential destinations within the MPA.

Figure 4-24: Population (2015) within ¼-Mile of Fixed-Route Transit



Legend

- 20-Year MPA Boundary
- DUATS Urbanized Boundary
- Railroad
- Interstate
- Principal Arterial

2015 Population

- Less than 75
- 76 - 150
- 151 - 300
- 301 - 600
- Greater than 600
- 1/4 Mile Buffer Transit Route
- Transit Route
- Sup. Service
- Trolley
- MacArthur

2.5 Miles

Data Sources: Illinois DNR, IDOT, US Census, Macon Co, DUATS
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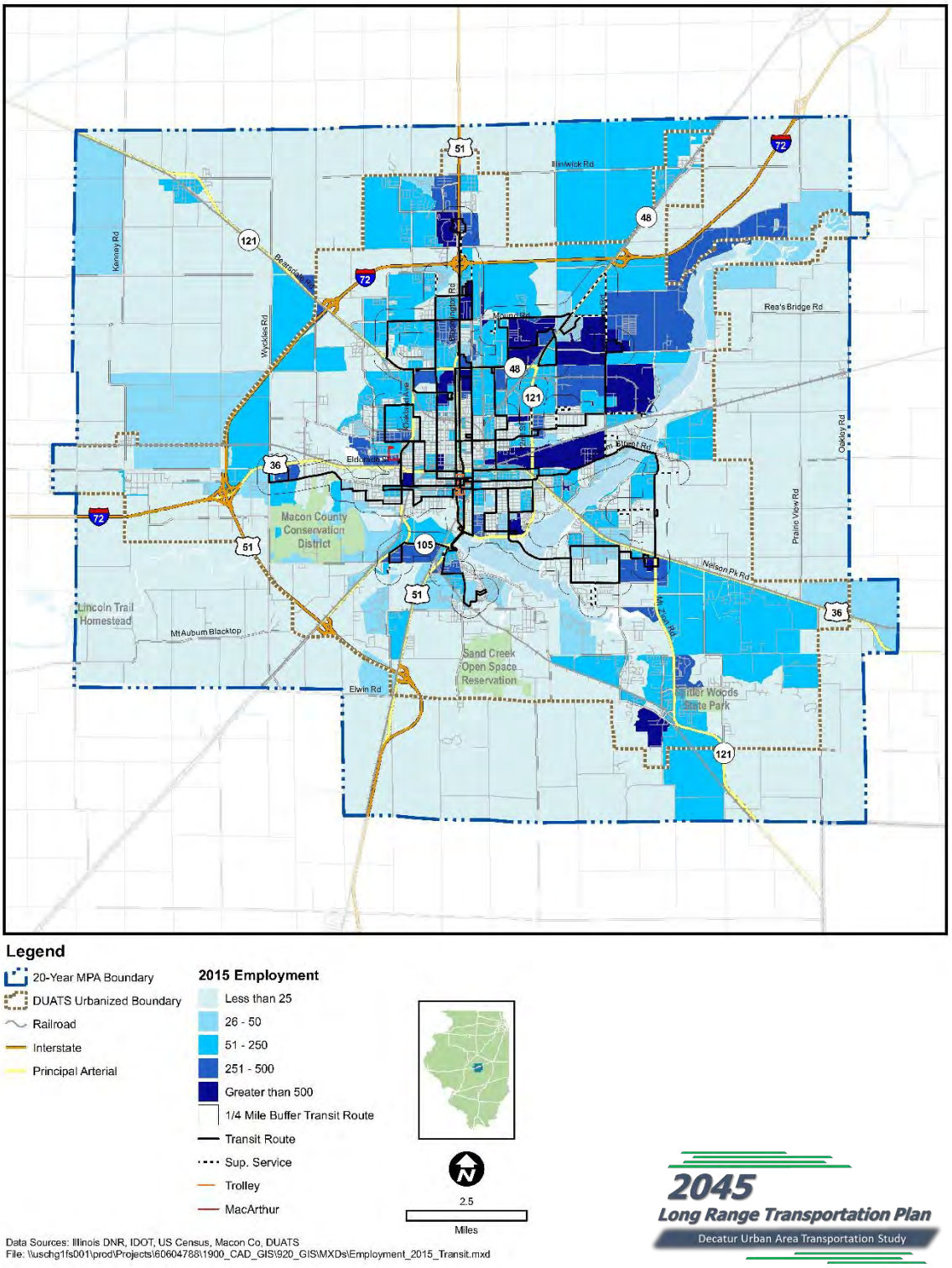
2045 Long Range Transportation Plan
Decatur Urban Area Transportation Study

Figure 4-25: Employment (2015) within ¼-Mile of Fixed-Route Transit



Areas of Concern

As part of prior LRTP updates, DPTS provided input related to transit operations in the area, including issues with at-grade railroad crossings that result in significant or frequent travel delays and areas where capacity / geometric improvements could be implemented to enhance transit operations. Table 4-15 summarizes past areas of concerns. These locations should be revisited as part of the DPTS 2020 COA study to determine if these issues still exist, or if new issues have been identified.

Table 4-15: Transit Needs and Issues

Railroad Crossing Related	Capacity / Geometric Related
Martin Luther King Jr. Dr. (MLK) at:	Van Buren at Water Street and MLK Drive
▸ Wood Street	Riverside from 16th Street to Maffit
▸ Cerro Gordo Street	Maffit from Riverside to Cantrell Street
▸ Peoria Avenue	Medial Drive in South Shores
Oakland Ave. at Cerro Gordo St.	Ridge Drive and Ridgedale Drive
E. Eldorado Street at:	Division St. between Samuel and 27th Street
▸ 800 Block R.R. tracks	Dennis St. between Grand Ave. and Ravina Park Rd
▸ 22nd Street	Dennis St. between W. Main St. and Riverview Ave.
Prairie at 22nd Street	Walnut between Jasper Street and Woodford Street
Monroe Street at Garfield Avenue	Hayworth Street between Decatur and Sunset Ave.
Faries Parkway at:	Prairie Street to 22nd Street
▸ 27th Street	William Street from the Pines to Rte. 105
▸ Near Brush College Road	Oakland Avenue from Eldorado to Grand Avenue
Jasper Street at Garfield Avenue	Fulton from Country Club Road to Baltimore Ave.
Water Street/Main Street at Johnson Street	New entrance to Fairview Park from US Rte. 36
	Extend MLK Drive over I-72 to Forsyth

SOURCE: Decatur Public Transit System

At-Grade Rail Impacts

Lengthy rail delays have a significant impact on the transit system's ability to maintain schedules. Since DPTS transit service operates on a pulse system, all buses need to arrive at the Transit Center at the same time to allow passengers the opportunity to transfer from one route to another. The DPTS, when possible, tries to work around train blockages by deviating from the scheduled route to an alternative route that avoids potentially long rail delays. In doing so, this adds miles and expense to the impacted routes, and causes buses to miss portions of their route—possibly stranding passengers. When there is no detour route, DPTS may send a van to meet the bus, making passenger transfers mid-route.

In January 2011, DPTS collected data to identify how often train blockages impacted transit service. The information that was collected included number of train blockages, number of times the buses had to stop as a result of the blockage, number of times that buses deviated to avoid stopping, and number of passengers impacted by the delay. Table 4-16 summarizes these data.

Table 4-16: Train Blockage Impacts on the Decatur Public Transit System

Month (2011)	Number of Days Data was Recorded	Number of Train Blockages	Average Blockages per Day	Number of Times Buses Were Stopped	Average Number of Buses Stopped per Day	Number of Times Buses Deviated to Avoid Train Blockages	Average Number of Buses that Deviate per Day
January	19	223	11.7	135	7.1	88	4.6
February	24	345	14.4	165	6.9	180	7.5
March	11	153	13.9	64	5.8	89	8.1
Total	54	721	13.4	364	6.7	357	6.6

SOURCE: Decatur Public Transit System (January – March, 2011)

Over the course of almost two months (54 operating days, Monday through Saturday), the DPTS recorded 721 incidents where bus service was impacted by train blockages. Of this total, 364 buses had to stop as a result of the blockages (50 percent), impacting almost seven buses on average per day. The other 357 buses were able to identify the train blockage far enough in advance to deviate from the scheduled route to use an alternative route to avoid potential delays. Table 4-17 shows the transit related impacts in terms of delay and number of passengers impacted.

Table 4-17: Transit Related Impacts Resulting from Buses Stopped for Trains

Month (2011)	Number of Days Data was Recorded	Number of Times Buses were Stopped	Total Delay Time for Stopped Buses (hours:minutes)	Number of Passengers On-Board Stopped Buses	Number of Buses that Missed Connections	Number of Passengers that Missed Connections
January	19	135	12:44	1,224	2	22
February	24	165	14:34	2,176	4	15
March	11	64	6:14	901	1	3

SOURCE: Decatur Public Transit System (January – March, 2011)

Projected Annual Total (based on data collected between January and March, 2011)

2011	304	2,050	188:39*	24,226	39	225

* Equivalent of approximately 7.8 days

Note: Does not assume any adjustment for harvest season when rail delays usually increase.

The 364 buses stopped for train blockages were estimated to be delayed a total of 33 hours and 32 minutes. The total number of passengers on-board when these delays occurred totaled 4,301. During the approximately two-month time period, train blockages resulted in seven buses missing their connection, which impacted 40 riders. When these totals are projected over the course of a year, with no seasonal adjustment for harvest season when rail activity typically increases, it equates to over 2,000 buses being stopped resulting in 188 hours delay, or the equivalent of almost eight full days of delay. Furthermore, the impact to transit riders equates to over 24,000 riders potentially being delayed on an annual basis.

The crossings that were most often impacted by train blockages include:

- **E. Wood at MLK |** Detour routes are possible if the train is noticed in time; two bus routes are affected;
- **E. Eldorado east of Morgan |** Detour routes are possible if the train is noticed in time; two bus routes are affected;
- **MLK north of Cerro Gordo |** Detour routes are possible if the train is noticed in time; one bus route is affected;
- **Brush College at Faries Parkway |** No detour routes; one route is affected; and
- **E. William at N. 23rd Street |** No detour routes; two routes are affected.

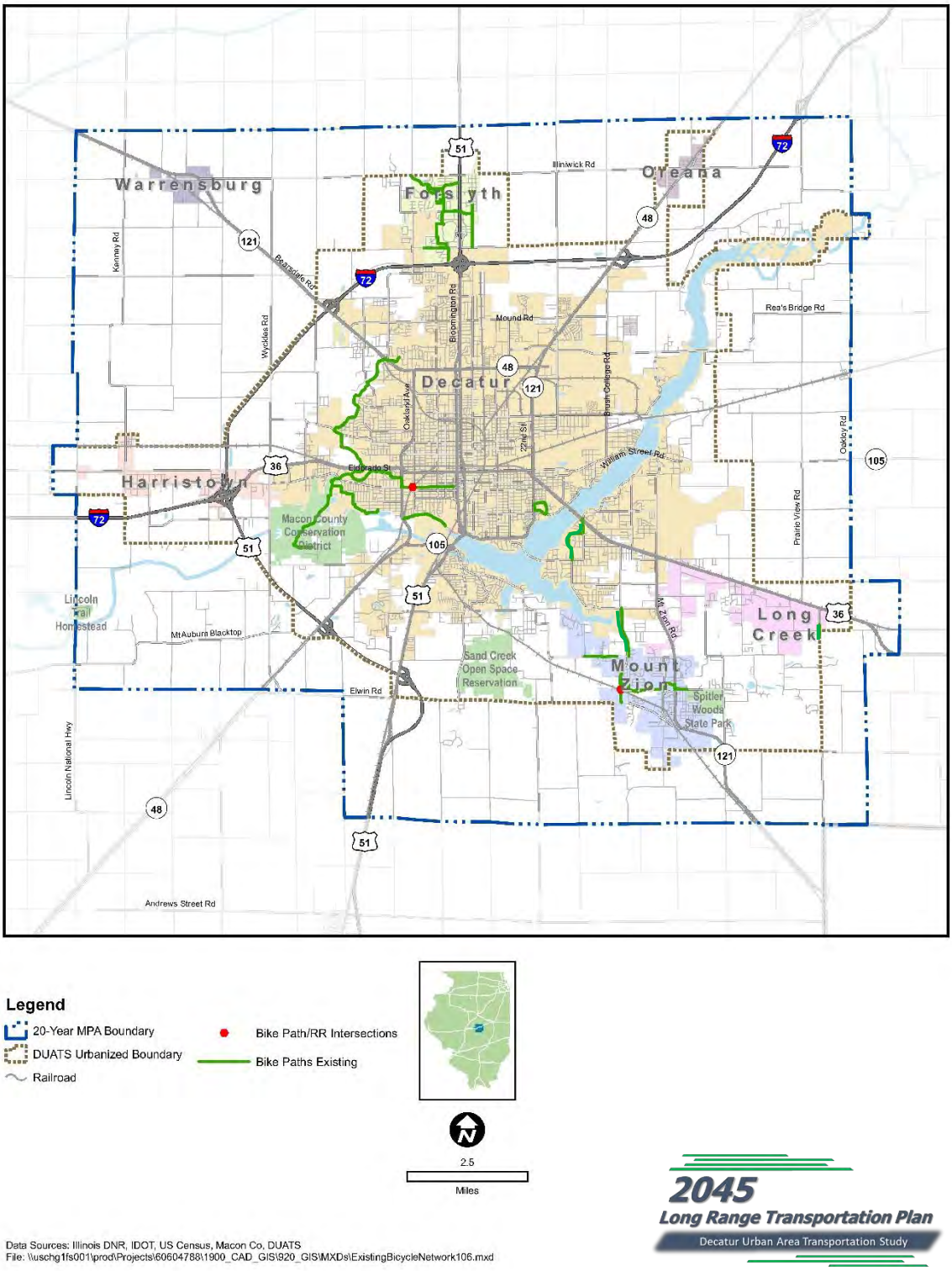
NON-MOTORIZED FACILITIES

Bicycle facilities and trail systems are an increasingly important transportation mode for recreational and other trip purposes. They are also valuable community assets that greatly enhance the quality of life for area residents. Bicycle and pedestrian facilities provide enhanced living environments and have been shown to increase property values and corresponding tax revenues and help stabilize neighborhoods. These facilities provide connections between places and people. As added benefits, they provide open space, can reduce the amount and intensity of storm water runoff, provide a "filter effect" to reduce pollution, and conserve or enhance wildlife habitats.

In 2011, DUATS completed a comprehensive review of the Decatur Metro Area Greenway Plan, adopted in 1998, and the 1996 – 2016 DUATS Comprehensive Bicycle Plan, which was adopted in 1996. Figure 4-26 displays the existing bicycle facilities in the MPA. Most of the bike trails are in the outskirts of Decatur and in surrounding villages including Forsyth and Mt. Zion. The map also highlights potential conflict points (rail crossings) between bicycle and railroad facilities.

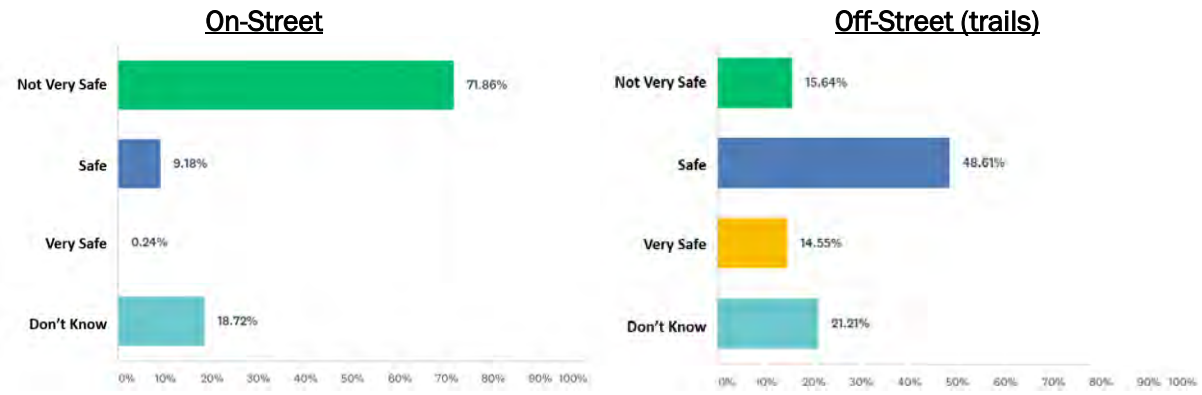
The number of designated bicycle miles in the MPA has more than doubled since 2004, from approximately nine miles to 22.6 miles currently. As of 2018, there are an estimated 12.4 miles of bicycle facilities within Decatur, 3.1 miles in Mt. Zion and 6.1 miles in Forsyth.

Figure 4-26: Existing Bicycle Network



While connectivity (i.e., eliminating network gaps) is often considered the most important factor for a successful non-motorized system, safety and comfort on existing facilities can have a major impact on the non-motorized travel. LRTP survey participants were asked to provide feedback regarding the perceived comfort level of riding on-street and off street (i.e., on a trail). Figure 4-27 shows that the majority (72 percent) do not feel very safe riding on-street and only nine percent feel safe, whereas 49 percent feel safe and 15 percent feel very safe riding on off-street trails. Given the amount of truck traffic in the region, it is not surprising that so few people feel safe riding alongside heavy commercial and passenger vehicles and as such the preference for non-motorized travel in the Decatur region has focused on building dedicated paths/trails.

Figure 4-27: Perceived Comfort Level (On-Street vs. Off-Street Facilities)



Source: DUATS 2045 LRTP Survey, 2019.

Two Decatur street segments, Country Club Road from Airport Road to US-36 and Lost Bridge Road, have a painted curb lane to assist pedestrians and bicyclists. These lanes are not specifically designed for bicycles and their width, striping and pavement conditions vary along their course. There are no dedicated bike lanes in the MPA. However, Decatur has incorporated a bicycle-friendly design during reconstruction efforts on two bridges: the MacArthur / Stevens Creek and South Shores / Sand Creek structures.

Spot Location Deficiencies

In an effort to highlight existing facilities and encourage public support for increasing system miles, DUATS—in cooperation with the Illinois League of Bicyclists and the Decatur Bicycle Club—created a first-ever Decatur Metro Bike Map in November 2010. This was part of a larger LRTP update effort in which meetings were held with the Decatur Bicycle Club to gather input on identifying locations that present concerns to cyclists and other first-hand information regarding bicycling in the MPA.

Members of the Decatur Bicycle Club (DBC) generally felt that there needs to be more done to provide for the safety and convenience of bicycle riders, to encourage more bicycle riding, and to educate the community with regard to the rules and laws associated with bicycle riding. They noted that many motorists think that it is illegal for bicyclers to be on the streets ('Go ride on the sidewalks where you belong!') and often display aggressive, dangerous behavior towards riders.

As part of the last LRTP, the DBC encouraged the implementation of *The Decatur Urbanized Area Comprehensive Bicycle Plan (1996-2016)* which is a supplement to the LRTP. Below are additional comments provided by the DBC.

1. Develop east-west/north-south bike routes through the city. Maybe Wood St and Mound Rd for east-west. Maybe Monroe St and Jasper St for north-south.
2. Purchase abandoned railroad lines for future trails now.
3. All new or improved road/street projects make bicycle and pedestrian compatibility a priority.
4. Bike lanes marked and kept clean for riding with bicycles.
5. Bike lanes evenly paved without grate openings parallel to direction of travel.
6. Bridges should be crossable without riding in car traffic.
7. Signage for bicycle traffic.
8. Bike racks around the city and on buses.
9. Bike storage lockers downtown.
10. Trail maps, benches, and water fountains for riders' convenience.
11. Roads and streets kept in good repair with even pavement.

It was also suggested that it would be a good idea to have an alternative transportation advocate in the planning office to represent alternate transportation, to write grants, etc. This person would be actively involved both in the planning and in the implementation of ideas beneficial to people in the community who wish to use alternative transportation modes.

One of the most frequently mentioned concerns of bicyclists is the strong desire to provide safe and adequate crossings of Lake Decatur. The lack of adequate sidewalks or other facilities that would afford a safe means of crossing Lake Decatur is also supported by the technical analysis. High travel speeds, high traffic volumes, narrow shoulders and lack of adequate sidewalks make crossing Lake Decatur by any means other than a motorized vehicle extremely difficult.

Multi-Use Trails

Well-planned and designed multi-use trails can provide good pedestrian and bicycle mobility. The trails / paths can serve both commuter and recreational cyclists. Generally, the following points are essential to development of successful, multi-use trails. Trail planning in the MPA should address as many of these factors as possible when making trail development decisions.

- Multi-use trails / paths should be separate from vehicular traffic lanes with as few street or driveway crossings as possible to keep the conflict points to a minimum;
- To the greatest degree possible, paths should be located along a river, stream, or other greenway in order to offer an aesthetic experience that attracts cyclists and pedestrians;
- Multi-use trails / paths should make connections to areas such as shopping malls, downtown, schools, parks, employment centers and other community destinations;
- Well-designed street crossings, with measures such as bike and pedestrian activated signals, median refuges, and warning signs for both motor vehicles and path users should be incorporated;
- Trip segments should be shorter than those provided by the road network and should make connections between dead-end streets or cul-de-sacs, or by providing short-cuts through open spaces;
- Proximity to housing and businesses increases visibility, accessibility, and safety. Despite fears of some property owners, paths have not been shown to attract crime into adjacent neighborhoods;

- Good design should include adequate width, sight distance, proper drainage, and the avoidance of blind corners, steep slopes, and other obstructions and impediments; and
- Multi-use trails / paths must be properly maintained, which includes regular sweeping, brush control, and repairs.

Recent Improvements

The majority of recent trail improvements have occurred in the southeastern portion of the DUATS MPA. Improvements have been made along Country Club Road, Baltimore Road, and a small segment along the DUATS eastern MPA boundary, near Long Creek.

Intermodal Connections

Intermodal connections currently require bicyclists to share roadways with automobiles, trucks, and buses in all but a few locations. Safety and accessibility for cyclists and pedestrians is important. Future planning should strongly emphasize and require provisions for alternative modes of transportation in conjunction with new roadways or reconstruction whenever possible. Providing alternative modes of transportation should be a primary concern when making street and roadway improvements bike and pedestrian accommodations should be considered in roadway design and construction.

Another consideration is bicycle parking. For bicycles to be considered a viable travel option, it is necessary for major destinations to accommodate bicycle parking. For example, bicycle parking is provided at the Senator Severns Transit Center, where bicyclists are able to ride to the Transit Center, park, and ride DPTS buses. In addition, on-street bicycle improvements have been made via the installation of bicycle racks by the Macon County Health Department in the Downtown Streetscape. The Decatur Civic Center is an example where there are no provisions for bicycle parking. Since the Civic Center houses the majority of City offices, it should provide accommodations for the cycling public.

Accessibility to Community Resources

Accessibility to community resources (e.g., schools, universities, libraries, and parks), commercial areas, and employment centers are important aspects of any bicycle network. These community resources were overlaid with the existing MPA bicycle system to highlight bicycle accessibility. Potential bicycle improvements are identified to maximize bicycle connections to community resources.

Figure 4-28 identifies various community destinations and facilities—major attractions—which primarily include educational and civic institutions, retail locations, and major industrial / employment centers. Further detail about the major attractors is provided in Table 4-18.

Figure 4-28: Major Trip Attractions

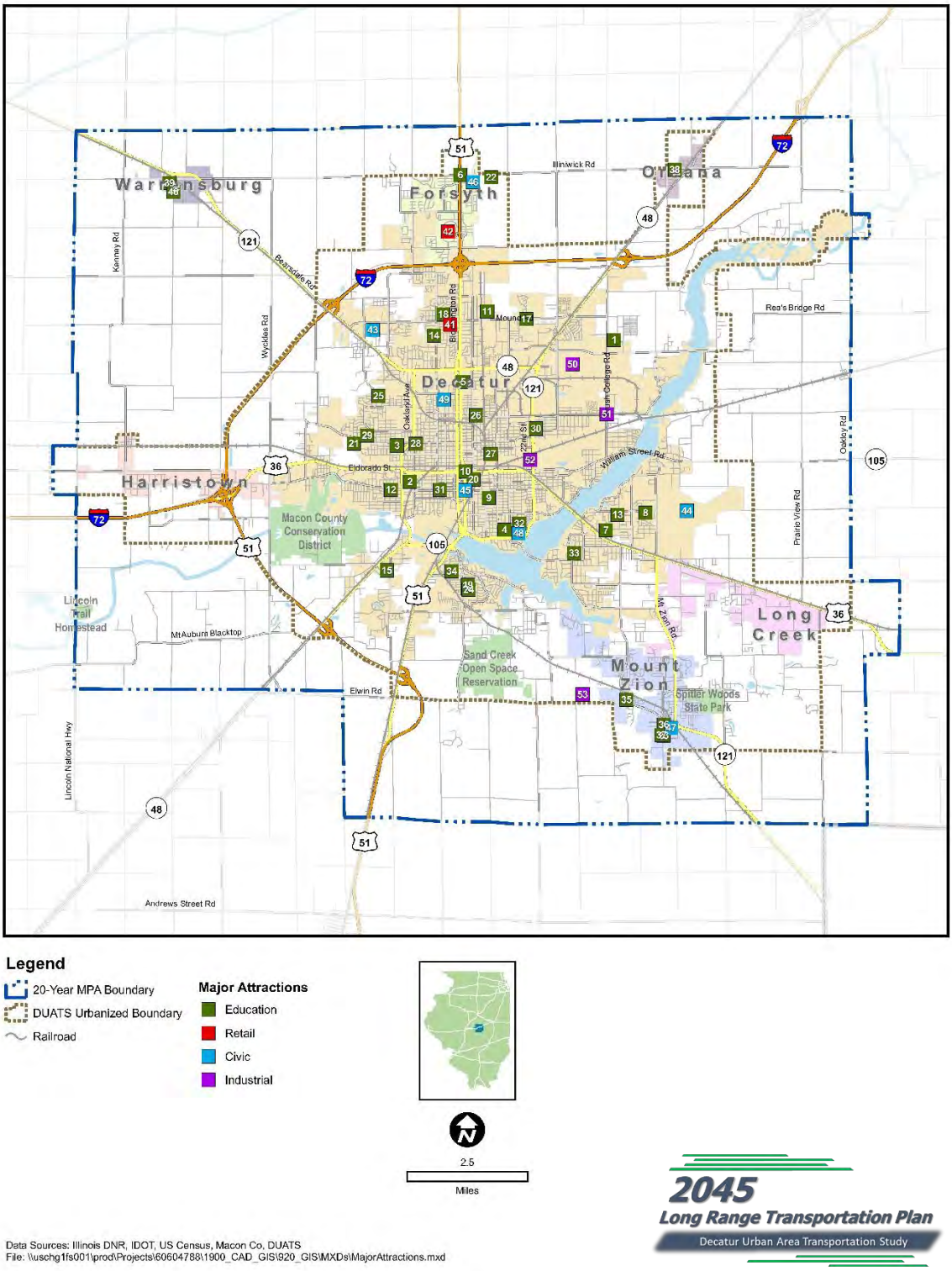


Table 4-18: Key of Major Trip Attractions

(See Figure 4-28)

Educational Institutions

1. Richland Community College
2. Millikin University
3. Douglas MacArthur High School
4. Eisenhower High School
5. St. Teresa High School
6. Decatur Christian School
7. Hillside Bethel Christian School
8. Thomas Jefferson Middle School
9. Johns Hill Magnet School
10. Stephen Decatur Middle School
11. Stevenson Elementary School
12. Dennis Elementary School
13. Michael E. Baum Elementary School
14. Parsons Accelerated School
15. Enterprise Elementary School
16. South Shores Elementary School
17. Lutheran School Association
18. Our Lady of Lourdes
19. Holy Family Elementary School
20. St. Patrick Elementary School
21. Northwest Christian Campus
22. Forsyth Elementary School
23. Mt. Zion Intermediate School
24. Pershing Pre-K Center
25. Benjamin Franklin Elementary School
26. Harris Elementary School
27. Hope Academy
28. Durfee Magnet School
29. Oak Grove Elementary School
30. Robertson Charter School
31. French Academy
32. Phoenix Academy
33. Muffley Elementary School
34. Garfield Montessori Magnet School
35. McGaughey Primary School
36. Mt. Zion Grade School
37. Mt. Zion High School
38. Oreana Elementary School
39. Warrensburg-Lathum Senior / Junior High School
40. Warrensburg Elementary School

Retail Locations

41. Target Center
42. Hickory Point Mall

Civic Institutions

43. Macon County Fairgrounds
44. Decatur Airport
45. Decatur Public Library
46. Forsyth Public Library
47. Mt. Zion Public Library
48. St. Mary's Hospital
49. Decatur Memorial Hospital

Industrial Facilities

50. Caterpillar
51. Archer Daniels Midland (ADM)
52. Tate & Lyle
53. PPG Industries

RAIL OPERATIONS

System Overview

Rail operations within the area are a key component of the regional transportation system and play a significant role in supporting the regional economy. The Decatur region is served by five railroads, including two Class 1 railroads: Norfolk Southern and Canadian National. The other three railroads are Decatur Central Railroad (a subsidiary of Omnitrax), Decatur and Eastern Illinois Railroad (DREI, a subsidiary of Watco), and the Decatur Junction Railway (a subsidiary of Pioneer Railcorp). The primary users of these railroads include major employers such as ADM, Caterpillar, and Tate and Lyle.

Figure 4-29 displays the location of these five railroads, which are described in detail below.

Norfolk Southern

Norfolk Southern (NS) is the largest rail carrier in the Decatur area, which contains the largest flat switching yard in the NS system. Although there are significant switching operations within the Decatur yard, there is minimal impact to traffic because the majority of rail traffic enters the yard through grade separated highway-rail crossings. Where at-grade crossings exist, trains typically operate at a track speed of 40 mph, which only minimally impacts traffic. Furthermore, grade-separated roadways are in proximity to the NS at-grade crossings, so motorists have a viable alternative route that can generally be used to avoid delays.

One significant exception to the previous statements is the NS at-grade crossings along Brush College Road, near Faries Parkway and further north at the ADM plant. Switching operations (serving ADM West and East plants) at these crossings are numerous and can result in significant traffic delays. Unlike through movements on the NS mainline, the switching operations occur at very low speeds which increase the train blockage delays. The Brush College Road at Faries Parkway crossing has been the primary focus of the Brush College Road Corridor Study that has been on-going for the past several years. Currently, the intersection is in Phase II design and construction is anticipated to begin 2021 with a possible opening of the grade separated facility in year 2023.

Canadian National

Canadian National (CN) is the second-largest Class 1 rail companies operating in the Decatur area. While the total number of trains is not as high as NS, CN rail traffic can cause significant disruptions to vehicular traffic when unit coal trains arrive from Peoria destined for ADM facilities. A unit train travels at a very low speed (5 mph to 10 mph) as it enters the yard which is centrally located in the Decatur urbanized area.

CN movements block major north-south thoroughfares including US-51 and MLK Jr. Drive; in these instances, no alternative roadways are available to motorists to avoid delays. When this movement occurs, it is among the most disruptive train blockages to the traveling public. Additional at-grade crossings are also impacted by CN operations, including blockages that are common at 22nd and 27th Streets as CN provides service to ADM. Coal used by ADM represents the majority of material transported by CN trains; however, one general merchandise train typically arrives daily from the south (from Mattoon or Centralia).

Decatur and Eastern Illinois Railroad (WATCO)

Decatur and Eastern Illinois Railroad (DREI, which was formerly CSX Transportation) runs a limited service in the area, operating one or two trains on a typical day. DREI usually transports ethanol and all trains travel east towards Avon Yard near Indianapolis or Terre Haute, Indiana. The Decatur rail yard is the westernmost end of this route. While there are not many trains traveling in and out of the area, DREI still creates numerous at-grade blockages as they assemble trains just south of Wabash-Illinois Central (WABIC) diamond. These train movements directly impact the at-grade crossing of Eldorado (US-36) and many also impact the crossing at the MLK Jr. Drive / Wood Street intersection. The short storage facility in the DREI rail yard requires multiple movements to assemble trains, which is the primary issue causing delays. While these blockages do not necessarily occur daily, they typically occur several times per week.

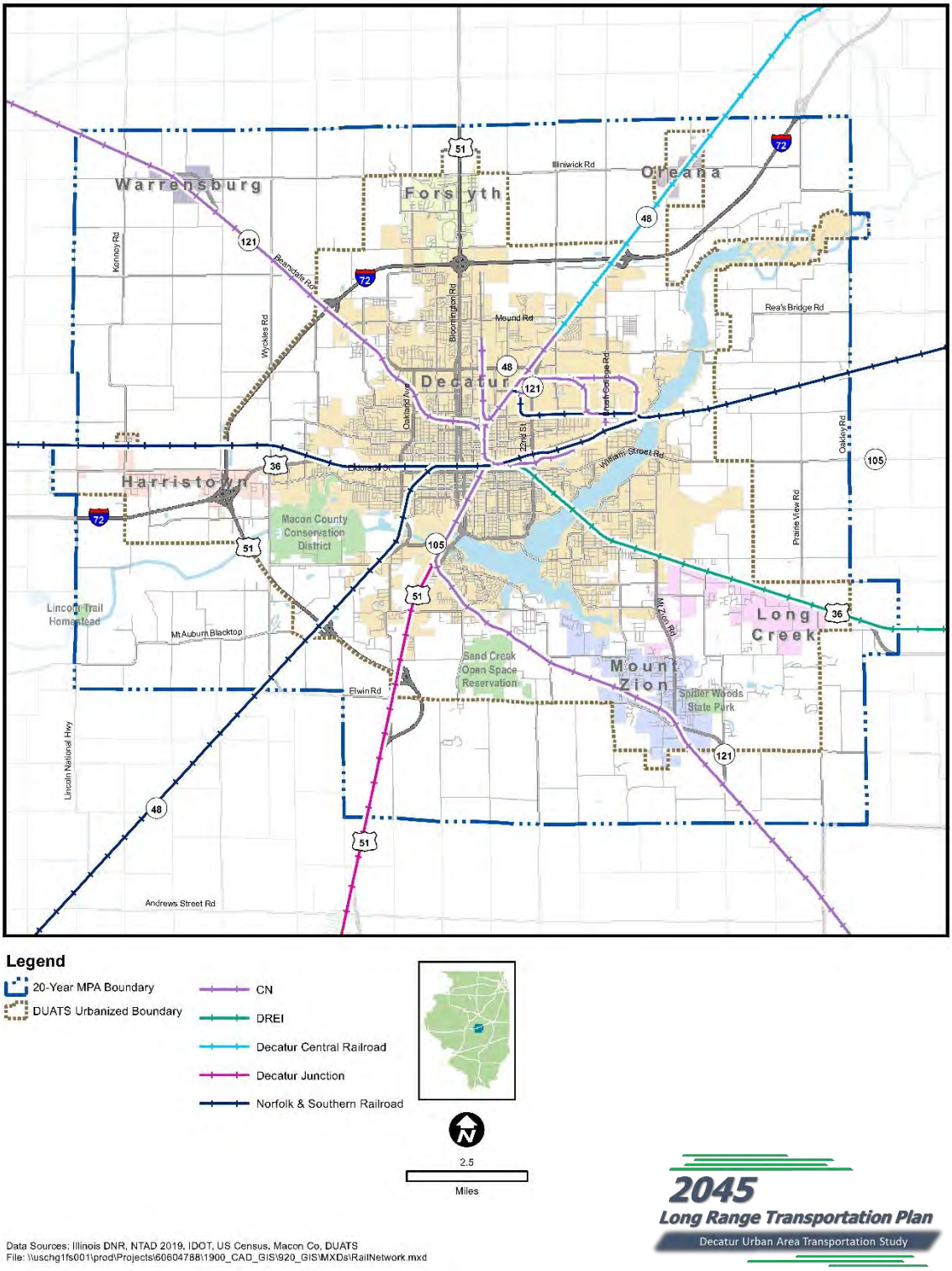
Decatur Central Railroad (Omnitrax)

This short line railroad is operated by the Decatur Central Railroad, a wholly-owned subsidiary of Omnitrax. It consists of a 16-mile span of track from Decatur to Cisco, IL, with major operations in the Decatur region. The railway makes a major connection to the CN in Decatur and through the CN connection the Midwest Inland Port. It primarily ships grain and fertilizer.

Decatur Junction Railway

This short line railroad is operated by the Decatur Junction Railway Company, a wholly-owned subsidiary of Pioneer Railcorp. It consists of a span of track from Assumption to Southeast Decatur. The railway makes a connection to the CN in Decatur and primarily ships grain and fertilizer over this section of track.

Figure 4-29: Railroad Network and Ownership



At-Grade Train Blockages

DATES Study

The *Decatur Area Transportation Efficiency Study* (DATES) was completed in 2013, which evaluated rail and truck movements within the region. The goal was to identify short- and long-term improvements that enhance the overall efficiency of the regional transportation network. Findings from this effort are represented in the following sections, where applicable.

Overview of At-Grade Rail Crossings

In Macon County there are a total of 138 at-grade rail crossings. Of this total, 113 (82 percent) are located in Decatur. The at-grade rail crossings are a significant source of travel delays due to the high number of trains, the train length, relatively slow speed of trains in the urbanized area, and the high traffic volumes on major arterials. A significant number of switching and reverse movements, in/out of rail yards, add to the at-grade crossing delays. Figure 4-32 displays the crossing locations within the DUATS MPA.

While area residents, officials, and stakeholders have long known these issues exist, it has been nearly impossible to document the blockages/delays on a daily or weekly basis. Without this data, it has been difficult for area officials to understand the true impact of rail operations on the regional roadway network. As a result, identifying and prioritizing potential solutions has also been nearly impossible. To address this concern, DATES included the development of a simulation model of the Decatur rail network which has aided in understanding rail issues and ultimately identifying potential solutions to create a more efficient transportation system.

Based on these model results, Figure 4-30 identifies crossing locations representing the highest number of train movements per week, while Figure 4-31 displays the hours of delay associated with the blockages. Together, these figures represent the crossing locations of highest concern.

Figure 4-30: Existing At-Grade Rail Crossings

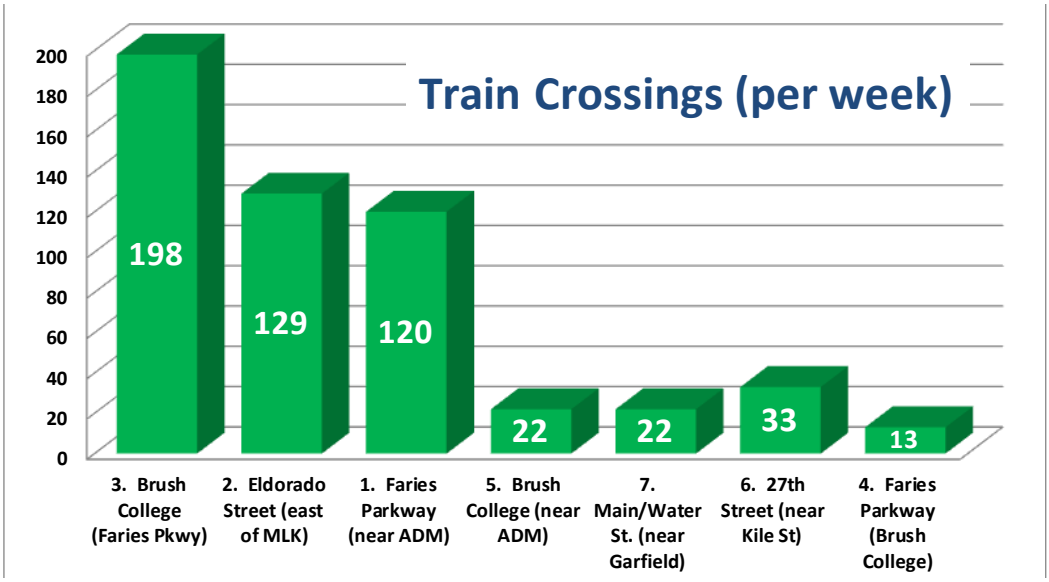
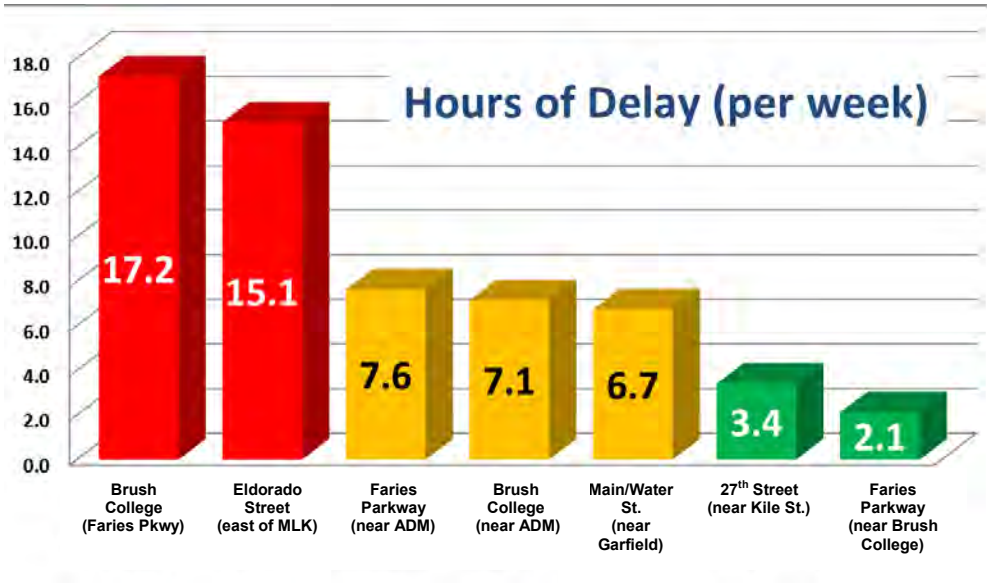


Figure 4-31: Existing At-Grade Rail Crossing Delays



SOURCE: AECOM; RTC Decatur Area Model – DATES.

Brush College Road Crossings

The Brush College Road corridor includes three areas of concern. The first is the bottleneck that exists at the NS rail yard underpass. Current conditions include a very narrow two-lane underpass that has known safety issues, limited non-motorized accommodations, and drainage issues.

The Brush College Road at-grade rail crossing near the ADM East Plant is used to move materials into the ADM plant and often includes very slow movements, including reverse moves that delay traffic. This is an ideal location for ADM to expand yard tracks along the western edge of the East Plant, as the location is accessible by NS (from the south, along the former Illinois Terminal tracks next to Faries Parkway) and by CN (from the north). Expanded rail activity at this location would probably result in more interference with highway traffic at 27th, Faries / Brush College, or both locations. The train movements that occur at this crossing are also a dependent function of how ADM (not the Class 1 railroads) completes their switching. Unlike other crossings in the area, this location does not have any alternate route that can be used to avoid delays.

While crossings along this corridor present the potential to create travel delays, the majority of operations at these locations are limited compared to the main line tracks. Additionally, movements often occur during off-peak times such as late evening and early morning, which further limit travel delays.

Eldorado Crossing

The Eldorado at-grade crossing is another primary area of concern since it is a US highway (US-36) that generates significant rail blockages just east of MLK Jr. Drive. Traffic volumes on Eldorado exceed 20,000 vehicles per day and truck volumes range between 900 and 1,200 per day.

MLK and Wood Crossing

As previously mentioned, the MLK / Wood intersection at-grade crossing is closely linked with the

Eldorado crossing. A number of train movements block this intersection, including trains making reverse movements. The Wood and MLK intersection is somewhat improved as part of the 6W truck route but rail delays can still cause significant delays to trucks and the general public.

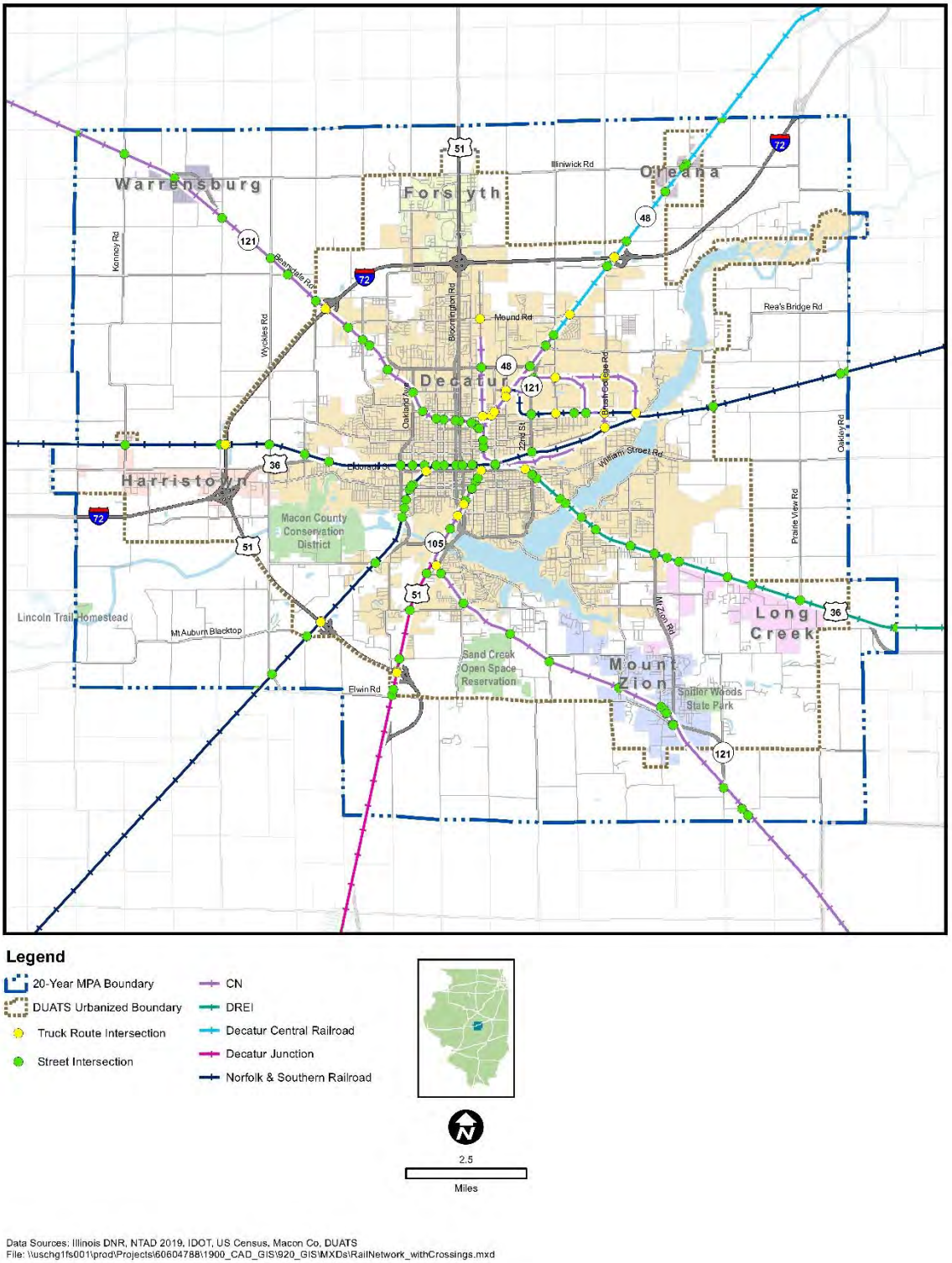
The DATES estimated that there are currently 129 blockages per week that occur at the Eldorado crossing. Of this total, nearly 74 percent (95 trains) also block the MLK / Wood intersection. At the time of the DATES project, it was estimated that of the 95 trains, 64 were CN trains and 31 were CSX trains. Recent data regarding the number of blockages is not available; however, delays still happen at this location.

Because of the significant number of train blockages that occur at Eldorado and MLK / Wood, area residents frequently use the Prairie Avenue underpass to avoid potentially long train delays.

Main, Water, and MLK Crossings

The CN crossings at Main, Water, and MLK Jr. Drive include 22 blockages per week, which result in 6.7 hours of delay. The future year train scenario showed the potential to increase to 29 trains per week resulting in 7.9 hours of delay. In comparison to other crossings throughout the region, these crossings have a lesser impact; however, over time the delays are still an issue. The trains moving through these crossings are generally moving at relatively low travel speeds which can contribute to sometimes lengthy delays.

Figure 4-32: At-Grade Rail Crossing Locations



Data Sources: Illinois DNR, NTAD 2019, IDOT, US Census, Macon Co, DUATS
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Intermodal Connections

The DUATS MPA is well positioned in terms of having the ability and infrastructure in place to ship products to other parts of the country. With the exception of west coast destinations, such as Los Angeles and Seattle, most goods can be shipped to their destination within two days by either rail or truck.

Table 4-19 displays the distance and approximate travel time (in days) for rail and trucks to reach major destinations. Figure 4-33 shows the 200-mile and 500-mile shipping distances from Decatur.

Table 4-19: Freight Distance by Miles and Travel Days by Rail and Truck

City	Miles	Days by Rail	Days by Truck
Atlanta, GA	592	2	1
Chicago, IL	179	1	1
Cincinnati, OH	270	1	1
Cleveland, OH	473	1	1
Dallas, TX	764	3	2
Denver, CO	901	2	2
Detroit, MI	422	1	1
Indianapolis, IN	165	1	1
Kansas City, MO	344	1	1
Los Angeles, CA	1,935	4	4
Memphis, TN	380	2	1
Minneapolis, MN	500	3	1
New Orleans, LA	758	2	2
New York, NY	906	2	2
St. Louis, MO	120	1	1
Springfield, IL	36	1	1
Seattle, WA	2,075	4	4

SOURCE: DUATS (2014)

Figure 4-33: Freight Coverage Area (within 200 and 500 Miles)

Although existing surface transportation affords the ability to ship products quickly and easily, intermodal freight connectivity is limited within the MPA. Currently, there is no rail access to the airport and there are limited rail spurs serving major industrial locations such as ADM and Caterpillar. Rail track to the old Firestone plant is still in place, serving some locations, e.g., steel unloading for a fabrication plant and scrap dealers.

One possible location for an intermodal facility is located off the CSX track near the business industrial park located south of the Decatur Airport. However, current rail traffic volumes would likely not warrant the development of an intermodal facility at this time. Further study and discussion is strongly encouraged as to the location and future construction of an intermodal freight facility.

Midwest Inland Port

In 2009-2010, ADM built its own 250-acre Rail and Intermodal Logistics facility to handle switching yard and storage tracks that serve freight trains. The facility allowed the company to efficiently load and unload freight products based on their own production schedule. This was a significant investment for rail operations in the area, as the railroad companies could more easily respond to ADM's needs while freeing ADM of having to rely on the railroads for switching operations.[4]

The facility is part of the larger Midwest Inland Port operation, which is the collective and connected infrastructure network of the Class 1 railroads, five major roadways (I-72, I-55,

[4] Dupin, Chris. "All Points on the Compass: With new intermodal yard in Decatur, ADM can move containers efficiently in the U.S. and Canada. American Shipper (October 2012).

I-74, I-57, and US-51), the Decatur Airport, an intermodal ramp, and other facilities. The Port is also within a Tax Increment Financing (TIF) district and Enterprise Zone, Foreign Trade Zone, and features customs clearing operations.

These types of intermodal improvements represent significant and prolonged investment opportunities for businesses and industries that support or rely on freight rail operations, which are a major boon to the local economy of the MPA.

AVIATION

The following provides an overview of existing facilities and operations at the Decatur Airport. The airport is located approximately four miles east of downtown Decatur at 910 Airport Road.

System Overview

The Decatur Airport is owned and operated by the Decatur Park District. The Airport is one of only five Park District-operated airports in the State of Illinois and the only Park District-owned airport served by an air carrier (Cape Air). The Airport encompasses an area of approximately 2,200 acres and includes over 5,000,000 square feet of pavement surface for aircraft operations (runways, taxiways, and parking aprons) and 360,000 square feet of roads and vehicle parking areas. The Decatur Airport has the fourth-longest runway in the State at 8,500 feet in addition to two other runways.

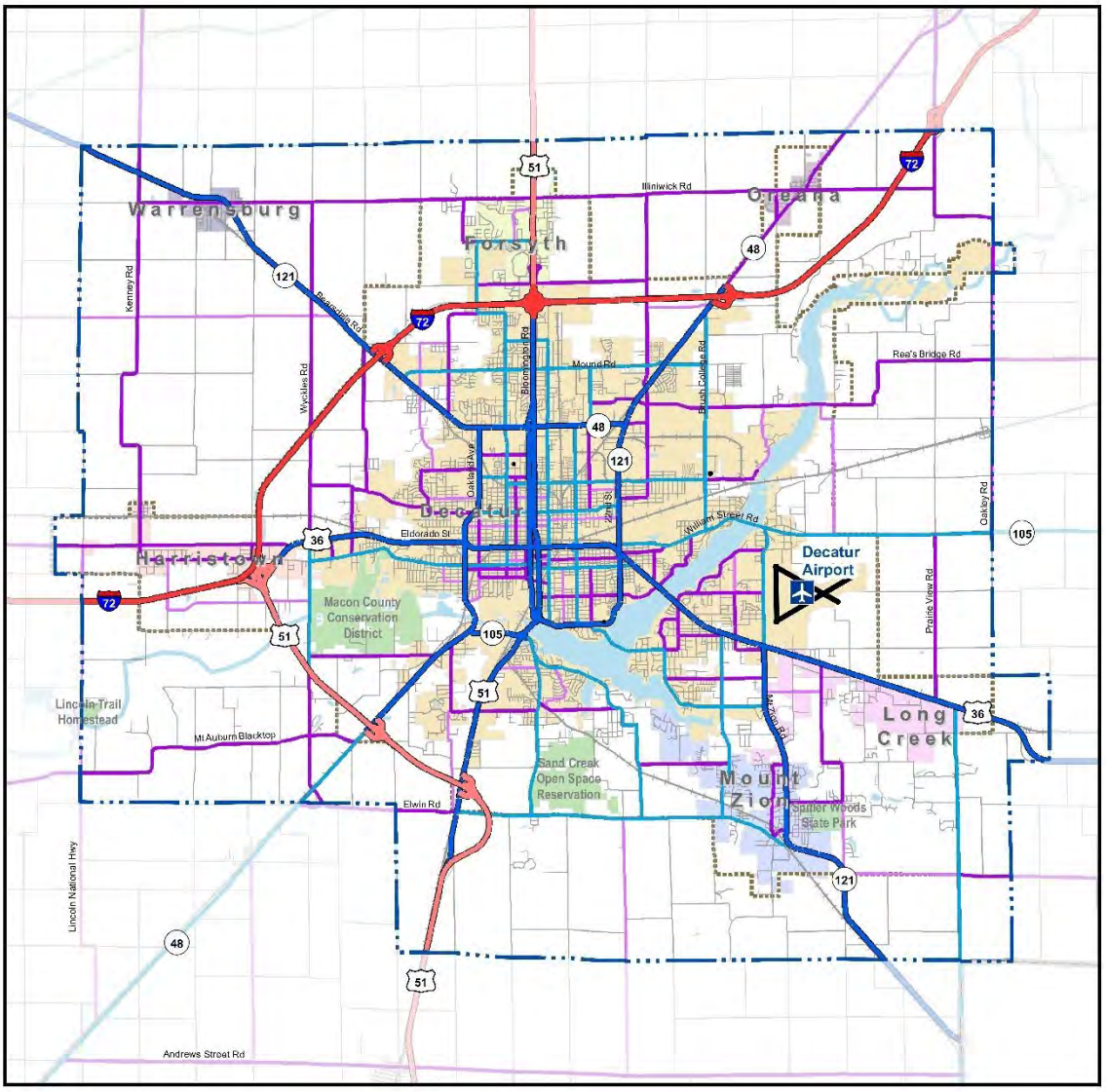
The Decatur Airport is located along the east-central edge of the MPA (Figure 4-34). As mentioned, the airport maintains three runways. The primary runway (6/24), measuring 8,500 by 150 feet, can accommodate large jet service and has a surface of grooved asphalt and concrete. Runway 12/30 is 6,800 feet by 150 feet with a surface of grooved (partial) asphalt and concrete. Runway 18/36 is 5,300 by 150 feet with a surface of grooved asphalt. All three runways are served by a full taxiway system and monitored by a control tower. Two multiple storage hangers are on site to house some of the 125 base aircraft. One is 27,000 square feet and the other is 8,000 square feet. There are 115 T-hangers also on site. Full snow removal capabilities are present, and a fire station is located on the field, enabling 24/7 operations. Figure 4-35 displays the Decatur Airport diagram.

Facilities

The Decatur Airport Terminal Building is a 24,000 square-foot ground level facility housing two gates, airline and car rental counters, seating areas for passengers and guests, baggage claim area, administrative offices, and a restaurant/banquet facility. Nearby parking is available for visitors and travelers have the convenience of long-term parking at no-charge. The airport amenities/businesses include the following:

- American Connection Ticket Counter
- Avis Rent-A-Car
- “Main Hangar” Restaurant and Banquet Facility
- Lobby Seating Area
- Volunteer Information Desk
- Baggage Claim Area
- Advertising Displays
- Motel Courtesy Phone
- Airport Administrative Offices
- Foreign Trade Zone and US Customs

Figure 4-34: Decatur Airport (with Roadway Functional Classification)



Legend

- 20-Year MPA Boundary
- DUATS Urbanized Boundary
- Railroad

Functional Class

- Interstate
- Freeway and Expressway
- Other Principal Arterial
- Minor Arterial
- Major Collector
- Minor Collector
- Local Road or Street

2.5 Miles

Data Sources: Illinois DNR, IDOT, US Census, Macon Co, DUATS
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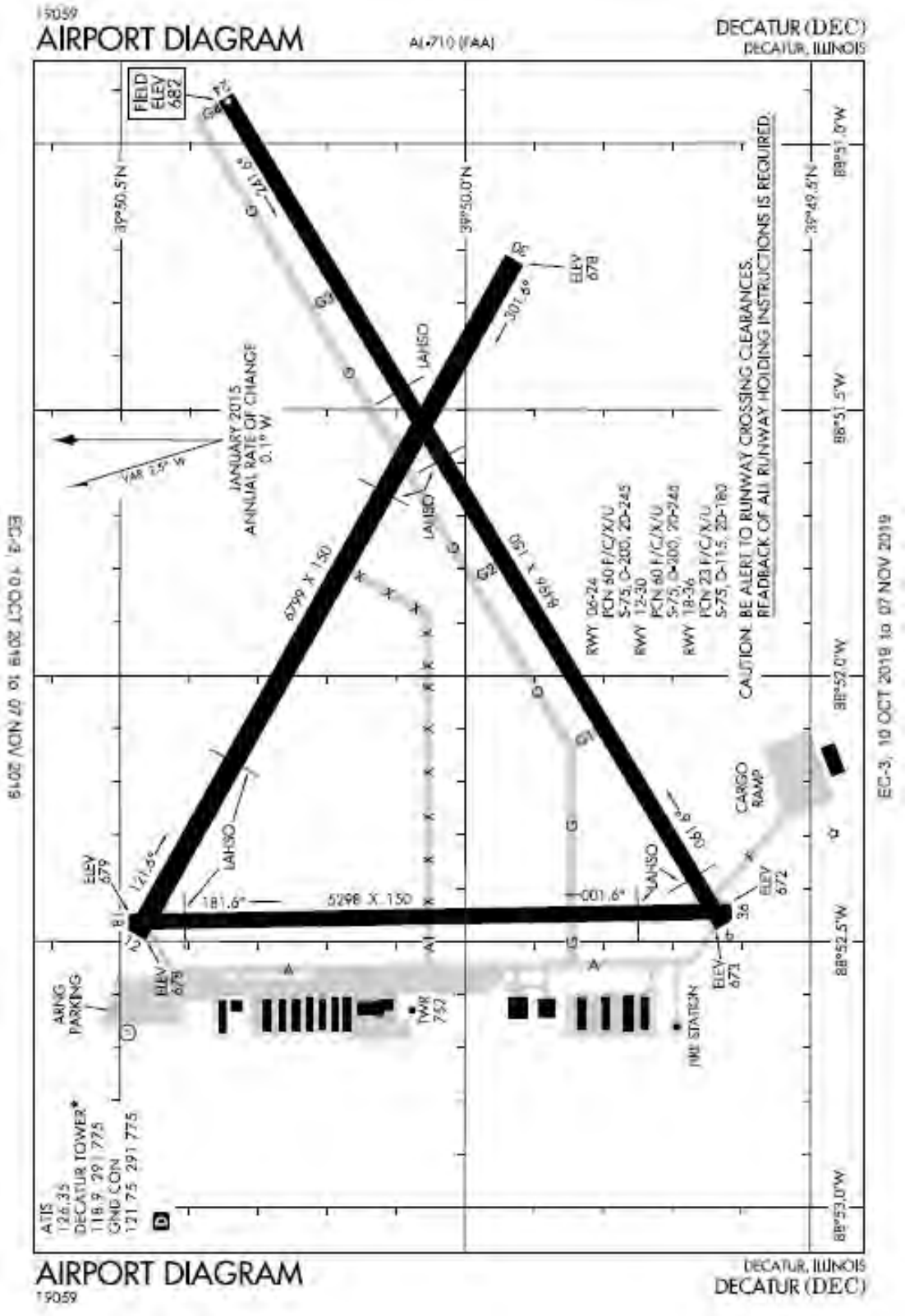
2045 Long Range Transportation Plan
Decatur Urban Area Transportation Study

Figure 4-35: Decatur Airport Diagram



https://aeronav.faa.gov/d-tpp/1911/00710AD.PDF

Foreign Trade Zone #245

According to the *Decatur Supply Chain Network Planning and Optimization Study*, the Decatur Park District oversees the Decatur Airport and the airport's business park. The business park is a foreign trade zone (FTZ #245) which features 42 acres of land adjacent to the airport runway available for commercial development. The business park also features a vacant cross dock facility that that was originally built for UPS air cargo operations through the Decatur airport.

FTZ #245 was established at the Decatur Airport in 2000 with Decatur Park District being named as the "Zone Grantee." FTZs are designated sites where special customs procedures apply. The designated area is called a General Purpose US FTZ, which for Customs purposes is considered outside the United States. This designation allows nearly any imported merchandise to be brought into an FTZ for manipulation, without paying U.S Customs or duties fees. This is intended to encourage US companies to conduct business in the Decatur area by keeping the cost of imports and exports down. The MIP is also serviced by the Decatur Airport, the U.S. Customs office, and has Foreign Trade Zone status. A Sub-Zone Site designation had been applied for by ADM with support of the Decatur Park District.

Department of Homeland Security

The Decatur Airport is designated a US Customs Port and serves as an important regional freight hub. This facility services corporate and general aviation aircraft, which is potentially a major growth factor for the airport. The US Customs office became operational on August 29, 1999, funded through user fees and a Decatur Park District subsidy. When entries reach 25,000 per year, US Customs typically fund the operation.

ADM, Caterpillar, and other corporate flyers are the primary users of the Customs facility. Until recently, the airport also served as a hub for UPS. Prior to the economic downturn, UPS made the Decatur Airport its primary facility for Illinois south of I-80 with more than ten million pounds of freight passing through each year. ADM ships between South America and Canada and items destined for those locations can clear customs at the Decatur Airport. The presence of both Customs and the FTZ make the Decatur Airport unique from other regional airports and provides the business park and the region an excellent location and opportunity for growth.

Land Use and Accessibility

The land uses surrounding the Decatur Airport are compatible with air service—close access to a business industrial park is particularly beneficial. As part of the airport layout plan there is the possibility of a CSX rail spur to serve the industrial park. This would likely occur if the industrial park occupant needed rail service.

The Decatur Airport is located on the eastern edge of the city and can be accessed via US-36, IL-105, and IL-121. There is no direct access to the airport by interstate or other limited-access highways. The Beltway is a planned improvement that will benefit the industrial park by providing increased accessibility for passengers, commercial vehicles and other airport users.

Operational Characteristics

The Decatur Airport is served by commercial airline service provided by Cape Air, which provides charter service to Burlington (Iowa), Chicago, Ironwood (Michigan), Jonesboro (Arkansas), and St. Louis. There are four departure flights per weekday from Decatur to Chicago and two departure

flights to St. Louis. On Saturdays there are five departures—three to Chicago and two to St. Louis. On Sundays there are three departures—two to Chicago and one to St. Louis.

The primary users of the airport are general aviation and the military. Gaitros Aviation LLC offers aviation fuel sales, pilot lounge and quiet room, ramp/tie-down services, aircraft cleaning, and hangars for aircraft storage. Between 2004 and 2018, operations have averaged 43,450 take-offs and landings per year. During this time period, operations reached a high of approximately 48,000 in 2007. Within the past five years (2014 to 2018) operations averaged slightly over 41,250 per year, down approximately 3,300 compared to the 2004 to 2013 average. The total operations (take-offs and landings) for the Decatur Airport (years 2004 to 2018) are displayed in **Table 4-20** and **Figure 4-36** displays annual operations along with the 5-year rolling average.

Table 4-20: Decatur Airport, Commercial and Non-Commercial Take-Offs and Landings

Year	Itinerant					Local			Grand Total
	Air Carrier	Air Taxi	General Aviation	Military	Total	Civil	Military	Total	
2004	14	2,777	19,300	952	23,043	19,461	426	19,887	42,930
2005	20	2,586	18,767	1,896	23,269	16,509	1,669	18,178	41,447
2006	41	2,917	17,078	2,301	22,337	19,621	3,554	23,175	45,512
2007	33	3,161	17,610	2,344	23,148	21,081	3,632	24,713	47,861
2008	42	2,523	15,224	2,635	20,424	19,380	4,821	24,201	44,625
2009	4	2,409	15,834	1,633	19,880	19,945	2,666	22,611	42,491
2010	3	3,942	13,699	3,020	20,664	19,562	5,356	24,918	45,582
2011	9	4,003	13,595	3,398	21,005	18,767	6,694	25,461	46,466
2012	13	4,021	11,988	3,839	19,861	17,140	7,309	24,449	44,310
2013	1	3,986	12,138	3,710	19,834	17,697	6,689	24,386	44,220
2014	0	3,911	11,379	3,552	18,842	17,078	6,862	23,940	42,781
2015	7	3,893	12,002	3,111	19,013	17,216	5,496	22,712	41,725
2016	22	4,060	10,778	3,770	18,630	14,822	6,406	21,228	39,858
2017	5	4,244	11,459	3,523	19,231	15,428	6,302	21,730	41,014
2018	9	4,349	10,398	3,636	18,392	15,329	7,081	22,410	40,906
2004 to 2013	18.0	3,232.5	15,523.3	2,572.8	21,346.5	18,916.3	4,281.6	23,197.9	44,544.4
2014 to 2018	8.6	4,091.4	11,203.2	3,518.4	18,821.6	15,974.6	6,429.4	22,404.0	41,256.8
Change	-9.4	858.9	-4320.1	945.6	-2,524.9	-2,941.7	2,147.8	-793.9	-3287.6

Source: Decatur Airport (2019).

Figure 4-36: Airport Operations

NOTE: 5-Year Rolling represents last year of the 5-year period. For example, 2008 represents the 5-year total between 2004 and 2008.

Enplanements

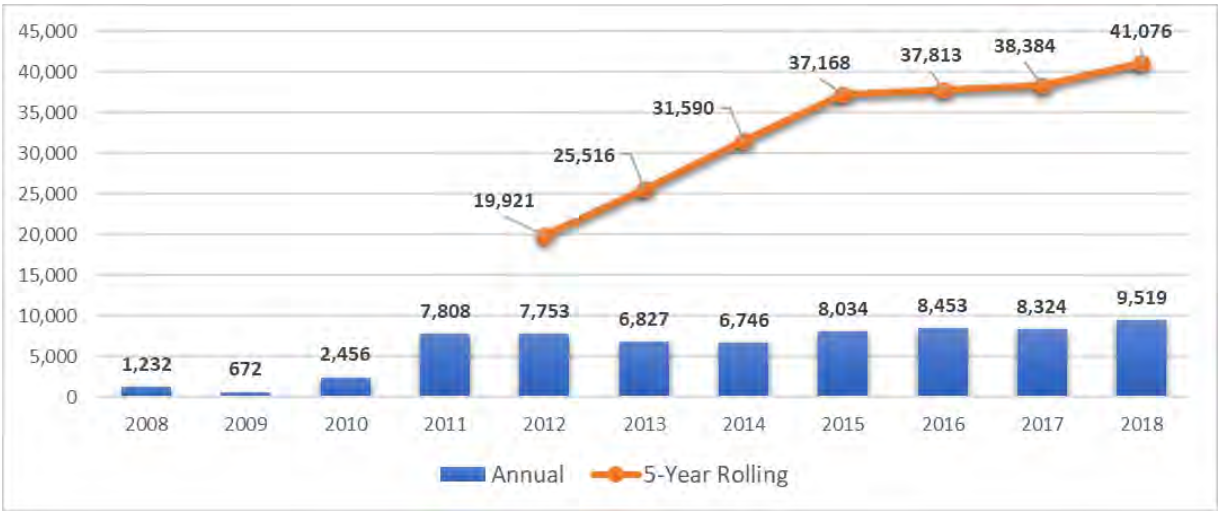
Enplanements, i.e., the number of passengers who board an airplane, has been steadily increasing over the past decade. Table 4-21 and Figure 4-37 display the annual enplanements for the Decatur Airport between 2008 and 2018. In 2011, enplanements jumped significantly to 7,800 with the introduction of commercial air service and then declined slightly until 2015, when they rebounded to hit 8,000. Since 2015, enplanements have been increasing to reach 9,500 in 2018. A total of 10,000 passengers per year is the threshold to be designated as a Primary Airport and the Decatur airport is quickly approaching this threshold.

Table 4-21: Decatur Airport Total Enplanements (2008 – 2018)

Year	Airport Service Class	Enplanements	Percent Change (from previous year)
2008	General Aviation	1,232	-
2009	General Aviation	672	-45.5
2010	General Aviation	2,456	265.5
2011	Commercial Service	7,808	217.9
2012	Commercial Service	7,753	-0.7
2013	Commercial Service	6,827	-11.9
2014	Commercial Service	6,746	-1.2
2015	Commercial Service	8,034	19.1
2016	Commercial Service	8,453	5.2
2017	Commercial Service	8,324	-1.5
2018	Commercial Service	9,519	14.4
Average 2008 to 2013		4,458	-
Average 2014 to 2018		8,215	-
Change (2008-2013 vs 2014-2018)		3,757	84.3

SOURCE: Decatur Airport (2019).

Figure 4-37: Airport Enplanements (2008 – 2018)



SOURCE: Decatur Airport (2019).

2045 Long Range Transportation Plan
Decatur Urban Area Transportation Study

Chapter 5
FUTURE NEEDS ANALYSIS

This chapter summarizes year 2040 population and employment projections *and the* multimodal conditions and issues *within the Metropolitan Planning Area.*

The analysis addresses potential multimodal deficiencies and identifies projects for roadways, public transportation, freight, non-motorized, *and* aviation.

2045 Population and Employment Projections

For consistency, the year 2045 population and employment projections for the DUATS LRTP were the same as the projections developed for the *Decatur Supply Chain Network Planning and Optimization Study*. The 2045 projections are summarized below.

2045 Population and Employment

According to the U.S. Census, the population in Macon County was 107,732 in 2018, which continues the downward population trend that was highlighted in Chapter 3. The *Decatur Supply Chain Network Planning and Optimization Study* acknowledged a continued downward population trend through 2045; however, in terms of employment, 2045 projections showed an increase from 64,483 jobs in 2018 to 67,436 jobs in 2045. Given the projected increase in employment, the consultant determined that from a long-term planning perspective, the population growth should reflect a similar percentage increase as that of employment (4.6 percent). As such, the 2045 population for the region is projected to be 112,666, representing just under a 5,000 person increase over the next 25 years. Table 5-1 summarizes the projected 2045 population and employment for the region.

Table 5-1: 2045 Population and Employment Projections

	Year				Change (2018 - 2045)	
	2018	2020	2030	2045	Total	Percent
Population	107,732	107,188	105,342	112,666	4,934	4.6%
Households	46,932	46,865	47,751	49,081	2,149	4.6%
Total Employment	64,483	65,091	66,029	67,436	2,953	4.6%
Industrial/ Utility/Farm Employment	16,033	16,004	16,468	17,165	1,132	7.1%
Commercial Employment	8,689	8,724	8,710	8,689	-	0.0%
Service Employment	39,761	40,363	40,851	41,582	1,821	4.6%

Source: Decatur Supply Chain Network Planning and Optimization Study (Woods and Poole/KOA/Quetica)

Figure 5-1 displays projected population levels in 2045 and Figure 5-2 displays projected population densities in 2045. Figure 5-3 displays the population change between 2015 and 2045.

As described in Chapter 3, the largest industry sectors in Macon County in 2018 were Manufacturing, Health Care and Services, and Government—all three of which experiences positive growth in jobs between 2013 and 2018, according to Emsi data sources. Manufacturing grew by 7 percent, Health Care and Services by 8 percent, and Government by 2 percent. The largest growth sectors in proportional terms were Utilities (16 percent growth), Administrative and Support Services (9 percent growth), and Professional and Technical Services (8 percent growth). The sectors that shrank the most were Management of Companies, Information, and Real Estate and Leasing, all of which have low concentrations in the area and contracted by over 10 percent between 2013 and 2018.

Figure 5-4 displays projected employment levels in 2045 and Figure 5-5 displays projected employment densities in 2045. Figure 5-6 displays the employment change between 2018 and 2045.

Figure 5-1: Projected 2045 Population

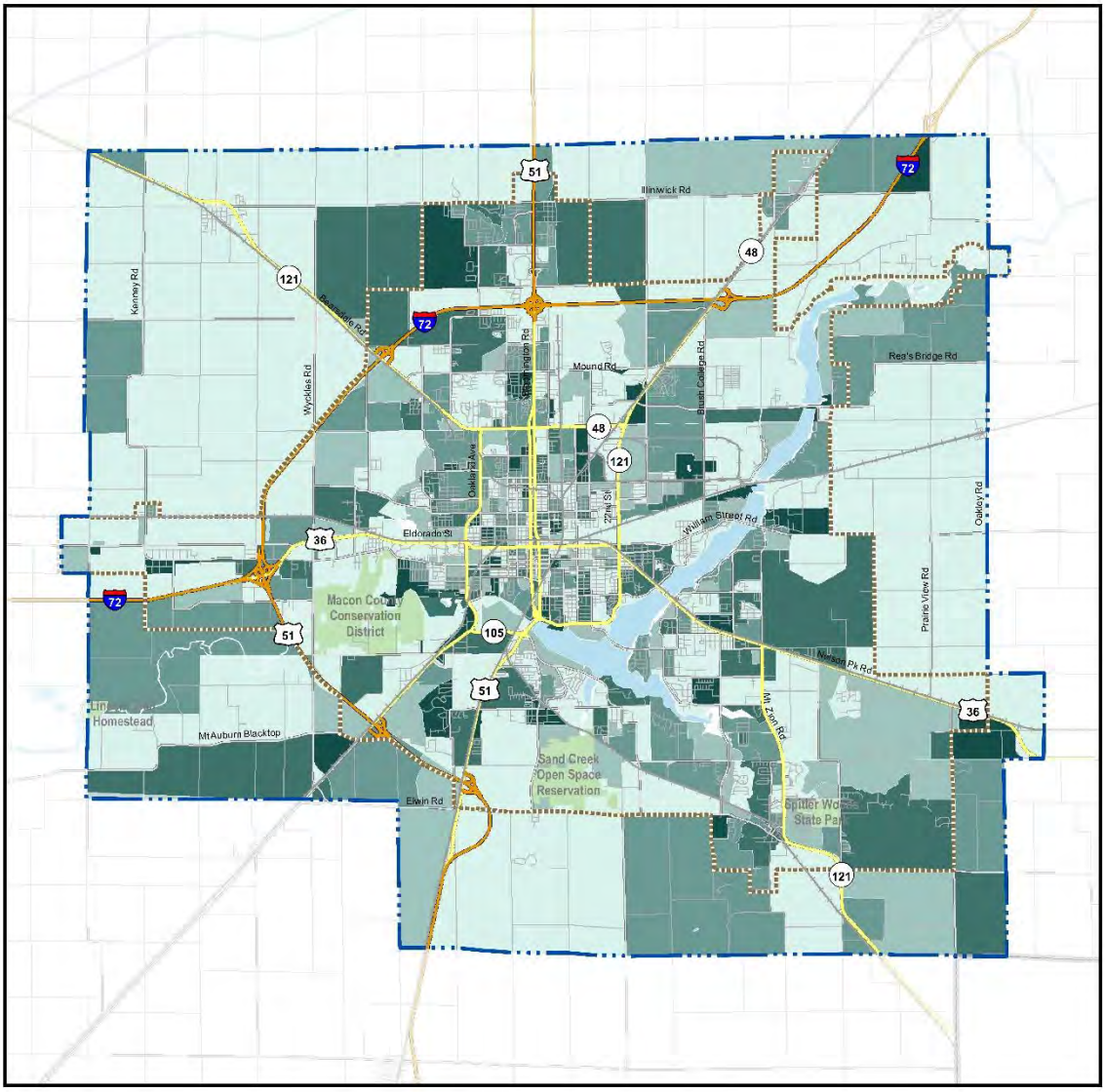


Figure 5-2: Projected 2045 Population Density

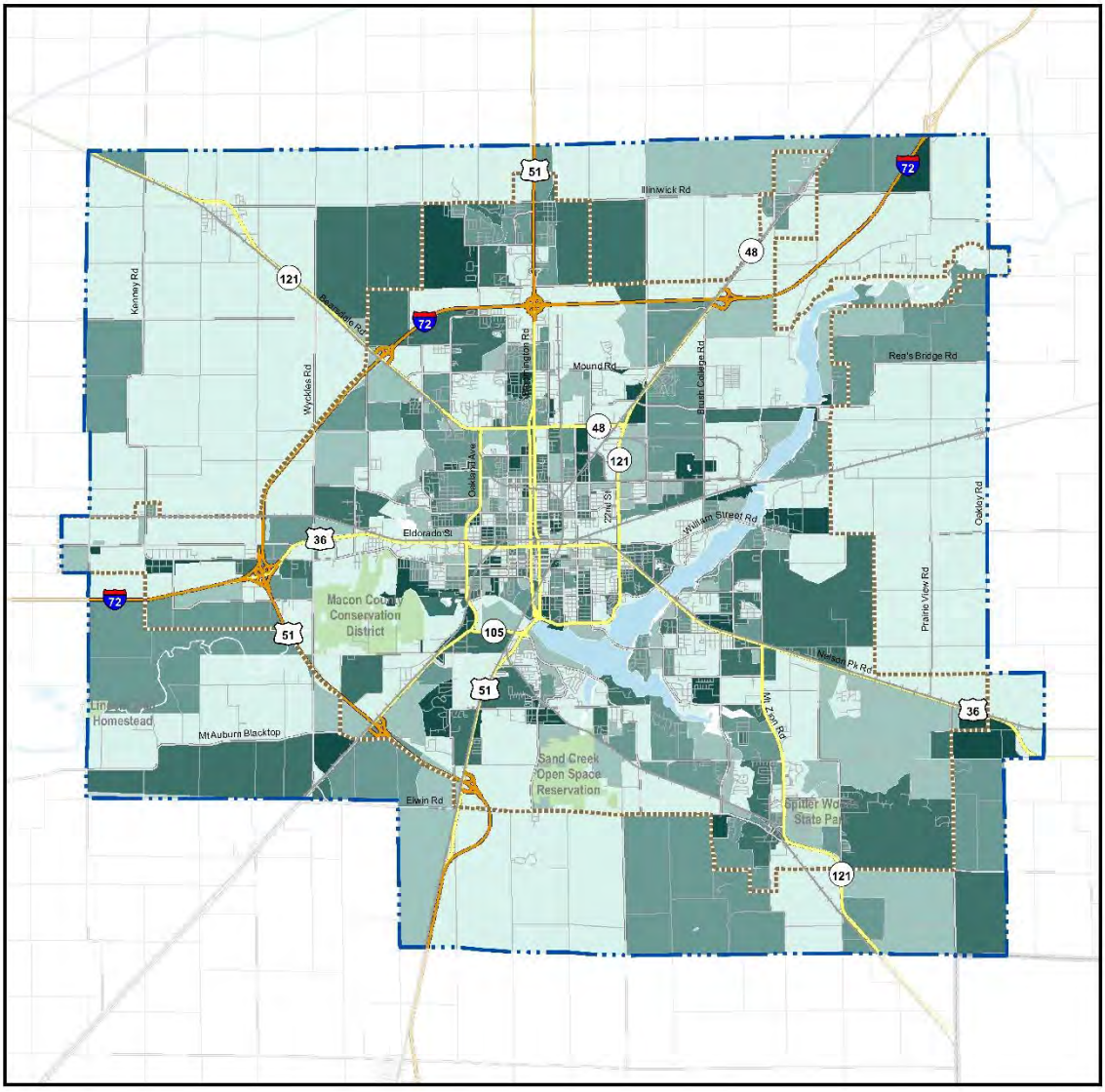


Figure 5-3: Population Change (2018 – 2045)

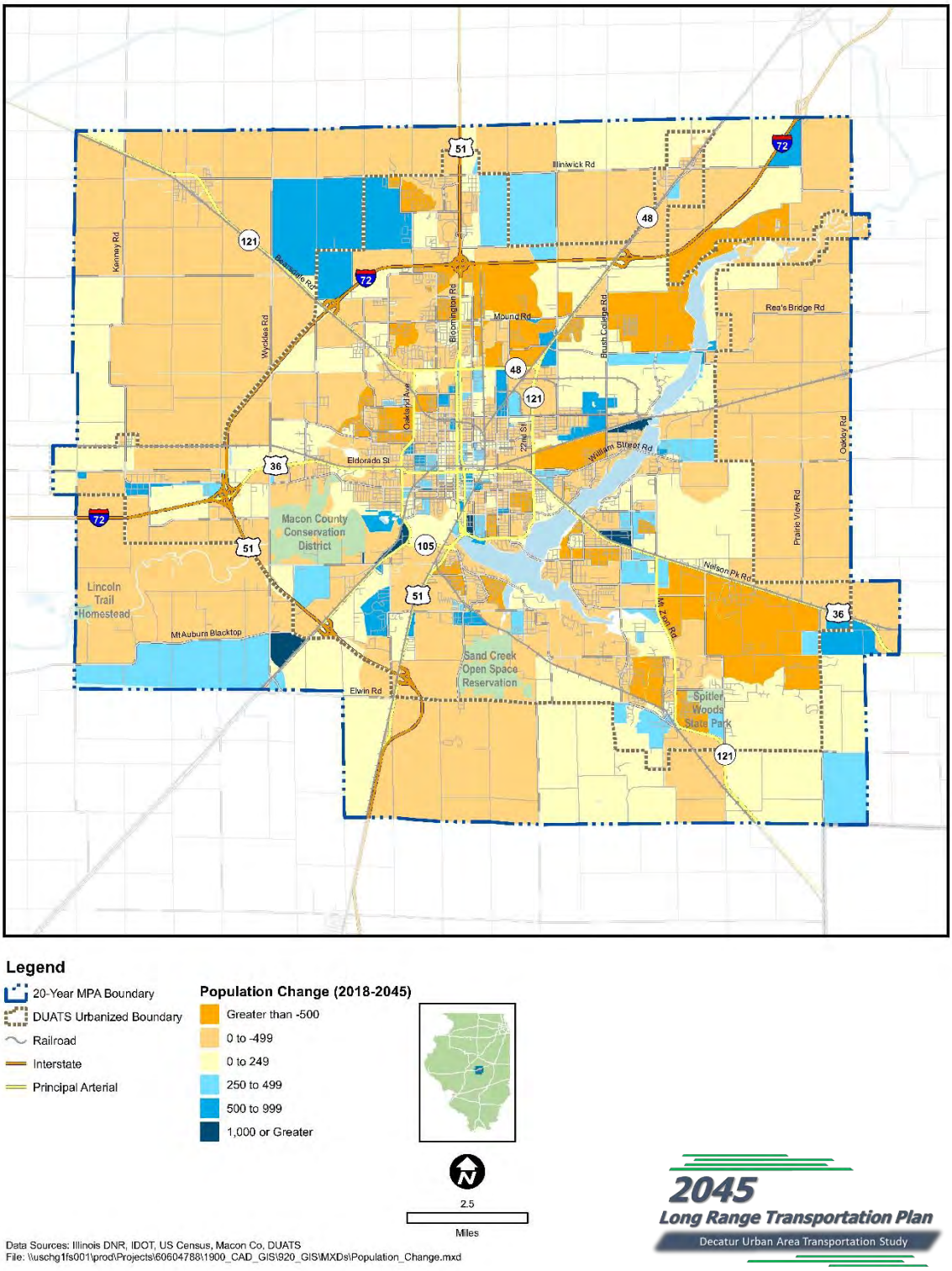


Figure 5-4: Projected 2045 Employment

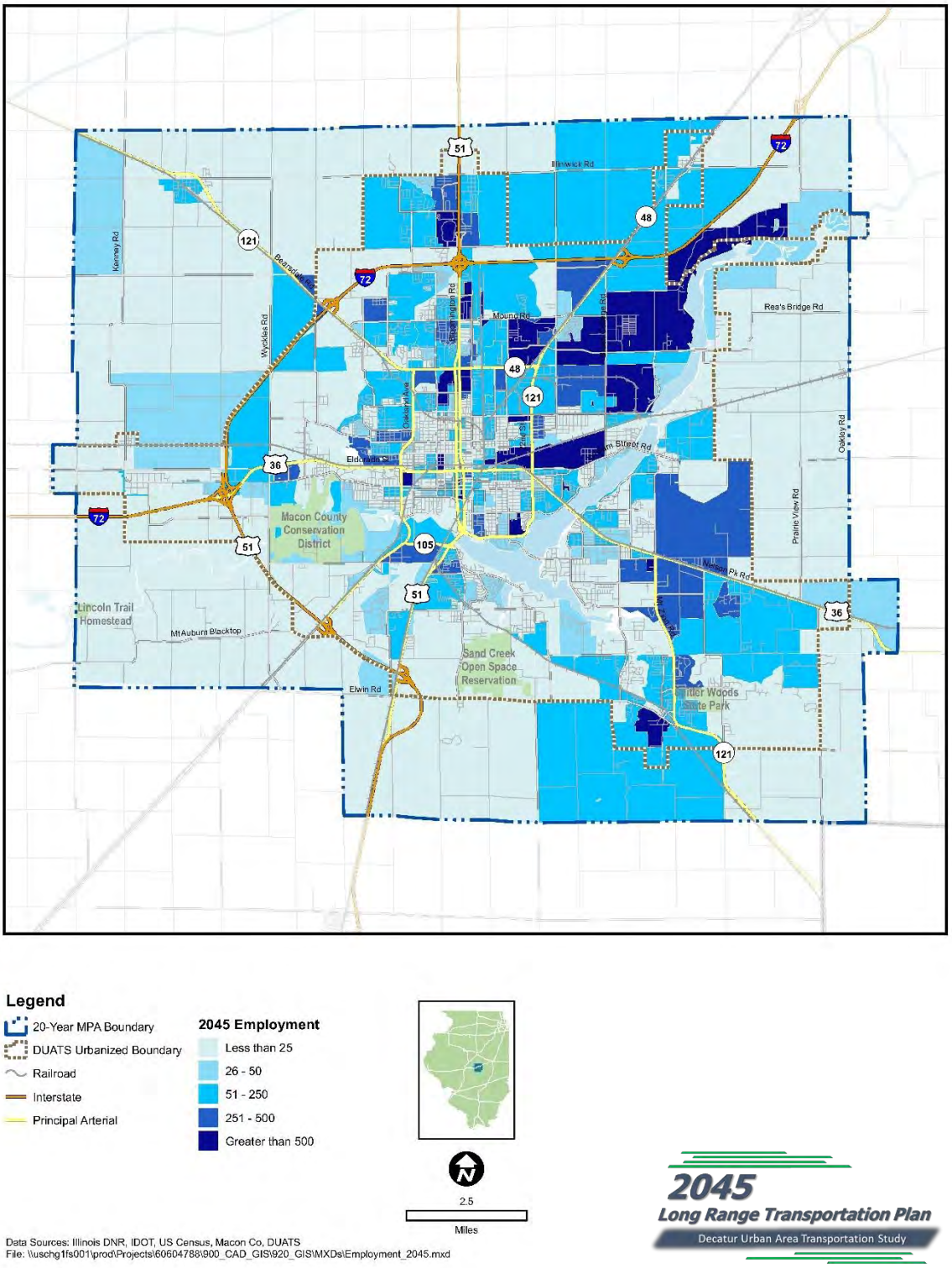
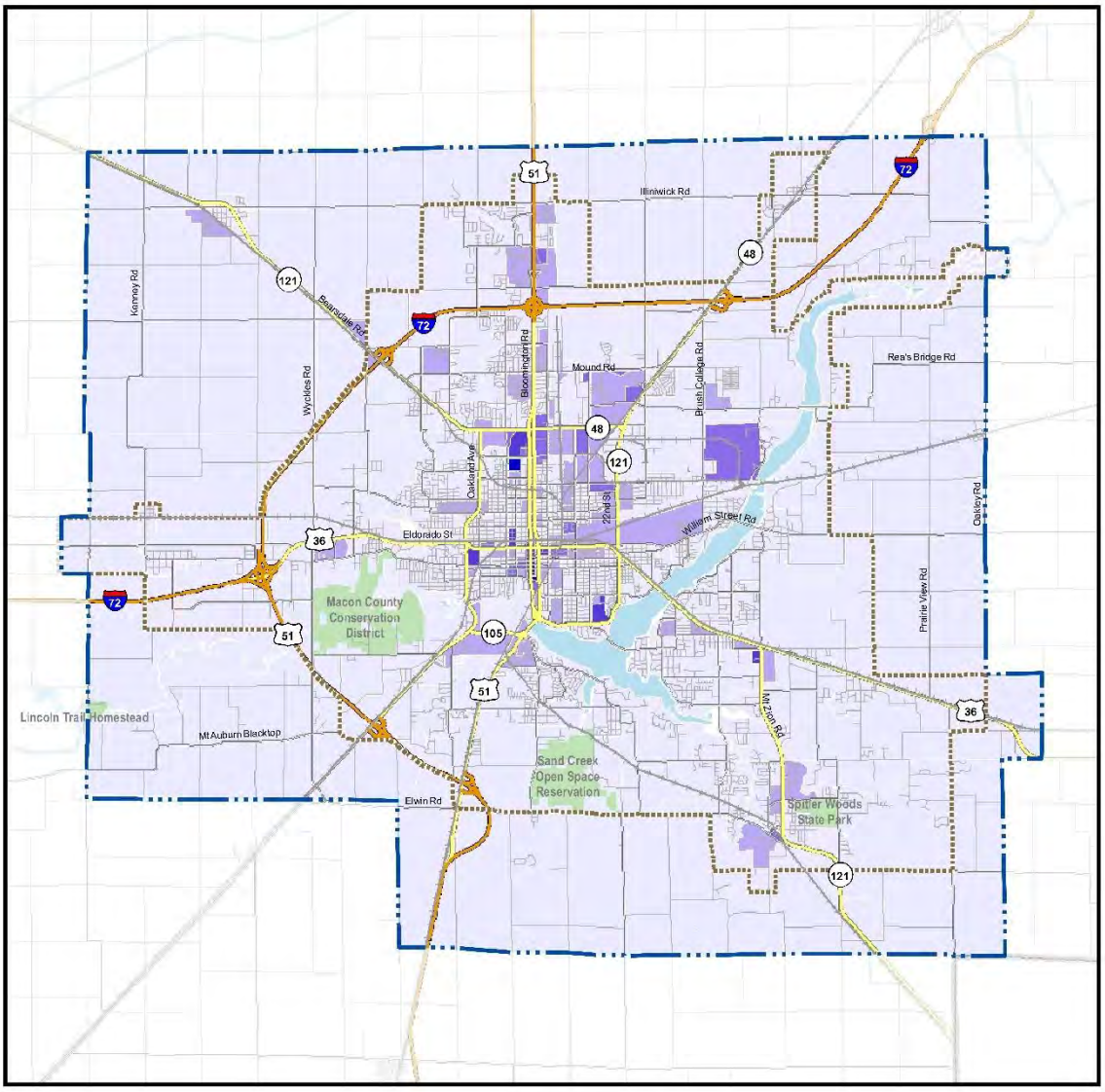


Figure 5-5: Projected 2045 Employment Density



Legend

- 20-Year MPA Boundary
- DUATS Urbanized Boundary
- Railroad
- Interstate
- Principal Arterial

2045 Employment Density

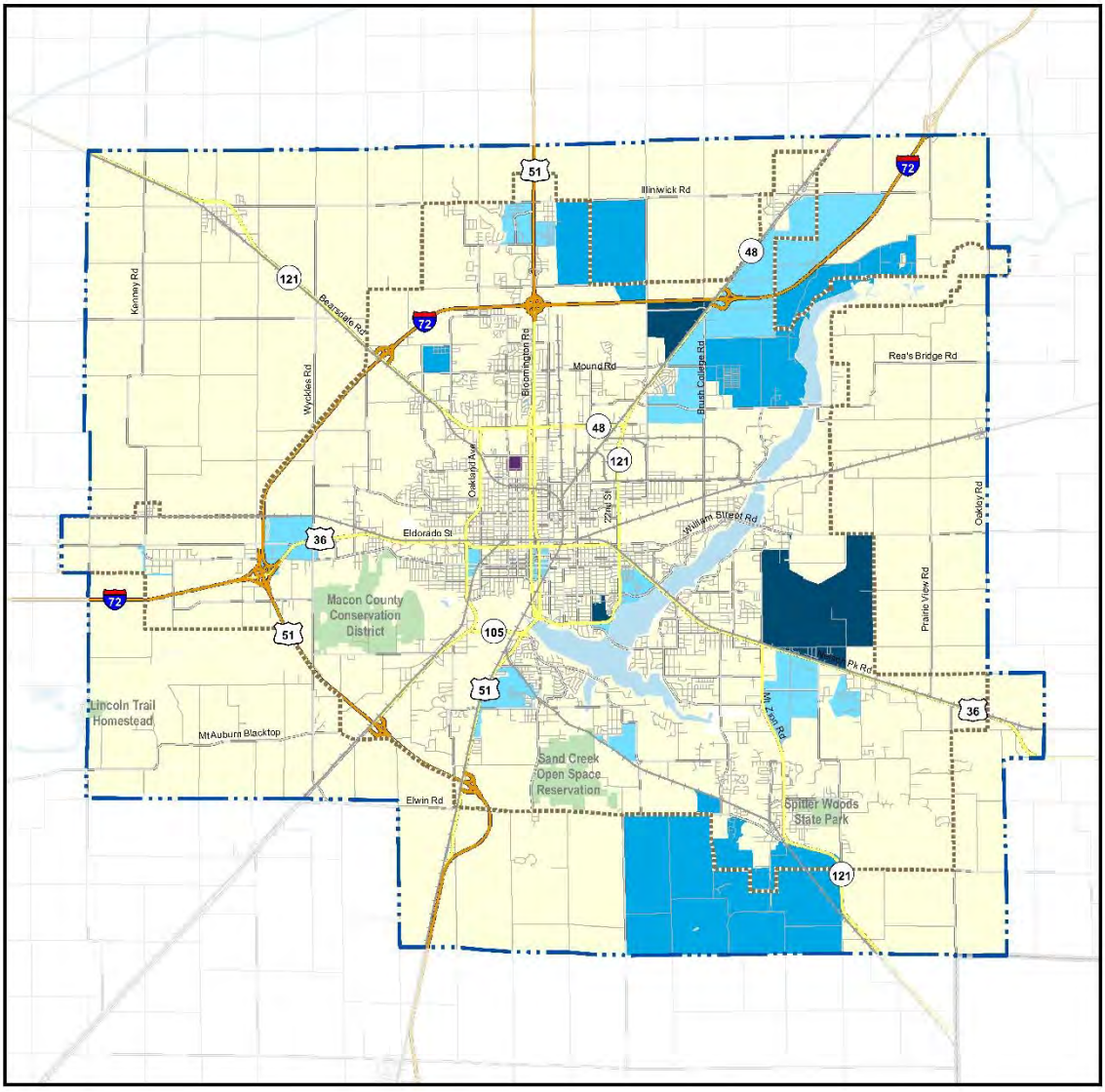
- Less than1,000
- 1,001 - 3,000
- 3,001 - 7,500
- 7,501 - 15,000
- Greater than 15,000

2.5
Miles

Data Sources: Illinois DNR, IDOT, US Census, Macon Co, DUATS
File: \\uschg1fs001\prod\Projects\60604788\1900_CAD_GIS\920_GIS\MXDs\EmploymentDensity_2045.mxd

2045 Long Range Transportation Plan
Decatur Urban Area Transportation Study

Figure 5-6: Employment Change (2018 – 2045)



Legend

- 20-Year MPA Boundary
- DUATS Urbanized Boundary
- Railroad
- Interstate
- Principal Arterial

Employment Change (2018-2045)

- No Change
- Less than 50
- 51 to 150
- 151 to 250
- Greater than 250

N

2.5

Miles

Data Sources: Illinois DNR, IDOT, US Census, Macon Co, DUATS
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2045 Long Range Transportation Plan
Decatur Urban Area Transportation Study

OVERVIEW OF FUTURE YEAR NEEDS

The existing conditions analysis identified transportation, mobility, and infrastructure issues that are currently present within the region. These issues are the starting point for the future year needs assessment to identify future mobility and infrastructure issues, challenges, and opportunities for the region through the horizon year 2045.

The identification of future needs and opportunities is based on a combination of a multimodal technical analysis, consideration of growth trends, and input from local agencies, stakeholders, and the public. This process builds off the 2040 LRTP recommendations and considers recent and on-going planning studies that could impact future transportation decision making and investments. Through this process, the needs assessment provides information to identify potential multimodal transportation improvements/projects that support the DUATS 2045 LRTP goals and objectives. Not only does this section address the region's LRTP needs, it also informs decisions regarding which projects to fund in the Transportation Improvement Program (TIP), and future studies to include in the Unified Planning Work Program (UPWP).

The future year population and employment projections for the region lay out a relatively modest increase through the year 2045 (approximately 5,000 persons and 3,000 jobs). It is unlikely that the projected growth will add significant pressure on the area roadways in terms of capacity issues. As such, future year transportation investments should—for the most part—focus on maintaining or improving the existing infrastructure, which was a priority of area residents according to the 2045 LRTP survey. Improvements should also include enhancing regional connectivity, which has been documented as a need in the east and southeast portion of the MPA.

Over the next two decades it will also be important to explore opportunities to identify new mobility solutions with a focus on supporting economic growth and improving the quality of life for area residents. The identification, integration, and development of future projects should also prioritize enhanced safety for the traveling public and increased efficiencies in operating and maintaining the transportation system—all of which are referenced in the DUATS 2045 LRTP goals and objectives.

The following sections discuss future year needs for the individual transportation modes. While discussed by mode, it is recognized that an integrated, multimodal transportation system will ultimately provide a more diverse and efficient transportation system that is better able to respond to future travel demands in a cost-effective manner. The section begins with a summary of the stakeholder survey and community survey results conducted as part of the 2045 LRTP update.

Stakeholder Surveys

Regional stakeholders were interviewed at the beginning of the 2045 LRTP development process and were asked to identify the biggest transportation/mobility concerns within the DUATS MPA. Stakeholders identified the following key themes:

- **High volumes of truck traffic |** Truck traffic is an important element of the Decatur regional economy; however, along with high truck volumes comes disruption to residential areas and local businesses. While recent truck route improvements through downtown Decatur have helped direct truck traffic to more appropriate roadway corridors, there remain areas

where trucks are not compatible with adjacent land uses. Safety concerns are paramount, and many stakeholders emphasize the importance of establishing a hierarchy of roadways to better accommodate current and future truck volumes throughout the region.
As part of the truck transportation discussion, several stakeholders focused on the opportunities for growth in eastern portion of the DUATS MPA. Specifically, two key priorities were improving access (1) from I-72 to the airport and (2) along state routes to local industry. These priorities were also supported by findings from the *Decatur Supply Chain Network Planning and Optimization Study,* which reported that local business and civic leaders repeatedly cited truck access to the industrial areas of Decatur as a hurdle for the city to gain prominence as a logistics hub. It is not only local stakeholders who have concerns about this issue—regional trucking companies and the Illinois Trucking Association also cited access concerns as a long-standing issue among the motor carrier community.

- **Deteriorating road conditions |** Deteriorating conditions of the regional roadway infrastructure was mentioned by several stakeholders. Generally speaking, there are numerous roadways within the MPA in need of a pavement overlay, or reconstruction. This concern is closely tied to the high truck volumes that were previously discussed. The high truck volumes, combined with heavy loads, place significant stress on the roadway pavement and contribute to the need for more frequent repairs.

- **At-grade rail crossing delays |** At-grade rail crossings, and specifically the travel delays caused by frequent train blockages, have been well documented as having negative impacts on the Decatur transportation system, as well as the regional economy. At-grade rail crossings also have direct negative impacts on truck access to the MIP.

- **Regional air travel |** A few stakeholders mentioned that they would like to see the Decatur airport expand the availability of commercial air service. In recent years the number of passengers using the Decatur airport has been steadily growing and some noted a potential opportunity to expand air service options in the future.

As a follow-up, stakeholders were asked if the key issues had any negative impacts on local businesses. Stakeholders indicated that the poor roadway conditions have several negative impacts including potentially creating safety and operational concerns, in addition to the overall negative impact that deteriorating infrastructure has on aesthetics. Stakeholders also returned to the issue of at-grade rail crossing delays and the negative impact that long train blockages have on the traveling public (including area bus riders) and the movement of goods (by delaying trucks traveling within and through the region).

There was consensus among stakeholders that if the region could address these transportation and infrastructure issues, economic growth would follow. Stakeholders generally agreed that the following four improvements would provide the most benefit the Decatur region.

- **Construct the Beltway |** Stakeholders talked about the importance of enhancing connectivity/access in the east and southeast portion of the region, and specifically mentioned improving access to the airport as an important economic development driver. Most stakeholders feel the Beltway will provide a much-needed roadway connection to

facilitate the efficient movement of truck traffic through the region. Some stakeholders stated that it is critical to complete the Beltway as it is important to have it in place to attract new businesses to the region.

- **Improve access to the Airport |** Most stakeholders referenced the previously mentioned Beltway as the top priority to improve access to the airport; however, some mentioned the need to improve the US-36 bridge crossing as another important transportation improvement.

- **Construct grade separations |** Reducing or eliminating at-grade rail crossing delays was another priority for the region. The grade separation at Brush College and Faries Parkway will help address the top delay location in the region but other at-grade crossings were also mentioned as areas of concern. Additional crossings include:
  - Brush College (crossing north of Faries Parkway, and the NS underpass south of Faries)
  - 27th Street
  - US 36 (Eldorado)

- **Enhanced connections between modes |** Several stakeholders indicated that the region has been making progress in constructing non-motorized facilities and they would like to see the completion of a continuous north-south trail that would connect the entire DUATS MPA.

Finally, stakeholders were asked to provide additional comments regarding any other future transportation issues facing the region. Responses included the following:

- **New technology |** A few stakeholders inquired about the potential benefits of emerging transportation technology, such as advancements in autonomous vehicles, electric vehicles (and the need for charging stations), and drones used for deliveries. Stakeholders also wondered what other new/emerging technology might be deployed over the next 25 years that currently does not exist. Generally speaking, it is believed that technology will play an important role in improving safety for the traveling public, primarily through future technology advancements that reduce or prevent crashes.

- **Connected bicycle infrastructure |** Stakeholders expressed a desire to fill-in the gaps in the current bicycle network plan to ultimately create a continuous, connected system through the DUATS region. A specific concern is the need to improve Lake Decatur bicycle/pedestrian crossings to enhance safety and regional connectivity.

- **Aging population |** A few stakeholders expressed concern the potential transportation and mobility needs associated with the aging population trend. In particular, some wondered about the potential need to enhance or expand alternative mobility options to best address future mobility needs of area residents.

Finally, stakeholders were asked to identify the primary obstacles to make the priority improvements within the DUATS MPA. The response overwhelmingly focused on the lack of transportation revenues and funding. There was also some concern about how the declining population trend in recent years could negatively impact future revenues. Stakeholders reiterated the importance of addressing the

transportation and infrastructure needs in order to be able to attract new job opportunities to the region.

Community Survey

An online survey was launched on the SurveyMonkey platform in July 12, 2019 and closed on August 16, 2019. The survey consisted of 23 multiple-choice and open-response questions. Questions related to both the transportation preferences and the characteristics and travel behavior of the survey participants. In total, 957 people participated in the survey, though not all participants answered every question. Furthermore, given that this survey was open to anyone in the public, the results should be viewed with caution as this was not intended to be a statistically valid survey. Instead it provides insight into specific transportation and mobility issues in the Decatur region that can help inform the development of key themes for the DUATS 2045 LRTP.

Detailed survey results are summarized in an appendix, and some responses have been included throughout this LRTP update. The findings of the community survey were mostly consistent with the stakeholder priorities and the previous 2040 LRTP recommendations. Generally speaking, the public wanted the 2045 LRTP to prioritize improvements to the existing transportation infrastructure. In addition, the public wanted the LRTP to prioritize eliminating or minimizing travel delay associated with at-grade rail crossings.

The discussion of the future year needs is categorized into the following sections:

- **Roadway;**
- **Public Transportation;**
- **Non-Motorized;**
- **Freight Traffic and Mobility; and**
- **Aviation.**

ROADWAY NEEDS

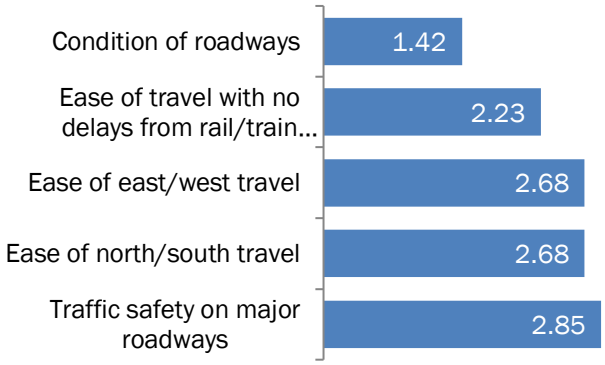
Highways and roadways facilitate the highest percentage of travel within the DUATS region, and providing an efficient and effective roadway system is critical to support the region's economy, quality of life, mobility, and social equity. While primarily serving vehicular traffic, roadways also facilitate freight (truck) movements, public transit operations, and bicycling. In Decatur, roadways also interact with the regional rail network as numerous at-grade rail crossings impact regional travel. As such, it is critical to consider the range of impacts and benefits that roadway improvements have on the overall regional multimodal transportation system—essentially evaluating the roadway system from a "Complete Streets" perspective. The following highlights the future roadway needs and opportunities within the DUATS region.

Roadway Priorities

2045 LRTP survey participants were asked to rate their level of satisfaction among a range of road and freight issues in the Decatur area (Figure 5-7). The issue that elicited the strongest dissatisfaction was the condition of roadways in the region. Both in the open response and multiple-choice sections, respondents consistently reported that the road conditions need to be addressed. Over 60 percent of responses mentioned road conditions as the most important transportation issue. Open responses cite specific problematic roadways and mention that major routes were particular concerns. For example, many participants mentioned US 51 and US 36 as roads that were in very poor condition.

Figure 5-7: Average Satisfaction with Road/Freight Issues

(1=low, 5=high)



The next most important issue was the impact of rail crossings on ease of travel. Motorist delays due to rail crossings were a major concern (very dissatisfied) for 30 percent of respondents, and another 31 percent indicated that they were dissatisfied with these delays. The other three issues—ease of east/west travel, ease of north/south travel, and traffic safety on major roadways—received more favorable ratings, though still only about a third of the respondents reported being satisfied in these areas. Full response data is provided in Table 5-2.

Table 5-2: Satisfaction with Characteristics of Road/Freight Network

	Very Satisfied		Satisfied		Neutral		Dissatisfied		Very Dissatisfied	
Ease of north/south travel	4%	34	27%	240	24%	213	24%	215	19%	168
Ease of east/west travel	3%	27	27%	236	28%	243	23%	205	17%	152
Ease of travel, delays from rail	1%	13	15%	129	21%	190	31%	275	30%	269
Traffic safety on major roadways	2%	20	32%	280	30%	262	23%	200	13%	116
Condition of roadways	0%	2	2%	16	5%	42	26%	231	67%	592

Source: 2019 LRTP Community Survey. Note: Responses indicating "Don't Know" are excluded.

Pavement Conditions

Maintaining roadway pavement in a state of good repair throughout the MPA involves extensive planning and investment. As previously documented, the DUATS region has a high percentage of roadways rated as "Fair" or "Poor," which typically require some form of maintenance in the short term. As such, improving pavement conditions in the short term will be a critical element facing the region.

Understanding existing pavement conditions helps agencies to ensure resources are in place to provide preventive roadway repairs prior to rapid deterioration. Deferred maintenance potentially accelerates deterioration and can lead to larger infrastructure concerns as routine maintenance needs start to increase at a faster rate than available funding. It is important for DUATS to monitor progress toward addressing pavement condition to provide a safe, reliable roadway conditions. Furthermore, if the DUATS region does not meet pavement condition performance targets, the region might be required to allocate additional funding toward pavement improvements.

Regional Connectivity/Access

Improving regional highway/roadway connectivity to the eastern portion of the MPA is an issue of significance to DUATS. This issue has been identified in previous DUATS LRTPs and it continues to be a regional priority. Enhancing roadway connectivity to the eastern portion of the MPA will strengthen the regional functional classification system and improve access to the airport. This enhanced connectivity/access will also support economic development opportunities. The Beltway, when completed, is expected to address the regional connectivity issue by increasing airport access and better accommodating truck traffic (negating to a larger extent the undesirable impacts associated with large trucks). The Beltway also has the potential to lower roadway maintenance costs within the urbanized area by shifting a significant portion of truck movements to fringe roadways which will be constructed to design standards better able to accommodate heavier truck traffic.

At-Grade Rail Crossings

As previously documented, at-grade rail crossings have significant impacts on travel within the DUATS region. This concern is likely to increase as the region is expected to attract additional industry and employment, and correspondingly increased rail traffic. An increase in rail operations is also likely to be supported by increased truck traffic, which in turn may be negatively impacted by growing at-grade rail crossing delays. Additional at-grade rail crossing delays would also negatively impact the traveling public.

At-grade rail crossings have been a concern of area officials and the public for many years; however, it was not until the DATES project[5] that this issue was studied in detail. DATES quantified delays and projected future increases in delays at key crossing locations, including:

- **NS Crossing at Brush College Road (near Faries Parkway) |** This location was previously identified as being the most frequently blocked crossing within the DUATS MPA. DATES estimated 234 blockages per week resulting in 24.3 hours of delay—the equivalent of being blocked one full day each week. This crossing is currently being designed for a

[5] URS Corporation, Decatur Area Transportation Efficiency Study (DATES) Final Report (2013).

grade-separated facility that is expected to begin construction in the next few years.

- **The Main / Water Crossings |** These locations project the lowest increase in number of trains, increasing from 22 to 29;
- **Brush College Road (near ADM) |** The most significant increase in train blockages that result in increased travel delays were projected at this location. Using the future year rail growth assumptions, this crossing is projected to increase from approximately seven hours to almost 19 hours of delay per week. It is important to note that the increase is one of many possible scenarios and the actual impact at this location is directly related to ADM operations; and
- **Other Crossings |** Other locations are generally projected to increase to a point that they would add between 20 and 30 additional train blockages per week.

Eliminating at-grade rail crossings at key locations, such as Brush College Road and Eldorado Street, is a high priority in the region and vital to supporting economic growth. The at-grade crossing along 27th Street is another key location to address. In addition to creating travel delays, at-grade rail crossings are also a safety concern as collisions between trains and other roadway users can cause not only serious injury and death, but also many other externalities such as loss of economic productivity, damage to infrastructure, cost of emergency services, etc. Eliminating crossings via bridges, viaducts, alternate routes, and other means of separation enhances the safety of the entire transportation system.

2045 Modeling Scenarios

As previously discussed in the existing conditions chapter, modeling traffic operations in the Decatur region is challenging, given the significant levels of truck traffic as well as numerous at-grade rail crossing delays. As part of the recent Decatur Supply Chain Network Planning and Optimization Study, the consultant made modifications to the DUATS regional travel demand model to replicate at-grade rail crossing delays within the Decatur region. The frequent train blockages that occur within the region have been well documented, in particular in the Decatur Area Transportation Efficiency Study (DATES), which quantified the delay at the primary crossings.

For consistency, the 2045 LRTP uses the scenarios that were modeled for the Decatur Supply Chain Network Planning and Optimization Study. Based upon on a review of current transportation issues, the major capacity improvements that would benefit the DUATS region include the Beltway and the construction of grade-separated structures to eliminate key at-grade rail crossings. The future year (2045) scenarios that were modeled include the following:

- **Scenario 1 |** Existing plus Committed (E+C) improvements (including grade separation at Brush College and East Faries Parkway)
- **Scenario 2 |** E+C base, plus grade-separated rail crossing at 27th Street
- **Scenario 3 |** E+C base, plus Beltway coded at 55 mph speed
- **Scenario 4 |** E+C base, plus Beltway coded at 65 mph speed

Each scenario is briefly described below. Figure 5-8 through Figure 5-11 display the planning level capacity (LOS) results for each scenario. It should again be noted that the LOS results consider rail delays in the region and as such do not represent a typical LOS analysis, but instead represent areas that might anticipate the greatest travel delay.

Scenario 1 | Existing plus Committed (E+C) improvements (including grade separation at Brush College and East Faries Parkway)

The 2045 E+C scenario provides a baseline condition that other year 2045 scenarios can be compared against. The most significant improvement included in this scenario is the completion of a grade separation at Brush College and East Faries Parkway. This project is currently in phase 2 design, and construction is anticipated to begin in the next few years. It should be noted that this grade separation is does not include the overpass at the current NS underpass, just south of Faries Parkway. This would be a separate stand-alone project.

Scenario 2 | E+C base, plus grade separation at 27th Street

This scenario includes a proposed grade separation of the rail crossing along 27th Street. This improvement is modeled by increasing the travel speed along 27th Street, thus eliminating the delay factor in the base model. This improvement would increase the efficient movement of trucks into and out of the MIP by eliminating the at-grade rail crossing delays. Benefits from this project would accrue as a result of a reduction in travel time for shippers and the public, a reduction in miles traveled and associated emissions, and improved safety for shippers and the general public due to the removal of the at-grade crossing.

Scenario 3 | E+C base, plus Beltway coded at 55 mph speed

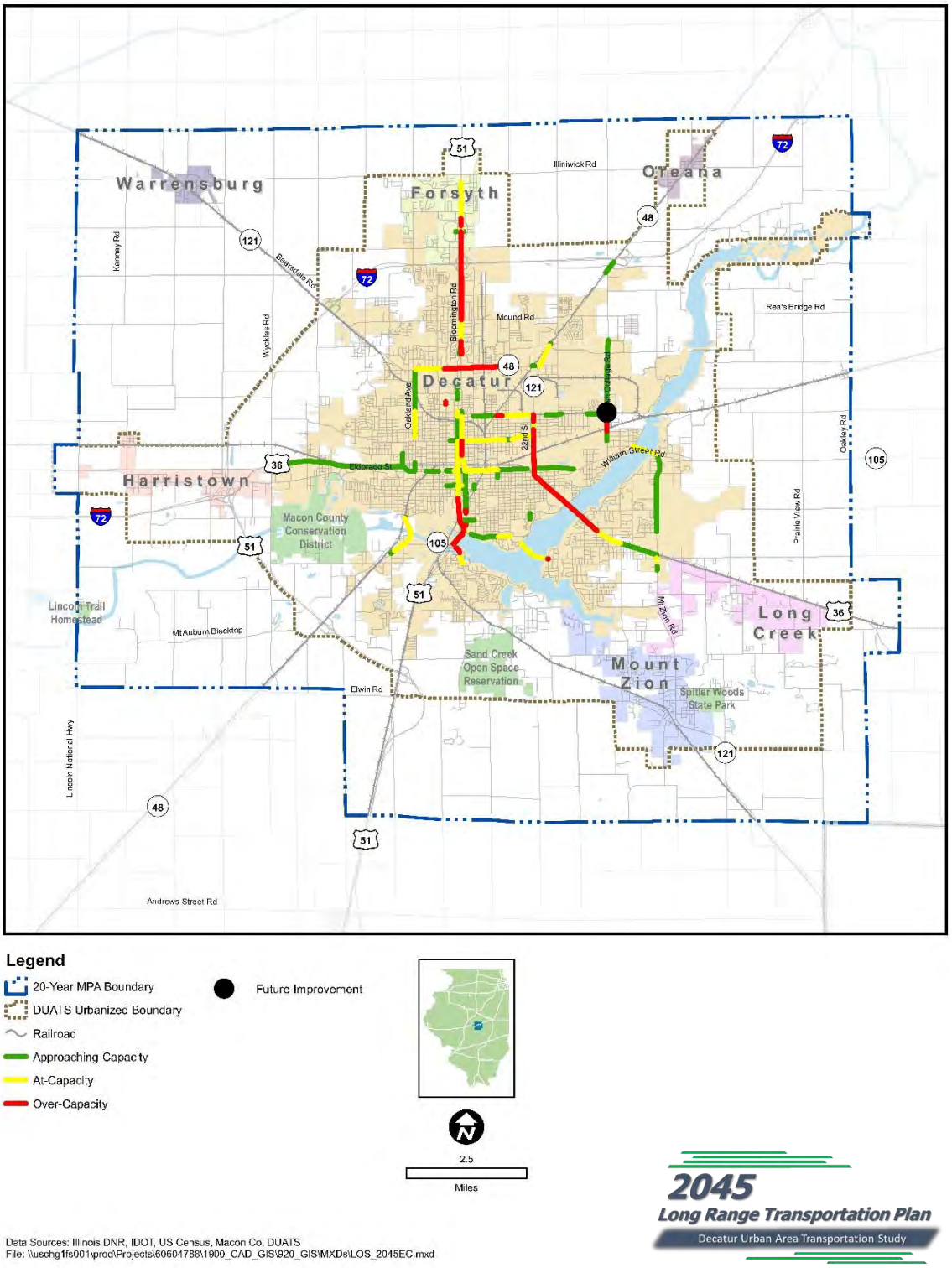
This scenario uses the E+C base network and includes the addition of the Beltway. Under this scenario, a speed of 55 mph is assigned to the Beltway.

The Beltway has been part of DUATS LRTP for a number of years. Completing the Beltway would eliminate at-grade railroad crossings on the local road network, reduce congestion and travel times for residents, remove trucks from downtown Decatur, and improve transit reliability. The Beltway is a proposed 24-mile limited-access roadway alignment that would connect US-51 south of Decatur to I-72 in the far northeastern portion of Decatur at the interchange with IL-48 via a circumferential “outer loop” in the southeastern portion of the MPA. From US-51, the route would travel east along Elwin Road, curve southeast near Karl Road, straighten out and continue east along Sefton Road, turn north along 85th Street, curve west near IL-24, turn north and run parallel to Christmas Tree Road, curve northwest between IL-22 and Garver Church Road, and finally terminate along IL-48 near the interchange with I-72.

Scenario 4 | E+C base, plus Beltway coded at 65 mph speed

Scenario 4 is the same as Scenario 3; however, the speed of the Beltway was modeled at 65 mph as opposed to 55 mph.

Figure 5-8: Scenario 1 – E+C (includes grade separation at Brush College & Faries Parkway)



Data Sources: Illinois DNR, IDOT, US Census, Macon Co, DUATS
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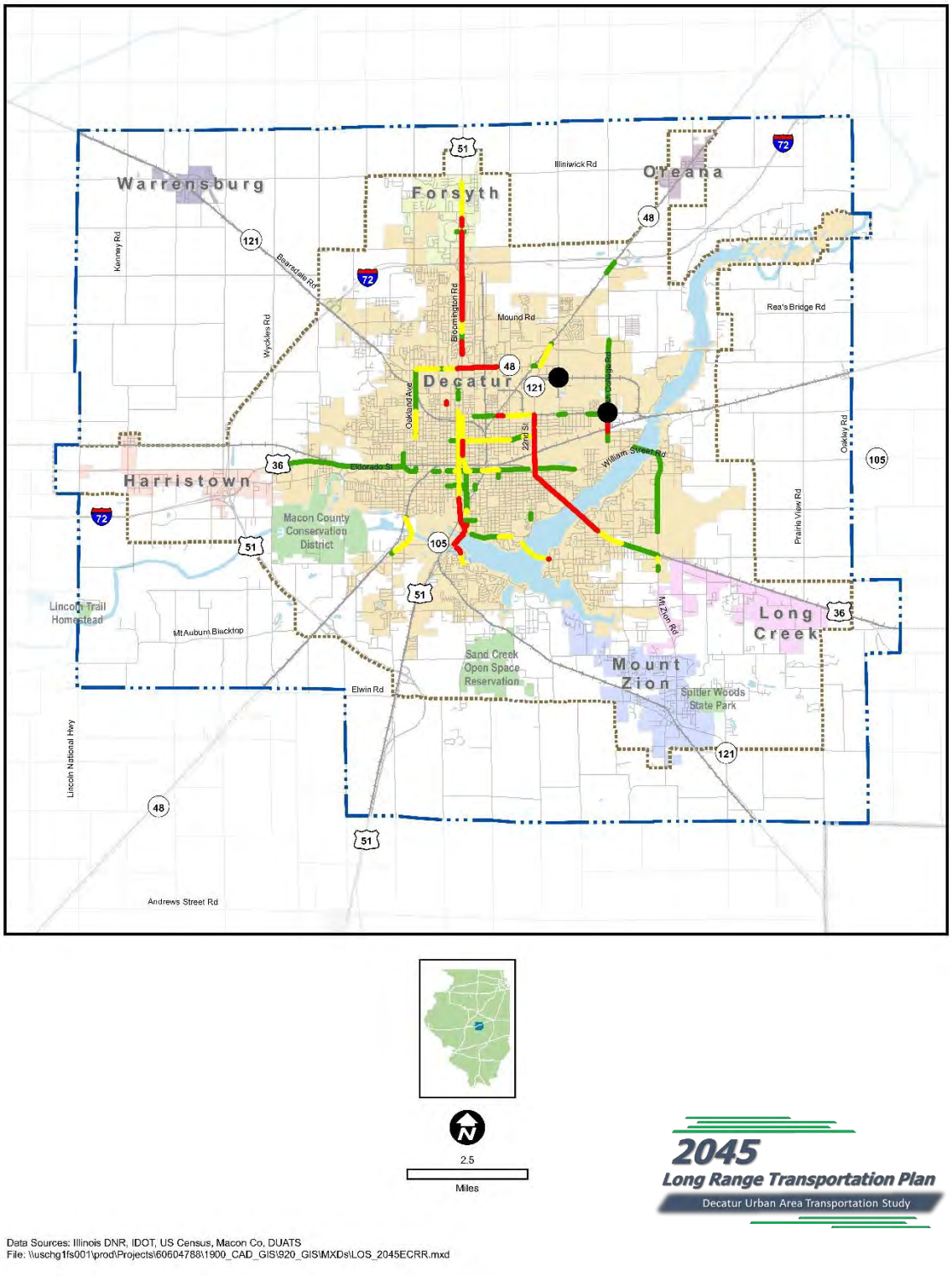
Figure 5-9: Scenario 2 – E+C (plus 27th Street Grade Separation)



Data Sources: Illinois DNR, IDOT, US Census, Macon Co, DUATS
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Figure 5-10: Scenario 3 – E+C (plus Beltway at 55 mph design speed)

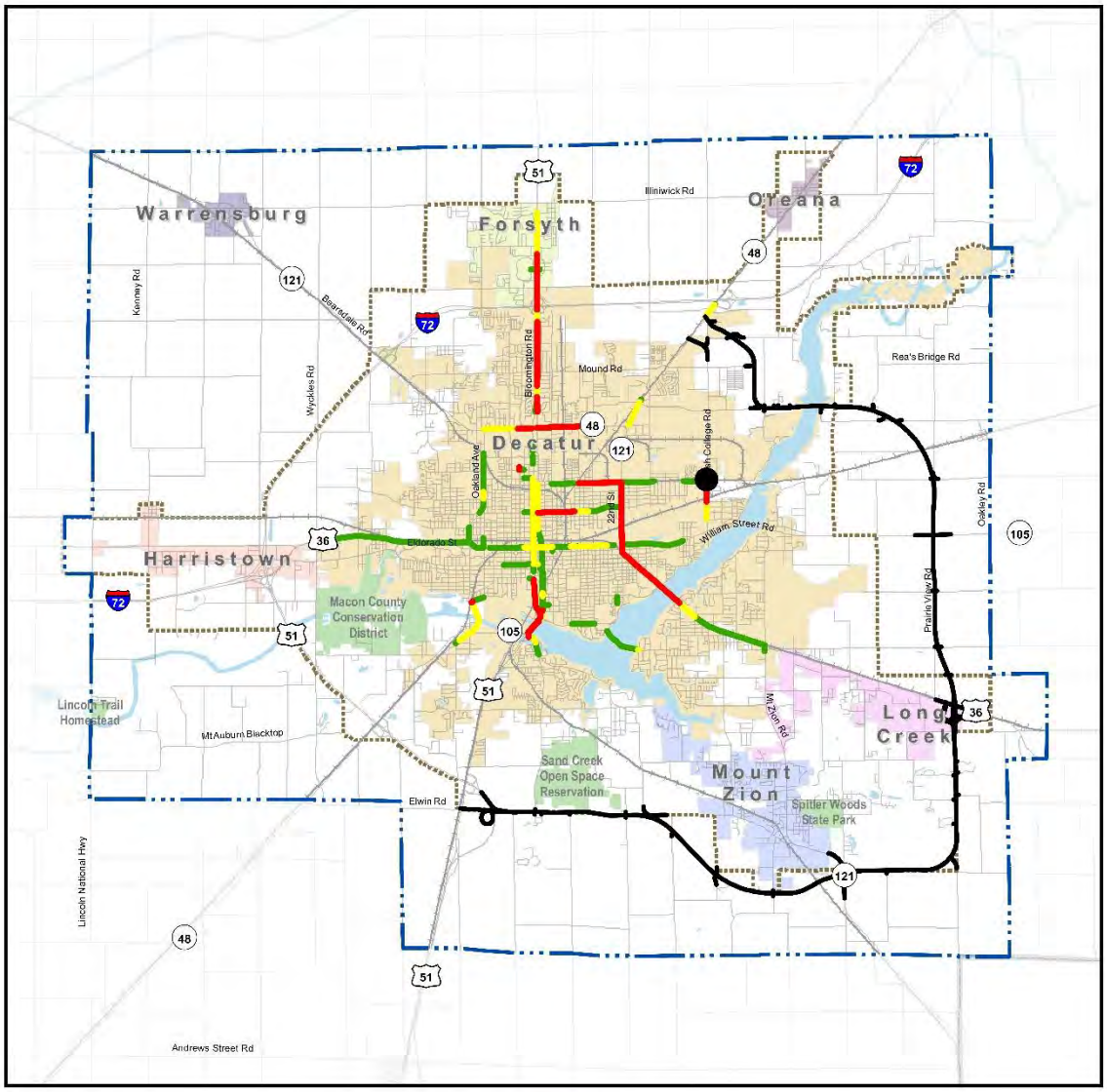
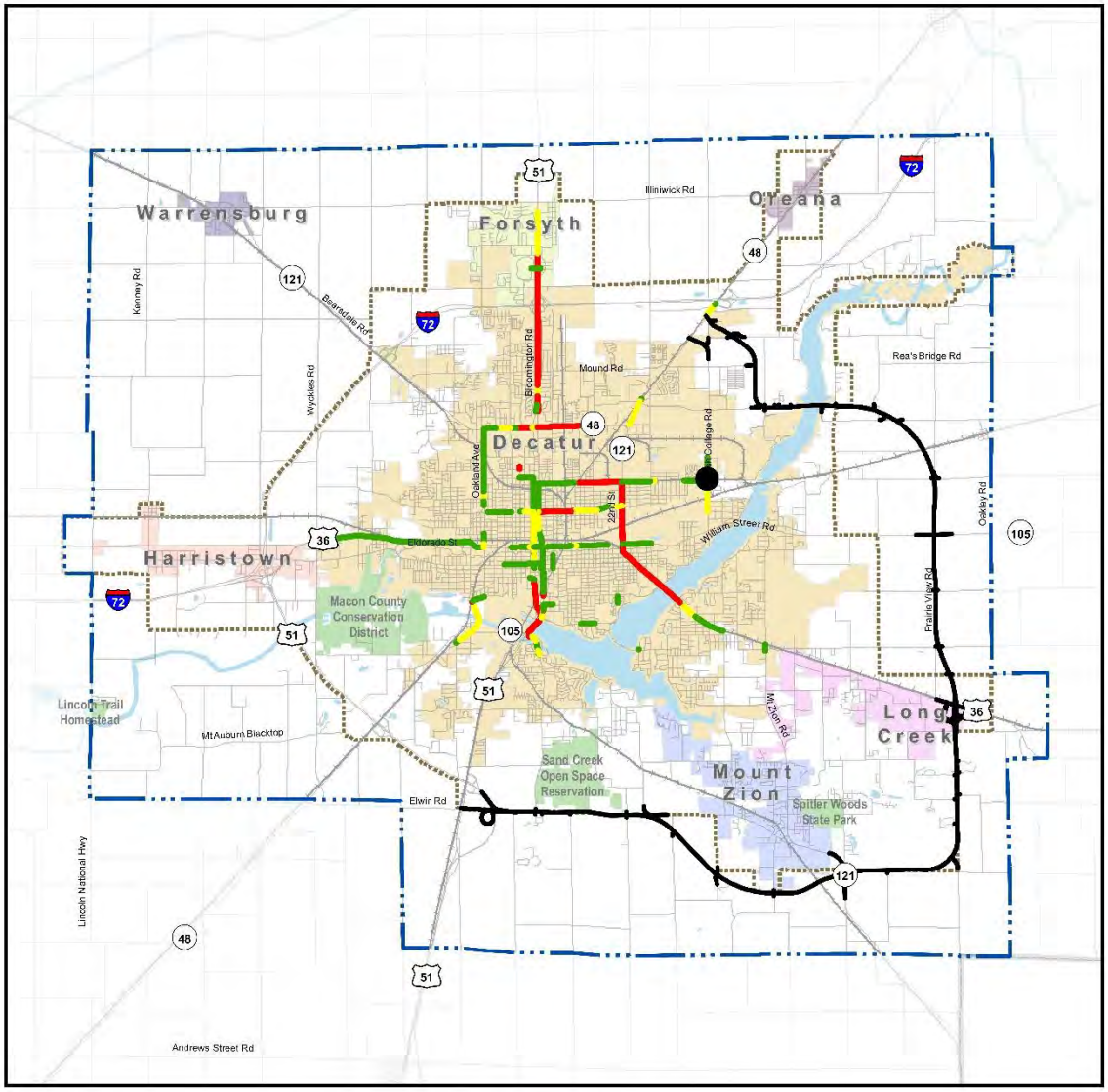


Figure 5-11: Scenario 4 – E+C (plus Beltway at 65 mph design speed)



Capacity Analysis

The 2045 model results were compared to the roadway capacities to identify the volume-to-capacity ratios. Using the same planning level of service thresholds as used for the existing conditions analysis, the future year miles of roadways approaching-capacity, at-capacity, and over-capacity were identified. Again, these results reflect overall travel delay and not typical LOS results due to the frequent at-grade rail crossing delays. Table 5-3 summarizes the 2045 capacity results for each scenario.

Table 5-3: Capacity Results (2045 Scenarios)

Scenario	Miles of LOS E	Miles of LOS F	Total (LOS E And F)
2015 Base Year	1.1	0.8	1.9
2045 Base Year	4.6	3.4	8.0
2045 Scenario 1 (E+C)	4.4	3.1	7.5
2045 Scenario 2	4.9	3.6	8.5
2045 Scenario 3	3.7	3.0	6.7
2045 Scenario 4	3.7	3.1	6.8

Overall, scenarios 3 and 4 (which include the Beltway) are projected to have the greatest benefit in terms of reducing travel delays within the region. The remaining delays are the result of at-grade rail crossings which continue to cause delays. Additionally, delays are also likely to be observed during a.m. and p.m. peak hours, but extended areas of recurring congestion are not anticipated. The Decatur Supply Chain Network Planning and Optimization Study further discusses the model results, which suggest daily vehicle hours traveled (VHT) on Macon County roads would be reduced by 1,612 hours assuming a 55 mile per hour speed limit and 2,203 hours assuming 65 miles per hour.

While the Beltway has positive benefits for the Macon County road network in terms of reducing congestion and the time residents will spend traveling, the number of vehicle miles traveled (VMT) will increase due to the physical length of the route compared to routes through the city of Decatur. As noted in the study, the increase in VMT is a disbenefit, but overall the additional benefits of the Beltway far outweigh the increase in VMT.

PUBLIC TRANSPORTATION NEEDS

Maintaining a reliable public transportation system provides an important mobility option to residents, workers, and students within the DUATS region. In many instances, public transportation is the only available or affordable travel option for area residents (who may be termed *transit captive riders*, as opposed to *transit choice riders*, i.e., those who choose to use transit). Without public transportation services, these transit captive riders would be unable to pursue job opportunities or complete daily personal, medical, and social tasks or activities. Identifying the future needs of transit captive and choice riders is an important element in an on-going effort to develop an expanded, reliable multimodal transportation system. The following highlights future transit needs and potential opportunities within the DUATS region.

Extended Evening Service

Many employment opportunities within the Decatur region are industrial/food processing jobs which operate around the clock. Currently, public transportation is not a viable option for individuals working late evening and early morning shifts. Extended evening service could benefit persons working unconventional hours outside regular transit service. In particular, some second- and third-shift employees with limited transportation options could potentially gain employment if extended evening service was available.

Critical to the effectiveness of extended evening service is coordination between transit providers and employers to ensure transit service is coordinated with shift changes. Furthermore, more creative mobility solutions—beyond typical fixed-route service—could be explored. This could potentially include programs such as the sponsorship of vanpools or other shared mobility options for workers needing transportation outside of existing fixed-route service windows. The proposed Comprehensive Operational Analysis (COA) that DPTS will complete in 2020 should explore potential options to provide extended evening service hours.

Serving Growth Areas

Recent population and employment trends show that Forsyth and Mt. Zion are the fastest growing areas within the DUATS MPA. As growth extends outward from the urban core, low-density development patterns make providing public transit, especially fixed-route service, challenging.

While not an immediate issue, future growth and development on the fringe area of the DUATS MPA may at some point require route modifications or service expansion to best serve the evolving needs of transit riders throughout the region. In particular, the completion of the Beltway is likely to attract new businesses and residents, potentially creating additional demand for future public transportation options.

Perhaps the biggest challenge in extending fixed-route service further afield is the need to stay on schedule. The farther routes are extended into developing areas on the fringe, the more difficult it is to adhere to scheduled bus service, especially if at-grade rail crossings create unexpected travel delays. On the other hand, if routes are extended to the fringe areas, it may be necessary to modify alignments to provide more streamlined service along major roadways. In essence, routes that currently operate on portions of local roadways, or serve neighborhoods or other destinations, might have to be eliminated to extend service coverage farther out and still remain on-schedule. If

this were to happen, some riders may need to walk further to reach a bus stop, which would require adequate pedestrian accommodations (i.e., sidewalks, accessible ramps, marked crosswalks, etc.) and on-going maintenance (i.e., sidewalks in good condition, over-hanging vegetation removed, snow removal, etc.) to ensure adequate network connectivity and accessibility. This is something that should be evaluated in greater detail as part of the DPTS COA.

Future year population and employment projections were reviewed with respect to the current fixed-route transit service area. Based on these projections and assuming the addition of no new transit routes or services, transit service coverage would decrease slightly from 61 percent of the population within the fixed-route service area to approximately 60 percent by 2045. Similarly, 71 percent of employment within the current service area is expected to drop to 70 percent in the year 2045. While not significant declines, this analysis illustrates the trend of growth on the fringe areas, beyond the current transit service area limits.

Figure 5-12 displays the 2045 residential population within a one-quarter mile radius of the DPTS fixed-route bus system. Figure 5-13 displays the projected 2045 employment levels within a one quarter-mile radius of the DPTS fixed-route bus system.

Figure 5-12: Projected 2045 Population within ¼-Quarter Mile of DPTS Fixed-route Service

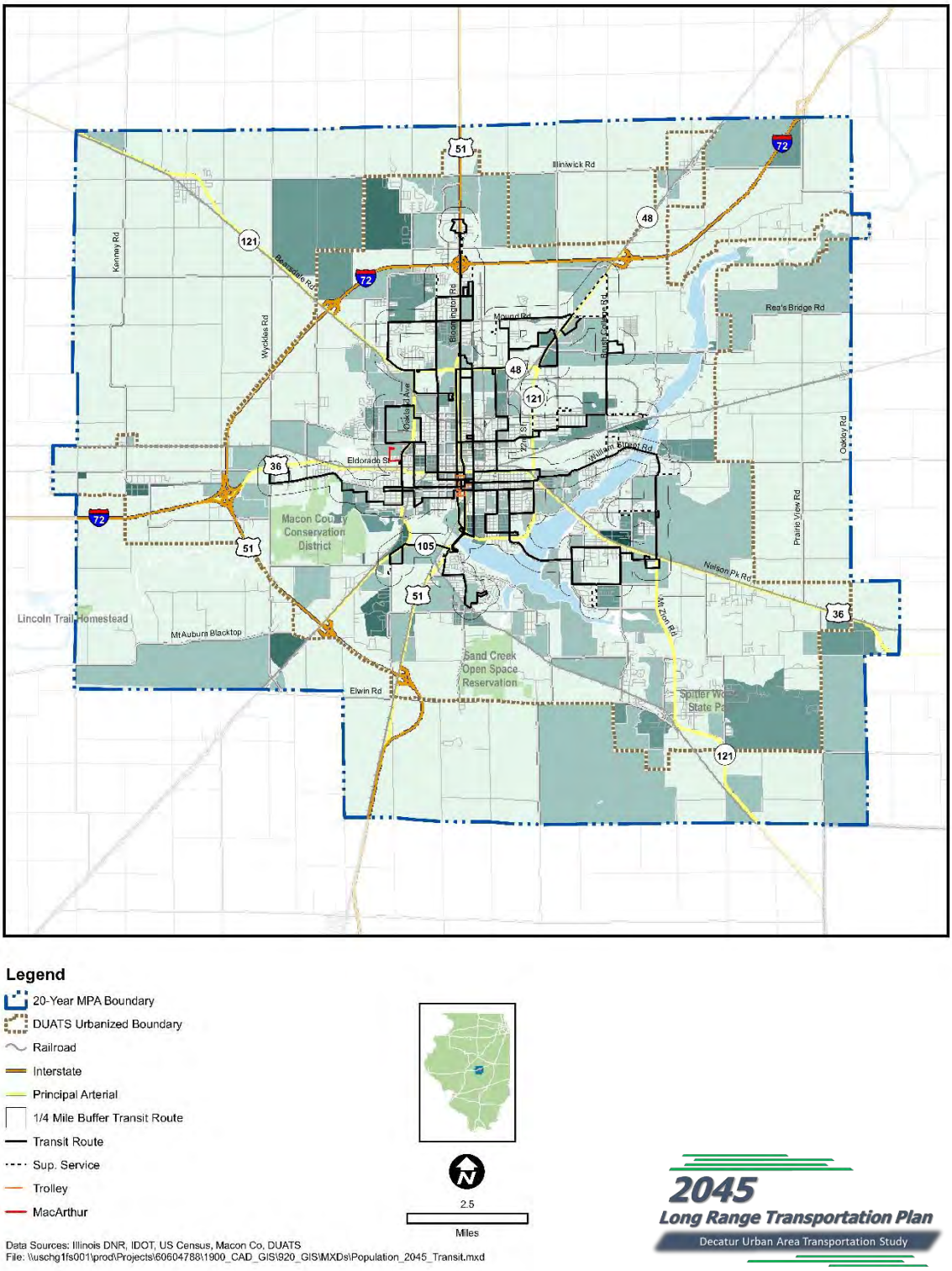
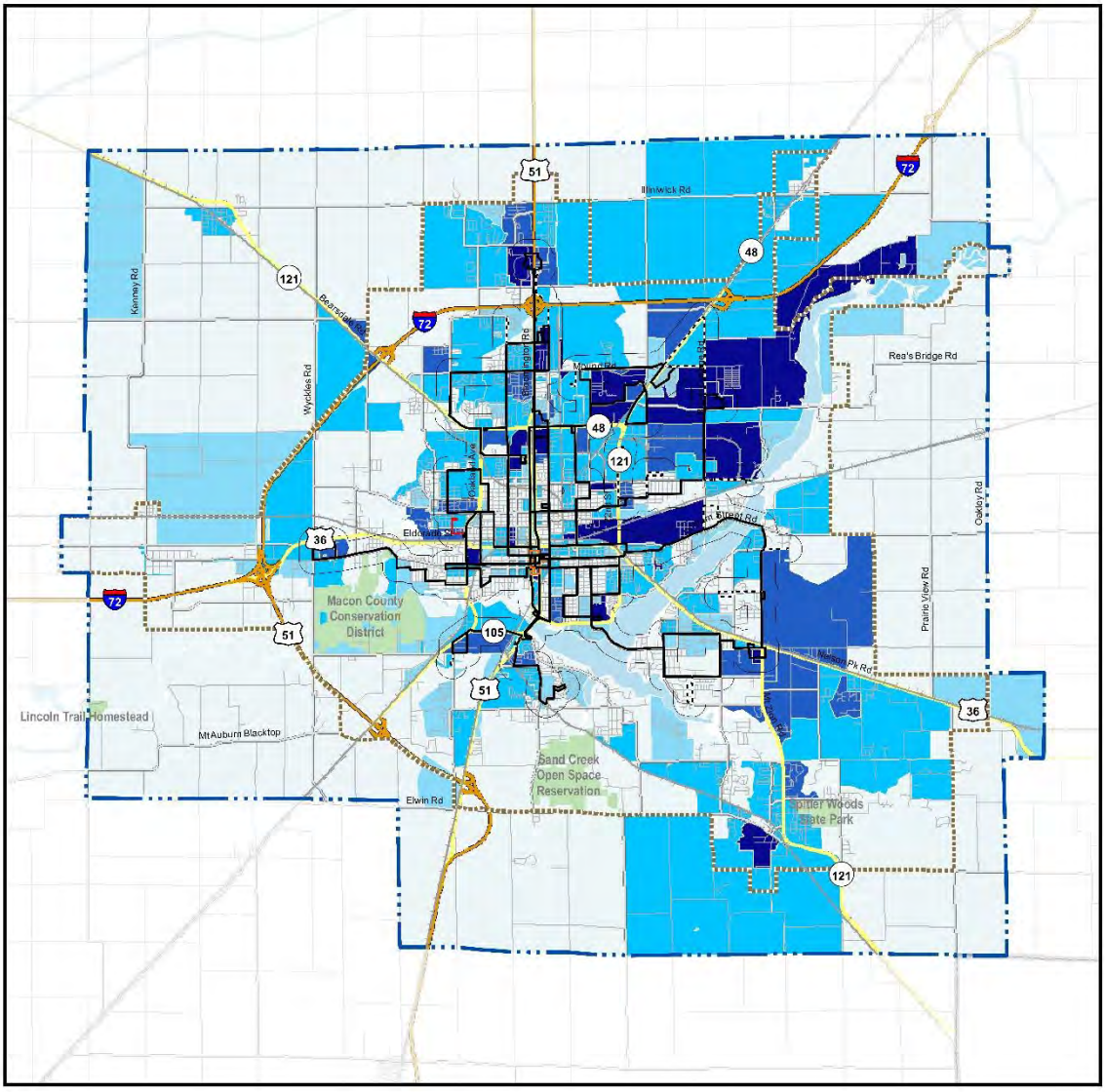


Figure 5-13: Projected 2045 Employment within ¼-Quarter Mile of DPTS Fixed-route Service



Legend

- 20-Year MPA Boundary
- DUATS Urbanized Boundary
- Railroad
- Interstate
- Principal Arterial
- 1/4 Mile Buffer Transit Route
- Transit Route
- Sup. Service
- Trolley
- MacArthur

2.5
Miles

Data Sources: Illinois DNR, IDOT, US Census, Macon Co, DUATS
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Schedule Adherence

Schedule adherence has been a concern of DPTS for years—in fact, dating back nearly two decades when a 2001 DPTS planning study raised this issue. It has also been supported by bus drivers, who have noted several locations throughout the transit service area that have frequent travel delays, mostly related to at-grade rail crossings. Since DPTS uses a pulse system to coordinate transfers at the Severns Transit Center, it is extremely important that each bus route adhere to the set schedule. However, this is often not possible due to at-grade rail crossing delays caused by freight train interference.

In 2011, DPTS collected at-grade rail crossing delay data as part of the DATES project. Between January 2011 and March 2011, DPTS bus drivers would call dispatch when they were delayed due to an at-grade rail crossing delay. Over the course of almost two months (54 operating days, Monday through Saturday), the DPTS recorded 721 incidents where their operations were impacted by train blockages. Of this total, 364 buses—approximately half—had to stop as a result of the blockages, which was almost 7 buses impacted per day. The remaining buses were able to identify the train blockage far enough in advance to deviate to an alternative route to avoid potential delays.[6] In total, nearly 4,500 passengers aboard the delayed buses were forced to wait a combined total of 33.5 hours during the data collection period. Seven buses during this time missed their pulse connection at the transit center, which impacted 40 passengers. The at-grade rail crossings that most often impacted by train blockages included:

- **Wood Street at MLK Jr. Drive |** Detour routes are possible if the train is noticed in time; two bus routes are affected. Plans are identified to improve this intersection;
- **Eldorado Street east of Morgan Street |** Detour routes are possible if the train is noticed in time; two bus routes are affected;
- **MLK Jr. Drive north of Cerro Gordo Street |** Detour routes are possible if the train is noticed in time; one bus route is affected;
- **Brush College Road at Faries Parkway |** No detour routes; one route is affected; and
- **William Street at 23rd Street |** No detour routes; two routes are affected.

Opportunities to minimize or eliminate travel delay for buses should be considered in future planning studies. Eliminating at-grade rail crossing delays remains a priority of the DUATS 2045 LRTP and these types of projects would significantly benefit regional transit operations. Furthermore, as previously discussed, at-grade rail crossing delays could make it difficult to extend fixed-route service to growing areas within the MPA at some point in the future.

Aging Population

An aging population is an issue that suggests the need to look at alternative transportation options for residents age 65 and older. As the area's population ages in place, there will be a greater need to provide alternative transportation options for many older residents. Complicating the situation is the rural character of many areas of the MPA. While fixed-route transit service will continue to serve the urbanized area well, the real challenge will be in finding viable transportation options for those living in the rural areas, or on the urbanized fringe. The need for demand-responsive transit service could significantly increase in future years and impact the delivery of transit services.

[6] URS Corporation, Decatur Area Transportation Efficiency Study. September 2013. Pages 54, 55.

Autonomous / Connected Vehicles

As emerging technologies develop at a rapid pace, it will be important to consider where they will fit into plans for future infrastructure. For example, mobility hubs can incorporate autonomous microtransit shuttles for last-mile trips, charging ports for an electric car-share station, as well as pick-up and drop-off space for transportation network company (TNC) partners. With microtransit filling the role of distribution, transit agencies may be able to focus on line-haul service. And with fewer people accessing stations by car, parking lots could be repurposed to a higher and better use, potentially making room for new trip generators or creating new revenue streams. It remains to be seen what the emerging transportation mobility frameworks of the future will look like upon implementation, but future LRTP updates should monitor the industry for potential impacts to transportation within the DUATS MPA, particularly in context with shared mobility.

High-Speed Passenger Rail

Over the past two decades there has been various high-level discussions regarding bringing Amtrak passenger rail service to Decatur. Conversations over the past decade have focused on the Midwest High Speed Rail Association (MWHSRA) initiative that would link St. Louis to Chicago, and as part of a potential alignment that would include a stop in the Decatur region. The currently proposed route would run between Champaign and Springfield on a dedicated rail line that would require a new rail alignment somewhere in the DUATS MPA. MWHSRA has promoted the rail project as supporting train speeds as high as 220-mph, which could transport passengers from Chicago to Decatur in one hour and fifteen minutes and to St. Louis in one hour.

A study commissioned by the MWHSRA has demonstrated that this is an attainable and valuable goal for Illinois passenger rail. The findings concluded that a rail route connecting to Decatur, an important center of business in Illinois, would be optimal and allow for electrically powered trains that could operate at high speeds. This high-speed rail project would also bring jobs, revenue, and fast transit options to the citizens of Decatur. Although current federal funding does not support 220-mph service, the feasibility of 220-mph service reported in this study builds a strong case for greater federal commitment to high speed rail funding in the future.

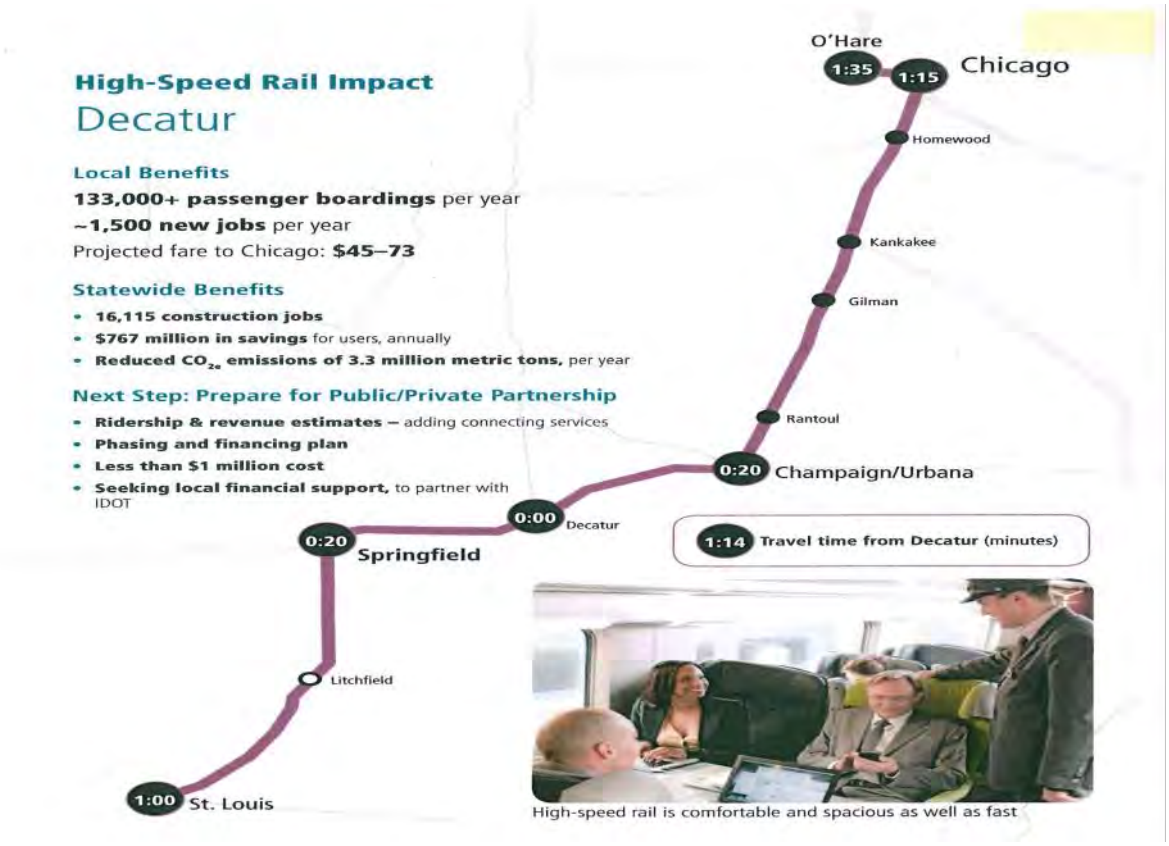
In September of 2013, the University of Illinois, in partnership with IDOT and several consultants, published a feasibility study that evaluated HSR between Chicago and terminal cities of St. Louis and Indianapolis, titled 220 MPH High Speed Rail Preliminary Feasibility Study. A station in Decatur is listed in this study as being one of nine stops between Chicago and St. Louis.[7] This study underscores the fact that planning efforts for high speed rail continue to evolve in Illinois, and potential service and construction work appears to be shifting from long-term to short-term expectations.

Planning for and possibly constructing such a massive transportation project would be of great significance to the Decatur region. Existing freight lines are numerous, the number of trains in and out of the MPA daily is large, and safety, security, operation, etc., would warrant a substantial investment of time, finances, and cooperation. Even with these obstacles, it is in the MPA's best

[7] University of Illinois at Chicago and University of Illinois at Urbana-Champaign. 220 MPH High Speed Rail Preliminary Feasibility Study (2013).

interest to support a future high-speed passenger rail service in Decatur. Figure 5-14 summarizes the elements of a Decatur area high-speed passenger rail service.

Figure 5-14: High Speed Passenger Rail



Source: Midwest High Speed Rail Association

NON-MOTORIZED NEEDS

The DUATS non-motorized network comprises primarily dedicated trails and is supplemented by on-road bicycle travel. DUATS, along with and through partner agencies, implements the regional trail plan, which has been documented in previous LRTPs. Agency review of the bicycle plan confirms that the primary plan is still relevant to guide future bicycle investments as part of the 2045 LRTP.

DUATS has made progress in planning, designing, and constructing components of its trail system. Most recently, trail segments have been added in the southeast portion of the DUATS MPA. The Decatur Park District is also moving forward with an extension of the Stevens Creek bike trail that will pass under I-72 to connect Cresthaven Park with Timber Lane in Forsyth (Figure 5-15). However, many components of the main north/south axis remain, as well as opportunities to expand the trail system on an east/west basis. Looking out to the year 2045, the primary need is to address major gaps in the network, which can be accomplished by addressing both local and regional components of the non-motorized system.

Figure 5-15: Stevens Creek Bike Trail (Underpass at I-72)

While trails represent the main focus of the DUATS non-motorized network, on-street bicycle accommodations—or non-motorized improvements incorporated into roadway projects—could provide critical connections to supplement the trail system. The application of Complete Streets principles can help in strengthening the DUATS non-motorized network. Complete Streets is a concept that can be applied in planning or designing a new roadway or repairing/replacing an existing roadway. Identifying ways to eliminate non-motorized system gaps could be as easy as restriping roadways to allocate more space to bicyclists or it could involve more extensive improvements such as reconstructing roadways to incorporate on-street bicycle facilities or adjacent sidewalks and/or trails.

At-grade Rail Crossings

While travel delays experienced by motorists are the most common among all roadway users, at-grade rail crossings also impact bicyclists and pedestrians. Beyond having to wait the same amount of time to cross, these users are potentially exposed to increased safety concerns. Most notably, bicyclists and pedestrians are exposed to weather conditions, including extreme heat and cold—something that motorists can largely avoid through climate control conditions within their vehicles. For these reasons among others, at-grade rail crossings are a major concern to non-motorized users. As such, the strategic development of grade-separated facilities at key locations throughout the MPA is a critical component of achieving a high degree of mobility for non-motorized users, as well as enhancing safety.

Bicycle Travel in Downtown Decatur

The current multi-use trail system serves primarily the outer areas of the MPA. Bicycle travel in downtown Decatur is limited by existing roadway configurations that do not contain design elements that are supportive of bicycle travel. Opportunities to improve bicycle travel along existing roadways should continue to be considered as part of any roadway reconstruction project throughout the MPA. Consistent signage, bicycle parking, and on-street facilities should be identified and provided in various locations in the CBD to improve bicycle travel in the downtown area.

Lake Decatur Crossings

The Lake Decatur area contains great opportunity for recreational activities and providing safe, well connected bridge crossings are an important element of the future non-motorized network.

Bicycle Plan

It has been several years since DUATS adopted the Decatur Urbanized Area Comprehensive Bicycle Plan (1999). DUATS has proposed that this plan be merged with the Metro Area Greenways Plan, although this has not occurred. An updated and merged Bicycle Plan would be of great value to local governments and interested parties in expanding their non-motorized networks and developing ways to enhance bicycling conditions in the MPA. A Bicycle Plan could also provide a strategy for prioritizing and sequencing projects both local and regional in nature. Lastly, the Bicycle Plan would provide an updated list of potential linkages between the central business district, the Severns Transit Center, and other destinations.

FREIGHT NEEDS

The movement of commodities, goods, and raw materials via truck and rail is critical to supporting the economic vitality of the region and meeting the operational requirements of businesses and industries in the MPA. However, truck and rail traffic often conflict with the movement of other surface transportation modes—primarily private automobiles, transit vehicles, and non-motorized users. The operation of trucks and trains also has a negative impact on quality of life issues—delays, noise, and air quality. As such, the primary objective of planning for freight traffic focuses on balancing the mobility needs of trucks and rail with the preservation of a high quality of life for residents throughout the MPA.

Truck Movements

Given the importance of truck traffic to the economic activity of the region, there is a need to better accommodate truck movements. In this regard, the Beltway project has been identified as the best available option for providing enhanced connectivity between the interstate and key truck routes along the southern and eastern areas of the region.

As previously noted, at-grade rail crossings are an issue in the MPA. Not only does the movement of rail trains at these locations cause a negative impact on the traveling public, but they also cause significant delays for trucks. Stalled large trucks, such as tractor trailers, have an even greater impact on overall congestion associated with grade crossings since their size consumes a larger portion of the roadway than do private automobiles.

Another issue related to truck movements involves the expansion of the Midwest Inland Port (in the NW quad of Brush College and Faries). This development is likely to result in increased truck and rail traffic. Much of this expansion occurred after the completion of the DATES project, a fact which illustrates how quickly developments like this can impact the transportation network.

Brush College Road Improvements

Brush College Road has long been identified as a corridor in need of both rail and truck improvements. A Brush College Road study investigated the future needs and issues associated with this roadway and identified several alternative improvements that could be made.[8] These improvements included:

- **Grade Separation at NS Rail Yard |** Included consideration of both an overpass and underpass, with the overpass option being selected as the preferred alternative;
- **Grade Separation at Faries Parkway |** Since an overpass was selected for the NS Rail Yard grade separation, an overpass was recommended for the Faries Parkway grade separation due to the proposed elevation of Brush College. Additionally, two different options were considered for building a ramp to connect Faries Parkway and Brush College Road.

The grade separation at Faries Parkway is currently being designed and will begin construction in the next few years. Funding for the grade separation at the NS rail yard has not been identified.

[8] City of Decatur, Brush College Road Improvement Study – Combined Design Report, pg. 75 (2014)

Relocation of Rail Facilities beyond the Urbanized Area

As part of the DATES project, several different options for improving freight rail-related congestion and delay issues in the MPA were considered. This included the consideration of significant alterations to the configuration of tracks in the region. Ultimately, the alternatives that proposed rerouting rail traffic tracks (estimated at $33.9 million) and relocating the CSX yard outside of the urbanized area (estimated at $19.1 million) were both judged too expensive and disruptive to the area to warrant further consideration. Furthermore, the amount of funding necessary for either project could be put to more productive use for other smaller, targeted improvements.

AVIATION NEEDS

From an LRTP perspective, recent improvements have positioned the airport to capitalize on future year improvements. Plans to construct the Beltway would greatly improve regional access and help attract new businesses to the industrial park. The following is a list of other future needs for the Decatur Airport:

- **Airport Operations |** Continued investment in the Decatur Airport is necessary to maintain and enhance its position as a passenger facility and airfreight hub of regional significance. Commercial airline service has continued to see an increase in annual enplanements and as such the airport may be in a position to expand air service in the future.
- **Airport Expansion |** Expansion plans are critical to the continued development and success of the Decatur Airport. Coordinated land use and transportation planning is needed to ensure that airport expansion plans can be implemented. In particular, it is important that new commercial and residential development does not encroach on the airport. Furthermore, future development should be considered in relationship to the Beltway to accommodate future airport expansion as well as providing the appropriate regional and local access/connectivity.
- **Development of the Industrial Park |** The Decatur region has been focused on attracting new businesses and industries to the area and one goal of the LRTP is to support economic development opportunities within the MPA. Development of the airport and industrial park are considered important to attracting new economic development opportunities to the region.
- **Improved Accessibility |** The Decatur Airport is located on the eastern edge of the city and can be accessed via US-36, IL-105, and IL-121. There is currently no direct access to the airport by interstate or other limited-access highways. Improved accessibility is critical to the continued development and success of the Decatur Airport. Completing the Beltway will help address this issue but additional improvements to area roadways would further position the airport, and adjacent industries, as a desired location for businesses within the region.

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Chapter 6
LRTP Priorities and Recommended Plan

This chapter summarizes the DUATS 2045 LRTP priorities, recommended plan *and* supporting strategies and policies.

The chapter identifies priority projects based on how they address the LRTP goals and objectives and is supplemented with an analysis of revenues, expenditures, and funding sources. It also includes an environmental justice and environmental mitigation analysis.

LRTP PRIORITIES

Chapter 5 outlined future year multimodal transportation needs, the majority of which come with substantial costs and cannot be implemented/constructed with current or projected transportation revenues. Given these funding constraints, this chapter sets forth priorities to help inform and guide future planning efforts. The summary of transportation priorities is followed by a fiscal constraint analysis identifying projects likely to be funded for implementation. It is important to note that the LRTP is viewed as a living document, and therefore projects can be amended prior to the next LRTP update to respond to changing priorities or conditions, if needed.

Regional Transportation Priorities

It is impossible to predict exactly what the DUATS MPA population, employment, and transportation system will look like in 25 years. For this reason, the primary purpose of the LRTP is to establish a framework that can be responsive to change in order to best address regional transportation priorities. As previously documented, the DUATS MPA has experienced a downward trend in population in recent decades. This trend, projected to continue over the next two decades, is offset by employment projections that anticipate the region adding nearly 3,000 jobs over the next 25 years. The LRTP assumes that the addition of these jobs will have a positive impact on population growth within the region, resulting in a modest increase of 5,000 persons by the year 2045.

In order for the DUATS MPA to realize this growth, it is critical to create an environment that provides current businesses and industries the opportunity to expand operations, while also attracting new employers and producers to the region. The 2045 LRTP identifies transportation infrastructure projects that should help spur economic development, in addition to enhancing safety and providing a range of reliable transportation alternatives to area residents. The DUATS 2045 LRTP priorities, summarized below and displayed in Figure 6-3, will help move the region closer toward making the 2045 vision a reality.

1) **Brush College Road Corridor Improvements.** Brush College Road is an important corridor that provides access to major regional employers. Previous LRTPs have identified the need to reduce at-grade rail crossing delays and improve travel flow along the corridor through two primary improvements: 1) grade separating the rail crossing immediately north of Faries Parkway by constructing an overpass, and, 2) constructing an overpass at the current NS rail yard underpass. Both projects were identified as priorities in the previous LRTP and have since been evaluated in more detailed planning and engineering studies.

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vements.

Figure 6-2 displays a rendering of the proposed NS rail year overpass.

Figure 6-1: Overview of Brush College Road Corridor Improvements

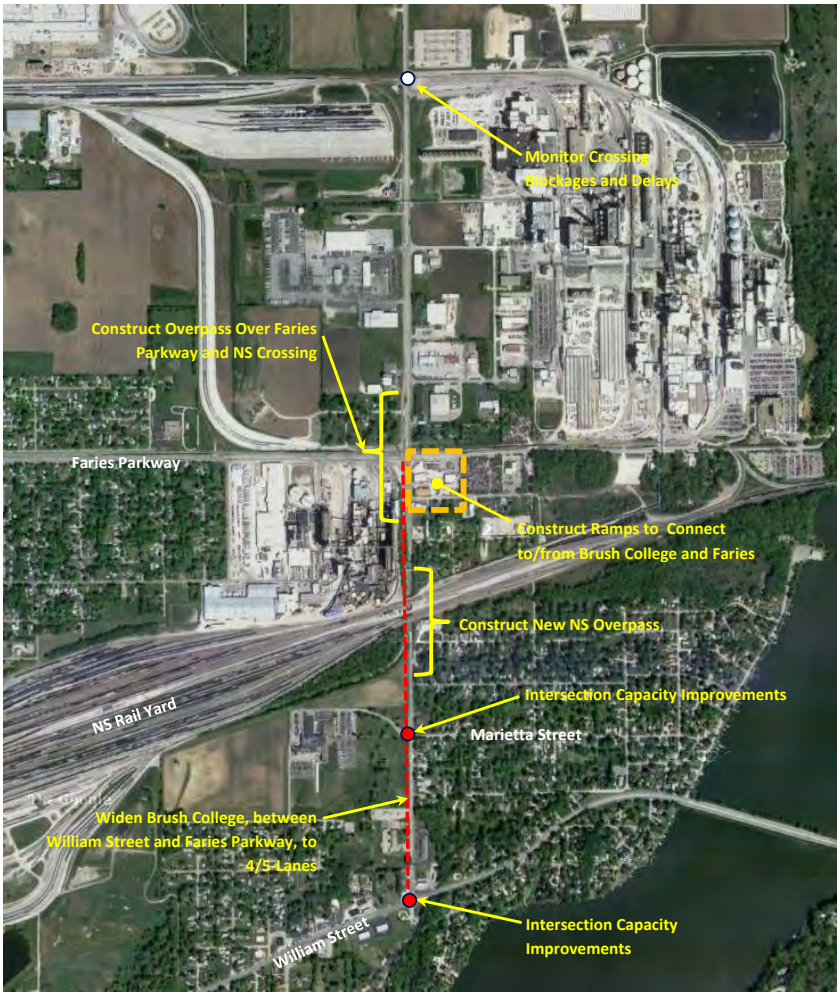


Figure 6-2: Proposed Brush College Road Overpass at NS Railyard

SOURCE: AECOM.

2) **Beltway.** The Beltway is a planned outer roadway that—when complete—will connect IL-48 in the northeast portion of the MPA to US-51 in the southwest. The project will provide a much-needed expressway in the east and southeast portion of the MPA that will enhance connectivity to the airport, support economic development, and better accommodate regional truck traffic. In previous LRTP documents, the DUATS Technical and Policy committees identified the segment from IL-48 to US-36 as Phase One of the overall project, and this section of the project remains a top priority in the 2045 LRTP as it would greatly enhance access between the airport and I-72. An improvement to Reas Bridge Road, over Lake Decatur, is programmed in the current TIP and the segment from IL-48 to IL-105 is also identified in the TIP. It is important to note that the completion of the entire Beltway remains a priority for the DUATS MPA.

   The Beltway supports the DUATS 2045 LRTP goals and objectives and addresses the ten FAST Act metropolitan transportation planning factors. The project supports economic development, enhances safety, increases security, increases accessibility/mobility, enhances quality of life, promotes the integration and connectivity of the transportation system for people and freight, promotes efficient system management, helps preserve existing transportation facilities, improves resiliency and reliability of the transportation system, and enhances travel and tourism (especially supports the Farm Progress Show).

3) **27th Street Corridor Improvements.** 27th Street is a major north-south corridor that provides access to area industries. This corridor continues to grow in importance given the direct access it provides to the Midwest Inland Port (MIP). The City of Decatur plans to study this corridor further as part of a comprehensive industrial transportation plan. It is anticipated that this study will identify projects to enhance accessibility, improve connectivity, reduce travel delays, and support economic development. Exploring options to enhance access to I-72 and the Beltway are important elements that should be evaluated to enhance regional connectivity. As specific projects are identified in this corridor study, DUATS can amend the LRTP to include regionally significant projects, if needed.

4) **Rail Crossing Improvements.** At-grade rail crossing delays throughout the DUATS MPA have long been a concern to the traveling public and to local businesses and industries. The DATES project, completed in 2013, was the first regional study to quantify travel delay caused by frequent train blockages. More importantly, the DATES results highlighted the challenges and negative impacts that rail crossing delays have on local businesses and industries, and further demonstrated the obstacles to retaining and attracting new businesses to the region. The previously discussed planned construction of an overpass of the rail crossing at Brush College Road at Faries Parkway will eliminate the top at-grade rail crossing delay in the region. This will be a substantial improvement to regional traffic operations; however, the construction of additional overpasses along US-36 and along 27th Street would have significant operational and economic benefits for the DUATS MPA.

5) **Lake Decatur Bridge Crossing Improvements.** The US-51 and US-36 Lake Decatur bridges are among the highest traffic volume locations within the Decatur region. Recent traffic counts on US-51 show the bridge carrying 24,600 vpd and the US-36 bridge carrying 21,300 vpd. The current design of these structures does not provide adequate space to accommodate non-motorized users (bicyclists and pedestrians). These bridges also carry over 1,000 trucks per day (US-51 carries 1,325 and US-36 carries 1,250), which only adds to the

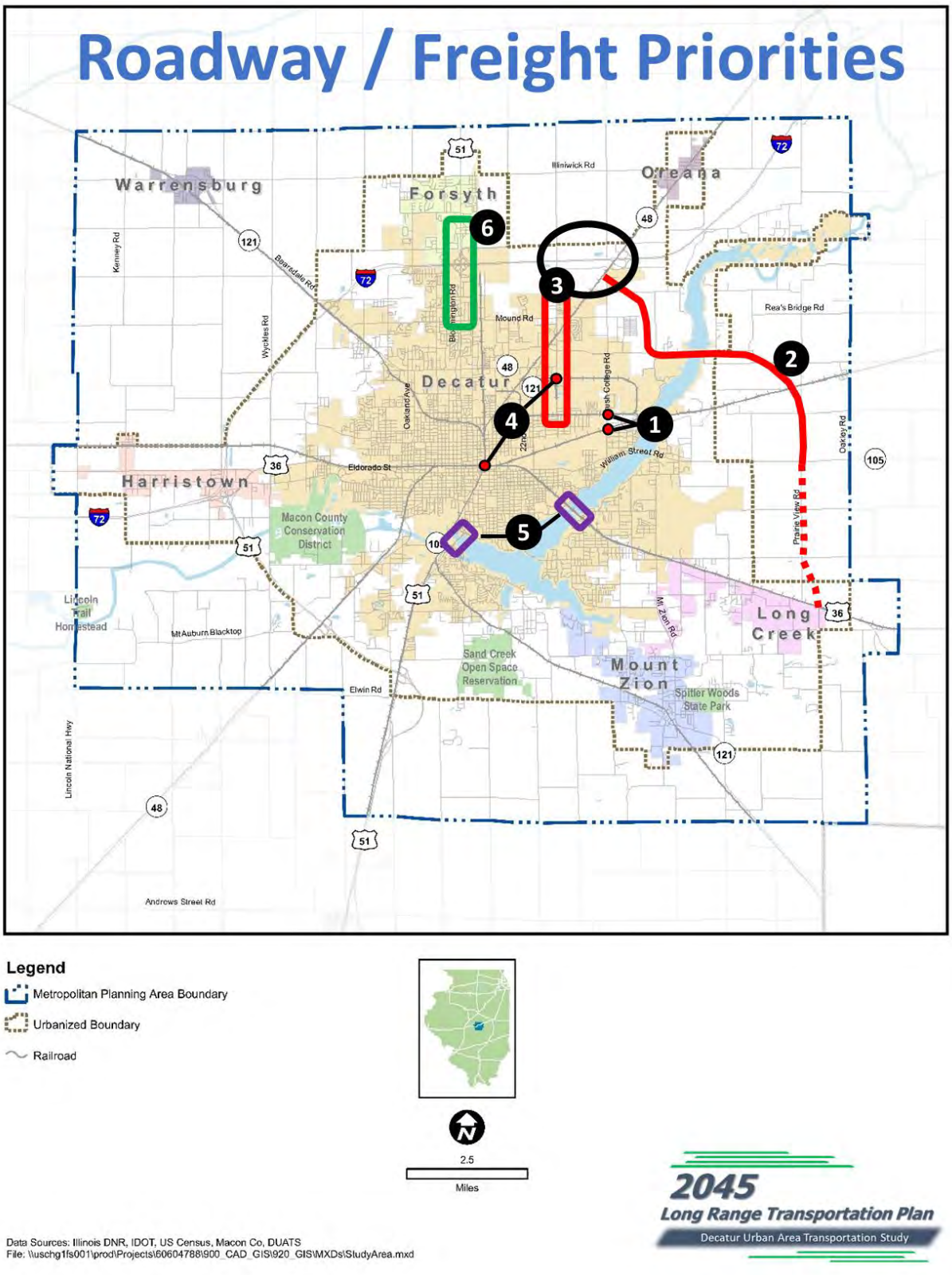
difficulty in crossing. Constructing new bridge crossings to current design standards would enhance safety at these locations, and further enhance access throughout the region.

6) **US-51 Traffic Operations and Safety.** The segment of US-51, just north of the I-72 interchange, has the highest observed traffic volumes (27,400 vpd) within the DUATS MPA. Opportunities to better accommodate traffic flow and enhance access in this area should be explored. In addition, this area also has the highest number of traffic crashes (121 recorded between 2012 and 2016). South of I-72 is also a high traffic area, with 76 crashes at the intersection of Mound and 75 crashes at the intersection of Ash, which ranks these in the top 10 crash locations within the MPA. A traffic study along this stretch of US-51 could potentially identify safety and access improvements to enhance traffic operations.

7) **Increased Focus on Preventative Maintenance.** [Not Displayed on

8) Figure 6-3] The on-going preservation of existing transportation infrastructure is a critical—and costly—component of maintaining a safe, efficient, and reliable transportation system. A 2045 LRTP review of progress toward meeting national performance measures indicates that the Decatur region is lagging behind state targets for maintaining NHS non-interstate segments in "good" condition. The concern about pavement condition was also identified as a top priority in the 2045 LRTP community survey. DUATS should pay close attention to this issue and prioritize improvements that make progress toward improving pavement conditions within the region. On a related note, the poor pavement condition within the region is due in large part to the heavy truck traffic. The previously discussed Beltway would likely help improve the pavement condition situation by redirecting trucks to a more appropriately designed facility which would better accommodate regional truck travel.

Figure 6-3: 2045 LRTP Priorities



POTENTIAL ROADWAY/FREIGHT PROJECTS

A range of potential roadway/freight projects were identified to address the LRTP priorities. DUATS member agencies reviewed the 2040 LRTP project list as a starting point to identify projects that were completed or may no longer be needed. Current and projected future transportation needs were also considered in identifying potential projects.

Figure 6-4 displays the IDOT and Macon County projects. Table 6-1 summarizes these projects. Figure 6-5 displays projects identified for Decatur, Forsyth, and Mt. Zion. Table 6-2 summarizes these projects. Individuals maps for each community are shown for Decatur (Figure 6-6), Forsyth (Figure 6-7), and Mt. Zion (Figure 6-8). Estimated project costs, if available, are also provided. In most cases the project costs represent planning level estimates in 2019 dollars.

Considerations in Identifying Projects

The DUATS MPA is somewhat unique in terms of identifying future transportation investments. Unlike many metropolitan areas that have reoccurring traffic congestion, current and projected traffic volumes in the DUATS MPA are not expected to be a significant issue (outside typical a.m. and p.m. peak hour traffic conditions that experienced increased traffic). I-72, as previously documented, has daily traffic volumes well below typical interstates and there is plenty of available capacity to accommodate additional traffic. The DUATS region is also projected to have relatively modest growth and traffic volumes are not expected to increase to levels that would require major roadway capacity projects. The area with the highest traffic volumes, US 51 north of I-72, is planned to be studied for potential intersection/traffic improvements that would likely identify projects to improve capacity and traffic flow.

As previously documented, the DUATS MPA has a higher than average freight (truck and rail) movement which creates other challenges for the region. These include frequent at-grade rail crossings which impacts the traveling public and causes trucks to be delayed resulting in inefficiencies for local businesses/industries. The heavy truck traffic also causes wear and tear on the existing roadways, often resulting in pavement and bridge conditions that deteriorate at a faster pace than other communities. The primary projects that would address these concerns are the development of the Beltway and construction of grade separations within the region. These improvements come with significant cost estimates that when looked at as part of the fiscally constrained analysis result in most of the projects being included as unfunded needs on the illustrative list of projects. Outside these investments, the majority of projects within the DUATS MPA are focused on maintaining the existing transportation facilities. Fiscally constrained projects are discussed in the following section.

Figure 6-4: IDOT and Macon County Projects

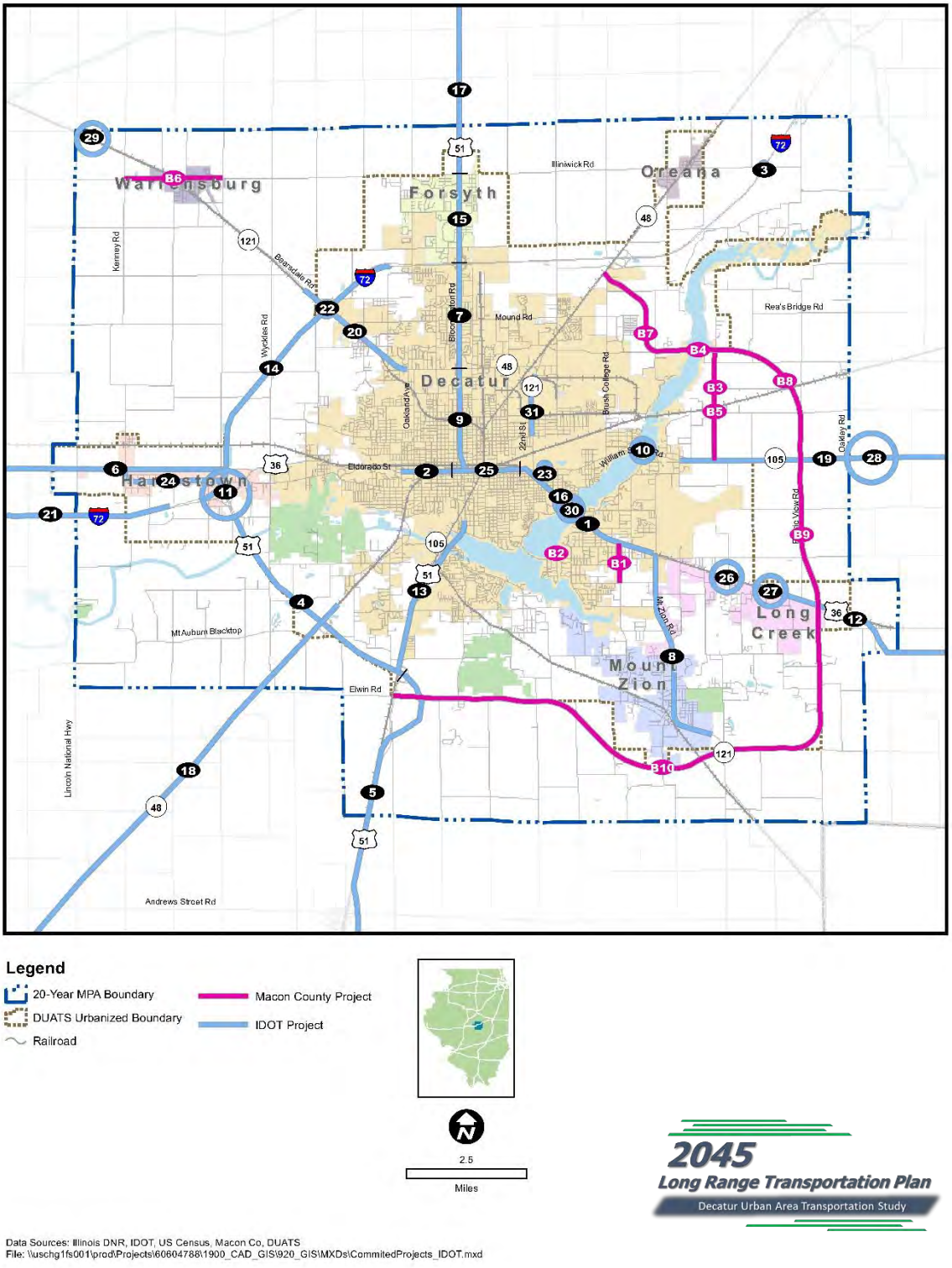


Table 6-1: IDOT and Macon County Project List

Project / Description	Approximate Location	Estimated Cost
1. US 36/ILL 121 - Resurfacing, ADA improvements and traffic signal modernization.	3.79 miles from 19th St to 0.4 Mi E of Airport Rd in Decatur	$ 5,730,000
2. US 36 - Resurfacing, ADA improvements, structure repair and traffic signal modernization	1.22 miles from ILL 48 to Church St in Decatur & W. Eldorado St from ILL 48 to US36	$ 4,350,000
3. I-72 - Bridge Joint replacement and repairs, deck repairs, and bridge deck overlay	bridge at CH 20 1 mile East of Oreana	$ 600,000
4. US 51 - Microsurfacing	4.64 miles from 0.8 Mi S of US 36 to 0.3 Mi E of US 51 Busn SW of Decatur	$ 650,000
5. US 51 - Resurfacing and Bridge joint replacement	9.38 miles from US 51 Bsn SW of Decatur to 0.5 Mi N of Shelby Co Line	$ 14,690,000
6. Old US 36 - Resurfacing	9.67 miles from Sangamon County Line to US 36 in Decatur	$ 7,790,000
7. Old US Business 51 - Resurfacing, ADA improvements and bridge joint repair	2.68 miles from I-72 to ILL 121 in Decatur	$ 4,550,000
8. ILL 121 - Resurfacing, ADA improvements	4.15 miles from US 36 to South Corporate Limits of Mt Zion	$ 7,140,000
9. Old US 51 Business - Resurfacing, ADA improvements	4.27 miles from ILL 121 to US 36 in Decatur	$ 6,820,000
10. ILL 105 - Superstructure Replacement	at William St Bridge over Lake Decatur	$ 9,210,000
11. US 36 - Resurfacing and bridge repair	5.94 miles from I-72 to 0.2 Mi W of Harristown Blvd (including ramps) & US 51 from I-72 to 0.3 Mi S of Cantrell	$ 6,780,000
12. US 36 - Resurfacing - 6.55 miles	6.55 miles from 70th St in Long Creek to 0.2 Mi W of ILL 32	$ 4,560,000
13. Old US Business 51 - Resurfacing, Bridge joint replacement and bridge deck overlay	6.08 miles from Cleveland Ave in Decatur to US 51 1.9 Mil S of Elwin Rd	$ 9,090,000
14. I-72 - Interstate Resurfacing and ramp repair	8.45 miles from 1.4 Mi W of US 51 W of Decatur to 0.5 Mi W of US 51 at Forsyth including ILL 121 interchange	$ 22,830,000
15. US 51 - Resurfacing and ADA improvements	1.94 miles from 0.1 Mile N of Forsyth to I-72 in Decatur	$ 4,620,000
16. US 36 - Bridge Replacement	bridge over Lake Shore Dr in Decatur	$ 1,690,000
17. US 51 - Resurfacing	8.14 miles from Dewitt County Line to 0.1 Mi N of Forsyth Rd	$ 14,770,000
18. ILL 48 - Resurfacing and Culvert Replacement	10.93 miles - 0.5 Mi N of US 51 to Christian Co Line -	$ 9,111,000
19. ILL 105 - Resurfacing	6.05 miles - 0.3 Mile E of Bender Dr to Piatt Co Line	$ 3,830,000
20. ILL 121 - Resurfacing and ADA improvements	2.72 miles - 0.6 Miles NW of I-72 to University Ave in Decatur	$ 3,710,000
21. I-72 - Resurfacing and Ramp Repair	7.86 miles from Sangamon Co Line to 1.4 Mi W of US 51 W of Decatur	$ 21,640,000
22. I-72 - Superstructure replacement	Bridge over ILL 121 and IC RR Northwest of Decatur	$ 10,510,000
23. ILL 105 at 24th St - Intersection Improvement	At 24th Street	$ 5,250,000
24. Main St - Resurfacing	2.26 miles from 0.1 Mi N of Eldorad St in Harristown to N Glasgow Rd	$ 1,060,000
25. Church St - Resurfacing and ADA improvements	1.40 miles to 19th St in Decatur	$ 2,360,000
26. US 36 - Bridge Replacement	Bridge at Long Creek Tributary W of Esther Ave	$ 1,009,000
26. US 36 - Bridge Replacement	Bridge at Long Creek 0.4 Mi E of S 70th St	$ 1,009,000
28. ILL 105 - Bridge Replacement	Bridge at Long Creek 2.5 Mi W of Piatt Co Line	$ 970,000
29. ILL 121 - Bridge Replacement	Bridge at Creek 0.5 Mi W of Heman	$ 1,040,000
30. ILL 121/US 36 - Bridge Rehabilitation	Bridge over Lake Decatur	$ 12,300,000
31. ILL 121 - Patching / Resurfacing	1.17 miles from 0.1 miles south of Kile Street to Locust Street in Decatur	$ 1,400,000

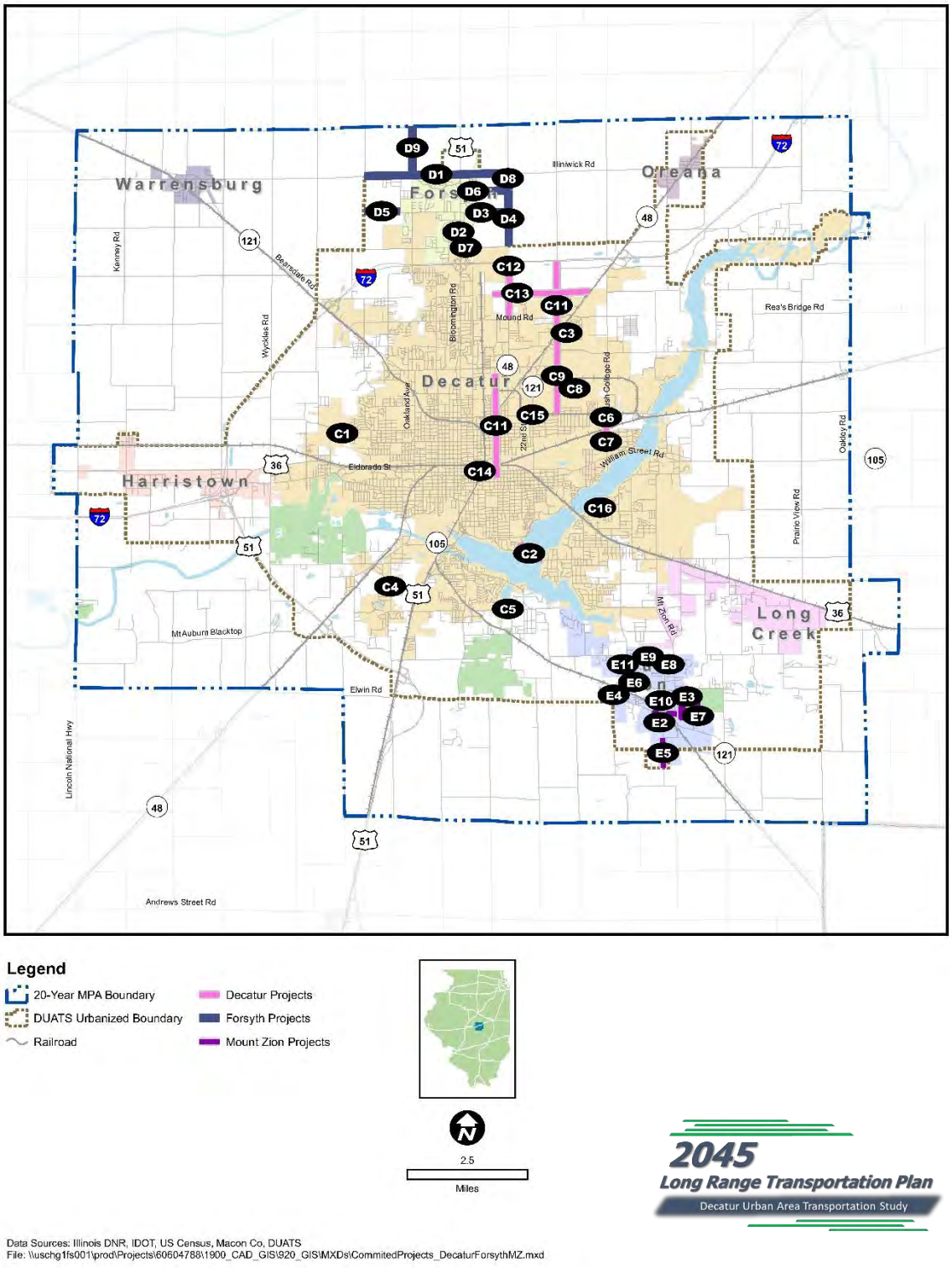
Source: IDOT.

Table 6-1: IDOT and Macon County Project List (continued)

Project / Description	Approximate Location	Estimated Cost
B1. CH-7 Reconstruction	Between Fitzgerald and US-36	$ 3,000,000
B2. CH-63 / Country Club Road Resurfacing	2,900 feet of roadway	$ 250,000
B3. CH-23 / Sangamon Road Curve Reconstruction	Design	$ 500,000
B4. Reas Bridge Road Bridge Replacement	Bridge over Lake Decatur	$ 13,650,000
B5. CH-23 /Sangamon Road Resurfacing	14,000 feet of roadway	$ 1,200,000
B6. CH-20 / Reconstruction	Warrensburg, IL	$ 5,000,000
B7. Beltway (Phase 1 - segment 1)	2 miles, Lake Decatur to ILL 48	$ 41,644,000
B8. Beltway (Phase 1 - segment 2)	4 miles, ILL 105 to Lake Decatur	$ 49,929,000
B9. Beltway (Phase 1 - segment 3)	4 miles, US 36 to ILL 105	$ 45,000,000
B10. Beltway (Phase 2, including final engineering)	13 miles, US 51 to US 36	$ 130,000,000
B11. Bridge/Structure Reconstruction or Replacement	Various locations (not shown on map)	$ 15,000,000

Source: Macon County.

Figure 6-5: Decatur, Forsyth and Mt. Zion Projects



Legend

- 20-Year MPA Boundary
- DUATS Urbanized Boundary
- Railroad
- Decatur Projects
- Forsyth Projects
- Mount Zion Projects

2.5 Miles

2045 Long Range Transportation Plan
Decatur Urban Area Transportation Study

Data Sources: Illinois DNR, IDOT, US Census, Macon Co, DUATS
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Table 6-2: Decatur, Forsyth and Mt. Zion Project List

City of Decatur Projects

Project / Description	Approximate Location	Estimated Cost
C1. Center Street Bridge over Steven's Creek	0.9 miles west of Home Park Avenue (construction 2021)	$ 1,000,000
C2. Lost Bridge Road Guardrail Replacement	Along causeway over Lake Decatur	$ 120,000
C3. Meadowlark Bridge Improvements	0.3 miles south of Mound Road	$ 350,000
C4. Taylor Road Bridge over Ward Branch	0.6 miles south of IL- 48 (construction 2020)	$ 1,000,000
C5. Grove Road Bridge over Sand Creek	0.8 miles east of Franklin Street Road (2024)	$ 300,000
C6. Brush College Road Improvement (Phase 1)	North of NS Underpass to Harrison Avenue	$ 25,800,000
C7. Brush College Road Improvements (Phase 2)	William Street to North of NS Underpass	
C8. Parkway Drive Improvement	27th Street to ADM Intermodal Ramp	$ 700,000
C9. 27th Street and CN Railroad Overpass	0.4 miles south of Pershing Road	$ 50,000,000
C10. 27th Street Improvement	Faries Parkway to IL-48	$ 2,000,000
C11. Jasper Street Improvement	Eldorado to Pershing Road	$ 2,000,000
C12. Woodford Street Extension and Interchange	Mound Road to I-72	$ 30,000,000
C13. Ash Avenue Extension	MLK Jr. Drive to IL-48	$ 30,000,000
C14. Eldorado (US-36) and CN Railroad Overpass	0.15 miles east of MLK Jr. Drive	$ 50,000,000
C15. Garfield Bridge	Replace Bridge over 22nd Street	$ 920,000
C16. Country Club Rd Bridge over Lake Decatur	Beam repairs	$ 10,000,000

Forsyth Projects

Project / Description	Approximate Location	Estimated Cost
D1. Illiniwick Road (CH-20) Reconstruction	Oakland Ave to Sawyer Rd (joint improvement with MCHD)	$ 11,165,000
D2. Barnett Avenue and US 51 Intersection Improvement	Reconstruction with safety improvements	$ 850,000
D3. E. Weaver Road Extension	Elwood Street to Sawyer Road	$ 3,300,000
D4. Sawyer Road Reconstruction (Phase 2)	E. Cox Street to E. Hickory Point Road	$ 4,500,000
D5. W. Weaver Road Extension	Hundley Road to Janvrin Road	$ 3,400,000
D6. East Cox Street Extension (Phase 3)	Smith Street to Sawyer Road	$ 3,900,000
D7. Koester Drive and E. Hickory Point Road Intersection study	Jointly funded project between Forsyth and Decatur	$ 500,000
D8. Sawyer Road Improvements	CH-20 South Cox Street Extension	$ 2,300,000
D9. Oakland Avenue Extension	CH-20 north to Shallenbarger	$ 4,500,000

Mt. Zion Projects

Project / Description	Approximate Location / Notes	Estimated Cost
E1. Broadway Street Reconstruction	Committed - anticipated bid letting January 2020	$ 1,465,000
E2. Main Street Bridge Rehabilitation	-	$ 525,000
E3. Lewis Park Drive Extension	-	$ 403,000
E4. Crestview Addition Widening	-	$ 425,000
E5. Henderson Street Reconstruction (Phase 3)	-	$ 497,000
E6. Florian Avenue Resurface	Mill and overlay	$ 210,000
E7. Park Addition Reclaim	Reclaim and widen	$ 360,000
E8. Dogwood Drive Resurface	Mill and overlay	$ 250,000
E9. Wildwood East Courts	Mill and overlay	$ 350,000
E10. Pine Court Resurface	Mill and overlay	$ 68,300
E11. Powers Court Resurface	Mill and overlay	$ 101,200

Source: Decatur, Forsyth and Mt. Zion.

Figure 6-6: Decatur Projects

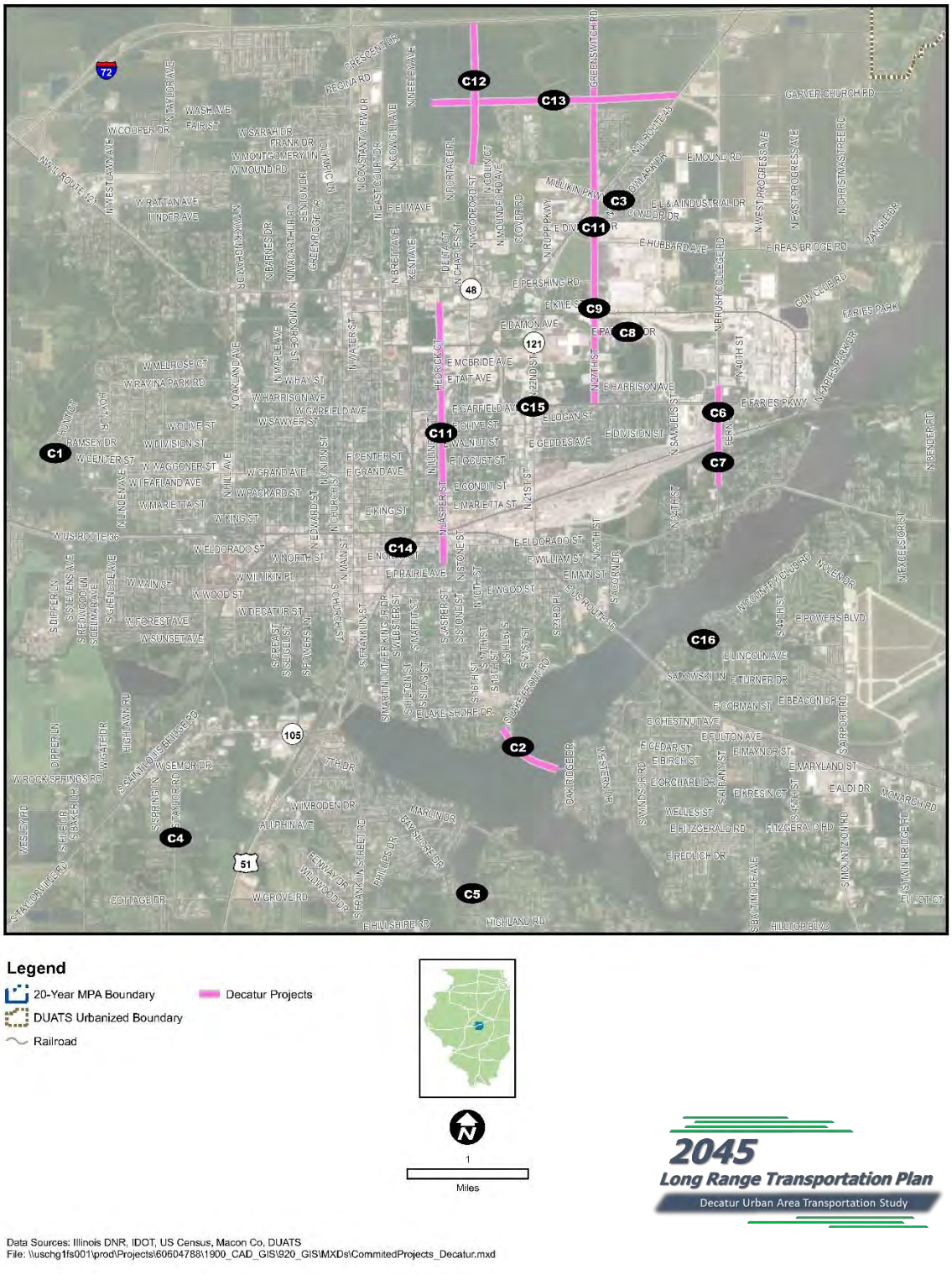
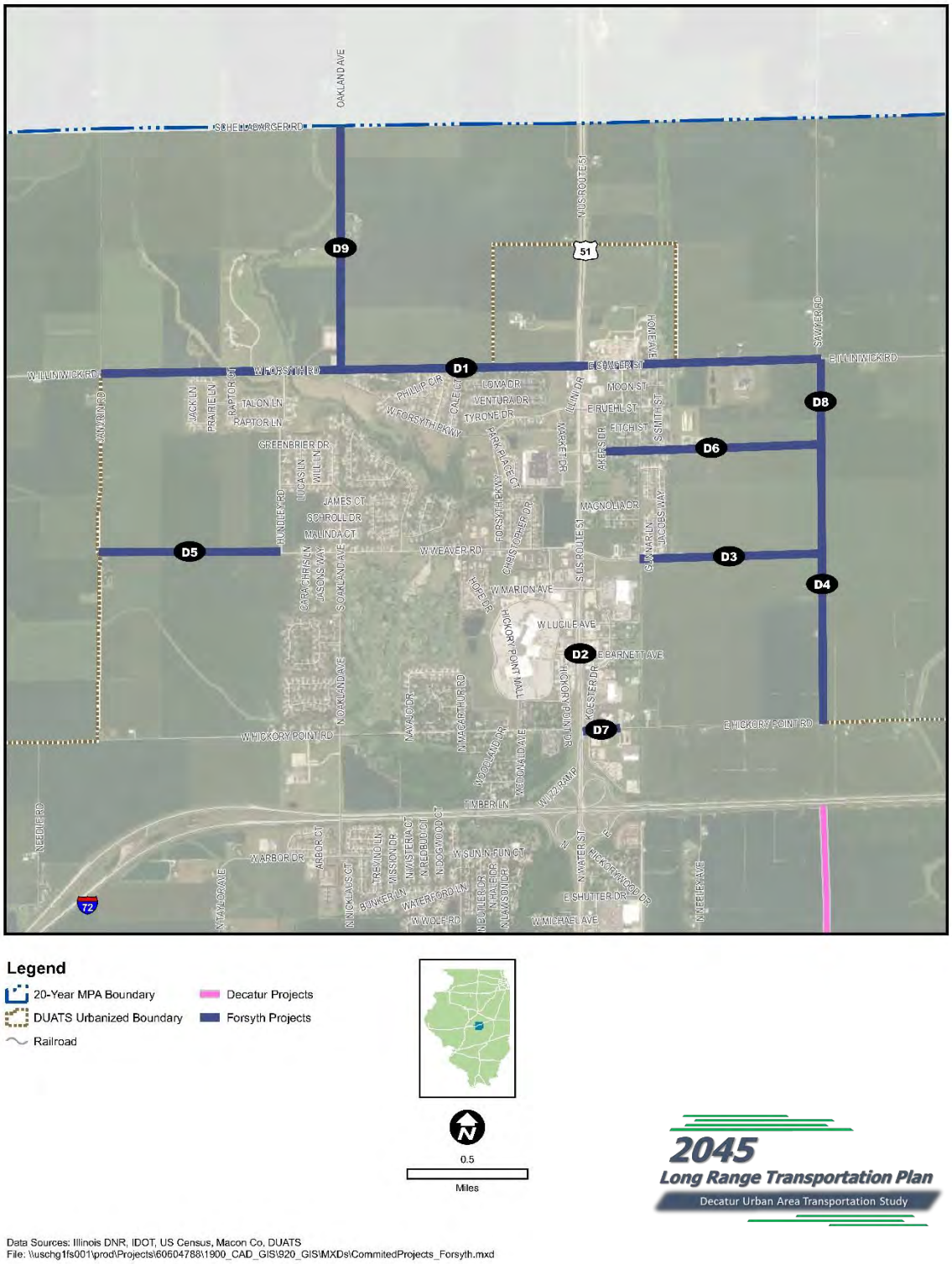


Figure 6-7: Forsyth Projects



Data Sources: Illinois DNR, IDOT, US Census, Macon Co, DUATS
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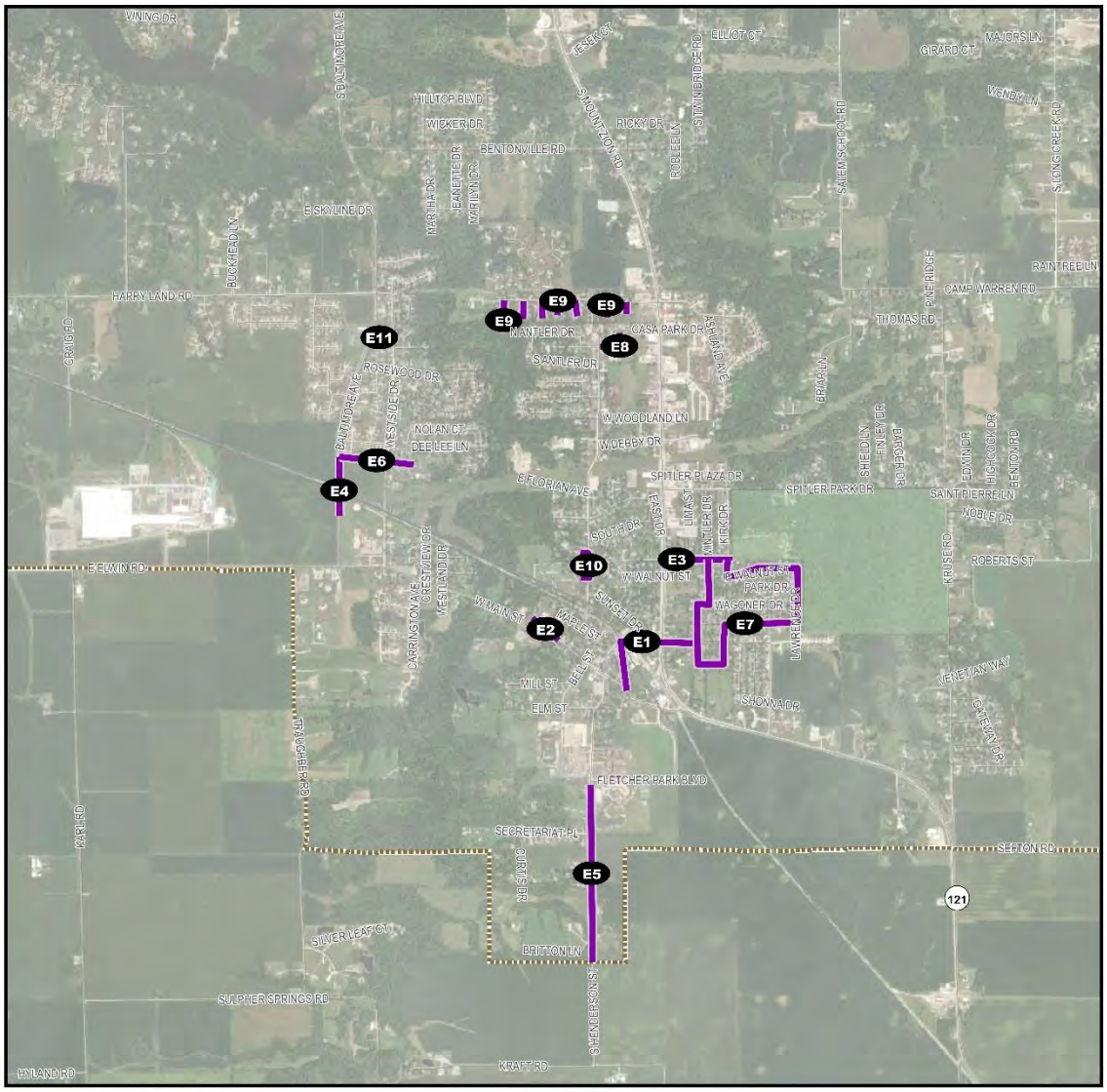
Figure 6-8: Mt. Zion Projects



Data Sources: Illinois DNR, IDOT, US Census, Macon Co, DUATS
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FISCALLY CONSTRAINED ROADWAY/FREIGHT PLAN

Federal planning legislation require LRTPs to be fiscally constrained. As such, the cost feasible analysis compares anticipated transportation revenues available through the horizon year 2045 to high-level project cost estimates, inflated to an anticipated year of expenditure. This analysis helps identify projects that are most likely to be funded during the life of the LRTP, and more importantly helps guide regional transportation and infrastructure investments.

The transportation needs and associated project costs are far greater than available transportation revenues—a common challenge facing most public agencies. Projects that are not fiscally constrained are included on the LRTP illustrative list of projects. Identifying these projects is an important aspect of the LRTP as the plan is a living document intended to provide guidance regarding future transportation investments. Furthermore, the LRTP can be amended, between regular LRTP updates, to add projects to the fiscally constrained list if priorities change and/or additional funding becomes available.

Federal Regulations

FAST Act planning regulations require that MPOs consider the financial implications of their planning efforts as part of the LRTP. Specific provisions in the law regarding the financial plan state the following requirements:[9]

- Development of a financial plan that demonstrates how the adopted transportation plan can be implemented;
- Development of funding estimates that will be available to support LRTP implementation, including financial resources from public and private sources;
- State recommendations on pursuing additional financing strategies to fund projects and programs included in the LRTP; and
- Account for all projects and strategies for which federal, state, local, or private funds would be used to finance, and use an inflation rate to reflect multi-year costs and revenues.

Simply stated, the LRTP should be fiscally constrained with reasonable funding sources identified for the proposed transportation projects. Projects with no known funding/revenue source are still included in the LRTP but will appear only as an illustrative project. The following sections summarize the DUATS 2045 LRTP fiscal constraint analysis.

Available Revenue

Transportation revenues come from several different sources including state and local funding. Transportation grants also play an important role in funding transportation projects, including large scale projects such as grade separations. Funding sources are described in more detail later in this section.

Projected roadway revenues available to the region are based on historical funding levels identified for the past five-years as reported by DUATS member agencies. In particular, transportation expenditures from IDOT, Macon County, and Decatur make up the majority of transportation expenditures for regionally significant transportation improvements. Based upon recent five-year averages for IDOT, Macon County, and the City of Decatur, it is estimated that the

[9] United States Government Printing Office (USGPO). 23 CFR 450.322(f)(10) – Development and Content of the Long Range Transportation Plan (LRTP). http://www.gpo.gov/fdsys/pkg/CFR-2011-title23-vol1/pdf/CFR-2011-title23-vol1-sec450-322.pdf (2014)

approximately $852 would be available through the year 2045 for maintenance and construction. Local funding for projects in Mt. Zion and Forsyth is also listed but is not generally a significant funding source for regional transportation projects identified in the LRTP.

The $852 million is likely a conservative estimate, especially given the recent Rebuild Illinois capital program. Rebuild Illinois is a $45 billion investment that will substantially help fund various projects throughout the state. Of this total, $33.2 bill is dedicated to repairing an aging transportation system of roads and bridges throughout the state. In addition, local governments will receive $4 billion in transportation funds to meet specific needs, the first increase in 20 years.

For the purpose of the LRTP fiscal constraint, the analysis does not assume any significant increase over recent levels. Future year funding is projected on an annual basis and includes a 1 percent inflationary factor per year. Based on historic funding sources, revenues can vary year to year and as such this approach reflects a conservative estimate.

Operations and Maintenance

A significant portion of available revenues will be used to fund on-going operating and maintenance (O&M) costs of existing transportation infrastructure. The LRTP should consider cost estimates and revenue sources that are reasonably expected to be available to adequately carry out typical maintenance activities. In addition, the plan should also take into account more intensive maintenance including pavement repaving and bridge repairs which are identified under capital improvements.

DUATS member agencies were asked to provide a summary of typical maintenance expenses for 2009 to 2018. Table 6-3 to **Error! Reference source not found.** displays historical maintenance for the DUATS member agencies.

Table 6-3: Historical IDOT Maintenance

Activity	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Pavement Rehabilitation/Replacement	$ 56,331	$ 38,318	$ 40,018	$ 89,934	$ 88,298	$ 80,493	$ 69,907	$ 48,068	$ 68,103	$ 76,712
Bridge Rehabilitation/Replacement	$ 1,400	$ 7,153	$ 4,085	$ 1,378	$ 1,527	$ -	$ 1,200	$ -	$ -	$ -
Shoulders/Curb and Gutter	$ 34,833	$ 24,295	$ 19,380	$ 7,194	$ 35,965	$ 5,876	$ 4,745	$ 4,628	$ 1,496	$ -
Drainage Work	$ 9,314	$ 1,666	$ 3,341	$ 402	$ 8,026	$ 7,262	$ 3,780	$ 1,868	$ 3,095	$ 5,597
Snow & Ice Removal	$ 302,579	$ 319,171	$ 319,377	$ 157,805	$ 193,870	$ 417,969	$ 308,161	$ 154,193	$ 206,158	$ 374,171
Other Operation and Maintenance Expenses *	$ -	$ -	$ 16,641	$ 9,004	$ -	$ 17,187	$ 11,480	$ 18,421	$ 20,028	$ 13,637
Total	$ 404,457	$ 390,603	$ 402,842	$ 265,717	$ 327,686	$ 528,787	$ 399,273	$ 227,178	$ 298,880	$ 470,117
5-Year Rolling Average					$ 358,261	$ 383,127	$ 384,861	$ 349,728	$ 356,361	$ 384,847

Source: IDOT.

Table 6-4: Historical Macon County Maintenance

Activity	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Pavement Rehabilitation/Replacement	$ 757,864	$ 761,471	$ 760,645	$ 834,803	$ 589,715	$ 921,074	$ 937,949	$ 690,028	$ 784,984	$ 821,899
Bridge Rehabilitation/Replacement	$ 252,625	$ 548,368	$ 91,786	$ 69,120	$ 669,740	$ 65,212	$ 41,324	$ 49,190	$ 45,654	$ 59,078
Shoulders/Curb and Gutter	$ 60,800	$ 92,564	$ 92,629	$ 81,803	$ 107,443	$ 73,077	$ 72,603	$ 59,164	$ 73,230	$ 74,053
Drainage Work	$ 27,064	$ 24,502	$ 6,982	$ 13,500	$ 19,578	$ 27,033	$ 27,258	$ 25,356	$ 31,384	$ 27,622
Snow & Ice Removal	$ 97,408	$ 81,722	$ 94,744	$ 57,868	$ 135,974	$ 61,000	$ 203,500	$ 130,123	$ 96,789	$ 120,000
Other Operation and Maintenance Expenses *	$ 25,188	$ 89,118	$ 178,327	$ 48,191	$ 77,145	$ 193,454	$ 161,827	$ 98,767	$ 99,537	$ 128,844
Total	$ 1,220,949	$ 1,597,745	$ 1,225,113	$ 1,105,285	$ 1,599,595	$ 1,340,850	$ 1,444,461	$ 1,052,628	$ 1,131,578	$ 1,231,496
5-Year Rolling Average					$ 1,349,737	$ 1,373,718	$ 1,343,061	$ 1,308,564	$ 1,313,822	$ 1,240,203

Source: Macon County Highway Department.

Table 6-5: Historical Decatur Maintenance

Activity	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Pavement Rehabilitation/Replacement	$ 2,435,325	$ 3,862,787	$ 1,101,025	$ 2,203,947	$ 1,993,735	$ 1,478,413	$ 2,012,970	$ 2,650,790	$ 5,484,158	$ 5,431,203
Bridge Rehabilitation/Replacement	$ 56,733	$ 231,752	$ 205,916	$ 317,830	$ 372,233	$ 355,596	$ 1,072,763	$ 229,265	$ 198,167	$ 446,909
Shoulders/Curb and Gutter	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Drainage Work	$ 116,135	$ 395,430	$ 227,606	$ 122,538	$ 267,265		$ 41,324	$ 477,185	$ 419,112	$ 238,282
Other Construction	$ 410,761	$ 176,619	$ 238,825	$ 4,100,464	$ 5,706,405	$ 56,755	$ 245,043	$ 98,938	$ 406,301	$ 129,479
Snow & Ice Removal	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total	$ 3,018,954	$ 4,666,588	$ 1,773,372	$ 6,744,779	$ 8,339,638	$ 1,890,764	$ 3,372,100	$ 3,456,177	$ 6,507,739	$ 6,245,873
5-Year Rolling Average					$ 4,908,666	$ 4,683,028	$ 4,424,131	$ 4,760,692	$ 4,713,284	$ 4,294,530

Source: City of Decatur.

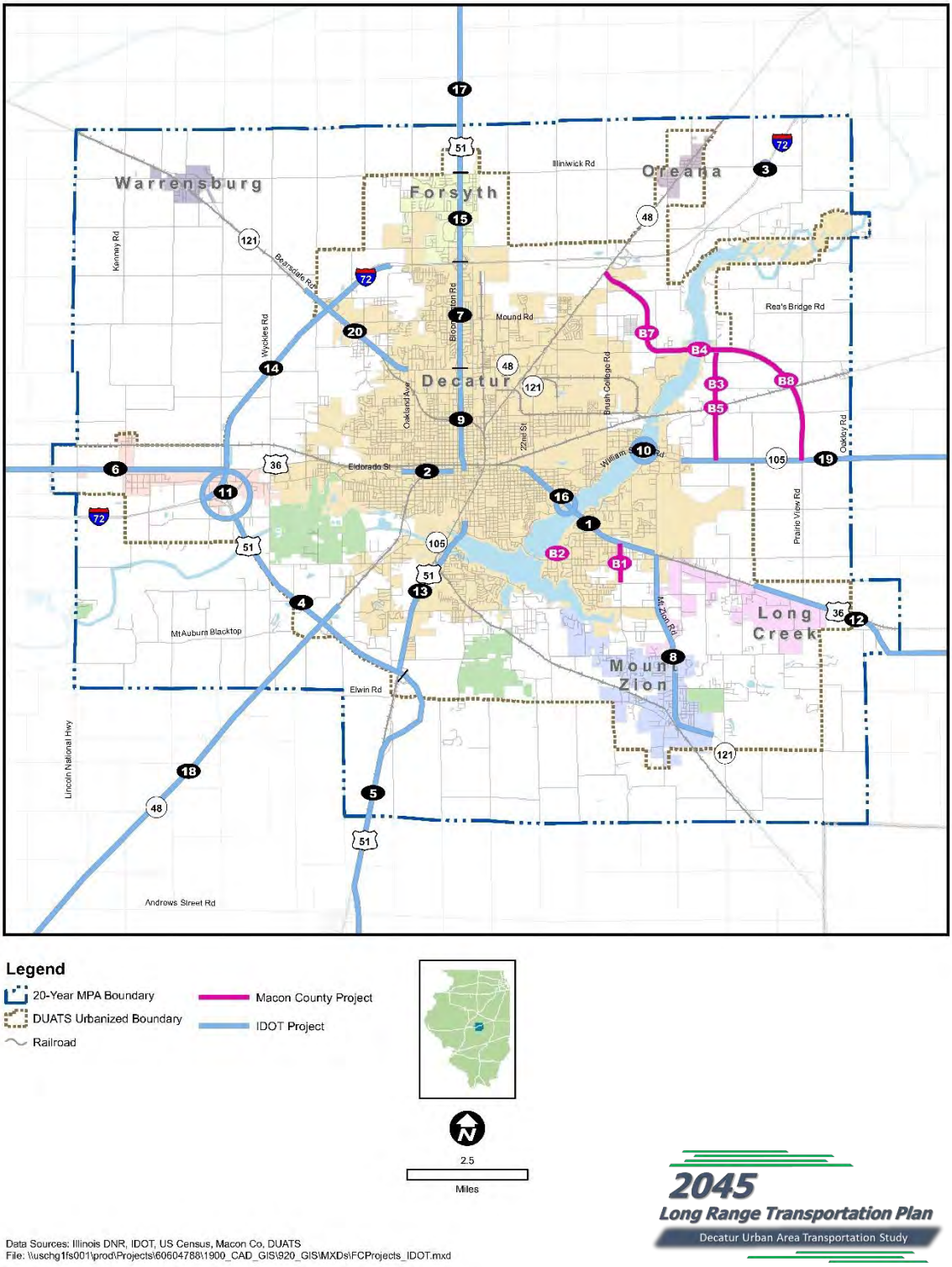
These costs were provided by each agency for the time period between 2014 and 2018. Applying a 3 percent inflation rate, the routine maintenance expenses are expected to total nearly $250 million for these three agencies which make up the majority of the operations and maintenance expenses within the MPA. Subtracting this from the total of $852 million leaves approximately $600 million for capital improvements.

Capital Improvements (Fiscally Constrained Plan)

The fiscal constraint requirement is intended to ensure that LRTPs reflect realistic assumptions about future revenues. Compliance with the requirement entails a comparison of revenues and estimated project costs. The primary question that must be answered is "Will the projected revenues (federal, state, local, and private) through the year 2045 cover the anticipated project costs?"

Figure 6-9 displays the fiscally constrained projects for the DUATS 2045 LRTP, while Table 6-6 summarizes the projects. Additional detail is provided in the appendix.

Figure 6-9: Fiscally Constrained Projects



Data Sources: Illinois DNR, IDOT, US Census, Macon Co, DUATS
File: \\uschg1fs001\prod\Projects\60604788\1900_CAD_GIS\920_GIS\MXDs\FCProjects_IDOT.mxd

Table 6-6: Fiscally Constrained Project List

Project / Description	Approximate Location	Estimated Cost
1. US 36/ILL 121 - Resurfacing, ADA improvements and traffic signal modernization.	3.79 miles from 19th St to 0.4 Mi E of Airport Rd in Decatur	$ 5,730,000
2. US 36 - Resurfacing, ADA improvements, structure repair and traffic signal modernization	1.22 miles from ILL 48 to Church St in Decatur & W. Eldorado St from ILL 48 to US36	$ 4,350,000
3. I-72 - Bridge Joint replacement and repairs, deck repairs, and bridge deck overlay	bridge at CH 20 1 mile East of Oreana	$ 600,000
4. US 51 - Microsurfacing	4.64 miles from 0.8 Mi S of US 36 to 0.3 Mi E of US 51 Busn SW of Decatur	$ 650,000
5. US 51 - Resurfacing and Bridge joint replacement	9.38 miles from US 51 Bsn SW of Decatur to 0.5 Mi N of Shelby Co Line	$ 14,690,000
6. Old US 36 - Resurfacing	9.67 miles from Sangamon County Line to US 36 in Decatur	$ 7,790,000
7. Old US Business 51 - Resurfacing, ADA improvements and bridge joint repair	2.68 miles from I-72 to ILL 121 in Decatur	$ 4,550,000
8. ILL 121 - Resurfacing, ADA improvements	4.15 miles from US 36 to South Corporate Limits of Mt Zion	$ 7,140,000
9. Old US 51 Business - Resurfacing, ADA improvements	4.27 miles from ILL 121 to US 36 in Decatur	$ 6,820,000
10. ILL 105 - Superstructure Replacement	at William St Bridge over Lake Decatur	$ 9,210,000
11. US 36 - Resurfacing and bridge repair	5.94 miles from I-72 to 0.2 Mi W of Harristown Blvd (including ramps) & US 51 from I-72 to 0.3 Mi S of Cantrell	$ 6,780,000
12. US 36 - Resurfacing - 6.55 miles	6.55 miles from 70th St in Long Creek to 0.2 Mi W of ILL 32	$ 4,560,000
13. Old US Business 51 - Resurfacing, Bridge joint replacement and bridge deck overlay	6.08 miles from Cleveland Ave in Decatur to US 51 1.9 Mil S of Elwin Rd	$ 9,090,000
14. I-72 - Interstate Resurfacing and ramp repair	8.45 miles from 1.4 Mi W of US 51 W of Decatur to 0.5 Mi W of US 51 at Forsyth including ILL 121 interchange	$ 22,830,000
15. US 51 - Resurfacing and ADA improvements	1.94 miles from 0.1 Mile N of Forsyth to I-72 in Decatur	$ 4,620,000
16. US 36 - Bridge Replacement	bridge over Lake Shore Dr in Decatur	$ 1,690,000
17. US 51 - Resurfacing	8.14 miles from Dewitt County Line to 0.1 Mi N of Forsyth Rd	$ 14,770,000
18. ILL 48 - Resurfacing and Culvert Replacement	10.93 miles - 0.5 Mi N of US 51 to Christian Co Line -	$ 9,111,000
19. ILL 105 - Resurfacing	6.05 miles - 0.3 Mile E of Bender Dr to Piatt Co Line	$ 3,830,000
20. ILL 121 - Resurfacing and ADA improvements	2.72 miles - 0.6 Miles NW of I-72 to University Ave in Decatur	$ 3,710,000
B1. CH-7 Reconstruction	Between Fitzgerald and US-36	$ 3,000,000
B2. CH-63 / Country Club Road Resurfacing	2,900 feet of roadway	$ 250,000
B3. CH-23 / Sangamon Road Curve Reconstruction	Design	$ 500,000
B4. Reas Bridge Road Bridge Replacement	Bridge over Lake Decatur	$ 13,650,000
B5. CH-23 /Sangamon Road Resurfacing	14,000 feet of roadway	$ 1,200,000
B7. Beltway (Phase 1 - segment 1)	2 miles, Lake Decatur to ILL 48	$ 41,644,000
B8. Beltway (Phase 1 - segment 2)	4 miles, ILL 105 to Lake Decatur	$ 49,929,000

Supporting Roadway/Freight Policies and Strategies

The following roadway/freight policies and strategies are identified as ways to support the future planning and implementation of improvements to strengthen the DUATS regional transportation system. Ultimately, these policies and strategies will support the DUATS 2045 LRTP goals and objectives.

- **Midwest Inland Port Transportation Plan |** Conduct an industrial transportation plan to evaluate opportunities to enhance truck and rail access in the vicinity of the MIP.

- **System Management |** Transportation System Management (TSM) and Intelligent Transportation Systems (ITS) strategies offer cost-effective solutions to transportation deficiencies. TSM projects such as intersection improvements (e.g., adding turn lanes, geometric improvements) should be sufficient to alleviate capacity issues within the DUATS MPA. ITS applications (e.g., traffic signal interconnects, signal preemption) can be used to improve traffic flow and provide priority to emergency vehicles. A regional ITS architecture was recently developed for Decatur as part of our Statewide ITS Plan. At the time of the DUATS 2045 LRTP adoption, the Statewide ITS documents were not yet available online. When available, the plan should include findings on the current use of ITS in Illinois, and potential applications in the Decatur region. It will also recommend approaches to enhance the integration and deployment of ITS in the future. The Decatur regional ITS will be available at:
idot.illinois.gov/transportation-system/transportationmanagement/planning/intelligent-transportation

- **Traffic Calming |** As appropriate, implement traffic calming techniques to discourage drivers (and especially trucks) from using local residential streets to avoid arterial roadways and other intended through routes. This is especially relevant for truck traffic that may be using local roadways to avoid traveling through downtown, causing negative externalities for local residents. Traffic calming measures also support the goal of maintaining a high quality of life within the MPA.

- **Access Management |** Access management has been shown to have significant benefits regarding the preservation of roadway capacity while improving traffic safety. Access management could potentially be considered along corridors that have a high number of crashes, have numerous and closely spaced access points, or feature confusing intersection geometrics.

- **Regional Land Use Design Standards |** Housing density should play a key role in determining roadway spacing. In general, areas featuring higher numbers of dwelling units per acre should warrant more closely spaced streets. Shorter spacing requirements would provide a greater number of travel paths, reduce travel speed on residential streets, and promote pedestrian travel and the use of public transportation services offered by DPTS. DUATS should collaborate with partnering municipalities and other community stakeholders to strengthen land use typologies identified in the comprehensive plan that would facilitate this and similar types of urban design standards.

- **Context Sensitive Solutions (CSS) |** Transportation improvements should be sensitive to the existing and planned environment. Steps should be taken to preserve features such as landscaping, scenic views, informal spaces, and all other applicable environmental considerations. Planning for improvements should involve CSS and plans should include aesthetic characteristics to make the improvements and corridor visually pleasing.

- **Complete Streets |** The design of all roadway improvements should consider and/or plan for alternate facilities that serve the needs of pedestrians, bicyclists, and other non-motorized

users.

- **Public-Private Partnerships |** Planning for future year rail operations has historically been conducted primarily by the rail companies. However, there is a growing consensus and willingness to cooperate on future growth strategies among both the public and private sectors. One way in which specific issues could be addressed in a collective manner involves the initiation of an open dialogue with major parties and stakeholders, with the intent of increasing cooperation and communication. Specific areas of where resources could be pooled include:
  - Sharing infrastructure and constructing improvements;
  - Monitoring and improving conditions at at-grade crossings;
  - Consolidating freight operations and improved logistical planning;
  - Intermodal opportunities;
  - Passenger rail service; and,
  - Highway/rail corridor improvements.

- **Grade-Separated Facilities |** Grade-separated facilities could greatly reduce travel delays for the various transportation modes including private vehicles, transit buses, and ground freight movement. Other grade-separation issues include the following:
  - Monitor at-grade rail crossings to provide a high level of safety and mobility for motorists, bicyclists and pedestrians;
  - Identify high priority crossings that could be considered for improved traffic control devices and potential grade separated facilities (several locations have been identified for possible grade separation, including Eldorado Street, between Front and Hilton, and 22nd Street, among others.;
  - Identify transit routes and at-grade crossings to determine the potential travel delays resulting from at-grade rail crossings;
  - Continue routine maintenance and upkeep of the existing rail infrastructure; and,
  - Create an inter-jurisdictional committee of local governments, railroads, and other stakeholders to explore the potential for intermodal connections, increases in freight efficiencies, possible trans-load operations, at-grade crossing closures, and other improvements to increase the effectiveness of rail service in the region.

- **New Technology |** New technology in rail operations should be identified and considered for possible application within the MPA. Applications could include more common items (such as installing new gates and flashing lights to improve safety at grade crossing locations) or more recent innovative technologies, like real-time traffic condition updates and responsive signalization to improve logistical efficiencies for truck traffic.

- **Intermodal Opportunities |** The MPA is steadily becoming a primary nexus for the movement of freight and consumer goods in the region and the State of Illinois. The existing rail service, close access to the Decatur Airport, and nearby industrial park made the MPA an ideal location for an intermodal facility constructed by ADM in 2013. This investment has bolstered the reach of the Midwest Inland Port, led by the Economic Development Corporation of Decatur and Macon County. The presence of the Foreign Trade Zone and Customs at the Decatur Airport is also a significant resource to support intermodal opportunities. Construction of the Beltway and the widening of US-51 (outside the MPA) would further support potential intermodal connections, as would a rail spur accessing the Airport industrial park.

- **Decatur Area Joint Operating Committee |** Previous DUATS LRTPs raised the possibility of the region forming of a Decatur Area Joint Operating Committee. This committee would include representatives of the Class 1 railroads, major industries, and area officials who

would meet a few times a year to discuss rail issues and possible solutions. Similar committees have been successful in other locations, including the Chicago metro area.

The committee might consider developing a railroad operations management plan that would look to increase the efficiency of the current system by adjusting schedules (i.e., postponing rail activity to off-peak periods) and encouraging operational agreements allowing the Class 1 railroads to share each other's trackage. While this sounds good in theory, the fact is that market demands typically dictate when products are needed and when rail maneuvers occur, thus making schedule adjustments difficult. Operational agreements can also be difficult as the Class 1 railroads are generally not inclined to share each other's trackage unless there are clear benefits to both parties. However, the formation of a joint operating committee is likely the only way that cost-minimizing improvements such as schedule changes and operational agreements could move forward to address the DUATS rail issues. As such, this joint committee remains as a potential strategy in the DUATS 2045 LRTP.

PUBLIC TRANSPORTATION PRIORITIES

The Decatur Public Transit System (DPTS) provides a valuable mobility service within the region. While ridership has experienced a decline in the past five years, the DPTS still provided over 1.1 million rides in 2018. In some cases, transit is the only travel option available to area residents to access jobs, schools, medical appointments, and other daily trip purposes. In fact, DPTS estimates that 87 percent of all customers do not have a driver license or access to a vehicle. As such, transit is and will remain an important mobility option for area residents. The 2045 LRTP outlines steps to enhance public transportation within the region.

The 2045 DUATS LRTP reviewed transit operations at a very high level. From a regional standpoint, fixed-route service coverage for the DUATS MPA is good. DPTS operates in Decatur, Forsyth, and Mt. Zion, and serves major employers in the region. From a short-term perspective, service coverage seems adequate, and long-term future year growth projections at this time do not warrant major route changes.

One concern for DPTS has been an aging fleet of vehicles; however, the current TIP includes plans to replace the vehicles over the next few years which will address this issue. While upgrading the fleet is a positive, replacing the fleet in a short time period means the next replacement of vehicles (targeted at 12 years useful life) will also occur around the same time. Over the next decade, it would be beneficial for the DPTS to develop a replacement schedule that spaces out fleet replacement on a more balanced, regular schedule.

Perhaps the greatest challenge facing DPTS operations is the frequent and sometimes lengthy at-grade rail crossing delays within the region. These delays are for the most part beyond the control of DPTS (in some cases, if identified ahead of time, bus drivers are able to divert to an alternate route to avoid the delay). Regardless, the potential for rail crossing delays adversely impacts transit operations and riders. The DATES report documented the negative impacts on transit riders, including instances where riders missed transfers due to rail crossing delays. While difficult to quantify, these train related delays could be contributing to the recent ridership decline. If riders experience frequent delays, miss transfers, or are late to work or school, it may cause some individuals to look for alternative transportation options. One of the keys to operating successful transit service is reliability, meaning riders can count on buses operating on-schedule and arriving at their destination on-time.

DPTS plans to conduct a Comprehensive Operational Analysis (COA) in 2020 that will examine current and future short-term transit services. One objective of the COA will be to identify opportunities to better deliver transit and mobility services within the region. The way people think of, and use, public transportation is rapidly changing and rethinking the delivery of public transportation within the DUATS region will be an important step to enhance mobility services. The 2045 LRTP includes the following issues for consideration in the upcoming COA.

- **Later/Evening Service |** Adding service to accommodate 2nd and 3rd shift workers is a priority improvement. Adding later service is a way to connect people to jobs which currently fall outside regular service hours. Based on conversation with DPTS staff, there has been interest among City Council members in extending evening service hours. Extending evening service hours is also important to support local businesses that sometimes find it challenging to fill 2nd and 3rd shift openings due to individuals being unable to travel to/from work. In addition to benefiting workers and businesses, later evening service also provides people a safety net in case work runs late or they wish to make non-work trips

such as running errands or attending evening social events that might end outside current service hours. One aspect of evening service that should be explored as part of the COA is service cost. A few years ago, DPTS offered extended evening service but the cost (fare) of the service was too high, rendering it unviable. Keeping evening service fares at the same rate, or near the same rate, as a regular transit fares should be evaluated.

- **Sunday Service |** Sunday service has been, and continues to be, a frequently requested improvement. One of the challenges with providing Sunday service is defining the purpose of the service. Some feel that Sunday service is primarily a way to get to/from church services. However, some communities across the county are seeing an increased demand for Sunday service to get people to/from jobs. As part of the COA it will be important to analyze the need, purpose, and feasibility for adding for Sunday service.

- **Aging Population |** Public transportation is a vital component in providing mobility to older adults, people with disabilities, and disadvantaged populations in the Decatur urbanized area. Public transportation can provide the basic mobility needed to access employment opportunities, health care facilities, daily shopping activities, and other basic community services. Demographics documented earlier in this LRTP suggest the region is currently above the national average in terms of the number of individuals nearing retirement age. While not necessarily a major concern at this time, in ten to twenty years, an aging population may want—or need—to use transit services more often. The nationwide trend over the past decade has been for older adults to stay in their homes—or to "age in place." In many cases their homes are located on the urban fringe or beyond current transit service areas, making the delivery of transit service, especially fixed-route service, difficult or impossible. This is an issue that should be monitored in future as new services or solutions may be required to meet future year mobility needs.

- **Future Growth Areas |** Future population and employment projections through the year 2045 have been discussed in this LRTP. Generally speaking, most growth within the region has been occurring in Forsyth and Mt. Zion. These areas are likely to see continued growth over the next few decades; however, the projected growth at this time would not warrant major service expansion plans. DPTS should continue to monitor future year growth and mobility needs, but the short-term focus should be on identifying opportunities to enhance existing operations.

- **First and Last Mile Connections |** All transit trips begin and end with individuals accessing the bus at a transit stop or downtown transit center. The majority of individuals walk to transit facilities, but some access facilities by wheelchair or bike, and some may be dropped off. Regardless, first and last mile connections are part of every transit trip and can play a significant role in the usage and perceived convenience of transit. If sidewalks or ADA facilities are not available, individuals are less likely to use transit. In addition, a number of stops near local industries require individuals to walk a significant distance to access the worksite(s). Finding opportunities to enhance first and last mile connections should be a priority for DUATS member agencies. In particular, sidewalk and/or trail improvements should be incorporated into roadway improvements to help strengthen transit operations, in addition to supporting non-motorized travel. Finally, the addition of bike racks on new buses will provide transit riders an additional mobility option to access transit services.

- **Service Efficiencies |** DPTS is constantly monitoring operations to identify potential opportunities to better deliver service. The planned COA will be a valuable resource that can examine service and mobility options in greater detail. If possible, boarding and alighting data should be reviewed to identify frequently used bus stops to help prioritize potential service enhancements. The study should also explore ways to make it easier for

riders to transfer to other bus routes without having to travel to the downtown station to complete a transfer. Ideally, the study will be able to identify opportunities to provide more direct travel and reduce travel times to make transit a more attractive travel option. Finally, supporting roadway projects that eliminate at-grade rail crossing delays can be expected to increase safety for transit riders, reduce travel delays, and provide more reliable service.

- **Transit-Supportive Policies |** Providing a successful transit service depends on more than reliable buses and route alignments. Transit supportive land use and roadway improvements are critical to providing a reliable, convenient, and safe travel option. Providing connected and well-maintained sidewalks and bike paths/trails are important to accessing transit. Similarly, proximity to higher-density residential or commercial land uses can support transit use, so that riders don't have to walk long distances to reach their destination after exiting the bus. While this can be somewhat challenging to implement in smaller communities, even small transit-supportive investments can benefit transit operations.

- **Technology Advancements |** Transportation service technology and platforms are developing rapidly, and it can be difficult to predict the type of services that will be available in the next few years, let alone the next ten to twenty years. Examples of current technology include Wi-Fi on buses and real-time tracking to see when buses will arrive at a bus stop. Additional improvements, such as mobile phone application platforms that allow transit agencies, transportation network companies (like Uber or Lyft), and other organizations to coordinate their transportation resources to help people get where they need to go, are being used in other cities and could one day be used in Decatur. Continued technology advancements should be monitored to determine if there are potential applications that could help better provide transit/mobility services to the Decatur region.

- **Intercity Bus and Commuter Vanpools |** The FAST Act requires transportation plans to consider improvements that support intercity transportation (including intercity buses, intercity bus facilities, and commuter vanpool providers). DPTS has had recent discussions with Peoria Charter about potentially using the downtown transfer station to provide service to Champaign, Bloomington, Lincoln, and Peoria. These discussions did not advance and at present there are no plans to bring intercity bus service to Decatur. However, this is something that should be monitored and perhaps pursued in the future.

- **High-Speed Passenger Rail Service |** Decatur is identified as a stop along a high-speed rail line connecting Chicago and St. Louis. While still early in the planning stages, this long-range improvement would bring significant economic benefits to the region. DUATS should continue to support and monitor progress related to high-speed passenger rail service being developed in the DUATS MPA.

Fiscally Constrained Transit Plan

A feasible transit service relies upon secure funding sources and sufficient revenue to support the continuing operation and potential expansion of public transportation services. The purpose of this analysis is to evaluate the financial feasibility of the DPTS to the year 2045. Transit operations can be divided into two categories: operating costs and capital improvements. These costs are described in the following.

Operating Expenses and Revenues

Operating costs for DPTS service, between 2014 and 2018, averaged approximately $6.8 million, reaching a high of approximately $7.5 million in FY 2020. The primary operating revenue sources are provided at the federal and state levels. Federal funding has made up approximately 23 percent of DPTS operating costs while the State of Illinois has covered between 63 to 65 percent. The remaining funds are generated by the transit system—primarily bus and paratransit fares, but also some advertising revenue. The City of Decatur also contributes funds to support DPTS operations.

To analyze potential future year transit financial conditions for the LRTP, it is necessary to make some assumptions regarding future year operating expenses and revenue sources. No major service modification or expansion is currently anticipated, so future year projections assume the increases shown in Table 6-10. The annual percentage increases are based on the five-year averages for the DPTS between 2014 and 2018.

Between 2014 and 2018, operating expenses have increased an average of 3.5 percent (Table 6-7). However, it should be noted that operating expenses between 2017 to 2018 increased 7.3 percent. This recent increase should be monitored to ensure that this trend does not continue and adversely impact future year transit operating projections.

Table 6-7. Estimated Transit Expenses/Revenue Change

Expenses	Annual Increase (unless otherwise noted)
Operating	3.5%
Revenues	Annual Increase (unless otherwise noted)
FTA 5307	4.1%
State	Assumes will cover 64% of annual service cost
System Revenue	3.5%
City of Decatur	2.2%

During this same five-year period, FTA 5307 funding has increased at approximately 4.1 percent annually. State funding has been increasing at approximately 6 percent per year; however, in 2018 that doubled to 12 percent. State funding remains consistent at approximately a 65 percent reimbursement rate, which has not changed since it was increased from the 55 percent reimbursement rate in 2008. For the future year projections, it is assumed that state funding will represent a 64 percent reimbursement rate through 2045. DPTS generated revenues have averaged approximately a 3.5 percent annual increase and the City of Decatur contributions have increased an average of 2.2 percent per year. These recent five-year averages are continued in the future projections, through the year 2045, which are displayed in Table 6-8.

Table 6-8: DPTS Projected Operating Expenses (2019 – 2045)

Year	Operating Costs (in $1,000)	Revenue Sources (in $1,000)					Estimated Deficit / Reserve	Percent Funded
		FTA 5307	State	System Revenues	Local	Total		
2014	$6,411	$1,400	$4,166	$660	$185	$6,411	$0	100.0%
2015	$6,534	$1,475	$4,246	$683	$195	$6,599	$65	101.0%
2016	$6,763	$1,550	$4,394	$707	$111	$6,763	$0	100.0%
2017	$7,000	$1,600	$4,549	$732	$120	$7,000	$0	100.0%
2018	$7,513	$1,800	$4,708	$757	$130	$7,395	($118)	98.4%
2019	$7,775	$1,874	$4,976	$784	$133	$7,766	($9)	99.9%
2020	$8,048	$1,951	$5,150	$811	$136	$8,048	$0	100.0%
2021	$8,329	$2,031	$5,331	$840	$139	$8,339	$10	100.1%
2022	$8,621	$2,114	$5,517	$869	$142	$8,642	$21	100.2%
2023	$8,922	$2,201	$5,710	$899	$145	$8,955	$32	100.4%
2024	$9,235	$2,291	$5,910	$931	$148	$9,280	$45	100.5%
2025	$9,558	$2,385	$6,117	$963	$151	$9,616	$58	100.6%
2026	$9,893	$2,482	$6,331	$997	$154	$9,965	$73	100.7%
2027	$10,239	$2,584	$6,553	$1,032	$158	$10,327	$88	100.9%
2028	$10,597	$2,690	$6,782	$1,068	$161	$10,702	$105	101.0%
2029	$10,968	$2,800	$7,020	$1,105	$165	$11,090	$122	101.1%
2030	$11,352	$2,915	$7,265	$1,144	$169	$11,493	$141	101.2%
2031	$11,749	$3,035	$7,520	$1,184	$172	$11,911	$162	101.4%
2032	$12,160	$3,159	$7,783	$1,226	$176	$12,344	$183	101.5%
2033	$12,586	$3,289	$8,055	$1,269	$180	$12,792	$206	101.6%
2034	$13,027	$3,424	$8,337	$1,313	$184	$13,257	$231	101.8%
2035	$13,483	$3,564	$8,629	$1,359	$188	$13,740	$257	101.9%
2036	$13,954	$3,710	$8,931	$1,406	$192	$14,239	$285	102.0%
2037	$14,443	$3,862	$9,243	$1,456	$196	$14,758	$315	102.2%
2038	$14,948	$4,021	$9,567	$1,507	$201	$15,295	$346	102.3%
2039	$15,471	$4,185	$9,902	$1,559	$205	$15,852	$380	102.5%
2040	$16,013	$4,357	$10,248	$1,614	$210	$16,429	$416	102.6%
2041	$16,573	$4,536	$10,607	$1,670	$214	$17,027	$454	102.7%
2042	$17,154	$4,722	$10,978	$1,729	$219	$17,648	$494	102.9%
2043	$17,754	$4,915	$11,362	$1,789	$224	$18,291	$537	103.0%
2044	$18,375	$5,117	$11,760	$1,852	$229	$18,958	$582	103.2%
2045	$19,018	$5,327	$12,172	$1,917	$234	$19,649	$630	103.3%

Source: AECOM

Note: 2019 to 2045 projections based on recent 5-year averages. Does not assume any major service improvements.

It is estimated that the DPTS operating expenses between 2019 and 2045 will total approximately $340 million. It should be noted that several variables can impact these projections. For example, the expansion of service, by adding routes or hours of service, would need to be evaluated in terms of the financial impacts. At present, the 2045 LRTP does not include any service expansion recommendations; however, if the planned COA identifies potential service changes, the LRTP could be amended to reflect the updates. In addition, it is difficult to estimate future year funding levels over the next twenty-five years as a number of factors could influence revenues. However, the recent State of Illinois Capital Bill is a positive move that should help stabilize—and potentially increase—funding for public transportation systems, including DPTS. Another consideration is that the revenues do not assume any increase in transit fares over the twenty-five year period. In all likelihood, transit fares will increase at least a few times to generate additional revenue. Based upon the future year assumptions and projections, DPTS operating revenue is reasonably projected to be sufficient to cover operating expenses through the year 2045. If funding gaps do occur, it could result in one or more of the following:

- **Increased Transit Fares |** Transit fares would need to be increased to generate additional funds to cover increasing operating costs. Increasing transit fares is never a popular decision but is one that is often necessary to offset rising operating costs;
- **Service Cuts |** If funding levels do not increase at a higher rate than the projected levels, some elements of the transit service may need to be eliminated or scaled back to reduce operating costs;
- **Limited Ability to Extend Service |** Without additional funding sources it would be extremely difficult to extend the hours of transit operation to provide later service or expand current service beyond the existing coverage area to other communities in the MPA; and,
- **Increased Funding from Other Communities |** Additional funding from other communities would likely be necessary to provide expansion of transit service throughout the MPA.

Capital Improvements

The regularly scheduled replacement of transit vehicles represents the most significant capital improvement expense. The current DUATS TIP (FY 2020 – FY 2023) includes the replacement of the existing fleet which has passed the useful life threshold. FY 2020 includes the purchase of 14 30' heavy-duty, low-floor diesel buses to replace 13 2001 buses and one 2009 bus. FY 2021 includes the purchase of four new buses to replace four 2009 buses, and FY 2022 includes the purchase of four new buses to replace four 2010 buses. Table 6-9 summarizes the estimated fleet replacement, including paratransit and maintenance vehicles through the year 2045. It is estimated that approximately $35 million will be needed over the next twenty-five years.

Table 6-9: DPTS Capital Improvements – Fixed-Route Fleet Replacement

	Estimated Vehicle Replacement						
	Buses		Paratransit / Vans		Maintenance Vehicles		
Year	Number	Est. Cost	Number	Est. Cost	Number	Est. Cost	Total
2019	1	$400	-	$0	-	$0	$400
2020	14	$5,936	-	$0	-	$0	$5,936
2021	4	$1,696	6	$348	-	$0	$2,044
2022	4	$1,828	-	$0	1	$60	$1,888
2023	-	$0	-	$0	-	$0	$0
2024	-	$0	2	$121	-	$0	$121
2025	-	$0	-	$0	-	$0	$0
2026	-	$0	-	$0	-	$0	$0
2027	-	$0	3	$188	1	$64	$252
2028	-	$0	3	$190	-	$0	$190
2029	-	$0	2	$128	-	$0	$128
2030	-	$0	2	$130	-	$0	$130
2031	8	$3,999	-	$0	-	$0	$3,999
2032	7	$3,534	-	$0	1	$68	$3,601
2033	4	$2,039	-	$0	-	$0	$2,039
2034	4	$2,060	3	$204	-	$0	$2,264
2035	-	$0	3	$207	-	$0	$207
2036	-	$0	2	$139	-	$0	$139
2037	-	$0	2	$141	1	$72	$213
2038	-	$0	-	$0	-	$0	$0
2039	-	$0	-	$0	-	$0	$0
2040	-	$0	2	$146	-	$0	$146
2041	-	$0	3	$222	-	$0	$222
2042	-	$0	3	$225	1	$76	$301
2043	8	$4,506	2	$152	-	$0	$4,657
2044	7	$3,982	2	$153	-	$0	$4,135
2045	4	$2,298	-	$0	-	$0	$2,298
	65	$32,277	40	$2,694	5	$ 339	$ 35,311

SOURCE: DPTS Fleet Inventory; AECOM projected estimates.
NOTE: Buses assume a 1 percent annual cost increase; paratransit and maintenance vehicles assume 1.2 percent annual increase.

In total, it is estimated that approximately 65 buses will need to be purchased between 2019 and 2045. This assumes the replacement of buses will occur at the FTA minimum bus life of 12 years and does not currently anticipate a need for additional buses for expanded service. It is anticipated that 40 paratransit vehicles will be replaced during this same period, assuming replacement every six years. In addition, it is assumed that two additional paratransit vehicles will be needed in 2030 and two more additional vehicles in 2040 to accommodate an aging population and growing demand for paratransit services. Finally, the replacement, or addition of, maintenance vehicles are assumed to occur every five years.

Non-vehicle capital improvements are summarized in Table 6-10. These capital improvements include such items as bus shelters, new technology/equipment (for buses and dispatch, etc.), repairs to maintenance facilities, etc. Non-vehicle capital costs included in the FY 2020 – FY 2023 TIP were used as a baseline to assume future year capital improvements. In total, it is estimated that non-vehicle capital improvements will total approximately $12 million through the year 2045.

Table 6-10: Non-Vehicle Capital Improvements

Year	Est. Cost	Year	Est. Cost
2019	-	2033	$470
2020	$330	2034	$484
2021	$469	2035	$498
2022	$575	2036	$513
2023	$60	2037	$529
2024	$360	2038	$545
2025	$371	2039	$561
2026	$382	2040	$578
2027	$393	2041	$595
2028	$405	2042	$613
2029	$417	2043	$631
2030	$430	2044	$650
2031	$443	2045	$670
2032	$456	Total (2019 - 2045)	$12,427

SOURCE: DPTS Capital Improvements FY 2020 – FY 2023 TIP; AECOM projected estimates.
NOTE: 2024 cost is the FY 2020 – FY 2023 TIP average; each additional year assumes a 3 percent annual increase.

It should be noted that the LRTP capital improvements are a very high-level estimate of vehicle and non-vehicle needs over the next twenty-five years. Several factors could influence these projections and the 2020 COA findings should be used to update the operating and capital costs to reflect potential future system modifications. For example, if DPTS were to change to electric vehicles, additional costs would need to be considered to account for a different vehicle type, as well as the necessary maintenance upgrades that would be needed to accommodate a new vehicle. However, based on current assumptions it is believed that DPTS will have sufficient funding to provide the current level of transit services (with modest paratransit service increase) through the year 2045.

Human Service Transportation Plan

An increasing number of people are unable to get to work, run errands, or reach medical services simply because they do not have access to reliable transportation. This group of transportation disadvantaged includes individuals with disabilities who cannot operate vehicles or travel outside of the home on their own because of medical conditions or limitations; individuals who cannot afford their own automobile; and, individuals without access to public transportation.

To enable these individuals to travel for employment, medical, education, and other needs, state and federal grants are available to provide transportation services that help elderly persons, persons with disabilities and/or low-income persons get to their destinations. In urbanized areas, fixed-route transit service and supplemental paratransit service are often available to meet many of these needs. In rural and smaller urban areas, however, public transportation service is less available and human service providers such as senior centers must often find other ways to provide their clients with transportation.

Federal transit law requires that projects selected for funding under the Enhanced Mobility for Individuals and Individuals with Disabilities (Section 5310) Program be "included in a locally developed, coordinated public transit-human services transportation plan," and that the plan be "developed and approved through a process that included participation by seniors, individuals with disabilities, representatives of public, private, and nonprofit transportation and human services

providers, and other members of the public" utilizing transportation services.

These coordinated plans identify the transportation needs of individuals with disabilities, older adults, and people with low incomes; provide strategies for meeting these needs; and prioritize transportation services for funding and implementation. The coordinated public transit-human service transportation plan (HSTP) is intended to maximize the collective coverage area of the targeted programs, increase service options, increase efficiency, and address the needs through a process that includes representatives of public, private, and non-profit transportation and human services providers and the users of these services.

Region 8 Human Service Transportation Plan

Each state receives FTA funds for the programs subject to the HSTP coordination process, and each state is required to determine how best to meet the mandate for coordination. The Illinois Department of Transportation – Office of Intermodal Project Implementation (IDOT-OIPI) established eleven HSTP regions and a coordinator for each. The Champaign County Regional Planning Commission (CCRPC) is the MPO for the Champaign-Urbana Urbanized Area and also facilitates the development of the Region 8 HSTP. The Region 8 HSTP includes Champaign, Clark, Coles, Cumberland, DeWitt, Douglas, Edgar, Macon, Moultrie, Piatt. Shelby, and Vermilion counties in Illinois. The Region 8 HSTP was approved on December 14, 2017 and meets the coordination mandate stipulated by FAST Act and IDOT.

The Region 8 HSTP consists of six major components:

- An overview of current transportation legislation and funding;
- Public participation and the planning process;
- Existing conditions and demographics of the region;
- A view of mobility today, analyzing major trip generators, top employers, and existing transportation services within the region;
- Service coordination, gaps, unmet needs, and duplication; and
- A vision for mobility tomorrow, identifying goals and objectives for the region.

Specific information as it relates to Macon County is available within the Region 8 HSTP. A copy of the Region 8 HSTP is available using the following link:

https://ccrpc.org/wp-content/uploads/2018/03/HSTP_Region-8_2017_ADA_Adopted-1.pdf

DUATS 5310 Funding

The DUATS FY 2020 – FY 2023 TIP identifies $223,000 in funding to support the purchase of three paratransit vehicles (one vehicle in 2017, one in 2018, and one in 2019). Macon Resources, Inc. is identified as the lead agency and funding is identified through 5310 under Consolidated Vehicle Procurement Assistance. Currently no 5310 funds are received by any entity in the Decatur urbanized area.

Supporting Transit Policies/Strategies

The following transit policies/strategies are identified as ways to support the future planning and implementation of improvements to address the DUATS regional transit priorities.

- **Administration and Funding |** Partnerships are key to coordinating effective and efficient transit services, as transit options are needed to travel not only within but between cities in the MPA. DPTS should continue to work in partnership with Macon County and surrounding

communities as it explores opportunities to improve and expand transit opportunities in the MPA. This partnership may include shared participation in the transit planning process to ensure that local transit needs are met, and it could also include potential regional/shared funding mechanisms to support the expansion of DPTS services outside the existing service area. Financial support from surrounding communities gaining DPTS transit coverage is critical to expanding transit service.

DPTS could explore the creation of a Regional Transit Board that would be tasked with supporting and evaluating the effectiveness of regional transit operations and finding ways to support capital improvement plans. The board could potentially consist of representatives from Decatur, Macon County, Forsyth, and Mt. Zion, as well as other interested stakeholders. This is a strategy that has been identified in previous LRTPs.

In terms of becoming eligible for a wider range of federal and state funding, innovative partnerships with between highway and transit agencies can broaden the range of eligible activities that their funds can support. DPTS should also continue to explore funding opportunities related to paratransit services, Medicaid/Medicare, and cooperative agreements with Millikin University and Richland College.

- **Improved Transfers |** Improving the ease and convenience of transfers between existing routes and services can be expected to increase the competitiveness of transit as a means of transportation. DPTS should explore the potential for implementing perimeter transfer points between DPTS and the rural transportation system in order to better facilitate intercity transit trips. Additionally, fare collection strategies that make transfers between the two systems seamless would help to attract potential riders.
- **Intermodal Connections |** Aside from the transfer improvements described above, it is also important to pursue improved intermodal connections. Examples include supporting improved bicycle connections, both at the Transit Center and major bus stop locations, as well as coordinating with taxi services, transportation network companies, and other providers to enable smooth connections at DPTS facilities.
- **Station and Stop Location Design Criteria |** Improved access to public transportation should be mandated through various administrative practices to ensure that transit user needs receive sufficient consideration. Access improvements should mostly include design criteria such as sidewalk geometry and expansion/repair, construction of shelters and benches, and installation of a comprehensively designed signage system. These and other design elements should be incorporated into transportation planning processes, and potentially into zoning review and other physical planning processes (discussed further in Land Use / Development Considerations).
- **Service Standards |** DPTS should maintain and enhance service standards for routing, on-time performance, route productivity, frequency of operation, special populations' needs and other standards to ensure the provision of quality services. The agency should periodically review community demographics, ridership by route, ridership demographics, etc., to determine whether the level of service provided meets the needs of all areas that DPTS serves. New technologies are emerging to improve data collection and analysis techniques (e.g., using automatic vehicle location systems and automatic passenger counters), which can improve planning and results.

  Aside from fixed-route service standards, DPTS should also explore the opportunity to create vanpool/carpool programs in the DUATS MPA and surrounding area, as demand warrants and funding becomes available.
- **Land Use / Development Considerations |** DPTS and partnering communities should explore opportunities for transit-oriented development (TOD), which is a planning concept that draws from land use and development policies that support transit operations and

ultimately help promote transit usage. Encouraging dense, mixed-use developments that are easily accessible via walking or bicycling can promote transit usage.

DPTS should encourage the adoption of consistent design standards, policies, and principles throughout the DUATS MPA to enhance accessibility and safety. This could include promoting the construction of sidewalks and curb cuts in existing neighborhoods that currently do not have them, supporting the repair and upkeep of existing sidewalks to provide better connections to transit facilities, and encouraging local agencies to include public transportation needs in their review of major commercial and residential developments to ensure transit/paratransit needs are sufficiently addressed (e.g., constructing sidewalks and bus stops). Such review will help to promote transit friendly design and encourage transit usage throughout the MPA.

Context Sensitive Solutions (CSS) can also encourage and promote alternative transportation modes such as public transit. Repaving sidewalks and constructing shared or dedicated non-motorized facilities that connect to transit stops are just two examples of improvements that can be incorporated with roadway or other transportation improvements and ultimately increase transit patronage.

- **Safety |** Technology improvements should be explored to enhance the safety of passengers on buses and vans and at the Transit Center. This may include the installation of on-board video equipment on all new and/or replacement buses and vans to provide an increased level of security, or potentially reviewing the need for additional cameras at the Transit Center, as warranted and when funding is available.

  DPTS should consider the implementation of Automatic Vehicle Location (AVL) systems to help monitor transit and paratransit vehicle locations. Specific route location can be essential in the event of an emergency and can also help improve transit and paratransit efficiency.

NON-MOTORIZED PRIORITIES

Currently, the Decatur Park District and Macon County Conservation District (MCCD) are the two entities primarily responsible for planning park-related improvements, which include developing the non-motorized trail network. In some instances, trail projects are completed in coordination with planned roadway improvements. Both Forsyth and Mt. Zion are also actively involved in developing segments of the non-motorized system that will eventually form a continuous trail connection through the DUATS MPA.

DUATS supports the continued expansion of the bicycle network within the MPA by constructing new facilities to form a regional bicycle system. The Metro Area Greenways Plan is the primary plan that includes proposed trail locations and facilities have been carried forward in the 2045 LRTP.

The region continues to make progress in planning, designing, and constructing components of the regional trail system plan. Recent improvements include the construction of small trail segments in the southeast portion of the region and renovations to the Rock Springs-Fairview Bike Trail. The following items highlight key elements of the non-motorized plan.

1. **I-72 Underpass |** I-72 has long been a barrier to bicycle travel between Decatur and Forsyth. Current plans include the construction of a portion of the Stevens Creek trail under I-72 to connect Cresthaven Park with Timber Lane in Forsyth.
2. **Completing a Continuous North-South Connection |** The long-term vision of the regional bicycle plan has been to create a continuous network of trails that would connect Mount Zion, Forsyth, and Decatur. With the completion of the Stevens Creek Trail extension under I-72, the next step is to identify a trail alignment to connect to Greendell Park. It is also important to eliminate additional trail gaps within the region, which are highlighted with purple ovals on the map in Figure 6-10. Various challenges exist with filling in the gaps, but efforts should continue to explore opportunities to further develop the trail network
3. **Lake Decatur Crossings |** DUATS supports detailed planning and engineering be completed to identify feasible solutions to accommodate bicycle travel across existing Lake Decatur bridge crossings. Lake Decatur crossings are a primary concern regarding bicycle travel within the MPA, and the key to providing a true regional bicycle network. Current roadway conditions at Lake Decatur bridges, in particular US 51 and US 36, are not conducive for safe non-motorized travel. The Lake Decatur area offers great opportunities for recreational activities, and providing safe, well-connected bridge crossings is an important element of the future non-motorized network.

   One example of an upcoming bridge improvement involves the design/construction of an enhanced crossing along Reas Bridge Road, which will be four lanes and accommodate bicyclists and pedestrians. Other existing Lake Decatur crossings should be evaluated to determine how they might be retrofitted to better accommodate bicycle and pedestrian travel.

- **Sidewalk Investment |** Many areas within the MPA lack sidewalk or other provisions for non-motorized travel. This is a significant concern that also impacts public transportation in the form of first and last mile connections. Sidewalk improvements should be prioritized near bus stop locations. Opportunities to enhance sidewalks should also be coordinated with roadway improvements throughout the DUATS region.

Figure 6-10 highlights the non-motorized regional priorities while Table 6-11 summarizes key trail segments that have been identified in the Greenways Plan and DUATS Bicycle Plan.

Figure 6-10: Non-Motorized Plan

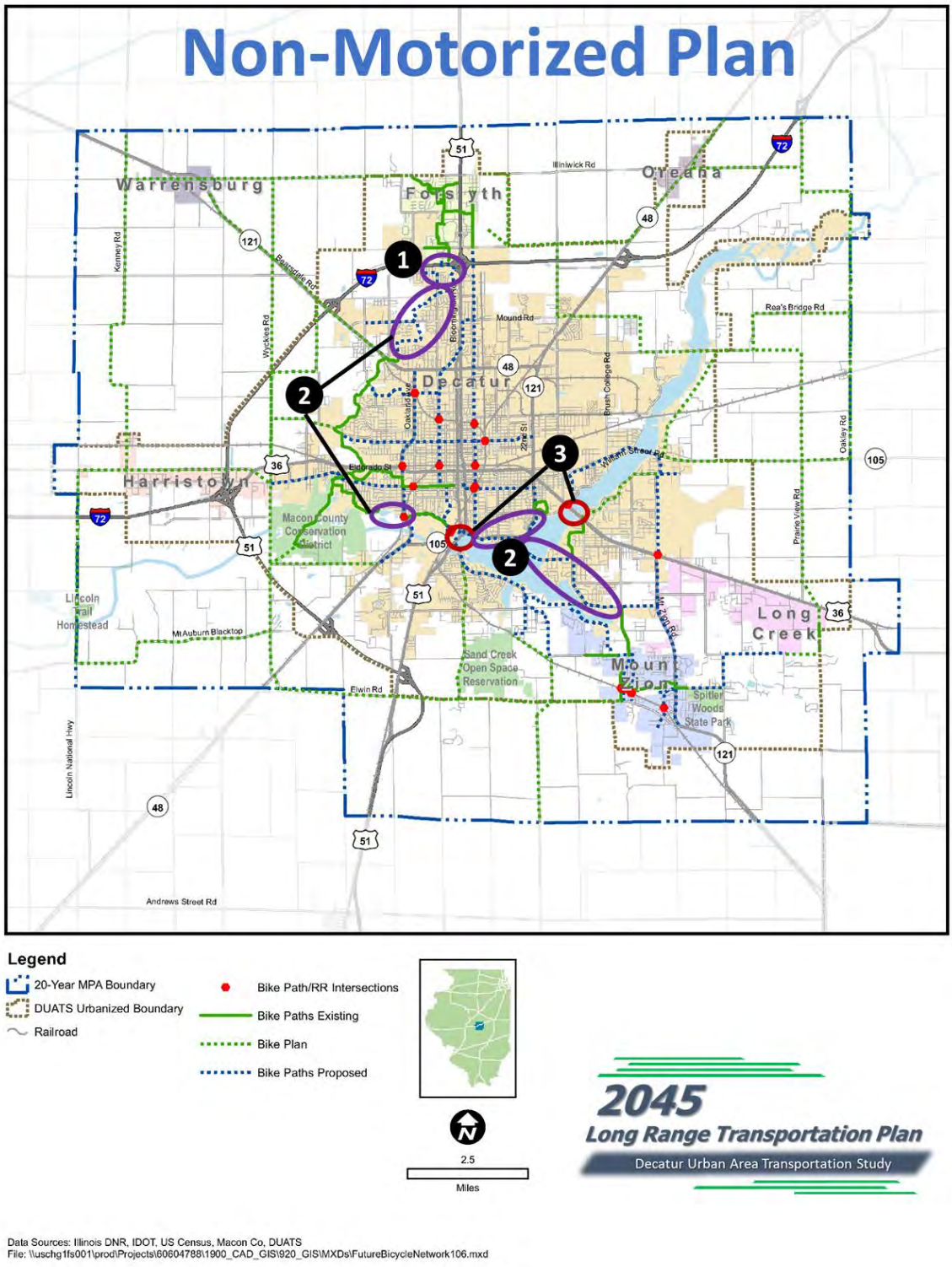


Table 6-11: Non-Motorized Improvements and Cost Estimates

ID#	Project	Responsible Agency	Estimated Cost (2019 Dollars)	Status
1	Finley Creek Conservation Area Trail	Decatur Park District	$1,100,000	No plans currently in progress
2	Lake Shore Trail	Decatur Park District	$3,900,000	No plans currently in progress
3	Rock Springs Trail	Decatur Park District	$1,100,000	No plans currently in progress
4	Spitler Woods Trail Head	Mt. Zion	$700,000	No plans currently in progress
5	Improve bridge crossings over I-72	Decatur / Forsyth	None Identified	No plans currently in progress
6	Chandler Park to Scovill Park	Decatur Park District	$1,400,000	No plans currently in progress
7	Fairview Park to Downtown	Decatur Park District	$700,000	No plans currently in progress
8	Fairview Park to Forsyth	Decatur Park District	$7,700,000	No plans currently in progress
9	Fairview Park to Harristown	Decatur Park District	$700,000	No plans currently in progress
10	Fairview Park to Scovill GC	Decatur Park District	$350,000	No plans currently in progress
11	Finley Creek Conservation Area to Baltimore Avenue	Mt. Zion	$1,100,000	No plans currently in progress
12	Fort Daniels to Spitler Woods	Greenway Coalition	$2,100,000	No plans currently in progress
13	Montezuma to Oakland Avenue	Forsyth	$560,000	No plans currently in progress
14	Mt. Zion Park to Girl Scouts	Mt. Zion	$700,000	No plans currently in progress
15	Neighborhood Park to Spitler Woods	Mt. Zion	$1,400,000	No plans currently in progress
16	Neighborhood Park to Finley Creek Conservation Area	Mt. Zion	$1,400,000	No plans currently in progress
17	Nelson Park to Faries Park	Decatur Park District	$3,500,000	No plans currently in progress
18	IL-121 connection to US-36	Mt. Zion	$1,400,000	No plans currently in progress
19	South Shores to Big Creek	Decatur Park District	$2,800,000	No plans currently in progress
20	Woodland Drive to High School	Decatur Park District	$700,000	No plans currently in progress

SOURCE: DUATS 2040 LRTP – updated for 2045 LRTP.

Supporting Non-Motorized Policies and Strategies

The following policies and strategies are identified as ways to support DUATS non-motorized priorities.

- **Regional and Statewide Bicycle Planning |** Continue proactive regional bicycle planning to coordinate development of a bicycle network that serves all areas of the MPA and connects to statewide bicycle facilities beyond the MPA boundaries:
  - Complete the update of the Decatur Metro Area Greenways Plan and continually identify weaknesses and identify critical linkages to key destination
  - Identify and preserve potential rights-of-way (especially abandoned rail corridors as potential rails-to-trails projects) that could be used to develop bicycle / pedestrian facilities
  - Explore opportunities to expand the DUATS bicycle network beyond the MPA boundaries to connect to Statewide facilities. Specifically, support the development of a bicycle trail along the IL-48 corridor through Oreana to connect to the Heartland Pathways North and South trails as well as the Clinton Lake area.
- **Context Sensitive Solutions |** CSS is an interdisciplinary approach that seeks to develop, build and maintain cost-effective transportation facilities which fit into and reflect the project's surroundings - its "context". Through early, frequent, and meaningful communication with stakeholders, and a flexible and creative approach to design, the resulting projects

improve safety and mobility for the traveling public, while preserving and enhancing the scenic, economic, historic, and natural qualities of the settings through which they pass.

Potential CSS applications should include prioritizing bicycle and pedestrian improvements with any new or improved roadway projects. Bicyclists and pedestrians should be a primary consideration in any transportation planning project rather than an afterthought to roadway improvements.

Additionally, DUATS should seek consultation and coordinate with IDOT on these types of solutions; IDOT currently offers guidance on CSS principles and is a resource for implementing associated solutions.

A specific opportunity to implement CSS may present itself in the Beltway project. DUATS should support the accommodation of bicycle travel along the Beltway; both proposed overpasses should accommodate north-south bicycle travel via shared or dedicated lane facilities along with all necessary signage, striping, facilities, and / or signals

- **Safe Routes to Schools |** Prioritize bicycle and pedestrian improvements along corridors connecting to schools within the MPA. Develop an inventory of existing non-motorized facilities by identifying sidewalk conditions, crosswalks, traffic control device locations, traffic volumes, posted speed limits, and observed speed limits. This database could then be used to prioritize non-motorized improvements. DPTS should pursue dedicated funding opportunities to implement non-motorized improvements that enhance connection to area schools
- **Comprehensive Review of Bicycle Facilities |** An updated comprehensive review of existing and planned bicycle facilities should be completed to identify current levels of bicycle usage and the most appropriate corridors for bicycle and pedestrian facilities.
- **Land Use and Design Considerations |** Local agencies should adopt policies that emphasize and promote bicycle/pedestrian travel:
    - Amend or adopt building codes and development standards to emphasize bicycle/pedestrian travel. Building codes could be amended to require bicycle parking/racks as part of the building design or site plans. Terminal facilities to make riding more attractive should also be encouraged;
    - Adopt aggressive street repair policies that help support bicycle and pedestrian travel;
    - Designate and post bicycle route signs to increase awareness of motorists to share the roadway with bicyclists;
    - Prioritize improvements that link bicycle facilities with major transit stops;
    - Encourage the integration of land uses and mixed-use development. This type of development supports pedestrian and bicycle travel and would improve connections to transit stops;

FUNDING OVERVIEW

Various federal, state, and local sources of funding are available for transportation infrastructure projects in the form of formula funds, grants, loans, and other special financing mechanisms. The typical sources of funding for projects in the DUATS region, including existing or potential, are discussed in this section.

Federal Sources

The Fixing America's Surface Transportation (FAST) Act was signed into law on December 4, 2015, by President Obama. It authorized $305 billion for fiscal years 2016 to 2020 for highway, safety, public transportation, motor carrier safety, hazardous materials safety, rail, research, technology, and statistics programs. The FAST Act provided the first dedicated source of federal funding for freight projects.[10]

Federal funding for transportation is derived in part from highway excise taxes (i.e., taxes paid when purchases are made on a specific good) on motor fuel and truck-related taxes on truck tires, sales of trucks and trailers, and heavy vehicle use. Excise taxes on gasoline and other motor fuels account for more than 85 percent of all receipts to the Federal Highway Trust Fund (HTF). Tax revenues are deposited into either the Highway Account or the Mass Transit Account of the Federal HTF and then distributed to the states. The Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) then distribute funds from the Highway and the Mass Transit Accounts, respectively, to each state through a system of formula grants and discretionary allocations. The FAST Act extended the imposition of highway-user taxes through September 30, 2022, with generally no change to the tax rates as imposed under the Moving Ahead for Progress in the 21st Century Act (MAP-21).

FUNDING SOURCES

Formula Funds – programs apportion amounts to recipients based on formulas that consider population, miles of roadway, and other metrics

Grants – programs award funding typically through a competitive application and review process

Loans – programs award funding to projects through an application and review process, and the recipient is expected to repay the funding later

Special Funding Mechanisms – other potential vehicles for funding infrastructure projects that may not be currently or fully utilized

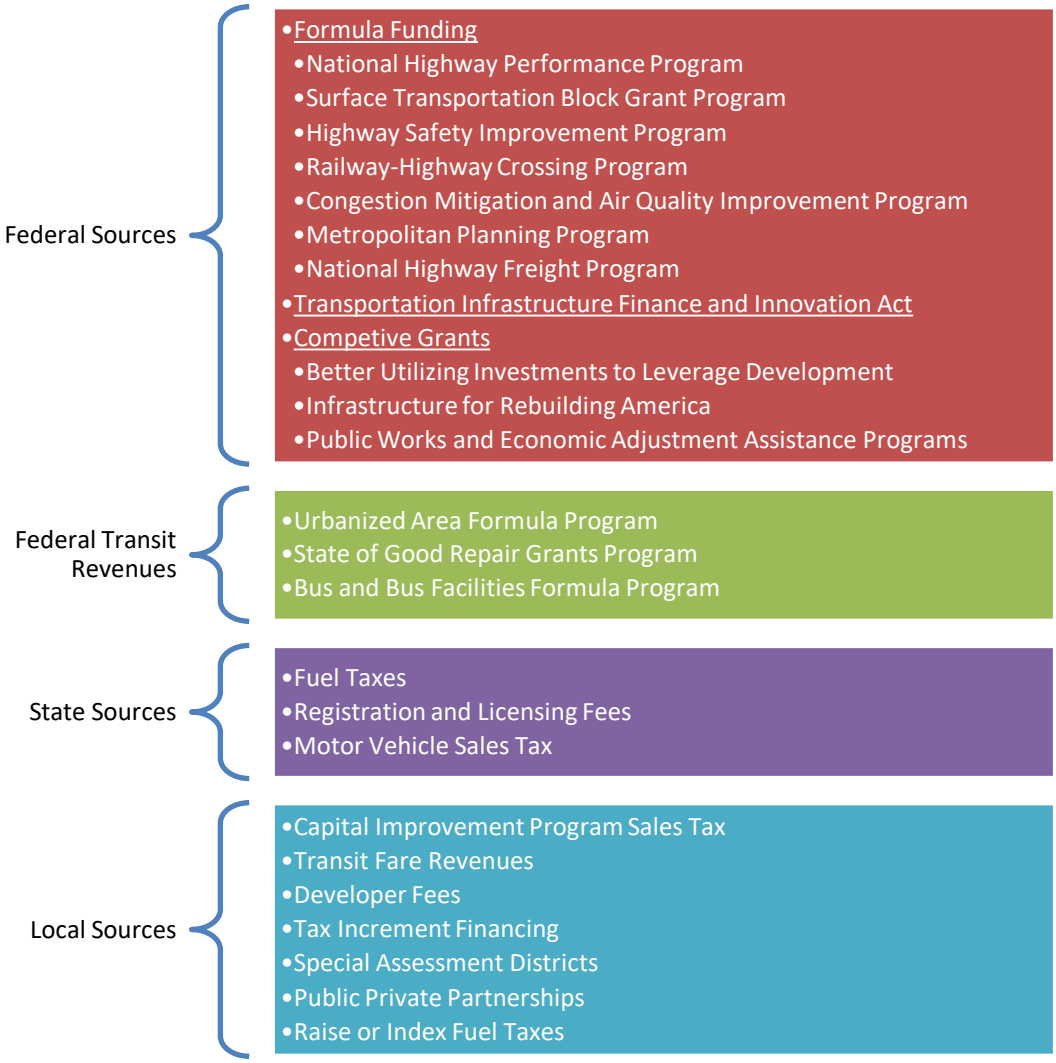
According to estimates from the Congressional Budget Office (CBO),[11] since 2001 outlays have consistently exceeded the revenues to the trust fund. To address the shortfall, Congress has authorized transfers from the General Fund to the HTF to prevent the HTF from being depleted. Under the FAST Act, $52 billion was transferred to the Highway Account and $18 billion to the Transit Account, allowing the accounts to pay their obligations through the end of fiscal year 2020. Currently, there are on-going discussions concern the reauthorization of FAST Act, or a similar transportation bill.

The following sections list and describe the federal, state, and local existing and potential funding sources for highway infrastructure projects. They are grouped and listed in **Figure 6-11**.

[10] The FAST Act, https://www.fhwa.dot.gov/fastact/

[11] Congressional Budget Office, Limit Highway and Transit Funding to Expected Revenues, December 13, 2018, https://www.cbo.gov/budget-options/2018/54774

Figure 6-11: Funding Sources and Programs



Formula Funds

Under the FAST Act, several programs are available for funding infrastructure.[12] Funding allocations are given for the following programs (before post-apportionment set asides, penalties, and sequestration):

- **National Highway Performance Program (NHPP) |** The NHPP provides support for the condition and performance of the National Highway System (NHS), construction of new facilities on the NHS, and ensuring that investments achieve performance targets established by state asset management plans. Funds are apportioned based on formulas to each state, and states divide it among apportioned programs. Eligible activities include reconstruction, resurfacing, restoration, rehabilitation, and preservation of bridges on non-NHS highways, projects that reduce the risk of failure of NHS infrastructure, and subsidies for projects

[12] Projects can be funded through more than one program.

under the Transportation Infrastructure Finance and Innovation Act (TIFIA), a financing program discussed in further detail below.[13]

- **Surface Transportation Block Grant Program |** The program provides flexible spending to states based on apportionment formulas for state and local transportation needs. Eligible projects include the construction of highways, bridges, tunnels, transit capital projects, operational improvements, safety infrastructure projects, parking facilities, recreational trails, bicycle and pedestrian projects, planning and design of roadways and interstates, surface transportation planning, travel demand management strategies, congestion pricing, and numerous others as found in 23 U.S.C. 133(b)(15).[14]
- **Highway Safety Improvement Program (HSIP) |** The HSIP aims to reduce traffic fatalities and injuries on all public roads through a data-driven approach that focuses on performance. Funds are apportioned through a lump sum to the states to divide among programs. Eligible activities include safety projects that are consistent with the State's Strategic Highway Safety Plan (SHSP)[15] [16] and that correct or improve hazardous road locations or features. Eligible projects may include vehicle-to-infrastructure communications equipment, pedestrian hybrid beacons, roadway improvements to separate pedestrians and motor vehicles (including medians), and other physical projects.[17]
- **Railway-Highway Crossings Program |** The program provides funds for safety improvements that reduce fatalities, injuries, and crashes at public grade crossings. Funding is apportioned based on formulas and considers the number of public crossings by state. Eligible activities include relocation of highways to eliminate grade crossings and those that eliminate hazards posed by idling trains on crossings.[18]
- **Congestion Mitigation and Air Quality Improvement Program (CMAQ) |** The CMAQ program provides flexible funding to state and local governments for transportation projects that help meet the requirements of the Clean Air Act.[19] Funds are available for projects that reduce congestion and improve air quality in non-attainment areas. Funds are apportioned to states to divide among localities. Eligible activities include projects or programs that contribute to the attainment or maintenance of a national ambient air quality standard, have a high level of effectiveness in reducing air pollution, and are included in the MPO's Transportation Improvement Program (TIP). Electric and natural gas vehicles are eligible.[20]
- **Metropolitan Planning Program |** The program establishes a framework for metropolitan transportation investment decisions. Funds are apportioned by state. MPOs are required to compile metropolitan transportation plans, transportation improvement programs, and long-range transportation plans. MPOs should make plans that improve transportation system resiliency and reliability, reduce or mitigate stormwater impacts of surface transportation, and enhance travel and tourism.[21]

[13] National Highway Performance Program, https://www.fhwa.dot.gov/fastact/factsheets/nhppfs.cfm
[14] Surface Transportation Block Grant Program, https://www.fhwa.dot.gov/fastact/factsheets/stbgfs.cfm
[15] Missouri's Blueprint – A Partnership Toward Zero Deaths 2016-2020, http://s3-us-west-2.amazonaws.com/modot-pdfs/Blueprint_2016-2020.pdf
[16] 2017 Kansas Strategic Highway Safety Plan, https://www.ksdot.org/Assets/wwwksdotorg/bureaus/burTrafficSaf/reports/reportspdf/SHSP2017.pdf
[17] Highway Safety Improvement Program, https://www.fhwa.dot.gov/fastact/factsheets/hsipfs.cfm
[18] Railway-Highway Crossings Program, https://www.fhwa.dot.gov/fastact/factsheets/railwayhwycrossingsfst.cfm
[19] Clean Air Act, 1963, https://www.govinfo.gov/content/pkg/STATUTE-77/pdf/STATUTE-77-Pg392.pdf
[20] Congestion Mitigation and Air Quality Improvement Program, https://www.fhwa.dot.gov/fastact/factsheets/cmaqfs.cfm
[21] Metropolitan Planning, https://www.fhwa.dot.gov/fastact/factsheets/metropolitanplanningfs.cfm

- **National Highway Freight Program |** The program aims to improve the efficient movement of freight on the National Highway Freight Network (NHFN). A lump sum is apportioned by state and then divided among programs at the local level. Eligible activities include projects and programs that contribute to the efficient movement of freight as identified in the state's freight plan. Examples may include ramp metering, truck-only lanes, adding or widening of shoulders, adding road capacity to address highway freight bottlenecks, separation of passenger vehicles and commercial vehicles, and numerous other projects.[22]

TIFIA

The Transportation Infrastructure Finance and Innovation Act (TIFIA) provides federal credit assistance to eligible highway, transit, intercity rail, and some freight rail, intermodal facilities, and port modification projects. Under TIFIA, states, localities, public authorities, and some private entities can take advantage of three types of financial assistance: secured loans, loan guarantees, and lines of credit. Eligible projects include, for example, transit-oriented development projects and the capitalization of a rural projects fund within a state infrastructure bank. Other specific requirements must be met including project costs, loan amounts, and project types. TIFIA has a rolling application process, where applicants must submit letters of interest demonstrating creditworthiness and readiness to proceed. After an invitation is received from the TIFIA Joint Program Office, a formal application is required. TIFIA was authorized at $275 million for fiscal years 2016 and 2017, increasing to $285 million in fiscal year 2018 and $300 million for fiscal years 2019 and 2020.[23]

Competitive Grants

Competitive grant opportunities include programs administered by the US Department of Transportation and Department of Commerce (Economic Development Administration).

- **Better Utilizing Investments to Leverage Development (BUILD):** The 2019 Consolidated Appropriations Act appropriated $900 million to be awarded by the USDOT for National Infrastructure Investments. This appropriation stems from the program funded and implemented pursuant to the American Recovery and Reinvestment Act of 2009 and is known as the BUILD program. It was previously known as TIGER. Funds for the fiscal year 2019 BUILD Transportation grants program are to be awarded on a competitive basis for surface transportation infrastructure projects that will have a significant local or regional impact.

  Under the most recent round of submissions, projects seeking funding must have met eligibility requirements and submitted an application by July 15, 2019. Projects are awarded based on the application package, review by USDOT, and ultimately the Secretary of USDOT's recommendation. Projects that show strong partnerships among stakeholders, both public and private, are better positioned to win. Projects must submit a benefit-cost analysis that demonstrates the project has greater benefits than it costs to construct and operate, i.e., a benefit cost ratio of greater than 1.0.

- **Infrastructure for Rebuilding America (INFRA):** Like the BUILD grant program, INFRA is a competitive grant program. Established under the FAST Act, it aims to fund nationally and regionally significant freight projects. The federal share of the project may not exceed 80

[22] National Highway Freight Program, https://www.fhwa.dot.gov/fastact/factsheets/nhfpfs.cfm
[23] Transportation Infrastructure Finance and Innovation Act (TIFIA), https://www.fhwa.dot.gov/fastact/factsheets/tifiafs.cfm and TIFIA Credit Program Overview, https://www.transportation.gov/tifia/tifia-credit-program-overview

percent, with 60 percent maximum of INFRA grant funds. Eligible projects include highway freight projects on the NHFN, highway or bridge projects that add capacity to an interstate or a national scenic area, and freight projects including intermodal, rail, or port projects, and grade-separation projects. The minimum award is $5 million for small projects and $25 million for large projects. Projects are evaluated based on selection criteria including a benefit-cost analysis and an application narrative. The Secretary of USDOT ultimately makes the final award recommendations. The most recent round of INFRA (FY 2019) was authorized up to $950 million, with $1 billion authorized for FY 2020.[24] FY 2019 INFRA applications were due in March 2019 and awards announced in July 2019.

- **Public Works and Economic Adjustment Assistance Programs:** These grant programs administered through the Economic Development Authority (EDA), a bureau within the Department of Commerce, provide investments that support construction, non-construction, technical assistance, and revolving loan fund projects on a competitive merit basis. Eligible applicants must be public or private non-profit organizations acting in cooperation with officials of a political subdivision of a state.

  Projects must demonstrate economic distress under one or more of the following criteria: (i) an unemployment rate that is, for the most recent 24-month period for which data are available, at least one percentage point greater than the national average unemployment rate; (ii) per capita income that is, for the most recent period for which data are available, 80 percent or less of the national average per capita income; or (iii) a "Special Need," as determined by EDA. See the Notice of Funding Opportunity (NOFO) for details on economic distress, including how the EDA defines special need.

  The average size of a Public Works program investment is $1.4 million and funds 80-150 projects per year. The average award for the Economic Adjustment Assistance program is $650,000 and funds 70-140 projects per year. Implementation projects can expect funding of up to $2 million. Eligible projects may apply on an ongoing basis as there is no deadline for the current NOFO.[25]

Transit Revenues

Federal grant programs in support of transit services include those commonly referred to as Section 5307, Section 5337, and Section 5339, described in further detail below.

- **Urbanized Area Formula Program (49 U.S.C. 5307):** Federal funds are made available for urbanized areas and to Governors for transit capital and operating assistance and for transportation-related planning. The term "urbanized area" refers to an incorporated area with a population of 50,000 or more that is designated as such by the U.S. Bureau of the Census. Recipients must be eligible public bodies. A wide variety of activities are eligible for funding assistance: planning, engineering design and evaluation of transit projects, capital investments in buses and bus-related activities (including vehicle replacement, bus overhaul and rebuilding, security equipment, and construction of maintenance and passenger facilities), and capital investments in new and existing fixed-guideway systems (including rolling stock, overhaul and rebuilding of vehicles, track, signals, communications, and computer hardware/software). Also, all preventive maintenance and some Americans with Disabilities Act (ADA) complementary paratransit service costs are considered capital expenses.

[24] Infrastructure for Rebuilding America (INFRA), https://www.fhwa.dot.gov/fastact/factsheets/infragrantsfs.cfm

[25] FY 2018 Economic Development Assistance Programs NOFO, https://www.grants.gov/web/grants/view-opportunity.html?oppId=306735

Funds are allocated according to legislative formulas. For areas with a population between 50,000 and 200,000, the formula is based on population and population density. For areas of more 200,000, the formula combines bus revenue vehicle miles, bus passenger miles, fixed-guideway revenue vehicle and route miles, population, and population density factors. A 20 percent non-federal match is required.

- **State of Good Repair Grants Program (49 U.S.C. 5337):** The State of Good Repair grants are capital assistance funds for maintenance, replacement, and rehabilitation projects of high-intensity fixed guideway and bus systems. The funds help agencies maintain a state of good repair. Funds are eligible to be spent on rolling stock, track, line equipment and structures, signals and communication, power equipment, security systems, passenger stations, maintenance facilities and equipment, and operational support equipment. Funds are apportioned by statutory formulas and a 20 percent non-federal match is required.
- **Bus and Bus Facilities Formula Program (49 U.S.C. 5339):** The Bus and Bus Facilities Formula program provides capital assistance for new and replacement buses and related equipment and facilities. Eligible capital projects include the purchasing of buses for fleet and service expansion, bus maintenance and administrative facilities, transfer facilities, bus malls, transportation centers, intermodal terminals, park-and-ride stations, replacement vehicles, bus rebuilds, bus preventive maintenance, passenger amenities such as passenger shelters and bus stop signs, accessory and miscellaneous equipment such as mobile radio units, supervisory vehicles, fare boxes, computers and shop and garage equipment. Funds are allocated on a discretionary basis and through competitive grants, and a minimum 20 percent non-federal match is required. The USDOT Secretary has the discretion to allocate funds, though Congress fully earmarks all available funding.

State Funding/Revenue

In 2019 Illinois passed a capital package of legislation toward transportation, water infrastructure, natural resources, open space, school construction, affordable housing, and other projects. With respect to transportation, it includes an additional $2.5 billion annually for transportation, a portion of which will be dedicated over approximately 20 to 30 years to paying off $11 billion in new transportation bonds authorized in the capital bill. Between bond funds and ongoing annual funding, over the next six years, an estimated $14 billion is provided for roads and bridges, $4.5 billion for transit, and $1.5 billion for passenger rail, freight rail, ports, and airports. About 54 percent will be funded by bonds, with the remainder provided as ongoing annual funding.

Another important aspect of State funding is the reimbursement of 65 percent of eligible transit operating expenses. Illinois does this through the provision of the Downstate Public Transportation Fund, which provides reimbursements to transit operators for a percentage of their public transit operating expenses. Eligible participants are defined by the Downstate Public Transportation Act. In 2008 the state increased its funding for transit operations from 55 percent up to 65 percent reimbursement for eligible transit operating expenses.

State funding for transportation traditionally been primarily paid for out of user fees including gas taxes and motor vehicle registration fees. Among the most common forms of funding are the following:

- **Motor Fuel Tax (MFT) |** The MFT is collected on each gallon of gas that is purchased. Beginning in 2019, the State of Illinois levies a tax of 38.0 cents per gallon of gasoline and 45.5 cents per gallon of diesel fuel and the rate is annually indexed to the federally calculated Consumer Price Index for all Urban Consumers.

- **Vehicle Registration Fees |** These annual fees are assessed in accordance with the class of vehicle. Beginning in 2019, these fees increased depending on the vehicle class.
- **Truck Access Routes |** Truck access routes have a special funding category available for designated truck routes to upgrade roads to accommodate 80,000 pound truck loads.
- **Illinois Commerce Commission (ICC) |** The ICC provides funding for safety improvements of highway-rail grade crossings on state and local roads.
- **Economic Development Funds |** These funds may be used for roadway transportation projects if the new or improved facility will attract or create jobs. This program can be used for industrial, commercial and recreational/entertainment projects.

Local Funding

The basis of local funding of transportation projects in the local municipalities and Macon County is primarily through federal and state allocations and block grants. However, there exist additional revenues which primarily come from property taxes, sales taxes, special assessments, and special tax districts. General funds for roadway maintenance may be obligated from the general property, sales, and other tax proceeds for transportation purposes. While this represents a funding source, the trend in local government is to use general fund property tax proceeds for operation and maintenance of general government. Additional funding includes:

- **Township Bridge Program |** Township Bridge Program funds are used to construct bridges twenty feet or more in length for the safe transportation of school children, the movement of agriculture equipment and products, rural mail routes, and the traffic needs of the general public. Funds are allocated to each eligible road district based on the total township mileage. Townships must levy a 0.08 percent road and bridge tax to qualify for the allocation.
- **Bonds |** Transportation projects may be financed utilizing bonded indebtedness. This method allows a unit of government to raise capital through the sale of public bonds to be repaid with interest using general property tax receipts, motor fuel tax, or revenue from the project upon completion. The City of Decatur has utilized this financing alternative to complete several public transportation projects.
- **Tax Increment Financing (TIF) |** The TIF technique captures all increases in property tax resulting from improvements to a property until such time as allowable project expenses have been paid. Proposed improvements and planned expenditures are defined in a plan and must meet eligibility requirements under the enabling legislation. City governments define the TIF district and program in consultation with units of local government impacted by the proposed district.
- **Capital Improvement Program (CIP) |** Funding for near-term (one to five years) transportation projects are identified in the State's multi-year program, a municipalities' Capital Improvement Program (CIP), and Macon County's CIP. Estimates of near-term transportation funding is based on appropriated levels of federal funding, cash flows of state funding sources, and city and county bonding programs and general revenue sources.

Non-Motorized Funding

Funding programs that may be applied to non-motorized transportation programs and projects include the following:

- **Illinois Transportation Enhancement Program (ITEP) |** The ITEP program provides financial assistance and funding for projects that provide alternative modes of transportation. It is also designed to support enhancements that improve cultural, historic, aesthetic, and environmental aspects of the transportation system.
- **Illinois Bicycle Path Grant Program |** These reimbursable grant funds provide financial assistance for the acquisition, construction, and rehabilitation of public off-road, non-motorized bicycle paths and directly related support facilities. The program is administered by the Illinois Department of Natural Resources.
- **Recreational Trails Program (RTP) |** The RTP is a reimbursement grant program that provides funding assistance for acquisition, development, rehabilitation and maintenance of recreational trails and related facilities. The program is administered by the Illinois Department of Natural Resources.
- **Community Development Block Grant (CDBG) Funds |** CDBG funds are administered by Housing and Urban Development (HUD) and allocated to metropolitan areas by the Federal government on a formula basis. Historically, these funds have been used in the MPA to help with the replacement of sidewalks of eligible low and moderate-income neighborhoods.
- **Other Grants |** Other grants to assist in motorized recreational trails include the Local Government Snowmobile Program, the Snowmobile Trail Establishment Fund, and the Off-Highway Vehicle (OHV) Recreation Trails Program. Additional information on these programs is available from IDOT and IDNR.

Freight

Funding for the maintenance of rail freight facilities comes primarily from private sources. Some economic development grants could be used to plan intermodal facilities or other projects that would attract or create jobs. With the growing emphasis on freight movement and the coordination of rail and highway interchange, more attention is likely to be given to this transportation sector in the future.

The Illinois Rail Freight Program provides capital assistance to communities, railroads and shippers to preserve and improve rail freight service in Illinois. For FY 2019-2024, the program proposes $6.5 million from current federal and state revenues for rail freight improvements. The primary role of the program is to facilitate investments in rail service by serving as a link between interested parties and channeling government funds to projects that achieve statewide economic development. The program provides low-interest loans and, in some cases, grants to finance rail improvements that have the potential to boost job creation and retention, improve access to markets, and maintain transportation cost savings. The loan program targets projects where the repayment of the loan by the recipient provides loan funding for future projects and fosters permanent solutions to rail service problems. Projects are evaluated through a cost-benefit analysis. IDOT must demonstrate that projected benefits exceed projected costs before a project can be deemed eligible. While proposed projects for FY 2019 meet eligibility criteria, priorities may change, which could delay or alter project funding. There are two revolving loan funds:

- **The Rail Freight Loan Repayment Fund |** The state deposits the repayments of old federal rail freight loans into this fund for reuse as loans or grants for eligible projects. A total of $500,000 is available in this fund for FY 2019.

- **The State Loan Repayment Fund |** The state deposits the repayments of old state rail freight loans into this fund for reuse as loans or grants for eligible projects. A total of $6 million is available in this fund for FY 2019.

SYSTEM SECURITY

Safety and Security are elements to be considered in the LRTP process. Safety and security are often used interchangeably; however, there exists a difference between the two concepts, which largely involves the issue of intent.

- **Safety |** Protection of persons or property from unintentional damage or destruction caused by accidental or natural events; and
- **Security |** Protection of persons or property from intentional damage or destruction caused by vandalism, criminal activity, or terrorist events.

Safety has been previously addressed in this plan. Security is addressed in this chapter of the LRTP. Incorporating security into the transportation planning process includes:

- Distinguish the separate yet interrelated issues of safety and security in the transportation planning process;
- Provide resources for transportation-related homeland security projects that would be identified through the regular transportation planning process, including those aimed at prevention, mitigation, response and recovery;
- Provide resources to improve international freight security in and around key freight gateways and hubs, including intermodal and Strategic Highway Network connectors;
- Provide resources to expedite urgent highway and public transportation security projects to address imminent damage or to repair damage caused by a terrorist attack against the United States, including structural hardening, relocation of roads from underneath critical structures, property acquisition to create secure zones, or repairing or replacing a bridge or tunnel that has been damaged or destroyed by a terrorist attack;
- Encourage the use of monitoring systems, such as ITS, to check the status or condition of key surface transportation facilities; and
- Inclusion into the planning process of security related stakeholders such as local law enforcement agencies, fire departments and rescue squads, federal response agencies, and the Department of Homeland Security (DHS).

Addressing the Gaps in Security

DUATS will continue to study, create and establish relevant and specific goals, objectives and anticipated outcomes regarding existing and anticipated security and public safety issues. These include the following actions:

- Review current statewide plans for emergency planning / security elements;
- Develop security goals and appropriate strategies in conjunction with the Macon County Emergency Management Agency (MCEMA);
- Continue to work with DPTS to formulate appropriate security planning. DUATS will work with DPTS to incorporate the SPP into the state and local transportation planning process, as well as define the role of the DPTS, DUATS and the state in promoting security; and

DUATS will continue to support the following activities:

- **Develop ITS Architecture |** In coordination with the update of the Illinois Statewide ITS Architecture, a regional ITS architecture will be developed for DUATS. An ITS architecture is a framework for the coordinated, targeted deployment of various technologies on and

around the transportation network, as well as strategies to optimize their use, including tools that transportation managers can apply to increase safety, reduce congestion, and enhance traveler convenience.

The ITS architecture development process involves a range of stakeholders, including representatives from counties and municipalities, public safety and emergency services, transit agencies, major employers, and others that manage or rely on the region's transportation network. The DUATS regional ITS architecture was not released at the time the 2045 LRTP was completed.

- **Solicit Staff Review |** Emergency management personnel are continually invited to review and comment on public safety, general security and vehicle access as it relates to new roadway construction and proposed developments or redevelopment areas.
- **Increase Public Awareness |** Educate the public about how they should use the area transportation system in case of an emergency and/or disaster.
- **Evacuation Plan |** The City of Decatur and Macon County have jointly developed an evacuation plan as part of a larger emergency operations planning effort. The evacuation plan defines the procedures and policies that govern how the city and county would operate in the event of an emergency that would require the evacuation of part or the entire county.

  The plan also outlines how local law enforcement and other public agencies should mobilize and coordinate their efforts to assist in evacuation procedures. These provisions are designed to coordinate with state and federal response efforts and focus on issues of safety and orderliness, which are of high importance in providing for an expeditious response.
- **Hazardous Materials Plan |** The hazardous materials plan establishes the policies and procedures under which Decatur and Macon County will operate in the event of a hazardous material emergency. It defines the roles, responsibilities, and relationships of government and private organizations in response to a hazardous materials incident. This plan provides assurance of appropriate response to protect the population of Macon County in the event of a hazardous material incident involving the transport, use, storage and/or processing of hazardous materials.
- **Terrorism Plan |** The Terrorism Consequence Management Plan establishes the policies and procedures under which Macon County will operate in the event of a terrorism emergency. This plan describes how local agencies and organizations are mobilized and coordinated in response to or support of a Weapons of Mass Destruction (WMD) emergency in response to terrorism. Also described are procedures to integrate with state and federal response efforts with Macon County capabilities.

  The Macon County Terrorism Task Force has developed this plan in compliance with federal planning requirements contained in the Managing the Emergency Consequences of Terrorist Incidents guidelines, and its contents apply only to Macon County. It is intended to supplement the Macon County Emergency Operations Plan and, as such, does not conflict with the County Plan, which addresses a full range of major emergencies.

  Additionally, the Illinois Plan for Radiological Accidents (IPRA) will be used during an Incident involving a potential or actual release of radiation from any source. Activities required to protect the public health and safety in such circumstances will be implemented in accordance with the procedures of the IPRA.
- **DPTS Security Plan |** DUATS will continue to work with DPTS to incorporate security review and updates into the state and local transportation planning process. Past actions to enhance the security of the public transit system include:

- Made repairs to the perimeter fences of its facilities;
- Installed camera systems on buses and ADA-accessible vans;
- Installed a camera system in the vault room / farebox counting room;
- Installed a camera system that monitors the inside and outside of Transit Center; and,
- Installed an electronic keypad at the employee entrance to Transit Center which features individualized access codes for keyed entry authorization.

- **Ongoing Coordination with IEMA |** The Illinois Emergency Management Agency (IEMA) is responsible for coordinating mitigation, preparation, response, and recovery operations during disasters in the State of Illinois, which includes areas beyond the boundaries of Macon County. DUATS and its governing partners will continue to work with IEMA to plan for and take action regarding these types of events.

ENVIRONMENTAL MITIGATION

The federal government, through FAST Act and the mandates of various departments and bureaus, requires that environmental impacts and mitigation be an integral part of the planning processes, which includes LRTP updates.

Environmental Objectives

DUATS is committed to wise stewardship of transportation planning dollars and effective decision making including project selection, which is integrated and coordinated with land use, water, and natural resource planning and management. The Macon County – Decatur Comprehensive Plan encourages the establishment of environmental suitability as a key limiting factor in determining the nature and location of future development. This principle of environmental sensitivity applies to transportation planning as an extension or major modification of the transportation system. The identification of a full range of environmental concerns will occur early in the transportation planning and project development process.

IDOT administers all projects receiving federal funds, whether under state or local jurisdiction, and ensures that projects adhere to all applicable state and federal environmental laws. Since most transportation projects require a plan to address environmental impacts, IDOT and DUATS will continue to incorporate environmental mitigation policies and strategies in making transportation improvements. DUATS continues to foster positive relationships with environmental groups, government agencies, and the public at large when discussing infrastructure projects and has worked to make environmental considerations part of the transportation planning process

DUATS has developed the objectives listed below to aid in the incorporation of environmental planning:

- Maintain and support the transportation system with improvements that are environmentally responsible and support conservation of the region's natural, cultural, historic, and aesthetic resources;
- Ensure that social, environmental, energy, regional and community, and other non-transportation goals, plans, and programs affecting transportation are considered in all phases of the transportation planning process;
- Identify, implement, or support public investment in transportation facilities and services that effectively address social, environmental, and energy goals of the community;
- Evaluate innovative methods for mitigating the environmental impacts of transportation facilities and improvements; and
- Encourage the shift of new developments that are typically scattered and are primarily vehicle-oriented to areas that are transit- and pedestrian-oriented, have existing transportation infrastructure in place, and/or utilize conservation design techniques.

Environmental Mitigation Strategies and Procedures

The National Environmental Policy Act (NEPA) requires full disclosure of the impacts that federally funded transportation projects would have on the surrounding environment. NEPA also requires that impacts to resources be avoided altogether if possible. If impacts cannot be avoided, measures must be taken to minimize those impacts via compensation or mitigation.

Based on its mission and the provisions of state and federal environmental laws, IDOT makes every attempt to minimize the negative environmental impacts of projects it funds and directs both during construction and after completion. IDOT policies, strategies, and procedures are specifically designed to identify potential environmental impacts and to proactively take all reasonable steps to ensure the least environmental disruption or other negative consequences.

There are several key areas in which environmental mitigation activities are focused. Figure 6-12, Figure 6-13, and Figure 6-14 depict environmentally sensitive areas in the MPA. The following are the most commonly identified areas:

- Section 4(f) Lands;
- Section 6(f) Land Conversions;
- Cultural Resources (Historic Properties and Archaeological Sites);
- Threatened and Endangered Species (State and Federal) and Natural Areas;
- Farmlands;
- Wetlands ;
- Floodplains;
- Noise Abatement; and
- Air Quality

Section 4(f) Lands

Section 4(f) of the USDOT Act of 1966 applies to any USDOT funded project which involves the use of any significant publicly owned public park, recreation area, or wildlife and waterfowl refuge and any land from a historic site of national, state or local significance. Special environmental analyses are required to determine if there is a feasible or prudent alternative to taking the proposed action involving the use of the 4(f) property. In addition, the project sponsor must demonstrate that all possible planning to minimize harm has occurred. These measures to minimize harm, which include mitigation, are documented in the 4(f) evaluation. IDOT, as part of its Bureau of Design and Environment (BDE) manual, has procedures in place for completing 4(f) evaluations that document these findings.

Section 6(f) Land Conversion

Section 6(f) of the Land and Water Conservation Fund Act of 1965 applies to any USDOT funded projects which involve the use of lands which have Land and Water Conservation (LAWCON) or Open Space Land Acquisition and Development (OSLAD) funds involved in their purchase or development. IDOT's BDE manual has procedures in place for handling 6(f) lands when developing highway projects. These procedures focus on early and on-going coordination with local officials as well as the Illinois Department of Natural Resources.

Cultural Resources (Historic Properties)

When IDOT develops a federally funded/regulated project, appropriate measures are taken to avoid and/or minimize impacts on properties that are included in or are eligible for the National Register of Historic Places. Where such properties will be affected, the Advisory Council on Historic Preservation shall be afforded a reasonable opportunity to comment prior to project approval. Special efforts shall be made to minimize harm to any National Historic Landmark. The IDOT BDE manual contains specific procedures for minimizing harm to historic resources in cooperation with the Advisory Council on Historic Preservation and the State Historic Preservation Officer.

Threatened and Endangered Species/ Natural Areas

In the development of a project, special studies and coordination are required when the action may affect Federally-listed threatened and endangered species. Studies and coordination also are required for actions that may adversely impact State-listed species. IDOT also conducts studies and coordination activities on actions that may adversely impact areas included in or eligible for the Illinois Natural Areas Inventory. It is IDOT's policy that in the development of a project, an assessment shall be made of the likely impacts on species of plants or animals listed in the Federal and/or State level as threatened or endangered and on State-designated Natural Areas. Every effort is made to minimize the likelihood of jeopardizing the continued existence of listed threatened or endangered species or the destruction or adverse modification of a Natural Area. Efforts are also made to avoid negative impacts on areas of habitat designated as critical habitat or essential habitat. The BDE manual specifies procedures for avoiding and/or mitigating impacts on endangered or threatened species and Natural Areas including consultation with the U.S. Fish and Wildlife Service and the Illinois Department of Natural Resources.

Farmlands

In the development of a project, consideration is given to the impacts that the action will cause in conversion of farmland to non-farm uses. Under certain circumstances, coordination must be initiated with the U.S. Department of Agriculture, Natural Resources Conservation Service, and/or the Illinois Department of Agriculture to evaluate the impacts on farmland and obtain the views of those agencies on alternatives to the proposed action. Proposed actions will be developed to be compatible with state, local government, and private programs and policies to protect farmland. The BDE manual outlines coordination procedures and defines those lands subject to these provisions.

Wetlands Preservation

Protection and preservation of wetlands is an important environmental goal of IDOT. In this area, mitigation efforts are coordinated with other state and federal agencies and are clearly defined in both policy and procedures.

The Illinois Interagency Wetland Policy Act of 1989 (IWPA) includes the identification and delineation of jurisdictional wetlands. The Wetlands Group within the Illinois Natural History Survey performs this work under a statewide contract with the IDOT. Under the CWA (Clean Water Act) and IWPA, IDOT must demonstrate that all measures were taken to first avoid and then minimize impacts to wetlands to the fullest extent practicable. Unavoidable impacts are mitigated by way of wetland compensation through either restoration or creation of wetlands. Methods used by IDOT to restore or create wetlands follow the Illinois Wetland Restoration and Creation Guide. In addition to the INHS Wetlands Group, the Wetlands Geology Section at the Illinois State Geological Survey provides technical assistance to IDOT in locating, evaluating, and monitoring compensatory wetlands. All IDOT wetland compensation plans include a commitment to monitor planned wetlands for attainment of performance standards. Departmental procedures for ensuring compliance with the CWA and IWPA are detailed in the IDOT Wetlands Action Plan. There are no Wetland Compensation sites in the Decatur MPA.

Floodplains

In the development of a federally funded project, special requirements are imposed by Executive Order 11988 when the project will entail a significant floodplain encroachment. These requirements are in addition to floodplain permit requirements and the special hydraulic analyses associated with determining bridge and culvert heights and widths for projects located in

floodplains. A project that will result in significant floodplain encroachment will require the preparation of an Environmental Assessment or Environmental Impact Statement. Both the IDOT BDE manual and the IDOT Water Quality Manual provide additional information and procedures for projects involving floodplains.

Noise Abatement

Federal laws and regulations require that it is necessary to undertake special technical analyses to identify and evaluate the potential noise impacts a project will involve. Once a noise impact is identified, IDOT will evaluate feasible and reasonable noise abatement methods to reduce traffic noise impacts. Traffic noise can potentially be reduced by addressing the noise source, noise path, or noise receiver. The IDOT BDE manual includes specific guidance and procedures for determining the need for noise abatement evaluations and the types of mitigation strategies that are appropriate for a variety of situations. The manual also specifies coordination requirements with local government and public participation procedures.

Air Quality

All transportation plans, programs, and projects which are funded or approved under Title 23 USC must be determined to conform with State or Federal air implementation plans as required by the Clean Air Amendments of 1990 and subsequent federal regulations. Such implementation plans describe how air quality standards will be achieved in those areas of a State in which standards are being exceeded. The DUATS MPA is an attainment area and is in compliance with air quality standards and within the parameters of transportation-related pollutants.

LRTP Environmental Mitigation Analysis

DUATS used available GIS layers and associated databases pertaining to environmentally sensitive and geographically significant areas to complete a high-level environmental mitigation analysis for the 2045 LRTP. The layers included natural resources, floodplains, and farmland maps (**Figure 6-12**, **Figure 6-13**, **Figure 6-14**).

Figure 6-12: Environmental Features – Natural Resources

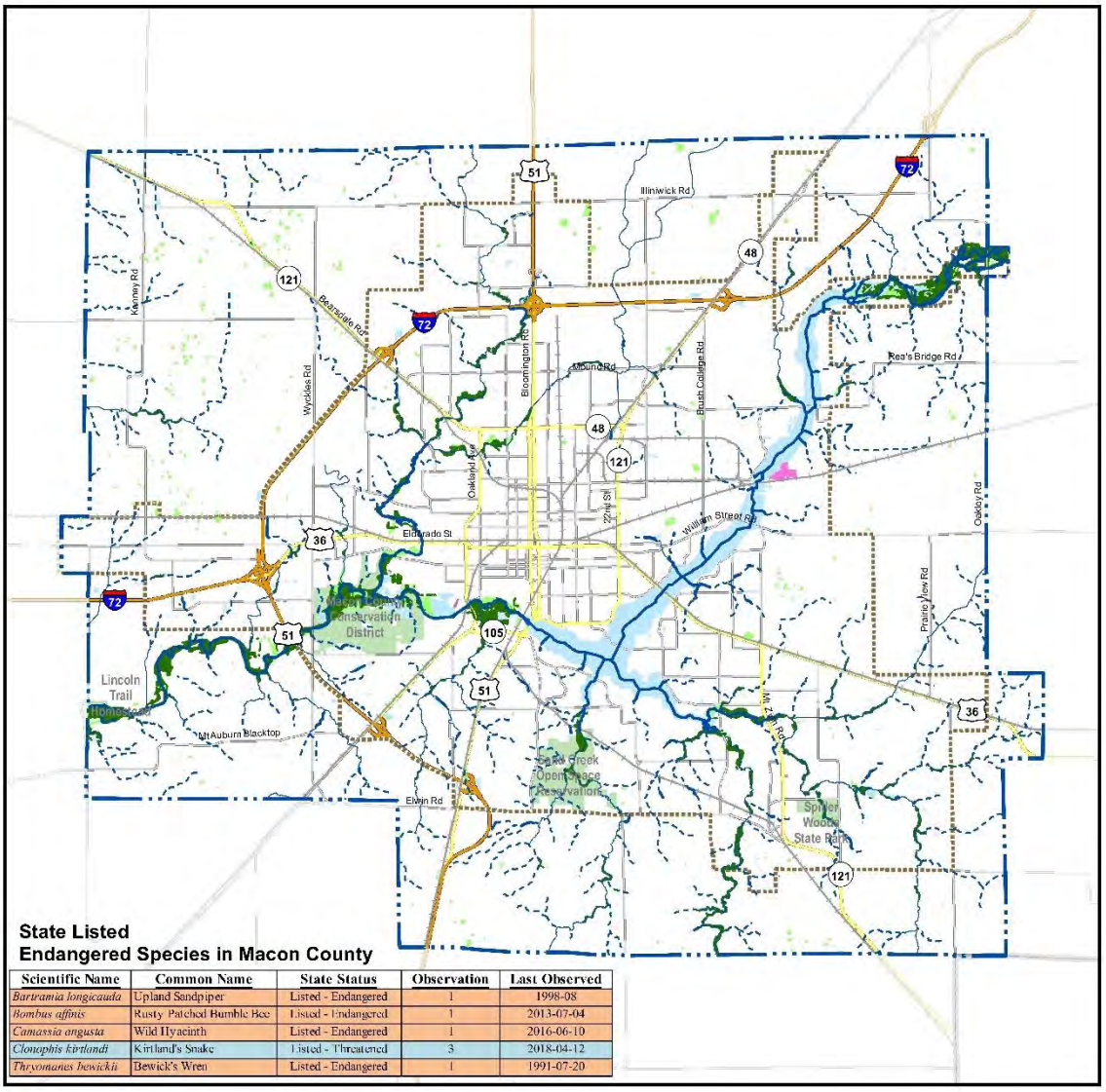
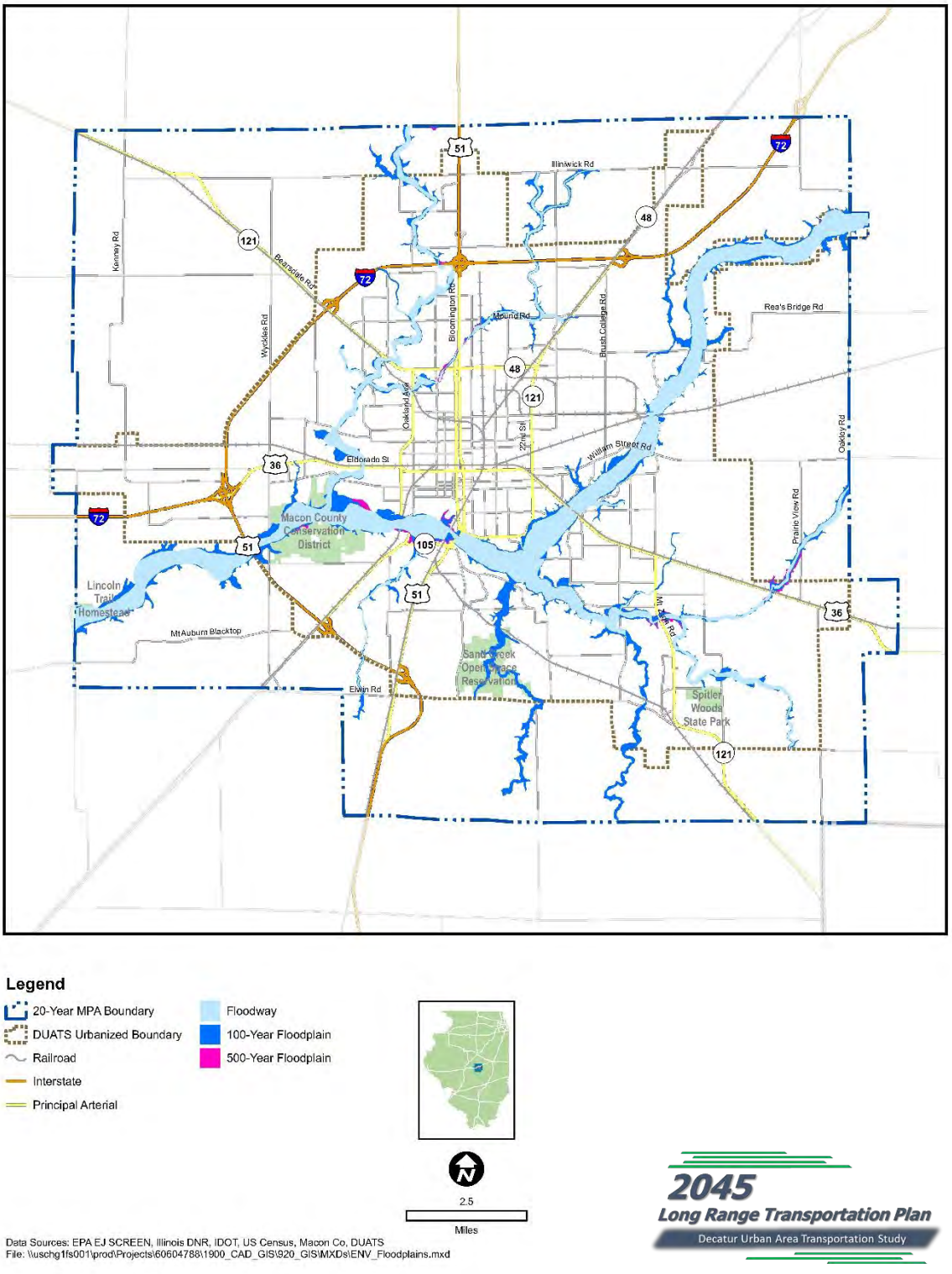


Figure 6-13: Environmental Features – Floodplains



Legend

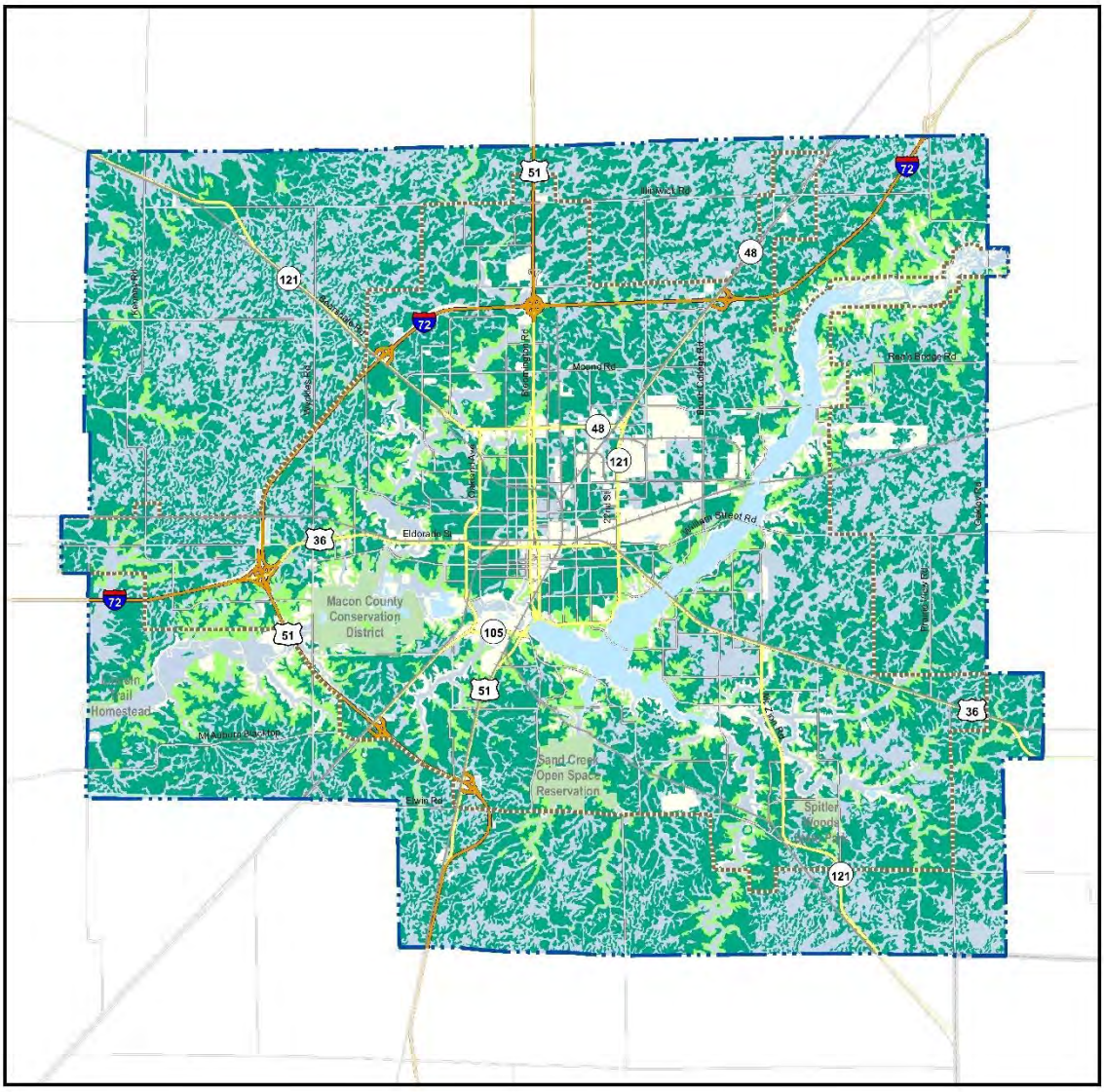
- 20-Year MPA Boundary
- DUATS Urbanized Boundary
- Railroad
- Interstate
- Principal Arterial
- Floodway
- 100-Year Floodplain
- 500-Year Floodplain

2.5
Miles

Data Sources: EPA EJ SCREEN, Illinois DNR, IDOT, US Census, Macon Co, DUATS
File: \\uschg1fs001\prod\Projects\60604788\1900_CAD_GIS\920_GIS\MXDs\ENV_Floodplains.mxd

2045 Long Range Transportation Plan
Decatur Urban Area Transportation Study

Figure 6-14: Environmental Features – Farmland



Comparing the environmental layers along with the fiscally constrained projects helps identify potential areas of concern and / or environmental incompatibility. For example, if a proposed road is on an alignment that crosses an environmentally sensitive area or a floodplain, DUATS would be able to identify this well in advance of a detailed study or engineering effort. As such, appropriate actions might be taken early in the process to avoid or mitigate potentially negative environmental impacts.

DUATS will continue to cooperate and coordinate planning activities with all applicable local, state, federal and quasi-public environmental resource agencies. Table 6-12 summarizes the potential environmental impacts on fiscally constrained IDOT projects and Table 6-13 summarizes the potential environmental impacts on fiscally constrained Macon County projects. Figure 6-15, Figure 6-16, and Figure 6-17 depict environmentally sensitive areas in the MPA in relationship to the fiscally constrained roadway/freight improvements.

It is important to note that this is not intended to be a detailed environmental analysis. Instead, the purpose of this process is to identify potential environmental issues early in the process. This analysis should be used as a starting point to help guide more detailed environmental analysis that will be required as these projects are designed and constructed.

Table 6-12: Fiscally Constrained Projects Resource Matrix (IDOT projects)

ID	Project (Approximate Limits) Refer to Figure 6-4 for project location.	Rivers/Streams (number)	Conservation Areas	Wetlands (approx. acres)	100-year Floodplain (number of crossings)	500-year Floodplain (number of crossings)	Historic Sites (number)	Historic Districts (number)	Prime Farmland (approx. acres)
1	US 36/ILL 121 - Resurfacing, ADA improvements and traffic signal modernization.	1	-	-	2	1	-	-	492
2	US 36 - Resurfacing, ADA improvements, structure repair and traffic signal modernization	-	-	-	-	-	*Note 3*	*Note 4*	239
3	I-72 - Bridge Joint replacement and repairs, deck repairs, and deck overlay	-	-	-	-	-	*Note 5*	*Note 6*	122
4	US 51 - Microsurfacing	2	*Note 1*	-	4	2	-	-	649
5	US 51 - Resurfacing and Bridge joint replacement	4	-	25	1	-	-	-	1,597
6	Old US 36 - Resurfacing	2	-	-	1	-	-	-	1,525
7	Old US Business 51 - Resurfacing, ADA improvements and bridge joint repair	2	-	29	4	2	-	-	317
8	ILL 121 - Resurfacing, ADA improvements	1	*Note 2*	-	3	2	-	-	851
9	Old US 51 Business - Resurfacing, ADA improvements	-	-	6	2	1	-	-	354
10	ILL 105 - Superstructure Replacement	1	-	225	2	1	-	-	85
11	US 36 - Resurfacing and bridge repair	1	-	-	-	-	-	-	350
12	US 36 - Resurfacing - 6.55 miles	1	-	-	1	2	-	-	980
13	Old US Business 51 - Resurfacing, Bridge joint replacement and bridge deck overlay	2	-	-	2	1	-	*Note 7*	565
14	I-72 - Interstate Resurfacing and ramp repair	4	-	-	1	-	-	-	1,011
15	US 51 - Resurfacing and ADA improvements	1	-	12	-	1	-	-	274
`16	US 36 - Bridge Replacement	1	-	-	2	1	-	-	51
17	US 51 - Resurfacing	4	-	-	4	1	-	-	1,506
18	ILL 48 - Resurfacing and Culvert Replacement	6	-	30	2	-	-	-	2,041
19	ILL 105 - Resurfacing	1	-	4	2	1	-	-	1,105
20	ILL 121 - Resurfacing and ADA improvements	1	-	18	1	1	-	-	551

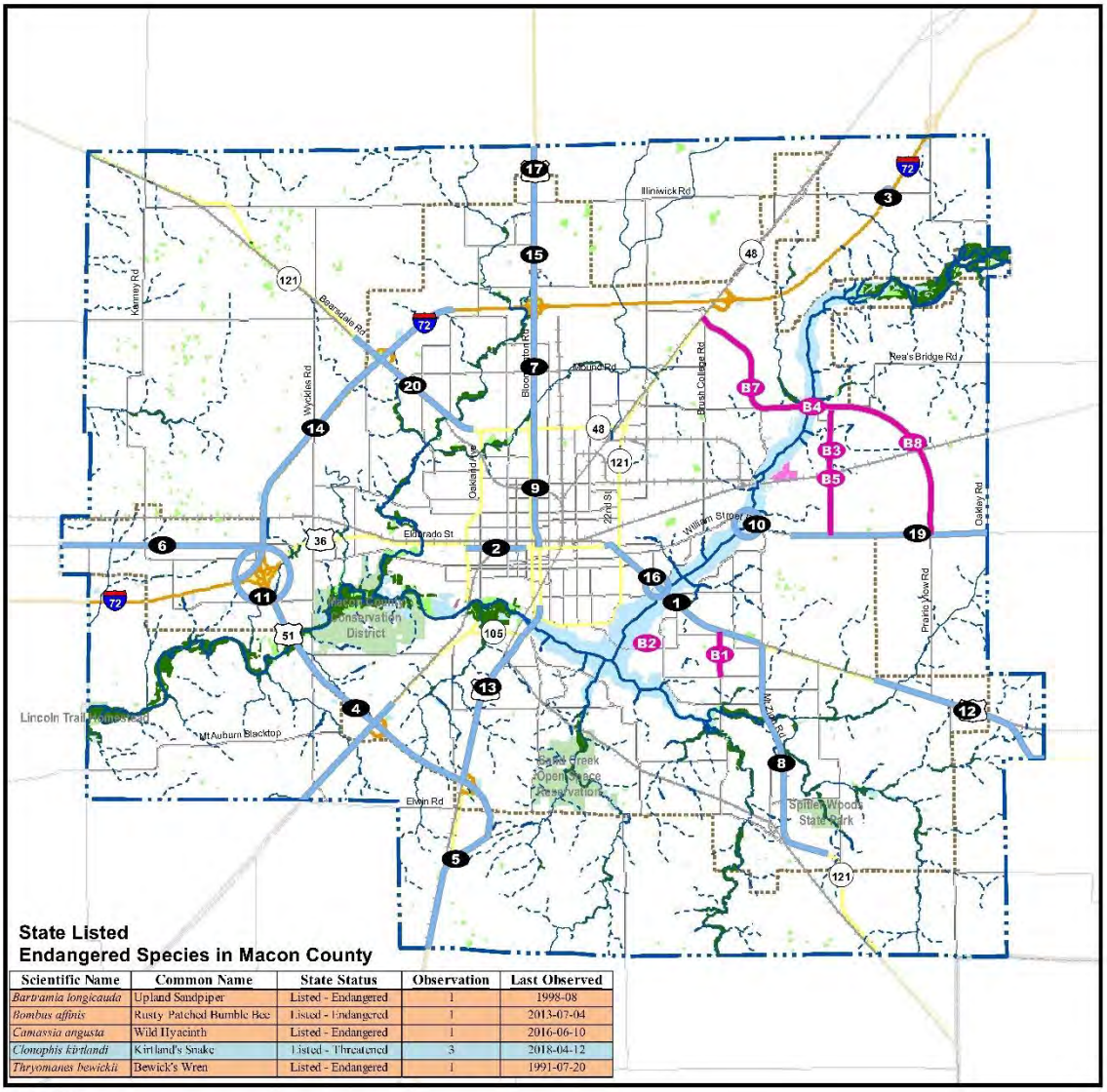
Source: AECOM (analysis of GIS data), 2019. NOTES: [1] Macon County Conservation District [2] Spitler Woods State Park [3] Transfer House; James Millikin House [4] West End Historic District; Decatur Historic District; Decatur Downtown Historic District [5] Transfer House [6] Decatur Historic District; Decatur Downtown Historic District [7] Decatur Historic District.

Table 6-13: Fiscally Constrained Projects Resource Matrix (Macon County projects)

ID	Project (Approximate Limits) Refer to Figure 6-4 for project location.	Rivers/Streams (number)	Conservation Areas	Wetlands (approx. acres)	100-year Floodplain (number of crossings)	500-year Floodplain (number of crossings)	Historic Sites (number)	Historic Districts (number)	Prime Farmland (approx. acres)
B1	CH-7 Reconstruction	0	-	0	0	0	-	-	106
B2	CH-63 / Country Club Road Resurfacing	0	-	0	1	1	-	-	44
B3	CH-23 / Sangamon Road Curve Reconstruction	3	-	0	2	1	-	-	330
B4	Reas Bridge Road Bridge Replacement	1	-	0	1	2	-	-	52
B5	CH-23 /Sangamon Road Resurfacing	0	-	0	0	0	-	-	77
B7	Beltway (Phase 1 – Lake Decatur to ILL 48)	1	-	0	3	1	-	-	478
B8	Beltway (Phase 1 – ILL 105 to Lake Decatur)	0	-	0	1	0	-	-	479

Source: AECOM (analysis of GIS data), 2019.

Figure 6-15: Fiscally Constrained Projects (with Natural Resources)



State Listed Endangered Species in Macon County

Scientific Name	Common Name	State Status	Observation	Last Observed
Bartramia longicauda	Upland Sandpiper	Listed - Endangered	1	1998-08
Bombus affinis	Rusty Patched Bumble Bee	Listed - Endangered	1	2013-07-04
Camassia angusta	Wild Hyacinth	Listed - Endangered	1	2016-06-10
Clonophis kirtlandi	Kirtland's Snake	Listed - Threatened	3	2018-04-12
Thryomanes bewickii	Bewick's Wren	Listed - Endangered	1	1991-07-20

Legend

- 20-Year MPA Boundary
- DUATS Urbanized Boundary
- Railroad
- Interstate
- Principal Arterial
- Fiscally Committed Macon County Project
- Fiscally Committed IDOT Project

NHD Streams

- Artifical Path Stream/River
- Perennial Stream/River
- Intermittent Stream/River

- Illinois Natural Areas
- Illinois Department of Natural Resources Site

NWI Wetlands

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond/Lake
- Riverine
- Other

2.5 Miles

Data Sources: EPA EJ SCREEN, Illinois DNR, IDOT, US Census, Macon Co, DUATS
File: \\uschg1fs001\prod\Projects\60604788\1900_CAD_GIS\920_GIS\MXDs\ENV_FC_NaturalResources.mxd

2045 Long Range Transportation Plan
Decatur Urban Area Transportation Study

Figure 6-16: Fiscally Constrained Projects (with Floodplains)

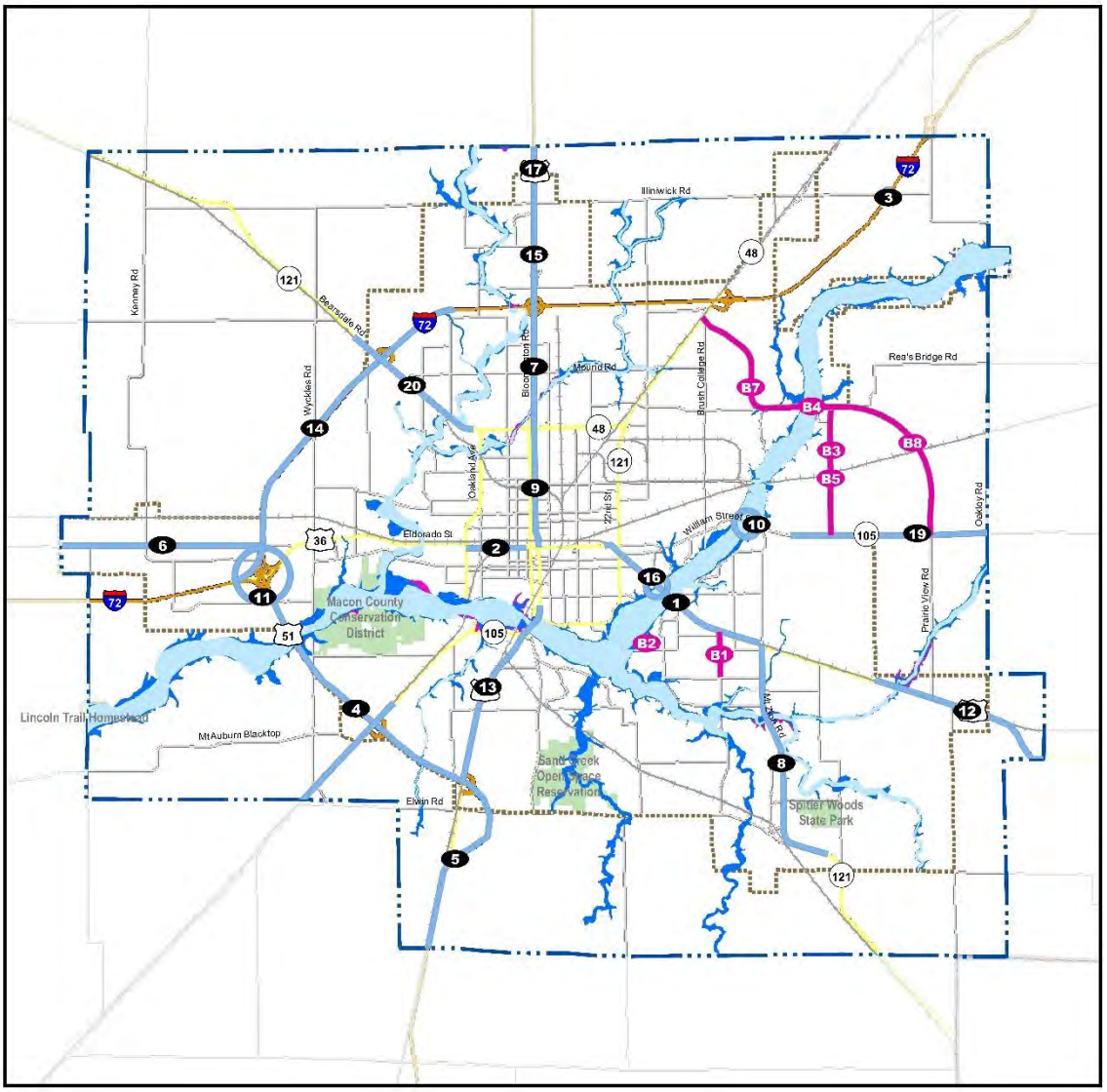
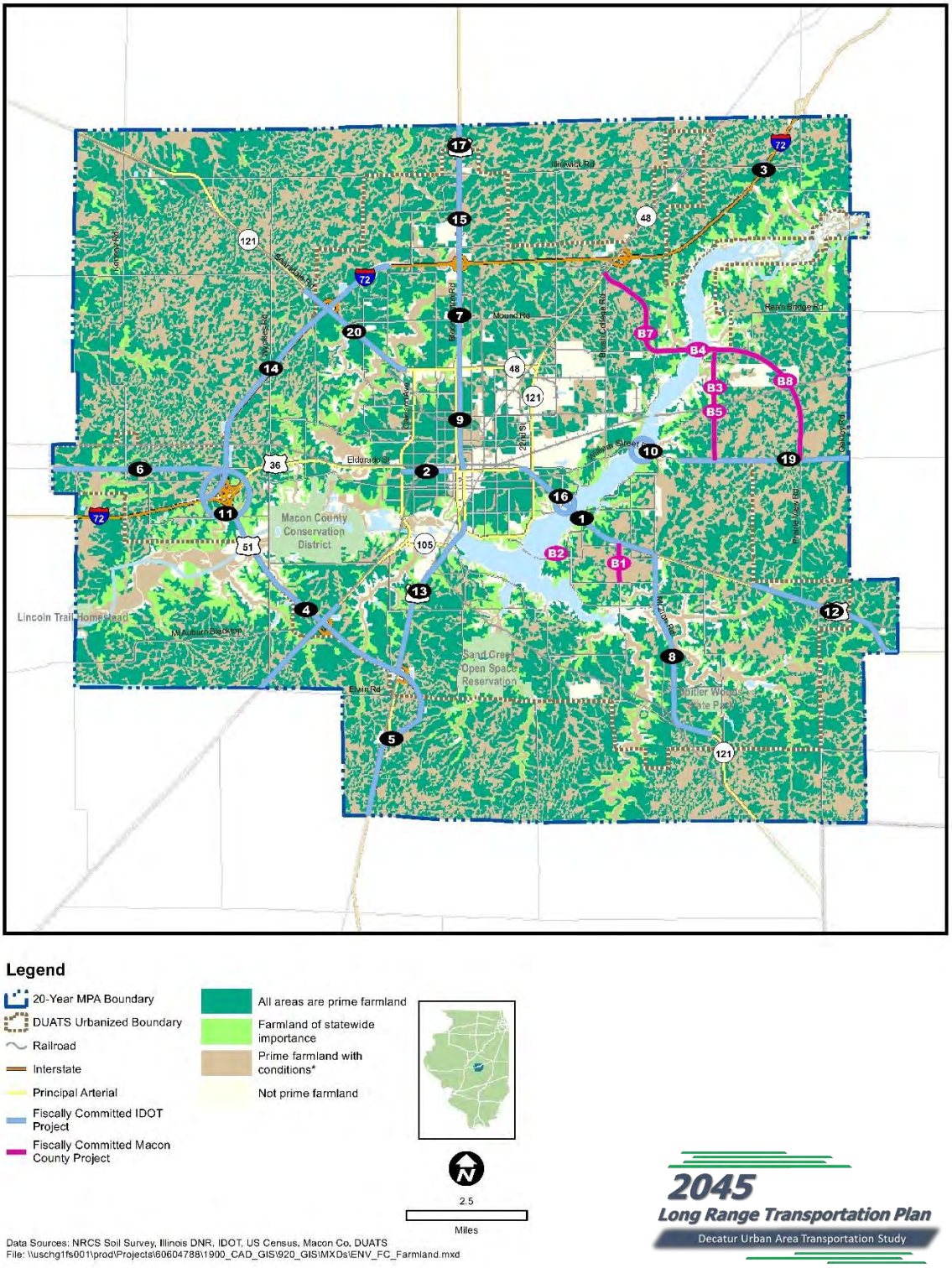


Figure 6-17: Fiscally Constrained Projects (with Farmland)



Potential Mitigation Activities

IDOT strives to reduce the negative impacts of highway construction and rehabilitation projects by requiring contractors to adhere to related provisions in their Standard Specifications for Road and Bridge Construction. This document includes specific requirements related to the environment: the protection of existing plant material, removal of waste, and temporary erosion control.

In addition to these general provisions, some highway projects also include additional construction mitigation requirements which are consistent with the location and magnitude of the project, the types of impacted resources, and other project specific issues. DUATS supports monitoring construction activities and instituting control programs on major construction projects. These efforts focus on the following actions:

- **Controlling Construction Dust |** Watering, street sweeping, and chemical dust suppressants;
- **Reducing Diesel Emissions |** Emission control devices, cleaner fuels and idling restrictions;
- **Controlling Erosion and Sedimentation |** Special equipment and procedures; and
- **Reducing Noise and Vibration |** Special drilling techniques and low-impact hammers.

ENVIRONMENTAL JUSTICE ANALYSIS

Environmental Justice (EJ) is a federal policy that requires agencies receiving federal funds to set up processes that consider impacts of plans, projects, and activities on minority and low-income populations. FHWA and FTA establish policy guidelines that focus on the following:

- **Limited Effects |** Avoid, minimize, or mitigate disproportionally high and adverse effects on human health and the local environment. This includes social and economic effects on minority and low-income populations;
- **Inclusion |** Ensure that all communities that would potentially be affected by the transportation decision-making process have the opportunity to participate and be represented; and
- **Guarantee of Benefits |** Prevent the denial, reduction, or significant delay of the receipt of benefits to minority and low-income population.

FHWA and FTA require environmental justice considerations in compliance with Title VI of the Civil Rights Act of 1964 which:

> "…prohibits discrimination by recipients of Federal financial assistance on the basis of race, color, and national origin, including matters related to language access for limited English proficient (LEP) persons. Under DOT's Title VI regulations, as a recipient of DOT financial assistance, you are prohibited from, among other things, using 'criteria or methods of administering your program which have the effect of subjecting individuals to discrimination based on their race, color, or national origin.' For example, neutral policies or practices that result in discriminatory effects or disparate impacts violate DOT's Title VI regulations, unless you can show the policies or practices are justified and there is no less discriminatory alternative. In addition, Title VI and DOT regulations prohibit you from intentionally discriminating against people on the basis of race, color, and national origin."

Minority Population

Minority population is defined as any identifiable group of minority persons who live in geographic proximity. Additionally, minority populations can include geographically dispersed or transient persons who would be similarly affected by a proposed transportation improvement. Minority persons include those who are American Indian, Alaska Native, Asian, Black or African American, Hispanic or Latino, and Native Hawaiian and other Pacific Islander. For the purpose of the EJ analysis, a census tract with a minority population of 23 percent or greater is defined as an EJ area as this percentage would exceed the Macon County minority population average.

The non-Caucasian population of the MPA is primarily concentrated in the central part of Decatur, extending north from Lake Decatur to East Garfield Avenue, between Oakland Avenue and 22nd Street. Minorities in this general area account for 50 to 75 percent of the population. Another area exceeding 50 percent is located in the north/northeast portion of Decatur, north of Garfield Avenue to I-72 roughly between US-51 and Brush College Road. Figure 6-18 displays the minority population within the DUATS MPA,

Low-Income Population

Low-income population was identified using the percentage of households with income levels below the poverty line. Census tracts having greater than 36 percent of households below the

poverty line were identified as an EJ area. The low-income population of the MPA is also highly concentrated in the central part of Decatur, and includes the same geographic boundaries described in the minority population. Figure 6-19 displays the low-income population.

Figure 6-20 displays the defined EJ areas, which include the previously defined minority and low-income populations.

Figure 6-18: Minority Population

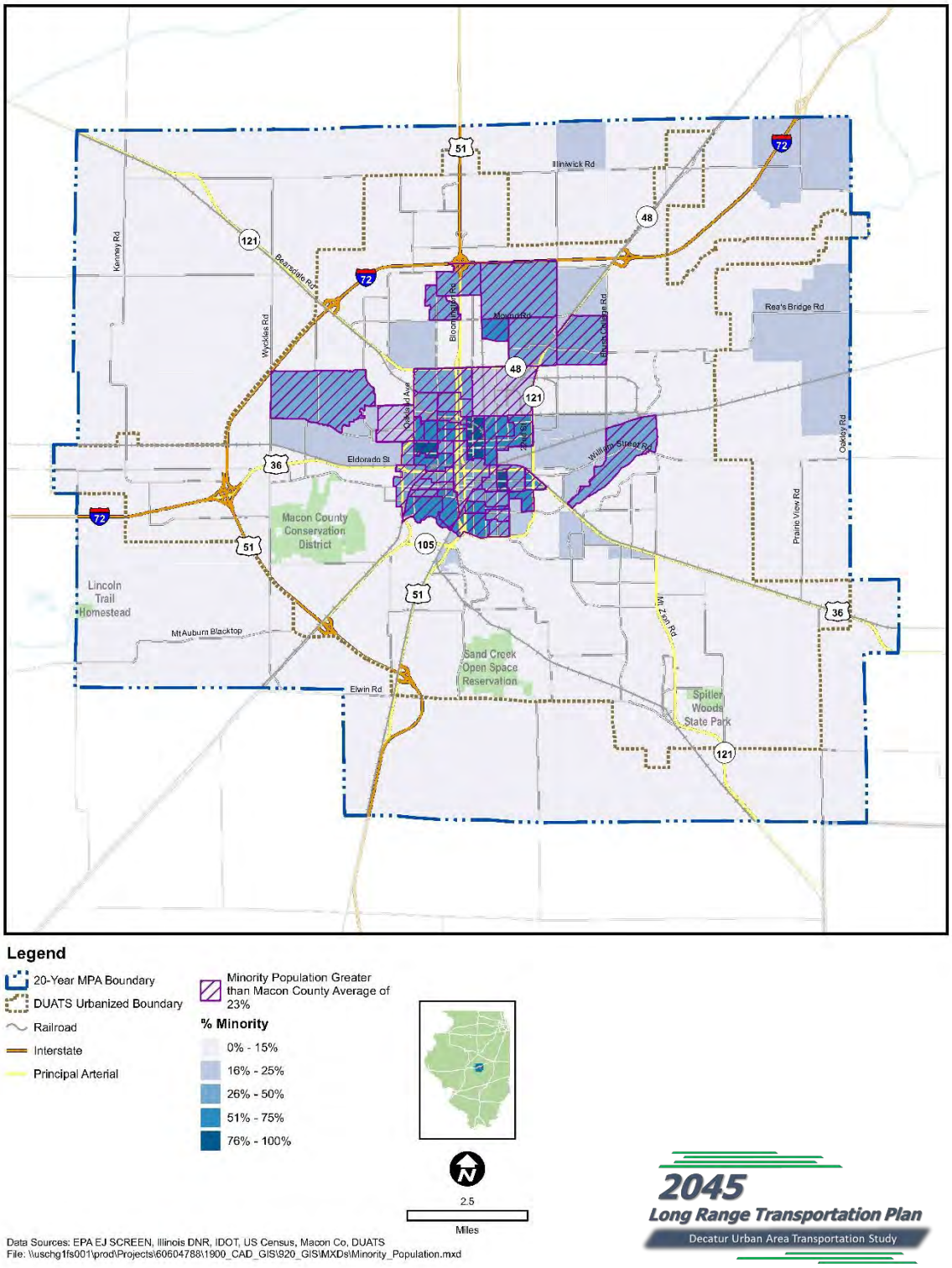


Figure 6-19: Low Income Population

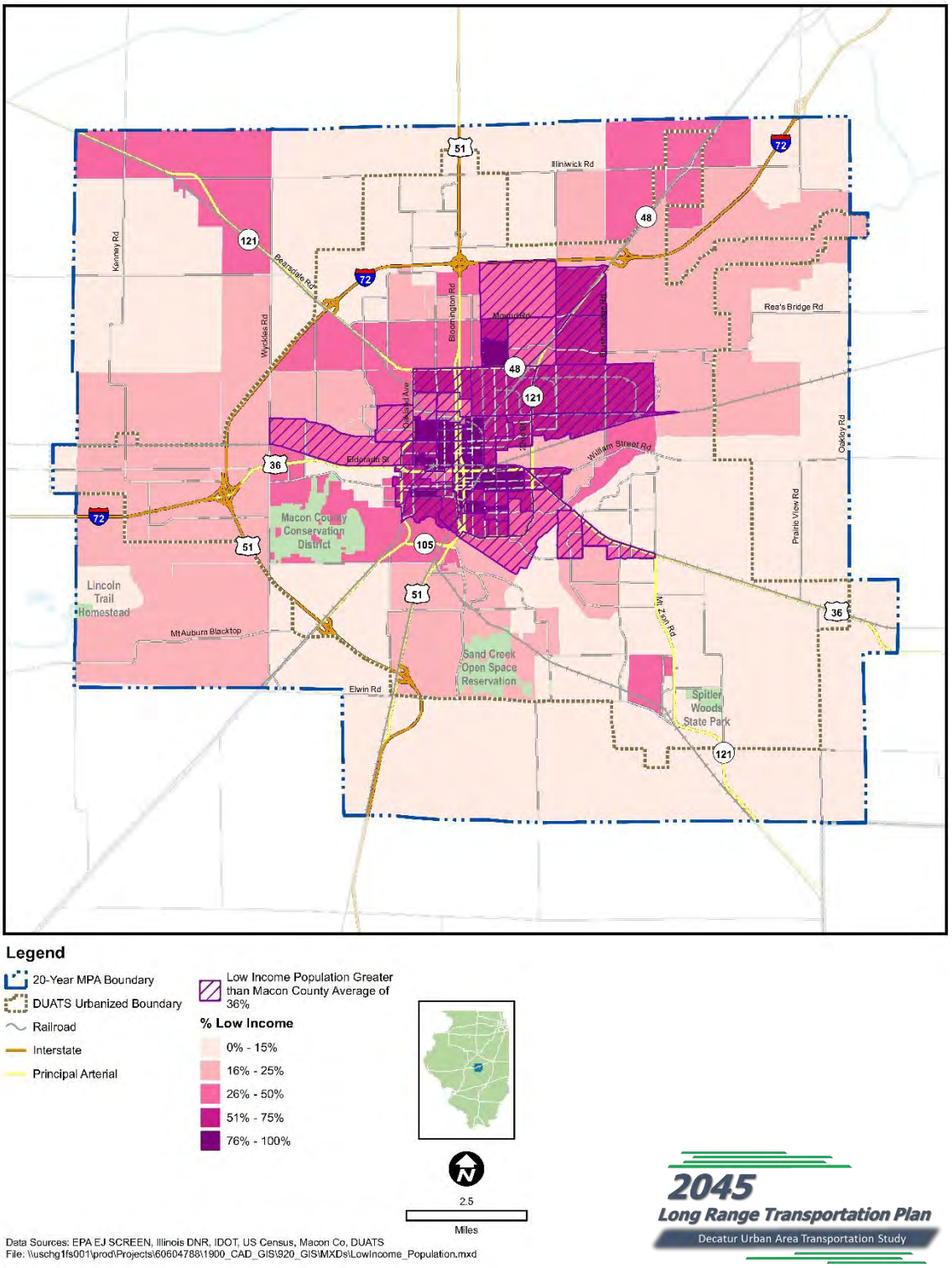
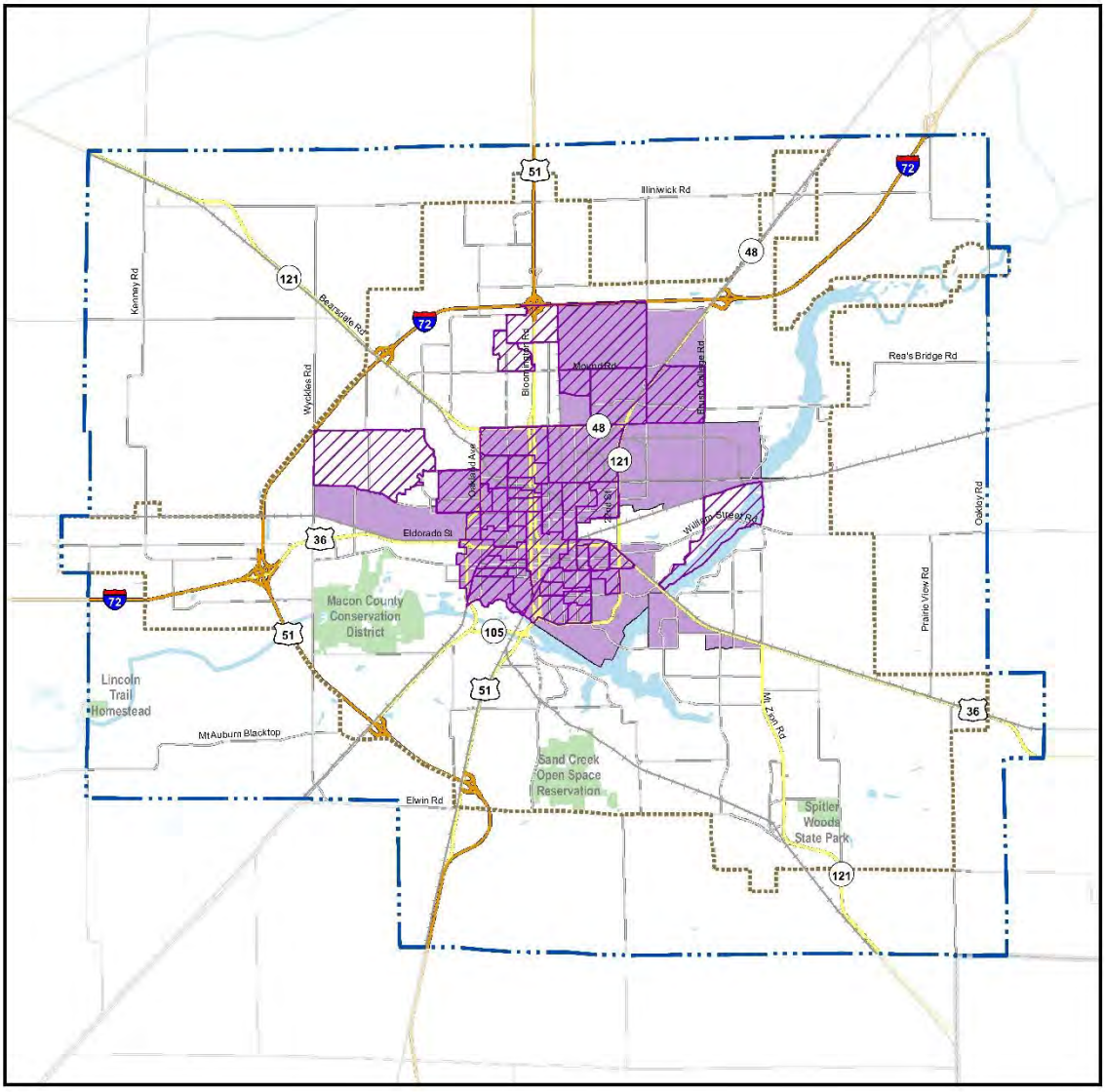


Figure 6-20: DUATS Environmental Justice Areas



Environmental Justice Analysis

An analysis of the fiscally constrained projects and EJ areas was conducted to identify potentially adverse impacts on low-income and minority populations within the DUATS MPA. Figure 6-21 displays the distribution of the fiscally constrained roadway/freight projects in relation to the EJ areas. Figure 6-22 displays the current fixed-route transit service coverage in relation to the EJ areas. Table 6-14 summarizes the Fiscally Constrained Projects in relationship to the defined EJ areas.

EJ Analysis of Fiscally Constrained Projects

The EJ analysis of the 2045 LRTP projects highlights the potential for transportation investments to enhance EJ areas within the DUATS MPA. The following discusses the potential impacts.

- **Roadway/Freight |** The majority of projects are located outside of the defined EJ areas. However, this does not mean that these projects will not benefit EJ population. The LRTP projects address the DUATS 2045 LRTP goals and objectives, including one of the primary objectives of spurring economic development within the region and ultimately creating sustainable jobs.

  To a large extent, a vast majority of LRTP projects focus on the on-going maintenance improvements focused on preserving the existing roadway network.

  Furthermore, a significant number of the roadway/freight priorities are not fiscally constrained and are therefore not included in this EJ analysis.

- **Transit Service |** A review of the transit service area shows that the EJ areas are well covered by the existing fixed-route service. The LRTP has not identified the need to expand service coverage; however, the COA study which will take place in 2020 provides a good opportunity to further evaluate mobility needs in relationship to the EJ areas.

  Long-range projects, such as adding intercity bus service to the Decatur region, would also benefit the DUATS EJ populations by providing a low-cost travel option. As a long-term transit improvement, the DUATS LRTP supports the continued pursuit of bringing high-speed passenger rail service to the Decatur region.

Conclusion

A review of the 2045 LRTP projects, in comparison to the EJ areas, demonstrates what DUATS believes are no negative EJ issues associated with the proposed roadway/freight and transit operations. In fact, the LRTP roadway/freight projects, while not all located directly within an EJ area, support the overall 2045 LRTP goals and ultimately would benefit EJ communities by creating new job opportunities within the region. The current transit coverage provides service to the EJ population most in need of public transportation. In fact, DPTS estimates over 90 percent of current transit riders do not have a driver's license and/or access to an automobile. As such, transit is a critical mode of transportation within the DUATS MPA. Furthermore, DPTS will conduct a COA in 2020 that will evaluate ways to potentially increase service efficiency, including opportunities to rethink how transit functions in the region to address changing mobility needs. Finally, a potential improvement that is not reflected on an EJ map is the potential implementation of later evening service. This would help connect area residents with 2nd and 3rd shift jobs that currently may not be reached as they fall outside regular transit operating hours.

Table 6-14: Fiscally Constrained Projects (within EJ Areas)

ID	Project (Approximate Limits) IDOT Projects (1 to 20); Macon County (B1 to B5, B7 and B8) Refer to Figure 6-4 for project location.	Minority EJ Area	Low-Income EJ Area
1	US 36/ILL 121 - Resurfacing, ADA improvements and traffic signal modernization.	◆	
2	US 36 - Resurfacing, ADA improvements, structure repair and traffic signal modernization	◆	◆
3	I-72 - Bridge Joint replacement and repairs, deck repairs, and deck overlay		
4	US 51 - Microsurfacing		
5	US 51 - Resurfacing and Bridge joint replacement		
6	Old US 36 - Resurfacing		
7	Old US Business 51 - Resurfacing, ADA improvements and bridge joint repair		❖
8	ILL 121 - Resurfacing, ADA improvements	◆	
9	Old US 51 Business - Resurfacing, ADA improvements	◆	◆
10	ILL 105 - Superstructure Replacement		❖
11	US 36 - Resurfacing and bridge repair		
12	US 36 - Resurfacing - 6.55 miles		
13	Old US Business 51 - Resurfacing, Bridge joint replacement and bridge deck overlay	❖	❖
14	I-72 - Interstate Resurfacing and ramp repair		◆
15	US 51 - Resurfacing and ADA improvements		◆
`16	US 36 - Bridge Replacement	◆	
17	US 51 - Resurfacing		
18	ILL 48 - Resurfacing and Culvert Replacement		
19	ILL 105 - Resurfacing		
20	ILL 121 - Resurfacing and ADA improvements	◆	◆
B1	CH-7 Reconstruction		
B2	CH-63 / Country Club Road Resurfacing		
B3	CH-23 / Sangamon Road Curve Reconstruction		
B4	Reas Bridge Road Bridge Replacement		
B5	CH-23 /Sangamon Road Resurfacing		
B7	Beltway (Phase 1 – Lake Decatur to ILL 48)		
B8	Beltway (Phase 1 – ILL 105 to Lake Decatur)		

Source: AECOM; U.S. Census Data.

◆ Entire project, or majority of project, within EJ area. ❖ Portion of project within EJ area. ◆ Project in proximity to EJ area (within a quarter-mile).

Figure 6-21: Environmental Justice Areas with Fiscally Constrained Projects

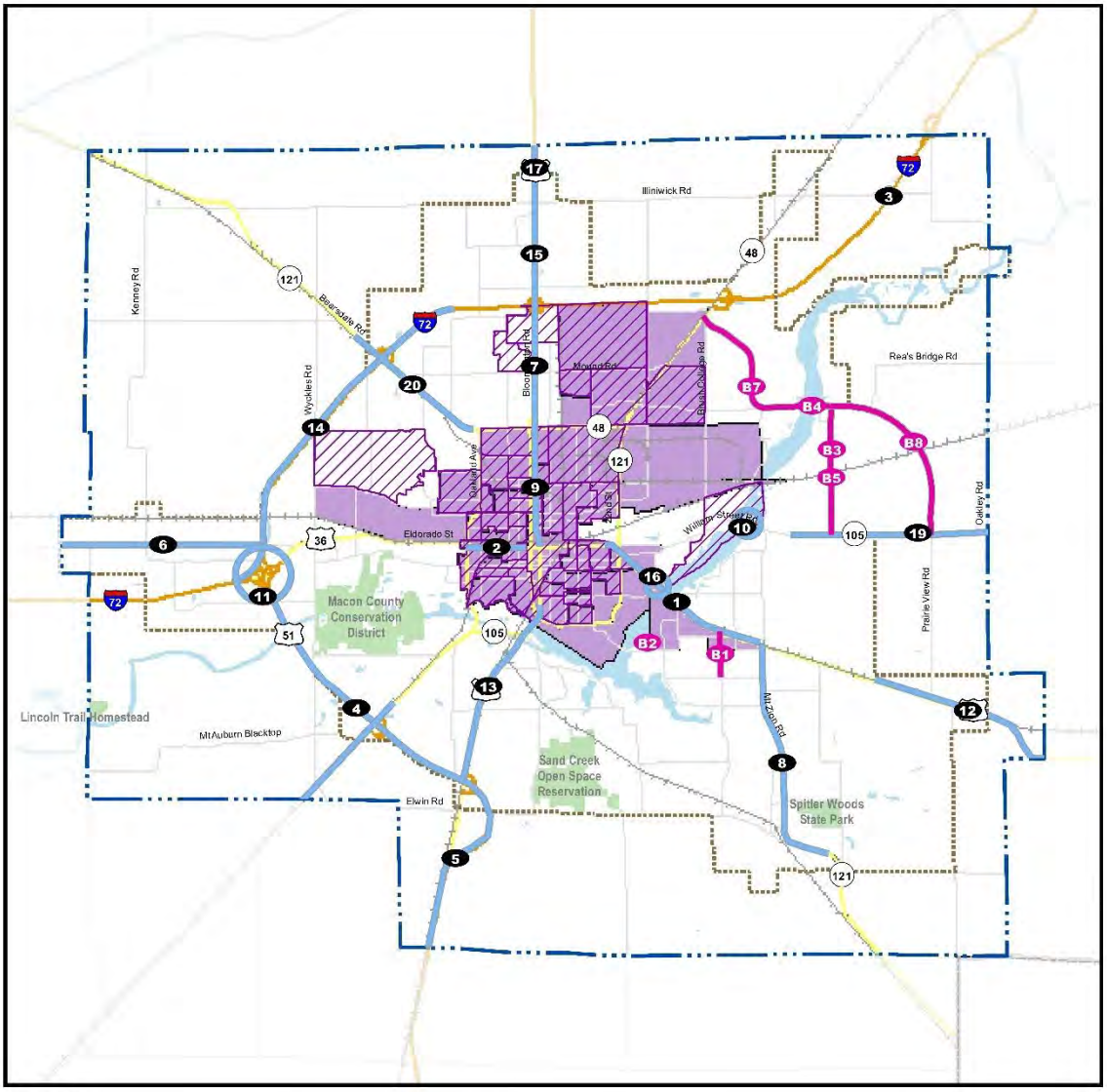
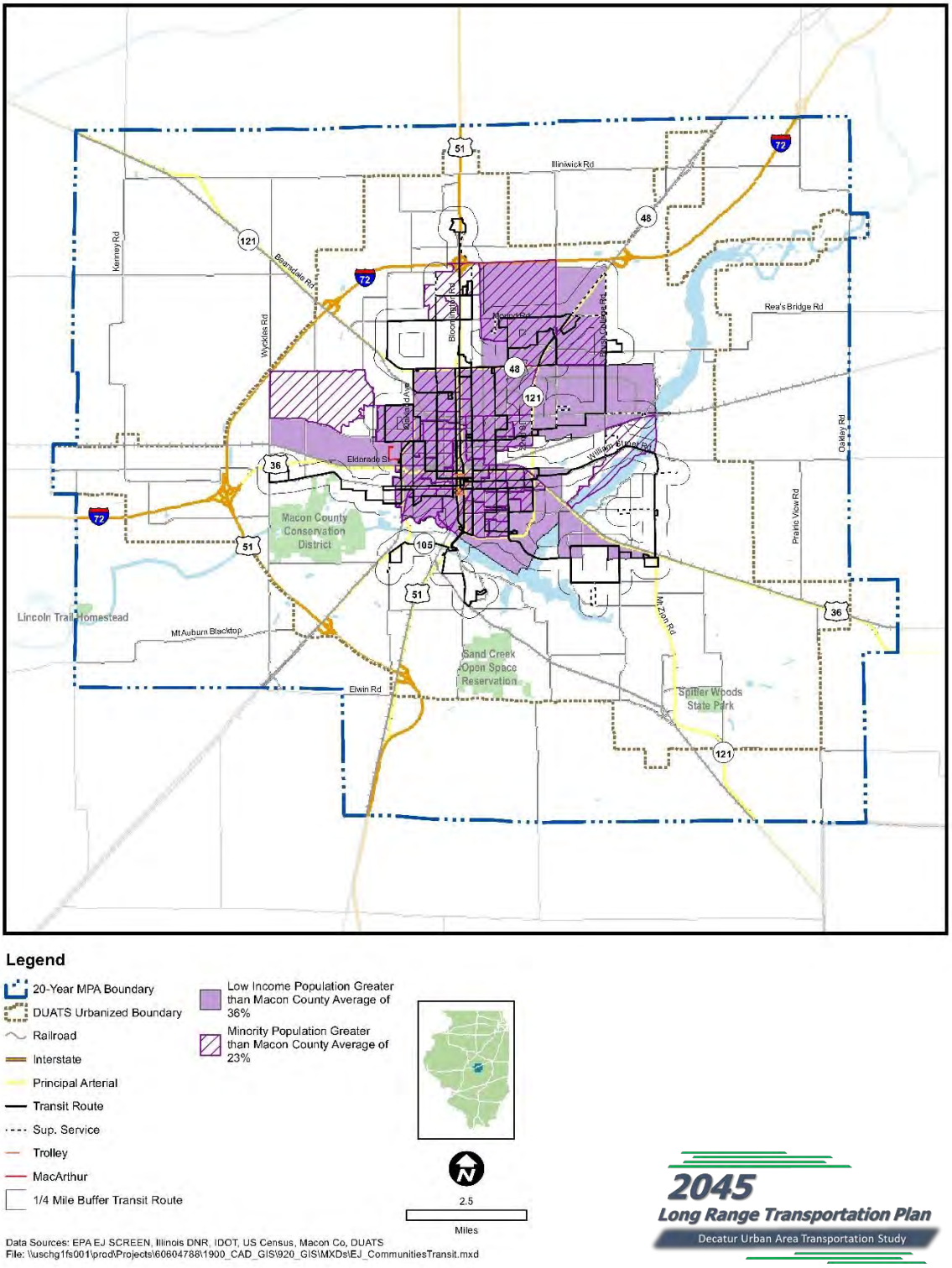



Figure 6-22: Environmental Justice Areas (with Fixed-Route Transit)