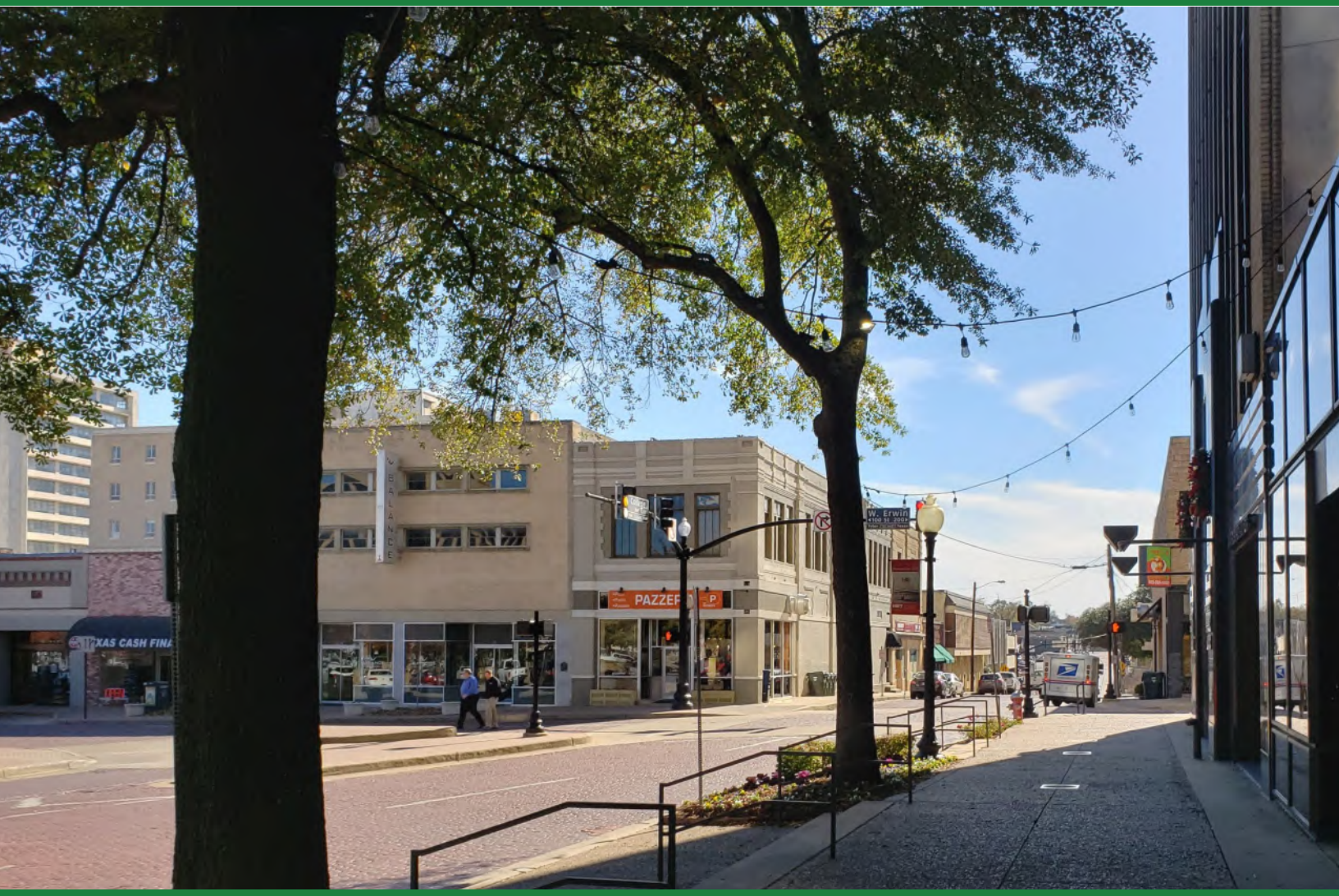

Tyler Area MPO
2050 Metropolitan Transportation Plan

DECEMBER 2024

This document was prepared in cooperation with:

The Tyler Area Metropolitan Planning Organization Technical Advisory Committee; and The Texas Department of Transportation.

This plan covers a 25-year planning horizon for the Tyler Metropolitan Planning Area, encompassing much of Smith County, Arp, Bullard, Hideaway, Lindale, New Chapel Hill, Noonday, Troup, Tyler, Whitehouse, and Winona.

This document was reviewed and adopted by the Tyler Area Metropolitan Planning Organization's Transportation Policy Committee in November 2024, with an effective date of December 4, 2024.

Tyler Area Metropolitan Planning Organization (TAMPO) Notice of Non-Discrimination:

Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d-1) and 49 CRF part 21; The Older Americans Act, as amended (42 U.S.C. 6101), prohibiting discrimination on the basis of age in programs or activities receiving Federal financial assistance; and Section 324 of title 23 U.S.C. regarding the prohibition of discrimination based on gender;

TAMPO is committed throughout the development of its plans and programs to ensure that no person on the grounds of age, gender, race, color or national origin is excluded from participation in, denied the benefits of, or subjected to discrimination under any program receiving federal financial assistance. TAMPO plans continue to work on improving the accessibility of employment within the TAMPO study area.

Complaints of alleged discrimination and inquiries regarding the MPO's nondiscrimination policies may be directed to Michael Howell, M.S., E.I.T. MPO Manager 423 W Ferguson St, Tyler, TX 75702, or by phone (903) 531-1173, or by email at mhowell@tylertexas.com.

Funding and Credit Disclaimer Statement:

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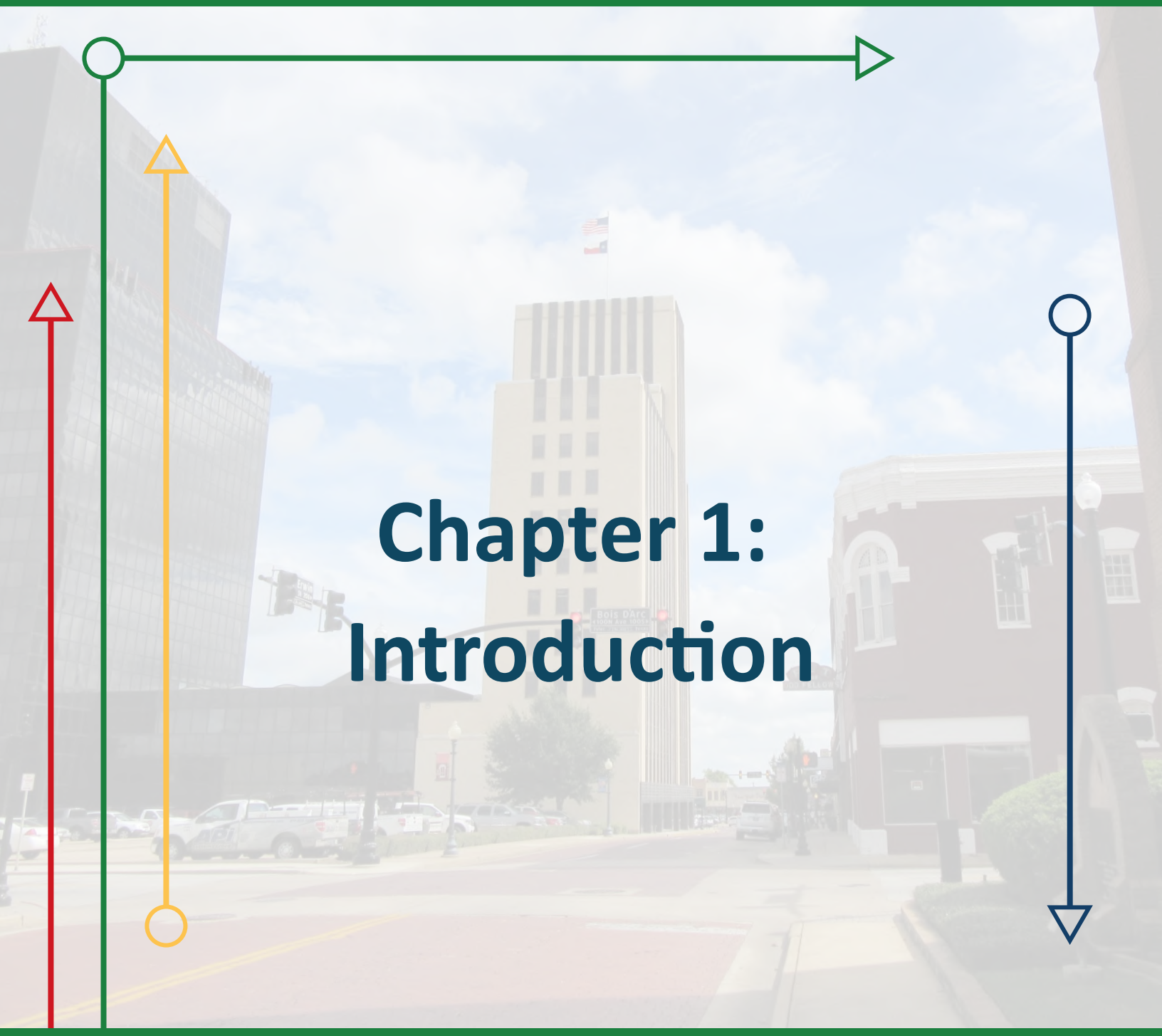


Chapter 1: Introduction

Tyler Area MPO
2050 Metropolitan Transportation Plan

Overview

Metropolitan transportation planning is a cooperative, comprehensive, and continuous ("3-C") process. This process is conducted by the Metropolitan Planning Organization (MPO), in coordination with Texas Department of Transportation (TxDOT), transit operators, numerous regional stakeholders, and the public to create a vision for the future of the community. Though federal requirements dictate at least a 20 year planning horizon, the application of this 3-C process for the Tyler Area MPO 2050 Metropolitan Transportation Plan (MTP) is designed to assist the MPO in prioritizing short and long-term investments in the regional transportation system over the next 25 years. Analysis, collaboration with planning partners, and a proactive public participation process involving all users of the transportation system supports this 3-C process.

The update of the 20+ year planning horizon must be completed every 5 years for areas in attainment for air quality to ensure consistency with regional goals and needs. As such, this document is an update to the current 2045 Metropolitan Transportation Plan (MTP) and will have a planning horizon from 2025 to 2050. The Tyler Area MPO initiated this update at the end of 2023. This MTP update was developed over approximately a 12-month period, during which time the project team conducted several rounds of public and stakeholder meetings, analyzed technical data, compiled and reviewed existing plans and studies, and evaluated potential projects according to community goals and performance-based criteria. The resulting product is a comprehensive blueprint for the future of the Tyler area transportation system that considers all modes and the needs of all users.

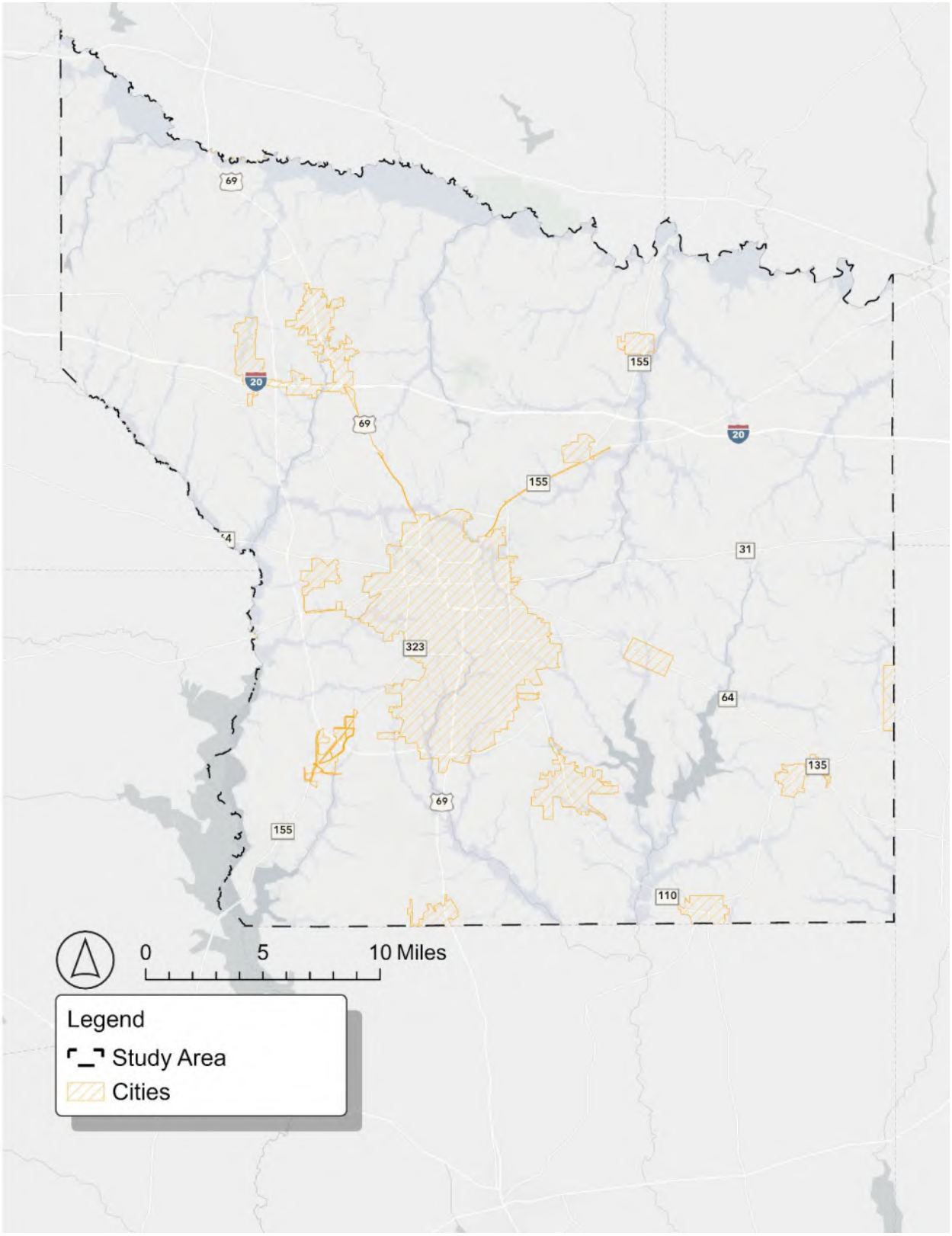
The planning area for the Tyler Area 2050 MTP encompasses Smith County, Texas, overlaps IH-20 and includes Arp, Bullard, Hideaway, Lindale, New Chapel Hill, Noonday, Troup, Tyler, Whitehouse, and Winona. Figure 1-1 shows the boundary of the MPO study area as well as the location of population centers within the MPO study area.

Tyler Area Metropolitan Planning Organization

The passage of the Federal Highway Act of 1962 required all major cities within the United States to adopt a Metropolitan Transportation Plan (MTP) to guide the long-term development of the transportation system. The Act established specific rules and regulations for carrying out the long-range transportation planning process and required the formation of MPOs for any urbanized area (UZA) with a population greater than 50,000. Under federal regulations, MPOs are responsible for carrying out a continuous, cooperative, and comprehensive (3-C) planning process, in cooperation with the state and local governments, to develop the MTP and determine how best to invest federal transportation funding in the region.

The Tyler Area Metropolitan Planning Organization is the organization designated by the Governor of Texas in 1974 as being responsible, together with the State, for carrying out the provisions of 23 USC §134, 49 USC §5303 (Metropolitan Transportation Planning) and 23 CFR 450.300 et seq. (Metropolitan Transportation Planning and Programming) and is established pursuant to those same US Codes. The MPO is the forum for cooperative decision making by principal elected officials of general-purpose local governments, in the Metropolitan Planning Area (MPA). As an organization, the Tyler area MPO includes a policy committee, a technical advisory committee, and MPO staff.

Figure 1-1: 2050 MTP Study area



Legislative Authority

Following passage of the Federal Highway Act of 1962, Congress passed a series of surface transportation bills that have continued to require MPOs to develop a metropolitan transportation plan to be eligible for federal funding. Past surface transportation legislation includes the Fixing America's Surface Transportation Act (FAST Act), which was passed in 2015. More recently, the 2021 Infrastructure Investment and Jobs Act (IIJA), also known as the Bipartisan Infrastructure Law (BIL), continued the Metropolitan Planning Program and features of the FAST Act. The Tyler 2050 MTP was developed in compliance with this legislation.

Transportation Policy Committee

Elected and appointed officials comprise the Transportation Policy Committee (TPC), which is responsible for approving and adopting all the transportation planning activities and programs of the MPO. The TPC was established in 1974 to meet federal requirements. Membership of the TPC is governed by agreement between the affected local governments and the Governor of Texas and is reviewed periodically to ensure adequate representation of all parties. Membership consists of 11 voting members, with representatives from the following member agencies as detailed below.

Representation	Current Representation by	Title
City of Tyler	Don Warren	Mayor
City of Tyler	Edward Broussard	City Manager
City of Tyler	Darin Jennings, PE	City Engineer
City of Lindale	Carolyn Caldwell	City Manager
City of Whitehouse	Leslie Black	City Manager
City of Winona	Dee Roden	Mayor Pro-Tem
Smith County	Neal Franklin	County Judge
Smith County	Pam Frederick	County Commissioner
Smith County	Frank Davis, EP	County Engineer
NET RMA	Gary Halbrooks	Board Member
TxDOT	Vernon Webb, PE	District Engineer

Technical Advisory Committee

The Transportation Advisory Committee (TAC) serves in an advisory role to the Transportation Policy Committee (TPC) and is responsible for professional and technical review of work programs, policy recommendations, and transportation planning activities. The TAC provides professional opinions and technical expertise to the TPC. TAC Membership consists of 21 voting members who are local and state technical or professional personnel that are knowledgeable in the transportation field. Current member representation is listed below.

Representation	Current Representation by
Tyler Area MPO	Michael Howell, AICP
City of Tyler	Heather Nick, AICP
City of Tyler	Stephanie Franklin

Representation	Current Representation by
City of Tyler	Cameron Williams, PE
City of Tyler	Kyle Kingma, AICP
City of Tyler	Jimmy Toler
City of Tyler	Burren Reed
Tyler Transit	Leroy Sparrow
Tyler Pounds Regional Airport	Stephen Thompson
Smith County	Doug Nicholson
Smith County	Vacant
Texas Department of Transportation – Tyler	Paul Schneider, PE
Texas Department of Transportation – Tyler	Adrienne Leach, PE
Texas Department of Transportation – Tyler	Eric Fisher, PE
Texas Department of Transportation – TP&P	Mansour Shiraz
Texas Commission on Environmental Quality	Jamie Zech
Tyler Economic Development Council/ Tyler Chamber of Commerce	Scott Martinez
East Texas Council of Governments	Melissa Cure
Federal Highway Administration	Justin Morgan
Federal Transit Administration	Tony Ogboli
Northeast Texas Regional Mobility Authority	Colleen Colby
Freight Industry	Brent Nelson
Tyler Bicycle Club	Bill Lewis

MTP Planning Process

The planning process used for the creation of the Tyler Area 2050 MTP is prescribed by state and federal regulations, but the vision that drives the process is developed locally. This MTP visioning process, therefore, focused on gathering locally generated plans and information, as well as the knowledge and wisdom of the local community, while following the state and federal guidelines that direct the general planning process. The Tyler Area MPO is responsible for programming regional transportation projects for implementation using federal transportation funding. The MTP provides a framework for analyzing the current and future regional travel demand and creating a blueprint for addressing the future multimodal transportation needs within the MPA.

Vision

The purpose of the MTP is to identify the transportation needs of the community over the next 25 years, establish priorities for funding those improvements, and chart a course for meeting the community's identified transportation needs. Establishing a community vision for the future of the transportation system and related goals to assist in the prioritization of transportation improvements is key to ensuring the plan reflects community values. Input from key stakeholders and members of the public was solicited early and continuously throughout the development of the plan.

The process for updating the Tyler Area MTP was initiated by a series of meetings with the public, professional planners, and engineers from the MPO and its member agencies, as well as State and local agencies, and other community stakeholders.

The purpose of these meetings was to gather data and input on community needs and values to establish a framework for MTP development. Using this information, the MPO drafted a recommended vision, a set of goals, and a list of evaluation criteria to assist in prioritizing transportation improvements for inclusion in the MTP. The vision and goals for the MTP also align with the federally required planning factors. Chapter 6 discusses the MTP's public and stakeholder involvement efforts throughout the development of the MTP and Chapter 2 outlines the vision and goals for the 2050 MTP.

The vision for the 2050 MTP is to develop a safe, efficient, and economically feasible multimodal transportation system that will accommodate the mobility needs of all people and goods traveling within and through the Tyler Area over the next 25 years.

Needs Assessment

To develop feasible and beneficial transportation solutions, it is imperative to assess the current state of the transportation system as well as community growth trends. For the update to the Tyler Area MTP, the needs assessment included an evaluation of the existing transportation system, a review of local plans, a demographic analysis to determine existing transportation demand based on current population levels, and projections of future population and employment and the associated future travel demand.

Coordination with Local Plans and Programs

Ensuring that proposed improvements are consistent with local programs, plans, goals and objectives, as well as supportive of local values and preserving existing community resources is of vital importance to MTP development. A review of local programs and plans was therefore conducted to ensure consistency between the metropolitan transportation planning effort and local community initiatives.

Project Call and Scoring Process

In order to incorporate the current federal planning factors into the planning process and to develop a cohesive and transparent process of ranking projects, a process was developed to assess projects according to reasonable assumptions on how they may perform in contributing to local, state, and federal goals. This process is discussed at greater length in Chapter 4. Due to increased project costs and delays since the outbreak of COVID 19, a call for new projects was limited for this MTP update.

Systems Level Analysis

System level analyses examined how the candidate projects impact community issues that are of system and region-wide concern. The study team incorporated this planning approach into the development of the MTP, which allowed for prioritization of transportation investments based on broader community issues in accordance with the community's vision and goals.

Financial Analysis and Constraint

Fiscal feasibility is a significant priority in determining the final list of improvements. Not only does Federal Legislation mandate that the MTP be fiscally constrained and only include projects that can reasonably be expected to have adequate funding, but certain projects also require that communities contribute local matching funds to receive federal funding. The process for establishing both estimated costs and revenues is critical for the creation of a viable MTP.

Revenue Projection

A revenue projection was developed that identified the anticipated revenue stream for local, State, and Federal funds. This revenue stream was factored to account for inflation at the anticipated year-of-receipt.

Project Costs

Cost is defined as the total project cost, which includes planning elements (e.g. environmental studies and functional studies); engineering costs (e.g. preliminary engineering and design); preconstruction activities (e.g. line and grade studies, right-of-way acquisition, utility relocations, and corridor preservation); construction activities; and contingencies. Project costs were calculated based on historical expenditures for similar improvements. The resulting cost estimates also included an inflation factor to account for the anticipated year-of-expenditure.

Fiscal Constraint Analysis

A fiscal constraint analysis was performed that compared the anticipated year-of-expenditure costs to the anticipated year-of-receipt revenues to determine if sufficient and timely financial resources were likely to exist to fund the proposed program of projects.

Project Scoring and Selection

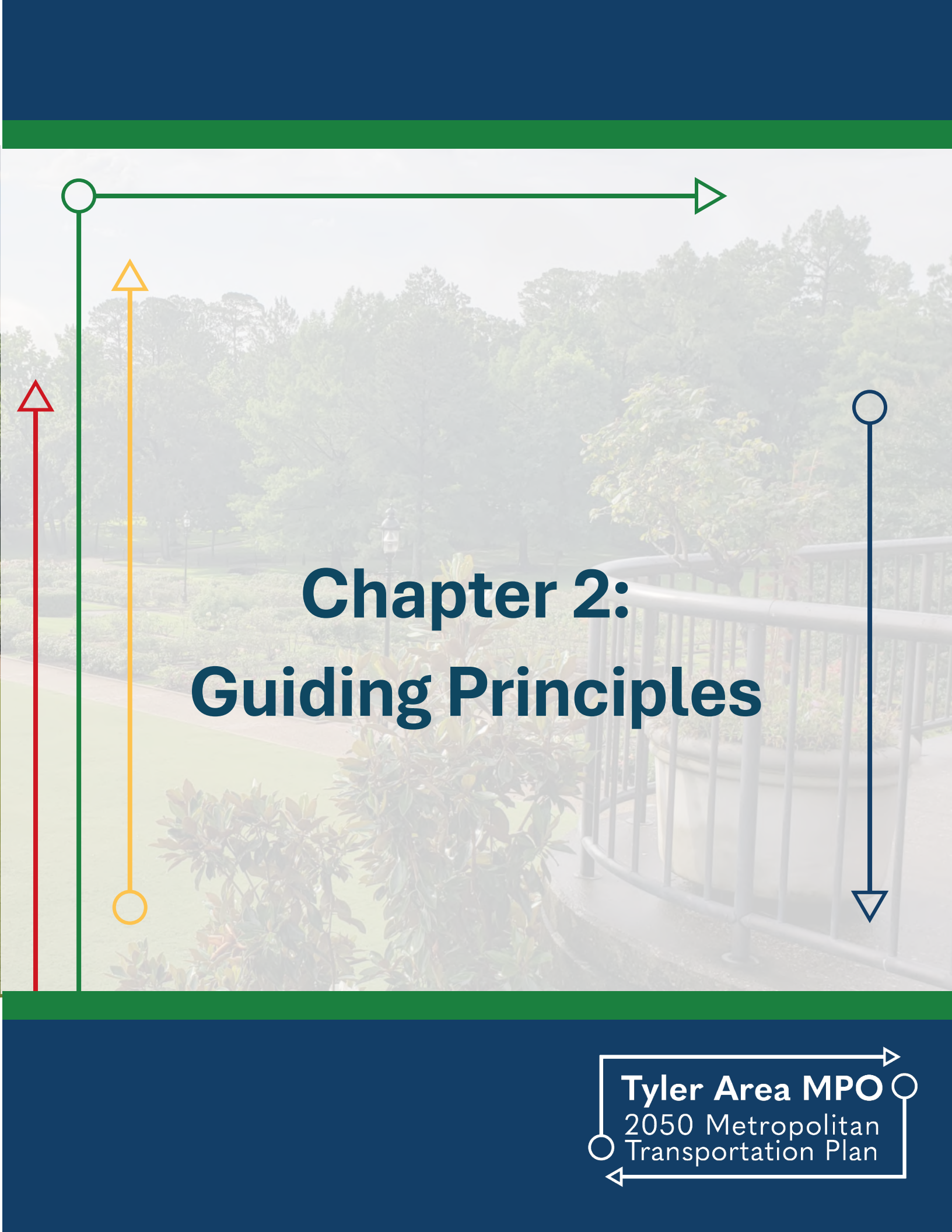
Based on the cost and revenue projections, the package of fiscally constrained projects anticipated to best accomplish community-defined goals and objectives, was selected by the TAC and then submitted to the Policy Committee for review and approval. The TPC was then able to review these recommendations and make measured and fiscally constrained choices.

MTP Adoption

The preliminary program of projects was approved by the Policy Committee on September 26, 2024. The preliminary transportation recommendations and associated list of proposed projects resulting from the project selection and fiscal constraint analysis, along with the results of the technical analysis and public input, were included in the draft MTP document.

The Tyler Area MPO Public Participation Plan requires a public comment and review period of 30 days before adoption of the MTP. The draft plan was presented to the public on October 10, 2024 for the solicitation of feedback.

The final MTP, which incorporated comments received during the 30-day public comment period, was presented to the Policy Committee for adoption on November 21, 2024. The approved MTP has an effective date of December 4, 2024.



Chapter 2: Guiding Principles

Tyler Area MPO
2050 Metropolitan Transportation Plan

The process of vision and goal development for the 2050 MTP is described in this chapter. A description of the process by which the set of performance measures – used to gauge whether the recommended program of transportation projects supports the established vision and goals – is also included. Together the vision, goals, objectives, and performance measures comprise the Tyler Area 2050 MTP's guiding principles. While federal regulations prescribe the planning process used for the creation of the Tyler Area 2050 MTP, the vision and goals were developed locally. As mentioned in Chapter 1, guiding principles are based on locally generated plans and information, as well as the knowledge and wisdom of the local community, while following the state and federal guidelines. Development of the MTP includes extensive public input and requires the collaboration of regional stakeholders, including local, state, and federal agencies and governing bodies, public and private transportation providers, and the business community. Input from stakeholders and the public helps to turn the community's priorities into defined principles that guide transportation policy and investment decisions within the Metropolitan Planning Area (MPA). The resulting recommendations and proposed improvements serve all users of the multimodal transportation system.

Federal Guidelines

To meet the mandates of its charter as an MPO and because a great deal of the transportation funding that will support the implementation of the Tyler Area 2050 MTP comes from the US Department of Transportation (USDOT), the Tyler Area MPO must seek to address both local and national transportation needs. The Tyler Area MPO must address the identified transportation issues of the region both in terms of local needs and the role that the region's transportation facilities play in the national transportation network. Therefore, the goals and objectives developed for the Tyler Area 2045 MTP were developed to address identified local priorities while also considering the region's role in the national transportation system.

The Infrastructure Investment and Jobs Act (IIJA) authorized billions of dollars in spending for transportation and infrastructure projects and provided additional funding for existing programs, created new programs, and established new regulations and requirements for how funding is utilized. Some changes to the regulations and guidance relevant to MPOs have occurred because of the IIJA. For example, MPOs now have a requirement to set aside 2.5% of the annual budget for investment in alternative transportation modes. Additionally, MPOs are now required to take state and local housing patterns into consideration during the planning process. Other changes include allowing social media to be used for public participation and requiring MPOs to consider the representation of the population of the planning area when initially designating officials for board representation.[1]

Federal Planning Factors

Congress has passed several bills regarding the intermodal surface transportation system: the Intermodal Surface Transportation Efficiency Act (ISTEA) (1991), Transportation Equity Act for the 21st Century (TEA-21) (1998), Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) (2005), Moving Ahead for Progress in the 21st Century Act (MAP-21) (2012), and Fixing America's

[1] FTA (2021). Fact Sheet: Metropolitan, Statewide & Non-Metropolitan Planning.

Surface Transportation (FAST) Act (2015). The IIJA continued transportation programs and the planning factors from its predecessors, which are listed below:

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

Review of Local Planning Documents

A review of current plans and reports that involve transportation projects and topics at the federal, state, regional, and local levels provides a consistent foundation to understand the current and future transportation investment activities and priorities in the region. This review of plans will carry forward previous transportation goals and visions. Additionally, this review serves to point out the specific current and future regional transportation projects that have been included in existing plans. Multimodal transportation projects from each of the plans will be used to develop a vision for the MTP and will be included in the unconstrained list of projects for full build of the transportation system.

Tyler Area 2045 Metropolitan Transportation Plan

The Tyler Area 2045 MTP was completed in 2019. This document serves as a guide for transportation investments in the Tyler Metropolitan Planning Area over a 25-year planning horizon. Many different groups of stakeholders were involved in the development of the plan, along with public input through the public participation process. Like the 2050 MTP update, the 2045 MTP reviews and reflects on prior plans in the region to ensure that proposed investments are consistent with them. In addition, the 2045 MTP includes project call and scoring, system-level analysis, and financial considerations. After being reviewed and presented to the public, the final 2045 MTP became effective in December 2019.

The vision for the plan is to “develop a safe, efficient, and economically feasible multimodal transportation system that will accommodate the mobility needs of all people and goods traveling within and through the Tyler area over the next 25 years.” Goals to support this vision were established based on regulatory requirements and stakeholder input, and are listed below:

2045 MTP Goals	
Improve transportation efficiency	Improved access
Improve safety	Rail preservation
Improve network continuity	Improve airport access
Improved east-west connections	Improve land use goals
Improve public transportation	Improve environmental stewardship
Improve cycling	Improve security
Improve walking	

Performance measures indicate plan progress and outcomes align with the performance targets set by TxDOT. Examples of the performance measures for the 2045 MTP include: the number and rate of fatalities, the number and rate of serious injuries, the percentage of bridges and pavements in good or poor condition, travel time reliability, etc.

Table 8-1 in the plan contains a list with details for a fiscally constrained and staged program of projects, and Table 8-2 contains an unconstrained project list of 8 projects. Projects from the 2045 MTP that have not yet been implemented will be brought forward into this 2050 MTP update for reevaluation and assessment.

Strategic Plan FY 2022-2026 (U.S. DOT)

The Strategic Plan from the U.S. DOT is a long-term strategy for actions and goals related to the operation, maintenance, and development of the American transportation network. Goals in this plan include safety, economic strength and competitiveness, equity, climate and sustainability, transformation for the future, and organizational excellence. This plan focuses primarily on agencies at the federal level. However, many of the goals, strategies, and objectives are applicable at the state and regional level, as well. For example, customer service and workforce development, safe designs, and accessibility are important focus areas at all agency levels.

State Plans

Current state transportation plans will have an impact on the update of the MTP because they contain specific projects, strategies, and goals for the statewide transportation system. Since the Tyler metro area is located at an important intersection for people and goods moving within the region and between states, projects in the MTP must align with the objectives of TxDOT.

2025 Unified Transportation Program (TxDOT)

The statewide Unified Transportation Program (UTP) gives an overview of the current and expected transportation projects in the state within 10 years. Texas state law requires that TxDOT publish the UTP annually. As part of the comprehensive planning process, the UTP is aligned with the long-term transportation goals for Texas. These goals are to promote highway safety, preserve existing infrastructure assets, and optimize system performance. In addition, the UTP specifies performance measures for each goal for the target year of 2033. Performance measures to achieve the established goals include assessments of fatalities per year, fatality rates, pavement and statewide bridge condition scores, urban congestion, and use of the rural reliability index.

The UTP projects from the Tyler Area MPO, along with each urbanized area in the state, are included in the statewide UTP. Tyler is also headquarters for the Tyler TxDOT District. The Tyler District primarily receives funding for projects within Category One (preventative maintenance and rehabilitation) Category Twelve (strategic priority) and Category Four (statewide connectivity corridor projects). The Tyler TxDOT District and the Tyler Area MPO work together to manage the regional transportation network. There are 19 total projects outlined for the Tyler TxDOT District, and four of them are located within Smith County:

- SH 31 widen non-freeway from SL 323 in Tyler to CR 236, 1.6 miles east of FM 757 (CSJ Number 0424-01-054)
- FM 2493 widen non-freeway from SL 323 in Tyler to FM 2813 (CSJ Number 0191-03-084)
- FM 756 widen non-freeway from Jeff Davis Drive (CR 1167) to FM 346 (CSJ Number 0492-04-034)
- FM 756 in Whitehouse, interchange at FM 346 (CSJ Number 0492-04-041)

Projects from the UTP will be reviewed for concurrence to ensure that they are included in the full list of MTP projects.

Texas Statewide Transportation Improvement Program (STIP) FY 2023-2026 (TxDOT)

The 2023-2026 STIP for Texas is an extensive document that outlines information for each individual current and near-term transportation project in the state. There are seven strategic goals that guide the STIP: (1) promote safety, (2) deliver the right projects, (3) focus on the customer, (4) foster environmental stewardship, (5) optimize system performance, (6) preserve assets, and (7) value employees. The Tyler MPO has its own section in the STIP on page 1042. This page details the projects included in the Tyler Area MPO TIP, along with subsequent approved revisions. Projects from the STIP will be reviewed for concurrence to ensure that they are still included in the full list of projects pulled forward from the previous MTP. Where applicable, new projects will be added to the full list of projects.

Transit Asset Management Plan 2023-2026 (TxDOT)

The Transit Asset Management Plan covers numerous rural public transit providers and other public transportation agencies as a group sponsored plan that complies with 49 CFR 625. TxDOT worked with transit providers to determine the condition of rolling stock, facilities, and equipment. The goal of this report is to help maintain a state of good repair for transit assets. According to the plan, an estimated $35 million per year will be required to meet the established state of good repair goals. The East Texas Council of Governments is listed in the report as having four of its rolling stock in need of immediate replacement. In addition, 15 more rolling stock are listed for replacement in years 2 through 4 (2024-2026).

Projects and capital expenditures in the plan will be used in the development of the full-build transportation network and list of projects.

ADA Self-Evaluation and Transition Plan (TxDOT, 2022)

This report examines the accessibility of sidewalks, rest stops, and buildings that are part of TxDOT transportation infrastructure and services. Federal law requires that TxDOT conduct this self-assessment

to inventory and remove all types of barriers for people with disabilities. As part of this assessment, thousands of signal pushbuttons, curb ramps, etc. were evaluated, along with 157 TxDOT facilities such as safety rest stops. The Tyler TxDOT District Headquarter buildings are located within the study area, with an estimated total cost of remediation of an estimated $280,000.

2022 Transportation Asset Management Plan (TxDOT)

The Transportation Asset Management Plan for Texas assesses the conditions of bridges and pavement. Keeping the transportation network in a state of good repair is essential to public safety and long-term structure operation. TxDOT coordinates with MPOs across the state to achieve the goals of 90% of bridges and roads in good condition, deliver the right projects, foster stewardship, optimize system performance, and preserve infrastructure assets.

Texas Strategic Highway Safety Plan 2022-2027 (TxDOT)

The goal of the Strategic Highway Safety Plan (SHSP) is to prevent crashes, reduce crash severity, and enhance emergency response. While the SHSP does not specifically mention the Tyler Area MPO, it is relevant in that its vision is a future with zero traffic fatalities and serious injuries. MPOs play a role in implementation of the Strategic Highway Safety Plan and work to realize Vision Zero within their planning area and within the state. Some examples of safety strategies from the plan are to keep vehicles from encroaching on the opposite lane, reduce speeding over the limit, expand intersection safety practices through planning and design, and increase public education and outreach efforts.

Regional Plans

Plans from the Tyler Area MPO and the East Texas Council of Governments manage transportation and transit regionally. These plans were developed with stakeholder input, public engagement, and data. Therefore, these regional plans are an essential resource for ensuring that transportation planning efforts in the study area remain continuous.

FY 2022 Annual Project Listing (Tyler Area MPO)

The 2022 Annual Project Listing (APL) is the latest APL available and can be found on the MPO website. This document lists all transportation projects, including active transportation projects, that were obligated to receive federal funding in the previous year. The 2022 APL had ten highway projects and two bike and pedestrian projects.

- Install profile edgeline markings at US 69 from IH 20, S to CR 471-Jim Hogg Rd (CSJ Number 0190-05-065)
- Install profile edgeline & centerline markings at FM 1253 from US 80, S to SH 110 S of Garden Valley (CSJ Number 0203-08-016)
- Install profile edgeline & centerline markings at SH 64 from Van Zandt C/L, SE to FM 2661 (CSJ Number 0245-05-050)
- Install profile edgeline markings at FM 2767 from 0.239 MI E OF FM 850-CR386, E to Gregg C/L
- Install profile edgeline & centerline markings at FM 15 from 0.460 MI E of SH 135, Price, in Troup, NE to SH 64 at Wright City (SSJ Number 0491-01-010)

- Install profile edgeline & centerline markings at FM 756 from FM 346, S to FM 344 at Walnut Grove (CSJ Number 0889-05-010)
- Install profile edgeline markings at FM 344 from US 69 in Bullard, E to SH 110 (CSJ Number 0927-01-029)
- Install profile edgeline & centerline markings at FM 848 from 1.79 MI S of SS248 (Old Omen SE), S to 0.756 MI N OF FM346- Whitehouse City Limit
- Install profile edgeline & centerline markings at FM 2015 from FM 16, S to US 271 (CSJ Number 1934-02-005)
- FM 16 widen 2 lanes to 4 lanes with flush median, US 69 to Toll 49 extension then construct center turn lane for rest of the 2 lane section from 4 MI W of FM 849 (CR481-E), E to US 69 in Lindale (CSJ Number 0522-04-032)
- Add 1.25 miles of sidewalk along FM 849 from Perryman Rd to Wood Springs Rd to Eagle Spirit Dr to EJ Moss (CSJ Number 0910-16-153)
- Construct 12 feet wide multipurpose trail from Stewart Park to Peete Elementary (CSJ Number 0910-16-162)

There also are nine grouped projects and six transit projects listed as receiving federal funds.

- SH 135 highway improvement from 1.657 MI SW of SH 64, in Arp, SW to 0.679 MI NE of FM 15, IN Troup (CSJ Number 0378-03-017)
- US 259 Seal Coat from depressed median start S. of US 84 to Nacogdoches County Line (CSJ Number 0138-05-061)
- SH 19 Seal Coat from FM 2330 to 0.06 MI S of CR 453 (CSJ Number 0108-06-055)
- Preventative maintenance in various locations (CSJ Number 0910-00-121)
- Install/upgrade roadway lighting in various locations (CSJ Number 0910-00-132)
- Intersection improvement at N Palace Ave and N Broadway Ave (CSJ Number 0910-16-165)
- Bicycle and pedestrian improvements in various locations (CSJ Number 0910-00-133)
- Bicycle and pedestrian improvements in Gregg and Rusk Counties (CSJ Number 0910-00-134)
- FM 344 install/upgrade drainage structure(S) from FM 756 AT Walnut Grove, E to SH 110, S OF Whitehouse (CSJ Number 0927-01-030)

Transit projects from the 2022 APL include planning/technical study such as short term planning administrative cost; capital and preventative maintenance expenses; operating expenses such as personnel salaries, fuel, utilities, etc.; capital expense related to ADA paratransit, bus maintenance/bus purchases; and ADA software and bus equipment.

FY 2023-2026 Transportation Improvement Program (Tyler Area MPO)

The Tyler Area MPO, in cooperation with TxDOT, Tyler Transit, FHWA, and FTA, developed the 2023-2026 Transportation Improvement Program (TIP) to provide a priority list of projects to implement over the four-year period. Projects included in this TIP originated from the 2045 MTP and align with national transportation goals and performance targets. The TIP includes seven highway mobility projects and 24 transit projects for the fiscal years 2023-2026. Funding for highway projects comes from categories 2 (urban area non-TMA corridor projects), 10 (supplemental transportation), and 12 (strategic priority).

Funding for transit projects comes from Sec. 5307 (urbanized formula >200K), Sec. 5339 (bus & bus facilities >200K), and Sec. 5310 (seniors & people w/disabilities >20K).

Active Tyler Plan (Tyler Area MPO, 2019)

The Active Tyler Plan is a tool to help encourage active transportation as a mode choice and guide transportation investments. Public input played an integral part in plan development, through workshops, pop-ups, open house meetings, and other forms of public engagement, revealing that residents care about improving access to active transportation facilities. In addition, the plan uses data to prioritize bicycle and pedestrian projects in Arp, Bullard, Lindale, New Chapel Hill, Tyler, Noonday, Troup, Whitehouse, and Winona. Overall, the main takeaways from the plan are listed below:

- The Greater Tyler Area is suitable for active transportation investments.
- Existing bicycle routes in Tyler and Whitehouse can be expanded.
- Regional connections can be implemented in the future.

Master Street Plan (Tyler Area MPO, 2021)

The Master Street Plan is a thoroughfare plan, or long-range plan, adopted in 2021. The purpose of the plan is to outline "an interconnected hierarchical system of current and proposed roadways that are required to meet the anticipated long-term growth."[2] The plan does not define specific projects, but instead is a tool to enable corridor preservation and acquisition for network development over time. In addition, the plan recommends policies and design guidelines to assist in meeting the plan goals of reducing congestion, improving safety, and increasing connectivity.

Tyler Texas Transit Route Study (Tyler Area MPO & Tyler Transit, 2021)

The Tyler Texas Transit Route Study was developed to understand the efficiency and efficacy of transit service in the area. The existing transit service includes five fixed routes and on demand paratransit. The plan makes recommendations on individual routes and phasing, transfer centers, customer communications, fares, and multimodal connections to improve and simplify transit services. Lastly, the study provides a route-level cost analysis to compare the operating costs of existing and proposed services to inform decision making.

East Texas Regionally Coordinated Transportation Plan (ETCOG, 2022)

The East Texas Council of Governments (ETCOG) developed the East Texas Regionally Coordinated Transportation Plan in 2022 to inform future transit service decisions. The plan strives to improve service for all residents, but focuses specifically on residents that are older, disabled, low-income, lack access to a vehicle, youths, veterans, or non-English speaking. As the rural transit district, ETCOG provides demand-response service to the rural parts of Gregg and Smith Counties, and all of Anderson, Camp, Cherokee, Harrison, Henderson, Marion, Panola, Rains, Rusk, Upshur, Van Zandt, and Wood Counties. In addition, ETCOG provides the GoVET service to veterans and military customers from certain counties to the

[2] TAMPO (2021). Tyler Master Street Plan. Pg. 1.

Overton Brooks VA Hospital in Shreveport, Louisiana. A charter service is also available from ETCOG to residents in the 14-county service area. Other transportation services are also offered by private companies in the region. The plan identifies gaps and strategies to improve public transportation to meet the goal of providing more trips for more people in a cost-effective, high-quality, and safe manner.

Local Plans

Local municipalities in the area have individual interests and goals for their transportation networks. The City of Tyler is the largest city and urbanized area in the county. Tyler is surrounded by smaller cities and communities, such as Arp, Bullard, Hideaway, Lindale, Noonday, Troup, Whitehouse, and Winona. The City of Tyler has multiple plans related to transportation planning and improvements. The comprehensive plan and the ITS Master Plan are described below. In addition, the City of Bullard has a comprehensive plan that details transportation goals and actions in connection with the City's vision and guiding principles. Other individual communities in the study area do not necessarily have published plans related to transportation investments and infrastructure. For this reason, it is essential that targeted public engagement captures their input for the MTP.

Tyler 1st (City of Tyler Comprehensive Plan)

Originally adopted in 2007 and updated in 2020, Tyler 1st is the City's comprehensive plan, which acts as a guide for policies and investments. The plan has sections dedicated to population and land use, downtown, north end revitalization, historic preservation, parks and open space, housing, economy, transportation, public facilities, and education. Specific transportation principles in the plan are to:

- Encourage continuous bicycle and pedestrian routes and trails that connect city destinations
- Adopt land use strategies that create higher-density, mixed-use clusters of "transit-ready" development that can support expansion of the public transportation system
- Plan for and preserve potential new transportation corridors and work with regional partners to support efficient transportation options throughout East Texas
- Emphasize links within the city via multimodal connections with the airport, rail, and bus services
- Accommodate regional traffic flow by proactively planning for future corridors and alternate routes and connectivity options
- Identify and develop specific gateways.

Some of the main transportation challenges the plan notes include congestion, connectivity, and bike and pedestrian facilities. Numerous action steps are outlined in the plan for improving the transportation network and the circulation of people and goods.

City of Tyler ITS Master Plan (2020)

The City of Tyler Engineering Services Department authorized a study on Intelligent Transportation Systems (ITS) in 2019. Some of the main findings of this study include the following:

- ITS is needed to efficiently manage traffic.

- More battery backup units (BBUs) are needed.
- Traffic control cabinets across the city need to be upgraded to Advanced Traffic Controller (ATC) Cabinets.
- The city should continue to optimize traffic signals for smooth traffic flow.

Moreover, the plan provides recommendations for implementation based on system needs, future buildout conditions, technologies, and cost projections.

Envision Bullard Comprehensive Plan

The City of Bullard's 2030 Comprehensive Plan was adopted in 2011. The plan revolves around four guiding principles: an identifiable town center, distinctive community design, healthy neighborhoods, and strategic infrastructure investments. Transportation is used in the plan to support land use and development goals. Specific transportation and mobility goals include multi-modal networks, connectivity, system improvements, and context sensitive roadway design.

Vision

To support the development of the Tyler Area 2050 MTP, the project team developed a series of public visioning outreach methods as a part of the public engagement effort associated with this plan. This effort involved social media, an online interactive mapping tool and survey, and in person activities at an open house event. Chapter 6 discusses public and stakeholder involvement efforts in more detail.

Participants provided valuable comments on the current state of the transportation system and identified specific needs and desires for the future transportation system. This public input was utilized by the Tyler Area MPO to develop the vision.

The project team revisited the Tyler Area MPO's 2045 MTP vision statement and presented it back to the public. The general feedback received held the same vision to be true for the 2050 MTP.

> The vision for the 2050 MTP is to develop a safe, efficient, and economically feasible multimodal transportation system that will accommodate the mobility needs of all people and goods traveling within and through the Tyler Area over the next 25 years.

Goals

Goals provide the framework to guide decision-making about selecting and prioritizing projects that will address identified needs and will be included in the Tyler Area 2050 MTP. Goals provide broad statements about what the MTP aims to achieve. The Tyler Area 2050 MTP goals were developed to incorporate public input, goals and objectives identified in previous planning efforts in the region and the US Department of Transportation's national performance goals. Figure 2-1 shows an activity in which open house participants ranked goals by priority.

Figure 2-1: Goal Ranking Activity Results

The goals for the 2050 MTP are listed below, in order of local preference (including in person and online responses). The goals contribute to the project prioritization process, which is discussed in Chapter 4:

- **Safety:** Promote and improve safety and security for users of all modes of transportation
- **Mobility:** Enhance multimodal connectivity to improve accessibility, especially for active transportation and transit options
- **Operations:** Optimize performance of the transportation system
- **Maintenance:** Preserve infrastructure assets and maintain a state of good repair
- **Sustainability:** Protect the natural environment
- **Resilience:** Increase the resilience of the transportation system from natural hazards
- **Economic:** Foster economic development opportunities for freight and for the region
- **Regional coordination:** Coordinate transportation investments with housing strategies and regional development trends.

Performance Measures

The goals, objectives, plans, and programs contained in Tyler Area 2050 MTP are intended to be outcome-based. The Tyler Area 2050 MTP performance measures are described in this section and are quantifiable indicators of whether the policies and proposed program of projects in the Tyler Area 2050 MTP help the region achieve the specified goals. This approach provides decision makers with the ability to objectively set policies and prioritize projects based on the project's anticipated outcomes and whether those

outcomes truly address the region's transportation challenges by achieving the local, state, and national goals and objectives. The performance measure process also allows the MPO to track whether a project's actual, real-world performance matches the results expected during the planning process. Performance measures also allow the Tyler Area MPO to meet its federal mandate for a process of continuous improvement of both the transportation system and the planning process itself.

For its 2050 MTP, the Tyler Area MPO has adopted the performance measures and targets set at the state level by TxDOT. Programs and projects should contribute to meeting these targets. Table 2-1 and Table 2-2 below show the various established performance measures from TxDOT and national goals. Further analysis of current condition system performance for the TAMPO region is described in the following chapter, along with comparisons to the established performance measure target values.

Table 2-1: TxDOT Performance Measures

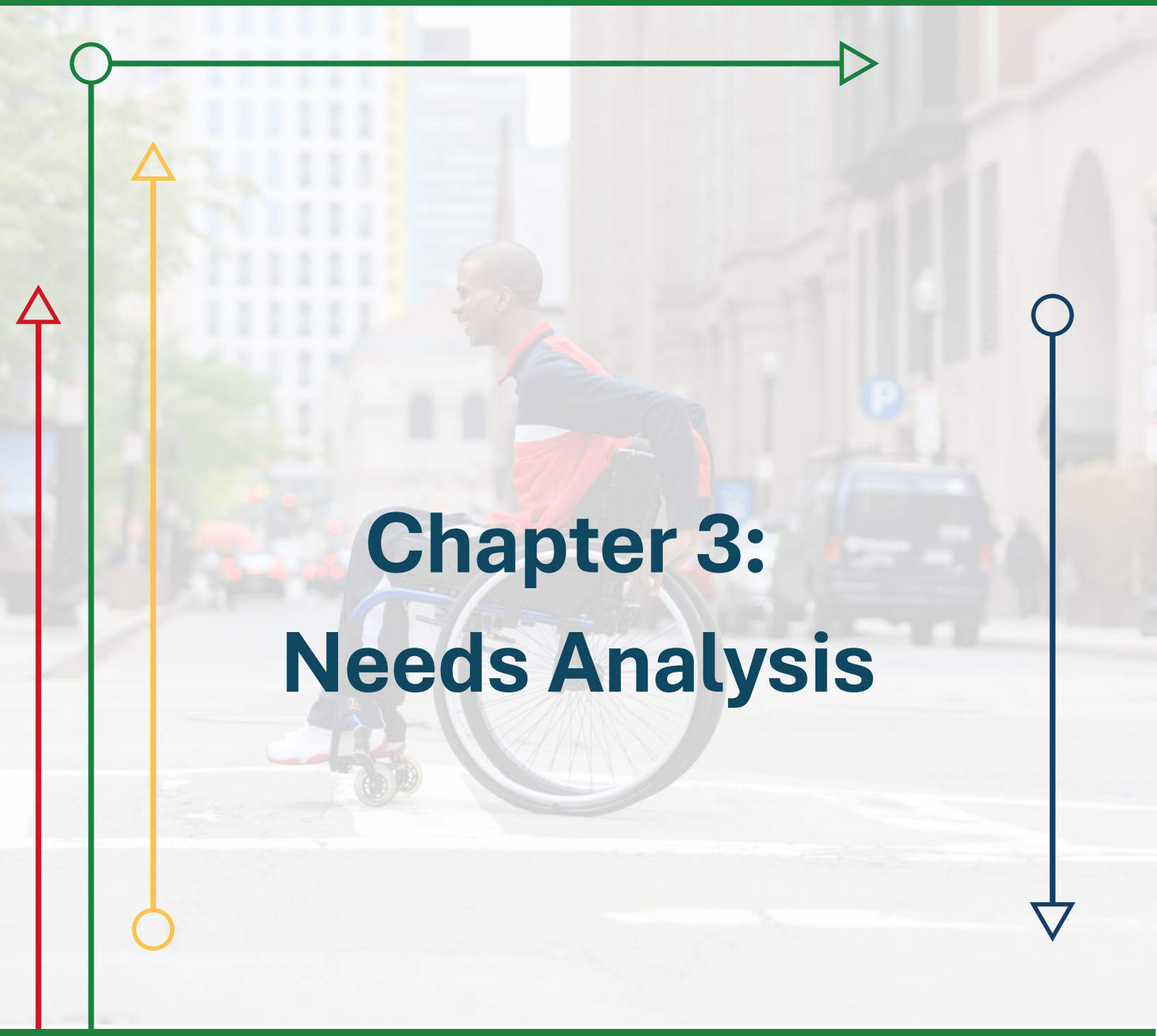
TxDOT Safety Performance Measures
Number of fatalities
Rate of fatalities
Number of serious injuries
Rate of serious injuries
Total number of non-motorized fatalities and serious injuries
TxDOT Bridge and Pavement Condition Performance Measures
Percent of NHS bridges by deck area classified as Poor Condition
Percent of NHS bridges by deck area classified as Good Condition
Percent of Interstate pavement in Good Condition
Percent of Interstate pavement in Poor Condition
Percent of Non-Interstate NHS pavement in Good Condition
Percent of Non-Interstate NHS pavement in Poor Condition
TxDOT System Performance Measures
Interstate level of travel time reliability (LOTTR)
Non-Interstate level of travel time reliability
Truck travel time reliability on the interstate system
TxDOT Transit Asset Management Performance Measures
Percent of revenue vehicles at or exceeding useful life benchmark
Percent of service vehicles (non-revenue) at or exceeding useful life benchmark
Percent of facilities rated below 3 on condition scale (TERM)
Percent of track segments with performance restrictions

Table 2-2: National Goal Metrics

Safety
Number of fatalities
Rate of fatalities per 100 million Vehicle Miles Traveled (VMT)
Number of serious injuries
Rate of serious injuries per 100 million VMT
Number of non-motorized fatalities and on-motorized serious injuries
Transit: Total number of reportable fatalities and rate per total vehicle revenue miles by mode
Transit: Total number of reportable injuries and rate per total vehicle revenue miles by mode

Transit: Total number of reportable events and rate per total vehicle revenue miles by mode
Infrastructure Condition
Percentage of pavements of the Interstate System in Good condition
Percentage of pavements of the Interstate System in Poor condition
Percentage of pavements of the non-Interstate NHS in Good condition
Percentage of pavements of the non-Interstate NHS in Poor condition
Percentage of NHS bridges classified as in Good condition
Percentage of NHS bridges classified as in Poor condition
Transit % revenue vehicles (by type) that exceed useful life benchmark (ULB)
Transit % non-revenue service vehicles (by type) that exceed ULB
Transit % facilities (by group) rated less than 3.0 on Transit Economic Requirements Model (TERM) scale
Congestion Reduction
No required measures for small MPOs and/or areas in attainment for air quality
System Reliability
Percentage of person-miles traveled on the Interstate that are reliable
Percentage of person-miles traveled on the non-Interstate NHS that are reliable
Transit: Mean distance between major mechanical failures by mode
Freight Movement & Economic Vitality
Truck Travel Time Reliability Index (TTTRI)
Environmental Sustainability
No required measures for small MPOs and/or areas in attainment for air quality
Reduced Project Delivery Delays
No established performance measures

Source: 49 CFR Part 490



Chapter 3: Needs Analysis

Tyler Area MPO
2050 Metropolitan Transportation Plan

Introduction

This chapter provides the results of the existing conditions analysis that was performed to ensure that the investments recommended by the plan consider the needs of the region to the extent feasible within budgetary constraints. Transportation system needs that are identified in this chapter through analysis of system performance as well as infrastructure or service gaps helped drive the transportation strategies and recommendations of this MTP. As part of the multimodal needs assessment for the 2045 MTP update, the needs of the region were analyzed for existing conditions and, where possible, for the conditions that are likely to exist in 2050. Conditions for 2050 were projected using a statistical forecasting tool known as a travel demand model (TDM). Consistent with the statement of vision, the goals, and the objectives of Tyler 2050 MTP, the current conditions analysis was performed within the following categories:

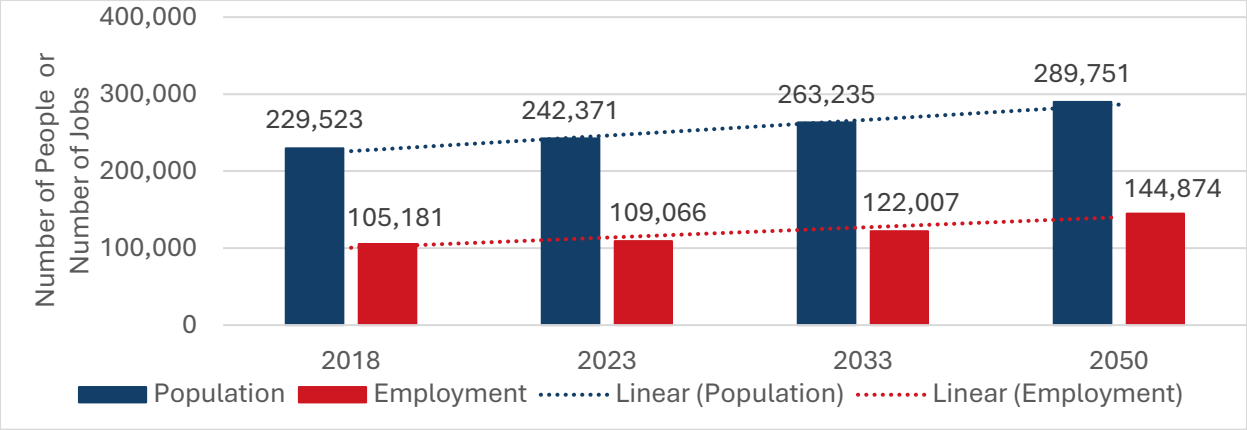
- **Demographics**
- **Equity**
- **Roadway Conditions**
- **Safety**
- **Transit**
- **Active Transportation**
- **Freight**

Demographics

Land use and growth patterns directly impact how people travel, which, in turn, affects transportation system needs within the community. Therefore, it is critical to understand and visualize where growth is occurring within the region. The following analysis details demographic growth trends at a regional level and serves as a driving force behind the Tyler Area MPO 2050 MTP update.

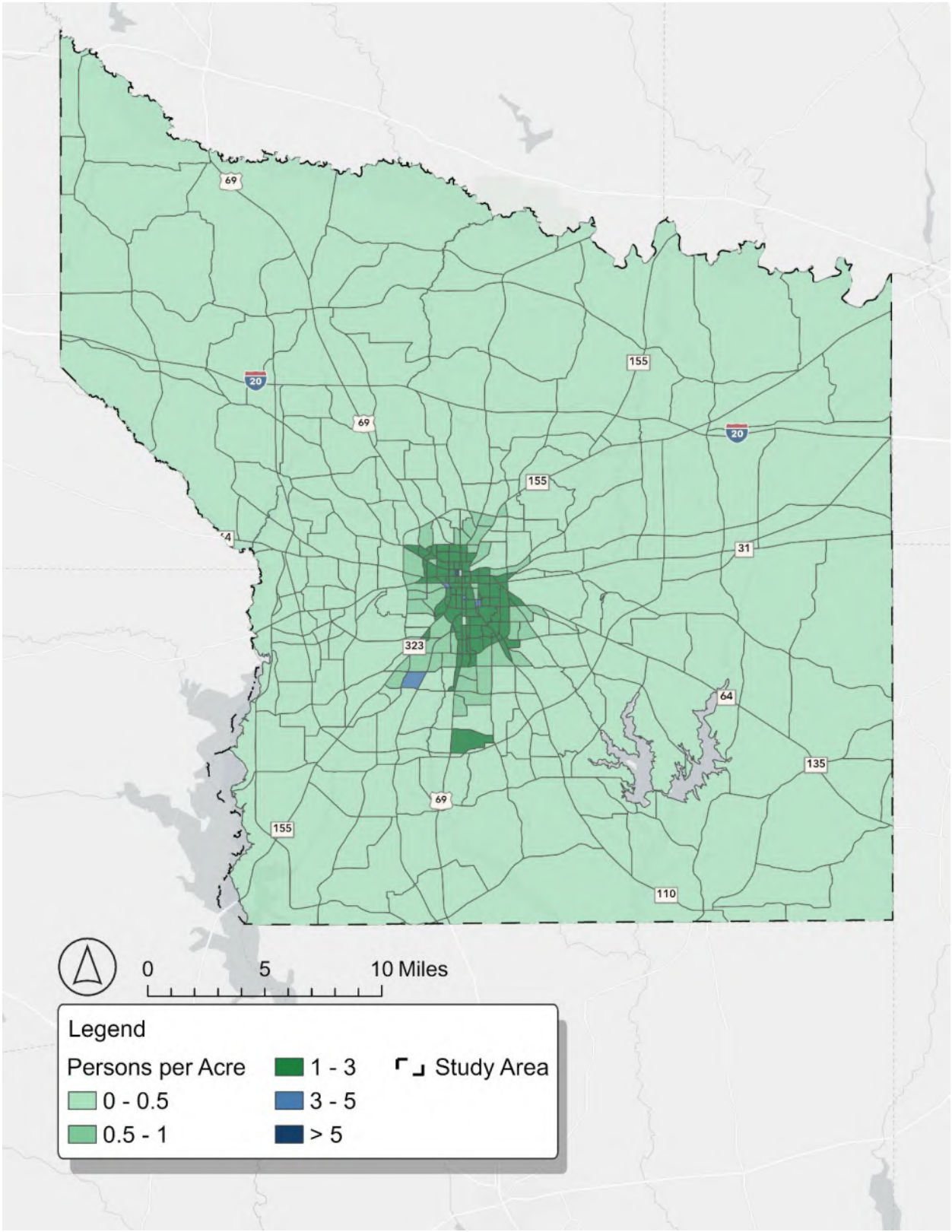
The Tyler Area MPO is steadily growing in terms of both population and employment (Figure 3-1). According to the TDM, the region's population is anticipated to grow by about 47,000 people and 39,500 jobs between 2023 and 2050. Spatially, the largest population increases are expected to occur within Tyler, TX, suggesting growth extending from already developed areas. Figure 3-2 shows the projected change in population density from 2023 to 2050, while Figure 3-3 shows the change in employment density.

Figure 3-1: Projected Population and Employment Growth



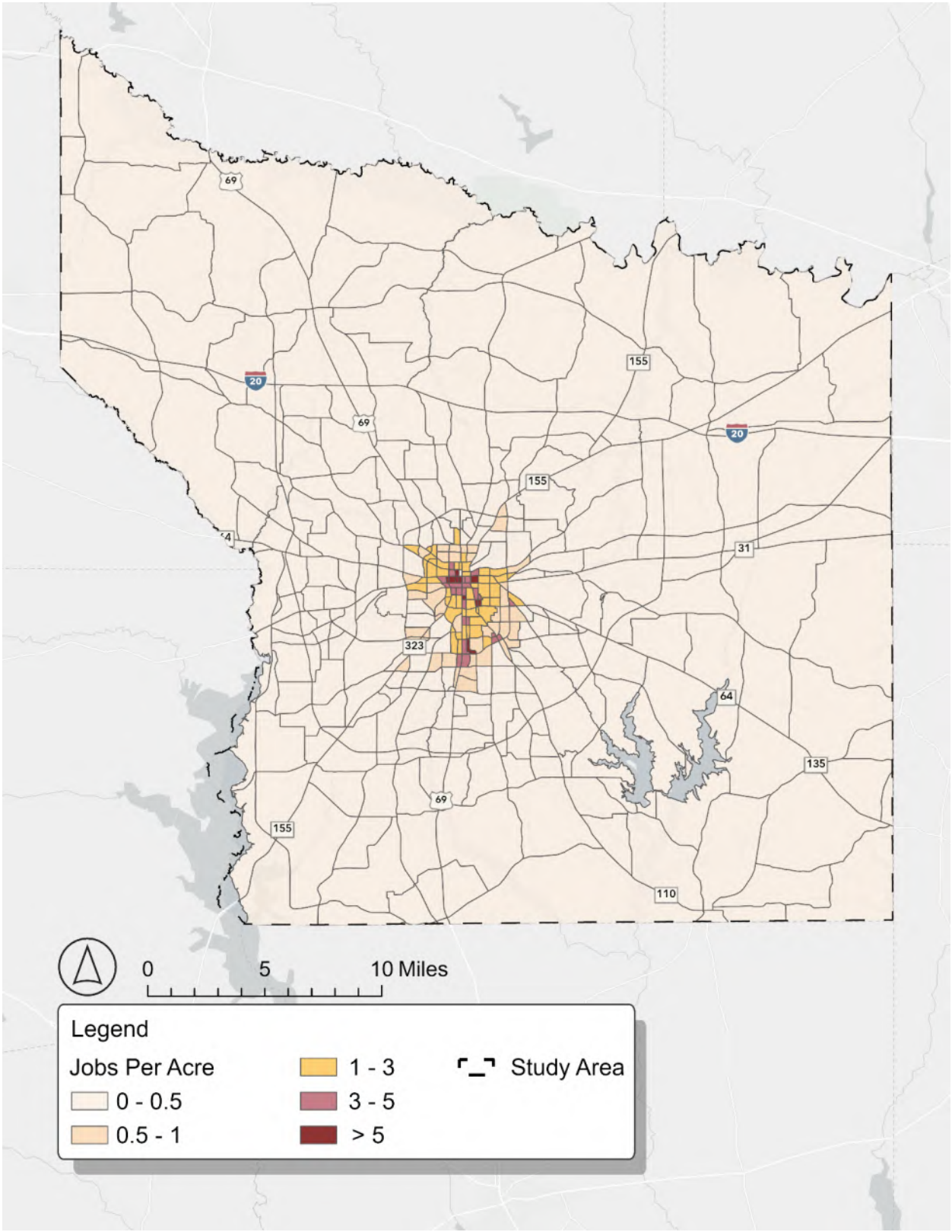
Source: Tyler Area MPO TDM – Base Year 2018

Figure 3-2: Population Change 2023-2050



Source: Tyler Area MPO TDM – Base Year 2018

Figure 3-3: Employment Change 2023-2050

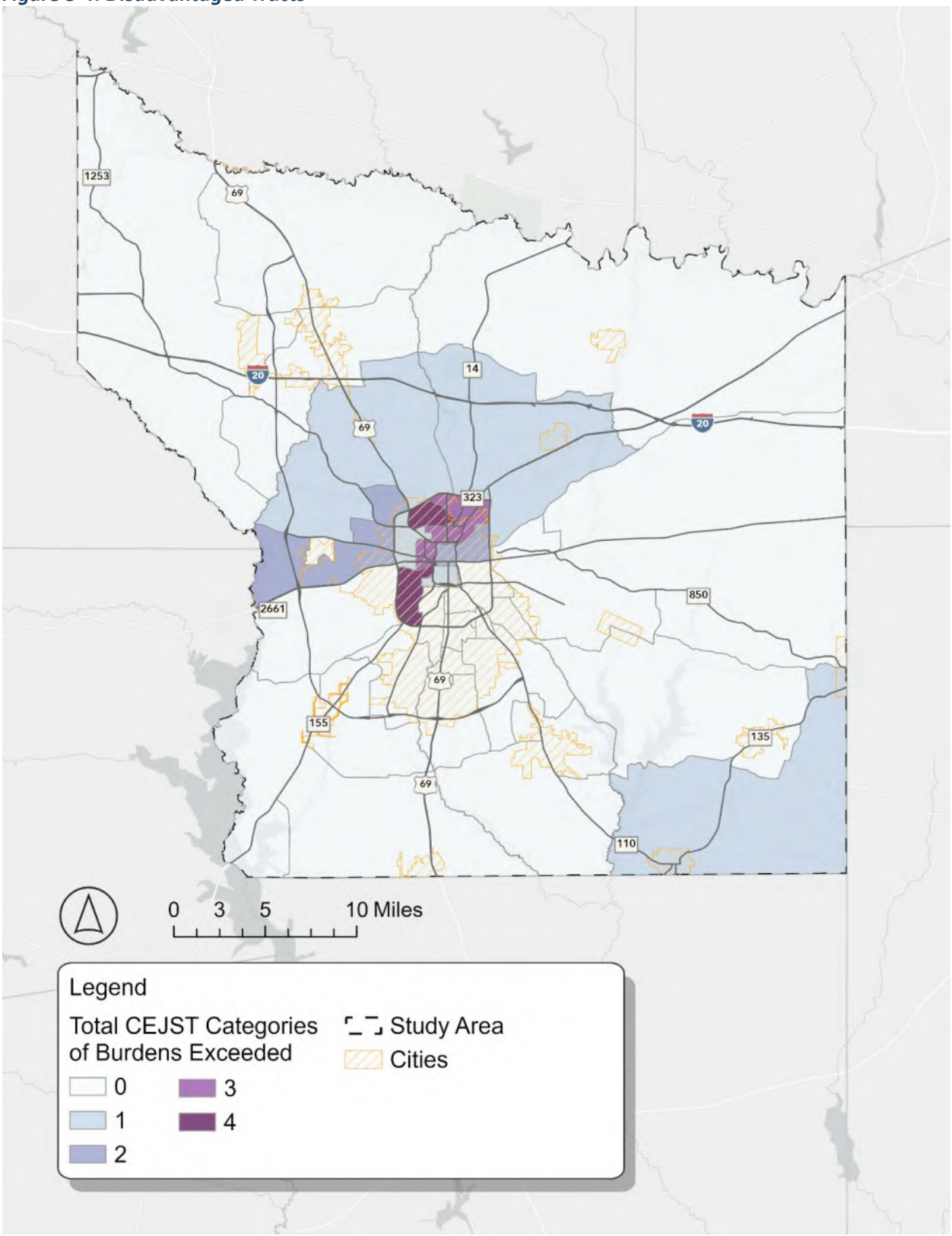


Source: Tyler Area MPO TDM – Base Year 2018

Equity

Transportation projects have lasting impacts on communities, making it crucial to integrate fair and equitable policies and funding decisions into the planning process. This ensures that no demographic group, defined by race, ethnicity, or socioeconomic status, faces unjust treatment or disproportionately shoulders negative consequences. Figure 3-4 shows the census tracts that have been identified by the Justice40 Climate and Economic Justice Screening Tool (CEJST) as disadvantaged based on socioeconomic factors *and* burdens in the following categories: climate change, energy, health, housing, legacy pollution, transportation, water and wastewater and workforce development. A few tracts in central Tyler exceeded the thresholds for 4 of the 8 categories, while others in the central and southeastern areas of the county exceeded one or two of the CEJST categories of burdens. Project scoring includes an equity component in order to prioritize projects that will benefit communities that face additional burdens.

Figure 3-4: Disadvantaged Tracts



Source: US Council on Environmental Quality CEJST (2023)

Roadway

The foundation of the Tyler Area MPO's transportation system is its roadways. The region's roadway network supports commuters traveling to work, freight movements, and public transit. Because of this dependence on roadway, this MTP must identify where there are issues with the roadway network and determine where there are needs for improvement.

The analysis and discussion in this section focus on the condition of the existing system, including reliability and congestion as key indicators of potential deficiencies. This assessment is intended to serve as a tool to pinpoint corridors experiencing high congestion throughout a typical weekday, highlight locations with accessibility concerns, and provide a baseline for evaluating roadway improvement projects.

Bridge

A total of 260 bridges were identified within Smith County, Texas. Around 50% of the bridges in the study area are in good condition, 49% are in fair condition, and 1% are in poor condition. Figure 3-5 shows the conditions of all bridges in the study area. There are 79 bridges that are part of the National Highway System (NHS) in Smith County. Of the NHS bridges, 48% are in good condition, 52% are in fair condition, and none are in poor condition (Table 3-1). Figure 3-6 shows NHS bridge locations.

The total area of bridges in the study area is 269,078 square meters, of which 208 square meters (0.1%) are in poor condition. The total area of NHS bridges is 175,161 square meters, which is entirely in either good or fair condition. Table 3-2 presents the bridge deck area by condition type for the study area.

Bridges along the NHS will be prioritized within the MTP project selection process (Figure 3-6). To support a comprehensive discussion on the state of good repair for assets beyond the NHS, the analysis in this section considers the condition of all bridges with data in the study area (Figure 3-5).

Table 3-1: Bridge Count by Condition

Condition	All Bridges	Percent	NHS Bridges	Percent NHS
Good	130	50%	38	48%
Fair	127	49%	41	52%
Poor	3	1%	0	0%
Total	260	100%	79	100%

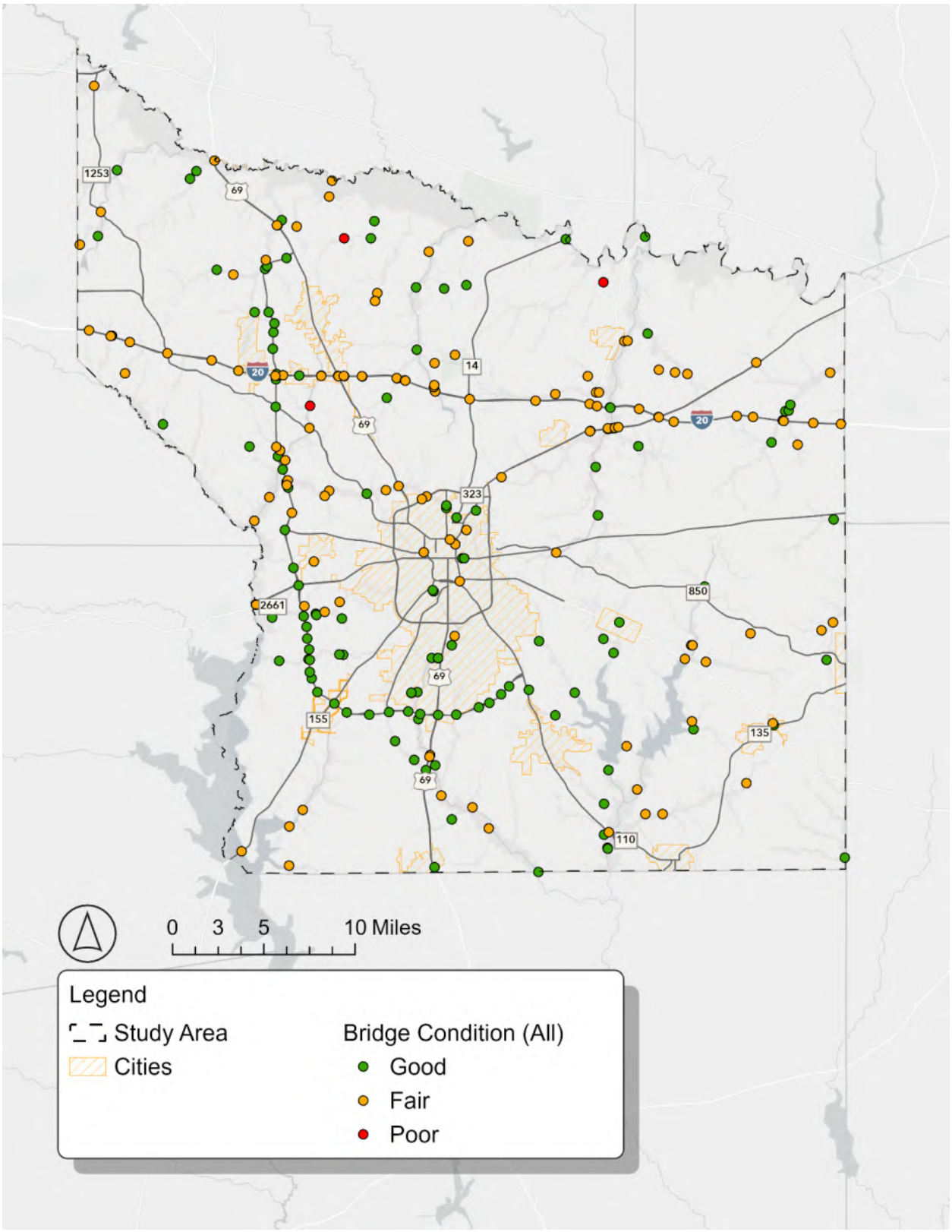
Source: National Bridge Inventory (accessed November 2023)

Table 3-2: Bridge Area by Condition

Condition	Total Deck Area (square meters)	Percent	NHS Deck Area (square meters)	Percent NHS
Good	158,966	59.1%	97,103	55.4%
Fair	109,904	40.8%	78,058	44.6%
Poor	208	0.1%	0	0.0%
Total	269,078	100%	175,161	100%

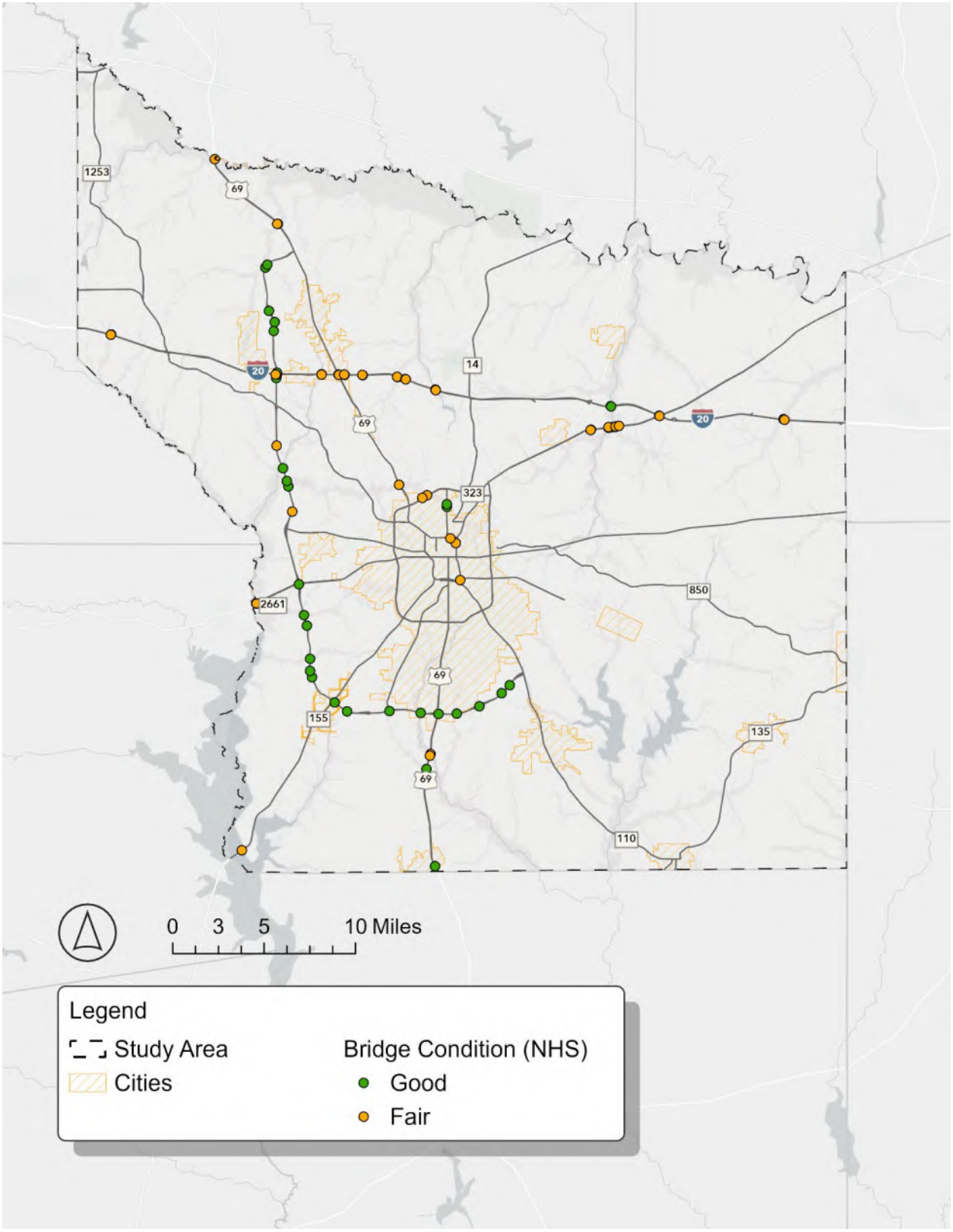
Source: National Bridge Inventory (accessed November 2023)

Figure 3-5: Condition of All Bridges



Source: National Bridge Inventory

Figure 3-6: Condition of National Highway System Bridges



Source: National Bridge Inventory

Pavement

The roadway pavement condition analysis for the Tyler Area discussed in this section was based on 2021 data from FHWA's Highway Performance Monitoring System (HPMS). HPMS data provides a condition rating based on the International Roughness Index (IRI) for roadways. This includes roadway segments found on the National Highway System (NHS), as well as various other roadways critical to the movement of people and goods in the region.

Based on guidance from the Code of Federal Regulations (23 C.F.R. 490.313), each roadway segment was categorized by condition according to the following IRI rating scale:

- Poor Condition: IRI > 170
- Fair Condition: IRI >= 95 and <= 170
- Good Condition: IRI <95

HPMS data was totaled to represent the number of lane miles for each of the three pavement condition categories, allowing the project team to calculate the percentage of interstate (NHS) and non-interstate NHS lane miles and the percentage of lane miles by condition. Table 3-3 presents the pavement condition results which coincide with the national performance measures identified by the FHWA. Table 3-3 below only contains information on the HPMS sampled NHS roadways.

Table 3-3: Tyler Area MPO - Pavement Condition by IRI Rating (2021)

	Total Lane Miles			% Total Lane Miles		
Condition	**Interstate**	**Non-Interstate NHS**	**Total NHS**	**Interstate**	**Non-Interstate NHS**	**Total NHS**
Poor	0	25.22	2.22	0%	3.83%	3.27%
Fair	6.62	188.11	194.73	5.87%	28.53%	24.36%
Good	106.17	445.95	552.12	94.12%	67.64%	71.51%
Total	112.80	659.28	772.10	100%	100%	100%

Source: TxDOT TPP 2021 Data

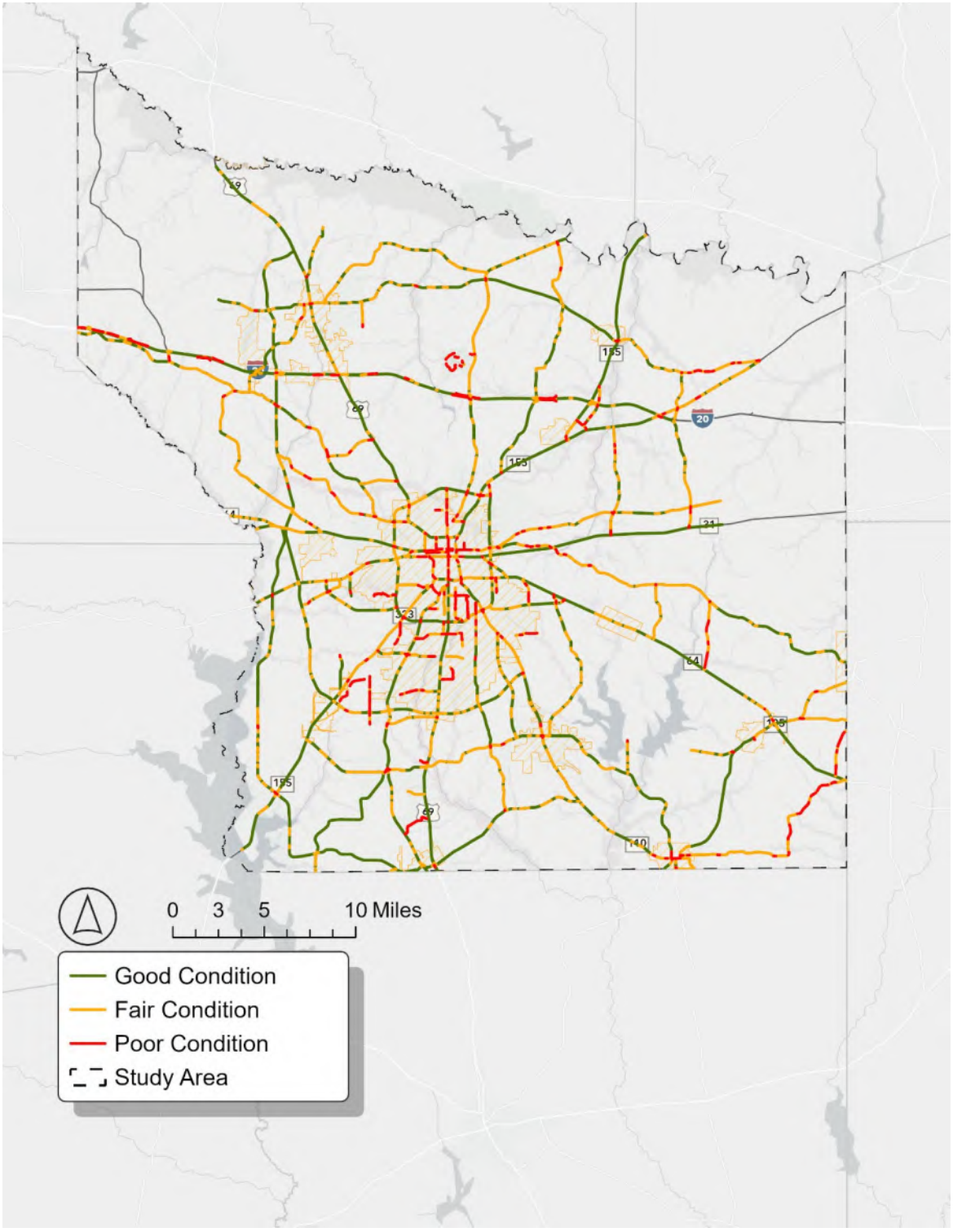
Out of the 772.10 total NHS lane miles with IRI data, 71.51% were found to be in Good condition, while 24.36% were recorded as being in Fair condition. This suggests that 95.87% of the total NHS roadway pavement conditions are either in a state of Good repair or adequate for utilization.

Regarding **Interstate** lane miles, 94.12% were rated as being in Good condition, well above the 63.9% state performance measure set forth by the FHWA. In addition, 5.87% were in Fair condition, totaling 100% either in a state of good repair or adequate serviceability. This means that the transportation network in the Tyler Metropolitan Planning Area (MPA) meets the performance measure for no greater than 0.2% of Interstate roadways in Poor condition.

For **Non-Interstate NHS** lane-miles, 3.38% were rated to be in Poor condition, missing the performance measure of 1.5%. Conversely, the percentage of Non-Interstate NHS lane-miles rated as Good condition was 67.64%, which meets the state safety measurement of 45.5%. For Non-Interstate NHS lane-miles, 96.17% were in a state of Good repair or adequate serviceability. Figure 3-7 displays roadway pavement conditions for the NHS (both Interstate and Non-Interstate) at the Tyler Area MPA level, showing the

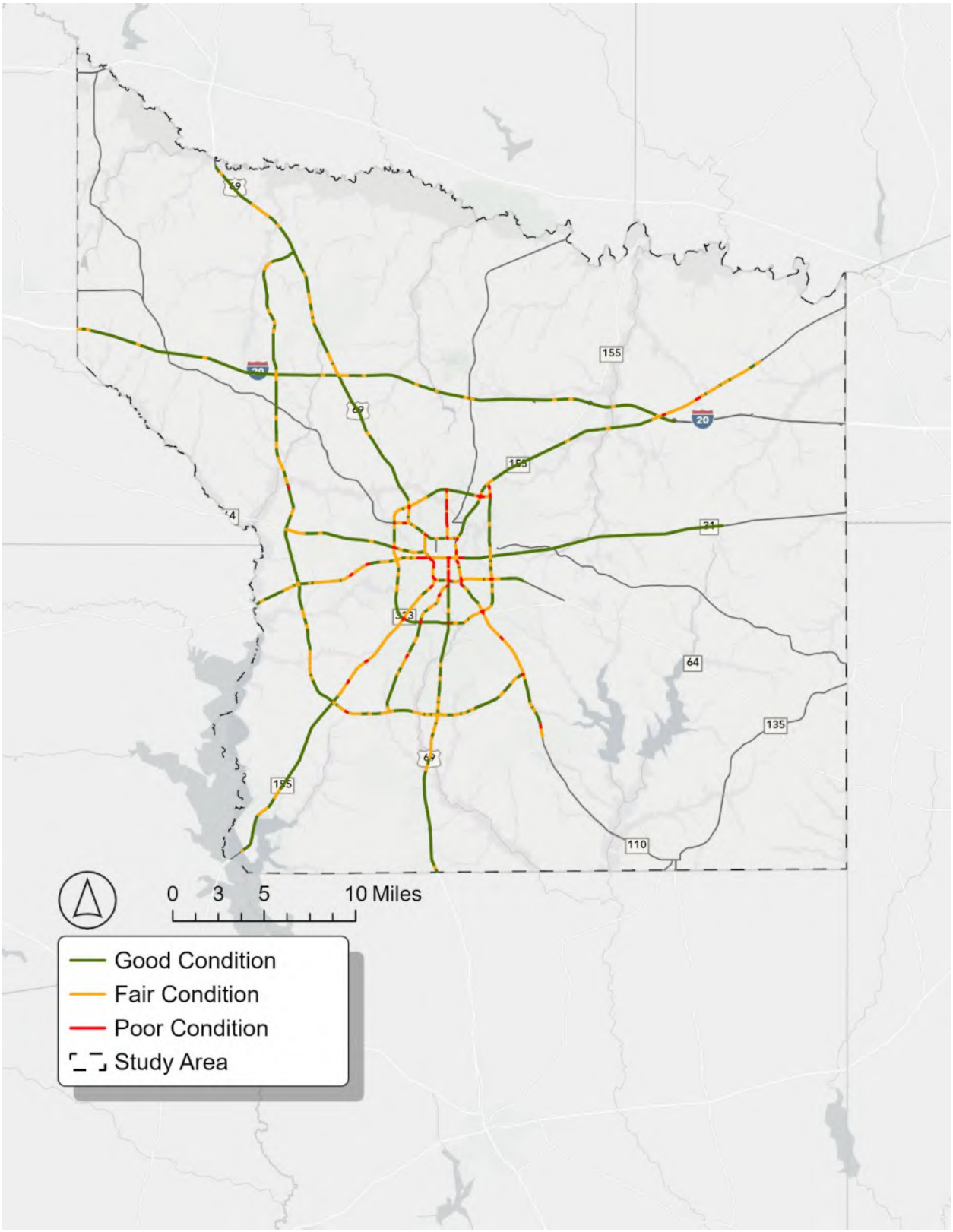
majority of major interstate and highway infrastructure to be in a state of Good repair. Figure 3-8 shows pavement conditions for NHS roadway segments.

Figure 3-7: Tyler Area MPA – Pavement IRI Rating for all Available Road Segments



Source: TxDOT TPP 2021 Data

Figure 3-8: Tyler Area MPA - Pavement IRI Rating for NHS Road Segments



Source: TxDOT TPP 2021 Data

Reliability

The following section details findings from analyses based on FHWA's National Performance Management Research Data Set Measures (NPMRDS) to create a robust understanding of existing and future roadway conditions. National Performance Metrics Travel time reliability is a measure of the consistency or dependability of travel times from day to day or across different times of day for a given roadway. While congestion typically focuses on the average roadway conditions in terms of delay, travel time reliability indicates the level to which traffic or roadway conditions can be anticipated for travelers to plan around expected delays. Reliability of the roadway network is important because it allows travelers to reach their destinations at their planned time. This is important for passenger travel and goods movement as well as for transit services as route planning plays an important role in how people manage their day-to-day lives.

Level of Travel Time Reliability (LOTTR) is calculated using a ratio of the 50th and 80th percentile travel time for all vehicles traveling a given roadway segment. Travel time data is provided as part of FHWA's NPMRDS. "Unreliable" means that travelers of a roadway segment cannot reasonably predict the time it would take to travel the roadway during peak traffic time periods, and per FHWA standards, any roadway with a LOTTR over 1.50 is considered unreliable.

Non-Interstate NHS segments are separated out from interstate segments for analysis because the MPO is required to report travel time performance metrics on the NHS as divided between the interstate and non-interstate portions of the NHS. This also provides comparative information to be used during the project prioritization processes in assessing levels of investment on operational improvements for proposed projects.

Interstate Level of Travel Time Reliability

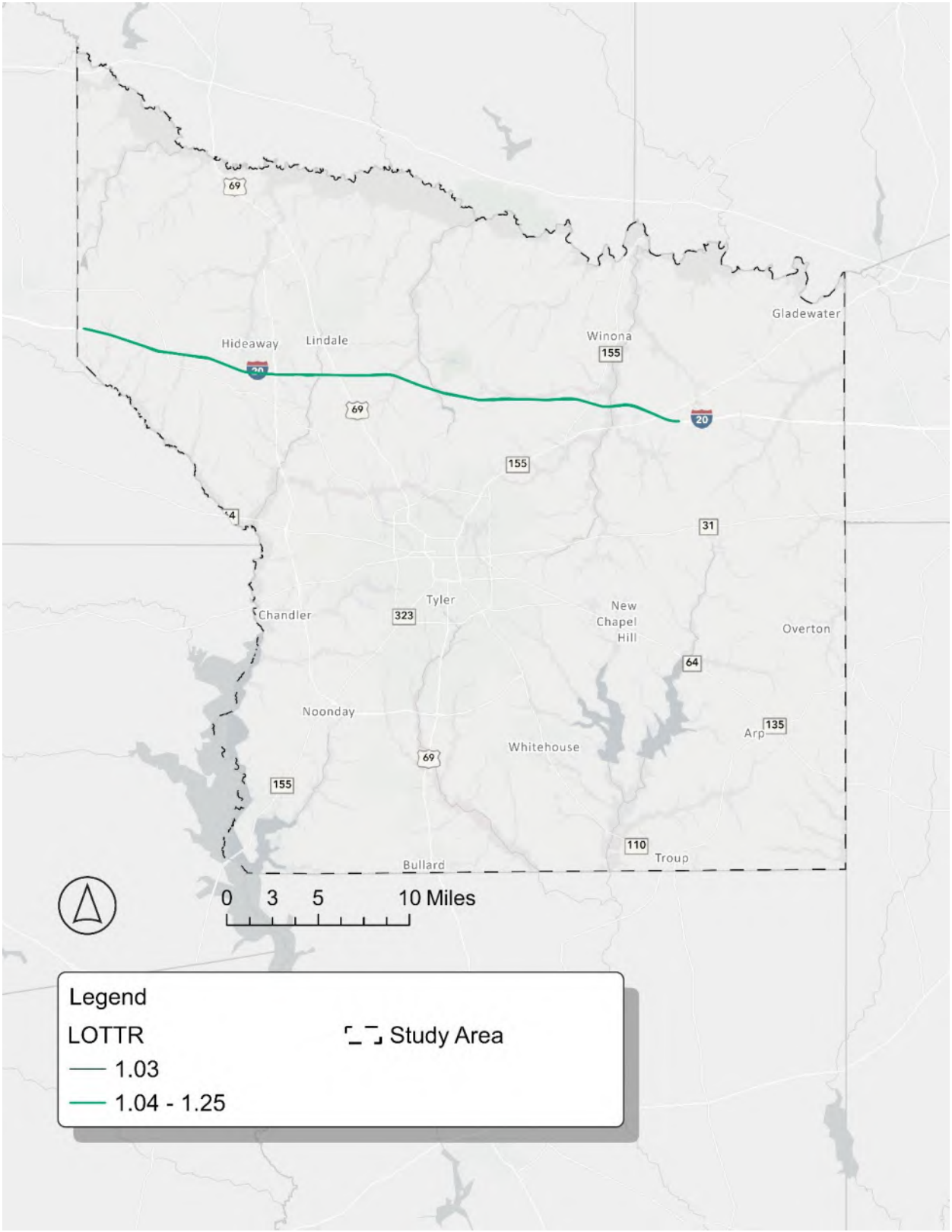
Per the 2023 NPMRDS, the current system reports 100% of vehicle-miles traveled on interstate segments are reliable. This shows that the Interstate reliability within the MTP study area is performing better than statewide baselines and achieves the target of greater than or equal to 70% of the system containing a LOTTR less than 1.50. Interstate 20 through Smith County has no segments deemed unreliable from 2020 to 2023, as shown in Table 3-4 and Figure 3-9.

Table 3-4: MPO to Statewide Comparison of Interstate Reliability

Year	Tyler Area MPO	TxDOT Baseline	TxDOT 2-Yr. Target	TxDOT 4-Yr. Target
2020	100%	84.6%	70.0%	70.0%
2021	100%			
2022	100%			
2023	100%			

Source: NPMRDS 2020 – 2023 INRIX, TxDOT

Figure 3-9: 2023 Interstate LOTTR



Source: NPMRDS 2020 – 2023 INRIX

Non-Interstate Travel Time Reliability

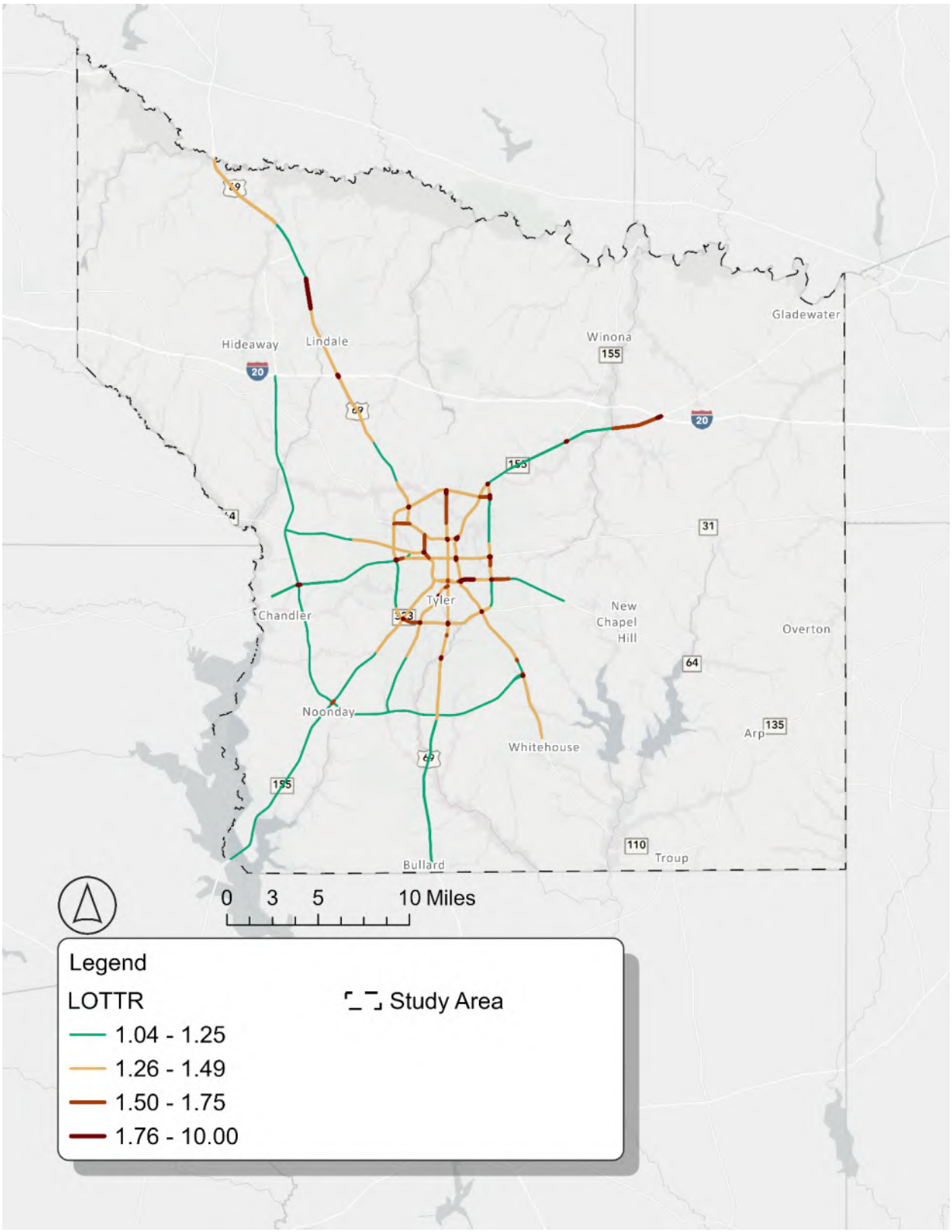
Performance measures for non-Interstate NHS reliability within the MTP study area for 2020 through 2023 have also consistently performed better than the statewide baselines, as shown in Table 3-5. The current system reports 97.1% percent of vehicle-miles traveled on non-interstate NHS segments that are reliable, which is better than the 70% target and helps inform planning decisions moving forward. Figure 3-10 illustrates the 2023 LOTTR of non-interstate NHS roadways.

Table 3-5: MPO to Statewide Comparison of Non-Interstate Reliability

Year	Tyler Area MPO	TxDOT Baseline	TxDOT 2-Yr. Target	TxDOT 4-Yr. Target
2020	92.1%	90.3%	70%	55%
2021	93.3%			
2022	96.1%			
2023	95.4%			

Source: NPMRDS 2020 – 2023 INRIX, TxDOT

Figure 3-10: 2023 Non-Interstate LOTTR



Source: NPMRDS 2020 – 2023 INRIX

Truck Travel Time Reliability

The roadway network is critical to the movement of freight within, into, and out of the Tyler study area. It is critical that the Tyler Area MPO's roadways provide safe, efficient, and reliable routes for the movement of goods. If supply chains that rely on consistent deliveries are interrupted due to congestion, industries and local businesses may incur additional costs. Regionally, unreliable roadway segments, congestion, and/or delays on the freight network can make an area unattractive to business development that needs reliable roadways that support safe, efficient freight mobility. Further, poor system performance on the primary freight routes can cause freight spillover to facilities that are not meant for such tonnage, causing strain on roadways, and creating potential safety issues for surrounding communities. The following section analyzes the conditions and performance of the freight roadway network assets previously discussed and review future no-build conditions to create a picture of where future strain may occur on the Tyler Area MPO freight network.

The Truck Travel Time Reliability (TTTR) Index is an indicator of unexpected delays or the predictability of congestion on the interstate system. TTTR is an important measure to consider for freight analysis as many businesses rely on predictable, just-in-time freight deliveries as part of their operations. If businesses can anticipate certain levels of congestion, they are able to plan their deliveries and operations around that congestion and avoid missed deliveries and unnecessary delays. Using FHWA's 2020 through 2023 National Performance Management Data Set (NPMRDS) truck travel time data, the metric was calculated as a ratio of the 50th percentile of truck travel time to the 95th percentile truck travel time for a given segment.[1] A TTTR value above 1.5 indicates a segment that is unreliable for truck travel, but all of IH-20 through Smith County was below this threshold from 2020 to 2023. Average TTTR across all parts of IH-20 in Smith County, weighted by their AADT, is shown in Table 3-6. Figure 3-11 on the following page shows the TTTR for 2023 on IH-20, shown to be fairly reliable for segments within the study area for 2023.

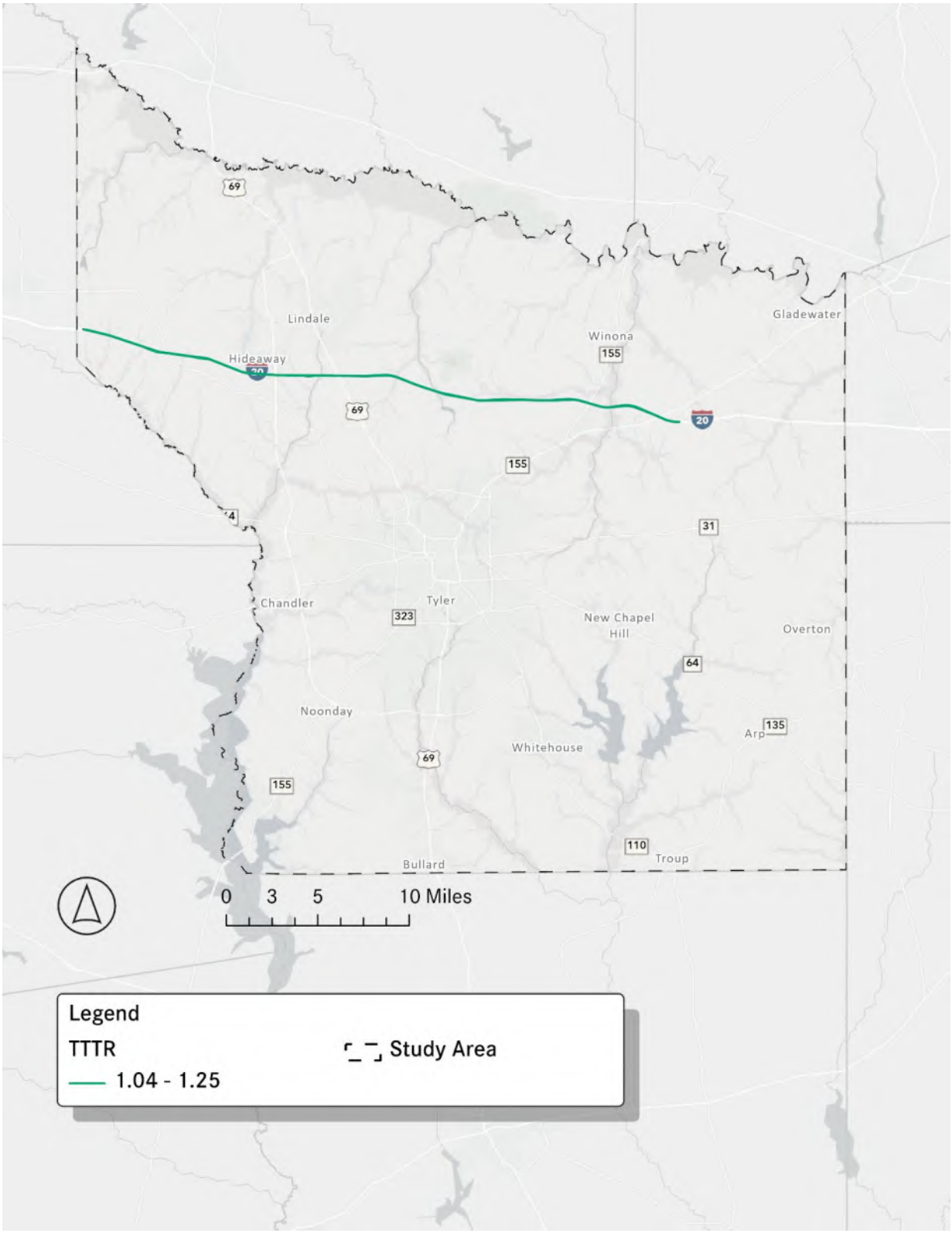
Table 3-6: MPO to Texas Statewide Comparison of Truck Travel Time Reliability

Year	Tyler Area MPO	TxDOT Baseline	TxDOT 2-Yr. Target	TxDOT 4-Yr. Target
2020	1.07	1.39	1.55	1.55
2021	1.10			
2022	1.08			
2023	1.09			

Source: NPMRDS 2020 – 2023 INRIX, TxDOT

[1] Methodology for calculating TTTR was taken from FHWA guidance calculating national performance measures (https://www.fhwa.dot.gov/tpm/guidance/hif18040.pdf)

Figure 3-11: 2023 TTTR



NPMRDS 2020 – 2023 INRIX, TxDOT

Congestion

Figure 3-12 shows modeled 2023 roadway network congestion according to the Regional Travel Demand Model (TDM). As shown in Figure 3-12, many segments on the region's roadway network currently experience some level of congestion throughout a typical day. The highest levels of congestion are present on US 271, particularly the section from N Northeast Loop 323 to County Road 3205. SH 64 southeast of Tyler also shows an extended section of heavy congestion from County Road 298 to .3 miles southeast of Old Henderson Highway.

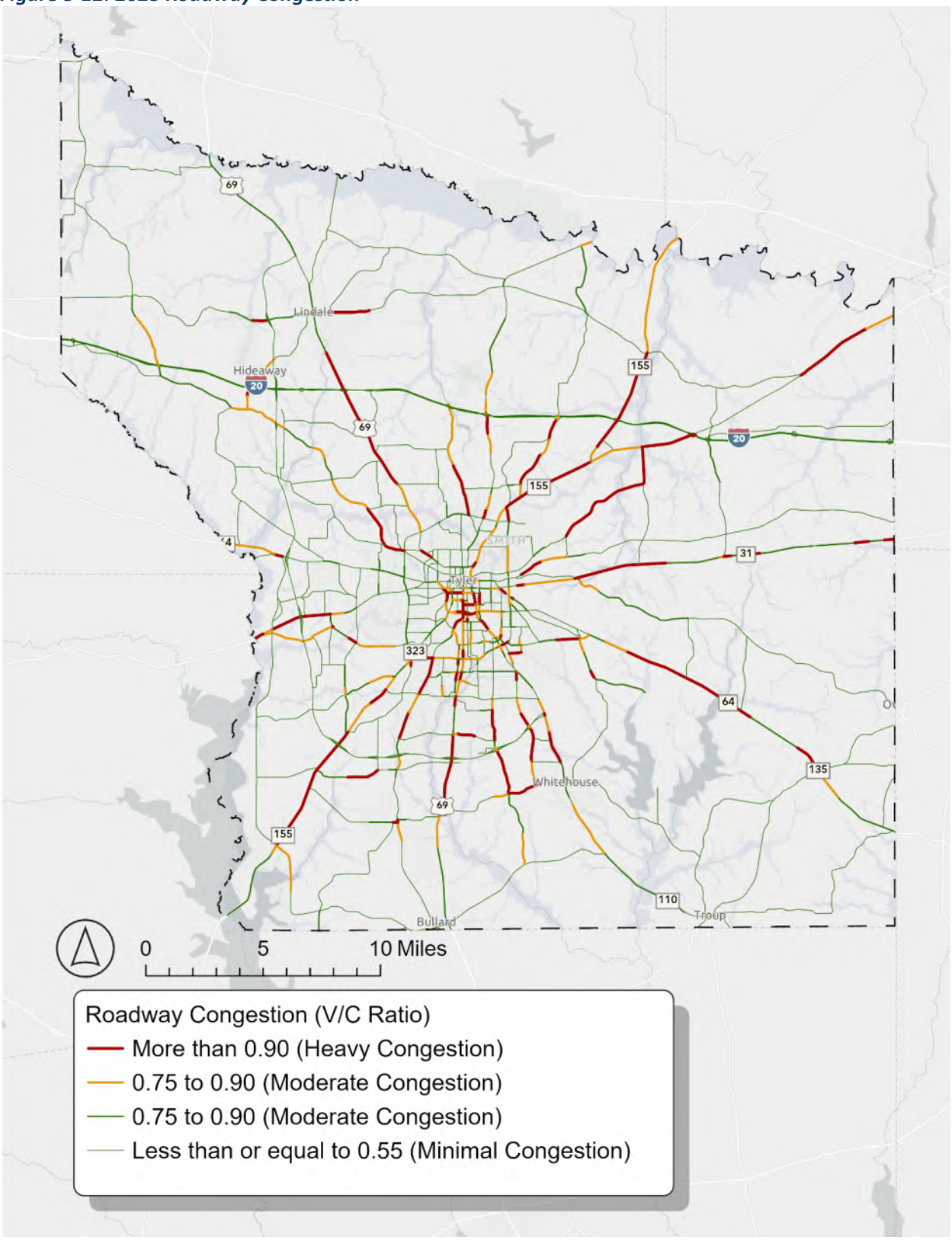
Table 3-7 below lists and provides congestion performance measures for the most congested road corridors in the MPA.

Table 3-7: Top Congested Corridors – 2023

Roadway	From	To	VMT	Avg V/C Ratio	VHT
I-20 Frontage Road	US 271	CEFCO	624	2.12	56
US 271	NE Loop 323	County Road 334	5,829	1.59	249
US 271	County Road 334	County Road 382	7,356	1.51	282
US 271	County Road 382	County Rd 3205	10,307	1.50	393
SH 64	.4 miles southwest of 220	.7 miles northwest of Lake Pines Dr.	16,177	1.46	603
SH 155	I-20 Frontage Rd	9th Street	2,519	1.45	86
US 69 S	E South Loop 49	Marsh Farm Rd	4,068	1.43	140
I-20 Frontage Road	US 271	.12 mile from US 271	825	1.39	28
SH 155	Southbound SH 155 Frontage Rd	Northbound SH 155 Frontage Rd	2,079	1.36	64
US 271	CR 383	Old Gladewater Highway	6,791	1.28	201

Source: Tyler Area MPO TDM – Base Year 2018

Figure 3-12: 2023 Roadway Congestion



Source: Tyler Area MPO TDM – Base Year 2018

Figure 3-13 shows projected 2050 roadway network congestion if no additional infrastructure is built. For purposes of this study, this is referred to as the 2050 TDM Existing Plus Committed, or E+C Scenario. In the E+C Scenario, the TDM simulates a network comprised of the current network, plus anything that is already under construction as well as projects with dedicated funding, and is intended as a decision support tool in comparing proposed improvements. This E+C Scenario shows congestion accumulating on the major roadways leading in and out of Tyler. SH 64 southeast of Tyler shows some of the highest levels of congestion for the 2050 TDM scenario. Notable heavy congestion can also be seen on State Highway 155 northeast of Tyler and the congestion extends south onto US Highway 271. SH 155 southwest of Tyler additionally shows a long segment of heavy congestion that is more pronounced than the 2023 TDM scenario results. Table 3-8 compares existing congestion conditions to the projected 2050 no-build scenario to show how congestion can be expected to increase. The top five road segments with the highest projected change in V/C ratios from 2023 to 2050 are listed below:

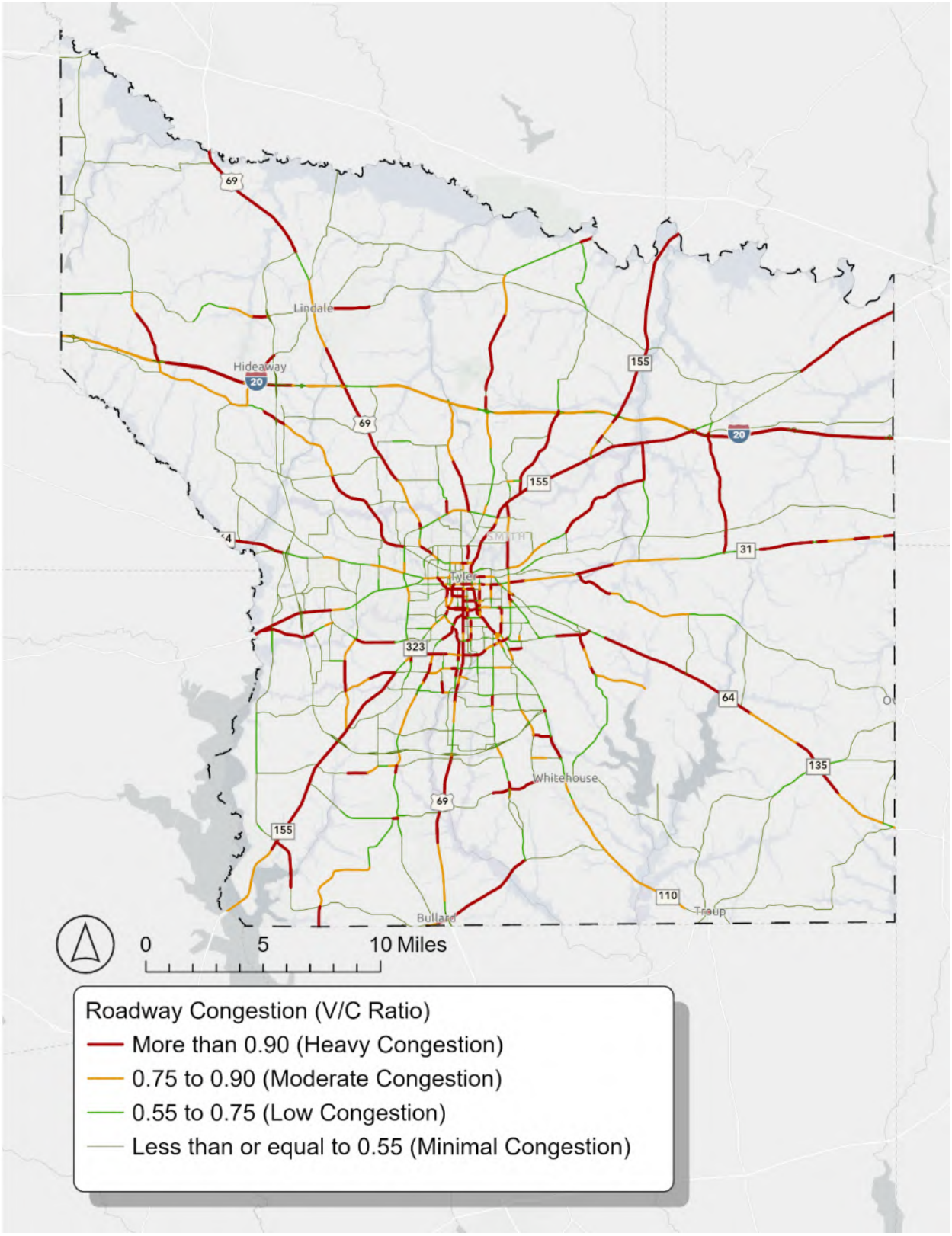
- FM 344 E from FM 756 to CR 115
- CR 2167 from FM 2964 to CR 2167
- CR 2167 from CR 2167 to TX 110
- N Church Ave from E Vance St to E Hillsboro St
- N Church Ave from E Hillsboro St to N Holmes Ave

Table 3-8: Regional Traffic and Congestion 2023 & 2050 E+C

	2023 Existing Conditions			2050 Future No Build			
	Interstate	**Arterials**	**Total**	**Interstate**	**Arterials**	**Total**	**% Change for Totals**
Total VMT	1,370,746	3,629,480	6,929,658	1,914,806	4,493,997	8,969,185	29.43%
Total VHT	25,249	97,567	173,484	37,715	126,716	233,348	34.51%
Average V/C Ratio	0.61	0.74	0.49	0.85	0.86	0.58	18.37%

Source: Tyler Area MPO TDM – Base Year 2018

Figure 3-13: TDM 2050 Roadway Congestion



Source: Tyler Area MPO TDM – Base Year 2018

Safety

This analysis in this section illuminates existing safety concerns and past trends in the region so that proposed transportation projects can attempt to address these issues and improve the overall safety of the system for all users. For this safety analysis, data from the Crash Records Information System (CRIS) data system was assessed for crashes that occurred in the Tyler Area MPO's Metropolitan Planning Area (MPA) from 2018 to 2022. This assessment determines trends and patterns based on the characteristics of the crashes.

Regional Crash Trends

During the five-year period (2018-2022), a total of 27,952 crashes occurred in the Tyler Area MPA, with the annual total of crashes gradually increasing over time. The average annual total for 2018 to 2022 is 5,590 crashes per year. As shown in Table 3-9, about 59% of the total crashes that occurred in the Tyler Area MPA over the five-year period were within Tyler city limits.

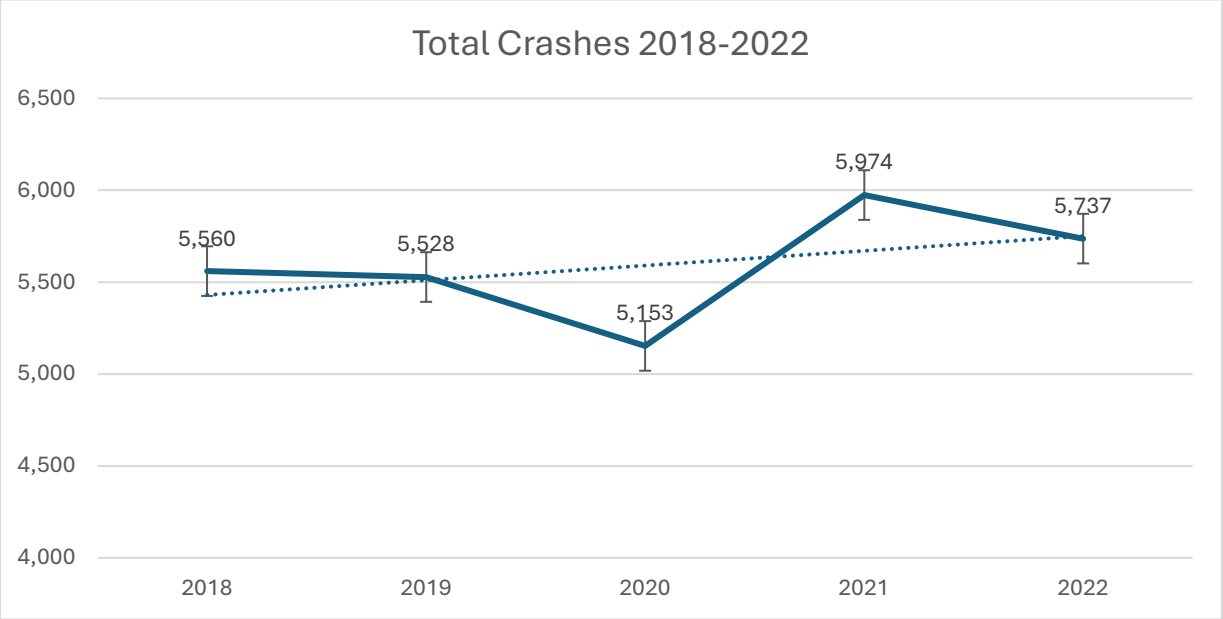
Table 3-9: Crashes by Jurisdiction (2018-2022)

Jurisdiction	Total Number of Crashes	% of Total Crashes in MPA
Tyler	16,660	59%
Tyler MPA	27,952	100%

TxDOT Crash Records Information System (2018-2022)

Figure 3-14 below shows the gradual growth in crashes in the Tyler Area MPO area for the five-year period from 2018 to 2022.

Figure 3-14: Tyler Area MPO - Total Crashes Over Time (2018-2022)



Source: TxDOT Crash Records Information System (2018-2022)

Table 3-10 below shows a comparison between regional crashes and the statewide crashes for Texas.

Table 3-10: Tyler Area MPO - Regional and Statewide Crash Comparison (2018-2022)

Crash Type	Tyler MPA	State of Texas	MPO's % of State Crashes
All Crashes	27,952	2,691,046	1.04%
Resulting in Fatality	224	18,267	1.23%
Resulting in Serious Injury	814	70,969	1.15%
Resulting in Ped/Bike Fatality	37	3,217	1.15%
Resulting in Ped/Bike Serious Injury	62	7,874	0.79%

Source: TxDOT Crash Records Information System (2018-2022)

Through this safety analysis, the densities of crash locations throughout the region were mapped to reveal where higher concentrations of crashes occurred over the period from 2018 to 2022. The results of mapping all crashes over the five-year period show that crashes occurred most frequently around the vicinity of intersections of major roadways in the region. Table 3-11 displays the intersections with the highest number of associated crashes.

"Hot spots" are areas of high crash activity that are not restricted to the intersection. Areas with higher crash activity that are near other high crash count intersections appear a more intense red to yellow Figure 3-15 shows the hot spots for all crashes over the five-year period at a regional level. Figure 3-16 shows a

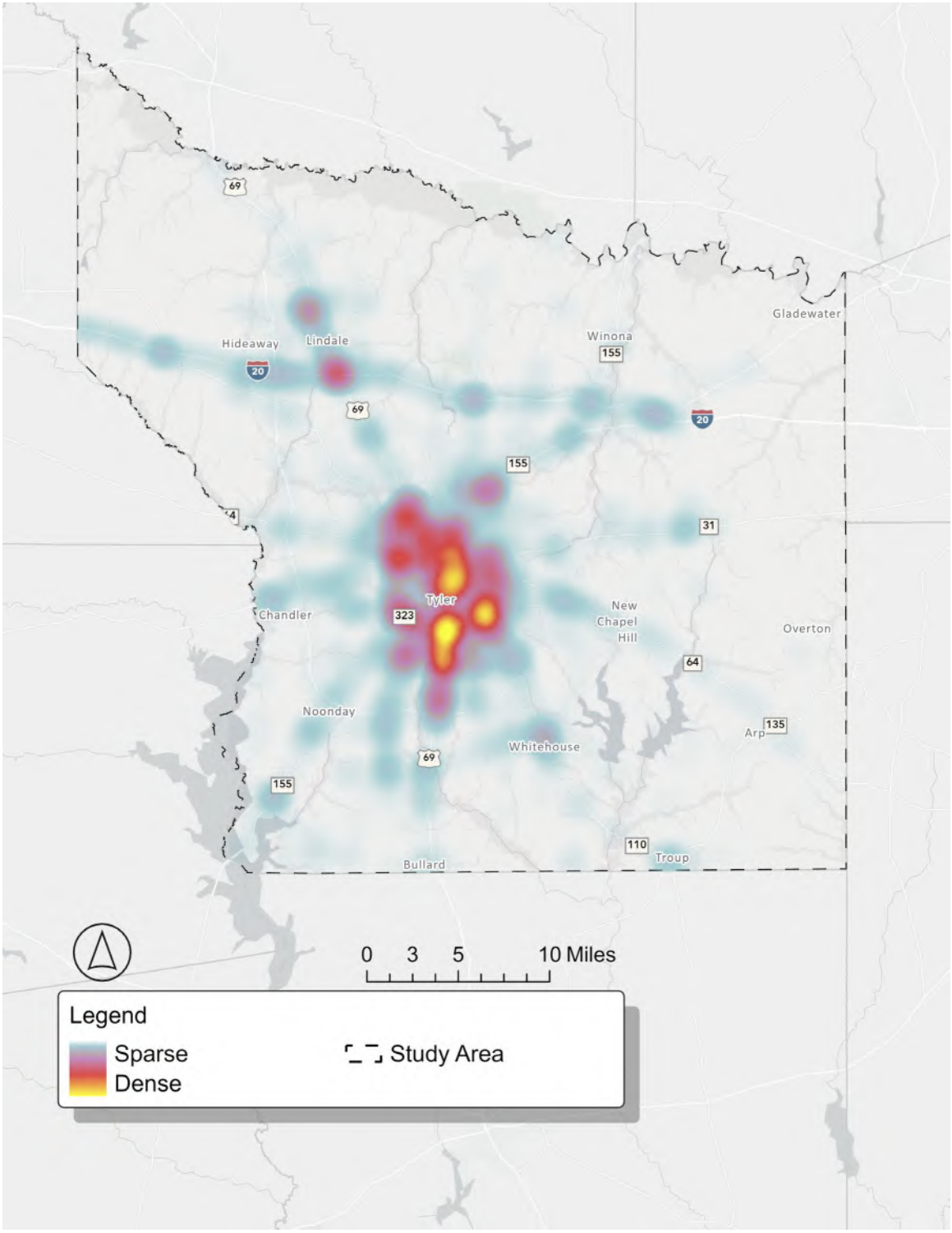
zoomed-in view of the crash hot spots for all crashes in the City of Tyler. Note that the highest crash intersections are not necessarily hot spots as they lack surrounding high crash counts.

Table 3-11: Tyler Area MPO - Top Crash Intersections (2018-2022)

Intersection	Crash Count
US-69 & W NW Loop 323	167
TX-110 & N NW Loop 323	163
W Erwin St & S SW Loop 323	133
E SE Loop 323 & Paluxy Dr	99
Chandler Hwy & S SW Loop 323	96
E SE Loop 323 & TX-110	93
TX-323 Loop & Old Jacksonville Hwy	92
US-271 & N NE Loop 323	88
W Grande Blvd & Old Jacksonville Hwy	85

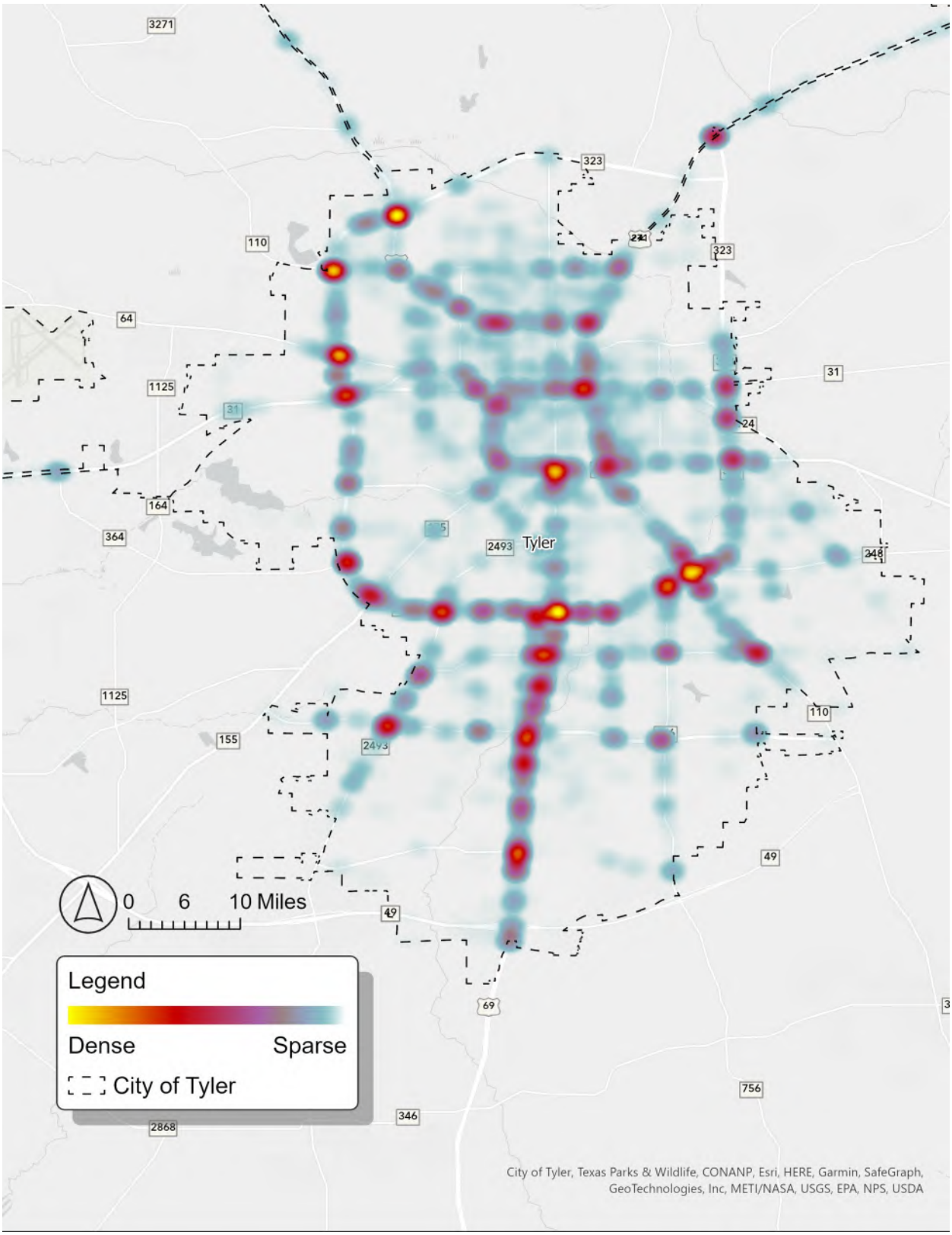
Source: TxDOT Crash Records Information System (2018-2022)

Figure 3-15: Crash Hot Spots for All Crashes (2018-2022)



Source: TxDOT Crash Records Information System (2018-2022)

Figure 3-16: Crash Hot Spots for All Crashes in Tyler (2018-2022)



Crash Rates

A crash rate is a metric representing the number of crashes relative to the amount of travel in a given region or on a given roadway. Utilizing 2016 vehicle miles traveled (VMT) estimates from the travel demand model for the Tyler MPO and 5-year crash data, crash rates for the region were calculated and compared to statewide rates to track the region's relative performance. For the Tyler Area MPO, crashes occurred at a rate of 92.8 per 100 million VMT for all crashes over the five-year period. The fatality and serious injury rates per 100 million VMT were 1 and 3.63, respectively. In comparison to the Texas statewide 5-year rolling averages, the Tyler Area MPO crash rate for all crashes is nearly 50% lower than the statewide rate. The MPO's crash rate for crashes resulting in fatality is about 30% lower than the statewide rate, and the MPO's crash rate for crashes resulting in serious injury is about 25% lower than the statewide rate. Table 3-12 shows the comparison between the Tyler Area MPO crash rates and Texas statewide crash rates.

Table 3-12: Tyler Area MPO Crash Rates vs. Statewide Crash Rates (2018-2022)

Type	Tyler MPA Crash Rates per 100 million VMT	Statewide Crash Rates per 100 million VMT
Total Crashes	92.8	191.22
Crashes Resulting in Fatality	1	1.44
Crashes Resulting in Serious Injury	3.63	4.85

Source: TxDOT Crash Records Information System (2018-2022)

Crash Severity

The severity characteristics of crash data represent the level of impact on the people involved. The data obtained from CRIS breaks severity down into the following categories: Fatal Injury, Suspected Serious Injury, Non-Incapacitating Injury, Not Injured, Possible Injury, and Unknown. These categories represent the most severe impact experienced in each crash, but do not necessarily account for all of the different impacts that may have resulted from the same crash. For example, a crash may be assigned a severity of "Fatal Injury," meaning that the crash resulted in at least one death, and other people involved in the crash may have experienced serious or minor injuries or may not have been injured at all.

Over the five-year period, most of the reported crashes resulted in no injuries (about 64%). In the 70 crashes that were marked with a severity of "Fatal Injury," a total of 224 fatalities occurred. Although 814 crashes were marked with a severity of "Suspected Serious Injury", they resulted in a total of 1560 people suspected to have experienced a serious injury. Overall, crashes that resulted in a severity of "Fatal Injury" or "Suspected Serious Injury" made up about 4% of the total crashes in the region from 2018 to 2022. Table 3-13 shows the breakdown of crashes by severity for the five-year period.

Table 3-13: Tyler Area MPO - Crashes by Severity (2018-2022)

Crash Severity	Number of Crashes	% of Total MPA Crashes
Fatal Injury	224	.80%
Suspected Serious Injury	814	2.91%
Non-Incapacitating Injury	2,869	10.26%
Possible Injury	5,068	18.50%
Not Injured	18,288	65.43%
Unknown	689	2.46%
All Crashes	27,952	100.00%

Source: TxDOT Crash Records Information System (2018-2022)

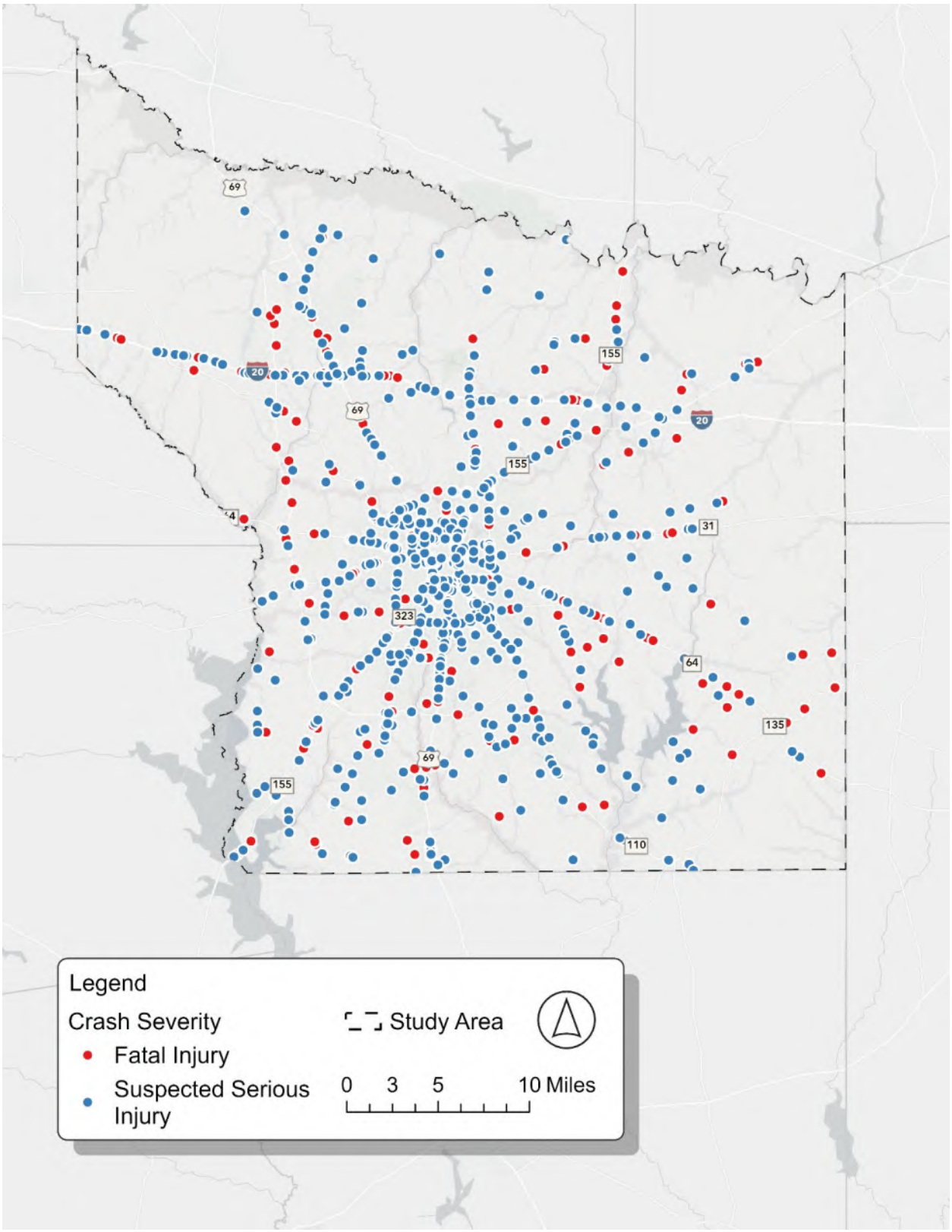
Figure 3-17 shows the locations of crashes that resulted in a severity of either "Fatal Injury" or "Suspected Serious Injury." Table 3-14 lists intersections that were identified to have a higher chance of injury by having at least one fatal injury and multiple serious injury crashes.

Table 3-14: High Injury Intersections

Intersection	Fatal Crashes	Serious Injury Crashes
TX-31 and Sunshine Church Rd	1	13
TX-323 and Kinsey Dr	1	4
FM 2767 and FM 757	1	3
Interstate 20 and TX-155	1	3
Paluxy Dr and TX-323	1	2
State Highway 31 and TX-323	1	2

Source: TxDOT Crash Records Information System (2018-2022)

Figure 3-17: Tyler Area MPO - Locations of Severe and Fatal Crashes (2018-2022)



Source: TxDOT Crash Records Information System (2018-2022)

Crash Manner of Collision

Manner of Collision is recorded using five categories with several subcategories to attribute the manner at which the collision occurred. Table 3-15 displays the top listed manners of collision for the Tyler Area MPO between 2018 and 2022. One Motor Vehicle – Going Straight represented the highest manner of collision with 6,110 crashes or roughly 22% of total crashes. Manner of collision for fatal and severe crashes are displayed in Table 3-16.

Table 3-15: Crashes by Manner of Collision (2018-2022)

Manner of Collision	Number of Crashes	% of Total MPA Crashes
One Motor Vehicle - Going Straight	6,110	22%
Same Direction - One Straight - One Stopped	4,988	17.84%
Same Direction - Both Going Straight - Rear End	3,447	12.33%
Angle - Both Going Straight	3,070	10.98%
Same Direction - Both Going Straight - Sideswipe	2,427	8.68%
Opposite Direction - One Straight - One Left Turn	2,193	7.86%
Angle - One Straight - One Right Turn	1,767	6.32%

Source: TxDOT Crash Records Information System (2018-2022)

Table 3-16: Manner of Collision for Fatal and Severe Crashes (2018-2022)

Manner of Collision	Number of Crashes	% of Total MPA Crashes
One Motor Vehicle - Going Straight	421	40.56%
Opposite Direction - One Straight - One Left Turn	122	11.75%
Angle - Both Going Straight	121	11.66%
Opposite Direction - Both Going Straight	89	10.98%
Same Direction - One Straight - One Stopped	69	8.57%
Same Direction - Both Going Straight -Rear End	67	6.45%
Angle - One Straight - One Left Turn	66	6.36%

Source: TxDOT Crash Records Information System (2018-2022)

Crashes Involving Pedestrians or Bicyclists

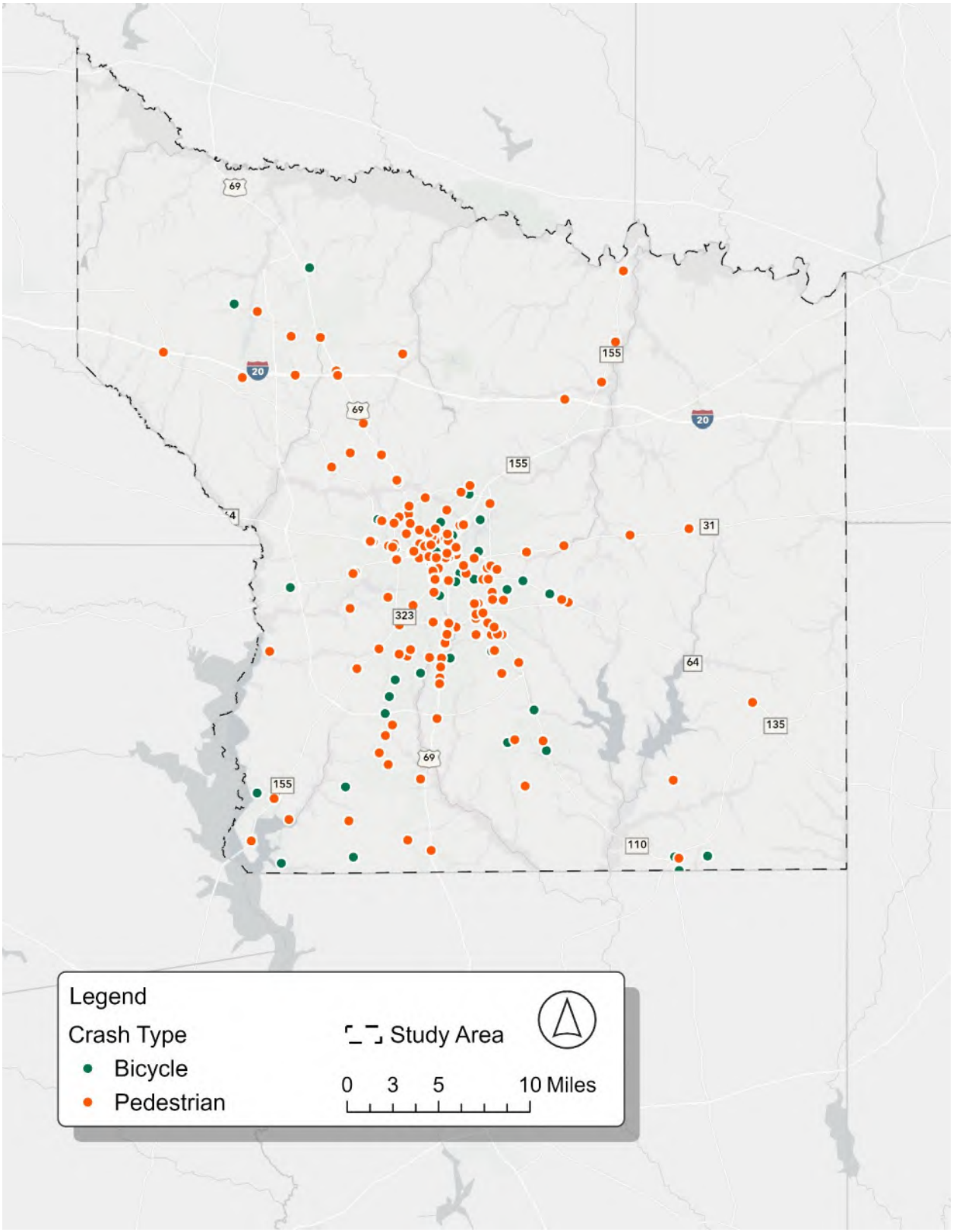
In the Tyler Area MPO, there were 238 crashes involving either pedestrians or bicyclists from 2018 to 2022, which is just under 1% of the total crashes that occurred in the region over that period. Of the 238 crashes, 189 (79%) involved pedestrians and 49 (21%) involved bicyclists. In addition, 45% of crashes involving pedestrians resulted in either a fatality or suspected serious injury for the pedestrian, and 29% of crashes involving bicyclists resulted in either a fatality or suspected serious injury for the bicyclist. Table 3-17 provides a more detailed breakdown of the severity of crashes involving pedestrians or bicyclists. Figure 3-18 shows the locations of all crashes in the region that involved a pedestrian or bicyclist over the five-year period.

Table 3-17: Pedestrian and Cyclist Crashes Resulting in Fatality or Serious Injury (2018-2022)

Crash Severity	Crashes Involving Pedestrians		Crashes Involving Bicyclists	
Fatal Injury	34	18%	3	6%
Suspected Serious Injury	51	27%	11	22%
All Crashes Involving Ped/Bike	189	100%	49	100%

Source: TxDOT Crash Records Information System (2018-2022)

Figure 3-18: Tyler Area MPO - Locations of Crashes Involving Pedestrians or Bicyclists (2018-2022)



Source: TxDOT Crash Records Information System (2018-2022)

Transit

Transit is typically most successful when serving communities with denser concentrations of residents and jobs. Transit propensity looks at population and employment densities as a significant initial measure of transit demand. This analysis relies on Transit Density Benchmarks developed by ATG. These Transit Density Benchmarks are estimated levels of density typically needed to support increasing frequencies of local bus service. Population density benchmarks are measured by the number of people per gross acre, and employment density benchmarks are measured by the number of jobs per gross acre. ATG's Transit Density Benchmarks can be seen in Table 3-18.

Table 3-18: Population and Employment Density Benchmarks

Population Density (people/acre)	Employment Density (jobs/acre)	Recommended Service Frequency
0 - 8	0 - 4	Flexible service
8 - 16	4 - 8	60-minute frequency
16 - 26	8 - 16	30-minute frequency
Over 26	Over 16	15-minute frequency

Source: Tyler Area MPO TDM – Base Year 2018

Population and employment density projections for 2023 and 2050 were calculated from 2023 Tyler area Travel Demand Model data at the Traffic Analysis Zone (TAZ) level. The projections were then compared with the existing transit network in the Tyler Area MPA.

Existing Transit Conditions

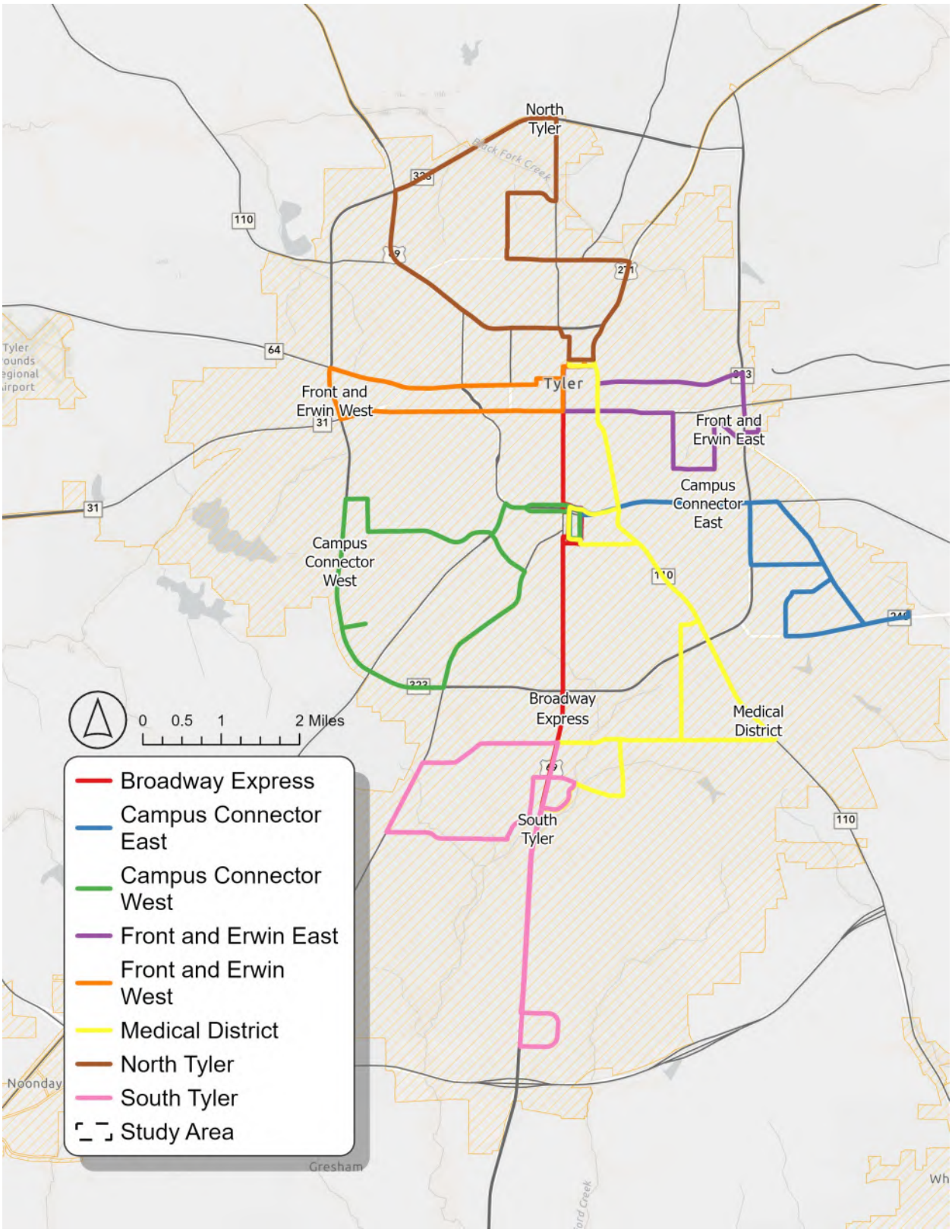
The Tyler Area MPO is currently serviced by six different fixed-route bus lines and, per request, Paratransit service. All fixed routes operate Monday through Friday from 6 AM to 8 PM and Saturday from 9 AM to 6PM. Routes 10, 11, and 14 have 60-minute recurring service frequency. Routes 12 & 20 have a 30-minute recurring service frequency. Route 21 has a 70-minute recurring service frequency. Bus routes can be seen in Figure 3-19, and frequencies can be seen in Table 3-19.

Table 3-19: Bus Routes and Frequency

Route	Frequency	Busses per Day
Route 20 – North Tyler	30-minute frequency	29
Route 12 – South Tyler	30-minute frequency	15
Route 10 – Broadway Express	60-minute frequency	15
Route 14 – Front and Erwin	60-minute frequency	15
Route 21 – Campus Connector	70-minute frequency	12
Route 11 – Medical District	60-minute frequency	15

Source: Tyler Transit

Figure 3-19: Tyler Bus Routes



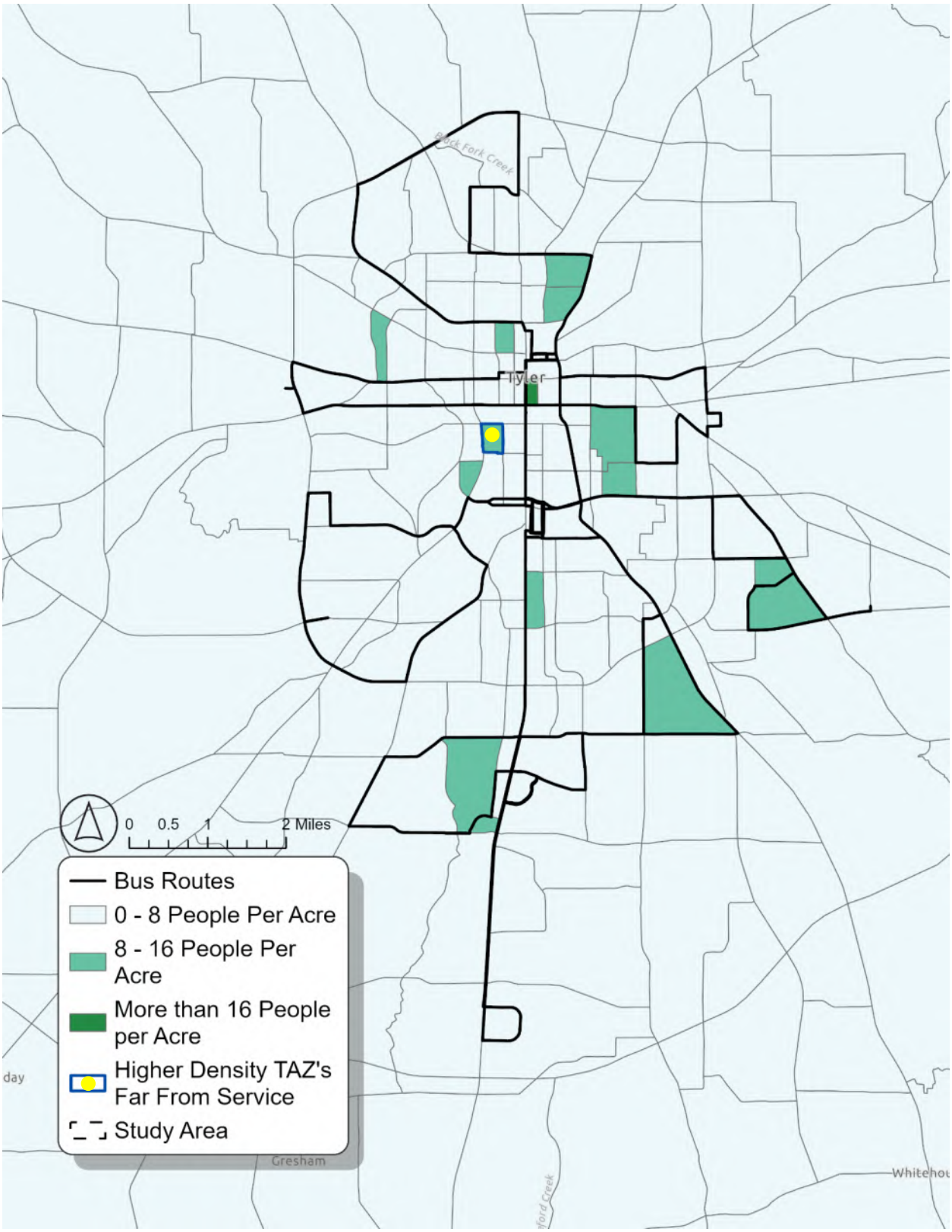
Source: Tyler Transit

Transit Gaps

Figure 3-20 shows the distribution of population density in relation to existing service, with TAZ's outlined in blue as those that are higher density (8 or more people/acre) and more than ¼ mile from fixed-route service. These are gaps in service as a quarter-mile is generally considered to be the maximum distance the average person is willing to walk to transit service. The existing transit network currently serves the highest population density TAZ's with the exception of the highlighted TAZ shown in Figure 3-20. Located in the southwestern region of the Tyler municipal boundary bounded by W Houston Street, W Dobb Street, S Palace Avenue, and S Chilton Avenue, this TAZ is dominantly single-family residential with a fair amount of multi-family residences and a handful of neighborhood commercial properties. This area is adjacent to the downtown region and could benefit from regular transit service.

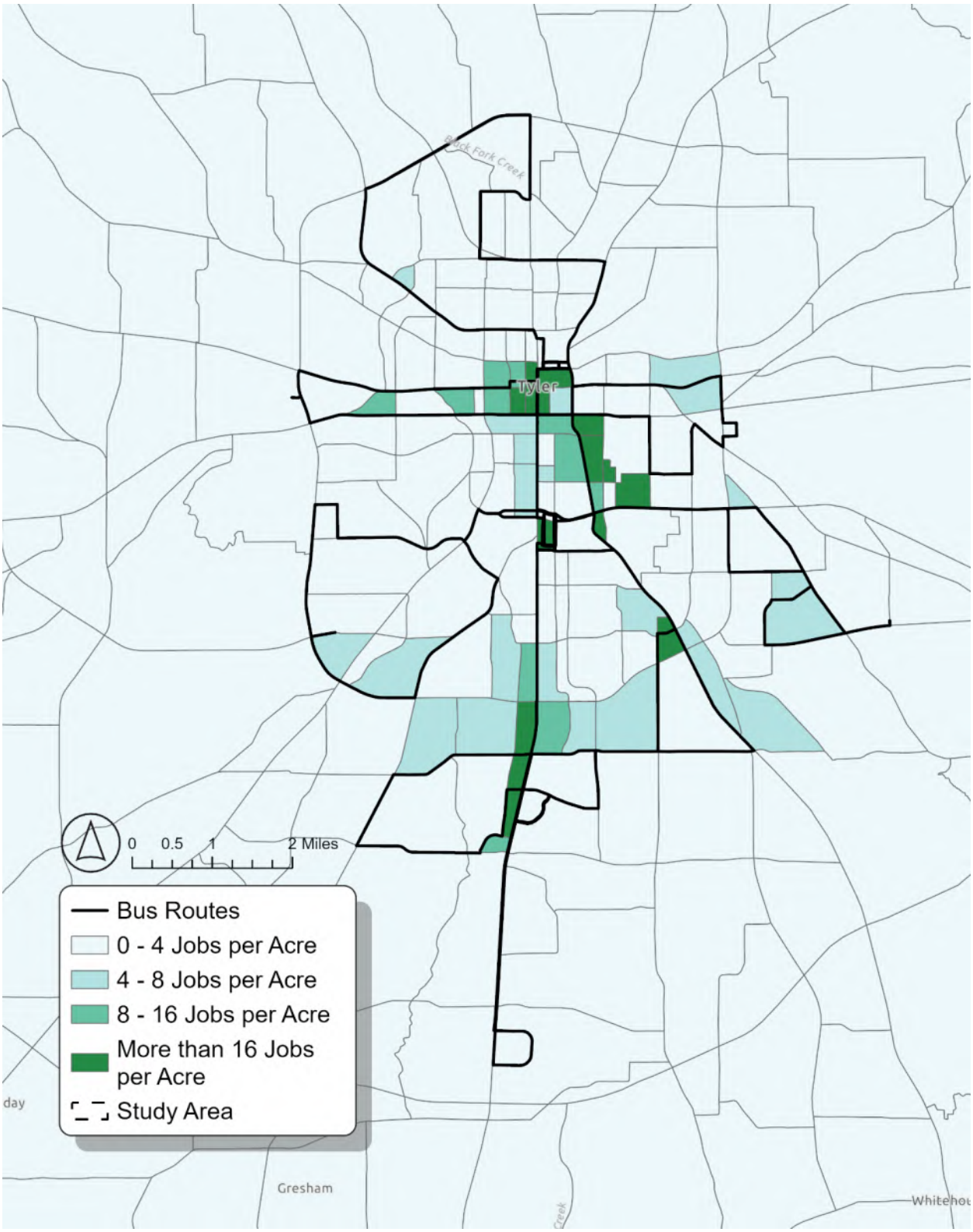
For employment density, the transit analysis found that all TAZ's with more than 8 jobs per acre are within at least a quarter-mile of the transit network. However, a number of TAZ's meet the employment benchmark criteria for more frequent service. Figure 3-21 shows the distribution of employment density, and Figure 3-22 shows a bivariate comparison of employment and population for 2023 illustrating the highest levels of both located centrally in Tyler.

Figure 3-20: Tyler Area MPO 2023 Population Density and Bus Routes



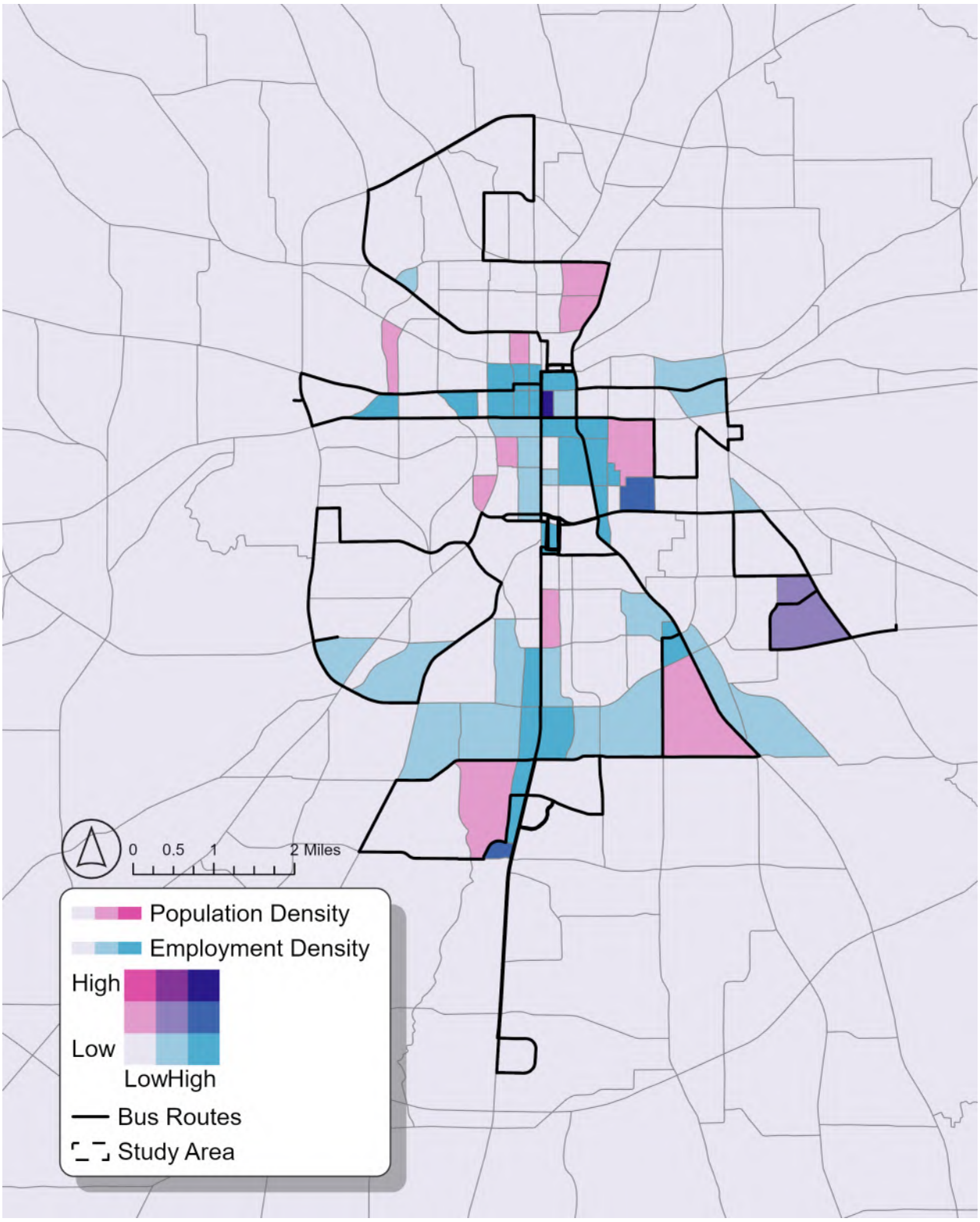
Source: Tyler Area MPO TDM – Base Year 2018, Tyler Transit

Figure 3-21: Tyler Area MPO 2023 Employment Density and Bus Routes



Source: Tyler Area MPO TDM – Base Year 2018, Tyler Transit

Figure 3-22: Population and Employment Bivariate Comparison 2023

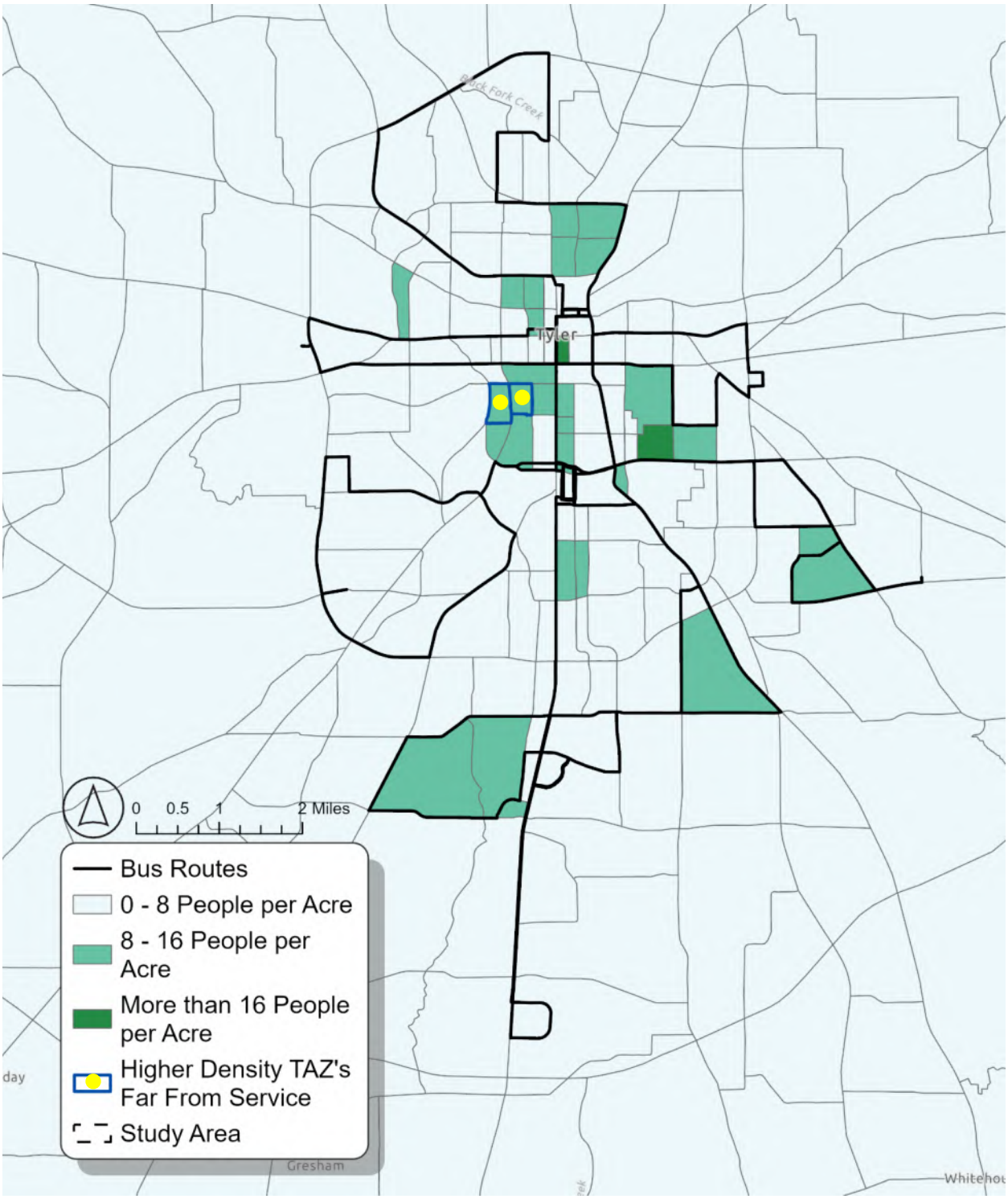


Source: Tyler Area MPO TDM – Base Year 2018, Tyler Transit

Future Transit Needs

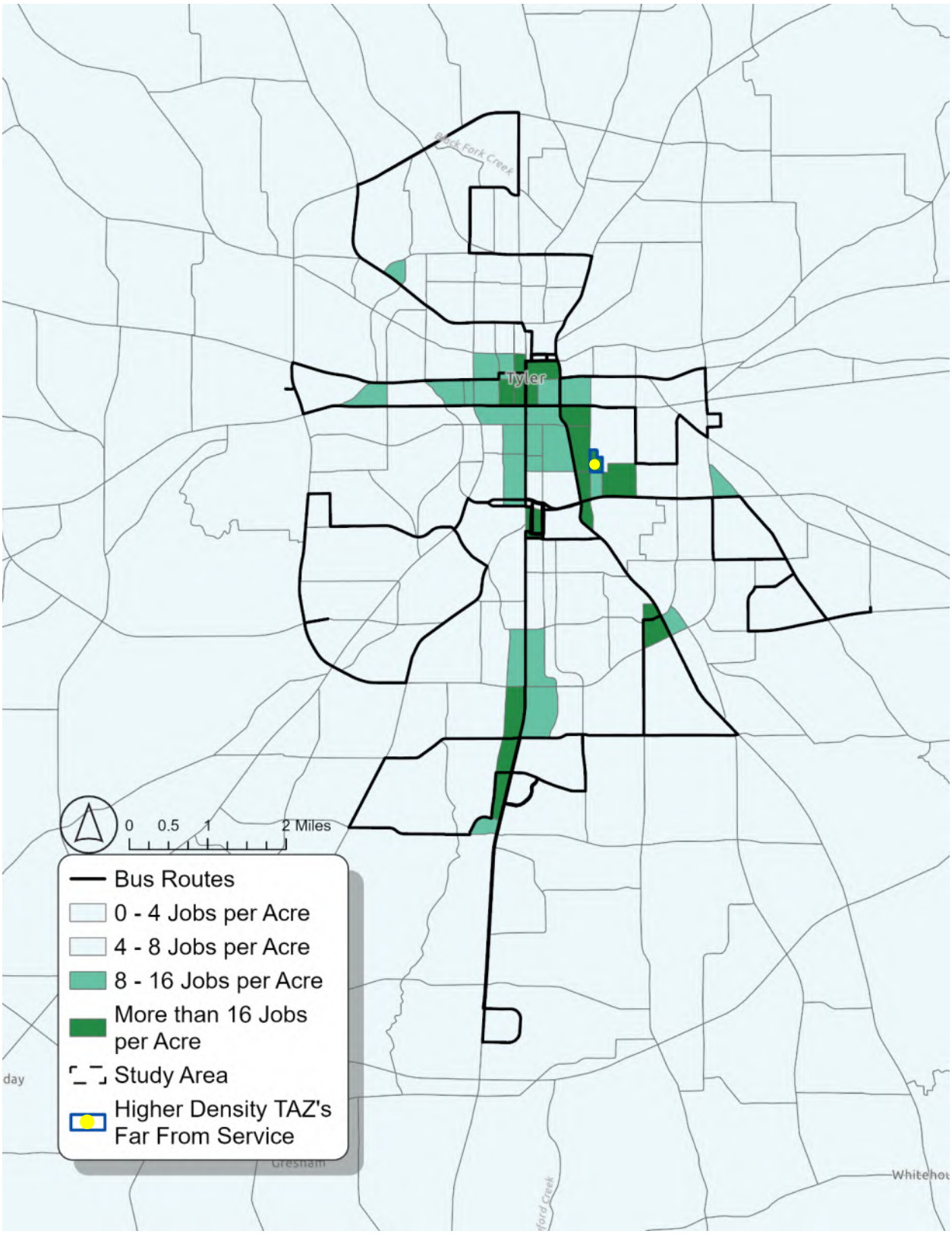
Population and employment projections for 2050 were taken from the TDM data and used to predict future transit needs. Figure 3-23 displays the population density for 2050 and compares it with the existing transit network, with blocks outlined in blue as those that are higher density (8 or more people/acre) and more than ¼ mile from fixed-route service. Figure 3-24 displays the employment density for 2050 and compares it with the existing transit network, with blocks outlined in blue as those that are higher density (8 or more jobs/acre) and more than one quarter-mile from fixed-route service. A number of TAZ's meet the employment threshold criteria for more regularly occurring service. Figure 3-25 shows a bivariate comparison of both population and employment for 2050 showing a robust growth of population and employment in the Tyler city center and around the existing transit network.

Figure 3-23: 2050 Population Density and Existing Transit Network



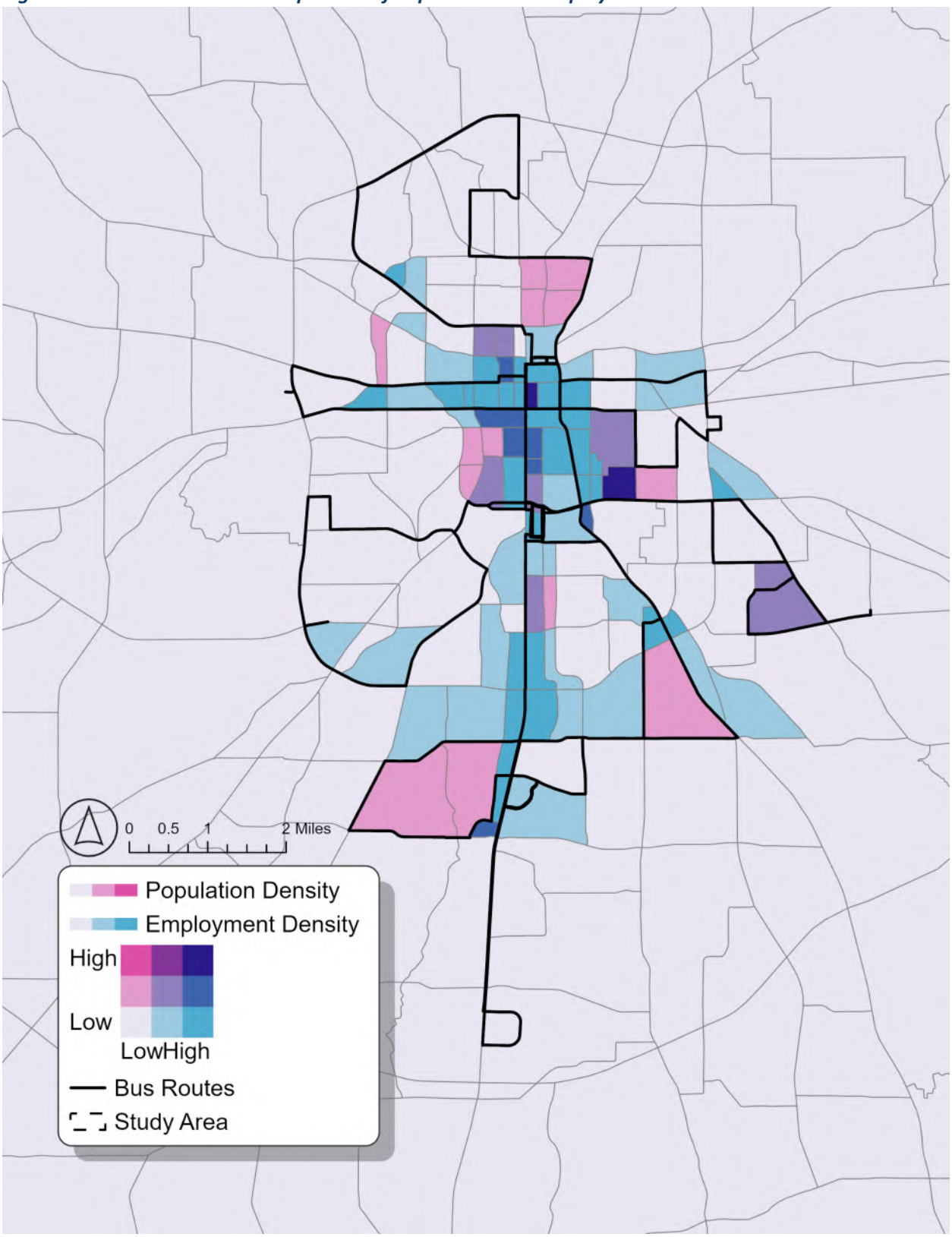
Source: Tyler Area MPO TDM – Base Year 2018, Tyler Transit

Figure 3-24: 2050 Employment Density and Existing Transit Network



Source: Tyler Area MPO TDM – Base Year 2018, Tyler Transit

Figure 3-25: 2050 Bivariate Comparison of Population and Employment



Source: Tyler Area MPO TDM – Base Year 2018, Tyler Transit

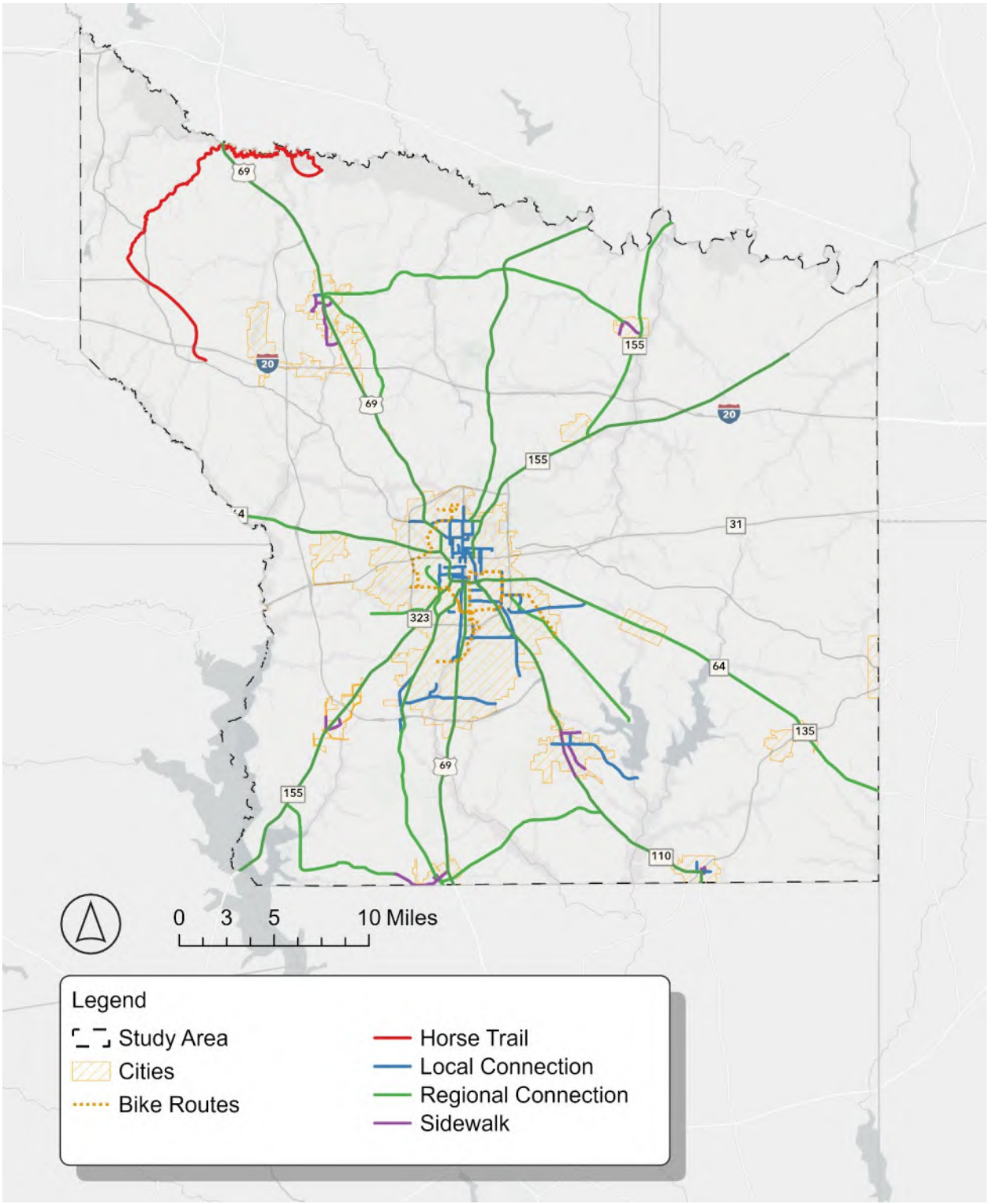
Active Transportation

The 2019 Active Tyler Transportation Plan outlines a vision for improving cycling and walking in the region and has recommendations for:

- **An Equestrian Trail** that links the Texas Rose Horse Park to the Mineola Nature Preserve
- **Regional Connections** that provide connectivity to several communities over a long distance.
- **Local Connections** for bicycle and pedestrian facilities within the municipality, and
- **Sidewalks** that increase walkability and access.

The Active Tyler Plan aims to encourage more people to walk and bicycle while informing them of the benefits of active transportation. The Plan also aims to connect people to important places as shown in Figure 3-26. As projects are scored for this MTP update, whether or not the project includes recommendations from the Active Tyler Plan will influence the number of points that the project will score for criteria related to improving quality of life and active transportation options.

Figure 3-26: 2019 Active Tyler Transportation Plan



Freight and Intercity Transportation

There are a number of other means of transportation for people and goods within the Tyler Metropolitan Study Area. This includes freight trucking, intercity bus, freight and passenger rail, as well as regional air travel.

There are currently no intermodal facilities for freight according to the Bureau of Transportation Statistics (BTS) within Smith County, though IH-20 and US 69 both provide important freight connectivity for local tucking fueled by agriculture and logging as well as connectivity for pass-through freight travel. The state of good repair and reliability of travel times along these freight critical roadways is important to ongoing freight resilience and is considered in the assessment of projects proposed for funding consideration in this MTP.

Rail Facilities

There are 123 registered railroad crossings within the study area, all owned by Union Pacific. 62 of the crossings are registered as main track crossings while the rest are registered as either sidings, yard track crossings, or industry track crossings, with 36 being identified as "other." Coordination with UP on rail grade crossing closures for surface-level roads is coordinated through participating municipalities and UP on an as needed basis. The majority of the rail facilities in the study area either mostly parallel US 31 diagonally up and along FM 155 Southwest/to Northeast, or along FM 110 running more North and South from Troup to Lindale. Additionally, a spur runs from Troup in the south portion of Smith County up northeast to the County Line just south of Overton. This is shown, along with regional aviation facilities in Figure 3-27.

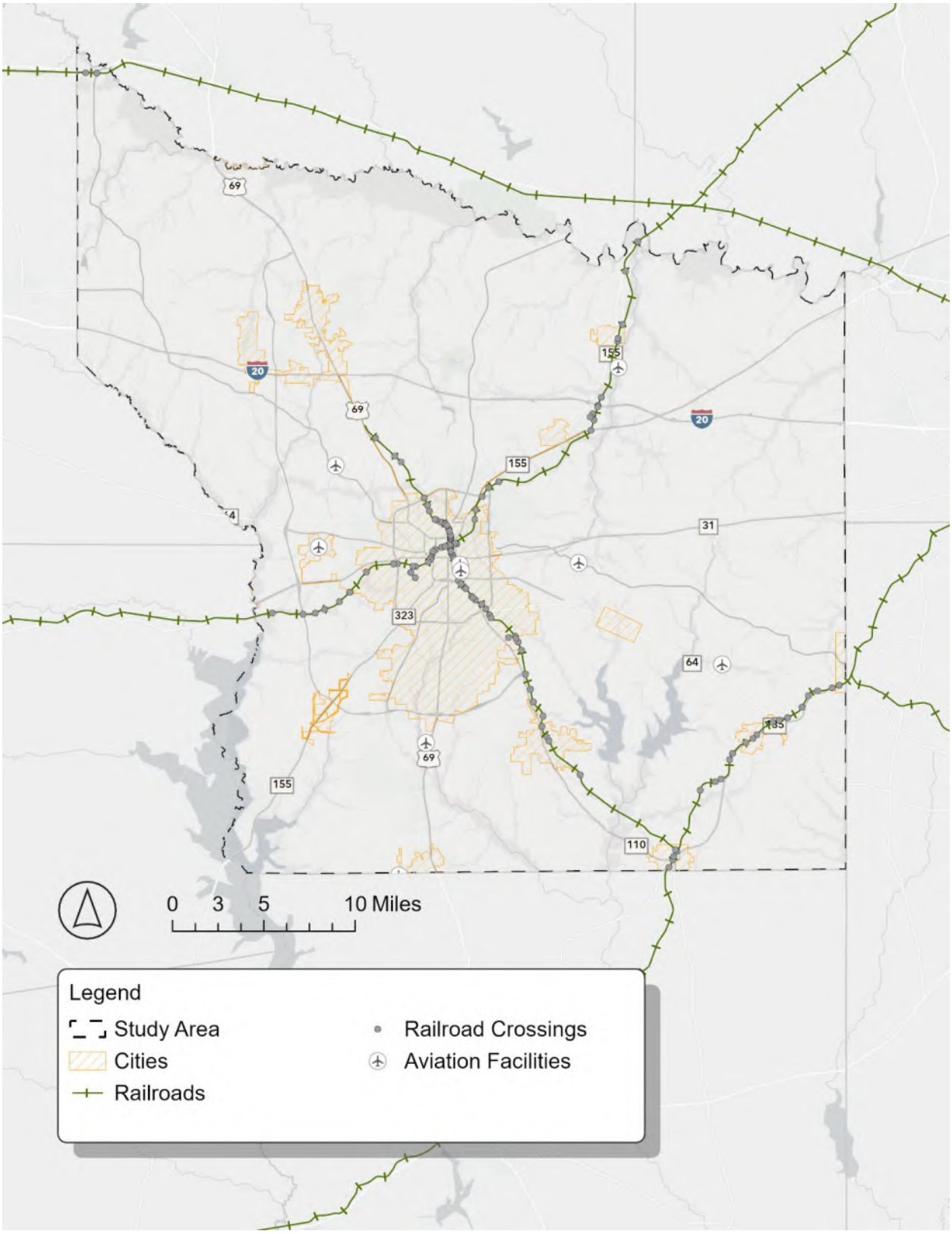
Aviation Facilities

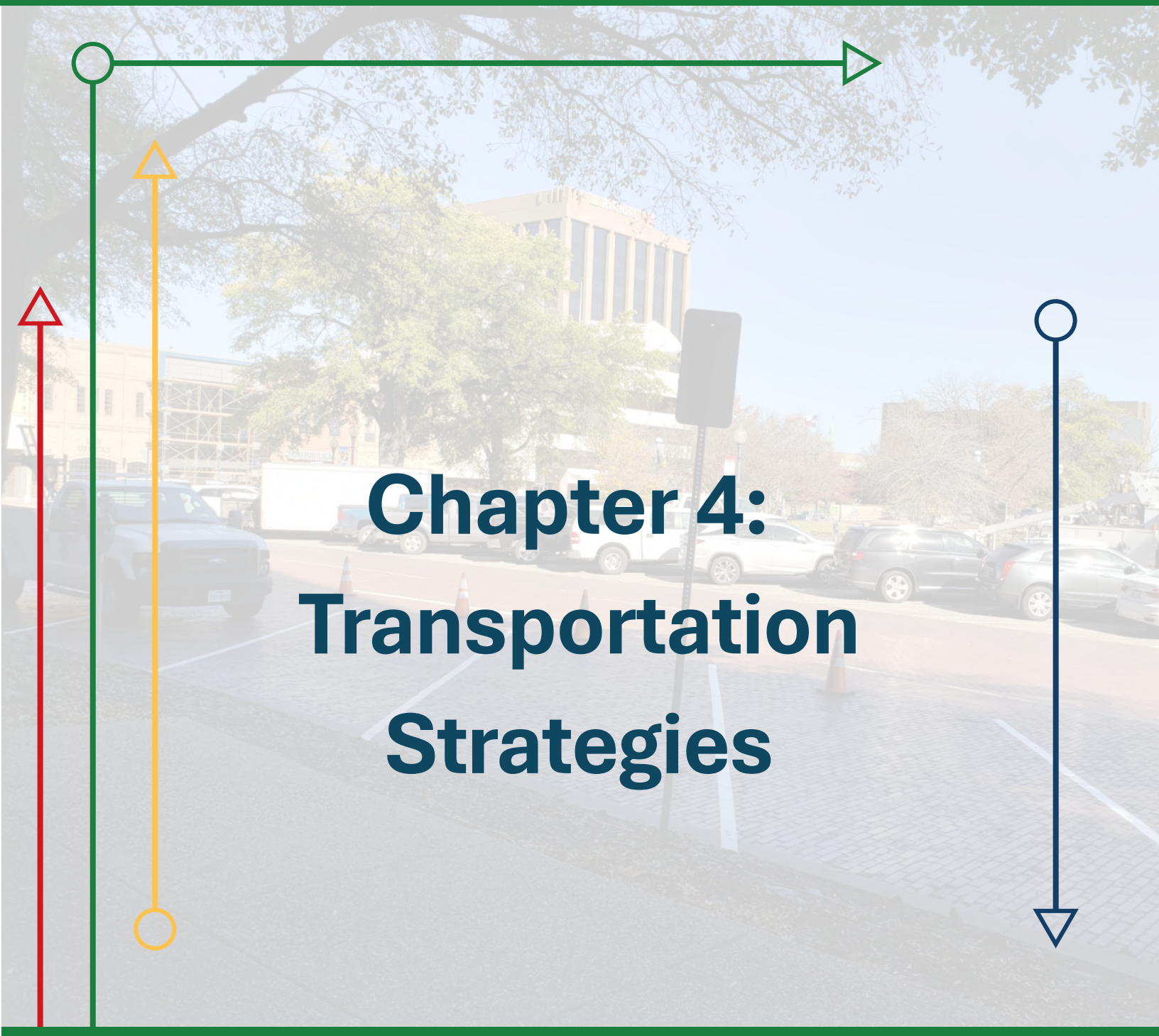
There are eight aviation facilities registered with the BTS, with the Tyler Pounds Regional Airport being the only facility used for passenger air travel. Two of the registered aviation facilities are emergency helipads located at the Mother Frances Hospital and the Ut Health East Texas Tyler Regional Hospital, and the remaining five facilities are rural facilities that largely support agriculture and private aircraft usage. [2] According to the T-100 domestic Market and Segment Data table from the US DOT BTS, the Tyler Pounds Regional Airport (TYR) does not receive any freight goods but did have 50,146 enplanements, with 50,210 passengers from 1,055 departures and arrivals from 2023. [3] These facilities, along with the rail-grade crossings described above are shown in Figure 3-27. As with other components of this needs analysis, these findings are considered in the assessment of proposed projects through the project scoring and prioritization process.

[2] Aviation Facilities | Aviation Facilities | Geospatial at the Bureau of Transportation Statistics (arcgis.com) accessed 7/23/2024

[3] T-100 Domestic Market and Segment Data | T-100 Domestic Market and Segment Data | Geospatial at the Bureau of Transportation Statistics (arcgis.com) accessed 7/23/2024

Figure 3-27: Aviation Facilities and Rail Grade Crossings





Chapter 4: Transportation Strategies

Tyler Area MPO
2050 Metropolitan Transportation Plan

Increasing roadway capacity through expanding or building infrastructure is not always the best method to meet mobility needs of the region. Non-capacity building strategies can be used to meet transportation goals. This chapter will discuss strategies such as Travel Demand Management (TDM) and Transportation System Management and Operations (TSMO), which do not always require the construction of transportation facilities. In addition, this chapter will discuss capital project strategies and the associated project selection process.

Since transportation funding resources are limited, a combination of major capital projects and other strategies can better serve to leverage available funding for greater impacts on regional mobility. This chapter is intended to serve as a toolkit of possible strategies to inform investment in the transportation system.

Transportation Demand Management (TDM)

Transportation Demand Management (TDM) is a set of strategies to maximize travel choices, optimize transportation systems, reduce congestion, and promote sustainable travel options. In short, TDM strategies reduce the number of vehicles on the road in order to reduce traffic congestion. Some TDM strategies discussed below include improving and incentivizing alternative modes of transportation, managing parking and land use, and other policy and institutional reforms. TDM strategies can be used to achieve the following goals:

- Improve mobility and accessibility by expanding and enhancing the range and quality of available travel choices
- Reduce congestion and improve system reliability by decreasing the number of vehicles using the roadway, especially at peak times
- Increase safety by addressing congestion, which is generally related to higher occurrences of traffic incidents
- Improve air quality by reducing the number of vehicle miles traveled.

Given limited funding, TDM strategies can be cost-effective ways to influence travel behavior and achieve transportation goals. Moreover, TDM strategies become more effective at reducing single occupancy vehicle travel when implemented alongside other strategies as part of a targeted program to manage transportation demand.

Improved Alternative Transportation Options

Access to transit and active transportation facilities (for walking and cycling) allows residents and visitors to have options for modes of travel. Alternative transportation facilities should be accessible for all ages and abilities. Utilizing carpool, vanpool, school pool programs, and Transportation Network Companies (TNCs) such as Uber and Lyft, are another way to increase transportation options and vehicle occupancy. Strategies to improve transportation options focus on the following objectives:

- Expand the service area of transit (regional and local) and connect bicycle and pedestrian infrastructure to transit facilities to reach more citizens, increasing connectivity to key destinations within the region
- Improve the quality of transit service to increase convenience, comfort, ease of access, and affordability to encourage mode switch by providing various levels of service focused on community context
- Consider utilizing park-and-ride facilities, dedicated bus lanes, and other transit improvements to reduce traffic congestion and increase transit efficiency
- Install pedestrian crossings/crosswalks in appropriate locations that tie into existing or proposed sidewalks so that walking is an accessible and safe transportation choice
- Improve safety for vulnerable road users by installing street lighting, signage, and reducing speed limits
- Create hike/bike trails and bicycle paths that are separate from vehicle traffic
- Educate the public on the availability of various alternative transportation modes and services and provide intuitive and accessible resources to help travelers navigate the region.

The 2019 Active Tyler Transportation Plan provides a comprehensive vision for active transportation facilities in the MPO area. The purpose of the plan is to help guide investment for transportation projects in each of the communities in the Tyler region and encourage active transportation in the greater Tyler area. The first goal of the plan is to encourage active transportation as a mode choice. Individual projects to improve active transportation facilities are listed for the cities of Arp, Bullard, Lindale, New Chapel Hill, Tyler, Noonday, Troup, Whitehouse, and Winona, along with several regional connection projects in Smith County.

In addition, the 2021 Tyler Texas Transit Route Study makes recommendations on ways to improve public transportation services in the Tyler area, making transit an effective transportation option for the general public.

Incentives to Use Alternative Modes

Providing adequate cycling facilities, pedestrian infrastructure, and transit service enables people to have a choice in how they get to work, school, or other destinations. By working with employers, schools, and other entities, incentives to use alternative modes of transportation can encourage more people to make a switch. The commute to and from work is a significant contributor to traffic congestion along area roadways, particularly during peak travel times. TDM strategies that focus on employer-based tools and incentives can be an effective way to reduce travel by single-occupant vehicles. Examples include the following:

- Transit passes and bike storage to enable other modes of commuting
- Carpool coordination and carpool priority parking
- Remote work or flexible schedules to reduce or shift times of travel

- Locating in developments with a mix of employment, residential, and service uses to shorten the work commute and reduce the need for midday trips
- Providing route information to divert commuters from congested routes.

The 2021 Tyler Texas Transit Route Study recommends the development of a commuter benefits program for employers. A partnership between the transit agency and employers could include transit discounts, covering employee transit fares, a guaranteed ride home program, or vanpool sponsorship.

Land Use

Land use factors significantly impact travel behavior. Typical development patterns have generally encouraged a separation of land uses, requiring more trips to be made by automobile due to large distances between origins and destinations. Land use policies that encourage density and mixed uses can be utilized to encourage alternative modes of transportation and reduce the number of automobile trips. In addition, automobiles require significant portions of land for parking. Making changes to policies regarding parking can influence travel behavior and disincentivize single-occupant vehicle trips. Land use strategies include development management and urban design, transit-oriented development planning, and roadway design guidelines and standards. Discussed further in this section are the strategies of Smart Growth, Complete Streets, and parking management.

The Tyler Comprehensive Plan lists principles to guide future land use. These include promoting high-density mixed-use centers in key locations and opportunity areas that could serve as future transit hubs and promoting development patterns for walkable environments. In addition, the comprehensive plan calls for "well-designed streetscapes and parks – all while accommodating cars and parking, but without acres of asphalt as the primary visual experience."[1] These land use considerations can influence travel behavior ultimately reducing the number of vehicles on roadways.

Smart Growth

Mixed-use development and increased density in transit corridors can enable alternative modes of transportation and thus reduce roadway congestion. Smart growth generally refers to the protection and preservation of valuable natural and cultural resources through the encouragement of more compact development patterns that optimize the use of existing transportation infrastructure. Smart growth development is characterized by higher population and employment densities and a mix of land uses, which increases the viability of public transportation, walking, and biking as viable transportation modes. Since smart growth principles encourage redevelopment and infill of existing areas, investment in the transportation system is focused on the maintenance and operation of existing roadway infrastructure and providing safe opportunities to travel by bike or foot, rather than on building costly new roadways in previously undeveloped areas. It is important to note that smart growth does not mean building dense high-rise structures or pitting transit or any other modes against highways. Instead, smart growth is about tailoring choices for individual settings. For example, in a suburban or rural community, Smart Growth may mean building smaller detached homes on smaller lots within walking distance of schools and other

[1] Tyler 1st Comprehensive Plan Update.
https://tyler1stupdate.weebly.com/uploads/1/2/4/3/124380494/12._future_land_use.pdf pg. 434 & 443.

amenities. Smart Growth encourages the development of a balanced intermodal transportation system that allows for the efficient and economical movement of people and goods.

Complete Streets

Complete Streets refers to an approach to street infrastructure that enables safe access for all people, including pedestrians, bicyclists, motorists, and transit riders of all ages and abilities. Each complete street is unique to its setting and context, but may include features like bike lanes, sidewalks, bus lanes, median islands, pedestrian signals, bus stops, cross walks, curb extensions, or roundabouts, as needed. In some cases, improvements to incorporate complete streets elements do not require extensive construction. Road striping, warning signs, streetscaping, and landscaping can improve safety for pedestrians and cyclists.

The Complete Street approach has been recommended and utilized locally within the region. For example, the City of Tyler's Comprehensive Plan notes that the Master Street Plan (MSP) supports Complete Street design concepts such as medians, safe biking areas and reduced travel lanes, and human-scaled features.[2] In addition, the City of Bullard's Comprehensive Plan also incorporates the Complete Streets approach to take all road users into account in a manner that is sensitive to local contexts. The Tyler Area MPO 2019 Active Tyler Plan explains that all cities within the MPO area can adopt Complete Streets policies that apply to all new roads.

Parking Management

Parking management strategies and incentives encourage the use of alternative modes and can be implemented by both local jurisdictions and employers. These strategies typically rely on disincentivizing travel of single occupant vehicles by passing along more of the cost of parking and/or limiting the availability of parking. In addition, parking enforcement can be used to prevent automobiles from parking in ways that may be harmful to or discourage pedestrian and bicycle travel. Appendix B to the Active Tyler plan outlines design guidelines for parking near different types of bike lanes.

Policy and Institutional Reforms

Requiring policy incorporation of TDM strategies is one way such measures can be prioritized over roadway expansions. Projects reducing the number of vehicles on the road would be completed before adding more lanes which potentially increase demand and worsen traffic. Moreover, policies can be used to prioritize ADA sidewalk rehabilitation and the collection of sidewalk and roadway condition data.

Other TDM strategies can include institutional reforms to change travel behavior. Marketing and educational campaigns designed to teach people about the benefits of and laws related to walking and cycling can help people become more comfortable using alternative modes of transportation. These steps can increase the public's awareness of the availability of various alternative transportation modes and services, exposing them to intuitive and accessible resources to help effectively navigate the region.

[2] Tyler 1st Comprehensive Plan Update.
https://www.cityoftyler.org/home/showpublisheddocument/5587/638379037974170000 pg. 398.

TDM Resources/Tools

The following tools and resources can be used to help evaluate the appropriateness of TDM strategies:

- Mobility Lab Transportation Cost Savings Calculators https://mobilitylab.org/resources/calculators/
- Commute Duration Dashboard Guide: Mapping Commute Travel Times to Evaluate Accessibility (Todd Litman, Hillary Nixon, PHD, and Cameron Simons, 2021) https://transweb.sjsu.edu/research/2064-Commute-Duration-Dashboard-Guide
- Online TDM Encyclopedia (Victoria Transport Policy Institute) https://www.vtpi.org/tdm/

Transportation Systems Management and Operations (TSMO)

TSMO is a way to holistically manage the transportation network and optimize existing infrastructure through integrating planning and design with operations and maintenance. TSMO aims to maintain and preserve the capacity of existing roadways before additional capacity is needed. Maintenance, operation, and the use of technology are all components of TSMO strategies.

The TxDOT Tyler District TSMO Program Plan contains the following action items:

- Implement Traffic Incident Management (TIM) response measures for major construction
- Provide work zone closure information through third-party apps
- Establish regional multidisciplinary TIM training
- Conduct annual regional traffic operations forums
- Develop an Intelligent Transportation System (ITS) Master Plan
- Improve TIM data collection
- Establish a formal regional TIM team
- Expand work zone technology deployments
- Plan and implement surveillance technology for signals
- Improve communications capabilities of signals to monitor and respond to conflicts, outages, and changes in traffic patterns
- Establish a regional traffic management center (TMC)
- Implement additional ITS field devices (such as additional CCTV cameras and Dynamic Message Signs).

Maintenance

Infrastructure maintenance is a critical aspect of transportation system management and operations. Most infrastructure management agencies prefer to schedule routine repairs and inspections instead of embarking on ad-hoc patching and repairing. Schedule management for inspection and street repairs enables city and county personnel to efficiently utilize limited resources. Regularly scheduled roadway resurfacing is necessary to provide uniform improvements to the existing roadways and to extend their useful life. Older roads, especially those built according to discontinued standards, should be reviewed to upgrade deficient sections based on modern design standards. Preventive maintenance and rehabilitation projects are one of the priority investment areas for the Tyler District.

Transportation infrastructure is no longer limited to concrete pavement and asphalt. Recent improvements in operations and data collection methods have led to digital controls and integrated computer networks that require maintenance and management. The TSMO Program Plan repeatedly mentions traffic signal maintenance and weather maintenance as areas of need or incorporated as part of implementation steps.

Technologies

As described above, transportation infrastructure includes digital controls and other devices and technology. Technological advancements in the transportation sector come in several forms, such as vehicle technology, fuels, data collection, driver information services, and infrastructure. The incorporation of technology into transportation management and operations to improve safety, reliability, and efficiency is referred to as Intelligent Transportation Systems, or ITS. For example, roadways and intersections can be remotely surveilled with ITS devices monitoring flood conditions and informing travelers of hazards or monitoring real-time traffic conditions enabling adaptive signal control.

Intelligent Transportation Systems (ITS)

The TxDOT Tyler District identified the need for a regional ITS master plan in the TSMO Program Plan. In 2020, the City of Tyler completed its own ITS master plan. The City's ITS plan notes a need for the following ITS devices and systems:

- Modernized traffic control cabinets and upgraded signals
- Improved communication and remote monitoring of school zone flashing beacons
- Battery backup units (BBUs) for traffic control cabinets
- Emergency vehicle pre-emption systems through physical/infrared or automated vehicle location (AVL) and global positioning system (GPS) devices
- Closed-circuit television cameras (CCTV) for intersection monitoring
- Deployment of cellular modems and install high bandwidth secure wireless radio network

Operations

Traffic Signal and Intersection Improvements

Roadway users encounter traffic control signage and intersection signals on nearly every route they travel. While the primary function of intersection traffic control is to improve safety at intersections, it is also often a significant source of delay. Improper signage and poor signal timing results in unnecessarily long queues and impacts the reliability of the transportation system. Improving signage, signal timing, and equipment is a cost-effective way to facilitate traffic flow along a corridor. The MPO can work with its planning partners to identify corridors which would benefit from traffic signal improvements and to prioritize projects.

Traffic Signal Optimization

The timing and phasing of signalized intersections should be reviewed periodically, especially in areas of rapid development or increased commercial activity. Most intersections should be reviewed for appropriate timing and phasing every six months, while more heavily traveled intersections could be reviewed more frequently. Whenever possible, the signal heads and controls should be uniform to facilitate ease of coordination and servicing of hardware. In locations of due east or due west travel, back plates and directional signal heads may be advantageous to improve visibility. In locations with significant wind and severe weather concerns, mast arm and pole dimensions should be designed appropriately. Traffic signals can also be coordinated along a corridor or throughout an entire system. As traffic volumes increase, signal coordination can be used to optimize high-priority traffic corridors and increase the throughput of critical thoroughfares.

Adaptive signal control, which adjusts the timing of traffic lights based on real-time travel conditions, can also provide significant relief to congested corridors and cut costs associated with traffic signal timing data collection and computation.

Signal Pre-Emption

On busy roads with highly used transit routes, transit signal priority or pre-emption can improve the operations of the transit system. Transit signal priority refers to technology that reduces dwell time for transit vehicles at signalized intersections, typically by holding green lights longer or shortening the duration of the red-light cycle. The same kinds of technology can also be employed for emergency vehicles. Equipping all intersections to accommodate signal prioritization can facilitate the deployment of such systems commensurate with demand.

Access Management

Access management refers to the regulation of the number of access points between a development and the adjacent roadway network. Most discussions of access management involve the placement and number of driveway curb cuts, although the application can also include the location, size, and function of interior service roads. Many access management solutions involve installation of roadway medians where feasible to limit turning movements and improve traffic flow and safety. For example, the Tyler comprehensive plan explains that access management strategies improve safety for pedestrians, cyclists, and transit riders by limiting the number of conflicts between vehicles and other road users.

Targeted / Traffic Enforcement

Consistent and reliable enforcement of traffic laws helps address public concerns about traffic issues. In areas with complaints about speeding and reckless or inconsiderate driving, proactive measures by law enforcement can gain the public's trust and compliance. Focused speed studies (using radar trailers and traffic counters) can be employed to discourage speeding on residential streets.

Traffic Calming

Because there are many instances where the number of aggressive drivers is greater than human resources can address, many cities and counties have implemented various "self-enforcing" speed and volume control devices. Most of these are referred to as "traffic calming" measures. These physical devices can assist law enforcement in influencing driver behavior. Traffic calming is often controversial and can be challenging to discuss.

Most traffic calming measures are applied to residential streets, though certain measures can be applied to higher volume roadways as well. Broadly defined, the goals of traffic calming measures are to:

- Slow down the average vehicle speeds for a particular roadway
- Address excessive volumes for a particular roadway
- Remind drivers of or reinforce the residential nature of specific roadways.

Traffic calming measures are designed to slow down or impact all vehicles. In practice, this can lead to reduced access and response times for emergency and law enforcement personnel. Careful consideration must be given to any proposed traffic calming device, especially if the roadway under review provides critical access for emergency personnel.

Traffic Incident Management

Traffic Incident Management (TIM) consists of a planned and coordinated process to detect, respond to, and quickly clear traffic incidents so that traffic flow may be restored as safely and quickly as possible. Effective TIM strategies reduce the duration and impacts of traffic incidents and improve the safety of motorists, crash victims, and emergency responders. Traffic incident management involves coordination among a number of public and private sector partners, including those responsible for:

- Law enforcement
- Fire and rescue
- Towing and recovery
- Traffic information media
- Transportation departments
- Public safety communications
- Hazardous materials contractors
- Emergency medical services (EMS)
- Emergency management and preparedness

City of Tyler ITS Master plan notes that there is a need for traffic incident management (TIM) training and regional video sharing with neighboring cities and agencies to better coordinate incident management

and emergency response. If applicable, components of TIM could be incorporated into other transportation improvement projects and initiatives.

TSMO Resources / Tools

- TxDOT TSMO Strategic Plan (2021 update) https://ftp.txdot.gov/pub/txdot-info/trf/tsmo/statewide-strategic-plan.pdf
- TxDOT Tyler District TSMO Plan (2021) https://ftp.txdot.gov/pub/txdot-info/trf/tsmo/tyler-tsmo-program-plan.pdf
- City Of Tyler ITS Master Plan (2020) https://www.cityoftyler.org/home/showpublisheddocument/5751/637394914504330000
- TxDOT TSMO Evaluation Tool (2021) https://ftp.txdot.gov/pub/txdot-info/trf/tsmo/tsmo-evaluation-tool.pdf
- AASHTO One-Minute Guidance Evaluation http://www.aashtotsmoguidance.org/one_minute_evaluation/

Infrastructure Investment Strategies

Projects were identified by reviewing existing MPO planning documents (such as the Active Tyler Plan) and ongoing planning efforts. In addition, MPO planning partners and member jurisdictions (such as the City of Tyler, Smith County, and TxDOT) were invited to submit new projects, update, or maintain previously submitted projects considered in the 2045 MTP. All projects submitted were incorporated into a project list that progressed to an initial technical review by MPO and project staff prior to being advanced to the project prioritization and selection process. A number of projects were noted as illustrative as they were either locally funded and/or off-system.

Each project included in the Draft Unconstrained 2050 MTP Project List for scoring included detailed project descriptions and was compared through GIS analysis to the proposed improvements in the Active Transportation Plan (ATP). Additional descriptions were added for projects where ATP components may be possible for inclusion, noting what type of Active Tyler component would be included in the project.

Project Prioritization and Selection

MPOs are required to consider strategies and projects that address the ten planning factors outlined in 23 CFR 450.306. Based on these planning factors and the TDM and TSMO considerations previously outlined, a specific set of project evaluation criteria was developed for TAMPO to ensure each aspect of the factors was taken into consideration in assessing the merits of the proposed projects.

The Technical Advisory Committee and Policy Committee incorporated the federal planning factors and the items required by the IIJA to create a project scoring process that determines regional priorities and develops the final project list. The scoring criteria is described below:

1. **Improve Safety and Security**
    - Use CRIS and ESRI to determine the number of fatalities and serious injuries along each project over the past 5 years
        - 1 point if no crashes were recorded along the project
        - Add 0.1 point for each crash recorded along the project maxing out at 3 points
        - 3 points for project with 20 or more crashes
2. **Increase Connections and Access**
    - Determine if the project connects to the sidewalk network or includes other components to improve connections and access.
        - 0.5 point if project includes frontage road or continuous center turn lane
        - 0.5 point if ADA infrastructure is included
        - 0.5 point if the project fills in gaps in the current sidewalk network
        - 0.5 point if project includes intersection improvements accommodating multimodal travel
3. **Improve Airport Access**
    - Create a 5 mile and 10-mile buffer around the airport
        - 3 points if the project is located within 2.5 miles
        - 2.5 points if the project is located within 5 miles
        - 2 points if the project is located within 7.5 miles
        - 1.5 points if the project is located within 10 miles
        - 1 point if the project is located more than 10 miles away
4. **Reduce Congestion**
    - Utilize TransCAD analysis or COMPAT tool to average project results on the vehicles per day (VPD), Volume to Capacity (V/C), speed, vehicle hours traveled (VHT), and vehicle miles traveled (VMT) variables listed below

Volume Increase	**V/C Improvement**	**Speed Improvement**
0: 0-1,000 add. VPD	**0:** Change less than 0.1 V/C	**0:** Up to 1 MPH increase
1: 1,001-5,000 add. VPD	**1:** 0.1-0.2 V/C decrease	**1:** 1.1-2.0 MPH increase
2: 5001-10,000 add. VPD	**2:** 0.21-0.35 V/C decrease	**2:** 2.1-3.5 MPH increase
3: 10,001-15,000 add. VPD	**3:** 0.36-0.5 V/C decrease	**3:** 3.6-5 MPH increase
4: 15,001 or more add. VPD	**4:** 0.51 or more V/C decrease	**4:** 5 MPH or more increase

Volume (E+C)	**V/C (E+C)**	**VHT Improvement**	**VMT (E+C)**
0: up to 5,000 VPD	**0:** Up to 0.5 V/C	**0:** Up to 150 VHT decrease	**0:** Up to 5,000 VMT
1: 5,001-10,000 VPD	**1:** 0.51-0.8 V/C	**1:** 151-500 VHT decrease	**1:** 5,001-20,000 VMT
2: 10,001-20,000 VPD	**2:** 0.81-1 V/C	**2:** 501-1,000 VHT decrease	**2:** 20,001-50,000 VMT
3: 20,001-40,000 VPD	**3:** 1.01-1.25 V/C	**3:** 1,001-2,500 VHT decrease	**3:** 50,001-100,000 VMT
4: 40,001 or more VPD	**4:** 1.26+ V/C	**4:** 2,501 VHT or more decrease	**4:** 100,001 VMT or more

5. **Support Land Use Goals**
    - Compare the location of schools, parks, medical facilities and Tyler 1st growth areas to the project
        - 0.5 point if the project is located within a growth area per Tyler 1st Annexation Plan

- 0.5 point if the project is located within 1 mile of a school or college
- 0.5 point if the project is located within 1 mile of a park
- 0.5 point if the project is located within 1.5 miles of a hospital/urgent care facility

6. **Encourage Environmental Stewardship and Resilience**
   - Determine if project is in a floodplain, part of a hurricane evacuation route, or part of the National Highway System
     - 1 point if the project intersects the FEMA Floodplain
     - 0.5 point if the project is located along a Hurricane evacuation route
     - 0.5 point if the project is located along a National Highway System route
7. **Preserve Existing System**
   - Evaluate how much right-of-way (ROW) the project requires
     - 3 points if the project can be constructed with minimal ROW acquisition
     - 2 points if the project can be constructed with moderate ROW acquisition
     - 1 point if the project requires ROW from properties throughout the limits
8. **Improve Public Transportation**
   - Compare project to bus stop locations
     - 3 points if the project is located within 1/4 mile from a bus stop
     - 2 points if the project is located within 1/2 mile from a bus stop
     - 1 point if the project is located more than 1/2 mile from a bus stop
9. **Encourage Cycling**
   - If road has schematic prepared
     - 3 points if the typical section has separated bicycle facilities
     - 2 points if the typical section has connected bicycle facilities
     - 1 point if the project has a wide shoulder that could be used for biking
   - Check for proposed facility in Active Tyler
     - 3 points if a facility is recommended throughout the project
     - 2 points if a facility is recommended on a portion of the project
     - 1 point if no facilities are recommended along the project
10. **Encourage Walking**
    - If road has schematic prepared
      - 3 points if project has separated sidewalks
      - 2 points if project has connected sidewalks
      - 1 point if project has a wide shoulder that could be used for walking
    - Check for proposed facility in Active Tyler and sidewalk inventory
      - 3 points if a facility recommended throughout the project
      - 2 points if a facility recommended on a portion of the project
      - 1 point if no facilities are recommended along the project
11. **Enhance Economic Development**
    - Analyze land owned by Tyler Economic Development Council (TEDC), tourist attractions, and major industry (according to TEDC) within one mile of project
      - 1 point if the project is within 1 mile to land owned by TEDC
      - 0.5 point if the project is within 1 mile to a major industry
      - 0.5 point if the project is within 1 mile to a tourist attraction listed on Visit Tyler page

12. Guarantee Equitable Transportation Improvements

- Use the Justice40 Climate and Economic Justice Screening Tool (CEJST) to identify the number of burden categories associated with an area
    - 3 points if the project is within or adjacent to an area with 3 or more burdens
    - 2 points if the project is within or adjacent to an area with 2 burdens
    - 1 point if the project is within or adjacent to an area with 0-1 burden

13. Project Readiness

- Determine current stage of the project
    - 3 points if environmental assessment has been complete
    - 2 points if project is in design
    - 1 point if no engineering has been begun

Visioning Workshop Feedback

During the visioning process, the public and stakeholders were asked to rank the evaluation criteria based on their personal preferences. The results were combined to assign a final ranking of the evaluation criteria based on community values. Table 1 shows the rankings of the evaluation criteria resulting from the visioning process and the assigned weights applied for each criterion. The weights were applied as a multiplier for each project's score on that associated criterion.

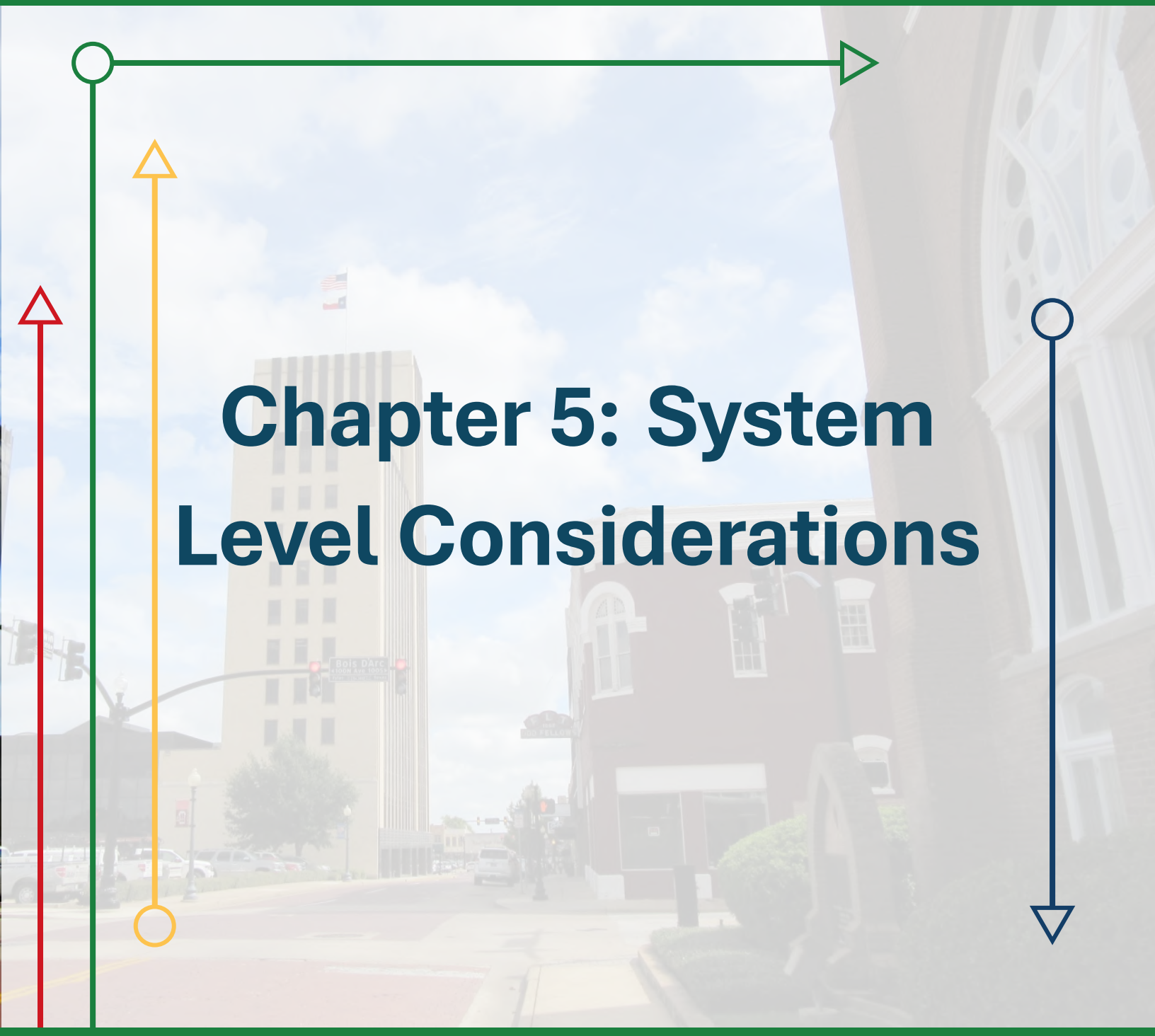
Table 1

Technical Advisory Committee Project Selection

Once the initial criteria had been tabulated, TxDOT, MPO staff, and the Technical Advisory Committee reviewed the preliminary prioritization process results to assess the community benefits of proposed transportation projects while considering project readiness and staging, while incorporating the federal metropolitan planning factors and the community-driven goals and objectives established during the visioning phase. The process combined technical judgement about the project's ability to meet national and state performance measures and local goals with sponsor-provided information about the purpose and need for the project, project readiness, and funding availability.

Transportation Policy Committee Project List Adoption

The prioritization process, when paired with the Fiscal Constraint analysis, resulted in a prioritized list of Implementation, near-, mid-, and long-term transportation improvements. The Technical Advisory Committee and Transportation Policy Committee reached consensus on the preliminary Draft Project List for the Draft MTP on X, 2024. The Final Project List is shown in Chapter 8 and was presented to the public for the 30-day comment period beginning X. Chapter 8 also provides corresponding maps to identify projects in each stage of the plan, as well as project tables with detailed project information.



Chapter 5: System Level Considerations

Tyler Area MPO
2050 Metropolitan Transportation Plan

The primary goal of the system-level analysis is to evaluate whether potential transportation improvements will impact environmental features or have negative impacts on historically disenfranchised populations. This chapter is intended to serve as an evaluation guide for agencies and elected officials as projects progress through the development process, and in turn allow the Tyler Area MPO to prioritize projects with lessened environmental and cultural impacts.

Once a project moves from the planning stage to the programming stage, a more detailed analysis of the specific impacts associated with capacity projects is performed using processes that meet the requirements of the National Environmental Protection Act (NEPA). The analysis in this chapter does not take the place of the NEPA assessment but does provide the Tyler Area MPO an initial understanding of potential project impacts on the region. Identifying potential impacts caused by these new transportation projects involves a three-step process that includes:

- Developing an inventory of environmental resources, cultural resources, and Environmental Justice populations (e.g., minority populations and low-income populations) within the Tyler Metropolitan Planning Area (MPA)
- Assessing the potential impacts, both positive and negative, of proposed transportation improvements through technical and spatial analysis
- Addressing possible system-wide mitigation activities.

The following sections describe the methods, approach, and outcomes of the system-level analysis.

Environmental & Cultural Analysis

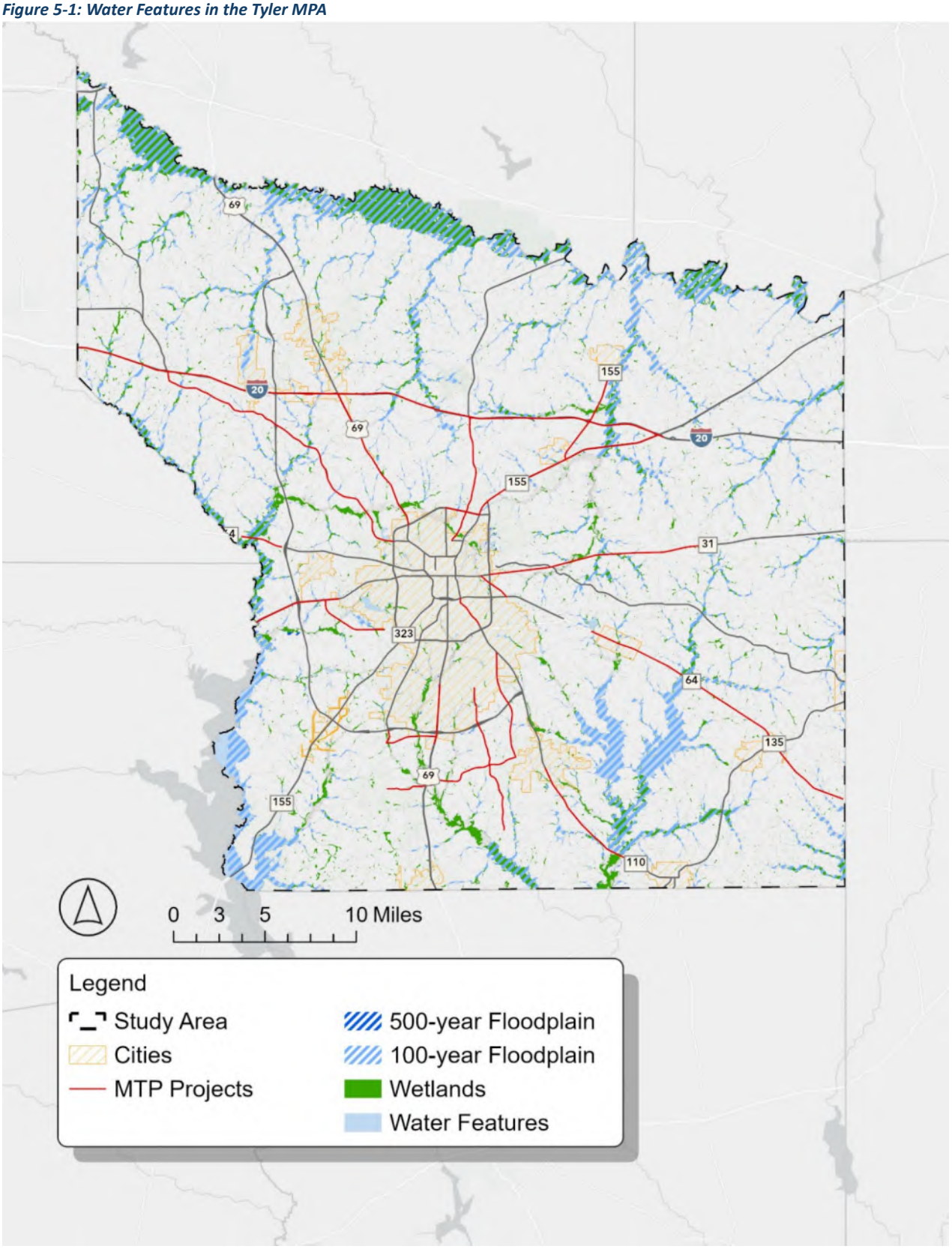
One element of the Environmental and Equity Assessment involved conducting an analysis on the environmental features, environmental hazards, and cultural assets that exist in the MPA.

This analysis identified the types of features, hazards, and assets that are present in the region and considered their distribution and concentration. This information not only provides a more holistic picture of the current state of the planning region – it also informs the project prioritization process where proposed transportation projects were ranked based on various evaluation criteria, including whether each project would have a positive impact on the environment, conserve energy, and improve environmental resiliency.

Environmental Features & Project Sites

Within the Tyler Area MPO region, sizeable waterbodies such as lakes and large ponds are present along with approximately 504 total miles of running water features, such as creeks, streams, and rivers, with several larger lakes in the southern region of the county. Wetlands and floodplains are environmentally sensitive features that could be negatively impacted by transportation projects and proximity to these features will have implications for project scoring. In Figure 5-1, a vast majority of MTP projects intersect with a floodplain, with significant overlap on projects along SH-110, SH-64, and IH-20. Figure 5-1 also shows overlap between projects and wetland areas, specifically on projects along SH-110, SH-64, and SH-31.

Figure 5-1: Water Features in the Tyler MPA



Source: Tyler Area MPO

Environmental, Cultural and Historical Feature Analysis

The purpose of identifying cultural and historical assets is to ensure the future transportation system provides the community with adequate access to these assets and does not negatively impact them. Data was collected for the following features in the Tyler MPA:

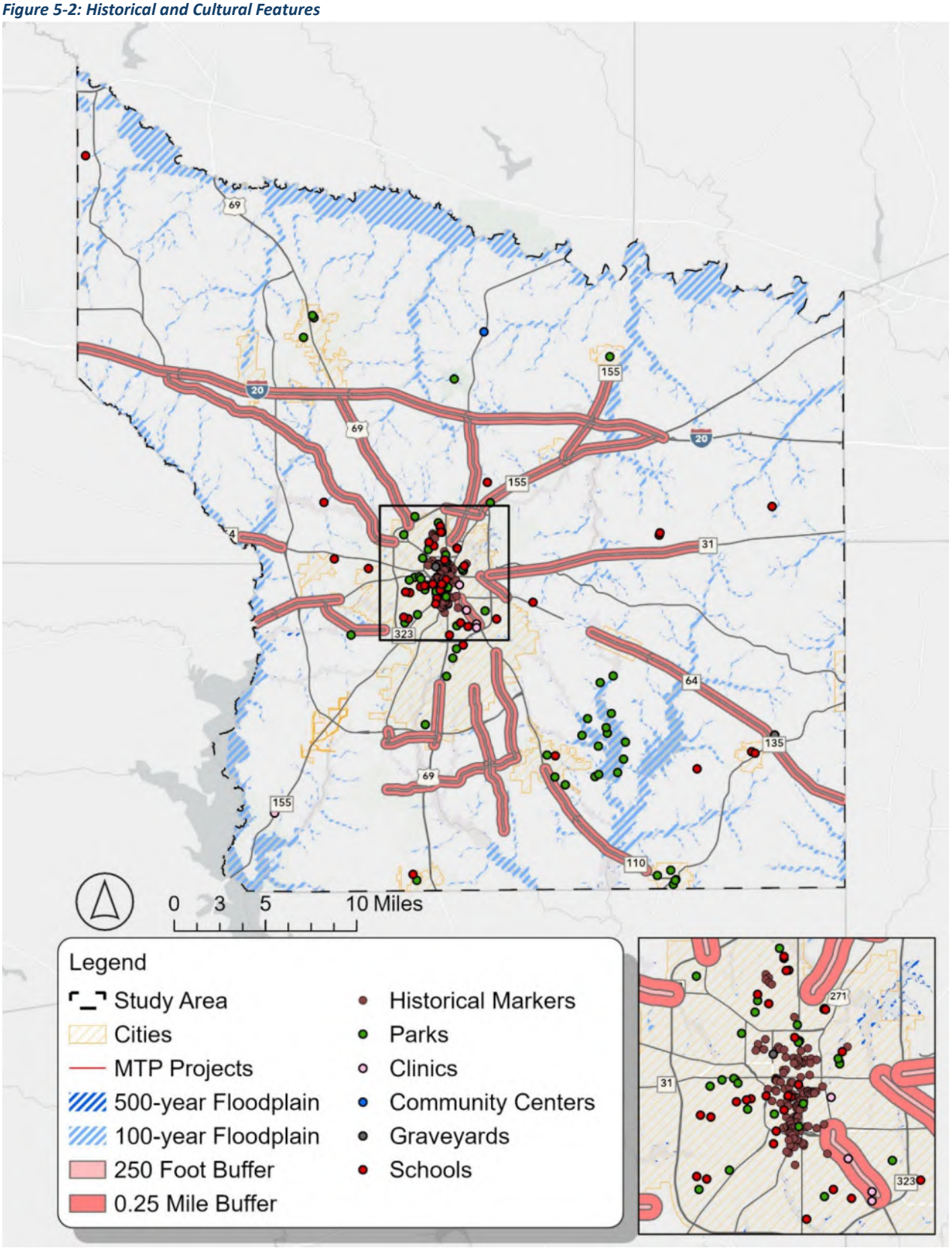
- Historic Markers
- Cemeteries
- Schools
- Clinics
- Community Centers
- Local Parks.

Following data collection, a GIS buffer analysis was conducted to determine how the 2050 MTP programmed projects might affect the inventoried resources. Buffer distances were scaled based on the environmental/cultural resource and the area of potential impact to that resource by a project. For example, cultural features may only be affected by a project directly adjacent to the resource while water features may be impacted by projects a greater distance away. Table 5-1 presents the buffer sizes selected in relation to each resource. Figure 5-2 shows environmental and cultural features with buffers around the MTP project sites.

Table 5-1: Buffer Distances from Projects

Feature	Buffer Distance
Historical Markers	250 feet
Parks	250 feet
Clinics	250 feet
Community Centers	250 feet
Schools	250 feet
Cemeteries	0.25 miles (1320 feet)
Water Resources	0.25 miles (1320 feet)

Figure 5-2: Historical and Cultural Features



Source: Tyler Area MPO

Assigned buffers and inventoried resources were then used to conduct a GIS intersect analysis to identify areas of overlap. Overlapping areas suggest potential impact between planned projects and environmental and/or cultural resources.

Table 5-2: Buffer Analysis Results

	Resource Type	Intersection Count	Area Covered (mi)
Cultural Resources	Historical Markers	0	-
	Clinics	0	-
	Community Centers	0	-
	Cemetery	1	-
	Schools	0	-
	Parks	0	-
Water Resources	Water Features	87	16.5
	Wetlands	1522	24.8
	100-year Floodplain	41	99.0
	500-year Floodplain	183	0.35

Overall, the buffer analysis suggests that the planned projects do not pose substantial negative impacts to regional environmental and cultural resources. However, projects that do intersect environmental features should be examined at a project level further along the project planning process to mitigate any potential negative impacts from occurring during implementation. These impacted sites include many square miles of water bodies, wetlands, 100-year floodplains, and 500-year floodplains.

Air Quality

Improving regional air quality and maintaining compliance with federal air quality standards are fundamental considerations in the MTP process. The construction of new transportation infrastructure increases the capacity for vehicles on regional roadways, which has the potential to increase traffic-related air pollutants in the Tyler MPA. In 1963, in response to increasing air pollution, the U.S. Congress passed the original Clean Air Act which established a federal program for researching techniques to monitor and control air pollution. The Clean Air Act of 1970 increased federal enforcement authority and authorized the development of national air quality standards to limit common and widespread pollutants.

These standards, known as the National Ambient Air Quality Standards (NAAQS), define the allowable concentration of pollution in the air for six "criteria" pollutants, including carbon monoxide, lead, nitrogen dioxide, particulate matter, ozone, and sulfur dioxide. The existing standards for each of the six criteria pollutants are listed in Table 5-3.

Table 5-3: National Ambient Air Quality Standards (NAAQS)

Pollutant	Primary/Secondary	Averaging Time	Level	Form
Carbon Monoxide (CO)	Primary	8 hours	9 ppm	Not to be exceeded more than once annually
		1 hour	35 ppm	

Lead (Pb)	Primary/Secondary	3 month rolling average	0.15 μ/m^3	Not to be exceeded
Nitrogen Dioxide (NO_2)	Primary	1 hour	100 ppb	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years
	Primary/Secondary	1 year	53 ppb	Annual mean
Ozone (O_3)	Primary/Secondary	8 hours	0.070 ppm	Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years
Particle Pollution ($PM_{2.5}$)	Primary	1 year	9.0 μ/m^3	Annual mean, averaged over 3 years
	Secondary	1 year	15.0 μ/m^3	
	Primary/Secondary	24 hours	35.0 μ/m^3	98th percentile, averaged over 3 years
Particle Pollution (PM_{10})	Primary/Secondary	24 hours	150.0 μ/m^3	Not to be exceeded more than once per year on average over 3 years
Sulfur Dioxide (SO_2)	Primary	1 hour	75 ppb	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
	Secondary	3 hours	0.5 ppm	Not to be exceeded more than once annually

Source: United States Environmental Protection Agency

Regions are designated by the EPA as either in attainment or nonattainment of the NAAQS. Attainment means the concentration of each pollutant successfully meets the NAAQS. The Tyler MPA is designated as being in attainment of NAAQS standards. Non-attainment means the concentration of at least one pollutant exceeds the maximum defined threshold.

If an area is designated as non-attainment, the State must develop and submit a State Implementation Plan (SIP). Areas of nonattainment can apply for Congestion Mitigation Air Quality (CMAQ) funds which can be used to help develop the SIP and use the funding to implement the mitigation activities. The SIP addresses each pollutant that exceeds NAAQS and establishes an overall regional plan to reduce air pollution emission levels and maintain attainment status.

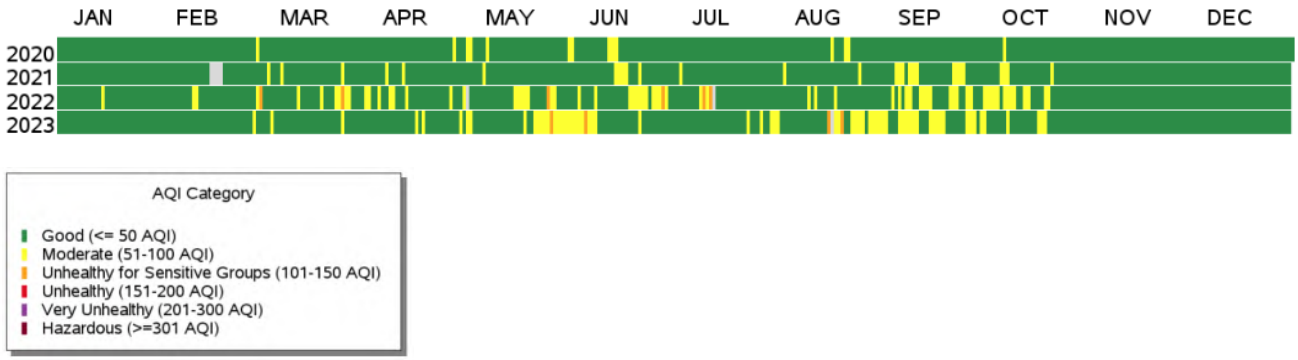
Once a nonattainment area meets the standards, EPA will designate the area to attainment as a "maintenance area". Maintenance areas are required to have a Maintenance Plan in place to ensure continued attainment of the respective air quality standard(s). The Clean Air Act defines specific timetables to attain air quality standards and requires nonattainment areas to demonstrate reasonable progress in reducing air pollutants until the area achieves attainment.

Tyler MPO Air Quality

Existing air quality within the Tyler MPA has generally been rated as moderate to good per the EPA's Outdoor Air Quality Data.

Figure 5-3 represents the EPA's daily Air Quality Index (AQI) values from 2020 – 2023 for all relevant AQI pollutants (Ozone, SO2, PM2.5, PM10) in the Tyler MPA.

Figure 5-3: Tyler Daily AQI Values, 2020-2023



Source: United States Environmental Protection Agency

Many of the days that rated poorly tended to occur in the summer months, specifically between late May and early August, which is a typical pattern for most metropolitan areas. Although not perfect, these are generally positive results. Room for improvement exists, but these results show that the region's air quality successfully meets the needs of the general public and compares favorably to similar metropolitan areas.

Potential Mitigation Activities

Federal regulations require the MTP process to include a discussion about potential mitigation activities that can revive and maintain the environmental resources of an area. These mitigation strategies apply to areas for air quality and Environmental Justice concerns. FHWA recommends an ordered approach to mitigation known as "sequencing" that involves understanding the affected environment and assessing transportation effects through project development. This ordered approach involves:

- Avoiding the impact altogether (this should be the priority), minimizing impacts by limiting the degree or magnitude of the action and its implementation
- Rectifying the impact by repairing, rehabilitating, or restoring the affected area
- Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
- Compensating for the impact by replacing or providing substitute resources.

The type and level of mitigation activities will vary depending on the scope of each project. Several mitigation measures and general areas where these activities can be implemented are presented in Table 5-4 on the following page and are intended to be regional in scope and may not necessarily address

potential project-level impacts. As proposed projects progress through the project development process, mitigation is an integral part of alternatives development and the analysis process to maximize the effectiveness of mitigation strategies.

In many instances, an assessment of the effectiveness of potential mitigation activities is developed in consultation with applicable federal, state, and tribal land management, wildlife, and regulatory agencies to eliminate or mitigate any potential negative impacts to the natural environment or cultural and historic resources. The timeframes for performing these consultations are scalable depending on the size of the project and the possible extent of the impact. As projects phase from planning to programming, planning partners have an opportunity to assess the extent and timeframe for performing the mitigation consultation process. Outside agencies involved in consultation, where applicable include some of the following:

- Land use management
- Natural resources
- Environmental protection
- Conservation
- Historic preservation.

Some levels of this consultation also include a comparison of regional and local transportation plans with statewide conservation, flood mitigation, and resiliency plans or maps.

Table 5-4: Mitigation Measures by Resource

Resource	Mitigation Measures
Wetlands / Water Resources	• Avoidance, Minimization or Compensation • Design Exceptions and Variances • Environmental Compliance Monitoring • Preservation • Creation • Restoration • In-lieu Fees • Riparian Buffers
Cultural Resources	• Avoidance Minimization • Landscaping for Historic Properties • Preservation in Place or Excavation for Archaeological Sites • Design Exceptions and Variances • Environmental Compliance Monitoring
Parks/Recreation Areas	• Avoidance, Minimization, Mitigation • Design Exceptions and Variances • Environmental Compliance Monitoring
Ambient Air Quality	• Transportation Control Measures • Transportation Emission Reduction Measures
Forested or other Natural Areas	• Avoidance, Minimization • Replacement Property for Open Space Easements to be of Equal Fair Market Value and of Equivalent Usefulness

	• Design Exceptions and Variances • Environmental Compliance Monitoring	
Agricultural Assets	• Avoidance, Minimization • Design Exceptions and Variances • Environmental Compliance Monitoring	
Endangered or Threatened Species	• Avoidance, Minimization • Time of Year Restrictions • Construction Sequencing • Design Exceptions and Variances • Species Research/Fact Sheets	• Memoranda of Agreements for Species Management • Environmental Compliance Monitoring

Environmental Justice Analysis

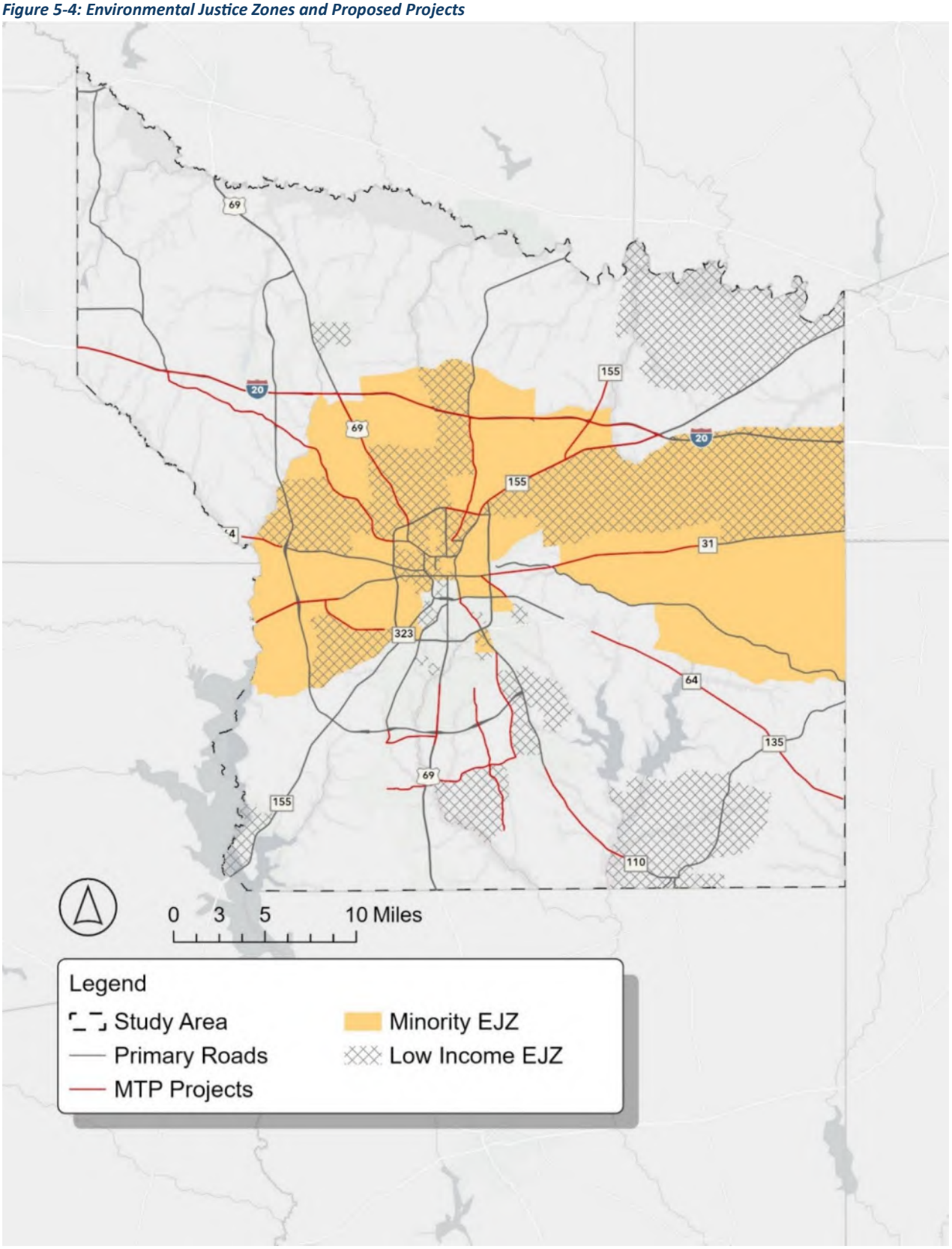
Environmental Justice is the fair treatment and involvement of all people regardless of race, color, national origin, educational level, or income with respect to the development, implementation, and enforcement of environmental laws. Environmental Justice works to provide access to public information for health, environmental planning, regulations, and enforcement for minority and low-income populations. It ensures that no populations are forced to shoulder a disproportionate burden of the negative human health or environmental impacts of pollution or other environmental hazards caused by a federally funded project.

Using the guidance in the metropolitan planning regulations, the study team incorporated Environmental Justice considerations into the development of the Tyler Area 2050 MPO. The study team identified and mapped low-income and minority populations (i.e., EJZs or Environmental Justice Zones), shown in Figure 5-4, and performed a GIS-based analysis of the proximity of proposed transportation projects to these communities.

Minority EJZs are represented by block groups containing at least 40% of the total population identified as minority population. Minority EJZs are dispersed throughout the Tyler MPA with high concentrations in the north, extending from downtown Tyler to IH-20, the east, and the west.

Low-income EJZs are represented by block groups containing at least 20% of the total block group population identified as living at or below the poverty line. Low-income EJZs are also dispersed throughout the Tyler MPA with high correlation with minority EJZs. There are also low-income EJZs near Lake Tyler in the south and in the northeast region of the Tyler MPA.

Figure 5-4: Environmental Justice Zones and Proposed Projects



Source: Tyler Area MPO, Climate and Economic Justice Screening Tool (CEJST)

Table 5-5 displays EJZ locations within the Tyler MPA in relation to the programmed projects. Nearly 60% of minority EJZs and 47% of low-income EJZs are intersected by proposed projects. Using the findings from the environmental justice analysis, a more detailed, project-level analysis will be performed where applicable to better understand potential impacts of transportation improvements on minority and low-income populations in coordination with partner agencies once projects move from planning to programming. The proximity of projects to these identified populations may have both positive and negative impacts.

Table 5-5: Projects Affecting EJZs

	Total Projects Affecting EJZ	Percentage of Projects Intersecting EJZ
Minority EJZs	19	59.4%
Low-income EJZs	15	46.9%

For example, it is assumed that the mobility, access, and safety benefits of most projects accrue most strongly in areas near the project. Therefore, if the project objectives are consistent with the travel market needs of adjacent communities, the project is viewed as having a positive impact. On the other hand, the physical impacts of project construction and footprint also have the greatest negative impacts on adjacent communities. Large infrastructure projects whose objectives are not consistent with community needs represent potential negative impacts.

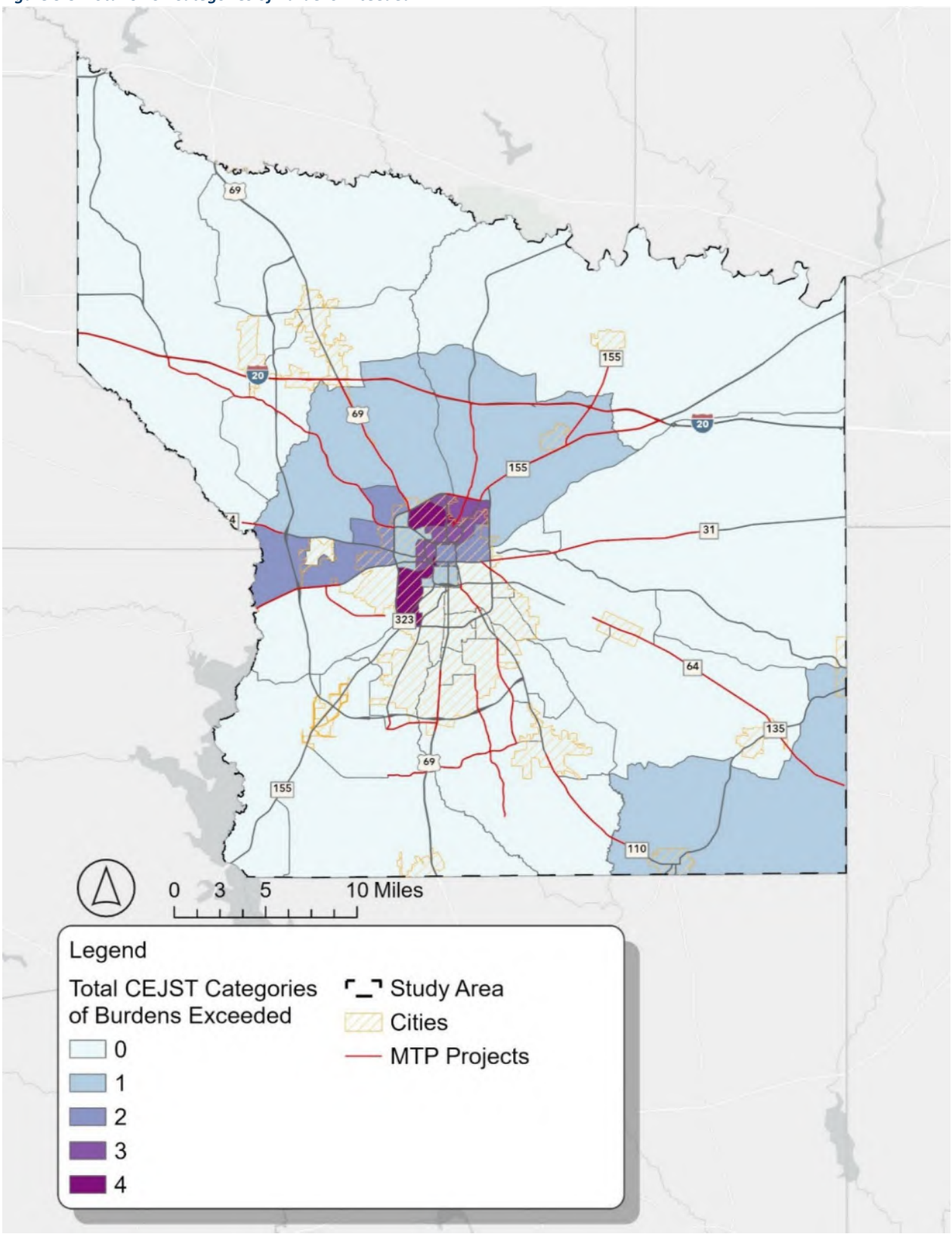
Section 223 of Executive Order 14008, Tackling the Climate Crisis at Home and Abroad, established the Justice40 Initiative, which directs 40% of the overall benefits of certain Federal investments – including investments in clean energy and energy efficiency, clean transit, affordable and sustainable housing, training and workforce development, the remediation and reduction of legacy pollution, and the development of clean water infrastructure – to flow to disadvantaged communities (DACs).

The Climate and Economic Justice Screening Tool (CEJST) is an interactive mapping tool to identify disadvantaged communities that are marginalized by underinvestment and overburdened by pollution. Federal agencies are using the CEJST as their primary tool for identifying disadvantaged communities that are geographically defined for any covered programs under the Justice40 Initiative and for programs where a statute directs resources to disadvantaged communities, to the maximum extent possible and permitted by law.

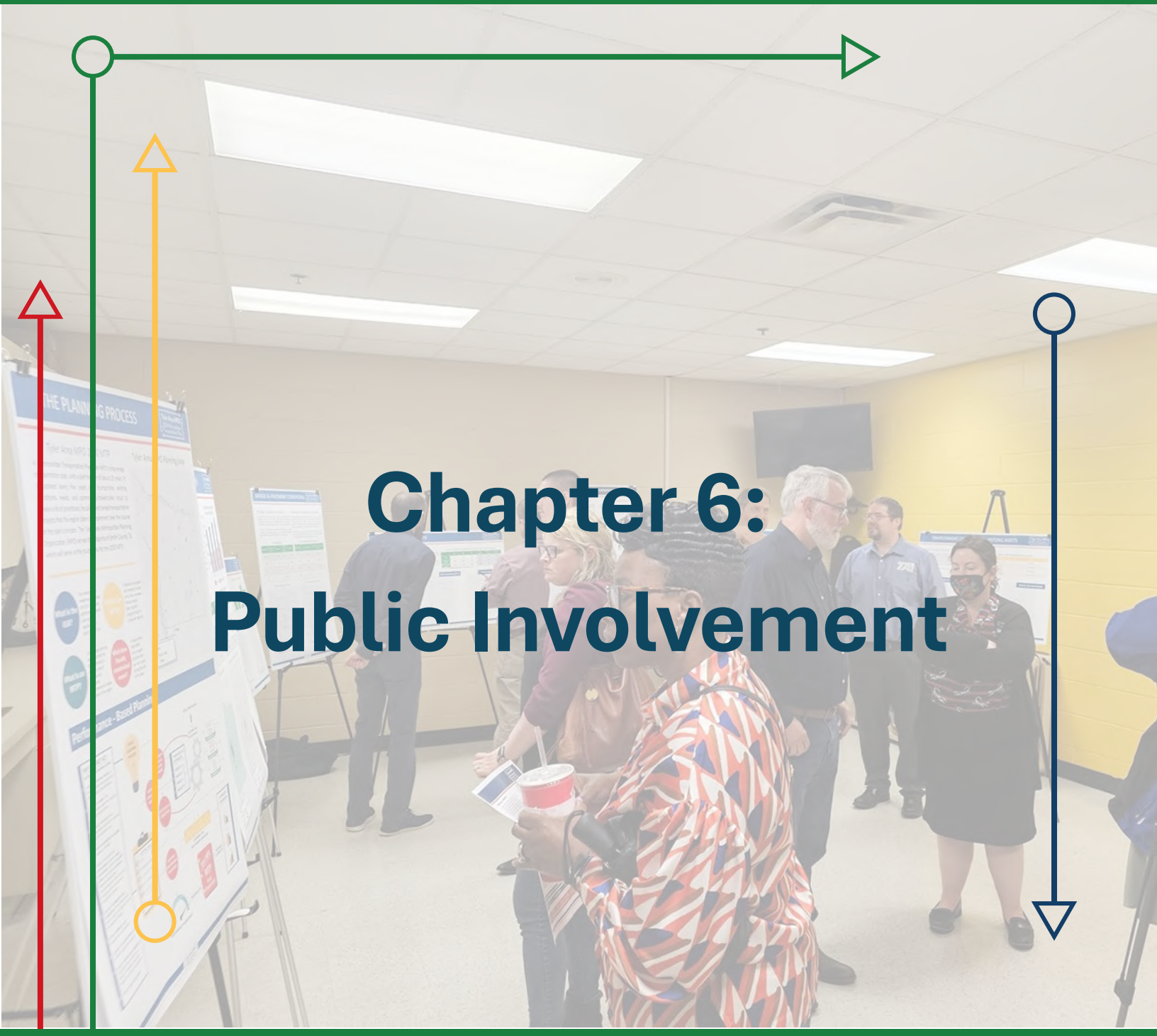
The key consideration in determining unintended consequences or disparate impacts to Environmental Justice populations is how the project objectives match the community's transportation needs. The Tyler Area MPO is committed to working with project sponsors to mitigate negative impacts on environmental justice communities using measures such as impact minimization and context-sensitive solutions (appropriate functional and/or aesthetic design features).

Figure 5-5 shows the total CEJST categories of burdens exceeded as it relates to MTP projects. The areas with the most burdens are located in the north and southwest of the City of Tyler with also a significant amount in the southeast of the study area. This corresponds closely to the Minority EJZs and Low-income EJZs identified in Figure 5-4.

Figure 5-5: Total CEJST Categories of Burdens Exceeded



Source: Tyler Area MPO, Climate and Economic Justice Screening Tool (CEJST)



Chapter 6: Public Involvement

Tyler Area MPO
2050 Metropolitan Transportation Plan

Public involvement is the heart and backbone of a well-developed Metropolitan Transportation Plan (MTP). The collaborative nature of public involvement is essential and valuable to the planning process. Public and stakeholder involvement in the development of the 2050 MTP was encouraged early in the process and throughout plan development using the Tyler Area Metropolitan Planning Organization's (TAMPO's) Public Participation Plan (PPP).

The primary components of this public participation process for this MTP were as follows:

- Consultation on regional transportation needs (stakeholder engagement)
- Development of a community vision
- Online survey and interactive map
- Review of technical analyses performed as part of plan development (open house meeting)
- 30-day review of the draft Tyler 2050 MTP

TAMPO Public Participation Plan

TAMPO maintains and implements a PPP as federally required under 23 CFR 450.316. The PPP was last updated X. The purpose of the PPP is to provide guidelines for the tools and timelines that should be used for public involvement during the development of the MPO's planning documents, such as the MTP, the Transportation Improvement Plan (TIP), and the Unified Planning Work Program (UPWP). Through the implementation of the PPP, TAMPO is able to ensure that public participation continues to be a critical component of the transportation planning processes. This is important because it allows the MPO to consider a diverse array of values and points of view from the communities that it serves. Early and continuous public involvement enables the MPO to make better informed decisions, improves quality through collaborative efforts, and builds mutual understanding and trust between the MPO and the public. Recognizing the importance of public participation, TAMPO uses procedures that:

- Provide timely information about transportation issues and processes to citizens, affected public agencies, representatives of transportation agency employees, private providers of transportation, other interested parties and segments of the community affected by transportation plans, programs and projects;
- Provide reasonable public access to technical and policy information used in the development of plans and the TIP and open public meetings where matters related to the Federal-aid highway and transit programs are being considered;
- Require adequate public notice of public participation activities and time for public review and comment at key decision points, including, but not limited to, approval of plans and programs;
- Demonstrate explicit consideration and response to public input received during the planning and program development processes; and
- Seek out and consider the needs of those traditionally underserved by existing transportation systems, including but not limited to elderly, disabled, low-income and minority households.

Summary of Outreach Efforts

As part of the PPP, TAMPO maintains a distribution list of interested groups and individuals, including state, county, and local government officials, Chambers of Commerce, community groups, special interest groups, transportation providers, freight companies, etc. These individual stakeholders and groups also receive notices or flyers via regular mail or email notification at least 72 hours prior to any public meeting, public review period, or public comment period.

Federal regulations require expanded consultation and cooperation with agencies and officials responsible for other planning-related activities within the Metropolitan Planning Area (MPA). The MPO shall consult with agencies and officials that are affected by transportation in the development of short and long-term transportation plans. For example, the 2021 BIL added affordable housing organizations to the list of MTP stakeholders to promote coordination and consideration of housing trends. A full listing of agencies and officials with whom the MPO may consult can be found in the PPP. TAMPO staff works to ensure that these interested parties have reasonable opportunities to comment on projects of the short-term and long-term transportation plans.

Over the course of the 2050 MTP development process, TAMPO undertook a series of public and stakeholder outreach efforts to better understand the needs, challenges, and opportunities for the existing transportation system, as well as the vision and goals the communities in the region have for the future of the transportation system over the next 25 years. The various outreach efforts are described in the following sections.

Stakeholder Interviews

The planning efforts of the MTP included extensive outreach to stakeholders. These stakeholder meetings were held over a period of eight weeks and included more than 50 individuals in 17 groups. The stakeholders provided a wide array of backgrounds, including elected officials, transportation experts, local non-profit representatives, higher education and public education to name a few. These stakeholders represented interested parties as the stakeholder groups listed in Table 6-1.

Table 6-1: Stakeholder Groups

Stakeholder Groups		
City of Tyler	Transportation	City of Bullard
Community Needs	Higher Education	Smith County
Chamber of Commerce	Public Service	Freight
Natural Resources	TxDOT	Bike Club
Area Cities	Medical	Housing
School Districts	Street Construction	

Stakeholders were asked a series of questions and then asked to provide individualized responses based on their respective backgrounds. The stakeholders provided insight from an individualized basis on the multimodal transportation system as a whole. This diversity in stakeholders helped provide valuable insight from differing perspectives regarding conditions and challenges throughout the MPO planning

area. Generalized stakeholder input about the transportation system discussed during the interviews are listed in Table 6-2.

Table 6-2: Interview Topics & Generalized Stakeholder Input

Category	Summarized Stakeholder Concerns and Comments
Roadway and Traffic Congestion	• Southern portions of Broadway continue to experience traffic congestion. • Old Jacksonville Highway is experiencing periodic congestion during AM and PM peak hours. • Improvements to Cumberland Road, Grande Blvd, Earl Campbell Pkwy continue to help east/west connections. • Increased school drop off traffic is affecting major arterial proximate to school facilities. • Concern regarding the number of school zones on major roadways. • Desire to see more dedicated right turn lanes on South Broadway intersections. • Rural area FM roads need widening or turn lanes (FM 344, FM 346, etc.).
Safety	• Deceleration lanes are helping traffic flow along arterials. • Would like to see more deceleration lanes installed as part of new developments. • Too many curb cuts on Broadway. • Old Jacksonville Highway needs lighting in rural areas- heading south. • Flashing arrows indicating upcoming curves are helping rural area safety.
Freight	• Need feeder roads along I20. • Would like to see more freight friendly intersections and directional controls at major arterial intersections. • Unsignalized intersections at major roadways continues to pose a problem and lead to an increase in congestion.
Public Transportation	• Need to look at micro transportation alternatives. • Users' needs and expectations are changing. • Rural and low-income users provide challenges to the system. • Funding and cost controls continue to challenge the system.
Connectivity	• East/West connections have improved overall network connectivity. • Need to continue to look at East/West connections in the southern portions of Tyler and in rural areas south of town. • Gentry Parkway continues to be perceived as a connectivity barrier.
Biking and Walking	• Bike lanes in Downtown, Midtown and UT Tyler areas are seeing increased use. • Need to make sure bike lanes are being put in areas of need and not where they are not needed. • Pedestrian friendly signals and intersection striping have helped greatly. • Need to see more mid-block signalized crossings in areas of high pedestrian use. • Gentry Parkway continues to be a pedestrian barrier. • Off network trail system needs to be extended into the northern areas of Tyler and into the southern portion of the county (Whitehouse and Bullard) where there is high demand and use.

	• Area municipalities need to coordinate bike and pedestrian trail planning efforts.
Natural Resources	• Expanding the trail system and natural areas will help with quality of life. • Expanding natural areas through town will help alleviate congestion in mixed use areas. • Lack of available right of way in higher density areas will limit infrastructure expansion. • Continue to emphasize coordination and expansion of alternative transportation initiatives in areas that will see the highest success. • Coordination with UT Tyler, Hospitals, TJC, area municipalities, and NETRMA on natural area planning and implementation is the key to success. This will also help with resilience planning in the future.

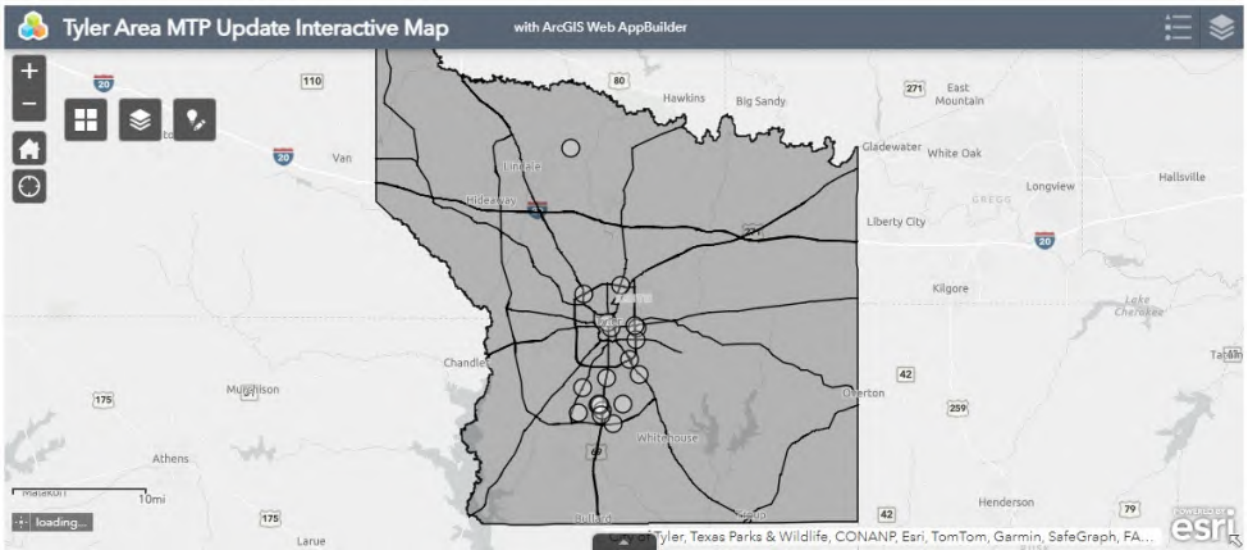
Visioning Process

The purpose of the TAMPO 2050 MTP visioning process was to solicit public input regarding their values and priorities for the future of the regional multimodal transportation system. The feedback received helped inform the goals and objectives for the MTP and played a role in shaping the process used to prioritize transportation improvement projects proposed for inclusion in the plan. Public feedback received from the online tool (discussed below) was used to create a component of the project score weighting process. The project scoring process is discussed in further detail in Chapter 4, which covers transportation strategies for the MPA, as well as Chapter 8 describing the Staged Improvement Plan. The visioning process for the TAMPO 2050 MTP consisted primarily of an online tool that was custom developed for TAMPO's MTP development process.

This tool consisted of modules that provided general information to the public about the plan development process and requested input about community values and existing conditions in the region. Online input was sought through the website survey that gathered basic information about the participants and their transportation usage and priorities. In addition, the website has an interactive map of the region where participants could place comments in exact locations regarding specific needs or issues related to transportation at those locations. The online tool was opened on January 1st and closed on April 23rd. During this time the tool received a total of 17 survey responses and 20 comments on the interactive map. Figure 6-1 is a screenshot of the online website overview page, and Figure 6-2 is a screenshot of the interactive map from the "Comment on the Map" module from the website. As shown in Figure 6-1, visitors to the site had the option to translate contents to their language of choice.

Figure 6-1: 2050 MTP Website

Figure 6-2: Interactive Online Mapping Tool



Public Open Houses

TAMPO hosted two public open houses during the development of the 2050 MTP. The purpose of these meetings was to provide information to the public about the MTP planning process and gather feedback about the community's thoughts on the transportation network and the MTP draft. The first meeting was held at the Glass Recreation Center, and the second at the Tyle Rose Garden Center.

Presentation of Technical Analysis Open House

The first open house meeting was held on April 16, 2024 with the purpose of presenting the work done to-date on the development of the plan, which included educational aspects about what an MTP is and why the MPO develops one for the region, as well as the results of the Current Conditions Assessment discussed in Chapter 3. The first public open house consisted of a set of nine exhibit boards that displayed information about the plan and the analyses using text, graphics, and maps. Comment cards as well as flyers with a link to the online survey and website were distributed for people who wanted to take the survey at a later time. Figure 6-3 shows an example of one of the boards displayed at the open house and Figure 6-4 is a photo of the meeting.

Figure 6-3: Example Public Engagement Board

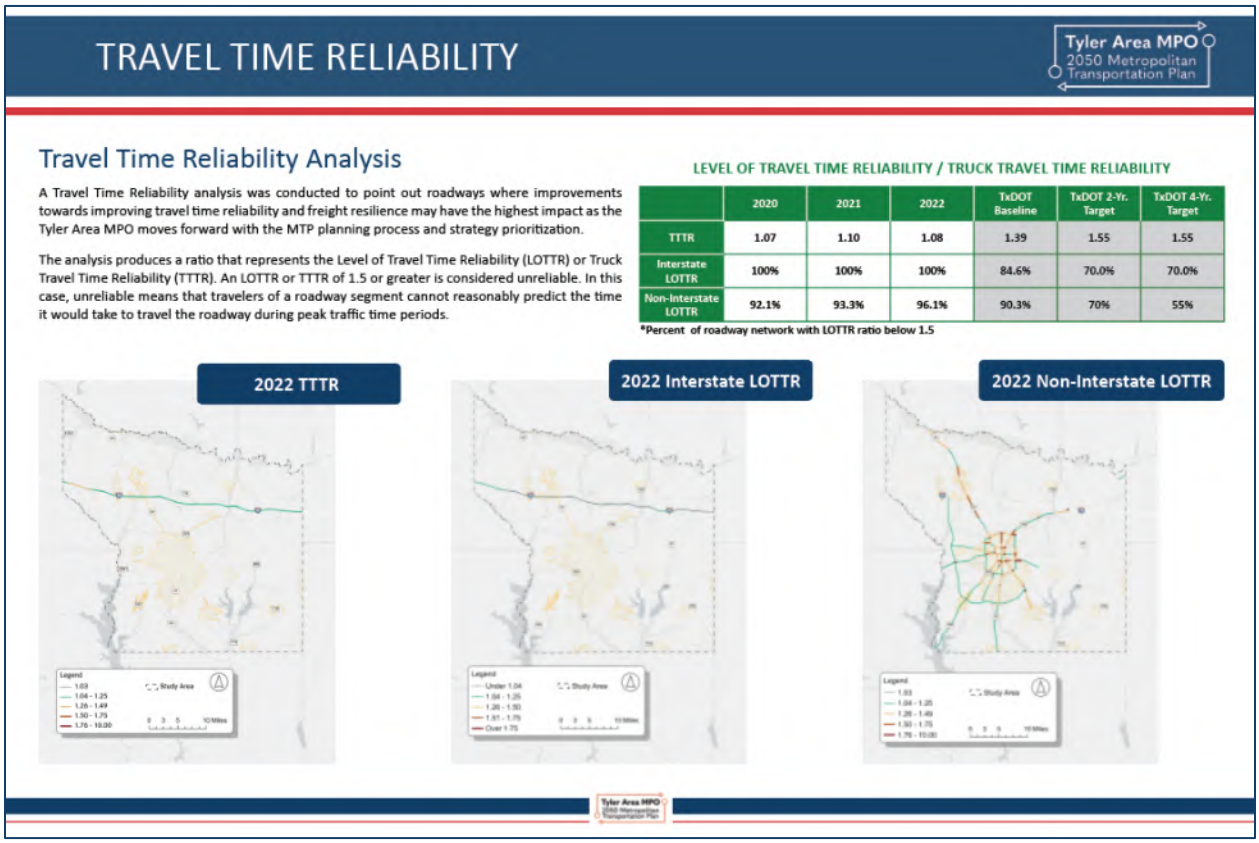
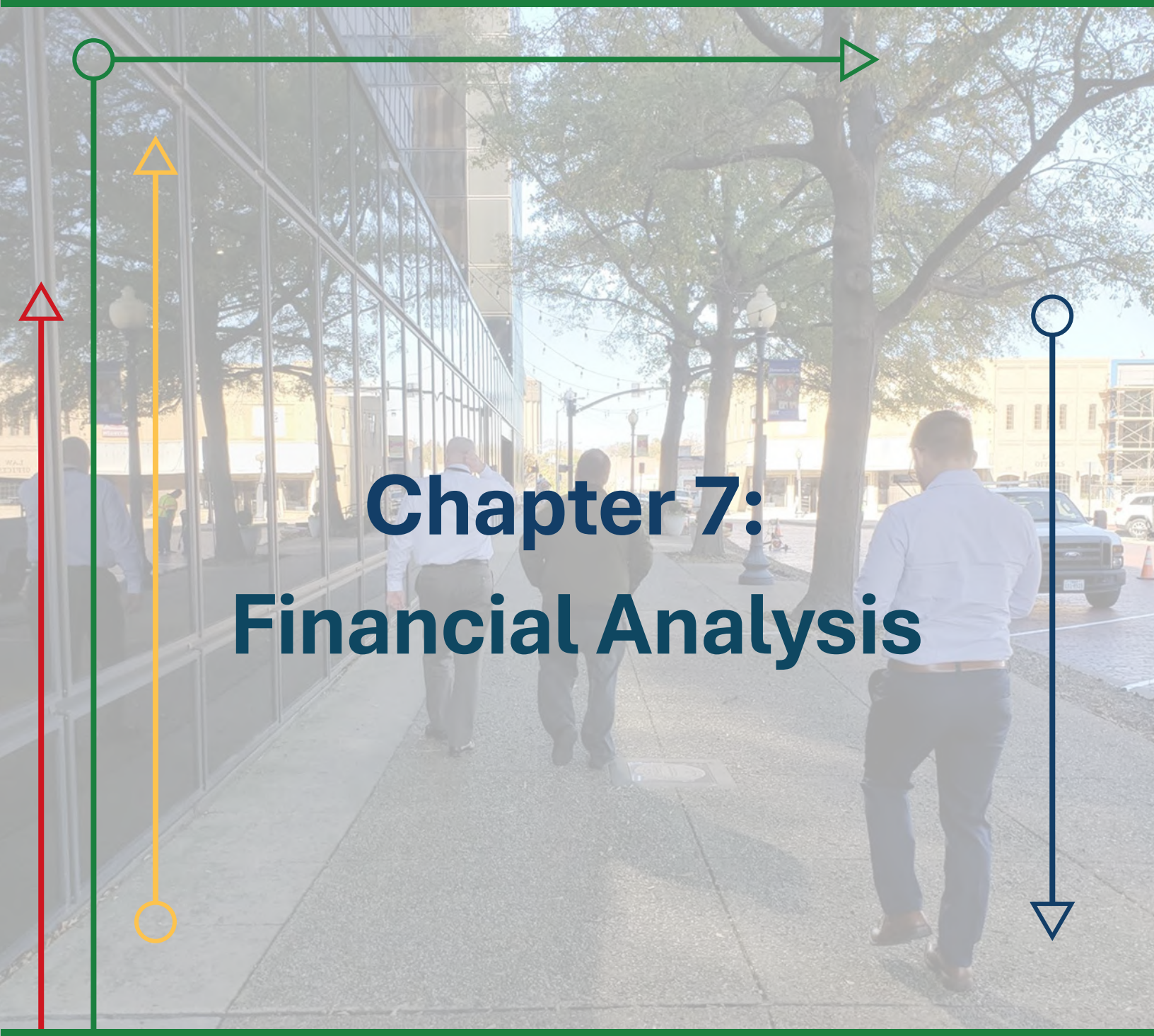


Figure 6-4: Open House Meeting

Draft MTP Open House

The second and final public open house was held on October 10, 2024. This open house meeting served to kick off the 30-day public comment period for the Draft Tyler 2050 MTP. This second open house provided the public with an overview of the draft 2050 MTP, including the proposed program of projects, and solicitations for feedback. Like the first open house, the second open house included a set of exhibit boards to convey information about the draft plan and the proposed projects using text, graphics, and maps. Figure 6-5 shows one of the boards used to facilitate feedback from attendees. Feedback on the draft final MTP will be considered by TAMPO and incorporated into the final plan document prior to approval.

Figure 6-5: Graphic from Public Meeting Board



Chapter 7: Financial Analysis

Tyler Area MPO
2050 Metropolitan Transportation Plan

Federal regulations mandate that investments proposed in an MTP must show "fiscal constraint" by providing enough information to demonstrate that projects included in the plan can likely be implemented using committed, available, or reasonably available revenue sources. In other words, the plan must show that the reasonably expected funding available for projects is able to cover the cost of the projects. This fiscal constraint process should also demonstrate reasonable assurances that the transportation system is being adequately operated and maintained.

This chapter summarizes available funding sources and compares projected planning level-project costs to projected revenue sources. It also outlines the process by which funding levels were established to determine the amount of funds available and discusses project cost development for the year of expenditure (YOE). Because federal regulations stipulate that the financial forecast considers inflation, funding and costs discussed in this chapter were estimated in year-of-receipt and year-of-expenditure dollars, respectively.

Funding Sources

The following is a list of programs incorporated into the financial analysis. Programs identified as funding opportunities include federal formula programs, federal discretionary grants, funding programs from the state of Texas, and local funding opportunities for transportation improvements.

Federal Formula Funding

Federal formula funding allocates a set amount of money to each recipient (such as states) to achieve a specified purpose. The laws that approve federal funding for transportation improvements have changed over time. In 2015, the federal government enacted the Fixing America's Surface Transportation Act (FAST Act), which provides funds for surface transportation activities. The FAST Act provided just over $300 billion dollars for surface transportation projects through the fiscal years of 2016 to 2020. The FAST Act builds upon the Moving Ahead for Progress in the 21st Century Act (MAP-21), which was enacted in 2012, by expanding its scope to include improving highway mobility, supporting economic growth by creating jobs, and accelerating project delivery and promoting innovation. MAP-21 set out to make surface transportation projects streamlined, performance-based, and multimodal while improving safety, maintaining infrastructure, reducing traffic congestion, improving efficiency, protecting the environment, and expediting project delivery.

In November of 2021, the Infrastructure Investment and Jobs Act (IIJA), also known as the Bipartisan Infrastructure Law (BIL) was enacted. It increased available funding for transportation projects by authorizing over $1 trillion for transportation and infrastructure spending. The IIJA replaced the FAST Act but largely preserved its core programs, and included changes to address sustainability, resiliency, safety, and equity. It also established new programs and new eligibilities for transportation project funding. The IIJA created four new formula programs: the PROTECT Formula Program, Carbon Reduction Program, Bridge Formula Program, and National Electric Vehicle Infrastructure Formula Program. New competitive grant opportunities were also established by the law, some of which will be discussed in further detail later in this section.

Bridge Formula Program

The Bridge Formula Program was created by the IIJA and provides funding to states for bridge rehabilitation, protection, construction, and replacement. The program apportions 75% of the funds for the replacement of bridges in poor condition and 25% for rehabilitation of bridges in fair condition. Projects funded from the Bridge Formula Program are subject to the requirement of accommodation for pedestrians and cyclists.

Carbon Reduction Program

The Carbon Reduction Program was established by the IIJA and provides funds to states to reduce emissions and develop carbon reduction strategies. States are required to work with MPOs to develop and update a carbon reduction strategy to receive funding. Eligible projects include public transportation, congestion management, alternative fuel infrastructure, and pedestrian and nonmotorized transportation projects.

Congestion Mitigation and Air Quality (CMAQ) Improvement Program

Urban areas that do not meet ambient air quality standards are designated as non-attainment areas by the U.S. Environmental Protection Agency (EPA). CMAQ funds are apportioned to those urban areas for use on projects that contribute to the reduction of mobile source air pollution through reducing vehicle miles traveled, fuel consumption, or other identifiable factors. Both roadway and transit projects are eligible for CMAQ funds. The IIJA continued the CMAQ program, with around $2.6 billion in apportionment each year until 2026. The Tyler metropolitan area is not currently eligible for CMAQ funds, as it does not have nonattainment status for air quality.

Highway Safety Improvement Program (HSIP)

The purpose of the HSIP is to achieve a significant reduction in traffic fatalities and serious injuries on all public roads, including non-state-owned public roads and roads on tribal lands. States are required to allocate HSIP using a safety data system to perform problem identification and countermeasure analysis on all public roads, adopt strategic and performance-based goals, advance data collection, analysis, and integration capabilities, determine priorities for the correction of identified safety problems, and establish evaluation procedures. The IIJA continued and increased HISP program funding. HSIP programs are administered by the state in coordination with MPOs.

Metropolitan Planning Program

The program funds the cooperative, continuous, and comprehensive (3C) planning activities of metropolitan planning organizations (MPOs). The IIJA provided an annual average of $456 million for this program. Funds are apportioned to states, which are then made available to MPOs.

National Electric Vehicle Infrastructure (NEVI) Formula Program

The IIJA also established the NEVI Formula Program, with a total of $5 billion available over five years.[1] The purpose of this program is to deploy a nationwide network of public electric vehicle charging stations along Alternative Fuels Corridors. States are required to create a state plan for electric vehicle infrastructure deployment. Thus, TxDOT determines how NEVI formula funds will be spent.

National Highway Freight Program (NHFP)

This program helps states and MPOs address impediments to freight movement. Examples of eligible activities include truck parking facilities, traffic signal optimization, and highway or bridge projects. The IIJA expanded the eligible road mileage under the program and apportioned an annual average of $1.43 billion through FY2026.

National Highway Performance Program (NHPP)

The IIJA allocated over $28 billion for NHPP funding each year from 2022 to 2026.[2] The purpose of the NHPP is to preserve the condition, performance, and resilience of the National Highway System (NHS). NHPP funds can also be used to construct new NHS facilities and ensure that projects are making progress toward performance goals set out in each state's asset management plan. NHPP provides funding for improvements to rural and urban roads that are part of the NHS, including the Interstate System and designated connections to major intermodal terminals. Under certain circumstances, NHS funds may also be used ("flexed") to fund transit improvements in NHS corridors. NHPP funds are distributed under Categories 1, 4, and 12 of TxDOT funding.

Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation (PROTECT) Formula Program

The PROTECT Program, established by the IIJA, provides funding to states for planning activities, transportation resilience improvements, evacuation route activities, and natural infrastructure to protect transportation assets. The goal of the program is to make the transportation system more resilient to natural hazards. From 2022-2026, the total amount of available funding from the PROTECT Formula Program is $7.3 billion.[3]

Railroad Rehabilitation and Improvement Financing (RRIF) Program

The Railroad Rehabilitation and Improvement Financing (RRIF) Program authorizes the Federal Railroad Administration (FRA) Administrator to provide direct loans and loan guarantees for projects that acquire,

[1] Joint Office of Energy & Transportation (2023). NEVI Formula Program Annual Report. Accessed February 2024.

[2] Kalla, H. (2022). FHWA Memorandum: Implementation Guidance for the National Highway Performance Program (NHPP) as Revised by the Bipartisan Infrastructure Law. Pg. 9. Accessed February 2023.

[3] USDOT (2022). Bipartisan Infrastructure Law Fact Sheets. PROTECT Formula Program. Accessed February 2024.

improve, rehabilitate, or build intermodal or rail equipment or facilities, including track, components of track, bridges, yards, buildings, and shops. Up to $35 billion per year of financing is available, with at least $7 billion reserved for projects not on Class I railroads. Financing can be provided for up to 100% of project costs with repayment periods of up to 35 years. Recipients benefit from interest rates that are equal to the cost of borrowing from the government. The FAST Act also authorized the USDOT to enter into Master Credit Agreements. These agreements include one or more loans to be made in the future on a program of related projects. State and local governments, government-sponsored authorities and corporations, and railroads are all eligible to borrow under RRIF.

Surface Transportation Block Grant (STBG) Program

The STBG Program is a block grant funding program with subcategories for states and urban areas. These funds can be used for any road, including an NHS roadway. The IIJA continued all STBG requirements but added the provision that states may use up to 15% of certain categories of STBG funds on roadways classified as local roads or rural minor collectors. The state portion of funding can be used on roads inside or outside an urbanized area, while the urban portion can only be used on roads within an urbanized area. The funding ratio is 80%/20% (federal/local).

For urban areas with a population of greater than 200,000 people, the MPO is the lead agency for funding allocation in consultation with the State. In urban areas with a population of less than 200,000 people, the state is the leading agency for fund allocation in consultation with regional planning organizations.

Transportation Alternatives (TA) Program

The Transportation Alternatives (TA) Program is a set-aside of STBG Program funding to provide funding for a variety of alternative transportation projects. From fiscal years 2022-2026, a total of around $1.4 billion is available for the TA program each year.[4] Eligible TA project activities include:

- Facilities for pedestrians, bicyclists, and other non-motorized forms of transportation
- Safe routes to school
- Conversion and use of abandoned railroad corridors for trails
- Community improvement activities
- Environmental mitigation related to stormwater and habitat connectivity

States and MPOs conduct a competitive application process for the use of the sub-allocated funds. Other than a recreational trails set-aside, states are given broad flexibility to use these funds. A 20% local funding match is required for most projects.

Transportation Infrastructure Finance and Innovation Act (TIFIA) Program

[4] US FHWA (2022). Fact Sheets. Transportation Alternatives (TA). Accessed February 2024.

The Transportation Infrastructure Finance and Innovation Act (TIFIA) Program provides federal credit assistance in the form of direct loans, loan guarantees, and standby lines of credit to finance surface transportation projects of national and regional significance. TIFIA credit assistance provides improved access to capital markets, flexible repayment terms, and potentially more favorable interest rates than can be found in private capital markets for similar instruments. TIFIA can help advance qualified large-scale projects that otherwise might be delayed or deferred because of size, complexity, or uncertainty over the timing of revenues. Transportation Projects eligible for federal assistance through existing transportation programs are eligible for the TIFIA credit program. Eligible projects must be included in the State Transportation Improvement Program (STIP) and have a capital cost of at least $50 million, except ITS projects which have a $15 million minimum eligibility requirement. TIFIA financing should attract public and private investment; result in a project proceeding earlier and/or more efficiently; and reduce use of federal grant assistance to the project.

FTA Funding Programs

Several FTA formula programs could be used to provide funding for public transportation service improvements, facilities, or equipment. These include:

- **Section 5307 –** Urbanized Area Formula Grants: This grant makes federal resources available to urbanized areas and to governors for transit capital and operating assistance in urbanized areas and for transportation-related planning. An urbanized area is an incorporated area with a population of 50,000 or more.
- **Section 5339 –** Grants for Buses and Bus Facilities: This formula grant provides funding to states and transit agencies through a statutory formula to replace, rehabilitate and purchase buses and related equipment, and to construct bus-related facilities.
- **Section 5310 –** Enhanced Mobility of Seniors and Individuals with Disabilities: This program provides formula funding to states for the purpose of meeting transportation needs of the elderly and persons with disabilities. Eligible recipients include private nonprofit groups, states, public transportation operators, and local governments.
- **Section 5311 –** The Formula Grants for Rural Areas Program: This program provides formula funding to states for the purpose of providing capital, planning, and operating assistance for public transportation providers in rural areas with populations of less than 50,000. Additionally, the program provides funding for training and technical assistance under the Rural Transportation Assistance Program.

The IIJA authorized up to $108 billion in support for federal public transportation programs, which is the largest federal investment for public transportation in the history of the nation. In addition to the major formula funding programs listed above, the FTA has several specialized competitive grant programs such as the Low or No Emission Vehicle Program (5339c) and Capital Investment Grants (5309).

Federal Discretionary Funding

There are many discretionary, or competitive, grant programs available at the federal level. The IIJA allocated funds to continue these programs and implemented new discretionary programs. MPOs are

eligible to apply or partner with other agencies to receive grant funding for a wide range of transportation improvement and planning activities. The DOT Discretionary Grants Dashboard is an excellent resource for navigating the many grant programs available along with their eligible activities and applicants.[5] The examples of grant programs are described below. Projects in the 2050 MTP update can be tailored to ensure eligibility for these programs.

Advanced Transportation Technologies and Innovative Mobility Deployment (ATTIMD) Program

The Advanced Transportation Technologies and Innovative Mobility Deployment (ATTIMD) program, also known as the Advanced Transportation Technology and Innovation (ATTAIN) program, provides funding to deploy, install, and operate advanced transportation and congestion management technologies. Some examples of these technologies include advanced traveler information systems, public transportation systems, and safety systems.

Airport Improvement Program (AIP)

This grant provides funding to public agencies or some private airports for the planning and capital projects for the development of public-use airports and rural "nonprimary" airports that are included in the National Plan of Integrated Airport Systems (NPIAS). Eligible projects include runways, taxiways, airport signage, airport lighting, and airport marking planning or capital projects.

Airport Terminals Program

The Airport Terminals Program provides grants to airports of all sizes to address aging air infrastructure. These grants will fund safe, sustainable, and accessible airport terminals, on-airport rail access projects, and airport-owned airport traffic control towers. However, projects may also include multimodal development.

Areas of Persistent Poverty Program (AoPP)

This program provides competitive funding from the FTA for planning, engineering, or development of technical or financing plans to improve transit services in areas experiencing long-term economic distress.

Bridge Investment Program (BIP)

This program provides funding for projects to replace, rehabilitate, preserve, and protect bridges. The goal is to reduce the total number of bridges in or at risk of poor condition. There is a rolling Notice of Funding for bridge projects under $100 million, large projects over $100 million, and bridge planning projects.

Capital Investment Grant (CIG) Program

This program funds fixed guideway investments, including new and expanded rapid rail, commuter rail, light rail, streetcars, bus rapid transit or corridor-based busing, and ferries.

[5] https://www.transportation.gov/grants/dashboard

Charging and Fueling Infrastructure Grant Program

The purpose of this program is to strategically deploy publicly accessible electric and alternative (hydrogen/propane/natural gas) fueling infrastructure. This includes funding for corridor charging along the designated Alternative Fuels Corridor and community charging near public roads and facilities. Community charging projects will prioritize rural and low- and moderate-income areas.

Commercial Driver's License Program Implementation (CDLPI)

This program provides funding to state CDL programs to achieve compliance with federal licensing and standards.

Commercial Motor Vehicle (CMV) Operator Safety Training Grant

The purpose of this program is to increase the number of CDL holders possessing enhanced operator safety training. Priority is given to the training of current or former members of the U.S. Armed Forces, including National Guard and Reservists. This program aims to reduce the severity and number of CMV crashes while helping to transition former members of the US Armed Forces into the commercial vehicle industry.

Community Safety Grant (CSG)

This grant is open to nonprofit organizations for the purpose of national outreach and training to assist communities in the preparation for and response to incidents involving the transportation of hazardous materials. There are no funding match requirements for the CSG program.

Diesel Emissions Reduction Act (DERA) National Grants

DERA Grants provide funding for projects that achieve significant reductions in diesel emissions and exposure. Projects should replace many high-emission vehicles with energy efficient transportation and technologies, especially for fleets that operate in areas with poor air quality.

Economic Adjustment Assistance (EAA) Program

The EAA program from the Economic Development Administration provides funding for technical, planning, and public works and infrastructure projects in regions experiencing adverse economic changes. For example, changes may result from a plant closure, changing trade patterns, natural disasters, military base closure, or environmental changes. Eligible projects include the creation and implementation of activities in an applicant's Comprehensive Economic Development Strategy (CEDS).

Economic Impact Initiative Grant Program

The Economic Impact Initiative Grant program provides funding for rural areas that are experiencing extreme unemployment and severe economic depression to develop essential community facilities. These facilities include projects like street or airport improvements, and the purchase of firetrucks. This grant may be combined with other grants or funding sources.

Grants for Buses and Bus Facilities Competitive Program

This program assists in the financing of buses and bus facilities capital projects. Projects which replace, rehabilitate, or modify bus facilities, as well as the purchase of buses, vans, and related equipment are eligible for funding.

Infrastructure For Rebuilding America (INFRA) Grant Program

The U.S. Department of Transportation (USDOT) provides the Infrastructure for Rebuilding America (INFRA) discretionary grant program to fund transportation projects of national and regional significance to improve the safety, efficiency, and reliability of the movement of freight and people. The IIJA allocated approximately $8 billion for INFRA grants for the fiscal years 2022-2026. USDOT seeks projects that apply innovative technology, delivery, or financing methods with proven outcomes to deliver projects in a cost-effective manner. Eligible INFRA project costs may include reconstruction, rehabilitation, acquisition of property (including land related to the project and improvements to the land), environmental mitigation, construction contingencies, equipment acquisition, and operational improvements directly related to system performance.

Innovative Coordinated Access and Mobility (ICAM) Pilot Program

This program finances innovative capital projects for the transportation-disadvantaged. The goal is to improve the coordination of transportation services and non-emergency medical transportation services for underserved groups and build partnerships among health, transportation and other service providers. Eligible applicants include state governments, local governments, federally recognized tribes and affiliated groups.

Low- or No-Emission Grant Program

This program includes the purchasing or leasing of low- or no-emission transit buses and related equipment, as well as the construction, leasing, or rehabilitation of new or existing public transportation facilities for low- or no-emission buses.

National Infrastructure Project Assistance (Mega) Grant Program

The Mega grant program supports large and complex transportation projects that may be difficult to otherwise fund. These projects should generate economic, mobility, or safety benefits at a national or regional level. Administered by USDOT, the Mega grant has a total of $5 billion in available funds for fiscal years 2022-2026. USDOT has combined solicitations for the Mega program, INFRA program, and a rural grant program into one Notice of Funding Opportunity, referred to as the Multimodal Project Discretionary Grant (MPDG) Opportunity.

Pilot Program for Transit-Oriented Development (TOD) Planning

This program provides funding to integrate land use and transportation planning to develop a new fixed guideway or core capacity transit project. Projects should examine the following factors to enable mixed-

use development near transit stations: ways to develop affordable housing near transit, economic development, ridership potential, multimodal connectivity and accessibility, transit access for pedestrian and bicycle traffic, etc.

Promoting Resilient Operations for Transformative, Efficient, and Cost-saving Transportation (PROTECT) Grant Program

This program provides funding to improve the resilience of surface transportation to natural hazards including climate change, sea level rise, flooding, extreme weather events, and other natural disasters. Funds are awarded in the form of planning grants and competitive resilience improvement grants to support planning activities, resilience improvements, community resilience, evacuation routes, and at-risk coastal infrastructure.

Public Transportation Emergency Relief Program

This program from the FTA provides assistance to public transportation operators after an emergency, such as floods, hurricanes, and tornadoes. Funding pays for pay for protecting, repairing, and/or replacing equipment and facilities that have been damaged. In addition, program funding can be used for operating costs of evacuation, rescue operations, temporary public transportation service, or reestablishing service.

Rail Vehicle Replacement Program

This program provides competitive funding for the replacement of rail vehicles, or rolling stock, that is past its useful life.

Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Grant Program

The Funding for the Rebuilding American Infrastructure with Sustainability and Equity (RAISE) grant program was renewed through the IIJA to continue to build and repair critical portions of the nation's freight and passenger transportation networks. RAISE, formerly known as BUILD and TIGER, has dedicated over $14 billion in grants to projects nationwide since 2009. Projects for RAISE funding are evaluated based on merit criteria that include safety, environmental sustainability, quality of life, economic competitiveness, state of good repair, innovation, and partnership. Within these criteria, USDOT prioritizes projects that can demonstrate significant progress on national objectives. As of 2023, the maximum grant award for RAISE grants was $345 million for a single state. To ensure that the benefits of infrastructure investments benefit communities large and small, the Department will award an equitable amount, not to exceed half of funding, to projects located in urban and rural areas, respectively.

Reconnecting Communities Pilot (RCP) Program

The RCP grant program is a combination of two major discretionary grant programs—the Reconnecting Communities Pilot (RCP) and Neighborhood Access and Equity (NAE) programs. This program provides funds for projects that improve walkability, safety, and transportation access, especially for historically

disadvantaged groups. In particular, the program provides funds to remove, retrofit, or mitigate transportation facilities that have created connectivity barriers.

Safe Streets and Roads for All (SS4A) Grant Program

The SS4A grant program was established by the IIJA, with available funding in the amount of $5 billion from 2022-2026. The purpose of the program is to prevent roadway injuries and deaths to support the USDOT National Roadway Safety Strategy and goal of zero roadway deaths. Eligible applicants for SS4A grant funding includes local governments, special districts, transit agencies, MPOs, and tribal governments. SS4A funding can be used to create a comprehensive safety action plan and implement infrastructure, operational, or behavioral activities from the plan.

Strengthening Mobility and Revolutionizing Transportation (SMART) Grants

The SMART grant program provides funding to conduct demonstration projects focused on advanced smart community technologies and systems. The purpose of the program is to fund purpose-driven innovation and build data and technology capacity in order to improve transportation efficiency and safety.

Thriving Communities Program

This program aims to ensure that historically disadvantaged communities have the technical tools and organizational capacity to compete for federal aid and deliver infrastructure projects. The planning and development of transportation and community revitalization activities will enable these communities to thrive.

Wildlife Crossings Pilot Program

This program seeks to improve habitat connectivity for terrestrial and aquatic species by providing funding for projects that reduce the number of wildlife-vehicle collisions.

State Funding

States receive formula funds from the Federal Aid Highway Program Highway Trust Fund. In addition, states receive transportation funds from taxes and fees such as motor fuel taxes and vehicle registration fees. States typically use funding sources to meet match funding requirements and fund operations. The following section describes state transportation funding sources from Texas. The State of Texas maintains categorized funding programs that coincide with federal funding programs. Traditionally, this funding is used to meet any required match of federal sources and to fund the operations of the state Department of Transportation. The primary funding source for Texas transportation programs includes motor fuel taxes allocations, motor vehicle registration fees, severance taxes allocations, and many other revenue sources and fees, including voter approved constitutional amendments Proposition 1 and Proposition 7, which redirect funding from the general fund to be spent on transportation projects. Categories 1-9 of the Texas Unified Transportation Program (UTP) are federal and state programmatic funding categories, while Categories 10, 11, and 12 are strategic and discretionary funding categories. TxDOT's provides the

following definitions and criteria for each funding category in the UTP Funding Categories Descriptions document[6], which is summarized in Table 7-1.

Table 7-1: TxDOT Funding Categories

Category	Description	Allocation and Project Selection
1: Preventive Maintenance and Rehabilitation	Addresses preventive maintenance and rehabilitation of the existing state highway system, including pavement, signs, traffic signals and other infrastructure assets	Funding to each TxDOT district is based on formulas for maintenance and rehabilitation. Projects are selected by district performance based prioritization process.
2: Metropolitan and Urban Area Corridor Projects	Addresses mobility and capacity projects on urban corridors to mitigate traffic congestion, traffic safety, and maintenance. Projects must be located on the state highway system.	Funding is allocated to MPOs based on population (above or below 200,000). Projects are selected by MPO performance-based prioritization process in consultation with TxDOT districts.
3: Non-Traditionally Funded Transportation Projects	For projects that are not traditionally part of the State Highway Fund, Texas Mobility Fund, pass-through financing, regional revenue and concession funds, and funding provided by local or military entities.	Funding and project selection is determined by state legislation, Texas Transportation Commission-approved minute order, or local government commitments.
4: Statewide Connectivity Corridor Projects	Addresses mobility on major state highway system corridors. Projects must be located on the Texas highway Trunk System, National Highway System (NHS), Connections to major seaports or border crossings, National Freight network, or Hurricane evacuation routes.	Rural Connectivity Funds are distributed based on project scoring thresholds and qualitative analysis. Urban Connectivity Funds distributed using Category 2 formulas. TxDOT districts select rural projects and select urban projects in consultation with MPOs.
5: Congestion Mitigation and Air Quality Improvement	Addresses attainment of National Ambient Air Quality Standards in non-attainment areas. Projects are evaluated to quantify its air quality improvement benefits.	TxDOT distributes funding from the federal Congestion Mitigation and Air Quality Improvement program to non-attainment areas by population and weighted by air quality severity. TxDOT districts oversee the selection of MPO projects using a performance-based prioritization process.
6: Structures Replacement and Rehabilitation (Bridge)	Addresses bridge improvements through the following sub-programs: Highway Bridge Program, Bridge Maintenance and Improvement Program, and Bridge System Safety Program.	Category 6 funding is allocated to TxDOT's Bridge Division, which selects projects statewide.

[6] https://ftp.txdot.gov/pub/txdot/get-involved/tpp/utp/061024-utp-funding-categories-descriptions.pdf

Category	Description	Allocation and Project Selection
7: Metropolitan Mobility and Rehabilitation	Addresses transportation needs within the boundaries of MPOs with populations of 200,000 or greater.	Funding distribution is based on the population of each Transportation Management Area (TMA). MPOs within TMAs select projects in consultation with TxDOT districts.
8: Safety	Addresses highway safety improvements through sub-programs: Highway Safety Improvement Program (HSIP) and Systemic Widening Program	Category 8 funding is allocated to TxDOT's Traffic Safety Division, which selects projects statewide.
9: Transportation Alternatives (TA) Set-Aside Program	Administers the federal TA set-aside program to build infrastructure-related projects that provide safe routes for non-drivers.	MPOs that are TMAs receive a portion of TA funds to administer. TxDOT distributes funds through a competitive statewide call for projects. TMA projects are selected by MPOs, while small urban and non-urban area projects are selected through a competitive process administered by TxDOT's Public Transportation Division.
10: Supplemental Transportation Programs	Addresses a variety of improvements sub-programs: Americans with Disabilities Act (ADA) Pedestrian Program, Carbon Reduction Program (CBN), Federal Lands Access Program (FLAP), Ferry Program, Green Ribbon Program, Intelligent Transportation Systems, Landscape Incentive Awards, Railroad Grade Crossing and Re-planking Program, Railroad Signal Maintenance Program, Safety Rest Area/Truck Parking, Seaport Connectivity, Supplemental Transportation Projects (Federal), Texas Parks and Wildlife Department (TPWD)	Each sub-program has its own allocation and project selection guidelines, with various TxDOT divisions and MPOs responsible for administration.
11: District Discretionary	Addresses TxDOT district transportation needs through the District Discretionary, District Safety, Energy Sector, Border State Infrastructure Funding, and Construction Cost Overruns/Change Order sub-programs.	TxDOT districts select projects using a performance-based prioritization process that assesses district-wide maintenance, safety or mobility needs. The Texas Transportation Commission allocates funds through a formula allocation program. The Texas Transportation Commission may supplement the funds allocated to individual districts on a case-by-case basis to cover project cost overruns, as well as energy sector initiatives.
12: Strategic Priority	Addresses projects with specific importance to the state, including those that improve congestion and connectivity,	Funding in Category 12 is awarded to specific projects at the discretion of the Texas Transportation Commission,

Category	Description	Allocation and Project Selection
	economic opportunity, energy sector access, border and port connectivity, efficiency of military deployment routes, and the ability to respond to emergencies	which selects from candidate projects nominated by TxDOT districts and MPOs.

Local Funding

It is typically the responsibility of the local government jurisdictions (cities and counties) to cover any costs not covered by state and federal programs. Local funding can come from a variety of sources including property taxes, sales taxes, user fees, special assessments, and impact fees. Match requirements make local funds critical to maintain eligibility for several federal and state funding sources, which is typically around 20% of total project costs for federal funding sources.

Advanced Transportation District

Legislation authorizing the creation of Advanced Transportation Districts and authorization of a local sales tax for advanced transportation was enacted by the Texas Legislature during the 76th session in 1999. Advanced transportation as defined in the legislation includes light rail, commuter rail, fixed guideways, traffic management systems, busways, bus lanes, technologically advanced bus transit vehicles and systems, bus rapid transit systems, transit centers, stations, electronic transit-related information, fare, and operating systems, high occupancy vehicle lanes, traffic signal prioritization and coordination systems, monitoring systems, and other services in connection with such facilities, equipment, operations, systems, and services.

Bond Issues

Property tax and sales tax funds can be used on a pay-as-you-go basis, or the revenues from these taxes can be used to repay general obligations or revenue bonds. These bonds are issued by local governments upon approval of the voting public.

Economic Development Corporation

In Texas, the Development Corporation Act of 1979 gives cities the ability to finance new and expanded business enterprises in their local communities through economic development corporations (EDCs). Chapters 501, 504, and 505 of the Local Government Code outline the authorization of certain EDCs to implement sales taxes to fund streets, roads, and other infrastructure improvements.

General Sales Taxes

The general sales and use taxes are also an important funding source for local governments. The most commonly known form of the general sales tax is the retail sales tax. The retail sales tax is imposed on a wide range of commodities, and the rate is usually a uniform percentage of the selling price.

Property Taxes

Property taxation has historically been the primary source of funding for local governments in the United States. Property taxes account for more than 80% of all local tax revenues. Property is not subject to federal government taxation and is a significant generator of tax revenue within the state of Texas given the lack of state and local-option income taxes.

Public-Private Partnerships

A Public-Private Partnership (P3) is a contractual agreement between a public agency (federal, state, or local) and a private entity for a long-term, performance-based approach to procuring public infrastructure. The private entity assumes the major share of the risk in terms of financing, constructing, and the performance of the project in return for the right to collect revenue from the project over a set period of time.

Special Assessments

Special assessment is a method of generating funds for public improvements, whereby the cost of a public improvement is collected from those who directly benefit from the improvement. Areas in which this scenario occurs are often called “Special Assessment Districts.” Within these districts, property owners—typically business owners—will vote to dedicate a portion of their sales tax or property tax to fund some improvement or service that benefits the district. In many instances, new streets are financed by special assessment. The owners of property located adjacent to the new streets are assessed a portion of the cost of the new streets based on the amount of frontage they own along the new streets.

Tax Increment Reinvestment Zone or District

One of the tools many states use to obtain funds not provided by federal and state funding is through Tax Increment Financing (TIF), which is a public financing method used for redevelopment and community improvement projects. A tax increment reinvestment zone (TIRZ) is a political subdivision of a municipality or county created to implement tax increment financing, which may be initiated by the city or county. The assessed values of properties within the new TIRZ are frozen for a period of time. As property values increase over the lifetime of the TIRZ, the property taxes collected through this increase (the "increment") are used to pay for the improvement project. A TIRZ may not be created without justification. In its current state, the area must have a deleterious effect on the economic future of the creating body. To be eligible for funding, the project sponsor must be able to show that the project offsets the deleterious effect. There are numerous TIRZs in Smith County, which are listed below along with zone activation and expiration dates.[7]

- City of Lindale TIRZ #2 (January 1, 2009 - December 31, 2029)
- City of Lindale TIRZ #3 (December 30, 2015 - December 31, 2045)
- City of Tyler TIRZ #1 (January 1, 1998 - Not Reported)
- City of Tyler TIRZ #3 (January 1, 2008 - December 31, 2037)
- City of Tyler TIRZ #4 (September 28, 2016 - December 31, 2045)

[7] https://comptroller.texas.gov/economy/development/prop-tax/docs/96-1726-tif-abate-2022-reg.pdf

Traffic Or Development Impact Fees

New developments create increased traffic volume on the streets around them. Development impact fees are a way of attempting to place a portion of the burden of funding improvements on developers who are creating or adding to the need for improvements.

User Fees

User fees are fees collected from those who use a service or facility. The fees are collected to pay for the cost of a facility, finance the cost of operations, and/or generate revenue for other uses. User fees are commonly charged for public parks, water and sewer services, transit systems, toll roads, express lanes, and solid waste facilities. The theory behind the user fee is that those who directly benefit from these public services pay for the costs.

Revenue Forecast

Transportation improvement projects in the Tyler Metropolitan Planning Area are funded through a combination of federal, state, and local dollars. Future revenue for roadway improvements was forecasted from TxDOT's 2025 Unified Transportation Program for the years 2025-2034 and inflated by a growth factor of 1.02 for the years 2035-2050. Table 7-2 below shows the total projected funding by stage for the funding categories that can be expected to support roadway projects within the Tyler metropolitan area over the 25-year planning horizon. The project team worked in close coordination with the TxDOT Tyler District to verify assumptions and to include additional projected funding factors.

Table 7-2: Projected Roadway Funding

Stage (Years)	Implementation (2025-2028)	Near Term (2029-2034)	Medium Term (2035-2045)	Long Term (2046-2050)
Category 1: Preventive Maintenance & Rehabilitation	$212,044,148	$228,719,844	$492,276,758	$345,706,869
Category 2: Metro & Urban Corridor Funding	$94,361,727	$81,347,814	$196,244,986	$137,815,240
Category 4: Statewide Connectivity Corridor Projects	$54,278,036	$51,268,563	$117,881,992	$82,783,950
Category 10: Carbon Reduction	$1,908,695	$2,887,740	$5,357,002	$3,762,015
Category 11: District Discretionary	$10,767,287	$13,803,948	$27,442,913	$19,272,093
Category 11: Safety	$16,294,040	$16,165,383	$36,253,005	$25,459,079
Category 11: Energy Sector	$14,756,661	$17,304,663	$35,808,380	$25,146,836
Total	$404,410,593	$411,497,953	$911,265,036	$639,946,081

Cost Estimation

As fiscal constraint is a major component of the MTP, consideration of the cost of the proposed transportation improvements is a key step. For the purpose of estimating fiscal constraint in the MTP, Federal regulations define "total project cost" to include:

- Planning elements (e.g. environmental studies and functional studies); Engineering costs (e.g. preliminary engineering and design);
- Preconstruction activities (e.g. ROW acquisition);
- Construction activities; and
- Contingencies.

Both typical improvement costs and local knowledge of other project costs were used to develop cost estimates for the projects considered for the MTP. In keeping with federal regulations, cost estimates were computed in YOE dollars using the inflation factors in accordance with FHWA and TxDOT guidance. Table 7-3 displays the aggregate total estimated project costs for each stage addressed by the MTP. Each stage also includes programmatic cost estimates for general system maintenance and operation. The complete list of projects considered for inclusion in the MTP, along with estimated YOE costs, can be found in Chapter 8. Transit fiscal projections were determined by examining the current FY 2025-2028 Transportation Improvement Program, and applying a growth rate to individual funding categories received by the MPO. As the population of the metropolitan area continues to grown, additional funding will become available based on 5307 and 5339 transit formula grant programs. Generally speaking, metropolitan areas with smaller bus and community-based transit are able to meet their capital and operating needs based on the budget provided by these funds.

Table 7-3: Transportation Improvement Costs

Stage (Years)	Estimated Project Costs	Estimated Transit Costs
Implementation (2025-2028)	$ 99,112,000	$ 16,720,628
Near Term (2029-2034)	$ 126,896,000	$ 33,683,228
Medium Term (2035-2045)	$ 348,051,700	$ 77,640,201
Long Term (2046-2050)	$ 220,976,000	$ 59,549,235
Total	$795,035,700	$ 187,593,292

Fiscal Constraint

The anticipated total program funding for both highway and transit is expected to be $1,003,575,600 over the 25-year planning horizon of the MTP. Total anticipated program costs are estimated to be around $982,628,992 in YOE dollars. Because the total program funding is expected to be greater than Tyler Area 2050 MTP program costs the plan meets the fiscal restraint requirement. In accordance with TxDOT's UTP process, the first ten years of the plan (2025-2034) are also fiscally constrained. Table 7-4 shows the fiscal summary for roadway improvements. More specifically, Table 7-4 compares roadway project costs over the MTP planning horizon to the projected funding from Categories 2 and 4U, which the Tyler MPO directly selects projects for. There is additional funding for roadway projects that can potentially be utilized within the metropolitan area, such as Carbon Reduction funds (Category 10) and other categories shown in Table 7-2.

Table 7-4: Fiscal Constraint Summary - Roadway

	Estimated Funding (Categories 2 and 4U)	Estimated Costs[8]
Implementation (2025-2028)	$148,639,763	$ 99,112,000
Near Term (2029-2034)	$132,616,377	$ 126,896,000
Medium Term (2035-2045)	$314,126,978	$ 348,051,700
Long Term (2046-2050)	$220,599,190	$ 220,976,000
Total	**$815,982,308**	**$795,035,700**

Table 7-5 shows the fiscal summary for transit, which is also fiscally constrained over the 25-year planning horizon.

Table 7-5: Fiscal Constraint Summary - Transit

	Estimated Funding	Estimated Costs
Implementation (2025-2028)	$ 16,720,628	$ 16,720,628
Near Term (2029-2034)	$ 33,683,228	$ 33,683,228
Medium Term (2035-2045)	$ 77,640,201	$ 77,640,201
Long Term (2046-2050)	$ 59,549,235	$ 59,549,235
Total	$ 187,593,292	$ 187,593,292

[8] Unused projected available funding from Implementation and Near Term were carried over to fund projects in the Medium and Long term stages.

Chapter 8: Staged Improvement Plan

Tyler Area MPO
2050 Metropolitan Transportation Plan

This chapter includes maps and tables that illustrate the plan of recommended projects in the Tyler Area 2050 MTP. The fiscally constrained projects have been grouped into four periods/stages based on related transportation improvement programming and planning documents and staging of revenue forecasts discussed in Chapter 7. The first stage, Implementation, was set up to accommodate and coincide with projects in the next Transportation Improvement Program (TIP). The following stage, the Near-Term stage includes projects occurring within the 2025 Unified Transportation Program (UTP). The years covered by the stages of this plan are separated as following:

- 2025-2028 - Implementation
- 2029-2034 - Near-Term
- 2035-2044 - Medium-Term
- 2045-2050 - Long-Term

In addition to fiscally constrained project lists and locations, this chapter includes a listing of unconstrained projects. These projects reflect possible future transportation needs that fall outside of reasonable expectations of infrastructure funding over the next twenty-five years.

Project Prioritization

To develop a prioritized list of projects, a set of performance-based criteria called “Guiding Values” were developed based on the goals and vision of the MTP. These criteria aligned with data developed during the initial analysis of the transportation system. The priority level of each criterion was evaluated during public outreach and engagement in the summer of 2024. Two separate surveys were conducted with regional stakeholders, who were asked to rank these 12 planning factors against each other. Points were assigned from 12 to 1 in descending order of rank for each response. The total ranking points awarded for each project were then used to calculate relative weights by which performance data from the regional analysis was scored. Depending on the data points for a project, it was awarded either a score between 1 and 3 on each performance dimension. The weights for each criterion were then applied to the score for each individual factor and summed to produce a total score. The ranked list was then used as a starting point to prioritize projects and develop a fiscally constrained funding plan.

After prioritization, the list of projects was assigned funding from two categories: Urban Metropolitan Mobility Funding (TxDOT Category 2) and Urban Connectivity (Category 4.) Category 4 was prioritized for TxDOT projects connecting to other regions. The ranked and fiscally constrained list was provided to the Technical Advisory Committee, who ordered the list based on project readiness. More ready or committed projects were prioritized and given funding in the Implementation and Near-Term stages, with larger more complicated projects funded in Medium- and Long-Term stages. Overall, 8 projects received full funding in the MTP funded project list, with the remainder reserved in the unfunded needs list. These 8 projects represent major improvements to the transportation system, many of which have been planned for several years.

Fiscally Constrained Program of Projects

The following map (Figure 8-1) shows the locations of the fiscally constrained projects in the Tyler Metropolitan Planning Area by the four project periods/stages, along with unfunded needs or fiscally unconstrained projects. Table 8-1 shows the fiscally constrained project list with the associated estimated year of expenditure costs. Though the development of these estimated costs has been discussed in greater detail in Chapter 7, estimated costs are shown in this chapter for the sake of open and transparent communication with the public. Table 8-2 shows the unconstrained project list for the Tyler Area MPO. The unfunded projects are included in the MTP because they could potentially be implemented if additional funding for transportation improvements becomes available. The fiscal constraint and ranking of these projects are the result of a continuous, comprehensive and collaborative process between TxDOT Tyler District, MPO staff, and the MPO committees. In addition, Table 8-3 shows unfunded bicycle and pedestrian-only project potentially eligible for in the future for Transportation Alternatives funding.

Figure 8-1: Tyler Area 2050 MTP Projects

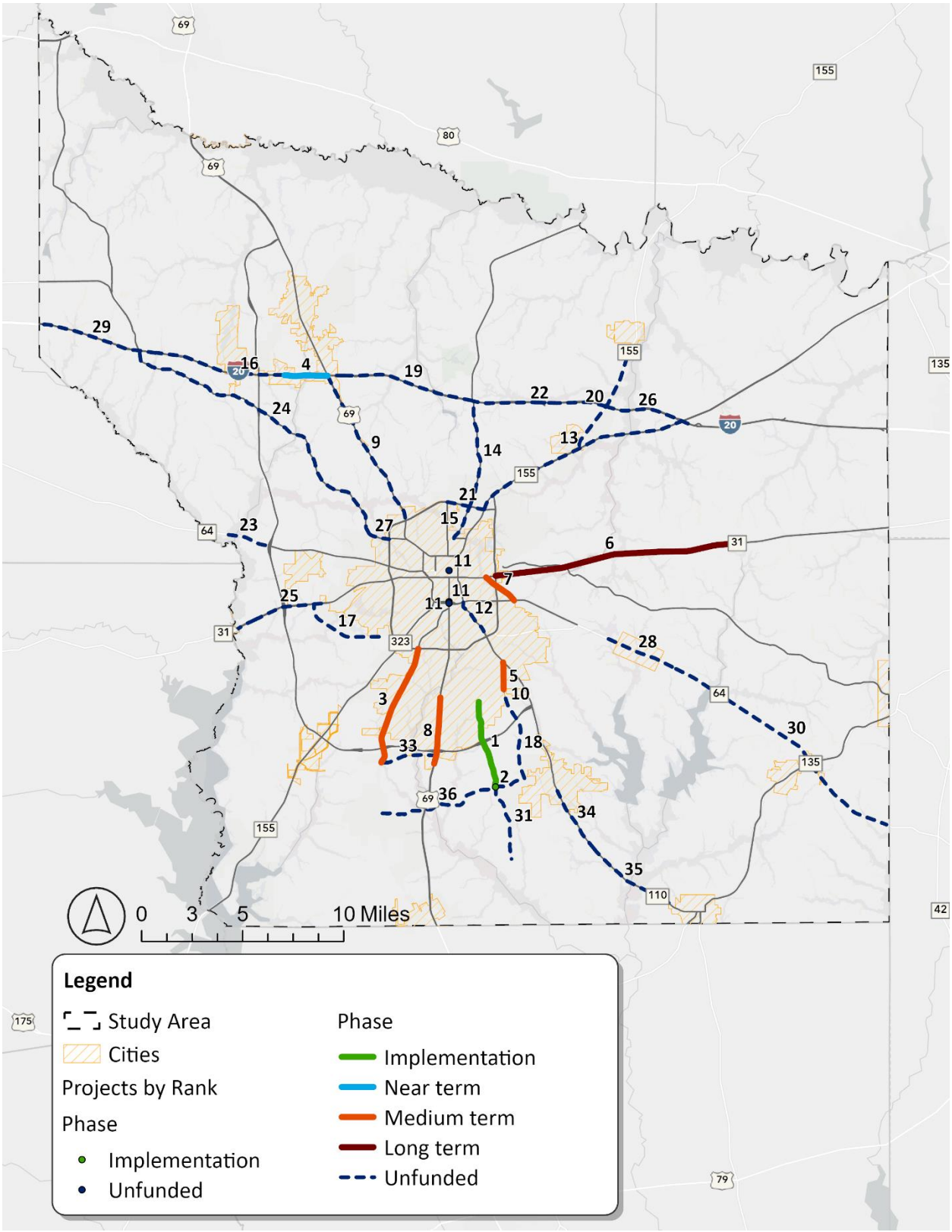


Table 8-1: Prioritized List of Projects

Stage	ID	Road	Limits	Description	Cost
Implement.	1	FM 756	From Jeff Davis Drive to FM 364	Widen from 2 lanes to 4 lanes with flush median (CSJ 0492-04-034)	$ 61,360,000
Implement.	2	FM 756	At FM 346	Construct Interchange (CSJ 0492-04-041)	$ 37,752,000
Medium	3	FM 2493	From SL 323 WSW to FM 2813	Widen from 4 Lanes to 6 Lanes with raised median (CSJ 0191-03-084)	$ 207,792,000
Near	4	IH 20	From County Road 433 (Harvey Road) to US 69	Ramp Reversal & One-Way Frontage Roads (CSJ 0495-04-069)	$ 126,896,000
Medium	5	FM 2964	From SH 110 to E. Grande Blvd	Widen from 2 lanes to 4 lanes with flush median (CSJ 3021-01-009)	$ 65,000,000
Long	6	SH 31	From SL 323 SSE to County Road 236, 1.6 Miles east of FM 757	Widen from 2 lanes to 4 lanes (CSJ 0424-01-054)	$ 220,976,000
Medium	7	SL 124	From SH 31 to SH 64	Widen to add a flush median	$ 17,579,700
Medium	8	US 69	From South Town Drive to 0.3 Miles South of FM 2813	Widen from 4 lanes to 6 lanes (CSJ 0191-01-089)	$ 57,680,000

Table 8-2: Unfunded Needs List

ID	Road	Limits	Description	Cost
9	US 69	From IH 20 to SL 323 WNW	Widen from 4 lanes to 6 lanes	$ 177,918,300
10	FM 2964	From E Grande Blvd to CR 2191 (Oscar Burkett Rd)	Widen from 2 lanes to 4 lanes with flush median	$ 33,000,000
11	US 69	at Glenwood Boulevard and West Erwin Street	Intersection Improvements	$ 81,000,000
12	SH 110	From 5th Street to Golden Road	Widen from 4 lanes with flush median to 6 lanes with raised median	$ 39,608,400
13	US 271	From Loop 323 ENE to IH 20	Widen from 4 lanes to 6 lanes	$ 240,008,700
14	FM 14	From IH 20 to SL 323 ENE	Widen from 2 lanes to 4 lanes with flush median	$ 100,494,800
15	FM 14	From SL 323 ENE to Martin Luther King Junior Boulevard	Widen to add a flush median	$ 18,845,100
16	IH 20	From 0.76 Miles East of SH 110 to 0.78 Miles East of US 69	Widen from 4 lanes to 6 lanes	$ 709,408,000

ID	Road	Limits	Description	Cost
17	SS 364	From SH 31 to County Road 1311 (Scenic Dr)	Widen from 2 lanes to 4 lanes with flush median	$ 92,902,900
18	FM 2964	From CR 2191 (Oscar Burkett Rd) to FM 346	Widen from 2 lanes to 4 lanes with flush median	$ 48,500,000
19	IH 20	From 0.78 Miles East of US 69 to FM 14	Widen from 4 lanes to 6 lanes	$ 536,144,000
20	SH 155	From US 271 to Upshur County Line	Widen from 2 lanes to Super 2 roadway	$ 21,000,000
21	Loop 323 Extension	From Loop 323 NE to US 271	Widen from 2 lanes to 4 lanes	$ 7,808,000
22	IH 20	From FM 14 to SH 155	Widen from 4 lanes to 6 lanes	$ 298,592,000
23	SH 64	From FM 2661 to Van Zandt County Line	Widen from 2 lanes to 4 lanes	$ 77,071,200
24	SH 110	From IH 20 to CR 46 (Old New Harmony Rd)	Widen from 2 lanes to Super 2 roadway	$ 77,196,400
25	SH 31	From FM 206 to FM 2661	Widen from 4 lanes to 6 lanes	$ 44,406,400
26	IH 20	From SH 155 to 0.5 Miles West of FM 757	Widen from 4 lanes to 6 lanes	$ 174,496,000
27	SH 110	From CR 46 (Old New Harmony Rd) to SL 323	Widen from 2 lanes to 4 lanes	$ 14,985,000
28	SH 64	From CR 220/1.4 Miles Southeast of SS 248 to FM 3226	Widen from 2 lanes to 4 lanes	$ 126,008,600
29	IH 20	From Van Zandt County Line to 0.76 Miles East of SH 110	Widen from 4 lanes to 6 lanes	$ 346,416,000
30	SH 64	From FM 3226 to Rusk County Line	Widen from 2 lanes to 4 lanes	$ 7,412,345
31	FM 756	From FM 346 to FM 344	Widen from 2 lanes to 4 lanes	$ 51,520,000
32	SH 31	From FM 2661 to Henderson County Line	Widen from 4 lanes to 6 lanes	$ 16,578,900
33	FM 2813	From FM 2493 to US 69	Widen from 2 lanes to 4 lanes	$ 54,214,300
34	SH 110	From Hagan Rd to FM 344	Widen from 2 lanes to 4 lanes	$ 44,939,400
35	SH 110	From FM 344 to County Road 2144 (Alley Road)	Widen from 2 lanes to Super 2 roadway	$ 241,739,800
36	FM 346	From FM 2493 to FM 2964	Widen from 2 lanes to 4 lanes	$ 37,497,600

Table 8-3: Unfunded Transportation Alternatives Projects

Name	From	To	Description	Cost
FY 26 TRF Signal Improvements	At Various Locations	within the Tyler MPO Limits	Traffic signal improvements including the installation of updated signal detection within the Tyler MPO Limits.	$500,000
FM 2493 Bike and Pedestrian Improvements	FM 346	.3 Miles South of FM 344 (Cherokee County Line)	Construct separated bike lanes and sidewalks in coordination with the FM 2493 lane widening project	$1,665,028
Legacy Trail Phase 3	Three Lakes Parkway	SH 155	Design of Phase 3 of Legacy Trail that will connect Phases 1 and 2 previously constructed. Phase 3 will consist of approximately 3.8 miles of trail starting at the Trail Head at Stewart Park and ending at the Three Lakes Parkway Trail Head. A considerable portion of this trail will be in the Old Jacksonville Hwy right-of-way.	$500,000
City of Tyler Midtown to Downtown Shared Use Path	East 5th St	South Broadway Ave	Construct roughly 2.5 miles of a 10-foot-wide shared-use path, including ADA-compliant concrete trails, lighting, ADA access ramps, crosswalks, Pedestrian Hybrid Beacons at existing light-controlled intersections, signage, crosswalks, and associated culverts, dirt work, and other similar improvements.	$4,803,110
Sidewalk Addition on Divine	Mahon	Golden	Construct sidewalks along both sides of Divine Street	$386,670
UT Tyler Campus Pedestrian Safety Enhancement Project	University Blvd	Liberty Ln, Old Omen Rd, and Varsity Dr	Construct a 10-foot-wide shared-use path along the perimeter of the University of Texas at Tyler campus, a crosswalk and signal improvements at Liberty Lane, and a pedestrian bridge across University Blvd.	$16,100,750

Name	From	To	Description	Cost
North Northwest Loop 323 Tyler High School Pedestrian Traffic Signal	North Northwest Loop 323	At Lion Ln	Construct a pedestrian traffic signal with APS push buttons and countdown pedestrian signal heads	$660,000