



2045 Long Range Transportation Plan

SOUTHEAST WIREGRASS AREA METROPOLITAN PLANNING ORGANIZATION

PREPARED BY:



SAIN
ASSOCIATES



STRADA

2045 METROPOLITAN TRANSPORTATION PLAN

Southeast Wiregrass Area Metropolitan Planning Organization

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This document was prepared as a cooperative effort of the U.S. Department of Transportation, Federal Highway Administration, Alabama Department of Transportation, Federal Transit Administration, and local governments in partial fulfillment of requirements amended in 23 USC 134 and 135 (MAP-21 Sections 1201 and 1202, July 2012) and Task 3.51 of the Southeast Wiregrass Area MPO FY 2020 Unified Planning Work Program. The contents of this document do not necessarily reflect the official views or policies of the U.S Department of Transportation.

METROPOLITAN PLANNING ORGANIZATION MEMBERSHIP

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*Brad Lindsey	ALDOT Local Transportation Bureau
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*indicates non-voting member

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Charles Metzger - Public Works Director, City of Dothan
Bart Barefoot – Assistant Public Works Director, City of Dothan
Tommy Wright – Traffic Engineer, City of Dothan
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Chris Champion - County Engineer, Henry County Road Department
Chad Granberry – Assistant County Engineer, Henry County Road Department
Justin Barfield - County Engineer, Geneva County Road & Bridge Department
Scott Farmer – Director, Southeast Alabama Regional Planning & Development Commission
Jarrod Weed - Manager, Wiregrass Transit Authority
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Art Morris - Dothan-Houston County Airport Authority, Inc.
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Matt Leverette – Assistant Region Engineer, Alabama Department of Transportation
Southeast Region
Josh Kervin – Region Pre-Construction Engineer, Alabama Department of Transportation
Southeast Region
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Southeast Region (District 71 Dothan)

Citizens Advisory Committee

TBD

MPO Staff

Mr. Todd McDonald, Director of Planning and Development	City of Dothan
Mr. Reginald Franklin, Transportation Planner, MPO Staff	City of Dothan

RESOLUTION NO. 03-25-2021-2

**SOUTHEAST WIREGRASS AREA
METROPOLITAN PLANNING ORGANIZATION
ADOPTING THE 2045 LONG RANGE TRANSPORTATION PLAN (LRTP)**

WHEREAS, the Southeast Wiregrass Area Metropolitan Planning Organization (MPO) is the organization designated by the Governor of the State of Alabama as being responsible, together with the State of Alabama, for implementing the applicable provisions of Title 23 United State Code (USC) 134 and 135 (amended by Fast Act, Sections 1201 and 1202, December 2015); 42 USC 2000d-1, 7401; 23 CFR 450 and 500; 40 CFR 51 and 93; and

WHEREAS, the U. S. Department of Transportation requires all urbanized areas, as established by the U. S. Bureau of the Census, conducting area-wide urban transportation planning, to submit a 2045 Metropolitan Transportation Plan as a condition for meeting the provisions of amended Title 23, U. S. Code, Sections 134 and 135; and

WHEREAS, consistent with the declaration of these provisions, the Southeast Wiregrass Area Metropolitan Planning Organization (SWAMPO), in cooperation with the Bureau of Local Transportation of the Alabama Department of Transportation, has prepared a 2045 Long Range Transportation Plan; and

WHEREAS, pursuant to its duties, functions and responsibilities, the Southeast Wiregrass Area Metropolitan Planning Organization (SWAMPO), in session this 25th day of March 2021, did review and evaluate the aforementioned 2045 Metropolitan Transportation Plan, summarized on the attached pages; now

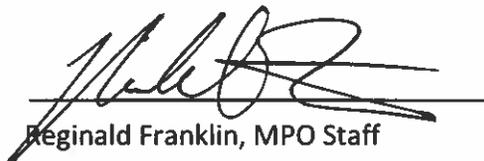
THEREFORE, BE IT RESOLVED, by the Southeast Wiregrass Area Metropolitan Planning Organization (SWAMPO), that the same does hereby endorse and adopt said 2045 Metropolitan Transportation Plan.

ADOPTED this 25th day of March 2021

ATTEST:



Mayor Mark Saliba, MPO Chairman



Reginald Franklin, MPO Staff

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Executive Summary

Introduction

The 2045 Long Range Transportation Plan (LRTP) provides the framework for the multimodal vision of growth and development within the Southeast Wiregrass Area Metropolitan Planning Organization (SWAMPO) region.

Recommendations in the 2045 LRTP are a culmination of both qualitative and quantitative inputs including technical analysis, public engagement, and coordination between various government entities in the Dothan Region. These entities include the City of Dothan, the Wiregrass Transit Authority, the Southeast Alabama Regional Planning and Development Commission (SEARP&DC), Alabama Department of Transportation (ALDOT), and SWAMPO.

The Dothan Metropolitan Planning Area (MPA) consists of the Dothan, Alabama urbanized area and additional areas expected to urbanize within the planning horizon

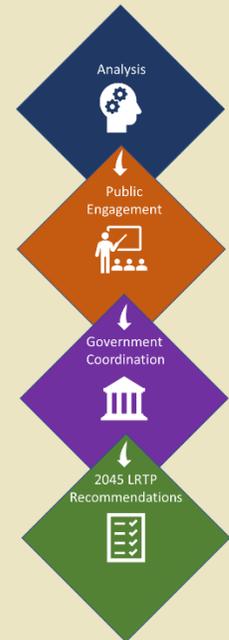
Planning Requirements

The 2045 LRTP Introduction chapter provides background on important legislation and federal and state requirements for the updated LRTP. A summarized listing of federal and state requirements regarding the planning process, transportation plan documentation, and performance-based planning and programming are as follows.

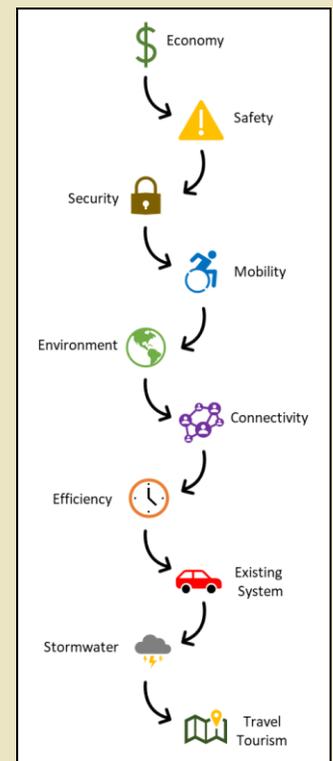
Planning Process

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

Documented Recommendations



Planning Process Consists of Both Federal and State Requirements



Transportation Plan Requirements

1. The current and projected transportation demand of persons and goods in the metropolitan planning area over the period of the transportation plan.
2. Existing and proposed transportation facilities (including major roadways, public transportation facilities, intercity bus facilities, multimodal and intermodal facilities, non-motorized transportation facilities (e.g., pedestrian walkways, trails, and bicycle facilities), and intermodal connectors that should function as an integrated metropolitan transportation system, giving emphasis to those facilities that serve important national and regional transportation functions over the period of the transportation plan.
3. A description of the performance measures and targets used in assessing the performance of the transportation system in accordance with §450.306(d).
4. A system performance report and subsequent updates evaluating the condition and performance of the transportation system with respect to the performance targets described in §450.306(d).
5. Operational and management strategies to improve the performance of existing transportation facilities to relieve vehicular congestion and maximize the safety and mobility of people and goods.
6. Assessment of capital investment and other strategies to preserve the existing and projected future metropolitan transportation infrastructure, provide for multimodal capacity increases based on regional priorities and needs, and reduce the vulnerability of the existing transportation infrastructure to natural disasters.
7. Transportation and transit enhancement activities, including consideration of the role that intercity buses may play in reducing congestion, pollution, and energy consumption in a cost-effective manner and strategies and investments that preserve and enhance intercity bus systems.
8. A discussion of the types of potential environmental mitigation activities and potential areas to carry out these activities, including activities that may have the greatest potential to restore and maintain the environmental functions affected by the metropolitan transportation plan.
9. A financial plan that demonstrates how the adopted transportation plan can be implemented.

Performance Based Planning

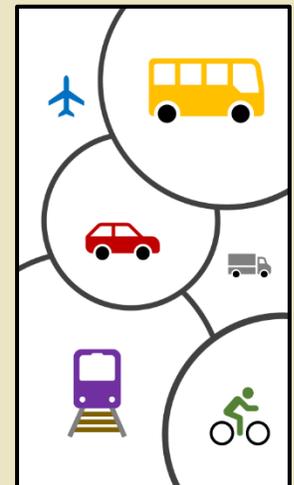
All planning tasks must be measured against these Livability Principles

1. Provide more transportation choices
2. Promote equitable, affordable housing
3. Enhance economic competitiveness
4. Support existing communities
5. Coordinate policies and leverage investment
6. Value Communities and neighborhoods

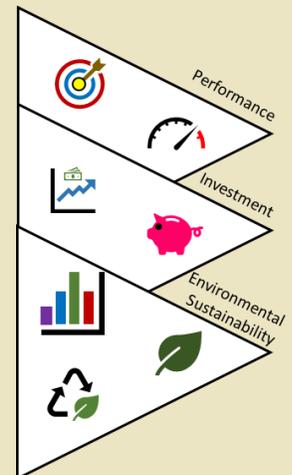
Minimum Requirements of Transportation Plan



Demand for Transportation Facilities



Emphasis on an Integrated Transportation System Across All Modes



Performance Based Planning

The Livability Principles will be measured as follows:

1. Percent of jobs and housing located within one-half (1/2) mile of transit service
2. Percent of household income spent on housing and transportation
3. Percent of workforce living within a thirty (30) minute or less commute from primary job centers
4. Percent of transportation investment dedicated to enhancing accessibility of existing transportation systems
5. Percent of transportation projects where more than one federal funding source is utilized
6. Percent of housing located in walkable neighborhoods with mixed use destinations located nearby

Plan Development Process

The plan needs to address the transportation network as a whole and focus on each mode and the system user needs. To achieve this, meaningful feedback from the public and all stakeholders is paramount in ensuring full participation for all regardless of race, ethnicity, disability, or language barriers. Public and stakeholder participation activities and procedures followed the MPO’s PPP document and Title VI requirements.

The COVID-19 pandemic added an additional level of complexity to the public engagement process. Interactive online engagement tools were utilized to support the public engagement process, including GIS mapping, a survey, and an engagement meeting held via Zoom. These online options were provided, and all received responses provided important insight on current and future transportation needs.

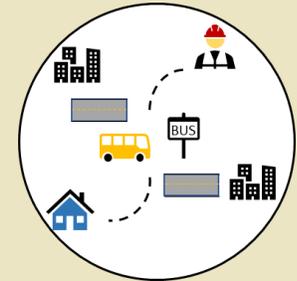
The general process followed for the 2045 LRTP to incorporate an outcome and performance-based planning approach are as follows.

1. Set Regional Vision
2. Define Goals and Objectives
3. Establish System Performance Measures
4. Assess Baseline System Performance
5. Identify Desired System Performance
6. Forecast Future Conditions and Needs
7. Develop Implementation Strategy

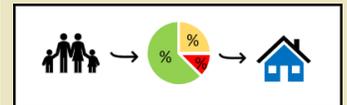
Establishing Plan Vision and Goals

Results from the online survey, public meeting, and stakeholder input were utilized to establish the vision for the SWAMPO region and provide inputs for the performance metrics development process. A growing desire for multimodal solutions for the transportation network along with supporting land uses was identified by the public. In addition to roadway and traffic signal improvements, significant support for future developments with mixes of retail, employment, and housing as well as bicycle and pedestrian facilities were received through the public engagement process.

Livability Principles



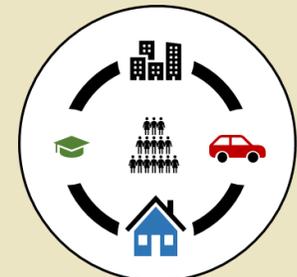
Proximity to Transportation



Investment Towards Access



Walkability to Land Uses



Regional Focus



Goals and Objectives



Performance Based Strategy

As it relates to the FAST Act it is important to differentiate between goals and objectives; **a goal is a broad statement that describes a desired end state and an objective is a specific, measurable statement that supports achievement of the goal.** The vision, goals, and objectives identified in the 2045 L RTP are consistent with public/stakeholder input, ALDOT Livability Indicators, and national transportation goals specified in the FAST Act.

- Goal 1: Affordable, Convenient, and Reliable Access to Destinations by Multiple Modes of Transportation
- Goal 2: A Connected Regional Economy Accessible to National and Global Markets
- Goal 3: A Well-Maintained and Efficient Transportation System
- Goal 4: A Safe, Secure, and Resilient Transportation System
- Goal 5: A Transportation System that Creates a Sense of Place and Improves Public Health
- Goal 6: A Transportation System that Distributes Benefits and Burdens in an Equitable Manner
- Goal 7: A Transportation System that Minimizes Detrimental Impacts to the Natural and Historic Environment and Practices Environmental Stewardship
- Goal 8: A Meaningful Public Involvement Process that Influences Transportation Decision-Making

Evaluating Current Performance and Estimating Future Needs

The 2045 L RTP analyzes the current environment, land uses, transportation patterns, and socioeconomic data in the region to obtain insight into the current demand for transportation. Existing conditions of each transportation mode is also observed through current asset inventory data, technical analysis, and the input received from the public and stakeholders.

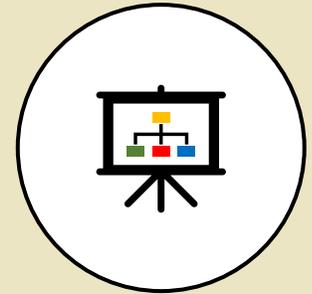
Roadways and Bridges

The SWAMPO region as a whole does not experience widespread congestion with congestion being isolated to sections of US 231, US 84, and Ross Clark Circle. The region does not contain interstate segments with approximately 10% of roadways being maintained by the State and the remaining 90% being maintained by either the local county or municipality. Currently 24.5% of the roadways within the region are classified in good condition with 69.5% in fair, and only 6% in poor. Of the 170 bridges documented in the region, 66 are currently rated as good and the remaining 104 are rated as fair. Crash data was analyzed from 2017 to 2019.

Bicycle and Pedestrian

A regional demand analysis was conducted to establish an understanding of current and future needs. There are several areas with a high demand for bicycle and pedestrian infrastructure, with the largest concentration located in the city centers and retail land uses. The City of Dothan has an adopted Bicycle and Pedestrian plan from 2011 with several roadways in

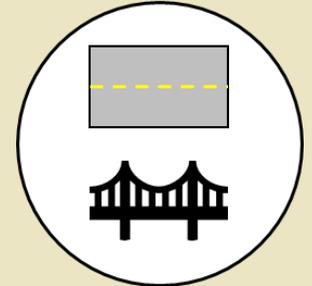
Vision and Goals



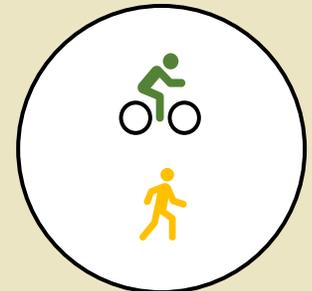
Goal Development



Network Wide Focus



Roadways & Bridges



Bicycle & Pedestrian



Public Transit

the Dothan area being designated as bike routes. ALDOT's Statewide Bicycle and Pedestrian Plan identifies two priority bicycle routes, one east-west paralleling US-84 and SR-52 and one north-south paralleling US-231 and US-431.

Public Transit

A GIS analysis was conducted to estimate the relative transit demand in the region as the current travel demand model (TDM) does not include a mode choice model. This along with a peer system comparison were utilized to assess current and future needs of the system. Review of current documents such as the MPO's 2010 *Fixed Route Feasibility Study* and SEARPDC's 2017 *Human Services Coordinated Transportation Plan* showcased support for the findings of previous plans.

Freight

While the SWAMPO region does not have a major freight corridor, the Dothan MPA does have a robust multimodal freight network. There are several multi-lane arterials designated as statewide primary freight corridors such as, US-231, US-431, AL-1, and US-84. The Dothan Regional Airport and Headland Municipal airport both play an integral role in the Dothan region's freight infrastructure. The region also has several active rail corridors and intermodal facilities.

Aviation

There are two airports in the Dothan MPO area: Dothan Regional Airport and Headland Municipal Airport. Future needs are represented by the future improvement listings for each. Both airports serve a key role in the overall transportation system of the region.

Project Prioritization

The 2045 LRTP identified roadway projects from public engagement, stakeholder input, previous plans, and the year 2045 travel model analysis. Bicycle and pedestrian projects were identified from the City of Dothan's Bicycle and Pedestrian Plan. Roadway project costs were developed based on typical improvement costs per mile and bicycle and pedestrian project costs were developed for construction only.

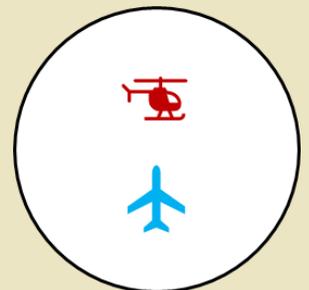
As transportation funding is limited, projects must be prioritized and programmed in a fiscally responsible manner. The prioritization process for the SWAMPO 2045 LRTP began with the inclusion of projects that were included in the TIP as these projects have been funded for design and/or construction. The remaining projects were prioritized as a function of the project's consistency with the SWAMPO regional goals, ALDOT Livability Principles, stakeholder and public engagement feedback.

Projects were awarded points based on the following criteria for each scoring category.

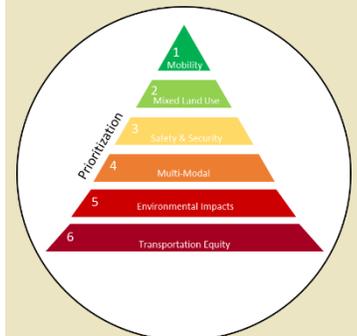
Supports Regional Mobility:



Freight



Aviation



Project Prioritization

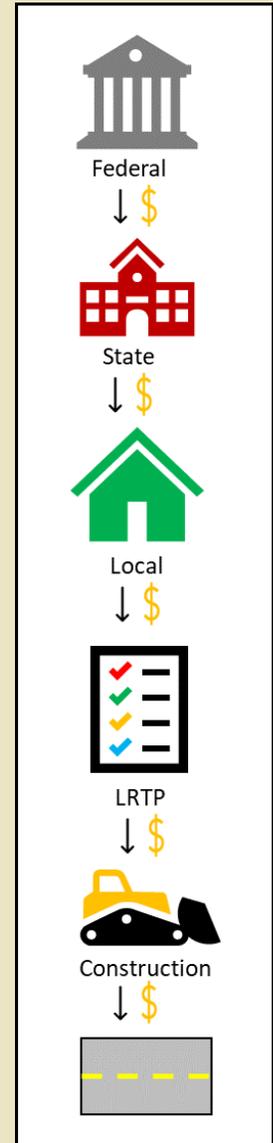
- 0 points-Does not improve regional mobility
- 3 points-Marginally improves regional mobility
- 7 points-Improves regional mobility
- 10 points-Significantly improves regional mobility
- Supports Mixed-Use Development:
 - 0 points-Does not support mixed-use development
 - 3 points-Marginally supports mixed-use development
 - 7 points-Supports mixed-use development
 - 10 points-Facilitates mixed-used development
- Supports Safety and Security:
 - 0 points-Does not support safety and security
 - 3 points-Marginally supports safety and security
 - 7 points-Supports safety and security
 - 10 points-Significantly improves safety and security
- Multi-modal:
 - 0 points-Accommodates one mode
 - 3 points-Accommodates two modes
 - 7 points-Accommodates three modes
 - 10 points-Accommodates four or more modes
- Environmental Impacts:
 - 0 points-Significant environmental impacts
 - 3 points-Moderate environmental impacts
 - 5 points-Minimal or no environmental impacts
- Transportation Equity:
 - 0 points-No improvement to transportation equity
 - 3 points-Moderate improvement to transportation equity
 - 5 points-Significant improvement to transportation equity

Financially Constrained Project Implementation and Visionary Projects

ALDOT provides each Metropolitan Planning Organization (MPO) with a projected future funding budget divided into the following categories: capacity, operations and maintenance, transit, MPO dedicated, and state. All project costs were increased by one percent annually in order to account for inflation.

The financially constrained plan includes sufficient funding to continue transit at its current level of service. Unfunded roadway projects are referred to as visionary/unfunded projects, and unfunded bicycle/pedestrian projects are referred to as potential Transportation Alternatives Program (TAP) projects. Only projects that were eligible for ALDOT's TAP funds were included. These projects should be submitted to ALDOT as part of the annual request for TAP projects. This program is competitive, so funds are not guaranteed. Some bicycle and pedestrian projects may appear incomplete. To address this issue, the city may amend the scope of the project before submitting for TAP funding or the city should attempt to construct the missing links without federal funding before submitting the project to ALDOT.

Financially Constrained Document and Implementation of Projects





Chapter 1

Introduction

Introduction

This document represents the 2045 Long Range Transportation Plan (LRTP) for the Dothan metropolitan area and replaces the 2040 LRTP. The 2045 LRTP outlines the vision for growth and development in the Dothan region for the next 25 years. The 2045 LRTP was developed using technical analysis, public engagement, and coordination between various government entities in the Dothan region including the City of Dothan, the Wiregrass Transit Authority, the Southeast Alabama Regional Planning and Development Commission (SEARP&DC), Alabama Department of Transportation (ALDOT), and other members of the Southeast Wiregrass Area Metropolitan Planning Organization (SWAMPO).

What is a Metropolitan Planning Organization?

A Metropolitan Planning Organization (MPO) is a federally designated transportation policy-making body that is composed of representatives from local governments and transportation agencies in the designated planning region.

Federal legislation passed in the 1960s required urbanized areas with a population over 50,000 to establish a metropolitan planning organization to ensure that existing and future transportation expenditures in a particular region are conducted in a continuing, cooperative, and comprehensive fashion. MPOs also work with state departments of transportation and public transit operators to establish spending levels for federally-designated transportation funds in the region.

By law, the MPO is a policy board of locally elected officials. Representatives from local governments and transportation agencies serve on Metropolitan Planning Organizations' policy boards and perform the following core functions:

Establish a setting for effective decision-making: MPOs establish and manage a fair and inclusive setting for regional decision-making in the planning process.

Identify and evaluate transportation improvement options: MPOs develop transportation improvement options and use supporting technical analysis and data to determine if improvement options are consistent with the performance measurement targets. Planning studies are included in the Unified Planning Work Program (UPWP).

MPO RESPONSIBILITIES

LRTP



Guides Transportation Investment in region for next 25 years

TIP



Specifies Projects in 5-7 Year Time Horizon with Project Limits



Engage Public in Regional Planning Process including Environmental Justice Communities



Identify Future Funding Sources and Develop Fiscally Constrained Transportation Plan

At States' discretion, FHWA Statewide Planning and Research (SP&R) and FTA Section 5304 program funds and/or FHWA Surface Transportation Program funding may be used to support an MPO.

COORDINATING AGENCIES



Prepare and maintain a Metropolitan Transportation Plan (MTP): An MPO must develop and maintain a Metropolitan Transportation Plan for a future planning horizon of at least 20 years for the region. The MTP (analogous to the LRTP) is developed to meet established regional visions and performance targets. The planning factors that MPOs consider to guide the planning process are discussed later in the chapter.

Develop a Transportation Improvement Plan (TIP): An MPO develops a short-range plan with priority projects pulled from the LRTP. The TIP must be financially constrained with funding sources and project limits identified.

Identify performance measurement targets and monitor whether implemented projects and policies are achieving targets: MPOs coordinate with state and local government representatives and transit authorities to establish performance measurement targets for the region as set forth in Federal law. LRTPs include a System Performance Report that tracks progress in meeting performance targets. In addition to federally mandated requirements, MPOs may identify additional, local performance measures that support the decision-making process.

Involve the public: An MPO must involve the public in all of the preceding steps. Emphasis should be given to including public input into the regional goals and performance measures.

Federal Designation

The Federal-Aid Highway Act of 1962 mandated regional transportation planning for urbanized areas with a population greater than 50,000. This requirement has been maintained in subsequent legislation and regulations.

The United States Census Bureau defines urbanized areas after each decennial census. The U.S Census Bureau defines urbanized areas as over 50,000 in population and urban clusters for urbanized areas with a population between 2,500 and 49,999. The remaining areas in the U.S. are designated as rural.

MPOs have authority in areas designated as Metropolitan Planning Areas (MPAs). MPAs are established around urbanized areas and formalized through agreements between the affected local jurisdictions and the governor. Typically, the MPA includes the smoothed urban area and surrounding areas that are expected to

The Federal-Aid Highway Act of 1962 created the federal requirement for urban transportation planning largely in response to the construction of the Interstate Highway System and the planning of routes through and around urban areas. The Act required, as a condition attached to federal transportation financial assistance, that transportation projects in urbanized areas of 50,000 or more in population be based on a continuing, comprehensive, urban transportation planning process undertaken cooperatively by the states and local governments — the birth of the so-called 3C, “continuing, comprehensive and cooperative” planning process.

urbanize in the planning horizon. The MPA boundary may be influenced by geographic boundaries or physical features such as rivers or major roadways.

Since the 1990 census, urbanized areas have been defined using a minimum population density threshold calculated at the census block or tract level. Adjacent non-residential uses along with low density areas located between urbanized areas are also included in the overall urbanized area definition. **Figure 1-1** illustrates the urbanized areas near Dothan.

SWAMPO Region

SWAMPO was created in 1983 after the 1980 Census indicated the population of the Dothan urbanized area exceeded 50,000. As of the 2010 Census, the Dothan urbanized area population was 68,781. **Figure 1-2** illustrates the metropolitan planning area boundaries for the Dothan region. The MPA boundary includes the land expected to be developed around Dothan in the next 25 years.

Local jurisdictions involved in the regional planning activities in the Dothan region include:

- Town of Ashford
- Town of Cowarts
- City of Dothan
- Town of Grimes
- City of Headland
- Town of Kinsey
- Town of Midland City
- Town of Napier Field
- Town of Pinckard
- Town of Rehobeth
- Town of Taylor
- Town of Webb
- Dale County
- Henry County
- Houston County

In addition, SEARP&DC, ALDOT, and the Federal Highway Administration (FHWA) participate in the MPO process.

The City of Dothan serves as the Lead Planning Agency (LPA) for SWAMPO and its Planning and Development Department fulfill the staffing requirements for the MPO.



Dale County



Cowarts



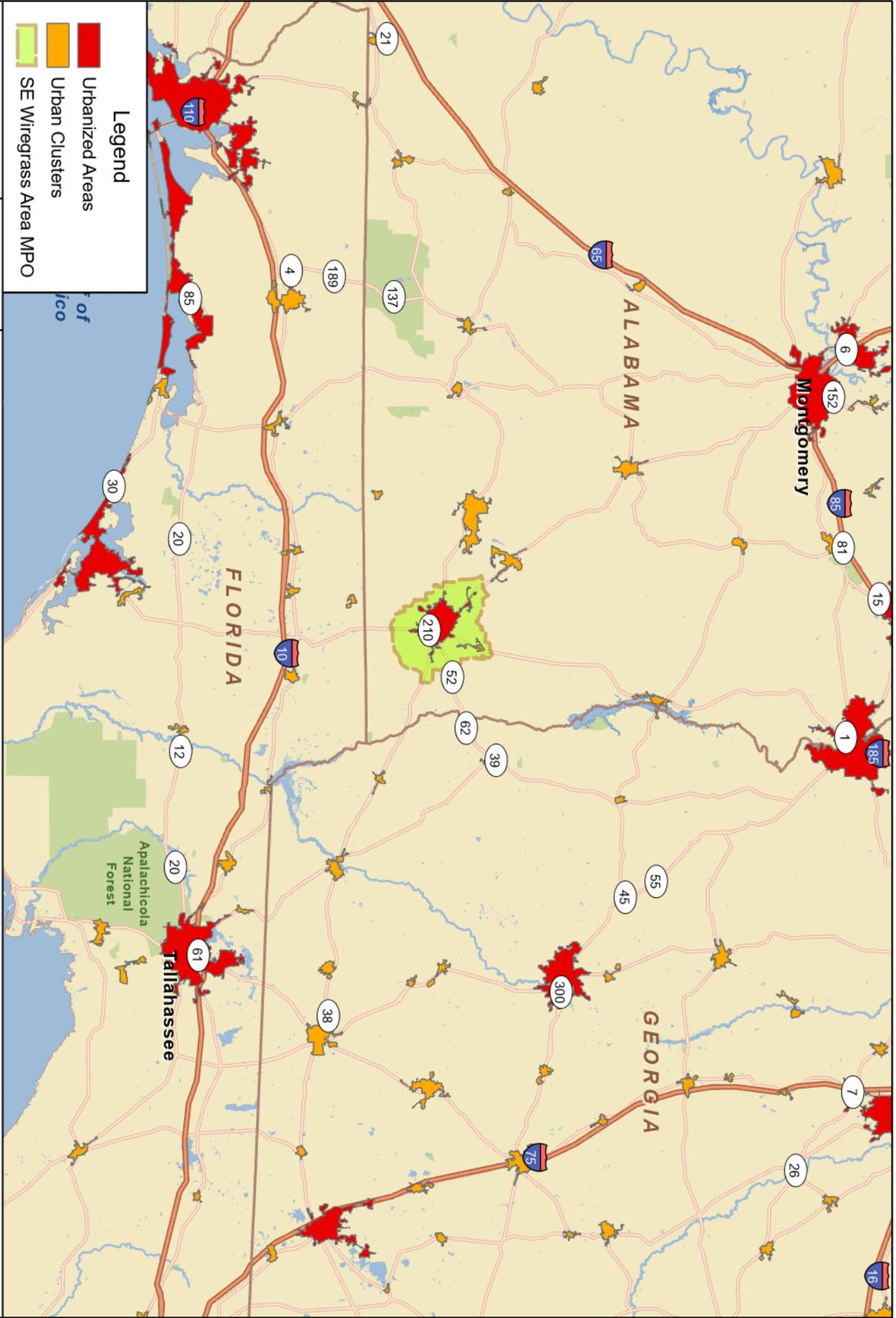
Headland



Taylor



Dothan



Legend

- Urbanized Areas
- Urban Clusters
- SE Wiregrass Area MPO

SAIN ASSOCIATES

NOT TO SCALE

Figure 1-1: Wiregrass Region Urbanized Areas

Southeast Wiregrass Area MPO
Dothan, Alabama

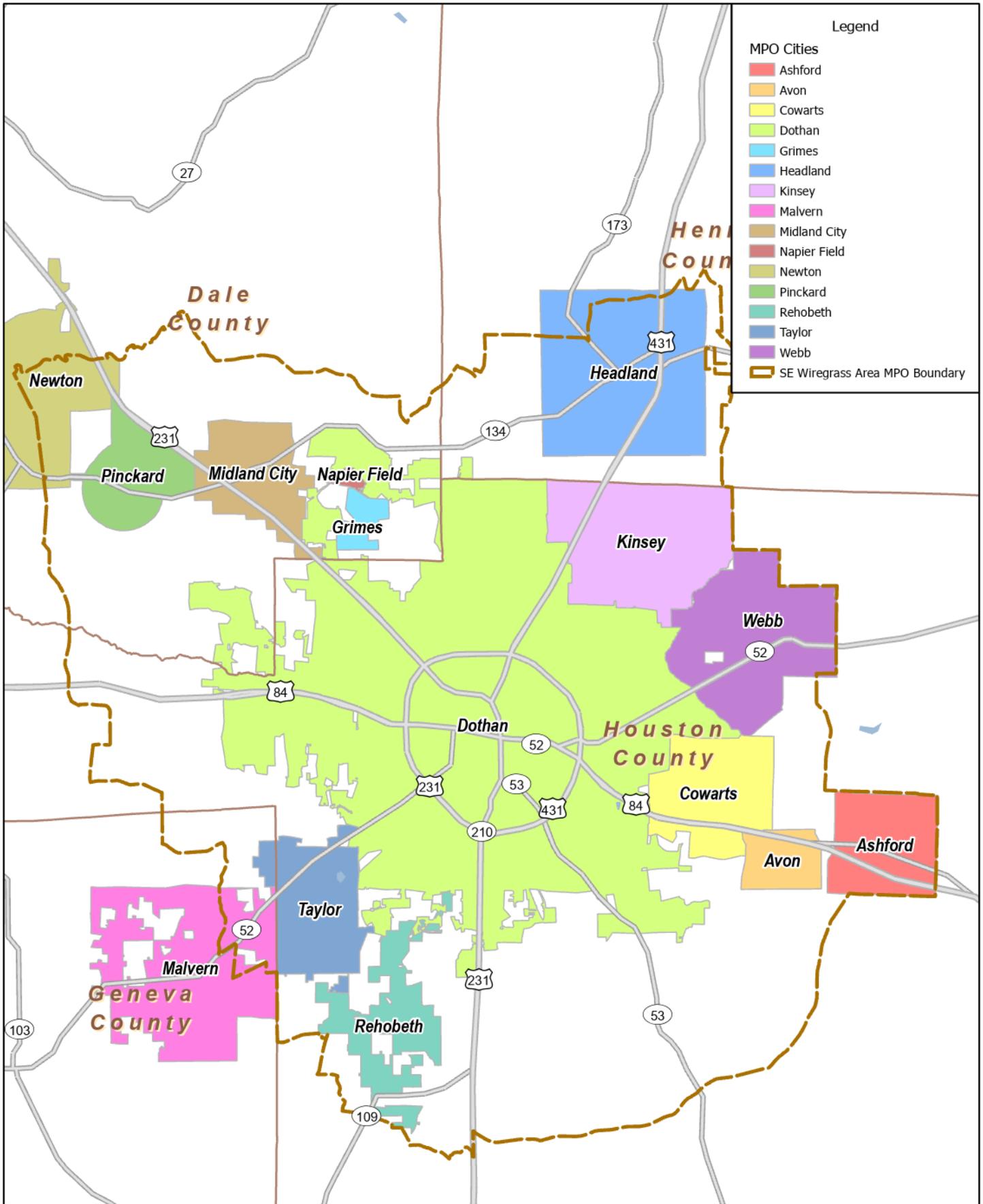


Figure 1-2: MPO Boundary and Municipalities

Southeast Wiregrass Area MPO
Dothan, Alabama



SAIN
ASSOCIATES



NOT TO SCALE

MPO Structure

SWAMPO is composed of three committees. The policy committee is the official decision-making body for the region. The technical advisory committee is responsible for providing and reviewing technical analysis in support of planning objectives in the region, and the citizens advisory committee provides input into the public involvement process.

Policy Committee

The Policy Committee is the policy and official decision-making body for SWAMPO and includes voting and non-voting members. Policy committee members are elected officials including mayors, county commissioners, and City of Dothan commissioners.

The Policy Committee reviews, approves, and submits plans and programs to ALDOT for formal adoption. The committee also oversees how federal dollars are expended in the region.

Technical Advisory Committee (TAC)

The TAC provides technical support to the Policy Committee to inform the decisions made by that committee. TAC members are non-elected officials who have technical expertise in one or more areas of transportation planning and work as staff at the local jurisdictions that are a part of SWAMPO, ALDOT, FTA, FHWA, and other selected transportation interests. A list of members is available at the SWAMPO office.

The Technical Advisory Committee reviews plans, programs, projects, studies, and reports. The TAC also provides the MPO with recommendations concerning these documents.

Citizens Advisory Committee (CAC)

The CAC was developed to provide input into the public engagement process. Each MPO member is charged with appointing one representative (Houston County and the City of Dothan have two). The chair of the CAC is a non-voting member of the TAC.

The MPO adopted its public participation plan in 2013. The plan outlines the process the MPO undertakes to ensure full public participation in the regional long range planning process.

Purpose and Authority of the Plan

Since the 1962 Federal-aid Highway Act, federal legislation has required metropolitan transportation plans for urban areas with a



Policy Committee
Reviews, Approves, and
Submits Plans and
Programs to ALDOT for
Formal Adoption



Technical Committee
Reviews Plans, Programs,
Projects, Studies, and
Reports



Citizens Committee
Provides Input into Public
Engagement Process

population of at least 50,000 as a condition of receipt of surface transportation funds.

Today, metropolitan transportation planning is governed by federal law 23 U.S.C. §134 and regulations codified in 23 C.F.R. §450.

According to the FHWA's The Transportation Planning Process: Key Issues:

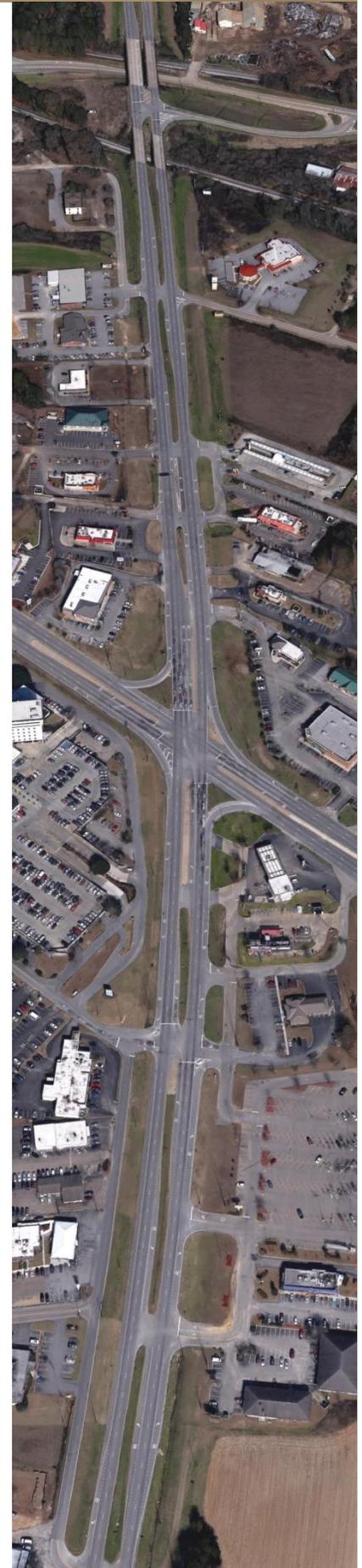
Metropolitan transportation planning is the process of examining travel and transportation issues and needs in metropolitan areas. It includes a demographic analysis of the community in question, as well as an examination of travel patterns and trends. The planning process includes an analysis of alternatives to meet projected future demands for all modes of transportation and for providing a safe and efficient transportation system that meets mobility while not creating adverse impacts to the environment.

The primary purpose of metropolitan transportation planning is to ensure that transportation planning in urbanized areas is carried out through a continuing, cooperative, and comprehensive (3-C) planning process. This 3-C process ensures that transportation planning is based on the most current information, reflects regional needs and priorities that are consistent with those of the state, takes into account all modes of transportation, and is consistent with other planning efforts, such as land use, comprehensive, and economic-development plans.

Adoption of the Long Range Transportation Plan is the first step towards the implementation of any transportation project using federal funds or any regionally significant transportation project, regardless of funding source. **No transportation project can receive federal funding unless it is included in the LRTP.** After adoption of the long range plan, a project can be programmed for design, right-of-way acquisition, or construction in the Transportation Improvement Program (TIP). The TIP identifies funding sources, fiscal year(s) of implementation, and the estimated amount of funding to be used.

Federal Requirements

A regional LRTP outlines the transportation project funding for a region at the federal, state, and local levels. The level of funding and allocation is determined through federal transportation authorization bills. To accomplish the objectives in §450.300 and §450.306(b), metropolitan planning organizations designated under §450.310, in cooperation with the State and public transportation operators, shall develop long-range transportation plans and TIPs through a



performance-driven, outcome-based approach to planning for metropolitan areas of the State.

The most recent Planning Rule issued by FHWA and FTA, directs the USDOT to oversee a metropolitan transportation planning process that is continuous, cooperative, and comprehensive, and provides for consideration and implementation of projects, strategies, and services that will address the following factors:

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

Transportation Plan

Per Federal requirements, the metropolitan transportation planning process shall include the development of a transportation plan addressing no less than a 20-year planning horizon as of the effective date. While developing the transportation plan, the MPO shall consider factors described in §450.306 as the factors relate to a minimum 20-year forecast period. In air quality attainment areas such as the SWAMPO region, the effective date of the transportation plan shall be its date of adoption by the MPO.

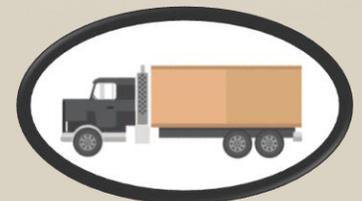
Per Federal Requirement, the Metropolitan Planning Process should address:



Economic Vitality and Global Competitiveness of the Region



Safety and Security of all Modes of Transportation



Increase Accessibility and Mobility of People and Freight



Protect and Enhance the Environment



Enhance Travel and Tourism

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

The MPO shall review and update the transportation plan at least every 4 years in air quality nonattainment and maintenance areas and at least every 5 years in attainment areas to confirm the transportation plan's validity and consistency with current and forecasted transportation and land use conditions and trends and to extend the forecast period to at least a 20-year planning horizon. The MPO shall approve the transportation plan (and any revisions) and submit it for informational purposes to the Governor. Copies of any updated or revised transportation plans must be provided to FHWA and FTA.

The MPO, the State, and the public transportation operator(s) shall validate the data used in preparing other existing modal plans for providing input into the transportation plan. In updating the transportation plan, the MPO shall base the update on the latest available estimates and assumptions for population, households, land use, travel, employment, congestion, and economic activity. The MPO shall approve the transportation plan contents and supporting analyses produced by a transportation plan update.

The metropolitan transportation plan shall, at a minimum, include:

- (1) The current and projected transportation demand of persons and goods in the metropolitan planning area over the period of the transportation plan.
- (2) Existing and proposed transportation facilities (including major roadways, public transportation facilities, intercity bus facilities, multimodal and intermodal facilities, non-motorized transportation facilities (e.g., pedestrian walkways, trails, and bicycle facilities), and intermodal connectors that should function as an integrated metropolitan transportation system, giving emphasis to those facilities that serve important national and regional transportation functions over the period of the transportation plan.
- (3) A description of the performance measures and targets used in assessing the performance of the transportation system in accordance with §450.306(d).

Minimum Federal Requirements for a Metropolitan Transportation Plan Include:



Current/Projected Transportation Demand and Existing/Proposed Transportation Facilities



Performance Measures and Targets and System Performance Report



Operational and Management Strategies to Maximize Existing System

(4) A system performance report and subsequent updates evaluating the condition and performance of the transportation system with respect to the performance targets described in §450.306(d).

(5) Operational and management strategies to improve the performance of existing transportation facilities to relieve vehicular congestion and maximize the safety and mobility of people and goods.

(6) Assessment of capital investment and other strategies to preserve the existing and projected future metropolitan transportation infrastructure, provide for multimodal capacity increases based on regional priorities and needs, and reduce the vulnerability of the existing transportation infrastructure to natural disasters.

(7) Transportation and transit enhancement activities, including consideration of the role that intercity buses may play in reducing congestion, pollution, and energy consumption in a cost-effective manner and strategies and investments that preserve and enhance intercity bus systems.

(8) A discussion of the types of potential environmental mitigation activities and potential areas to carry out these activities, including activities that may have the greatest potential to restore and maintain the environmental functions affected by the metropolitan transportation plan.

(9) A financial plan that demonstrates how the adopted transportation plan can be implemented.

(i) For the purposes of transportation system operations and maintenance, the financial plan shall contain system-level estimates of costs and revenue sources that are reasonably expected to be available to adequately operate and maintain the Federal-aid highways (as defined by 23 U.S.C. 101(a)(5)) and public transportation (as defined by title 49 U.S.C. Chapter 53).

(ii) For the purpose of developing the metropolitan transportation plan, the MPO(s), public transportation operator(s), and State shall cooperatively develop estimates of funds that will be available to support metropolitan transportation plan implementation, as required under §450.314(a). All necessary financial resources from public and private sources that are reasonably expected to be made available to carry out the transportation plan shall be identified.

Minimum Federal Requirements for a Metropolitan Transportation Plan Include:



Intercity Bus and Transit Enhancement Activities



Potential Environmental Mitigation Activities



A Financial Plan including Innovative Financing Techniques

(iii) The financial plan shall include recommendations on any additional financing strategies to fund projects and programs included in the metropolitan transportation plan. In the case of new funding sources, strategies for ensuring their availability shall be identified. The financial plan may include an assessment of the appropriateness of innovative financing techniques (for example, tolling, pricing, bonding, public private partnerships, or other strategies) as revenue sources for projects in the plan.

(iv) In developing the financial plan, the MPO shall take into account all projects and strategies proposed for funding under title 23 U.S.C., title 49 U.S.C. Chapter 53 or with other Federal funds; State assistance; local sources; and private participation. Revenue and cost estimates that support the metropolitan transportation plan must use an inflation rate(s) to reflect “year of expenditure dollars,” based on reasonable financial principles and information, developed cooperatively by the MPO, State(s), and public transportation operator(s).

(v) For the outer years of the metropolitan transportation plan (i.e., beyond the first 10 years), the financial plan may reflect aggregate cost ranges/cost bands, as long as the future funding source(s) is reasonably expected to be available to support the projected cost ranges/cost bands.

(vi) For illustrative purposes, the financial plan may include additional projects that would be included in the adopted transportation plan if additional resources beyond those identified in the financial plan were to become available. These projects are identified as Visionary projects in the plan.

(vii) In cases that FHWA and FTA find a metropolitan transportation plan to be fiscally constrained and a revenue source is subsequently removed or substantially reduced (i.e., by legislative or administrative actions), FHWA and FTA will not withdraw the original determination of fiscal constraint; however, in such cases, FHWA and FTA will not act on an updated or amended metropolitan transportation plan that does not reflect the changed revenue situation.

(10) Pedestrian walkway and bicycle transportation facilities in accordance with 23 U.S.C. 217(g).

(11) The MPO shall provide individuals, affected public agencies, representatives of public transportation, public ports, freight shippers, providers of freight transportation services, private providers of transportation (including intercity bus operators, employer-based

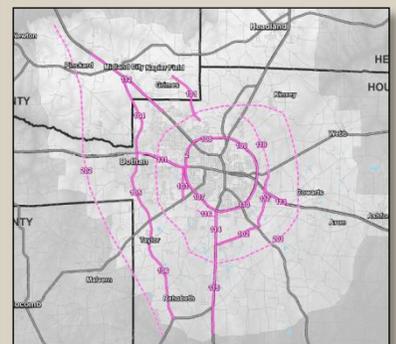
The Financial Plan should:



Include Inflation Rate(s)



Identify Funding Sources



Source: SWAMPO 2040 L RTP

Consider Visionary Projects that are not funded in L RTP

commuting programs, such as carpool program, vanpool program, transit benefit program, parking cashout program, shuttle program, or telework program), representatives of users of public transportation, representatives of users of pedestrian walkways and bicycle transportation facilities, representatives of the disabled, and other interested parties with a reasonable opportunity to comment on the transportation plan using the participation plan developed under §450.316(a).

The MPO shall publish or otherwise make readily available the metropolitan transportation plan for public review, including (to the maximum extent practicable) in electronically accessible formats and means, such as the World Wide Web.

Consistency with Other Plans

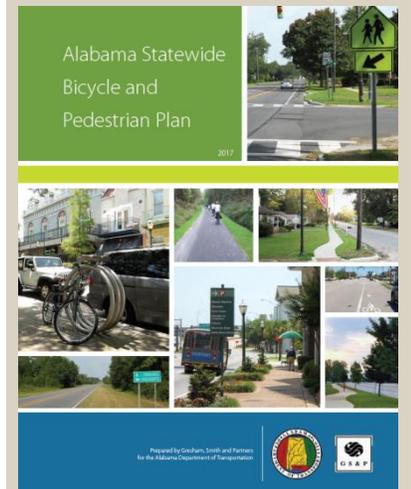
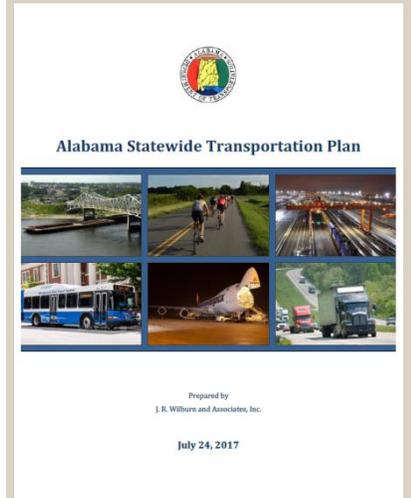
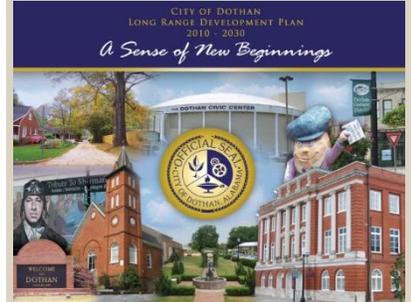
The MPO shall consult, as appropriate, with State and local agencies responsible for land use management, natural resources, environmental protection, conservation, and historic preservation concerning the development of the transportation plan. The consultation shall involve, as appropriate:

- (1) Comparison of transportation plans with State conservation plans or maps, if available; or
- (2) Comparison of transportation plans to inventories of natural or historic resources, if available.

The LRTP should integrate the priorities, goals, countermeasures, strategies, or projects for the metropolitan planning area contained in the Highway Safety Improvement Program (HSIP), including the state's Strategic Highway Safety Program (SHSP) required under 23 U.S.C. 148, the Public Transportation Agency Safety Plan required under 49 U.S.C. 5329(d), or an Interim Agency Safety Plan in accordance with 49 CFR part 659, as in effect until completion of the Public Transportation Agency Safety Plan, and may incorporate or reference applicable emergency relief and disaster preparedness plans and strategies and policies that support homeland security, as appropriate, to safeguard the personal security of all motorized and non-motorized users.

The LRTP should be consistent with local planning efforts and documents including comprehensive plans, land use plans, economic development plans, and zoning ordinance updates.

The SWAMPO LRTP should be consistent with:



Planning Horizon and Update Cycle

To meet Federal requirements, the long range plan must be updated at a minimum of every four years in non-attainment and maintenance areas and every five years in attainment areas. The minimum required planning horizon is 20 years.

Given that SWAMPO is an attainment area, the MTP must be updated every five years. In order to maintain a 20 year planning horizon, the 2045 LRTP must be updated and adopted by the same adoption date in 2025.

In between the five-year update cycle, the MPO may make amendments and modifications to the MTP at any time without a requirement to extend the horizon year. However, these revisions must be approved by the MPO under the requirements set forth in the Public Participation Plan.

Anti-Discrimination Accommodations

Federal legislation and executive orders prohibit discrimination and/or exclusion from participation in any program or activity receiving federal financial assistance on the basis of race, color, national origin, disability, income, minority-status, or limited-English proficiency. The SWAMPO Public Participation Plan (PPP) specifies the manner in which the MPO prevents discrimination and accommodates these populations. The PPP is provided in the Appendix.

Title VI of the Civil Rights Act of 1964 ensures that no person is excluded from participation in, denied the benefit of, or subjected to discrimination under any program or activity receiving federal financial assistance on the basis of race, color, or national origin.

The Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA) of 1990 encourages the participation of people with disabilities in the development of transportation and paratransit plans and services.

Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations, was signed by President Clinton in 1994. There are three fundamental Environmental Justice (EJ) principles:

- To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low income populations.

Title VI of the Civil Rights Act of 1964 ensures that no person is excluded from participation in, denied the benefit of, or subjected to discrimination under any program or activity receiving federal financial assistance on the basis of race, color, or national origin.

The Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA) of 1990 encourages the participation of people with disabilities in the development of transportation and paratransit plans and services

Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations, was signed by President Clinton in 1994.

- To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.
- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

Executive Order 13166, "Improving Access to Services for Persons with limited English Proficiency", was signed by President Clinton in 2000. Along with Title VI of the Civil Rights Act of 1964, the federal government requires federal agencies to examine the services they provide, identify any need for service to those with limited English proficiency (LEP), and develop and implement a system to provide those services so LEP persons can have meaningful access to them. For recipients of federal financial assistance, such as MPOs, the federal government requires provision of meaningful access to their LEP applicants and beneficiaries.

Performance-based Planning

Performance-based planning and programming applies performance management principles to transportation system policy and investment decisions, providing a link between management and long-range decisions about policies and investments that an agency makes in its transportation system. Performance-based planning and programming is a system-level, data-driven process to identify strategies and investments for the MPO region. Long-range planning helps to define key goals and objectives and to analyze and evaluate strategies and scenarios for meeting goals. Connecting performance measures to goals and objectives through target setting provides a basis for understanding and sharing information with stakeholders and the public.

The Fixing America's Surface Transportation (FAST) Act provides funding through the year 2020 for surface transportation infrastructure planning and investment. As of December 2015, the FAST Act replaced the Moving Ahead for Progress in the 21st Century (MAP-21) Act. Like MAP-21, the FAST Act calls for statewide and metropolitan planning processes to incorporate a more comprehensive performance-based approach to decision-making.

The objectives-driven, performance-based approach to planning for operations is an example of performance-based planning focused on one area: operations. The same processes and principles are used in both planning for operations and performance-based planning. The

Performance-based Planning should be:



System-level



Data-driven



Inclusive of Public and Stakeholders

planning for operations approach falls under the larger planning activity of performance-based planning. By expanding the objectives-driven, performance-based approach for operations to other areas such as safety, asset management, freight, and others, a region or State can build a comprehensive performance-based planning process. Weighting the performance measures as a function of public input adds an additional local level layer to the overall performance-based planning process and leads to plan recommendations that are tailored to the different geographic areas in the region.

State Requirements

Increasingly, federal and state agencies are using performance measures as a way of ensuring greater accountability for the distribution of public funds in an ever growing number of programs and activities across a variety of disciplines. Within the transportation sector and the planning processes associated with transportation infrastructure development, ALDOT has adopted Livability Principles and Indicators as a sustainability measurement against future actions. GIS analysis of census and travel model data was used to quantify Livability Principles and Indicators metrics.

All planning tasks must be measured against these Livability Principles:

- 1) Provide more transportation choices
- 2) Promote equitable, affordable housing
- 3) Enhance economic competitiveness
- 4) Support existing communities
- 5) Coordinate policies and leverage investment
- 6) Value Communities and neighborhoods

The Livability Principles will be measured as follows:

- 1) Percent of jobs and housing located within one-half (1/2) mile of transit service
- 2) Percent of household income spent on housing and transportation
- 3) Percent of workforce living within a thirty (30) minute or less commute from primary job centers
- 4) Percent of transportation investment dedicated to enhancing accessibility of existing transportation systems
- 5) Percent of transportation projects where more than one federal funding source is utilized

MPOs are required to monitor national performance measures including:

The number of serious injuries and fatalities;

Serious injuries and fatalities per 100 million vehicle miles traveled on public roads;

The condition of pavements on the Interstate system;

The condition of pavements on the National Highway System (excluding the Interstate);

The condition of bridges on the National Highway System;

The performance of the Interstate System;

The performance of the National Highway System (excluding the Interstate System);

Traffic congestion;

Freight movement on the Interstate System; and

On-road mobile source emissions

6) Percent of housing located in walkable neighborhoods with mixed use destinations located nearby

Amending and Modifying the MTP

Between five-year updates, the need may arise for modification to the MTP which significantly alters the scope or budget of the MTP. Typically, this situation arises when existing projects are modified or removed and new projects are added. Since federally funded projects included in the short-range TIP for the MPO area must be consistent with the fiscally constrained MTP, these modifications would require either a formal amendment or an administrative modification.

The Southeast Wiregrass Area MPO adheres to the following procedures developed by FHWA and ALDOT to amend or administratively modify the MTP and TIP.

Formal Amendment

The amendment process involves both a formal approval process and also a system for processing more modest or minor adjustments to TIP projects. FHWA - Alabama Division and ALDOT have agreed that a formal TIP amendment is required for a highway-oriented project when one or more of the following criteria are met:

- 1) Adds a new project, or deletes a project, that utilizes federal funds from a statewide line item, exceeds the threshold listed below, and excludes those federally-funded statewide program projects.
- 2) Adds a new project phase(s), or increases a current project phase, or deletes a project phase(s), or decreases a current project phase that utilizes federal funds, where the revision exceeds the following threshold:
 - \$5 million or 10 percent, whichever is greater, for ALDOT federally-funded projects and Transportation Management Area (TMA) attributable projects.
 - The lesser amount of \$1 million or 50 percent, of project cost for non-TMA MPOs.
 - \$750,000 for the county highway and bridge program.

Involves a change in the scope of work to a project(s) that would:

- 1) Result in a revised total project estimate that exceeds the thresholds established between ALDOT and the Planning Partner (not to exceed any federally-funded threshold contained in the Memorandum of Understanding on ALDOT Statewide Procedures for FY 2021-2024 TIP/STIP Revisions)



- 2) Results in a change in the scope of work on any federally-funded project that is significant enough to essentially constitute a new project.
- 3) Changes level of effort planned budgets by an amount exceeding 20 percent of the original budgeted amount per ALDOT region.

Administrative Modification

A change that does not meet any of the formal amendment criteria may be processed as an administrative modification (see below), subject to approval by the MPO policy board. Once approved, the MPO may proceed, requiring only signature of the chairperson and attestation. An administrative modification is a minor STIP/TIP revision that:

- 1) Adds a project from a level of effort category or line item, utilizing 100 percent state or non-federal funding, or an MPO TIP placement of the federally-funded, Statewide Program, or federal funds from a statewide line item that do not exceed the thresholds established by the Planning Partner.
- 2) Adds a project for emergency repairs to roadways or bridges, except those involving substantive or functional adjustments, or location and capacity changes.
- 3) Draws down, or returns funding, from an existing STIP/TIP Reserve Line Item, and does not exceed the threshold established between ALDOT and the Planning Partners.
- 4) Adds federal or state capital funds from low-bid savings, de-obligations, release of encumbrances from savings on programmed phases, and any other project-cost modification sent to and approved by FHWA or FTA, to another programmed project.

Current Transportation Planning Trends

Changing Demographics

There are a number of social and demographic changes that are impacting travel demand and are likely to continue to do so in the future. These trends include the aging of the population, increasing diversity in the U.S population, and increasing population growth in central cities and close-in suburbs.

The U.S. Census Bureau projects that the population in the United States will increase from the current population of 335 million to 389 million by the year 2045 which represents an increase of 16% in total

Demographics are changing in the U.S. and Alabama. Recent trends include:



Aging Population



Increasing Diversity



Increased Population Growth in Central Cities

U.S. population with an annual growth rate of 0.64% during the planning horizon.

The State of Alabama's population increased from 4.79 million in the year 2010 to 4.91 million in the year 2020 which correlates with an annual growth rate of 0.25%. Population forecasts in the year 2040 of 5.58 million correlates with an annual growth rate of 0.68% which is consistent with the overall growth rate for the U.S.

Figure 1-3: Alabama Population Growth by County

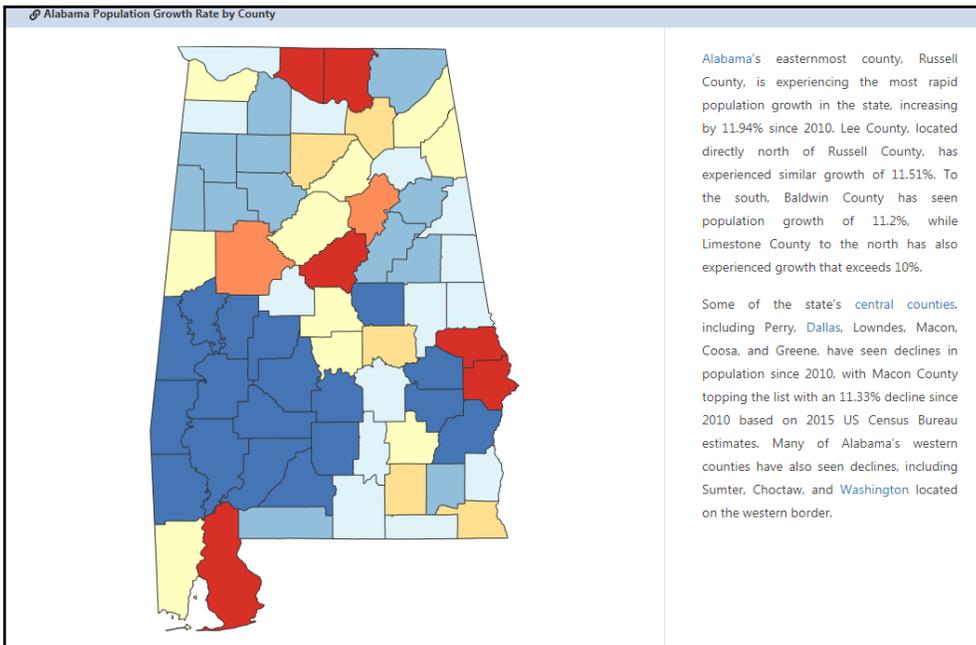
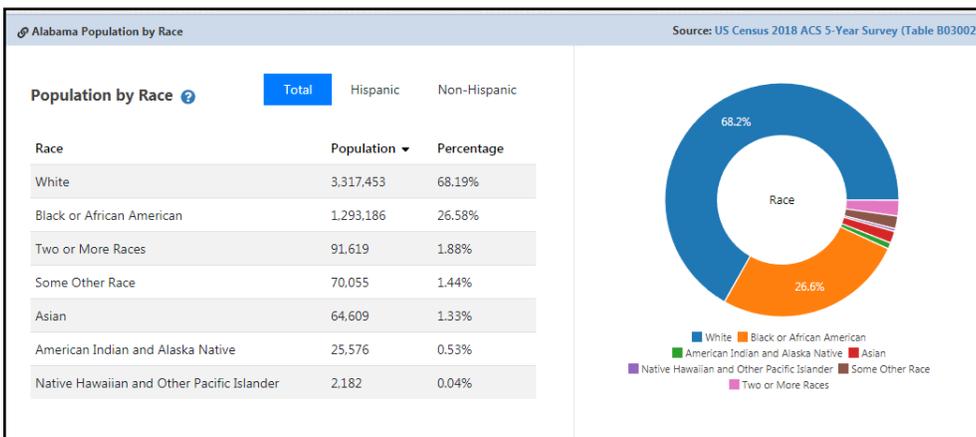


Figure 1-4: Alabama Population by Race



The Dothan metropolitan area has increased from a population of 142,718 in the year 2010 to an estimated population of 149,855 in the year 2020 which correlates with an average annual growth rate of

The Fastest Growing Counties in Alabama are:

Lee County



Source: theculturetrip.com

Russell County



Source: en.wikipedia.org

Baldwin County



Source: alabamane.wscenter.com

Limestone County



Source: en.wikipedia.org

0.68% which is the same growth rate forecast for the U.S between 2020 and 2045.

While the U.S and Alabama populations are projected to grow at similar rates, the overall growth in the country is not equally distributed. The Northeastern and Midwestern states are projected to have much lower growth rates than the Southern and Western states. Growth will continue to be concentrated in the metropolitan areas with increased growth in the central cities in comparison to past decades and strong continued growth in the suburbs.

Figure 1-5: Alabama Population by Age



The country will also continue to diversify with most of the future population growth associated with immigration. Alabama is expected to follow this national trend and will continue to diversify in the future.

The population of the United States has been aging overall for several decades and is projected to continue to do so in the future. Alabama's population is expected to follow the national trend, and the Dothan region has already emerged as a popular destination for retirees which will likely lead to more elderly residents in the Dothan region as a percentage when compared to the state overall.



The national and state population trends have a direct impact on transportation planning efforts across the country. For example, the aging population acutely impacts the trucking industry which is already experiencing labor shortages as an aging population reduces the overall labor participation rate. If labor shortages in the trucking industry increase in the future it will have impacts on the overall commodity flow chain as truck traffic would level off at some point and would either be replaced by other transport modes or delivery methods.

An aging population could lead to a number of planning challenges such as:

- Accommodating a larger percentage of paratransit users as more people may be unable to drive
- Providing adequate sidewalks, bicycle lanes, and multi-use trails to support active transportation for all age groups, including the elderly
- Addressing the forecast labor shortage as the working age population will decrease as an overall percentage of the population
- Providing adequate housing options for elderly populations whose income will likely decrease after retirement
- Adjusting fixed-route transit service to respond to new populations of captive riders

Immigration patterns will also continue to impact planning decisions into the future as per capita Vehicle Miles Traveled (VMT) will likely decrease initially as many immigrants relocate from countries where transit usage and non-motorized travel predominate and will continue these behaviors after immigrating to the U.S. However, as immigrants assimilate into American culture, VMT will likely increase on a per-capita basis as vehicle ownership rates increase in these communities over time. The reliance on the pedestrian and transit modes of travel for recent immigrants have led to situations where this population is disproportionately impacted when it comes to vehicle/pedestrian crashes and the associated injuries and fatalities.



Changing Technology

Advances in technology and the impacts on transportation planning is perhaps the most challenging aspect to gage in the planning process. Technology can be a major disrupter to the transportation network. An example of this is the emergence of Uber/Lyft and other Transportation Network Companies (TNCs) which have dramatically altered the way people travel around the world. Many people who used to travel via taxis, personal vehicles, and transit have migrated to TNCs in many cities which impacts the demand for these other modes. Transportation planners and modelers are still trying to grasp the impact of this emerging technology. Initial analysis and observations have illustrated a mix of transportation impacts related to TNCs including:

- Decreases in transit ridership as people use Uber/Lyft instead of transit
- Increases in VMT in some areas with high TNC usage
- Reductions in vehicle trips per household

While Uber and Lyft were started to provide a cheaper alternative to ridesharing, the services have also been used to serve as the “last mile” of transit trips in many cities. Other technologies that have been at least partially developed to address the last mile of transit trips include shared e-scooters, bikes, and e-bikes. These services allow users to rent these modes of transportation, typically at an hourly rate. These micro-mobility modes of travel will likely increase in the future which can improve transit ridership in many cities, but also require local governments to develop policies for the usage of these vehicles, i.e. restrictions on sidewalks, major arterials, etc.

The COVID-19 pandemic reinforced telecommuting around the world as many companies had to implement telecommuting as a mitigation measure. Telecommuting reduces peak period Home-Based-Work trips which improves regional air quality and reduces the need for costly highway capacity improvements. Telecommuting reinforces the need for regional broadband networks as this behavior is likely to increase in the future which will necessitate the reliable internet service that is provided by broadband.

Intelligent Transportation Systems (ITS) technologies have provided many benefits to the transportation industry. ITS technologies can be used to do many things including:

Technology Trends Impacting Transportation Planning Include:



E-Scooters & E-Bikes



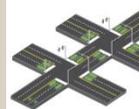
Telecommuting



Intelligent Transportation Systems

Adaptive Traffic Control Systems

What is ATCS?



An ATCS usually includes algorithms that adjust:

- Cycle Length
- Splits
- Offsets
- Phase Sequence

In order to:

- Minimize Delays,
- Reduce the number of stops,
- Decrease the Travel Time.

Any adaptive traffic control system relies upon good detection of the current conditions in real-time in order to allow a quick and effective response to any changes in the current traffic situation.



Source: skylineproducts.com

- Optimize signal timings based on real-time demand
- Allow for remote monitoring of traffic signals
- Provide real-time travel time information between origins and destinations via multiple routes
- Provide advance guidance in fog prone areas
- Prevent wrong-way crashes on reversible toll lanes
- Dynamically price toll lanes based on congestion levels
- Passively detect pedestrians and bicycles at trail crossings

The optimization and implementation of advanced traffic signal technologies in particular reduces the need for capacity improvements, improves safety and traffic flow, and reduces intersection delay. As funding continues to be limited across the nation, ITS strategies will likely increase in usage given the generally high benefit/cost ratios.

Climate

Climate change and the impacts on the environment have gained increased attention in recent years. According to the National Oceanic and Atmospheric Administration (NOAA);

“Impacts from climate change are happening now. These impacts extend well beyond an increase in temperature, affecting ecosystems and communities in the United States and around the world. Things that we depend upon and value — water, energy, transportation, wildlife, agriculture, ecosystems, and human health — are experiencing the effects of a changing climate.”

According to the FHWA report *Integrating Climate Change into the Transportation Planning Process*, there is general scientific consensus that the earth is experiencing a long-term warming trend and that human-induced increases in atmospheric greenhouse gases (GHGs) are the predominant cause. The combustion of fossil fuels is by far the biggest source of GHG emissions. In the United States, transportation is the largest source of GHG emissions, after electricity generation. Within the transportation sector, cars and trucks account for a majority of emissions.

Impacts of Climate Change Include:



Increased Intensity and Frequency of Severe Weather and Hurricanes



Increased Intensity and Frequency of Flooding in Coastal and River Areas



Erosion of Coastal and River Areas

The Dothan region is located only 90 miles from the Gulf of Mexico meaning the region is at risk of storm surge, flooding, and wind damage from tropical storms and hurricanes. As global temperatures continue to increase, the frequency of the most intense Category 4 and 5 hurricanes are projected to increase which will have a direct impact on the Dothan region. Modifications to building codes, reinforcing or “hardening” of existing buildings, and the demolition of buildings in low lying areas of the region are possible mitigation strategies for the region to plan for and mitigate the impacts of climate change.



Source: abc15.com

Declining Transportation Revenues

Gasoline taxes have historically been the primary financing mechanism for transportation projects in the United States. The State of Alabama passed a gas tax increase in March of 2019 that increased the tax rate 6 cents a gallon to 24 cents a gallon. Each 1 cent of tax is estimated to be worth \$32 million in new revenue which equates to \$320 million per year in statewide revenue that has been dedicated mostly to road and bridge projects across the State of Alabama. An additional 2 cent increase was effective in October 2020 and another 2 cent increase is planned for October 2021. The gas tax increase in 2019 was the first increase in the tax since 1992, or a period of 27 years. During this period of time, the costs of labor and materials for transportation projects increased significantly while transportation revenue remained relatively flat over the years (while the population

Climate Change Mitigation Strategies Include:



Source: theguardian.com
Raising Buildings



Source: geodesignbarriers.com
Emergency Flood Barriers



Source: hochwasserschutz-rs.de
Automated Flood Gates



Source: region2coastal.com
Raising HVAC Units

increased over this time period with more drivers, vehicles also became more fuel efficient which offset the population gains).

USDOT, state DOTs, and local agencies have taken a variety of approaches to deal with declining and uncertain transportation revenue. For instance, in order to maximize its shrinking revenues, the FHWA encourages innovative financing strategies for transportation projects through its Innovative Project Delivery program. An example of this program is the Alabama Transportation Rehabilitation and Improvement Program (ATRIP), a partnership between ALDOT and USDOT that used Grant Anticipation Revenue Vehicle (GARVEE) bond financing to advance federal-aid funding for projects which have an immediate need that will only increase in cost in the future.

At the local level, many local governments have begun to look at the Return on Investment (ROI) of their capital improvement projects, especially transportation projects. They have also raised new transportation revenue through temporary bonds, tax increases, special assessment districts, and other means. For example, Baltimore, MD implemented a Traffic Impact Study (TIS) program where the City manages the TIS process, and the developers contribute to a City fund for infrastructure and transit improvements based on the magnitude of the developer's forecast traffic impacts in relation to the overall development plan for the City.

At all levels, it is becoming increasingly important to prioritize transportation projects based on some measure of cost-effectiveness. It will also be necessary to seek innovative and alternative means of financing and funding for transportation. There are many successful examples of local and state agencies utilizing public-private partnerships, privatization, Tax-Increment Financing (TIF), and other innovative financing structures to overcome funding shortfalls.





Chapter 2

Plan Development Process

Performance-Based Planning Approach

The 2045 LRTP was developed using a performance-based planning approach. Performance based planning and programming (PBPP) applies performance management principles to the planning process. Performance management is a strategic approach based on the development, application, and monitoring of performance data. PBPP uses data-derived indicators about the existing and desired future transportation system to set regional strategic objectives, evaluate how funds are allocated at the regional level, and to evaluate future plan outcomes.

The Fixing America's Surface Transportation (FAST) Act, signed into law in 2015, builds on the MAP-21 requirements for performance-based planning in statewide and regional planning. It requires USDOT to establish performance measures that enable states and MPOs to track their performance in addressing the national goals as set forth in the FAST Act.

In keeping with the federal FAST Act requirements, the MPOs in Alabama are required to address sustainability performance measures related to the State's Livability Principles and Indicators initiative discussed in the Introduction chapter. The general process below illustrates how the 2045 LRTP incorporates an outcome and performance based planning approach.

1. **Set a Regional Vision** - use public and stakeholder input to develop a regional vision. Use the transect concept to contextualize the vision by area type within the region.
2. **Define Goals and Objectives** - develop goals that address desired outcomes consistent with the regional vision and national goals set forth in the FAST Act. Develop specific objectives that are measurable to foster achievement of the stated goals.
3. **Establish System Performance Measures** - select performance measures that are consistent with the regional goals and objectives and are consistent with the ALDOT Livability Principles and Indicators. Monitoring these measures over time will allow the MPO to respond to unforeseen circumstances and track progress.
4. **Assess Baseline System Performance** – conduct an asset inventory for the existing transportation system along with a technical analysis of the existing travel patterns in the region.

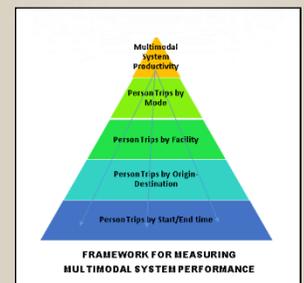
Performance-Based Planning includes the following steps:



Set Regional Vision



Define Goals and Objectives



Establish System Performance Measures



Assess Baseline System Performance

The inventory and analysis is supplemented by input from the public and stakeholders.

5. **Identify Desired System Performance** - Focus the 2045 LRTP on the preferred overall trend of performance measures.
6. **Forecast Future Conditions and Needs** – Forecast future growth from 2015 to 2045 in the Dothan region. The impacts of the forecast changes in land use and demographics are modeled using the existing transportation system and committed projects. Additional future projects are then evaluated both individually and as a package of programmed improvements.
7. **Develop Implementation Strategy** – Develop a prioritization methodology using technical analysis, stakeholder, and public input. The projects that best address the future multi-modal needs in the Dothan region are given prioritization for the plan provided there are no adverse environmental justice impacts or cost/funding constraints.

Planning Emphasis Areas

FHWA and FTA identify Planning Emphasis Areas (PEAs) to indicate which priorities they want to emphasize in the transportation planning process as MPOs and state DOTs develop their respective work plans. The following PEAs are for Fiscal Year 2021 and will be applied to the various tasks and subtasks in the UPWP.

FAST Act Implementation: Continue the implementation of performance based transportation planning and programming that supports the achievement of transportation system performance outcomes.

Models of Regional Planning Cooperation: Promote cooperation across MPO and state boundaries where appropriate to ensure a regional approach is taken to transportation planning.

This is particularly important when more than one MPO or state serves an urbanized area or adjacent urbanized areas. This cooperation can occur through metropolitan planning agreements that identify how the joint planning process and transportation planning products will be coordinated, through the joint development of transportation plans and other products, and/or by other locally developed means.

Ladders of Opportunity: As a part of the transportation planning process, identify transportation connectivity gaps to essential services

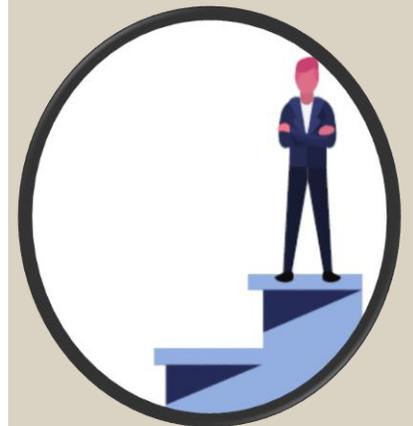
Planning Emphasis Areas:



Facilitate FAST Act Implementation



Promote Cooperation across MPO and State Boundaries



Create "Ladders of Opportunities"

in the region, particularly for low-income, disabled, Environmental Justice communities, and rural residents.

Essential services include:

- Housing
- Employment
- Healthcare
- Schools/Education
- Recreation
- Grocery Stores
- Basic Retail

This emphasis area can include MPO and state identification of performance measures and analysis methods to measure the transportation system's accessibility to essential services and the use of this information to identify gaps in the transportation network related to these essential services. It should also include the identification of solutions to address these gaps.

Title VI and the Long Range Plan

SWAMPO is committed to ensuring public participation in the development of all transportation plans and programs. The overall goal for SWAMPO is for the transportation planning process to be open, accessible, transparent, inclusive, and responsive. SWAMPO will continue to be compliant with the Americans with Disabilities Act of 1990 (ADA), and the Rehabilitation Act of 1973, Section 504. SWAMPO is compliant with all other Title VI laws, processes, and programs, including the following:

- Civil Rights Act of 1964, 42 USC 2000d, et seq. which prohibits exclusion from any federal program on the basis of race, color, or national origin.
- 23 USC 324 which prohibits discrimination on the basis of sexual orientation, adding to the landmark significance of 2000d; this requirement is found in 23 CFR 450.334(1).
- Rehabilitation Act of 1973, 29 USC 701 Section 504, which prohibits discrimination on the basis of a disability, and in terms of access to the transportation planning process.
- Americans with Disabilities Act of 1990 which prohibits discrimination based solely on disability. ADA encourages the participation of people with disabilities in the development of transportation and paratransit plans and

Essential Services include:



Housing



Employment



Healthcare



Schools

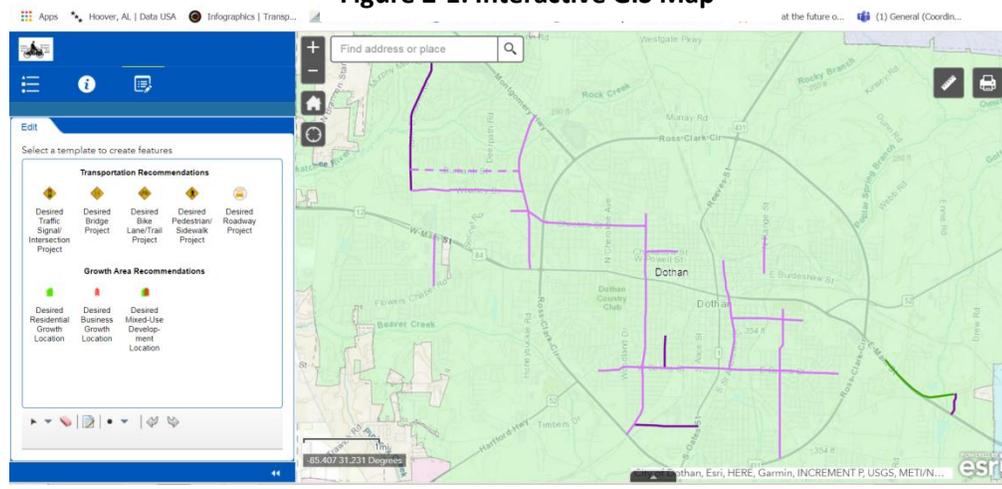
services. In accordance with ADA guidelines, all LRTP meetings took place in locations which are accessible by persons with mobility limitations or other impairments.

- Executive Order 12898, referred to as Environmental Justice, which requires that federal programs, policies and activities affecting human health or the environment will identify and avoid disproportionately high and adverse effects on minority or low income populations. The intent was to ensure that no racial, ethnic, or socioeconomic group bears a disproportionate share of negative environmental consequences resulting from government programs and policies.
- Limited English Proficiency (LEP) Plan which is required by Title VI of the Civil Rights Act of 1964, Executive Order 13166, and FTA Circular C 4702.1B, October 2012. SWAMPO has completed a Four Factor Analysis (detailed in the Appendix) of the Metropolitan Planning Area (MPA) to determine requirements for compliance with the Limited English Proficiency (LEP) provisions. Based on the analysis, the MPO has identified a population within the MPA that may require MPO assistance in participating in the planning process.

To support the public participation goals of SWAMPO, the public was encouraged to participate in the development of the LRTP. The COVID-19 pandemic added an additional level of complexity to the public engagement process that had to be addressed using the following methods:

An online interactive GIS map was developed for the public to input project requests and concerns related to roadway, transit,

Figure 2-1: Interactive GIS Map

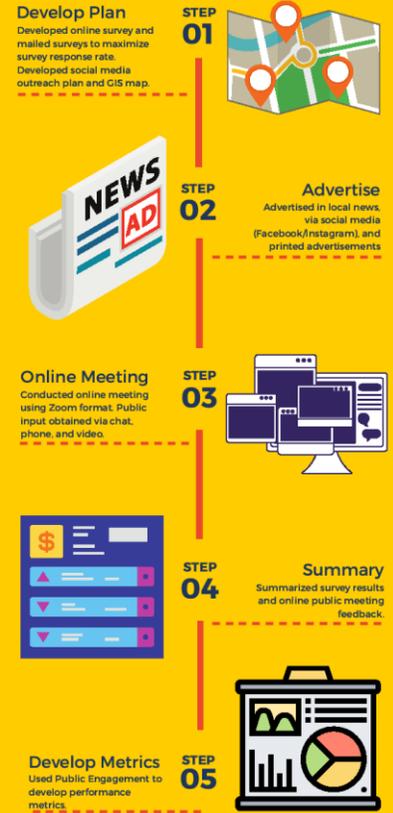


bicycle/trail, and pedestrian improvements. The interactive map also allowed the public to input where they would like to see future household, employment, and mixed-use development growth.

An online survey was also developed to obtain public feedback related to the existing transportation system and to inform the performance measures required in the PBPP.

Figure 2-2: Online Public Engagement Survey

Public Engagement Process



Future Growth

Should future growth occur inside or outside of Ross Clark Circle?

Yes
 No

Should future developments incorporate bike/ped facilities?

Yes
 No

Should future development include mixes of retail/housing/employment?

Yes
 No

Rank Transportation Goals from Least Important (1) to Most Important (5)

Improve safety for all modes

1	2	3	4	5
Negative		Neutral		Positive

Reduce congestion

1	2	3	4	5
Negative		Neutral		Positive

Improve accessibility for all ages and abilities

1	2	3	4	5
Negative		Neutral		Positive

Recreational Trails linking communities, parks, and open spaces

1	2	3	4	5
Negative		Neutral		Positive

Sidewalks or multi-use trails for walking or biking to major employment/retail centers

1	2	3	4	5
Negative		Neutral		Positive

Improve transit service

1	2	3	4	5
Negative		Neutral		Positive

Support future land use

1	2	3	4	5
Negative		Neutral		Positive

Protect the environment

1	2	3	4	5
Negative		Neutral		Positive



The online interactive map and survey were supported by hard copy mailings of the survey to targeted low-income and Limited English Proficiency communities to encourage public participation in those Environmental Justice communities. The hard copy surveys were mailed out through the City of Dothan's Utility Department.

Public Meeting

The public engagement meeting was held via Zoom on July 16, 2020 at 5:30 P.M. An overview of existing conditions and survey results were presented at the meeting which was followed up by a visioning session where the public gave feedback related to future growth, transportation needs, and visionary projects via the Zoom chat feature. Per Governor Ivey's directive in March 2020 related to COVID-19 and public engagement, this meeting format fulfilled the requirements for public engagement. The Zoom format enhanced the ability of persons with disabilities (significant percentages of this population group are also low-income) to participate in the public engagement process.

Figure 2-3: Public Meeting Advertisement

PUBLIC NOTICE

**Southeast Wiregrass Area Metropolitan Planning Organization
Transportation Meetings Announcement**

The Southeast Wiregrass Metropolitan Planning Organization (MPO) extends an invitation to ALL interested individuals to participate in a Public Involvement Meeting on the Updating of the Regional Long-Range Transportation Plan (LTRP).

The 2045 LTRP is a document that is updated every 5 years that projects 25 years into the Dothan region's future transportation needs. This update will review the overall transportation plan, strategies, accomplishments, and future projects for the Region.

Date: Thursday, July 16, 2020

Time: 5:30 PM to 7:00 PM

Place: Due to COVID-19 and Social Distancing Orders the Public Involvement Meeting will be video conference from Zoom and Live Streamed on Facebook (FB), YouTube (YT), Instagram (IG) and Twitter.

Join Zoom Meeting
<https://zoom.us/j/95388603567>

Meeting ID: 953 8860 3567
One tap mobile
[+13126266799](tel:+13126266799), [95388603567#](tel:+13126266799) US (Chicago)

Dial by your location
[+1 312 626 6799](tel:+13126266799) US (Chicago)

Meeting ID: 953 8860 3567

Documents will be available electronically on the City of Dothan Website or they can be mailed by request. Forms can be submitted by email to rbfranklin@dothan.org by fax to [334-615-4419](tel:334-615-4419) or send by mail at P.O. Box 2128, Dothan, AL 36302. All comments forms should be submitted by the close of business (COB) on [July 31, 2020](#).

Additional information about this meeting can be obtained from the City of Dothan Planning and Development Office, Room 305, Dothan Civic Center, from 8:00 a.m. to 5:00 p.m. or by contacting Todd McDonald, (334) 615-4410 or Reginald Franklin, (334) 615-4414. Meeting documents are also posted on the City of Dothan website at www.dothan.org on the Planning Department page under the Transportation Planning tab. If you have disabilities that require assistance, please contact the MPO Staff at least 24 hours before the meeting at the number listed above so that accommodations can be made. All meetings are open to the public.



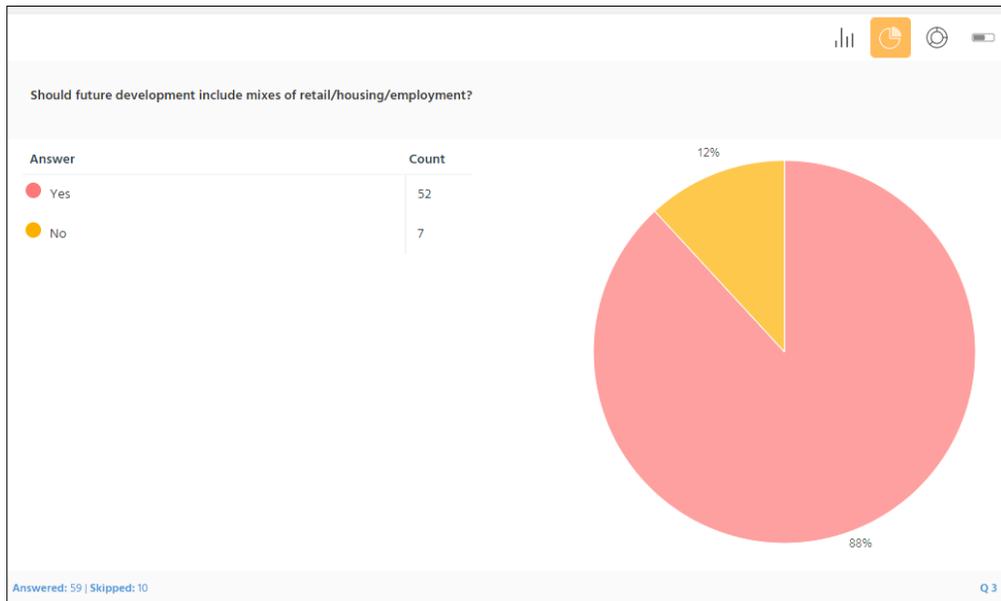
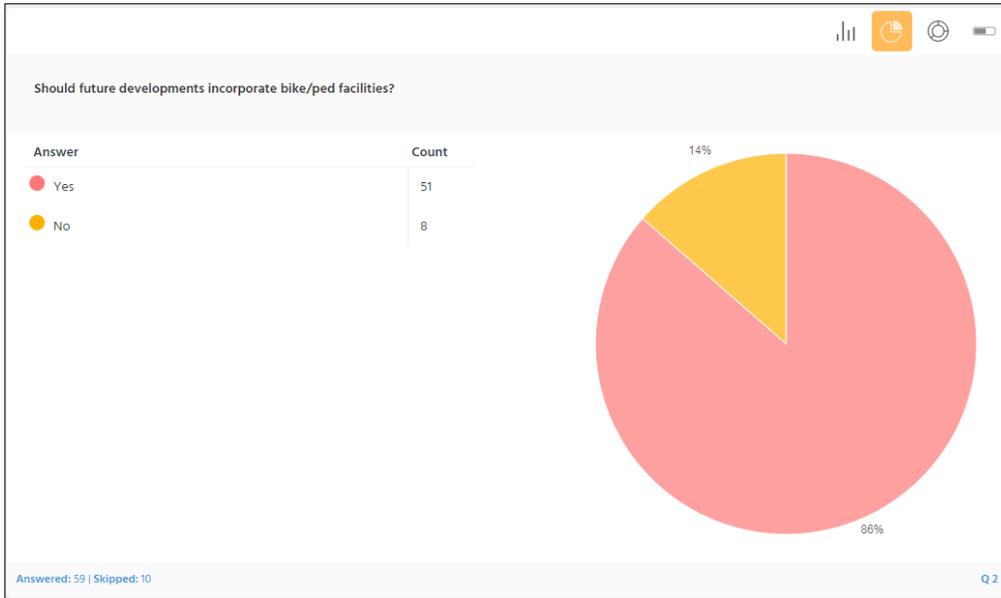
Performance Metrics Development

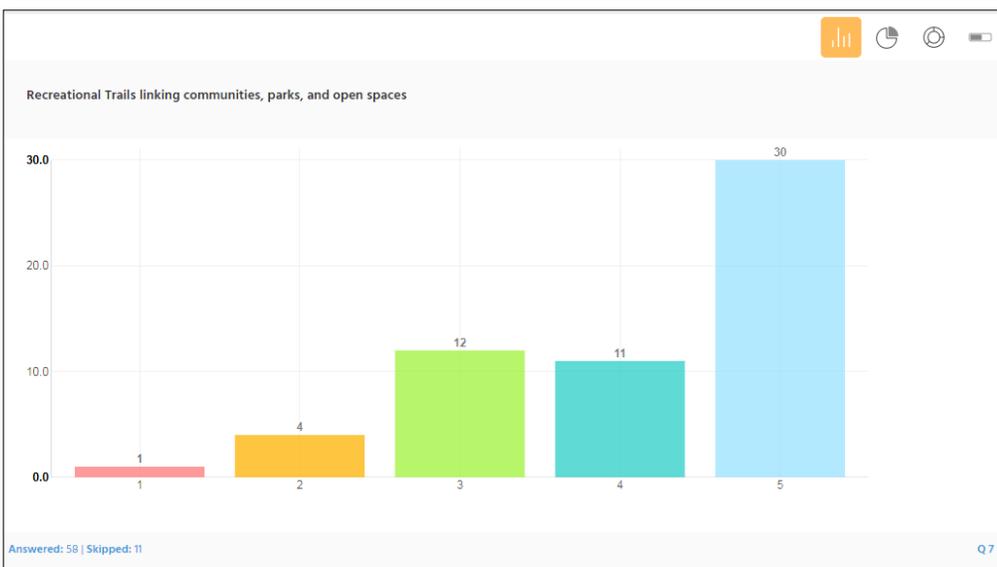
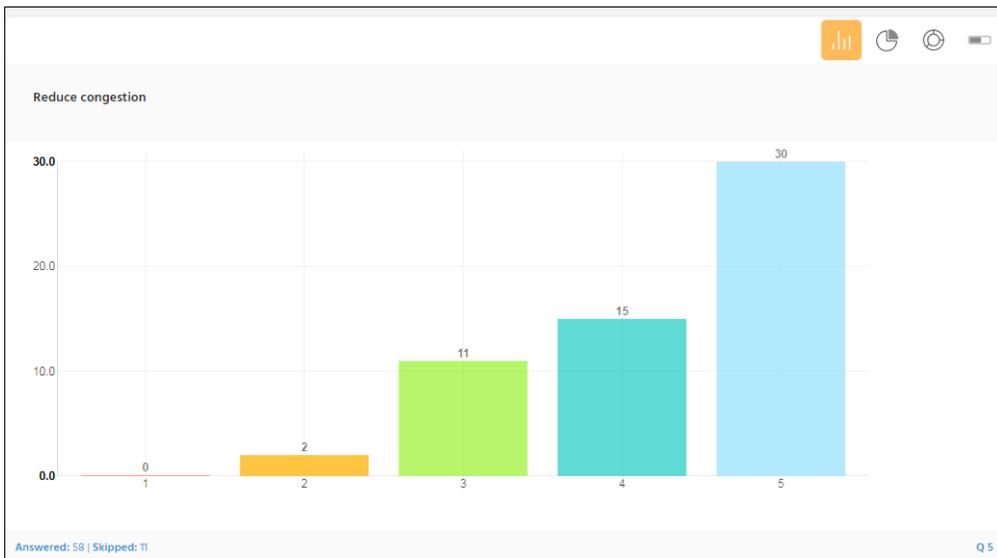
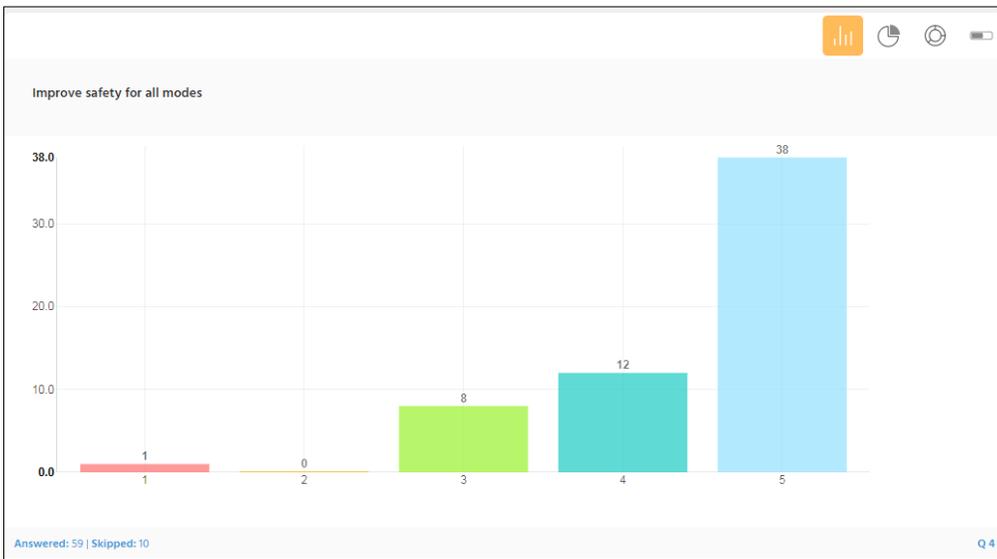
The feedback from the public engagement process was used to inform the performance metrics which were developed by subareas within the Dothan region to reflect the differences in urban form and density and to capture the differences in transportation needs across multiple transects (area types) in the region. Transportation and growth issues were prioritized along with preferred projects to address future mobility in the region.

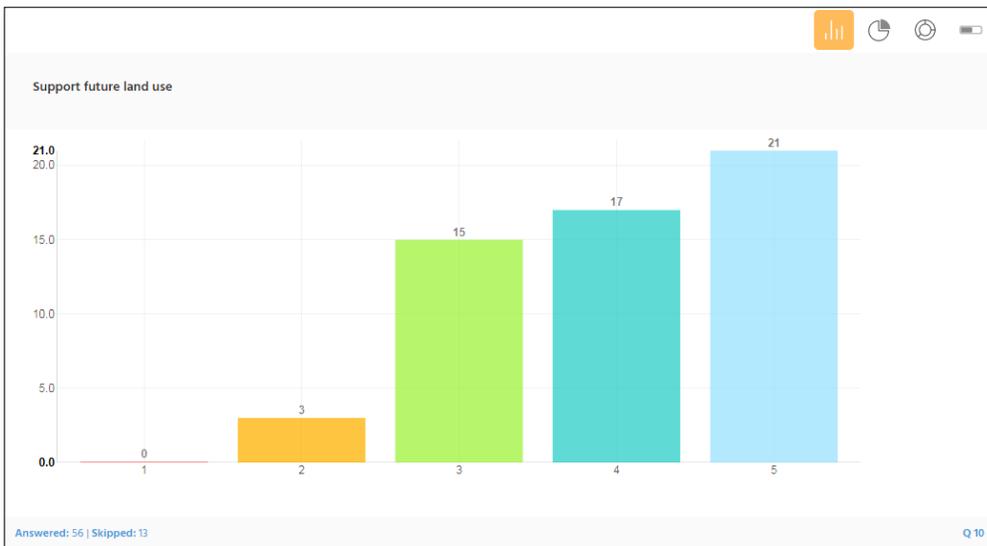
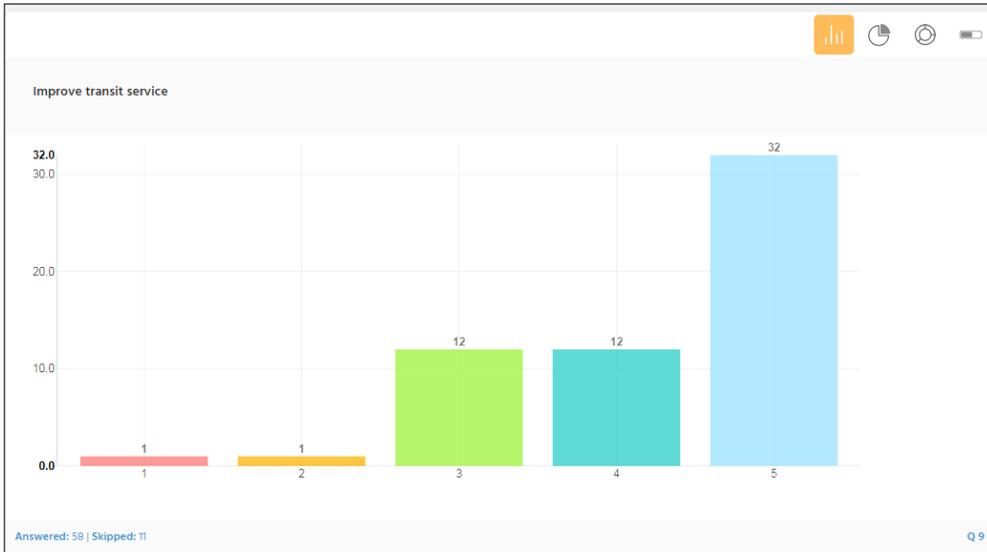
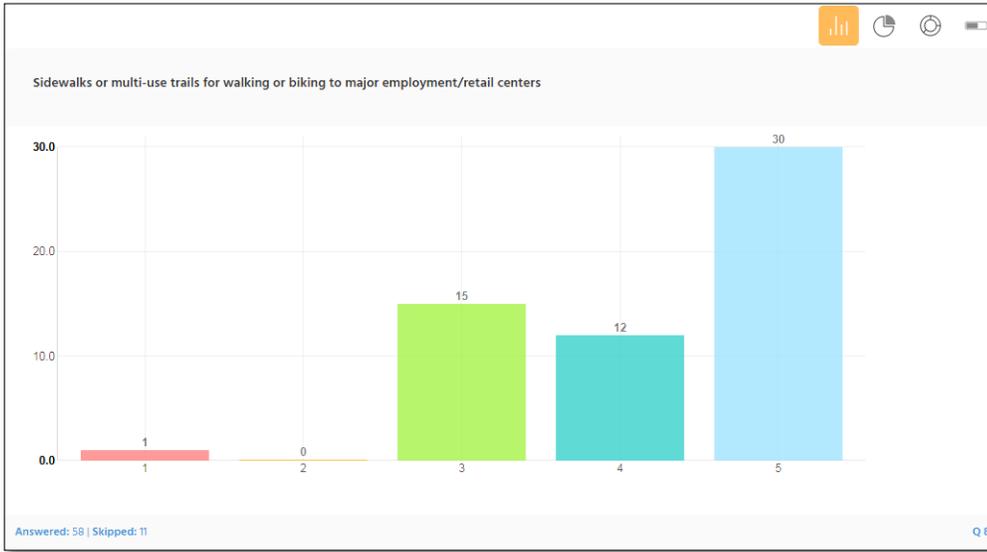
Figure 2-4: Public Meeting Responses
(1=lowest priority; 5=highest priority)

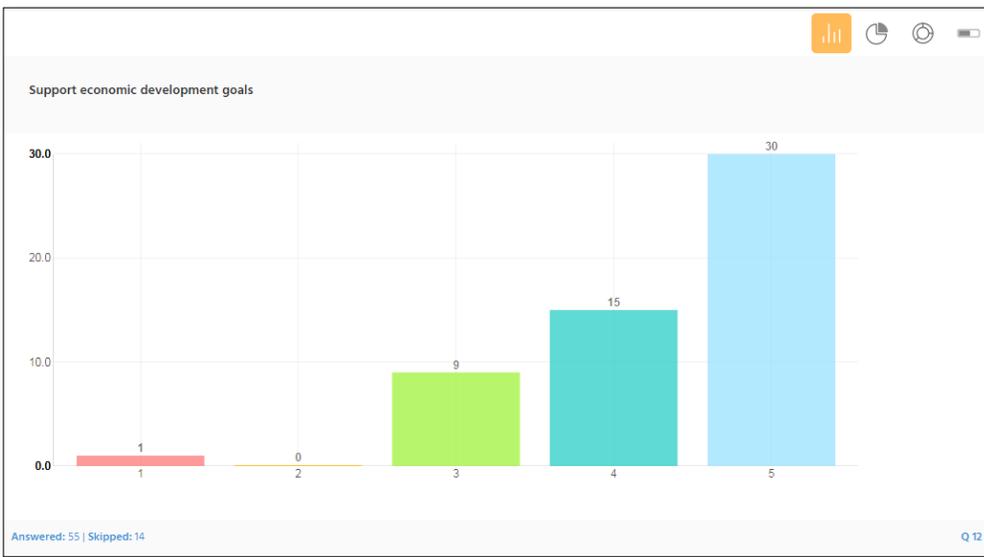
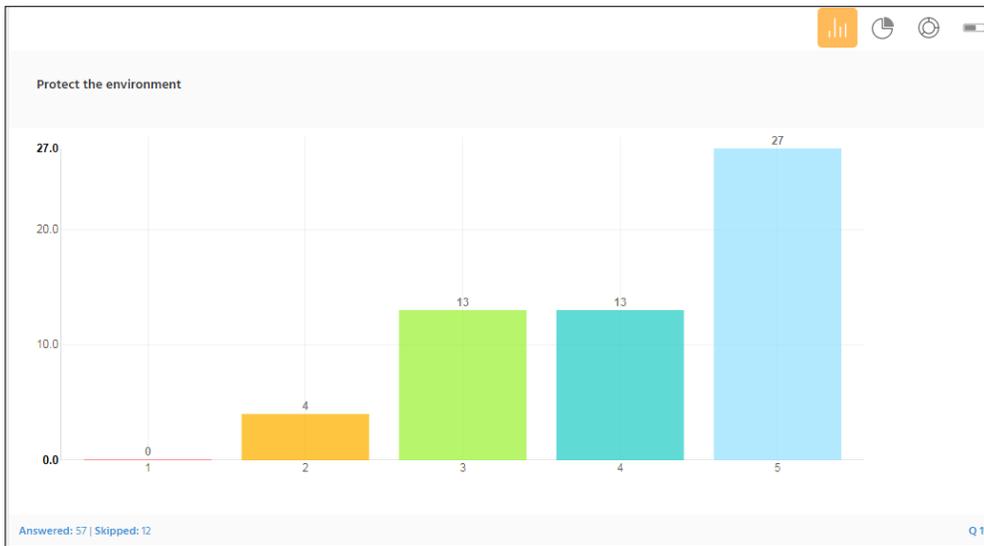


Figure 2-4 continued









Answers
I think whether to incorporate bike/ped facilities or add sidewalks depends on what part of Dothan you're talking about. Within the Circle, bike/ped facilities might make sense, though I've seen the City of Myrtle Beach, SC, snarl its oceanfront traffic into a knot by adding those, so it would have to be done carefully. Outside the Circle, there is less point as it would be too far to walk anywhere. In general, when modifying the roads and building new ones, please stay away from roundabouts (i.e., traffic circles) and speed bumps; both actually hurt me (I have a truncated left collarbone that doesn't like bumps or tight turns) and I doubt I'm the only one with such a problem. I came to your meeting to hear about paratransit plans, but since I did not even know about Wiregrass Transit I do not feel I am qualified to comment on that. I don't think mixed-use communities are a good idea outside the Circle, and even inside the Circle I am dubious; a factory would be too noisy for the surrounding residences. I suppose a row of retail shops with housing nearby might work, especially if they closed at 5 or so. Walking trails are nice; we had a rail-trail in the town I lived in before last September. But I think Dothan has trails already? I wasn't well enough to look into the matter last fall, and of course Covid has put a damper on such things this year.
I appreciate the coordination of the stoplights. Maybe more improvements could be possible in very busy areas. Thank you!
Reduce congestion not by building more roads/lanes. Instead, I'd like to see more access to safe, reliable, and clean public transit including but not limited to, busses, train/light rail, and bicycle lanes.
As for "sidewalks and multi-use trails", this would be a fabulous addition to our community. I'm thinking along the lines of the Katy Trail in Dallas or the proposed Creekline in Opelika. A long path that connects major parts of the city that is ONLY for bikes/pedestrians. Include small parks and perhaps some primarily outdoor restaurants (also accessible by car/ride share) along the path.
Thank you for fighting the good fight!
The area needs some sort of dependable and reliable transit system that is affordable. The current system isn't dependable at all.
Enforce laws on ATV and golf carts speeding around on city streets.
Napier Field has NO transportation at all. I have to pay \$50 to go 5 miles to walmart by cab.
incentivize Uber/Lyft to properly service Dothan. If so subsidized (and promoted), Wiregrass Transit can better serve the ADA community .
We need to reuse empty buildings before we build new ones. There are many unused retail spaces that have never been used.
Would like to see more police presence and enforcement on the roads to reduce aggressive drivers and speeders, 70 mph on Ross Clark Circle is a normal.
THE ATTENTION TO MAKING DOTHAN PEDESTRIAN FRIENDLY WITH SIDEWALKS IS EXCELLENT. ENCOURAGE STREETSCAPING (LANDSCAPING) ALONG ALL ROUTES AS WELL AS GREEN MEDIANS WHERE POSSIBLE TO SOFTEN THE STREET.

Answers
Train
I feel that we need more sidewalks throughout Dothan.
I am a transplant from AZ, there our transportation system works well, I prefer the trams to the buses since its less pollution. I do miss hiking and biking, we have so many trails to use there I wish Dothan had more of that. I know there are not the mountains that AZ has but in some areas, around man made lakes they build hills to climb for resistance in hikes. I love my new home, and am looking forward to new community friendly areas.
Stop putting up Red Lights every 50 ft, use overpasses, get an I-10 connector through Dothan!

There were over sixty responses to the online survey which can be summarized as follows:

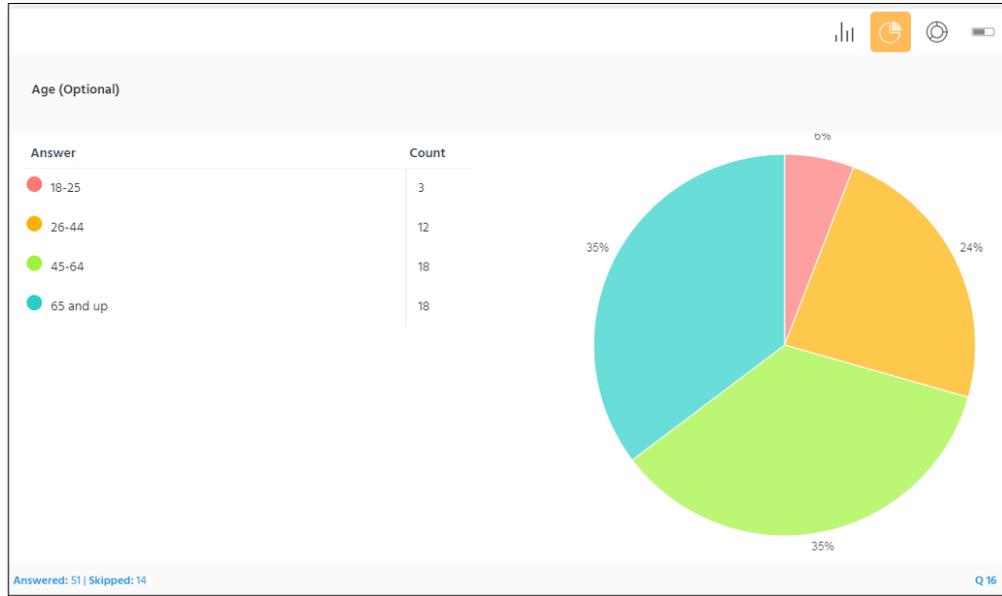
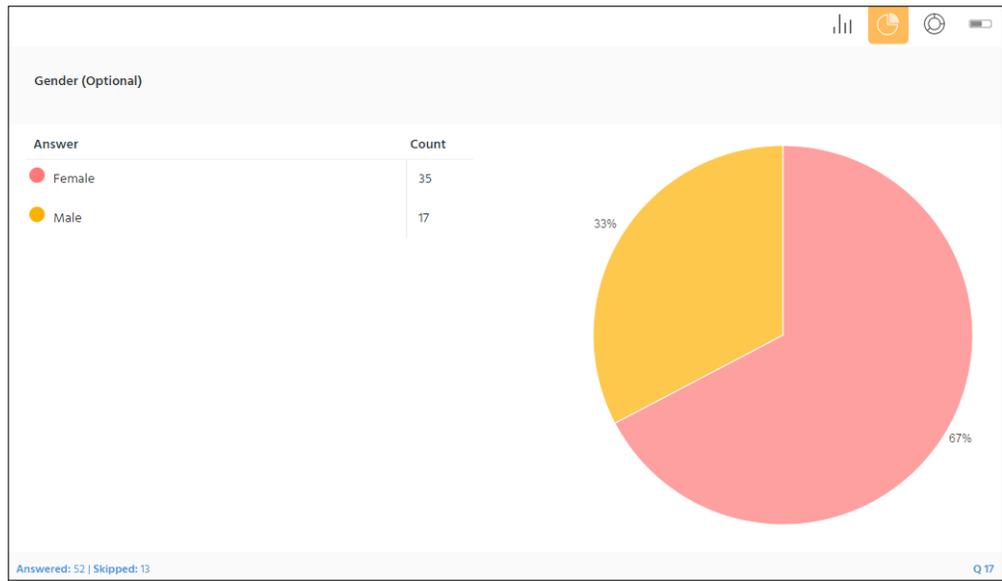
- Bicycle facilities and traffic signals had the highest average score, followed by pedestrian facilities, road improvements, and transit service.
- The public overwhelmingly supported bicycle/pedestrian facilities in future developments as well as developments that included a mix of retail, housing, and employment.
- Sidewalks and bicycle facilities that connect neighborhoods to shopping and entertainment and increased transit service also gathered strong support from the public.

The results of the public engagement process illustrate a shift in public sentiment in the region away from auto-centric development patterns and associated projects to more of a multi-modal environment with supporting land uses. This is consistent with the nationwide trend to develop urban areas in a more environmentally sustainable fashion.



The input from the public engagement process was used to inform the performance measures discussed in the next chapter.

Figure 2-5: Public Engagement Response by Gender and Age





Chapter 3

Visioning and Performance Measures

Public Vision

Results from the online survey, public meeting, and stakeholder input were used to develop a future vision for the SWAMPO region and inform the performance metrics development process. Public and stakeholder input indicated a growing desire for a more multi-modal transportation network with supporting land uses. In addition to roadway and traffic signal improvements, residents overwhelmingly supported future developments with mixes of retail, employment and housing as well as bicycle and pedestrian facilities.

Goals and Objectives

Goals and objectives are typically developed concurrently in the planning process. While related, it is important to differentiate between goals and objectives within the context of the FAST Act.

A goal is a broad statement that describes a desired end state. Goals should be consistent with the overall vision for the region and form the basis for selecting projects and policies that will achieve the desired vision outcomes.

An objective is a specific, measurable statement that supports achievement of the goal. An objective can be thought of as a specific, actionable task that leads towards the desired goal. Objectives can be categorized into outcome, output, and activity-based objectives as described in **Figure 3-1**. Outcome-based objectives are preferred for long-range planning because they allow the most effective communication with the public.

The 2045 LRTP goals and objectives summarized in this chapter are consistent with public/stakeholder input, ALDOT Livability Indicators, national transportation goals specified in the FAST Act, and federal planning factors reinforced by the FAST Act.

Figure 3-1: Outcome, Output, and Activity-based Objectives

Type	Description	Example
Outcome	Reflect concerns of the public, customers, and stakeholders; these objectives are often the most meaningful to the public and related most directly to system goals; however they may be influenced by a range of factors beyond the control of the transportation agencies.	Reduce hours of incident-based delay experienced by travelers
Output	Reflect quantity of activities that affect outcomes, and may be more directly influenced by a transportation agency (although they also may not be entirely in control of the agency).	Reduce the clearance time for traffic incidents (For incident clearance, the transportation agency would need to work with law enforcement, etc.)
Activity	Reflect actions that are taken by transportation agencies. These are less directly tied to the outcome, and often directly relate to a strategy being implemented.	Increase the number of cameras tracking system conditions

Source: FHWA and FTA "Advancing Metropolitan Planning for Operations: The building blocks of a Model Transportation Plan Incorporating Operations - A Desk Reference," April 2010

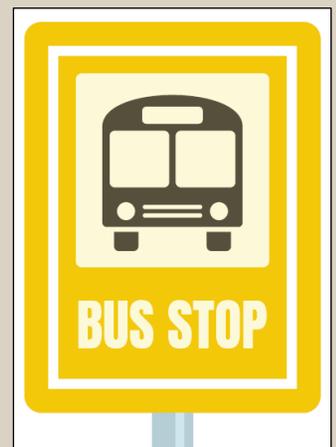
Public feedback revealed a future vision for the Dothan region that includes:



Walkable communities with mixes of land uses



Multi-use trails to connect communities to recreational areas, job, and retail opportunities



Improved transit service

Goals and Objectives developed for the 2045 LRTP are as follows:

Goal 1: Affordable, Convenient, and Reliable Access to Destinations by Multiple Modes of Transportation

Objectives:

- Increase the percentage of trips made by bicycling, walking, and public transit
- Increase the percentage of transportation investment dedicated to enhancing accessibility of the existing transportation system
- Reduce the percentage of household income spent on housing and transportation
- Increase the percentage of the workforce living within a 30 minute or less commute from primary job centers
- Increase the percentage of the population and employment within a half mile of a transit route
- Increase the percentage of the population and employment within a half mile of a marked bicycle facility
- Increase the percentage of collector and arterial roadway centerline miles in urban areas with sidewalk on both sides
- Add fixed-route transit service and expand paratransit/demand responsive transit service to the weekend and into the late evenings on weekdays
- Reduce the annual hours of delay from recurring and non-recurring congestion experienced by motorists and transit riders
- Once fixed-route transit service is implemented, improve on-time performance
- Increase the percentage of paratransit/demand responsive trips that pick up passengers within two hours of request

Goal 2: A Connected Regional Economy Accessible to National and Global Markets

Objectives:

- Minimize delay on principal arterials connecting rural and urban areas
- Increase scheduled public transit connections between communities in the MPA region



- Designate and construct a network of regional multi-use paths and on-street bicycle facilities that connect activity centers throughout the MPA region
- Minimize railroad freight delay by improving operations and infrastructure and reducing railroad/roadway and land use conflicts
- Improve operations at intermodal freight and passenger facilities such as transload facilities, airports, and multi-modal transit centers by ensuring sufficient storage capacity for all vehicles and cargo
- Minimize delay on the USDOT-designated national freight network
- Increase inter-city transit service to other urbanized areas in the Southeast by adding new destinations and increasing the frequency of existing service
- Increase the number of daily commercial flights between the Dothan Regional Airport and major international hubs such as Atlanta and Dallas

Goal 3: A Well-Maintained and Efficient Transportation System

Objectives:

- Reduce the percentage of roadway miles classified as Arterials and Collectors with a Pavement Condition Rating (PCR) of 72 or lower which indicates a need for resurfacing or reconstruction
- Decrease the number of bridges on public roads that are classified as Structurally Deficient or Functionally Obsolete
- Ensure that all transit facilities and vehicles are in a State of Good Repair, as required by the Federal Transit Administration
- Reduce the length of sidewalk and crosswalk infrastructure along arterials and collectors that requires repair or maintenance
- Reduce the length of bicycle facility and multi-use path infrastructure that requires repair or maintenance
- Ensure that airport equipment, facilities, and pavement on runways, taxiways, and aprons are in good condition
- Ensure that active railroad infrastructure is in good condition, especially tracks, vehicles, bridges, and roadway crossings



- Reduce annual Vehicle Miles Traveled per capita and Vehicle Hours Traveled per capita through Transportation Demand Management strategies
- Increase the number of congested intersections and corridors that are managed by Intelligent Transportation Systems
- Reduce the number of underutilized roadway corridors in urban areas with projected 2045 Volume to Capacity ratios below 0.75 by reallocating roadway space to other modes and purposes where such reallocation is deemed appropriate
- Increase fixed route and paratransit/demand responsive transit passenger trips while reducing the operating cost per passenger trip for both

Goal 4: A Safe, Secure, and Resilient Transportation System

Objectives:

- Reduce the number of automobile crashes on public roads resulting in fatalities or serious injuries and the respective rates per 100 million Vehicle Miles Traveled
- Reduce the number of bicycle and pedestrian crashes resulting in fatalities or serious injuries and the respective rates per capita
- Reduce the number of safety and security incidents, injuries, and fatalities for all transit systems and the respective rates per 100,000 Vehicle Miles
- Reduce the number of highway-rail crossing crashes, injuries, and fatalities for freight and passenger rail
- Reduce the number of aviation-related incidents or accidents that can be attributed to local airport operations or facilities
- Increase the redundancy and diversity of the transportation network by increasing the number of emergency evacuation alternatives for multiple modes of transportation, with special consideration to the carless population
- Improve the flexibility of the transportation network by increasing the number of intersections and corridors managed by Intelligent Transportation Systems



Goal 5: A Transportation System that Creates a Sense of Place and Improves Public Health

Objectives:

- Increase the amount of public art installations and street furniture designed by local artists along transportation right of ways and on transportation facility properties
- Increase the tree canopy and vegetated space along transportation right of ways
- Increase the number of projects where roadways are temporarily transformed for community events or tactical urbanism projects such as festivals and open-air dining
- Increase new residential and commercial development and reinvestment adjacent to transportation improvements in historic districts and areas with a high density of housing built at least 50 years ago
- Increase the percentage of housing located in walkable neighborhoods with mixed-use destinations located nearby
- Increase the number of TAZs with a balanced jobs to housing ratio
- Increase the population residing in urban TAZs where the combined length of sidewalk along collectors and arterials is at least 1.5 times greater than the length of those roadways
- Increase the percentage of urban TAZs within one mile of a multi-use path
- Increase the percentage of K-8 students that walk or bike to school
- Reduce the number of urban food deserts with no fixed-route transit service

Goal 6: A Transportation System that Distributes Benefits and Burdens in an Equitable Manner

Objectives:

- Minimize the disparity between the percentage of Environmental Justice/Low Mobility (EJ/LM) area households that spend 45% of their income on housing and transportation versus all other areas
- Minimize the disparity in the average travel time to work between EJ areas and all other tracts



- Minimize disparity between travel time by driving and by riding transit to primary employment centers and major medical and educational destinations in EJ areas
- Increase the ratio of sidewalk and multi-use path length to roadway length in EJ areas and areas within a half mile of fixed route transit service
- Reduce the exposure to arterial traffic (VMT) and associated greater air and noise pollution for EJ groups
- Minimize the disparity between bicycle and pedestrian crashes in EJ areas and other areas

Goal 7: A Transportation System that Minimizes Detrimental Impacts to the Natural and Historic Environment and Practices Environmental Stewardship

Objectives:

- Reduce transportation-related greenhouse gas emissions per capita
- Increase the number of transit and other fleet vehicles fueled by alternative and hybrid fuels and reduce fossil-fuel dependency
- Develop more residential units and commercial developments in infill locations than in greenfield locations
- Reduce collisions between automobiles, trains, and animals in high collision areas by introducing design countermeasures
- Ensure that no programmed transportation project has a significantly adverse impact to historic sites, parks, and recreation areas where a feasible and prudent alternative exists

Goal 8: A Meaningful Public Involvement Process that Influences Transportation Decision-Making

Objectives:

- Local residents, businesses, and other stakeholders are educated on the transportation planning process and local transportation issues and they provide an increased level of meaningful input that is incorporated into the decision-making process



- The socioeconomic composition of public participants resembles that of the Metropolitan Planning Area as a whole and includes representation from a variety of urban, suburban, and rural communities
- Projects prioritized for funding have support from the community as a whole as well as the majority of residents and businesses directly impacted

System Performance Measures

The 2045 LRTP addresses the following performance measures that are consistent with the Goals and Objectives and required by the ALDOT Livability Principals and Indicators initiative.

Performance Measure 1: The percentage of transportation investment dedicated to enhancing accessibility of existing transportation system

Target-Increase

Performance Measure 2: The percentage of household income spent on housing and transportation

Target-Decrease

Performance Measure 3: The percentage of workforce living within a 30 minute or less commute from primary job centers

Target-Increase

Performance Measure 4: The percentage of the population and employment within a half mile of a transit route

Target-Increase

Performance Measure 5: The percentage of housing located in walkable neighborhoods with mixed use destinations nearby

Target-Increase

Performance Measure 6: The percentage of transportation projects where more than one federal funding source is utilized

Target-Increase

The performance measure data can be found in the Appendix.



Chapter 4

Environment



The Environment

Minimizing the impacts of urban development on the environment has grown in importance in recent decades as the impacts of climate change have impacted communities across the U.S. The transportation planning process should consider and minimize negative impacts on both the human and natural environment. Given the documented impacts of climate change and the SWAMPO region's proximity to the Gulf Coast, the transportation planning process should also consider the impacts of more intense hurricanes and increased flooding in the future. Giving full consideration to the environment increases opportunities for interagency coordination, enables expedited project delivery, and promotes outcomes that are more environmentally sustainable.

Federal Requirements

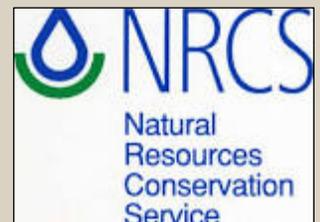
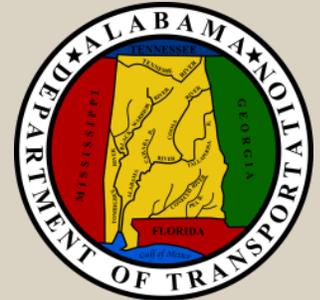
Federal regulations (23 C.F.R. 450) require the LRTP to address environmental concerns by doing the following:

1. The development of the LRTP must involve consultation with the state and local agencies responsible for land use management, environmental protection, conservation, and historic preservation. This should include a comparison of the LRTP with state conservation plans or maps and inventories of natural and/or historic resources if this information is available.
2. The LRTP must discuss the types of potential environmental activities relating to the implementation of the LRTP, including potential areas for these activities to occur and activities which may have the greatest potential to mitigate the effects of the LRTP projects and strategies. Mitigation activities do not have to be project-specific and can instead focus on broader policies, programs, and strategies. The discussion must involve consultation with federal, state, and tribal land management, wildlife, and regulatory agencies.

The National Environmental Policy Act of 1969 (NEPA) established the basic framework for integrating environmental decisions into federal decision-making. Federal regulations related to NEPA (40 C.F.R. 1508) define mitigation as:

- Avoiding the impact altogether by not taking a certain action or parts of an action.

The development of the Dothan MTP requires consultation with:



- Minimizing the impacts by limiting the degree or magnitude of the action and its implementation
- Rectifying the impact by repairing, rehabilitating, or restoring the affected environment
- 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 or environments

Section 4(f) of the US Department of Transportation Act of 1966 provides additional environmental protection for property in publicly owned parks, recreational areas, wildlife and waterfowl refuges, and historic sites by preventing these properties from being used for transportation purposes unless there is no feasible and prudent alternative, the action includes all possible planning to minimize harm to the property, or a *de minimis* impact determination is made.

Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations, was signed by President Clinton in 1994. It sought to reaffirm the intent of Title IV of the Civil Rights Act of 1964, NEPA, and other federal laws, regulations, and policies by establishing the following Environmental Justice (EJ) principles for all federal agencies and agencies receiving federal funds like MPOs:

- To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations
- To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process
- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations

LRTP Project Environmental Screening

Detailed, project-specific environmental impact analysis is beyond the scope of a LRTP. However, the 2045 LRTP uses an environmental screening process to evaluate the relative probability (high, medium, low) of significant environmental impacts for all considered transportation projects. This process utilizes available inventories of all



relevant natural and cultural resources and demographic data from the U.S. Census Bureau and the City of Dothan. Projects that traverse or are adjacent to parks, historical buildings, wetlands, or flood zones are placed in the high probability of significant environmental impact category, projects that traverse or are adjacent to streams or rivers are placed in the medium probability of significant environmental impact category, and projects that do not traverse or are not adjacent to environmental or cultural resources are placed in the low probability of significant environmental impact category. **Figure 4-1** illustrates resources and issues typically considered in environmental impact evaluations.

Figure 4-1: Typical Environmental Issues

RESOURCE/ISSUE	WHY IMPORTANT	REGULATORY BASIS	CONTACT
HAZMAT Sites	Health Hazards, costs, delays, liability for both state and federal projects on either existing or acquired right-of-way	State and federal law; Guidelines for Ops; ASTM E-1527	Phase-1: Design Bureau/ETS, phone 334-242-6154 Phase 2 and 3: Materials and Tests Bureau, phone 334-206-2284
Air Quality	Public health, welfare, productivity, and the environment are degraded by air pollution	Clear Air Act of 1970; 40 CFR Parts 51 & 93; State Implementation Plan	Design Bureau/ETS, phone 334-242-6147; PM-2.5-Design Bureau/ETS, phone 334-242-6315
Noise	Noise can irritate, interrupt, and disrupt, as well as generally diminish the quality of life	Noise Control Act of 1972; ALDOT's highway Traffic Noise Analysis Policy and Guidance	Design Bureau/ETS, phone 334-242-6147 or 6828 or 6710
Wetlands	Flood control, wildlife habitat, water purification; applies to both state and federally funded projects	Clean Water Act of 1977; Executive Order 11990; 23 CFR 777	Design Bureau/ETS, phone 334-242-6145; US Army Corps of Engineers, phone 251-690-2658
Threatened and Endangered Species	Loss of species can damage or destroy ecosystems, including the human food chain	Endangered Species Act of 1973; 7 CFR 355	Design Bureau/ETS, phone 334-242-6132; US Fish & Wildlife Service, phone 251-441-5181
Floodplains	Encroaching on or changing the natural floodplain of a water course can result in catastrophic flooding of developed areas	Executive Order 11988; 23 CFR 650; 23 CFR 771	Design Bureau/ETS, phone 334-242-6145; Bridge Bureau, phone 334-242-6598



Farmlands	Insure conversion compatibility with state and local farmland programs and policies	Farmland Protection Policy Act of 1981; 7 CFR 658	Design Bureau/ETS, phone 334-242-6150; Natural Resource Conservation Service (NRCS), phone 334-887-4500
Recreation Areas	Quality of life; neighborhood cohesion	Section 6(f) of the Land and Water Conservation Fund Act; Section 4(f) of the DOT Act of 1966 (when applicable); 23 CFR 771	Design Bureau/ETS, phone 334-242-6143 or 6152; Alabama Department of Economic and Community Affairs, phone 334-242-5363
Historic Structures	Quality of life; preservation of the national heritage	National Historic Preservation Act of 1966 (Section 106); the DOT Act of 1966 [Section 4(f)]; 23 CFR 771; 36 CFR 800	Design Bureau/ETS, phone 334-242-6144 or 6225; Alabama Historical Commission, phone 334-230-2667
Archaeological Sites	Quality of life; preservation of national and Native American heritage	National Historic Preservation Act of 1966 (Section 106); the DOT Act of 1966 [Section 4(f)]; 23 CFR 771, Executive Order 13175	Design Bureau/ETS, phone 334-242-6144 or 6225; Alabama Historical Commission, phone 334-230-2667
Environmental Justice	To avoid, minimize, or mitigate disproportionately high impacts on minorities and low income populations	Title VI, Civil Rights Act of 1964; Executive Order 12898	Design Bureau/ETS, phone 334-242-6529 or 6576; right-of-way office in each respective ALDOT Region



Regional Context

Climate, Soil, and Topography

The Dothan metropolitan area is located in the Humid Subtropical zone according to the Koppen climate classification system. The climate is characterized by hot, humid summers with frequent afternoon thunderstorms and mild winters. According to the National Weather Service, the average July temperature is approximately 81 degrees Fahrenheit and the average January temperature is approximately 53 degrees Fahrenheit. Average annual rainfall is approximately 55 inches.

The SWAMPO region is almost exclusively located in the Daugherty Plain ecosystem within the Southeastern Plains of Alabama. According to Alabama's Comprehensive Wildlife Conservation Strategy:

The Daugherty Plain has sandy loam, sandy clay, or sandy soils. Most of this region is low in elevation and relatively flat. The fire-adapted longleaf pine community was here before extensive clearing for agriculture, conversion to loblolly plantations, and suppression of fire.

Also known as the Coastal Plain or East Gulf Coastal Plain, the Southeastern Plain ecoregion represents over half of the land area in the State of Alabama, and is highly variable in topography, soils, and vegetation. The Southeastern Plains region is separated from the other regions to the north by the Fall Line, which curves from the Northwestern corner of Alabama to the Georgia border in East Central Alabama. The Fall Line is the most important physical feature affecting the distribution of a number of Alabama's amphibians, reptiles, fish, and mollusks. Streams above the Fall Line are generally swift with rocky bottoms. Streams below the Fall Line tend to be sluggish with muddy or sandy bottoms.

Geologically, this region is much younger than the upland regions of the State, and it lacks well-consolidated rocky formations. Most of the soils in this area are derived from marine and fluvial sediments eroded from the Southwestern Appalachian and Piedmont plateaus.

Topography is generally flat to rolling, but some portions have relief of 200 to 300 feet. Much of the forest in this region has been converted to pine plantations. Where natural forest remains, longleaf, shortleaf, and loblolly pines dominate most uplands, with slash pines in the lower areas and scattered areas of hardwoods. Floodplain forests contain



oaks, ash, cypress, and tupelo gum. Prior to modern fire suppression, the upland forests naturally burned every few years and fire-adapted species such as longleaf pine were predominant over much of the area.

A digital elevation model of the Dothan metropolitan area is illustrated on **Figure 4-2**. This illustrates that the region is located in a low-lying area with generally flat conditions, though there are ravines near major streams and some areas of relatively higher elevation to the north.

Land Cover and Agriculture

The land cover of the Dothan metropolitan area is illustrated on **Figures 4-3 and 4-4**. According to this information, developed areas account for only 18.8 percent of the land in the metropolitan area. Cropland and forested areas make up 52.4 percent. **Table 4-1** illustrates that cotton and peanuts are by far the most widespread crops, but there are also significant crops of hay. These crops are consistent with the region being located in both the peanut and cotton belts of the country.

Crops with over 1000 acres of cropland in the region include cotton (over 24,000 acres), peanuts (almost 17,000 acres), hay (over 11,000 acres, and corn (over 1100 acres).

Historical Urban Development

The historical urban development pattern in a region offers insights into the likely distribution of historic and other cultural resources. **Figure 4-5** illustrates that the largest concentration of older structures (buildings 50 years of age or older) are concentrated in the core of the City of Dothan. Field observations indicated that there are additional smaller concentrations of potentially historical structures in the centers of many of the smaller municipalities within the MPA.

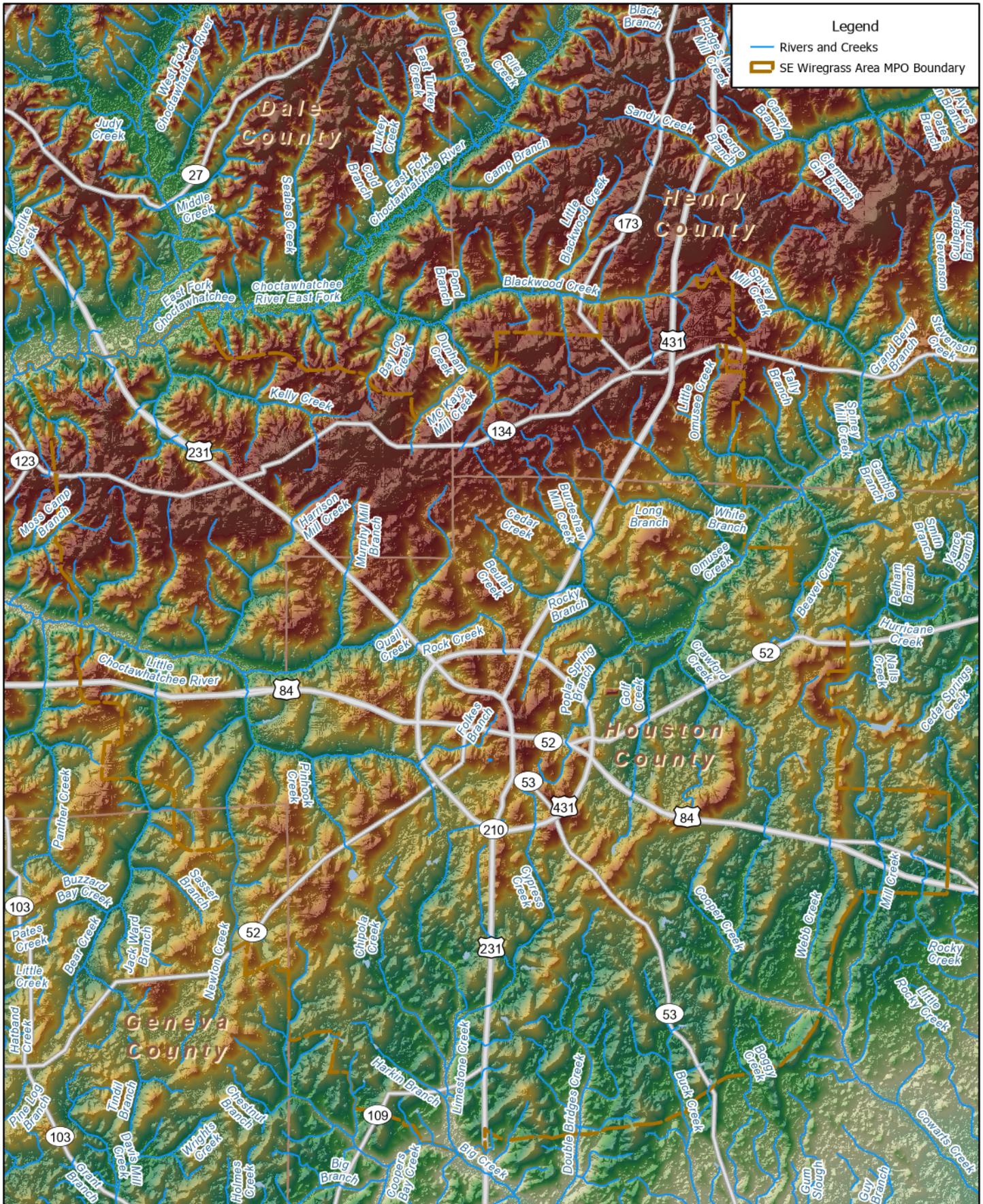
NEPA does not officially define historic and cultural resources, however there are several laws and executive orders that address historic and cultural resources. While NEPA does not officially define historic and cultural resources, NEPA does require agencies to consider the effects of their actions on all aspects of the human environment. Humans relate to the environment through their culture, so the cultural aspects of the environment including the natural environment, the built environment, and human social institutions must be considered during the regional planning process.



In addition, the National Historic Preservation Act (NHPA) sets forth government policies and procedures regarding historic properties which include districts, sites, building, structures, and objects included in or eligible for the National Register of Historic Places. Section 106 of NHPA requires that federal agencies consider the impacts of their actions on these types of properties. Historic and Cultural resources are identified in **Figure 4-6**. Historical and cultural resources are primarily concentrated in central Dothan and include:

- Atlantic Coastline Railroad Depot
- Old Howell School
- Dothan Municipal Light and Water Plant
- First Missionary Baptist Church
- Dothan Opera House
- Murphy's Grist Mill
- Express Car and Business #502





Legend
 — Rivers and Creeks
 — SE Wiregrass Area MPO Boundary

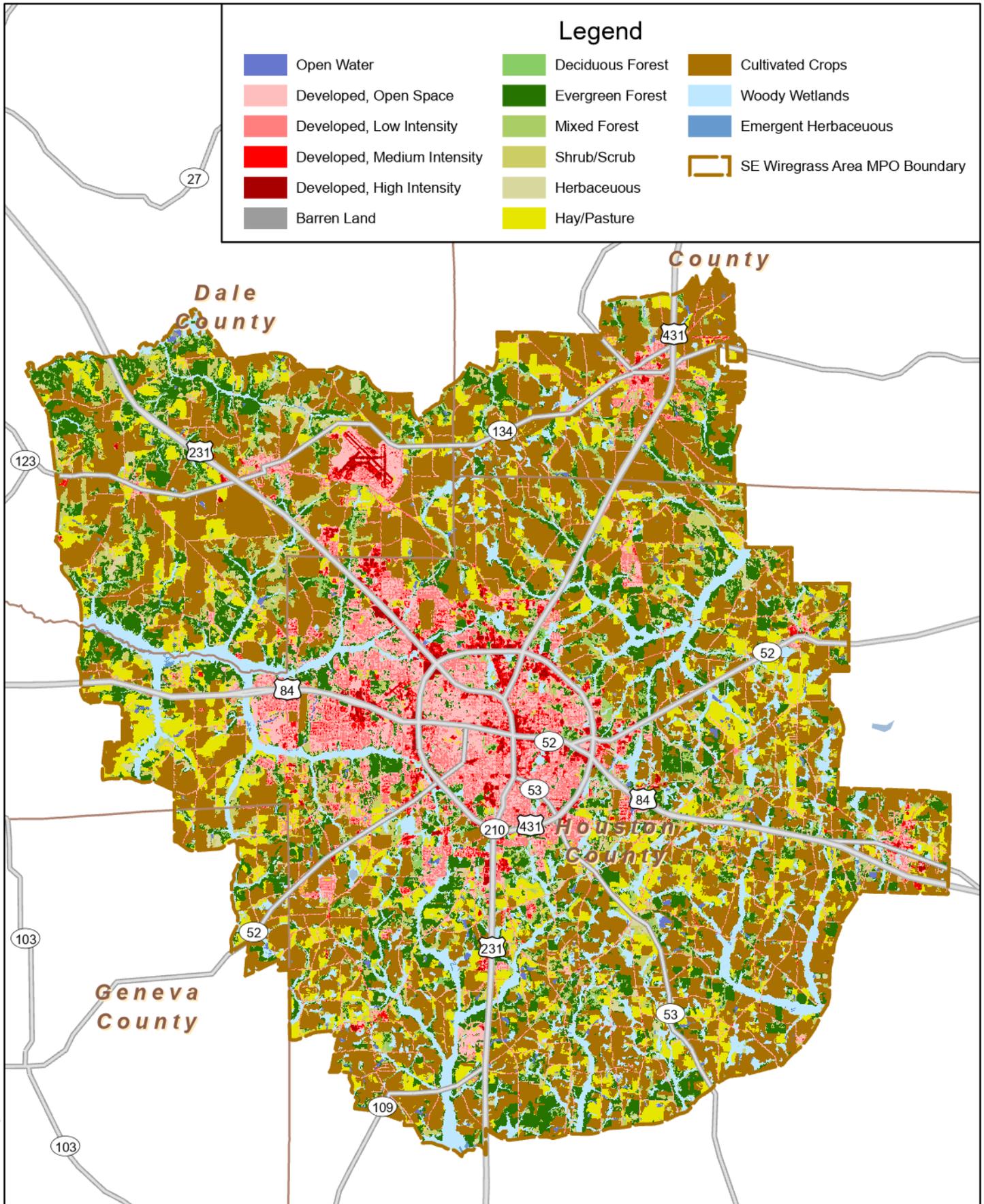
Figure 4-2: Elevation Map

Southeast Wiregrass Area MPO
 Dothan, Alabama

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NOT TO SCALE



Legend

 Open Water	 Deciduous Forest	 Cultivated Crops
 Developed, Open Space	 Evergreen Forest	 Woody Wetlands
 Developed, Low Intensity	 Mixed Forest	 Emergent Herbaceous
 Developed, Medium Intensity	 Shrub/Scrub	 SE Wiregrass Area MPO Boundary
 Developed, High Intensity	 Herbaceous	
 Barren Land	 Hay/Pasture	

Figure 4-3: Land Cover Map



Data Source: USGS, 2016 National Land Cover Database

Southeast Wiregrass Area MPO
Dothan, Alabama

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Figure 4-4: Land Cover Breakdown

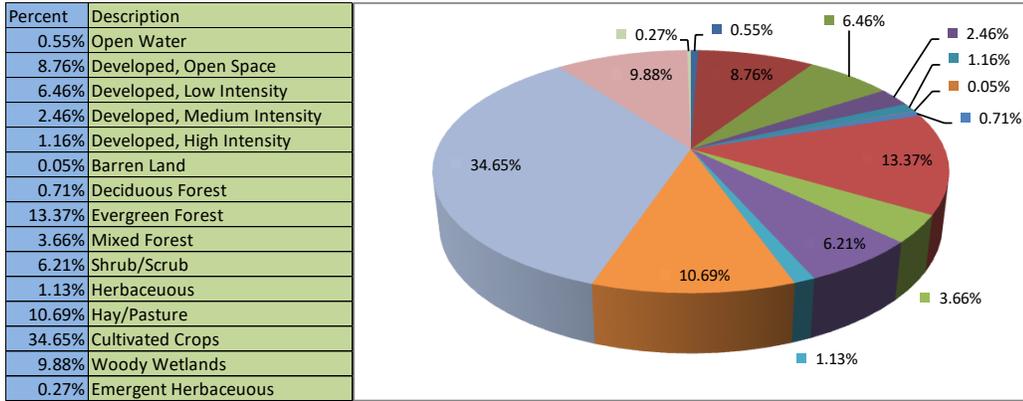


Table 4-1: Crop Breakdown

ClassName	Square Meters	Acres
Evergreen Forest	125897400	31,109.9
Fallow/Idle Cropland	118196100	29,206.9
Shrubland	105369300	26,037.3
Cotton	98808300	24,416.0
Peanuts	68760000	16,991.0
Developed/Open Space	68035500	16,811.9
Other Hay/Non Alfalfa	46335600	11,449.8
Developed/Low Intensity	42174000	10,421.4
Deciduous Forest	32754600	8,093.8
Woody Wetlands	23985000	5,926.8
Developed/Med Intensity	17005500	4,202.1
Grassland/Pasture	8425800	2,082.1
Developed/High Intensity	8315100	2,054.7
Mixed Forest	5552100	1,372.0
Corn	4523400	1,117.8
Open Water	4155300	1,026.8
Millet	2695500	666.1
Soybeans	1526400	377.2
Rye	1065600	263.3
Sod/Grass Seed	720900	178.1
Oats	716400	177.0
Pecans	557100	137.7
Sorghum	422100	104.3



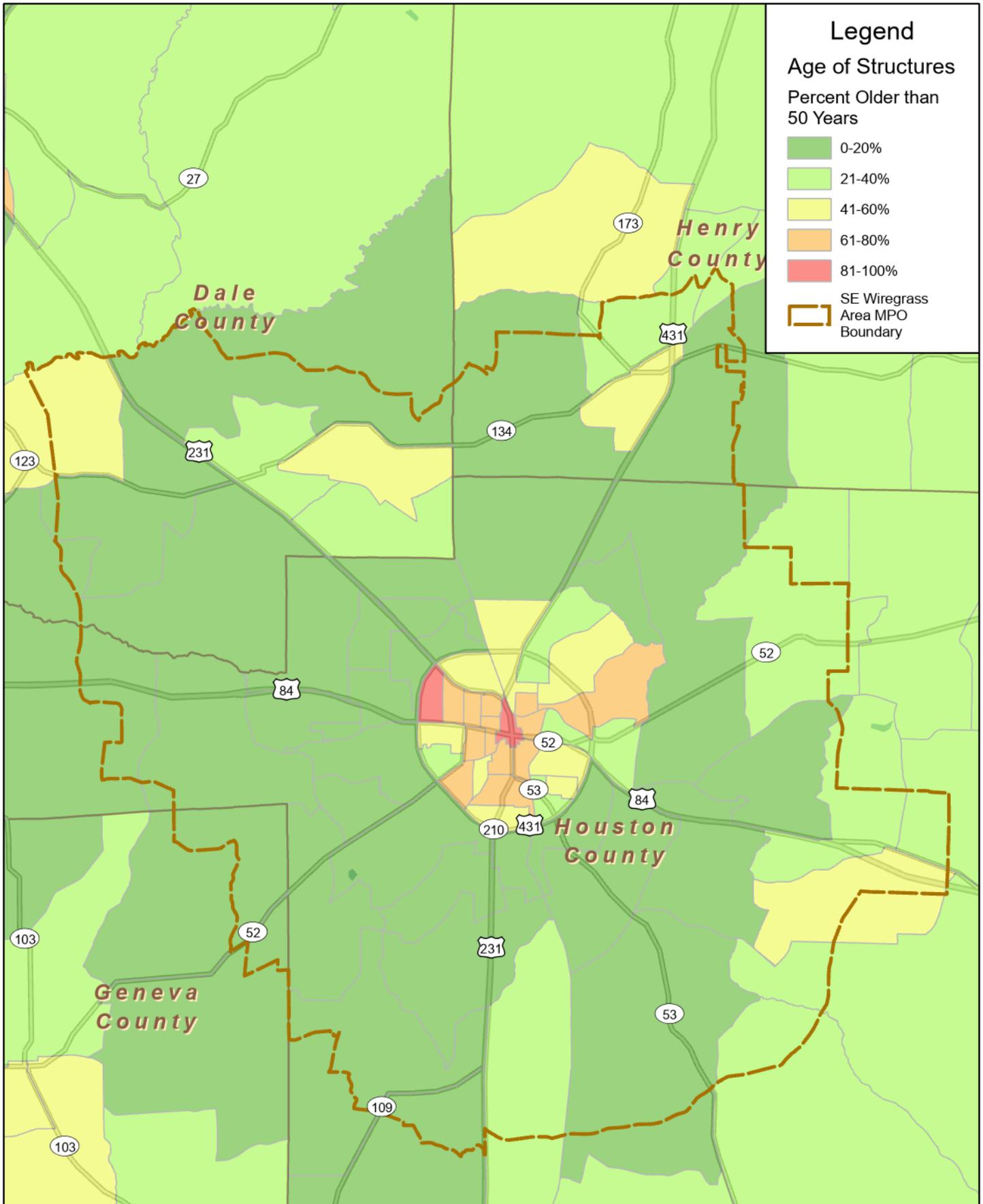


Figure 4-5: Age of Existing Housing Units

Data Source: US Census Data

Southeast Wiregrass Area MPO
Dothan, Alabama



SAIN
ASSOCIATES



NOT TO SCALE

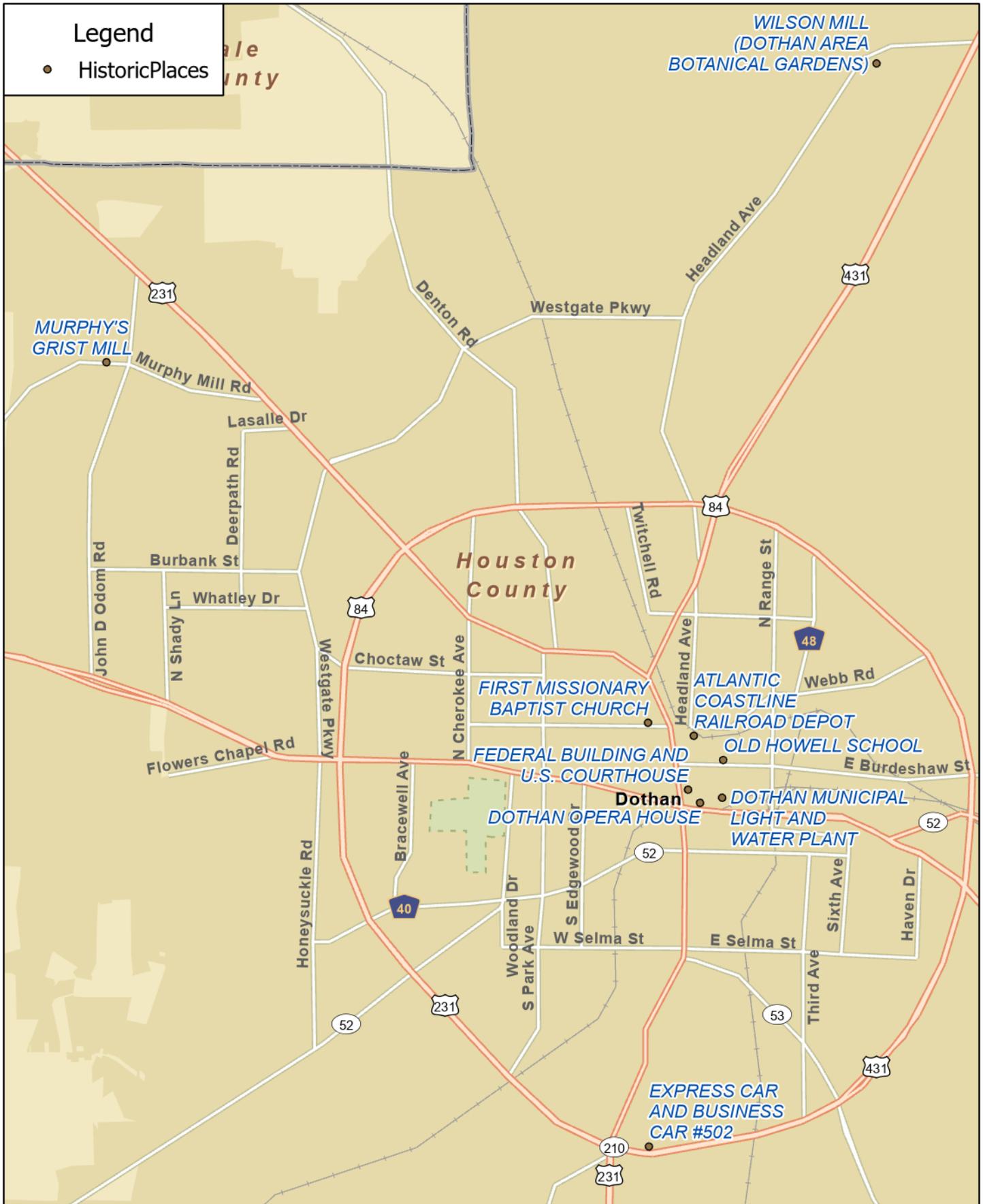


Figure 4-6: Historic and Cultural Resources

Southeast Wiregrass Area MPO
Dothan, Alabama

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NOT TO SCALE

Air Quality and Transportation

Highway vehicles and non-road equipment are mobile sources of toxins, compounds which are known or suspected by EPA to cause cancer or other serious health or environmental effects. Mobile sources via the combustion of fossil fuels release nitrogen dioxide and Volatile Organic Compounds (VOC) which chemically react in the presence of heat and sunlight to form ground-level ozone. Ground-level ozone can lead to a number of adverse health effects such as asthma and can also negatively impact sensitive vegetation and wildlife. Mobile sources also contribute to climate change when combustion of fossil fuels release nitrous oxide and carbon dioxide.

The EPA regulates vehicle emissions and fuel efficiency through its vehicle Greenhouse Gas Emissions and Corporate Average Fuel Economy (CARE) standards. It also regulates and monitors pollutants considered harmful to public health and the environment through the National Air Quality Standards (NAAQS) authorized by the Clean Air Act (1970). The EPA has set NAAQ standards for six pollutants classified as principal criteria pollutants. They are listed in **Table 4-2** along with the current standards.

The enactment of the Clean Air Act of 1970 (1970 CAA) resulted in a major shift in the federal government's role in air pollution control. This legislation authorized the development of comprehensive federal and state regulations to limit emissions from both stationary (industrial) sources and mobile sources. Four major regulatory programs affecting stationary sources were initiated: the National Ambient Air Quality Standards (NAAQS, pronounced "knacks"), State Implementation Plans (SIPs), New Source Performance Standards (NSPS), and National Emission Standards for Hazardous Air Pollutants (NESHAPs). Furthermore, the enforcement authority was substantially expanded. The adoption of this very important legislation occurred at approximately the same time as the National Environmental Policy Act that established the U.S. Environmental Protection Agency (EPA). The EPA was created on December 2, 1970 in order to implement the various requirements included in these Acts.

Table 4-2: NAAQS Standards

Pollutant [links to historical tables of NAAQS reviews]	Primary/ Secondary	Averaging Time	Level	Form	
Carbon Monoxide (CO)	primary	8 hours	9 ppm	Not to be exceeded more than once per year	
		1 hour	35 ppm		
Lead (Pb)	primary and secondary	Rolling 3 month average	0.15 µg/m ³ ⁽¹⁾	Not to be exceeded	
Nitrogen Dioxide (NO₂)	primary	1 hour	100 ppb	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years	
	primary and secondary	1 year	53 ppb ⁽²⁾	Annual Mean	
Ozone (O₃)	primary and secondary	8 hours	0.070 ppm ⁽³⁾	Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years	
Particle Pollution (PM)	PM _{2.5}	primary	1 year	12.0 µg/m ³	annual mean, averaged over 3 years
		secondary	1 year	15.0 µg/m ³	annual mean, averaged over 3 years
	PM ₁₀	primary and secondary	24 hours	35 µg/m ³	98th percentile, averaged over 3 years
		primary and secondary	24 hours	150 µg/m ³	Not to be exceeded more than once per year on average over 3 years
Sulfur Dioxide (SO₂)	primary	1 hour	75 ppb ⁽⁴⁾	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 per year	

All counties within the SWAMPO region are currently in attainment for NAAQS.

The EPA recently reduced the 8-hour ozone standards from 75 parts per billion to 70 parts per billion. As none of the counties in the SWAMPO region exceed 65 parts per billion and are not projected to do so until after 2025, the SWAMPO region will continue to remain in attainment until at least the year 2025.

Transportation conformity is a process that requires MPOs to conform to the requirements of the Clean Air Act Amendments of 1990 (CAAA of 1990) to ensure that federal funding and approval are given to those transportation activities that are consistent with air quality goals. CAAA requires that transportation plans, programs, and projects in



non-attainment or maintenance areas that are funded or approved by FHWA be in conformity with the State Implementation Plan (SIP). The SIP represents the state's plan to either achieve or maintain the NAAQS standards for a particular pollutant.

Should any of the counties in the SWAMPO region exceed NAAQ standards and become designated as a non-attainment area, then the entire SWAMPO region would fall under the non-attainment category and will be subject to a conformity analysis. If this occurs in the future, the regional travel demand model, which forms the basis for transportation decision-making in the region, provides numerical outputs that can be used in conformity analysis.

Climate

Climate change and the impacts on the environment have gained increased attention in recent years. According to the FHWA report *Integrating Climate Change into the Transportation Planning Process*, there is general scientific consensus that the earth is experiencing a long-term warming trend and that human-induced increases in atmospheric greenhouse gases (GHGs) are the predominant cause. The combustion of fossil fuels is by far the biggest source of GHG emissions. In the United States, transportation is the largest source of GHG emissions, after electricity generation. Within the transportation sector, cars and trucks account for a majority of emissions. Traffic congestion increases the level of GHG emissions.

Public Health

Public Health has increasingly been incorporated into the planning process in recent years as the impacts of vehicle emissions in particular, have become clearer over time. Transportation can impact public health in a number of ways including:

Safety: Roadway design, operations, and maintenance can impact the rate of traffic crashes and fatalities. Poor intersection designs and lack of pedestrian facilities can lead to increased rates of pedestrian crashes and fatalities.

Air Quality: Vehicle emissions associated with traffic congestion can lead to increased rates of asthma and other respiratory illnesses in a region.

Noise Pollution: Noise pollution can cause hearing loss, stress related illnesses, high blood pressure, speech interference, and sleep disruption. High levels of truck traffic such as what occurs on Ross Clark Circle increase noise pollution significantly.

Transportation impacts health outcomes in the following ways:



Roadway design, operations, and maintenance impacts crash rates



Air pollution can increase asthma rates



Noise pollution can lead to hearing loss



Trails and Sidewalks encourage exercise

Physical Activity: Limited bicycle and pedestrian facilities can lead to increased rates of obesity, diabetes, and heart disease in a community.

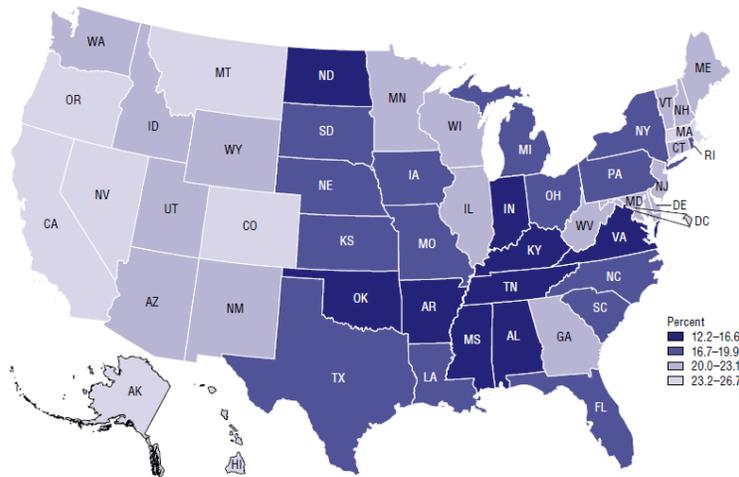
Accessibility: A lack of transportation options, particularly for low-income communities can limit access to healthy food options and healthcare services.

The role of transportation in public health outcomes is particularly important in urbanized regions such as SWAMPO. Data from the Centers for Disease Control and Prevention’s Health Status Indicators illustrate that the state of Alabama including the SWAMPO region have low rates of physical activity and relatively high rates of obesity. These conditions are directly correlated, and it has been documented that communities that invest in more sustainable transportation infrastructure including trails, greenways, and well developed sidewalk networks have improved health outcomes and reduced vehicle emissions.

Figure 4-7: Selected Public Health Indicators

Map IV-4. Adults (18+ years) Who Met Guidelines for Aerobic and Muscle-strengthening Physical Activity, by State: 2013

Healthy People 2020 Objective PA-2.4 • Related State Data



NOTES: Data are for adults aged 18 and over who reported light or moderate leisure-time physical activity for at least 150 minutes per week, vigorous physical activity for at least 75 minutes per week, or an equivalent combination of moderate and vigorous-intensity activity and reported doing muscle-strengthening physical activity at least twice per week. Data are age-adjusted to the 2000 standard population. National data for the objective are based on self-reported physical activity from the National Health Interview Survey (NHIS) and are the basis for setting the national target of 20.1%. State data from the Behavioral Risk Factor Surveillance System (BRFSS) are based on self-reported leisure-time physical activity. Data from the NHIS (20.8% in 2013) may not be directly comparable to the all-states combined data from the BRFSS (20.2% in 2013), and therefore the national target may not be applicable to individual states. Data are displayed by a Jenks classification for U.S. states which creates categories that minimize within-group variation and maximize between-group variation. The Technical Notes provide more information on the data and methods.

DATA SOURCE: Behavioral Risk Factor Surveillance System (BRFSS); CDC/NCCDPHP

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HEALTHY PEOPLE 2020 MIDCOURSE REVIEW

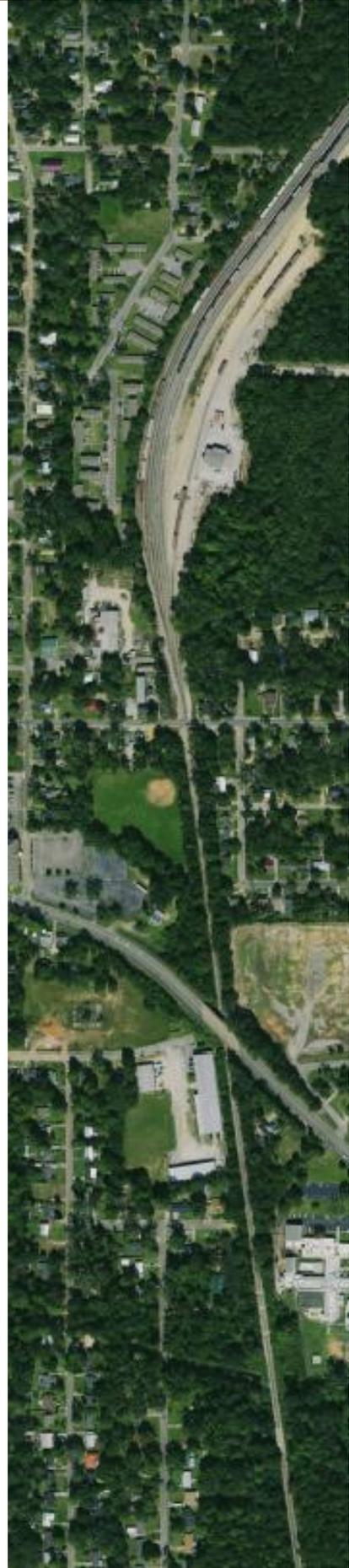
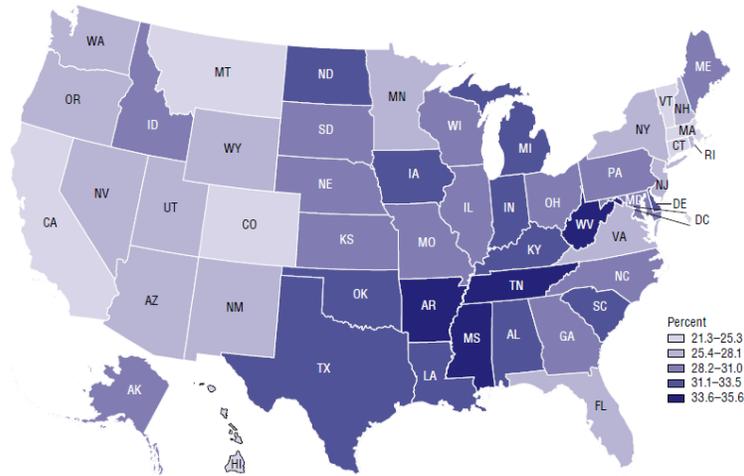


Figure 4-7 continued

Map IV-5. Adult (20+ years) Obesity Based on Self-reported Weight and Height, by State: 2013

Healthy People 2020 Objective NWS-9 • Related State Data



NOTES: Data are for adults aged 20 and over with obesity, defined as a body mass index at or above 30.0 kg/m², and are age-adjusted to the 2000 standard population. National data for the objective are based on measured weight and height from the National Health and Nutrition Examination Survey (NHANES) and are the basis for setting the national target of 30.5%. State data from the Behavioral Risk Factor Surveillance System (BRFSS) are based on self-reported weight and height. Data from NHANES (35.3% in 2009-2012) may not be directly comparable with the all-states combined data from BRFSS (28.6% in 2013), and therefore, the national target may not be applicable to individual states. Data are displayed by a Jenks classification for U.S. states which creates categories that minimize within-group variation and maximize between-group variation. The Technical Notes provide more information on the data and methods.
 DATA SOURCE: Behavioral Risk Factor Surveillance System (BRFSS), CDC/NCCDPHP

Chapter IV • Leading Health Indicators

IV-27

Wetlands and Flood Zones

A wetland is a unique ecosystem that is flooded by water either permanently or seasonally. Characteristics of wetlands include brackish water (a mix of salt and fresh water), hydric soil (soil permanently or seasonally inundated with water), and unique vegetation and wildlife that has adapted to these environments. As illustrated in **Figure 4-8**, wetlands are located throughout the SWAMPO region including along Kelly Creek, the West Fork Choctawhatchee River, the Little Choctawhatchee River, the Rocky Branch, Newton Creek, and Bear Creek. These wetlands are the habitat for a number of endangered species in the SWAMPO region, and future development plans should protect these sensitive areas. As part of the project evaluation process, specific projects were evaluated at the planning level to determine if they would potentially impact wetland areas.

Flood Zones were also identified during the planning process as these areas are also sensitive to development and transportation improvements. Flood Zones in the SWAMPO region (illustrated on **Figure 4-9**) tend to overlap the wetland areas with additional Flood Zones located along a number of rivers and creeks including Cooper Creek, Web Creek, Cowarts Creek, Limestone Creek, and Big Creek.



These areas should also be protected from future development impacts, particularly given the region’s proximity to the Gulf of Mexico. Tropical storms and hurricanes are projected to increase in frequency and intensity due to climate change. This will increase the frequency and severity of flooding in existing Flood Zones which could impact adjacent developments in the future.

Flood zones and wetlands provide critical habitats for a number of species in the SWAMPO region including:

- Oval Pigtoe
- Shinyrayed Pocketbook
- Fat threeridge (mussel)
- Gulf Moccasinshell
- Chipola Slabshell
- Tapered Pigtoe
- Fuzzy Pigtoe
- Choctaw Bean
- Southern Kidneyshell

Figure 4-10 illustrates the locations of critical habitats in the SWAMPO region.

Hazardous Materials

Hazardous materials can significantly deteriorate the natural environment. Hazardous sites may discharge toxic materials into streams or wetlands or emit toxic emissions through combustion processes. Future development in the region should consider the locations of potentially hazardous sites, particularly in the context of Environmental Justice as low-income communities tend to have the highest probabilities of being located near or adjacent to potentially hazardous sites. Potentially hazardous sites are illustrated on **Figure 4-11**.

Environmental Justice Communities

Environmental Justice (EJ) communities are locations where minority populations (all people that are non-Hispanic white), low income populations, linguistically isolated populations, populations without a high school diploma, elderly (over age 64) and young children (under age 5) prevail at rates above the national average. The EPA EJSCREEN mapping tool identifies EJ communities across the country using these metrics. EJ communities are illustrated on **Figure 4-12**.

Streams and wetlands provide critical habitats for a number of species including:



Source: ingersollnatureclub.com

Oval Pigtoe



Source: jaxshells.org

Shinyrayed Pocketbook



Source: discoverlife.org

Chipola Slabshell



Source: ourendangeredworld.com

Choctaw Bean



Source: wildlife-species.canada.ca

Southern Kidneyshell

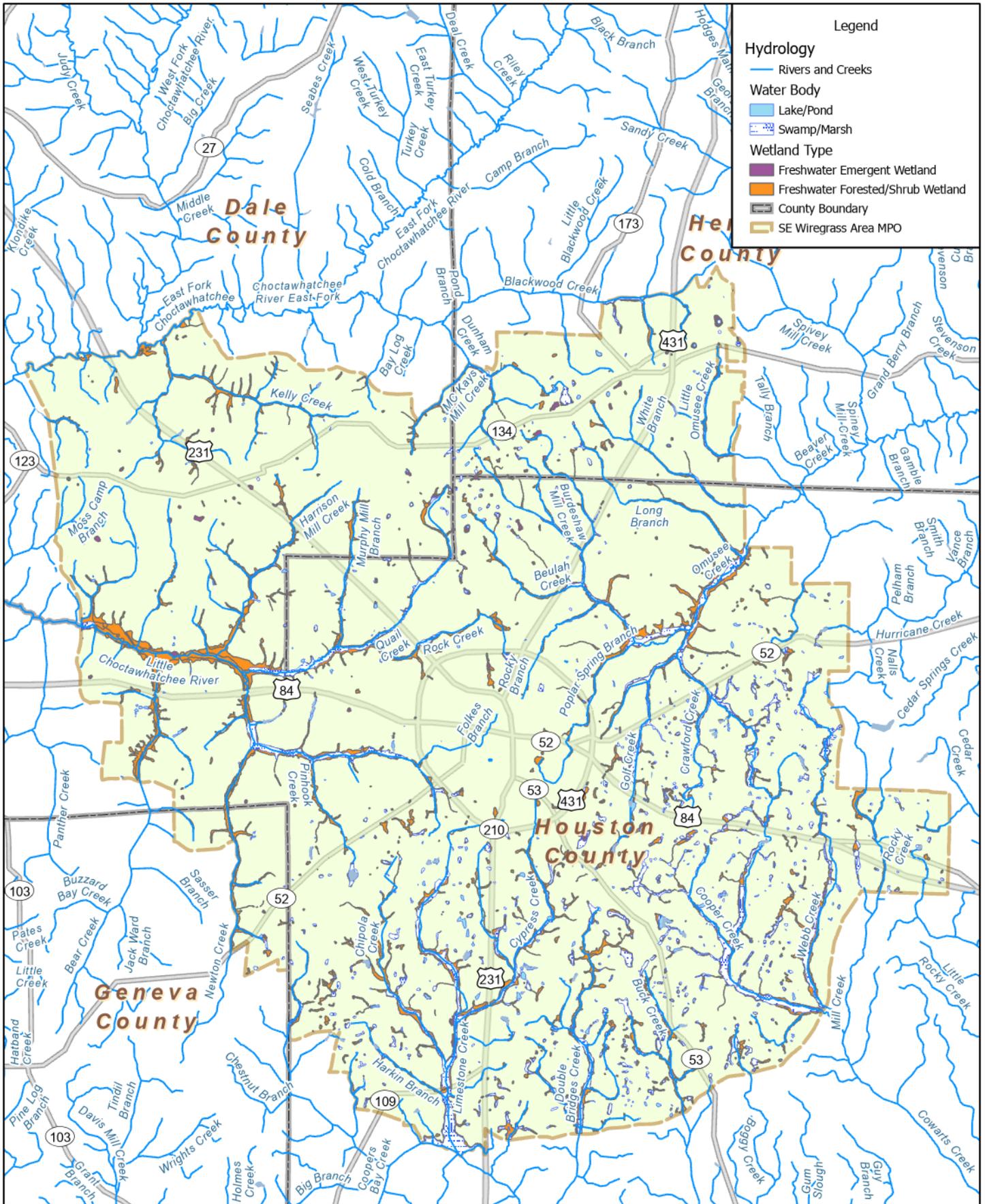


Figure 4-8: Creeks and Wetlands

Southeast Wiregrass Area MPO
Dothan, Alabama



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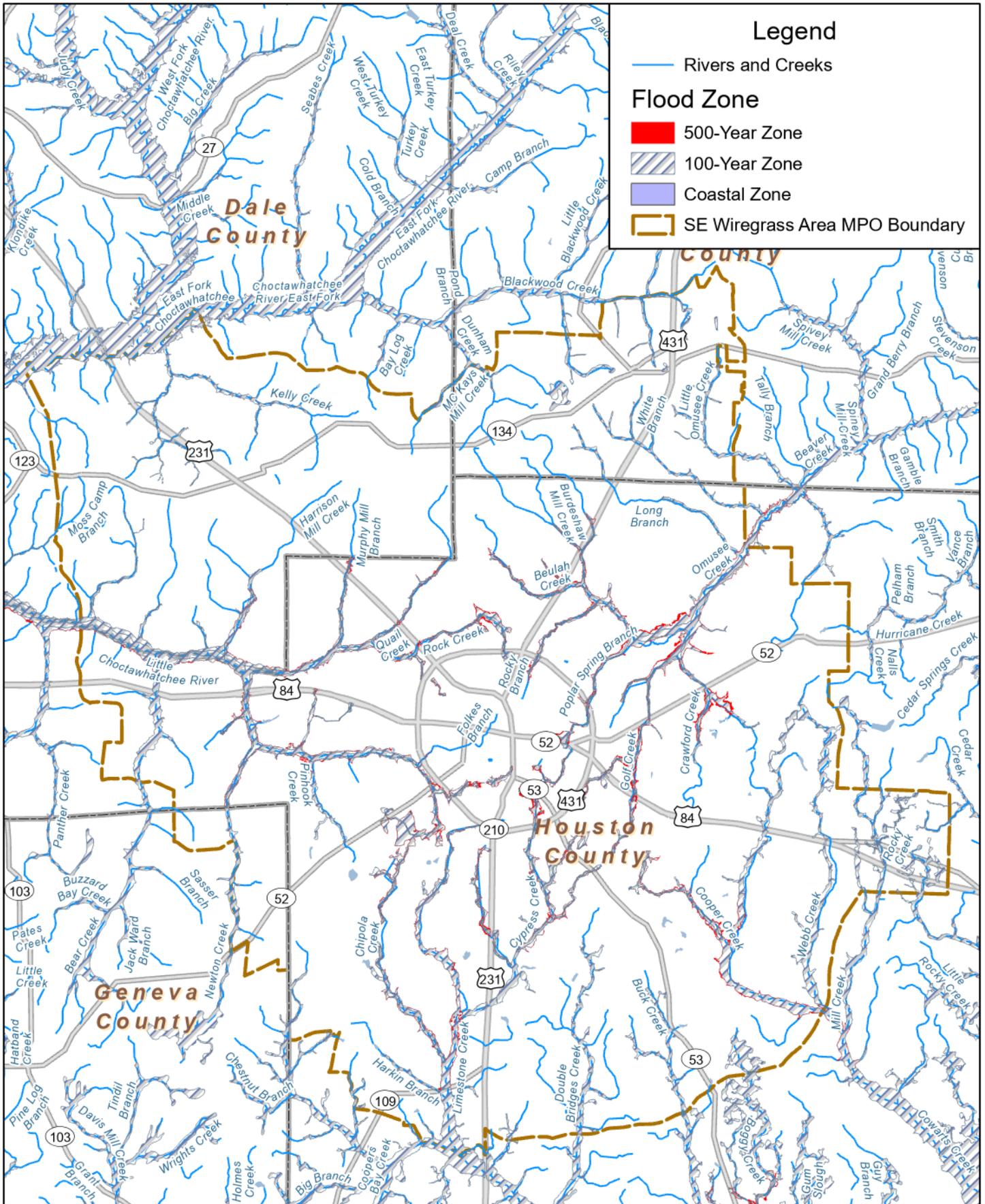


Figure 4-9: Flood Zone Map

Southeast Wiregrass Area MPO
Dothan, Alabama



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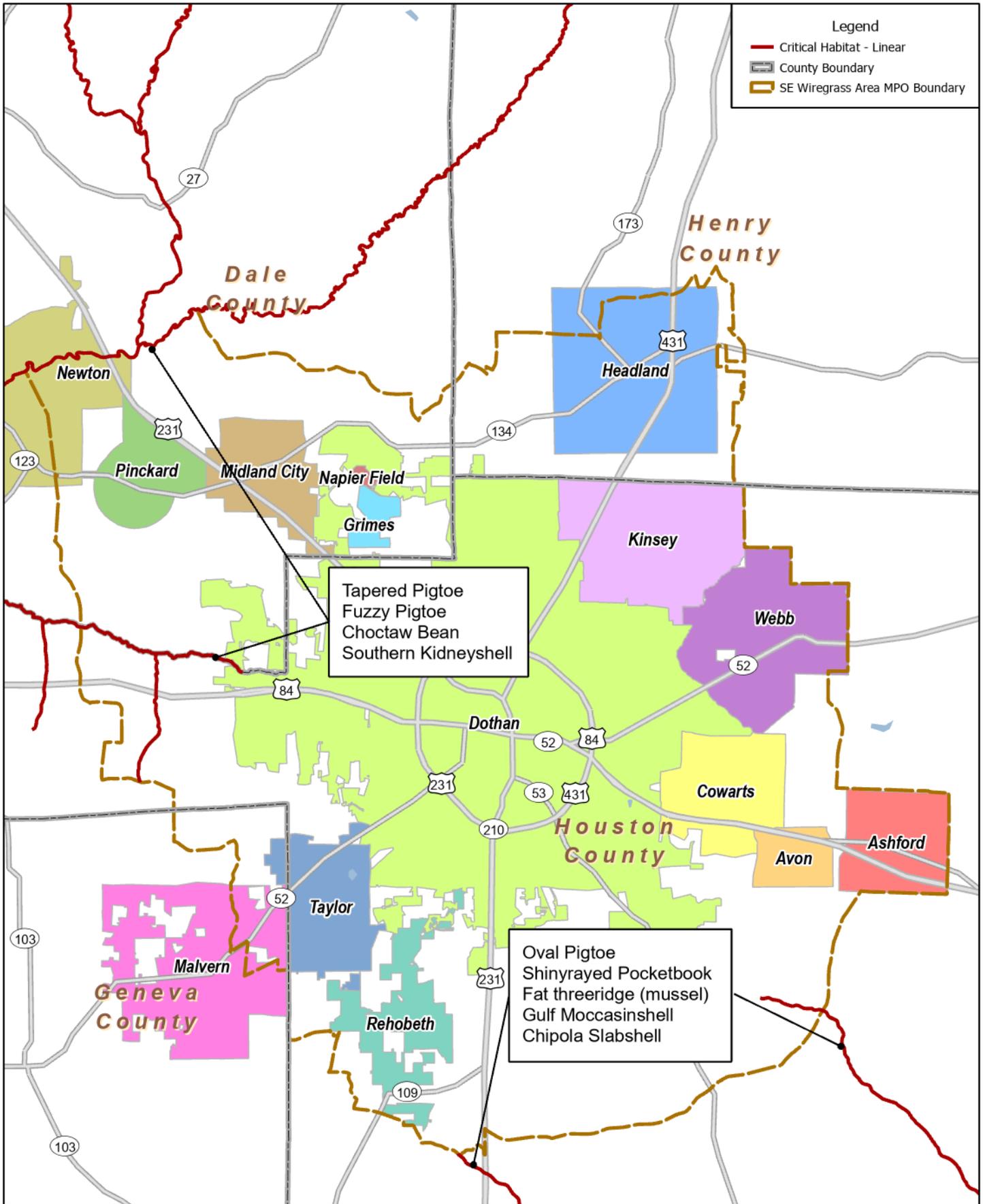


Figure 4-10: Critical Habitats

Southeast Wiregrass Area MPO
 Dothan, Alabama

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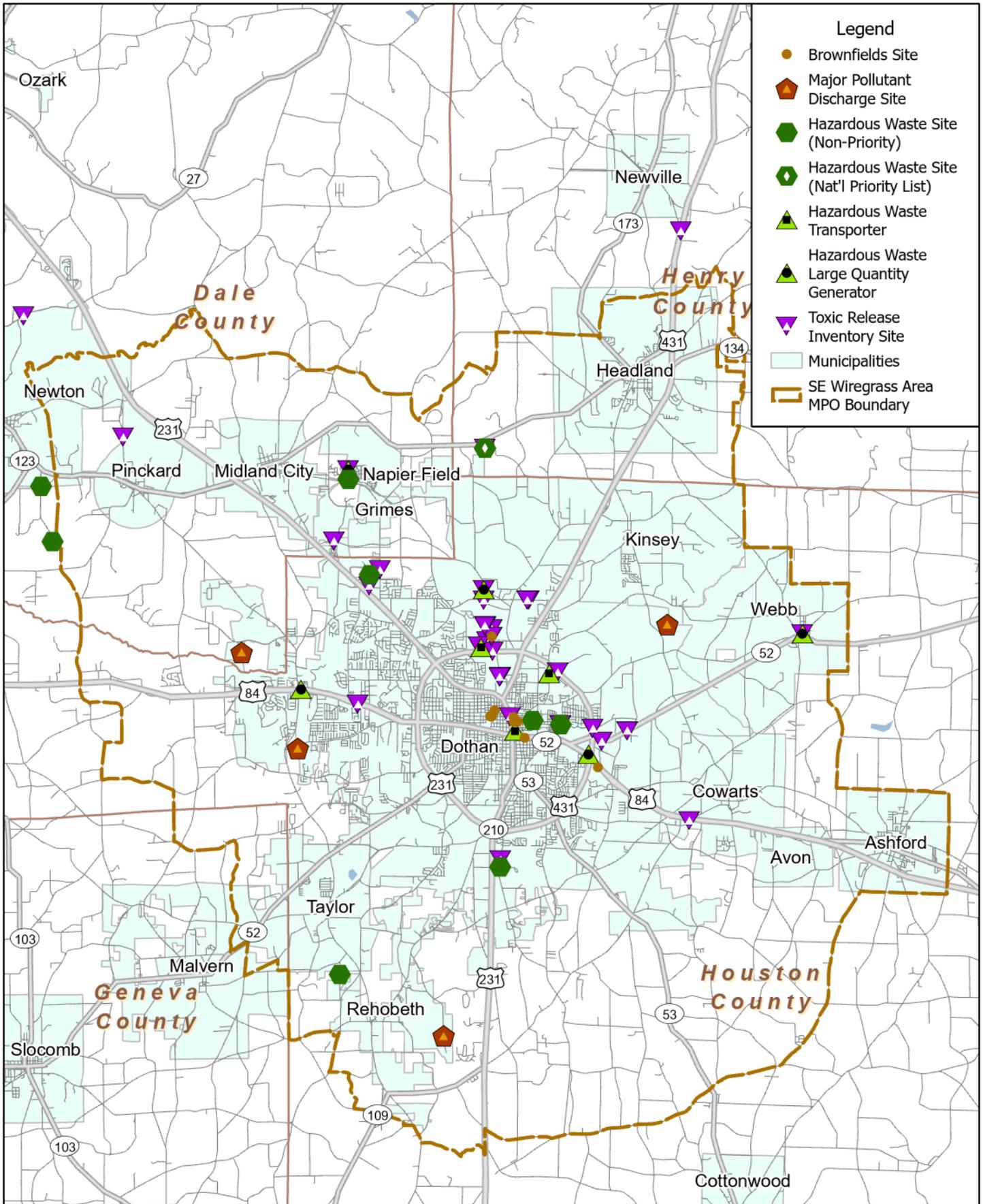


Figure 4-11: Potentially Hazardous Sites

Southeast Wiregrass Area MPO
Dothan, Alabama

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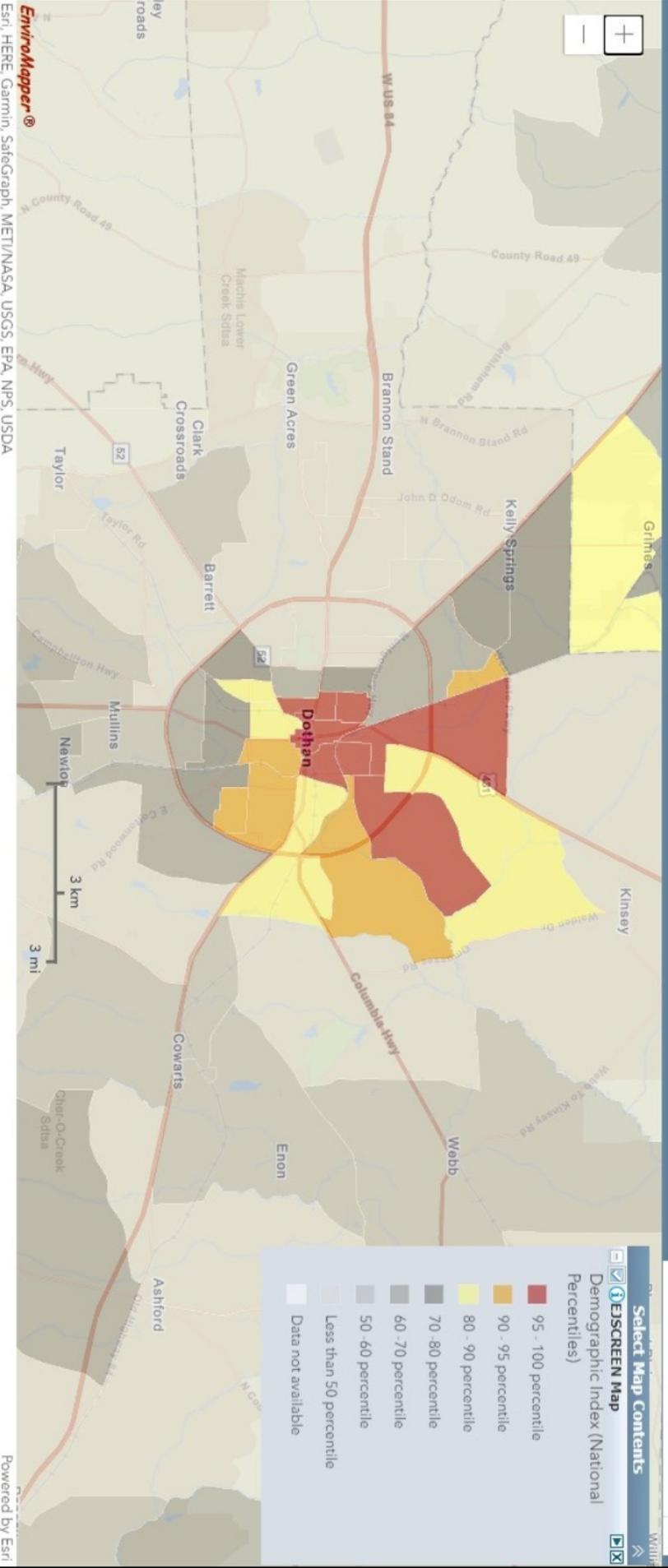


Figure 4-12: Environmental Justice Areas

Southeast Wiregrass Area MPO
Dothan, Alabama





Chapter 5

Current Land Use and Demographics

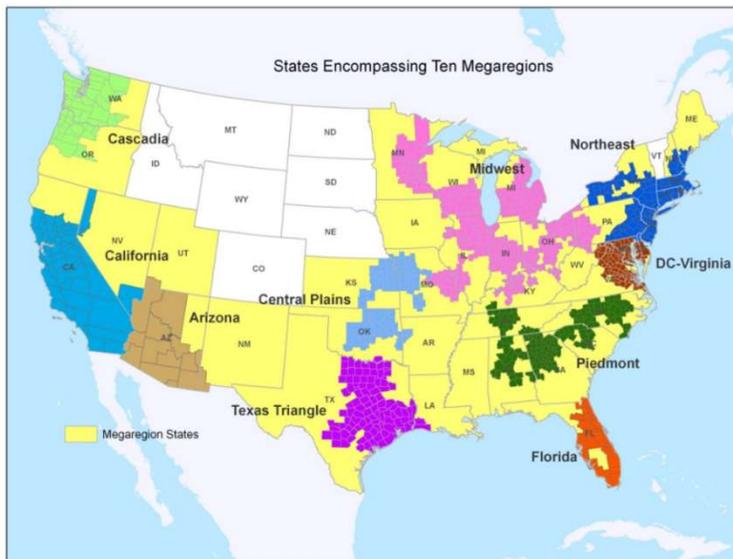
Regional Context

The Dothan Metropolitan Planning Area is located near the southeastern corner of the state of Alabama. The region is relatively isolated within the United States and is not a part of any of the Mega-regions in the country as illustrated on **Figure 5-1**. The closest Mega-region is the Piedmont region that extends from the Carolinas to central Alabama. Dothan is the second largest city (after Tallahassee) in what is known as the Wiregrass Region of the United States. This Region is formed by portions of southeast Alabama, southwestern Georgia, and the northern panhandle of Florida. **Figure 5-2** shows the coverage of the Wiregrass region.

The Wiregrass Region is named after a type of grass, *Aristida stricta*, which once was the prevalent vegetative presence in the region in areas that were not a part of swamplands. The region is marked by pine trees, sandy soils, rivers, creeks, swamps, and a subtropical climate. Within the western end of this region, the City of Dothan is a major economic and cultural center, though smaller areas such as Enterprise, Ozark, and Fort Rucker also have a large economic impact within the region.

The Dothan metropolitan area does not have interstate access. The closest interstate is Interstate 10, located approximately 30 miles to the south. While not currently connected by a contiguous urban area, there is a high level of work-related commuting between Dothan, Enterprise, Ozark, and portions of the Florida panhandle.

Figure 5-1: United States Mega-regions



Source: miles2gobeforeisleep.com
Dothan



Source: nohomejustroom.com
Enterprise



Source: encyclopediaofalabama.org
Ozark

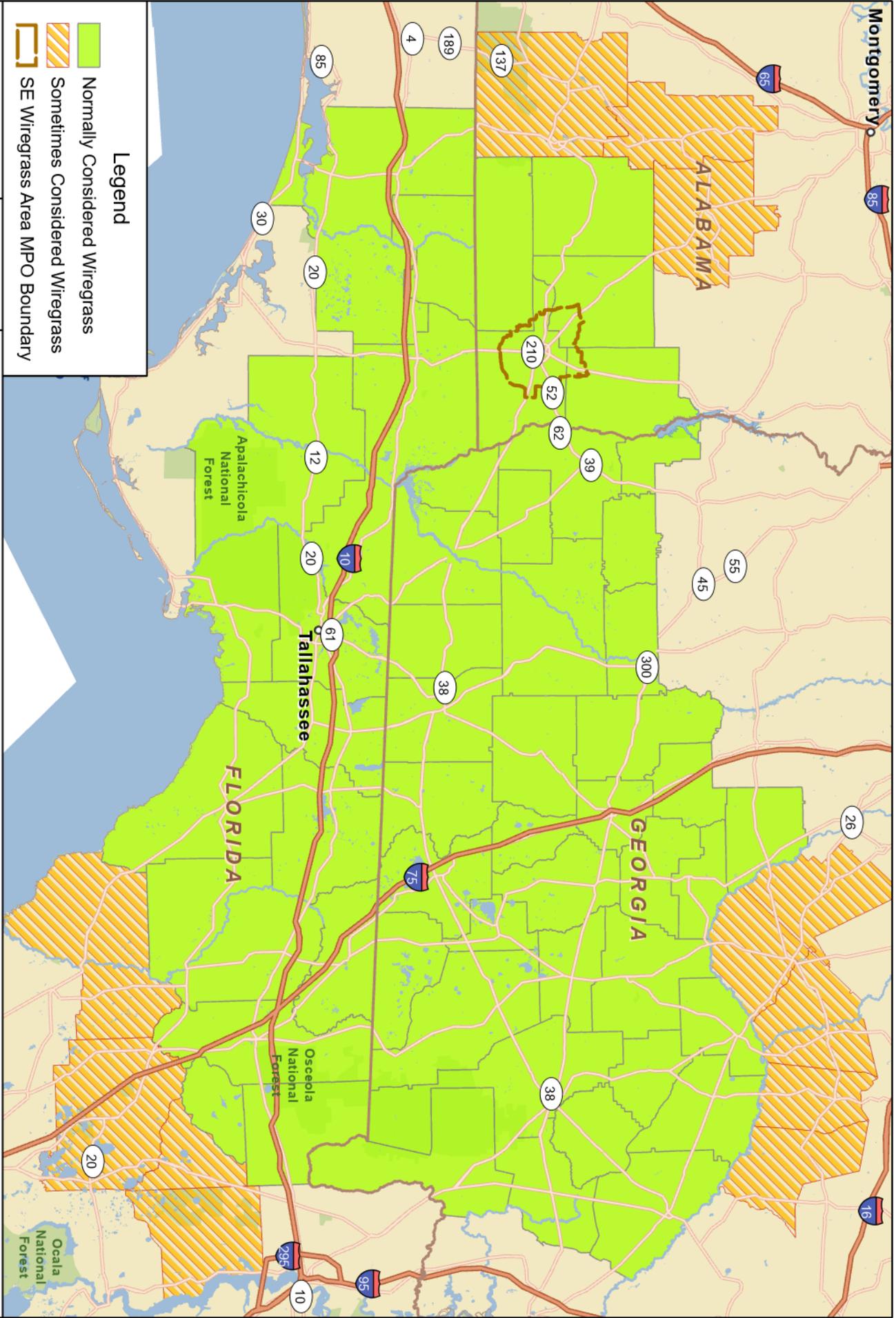


Figure 5-2: Wiregrass Region of the United States

Note:
 Map data derived from the Wiregrass Region Digital History
 Project website at sites.google.com/view/wiregrassrdhp/home.

Southeast Wiregrass Area MPO
 Dothan, Alabama



Land Use Patterns

The Dothan MPO boundary and municipalities are illustrated on **Figure 5-3**. The metropolitan area is centered around the City of Dothan in Houston County. Other cities in the region include Headland, Kinsey, Cowarts, Ashford, Taylor, Midland City, and Pinckard. As illustrated on **Figure 5-4**, the population density is highest inside of Ross Clark Circle and in the areas directly west of Ross Clark Circle. The population density is consistent with land development patterns in recent decades. Employment density as illustrated in **Figure 5-5** is concentrated around Ross Clark Circle and along US-231 and US-84 northwest and west of Dothan respectively. Activity Density, shown on **Figure 5-6**, is the combined population and employment density and is highest in downtown Dothan and a few census tracts adjacent to Ross Clark Circle.

Land use maps were acquired for the City of Dothan and the City of Headland. The latest land use map for the City of Dothan was adopted in 2017 and is displayed in **Figure 5-7**. A future land use map for Dothan shows the projected land uses for the city in the year 2030 and is displayed in **Figure 5-8**. A land use map for the City of Headland, adopted in 2010, is shown in **Figure 5-9**.

The current zoning maps reveal some noteworthy trends concerning the concentration of particular land uses. The highest commercial concentrations are located around Ross Clark Circle, particularly along the southern and western sides of the City of Dothan and along the highway approaches to Ross Clark Circle, including US-84, US-231, and US-431. Residential housing is the predominant land use located inside Ross Clark Circle, with the exception of the Central Business District. Another high concentration of housing is located outside of the Ross Clark Circle loop on the western side of the City of Dothan.

The primary areas zoned for industrial use are located along the railroad approaches on the north, south, and eastern sides of Dothan and on the western and eastern edges of Headland. Pockets of land with agricultural uses are located on the outer edges of the city region.

The Future 2030 Land Use Map shows a similar pattern to what is currently in place. Some minor changes to the current land use pattern include the extension of commercial districts along the primary arterial approaches to the center of the city. The continued expansion



of residential areas beyond the Ross Clark Circle loop is also noteworthy, while the agricultural areas are still present in the outer parts of the city. The Future Map also includes the proposed I-10 Connector roadway just outside the City of Dothan to the west.

Housing permit data provided by the city indicated that over 1200 residential housing permits were issued from 2015 through 2020. The yearly breakdown of permit activity from 2015 through 2020 is shown below:

- 2015 – 218 permits
- 2016 – 204 permits
- 2017 – 183 permits
- 2018 – 179 permits
- 2019 – 196 permits
- 2020 – 231 permits

Residential permit activity has fluctuated around 200 permits per year during this time period with an average of 202 permits per year.

Figure 5-10 illustrates the retail services concentrations in the SWAMPO region. Retail services are primarily concentrated in central Dothan and along the US highways in the region including US-231, US-84, US-431, and Ross Clark Circle. Smaller concentrations of retail services are located along Honeysuckle Road, Westgate Parkway, and SR-52 southwest of Ross Clark Circle. **Figure 5-11** illustrates areas in the SWAMPO region where office employment is concentrated. Office employment is scattered throughout the City of Dothan, and the highest concentrations of office employment in the region are located east and west of the intersection of US-84 and the western side of Ross Clark Circle. **Figure 5-12** illustrates the locations in the SWAMPO region where industrial employment is concentrated. Industrial employment is concentrated in central Dothan, the Headland area, and the Pinckard/Midland City area.

In recent years the highest rates of growth in the region have occurred west of Ross Clark Circle in western Houston County, and this trend is projected to continue into the future. **Figure 5-13** illustrates the forecast dwelling unit change in the SWAMPO region from 2020-2045, and **Figure 5-14** illustrates the areas in the region where new development has occurred from 2006 to 2016. **Figure 5-15** illustrates the median household income in the region. The lowest income areas in the region are concentrated in central and northern Dothan.



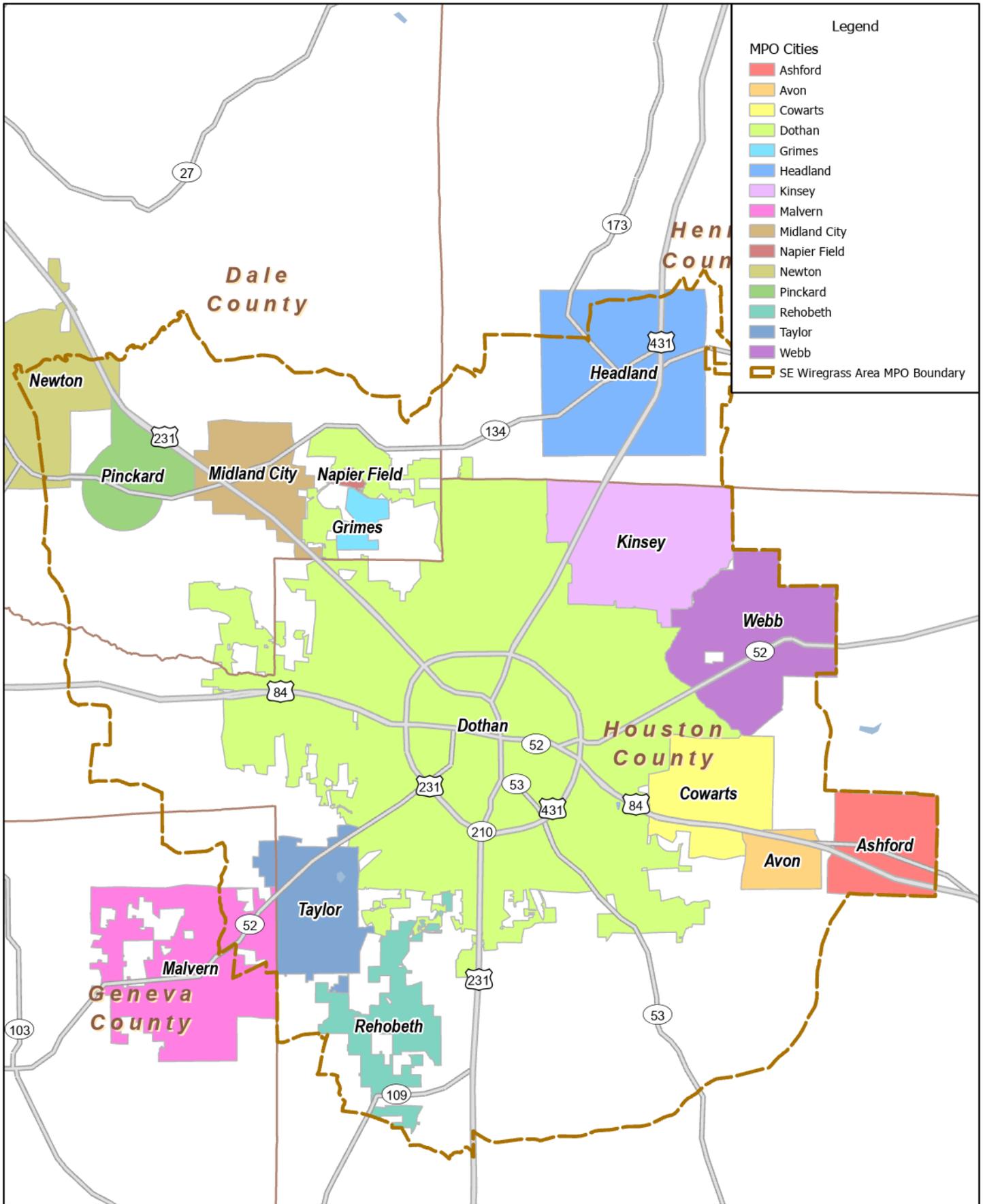


Figure 5-3: MPO Boundary and Municipalities

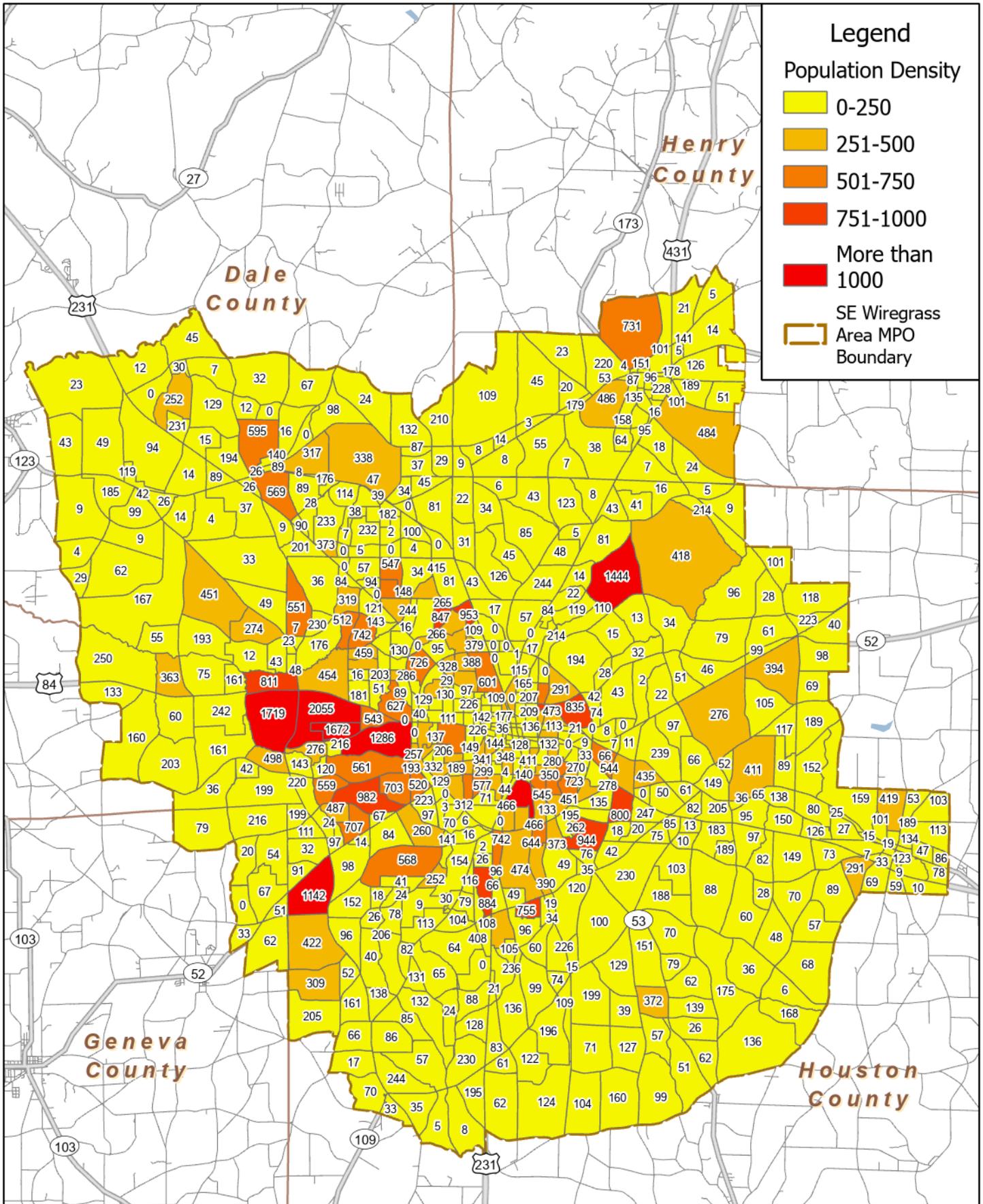
Southeast Wiregrass Area MPO
Dothan, Alabama



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Population Density

- 0-250
- 251-500
- 501-750
- 751-1000
- More than 1000

SE Wiregrass Area MPO Boundary

Figure 5-4: Population Density

Southeast Wiregrass Area MPO
Dothan, Alabama

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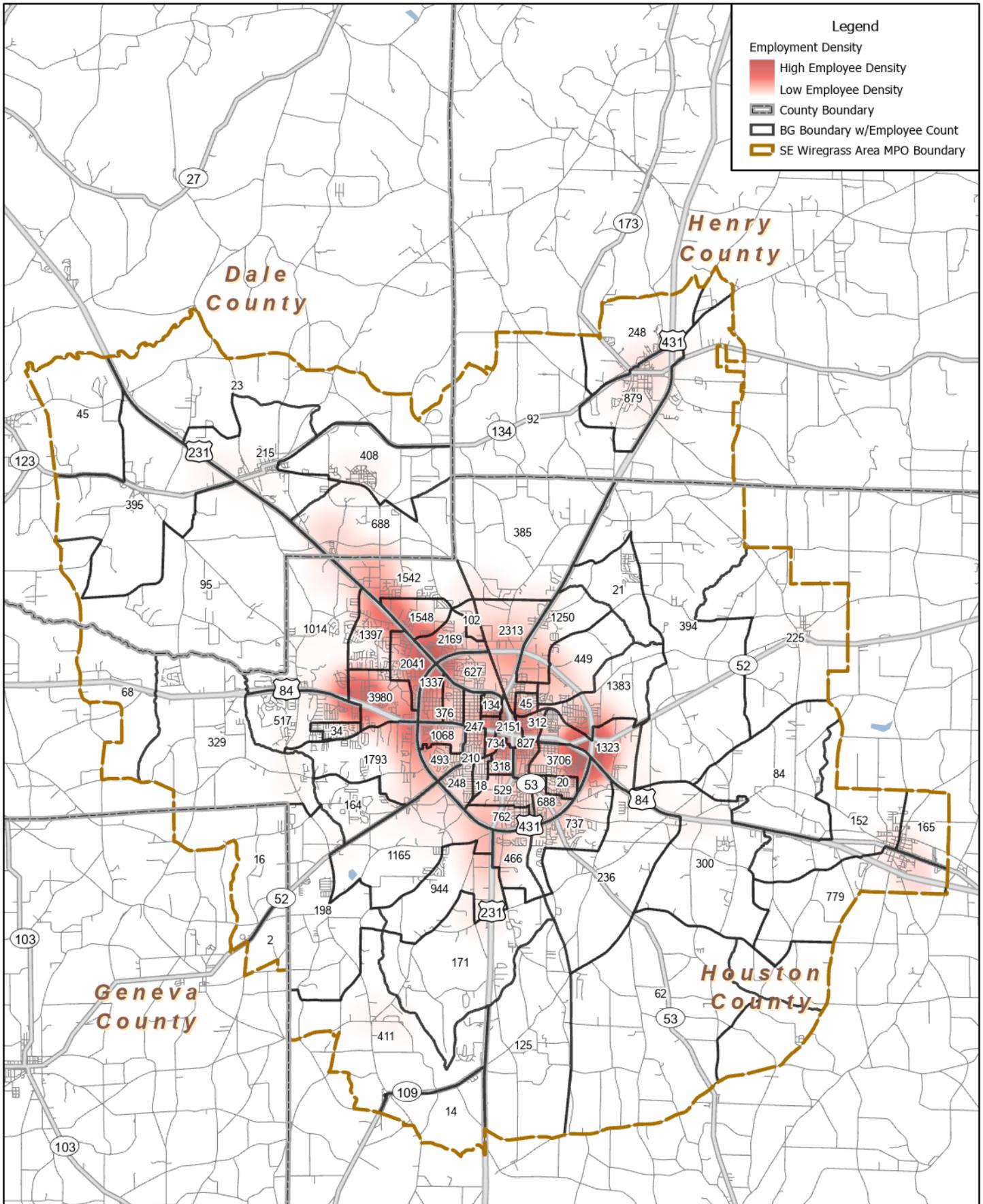


Figure 5-5: Employment Density w/ Employees Per Block Group

Southeast Wiregrass Area MPO
Dothan, Alabama



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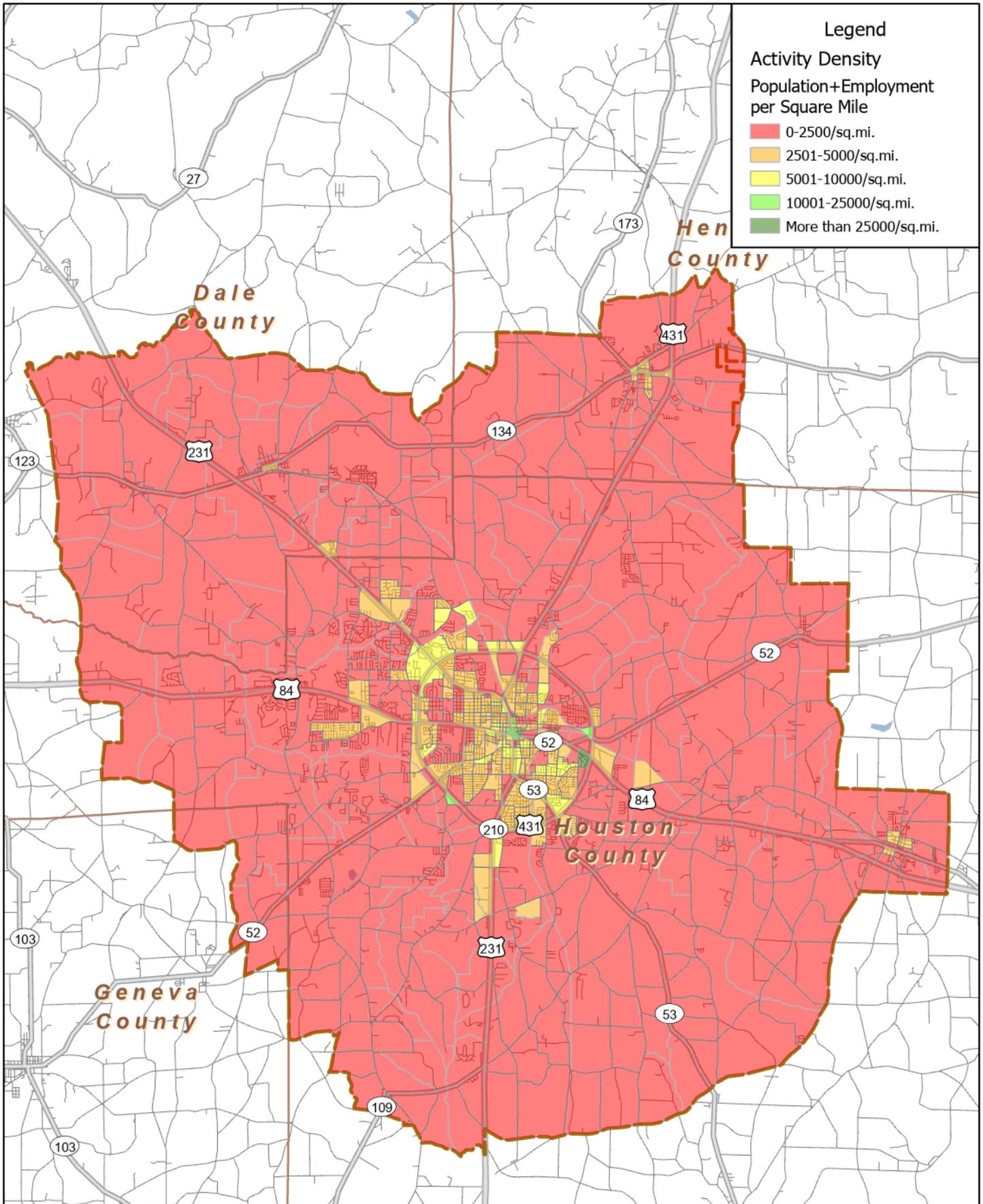


Figure 5-6: 2020 Activity Density

Southeast Wiregrass Area MPO
 Dothan, Alabama



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Figure 5-7: Current Land Use-City of Dothan

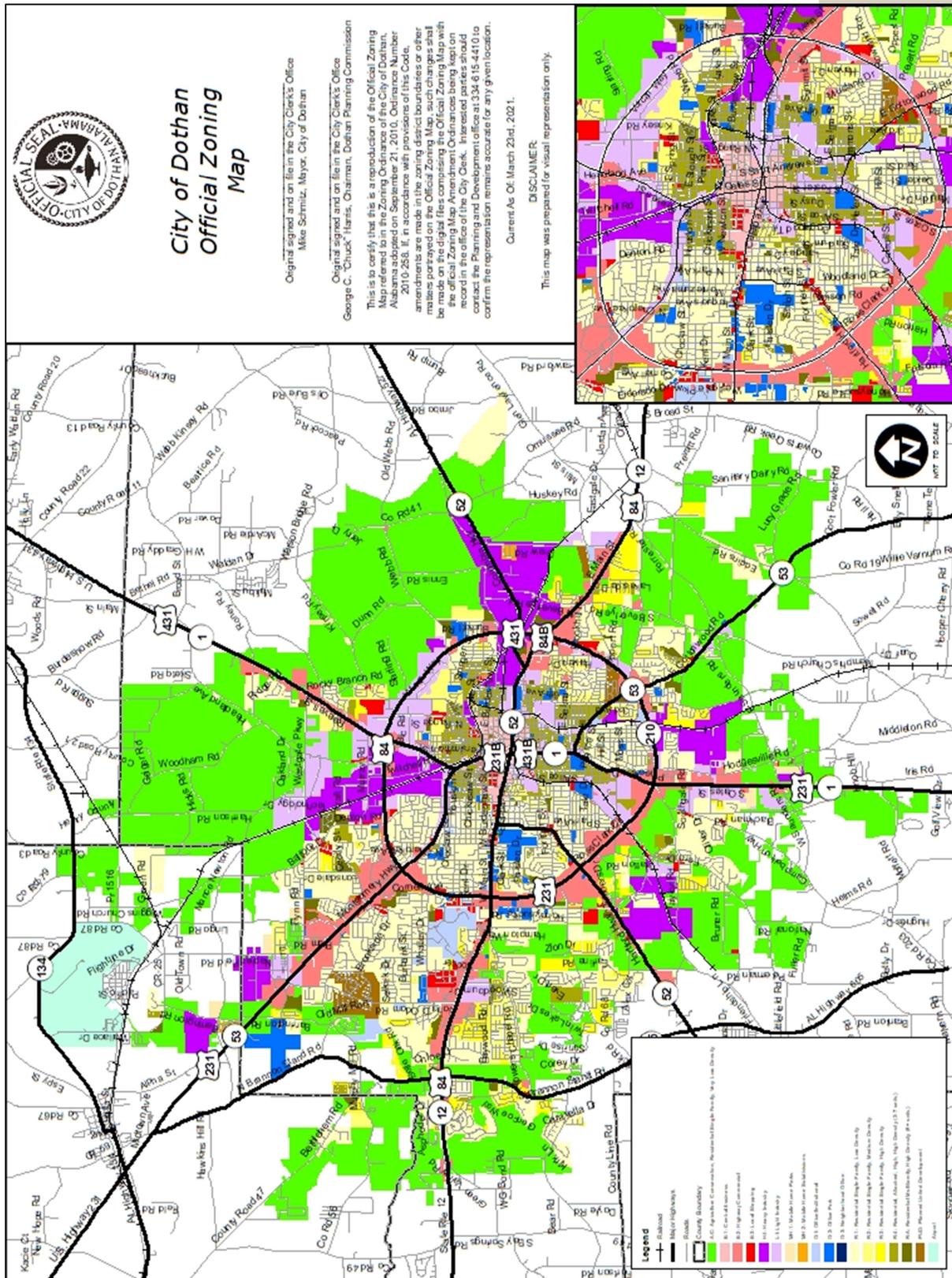


Figure 5-8: Future Land Use-City of Dothan

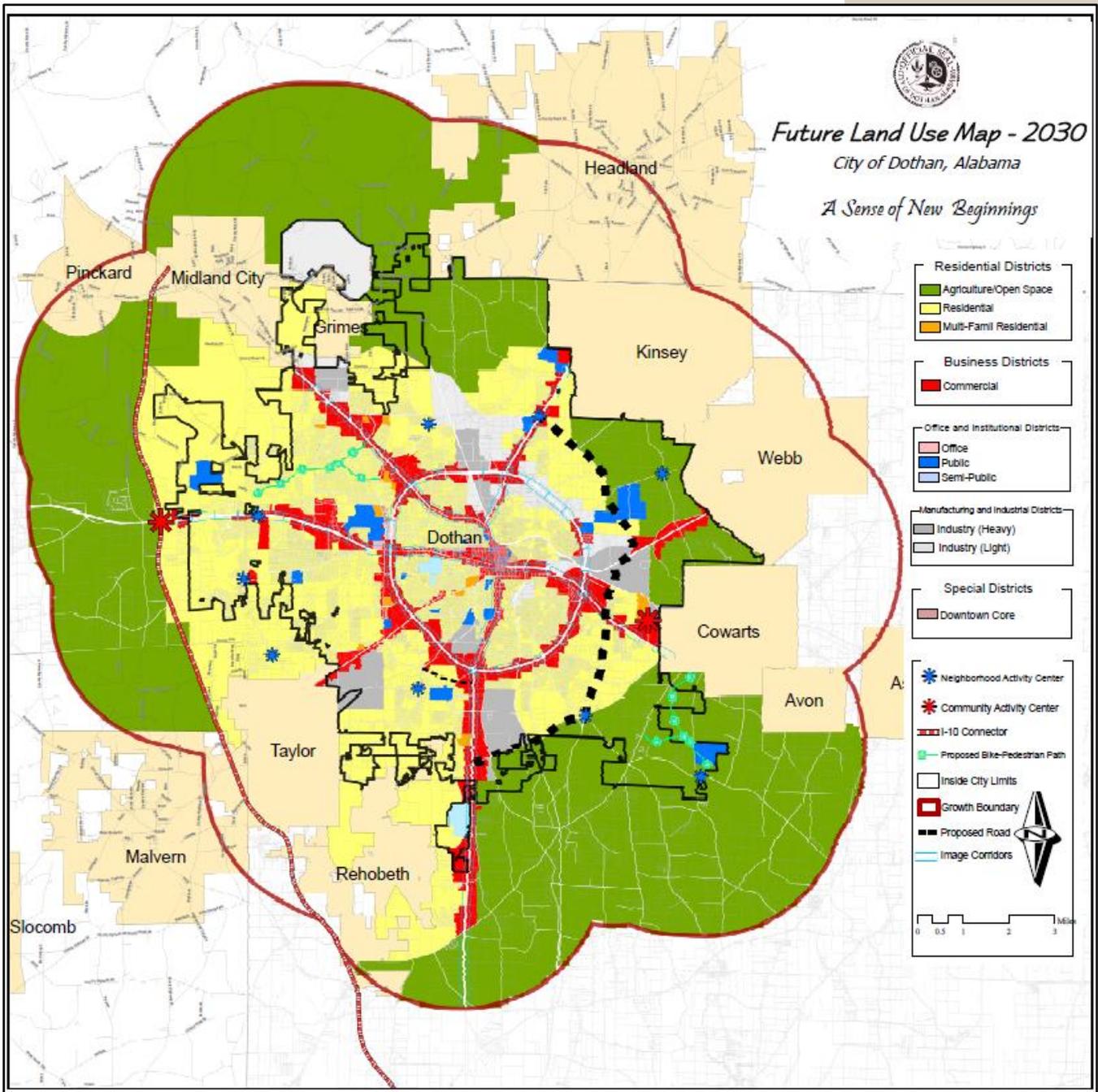
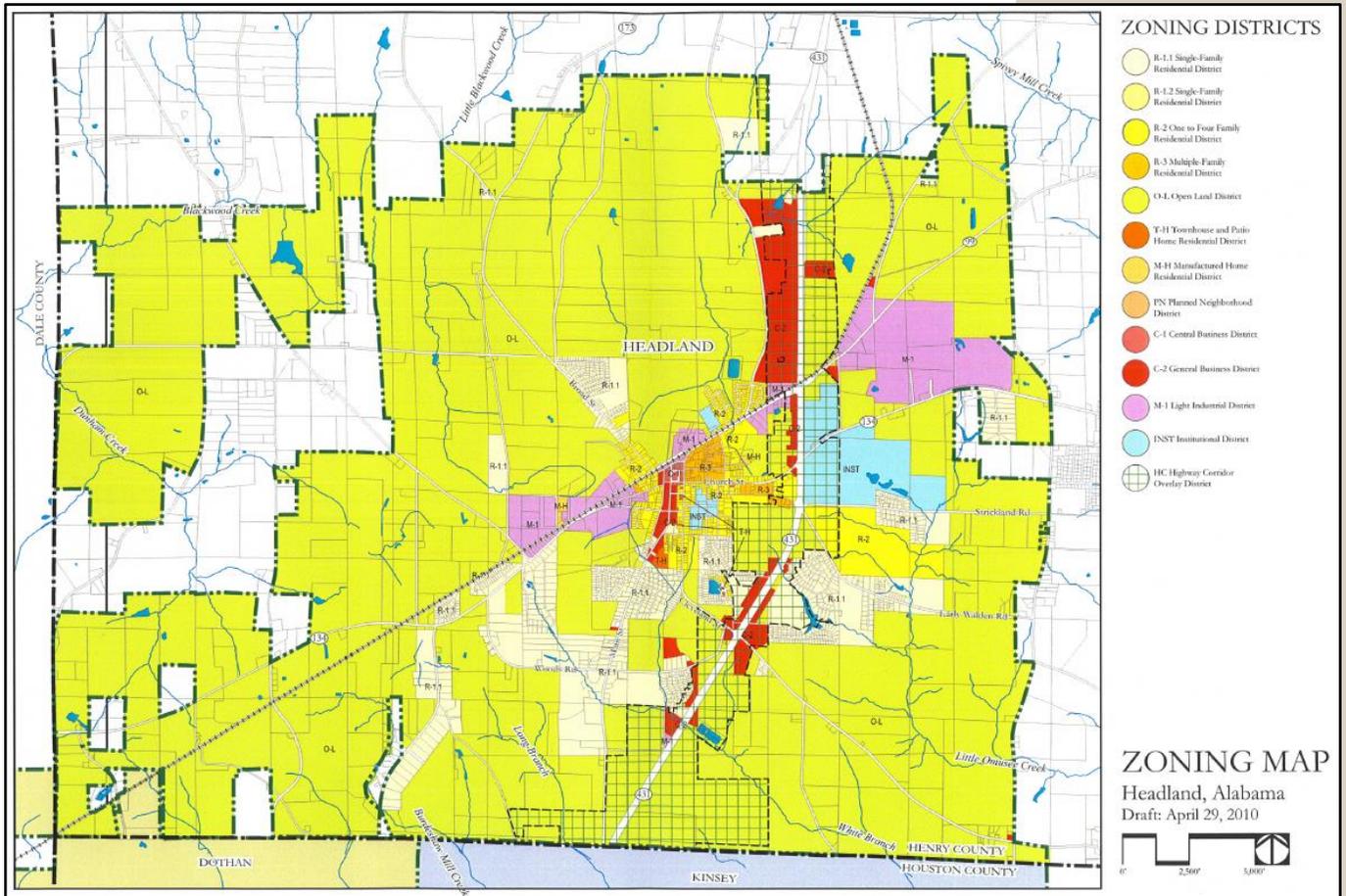


Figure 5-9: City of Headland Land Use



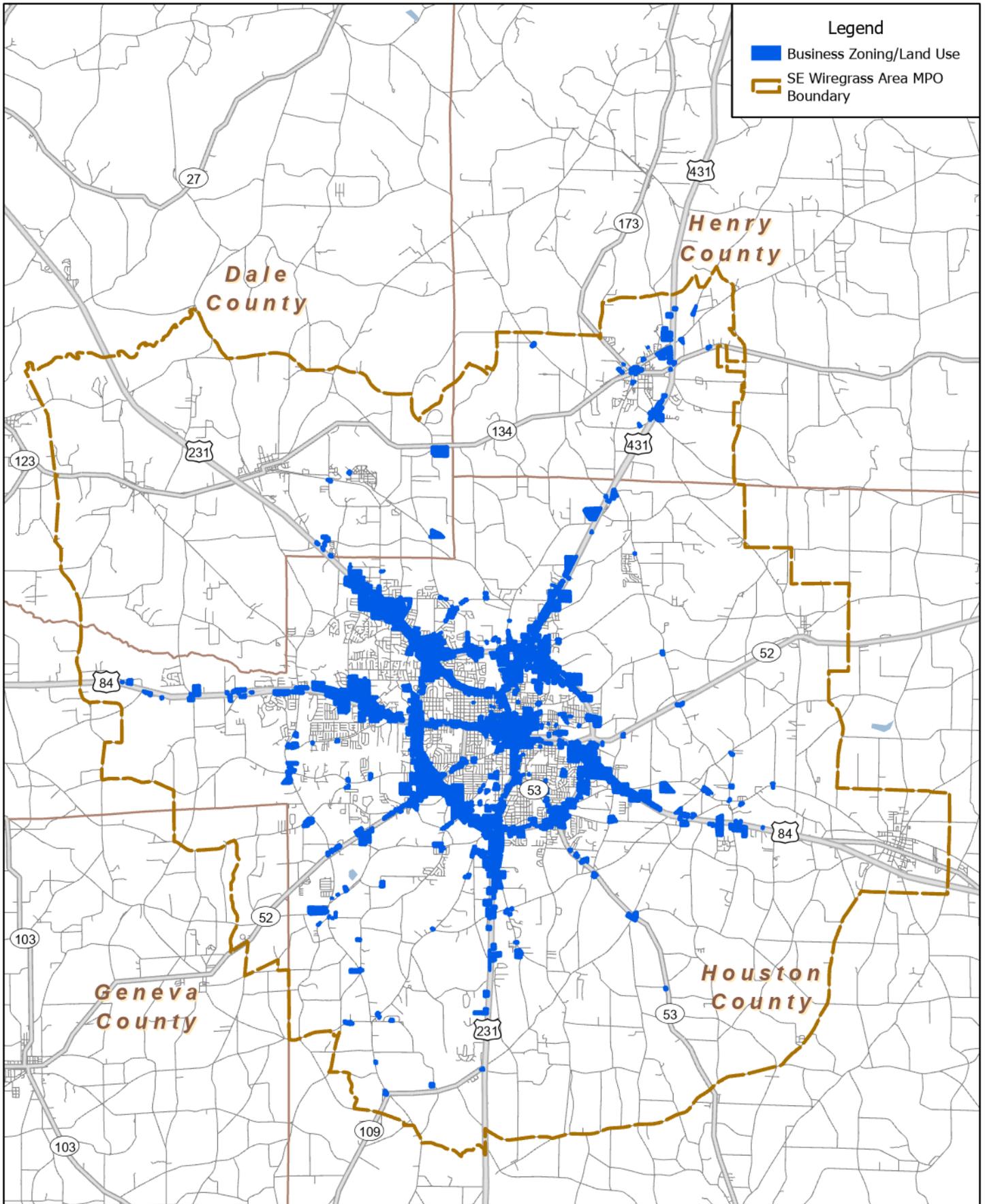


Figure 5-10: Retail Services Concentration

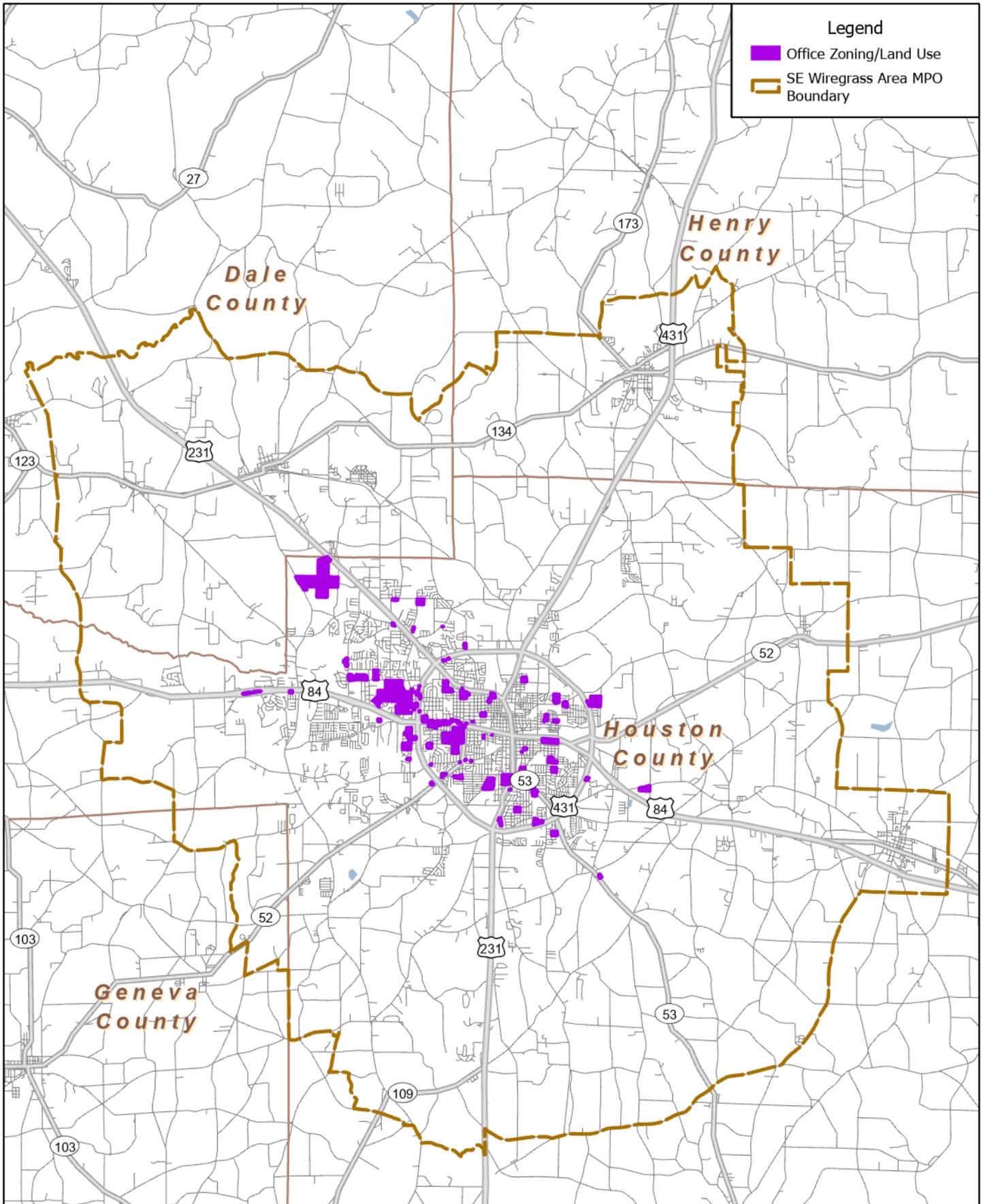
Southeast Wiregrass Area MPO
Dothan, Alabama



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- Office Zoning/Land Use
- SE Wiregrass Area MPO Boundary

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Figure 5-11: Office Employment Concentration

Southeast Wiregrass Area MPO
Dothan, Alabama

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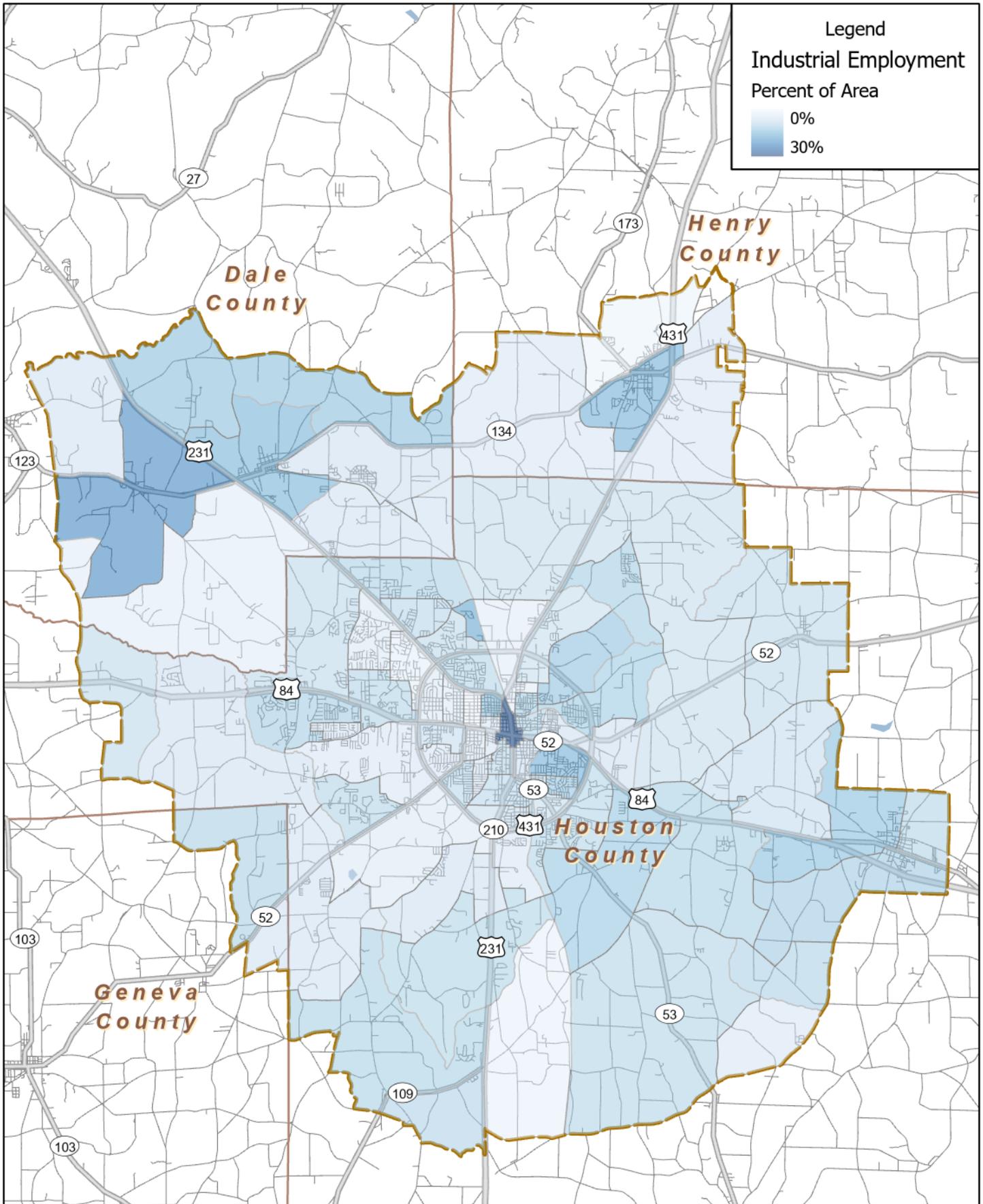


Figure 5-12: Concentrations of Industrial Employment

Southeast Wiregrass Area MPO
 Dothan, Alabama



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Num Dwelling Unit Change

- No Change
- 1-25
- 26-50
- 51-100
- More than 100
- County Boundary
- SE Wiregrass Area MPO Boundary

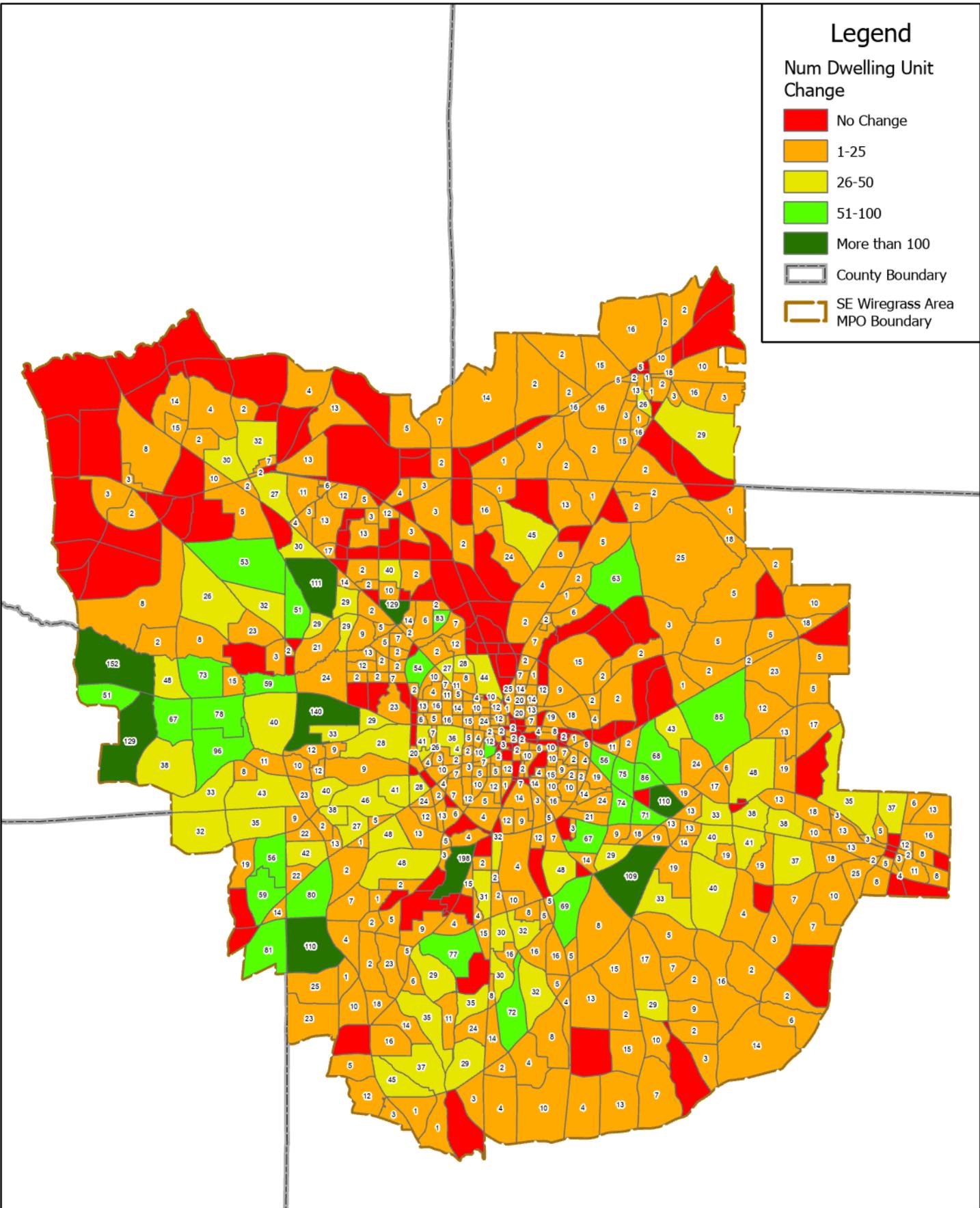


Figure 5-13: TAZ Dwelling Unit Change 2020-2045

Southeast Wiregrass Area MPO
Dothan, Alabama



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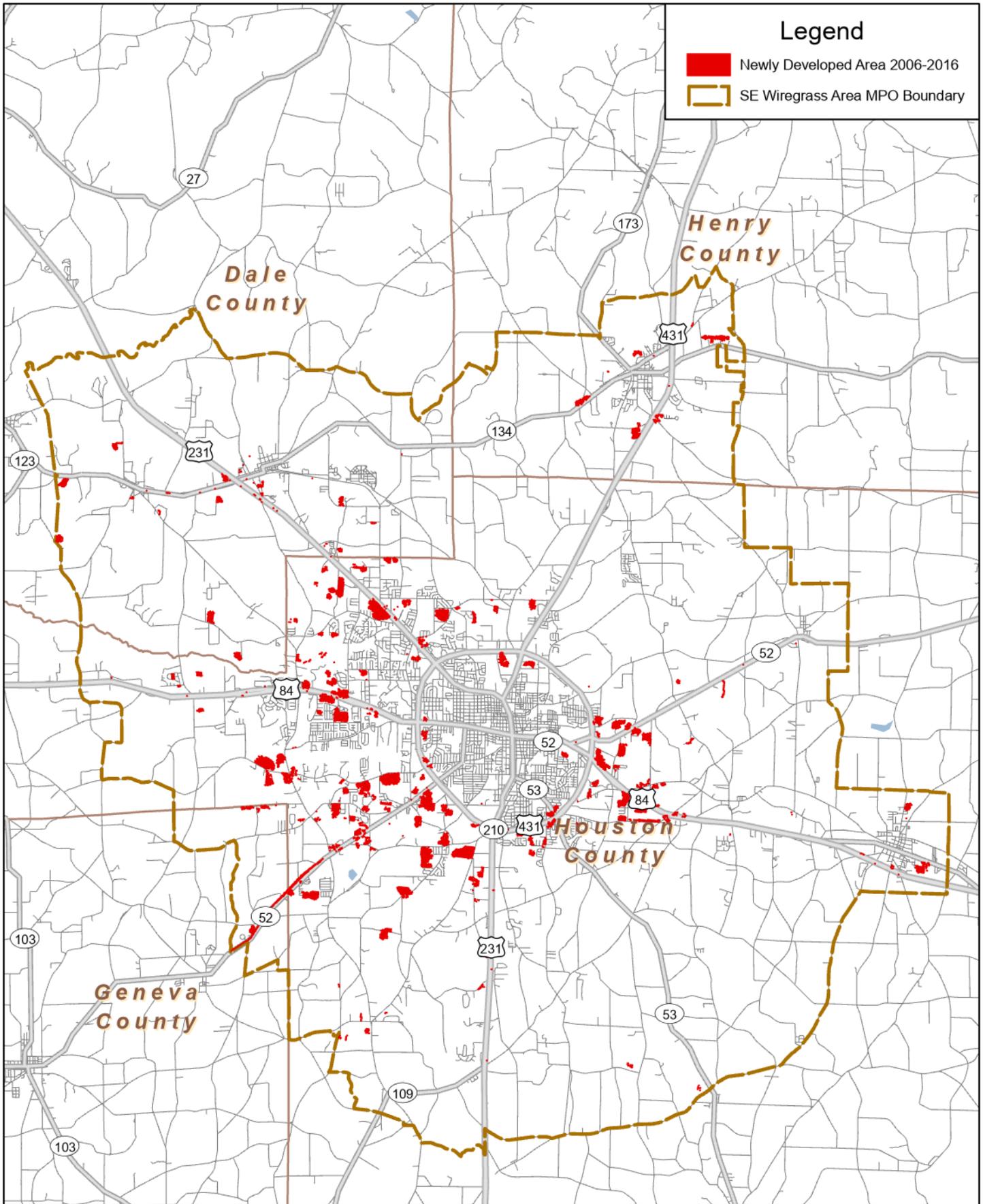


Figure 5-14: Newly Developed Areas from 2006 to 2016

Data Source: USGS, 2006 and 2016 National Land Cover Database

Southeast Wiregrass Area MPO
Dothan, Alabama



NOT TO SCALE

Legend

2018 Median Income

- \$0 - \$25,000
- \$25,001 - \$50,000
- \$50,001 - \$75,000
- \$75,001 - \$100,000
- More than \$100,000
- County Boundary
- TAZs
- SE Wiregrass Area MPO Boundary

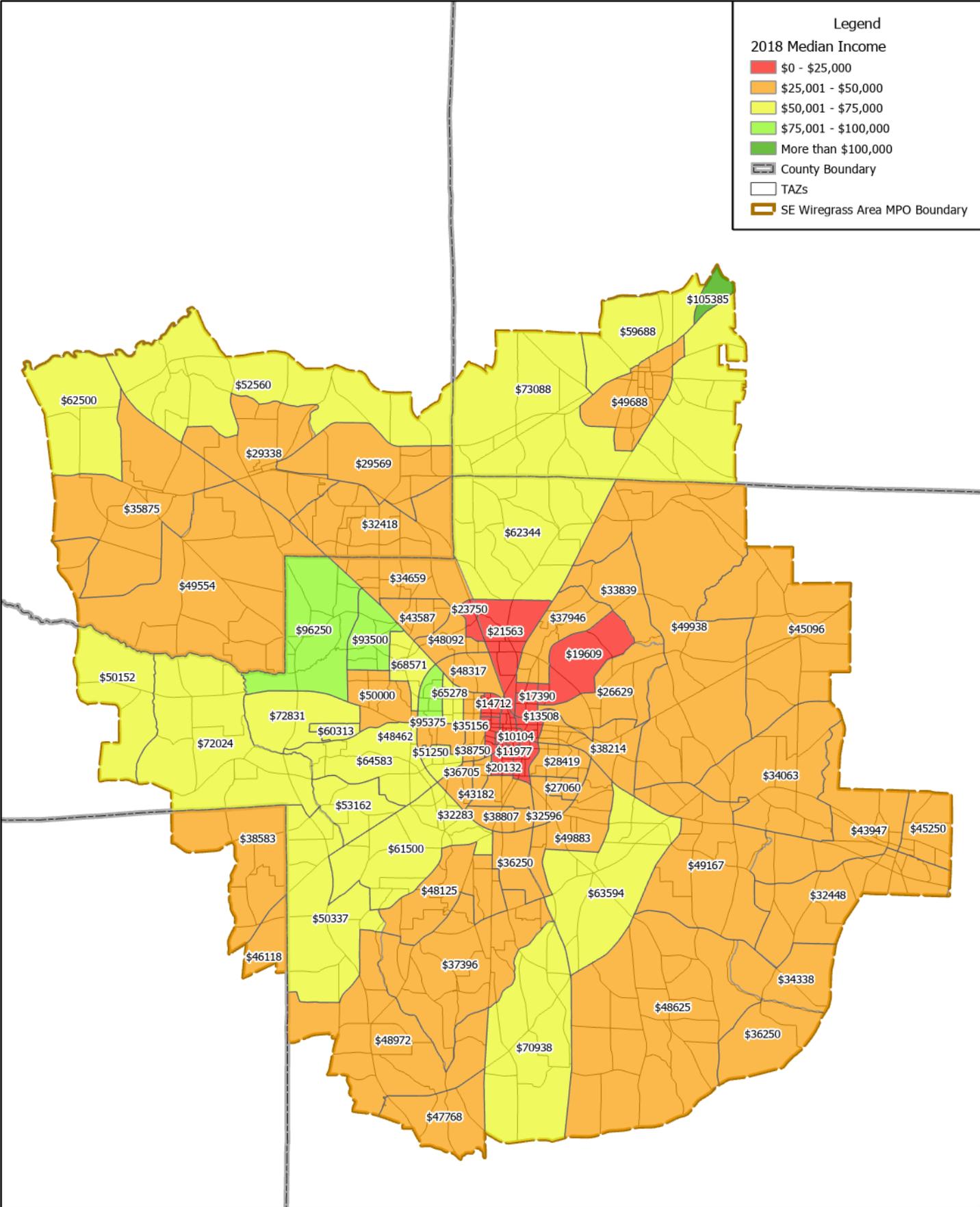


Figure 5-15: 2018 Median Income

Southeast Wiregrass Area MPO
Dothan, Alabama

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Three historic districts are located within the City of Dothan. Two are located to the northeast of the intersection of North Oates Street and Main Street. The Downtown Commercial Historic District shown on **Figure 5-16** ranges approximately from Chickasaw Street to East Crawford Street, covering portions of North Oates Street, North Forest Street, North Saint Andrews Street, and North Appletree Street. This District also covers a segment of Main Street between North Oates Street and Museum Avenue. This District is marked by a high concentration of closely spaced commercial and warehouse buildings. Many of the buildings were constructed between 1885 and 1930.

The second historic district also shown on **Figure 5-16** is the Newton-Burdeshaw-Cherry-Appletree-Range (NBCAR) Historic District, located just to the east of the Downtown Commercial Historic District. This District covers portions of East Newton Street, East Burdeshaw Street, East Adams Street, North College Street, North Cherry Street, Brundidge Street, and North Range Street. The third historic district, the Houston Heights Historic District, is located to the west of downtown. This district is mostly a residential area approximately bounded by Woodland Drive (SR-52), Magnolia Avenue, Virginia Drive, and Woodlawn Drive.

Population and Economic Trends

The SWAMPO region's population increased from an estimated 142,718 to an estimated 147,967 between the years 2010 and 2018 representing a growth rate of 4% for this time period. This is slightly less than the national growth rate of 6% for this time period and slightly greater than the State of Alabama's growth rate of 3%. Within the SWAMPO region, Houston County where the City of Dothan is located had the strongest growth, while the adjacent counties (Dale, Geneva, and Henry) sustained minimal population losses.

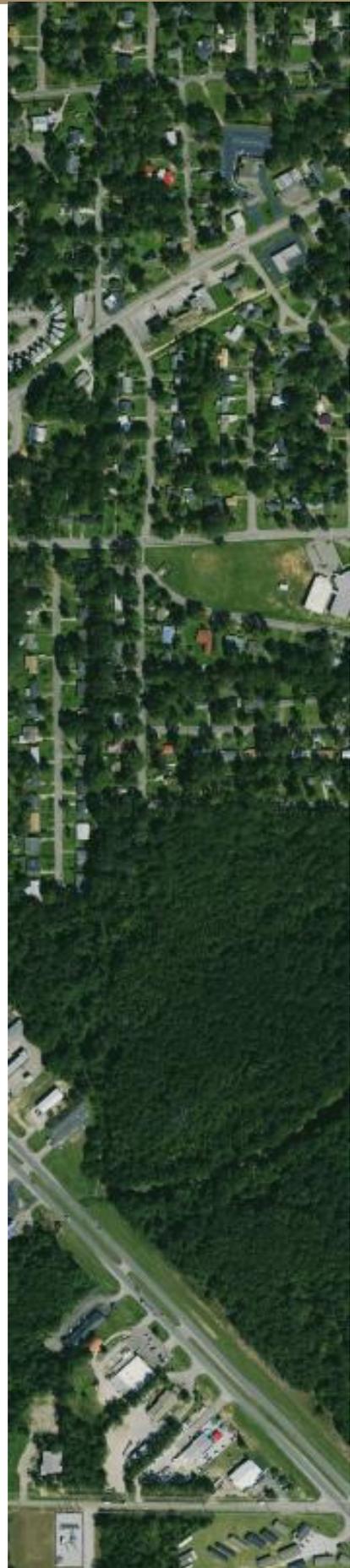
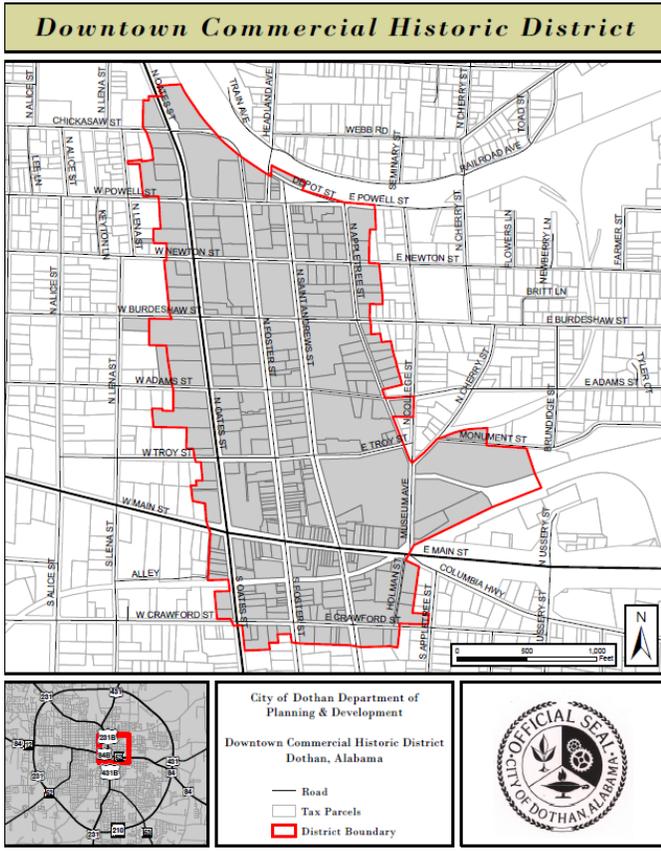


Table 5-1: Population Change - 2010 to 2018

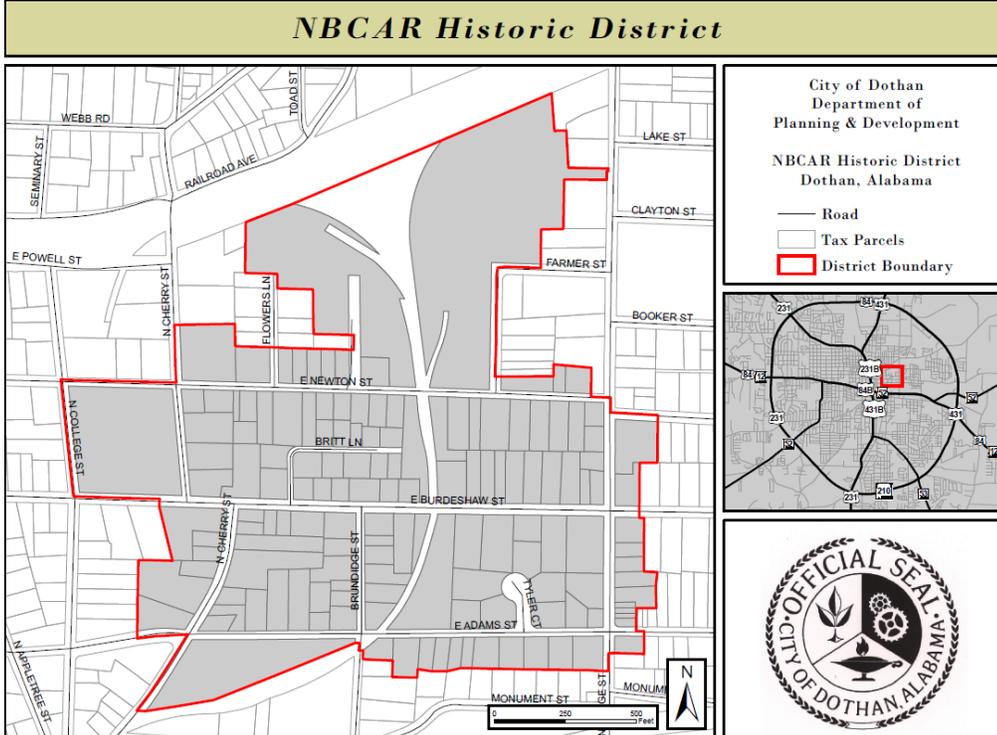
Place	2010	2018	Total Change	Percent Change
United States	303,965,272	322,903,030	18,937,758	6%
Alabama	4,712,651	4,864,680	152,029	3%
Dale County	49,730	49,255	-475	-1%
Geneva County	26,541	26,491	-50	0%
Henry County	17,148	17,124	-24	0%
Houston County	99,029	104,352	5,232	5%
Dothan Metropolitan Area	142,718	147,967	5,249	4%

Source: U.S. Census Bureau

Figure 5-16: Historic Districts



Source: City of Dothan Department of Planning & Development



Source: City of Dothan Department of Planning & Development



Table 5-2: Change in Employment in the Dothan Area by Industry - 2010 to 2019

Descriptions	2010	2019	Total Change	Percent Change
Total Employment	59,000	62,265	3,265	6%
Total Non-Farm	57,200	60,000	2,800	5%
Mining, Logging, and Construction	3,200	2,700	-500	-16%
Manufacturing	5,300	5,400	100	2%
Trade, Transportation, and Utilities	14,900	15,400	500	3%
Information	700	500	-200	29%
Financial Activities	2,100	2,100	0	0%
Professional and Business Services	4,500	4,900	400	9%
Education and Health Services	7,700	8,900	1,200	16%
Leisure and Hospitality	5,400	6,500	1,100	20%
Other Services	2,700	2,900	200	7%
Government	10,600	10,700	100	1%
Total Unemployment	6,232	1,957	-4,275	-69%

Source: U.S. Bureau of Labor Statistics

Total employment in the Dothan region increased by 6% between the years 2010 and 2019 which is consistent with the population growth in the region. The Information, Leisure and Hospitality, and Education and Health Services job sectors illustrated the strongest market sector growth while Mining, Logging, and Construction was the only employment category to experience a decline in the region. It should be noted that total unemployment in the region decreased by 69% between 2010 and 2019.

Travel Patterns

Commuting patterns offer some insight into travel patterns in a region, particularly during the peak hours of travel. While work trips constitute only roughly 20% of all trips, they constitute almost half of the peak hour trips. The Census Bureau's Longitudinal Employer-Household Dynamics (LEHD) program provides detailed commuting data for metropolitan areas across the US. The LEHD data indicated that over 65% of workers in the region live within the MPA while almost 35% of workers in the region commute from outside the region to work. Conversely, almost 37% of residents within the MPA commute outside of the region to work while over 63% of the residents within the MPA work within the region. **Figure 5-17** illustrates the commuting patterns in the region, and **Figure 5-18** illustrates the carpool distribution.

Dothan Region Employment Trends 2010-2019



Information Jobs

↑ 29%



Leisure and Hospitality Jobs

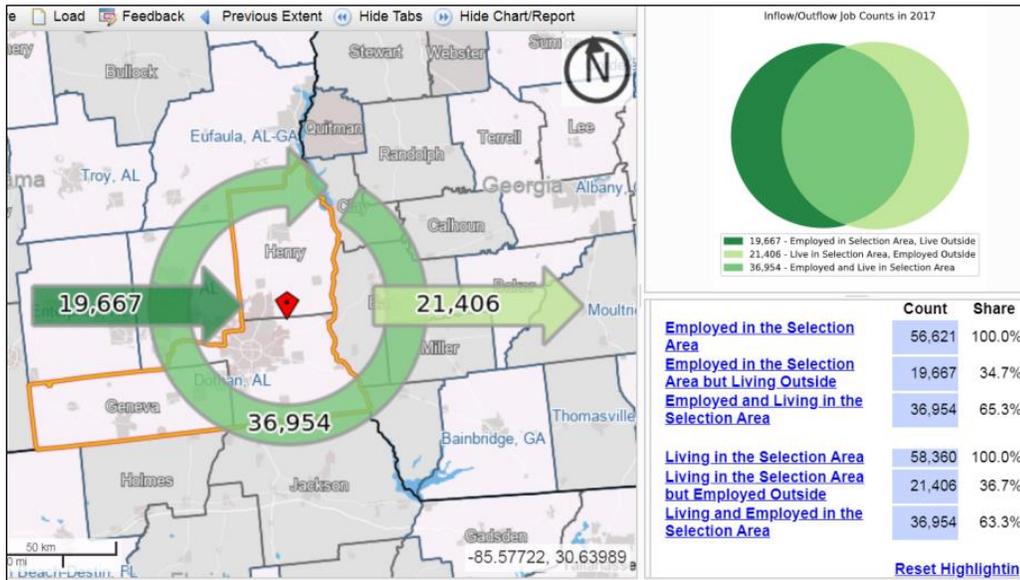
↑ 20%



Professional Services Jobs

↑ 9%

Figure 5-17: Commuter Patterns for Dothan Region



As illustrated in **Figure 5-19**, travel time to work is lower for the Dothan region than the national average which is consistent with the region's relatively small size. There were no census tracts in the region where the travel time to work was over an hour, and most workers in the region reside in census tracts where the mean commute to work is under 30 minutes. As illustrated in **Table 5-3**, the vast majority of trips to work in the region (96%) are made by private automobile which is consistent with the region's low-density land use patterns and lack of fixed-route transit service. Of note, the second highest share of means of transportation to work is working from home which has increased significantly during the COVID-19 crisis and may remain elevated into the future as employers and employees adapt to working from home.

Table 5-3: Means of Transportation to Work

Source: U.S. Census Bureau

Dothan Region Means of Transportation to Work		
	Estimate	Percent
Total:	60,397	100%
Car, truck, or van:	57,858	96%
Drove alone	53,369	88%
Carpooled:	4,489	7%
In 2-person carpool	3,488	6%
In 3-person carpool	698	1%
In 4-or-more-person carpool	303	1%
Public transportation (excluding taxicab)	12	0%
Walked	347	1%
Taxicab, motorcycle, bicycle, or other means	569	1%
Worked at home	1,611	3%



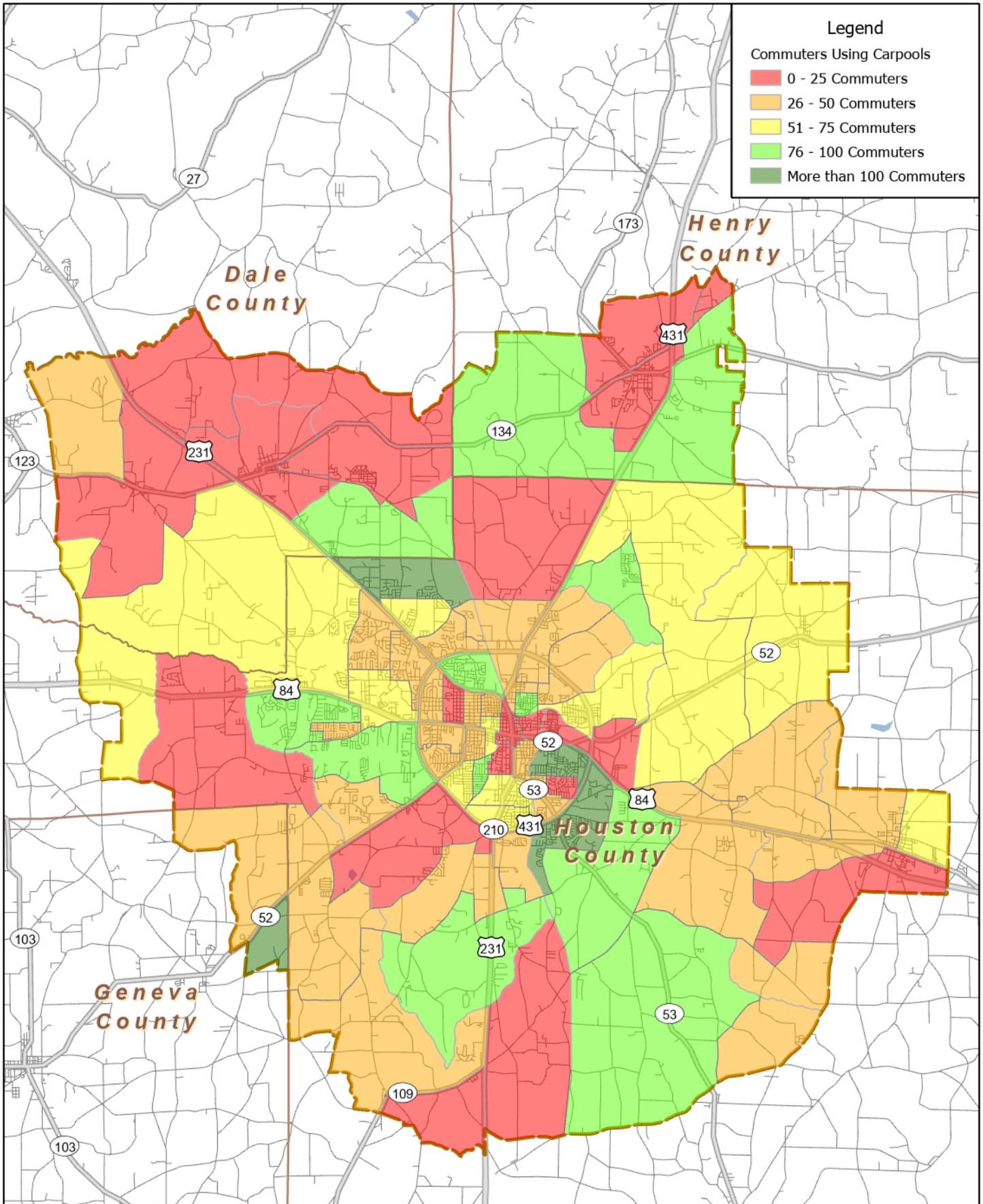


Figure 5-18: Commuters Using Carpools

Southeast Wiregrass Area MPO
Dothan, Alabama



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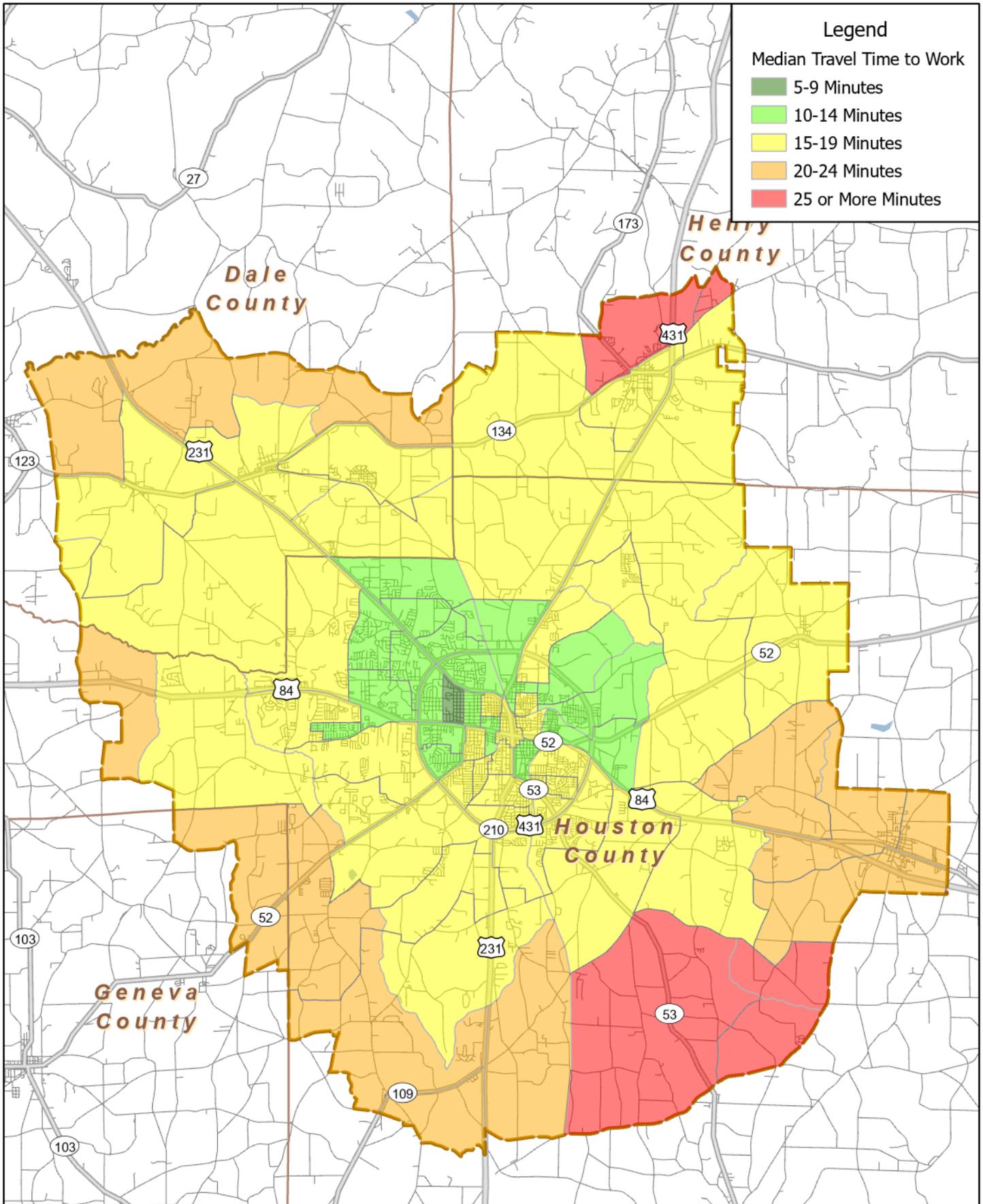


Figure 5-19: Median Travel Time to Work

Southeast Wiregrass Area MPO
 Dothan, Alabama

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Chapter 6

Existing Transportation



Existing Transportation System

The Dothan region's transportation network is anchored by the roadway system, and most trips in the region are made by personal vehicles. This trend is similar to the rest of the U.S. with the exception of dense, major metropolitan areas such as New York City and San Francisco. The regional highway network is critical to regional mobility and economic activity. Therefore, the condition of roadways and bridges affect the majority of household travel in the SWAMPO region. **Figure 6-1** illustrates the daily trip purposes as documented in the National Household Travel Survey. Home-related and shopping/errand trips account for the majority of the trips in the country. In the context of the low-density SWAMPO region, these trip purposes can generally only be accomplished with a vehicle.

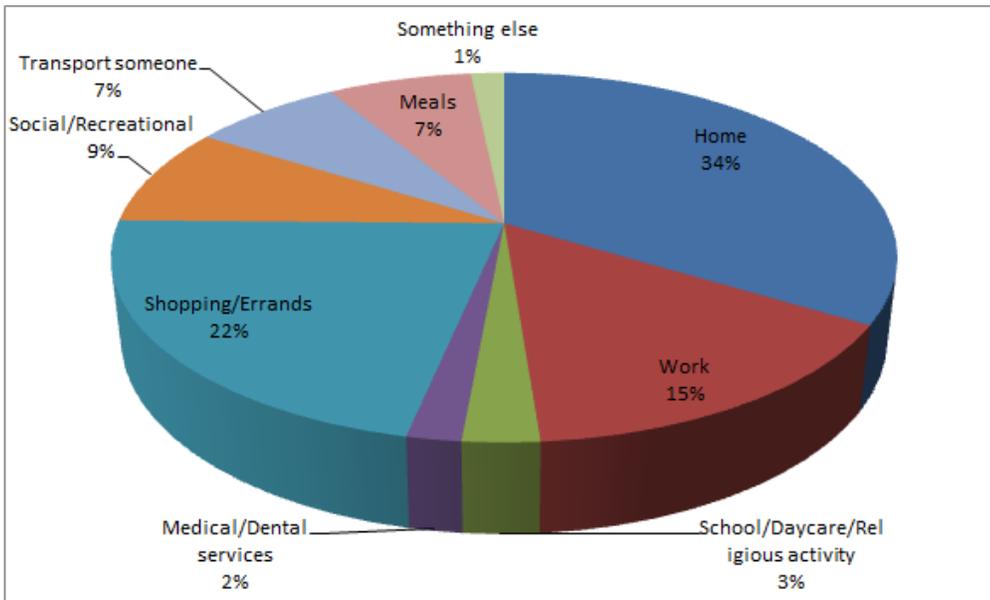


Figure 6-1: National Household Travel Survey: Vehicle Travel by Trip Purpose

Identifying future transportation needs and planning future regional transportation improvements begins with evaluating the existing transportation system. The transportation elements summarized in this chapter include roadways, bridges, bicycle and pedestrian infrastructure, public transit, freight, and aviation.

Roadways and Bridges

Roadways and bridges in the Dothan region play a critical role in supporting the travel and transportation demand. These facilities support roadway users of many varieties, including passenger vehicles,

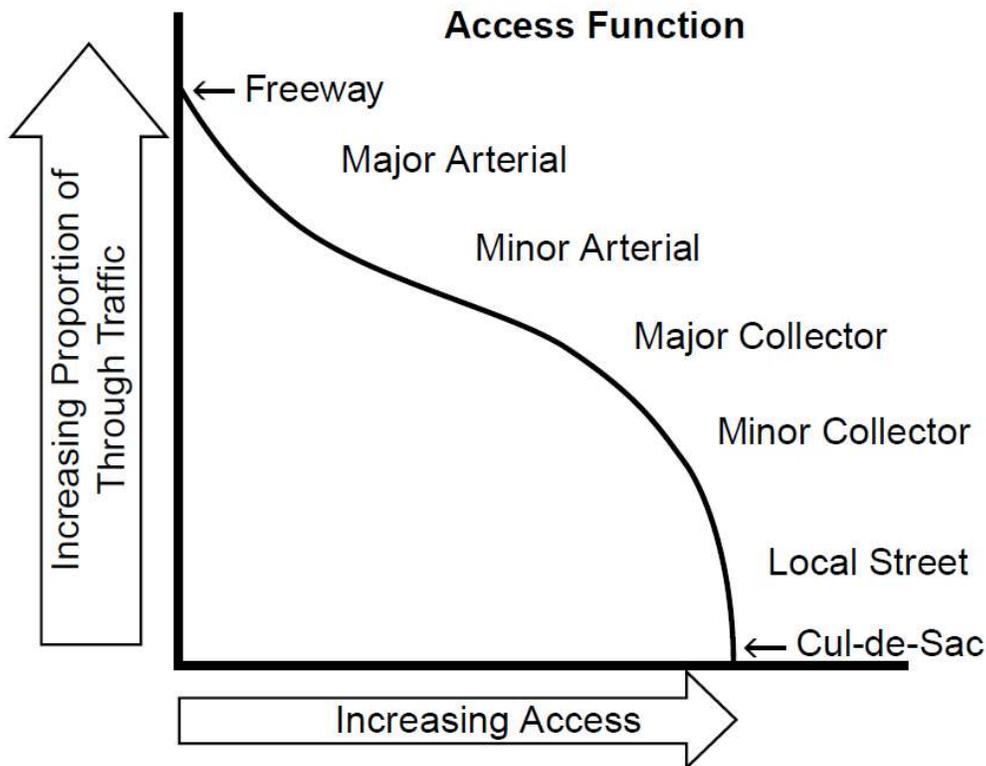


motorcycles, heavy vehicles, freight vehicles, public transit, bicycles, and pedestrians.

Functional Classification of Roadways

In analyzing the roadway network within an area, it is necessary to divide and inventory roadways based on the roadway's ability to move traffic and by its ability to access property. **Figure 6-2** illustrates the relationship between roadway functional classification and access to property. Access to property decreases as roadway functional classification increases from collector to freeway.

Figure 6-2: Roadway Access Function



Based on these criteria, roadways are given a functional classification. In the state of Alabama, ALDOT is primarily responsible for the classification of roadways. Maps showing the functional classifications of the roadways within the Dothan area are shown in **Figures 6-3 and 6-4**. The higher volume roadways are classified under the following categories:

- Interstates – These make up the highest classification of roadways. Interstates represent roadways that offer the highest level of mobility and the highest speeds over the longest uninterrupted distance. Very little land access is provided with

Functional classes of roadways in metropolitan areas include:



Interstate/Freeways



Principal and Minor Arterials



Major and Minor Collectors



Local Streets

this classification. Posted speed limits are typically between 55 and 75 miles per hour. The Dothan MPA does not have any interstate classified roadways.

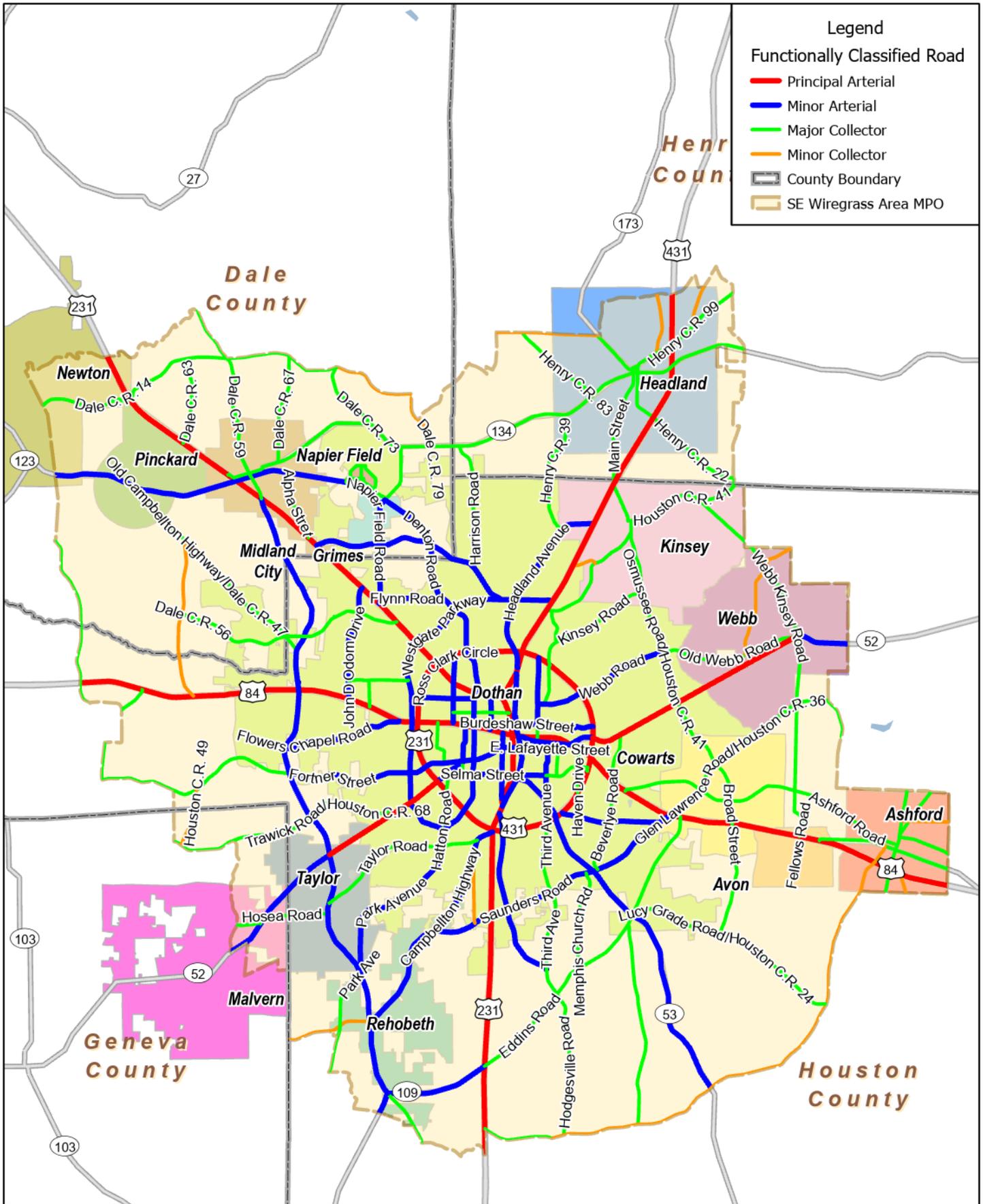
- Arterials – These include roadways that oftentimes provide connections to the interstate system. Arterials connect cities, urban areas, and industrial centers, offering a high level of mobility with limited land access. Posted speed limits are typically between 40 and 70 miles per hour. Arterials are divided into two types:
 - Principal Arterials
 - Minor Arterials
- Collectors – These include roadways which connect the arterial network to the local roadways. Collectors often serve to provide connectivity within urban areas. Posted speed limits are typically between 30 and 45 miles per hour. Collectors are divided into two types:
 - Major Collectors
 - Minor Collectors
- Local Streets – These include most other types of roadways in an area. Local streets typically offer the lowest mobility but are the most common access to residential areas, businesses, and other local areas. These typically make up the majority of the roadways in a given area. Posted speed limits are typically between 20 and 35 miles per hour.

Table 6-1 illustrates that the majority of roadways in the SWAMPO region (over 80%) are classified as either local street or collector. The remaining roadways in the region are classified as arterials.

Table 6-1: Roadway Functional Class by Centerline Miles

Classification	Centerline Miles in Dothan MPO	Percent
Interstates	0	0.0%
Principal Arterials	80	6.7%
Minor Arterials	133	11.1%
Major Collectors	203	17.0%
Minor Collectors	35	2.9%
Local Streets	746	62.3%
Total	1,197	100.0%





Legend

Functionally Classified Road

- Principal Arterial
- Minor Arterial
- Major Collector
- Minor Collector
- County Boundary
- SE Wiregrass Area MPO

Figure 6-3: Functionally Classified Roads Area-Wide

Southeast Wiregrass Area MPO
Dothan, Alabama



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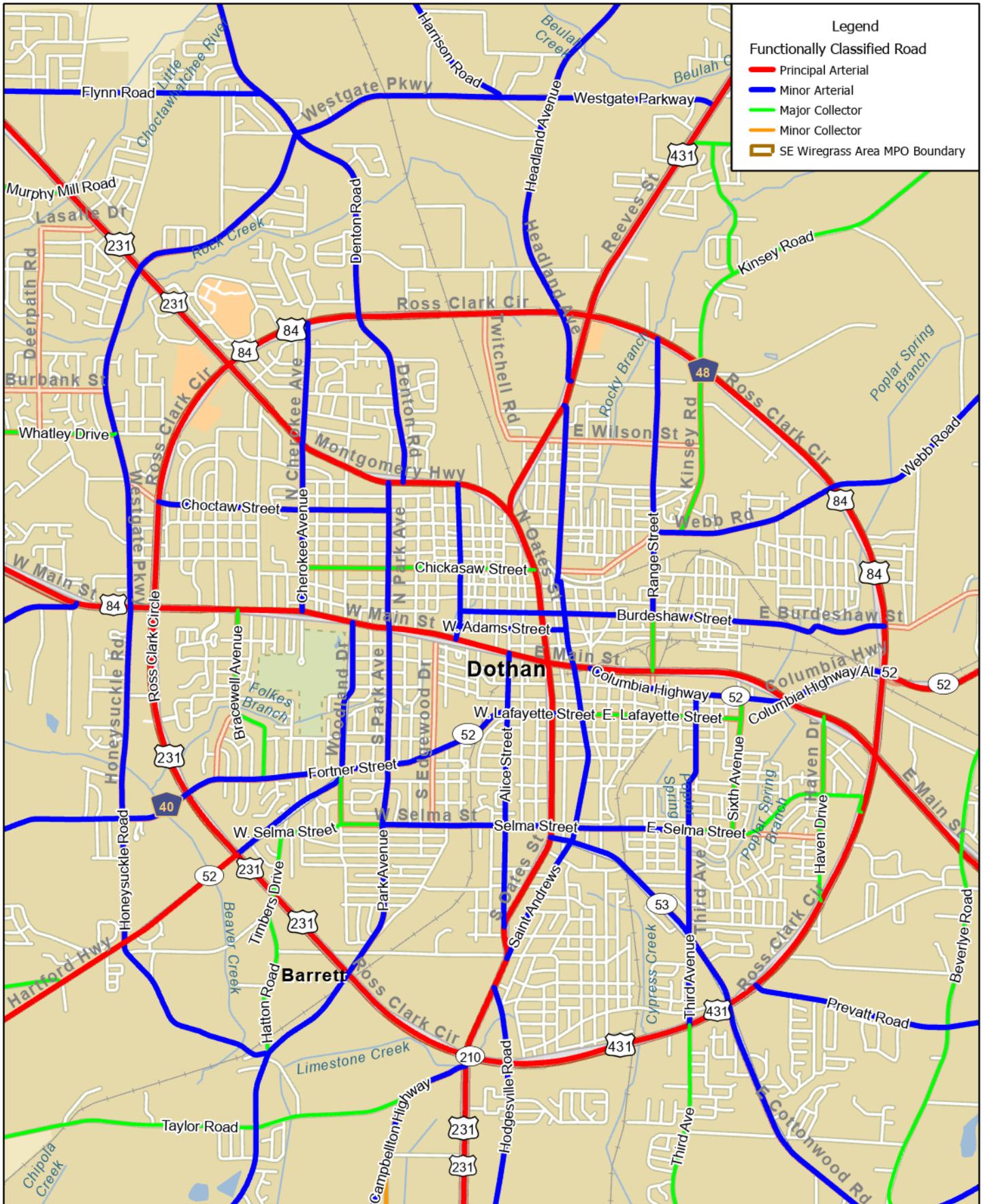


Figure 6-4: Functionally Classified Roads Downtown

Southeast Wiregrass Area MPO
Dothan, Alabama



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Major Roadways

The Dothan region contains varying roadways, including federal, state, and county maintained roadways. These are generally identified as US highways, state routes, or local roads. Some of the major roadways serving the Dothan region include:

1. Ross Clark Circle/SR-210 – This roadway is a principal arterial which creates a bypass loop around the City of Dothan. It intersects all major roadways going into or out of the city.
2. US-231 – This is a principal arterial approaching Dothan from the south and from the northwest, serving as the main connection to the State of Florida and I-10 south of Dothan and as a connection to the Cities of Troy and Montgomery to the northwest.
3. US-431/SR-1 – This principal arterial approaches Dothan from the northeast, serving as a connection to the City of Eufaula.
4. US-84/SR-12 – This east/west principal arterial serves as a connection to the state of Georgia to the east and the cities of Enterprise and Andalusia to the west.
5. SR-52 – This east/west roadway enters the MPO area as a minor arterial but changes to a principal arterial as it nears the City of Dothan. SR-52 continues through the city and extends to the east, becoming a minor arterial just before leaving the MPO region. SR-52 serves as a connection to Dothan from Columbia to the east and Hartford to the west.
6. SR-53 – This minor arterial approaches Dothan from the southeast. SR-53 serves as a connection to Dothan from the city of Cottonwood and the State of Florida.

There are no interstate or freeway facilities in the Dothan region. An interstate connection between Dothan and I-10 was listed as a visionary project in the 2040 LRTP.

Roadway Conditions:



Ross Clark Circle

Source: Dothan Eagle



Ross Clark Circle



Columbia Highway Bridge



N Oates Railroad Bridge



E Main Street

Roadway Maintenance

A majority of the roadways in the Dothan area are classified as local roads. As shown in **Table 6-2**, almost 90% of the roadways in the area are maintained by the local county or municipality, while just over 10% of the roadways are maintained by ALDOT. Most of the arterials are either state or federal highways, maintained by the state. A majority of the collectors are maintained by either the local county or municipality as illustrated on **Figure 6-5**.

Maintenance Responsibility	Centerline Miles In Dothan MPO	Percent
ALDOT	136	11.4%
County or Municipality	1,061	88.6%
Total	1,197	100.0%

Table 6-2: Roadway Maintenance Responsibility

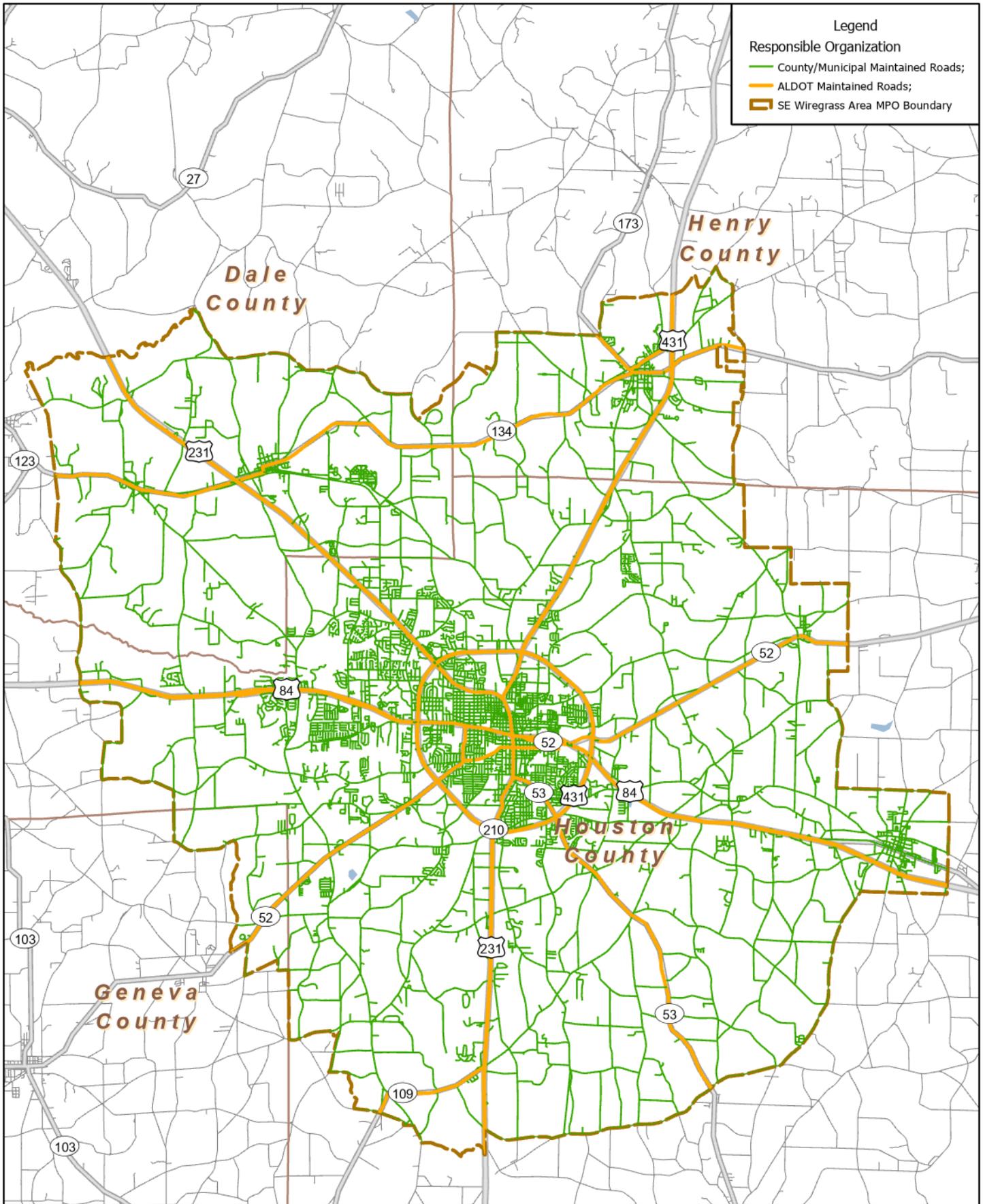
Pavement Condition

Pavement conditions in the SWAMPO region are generally fair to good as illustrated on **Figure 6-6**. Out of 40 miles of major roads 24.5% were classified by ALDOT as in good condition, 69.5% in fair condition, and 6% in poor condition. Poor pavement conditions were documented on Ross Clark Circle between US-231 and US-84, though it should be noted that this segment is currently under construction which will improve pavement conditions to good in the near future. Additional roadway segments with pavement conditions rated as poor were observed on US-84, US-231, and Woodland Drive within the Dothan city limits, as well as small segments of SR-605, US-431, US-231, and SR-134 outside of Ross Clark Circle. No evaluations were available for pavement conditions on city and county-maintained roadways in the Dothan MPA.

Bridges

ALDOT provided a bridge inventory for the Dothan region which summarizes the bridges as either Not Deficient or Structurally Deficient. As **Figure 6-7** illustrates, there are 170 bridges in the Dothan region and none are currently classified as Structurally Deficient. Out of 170 bridges, 66 were rated as Good and 104 were rated as Fair.





Legend

- Responsible Organization
- County/Municipal Maintained Roads;
- ALDOT Maintained Roads;
- SE Wiregrass Area MPO Boundary

Figure 6-5: Road Maintenance Responsibility

Southeast Wiregrass Area MPO
Dothan, Alabama

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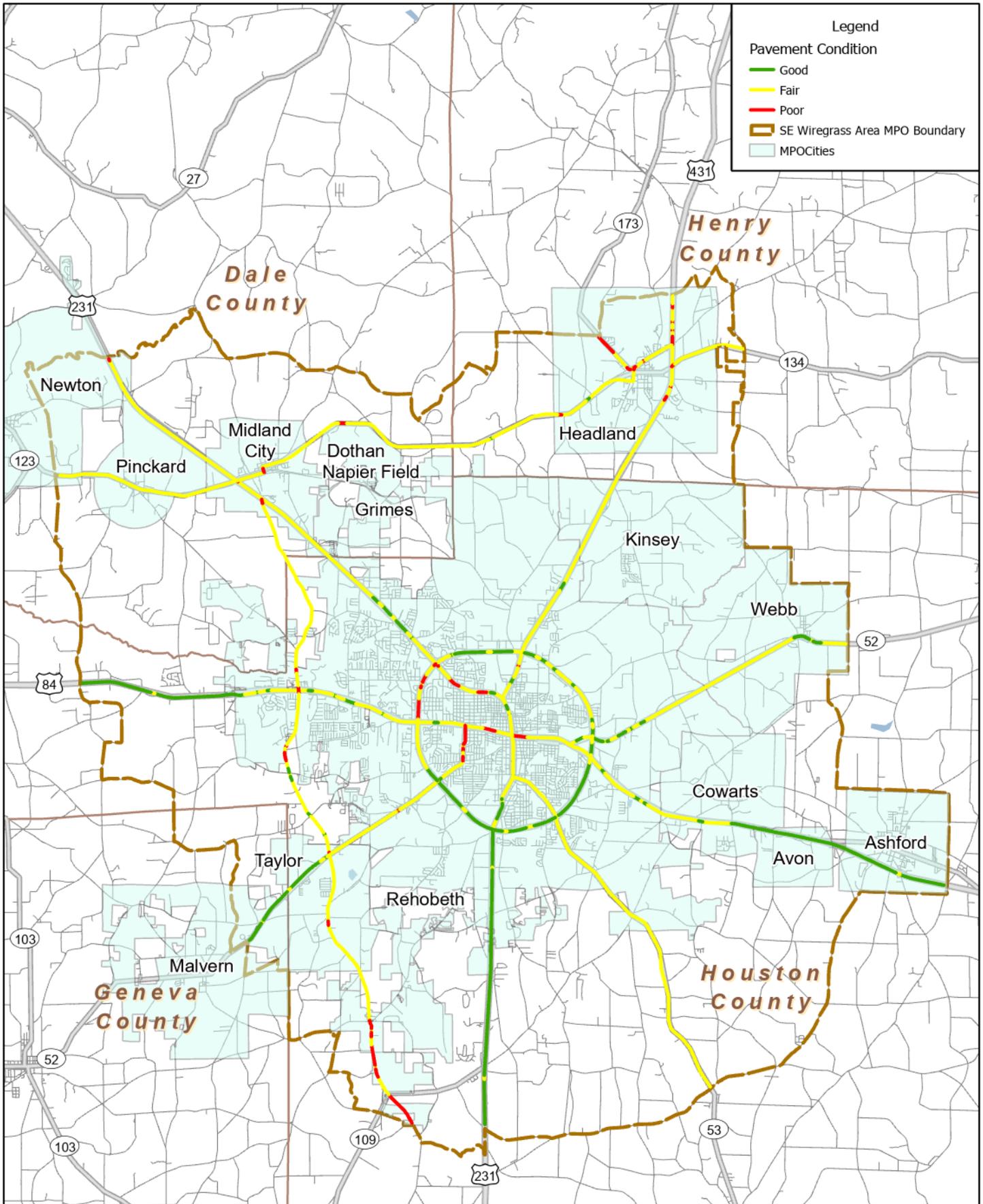


Figure 6-6: Pavement Conditions on ALDOT-Maintained Roads

Southeast Wiregrass Area MPO
Dothan, Alabama

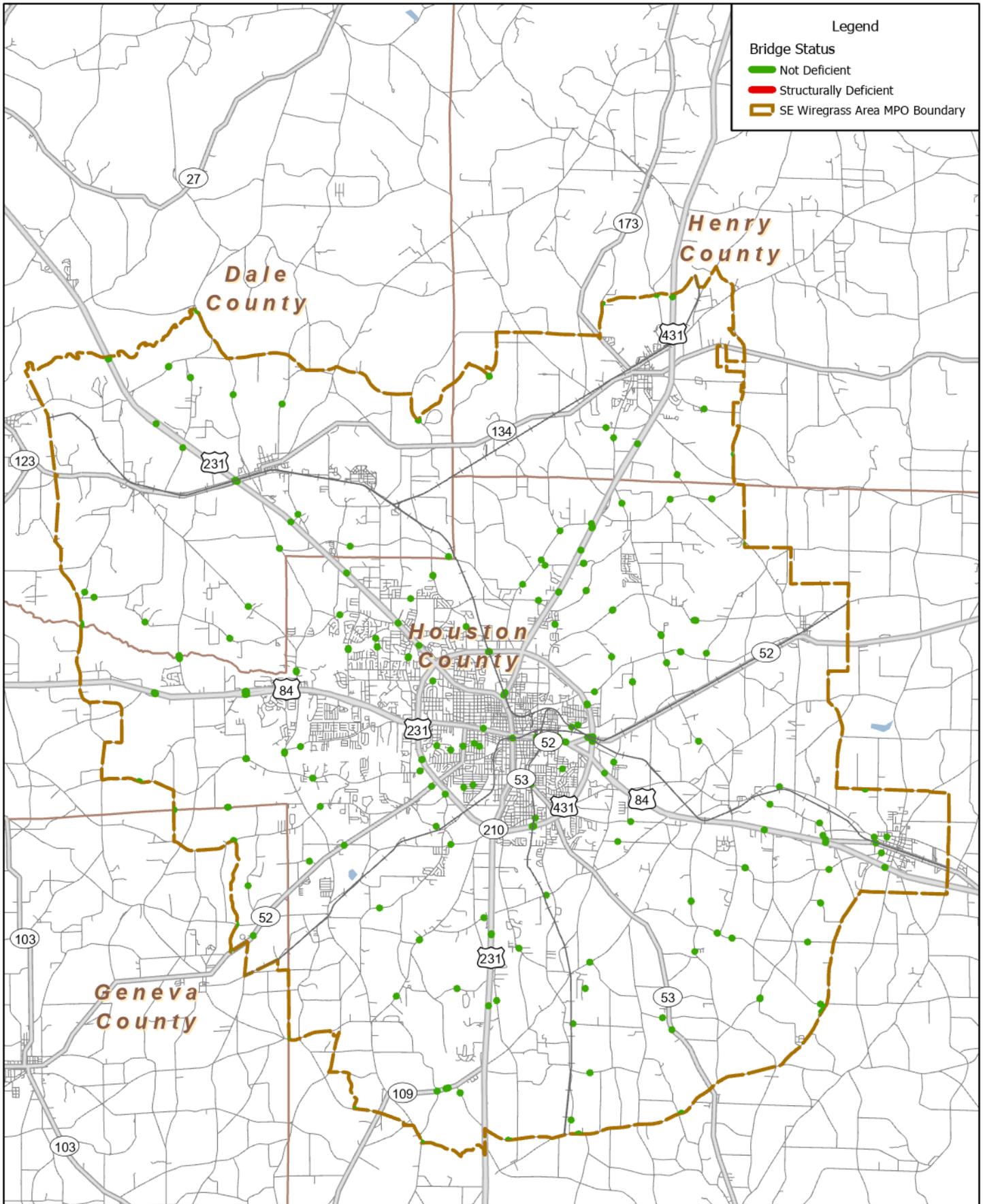
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Legend

- Bridge Status
- Not Deficient (Green dot)
- Structurally Deficient (Red line)
- SE Wiregrass Area MPO Boundary (Orange dashed line)

Figure 6-7: Bridge Map

Southeast Wiregrass Area MPO
Dothan, Alabama

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Traffic, Congestion, and Reliability

The Texas Transportation Institute's (TTI) Urban Mobility Report analyzed traffic congestion and travel reliability across the United States. This report summarized traffic conditions for the year 2017, and illustrated that the Dothan region experiences:

- ✓ 2,717 Total Annual Hours of Delay
- ✓ 32 Hours of Annual Delay per Auto Commuter
- ✓ \$56 Million in Total Annual Congestion Cost
- ✓ \$665 Annual Congestion Cost per Auto Commuter

The Dothan region was compared to similarly sized metropolitan areas including, Brunswick, GA; Anderson, SC; and Houma, LA.

Brunswick, GA

- ✓ 1,488 Total Annual Hours of Delay
- ✓ 21 Hours of Annual Delay per Auto Commuter
- ✓ \$31 Million in Total Annual Congestion Cost
- ✓ \$429 Annual Congestion Cost per Auto Commuter

Anderson, SC

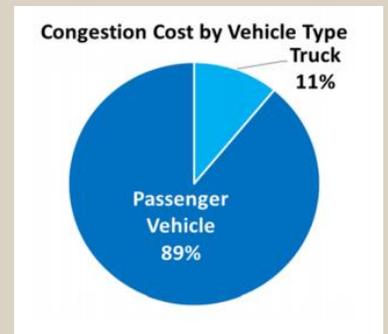
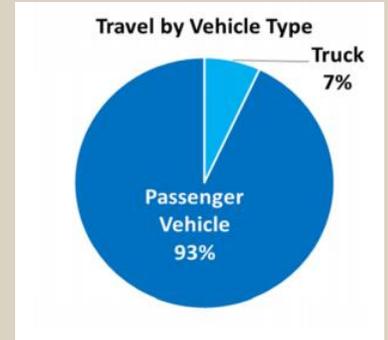
- ✓ 1,544 Total Annual Hours of Delay
- ✓ 18 Hours of Annual Delay per Auto Commuter
- ✓ \$33 Million in Total Annual Congestion Cost
- ✓ \$387 Annual Congestion Cost per Auto Commuter

Houma, LA

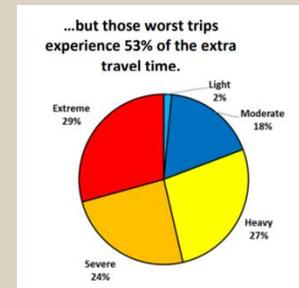
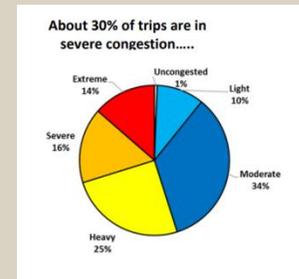
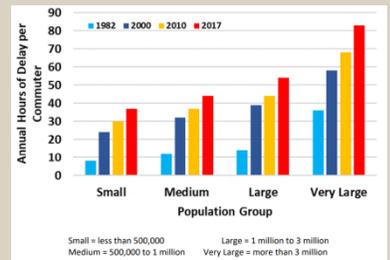
- ✓ 2,806 Total Annual Hours of Delay
- ✓ 18 Hours of Annual Delay per Auto Commuter
- ✓ \$60 Million in Total Annual Congestion Cost
- ✓ \$390 Annual Congestion Cost per Auto Commuter

Compared to peer regions, Dothan generally experiences more traffic delay and lower levels of traffic reliability. Major contributing factors to traffic congestion in the Dothan region include significant truck volumes (illustrated on **Figure 6-8**) which disproportionately impact traffic flow, and a lack of access management along major corridors which also serve as major truck routes in the region. Daily traffic counts and truck percentages were summarized for the SWAMPO region on **Figure 6-9**. US-231, US-84, and Ross Clark Circle as the principal arterials in the region carry the most traffic, with daily volumes approaching

Truck Traffic Disproportionately Impacts Travel Time Reliability



Traffic Congestion Continues to Increase in all Metropolitan Areas



40,000 on US-231 and Ross Clark Circle and exceeding 40,000 on US-84 west of Ross Clark Circle in western Houston County. **Figure 6-10** illustrates the truck volumes in the SWAMPO region. This figure illustrates that the highest truck volumes in the region are present on the northeastern portion of Ross Clark Circle based on Freight Analysis Framework (FAF) estimates with the next highest volumes on the rest of Ross Clark Circle, US-231, and US-431.

The base conditions travel demand model was used to highlight existing roadway segments in the SWAMPO region that experience congestion during one or more of the peak periods during the course of a typical weekday. The volume/capacity ratio, or v/c was mapped on **Figure 6-11** for all of the roadway links in the travel demand model. Congested roadway segments also experience the greatest variability in travel time reliability.

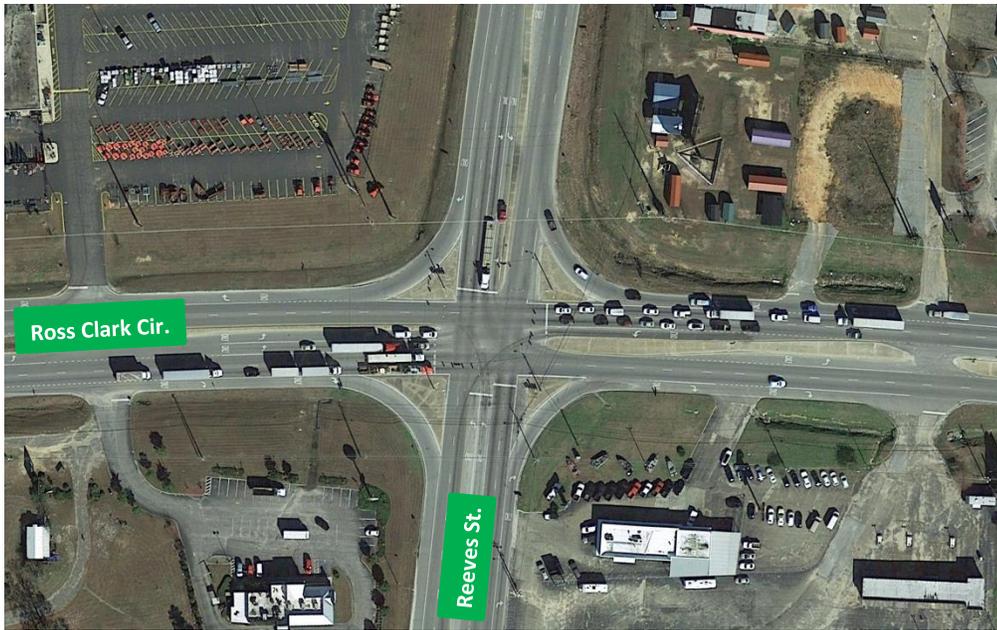
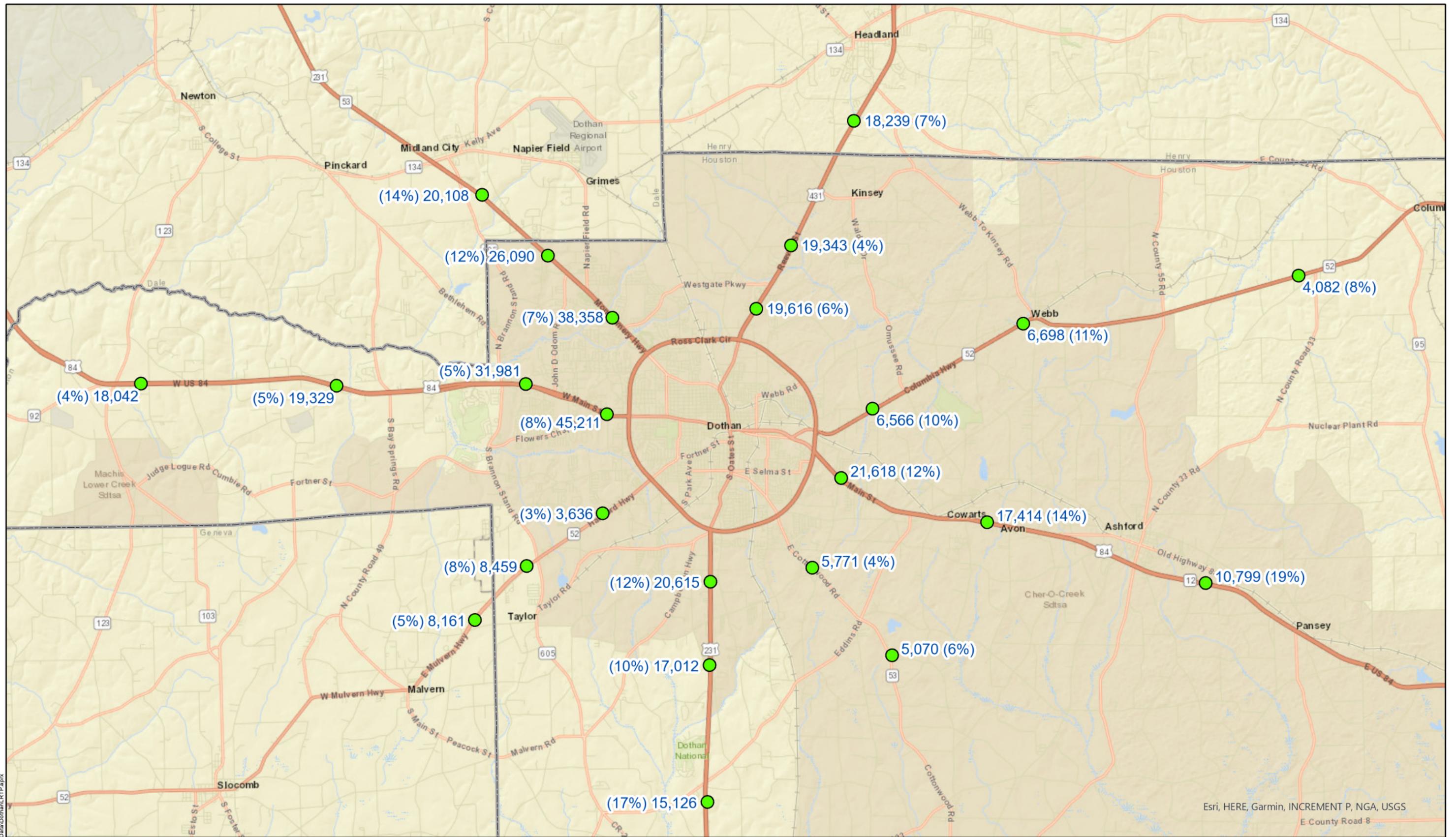


Figure 6-8: High Truck Concentration on Ross Clark Circle





Esri, HERE, Garmin, INCREMENT P, NGA, USGS
E County Road 8

Figure 6-9: Count Locations with Average Daily Traffic - Region



 XX - Average Annual Daily Traffic (AADT)
 (XX) - Truck Percentage (TADT)

 - Count Locations

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Southeast Wiregrass Area MPO
Dothan, Alabama

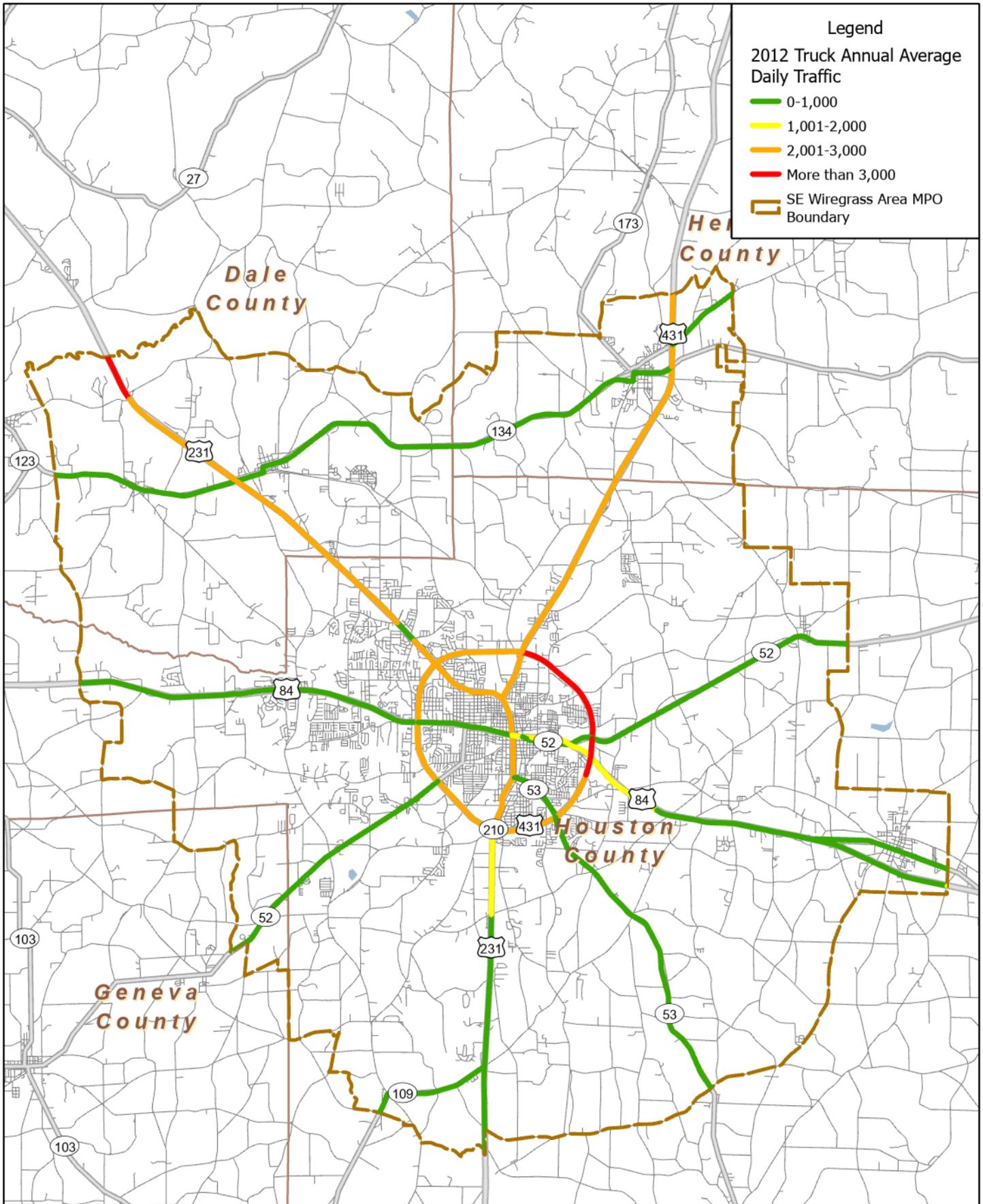


Figure 6-10: 2012 Truck Volumes on Major City Routes

Southeast Wiregrass Area MPO
Dothan, Alabama

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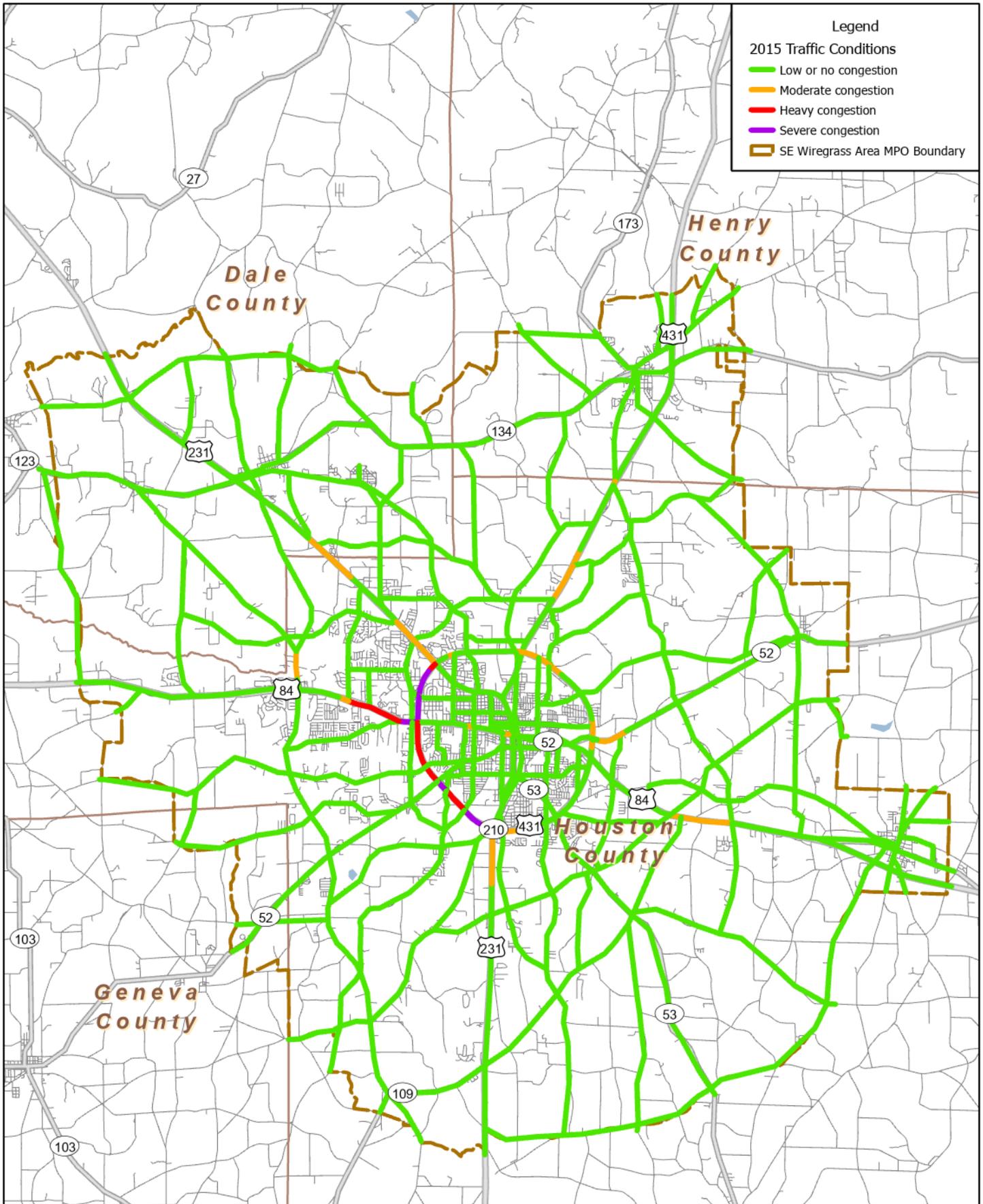


Figure 6-11: 2015 Traffic Conditions from Regional Travel Demand Model

Southeast Wiregrass Area MPO
Dothan, Alabama

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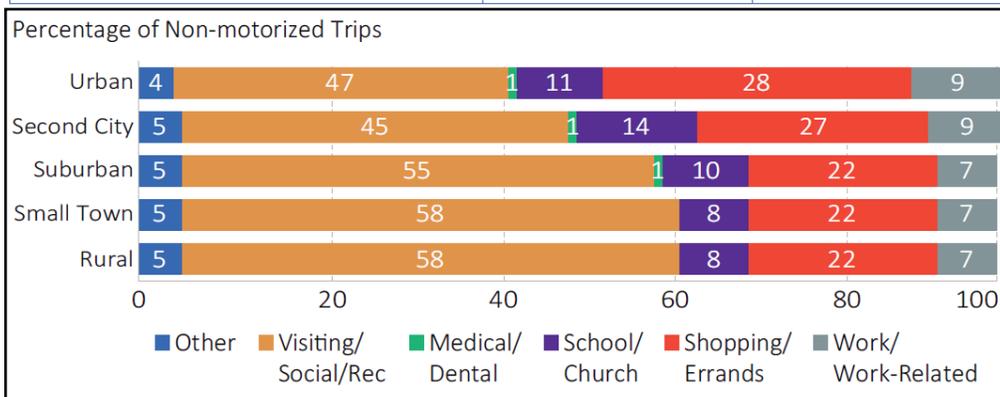
Bicycle and Pedestrian

Bicycle and Pedestrian modes of transportation are typically evaluated together as they are both forms of active transportation that improve the regional air quality and the overall health of the citizens in the region. While these modes are both non-motorized, there are some noticeable differences in speeds, infrastructure requirements, and trip purposes. The average walk speed is roughly three miles per hour while the average bike speed is approximately 10 miles per hour. These differences in speed lead to different infrastructure requirements for each mode. Pedestrian trips are most commonly associated with sidewalks and trails while bicycle trips are typically accommodated by a combination of off road multi-use or designated bike trails and on-road facilities such as shared use lanes and designated bike lanes.

The National Household Travel Survey (NHTS) data illustrates that the primary trip purposes for pedestrian and bicycle travel are social/recreational, family/personal business, school/church, and shopping. As **Figure 6-12** illustrates, these trends are consistent across all area types.

Figure 6-12 Non-Motorized Trip Purpose

Trip Purpose	Weekday	Weekend
To/from work	9%	4%
Work-related business	2%	0%
Shopping	12%	19%
Family/personal business	16%	8%
School/church	12%	7%
Medical/dental	1%	0%
Visit with friends/relatives	6%	10%
Social/recreational	37%	49%
Other	5%	3%
Total	100%	100%



Pedestrian Facilities:



S Saint Andrews Street



W Lafayette Street



Morning Glory Lane



S Oates Street



Girard Avenue

Trail and Bicycle Facilities

Several roadways in the Dothan area are designated as bike routes. Most of these bike routes are designed as shared use lanes with sharrows to accommodate both vehicles and bicycles. The majority of these are located in the area within Ross Clark Circle and to the northwest, in the area between US-231 and US-84. Roadways with these shared use designations include:

- SR-52, between South Brannon Stand Road and Scott Road
- South Woodburn Drive, between US-84 and Flowers Chapel Road
- John D Odom Road, between Whatley Drive and Murphy Mill Road
- Whatley Drive, between John D Odom Road and Westgate Parkway
- Burbank Street, between John D Odom Road and Westgate Parkway
- Westgate Parkway, between US-231 and US-84
- Choctaw Street, between Recreation Road and North Park Avenue
- North Park Avenue, between US-231 and Ross Clark Circle
- Chickasaw Street, between North Park Avenue and Montana Street
- Selma Street, between Timbers Drive and Haven Drive
- South Saint Andrews Street, between Selma Street and East Powell Street
- East Lafayette Street, between South Saint Andrews Street and 6th Avenue
- North Range Street, between Webb Road and East Burdeshaw Street
- 3rd Avenue, between Columbia Highway and Ross Clark Circle

Roadways with designated bike-only lanes include:

- West Carroll Street, between South Park Avenue and South Oates Street
- South Edgewood Drive, between Fortner Street and Selma Street
- Health Sciences Boulevard, between US-84 and Cowarts Road

Bicycle and Trail Facilities:



W Carroll Street



Health Sciences Boulevard



S Edgewood Drive



Woodburn Drive



W Main Street

A pedestrian trail is present at the following location:

- Along US-84, headed southeast, turning onto Cowarts Road, before ending at Health Sciences Boulevard

As illustrated on **Figure 6-13**, most of the designated bike routes in the area are connected. Some gaps are present at the following locations:

- South Woodburn Drive – Disconnected from routes along both Whatley Drive to the north and Westgate Parkway to the east
- Chickasaw Street – Disconnected from the route along South Saint Andrews Street to the east
- West Carroll Street – Disconnected from the route along South Saint Andrews Street to the east
- North Range Street – Disconnected from the route along 3rd Avenue to the south

Sidewalks, Crosswalks, and ADA Accessibility

The largest concentration of sidewalks in the Dothan area is located in the downtown grid area within Ross Clark Circle as illustrated on **Figure 6-14**. Additional sidewalks within Ross Clark Circle are located near the schools in the area. Sidewalks are generally present at the school locations, but sidewalks are not usually present in the nearby neighborhoods. Additional sidewalks are present in various neighborhoods outside of Ross Clark Circle, mostly to the south and west of downtown.

The downtown area has a well-connected pedestrian network. Sidewalks in neighborhoods outside of downtown are typically not connected to the major roadways. No sidewalks are present linking the areas outside of the Ross Clark Circle loop to the areas inside the loop.

Some sidewalks are present in the smaller cities and towns surrounding Dothan in the metropolitan area. These sidewalks are generally confined to the downtown areas of these cities. The additional cities in the metropolitan area with sidewalks include Pinckard, Midland City, Headland, Webb, Cowarts, and Ashford.

Though no assessment of pedestrian and bicycle facilities was conducted during the 2045 LRTP development, the City of Dothan

Bicycle and Pedestrian Accommodations:



N Oates Street



N Oates Street



E Main Street



Woodland Drive



Stringer Street

provided the following general information regarding sidewalk/ADA conditions in the region:

- Most existing sidewalks along major roadways do not meet the five foot width required by ALDOT and the City of Dothan
- Most intersections along major roadways lack crosswalks and ADA ramps
- Where crosswalks are provided along roadways, they are in fair to good condition but generally lack pedestrian signals and signage and ADA ramps

Existing Plans

The City of Dothan adopted its current Bicycle and Pedestrian Plan in 2011 for the purpose of identifying needs and improving the city's bicycle and pedestrian facility network. Improvements were recommended with the goal of increasing the safety, attractiveness, and legitimacy of bicycling and walking as reasonable transportation alternatives. Highlights from the 2011 Plan include:

- The selection and implementation of suitable bike routes
- Improved bicycle connectivity between notable destinations
- Shared-use trail options
- Improved pedestrian network, increasing connectivity between notable destinations
- Pedestrian facility improvements in the areas surrounding all schools, recreational facilities, and major shopping areas
- Improvements to all existing pedestrian facilities to meet the City's standards and ADA requirements
- Construction of 86 miles of new pedestrian facilities to be added to the City's existing 81 miles of pedestrian network

The ALDOT Statewide Bicycle and Pedestrian Plan illustrated on **Figure 6-15** established a statewide vision to support the bicycle and pedestrian modes of travel in the State of Alabama. The statewide plan identifies two priority bicycle routes in the Dothan region. One route is in the east-west direction generally paralleling US-84 and SR-52, and the other route is in the north-south direction generally paralleling US-231 and US-431.



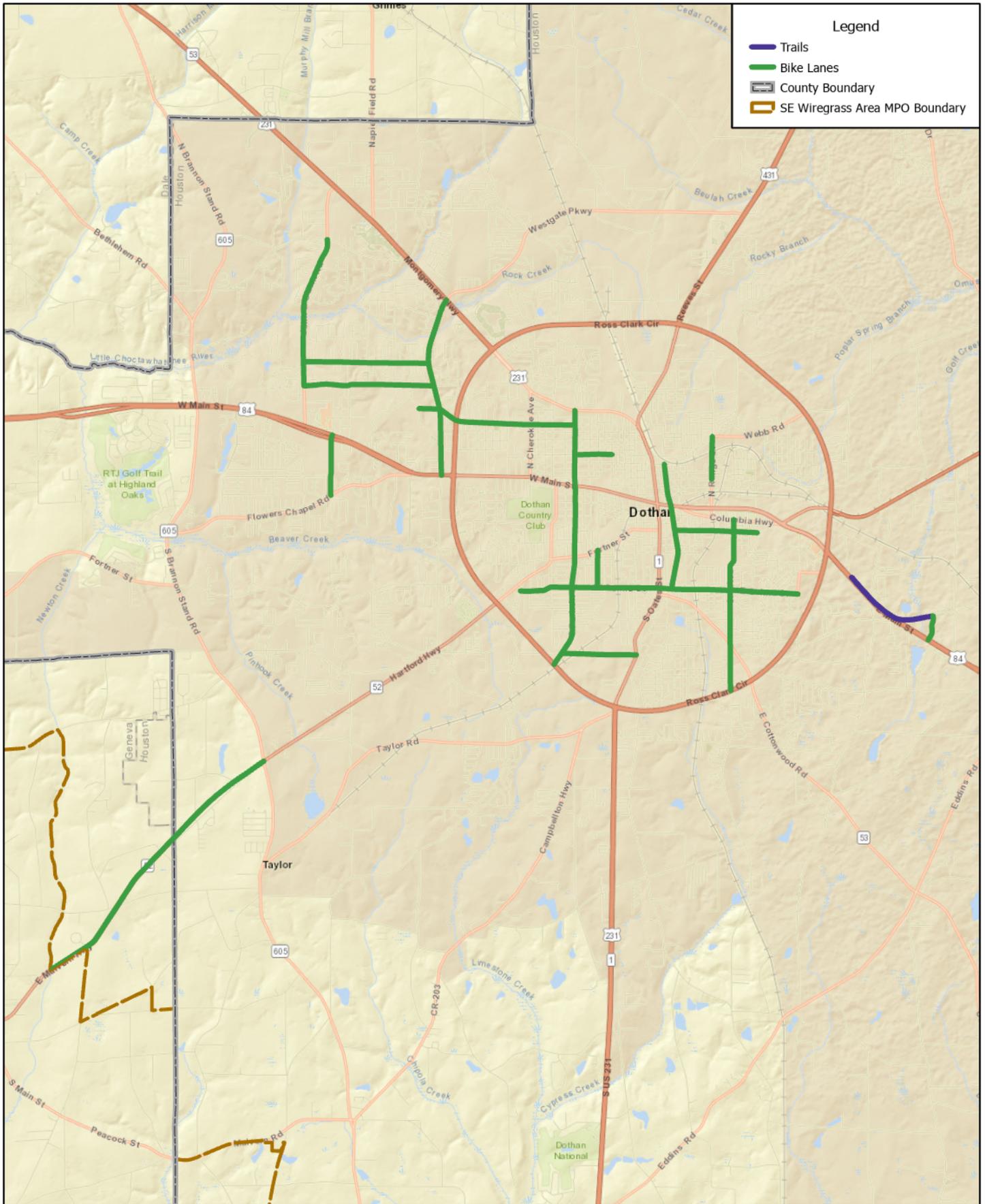


Figure 6-13: Bicycle and Trail Facilities

Southeast Wiregrass Area MPO
Dothan, Alabama

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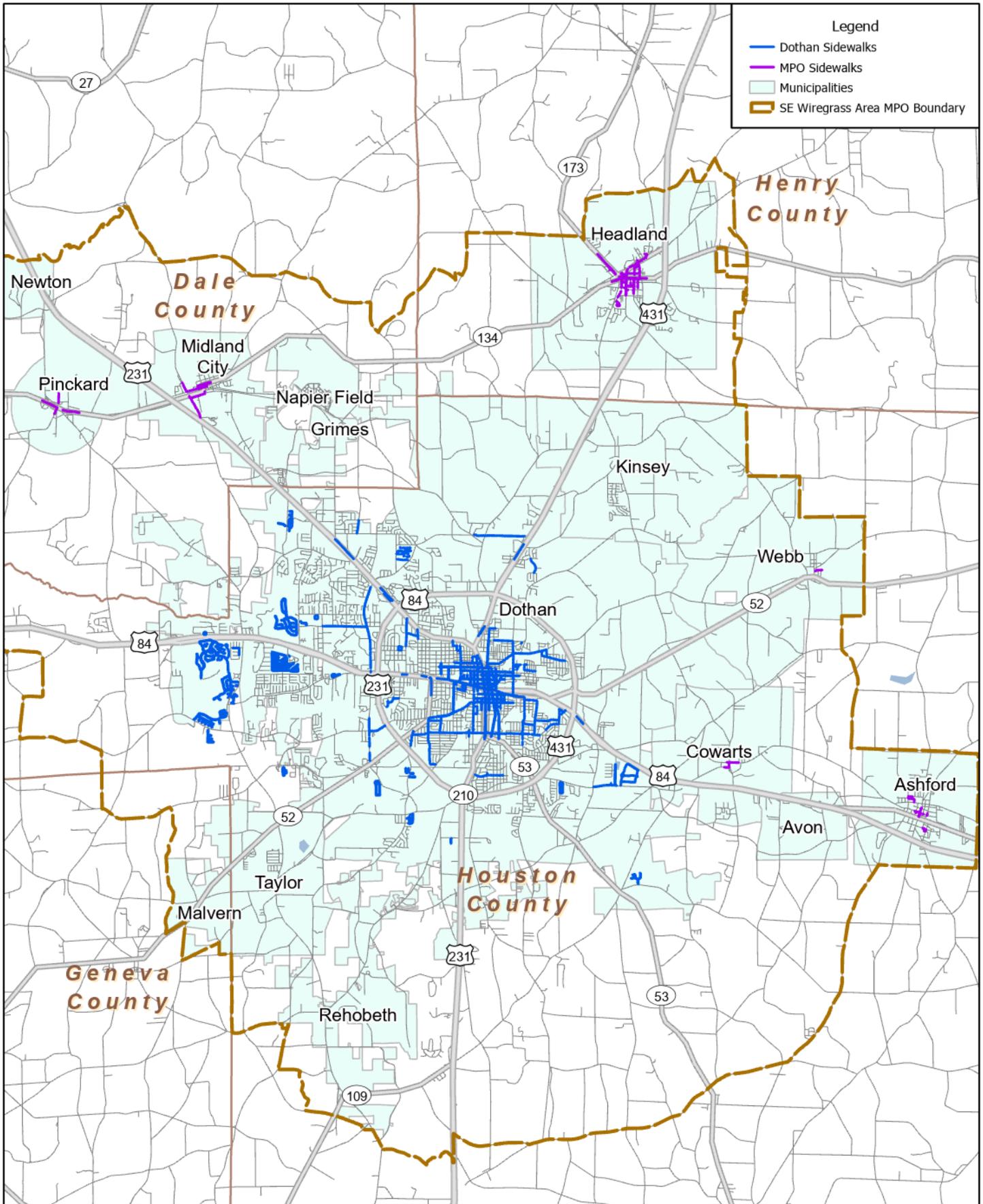


Figure 6-14: Sidewalks

Southeast Wiregrass Area MPO
Dothan, Alabama

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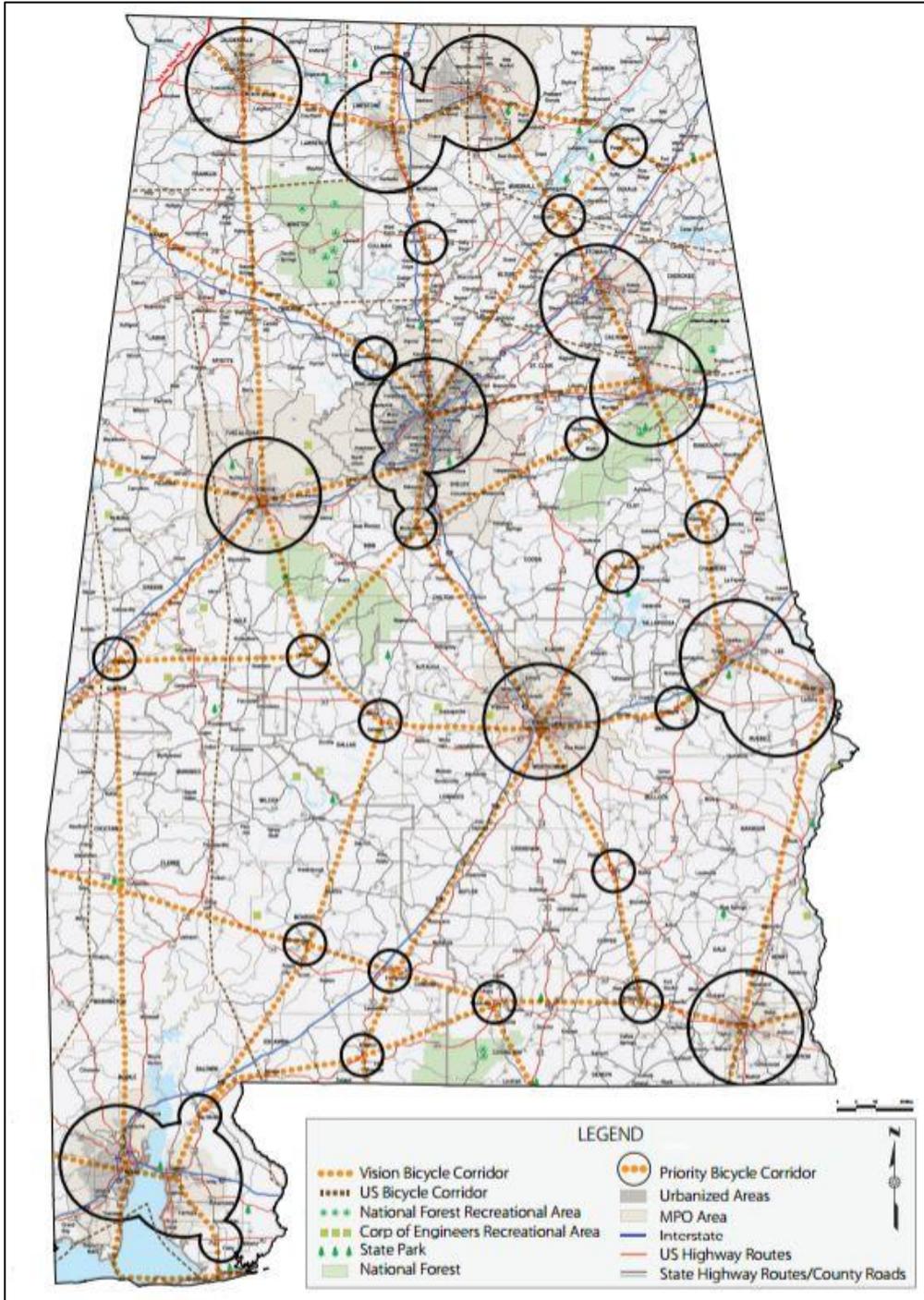


Figure 6-15: ALDOT Bicycle and Pedestrian Plan Map - 2017



Pedestrian and Bicycle Demand Analysis

There is no pedestrian or bicycle traffic count data available in the Dothan MPA. The pedestrian and bicycle demand analysis will be discussed later in more detail.

Bicycle and pedestrian trips make up less than two percent of work commute trips in the Dothan Metropolitan Planning Area and the City of Dothan.

Table 6-3: Means of Transportation to Work - 2018

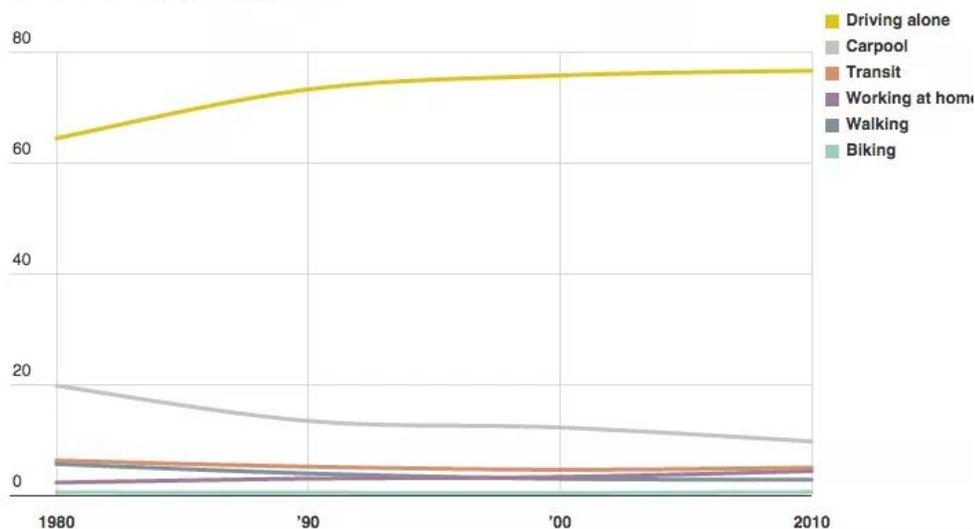
Mode	Dothan	MPA	U.S.
Drove Alone	82.7%	88.4%	76.3%
Carpooled	10.9%	7.4%	9.0%
Public Transportation	0.0%	0.0%	4.9%
Walked	0.7%	0.6%	2.6%
Other	1.0%	0.9%	1.9%
Worked at Home	4.7%	2.7%	5.3%

Source: U.S. Census Bureau

Historically, bicycle and pedestrian trips have trended downward in many metropolitan areas as the urban form continued to develop in a more suburban pattern. Dothan, like many metropolitan areas in the United States, saw extensive automobile-oriented suburban growth during the latter half of the 20th century. While this growth pattern

Figure 6-16: National Commuting Trends

Modes of commuting, by percentage of workers



Source: Commuting in America 2013

Strategies to Encourage Pedestrian and Bicycle Travel Include:



Mixed-use Development



Recreational Trails



Improved Transit Service

enabled workers to live in larger houses on larger lots, it also meant that they typically lived too far away from their workplace to make walking or biking to work an attractive option. In areas where transit was not available, this meant an almost complete reliance on the automobile to get to work, either by driving alone or carpooling.

For many of the same reasons that walking and biking to work decreased in recent decades, school children have become less likely to walk or bike to school. This trend is a combination of the suburban land form and the recent tendency of new schools to locate near the urban fringe to reduce operating and capital costs because of more affordable, available land. This is in marked contrast to the historical role of the school in American cities as a neighborhood anchor. According to the National Center for Safe Routes to School's 2011 report, How Children Get to School:

- From 1969 to 2009, the percent of children 5 to 14 years of age that usually walked or bicycled to school dropped from 48 percent to 13 percent
- From 1969 to 2009, the percent of children in grades K–8 that lived within one mile of school dropped from 41 percent to 31 percent.

As travel demand models are not estimated and designed to model pedestrian and bicycle trips, GIS procedures were used to estimate the demand for pedestrian and bicycle trips in the Dothan region. A number of variables were used in the GIS analysis including:

- Household Density
- Employment Density
- Activity (Combined Employment/Household) Density
- Proximity to Schools
- Proximity to Parks and Recreational Trails
- Availability of Sidewalks and Bicycle Lanes
- Percentage of Zero Vehicle Households
- Percentage of Low-Income Households
- Proximity to Major Attractions

The demand analysis for bicycles and pedestrians was similar, with the major difference being the travel shed that is evaluated. Given the differences in speeds between pedestrian and bicycle trips, different GIS buffers were used for each mode. A half-mile buffer was used for

Variables Impacting Pedestrian and Bicycle Demand Include:



Source: en.wikipedia.org
Household and Employment Density



Source: wtv.com
Proximity to Schools



Source: youtube.com
Proximity to Parks



Source: seeclickfix.com
Availability and Condition of Sidewalks



Source: avenelarts.com
Proximity to Major Attractions

pedestrian demand and a 1.5 mile buffer was used for bicycle trips. The results of this analysis are illustrated on **Figures 6-17 and 6-18**.

The GIS mapping exercise was a fine-grained analysis that assessed an area's potential demand for pedestrian and bicycle trips on a scale of 1-100. The calculated values were then used to develop a heat map illustrating the potential pedestrian and bicycle demand. It should be noted that this process estimates relative demand based on the variables mentioned previously and does not represent a project-level type traffic forecast for pedestrian and bicycle trips.



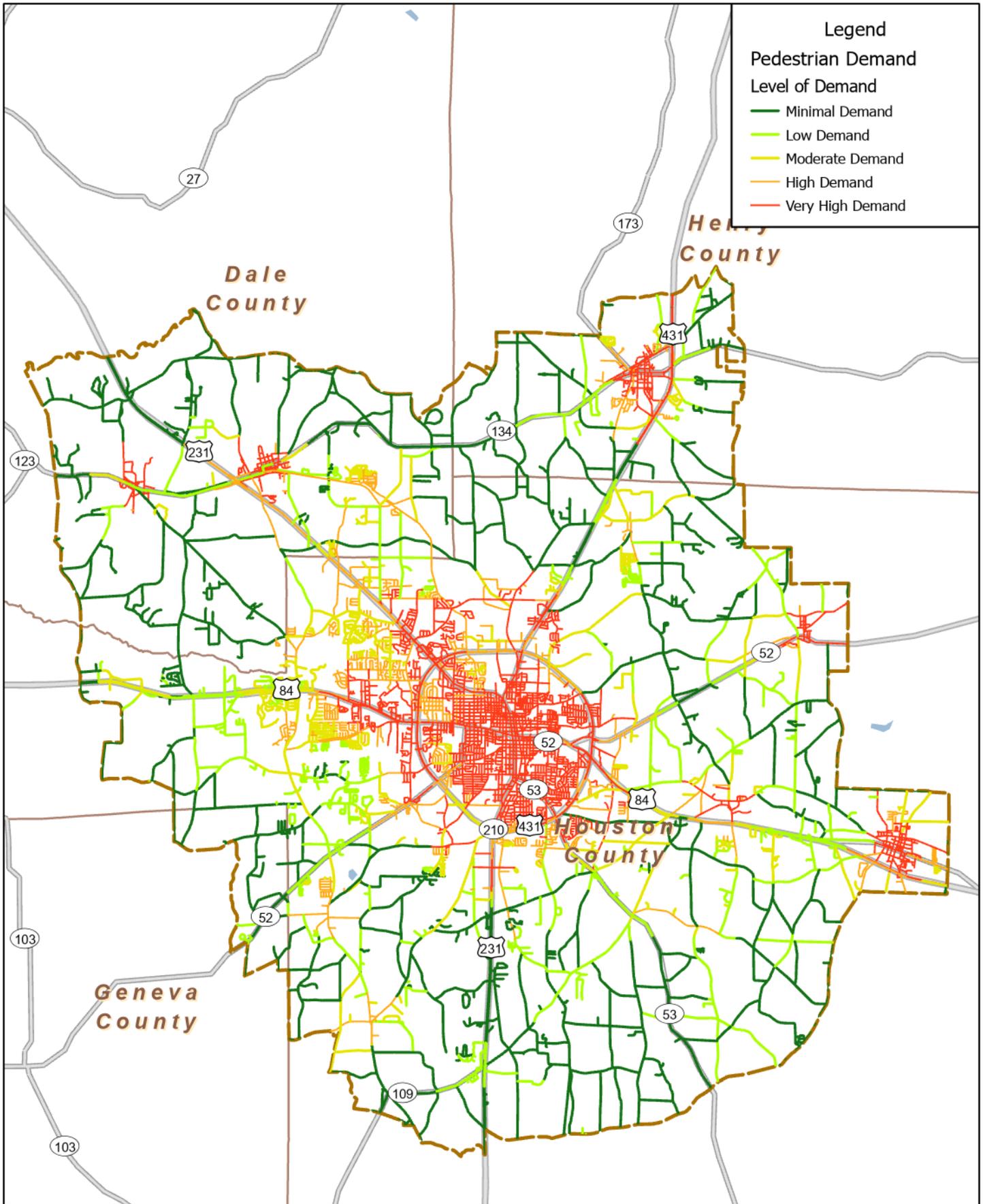


Figure 6-17: Pedestrian Demand

Southeast Wiregrass Area MPO
Dothan, Alabama

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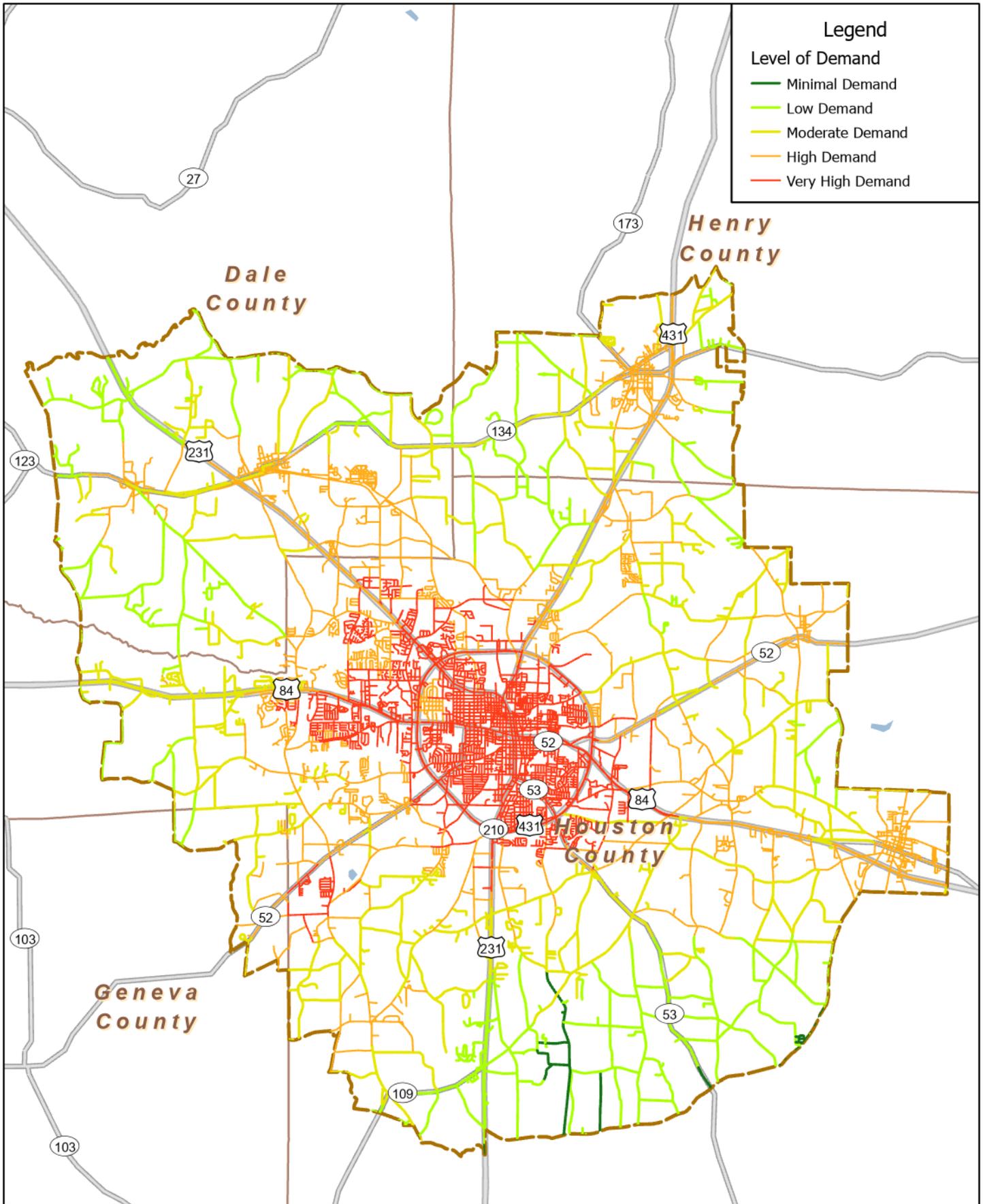


Figure 6-18: Bicycle Demand

Southeast Wiregrass Area MPO
Dothan, Alabama

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Public Transit

Public transit is an important part of an urbanized area, ideally serving as an effective mode of transportation for a city's citizens to access employment, medical care, shopping, restaurants, and other major destinations in the city. Public transit is often especially helpful for those in lower income areas or for those without access to a personal vehicle. **Figure 6-19** illustrates the distribution of zero vehicle households in the region. The highest concentrations of zero vehicle households in the region are located in the central, eastern and northeastern areas of the City of Dothan. Benefits of public transit include the increase of local business accessibility, reduction of traffic congestion, reduction of vehicle emissions, and improvement in a city's walkability.

Transit options for the Dothan area include paratransit services offered by the Wiregrass Transit Authority. The service area for this option is limited to the City of Dothan and Houston County. The Wiregrass Transit Authority currently uses 20 vehicles for this service, with all of these vehicles being ADA accessible. Citizens seeking to use this transit service must call at least one day in advance to arrange pick-up. Current rates include a fee of \$2 for those inside the city limits in Dothan, \$5 from Webb, Ashford, Rehobeth, Taylor, and Cottonwood, and \$8 from Gordon, Columbia, and Wicksburg.

A Greyhound bus station, Flying J Travel Plaza, is also located in Dothan. This station is located on the southern side of the city, in the northeast corner of the Ross Clark Circle/South Oates Street intersection.

The NHTS data shown on **Figure 6-20** illustrates that in small urban areas like Dothan, transit only accounts for 2.3% of all trips. According to the survey data, the predominant trip types are Home-Based-Work (HBW), shopping/errands, and social/recreation.

Public Transit in Dothan Region:



Source: searpcdc.org



Source: searpcdc.org



Source: searpcdc.org



Source: searpcdc.org



Source: greyhound.com

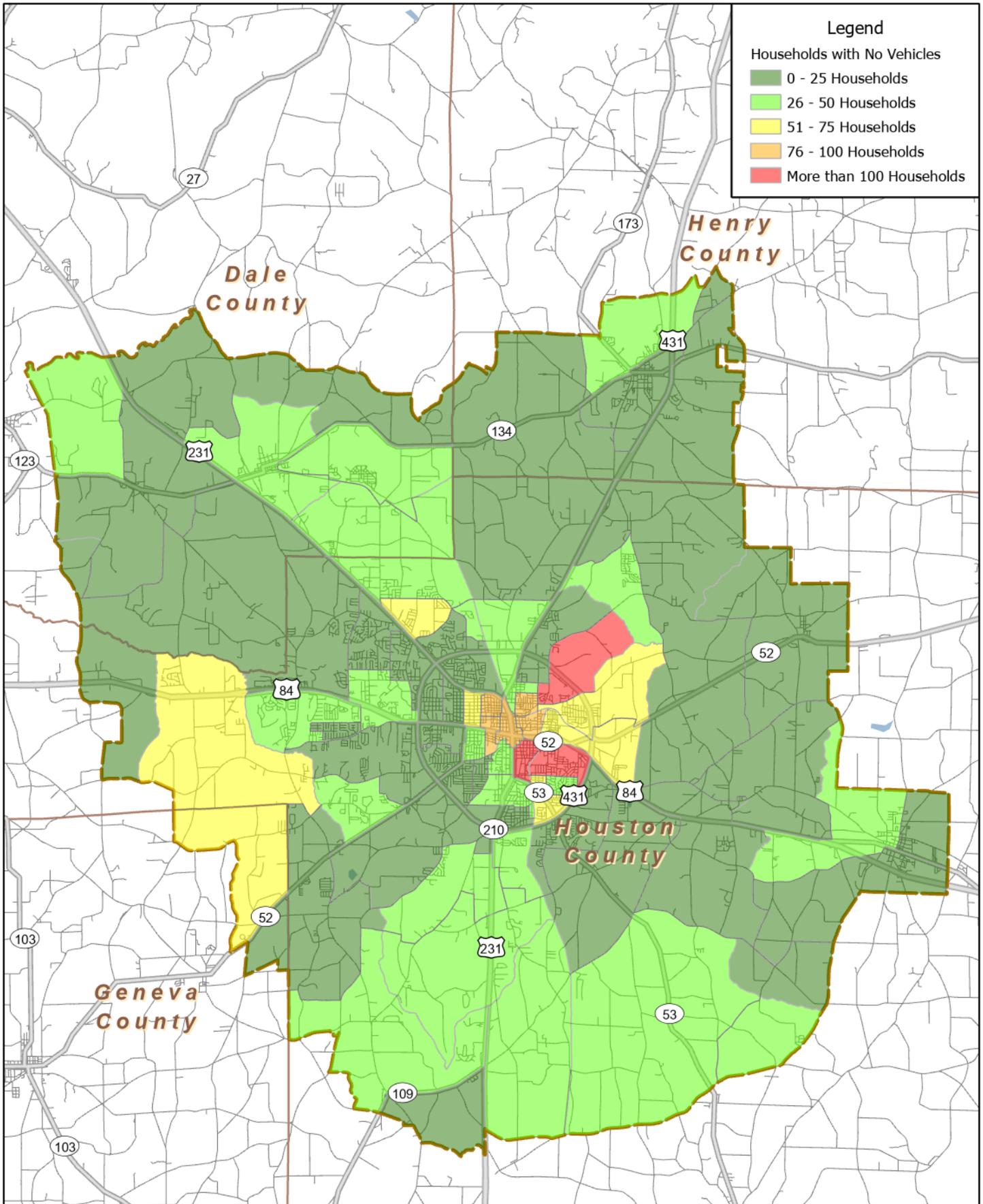


Figure 6-19: Households with No Vehicles

Southeast Wiregrass Area MPO
Dothan, Alabama

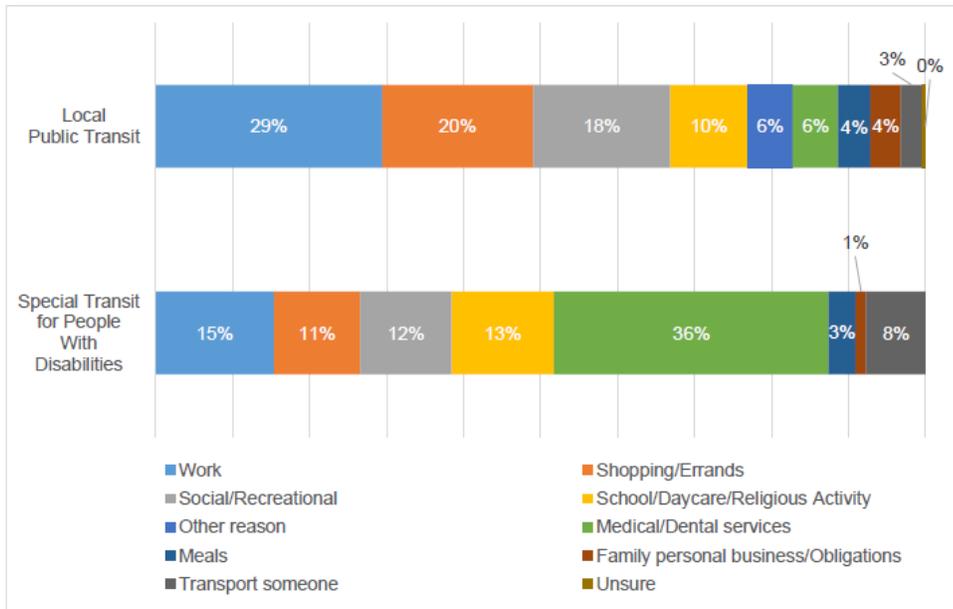


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Figure 6-20 Public Transit Trip Purpose



*Note: Local Public Transit includes local public bus, commuter bus, shuttle bus, commuter train, subway/elevated train, street car/trolley, special transit-people w/disabilities, and ferry.
Source: 2009 National Household Travel Survey*

As the Dothan travel demand model does not include a mode choice model, a GIS analysis was conducted to estimate the relative transit demand as a function of the following variables:

- Census blocks with minimum population densities of five people or more per acre. Higher densities influence transit demand because the clustering of activities attracts more trips.
- Census block groups with a concentration of low-income households, defined as block groups with median household incomes below \$25,000. Even if the density threshold above is not met, an area with lower densities but higher concentrations of low-income households is likely to generate greater transit demand.



Table 6-4: Minimum Density Requirements for Transit Service

Type of Service	Minimum Housing Density Dwelling Units per Acre (DUA)	Minimum Population Density/ Minimum Non-Residential Floor Space
Local Bus (1 hour service)	4 – 5	3,000 – 4,000 people per square mile. 5 – 8 million square feet concentration of non-residential floor space.
Intermediate Bus (1 bus every ½ hour)	6 – 7	5,000 – 6,000 people per square mile. 8 – 20 million square feet concentration of non-residential floor space.
Frequent Level Bus (A bus every 10 minutes)	15	10,000 people per square mile. 15 – 20 million square feet of non-residential floor space.
Light Rail	9 (between ¼ and ½ mile of route)	35 – 50 million square feet of non-residential floor space.
Commuter Rail	1 – 2	100 million square feet of non-residential floor space.

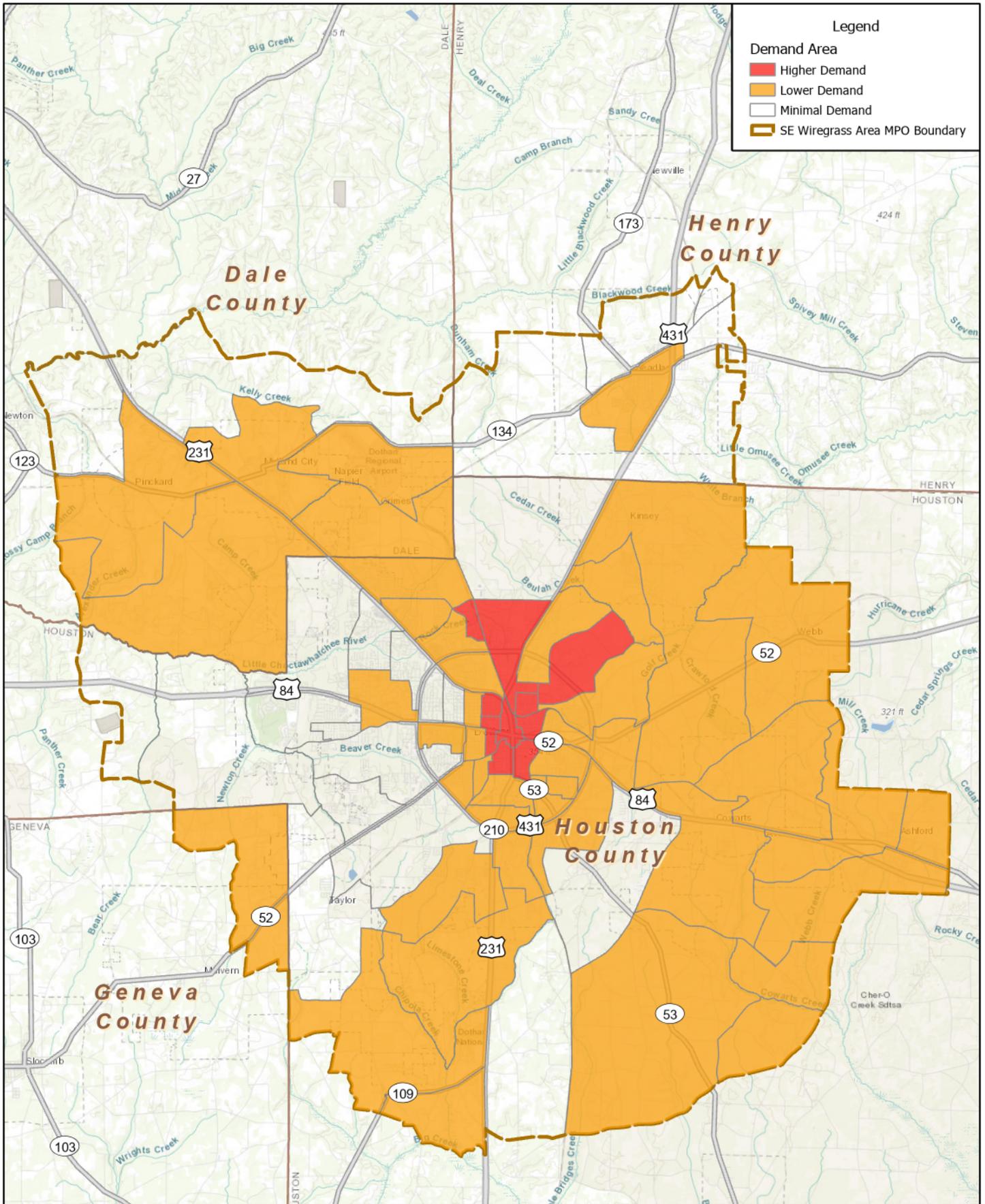
Source: ITE “A Toolbox for Alleviating Traffic Congestion”

Using this criteria, transit demand is concentrated in three distinct areas in the region as illustrated on **Figure 6-21**, the central portion of the City of Dothan including many of the historic districts and the downtown area, the northeast side of the City of the Dothan extending northeast past Ross Clark Circle, and the north side of the City of Dothan extending past Ross Clark Circle.

Existing Plans

The Southeast Wiregrass MPO Fixed Route Transit Feasibility Study completed in 2010 evaluated the feasibility of developing a fixed-route transit system in the Dothan MPA region. That study determined that the implementation of a fixed-route transit system may not be cost-feasible. The study’s assessment of potential latent transit demand for the fixed-route alternatives indicated that the system could potentially attract approximately 7,000 to 8,000 trips per month but would not significantly alleviate the demand on the existing paratransit operations. Therefore, any fixed-route system would create additional operating and capital costs for WTA. Based on these findings, the study recommended that the City of Dothan consider the implementation of a deviated-route system along preferred corridors. The study determined that the deviated-route system would attract more ridership (approximately 12,000 trips per month) at a lower operation cost (\$550,000 annually) than any of the fixed-route alternatives.





Legend

- Higher Demand
- Lower Demand
- Minimal Demand
- SE Wiregrass Area MPO Boundary

Figure 6-21: Regional Transit Demand

Southeast Wiregrass Area MPO
Dothan, Alabama

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The Human Services Coordinated Transportation Plan for the Southeast Alabama Region 2015-2017 is the most recent coordinated transportation planning process for the region, conducted in coordination with the ALDOT and the Alabama Association of Regional Councils (AARC). A summary of the recommendations from this plan include:

- Expanding public transportation systems into Coffee, Dale, Geneva, and Henry counties
- Expanding the service area of the Eufaula-Barbour Transit Authority to include all of Barbour County
- Creating strategies for non-emergency medical transportation for out-of-county or out-of-region destinations
- Expanding service hours to include night and weekend public transportation services
- Increasing utilization of existing transportation vehicles and efficiency of services
- Improving coordination between jurisdictions and agencies to reach underserved areas
- Implementing a fixed route transit system for the Dothan area
- Expanding access for transportation opportunities to target populations and activities
- Leveraging resources from various agencies to aid in transit improvements
- Developing communication and education strategies to provide service information to agencies and target populations
- Cultivating additional partnerships with private transportation providers

This plan illustrated a number of shortcomings in the coordinated planning process in Southeast Alabama that serve as impediments to accessibility and mobility for the target population of older adults, persons with disabilities, and low-income individuals. Most of these impediments can be attributed to fundamental misunderstandings of transportation services available, funding resources, and geographic focus.

However, the plan noted that there are many successfully working partnerships that are occurring and ongoing within the Southeast Alabama region that are providing essential transportation services to target populations. The challenge is that the framework of public transportation within Southeast Alabama is generally fragmented, due



to having multiple local public transportation providers and specialized population providers, with no overlying regional process.

Recent Operating Characteristics

Table 6-5 illustrates the operating characteristics for the Wiregrass Transit Authority (WTA) from Fiscal Year 2014 to 2018. This information includes the Dial-a-Ride service and contract services utilizing Section 5307 FTA funds.

One noticeable change during the selected time period is the increase in service area population due to the expansion of the service area in 2015, leading to noteworthy changes in operating characteristics between 2014 and 2015. Using historical trends, it was noted that the passenger trips per year had decreased every year from 2011 to 2017, until a slight increase was recorded in 2018. The total operating expenses had also decreased every year during the study period until a noticeable increase was seen in 2018 expenses.

The farebox recovery ratio, a percentage reflecting the amount of the operating expenses that is made up for by the fare revenue, is shown to be holding steadily around three percent, peaking in 2016.

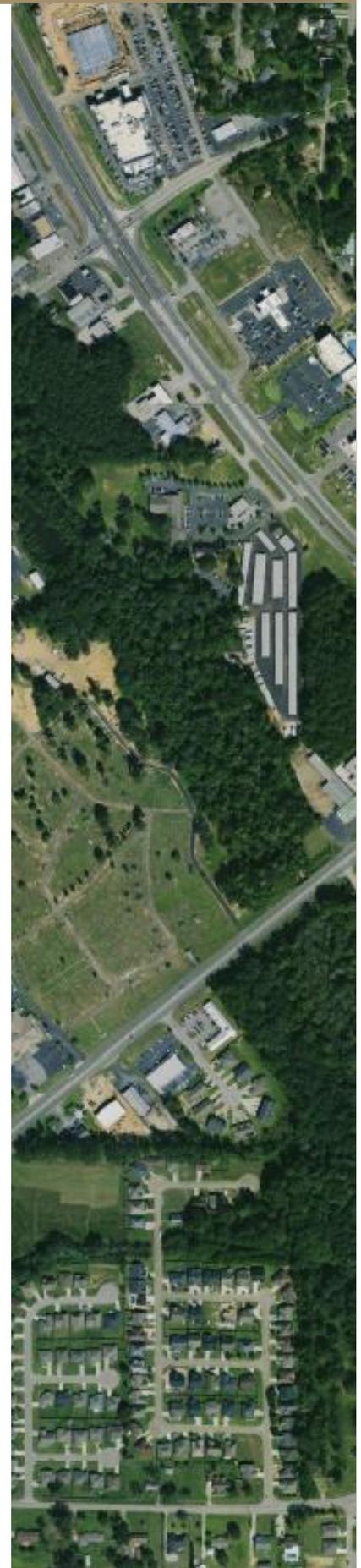
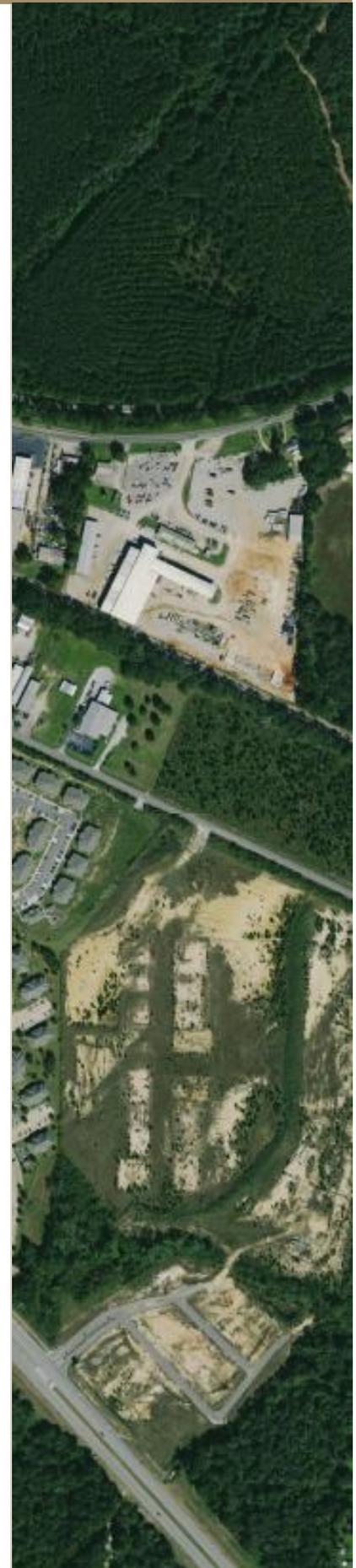


Table 6-5 Recent Operating Characteristics for WTA

General Performance	2014	2015	2016	2017	2018
Service Area Population	90,000	245,838	245,838	245,838	245,838
Passenger Trips	156,234	135,889	125,741	111,777	115,400
Total Operating Expense	\$2,955,760	\$2,598,299	\$2,000,072	\$1,951,240	\$2,491,256
Service Supply and Quality					
Vehicles Operated in Maximum Service	44	44	43	41	22
Vehicle Revenue Miles	1,416,329	1,244,830	1,210,527	1,092,380	1,090,048
Vehicle Revenue Hours	84,909	74,736	70,855	67,128	63,167
Average Age of Fleet	4.4	5.4	6.4	7.4	8.4
Service Consumption					
Passenger Trips per Capita	1.74	0.55	0.51	0.45	0.47
Passenger Trips per Revenue Mile	0.11	0.11	0.10	0.10	0.11
Passenger Trips per Revenue Hour	1.84	1.82	1.77	1.67	1.83
Efficiency					
Operating Expense per Capita	\$32.84	\$10.57	\$8.14	\$7.94	\$10.13
Operating Expense per Passenger Trip	\$18.92	\$19.12	\$15.91	\$17.46	\$21.59
Operating Expense per Revenue Mile	\$2.09	\$2.09	\$1.65	\$1.79	\$2.29
Operating Expense per Revenue Hour	\$34.81	\$34.77	\$28.23	\$29.07	\$39.44
Farebox Recovery					
Fare Revenue	\$85,170	\$77,934	\$69,391	\$58,479	\$67,892
Farebox Recovery Ratio	2.9%	3.0%	3.5%	3.0%	2.7%



Peer System Comparison

The Wiregrass Transit Authority was compared to peer systems in the State of Alabama including Decatur, Florence, and Opelika. These regions were selected because of their comparable size, population density, and transit systems to those noted for WTA. The selected regions use demand-responsive systems for transit, similar to WTA within the urban areas rather than fixed-route systems which are used in the larger urban areas in the state.

Table 6-6 reflects the urban area characteristics for the comparable regions and for the SWAMPO region. **Table 6-7** reflects the operating characteristics for the transit systems of the aforementioned regions.

Table 6-6 Selected Urbanized Areas with Peer Transit Systems

Urbanized Area	Year	City Population	Square Miles	Population Density (Pop./Sq.Mi.)	Transit Provider
Decatur, AL	2018	54,617	61	895	MCATS*
Florence, AL	2018	40,104	27	1,485	NACOLG**
Opelika, AL	2018	29,798	60	497	LRPT***
Dothan, AL	2018	67,872	90	754	WTA****

* - Morgan County Area Transportation System
 ** - Northwest Alabama Council of Local Governments Transit
 *** - Lee-Russell Public Transit
 **** - Wiregrass Transit Authority



Table 6-7 Operating Characteristics for Peer Systems

Transit System Characteristics	MCATS (2016)	NACOLG (2018)	LRPT (2018)	WTA (2018)
Service Area Population	111,064	234,101	193,194	245,838
Service Area Square Miles	574	3,365	609	2,972
Service Area Population Density (Pop./Sq.Mi.)	194	70	318	83
Vehicles Operated in Maximum Services	28	49	30	22
Purchased (Contract)	0	10	0	10
Directly Operated	28	39	30	12
Service Supplied and Consumed				
Annual Vehicle Revenue Miles	440,403	486,030	625,580	1,090,048
Annual Vehicle Revenue Hours	30,244	34,241	47,868	63,167
Annual Unlinked Trips	110,953	106,555	105,959	115,400
Passenger Trips per Revenue Mile	0.25	0.22	0.17	0.11
Passenger Trips per Revenue Hour	3.67	3.11	2.21	1.83
Efficiency				
Operating Expense per Vehicle Revenue Mile	\$2.56	\$2.40	\$3.65	\$2.29
Operating Expense per Vehicle Revenue Hour	\$37.30	\$34.12	\$47.70	\$39.44
Operating Expense per Passenger Trip	\$10.17	\$10.96	\$21.55	\$21.59
Farebox Recovery				
Fare Revenues Earned	\$166,926	\$426,268	\$81,684	\$67,892
Total Operating Expense	\$1,128,216	\$1,168,200	\$2,283,505	\$2,491,256
Farebox Recovery Rate	15.8%	36.5%	3.6%	2.7%

Compared to peer regions, WTA has the lowest farebox recovery rate, fare revenues earned, passenger trips per revenue hour, passenger trips per revenue mile, and the highest operating expense per passenger trip. These statistics are consistent with the findings from the *Human Services Coordinated Transportation Plan for the Southeast Alabama Region 2015-2017* which documented opportunities to improve WTA system efficiencies.

Table 6-8 highlights the most popular destinations for WTA paratransit users. Health Care facilities are by far the most frequented destinations for WTA riders.



Table 6-8 Most frequented destinations for WTA users

1118 Ross Clark Cir	SAMC	Health Care
1450 Ross Clark Cir Ste 200	Wiregrass Kidney	Health Care
1480 Ross Clark Cir	Physical Therapy	Health Care
1500 Ross Clark Cir	Southern Bone & Joint	Health Care
1630 Columbia Hwy	DCI	Health Care
1672 Columbia Hwy	SpectraCare	Health Care
201 Doctors Dr	Southern Clinic	Health Care
216 Graceland Dr	Gambro / Davita	Health Care
2431 W Main St	Westwood Plaza	Health Care
2800 Ross Clark Cir	Eye Center South	Health Care
3300 S Oates St	Walmart S/S	Shopping
409 Columbia Hwy	Food Depot	Shopping
4300 W Main St	Flowers Hospital	Health Care
480 Honeysuckle Dr	Digestive Health W/S	Health Care
900 Commons Dr	Wiregrass Commons Mall	Shopping



Freight

Freight traffic has a direct impact on the reliability and longevity of a city's infrastructure. Trucking and freight vehicles increase congestion along commonly used roadways. These impacts are most noticeable during commuter peak hour time periods. This congestion naturally lowers the travel time reliability along higher volume roadways. Based on observations conducted within the City of Dothan, an example of this is the Ross Clark Circle loop, commonly used as a bypass by freight traffic. The high volume of freight traffic on a roadway also shortens the life span of pavements and roadways, leading to increased costs associated with repaving and repair.

One emerging trend in the freight industry that could substantially alter freight and goods movement in the future is the rise of autonomous trucking. This shift would result in an increase in daily hours of operation for the vehicle and reduce the need for truckers to stop inside towns located on their driving route. Given the volume of truck traffic in the SWAMPO region, this could lead to a potential loss of tax revenue in the future despite increases in truck volumes on regional highways.

While the SWAMPO region lacks the presence of a major freight corridor, freight trucks traveling between Northwest Florida and the Mid-South and Midwest regions of the U.S. likely pass through the Dothan MPA region.

The Dothan MPA has a robust multimodal freight network. **Figure 6-22** illustrates the regional context for the MPA's freight network. **Figure 6-23** highlights the MPA's freight-related infrastructure and facilities, including businesses that provide freight-related services.

The MPA has several multi-lane arterials that are designated as statewide primary freight corridors. These include:

- US-231
- US-431
- SR-1
- US 84

There are also several active rail corridors, including:

- CSX railroad line, a Class I railroad connecting Dothan to Montgomery, AL, South Georgia, and Tallahassee, FL. In the Dothan MPA, it passes through Pinckard, Midland City, Napier Field, Grimes, Dothan, Cowarts, and Ashford

Dothan Freight-related Infrastructure:



Flying J Travel Center



E Selma Street



Ross Clark Circle



Ross Clark Circle



Dothan Regional Airport

- A southern Bay Line Railroad line, a Class III short line railroad that connects Downtown Dothan to Panama City, FL
- A northern Bay Line Railroad line, a Class III short line railroad that connects the area near the Dothan Regional Airport to Abbeville, AL; it passes through Headland along the way
- The Chattahoochee Railroad line, a Class III short line railroad that connects Downtown Dothan to the Chattahoochee River and Port of Columbia; it also passes through Webb
- The Hartford and Slocomb Railroad, a Class III short line railroad extends from Downtown Dothan to Taylor; however, the railroad track is abandoned past Taylor Road in Dothan

The Dothan Regional Airport and Headland Municipal airport are also integral parts of the Dothan region's freight infrastructure. While only a small amount of freight is shipped by air, the airports also serve as warehousing, maintenance, and manufacturing hubs.

There are three intermodal facilities in the MPA. All three facilities transload cargo between trucks and rail. These facilities include:

- Sunstates Refrigerated Services, Inc
- Hedstrom Corp
- Dothan Greyhound Station
- Bay Line Rail Terminal
- CSX Rail Terminal
- YRC Freight

There are no water ports within the Dothan MPA, but the Port of Columbia on the Chattahoochee River is just beyond the MPA in Houston County, at the state line with Georgia. This port and the Chattahoochee River do not see significant cargo traffic.



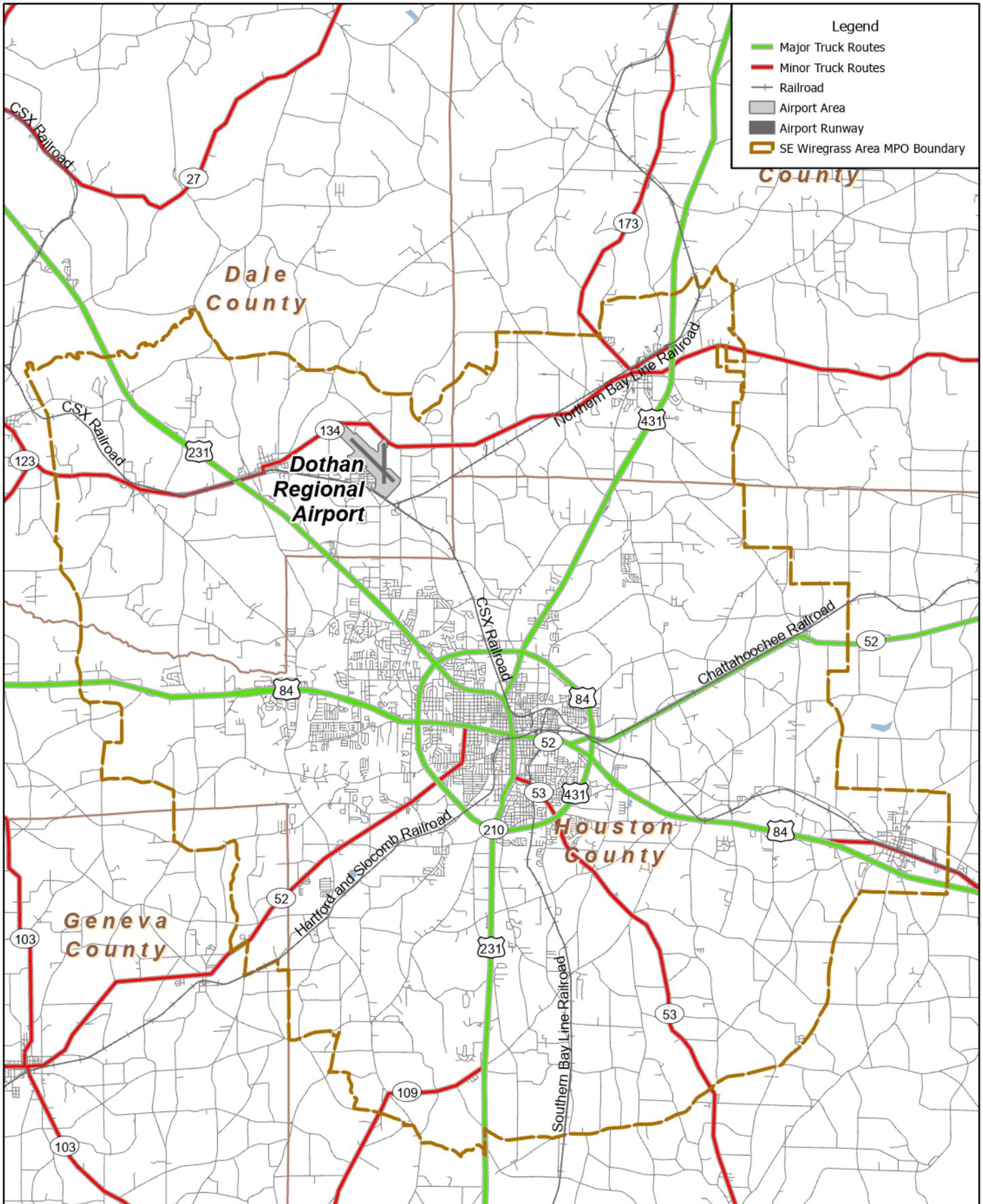


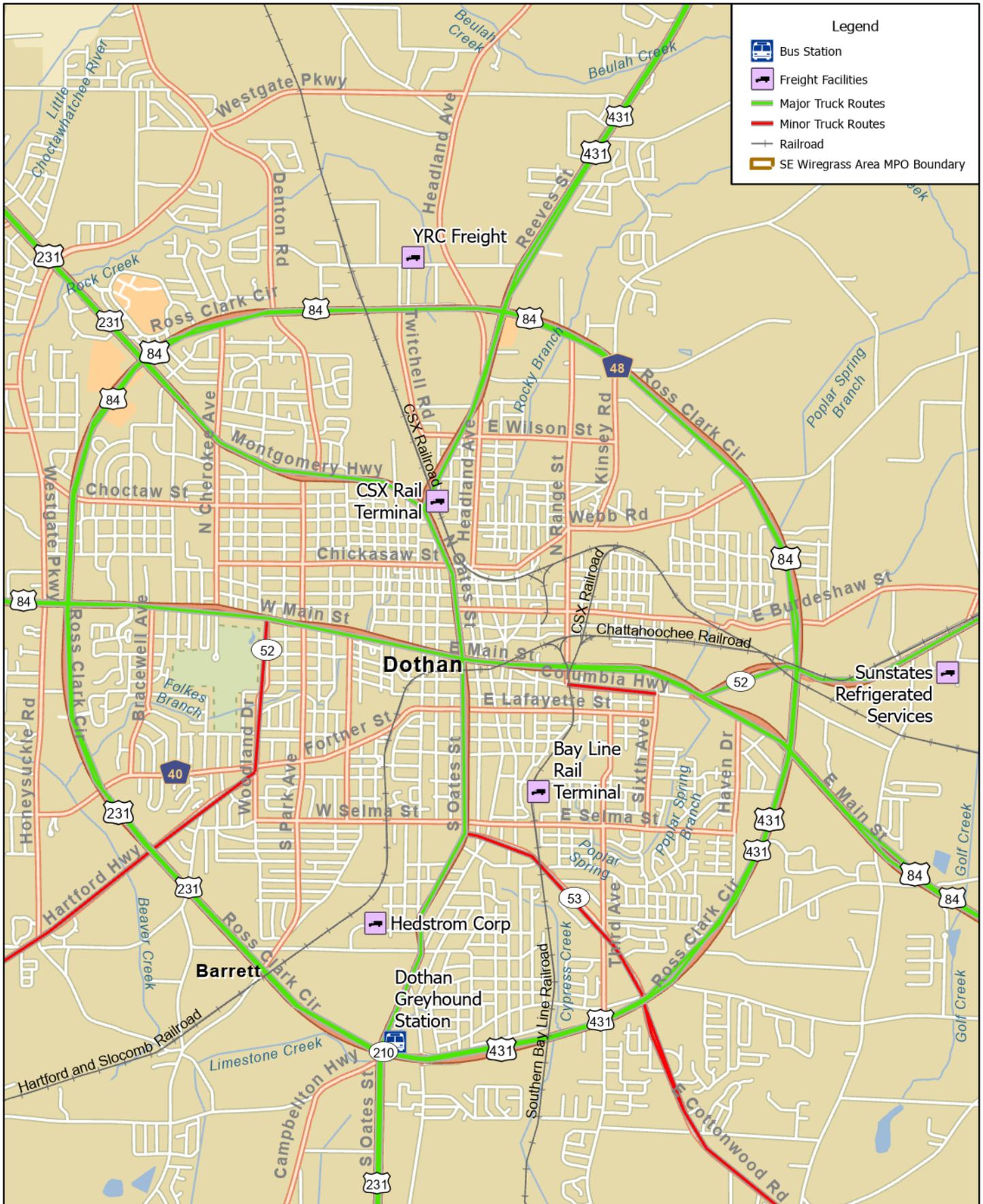
Figure 6-22: Regional Freight Context

Southeast Wiregrass Area MPO
Dothan, Alabama

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Freight Traffic and Congestion

The FHWA's Freight Analysis Framework (FAF) data was used to evaluate state and regional commodity flows. The FAF uses models to disaggregate interregional flows from an origin-destination database into flows between localities and then assigns these flows to individual highways using average payloads per truck, and truck counts on individual highway segments.

Figure 6-24 illustrates the estimated average daily truck traffic on the major roadways in the State of Alabama. **Figure 6-25** illustrates major truck flows to, from, and within the State of Alabama. What **Figure 6-25** illustrates is that US 231 is likely the major route for long-distance freight trucks in the Dothan region, while regional freight traffic is more evenly dispersed.

Nationally, congestion affecting freight is mostly limited to peak hour congestion. The travel time reliability maps (**Figure 6-26** and **Figure 6-27**) show the areas in the Dothan region that are most likely to experience congestion and add delay for all vehicles. Of the areas identified as unreliable during peak hours, the greatest concern for freight trucks are the areas that have the most estimated daily freight truck traffic, serve the highest demand areas, and are ALDOT freight corridors.

Areas that meet these criteria include the following corridors and nodes which have the highest potential for freight delay and bottlenecks:

- The northwestern quadrant of Ross Clark Circle, from Denton Rd to US 84
- US 231 from Ross Clark Circle to Flynn Rd
- Bottlenecks at Ross Clark Circle and US 84 (W. Main Street)
- Bottlenecks at Ross Clark Circle and US 84 (E. Main Street)
- Bottlenecks on Oates Street and US 84 entering and exiting Downtown Dothan

Alabama Statewide Freight Plan

The 2017 Alabama Statewide Freight Plan establishes the freight planning and performance monitoring activities to be undertaken statewide by ALDOT. Key plan elements include:

- An overview of relevant policy that influences freight planning at the statewide level



- A discussion of existing and projected commodity flows and freight network characteristics, which provide the baseline for identifying needs statewide
- A profile of the Interim National Multimodal Freight Network (NMFN) within the State of Alabama
- A summary of freight improvements of statewide significance, which forms the basis for the overall Freight Investment Plan
- A description of the measures and procedures that will be used by ALDOT to monitor transportation system performance with respect to freight mobility

The statewide freight plan capacity project recommendations illustrated on **Figure 6-28** are concentrated on the interstate system in the state with no significant capacity projects recommended for the SWAMPO region.



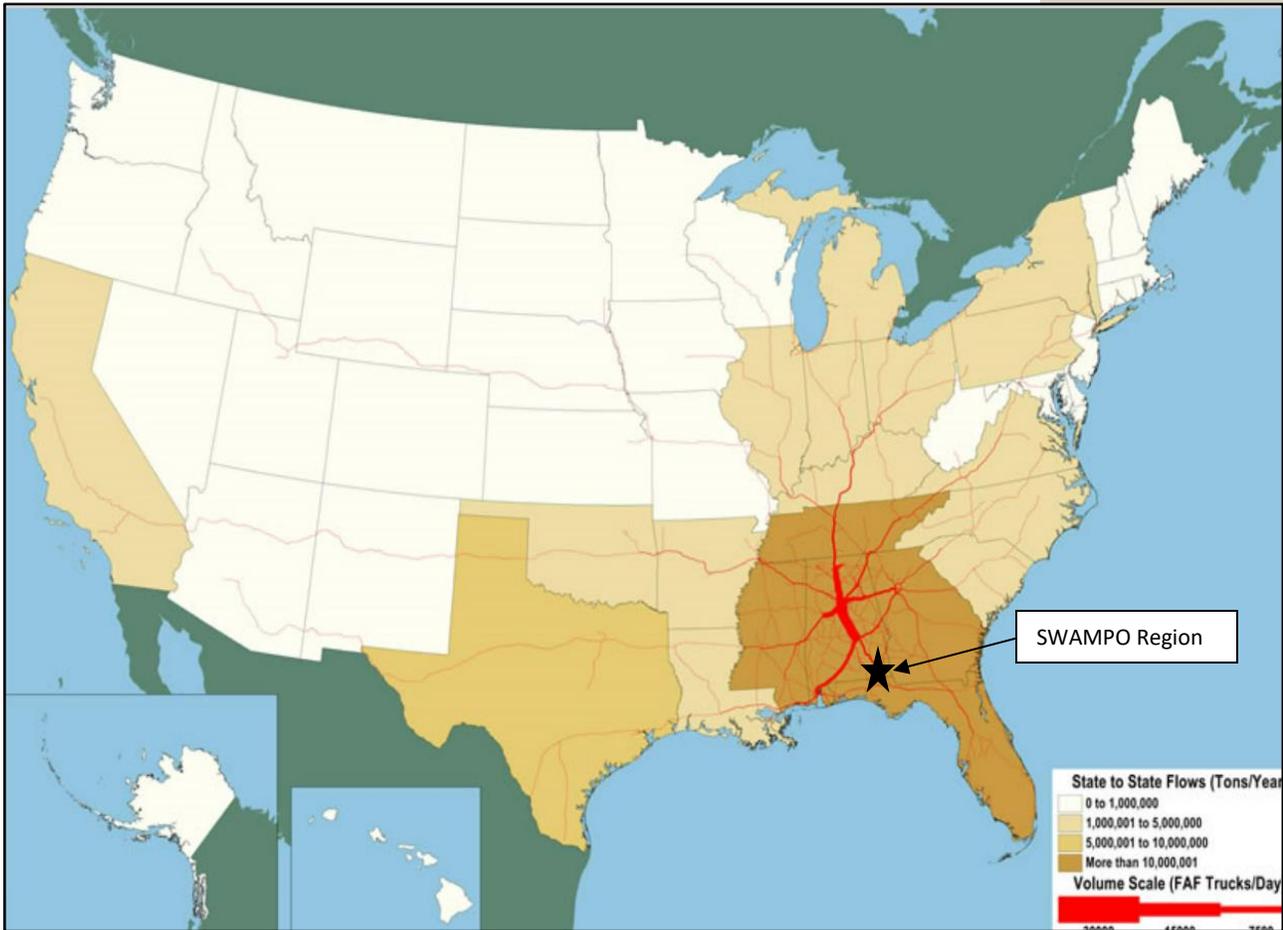
Figure 6-24: Major Flows by FAF Truck Through State of Alabama



Source: Freight Analysis Framework-2012



Figure 6-25: Major Flows by Truck to, from, and within Alabama



Source: Freight Analysis Framework-2012

Figure 6-26: Dothan MPA Travel Time Reliability

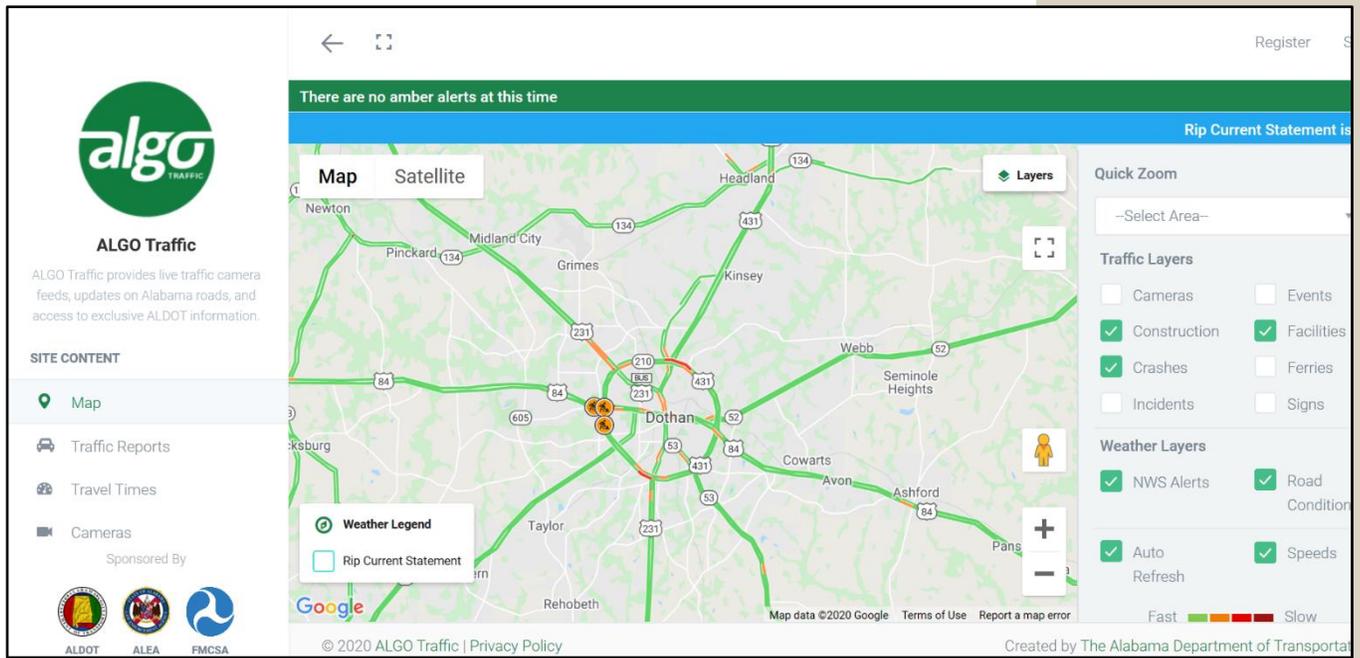


Figure 6-27: Travel Time Reliability Central Dothan

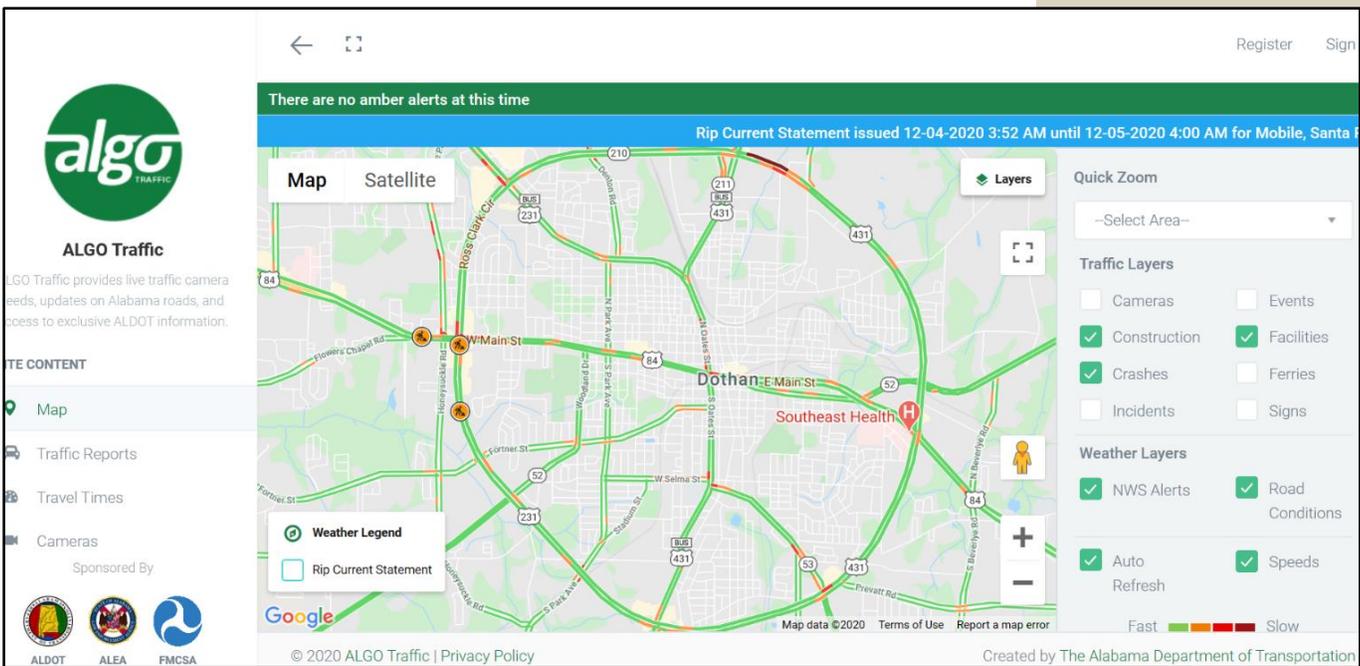
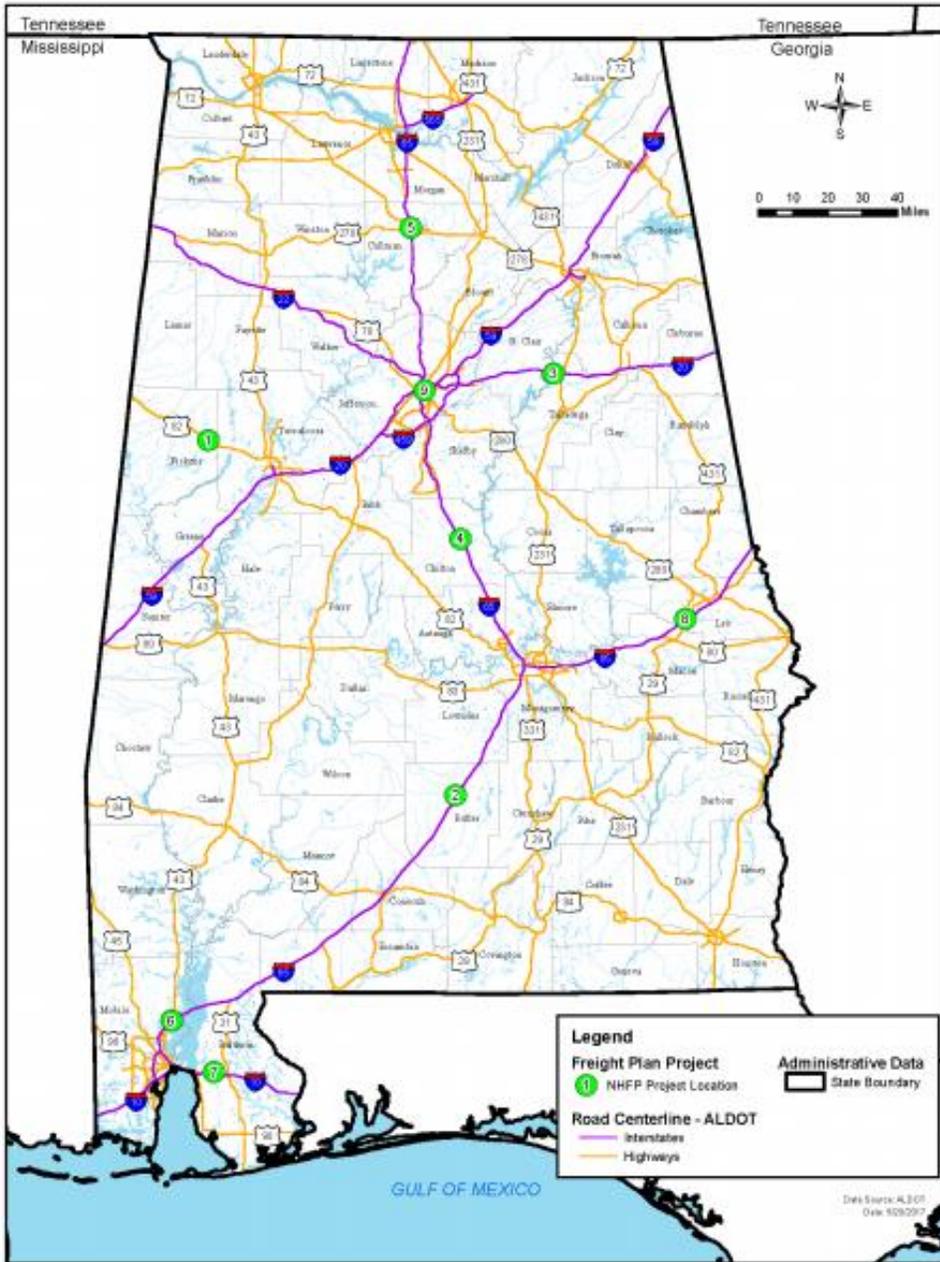


Figure 6-28 Freight Improvements from Statewide Plan



Aviation

The Dothan MPO region's aviation infrastructure serves a key role in the overall transportation system. Airports offer services that efficiently transport people and freight, aid in corporate recruitment and economic development, provide military support, assist medical, fire, and police responders during emergencies, and provide recreational and tourism opportunities for the region.

There are two publicly-owned airports in the Dothan MPO area: Dothan Regional Airport in Dothan (shown on **Figures 6-29 through 6-31**) and Headland Municipal Airport (shown on **Figure 6-32**) in Headland. Dothan is classified in the National Plan of Integrated Airport Systems (NPIAS) as a Non-hub Primary airport while Headland is classified as a General Aviation airport. Of these two airports in the region, only the Dothan Regional Airport provides scheduled, passenger air service. Currently, this service is limited to daily, non-stop service between Dothan and Atlanta. This non-stop service is provided by Delta Airlines through its Delta Connection regional service, ExpressJet.

Outside of the MPO region, there are several airports within a few hours' drive that are larger and provide more service. Of these, the Northwest Florida Beaches International Airport and Pensacola International Airport are the most prominent. Both airports are classified as Primary Small Hubs and are served by many airlines. Both provide daily, non-stop service to many airports around the Southeast that serve as larger national and international hubs.

Table 6-9 shows proposed improvements for the airports located within the Dothan MPO region.



Table 6-9: Proposed Airport Improvements

Airport	Proposed Date of Completion	Planned Improvement
Dothan Regional Airport		Not able to contact
Headland Municipal Airport	December 2020	Implement an Automated Weather Observing System (AWOS) for pilots
	3 to 4 years	Construction of new terminal building
	5 years	Construct at least two new large hangars for corporate aircraft
		Construct new building for a flight school
Extend parallel taxiway for runway 9/27		
Install 10 to 20 additional T-hangars		





Figure 6-29: Dothan Regional Airport

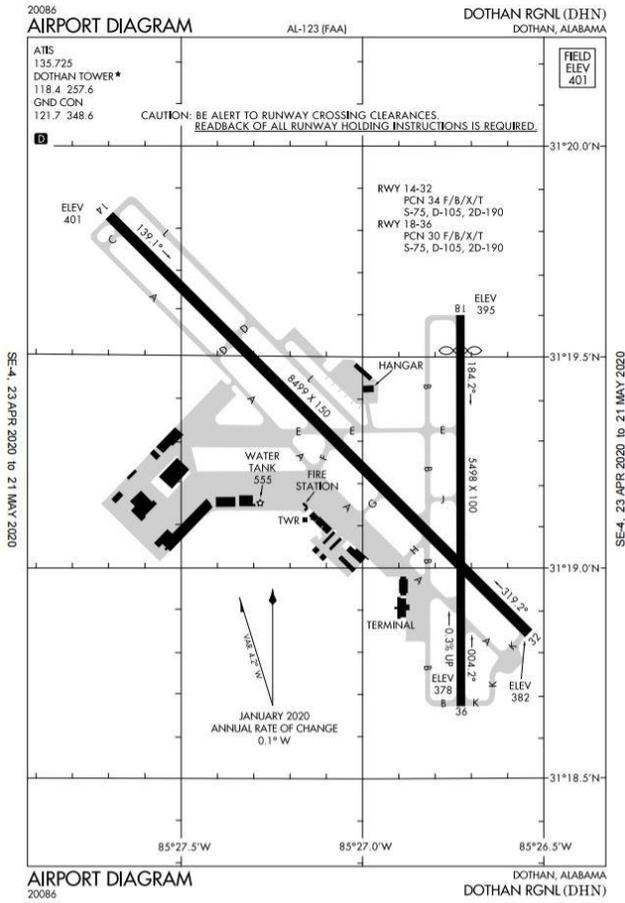


Figure 6-30 Dothan Regional Airport Layout

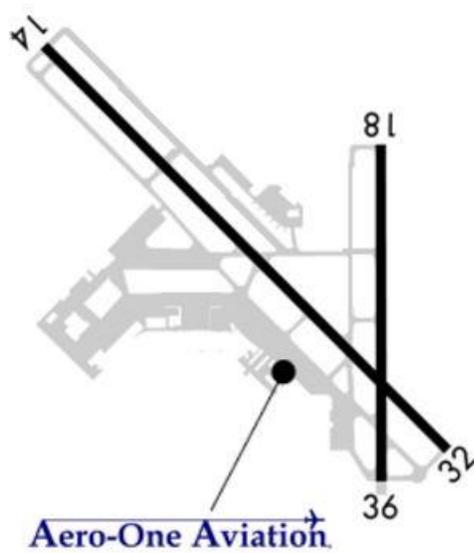


Figure 6-31 Dothan Regional Airport Runway Layout





Figure 6-32 Headland Municipal Airport

Safety

Crash data for the Dothan MPO area was obtained through the Critical Analysis Reporting Environment (CARE) database available through the Center for Advanced Public Safety at the University of Alabama. This data is helpful in processing general crash statistics for an area without providing information or data about specific crashes, intersections, or corridors. For this safety analysis, available crash data was analyzed from 2017 through 2019 for the Dothan MPO area. According to the CARE data, a total of 10,657 crashes occurred within the Dothan MPO area from 2017 through 2019. A breakdown of these crash totals by year is shown in **Table 6-10**.

Table 6-10: Crashes by Year (2017-2019)

Area	Year	Crashes
Dothan MPO	2017	3,372
	2018	3,548
	2019	3,737
	Total	10,657

In order to determine the cause of the crashes in an area, the crash data must be analyzed to identify common trends which lead to specific crash patterns within the study area. This analysis includes crash severity, crash type, weather conditions, and pavement conditions at the time of each crash. These are shown in the following figures:

- Figure 6-33 – Crash Severity
- Figure 6-34 – Crash Type
- Figure 6-35– Crashes by Weather Conditions
- Figure 6-36 – Crashes by Pavement Conditions



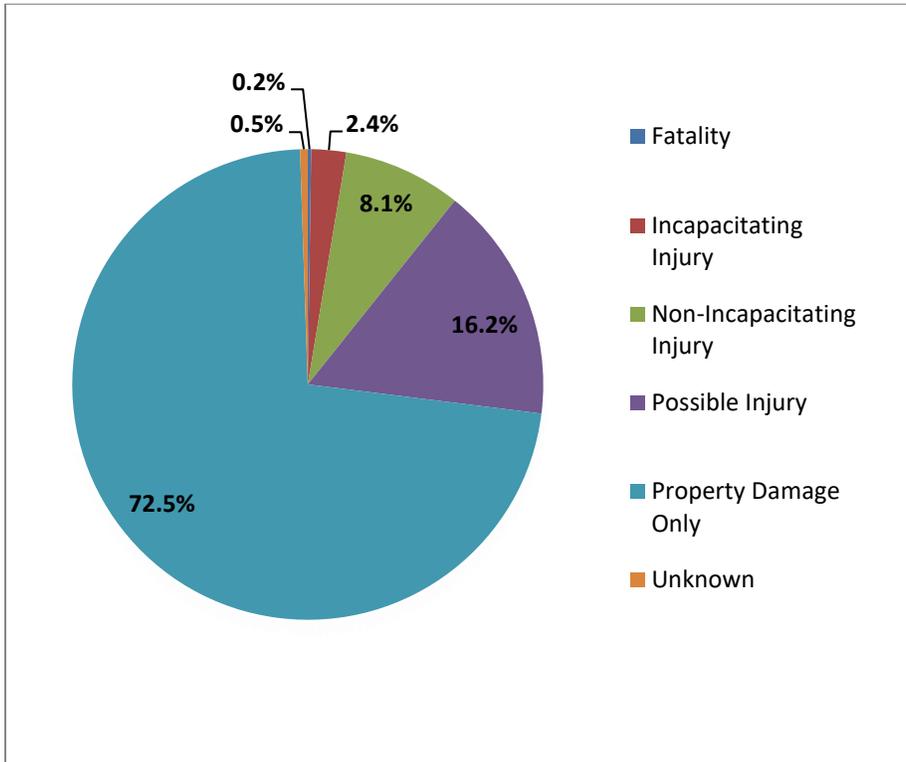


Figure 6-33: Crash Severity (2017-2019)

Crash severity is an important metric in crash analysis. For the study period, 72.5% of the crashes were classified as “Property Damage Only” crashes, while 27.5% of the crashes involved bodily injury to a vehicle occupant. 2.6% of the crashes resulted in severe injury or death. The crash severity statistics for the state of Alabama were also analyzed for the purposes of comparison, with the percentages of injury crashes in the Dothan MPO area noted as generally being very similar those of the state of Alabama. A slightly lower percentage of fatalities and non-incapacitating injury crashes were noted in the statewide data, while higher percentages of non-incapacitating and possible injury crashes were found in the Dothan MPO data.



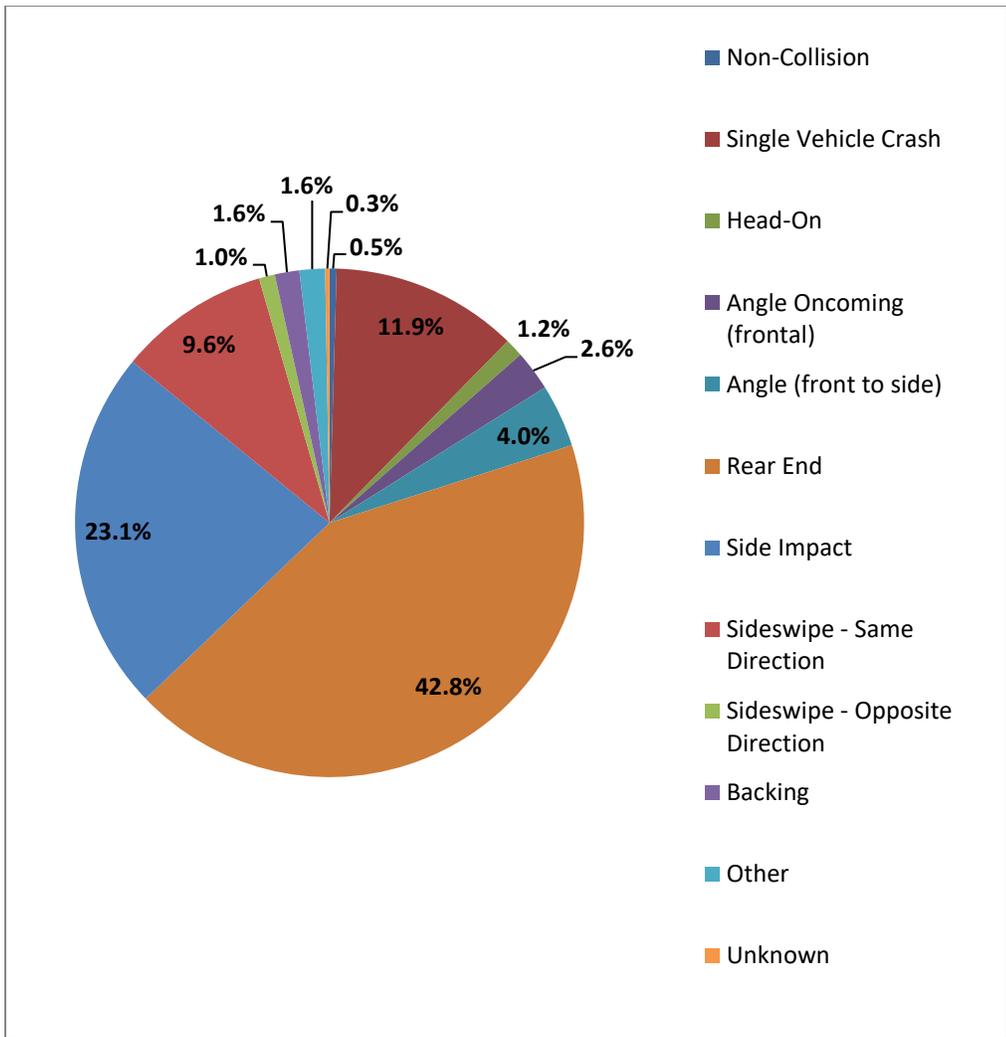


Figure 6-34: Crash Type (2017-2019)

The crash type statistics were analyzed for the SWAMPO region. The most common crash type in the area was noted to be rear-end crashes, which represented 42.8% of the total crashes. It is typical for rear-end crashes to be the most common crash type near urbanized areas. Side impact crashes (23.1%) were found to be the second most common crash type for the area, with single vehicle crashes (11.9%) and sideswipe-same direction crashes making up the other notable crash volumes within the MPO area. While analyzing the statewide crash statistics, it was found that rear-end crashes (36.1%), single vehicle crashes (18.9%), side impact crashes (17.6%), and sideswipe-same direction crashes (9.3%) were also the most common categories of crashes statewide. The lower statewide percentages for both rear-end and side impact are to be expected when compared to the MPO area due to the rural nature of much of the state.



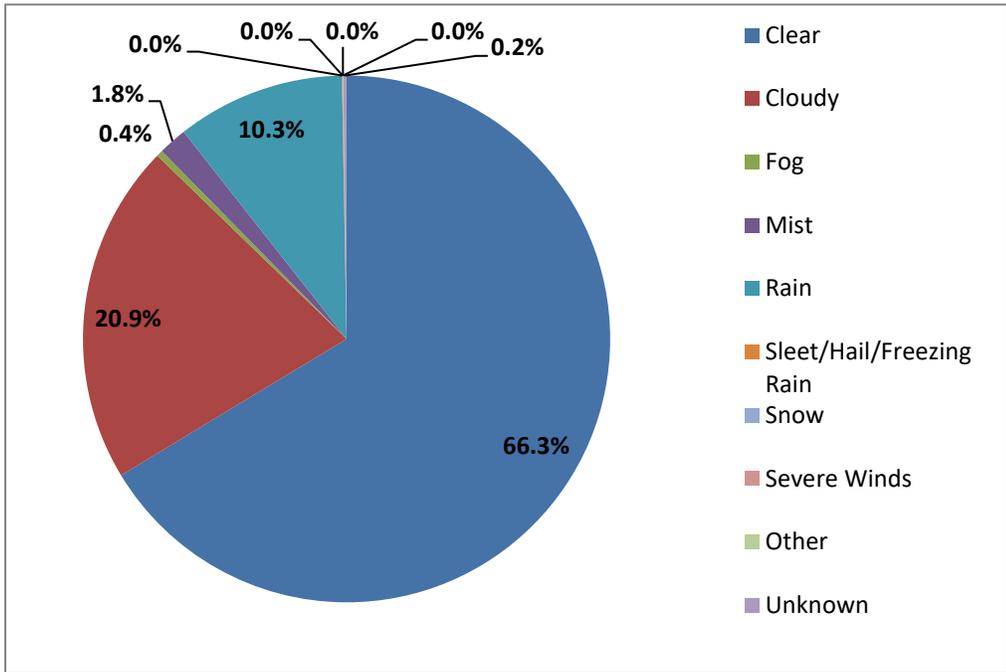


Figure 6-35: Crashes by Weather Conditions (2017-2019)

Weather conditions are often key elements in vehicular safety along roadways. Within the Dothan MPA, the majority of crashes can be placed into three distinct categories of weather condition. The majority of crashes located inside the MPO area occurred under clear conditions (66.3%). Other statistically significant weather patterns include cloudy conditions (20.9%) and rainy conditions (10.3%). These trends are nearly identical to the statewide crash statistics, implying that, when compared to statewide averages, weather conditions are not impacting vehicle crashes at different rates within the Dothan MPO area versus the statewide area.



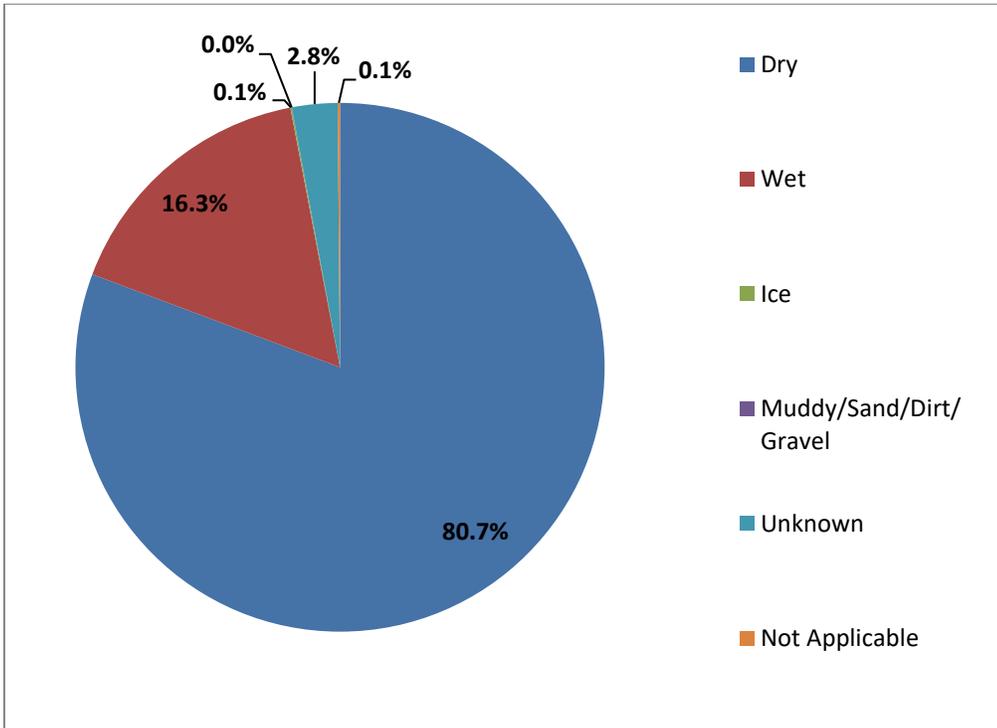
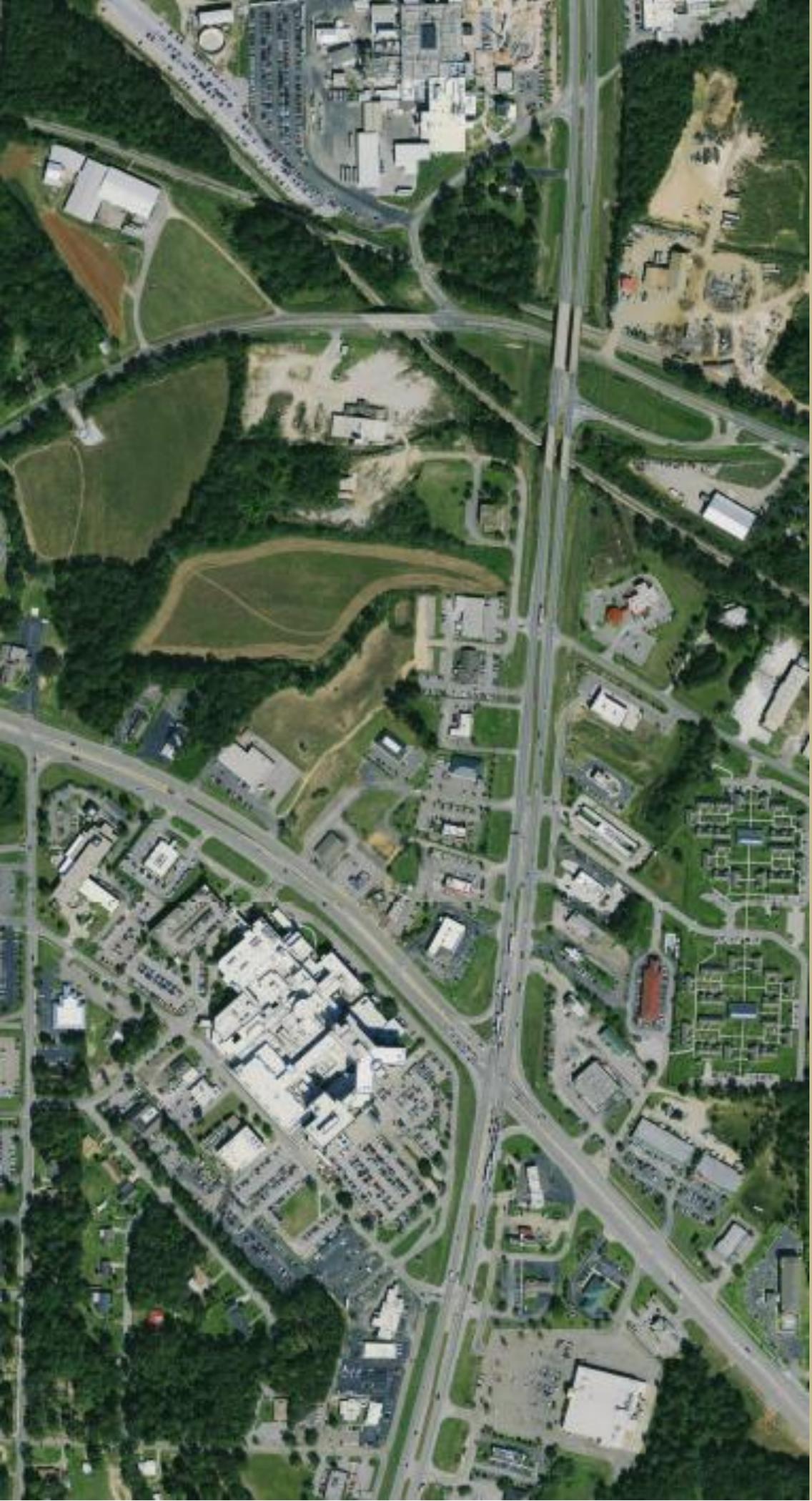


Figure 6-36: Crashes by Pavement Conditions (2017-2019)

Another notable element of vehicular safety is the pavement conditions of the roadways. Only two pavement condition types were notable for crashes within the Dothan MPO area. A large majority of crashes occurred under dry roadway conditions (80.7%). The second most common pavement condition for crashes was found to be wet roadway conditions (16.3%). These are expected to be the two most common conditions for crashes in the Dothan MPO area, due to the latitude of the area and the resulting low number of days with icy roadway conditions. These percentages are similar to the statewide trends, with dry conditions (74.7%) and wet conditions (17.3%) making up the two significant options for pavement conditions within the state of Alabama.





Chapter 7

Forecasting Future Travel Demand

Forecasting Future Travel Demand

Forecasting future travel demand is a critical component of the regional long range transportation plan. Modeling future travel patterns in the region informs the project prioritization process and ultimately leads to discrete projects that address the future transportation needs in the Dothan region.

SWAMPO with the support of ALDOT utilizes Cube software to forecast traffic in the Dothan region. The regional travel demand model is a traditional four-step model (Trip Generation, Trip Distribution, Mode Choice; Assignment); however the model does not include the mode choice step. It should be noted that there are currently no fixed-transit routes in the Dothan region that would be modeled in Cube. The generalized four-step modeling process is described below.

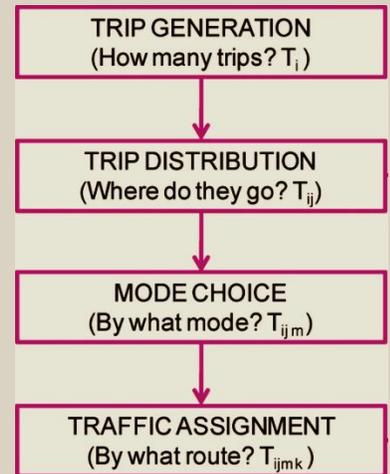
Trip Generation-Demographic data is used to generate productions at the household level and attractions based on employment. The ALDOT TRIPGEN program was used to estimate zonal trip productions and attractions.

Trip Distribution-A traditional gravity based trip distribution model is used to distribute the trips between origins and destinations in the modeled region. The origin is the TAZ where each trip begins, and the destination is the TAZ where each trip ends. The standard CUBE Voyager gravity model was used for Trip Distribution. The gravity model uses the productions and attractions table from the Trip Generation step, the travel time matrix between each TAZ in the region, and a friction factor table to generate a single vehicle trip table. The trip table summarizes the vehicle trips between each TAZ in the SWAMPO region.

Mode Choice-A logit model is used to estimate whether people choose transit versus driving in a car alone or carpooling. **(Note: this step is missing from the Dothan model chain)**

Assignment-A vehicle-only trip table is output from the mode choice model and assigned to the Dothan region highway network using an equilibrium assignment algorithm. The Equilibrium Highway Load module in Cube Voyager was used for highway network assignment. Equilibrium assignment uses an iterative process to optimize the overall travel time for all trips in the modeled region. The network is considered to be in equilibrium when no traveler can improve his or her travel time

Four-Step Modeling Process



using an alternative path. **(Note: the trip tables from the Trip Distribution step are used in Assignment as there is no mode choice model in the Dothan model chain).**

The two primary inputs into the regional travel demand model are the highway networks and demographic files which include the population, employment, and school enrollment estimates for existing and future conditions. The future demographics were developed using a cohort approach starting with national forecasts. State-level forecasts were developed based on historical and existing percentages of Alabama population relative to the national population for the same years. Similarly, the Dothan region population forecasts were estimated based on existing and historical percentages of the Dothan region's population relative to the State population. The 2045 population forecasts were compared to the 2040 forecasts developed by the Alabama Center for Business and Economic Research (CBER) for consistency purposes. Employment forecasts were developed as a function of the population growth. Labor participation rates were assumed to remain relatively consistent into the future.

The Dothan region 2045 forecasts were developed at the county level using the assumption that each county's share of the total population would remain similar to the existing shares. The generalized process described below was used to develop TAZ level population, employment, and school forecasts.

Wetlands, recreational areas, and existing developed areas were not allocated additional households or employment unless there was a known planned redevelopment or development pressures.

Population was forecast for each TAZ using the following assumptions:

- Most growth will occur in areas that developed between 2005 and 2015
- Development known to occur since 2015 and recently approved development was added first
- It was assumed that most lots would be developed by 2020 and virtually all lots would be developed by 2030
- Land use regulations were considered during the allocation process so that housing units were not added in excess of what is legally permissible. If no land use regulations were available, the context of the immediate area was considered for lot size.



Table 7-1: Population forecasts

US Population Trends					
2014	2020	2030	2040	2045	2050
318748	334503	359402	380219	389274	398328
Alabama					
4843	4908	5175	5475	5606	5736
% of US					
1.52%	1.47%				
Dothan Metro Region					
147.2	148.2	160.4	175.2	185.0	189.3
% of State					
3.0%	3.0%				
Houston County					
103.8	105.3	114.7	125.3	132.3	135.3
% of Region					
70.5%	71.1%				
Henry County					
17.2	17.1	17.7	18.3	18.6	18.8
% of Region					
11.7%	11.5%				
Geneva County					
26.3	25.8	26.5	27.4	27.8	28.2
% of Region					
17.9%	17.4%				
Dale County					
49.7	49.2	50.5	53.0	54.3	55.5
% of State					
1.0%	1.0%				

* Population Estimates in 1,000s

The initial TAZ forecasts were submitted to the City of Dothan and stakeholders for review and finalized based on the input from those respective parties.

The overall growth pattern in the region is for population and household growth to continue to push westward outside of Ross Clark



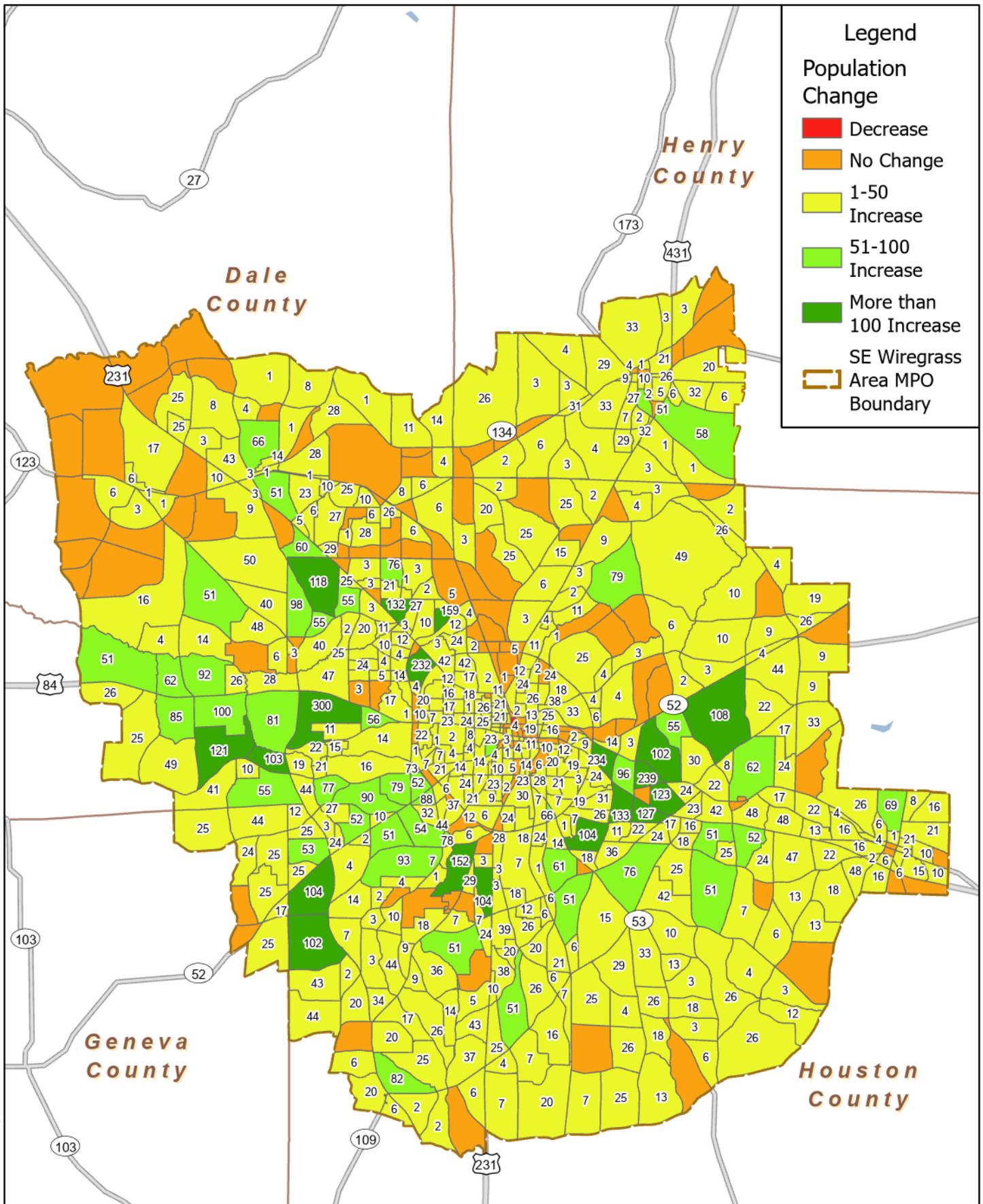
Circle with more moderate growth to the east and north of Ross Clark Circle as illustrated on **Figure 7-1**. Significant growth areas include the area around Brannon Strand Road and US-84 and US-231 near the Houston/Dale County line.

Employment growth is forecast to be consistent with population growth, with the highest growth forecast around Ross Clark Circle and areas to the west of Ross Clark Circle along US-84 as illustrated on **Figure 7-2**.

Figure 7-3 illustrates that the highest population density in the year 2045 would be in the higher growth areas of the Dothan region previously referenced. Of note is the fact that population growth and density is projected to increase outside of Ross Clark Circle at much higher rates than in the central areas of Dothan where minimal population growth is forecast.

Figure 7-4 illustrates the year 2045 activity density in the SWAMPO region. Central Dothan, including the downtown area and adjacent historic districts, is forecast to continue to have the highest activity densities in the region with additional pockets of high activity densities located around Ross Clark Circle.





Legend

Population Change

- Decrease
- No Change
- 1-50 Increase
- 51-100 Increase
- More than 100 Increase

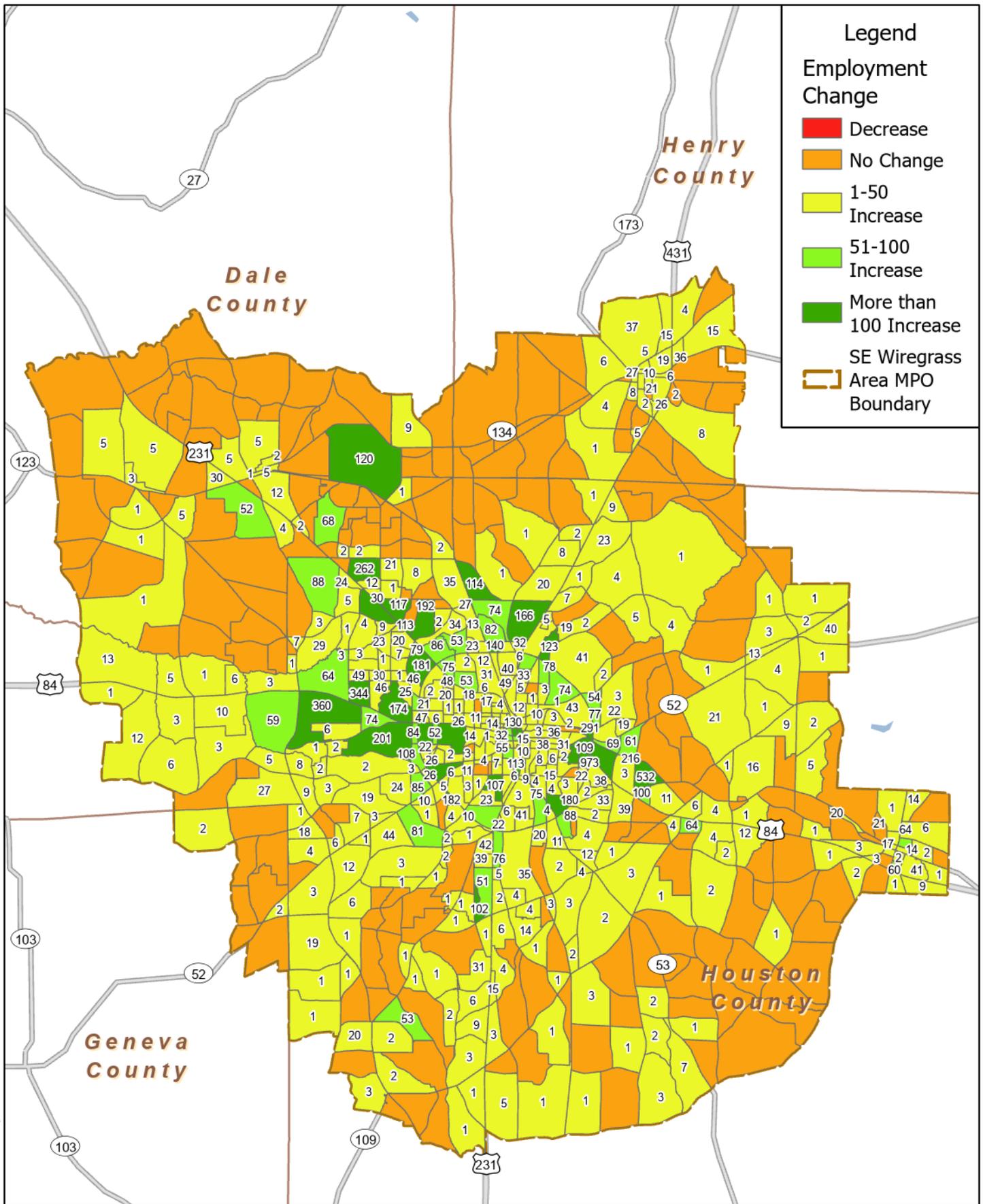
SE Wiregrass Area MPO Boundary

Figure 7-1: Population Change 2015-2045 Area-Wide

Southeast Wiregrass Area MPO
Dothan, Alabama

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Legend

Employment Change

- Decrease
- No Change
- 1-50 Increase
- 51-100 Increase
- More than 100 Increase
- SE Wiregrass Area MPO Boundary

Figure 7-2: Employment Change 2015-2045 Area-Wide

Southeast Wiregrass Area MPO
Dothan, Alabama

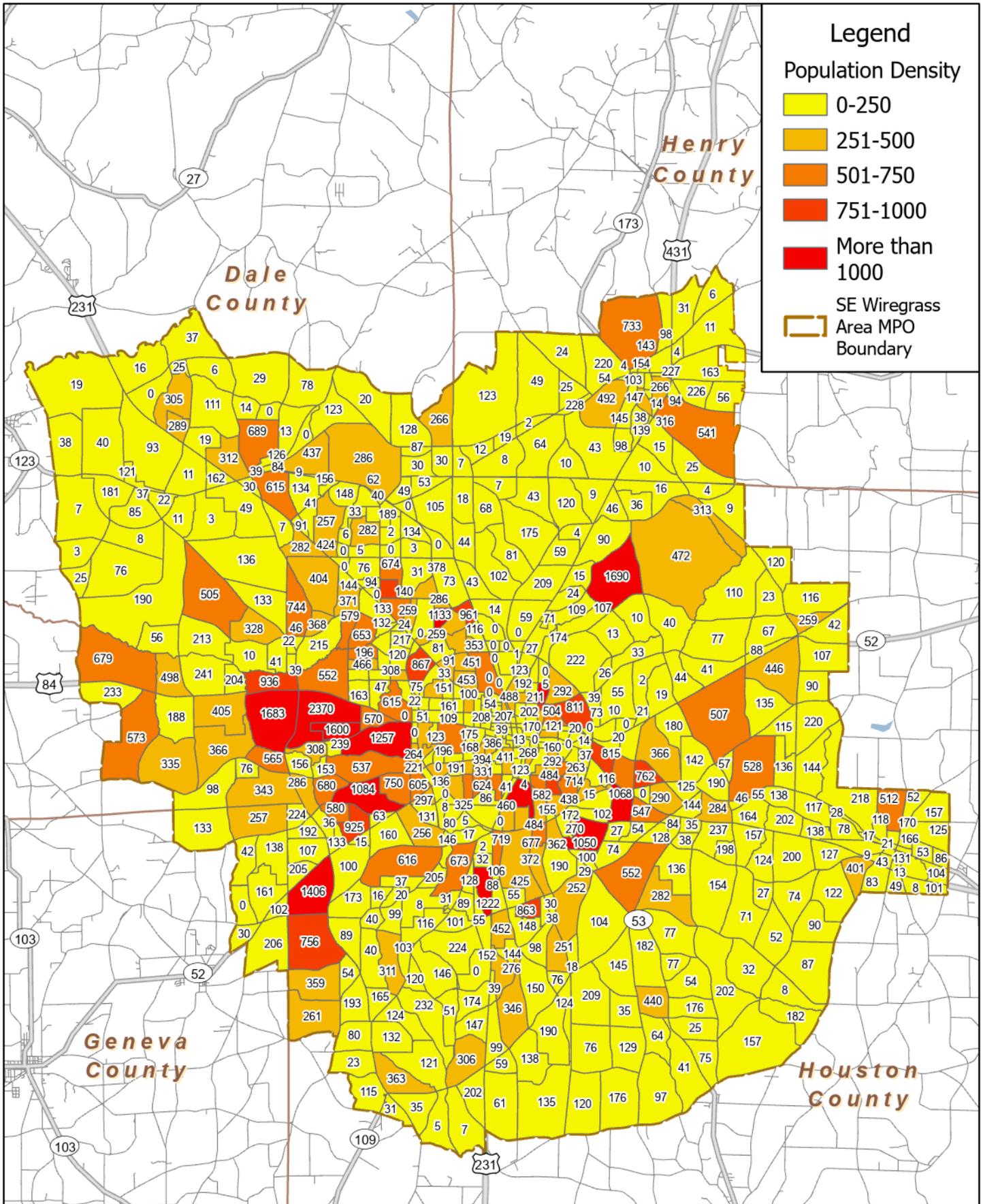
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SAIN
ASSOCIATES



NOT TO SCALE



Legend

Population Density

- 0-250
- 251-500
- 501-750
- 751-1000
- More than 1000

SE Wiregrass Area MPO Boundary

Figure 7-3: Population Density 2045

Southeast Wiregrass Area MPO
Dothan, Alabama

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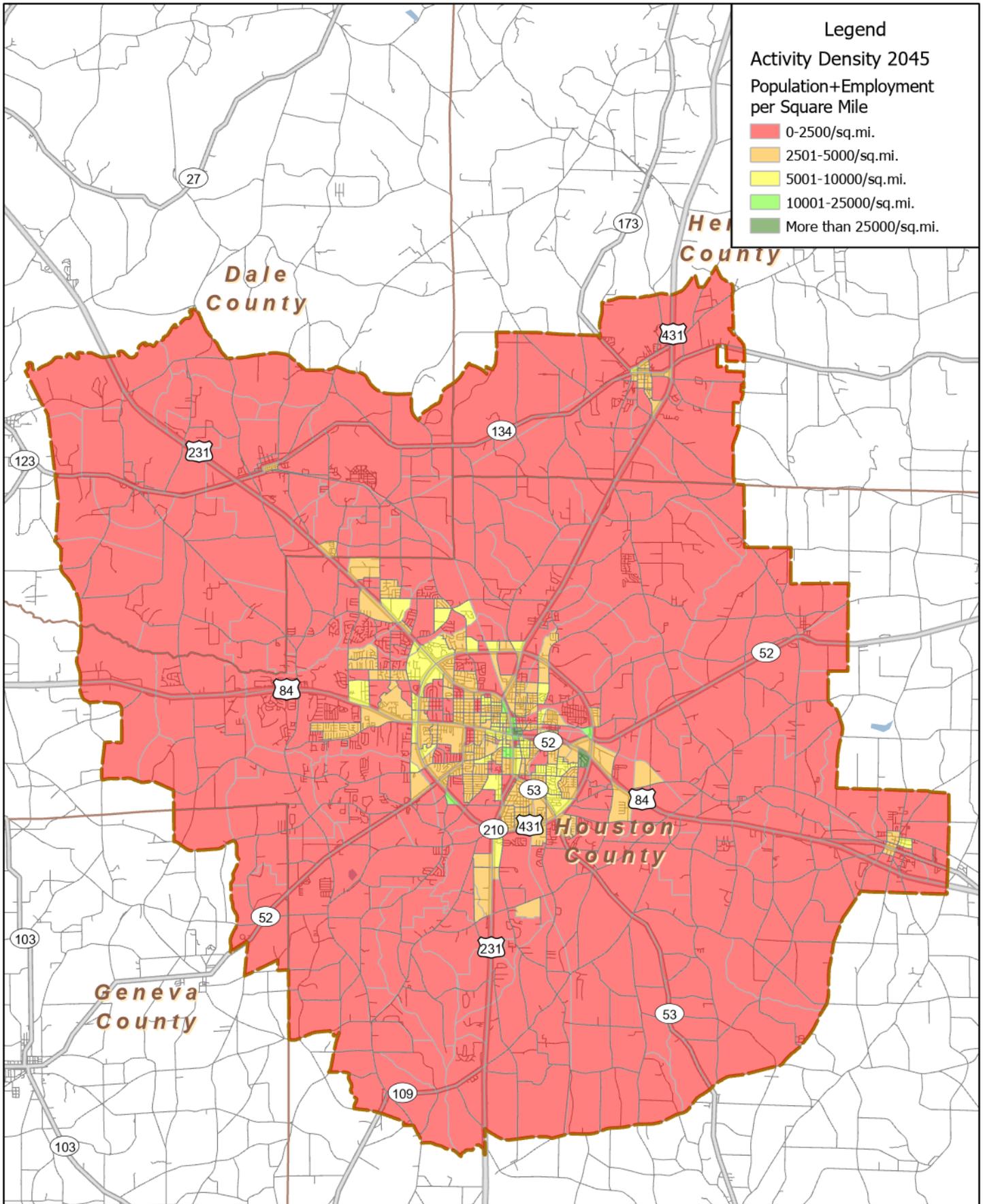


Figure 7-4: 2045 Activity Density

Southeast Wiregrass Area MPO
 Dothan, Alabama

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Future Transportation Network

Future improvements to the transportation network will impact future land development patterns and travel in the SWAMPO region. In addition to the demographic forecasts, the Existing plus Committed (E+C) projects were coded into the future year 2045 travel demand model inputs. The following E+C projects were coded into the year 2045 highway network:

Adding lanes on SR-210 (Ross Clark Circle) from south of Meadowbrook Drive South to North Cherokee Avenue and on SR-53 (US-231) from Girard Avenue to Buyers Drive

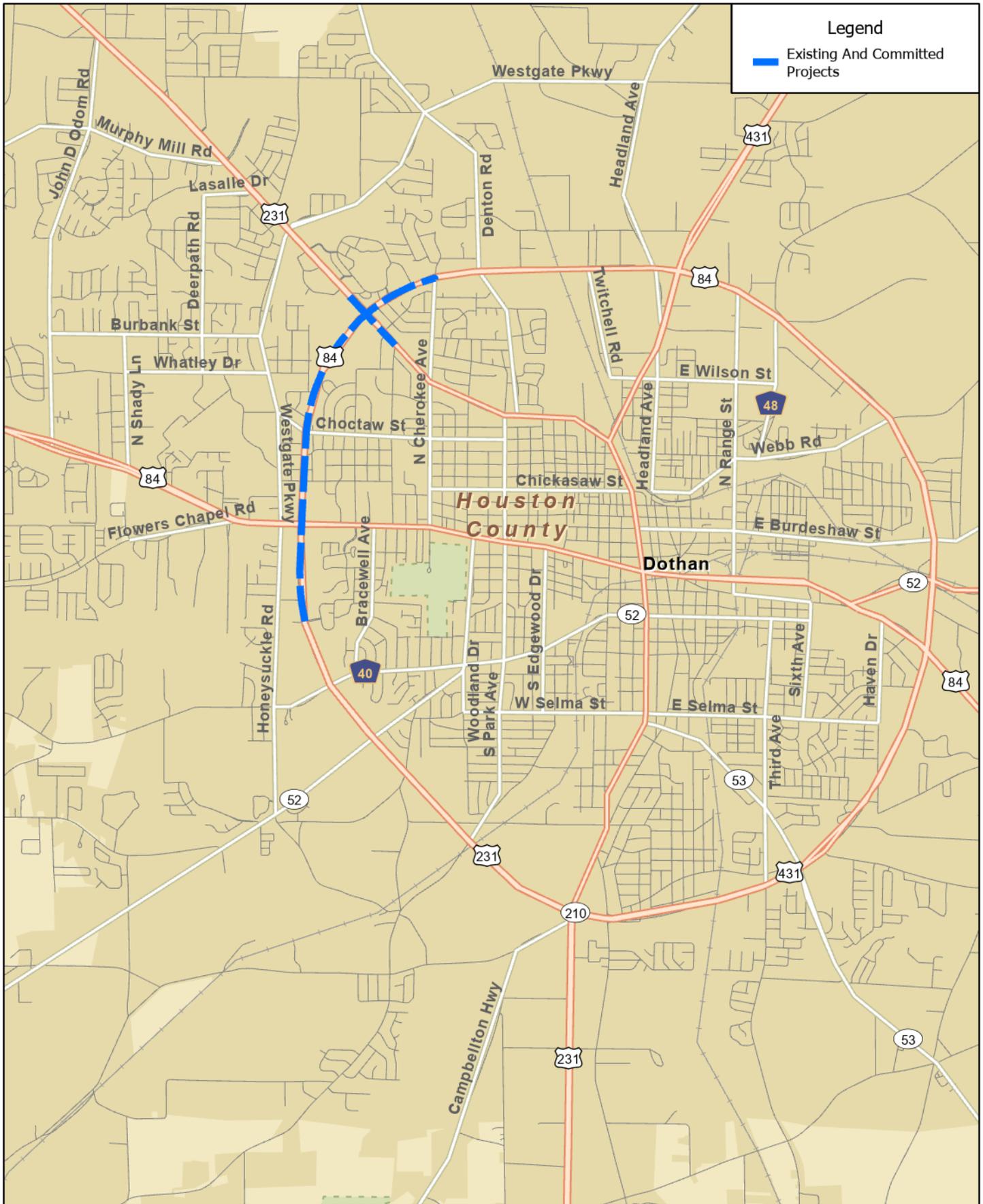
Adding lanes on SR-210 (Ross Clark Circle) from US-231 south to Bauman Drive

The E+C projects are illustrated on **Figure 7-5**.

Travel Demand Model Outputs

The primary outputs of the travel demand model are vehicle trips, vehicle miles traveled, and vehicle hours of delay. This information combined with a comparison of future volumes to capacity informs the needs assessment in Chapter 8.





Legend

- Existing And Committed Projects

Figure 7-5: Existing and Committed Projects

Southeast Wiregrass Area MPO
Dothan, Alabama

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Chapter 8

Future Transportation Need



Future Transportation Need

The future transportation needs reflect the travel patterns associated with future development and transportation network deficiencies. Public input indicated a desire for a more multi-modal network in the future which will lead to a more sustainable transportation system and improve transportation equity across the region. The future transportation needs for the SWAMPO region can be broken into several broad categories, Transportation System Maintenance and Operations (TSM&O), non-motorized travel, transit, highway capacity, and freight. These broad categories are summarized in more detail below.

TSM&O

TSM&O encompasses a broad range of transportation asset management and optimization strategies including:

- Pavement
- Bridges
- Traffic Signals/ITS
- Access Management, and
- Traffic Safety

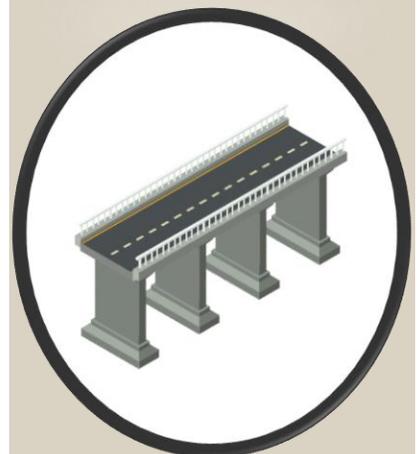
Pavement: Existing pavement deficiencies will require proactive and preventative maintenance to accommodate future vehicle and truck demands in the region. Corridors with large volumes of truck traffic such as Ross Clark Circle should be allocated additional resources for proactive preventative maintenance.

The existing pavement conditions are only known for the ALDOT maintained roadways in the SWAMPO region. As documented in the Existing Transportation System chapter, the pavement conditions in the SWAMPO region are generally fair to good. Poor pavement conditions were documented on Ross Clark Circle between US-231 and US-84 though it should be noted that this segment is currently under construction which will improve pavement conditions to good in the near future. Additional roadway segments with pavement conditions rated as poor were observed on US-84, US-231, and Woodland Drive within the Dothan city limits, as well as small segments of SR-605, US-431, US-231, and SR-134 outside of Ross Clark Circle as illustrated on **Figure 8-1**.

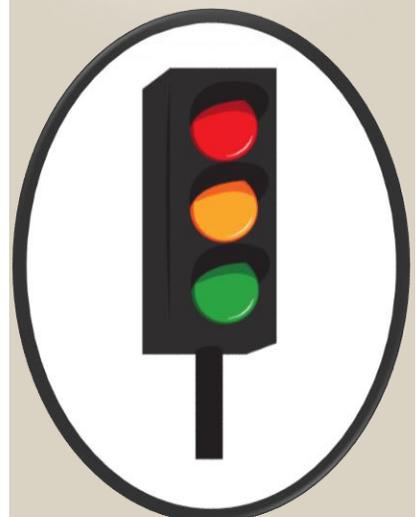
TSM&O Includes:



Pavement Maintenance



Bridge Repair and Maintenance



Traffic Signals and ITS

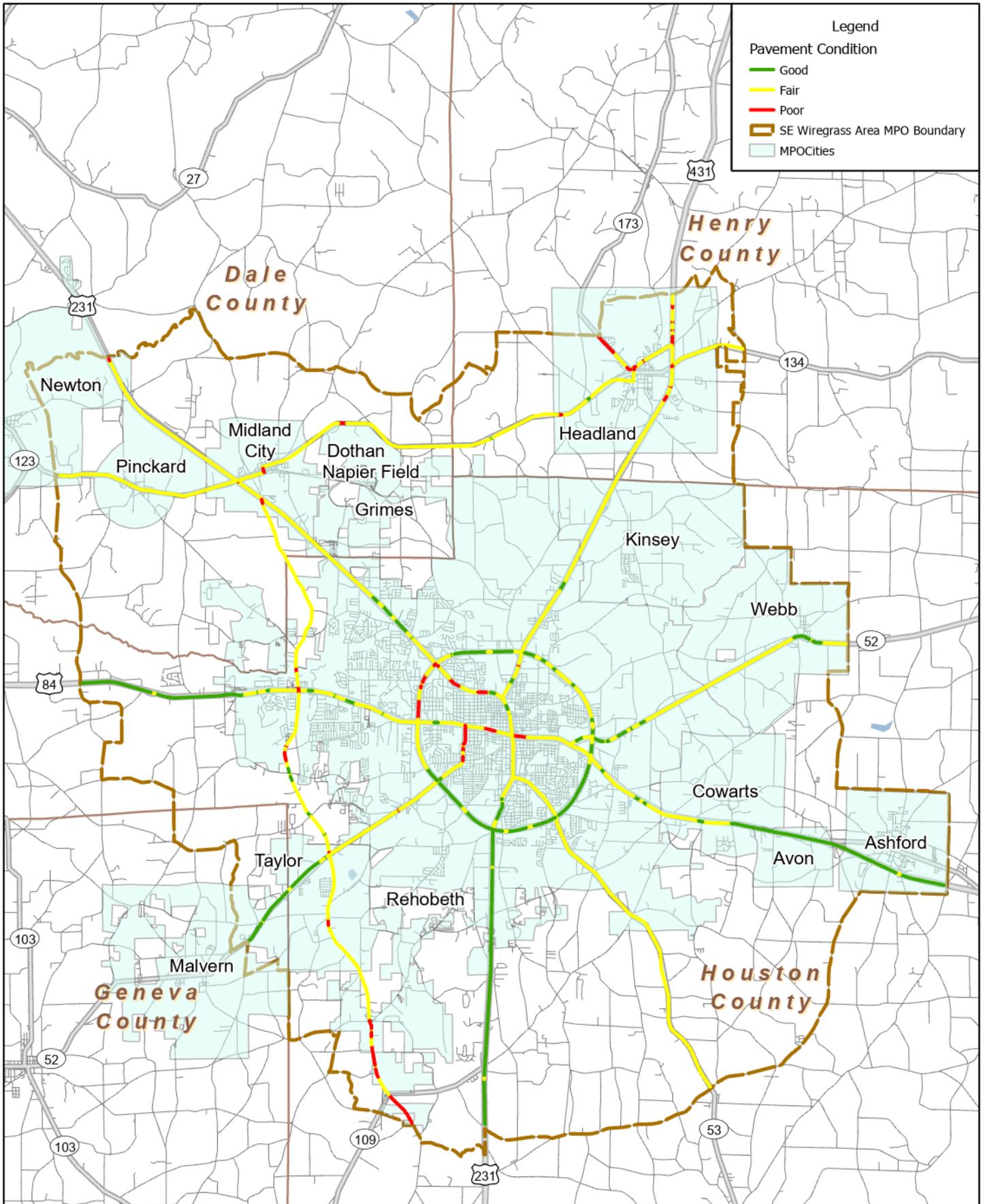


Figure 8-1: Pavement Conditions on ALDOT-Maintained Roads

Southeast Wiregrass Area MPO
Dothan, Alabama

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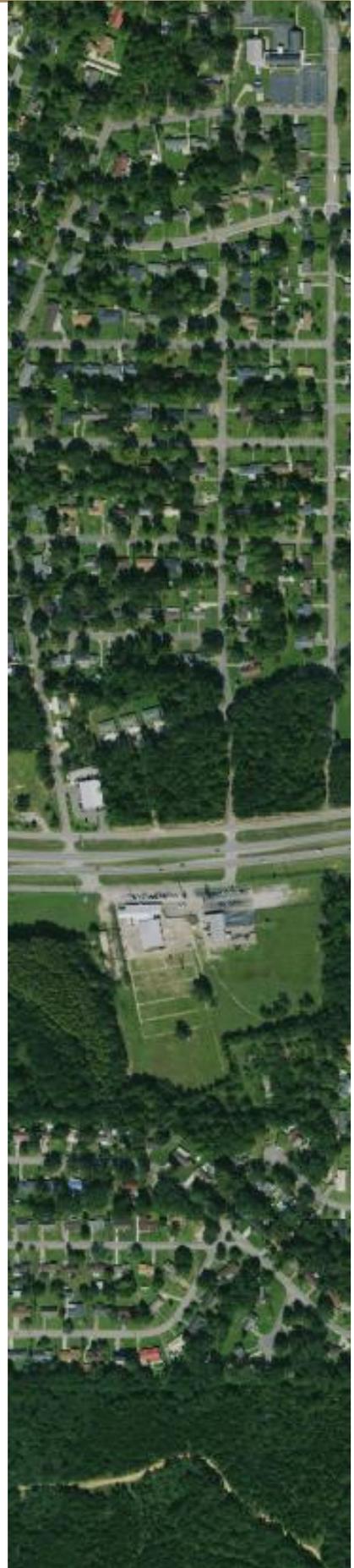
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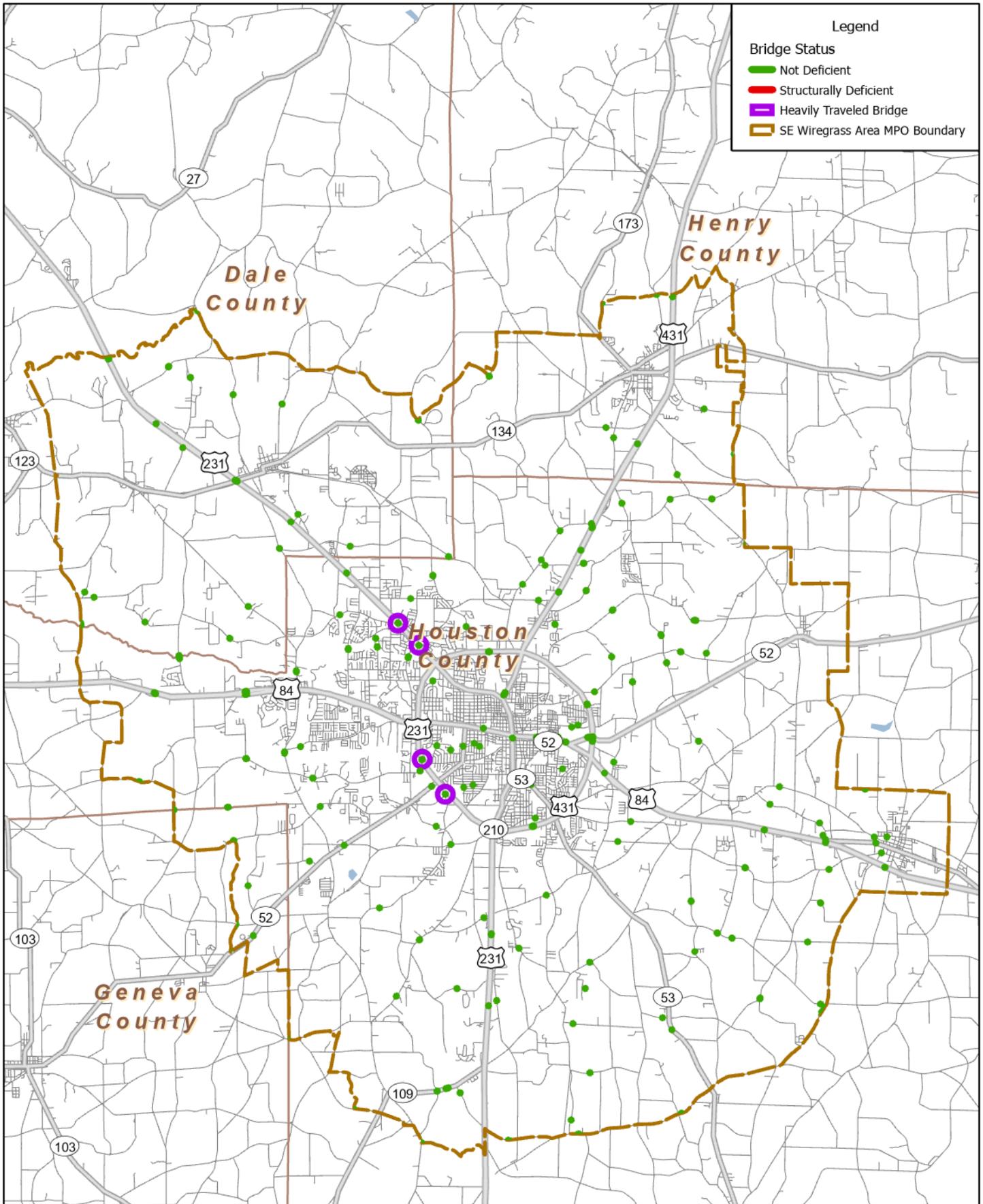


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Bridges: The SWAMPO region does not have any bridges that have sufficiency ratings low enough to warrant replacement or rehabilitation by ALDOT in the near-term.

Bridges provide important linkages between communities and activity centers and are critical for regional and freight mobility. It is important to note that a bridge designation of structurally deficient or functionally obsolete does not necessarily mean a bridge is unsafe. Structural deficiency is characterized by deteriorated conditions of significant bridge elements and potentially reduced load-carrying capacity. A structurally deficient bridge typically requires maintenance and repair to remain in service, and would eventually require major rehabilitation or replacement to address the underlying deficiency. A functionally obsolete bridge does not meet current design standards; either because the volume of traffic exceeds the maximum volume the bridge was designed for, and/or the relevant design standards have been revised. In addition to the existing deficient bridges, additional bridges have been highlighted in **Figure 8-2** that are forecast to carry significant volumes of traffic and/or large percentages of truck traffic as these bridges will deteriorate at a more rapid pace than average.





Legend

Bridge Status

- Not Deficient
- Structurally Deficient
- Heavily Traveled Bridge
- SE Wiregrass Area MPO Boundary

Figure 8-2: Heavily Traveled Bridges

Southeast Wiregrass Area MPO
Dothan, Alabama

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Traffic Signals/ITS: Traffic signals were ranked as the highest priority for improvement by the public along with bicycle/trail improvements. Traffic signals and ITS improvements (signal system implementation and optimization, traffic management centers, signal timing optimization, adaptive traffic signals, changeable message signs) are relatively low-cost improvements that can significantly improve vehicle mobility and potentially reduce crashes. Advanced traffic signal systems can also be programmed to accommodate hurricane evacuations, improving the safety and security in the region.

Access Management: Access management can improve both safety and mobility along congested corridors. Relative to highway capacity improvements, access management strategies can be implemented at a much lower cost while providing significant reductions in corridor travel times and delays. Traffic signal and access management projects were evaluated in the same manner as roadway capacity projects during the project prioritization process.

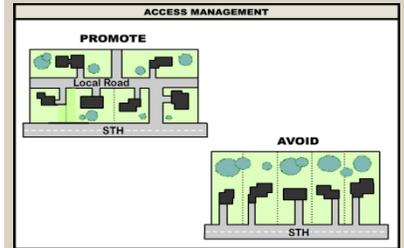
Traffic Safety: Traffic safety includes improved lighting, signing, and markings as well as traffic calming strategies including:

- Chicanes
- Road Diets
- Bulb-Outs
- Raised Crosswalks
- Rectangular Rapid Flash Beacons (RRFB)
- Rumble Strips
- Pedestrian Refuges
- Automated Speed Enforcement

For the Dothan MPO area, rear-end crashes were easily the most common crash type, which is common for regions surrounding urbanized areas. Following the crash analysis, it was determined the common crash types for the area included rear-end crashes, side impact crashes, single vehicle crashes, and sideswipe crashes.

Common countermeasures for standard crash types are shown in **Table 8-1**.

Access Management



Source: Wisconsin Department of Transportation

Traffic Safety and Calming



Chicanes

Source: Institute of Transportation Engineers



Road Diet

Source: Institute of Transportation Engineers



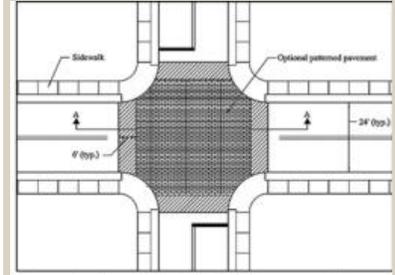
Bulb-out

Source: Institute of Transportation Engineers

Table 8-1: Crash Types and Common Countermeasures

Crash Types	Common Countermeasures	Cost
Rear-End	Left and right turn lane evaluation/installation	Medium to High
	Coordinate/optimize traffic signals	Medium
	Adjusting the yellow clearance intervals for signals	Low
	Increase visibility of signal heads (can include backplate installation, advance warning signage, near-side signals, etc)	Low
	Check pavement conditions and improve slick roadways	Medium
	Ensure that existing signals are warranted at intersections with high rear-end crash totals	Low
Angle	Roundabout installation	Medium to High
	Add protected/permissive left turn phase at signals	Medium
	Increase visibility of signal heads (can include backplate installation, advance warning signage, near-side signals, etc)	Low
	Ensure sufficient sight distance is present for intersection approaches	Low to Medium
	Optimize signal timing	Low
Single Vehicle	Install edgeline rumble strips	Low
	Relocate fixed objects out of the clear zone	Medium
	Modify non-recoverable slopes along roadside	Medium
	Ensure sufficient pavement marking visibility during all light conditions	Low
	Ensure sufficient roadway lighting in key areas	Medium
Sideswipe	Install centerline rumble strips	Low
	Ensure sufficient pavement marking visibility during all light conditions	Low
Head-On	Install centerline rumble strips	Low
	Median barriers	Medium to High

Traffic Safety and Calming



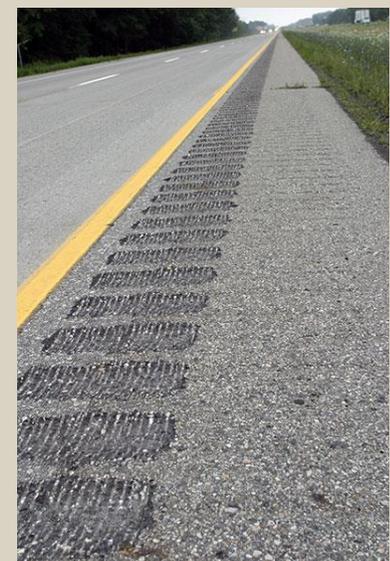
Raised Crosswalk

Source: Institute of Transportation Engineers



Rectangular Rapid Flashing Beacon

Source: Federal Highway Administration



Rumble Strips

Source: rumblestrips.com

Non-Motorized Travel

Improving non-motorized travel was ranked as the highest priority (along with traffic signals) by the public through the engagement process. Non-motorized travel includes sidewalks, multi-use trails, and bicycle lanes and facilities. The City of Dothan has a limited, but developing bicycle/pedestrian network with future improvements identified in the City’s Pedestrian and Bicycle Plan. Improving the bicycle/pedestrian network provides many benefits to a region including increasing opportunities for active transportation, children walking to school, and transit accessibility all of which can address transportation equity in the region.

ALDOT received a directive from FHWA in June 2009 that the MPOs must; “include a policy statement that bicycling and walking facilities will be incorporated into all transportation projects unless exceptional circumstances exist.” This directive was reinforced by a USDOT email broadcast in March 2010 in which recommendations were forwarded to state DOTs with regard to bicycle and pedestrian policy. These two directives effectively modified 23 USC 217 in implementing improvements using federal funds on ALDOT maintained facilities.

The existing conditions assessment, pedestrian/bicycle demand analysis, and public engagement input illustrate the need to approach bicycle/pedestrian projects and planning in a more holistic fashion moving forward. For the purposes of the SWAMPO 2045 LRTP, bicycle and pedestrian projects were scored alongside traditional roadway capacity projects. This approach ensures that non-motorized travel improvements are given the same emphasis as roadway projects and adjusted the prioritization process so that all modes of transportation are treated equally in the prioritization process. The bicycle and pedestrian projects outlined in the 2045 LRTP reflect projects that have already been identified as needs by SWAMPO or its member agencies. Locally sponsored bicycle/pedestrian plans should be completed and coordinated with SWAMPO to identify future bicycle and pedestrian projects in the region. Additional measures can be undertaken by local jurisdictions in the Dothan region to encourage non-motorized travel including the development of Complete Streets policies at the local level.

Transit

There is currently no fixed-transit route in the Dothan region. A deviated fixed-route system was recommended for consideration in

Other Project Categories Include:



Non-Motorized Travel



Transit



Highway Capacity



Freight

SWAMPO's 2010 *Fixed Route Transit Feasibility Study*. The transit demand analysis conducted for the 2045 LRTP illustrated that there is enough demand to potentially support a limited fixed-bus route within the central portion of the City of Dothan.

As documented in the 2040 LRTP, all of WTA's directly operated vehicles reached their useful life in 2017. To extend the life of the vehicles, WTA rehabilitated instead of replaced those vehicles.

Since all of WTA's maintenance needs are outsourced, there is no need for maintenance facility improvements as those are included in WTA's operating costs. As there are no current plans to expand the system significantly, there is no need for parking lot capacity improvements. Administrative office improvements may be needed in the future, but this need has not been communicated at this time.

The deviated fixed-route system identified in the *Fixed Route Transit Feasibility Study* encompasses the same geographies recommended for a limited fixed-transit route in the 2045 LRTP. These areas along with the proposed deviated fixed-route system are illustrated on **Figure 8-3**. The proposed system connects many of the region's attractions and provides access to a number of low-income and environmental justice communities which would improve transportation equity in the region.

The WTA, SWAMPO, and the City of Dothan should advance efforts to implement either the deviated fixed-route system or the limited fixed route system shown on **Figure 8-4**. The efforts should include funding identification and evaluation, ridership forecasting, and public outreach that considers all of the economic, social, and environmental benefits associated with implementing the proposed transit service.

The 2015 *Human Services Coordinated Transportation Plan* (HSCTP) identified a need for service to be expanded and enhanced by adding vehicles, increasing the hours and days of service, mobility management, technology improvements, and contract transportation services. The HSCTP also recommended that WTA coordinate with other counties in the SEARPDC region to potentially implement deviated fixed-route service across the larger SEARPDC region which includes SWAMPO. Candidate corridors for this service as identified in the HSCTP include:

- US-431
- US-231



- US-84
- SR-52
- SR-167

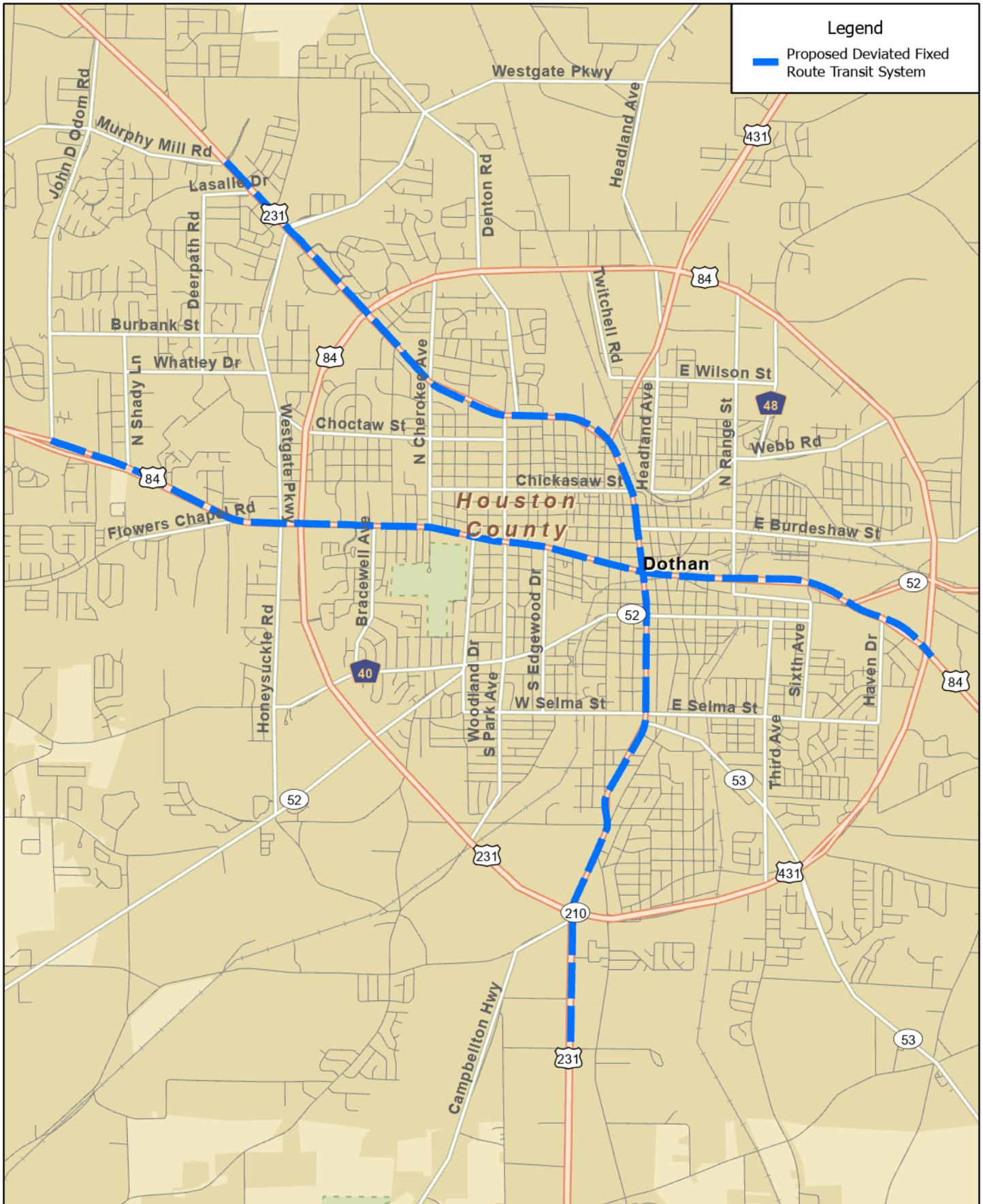
Beyond the deviated fixed-route service, transit service is still needed in Dale, Geneva, and Henry Counties. While this has been partially accomplished through the Jobs Access Reverse Commute (JARC) service initiative, more comprehensive transit service should be considered, particularly to address the needs of low income and elderly residents based on the finding from the HSCTP.

A longer term solution to the public transportation needs in the SWAMPO region and surrounding counties may be the development of a larger regional transit authority which would serve as an umbrella agency for the entire SEARPDC region. SWAMPO should coordinate with SEARPDC on a study to evaluate the feasibility and logistics for this agency.

Highway Capacity

Adding capacity to existing roadways improves regional mobility and traffic flow along major corridors, however the cost of highway capacity projects are significantly higher than TSM&O, transit, and non-motorized travel projects. Given the limited funding resources in the SWAMPO region, highway capacity projects need to be focused on areas where the greatest benefit can be obtained for the cost without negatively impacting Environmental Justice communities. **Figure 8-5** illustrates the year 2045 traffic conditions in the SWAMPO region for the Existing + Committed network. Without additional transportation improvements, heavy to severe congestion is forecast for most of Ross Clark Circle, US-231 outside of Ross Clark Circle, US-431 northeast of Ross Clark Circle, and US-84 outside of Ross Clark Circle.





Legend

- Proposed Deviated Fixed Route Transit System

Figure 8-3: Deviated Fixed Route Transit System

Southeast Wiregrass Area MPO
Dothan, Alabama

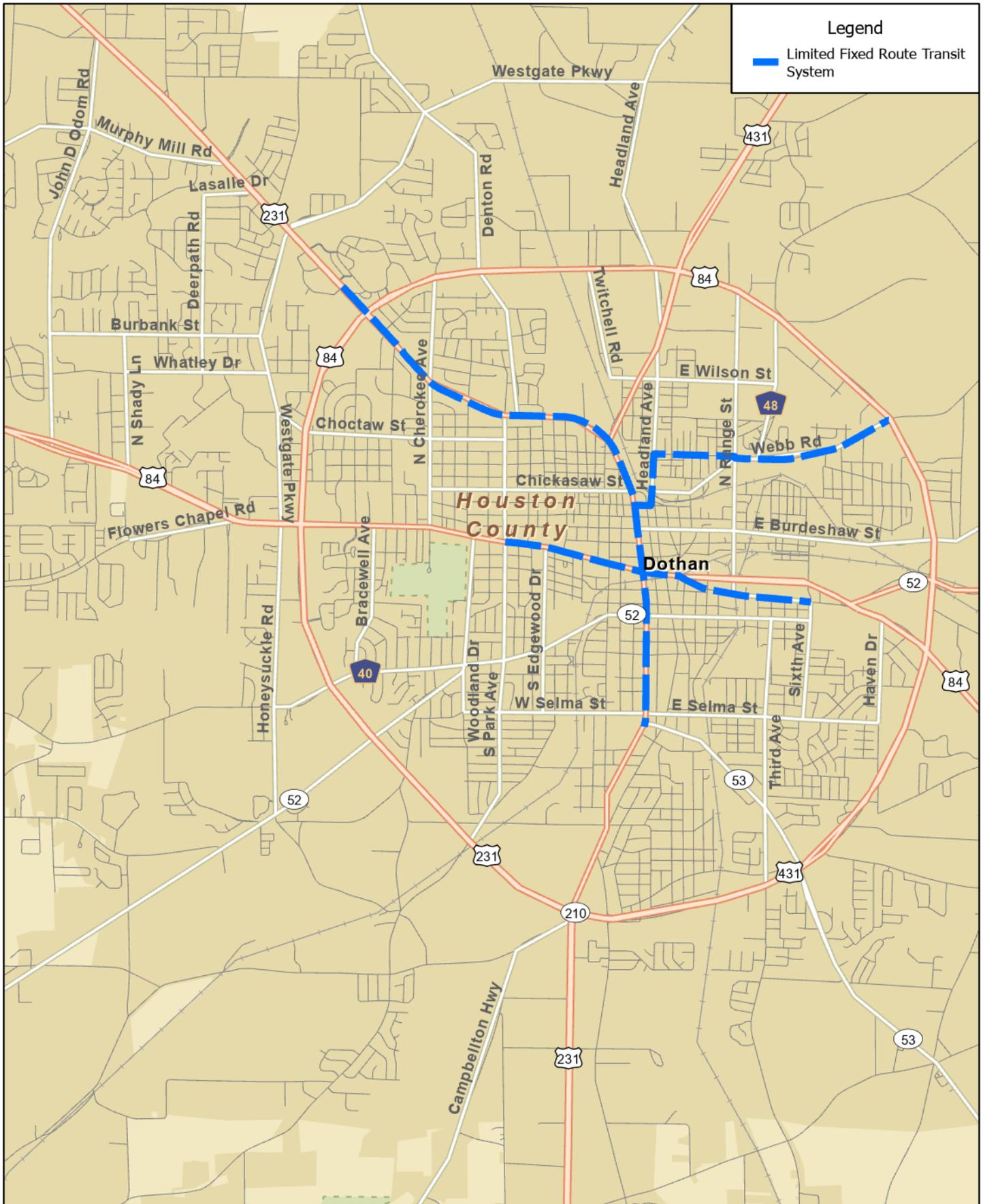
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Legend

— Limited Fixed Route Transit System

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Figure 8-4: Limited Fixed Route Transit System

Southeast Wiregrass Area MPO
Dothan, Alabama

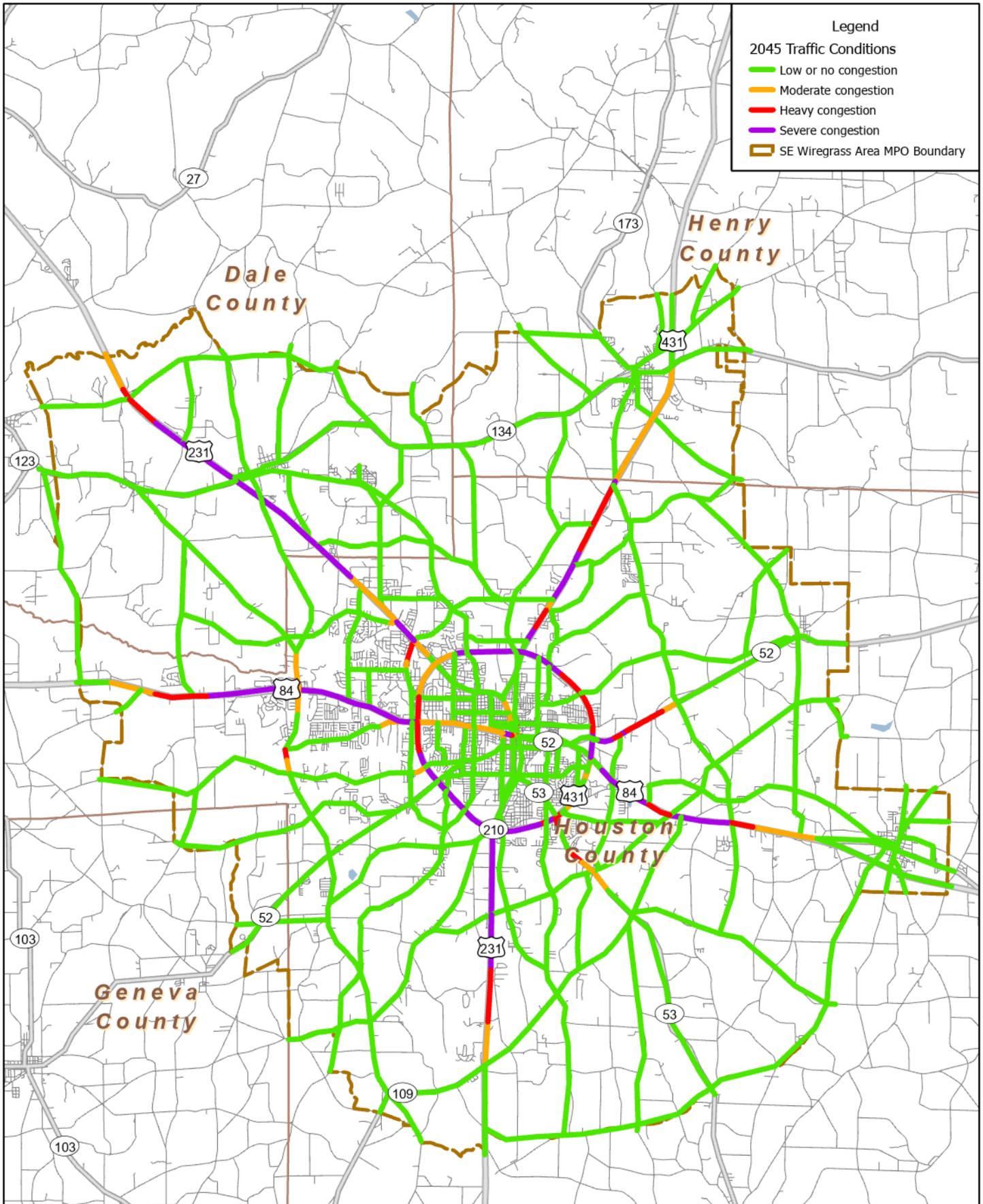


Figure 8-5: 2045 Traffic Conditions from Regional Travel Demand Model
 (Fiscally Constrained)
 Southeast Wiregrass Area MPO
 Dothan, Alabama



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Freight

The Dothan region has historically been a hub for freight movements, and this is projected to be the scenario in the future. Accommodating future freight demands requires the appropriate level of planning and coordination with ALDOT (trucks), railroad carriers and regional airports. The 2045 LRTP identified the corridors with the largest truck volumes as US 231 northwest and south of Dothan, US-84 east and west of Dothan, and the west side of Ross Clark Circle.

Roadway, bridge, and pavement improvements to these corridors would benefit truck as well as automobile traffic. The City of Dothan and SWAMPO should consider conducting a comprehensive freight planning effort that would include acquiring proprietary freight data needed for a more granular analysis of freight movements in the region. The recommendations developed in the regional freight plan should be coordinated with the ALDOT Statewide Freight Plan and the SWAMPO 2045 LRTP. MAP-21 requires freight plans for urbanized areas with population over 200,000 but does not require them for smaller MPOs like SWAMPO. However, ALDOT PL funds could potentially be used to support a SWAMPO freight study.

SWAMPO will continually coordinate with ALDOT to identify rail hotspots and fund improvements.





Chapter 9

Funding

Funding

Metropolitan Transportation Plans are required by MAP-21 / FAST Act legislation to be financially constrained. This requirement is met through the development of a financial plan which demonstrates the costs of programmed projects does not surpass the amount of resources that are reasonably expected to be available. This chapter provides an analysis of the estimated funding available for transportation projects and programs in the Metropolitan Planning Area from public, private, and other additional financial resources.

Funding Sources

While organizations may use differing methodologies to forecast how much revenue is to be reasonably expected from federal, state, and local sources, ALDOT does provide each Metropolitan Planning Organization (MPO) with a projected future funding budget divided into the following categories; capacity, operations and maintenance, transit, MPO dedicated, and state. **Table 9-1** shows the anticipated funding for the MPO for Fiscal Years (FY) 2020 to FY 2023 by MAP-21 / Fast ACT funding program categories.

ALDOT did not project the Transportation Alternatives Set-Aside Program (TAP) funding as these funds are awarded through an ALDOT administered competitive selection process. Project funding is allocated in two separate ways; first fifty percent is sub allocated to areas based on their relative share of the total State 2010 Census. The second fifty percent is allocated to any area of the state. Any sponsor located in the State, regardless of population (including MPOs), are eligible to submit applications for consideration and the State funds are then awarded and administered by ALDOT.

There is a fair amount of insecurity in the funding amount of the Highway Trust Fund, and with the State proposing a large maintenance effort, ALDOT has decided to limit spending on capacity projects over the next ten years and to allocate and spend more money on maintenance and operations interests in the subsequent 25 years. These funds will be utilized to maintain current and future planned facilities in the Metropolitan Planning Area. **Table 9-2** showcases the long-term plan estimates for FY 2020 thru FY 2045.

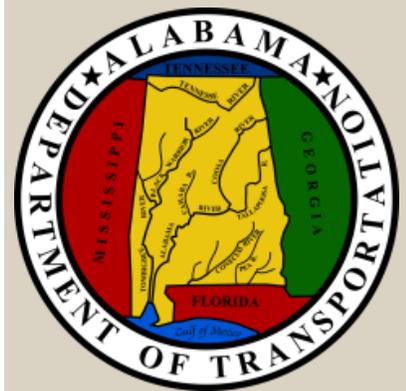
Major Funding Categories

MAP-21 and Fast Act attempted to simplify the federal highway transportation program funding categories through the consolidation

Funding Sources for SWAMPO Include:



Federal Transit Administration



of a large number of specific programs into a smaller number of broader core programs. Actions completed under the prior National Highway System Program, Interstate Maintenance Program, Highway Bridge Program, and Appalachian Development Highway System Program are now a part of the National Highway Performance Program (NHPP), Surface Transportation Program (STP), Highway Safety Improvement Program (HSIP), and Congestion Mitigation and Air Quality (CMAQ) Improvement Program. As SWAMPO is in compliance with National Ambient Air Quality standards, SWAMPO is not eligible for CMAQ funds.

Project costs are distributed across a variety of funding programs, a representative list of some programs available are listed below:

Federal Programs

- Highway Safety Improvement Program
- National Highway Performance Program (NHPP)
- Surface Transportation Program (STP)
- FTA Funds
- Transportation Alternatives Program (TAP)

Innovative Funding

- Alabama Transportation Rehabilitation and Improvement Program (ATRIP)
- Alabama Transportation Rehabilitation and Improvement Program - II (ATRIP - II)

State and Local Programs

- Rebuild Alabama Act
- Property Taxes
- Sales Tax
- Lodging Tax
- User Fees
- Special Assessments
- Impact Fees
- Bond Issuance

Federal Programs

Federal funding provided by ALDOT are projections for anticipated future funds by major categories such as capacity, operations and maintenance, transit, MPO dedicated, and state. These program categories are additionally divided into capacity and operations and maintenance (O&M) as the financials for each capacity and O&M project are considered independently. Capacity projects are those that add capacity to the existing system, such as adding lanes to an existing road or constructing a new road. O&M projects are those that address safety, operations, or maintenance needs, such as roadway resurfacing, intersection improvements, and transit operations.

Federal competitive grant programs could also be an additional avenue for available funding for transportation infrastructure projects. These programs could provide support for innovative and state and local program funding discussed on the following page.



Innovative Funding

In an effort to provide greater access to delivering infrastructure projects, Congress allowed States to use a wider variety of funding avenues such as bonds. The State of Alabama approved the Alabama Transportation Rehabilitation and Improvement Program (ATRIP) and most recently ATRIP-II to rehabilitate and improve transportation infrastructure through accelerated delivery of project funding. The program's goal is to address critical needs projects across the State in an effort to rehabilitate and improve the in-place facilities and in some cases provide new facilities.

State and Local Programs

Projects utilizing Federal dollars usually require State and local governments to be responsible for project costs not covered by the federal programs. These state and local funds primarily come from property tax, sales tax, and other funding sources such as the Rebuild Alabama Act. As funding becomes more competitive at all levels, innovative and additional local funding resources may become more important.

Program Costs

MPOs in Alabama are required to increase project costs by one percent annually in order to account for inflation. Later chapters will cover in greater detail the project development and prioritization process to provide project level costs and an implementation plan where the inflated cost to year of expenditure is accounted for to safeguard that the plan is fiscally constrained.



Table 9-1: Estimated Funding 2020-2023

	Estimated Funding Forecasts FY 2020 Thru FY 2023					
	FY 2020 Thru FY 2023 Funding Projections (Capacity - Federal)	FY 2020 Thru FY 2023 Funding Projections (Capacity - State/Local)	FY 2020 Thru FY 2023 Funding Projections (Capacity - Totals)	FY 2020 Thru FY 2023 Funding Projections (Maintenance & Operations - Federal)	FY 2020 Thru FY 2023 Funding Projections (Maintenance & Operations - State/Local)	FY 2020 Thru FY 2023 Funding Projections (Maintenance & Operations - Totals)
MAP-21 / FAST Act Categories						
National Highway Performance Program (NHPP)	\$27,668,869	\$8,065,556	\$35,734,425	\$2,334,878	\$5,883,719	\$2,918,597
Surface Transportation Program - Dedicated (STPOA)	\$0	\$0	\$0	\$7,700,712	\$2,048,182	\$9,748,894
Surface Transportation Program - Other	\$0	\$0	\$0	\$2,044,294	\$475,370	\$2,519,664
Transit	\$0	\$0	\$0	\$11,762	\$2,940	\$14,702
Bridge	\$0	\$0	\$0	\$0	\$0	\$0
Congestion Mitigation and Air Quality (CMAQ)	\$0	\$0	\$0	\$0	\$0	\$0
Highway Safety Improvement Program (HSIP)	\$0	\$0	\$0	\$1,761,300	\$195,700	\$1,957,000
Transportation Alternatives Program (TAP)	\$0	\$0	\$0	\$0	\$0	\$0
Other Federal and State Funding						
State - Including ATRIP I & II	\$0	\$2,198,000	\$2,198,000	\$0	\$0	\$0
Appalachian Highway System	\$0	\$0	\$0	\$0	\$0	\$0
High Priority and Congressional Earmark Funding	\$0	\$0	\$0	\$0	\$0	\$0
Totals	\$27,668,869	\$10,263,556	\$37,932,425	\$13,852,945	\$3,305,912	\$17,158,857
			\$55,091,282			



Table 9-2: Projected Long-Term Funding 2020-2045

Years	Capacity Funding	Operations & Maintenance Funding	Transit Funding	MPO Dedicated Funding	State Funding
FY 2020 - FY 2023	\$27,668,869	\$6,140,472	\$11,762	\$7,700,712	\$11,518,345
FY 2024 - FY 2025	\$19,582,303	\$2,783,075	\$0	\$2,637,572	\$5,591,344
FY 2026 - FY 2030	\$4,412,723	\$22,918,134	\$5,801,364	\$10,156,270	\$0
FY 2031 - FY 2035	\$4,412,723	\$22,918,134	\$5,801,364	\$10,156,270	\$0
FY 2036 - FY 2040	\$4,412,723	\$22,918,134	\$5,801,364	\$10,156,270	\$0
FY 2041 - FY 2045	\$4,412,723	\$22,918,134	\$5,801,364	\$10,156,270	\$0
Totals	\$64,902,063	\$100,596,084	\$23,217,218	\$50,963,363	\$17,109,690
			\$256,788,417		





Chapter 10

Project Prioritization

Project Development and Prioritization

Projects were identified for the 2045 LRTP in the following ways:

- Roadway capacity projects were identified from public engagement, stakeholder input, previous plans, and year 2045 travel model analysis
- Bicycle and pedestrian projects were identified from the *City of Dothan's Bicycle and Pedestrian Plan*
- No capital projects were identified for transit based on communications with WTA
- No capacity projects were identified for rail projects
- Aviation capacity projects were identified based on conversations with local airport authorities
- Maintenance and operations projects were identified through an analysis of existing conditions and stakeholder input

Roadway project costs were developed based on typical improvement costs per mile.

Bicycle and pedestrian costs were developed based on the project-specific costs provided in the *City of Dothan Bicycle and Pedestrian Plan*. Costs for bicycle and pedestrian projects are for construction only. Pedestrian project costs assume construction of sidewalks on both sides of the roadway and intersection improvements at major roadway crossings. To account for areas where sidewalks are present, pedestrian project costs were reduced to account for existing sidewalks.

As transportation funding is limited, projects must be prioritized and programmed in a fiscally responsible manner. The prioritization process for the SWAMPO 2045 LRTP began with the inclusion of projects that were included in the TIP as these projects have been funded for design and/or construction. The remaining projects were prioritized as a function of the project's consistency with the SWAMPO regional goals, ALDOT Livability Principles, stakeholder and public engagement feedback. **Table 10-1** illustrates the project scoring methodology utilized in the prioritization process.

To ensure consistency in the scoring process, projects were awarded points based on the following criteria for each scoring category.



Supports Regional Mobility:

- 0 points-Does not improve regional mobility
- 3 points-Marginally improves regional mobility
- 7 points-Improves regional mobility
- 10 points-Significantly improves regional mobility

Supports Mixed-Use Development:

- 0 points-Does not support mixed-use development
- 3 points-Marginally supports mixed-use development
- 7 points-Supports mixed-use development
- 10 points-Facilitates mixed-used development

Supports Safety and Security:

- 0 points-Does not support safety and security
- 3 points-Marginally supports safety and security
- 7 points-Supports safety and security
- 10 points-Significantly improves safety and security

Multi-modal:

- 0 points-Accommodates one mode
- 3 points-Accommodates two modes
- 7 points-Accommodates three modes
- 10 points-Accommodates four or more modes

Environmental Impacts:

- 0 points-Significant environmental impacts
- 3 points-Moderate environmental impacts
- 5 points-Minimal or no environmental impacts

Transportation Equity:

- 0 points-No improvement to transportation equity
- 3 points-Moderate improvement to transportation equity
- 5 points-Significant improvement to transportation equity

A raw score for the plan projects was calculated using the scoring system. For example, a Ross Clark Circle widening project without sidewalks would score highly (10) on regional mobility as the roadway widening would add capacity to major regional highway, but the project would have a multi-modal score of 0 as the project would only accommodate one mode of travel. If sidewalks and buffered bike lanes were added to the roadway widening project, the multi-modal



score would increase to 7, as the project would now incorporate three different modes. Similarly, bicycle and pedestrian projects that support mixed-use development were given a higher supports mixed-use development score than roadway widening projects in rural or low density suburban areas. Projects that did not cross or impact streams and wetlands were given the highest environmental scores, followed by projects that only impacted small streams, with the lowest scores being allocated to projects that would cross or impact major wetland areas. The raw score was then factored as a function of the public engagement feedback. As the public expressed an interest for more mixed-use developments, improved transit, and improved bicycle and pedestrian facilities, projects in these categories were given increased priority through a weighting process which calculated the project's final score used in the prioritization process.

After calculating the final project score using the formula, final score = total score x PI weight, the projects were prioritized as illustrated in **Table 10-2**. Pedestrian and bicycle projects would be funded through the competitive TAP application process and are listed as visionary projects in the 2045 LRTP. Other projects included in the constrained and visionary long range plans were categorized as follows:

Capacity

This category includes adding lanes to existing roadway facilities and constructing new roadways. This category does not include intersection turn lane improvements.

ATMS/Traffic Signal

This category includes adding intersection turn lanes, traffic signal timing optimization, signal system upgrades, adaptive traffic signals, and ITS.

Projects included in the fiscally constrained long range plan were categorized as high priority. The remaining projects were prioritized as either medium or low priority as a function of the final project score. The project prioritization is summarized on **Figure 10-1**.



Table 10-1: Project Prioritization Methodology

Project Type	Score from PI	PI Weight for Prioritization	Supports Regional Mobility	Supports Mixed-Use Development	Supports Safety and Security	Multi-Modal	Environmental Impacts	Transportation Equity	Project Weight for Prioritization
Road Capacity	2.76	0.95	Max 10 Points	Max 10 Points	Max 10 Points	Max 10 Points	Max 5 Points	Max 5 Points	Total Score x PI Weight
Transit	2.72	0.93							
Pedestrian	2.96	1.02	Max 10 Points	Max 10 Points	Max 10 Points	Max 10 Points	Max 5 Points	Max 5 Points	Total Score x PI Weight
Bicycle/ Trail	3.06	1.05							
TSMO	3.06	1.05							
Average	2.91								



Table 10-2: SWAMPO 2045 LRTP Project Scoring

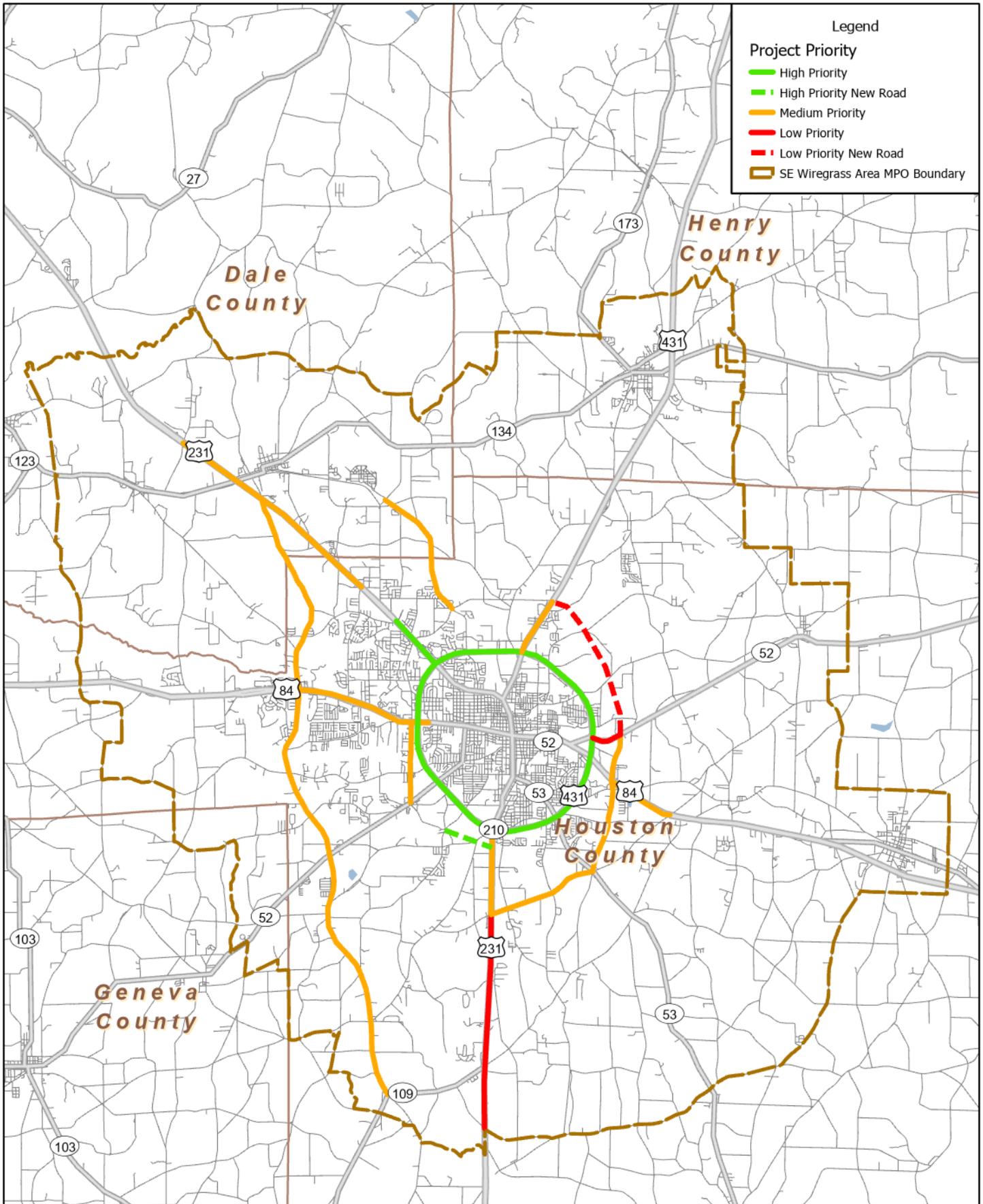
Project Type	Score from PI	PI Weight for Prioritization	Supports Regional Mobility	Supports Mixed-Use Development	Supports Safety and Security	Multi-Modal	Environmental Impacts	Transportation Equity	Project Weight for Prioritization
			Max 10 Points	Max 10 Points	Max 10 Points	Max 10 Points	Max 5 Points	Max 5 Points	Total Score x PI Weight
			Score	Score	Score	Score	Score	Score	Score
Road Capacity	2.76	0.95							
Transit	2.72	0.93							
Pedestrian	2.96	1.02							
Bicycle/ Trail	3.06	1.05							
TSMO	3.06	1.05							
Average	2.91								
Project Description									
Kelly Springs Elementary School/Pavilion Mall Area Streets: Walk-1			3	10	7	3	5	5	38.9
Beverly Middle & Hidden Lakes Elementary School Area Streets: Walk-5			3	10	10	0	5	5	38.9
Westgate Recreation Center Area Street: Bike-4			3	10	10	0	5	3	35.6
Wiregrass Mall / Westgate Parkway Area Streets: Walk-2			3	10	10	0	5	5	34.7
ATMS/Traffic Signal Optimization on US 231 from Murphy Mill Road to Ross Clark Circle			7	3	10	3	5	3	32.6
Flowers Hospital Area Streets: Walk-3			0	10	10	0	5	5	31.5
Selma Street Elementary School Area Streets: Walk-4			3	7	10	0	5	5	31.5
Kelly Springs Elementary School / Pavilion Mall Area Streets: Bike-1			3	10	7	3	5	3	31.5
Andrew Belle Recreation Center Area Streets: Bike-3			3	10	10	0	5	3	31.5
Ross Clark Cir US 231 North to Reeves St Widen to 6 Lanes			10	0	10	0	5	3	31.5
Walton Park Recreation Center Area Streets: Bike-2			0	7	10	0	5	3	25.4
Honeysuckle Rd US 84 to Hartford Hwy Widen to 4 Lanes			10	3	10	0	3	0	24.6
Brannon Stand US 231 North to US 84 Widen to 4 Lanes			10	3	10	0	3	0	24.6
Brannon Stand US 84 to SR 52 Widen to 4 Lanes			10	3	10	0	3	0	24.6

Capacity Projects from 2040 LRTP
 Projects from City of Dothan Bicycle/Pedestrian Plan
 New Projects from 2045 Needs Assessment

Table 10-2 (continued): SWAMPO 2045 LRTP Project Scoring

Project Type	Score from PI	PI Weight for Prioritization	Supports Regional Mobility	Supports Mixed-Use Development	Supports Safety and Security	Multi-Modal	Environmental Impacts	Transportation Equity	Project Weight for Prioritization
			Max 10 Points	Max 10 Points	Max 10 Points	Max 10 Points	Max 5 Points	Max 5 Points	Total Score x PI Weight
Project Description			Score	Score	Score	Score	Score	Score	Score
Road Capacity	2.76	0.95	10	0	10	0	3	3	24.6
Transit	2.72	0.93							
Pedestrian	2.96	1.02	10	0	10	0	3	3	24.6
Bicycle/ Trail	3.06	1.05	10	0	10	0	3	3	24.6
TSMO	3.06	1.05							
Average	2.91								
Ross Clark Cir Reeves St to Columbia Hwy Widen to 6 Lanes			10	0	10	0	3	3	24.6
Ross Clark Cir Columbia Hwy to US 231 South Widen to 6 Lanes			10	0	10	0	3	3	24.6
Widen US 431 from 4 to 6 lanes with sidewalks from Ross Clark Circle to Westgate Parkway			10	0	10	0	3	3	24.6
Grandview Elementary School Area Streets: Bike-5			3	10	3	0	5	3	24.4
US 231 South Ross Clark Cir to E Saunders Rd Widen to 6 Lanes			10	0	10	0	5	0	23.7
Ross Clark Cir Baumann Dr to US 231 South Widen to 6 Lanes			10	0	10	0	5	0	23.7
Widen Columbia Highway to 4 Lanes from Ross Clark Circle to N Beverly Road			7	3	7	0	5	3	23.7
US 84 Pinetree Dr to Brannon Stand Rd Widen to 6 Lanes			10	0	10	0	3	0	21.8
E Main St N Beverly Rd to Forrester Rd Widen to 6 Lanes			10	0	10	0	3	0	21.8
Brannon Stand SR 52 to SR 109 Widen to 4 Lanes			10	0	10	0	3	0	21.8
US 231 South E Saunders Rd to E Smithville Widen to 6 Lanes			10	0	10	0	3	0	21.8
Honeysuckle Rd S Park Ave to US 231 South New 2 Lane Roadway			7	3	7	0	3	0	19.0
Eastern Bypass Columbia Hwy to Reeves St New 4 Lane Roadway			7	0	7	0	3	3	19.0
US 231 North John D Odum Rd to Lees Bridge Widen to 6 Lanes			10	0	10	0	0	0	19.0
E Saunders Rd US 231 South to E Cottonwood Rd Widen to 4 Lanes			7	0	7	0	3	0	16.1
N Beverly Rd Forrester Rd to Columbia Hwy Widen to 4 Lanes			3	0	7	0	3	0	12.3
Denton Rd Mance Newton Rd to Paramore Widen to 4 Lanes			3	0	3	0	5	0	10.4

Capacity Projects from 2040 LRTP
 Projects from City of Dothan Bicycle/Pedestrian Plan
New Projects from 2045 Needs Assessment



Legend

Project Priority

- High Priority
- - - High Priority New Road
- Medium Priority
- Low Priority
- - - Low Priority New Road
- - - SE Wiregrass Area MPO Boundary

Figure 10-1: Project Prioritization

Southeast Wiregrass Area MPO
Dothan, Alabama

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Chapter 11

Implementation



Implementation Plan

Tables 11-1 and 11-2 in this chapter include fiscally constrained capacity and maintenance and operations (M&O) projects. All project costs were increased by one percent annually in order to account for inflation.

All M&O projects from FY 2024-2045 are included as line items based on the amount of remaining funding after revenue dedicated to M&O projects from FY 2020-2023 are subtracted. **Figure 11-1** compares the estimated expenses for dedicated capacity, M&O, transit, and dedicated MPO projects in relationship to the available funding expected for the SWAMPO region between FY 2024-2045.

Table 11-3 lists the fiscally constrained capacity projects. Capacity projects exceeding the federal funding allocated by ALDOT are listed in **Table 11-4**. Unfunded roadway projects, illustrated on **Figure 11-2**, are referred to as visionary projects, and unfunded bicycle/pedestrian projects (illustrated on **Figure 11-3**) are referred to as potential Transportation Alternatives Program (TAP) projects. Only projects that were eligible for TAP funds were included. These projects should be submitted to ALDOT as part of the annual request for TAP projects. This program is competitive, so funds are not guaranteed. Some bicycle and pedestrian projects may appear incomplete. To address this issue, the city may amend the scope of the project before submitting for TAP funding or the city should attempt to construct the missing links without federal funding before submitting the project to ALDOT.

If funding becomes available for an unfunded project, the LRTP should be updated to reflect the project as funded. The local match for roadway projects is assumed to be 20 percent of the total project cost. For transit, the local match varies depending on the project type. Maintenance and operations assistance is assumed to require a 50% local match while capital projects would require a 20% local match. **Figures 11-4 and 11-5** illustrate the effectiveness of the 2045 LRTP visionary scenario compared to the 2045 fiscally constrained LRTP scenario.

While there are no specific projects related to emerging technologies, SWAMPO should take the lead in championing policies that facilitate increased telecommuting across the region as well as identifying opportunities to coordinate Uber/Lyft services with local and regional transit service.



Table 11-1: Fiscally Constrained Projects

Federal	State	Other	Description
\$0	\$187,080	\$0	Adding a turn lane on Westgate Parkway from 0.21 miles east of the railroad to Technology Warehouse Freezer for the City of Dothan
\$12,383	\$0	\$3,090	Section 5307 Transit SE AL Reg Plan and Dev Comm Capital Support Equip (2-way radios) FY 2020
\$0	\$2,123,040	\$0	Adding additional lane of SR-12 (US-84/West Main Street) from John D. Odom Road to Flowers Chapel Road
\$283,773	\$31,530	\$0	Install railroad crossing devices on SR-12 (US-84) and Museum Avenue in Dothan, DOT No. 733686N, Ref #1325 (XVI-R), to include standard mast mounted signals, gates, bells, GCP's, signs, markings, and legends
\$774,119	\$0	\$321,308	Resurfacing on CR-47 from the Houston County line to SR-134
\$445,725	\$0	\$111,431	Resurfacing on CR-41 (Walden Drive) from Kinsey Road to Broad Street – HCP 35-408-19
\$271,552	\$0	\$67,888	Resurface Suggs Road from Headland Avenue to the Houston/Henry County line
\$254,936	\$0	\$63,734	Resurfacing on Jordan Avenue from Ruth Circle to Enon Road
\$260,245	\$0	\$65,062	Resurfacing on Ashford Road from Enon Road to Ben Ivey Road
\$594,451	\$0	\$286,610	Resurfacing on CR-112 (Napier Field Road) from SR-53 (US-231) to the Dale County line
\$2,453,980	\$613,495	\$0	Resurfacing on SR-52 from SR-605 to SR-210 (US-231/Ross Clark Circle)
\$960,634	\$240,158	\$0	Resurfacing and 2' safety widening on SR-134 from SR-123 to CR-67
\$270,178	\$30,020	\$0	Resurfacing and 2' safety widening on SR-134 from SR-123 to CR-67
\$15,726,524	\$3,931,631	\$0	Adding lanes on SR-210 (Ross Clark Circle) from south of Meadowbrook Drive South to North Cherokee Avenue and on SR-53 (US-231) from Girard Avenue to Buyers Drive
\$631,022	\$157,756	\$0	Curb ramp installations and modifications on State Routes 1, 12, 27, 52, 53, 87, 95, 103, 123, 196, and 210 in Geneva and Houston Counties
\$206,523	\$0	\$51,631	Resurface CR-51 (Bethel Road) from CR-41 (Broad Street) to SR-1 (US-431)
\$204,063	\$0	\$51,016	Resurfacing on Hosea Road from the Geneva County line to SR-605 – HCP 35-407-19
\$888,491	\$0	\$222,123	Resurfacing on Taylor Road from SR-605 to Campbellton Highway
\$657,440	\$0	\$164,360	Resurfacing on Roney Road from SR-1 (US-431) to Walden Drive
\$4,252,767	\$1,063,192	\$0	Adding lanes on SR-210 (Ross Clark Circle) from US-231 South to Bauman Drive
\$1,567,856	\$174,152	\$0	Intersection improvements and access management west of Cowarts on SR-12 (US-84) from 150' west of Health Sciences Boulevard to 1470' east of Eddins Road including widening of turn lane, addition of acceleration lane, and median crossover protection
\$491,622	\$0	\$130,788	Resurface CR-65 (Cowarts Creek Road/South Broad Street) from CR-24 (Lucy Grade Road) to SR-12 (US-84)
\$1,203,027	\$0	\$300,757	Resurfacing on CR-203/Campellton Highway from Hadden Road to SR-1 (US-231) South Oates Street
\$286,741	\$71,685	\$0	Installation of I.T.S. devices to provide advanced corridor management TSMO along various sections of SR-210 (US-231) in Houston County
\$3,858,710	\$964,677	\$0	Adding lanes on SR-210 (Ross Clark Circle) from US-231 South to Bauman Drive
\$15,168,462	\$3,792,116	\$0	Adding lanes on SR-210 (Ross Clark Circle) from US-231 South to Bauman Drive
\$3,435,640	\$858,910	\$0	Pedestrian bridge, sidewalks, and lighting on SR-210 (Ross Clark Circle) from Fortner Street to North Cherokee Avenue, on SR-53 (US-231) from Girard Avenue to Buyers Drive and on SR-12 (US-84) from Bel Aire Drive to North Englewood Avenue (Phases)
\$450,306	\$0	\$112,577	Resurfacing on CR-68 from the Houston County line to Fortson Road (the MPO boundary)
\$158,294	\$0	\$39,574	Resurfacing on CR-70 from the Houston County line to SR-52
\$183,005	\$0	\$45,752	Resurface CR-55 (Broadway Street) from the south city limit of Ashford to Old US Highway 84
\$576,207	\$0	\$144,051	Resurfacing on Hodgesville Road from Eddins Road to Saunders Road

Table 11-1 (continued): Fiscally Constrained Projects

Federal	State	Other	Description
\$131,626	\$0	\$32,907	Resurfacing on East Grey Hodges Road from SR-1 (US-431) to Roney Road
\$292,313	\$0	\$73,078	Resurfacing on Ashford Road from Ben Ivey Road to Midland Street
\$603,876	\$0	\$150,969	Resurfacing on Old Webb Road from the Webb town limits to SR-52
\$1,977,096	\$494,274	\$0	Adding lanes on SR-210 (Ross Clark Circle) from US-231 South to Bauman Drive
\$2,925,040	\$731,260	\$0	Installation of I.T.S. devices to provide advanced corridor management TSMO along various sections of SR-210 (US-231) in Houston County

Table 11-2: Fiscally Constrained Maintenance and Operations Projects

Description
Adding a turn lane on Westgate Parkway from 0.21 miles east of the railroad to Technology Warehouse Freezer for the City of Dothan Section 5307 Transit SE AL Reg Plan and Dev Comm Capital Support Equip (2-way radios) FY 2020
Adding additional lane of SR-12 (US-84/West Main Street) from John D. Odom Road to Flowers Chapel Road
Install railroad crossing devices on SR-12 (US-84) and Museum Avenue in Dothan, DOT No. 733686N, Ref #1325 (XVI-R), to include standard mast mounted signals, gates, bells, GCP's, signs, markings, and legends
Resurfacing on CR-47 from the Houston County line to SR-134
Resurfacing on CR-41 (Walden Drive) from Kinsey Road to Broad Street – HCP 35-408-19
Resurface Suggs Road from Headland Avenue to the Houston/Henry County line
Resurfacing on Jordan Avenue from Ruth Circle to Enon Road
Resurfacing on Ashford Road from Enon Road to Ben Ivey Road
Resurfacing on CR-112 (Napier Field Road) from SR-53 (US-231) to the Dale County line
Resurfacing on SR-52 from SR-605 to SR-210 (US-231/Ross Clark Circle)
Resurfacing and 2' safety widening on SR-134 from SR-123 to CR-67
Resurfacing and 2' safety widening on SR-134 from SR-123 to CR-67
Curb ramp installations and modifications on State Routes 1, 12, 27, 52, 53, 87, 95, 103, 123, 196, and 210 in Geneva and Houston Counties
Resurface CR-51 (Bethel Road) from CR-41 (Broad Street) to SR-1 (US-431)
Resurfacing on Hosea Road from the Geneva County line to SR-605 – HCP 35-407-19
Resurfacing on Taylor Road from SR-605 to Campbellton Highway
Resurfacing on Roney Road from SR-1 (US-431) to Walden Drive
Intersection improvements and access management west of Cowarts on SR-12 (US-84) from 150' west of Health Sciences Boulevard to 1470' east of Eddins Road including widening of turn lane, addition of acceleration lane, and median crossover protection
Resurface CR-65 (Cowarts Creek Road/South Broad Street) from CR-24 (Lucy Grade Road) to SR-12 (US-84)
Resurfacing on CR-203/Campellton Highway from Hadden Road to SR-1 (US-231) South Oates Street
Installation of I.T.S. devices to provide advanced corridor management TSMO along various sections of SR-210 (US-231) in Houston County
Resurfacing on CR-68 from the Houston County line to Fortson Road (the MPO boundary)
Resurfacing on CR-70 from the Houston County line to SR-52
Resurface CR-55 (Broadway Street) from the south city limit of Ashford to Old US Highway 84
Resurfacing on Hodgesville Road from Eddins Road to Saunders Road
Resurfacing on East Grey Hodges Road from SR-1 (US-431) to Roney Road
Resurfacing on Ashford Road from Ben Ivey Road to Midland Street
Resurfacing on Old Webb Road from the Webb town limits to SR-52
Installation of I.T.S. devices to provide advanced corridor management TSMO along various sections of SR-210 (US-231) in Houston County

Projects in TIP

Figure 11-1: Financial Plan Summary

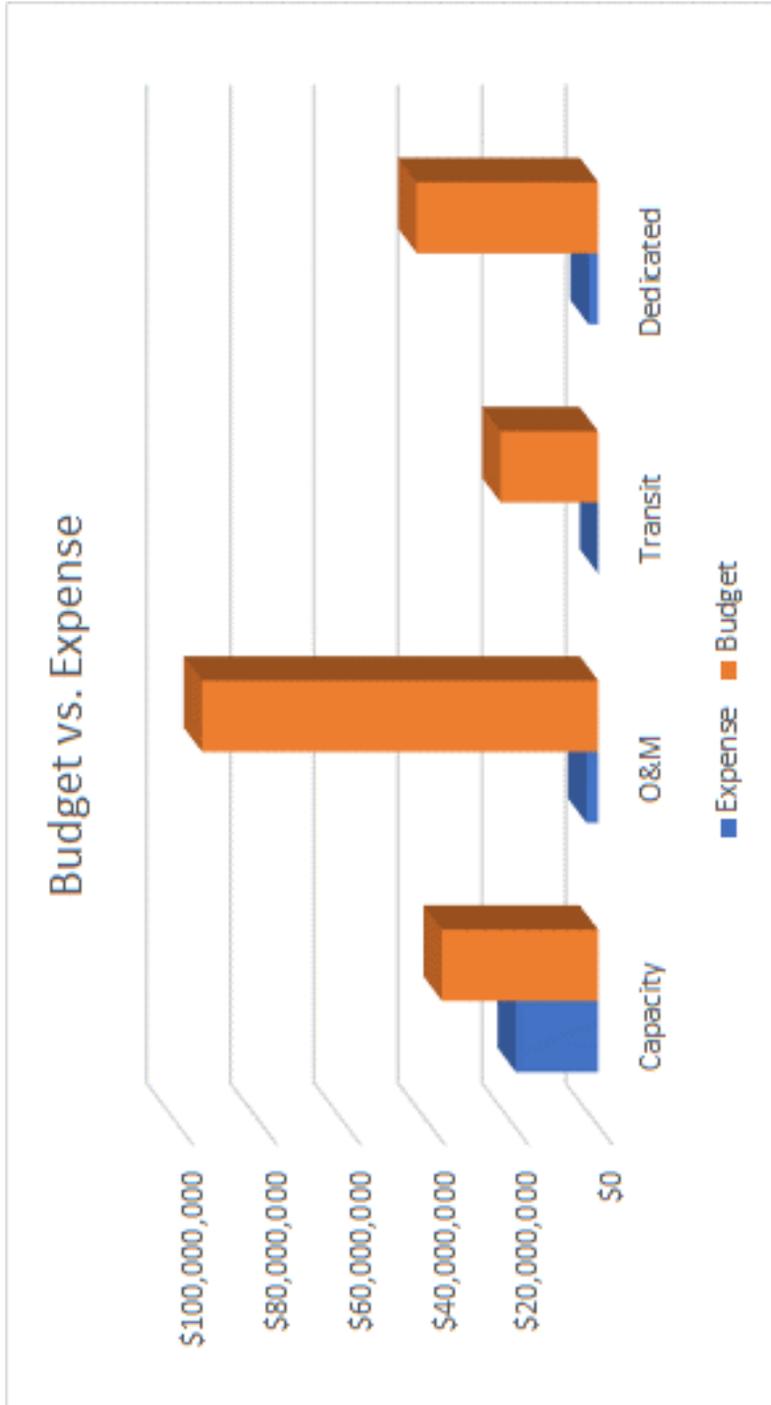


Table 11-3: Fiscally Constrained Roadway Capacity Projects

Description
Adding lanes on SR-210 (Ross Clark Circle) from south of Meadowbrook Drive South to North Cherokee Avenue and on SR-53 (US-231) from Girard Avenue to Buyers Drive
Adding lanes on SR-210 (Ross Clark Circle) from US-231 South to Bauman Drive
Pedestrian bridge, sidewalks, and lighting on SR-210 (Ross Clark Circle) from Fortner Street to North Cherokee Avenue, on SR-53 (US-231) from Girard Avenue to Buyers Drive and on SR-12 (US-84) from Bel Aire Drive to North Englewood Avenue (Phases)

Table 11-4: Visionary and TAP Project List

Description
Kelly Springs Elementary School/Pavilion Mall Area Streets: Walk-1
Beverlye Middle & Hidden Lakes Elementary School Area Streets: Walk-5
Westgate Recreation Center Area Street: Bike-4
Wiregrass Mall / Westgate Parkway Area Streets: Walk-2
ATMS/Traffic Signal Optimization on US 231 from Murphy Mill Road to Ross Clark Circle
Flowers Hospital Area Streets: Walk-3
Selma Street Elementary School Area Streets: Walk-4
Kelly Springs Elementary School / Pavilion Mall Area Streets: Bike-1
Andrew Belle Recreation Center Area Streets: Bike-3
Ross Clark Cir US 231 North to Reeves St Widen to 6 Lanes
Walton Park Recreation Center Area Streets: Bike-2
Honeysuckle Rd US 84 to Hartford Hwy Widen to 4 Lanes
Brannon Stand US 231 North to US 84 Widen to 4 Lanes
Brannon Stand US 84 to SR 52 Widen to 4 Lanes
Ross Clark Cir Reeves St to Columbia Hwy Widen to 6 Lanes
Ross Clark Cir Columbia Hwy to US 231 South Widen to 6 Lanes
Widen US 431 from 4 to 6 lanes with sidewalks from Ross Clark Circle to Westgate Parkway
Grandview Elementary School Area Streets: Bike-5
US 231 South Ross Clark Cir to E Saunders Rd Widen to 6 Lanes
Ross Clark Cir Baumann Dr to US 231 South Widen to 6 Lanes
Widen Columbia Highway to 4 Lanes from Ross Clark Circle to N Beverly Road
US 84 Pinetree Dr to Brannon Stand Rd Widen to 6 Lanes
E Main St N Beverly Rd to Forrester Rd Widen to 6 Lanes
Brannon Stand SR 52 to SR 109 Widen to 4 Lanes
US 231 South E Saunders Rd to E Smithville Widen to 6 Lanes
Honeysuckle Rd S Park Ave to US 231 South New 2 Lane Roadway
Eastern Bypass Columbia Hwy to Reeves St New 4 Lane Roadway
US 231 North John D Odom Rd to Lees Bridge Widen to 6 Lanes
E Saunders Rd US 231 South to E Cottonwood Rd Widen to 4 Lanes
N Beverly Rd Forrester Rd to Columbia Hwy Widen to 4 Lanes
Denton Rd Mance Newton Rd to Paramore Widen to 4 Lanes

Capacity Projects from 2040 LRTP

Projects from City of Dothan Bicycle/Pedestrian Plan

New Projects from 2045 Needs Assessment

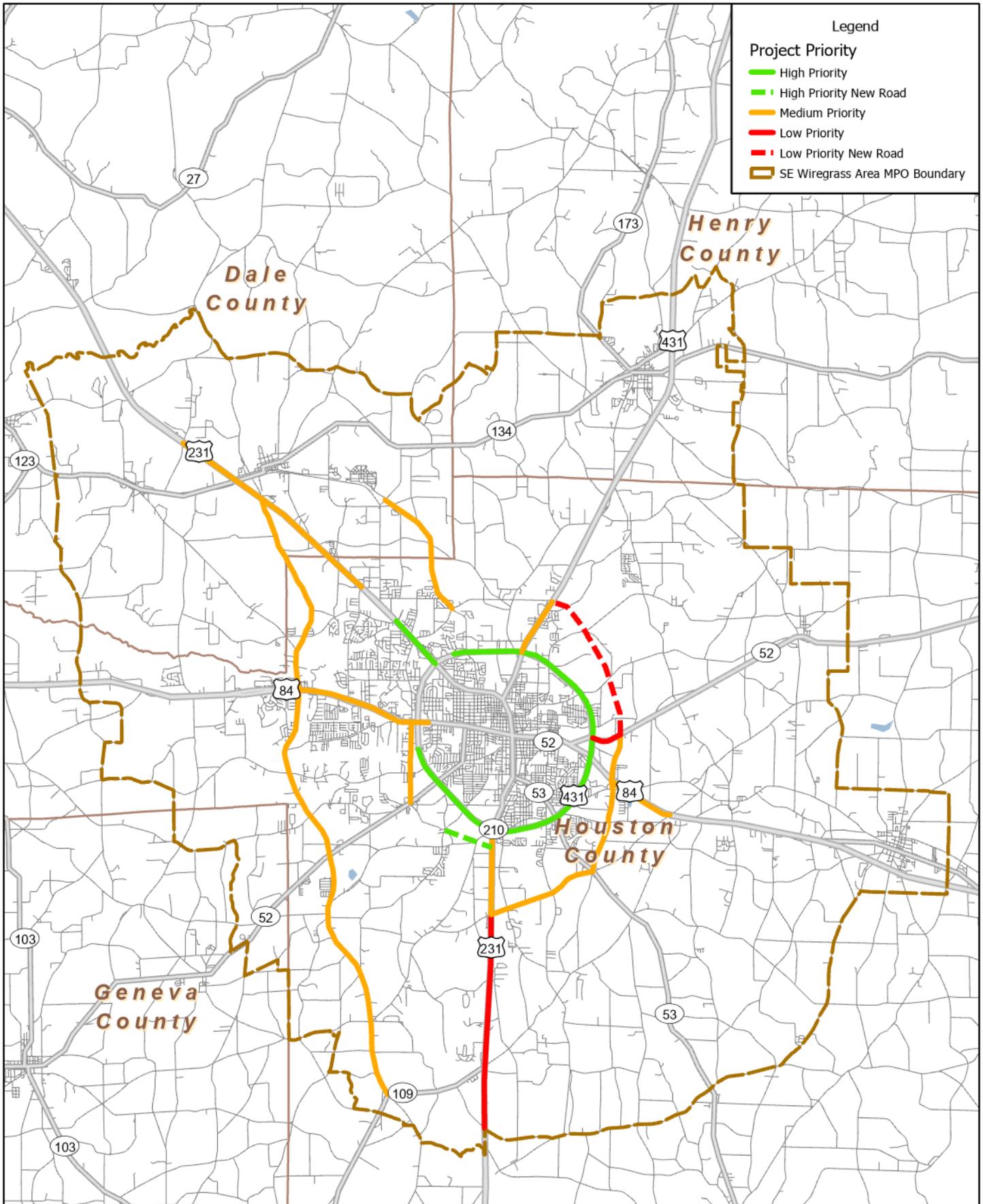


Figure 11-2: Visionary Projects

Southeast Wiregrass Area MPO
Dothan, Alabama

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SAIN
ASSOCIATES



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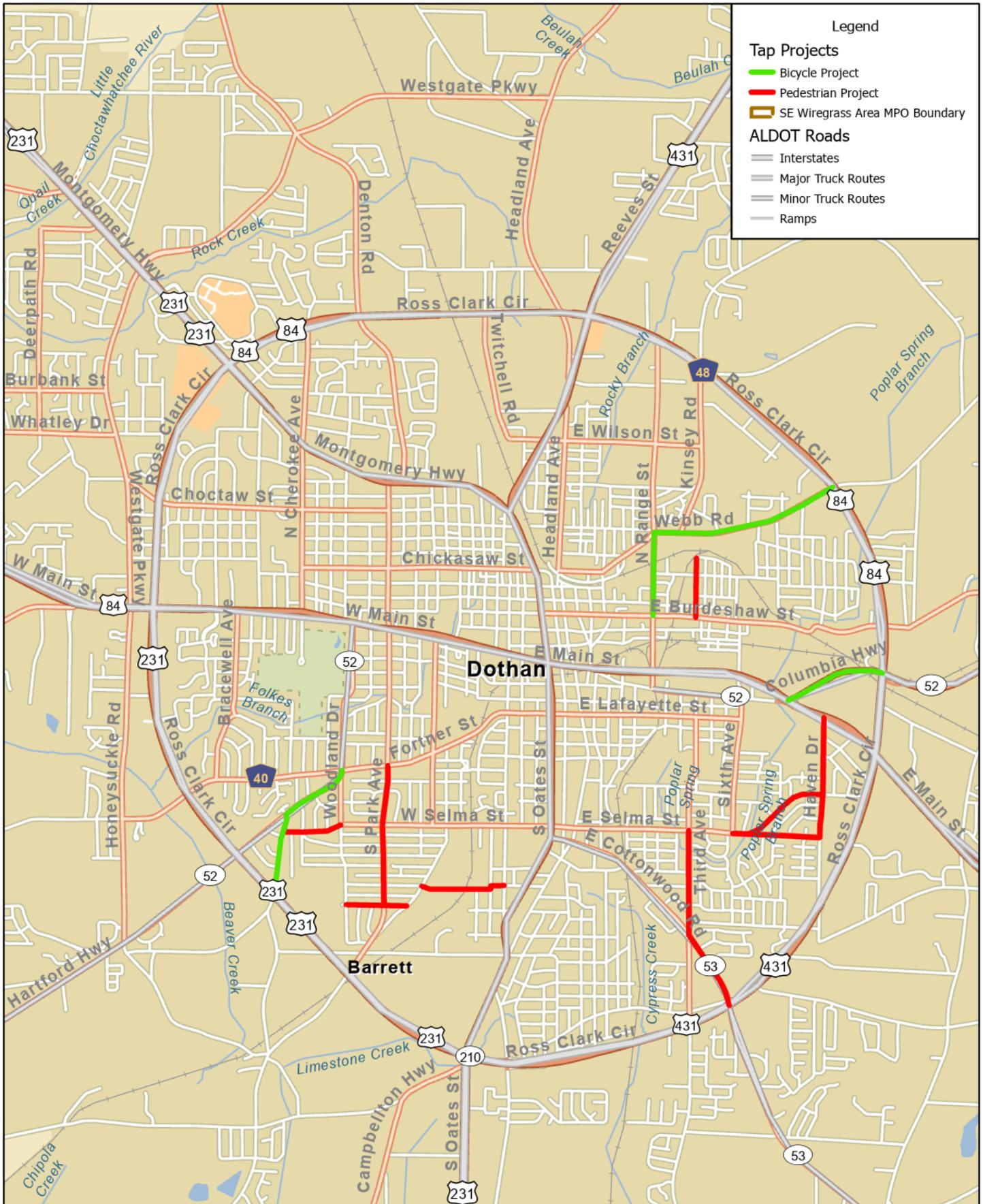


Figure 11-3: Potential TAP Projects

Southeast Wiregrass Area MPO
Dothan, Alabama

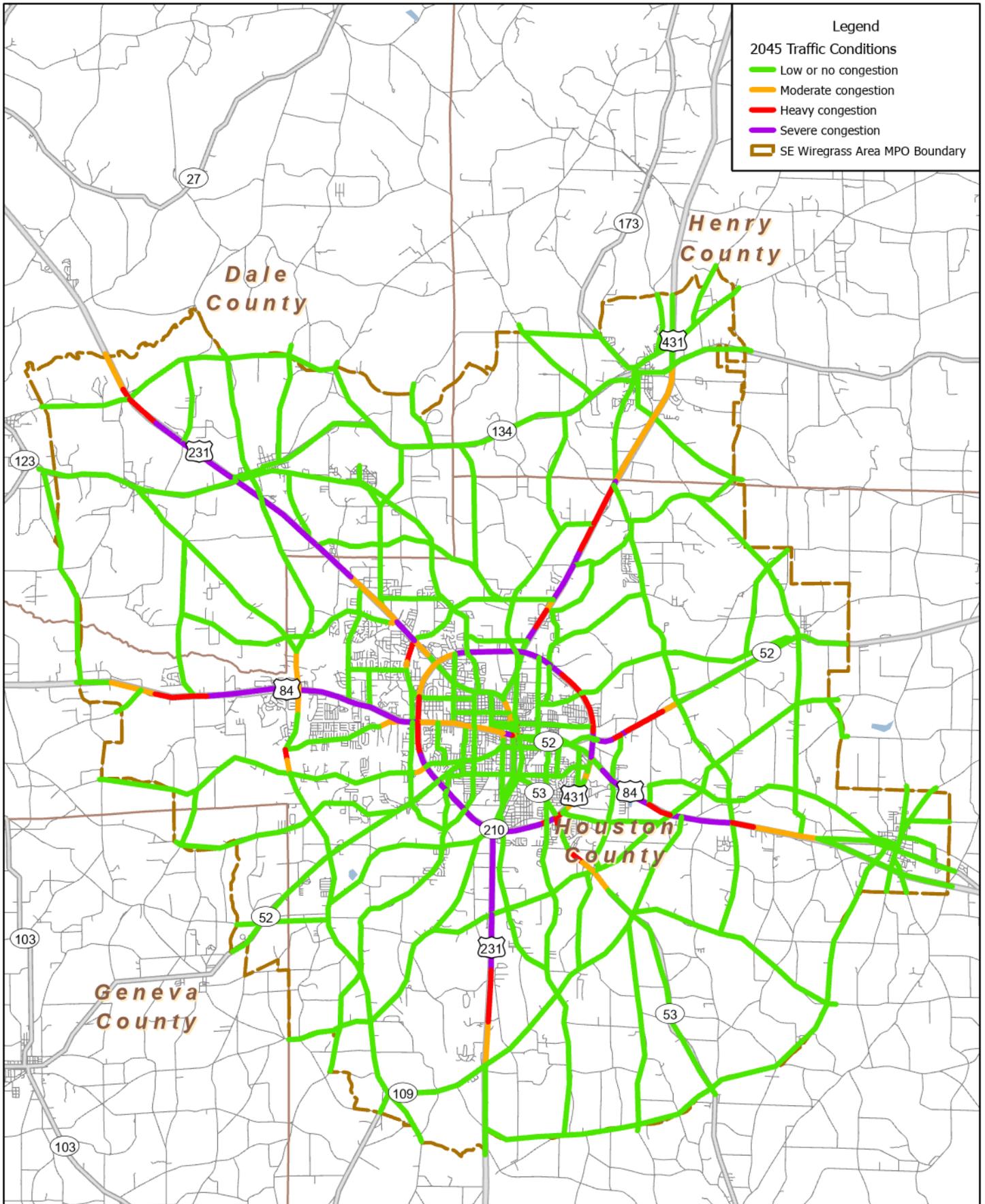


Figure 11-4: 2045 Traffic Conditions from Regional Travel Demand Model

(Fiscally Constrained)

Southeast Wiregrass Area MPO
Dothan, Alabama

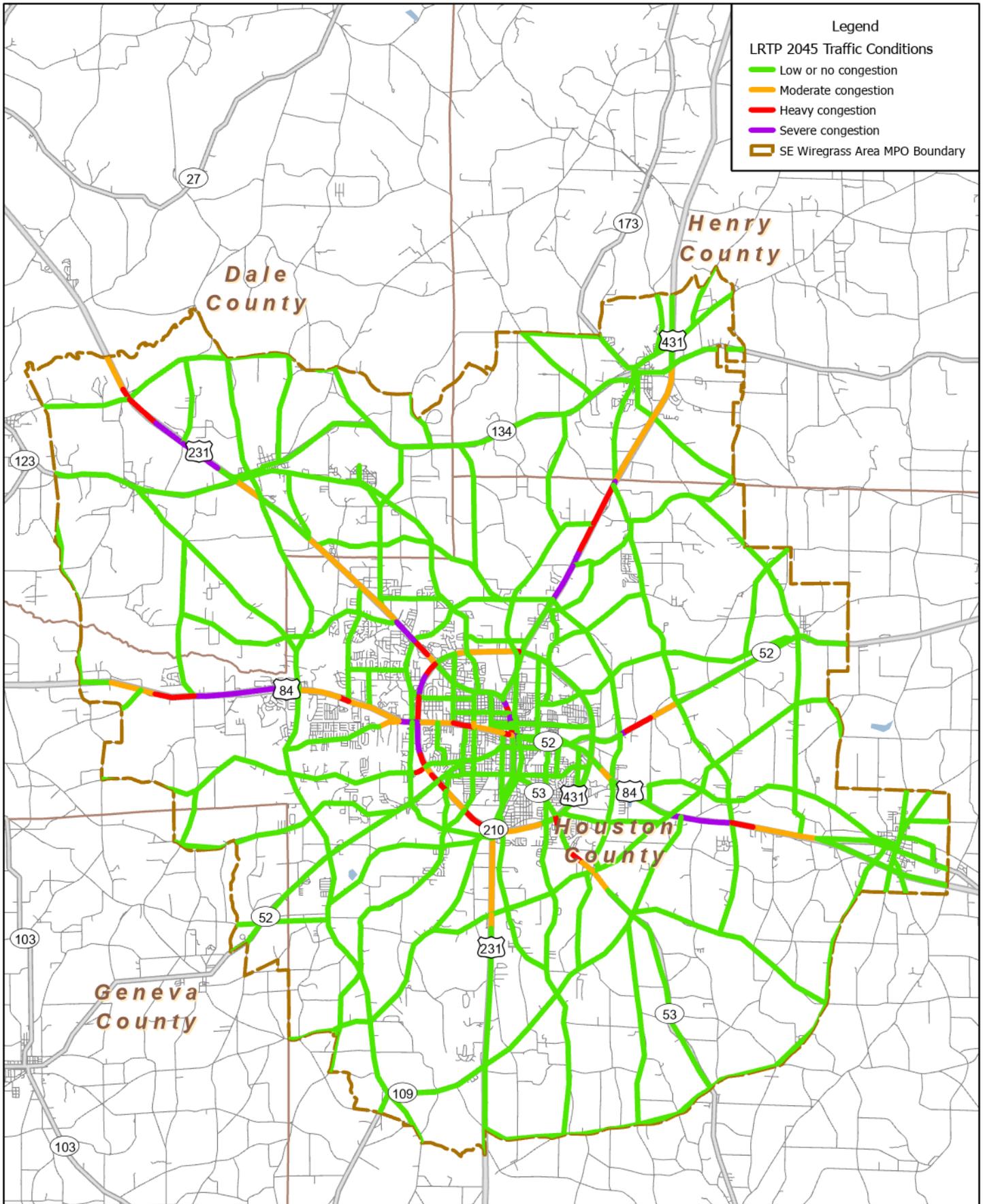
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Legend

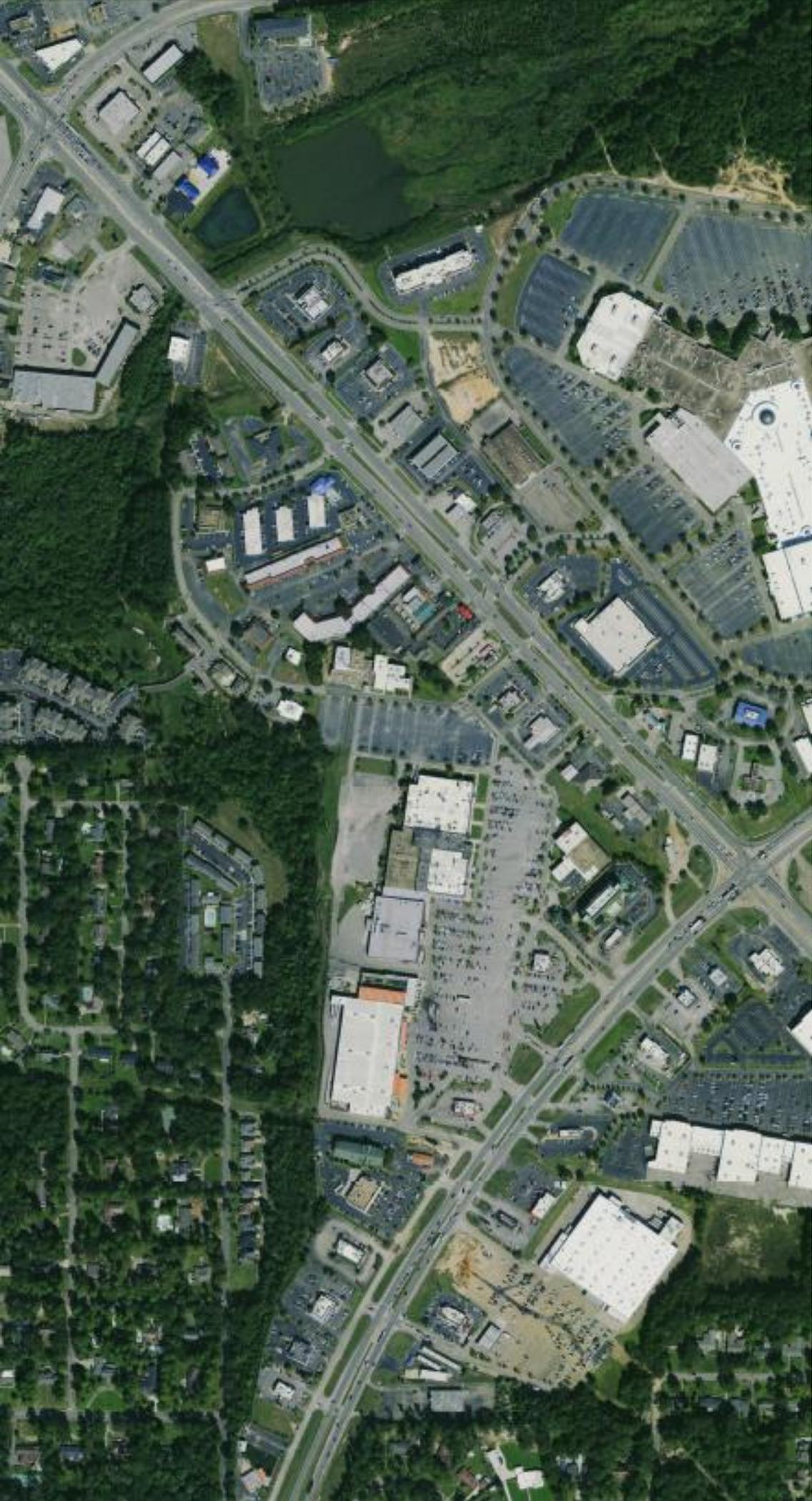
- Low or no congestion
- Moderate congestion
- Heavy congestion
- Severe congestion
- SE Wiregrass Area MPO Boundary

Figure 11-5: LRTP 2045 Traffic Conditions from Travel Demand Model
(Visionary)

Southeast Wiregrass Area MPO
Dothan, Alabama

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Appendix

ACRONYMS AND DEFINITIONS

Acronym	Description
ADA	Americans with Disabilities Act
ALDOT	Alabama Department of Transportation
APDV	Appalachian Development
ARRA	American Recovery and Reinvestment Act of 2009
ATRIP	Alabama Transportation Rehabilitation and Improvement Program
CAC	Citizens Advisory Committee
CFR	Code of Federal Regulations
CMAQ	Congestion Mitigation Air Quality
CN	Construction
DBE	Disadvantaged Business Enterprise
DOT	Department of Transportation
ESRI	Environmental Scientific Research Institute
EPA	Environmental Protection Agency
FAA	Federal Aviation Administration
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
FY	Fiscal Year
GARVEE	Grant Anticipated Revenue Vehicle
GHG	Greenhouse Gas
GIS	Geographic Information Systems
HPPP	High Priority Project Program
HSIP	Highway Safety Improvement Program
HPP	High Priority Projects
HTF	Highway Trust Fund
IM	Interstate Maintenance
ITS	Intelligent Transportation Systems
JARC	Job Access and Reverse Commute
LEP	Limited English Proficiency
LPA	Lead Planning Agency
LRTP	Long Range Transportation Plan
MAP-21	Moving Ahead for Progress in the 21st Century
MO	Maintenance and Operations
MPA	Metropolitan Planning Area
MPO	Metropolitan Planning Organization
MTP	Metropolitan Transportation Plan
NAAQS	National Ambient Air Quality Standards

Acronym	Description
NEPA	National Environmental Policy Act of 1969
NHF	National Highway Fund
NHS	National Highway System
P	Planned Projects
PBPP	Performance-based Planning and Programming
PE	Preliminary Engineering
PL	Planning Funds
PPP	Public Participation Plan
RW	Right of Way
SAFETEA	Safe, Accountable, Flexible, Efficient Transportation Equity Act; A Legacy for Users
SEARPDC	Southeast Alabama Regional Planning and Development Commission
SHSP	Statewide Highway Safety Plan
SPR	State Planning and Research
STIP	State Transportation Improvement Program
STP	Surface Transportation Program
STPAA	(Any Area)
STPTE/STTE	(Enhancement)
STPRH/STPHS	(Safety)
ST/STPPA	(State)
STPOA/STOA	(Urban Area < 200,000)
SWAMPO	Southeast Wiregrass Area Metropolitan Planning Organization
TAC	Technical Advisory Committee
TAP	Transportation Alternatives Program
TAZ	Traffic Analysis Zone
TD	Transportation Disadvantaged
TDP	Transit Development Plan
TDM	Travel Demand Management
TEA-21	Transportation Equity Act for the 21st Century
TSM	Traffic Safety Management
TR	Transit
TIP	Transportation Improvement Program
TE	Transportation Enhancement
UPWP	Unified Planning Work Program
U.S.C. or USC	United States Code
USDOT	United State Department of Transportation
UT	Utility Construction
WTA	Wiregrass Transit Authority

TRAVEL DEMAND MODEL UPDATE AND VALIDATION

Travel Demand Model Overview

The following sections provide an overview of the SWAMPO regional travel demand model, a summary of the travel demand model update from the base year 2010 to the base year 2015, and a summary of the travel demand model calibration and validation process. The SWAMPO LRTP update is sponsored by SWAMPO and coordinated with ALDOT. Sain Associates, Inc. updated the Dothan area travel demand model to a base year of 2015. The horizon year for the LRTP is the year 2045.

The travel demand model uses existing household, school enrollment, and employment inputs to predict the traffic flows in the Dothan region based on current conditions. The travel demand model also forecasts future traffic flows in the region as a function of forecast households, school enrollment, employment, and highway capacity. The Dothan regional travel demand model was developed in Cube as a traditional four step model and is compatible with the ALDOT model development practice. The four steps include:

Trip Generation-Demographic data is used to generate productions at the household level and attractions based on employment. The ALDOT TRIPGEN program was used to estimate zonal trip productions and attractions. The mathematical equations employed in the TRIPGEN model were updated during the 2040 LRTP development. The TRIPGEN model calculates zonal trip production and attraction estimates for six trip purposes as follows:

- ✓ Home Base Work (HBW) – Work related trips within the study area with at least one trip end at home.
- ✓ Home Base Other (HBO) – Non-work trips within the study area with at least one trip end at home.
- ✓ Non-Home Base (NHB) – Trips for any purpose within the study area with no trip end at home.
- ✓ Truck-Taxi (T-T) – Trips by commercial truck or taxi with both trip ends in the study area.
- ✓ Internal – External (I-E) – Trips for any purpose with only one trip end in the study area and the other trip end outside of it.
- ✓ External – External (E-E) – Trips for any purpose which pass through the study area but has both trip ends outside of the study area.

The TRIPGEN model uses the six socio-economic variables previously described to calculate the zonal trip productions and attractions for each TAZ. The TRIPGEN model also requires the following additional information:

- ✓ A file of cross classification rates to convert households into subclasses by vehicle ownership and range of income.
- ✓ A file of household trip generation rates that are a function of automobile ownership and income range.
- ✓ A file that provides the breakdown of total trip generation values into six trip purposes.
- ✓ A file of trip attraction rates for each trip purpose based on the socioeconomic variables.
- ✓ A file containing the proportion of external-external trips to total trips for various roadway functional classifications.

- ✓ A file containing the external TAZ numbers, traffic volumes, and functional classification of the station.

Trip Distribution-A traditional gravity based trip distribution model is used to distribute the trips between origins and destinations in the modeled region. The origin is the TAZ where each trip begins, and the destination is the TAZ where each trip ends. The standard CUBE Voyager gravity model was used for Trip Distribution. The gravity model uses the productions and attractions table from the Trip Generation step, the travel time matrix between each TAZ in the region, and a friction factor table to generate a single vehicle trip table. The trip table summarizes the vehicle trips between each TAZ in the SWAMPO region.

Mode Choice-A logit model is used to estimate whether people choose transit versus driving in a car alone or carpooling. **(Note: this step is missing from the Dothan model chain)**

Assignment-A vehicle-only trip table is output from the mode choice model and assigned to the Dothan region highway network using an equilibrium assignment algorithm. The Equilibrium Highway Load module in Cube Voyager was used for highway network assignment. Equilibrium assignment uses an iterative process to optimize the overall travel time for all trips in the modeled region. The network is considered to be in equilibrium when no traveler can improve his or her travel time using an alternative path. **(Note: the trip tables from the Trip Distribution step are used in Assignment as there is no mode choice model in the Dothan model chain).**

While the Dothan travel demand model does not include a mode choice model, it should be noted that the Dothan region has no fixed transit network that would be modeled in Cube. The Cube model is maintained by ALDOT with a base year of 2010 and a forecast year of 2040. The project team updated the base year to 2015 and the forecast year to 2045 as a part of the LRTP development.

The TAZ structure used in the SWAMPO travel demand model was updated as part of the 2040 LRTP development effort. This update increased the number of TAZs in the Dothan region from 207 internal TAZs and 38 external stations for a total of 245 zones to 677 internal TAZs and 40 external zones for a total of 717 zones. Given the recent update of the TAZ structure, no additional TAZ refinements were performed as a part of the 2045 LRTP planning effort. Figures A-1 through A-5 illustrate the TAZ structure for the SWAMPO regional travel demand model.

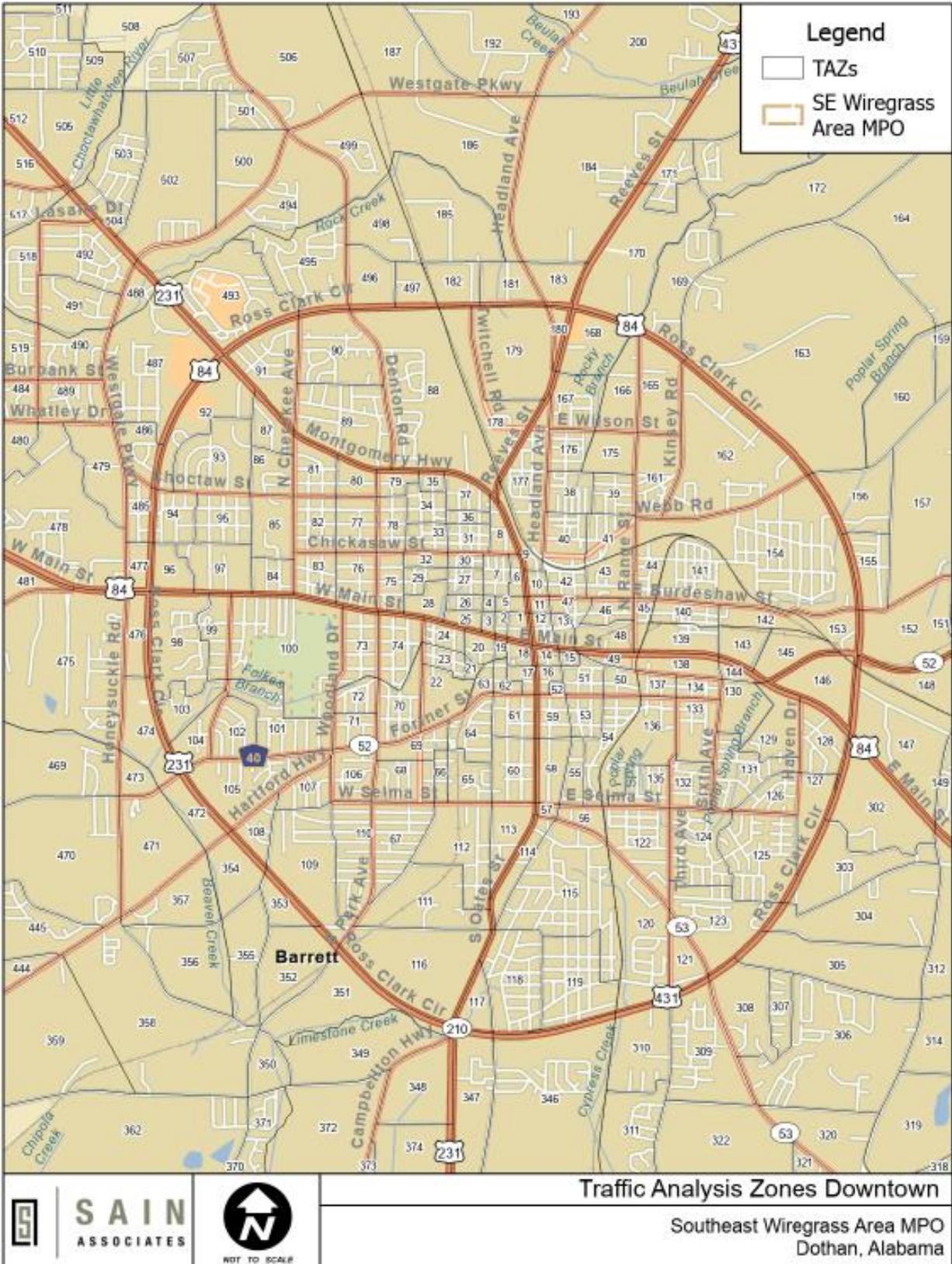


Figure A-1: Central Dothan Region TAZs

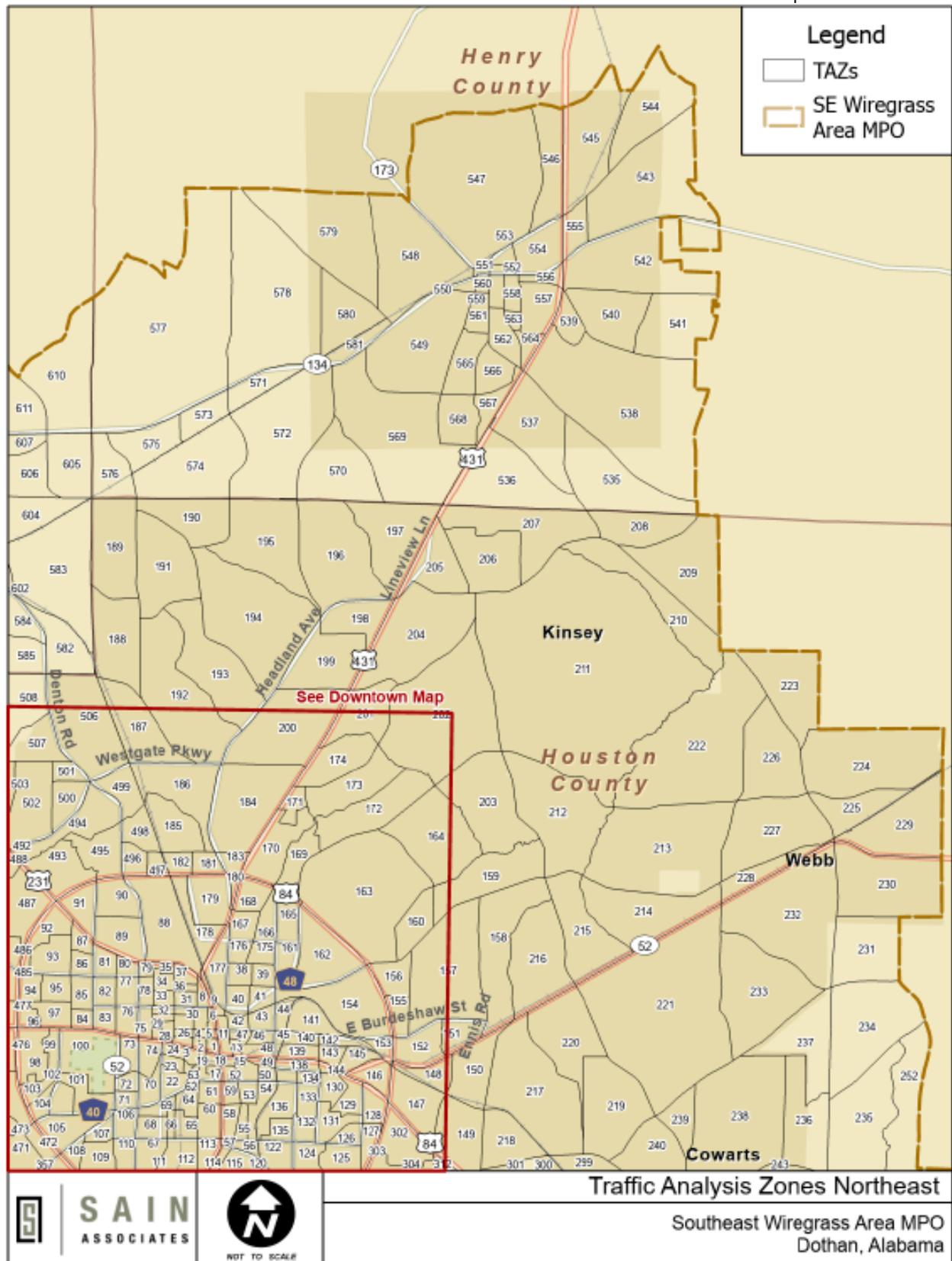


Figure A-2: Northeast Dothan Region TAZs

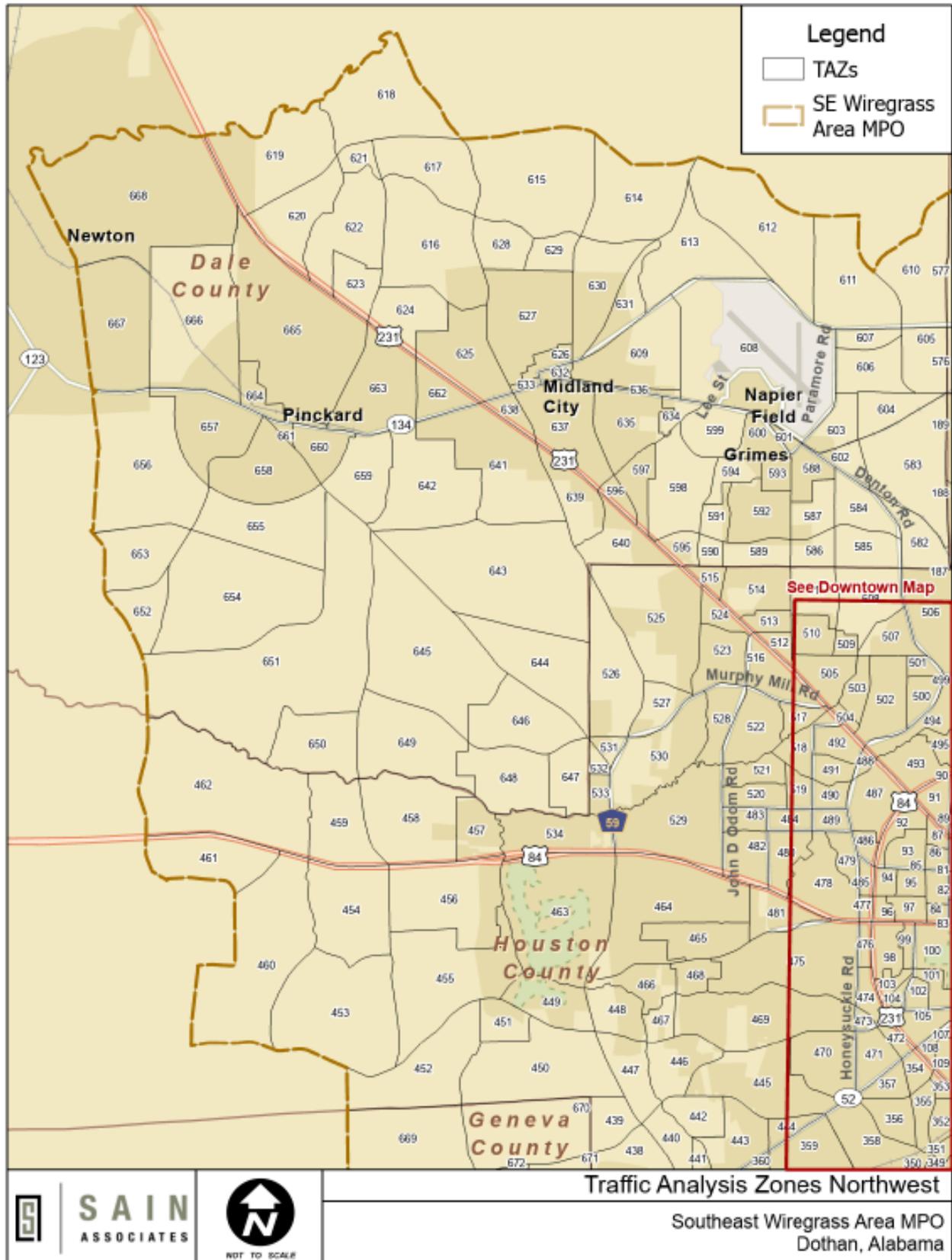


Figure A-3: Northwest Dothan Region TAZs

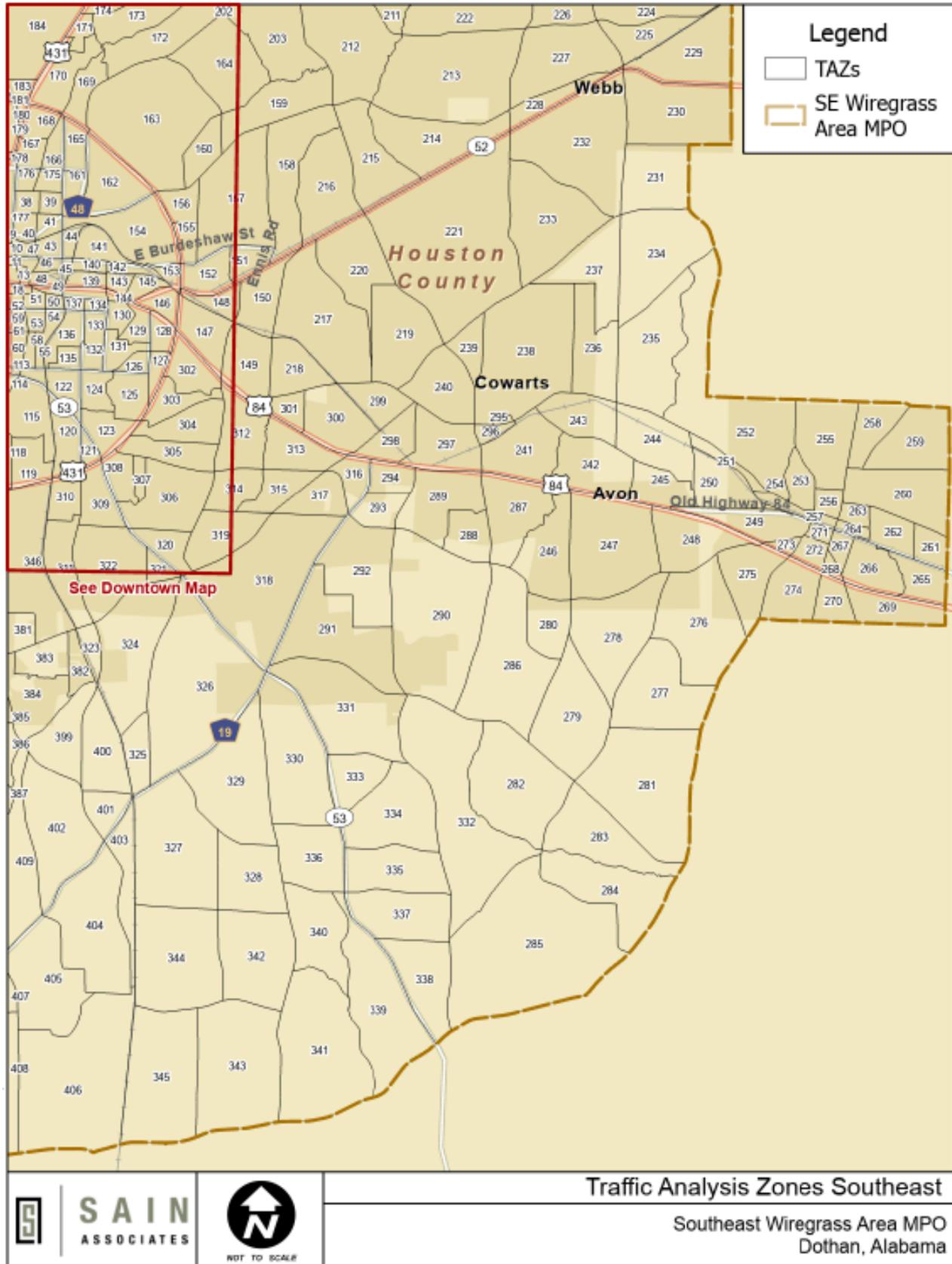


Figure A-4: Southeast Dothan Region TAZs

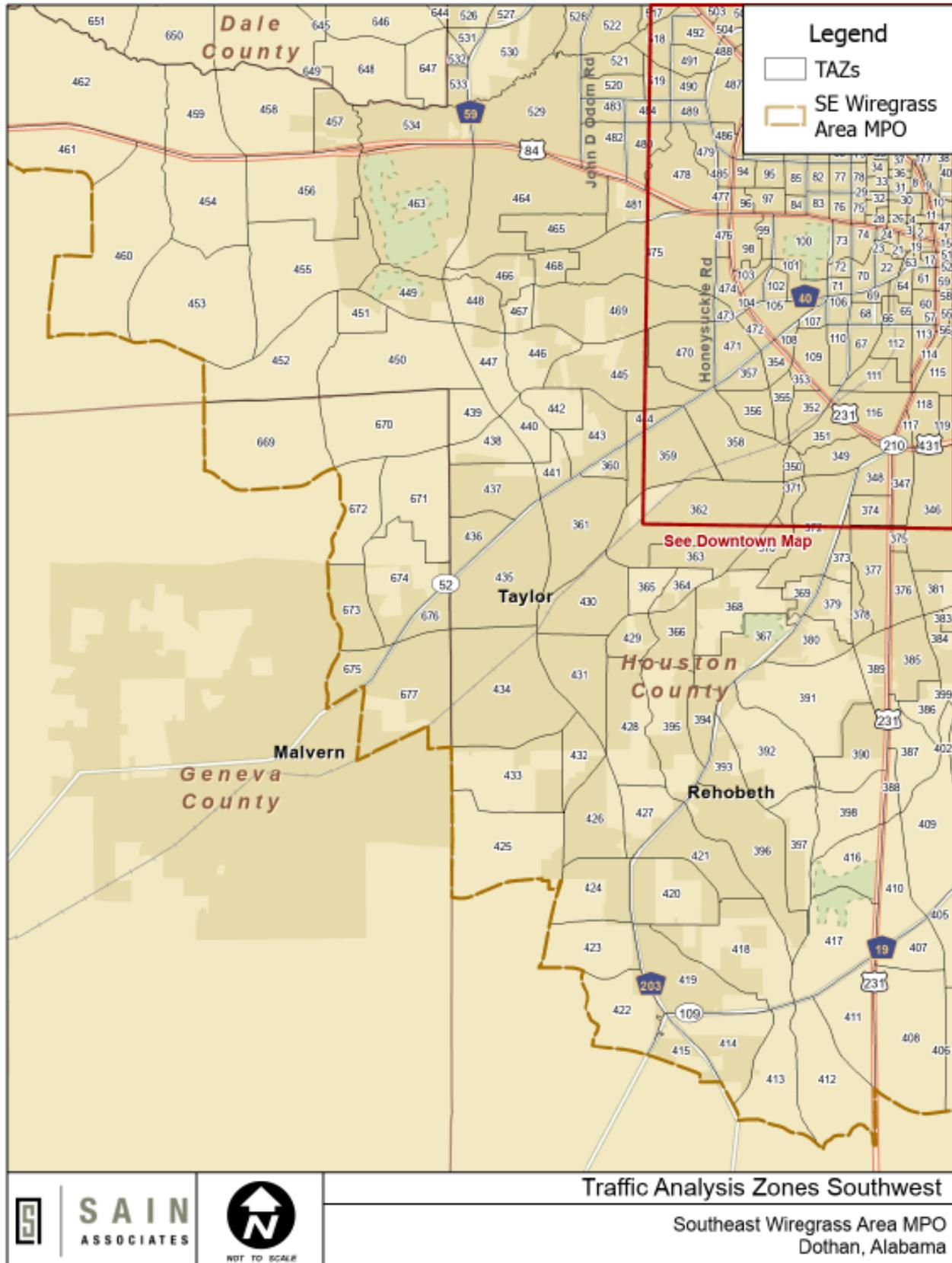


Figure A-5: Southwest Dothan Region TAZs



Socioeconomic Data

The City of Dothan provided base year employment, school enrollment, and dormitories data. The data provided by the City was used to update these attributes in the travel demand model 2015 base year socioeconomic data file. The City provided total employment at the TAZ level with an overview of the employers in each TAZ. This data and the existing 2010 retail and non-retail employment distributions were used to develop the 2015 retail and non-retail employment estimates. Specifically, the data provided to the study team included:

- ✓ Proprietary employment point data obtained by the MPO staff from InfoUSA provided detailed information on existing establishments in the Metropolitan Planning Area, including the number of employees.
- ✓ School enrollment data provided by the MPO staff, which was compiled from U.S. Department of Education National Center for Education Statistics.

After discussions with the City, the 2015 household estimate was developed by extrapolating the existing year 2010 and 2020 TAZ household inputs from the SWAMPO travel demand model. The study team used this approach with the assumption that if the base year 2015 travel demand model run did not achieve acceptable validation, then additional review of building permit activity between the years 2010 and 2015 would be conducted to refine the base year 2015 household estimates as necessary.

U.S. Census data for median household income was used to update the TAZ median household income from the year 2010 to 2015.

The six socioeconomic inputs that are input into the SWAMPO travel demand model at the TAZ level include:

- ✓ Number of Households
- ✓ Median Household Income
- ✓ Non-retail Employment
- ✓ Retail Employment
- ✓ School Enrollment
- ✓ Dormitories

Base Year Highway Network

MPO staff provided a list of transportation projects constructed in the region between the years 2010 and 2015 for the purposes of updating the travel demand model highway network from the year 2010 to 2015. A summary of the projects provided by MPO staff are on the following pages.



2010

9/28/2011

URBAN AREA FUNDING AVAILABILITY REPORT
FEDERAL FUNDING ONLY

Page 1 of 3

URBAN AREA	FEDERAL FUNDING ONLY						
PROJECT NO	PROJECT DESCRIPTION	SCOPE	FEDERAL FUNDS	Start Date	Status	Authorized	
100048236	ADD TURN LANES INTERSECTION OF CR-59 (BRANNON STAND ROAD) & CR-56 (MURPHY MILL F	CN	\$500,062	01/18/2008	Authorized	12/19/2007	
TOTALS FOR FISCAL YEAR 2008							
Prior FY Carryover	(\$520,718)	Authorized Projects	\$500,062	Unobligated Balance	(\$1,420,760)		
FY Apportionment	\$1,299,733	Planned Projects	\$0	Remaining Balance	(\$1,420,760)		
FY Special Allocation	(\$1,699,713)	Total Project Funds	\$500,062				
Total Funds	(\$920,698)						

100008620	CR-25 (DENTON RD) ADD LANES FROM SR-210 (ROSS CLARK CIRCLE) TO WESTGATE PARKWA	PE	\$332,800	08/01/2009	Authorized	7/1/2009
100047154	INTERSECTION IMPROVEMENTS ON CR-112 (PHILLIP J HAMM DR) @ CR-10 (MANCE NEWTON R	PE	\$160,000	07/01/2009	Authorized	7/1/2009
100052443	RESURFACING HONEYSUCKLE RD FROM SR-12 (US-84) TO CR-15 (PARK AVENUE)	PE	\$92,590	08/01/2009	Authorized	8/22/2009
100052445	RESURFACING WESTGATE PARKWAY FROM SR-12 (US-84) TO SR-53 (US-231)	PE	\$50,724	01/01/2010	Authorized	6/22/2009
100053599	RESURFACING WHATLEY DRIVE FROM SHADY LN TO WESTGATE PARKWAY	PE	\$50,000	08/01/2009	Authorized	7/1/2009
100053601	RESURFACE MURRY RD FROM CR-25 (DENTON RD) TO SR-1 (US-431)	PE	\$60,000	08/01/2009	Authorized	7/1/2009
TOTALS FOR FISCAL YEAR 2009						
Prior FY Carryover	(\$1,420,760)	Authorized Projects	\$746,114	Unobligated Balance	\$1,133,129	
FY Apportionment	\$1,193,347	Planned Projects	\$0	Remaining Balance	\$1,133,129	
FY Special Allocation	\$2,106,656	Total Project Funds	\$746,114			
Total Funds	\$1,879,243					

100044187	INTERSECTION IMPROVEMENTS TO CR-59 @ FORTNER STREET; TURNLANES & SIGNAL	RW	\$175,664	08/01/2010	Authorized	7/7/2010
100052410	WIDEN & RESURFACE CR-40 (FORTNER STREET) FROM CR-59 (BRANNON STAND ROAD) TO HC	CN	\$285,781	02/26/2010	Authorized	1/27/2010
100052444	RESURFACING OF HONEYSUCKLE ROAD FROM SR-52 (HARTFORD HWY) TO SR-12 (US-84)	CN	\$671,000	02/26/2010	Authorized	1/29/2010
100052446	RESURFACE WESTGATE PARKWAY FROM SR-12 (US-84) TO FAY LANE	CN	\$593,276	02/26/2010	Authorized	1/29/2010
100053539	RESURFACE SOUTH BRANNON STAND RD (CR-59) FROM 0.06 MILE NORTH OF SR-52 TO 0.30 MI	CN	\$317,740	11/06/2009	Authorized	10/9/2009
100053541	RESURFACE CR-26 (JORDON AVE.) FROM NORTH ROW SR-12 (US-84) TO 0.22 MILE EAST OF GL	CN	\$328,590	11/06/2009	Authorized	10/9/2009
100054791	WIDEN & RESURFACE CR-40 (FORTNER STREET) FROM CR-59 (BRANNON STAND ROAD) TO HC	CN	\$105,969	02/26/2010	Authorized	1/27/2010
TOTALS FOR FISCAL YEAR 2010						
Prior FY Carryover	\$1,133,129	Authorized Projects	\$2,478,019	Unobligated Balance	\$831,149	
FY Apportionment	\$1,290,503	Planned Projects	\$0	Remaining Balance	\$831,149	
FY Special Allocation	\$985,536	Total Project Funds	\$2,478,019			
Total Funds	\$3,309,168					

2011

Project ID	FUND	FY YR	Family ID	Project Name	Type	Scope
100053247	STAAE	2011	33025	RESURFACING AND 2" PAVEMENT WIDENING ON SR-134 FROM CR-67 IN MIDLAND CITY TO HENRY COUNTY LINE (FY2010 PHASE 2)	WRR	FM

Project ID	FUND	FY YR	Family ID	Project Name	Type	Scope
100053247	HSIPE	2011	33025	RESURFACING AND 2" PAVEMENT WIDENING ON SR-134 FROM CR-67 IN MIDLAND CITY TO HENRY COUNTY LINE (FY2010 PHASE 2)	WRR	FM

2012

11/8/2013

URBAN AREA FUNDING AVAILABILITY REPORT
FEDERAL FUNDING ONLY

Page 1 of 2

URBAN AREA	FEDERAL FUNDING ONLY						
PROJECT NO	PROJECT DESCRIPTION	SCOPE	FEDERAL FUNDS	Start Date	Status	Authorized	
100044188	INTERSECTION IMPROVEMENTS TO CR-59 @ CR-40 (FORTNER STREET); TURNLANES & SIGNAL	UT	\$1,090,697	09/01/2012	Authorized	1/9/2012	
100057883	RESURFACE CR-59 FROM SR-53 (US-231) TO HINTON WATERS AVENUE	PE	\$8,320	11/01/2012	Authorized	9/20/2012	
TOTALS FOR FISCAL YEAR 2012							
Prior FY Carryover	\$555,825	Authorized Projects	\$1,099,017	Unobligated Balance	\$705,988		
FY Apportionment	\$1,249,180	Planned Projects	\$0	Remaining Balance	\$705,988		
FY Special Allocation	\$0	Total Project Funds	\$1,099,017				
Total Funds	\$1,805,005						



2013

**SOUTHEAST WIREGRASS AREA METROPOLITAN PLANNING ORGANIZATION (MPO)
FISCAL YEAR 2013 AUTHORIZED PROJECTS (OCTOBER 1, 2013 THROUGH SEPTEMBER 30, 2013)**

Table #	State Project ID	Project Description	Length (Miles)	Scope	Est. Total Cost	Federal	State, Local or other Match	Year	Funding Source	Sponsor
1	100044188	INTERSECTION IMPROVEMENTS TO CR-59 @ CR-40	0.666	UT	\$1,736,516	\$1,090,697	\$645,819	2012	STPA	HOUSTON COUNTY
2	100057218	RESURFACE CR-34 (PREVATT ROAD) FROM SR-210 (ROSS CLARK CIRCLE) TO CR-36 (FORRESTER ROAD)	2.38	CN	\$419,764	\$335,811	\$83,953	2012	STPOA	HOUSTON COUNTY
3	100053250	RESURFACING & 2" PAVEMENT WIDENING ON SR-134 FROM SR-1 (US-431) TO 0.4 MILE EAST OF CR-111 (FY2010 PHASE 2)	6.156	FM	\$613,680	\$552,312	\$61,368	2012	SP	ALDOT
4	100053250	RESURFACING & 2" PAVEMENT WIDENING ON SR-134 FROM SR-1 (US-431) TO 0.4 MILE EAST OF CR-111 (FY2010 PHASE 2)	6.156	FM	\$2,175,774	\$1,740,619	\$435,155	2012	STPOA	ALDOT
5	100056205	RESURFACE SR-12 FROM SR-210 TO WEST CR-65 IN COWARTS	3.841	FM	\$2,841,507	\$2,273,206	\$568,301	2012	NHS	HOUSTON COUNTY
6	100056576	SECTION 5307 TRANSIT DOTHAN PREVENTIVE MAINTENANCE FY 2012	0	TR	\$95,651	\$76,521	\$0	2012	TP	SEARPOC
7	100057581	SECTION 5310 TRANSIT WIREGRASS ADULT LLC CAPITAL BUSES FY 2012 (2 MV)	0	TR	\$93,069	\$74,455	\$18,614	2012	TP	WIREGRASS ADULT LLC
8	100057883	RESURFACE CR-59 FROM SR-53 (US-231) TO HINTON WATERS AVENUE	0.68	PE	\$12,400	\$8,320	\$2,000	2012	STPA	DALE COUNTY
9	100057917	SECTION 5309 TRANSIT CITY OF HEADLAND CAPITAL BUS (1 MV)	0	TR	\$47,147	\$37,717	\$9,430	2012	TP	CITY OF HEADLAND
10	100056003	SAFE ROUTES TO SCHOOL FY 2010 SIDEWALK IMPROVEMENTS AND SCHOOL ZONE STRIPING NEAR HEADLAND MIDDLE SCHOOL IN THE CITY OF HEADLAND	0	CN	\$153,965	\$153,965	\$0	2012	SP	CITY OF HEADLAND
11	100059276	RESURFACE CR-16 FROM THE DALE CO. LINE TO SR-173 - HCP 34-13-12	3.537	CN	\$554,992	\$440,689	\$114,303	2013	STPOA	HENRY COUNTY
12	100056752	SECTION 5311 TRANSIT HOUSTON COUNTY OPERATING ASSISTANCE FY 2013	0	TR	\$321,100	\$160,550	\$0	2013	TP	SEARPOC
13	100056753	SECTION 5311 TRANSIT HOUSTON COUNTY ADMINISTRATION ASSISTANCE FY 2013	0	TR	\$147,282	\$117,826	\$0	2013	TP	SEARPOC
14	100057078	SECTION 5307 TRANSIT, DOTHAN (SEARPOC) OPERATING ASSISTANCE FY 2013	0	TR	\$1,239,720	\$619,860	\$0	2013	TP	SEARPOC
15	100057079	SECTION 5307 TRANSIT, DOTHAN (SEARPOC) PREVENTIVE MAINTENANCE FY 2013	0	TR	\$102,500	\$82,000	\$0	2013	TP	SEARPOC
16	100057192	SECTION 5316 JARC WIREGRASS TRANSIT FY 2013 URBAN (DHR)	0	TR	\$464,922	\$353,836	\$111,086	2013	TP	SEARPOC
17	100057199	SECTION 5316 JARC WIREGRASS TRANSIT FY 2013 RURAL (OTHER)	0	TR	\$1,054,080	\$527,040	\$0	2013	TP	SEARPOC
18	100057217	RESURFACE CR-40 (FORTNER STREET) FROM CR-277 (CUMBER ROAD) TO WEST OF CR-59 (BRANNON STAND ROAD)	5.831	CN	\$1,531,394	\$1,225,115	\$306,279	2013	STPOA	HOUSTON COUNTY
19	100058683	RESURFACE WOOD STREET FROM SR-210 (US-84) (ROSS CLARK CIRCLE) TO SPRING STREET CITY OF DOTHAN	1.42	CN	\$650,939	\$520,751	\$130,188	2013	STPOA	CITY OF DOTHAN
20	100059465	RESURFACE CR-99 FROM SR-1 (US-431) TO CR-12 HENRY COUNTY	5.3	CN	\$1,625,116	\$1,300,093	\$325,023	2013	STPOA	HENRY COUNTY
21	100060203	RESURFACE CR-10 FROM CR-3 TO SR-1 (US-431), CR-40 FROM WOODLAND DRIVE TO 6TH AVENUE, MONTANA STREET FROM SR-12 (US-84) TO SR-53 (US-231) IN DOTHAN	4.418	CN	\$1,282,857	\$1,026,286	\$256,571	2013	STPOA	CITY OF DOTHAN
22	100058713	SECTION 5307 TRANSIT DOTHAN CAPITAL SUPPORT EQUIPMENT FY-2013	0	TR	\$33,600	\$26,880	\$0	2013	TP	SEARPOC
23	100058821	SAFE ROUTES TO SCHOOL FY 2013 SIDEWALKS, CROSSWALKS, TRAFFIC CONTROL AND BIKE RACKS ALONG VALLEY FORGE ROAD AND SOUTH PARK AVENUE IN DOTHAN (SELMA STREET ELEMENTARY SCHOOL)	0	CN	\$3,624	\$3,624	\$0	2013	SP	CITY OF DOTHAN
24	100058821	SAFE ROUTES TO SCHOOL FY 2013 SIDEWALKS, CROSSWALKS, TRAFFIC CONTROL AND BIKE RACKS ALONG VALLEY FORGE ROAD AND SOUTH PARK AVENUE IN DOTHAN (SELMA STREET ELEMENTARY SCHOOL)	0	CN	\$173,077	\$144,544	\$28,533	2013	SP	CITY OF DOTHAN
25	100059933	SECTION 5310 DOTHAN-HOUSTON INTELLECTUAL DISABILITIES VEHICLE CAPITAL	0	TR	\$49,117	\$39,293	\$9,824	2013	TP	DOTHAN-HOUSTON CO. INTEL DB

Table #	State Project ID	Project Description	Length (Miles)	Scope	Est. Total Cost	Federal	State, Local or other Match	Year	Funding Source	Sponsor
26	100060184	RE-ESTABLISH AND ADD RIPRAP TO THE OUTLET END AND SPILLWAY OF BIN # 8624 ON CR-10 OVER HOWELL CREEK. FHWA DISASTER # AL 13-1 (REPORT # HDALF-01)	0	CN	\$11,500	\$11,500	\$0	2013	STPOA	DALE COUNTY
27	100060185	RE-ESTABLISH AND ADD RIPRAP TO THE OUTLET END AND SPILLWAY OF BIN 8665 ON CR-75 (ALPHA STREET) OVER PARAMORE CREEK. FHWA DISASTER # AL 13-1 (REPORT # HDALF-02)	0	CN	\$17,250	\$17,250	\$0	2013	STPOA	DALE COUNTY
28	100060189	REPLACE CROSSDRAIN PIPE AND BACKFILL POLE RIPRAP, AND PAVE AT UNIMAGED ARK ON CR-129 (EDDINS ROAD) LOCATED 0.6 MILES NORTH OF SR-53. FHWA DISASTER # AL 13-1 (REPORT # HOUSTON-2013-01)	0	CN	\$92,000	\$92,000	\$0	2013	STPOA	HOUSTON COUNTY
29	100060191	INSTALL WITH BORROW, AND PLACE RIPRAP AND GRASSING AROUND WINGWALL AND TIEWALL OF INLET AND OUTLET END OF BIN # 6997 ON CR-29 OVER CYPRESS CREEK ON HODGESVILLE ROAD. FHWA DISASTER # AL 13-1 (REPORT # HOUSTON-2013-01)	0	CN	\$25,000	\$25,000	\$0	2013	STPOA	HOUSTON COUNTY
30	100060193	RE-ESTABLISH TIEWALL AND FORM SPILLWAY AT OUTLET OF CULVERT ON CR-32 (JUDGE LOGUE ROAD) LOCATED 0.1 MILES SOUTH OF WEST US-84. FHWA DISASTER # AL 13-1 (REPORT # HOUSTON-2013-02)	0	CN	\$13,000	\$13,000	\$0	2013	STPOA	HOUSTON COUNTY
31	100060618	SECTION 5309 TRANSIT CITY OF HARTFORD CAPITAL ROLLING STOCK (1MV)	0	TR	\$49,086	\$39,269	\$9,817	2013	TP	CITY OF HARTFORD
32	100060620	SECTION 5309 TRANSIT DOTHAN-HOUSTON INT DIS DB	0	TR	\$48,788	\$39,030	\$9,758	2013	TP	DOTHAN-HOUSTON CO. INTEL DB
33	100060818	SECTION 5309 TRANSIT DOTHAN-HOUSTON CO. INTEL DISAB. RD. CAPITAL ROLLING STOCK (1 MINIVAN)	0	TR	\$36,507	\$29,205	\$7,302	2013	TP	DOTHAN-HOUSTON CO. INTEL DB

Total project cost for authorized projects in FY 2013	\$17,716,921
State of Alabama (ALDOT) total project cost for authorized projects in FY 2013	\$2,789,454
City of Dothan total project cost for authorized projects in FY 2013	\$2,110,497
Houston County total project cost for authorized projects in FY 2013	\$6,659,180
Dale County total project cost for authorized projects in FY 2013	\$41,150
Henry County total project cost for authorized projects in FY 2013	\$2,180,108
Other Sponsors total project cost for authorized projects in FY 2013	\$3,936,532

- Project Scope Acronyms:
- CN - Construction
 - FM - Federal Maintenance
 - PE - Preliminary Engineering
 - TR - Transit
 - UT - Utility Relocation
- Funding Acronyms:
- NHS - National Highway System
 - SP - Safety Projects
 - STPA - Surface Transportation Program Area
 - STPOA - Surface Transportation Program Other Area
 - TP - Transit Projects

For further information, contact Reginald Franklin at (334) 615-4414 or Todd McDonald, AICP at (334) 615-4412. Questions and Comments can also be e-mailed to rfranklin@dothan.org, faxed to (334) 615-4419, or sent by mail to: The City of Dothan, Southeast Wiregrass Area MPO, P.O. Box 2128, Dothan, AL 36302-2128

Federal Highway Administration Federal Law requires Metropolitan Planning Organizations to publish a list of transportation projects that were authorized/obligated in the previous fiscal year that involved federal highway or transit funds. A project is considered authorized/obligated when a funding contract has been completed between the sponsoring local or State government entity and the Alabama Department of Transportation. The authorized/obligated projects list includes those projects from the Dothan Urbanized Area funded in fiscal year 2013. A fiscal year runs from October 1 to September 30 annually.



2014

**SOUTHEAST WIREGRASS AREA METROPOLITAN PLANNING ORGANIZATION (MPO)
FISCAL YEAR 2014 AUTHORIZED PROJECTS (OCTOBER 1, 2013 THROUGH SEPTEMBER 30, 2014)**

Table #	State Project ID	Project Description	Length (Miles)	Scope	Est. Total Cost	Federal	State, Local or other Match	Funding Source	Sponsor
1	100003285	BRIDGE OVER BRIDGE CULVERT ON SR-210 (ROSS CLARK CIRCLE), FROM FORTNER STREET TO BAUMAN DRIVE BINS #020952, #020951 (NH01M)	0.01	CN	\$3,059,013	\$2,447,210	\$611,803	STPA	ALDOT
2	100003285	BRIDGE OVER BRIDGE CULVERT ON SR-210 (ROSS CLARK CIRCLE), FROM FORTNER STREET TO BAUMAN DRIVE BINS #020952, #020951 (BRNM)	0.01	CN	\$4,588,519	\$3,670,815	\$917,704	STPOA	ALDOT
3	100056889	SECTION 5311 TRANSIT HOUSTON COUNTY OPERATING ASSISTANCE FY 2014	0	TR	\$200,000	\$100,000	\$100,000	TP	SEARPOC
4	100056890	SECTION 5311 TRANSIT HOUSTON COUNTY ADMINISTRATION ASSISTANCE FY 2014	0	TR	\$147,283	\$117,826	\$29,456.50	TP	SEARPOC
5	100057088	SECTION 5307 TRANSIT, DOTHAN (SE ALA REG PLAN & DEV COMM) OPERATING ASSISTANCE FY 2014	0	TR	\$1,000,000	\$500,000	\$500,000	TP	SEARPOC
6	100057089	SECTION 5307 TRANSIT, DOTHAN (SE ALA REG PLAN & DEV COMM) PREVENTIVE MAINTENANCE FY 2014	0	TR	\$150,000	\$120,000	\$30,000	TP	SEARPOC
7	100057884	RESURFACE CR-59 FROM SR-53 (US-331) TO HINTON WATERS AVENUE	0.68	CN	\$202,924	\$162,340	\$40,584	STPA	DALE COUNTY
8	100058534	RESURFACE SOUTH PARK AVENUE (CR-15) FROM MALVERN ROAD (CR-93) 3.98 MILES NORTHERLY TO NATIONAL ROAD (CR-131)	4	CN	\$784,734	\$626,138	\$158,596	STPOA	HOUSTON COUNTY
9	100058535	G-TREATMENT, LEVELING, RESURFACE, & STRIPE GLEN LAWRENCE ROAD (CR- 44) FROM (CR-26) JORDAN AVENUE TO (CR- 322) BRACKIN ROAD	4.7	CN	\$922,291	\$736,283	\$186,008	STPOA	HOUSTON COUNTY
10	100059467	RESURFACE CR-341 (SOUTH MAIN STREET) FROM .3 MILES SOUTH OF WOODS/SOLOMON ROAD TO KING STREET IN THE CITY OF HEADLAND (R.L.M.P.)	1.5	CN	\$671,258	\$454,803	\$216,455	STPOA	CITY OF HEADLAND
11	100059473	RESURFACE CR-36 SAUNDERS ROAD/ FORRESTER ROAD & GLEN LAWRENCE ROAD FROM CR-115 (CAMPBELLTON HIGHWAY) TO CR-26 (JORDAN AVENUE) HOUSTON COUNTY	7.5	CN	\$1,654,150	\$1,323,320	\$330,830	TP	HOUSTON COUNTY
12	100061755	SUPERELEVATION IMPROVEMENT ON SR-12(US-84) IN THE TOWN OF COWARTS AT SANITARY DAIRY ROAD FROM MP 215.076 TO MP 215.462	0.386	CN	\$407,796	\$407,796	\$0	SP	ALDOT
13	100059712	INTERSECTION IMPROVEMENTS TO SR-605 (BRANNON STAND ROAD) AT CR-40 (FORTNER STREET) TURN LANES	0.666	PE	\$20,800	\$16,640	\$4,160	TP	ALDOT
14	100060624	CONSTRUCT AN ADDITION TO DISTRICT 1 OFFICE	0	LB	\$293,264	\$0	\$293,264	OFSAP	ALDOT
15	100061473	SECTION 5316 WIREGRASS TRANSIT OPERATIONS; DHR; SMALL URBAN FY 2014	0	TR	\$558,328	\$353,836	\$204,492	TP	SEARPOC
16	100061635	SECTION 5316 WIREGRASS TRANSIT OTHER; RURAL FY 2014	0	TR	\$320,000	\$160,000	\$160,000	TP	SEARPOC
17	100061646	SECTION 5316 JARC WIREGRASS TRANSIT OPERATIONS - OTHER; RURAL FY 2014	0	TR	\$944,896	\$472,448	\$472,448	TP	SEARPOC
18	100062152	SECTION 5309 TRANSIT CITY OF HEADLAND CAPITAL (1 CV) 100% LOCAL	0	TR	\$41,251	\$0	\$41,251	TP	CITY OF HEADLAND



Total project cost for authorized projects in FY 2013	\$15,966,506
State of Alabama (ALDOT) total project cost for authorized projects in FY 2013	\$8,369,391
SEARPDCC total project cost for authorized projects in FY 2013	\$3,320,507
Houston County total project cost for authorized projects in FY 2013	\$3,361,175
Dale County total project cost for authorized projects in FY 2013	\$202,924
City of Headland total project cost for authorized projects in FY 2013	\$712,509

Project Scope Acronyms:

CN - Construction

LB - Land & Building

PE- Preliminary Engineering

TR - Transit

Funding Acronyms:

OFSAP - Other Federal and State Aid Projects

SP - Safety Projects

STPA - Surface Transportation Program Area

STPOA - Surface Transportation Program Other Area

TP - Transit Projects

For further information contact Reginald Franklin at (334) 615-4414 or Todd McDonald, AICP at (334) 615-4412. Questions and Comments can also be e-mailed to rbrfranklin@dothan.org, faxed to (334) 615-4419, or sent by mail to: The City of Dothan, Southeast Wiregrass Area MPO, P.O. Box 2128, Dothan, AL 36302-2128

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2015

Your search returned 6 results. Click the Project ID for detailed Project information or Edit button to edit MPO Data.

	Project ID	FUND	FY YR	Family ID	Project Name	Type	Scope
	100008621	DTSTM	2015	1987	CR-25 (DENTON RD) ADD LANES FROM SR-210 (ROSS CLARK CIRCLE) TO WESTGATE PARKWAY	ADL	RW
	100061567	DTSTM	2015	11208	G-TREATMENT, LEVELING, RESURFACING AND TRAFFIC STRIPE ON (CR-26) JORDON AVENUE FROM 0.09 MILES WEST OF MCEACHIN ROAD TO 0.15 MILES EAST OF RUTH CIRCLE	RSF	CN
	100058519	A2BR	2015	34944	BRIDGE REPLACEMENT ON CR-25 (DENTON ROAD) OVER ROCK CREEK BIN # 4593	BRL	CN
	100058578	A2RDY	2015	34944	RESURFACE CR-59 FROM SR-134 (HINTON WATERS AVENUE) NORTH TO SR-27 (RAMP)	RSF	CN
	100058578	SOAME	2015	34944	RESURFACE CR-59 FROM SR-134 (HINTON WATERS AVENUE) NORTH TO SR-27 (RAMP)	RSF	CN
	100061072	A1RDY	2015	34944	RESURFACE CHICKASAW STREET FROM CHEROKEE AVENUE TO SR-1 (US-231/OATES STREET) AND SOUTH PARK AVENUE FROM SELMA STREET TO SR-12 (US-84/MAIN STREET) CITY OF DOTHAN	RSF	CN



A review of the project list illustrated that there were no roadway capacity projects in this timeframe that would require updating the travel demand model base year highway network. The CR-25 capacity project listed in the year 2015 is still currently only partially complete for a short segment. The following table illustrates the attributes coded into the SWAMPO travel demand model highway network.

Link Field	Value
A	Link node A
B	Link node B
Distance	Link distance in miles
Name	Street Name
Posted_Speed	Roadway Posted Speed in mph
Speed	Adjusted roadway speed used in the model run, in mph
Time1	Free flow link travel time in minutes
Time2	Unused
Capacity	Link daily capacity (vehicles per day)
Linkgrp1	Functional classification for roadway capacity
Linkgrp2	Urban (code=4) or Rural (code=8)
Linkgrp3	Number of lanes
Asgngrp	Functional classification:
	1 = Interstate
	2 = Other Freeways/Expressways Urban
	3 = Principal Arterial
	4 = Minor Arterial
	5 = Collector Urban
	6 = Major Collector Rural
	7 = Minor Collector Rural
	8 = Ramp
9 = Centroid Connector	
CUser	Unused
Cost	Unused
Twoway	Directional flow:
	0 = Two way
	1 = One way
AADT_15	2015 Traffic Count (only on links with count station location)
Dircode	Unused

Table A-1: Highway Network Attributes

Model Validation Process

The overall goal of the model validation effort is to improve the model's predictive capabilities and ability to provide reasonable forecasts. This is done by developing a base year model and evaluating how well the model is able to replicate the existing conditions. To verify that the SWAMPO model was properly simulating the study area, the base year assignments were validated using the procedures found in the *Minimum Travel Demand Model Calibration and Validation Guidelines for State of Tennessee*, *Travel Estimation Techniques for Urban Planning*, and the *FHWA Travel Model Validation and Reasonability Checking Manual*.



The validation of the SWAMPO model was initiated on an area-wide basis. The base year travel demand model output was compared to existing daily traffic counts on a functional class and ADT basis to assess the model performance at the system-level.

RMSE and %RMSE are both measures of accuracy of the traffic assignment measuring the average error between the observed and modeled traffic volumes on links with traffic counts. As such, the RMSE and %RMSE were summarized by facility type for the Dothan region.

ADT Group (vehicles per day)	ADT 2015	Assigned Volume	Difference	RMSE Error	Desirable RMSE Error	Acceptable?
0-10,000	882692	883278	586	5.0%	43.1%	Yes
10,000-40,000	2529236	2487542	-41694	0.1%	25.4%	Yes
All Classes	3411928	3370820	-41108	4.2%	40.0%	Yes

Table A-2: Model Assignment RMSE by Link Volume

ADT Group (vehicles per day)	ADT 2015	Assigned Volume	Difference	% Difference	Desirable Deviation	Acceptable?
< 1,000	25718	29942	4224	16.4%	60%	Yes
1,000-2,500	126776	130457	3681	2.9%	47%	Yes
2,500-5,000	326048	308862	-17186	-5.3%	36%	Yes
5,000-10,000	404150	414017	9867	2.4%	29%	Yes
10,000-25,000	1315726	1331958	16232	1.2%	25%	Yes
25,000-50,000	1212610	1155584	-57026	-4.7%	22%	Yes
All Classes	3411028	3370820	-40208	-1.2%	5%	Yes

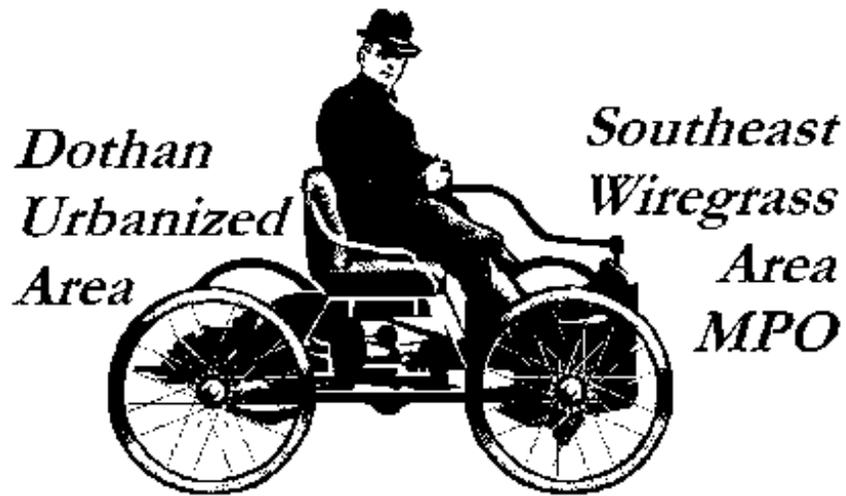
Table A-3 Model Assignment by ADT group

Functional Class	ADT 2015	Assigned Volume	Difference	% Difference	Desirable Deviation	Acceptable?
Principal Arterial	2467236	2482542	15306	0.6%	7%	Yes
Minor Arterial	722968	679272	-43696	-6.0%	10%	Yes
Collector	220884	209184	-11700	-5.3%	20%	Yes
All Classes	3411088	3370997	-40091	-1.2%	5%	Yes

Table A-4: Model Assignment by Functional Class

As Tables A-2 through A-4 illustrate, the base year 2015 SWAMPO travel demand model validates within acceptable thresholds. Minor adjustments to free-flow speeds on Ross Clark Circle and Westgate Parkway between US-231 and US-84 were the only adjustments required to achieve acceptable model validation. The final step of the model validation that was completed prior to developing future year forecasts was conducting a sensitivity analysis with the travel demand model. The sensitivity analysis consisted of testing out several land use and transportation scenarios (i.e. adding large residential development to TAZ, adding lanes to Ross Clark Circle, adding employment to TAZ) and evaluating the model output for reasonableness.

Once the base year 2015 model validation was completed, the future year demographic files and transportation networks were updated to reflect the year 2045 conditions. The model volume/capacity was summarized for the base year 2015 and future year 2045 networks to reflect the existing and future transportation system performance in the SWAMPO region.



2013 Public Participation Plan

Final

Prepared by the Southeast Wiregrass Metropolitan Planning Organization for
Member Local Governments in Cooperation with the Alabama Department of Transportation
September 2013

Southeast Wiregrass Area Metropolitan Planning Organization

2013

Public Participation Plan for the Dothan Urbanized Area

This document is posted on the internet at

www.dothan.org

For additional information regarding this document, please contact:

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Southeast Wiregrass Area Metropolitan Planning Organization (MPO)

City of Dothan

Department of Planning and Development

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Email: tmcdonald@dothan.org

Date adopted: 06-26-2013

This Public Participation Plan was prepared as a cooperative effort of the U.S. Department of Transportation (USDOT), Federal Highway Administration (FHWA), Alabama Department of Transportation (ALDOT), and the City of Dothan Department of Planning and Development as a requirement of Title 23 USC 134 and 135 (amended by MAP-21, Sections 1201 and 1202, July 2012). The contents of this document do not necessarily reflect the official views or policies of the U. S. Department of Transportation.

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Policy Committee**

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City of Dothan

Mayor Fred McNab
Town of Pinckard

Mr. Critt Snellgrove
City of Dothan Commission

Mayor Joe Collins
Town of Rehobeth

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Town of Webb

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Dale County Commission, Chairman

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Development Commission

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MPO Staff

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Director of Planning and Development
MPO Secretary
City of Dothan

Mr. Reginald Franklin
Transportation Planner
City of Dothan

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Public Works Director
City of Dothan

Derek Brewer
County Engineer
Dale County Road & Bridge Department

Charles Metzger, P.E.
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City of Dothan

Joshua Knight
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Dale County Road & Bridge Department

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Chris Champion
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John Sorrell
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Wiregrass Transit Authority

G. C. Harris
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Dothan Planning Commission

Powell Brewton
Dothan Area Chamber of Commerce

Scott Trott
CDG Engineering

Art Morris
Dothan-Houston County
Airport Authority, Inc.

Charles Owens
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Surface Transportation Committee

David Bush
District 1 Manager
Alabama Department of Transportation
7th Division

Matt Leverette
Pre-Construction Engineer
Alabama Department of Transportation
7th Division

Wiley Brooks
Transit Development Manager
Alabama Department of Transportation
Multimodal Transportation Bureau

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Alabama Department of Transportation
Metropolitan Planning Division

Will Adams
State Design Engineer
Alabama Department of Transportation

Cornell Tatum
Title VI Compliance
Alabama Department of Transportation

Stephanie James
Title VI Compliance
Alabama Department of Transportation

Tony W. Harris
Governmental Relations Manager
Alabama Department of Transportation

**Southeast Wiregrass Area Metropolitan Planning Organization
Citizens Advisory Committee**

To Be Determined

**SOUTHEAST WIREGRASS AREA
METROPOLITAN PLANNING ORGANIZATION**

RESOLUTION NO. 06-26-13-2

Adopting the 2013 Public Participation Plan
for the Dothan Urbanized Area

WHEREAS, Southeast Wiregrass Area Metropolitan Planning Organization (MPO) is the organization designated by the Governor of the State of Alabama as being responsible, together with the State of Alabama, for implementing the applicable provisions of 23 USC 134 and 135 (amended MAP-21, sections 1201 and 1202, July 2012); 42 USC 2000d-1, 42 USC 7401; 49 CFR 27; 23 CFR 450 and 500; 40 CFR 51 and 93; and

WHEREAS, 23 Code of Federal Regulations (CFR) 450.316(a) et al, provides that the MPO must prepare a participation plan to describe the process to ensure all citizens have reasonable opportunities to be involved in transportation planning, and further describes the means, methods, and formats used in providing those opportunities; and

WHEREAS, consistent with the declaration of the above provisions, the Southeast Wiregrass Area MPO, in consultation with the Alabama Department of Transportation, has prepared a Draft 2013 Public Participation Plan (PPP); and'

WHEREAS, in accordance with 23 CFR 450.316(a)(3), the MPO has provided a public comment period of forty-five (45) days to review the Draft PPP prior to final approval; and

WHEREAS, 23 CFR, Part 450, Subpart C, Section 316 (a)(1)(ix) requires, and the MPO agrees, to periodically review the effectiveness of procedures and strategies providing full and open access to all; now

THEREFORE, BE IT RESOLVED that the Southeast Wiregrass Area MPO has reviewed its public participation procedures, hereafter referred to as the Public Participation Plan (PPP), to assure that full and open access to the MPO decision making process is provided for all citizens, to maintain consistency with federal and state requirements, and to improve and streamline the public participation process and hereby endorses and adopts the Draft 2013 Public Participation Plan.

Mike Schmitz, Chairperson, MPO

ATTEST: Todd McDonald, Secretary

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1.0 Introduction

A Metropolitan Planning Organization (MPO) is an organization created to carry out the transportation planning activities of a Metropolitan Planning Area (MPA). Each Urbanized Area in the United States with a population of 50,000 or more is required by the Federal Highway Act of 1962 to establish a Metropolitan Planning Organization [renewed by MAP-21, July 2012]. MPOs are responsible for the continuing, cooperative and comprehensive (3-C) transportation planning process for their particular Urbanized Area. The agreement to implement the 3-C process to comply with regulations combining the planning requirements of the Federal Highway Administration and the Federal Transit Administration, and change of MPO membership, was most recently updated in 2009.

Urbanized Areas are designated decennially by the United States Census Bureau and are a reflection of urban growth based on population density, not political boundaries. For this reason, MPOs are responsible for the transportation planning process in Urbanized Areas, not single political entities. The goal of the Federal Highway Act of 1962 is to ensure that the transportation planning process and resulting transportation network are cohesive and functional for urban areas that have grown together. In other words, transportation planning needs to be regional in scope, because transportation systems cut across governmental boundaries.

1.1. Study Area

In addition to the Urbanized Area, MPOs also have Study or Planning Areas. The Study Area is made of areas surrounding the urbanized area that are expected to urbanize within the next 20 years and represents extent of the geographic area in which MPO monies can be spent. These areas are created by each individual MPO, but require the approval of the Governor. The Southeast Wiregrass Area MPO Study Area includes Houston, Dale, Henry, and Geneva Counties. [See Appendix 6.2]

1.2. Purpose

The following procedures are part of the Southeast Wiregrass Area Metropolitan Planning Organization (MPO) Public Participation Plan (PPP), required as part of the passage of Public Law 112-141, the Moving Ahead for Progress in the 21st Century Act (MAP-21), on July 6, 2012. The purpose of this Public Participation Plan is to be consistent with the intent of the MAP-21 final rules to provide for an open process with free exchange of information and opportunity for public input at all stages of the transportation planning process, as well as all scheduled MPO meetings.

1.3. Federal Requirements

The following is a brief summary of the relevant federal laws, regulations, and executive orders that direct state departments of transportation regarding public participation matters. This text was prepared by the Bureau of Transportation Planning at the Alabama Department of Transportation and modified by the MPO staff to address MPO functions.

Title 23 United States Code (USC) 134 and 135 – is codification of the law establishing planning policy, defining MPO organizational structure, and delineating MPO and State responsibilities in the transportation planning process.

Moving Ahead for Progress in the 21st Century Act (MAP-21) – This is the most recent transportation legislation, signed into law by President Obama in July of 2012. This law amends, modifies, and adds to existing 23 USC 134 and 135. The language specific to the participation process is found in 134(i)(6), Participation by Interested Parties.

23 Code of Federal Regulations (CFR) 450 – is FHWA/FTA interpretation of 23 USC 134 and 135, providing specific requirements and actions for MPOs and the state implementing agency, the DOT. The applicable language for both is found, respectively, in 450.210(1)(i and others) (“..the state shall..”) and 450.316(1)(vii and others) (“..the MPO shall..”).

Title VI Civil Rights Act of 1964, 42 USC 2000d, et seq. - 42 USC 2000d prohibits exclusion from participation in any federal program on the basis of race, color, or national origin. This is the seminal or shaping expression of the law.

23 USC 324 – This is the law prohibiting discrimination on the basis of sexual orientation, adding to the landmark significance of 2000d. This requirement is found in 23 CFR 450.334(1).

29 USC 794 (Rehabilitation Act of 1973.) - This is the law prohibiting discrimination on the basis of a disability, and in terms of access to the transportation planning process.

Clean Air Act (23 USC 7401 et al)- A series of acts aimed at reducing smog and air pollution, the most recent of which is the Clean Air Act Extension of 1970, with amendments in 1977 and 1990. The 1990 amendment established the State Implementation Plan (SIP), under which the states are obligated to notify the public of plans for pollutant control and allow opportunities for input into the process.

Executive Order 12898 – Executive Orders by the President as the head of the Executive Branch typically carry the weight of law. This is not actually true unless the order has been given discretionary power through an Act of Congress, or a later act gives congressional weight to the order. Significant orders by Presidents in the past affect the ability segments of the population to gain access, and in this case, access to the planning process. Order 12898, often simply called “Environmental Justice,” requires federal agencies to identify “disproportionately high and adverse human and health environmental effects of its programs on minority populations and low-income populations...” and prohibits actions that would adversely affect a disproportionately high number among these populations. Section 5-5 addresses the public involvement part of the order.

2.0 Metropolitan Planning Organization Structure

The Southeast Wiregrass Area Transportation Planning Process is staffed by members of the City of Dothan Department of Planning & Development. They are responsible for administrative support and carrying out the Transportation Planning Process within the Metropolitan Planning Area (MPA). The MPO business and physical address is:

Southeast Wiregrass Area Metropolitan Planning Organization (MPO)
Roy Driggers Municipal Building, Room 305
126 North St. Andrews
Dothan, AL 36303

The Southeast Wiregrass Area MPO is composed of three (3) distinctive committees; Policy Committee, Technical Advisory Committee and Citizens Advisory Committee.

2.1. Policy Committee

The Policy Committee is the policy and decision-making board, which includes voting and non-voting MPO members. Policy Committee members are elected officials (Mayors, Dothan City Commissioners and County Commission Chairmen and a Houston County Commission member) of the local government jurisdictions. The Policy Committee discusses, adopts and submits projects to the Alabama Department of Transportation (ALDOT).

2.2. Technical Advisory Committee

The Technical Advisory Committee (TAC) provides technical support to the Policy Committee. TAC members are non-elected officials, who based on their affiliation, have a hand in developing transportation infrastructure and/or operating transportation dependent businesses.

2.3. Citizens Advisory Committee

The Citizen Advisory Committee (CAC) was established to provide input into the public involvement process. Each MPO member is charged with appointing one representative (Houston County and the City of Dothan have two). The chair of the CAC is a non-voting member of the TAC.

3.0 Regulations and Requirements

3.1. Scope of the Planning Process

While the amended 23 USC 134 and 135 and existing 23 CFR 450 are the primary resources for MPO planning activities, in MAP-21 the Scope of the Planning Process (introduced in SAFETEA-LU as the Planning Factors) provides guiding principles within which the planning process takes place. The eight Factors themselves remain unchanged and are listed below:

1. Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency;
2. Increase the safety of the transportation system for motorized and non-motorized users;
3. Increase the security of the transportation system for motorized and non-motorized users;
4. Increase the 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; and

8. Emphasize the preservation of the existing transportation system.

3.2. MAP-21 PPP Provision

Title 23 USC 134, as amended, emphasizes not only the need for involvement by the general public and all interested parties, it requires fundamental procedures be carried out for insuring direct public access to information and the opportunity for input into the process.

- A. 23 USC 134(i)(6)(B) calls for a Public Participation Plan (PPP) in development of an overall Transportation Plan or Long Range Transportation Plan and provides for the following, in part:

1. Shall be developed in consultation with interested parties.
2. Shall provide interested parties with reasonable opportunity to comment.
3. Methods must include public meetings at convenient and accessible times and locations.
4. Visualization techniques to assist in interpreting plans and actions.
5. Public information should be provided electronically, using available devices and applications and the Internet to aid in dissemination.
6. A plan must be published by the MPO for public review (ALDOT requires that the Plan be made available both in hard copy and electronic versions).

- B. 23 Code of Federal Regulations (CFR) 450 interprets the amended provisions of 23 USC 134 and provides for the following, in part:

1. Adequate public notice of activities and time for public review and comment.
2. Timely notice and access to information.
3. Employment of visualization techniques to describe plans and programs.
4. Make information available electronically and on the internet.
5. Hold meetings at convenient times and easily accessible venues.
6. Consider and respond to public input in a timely fashion.
7. Seek out and consider the needs of the traditionally underserved in the community, such as low-income and minority populations.

8. Provide additional opportunity for public comment on all plans, and changes to plans, following initial agency and public reviews during development, especially the Long Range Transportation Plan and Transportation Improvement Program.
9. Coordination with statewide public involvement and consultation processes.
10. Periodically review procedures and effectiveness of Plan strategies.
11. Provide a summary of public comments on the draft for the Long Range Transportation Plan and the Transportation Improvement Program and include those in the final documents.
12. Provide a minimum of a forty-five (45) day public comment period before finalization of a PPP Plan or an update of an existing PPP Plan.

3.3. Americans with Disabilities Act (ADA), Title VI, and Environmental Justice

ADA:

The ADA is a civil rights law that prohibits discrimination based solely on disability. It provides protections against discrimination similar to the Civil Rights Act of 1964 which is based on race, religion, sex, national origin and other characteristics. ADA essentially defines disability as a physical or mental impairment that limits life activity.

The Rehabilitation Act of 1973, including Section 504, and the Americans with Disabilities Act of 1990 encourages the participation of people with disabilities in the development of transportation and paratransit plans and services. In accordance with ADA guidelines, all meetings conducted by the MPO will take place in locations which are accessible by persons with mobility limitations or other impairments. Further, each state is required to be compliant with both Acts.

Title VI [Environmental Justice]:

Title VI of the Civil Rights Act of 1964 ensures that no person is excluded from participation in, denied the benefit of, or subjected to discrimination under any program or activity receiving federal financial assistance on the basis of race, color, national origin, age, sex, disability, or religion. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations, was signed by President Clinton in 1994. It required that programs, policies and activities affecting human health or the environment will identify and avoid disproportionately high and adverse effects on minority or low-income

populations. The intent was to ensure that no racial, ethnic, or socioeconomic group bears a disproportionate share of negative environmental consequences resulting from government programs and policies.

3.3.1 Language Assistance Plan

As required by Title VI of the Civil Rights Act of 1964, Executive Order 13166, and FTA Circular C 4702.1B, October 2012, the Southeast Wiregrass Area MPO has completed a Four Factor Analysis of the Dothan Metropolitan Planning Area to determine requirements for compliance with the Limited English Proficiency (LEP) provisions. Based on analysis, the MPO has identified a population within the MPA that may require MPO assistance in participating in the planning process. A Language Assistance Plan is being developed as due to the following criteria:

- 4.42% of the total study area populations are not of the White or Black/African American Race
- 3.09% of the total population are of Hispanic or Latino ethnicity
- Census estimates that 3.91% of the total study area population speaks English and another language
- Of that 3.91%, 1.45% speak English less than “Very Well”
- Notice of the availability of language assistance to LEP persons is provided by the Southeast Wiregrass Area MPO.
- The MPO monitors, evaluates and updates the Plan annually through the update of the PPP and the Unified Planning Work Program (UPWP).
- Training on MPO staff to provide language assistance is done by the Alabama Department of Transportation.

The MPO periodically reviews the above steps to ensure that inadvertent discrimination on the basis of national origin is not occurring. In addition to the above actions, the MPO will provide the following:

- Notice of MPO meetings and hearings in the secondary language Spanish
- Translation services for meetings or hearing on request, subject to a notice of 48 hours.
- Translation services, verbal only, of planning documents subject to notice of 48 hours.
- Title VI Complaint Forms in the secondary language Spanish.

3.4. MPO PPP Goals

As a continuing effort by the MPO to provide public access and the means by which to engage in the planning process, the MPO observes the following goals:

1. Offer opportunities for groups and individuals to participate in the decision-making process for the development of the Long Range Transportation Plan (LRTP), the Transportation Improvement Program (TIP), and other formal planning documents.
2. Provide open and continuous communication to inform citizens of transportation planning activities.
3. Provide timely and adequate public notice of hearings, meetings, events, and draft planning document availability.
4. Offer a timely response to public comments and concerns with the aim of educating citizens about transportation planning programs and issues.
5. Consult with and encourage comments from groups and individuals belonging to minority populations, low-income populations, and others with special needs.
6. Review the Public Participation Plan (PPP) annually and update policies as needed or required by FHWA or ALDOT. Full update of the PPP will be required with publication of new CFRs.

3.5. Public Participation Procedures for Transportation Planning Documents

This section discusses the public participation process and procedures for preparation and dissemination of the following planning documents:

3.5.1. Unified Planning Work Program (UPWP):

The UPWP is the primary document in the required planning document hierarchy through which funding for the principal work activities of the MPO are programmed. These work products include: the Long Range Transportation Plan, the Transportation Improvement Program, and the Public Participation Plan (amendment). Funds allocated to each of the tasks are referred to a PL (planning) funds which are provided to each MPO planning agency for the purpose of supporting the mission and goals of the MPO.

The UPWP outlines the task activities for the transportation planning program for the upcoming fiscal year. Tasks include: administration, data collection and management, UPWP, public involvement, environmental mitigation, transportation systems, (LRTP, TIP, Bicycle and Pedestrian), transportation safety, education and training,

special projects, corridor development and development of Regional Impact. The activities under the Public Involvement task include building or preparing the PPP, doing community outreach, educating the public on the involvement process, and interacting with the public for the MPO. Other procedural steps include:

- Public Involvement for the UPWP document itself includes a thirty (30) day review period prior to MPO policy Board approval for agency and public comment on the draft and similar timeframe for changes that may be made to the draft before ALDOT approval and publication of the final document.
- Notices and agendas for all meetings are U.S. mailed or emailed to stakeholders and interested parties fourteen (14) days prior to the meeting date.
- All meetings are open to the public because public input is encouraged and valued as codified in the Alabama Open Meetings Act 2005-40, p. 55, Art. 1.
- All meetings are subject to the provisions of Alabama Code 36-25A-1 and requirements for public access and involvement.
- All meetings will be advertised by legal notice in a newspaper with city/countywide coverage.
- Amendment to the UPWP requires FHWA and ALDOT approval and may require public participation. The MPO should consult with ALDOT to determine the extent of that participation.
- Copies of documents may be obtained on the web at www.dothan.org or by contacting Mr. Todd McDonald, AICP or Reginald Franklin at the City of Dothan Department of Planning & Development, 126 N. Saint Andrews Street Room 305, P. O. Box 128, Dothan, Alabama 36302, calling (334) 615-4410, Fax (334)615-4419, or emailing tmcdonald@dothan.org or rbfranklin@dothan.org

3.5.2. Long Range Transportation Plan (LRTP):

The Long Range Transportation Plan (LRTP) identifies potential projects in the MPA/Study Area to a twenty-year horizon. The LRTP is updated every five years (four years if in non-conformity for Air Quality) and serves as a conduit for public input on a broad range of transportation issues. The LRTP considers all modes of transportation from a regional perspective and must be fiscally constrained (balanced).

- The LRTP will be open to public review and comment for thirty (30) days, and again for thirty (30) days after ALDOT and FHWA review and changes have been made prior to approval of the final draft.
- The MPO will maintain stakeholder and interested party telephone, email, and address listings for the purpose of outreach and generating comment. These will include CAC members, school and church organization members, community organizations and groups, housing authority members, chambers of commerce, and state, federal, and local government agencies and staffs.
- Special outreach within the Metropolitan Planning Area that will include complete listings of churches, businesses, and community leaders in areas with low and moderate income populations.
- Notices will be advertised in a newspaper with city and countywide coverage, mailed or emailed out fourteen (14) days prior to the scheduled meeting.
- Hold at least one (1) open public meeting to receive public comments on the Draft LRTP. An additional public meeting may be held at a different location if needed pending approval from the Policy Board
- When written or oral comments are received, an analysis, summary, and report on the disposition of the comments are included in the appendices of the Final Long Range Transportation Plan. Changes will be incorporated into the LRTP as appropriate and at the discretion of the Policy Board.
- Members of the MPO staff will be available to answer questions and hear comments from interested citizens' at all scheduled LRTP meetings and during regular Public Forum periods of the Policy Board and Committee meetings.
- Copies of documents may be obtained on the web at www.dothan.org or by contacting Mr. Todd McDonald, AICP or Reginald Franklin at the City of Dothan Department of Planning & Development, 126 N. Saint Andrews Street Room 305, P. O. Box 128, Dothan, Alabama 36302, calling (334) 615-4410, Fax (334)615-4419, or emailing tmcdonald@dothan.org or rbfranklin@dothan.org

3.5.3. Transportation Improvement Program (TIP):

The Transportation Improvement Program (TIP) is the short-range budget document that allocates funding to specific transportation projects advanced by a member government/sponsor. Projects may be programmed for funding under numerous categories and covers a four-year period. Other state and federal funding sources and programs may contribute to development of the transportation system in the Southeast Wiregrass Area and must be included in the TIP project listings. The TIP is also a fiscally constrained document.

- Amendment to the TIP may require public participation. The MPO should consult with ALDOT to determine the extent of that participation.
- In preparation of the TIP, the MPO will consult with all local governments, federal and state agencies, and other officials responsible for other planning
- The TIP will be open to public review and comment for thirty (30) days, and again for thirty (30) days after ALDOT and FHWA review and changes have been made prior to approval of the final draft.
- The MPO will maintain stakeholder and interested party telephone, email, and address listings for the purpose of outreach and generating comment. These will include CAC members, school and church organization members, community organizations and groups, housing authority members, chambers of commerce, and state, federal, and local government agencies and staffs.
- Special outreach within the Metropolitan Planning Area that will include complete listings of churches, businesses, and community leaders in areas with low and moderate income populations.
- Notices will be advertised in a newspaper with city and countywide coverage, mailed or emailed out fourteen (14) days prior to the scheduled meeting.
- Hold at least one (1) open public meeting to receive public comments on the Draft TIP. An additional public meeting may be held at a different location if needed pending approval from the Policy Board
- When written or oral comments are received, an analysis, summary, and report on the disposition of the comments are included in the appendices of the Final TIP. Changes will be incorporated into the TIP as appropriate and at the discretion of the Policy Board.

- Members of the MPO staff will be available to answer questions and hear comments from interested citizens' at all scheduled TIP meetings and during regular Public Forum periods of the Policy Board and Committee meetings.
- Copies of documents may be obtained on the web at www.dothan.org or by contacting Mr. Todd McDonald, AICP or Reginald Franklin at the City of Dothan Department of Planning & Development, 126 N. Saint Andrews Street Room 305, P. O. Box 128, Dothan, Alabama 36302, calling (334) 615-4410, Fax (334)615-4419, or emailing tmcdonald@dothan.org or rbfranklin@dothan.org

3.5.4. Public Participation Plan (PPP):

Under Section 3.1 the PPP is required under 23 USC 134 (amended by MAP-21 Section 1201 and 1202, July 2012); 42 USC 2000d-1, 7401; 23 CFR 450 and 500; 40 CFR 51 and 93, and then as interpreted in the regulations of 23 CFR 450. Within 450.316 are the specifics for the Plan and they include some or all of the following items that are necessary to ensuring full compliance of the law and participation of the citizens of the Southeast Wiregrass Area MPO in the process.

The Plan outlines activities for informing the public and providing opportunities for public review and comment on the transportation planning process and or proposed transportation improvement projects. Additionally, for Transportation Management Areas (TMA's) (over 200,000 in population), the Congestion Management Process and the Air Quality Conformity Report for TMA's in non-attainment for air quality are required. The Southeast Wiregrass Area MPO is in attainment for air quality and is concerned with maintaining and or updating the UPWP, LRTP, TIP, the Bicycle/Ped Plan and the PPP. Accordingly, the following actions will take place in preparation of the PPP update:

- The Public Participation Plan (PPP) will be updated at least every four (4) years, unless directed otherwise by the Alabama Department of Transportation (ALDOT). The MPO may adjust or amend the PPP as needed, with copies submitted for review to ALDOT, who will make further distribution to FHWA, FTA, and other agencies.
- The PPP will be prepared by the MPO with input from the citizens of the MPA, individuals who work in the MPA, local governments, state and federal agencies, and interested parties as provided in 23 CFR 450.316(a).

- Dissemination of written information to public and stakeholder groups is a requisite part of 316(a). Draft versions and the Final PPP will be available for public review and comment for a minimum of forty-five (45) days prior to MPO Policy Board approval, unless otherwise specified by ALDOT.
- Draft versions and the Final PPP document must be approved by ALDOT, FHWA, and FTA.
- Hold at least one (1) open public meeting to receive public comments on the Draft TIP. An additional public meeting may be held at a different location if needed pending approval from the Policy Board
- Special outreach will be undertaken within the Metropolitan Planning Area that will include complete listings of churches, businesses, and community leaders in areas with low and moderate income populations.
- Notices will be advertised in a newspaper with city and countywide coverage, mailed or emailed out fourteen (14) days prior to the scheduled meeting.
- Members of the MPO staff will be available to answer questions and hear comments from interested citizens' at all scheduled PPP meetings and during regular Public Forum periods of the Policy Board and Advisory Committee meetings.
- When written and oral comments on the PPP are received, an analysis, summary, and report on the disposition of the comments are included in the appendices of the final Public Participation Plan. Changes will be incorporated into the PPP as appropriate and at the discretion of the Policy Board.
- Amendment to the PPP may require public participation. The MPO should consult with ALDOT to determine the extent of that participation.
- In preparation of the PPP, the MPO will consult with all local governments, federal and state agencies, and other officials responsible for other planning activities affected by the planning process in the Metropolitan Planning Area.
- Copies of documents may be obtained on the web at www.dothan.org or by contacting Mr. Todd McDonald, AICP or Reginald Franklin at the City of Dothan Department of Planning & Development, 126 N. Saint Andrews Street Room 305, P. O. Box 128,

Dothan, Alabama 36302, calling (334) 615-4410, Fax (334)615-4419, or emailing tmcdonald@dothan.org or rbfranklin@dothan.org

3.5.5. Bicycle and Pedestrian Plan:

By FHWA directive, bicycle and pedestrian planning components have been required in the Long Range Transportation Plan and the Transportation Improvement Program documents for some time. Inclusion in Alabama MPO planning documents took place in 2010. ALDOT joined other state DOTs and approved and implemented a Statewide Bicycle and Pedestrian Plan in the same year.

As a result of the 2010 action, ALDOT required that MPOs in the FY 2012 cycle either have Bicycle/Pedestrian Plans in their UPWP or be working on a Plan, with approval for no later than the Summer of 2013. Those MPOs lacking a Plan must include in their Proposed Work section of the FY 2013 UPWP, specific language for the development of a Bicycle and Pedestrian Plan. The Southeast Wiregrass MPO adopted its Bicycle and Pedestrian Plan in 2011. As a formal planning document, draft and final versions of the Plan are subject to ALDOT and FHWA review and approval. The following activities will be done in preparation of the Bicycle and Pedestrian Plan:

- The MPO may adjust or amend the Bicycle and Pedestrian Plan as desired, with copies submitted for review to ALDOT, who will make further distribution to FHWA and other agencies.
- The Bicycle and Pedestrian Plan will be prepared by the MPO with input from the citizens of the MPA, individuals who work in the MPA, local governments, state and federal agencies, and interested parties as provided in this PPP and 23 CFR 450.316. The BPAC will make a recommendation to the Policy Board for action on the Draft and Final documents.
- Dissemination of written information to public and stakeholder groups is a requisite part of 450.316(a). Draft versions of the Plan will be available for public review and comment for a minimum of thirty (30) days prior to Policy Board approval.
- Drafts and Final Bicycle and Pedestrian Plans must be approved by ALDOT and FHWA.

- Notices will be advertised in a newspaper with city and countywide coverage, mailed or emailed out fourteen (14) days prior to the scheduled meeting.
- Hold at least one (1) open public meeting to receive public comments on the Draft TIP. An additional public meeting may be held at a different location if needed pending approval from the Policy Board
- Members of the MPO staff will be available to answer questions and hear comments from interested citizens on the Bicycle and Pedestrian Plan at all scheduled meetings and during regular Public Forum periods of the Policy Board and Advisory Committee meetings.
- When written and oral comments on the Bicycle and Pedestrian Plan are received, an analysis, summary, and report on the disposition of the comments are included in the appendices of the final Bicycle and Pedestrian Plan. Changes will be incorporated into the BPP as appropriate and at the discretion of the Policy Board.
- In preparation of the Bicycle and Pedestrian Plan, the MPO will consult with all local governments, federal and state agencies, and other officials responsible for other planning activities affected by the planning process in the Metropolitan Planning Area.
- Copies of documents may be obtained on the web at www.dothan.org or by contacting Mr. Todd McDonald, AICP or Reginald Franklin at the City of Dothan Department of Planning & Development, 126 N. Saint Andrews Street Room 305, P. O. Box 128, Dothan, Alabama 36302, calling (334) 615-4410, Fax (334)615-4419, or emailing tmcdonald@dothan.org or rbfranklin@dothan.org

3.5.6. Air Quality Public Involvement and Report:

If, after Environmental Protection Agency (EPA) rulemaking, the Dothan urban area is found to be in non-conformity for ground level ozone (O₃), or any other pollutant, the Southeast Wiregrass Area MPO will provide public review and comment opportunities necessary in documenting a process for attaining Air Quality Conformity.

The EPA is scheduled to propose new ground-level ozone attainment levels in July 2013. The National Ambient Air Quality Standards (NAAQS) for ozone are currently .75/.075 (parts per billion/million) depending on reporting method. A new lower threshold range may require the Southeast Wiregrass Area MPO to

develop an Air Quality Conformity Report (ACR) utilizing MOVES2010b software pollution estimates and budgets generated from the Alabama Department of Environmental Management's (ADEM) Statewide Implementation Plan (SIP).

If it becomes necessary to amend the Transportation Improvement Plan (TIP), the Long Range Transportation Plan (LRTP) or to develop an ACR, the following activities will be undertaken to provide opportunities for public review and comment:

- At least one public meeting to solicit public review and comments on the ACR or Draft TIP or LRTP amendments will be announced and held with MPO staff in attendance.
- A block ad announcement of the public meeting, its date, location and time along with information on other opportunities for public review and comment on the ACR or the amended TIP or LRTP amendments will be published in the local newspaper of general circulation at the beginning of the 25 day review period.
- Meeting announcements and details will be posted on the MPO web page
- Copies of the ACR or the amended TIP or LRTP amendments will be available on-line, in the EARPDC lobby, or mailed on request for public review and comment for twenty five (25) days after the MPO adopts the Draft document.
- During this 25 day period the CAC will meet and be solicited for comments after a review of the amended TIP or LRTP amendments.
- Special outreach within the Study Area will include hand delivered announcements of public review and comment opportunities to local barber shops, beauty parlors and churches in low income and minority communities.
- Comment forms will accompany all copies of the ACR or the amended TIP or LRTP amendments and can be submitted at any time during the 25 day review period by mail, dropped off in the EARPDC lobby or via email to the MPO.
- All public comments on the ACR or the amended TIP or LRTP amendments will be summarized in a report and provided to the MPO at its regular meeting for review, consideration and response if necessary. Copies of all comments will be included in the appendices of the Final TIP.

- Copies of documents may be obtained on the web at www.dothan.org or by contacting Mr. Todd McDonald, AICP or Reginald Franklin at the City of Dothan Department of Planning & Development, 126 N. Saint Andrews Street Room 305, P. O. Box 128, Dothan, Alabama 36302, calling (334) 615-4410, Fax (334)615-4419, or emailing tmcdonald@dothan.org or rbfranklin@dothan.org

3.6. Amendment Process – LRTP, TIP, and other Operations Plans

The amendment process involves both a formal approval process and also a system for processing more modest or minor adjustments to TIP projects. The Federal Highway Administration (FHWA) - Alabama Division and the Alabama Department of Transportation (ALDOT) have agreed that a formal TIP amendment is required for a “highway-oriented” project when one or more of the following criteria are met:

- Adds a new project
- Deletes a project
- A project cost increase exceeds 20% or \$1,000,000, whichever is less, or an action adversely affecting fiscal constraint
- Change to a project start or completion date
- Changes to the scope or the termini description of the project

A change that does not meet any of these criteria may be processed as an administrative modification (see below), subject to DOT approval of this procedure by the MPO policy board. Once approved, the MPO may proceed, requiring only signature of the chairperson and attestation. Existing 23 CFR 450 regulations retained by MAP-21, include a provision for an administrative modification (23 CFR450.104) which includes the following definition:

Administrative modification means a minor revision to a long-range statewide or metropolitan transportation plan, Transportation Improvement Program (TIP), or Statewide Transportation Improvement Program (STIP) that includes minor changes to project/project phase costs, minor changes to funding sources of previously-included projects, and minor changes to project/project phase initiation dates. An administrative modification is a revision that does not require public review and comment, re-demonstration of fiscal constraint, or a conformity determination (in non-attainment and maintenance areas).

4.0 Southeast Wiregrass Area MPO Staff

The MPO consists of one employee of the City of Dothan Department of Planning and Development. The MPO Transportation planner administers and manages the transportation planning program in an efficient manner by administering all MPO documents in accordance with the 3-C process, maintaining Title VI compliance and Federal drug-free work place requirements, providing administrative support to all MPO proceedings, providing MPO Policy/TAC/Citizens Advisory Committees with appropriate information and maintaining accurate minutes and records of MPO proceedings. The following activities include but are not limited to the public participation activities conducted by the MPO staff:

1. Set quarterly MPO meetings and agendas
2. Organize MPO Projects
3. Manage LRTP, PPP, TIP, and UPWP w/ updates
4. Submit MPO invoices, semi-annual, and cost allocation reports
5. Work with MPO members on project submittal and removals
6. Review/monitor Funding Availability Report
7. Update, monitor road classification functions
8. Work with CUBE/TRANPLAN travel modeling software
9. Involvement with any Transportation related project(s) at the local and state level

4.1. Meeting Contact and Information

All MPO Policy Board and TAC meetings are held at the Dothan Civic Center on a quarterly basis unless otherwise specified. All regular and “special called” meetings are advertised in the paper at least (14) days prior to the meeting date and must conform to the requirements of the Alabama Open Meetings Act 2005-40 and are open to the public. All MPO meetings must also accommodate persons with special needs. Venues should be ADA504 compliant (wheelchair accessible) and meeting notices will provide a call-in number at least 24 hours in advance for citizens requiring assistance. For all inquiries regarding the Southeast Wiregrass MPO can be made to Todd McDonald, AICP, Planning Director or Reginald Franklin, Transportation Planner, as follows:

Southeast Wiregrass Area Metropolitan Planning Organization (MPO)
City of Dothan Department of Planning and Development
P. O. Box 128, Dothan, Alabama 36302
334-615-4410 (tel)
334-615-4419 (fax)
Email:
tmcdonald@dothan.org
rbfranklin@dothan.org

5.0 Performance Measurement Process

5.1. Livability Principles and Indicators

Increasingly, federal and state agencies are using Performance Measures as a way of ensuring greater accountability for the expenditure of public funds in an ever growing number of programs and activities across a variety of disciplines. Within the transportation sector and the planning processes associated with transportation infrastructure development, ALDOT has adopted the Livability Principles and Indicators as a sustainability measurement against future actions.

The Livability Principles and Indicators are described in the narrative and individual task sections of each draft and final version of the Unified Planning Work Program. The Principles shown are established by federal law and cannot be changed by the MPO. However, Alabama MPOs are encouraged to employ or adapt those Indicators they feel best reflect their local conditions and needs and that can be easily tracked over time and presented in tables, charts, or GIS mapping within the following planning documents:

1. Long Range Transportation Plan
2. Transportation Improvement Program
3. Bicycle and Pedestrian Plan
4. Public Participation Plan
5. Congestion Management Process
6. Air Quality Conformity Report (applicable to those MPOs in non-conformity status)

All planning tasks must be measured against these Livability Principles:

1. Provide more transportation choices
2. Promote equitable, affordable housing
3. Enhance economic competitiveness
4. Support existing communities
5. Coordinate policies and leverage investment
6. Value Communities and neighborhoods

As a measure of sustainability of these principles, the MPO will provide the following Livability Indicators:

1. Percent of households utilizing transit service
2. Vehicle miles traveled per household
3. Percent of household income spent on housing and transportation
4. Transportation cost per household
5. Percent of housing units within a .5 miles of primary employment centers
6. Percent of transportation investment from the Long Range Transportation Plan (LRTP) dedicated to enhancing accessibility of existing transportation facilities
7. Percent of transportation projects where more than one federal funding source is utilized
8. Percent of housing located in a walkable distance of retail services and recreational facilities (e.g. community centers, parks)
9. Automobile greenhouse gas emissions per household

5.2. Performance Evaluation

The MPO listed some techniques to evaluate the effectiveness of this plan. These techniques along with their evaluation criteria, performance goals, and methods indicate how the MPO will give all citizens the opportunity to participate in the Southeast Wiregrass Area MPO transportation planning process. The following procedures will be used to evaluate the effectiveness of the methods and goals listed in this document:

Public Participation Techniques	Evaluation Criteria	Performance Goal	Methods to meet Goal(s)
Public Participation	Attendance, calls, and comments	N/A	Update every 3 years to improve strategies and methods
Advisory Committees	Attendance	Maintain an average attendance of 50% or more	Generate consistent meeting dates and send out materials before meetings
MPO Website	Total number of inquiries (calls, letters, emails, etc.)	Number of site visits per month	Provide recent news, upcoming events, and other reference data
Public Hearings	Attendance, calls, and comments	Achieve a minimum attendance of 10 citizens at each public hearing	Schedule meetings at convenient times/locations and increase awareness of meetings
Mailing and Address lists	Attendance, calls, and comments	Ensure all potential stakeholders are included	Continue to update and maintain listings
Data/fact sheets and surveys	Attendance, calls, and comments	N/A	Encourage responses and comments
Surveys	Number of responses	5% response rate of the total sample	Encourage responses and comments
Public Relations	Number of local and regional meetings and events attended	N/A	Represent the MPO at all related Transportation related events and meetings
Display Ads	Attendance, calls, and comments	Compare posted locations versus attendance	Look for better locations to post Ads and notices at population centers

6.0 Appendices

6.1 Abbreviations and Acronyms

Appendix 6.1: Abbreviations and Acronyms

3-C	Comprehensive, Cooperative, and Continuing
ADA	Americans with Disabilities Act
ADEM	Alabama Department of Environmental Management
ALDOT	Alabama Department of Transportation
APA	American Planning Association
ATPA	Alabama Transportation Planning Association
ATS	ALDOT Technical Services
AQ	Air Quality
BPAC	Bicycle and Pedestrian Advisory Committee
CAC	Citizens Advisory Committee
CAD	Computer Aided Design
CFR	Code of Federal Regulations
COOP	Continuity of Operations Plan
DBE	Disadvantaged Business Enterprise
DOT	Department of Transportation
DRI	Developments of Regional Impact
FAS	Federal Aid System
EPA	Environmental Protection Agency
ESRI	Environmental Scientific Research Institute
ETS	Environmental Technical Section
FAS	Federal Aid System
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
FY	Fiscal Year

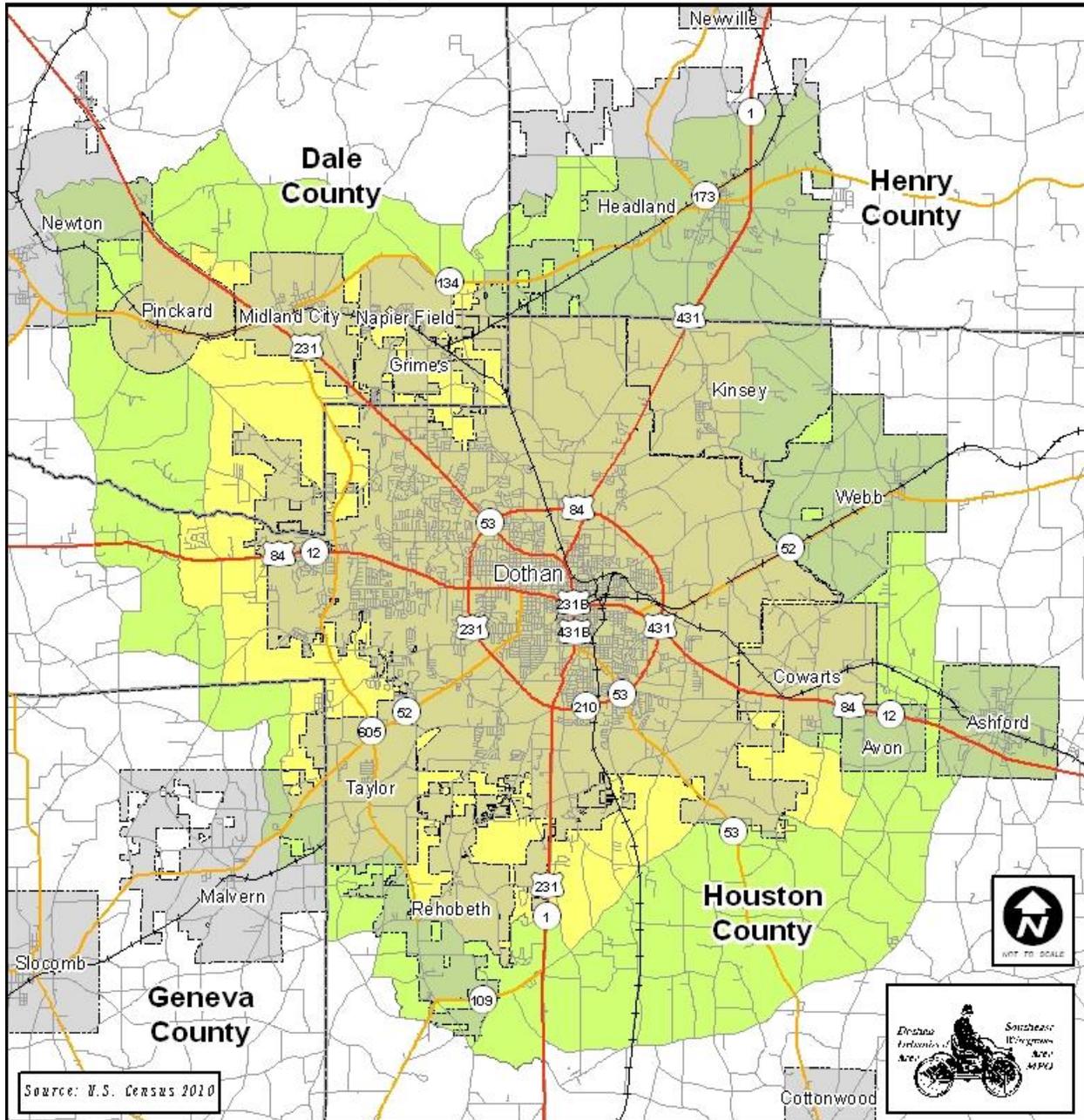
GIS	Geographic Information System
GHG	Greenhouse Gases
ITS	Intelligent Transportation System
L RTP	Long Range Transportation Plan
MAP-21	Moving Ahead for Progress in the 21st Century
MPA	Metropolitan Planning Area
MPO	Metropolitan Planning Organization
MOVES	Motor Vehicle Emission Simulator
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHS	National Highway System
O ₃	Ground level ozone is an air pollutant resulting from chemical reactions between nitrogen and certain volatile organic compounds (VOCs) emitted through fossil fuel exhaust and other sources.
PL	Planning Funds
PM _{2.5}	Pollution in the form of tiny particles or droplets in the air that are two and one half microns or less in width.
PPP	Public Participation Plan (or Process depending on use)
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy <i>for</i> Users
SEARP&DC	Southeast Alabama Regional Planning and Development Commission
SIP	Statewide Implementation Plan
SPR	State Planning and Research
STIP	Statewide Transportation Improvement Program
TAC	Technical Advisory Committee
TAP	Transportation Alternatives Program
TAZ	Traffic Analysis Zone

TEA-21	Transportation Equity Act for the 21st Century
TDP	Transit Development Plan
TIP	Transportation Improvement Program
TSM	Transportation System Management
UPWP	Unified Planning Work Program
USC	United States Code

6.2 Southeast Wiregrass Area MPO Urban and Study Area Map

Appendix 6.2: Southeast Wiregrass Area MPO Urban and Study Area Map

Southeast Wiregrass Metropolitan Planning Organization
 Dothan Urbanized Area Map
 Dale, Henry, Geneva, & Houston Counties



Legend

- +— Railroad
- Alabama State Highway
- ▭ County Boundary
- ▭ Urbanized Area
- United States Highway
- Roads
- ▭ Municipalities
- ▭ Study Area

6.3 Southeast Wiregrass Area MPO Livability Principles and Indicators

Appendix 6.3: Southeast Wiregrass Area MPO Livability Principles and Indicators

Livability Principles and Indicators

1. Provide more transportation choices

Develop safe, reliable and economical transportation choices to decrease household transportation costs, reduce our nation's dependence on foreign oil, improve air quality, reduce greenhouse gas emissions and promote public health.

Indicator(s)

- Percentage of workforce using transit service:

Means of Transportation to Work		
Dothan-Enterprise-Ozark, AL CSA		
Mode of Transportation	Estimate	Percent
Total:	102,591	-
Car, truck, or van:	97,492	95.03%
Drove alone	88,636	86.40%
Carpooled:	8,856	8.63%
Bus or trolley bus	384	0.37%
Taxicab	10	0.01%
Motorcycle	109	0.11%
Bicycle	93	0.09%
Walked	713	0.69%
Other means	1,840	1.79%
Worked at home	1,950	1.90%

Source: U.S. Census 2011 ACS 1-year estimates

- Vehicle miles traveled per household:

Vehicle Miles Traveled (VMT) per household		
Southeast Wiregrass Area MPO		
Miles	Population	% of Population
< 16,000 Annual Miles	0	0.00%
16,000 to 18,500 Annual Miles	2,421	2.70%
18,500 to 21,000 Annual Miles	43,350	48.90%
21,000 to 26,000 Annual Miles	39,537	44.60%
26,000 + Annual Miles	3,266	3.70%
Total	88,574	100%

Source: Housing and Transportation Affordability Index 2011

2. Promote equitable, affordable housing

Expand location- and energy-efficient housing choices for people of all ages, incomes, races and ethnicities to increase mobility and lower the combined cost of housing and transportation.

Indicator(s)

- Percentage of household income spent on housing and transportation:

Percentage of household income spent on housing and transportation		
Southeast Wiregrass Area MPO		
% of Income	Population	% of Population
Less than 40 %	0	0
40 to 45 %	2,421	2.70%
45 to 50 %	4,519	5.10%
50 to 60 %	52,978	59.80%
60 + %	28,656	32.40%
Total	88,574	100%

Source: Housing and Transportation Affordability Index 2011

- Transportation costs per household:

Annual Transportation Costs per Household		
Southeast Wiregrass Area MPO		
Costs	Households	% of Households
Less than \$12500	0	0%
\$12,500 to \$13,500	17,342	51.10%
\$13,500 to \$14,300	6,576	19.40%
\$14,300 to \$15,400	6,050	17.80%
More than \$15400	3,979	11.70%
Total	33,947	100%

Source: Housing and Transportation Affordability Index 2011

3. Enhance economic competitiveness

Improve economic competitiveness through reliable and timely access to employment centers, educational opportunities, services and other basic needs by workers as well as expanded business access to markets.

Indicator(s)

- Percent of housing units within a 0.5 miles of primary employment centers:

Travel Time to Work		
Dothan-Enterprise-Ozark, AL CSA		
Travel Time	Estimate	Percent
Total:	100,641	-
Less than 5 minutes	3,557	3.53%
5 to 9 minutes	11,925	11.85%
10 to 14 minutes	18,918	18.80%
15 to 19 minutes	16,990	16.88%
20 to 24 minutes	15,785	15.68%
25 to 29 minutes	6,424	6.38%
30 to 34 minutes	15,420	15.32%
35 to 39 minutes	1,945	1.93%
40 to 44 minutes	1,878	1.87%
45 to 59 minutes	4,907	4.88%
60 to 89 minutes	1,492	1.48%
90 or more minutes	1,400	1.39%
<i>Source: U.S. Census 2011 ACS 1-year estimates</i>		

4. Support existing communities

Target federal funding toward existing communities – through such strategies as transit-oriented, mixed-use development and land recycling – to increase community revitalization, improve the efficiency of public works investments, and safeguard rural landscapes.

Indicator(s)

- Percent of transportation investment from the Long Range Transportation Plan (LRTP) dedicated to enhancing accessibility of existing transportation facilities: Approximately: 98%

5. Coordinate policies and leverage investment

Align federal policies and funding to remove barriers to collaboration, leverage funding and increase the accountability and effectiveness of all levels of government to plan for future growth, including making smart energy choices such as locally generated renewable energy.

Indicator (s)

- Percent of transportation projects where more than one federal funding source is utilized: 0% percent

6. Value communities and neighborhoods

Enhance the unique characteristics of all communities by investing in healthy, safe and walkable neighborhoods – rural, urban or suburban.

Indicator(s)

- Percent of housing located in a walkable distance of retail services and recreational facilities (e.g. community centers, parks):
Data to be added later
- Automobile greenhouse gas emissions per household:

Automobile Greenhouse Gas Emissions Per Southeast Wiregrass Area MPO		
Tonnes/Year	Households	% of Households
< 3.3 Tonnes/Year	0	0%
3.3 to 5.1 Tonnes/Year	0	0%
5.1 to 6.5 Tonnes/Year	971	2.90%
6.5 to 8.6 Tonnes/Year	8,267	24.40%
8.6 + Tonnes/Year	24,709	72.80%
Total	33,947	100%

Source: Housing and Transportation Affordability Index 2011

6.4 Southeast Wiregrass Area MPO Sample Sign-in Sheet

Southeast Wiregrass Metropolitan Planning Organization

Public Hearing Sign-in Sheet

[Project]

[Date/Time]

[Location]

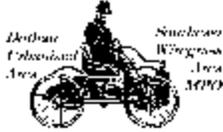
[Address]

[City, State, Zip]

Name	Address	City, State, and Zip	Telephone	Email (Optional)

6.5 Southeast Wiregrass Area MPO Sample Comment Form

Comment Form



Southeast Wiregrass Metropolitan Planning Organization

Project: **[Project Name]**

Comment Period: **[Dates]**

Date: _____ Name: _____

Address: _____

Phone: _____ Email: _____

Comments: _____

Please Return or mail your comments to:

The City of Dothan

Southeast Wiregrass Area MPO

P.O. Box 2128

126 N. Saint Andrews Street Rm. 305

Dothan, AL 36303

Ph: (334) 615-4410

Fx: (334) 615-4419

Or e-mail your comments to rbfranklin@dothan.org

6.6 Public Review and Comment Documentation

PUBLIC NOTICE

The Southeast Wiregrass Area Metropolitan Planning Organization (MPO) will hold a public hearing on Tuesday, October 22, 2013 at 6:00 p.m. in Meeting Room D located on the first floor of the Dothan Civic Center at 126 North St. Andrews Street.

This meeting is to get public input on the 2013 Southeast Wiregrass Area Metropolitan Planning Organization (MPO) Public Participation Plan. The purpose of this plan is to be consistent with the intent of the MAP-21 final rules to provide for an open process with free exchange of information and opportunity for public input at all stages of the transportation planning process, as well as all scheduled MPO meetings. There will be a 45 day review and comment period beginning on October 8th, 2013 through November 22nd, 2013.

The draft 2013 Public Participation Plan for the Southeast Wiregrass MPO area document and comment form can be downloaded from our website at www.dothan.org. The document and comment forms are also available at the following locations:

- Dothan City Hall, Department of Planning & Development
126 N. Saint Andrews St. Room 305
- Dothan-Houston County Library
212 West Burdeshaw Street
- Southeast Alabama Regional Planning & Development Commission
462 N Oates St
- Wiregrass Transit Authority
201 Depot St

Additional information about this meeting can be obtained from the City of Dothan Planning and Development Office, Room 305, Dothan Civic Center, from 8:00 a.m. to 5:00 p.m. or by contacting Todd McDonald, (334) 615-4410 or Reginald Franklin, (334) 615-4414. The meeting is open to the public. Comments can be emailed to rfranklin@dothan.org or sent by mail to:

Reginald Franklin
City of Dothan
Southeast Wiregrass Area MPO
P.O. Box 2128
Dothan, AL 36302-2128

COPY

Planning and Development
Date Received

Account Number
2150038

OCT - 9 2013

Alabama Community Newspapers
Advertising Affidavit

P.O Box 280
Dothan, AL 36302
(800) 281-0444

Date
October 06, 2013

CERTIFIED AS CORRECT
AUTHORIZED BY DEPT. HEAD

Todd McDonald

001-27-~~29~~-527-30-31
ACCOUNT NUMBER

MPO
80/20

P.O. # 100924 Proj. # 230488 \$350.00

CITY OF DOTHAN
PO BOX 2128
DOTHAN, AL 36302

Date	Category	Description	Ad Size	Total Cost
10/06/2013	_Legal Notices	L197046/MPO Public Notice	1 x 49 L	350.00

L197046 PUBLIC NOTICE
 The Southeast Wiregrass Area Metropolitan Planning Organization (MPO) will hold a public hearing on Tuesday, October 22, 2013 at 6:00 p.m. in Meeting Room D located on the first floor of the Dothan Civic Center at 126 North St. Andrews Street.
 This meeting is to get public input on the 2013 Southeast Wiregrass Area Metropolitan Planning Organization (MPO) Public Participation Plan. The purpose of this plan is to be consistent with the intent of the MAP-21 final rules to provide for an open process with free exchange of information and opportunity for public input at all stages of the transportation planning process, as well as all scheduled MPO meetings. There will be a 45 day review and comment period beginning on October 8th, 2013 through November 22nd, 2013.
 The draft 2013 Public Participation Plan for the Southeast Wiregrass MPO area document and comment form can be downloaded from our website at www.dothan.org. The document and comment forms are also available at the following locations:
 • Dothan City Hall, Department of Planning & Development 126 N. Saint Andrews St. Room 305
 • Dothan-Houston County Library 212 West Burdeshaw Street
 • Southeast Alabama Regional Planning & Development Commission 462 N Oates St
 • Wiregrass Transit Authority 201 Depot St
 Additional information about this meeting can be obtained from the City of Dothan Planning and Development Office, Room 305, Dothan Civic Center, from 8:00 a.m. to 5:00 p.m. or by contacting Todd McDonald, (334) 615-4410 or Reginald Franklin, (334) 615-4414.
 The meeting is open to the public. Comments can be emailed to rfranklin@dothan.org or sent by mail to:
 Reginald Franklin
 City of Dothan
 Southeast Wiregrass Area MPO
 P.O. Box 2128
 Dothan, AL 36302-2128

Affidavit of Publication of Legal Notice

State of Alabama

Houston County

Before me, a notary public in and for the county and state above listed,

personally appeared Alice Trawick
who, by me duly sworn, deposes and says that:

"My name is Alice Trawick, I am the Legal Manager of the Dothan Eagle".

The Newspaper published the attached legal notice in the issues of:
10/06/2013

Newspaper reference: 0000670117
The sum charged for publications was \$350.00.

The charges by the Newspaper for said publication does not exceed the lowest actual classified rate paid by commercial customers for an advertisement of similar size and frequency in the same newspaper(s) in which the public notice appeared.

There are no agreements between the Newspaper and the officer or attorney charged with the duty of placing the attached legal advertising notices whereby any advantage, gain or profit accrued to said officer or attorney.

Alice Trawick
AFFIANT

Sworn and subscribed this 7th of October, 2013

Reginald Franklin
Notary Public State of Alabama

**My Commission Expires
March 22, 2017**

THIS IS NOT A BILL. PLEASE PAY FROM INVOICE. THANK YOU

Southeast Wiregrass Metropolitan Planning Organization

Public Hearing Sign-in Sheet

2013 Public Participation Plan

Meeting Room D – 1st Floor Dothan Civic Center

Dothan Civic Center

126 North Saint Andrews Street

Dothan, AL 36302

Name	Address	City, State, and Zip	Telephone	Email (Optional)
Charles Metzger	1443 Eddins Rd	Dothan, AL 36301	798-3614	csmetzger@dothan.org
Todd McDonald	i Walford Place	Dothan AL 36301	798-4029	Tmcdonald@dothan.org

LIVABILITY PRINCIPLES AND INDICATORS

Livability principles and indicators are also discussed in Chapter 1 and Chapter 2. This section summarizes the current state of the livability indicators, which also serve as performance measures for the 2045 Metropolitan Transportation Plan, as mentioned in Chapter 3. They may be continued in the future or superseded by federally required performance measures and any additional performance measures desired to be tracked by the MPO.

Livability Indicator 1: The percent of jobs and housing located within one-half (1/2) mile of transit service.

Target: Increase

Current Performance: 93%

Definition: The percentage of MPA population and employment within a half mile of the City of Dothan or Houston County, the service areas for Wiregrass Transit Authority (WTA). Since WTA provides curb-to-curb demand response transit service, the entire service area has transit service. All population in census blocks with centroids within a half mile buffer of the WTA service area were used to calculate the population.

Data sources: 2010 Census and InfoUSA employment data

Livability Indicator 2: The percent of household income spent on housing and transportation.

Target: Decrease

Current Performance: 60%

Definition: The average percentage of household income spent on housing and transportation in MPO.

Data Source: Housing and Transportation Index, created by the Center for Neighborhood Technology. A caveat for this data is that the information uses the MPO boundary before the 2010 update.

Livability Indicator 3: The percent of workforce living within a thirty (30) minute or less commute from primary job centers.

Target: Increase

Current Performance: 100%

Definition: The percentage of the MPA workforce that resides in a TAZ within a thirty minute or less commute from primary job centers, defined as Downtown Dothan, Southeast Alabama Medical Center, Flowers Hospital, and the commercial corridor between Wiregrass Commons Mall and Dothan Pavilion. Due to the size of the Southeast Wiregrass Area MPO and low congestion, the entire MPA is within a 30 minute commute of these areas.

Data Source: Dothan Regional Travel Demand Model

Livability Indicator 4: The percent of transportation investment dedicated to enhancing accessibility of existing transportation systems.

Target: Increase

Current Performance: 18.8%

Definition: The percentage of the MTP estimated federal funding dedicated to capacity projects, regardless of mode, as provided by ALDOT.

Data Source: ALDOT

Livability Indicator 5: The percent of transportation projects where more than one federal funding source is utilized.

Target: Increase

Current Performance: 0%

Definition: The number of projects already programmed in the TIP that utilized at least two federal funding sources.

Data Source: ALDOT

Livability Indicator 6: The percent of housing located in walkable neighborhoods with mixed use destinations located nearby.

Target: Increase

Current Performance: 8.6%

Definition: The percentage of housing units in TAZs with at least 1 housing units per acre and a jobs (only Retail and Services) to housing ratio of at least 0.75 in the base year (2015).

Data Sources: 2010 Census and InfoUSA employment data