

MUNFORD

CITY OF MUNFORD
T E N N E S S E E

COMMUNITY MOBILITY STUDY

AUGUST 2021
FINAL REPORT

ACKNOWLEDGMENTS

Thank you to the people who participated in the development of this plan through the only survey and public outreach events. This time spent planning for the city of Munford's future is appreciated and will positively impact the community for years to come.

CITY OF MUNFORD, TENNESSEE

Honorable Dwayne Cole, Mayor

Ms. Sue Arthur, Vice-Mayor

Mr. Ray Deneka, Alderman

Mr. Lonnie Glass, Alderman

Mr. Jack Bomar, Alderman

Mr. Glenn Turner, Alderman

Ms. Deborah Reed, Alderman

Sherry Yelvington, City Recorder

KIMLEY - HORN AND ASSOCIATES, INC.

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TENNESSEE DEPARTMENT OF TRANSPORTATION

MEMPHIS AREA ASSOCIATION OF GOVERNMENTS



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INTRODUCTION

Context

Plan Funding

Project Process

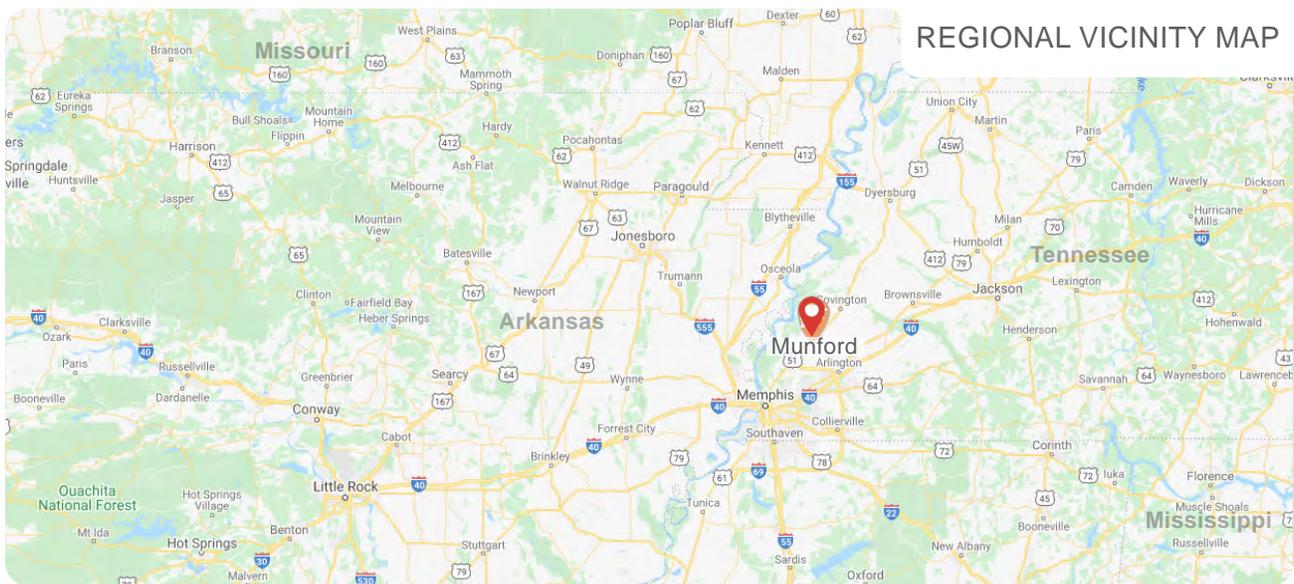
Community Mobility Studies

CONTEXT

SUMMARY

Munford is a growing West Tennessee municipality of approximately 6,200 people in Tipton County - located in the southwest corner of the State. Munford is approximately 25 miles north of Memphis. The City of Munford applied for the TDOT Rural Community Transportation Planning Grant in order to identify multimodal connectivity options, improve safety along the streets, and improve traffic functions.

The major vehicular corridors that create this study area are Munford Avenue and Tipton Street. Specific areas of focus along these corridors included intersections along Munford Avenue at Beaver Road, Park Street, and Doctor's Drive. Also included per request of the City was the intersection of Giltedge Road and Main Street and a portion of Park Street adjacent to the Elementary School.



REGIONAL VICINITY MAP



CORRIDOR STUDY AREA

PLAN FUNDING

FUNDING SOURCES

It is critical to establish a timeline to secure necessary funding to finance Munford's transportation plan. There are many sources of funding through state and federal programs. It is a long process to obtain these financial opportunities, and an appropriate amount of time must be taken into consideration when planning for future improvements. Once funding has been awarded, time is limited in using the funds to develop construction plans and produce built results, thus the importance of this document to outline proposed improvements ready to be designed once funding is allocated. Successful community improvements begin with a well thought out schedule, while taking funding resources into consideration.

COMMUNITY TRANSPORTATION PLANNING GRANT (CTPG)

The Munford Community Mobility Study was selected as a recipient of TDOT's CTPG funding. The Office of Community Transportation (OCT) coordinates the state's transportation planning efforts to provide technical guidance for local jurisdictions, increasing the level of collaboration between TDOT and municipalities across the state. OCT gives TDOT a thorough understanding of local communities and the various transportation planning documents and policies in place. The office is comprised of two sections, Community Planning and Regional Planning. The OCT's mission is to coordinate the state's transportation planning, local land use decisions, and community visions to guide the development of a safe and efficient statewide transportation system. This report was funded by Munford's CTPG grant. As a part of the agreement to receive funding through the grant, the City of Munford will need to adopt a resolution; allowing the city to begin implementing recommendations from this plan.

RURAL COMMUNITY TRANSPORTATION PLANNING GRANT OBJECTIVES

- Develop transportation and land use plans containing deliverables that can be used as guiding tools for future transportation projects.
- Develop real-world transportation and land use solutions that are cost effective and feasible.
- Improve safety through planning documents.
- Create policies and procedures that link all transportation modes and provide alternative mobility options.
- Utilize Context Sensitive Design and Solutions (CSD/CSS) that preserve and enhance community, resources.

(Information on this page is from TDOT's Office of Community Transportation website)



PROJECT PROCESS

PLAN DEVELOPMENT

The planning process began on February 19, 2021 with a project kick-off meeting including City of Munford staff, TDOT, and the RPO Coordinator to clarify scope of work and project schedule. Input from stakeholders and the community was obtained through an online public survey and two public input meetings (one virtual and one in-person event). Meetings included discussions and activities that generated and evaluated planning concepts and strategies. While the project team coordinated and received feedback, the team also pulled opinions from community members and took their thoughts and ideas into consideration. Outreach and project input occurred throughout the planning process (see diagram to the right).

ENGAGEMENT PROCESS

Special consideration was given to reaching a broad cross-section of the community with the intent to accomplish several objectives:

- Offering decision and/or influence opportunities for citizens
- Using the engagement process to raise awareness of the project and of planning in general

Due to COVID-19 restrictions during the planning process, multiple engagement methods were utilized including an online survey and live virtual public meeting.

PROJECT INITIATION

1

- Client Project Kickoff Meeting
- Communicate Workplan

VISIONING

2

- Community Input Events
- Online Survey

PLAN & REPORT DEVELOPMENT

3

- Final report development and adoption of plan

PROJECT IMPLEMENTATION

4

- Funding Acquisition
- Construction of recommendations

COMMUNITY MOBILITY PLAN

WHAT IS A COMMUNITY MOBILITY PLAN

A Community Mobility Plan is a multi-modal plan that identifies the existing and future transportation systems necessary to serve the currently and anticipated travel demand in a specific area. Transportation systems include roadways, public transportation, rail, bicycle, and pedestrian facilities.

The Community Mobility Plan (CMP) strengthens the relationship between transportation plan, local land use plans, and the community vision in a particular area.

WHY CONDUCT A COMMUNITY MOBILITY PLAN

The CMP provides a community with information to better prepare for and respond to future development. The report will summarize existing and future transportation system needs. Specific areas of analysis may include:

- Identification of roadway design deficiencies
- Roadway capacity issues (level of service)
- Safety issues
- Adjustments to the functional classification system
- Intermodal issues (bike; pedestrian; freight; public transportation)

LEADERSHIP COMMITMENT

Community leaders must demonstrate a clear commitment to support the transportation study.

VISIONING & CONSENSUS

Establishing a shared vision and consensus allows the community to set project goals and objectives. Understanding needs and developing support from the community is vital to start the planning, design and implementation processes.

PLANNING & DESIGN

Communities should leverage local resources and knowledge to assist in guiding project activities to best meet the needs of their community. Tailoring best practices to meet local conditions and desires will assist in developing an implementable, successful planning study.

PLAN & REPORT DEVELOPMENT

Communities should seek funding from diverse sources to implement their transportation studies. Communities should also consider partnering with private industry as well as seeking funding from other state and federal sources.

STEPS FOR IMPLEMENTATION



An aerial photograph of a commercial district. In the foreground, a large building with a grey corrugated metal roof and a brick base is prominent. To its left, another building has a dark roof and a light-colored facade. Further back, there are several other commercial buildings, some with blue roofs, and several parking lots filled with cars. The overall scene depicts a typical urban commercial environment.

EXISTING CONDITIONS

Visual Context

Operational Analysis

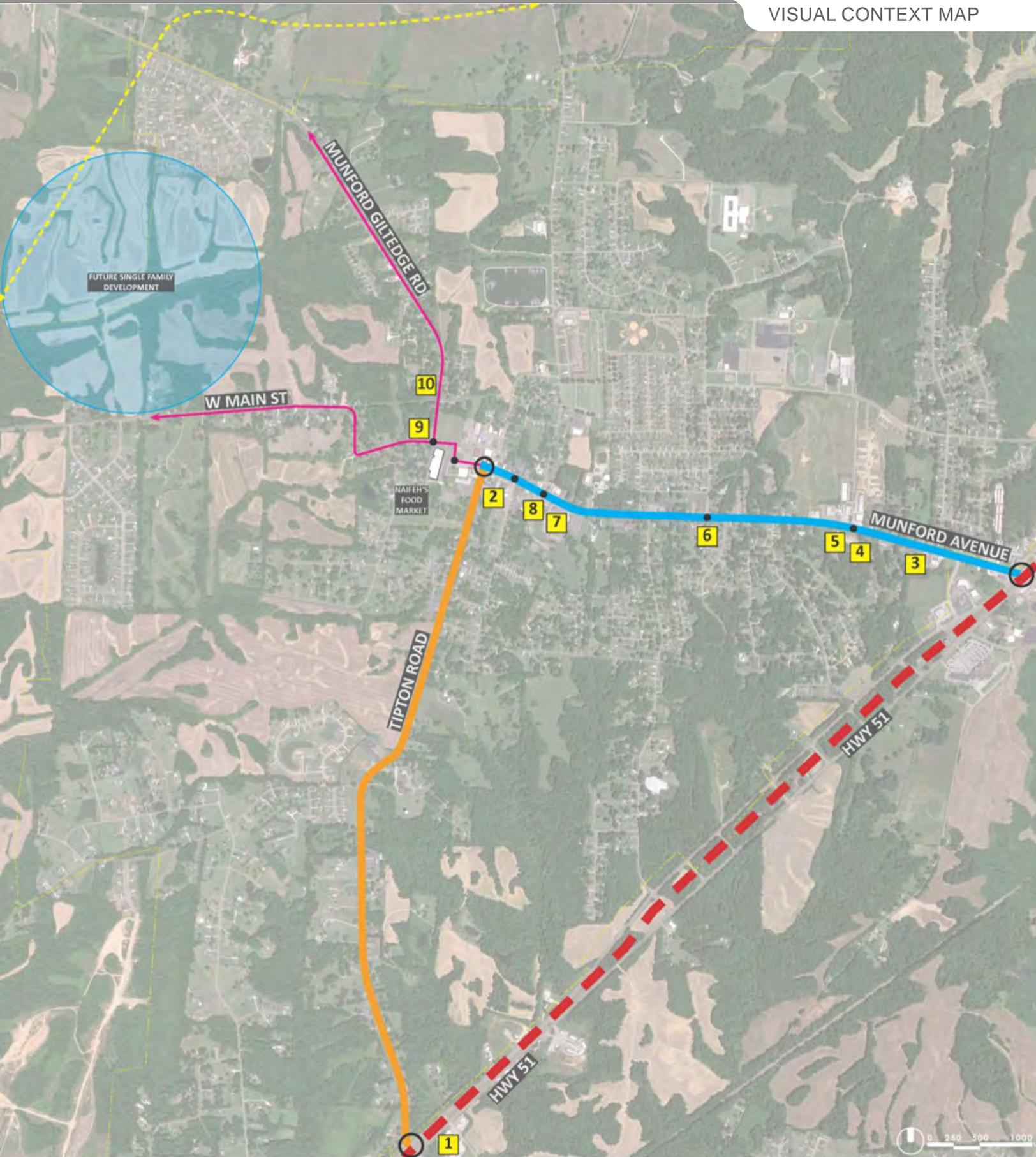
Existing Streetscape Infrastructure

Existing Zoning

Existing Land Use

VISUAL CONTEXT

VISUAL CONTEXT MAP





OPERATIONAL ANALYSIS

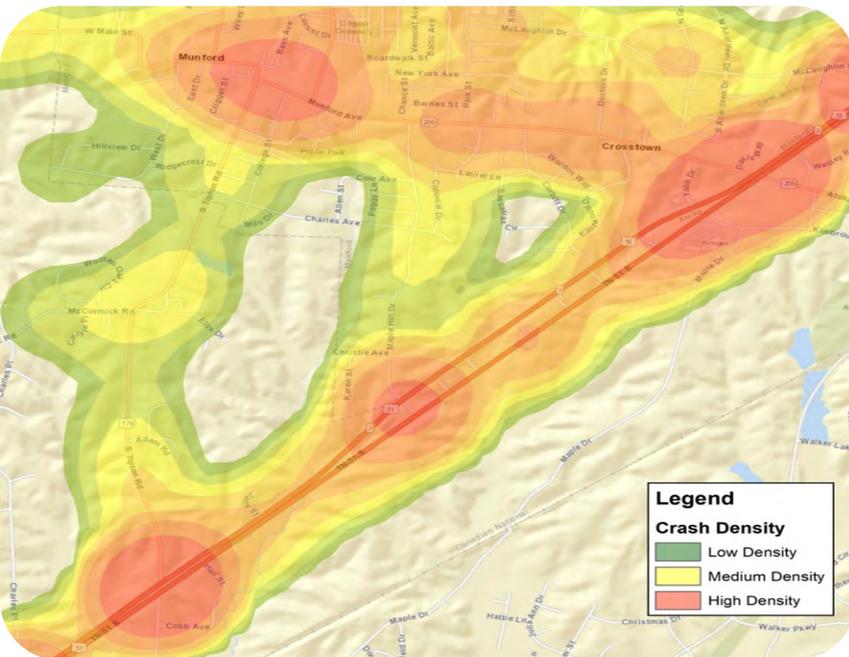


FIGURE 1.

Future traffic volumes were obtained by increasing the 2019 volumes by an amount that represents potential growth of traffic in the study area to the year 2040. Volumes in the year 2040 are expected to range from approximately 3,800 vehicles on Main Street to 16,000 on Munford Avenue.

Based on current roadway volumes and projected future roadway volumes, there appear to be no capacity issues along the study corridors. All corridors are expected to function at acceptable Level of Service (LOS). Therefore, no recommendations are made for these corridors to accommodate future capacity.

CRASH HISTORY

Crash data was obtained from TDOT through the Enhanced Tennessee Roadway Information Management Systems (ETRIMS) for the previous three years (2017-2019). Crash data from 2020 was not evaluated due to the impacts on travel patterns stemming from the pandemic. A total of 112 crashes were reported along the roadway or at intersections along the corridors during this time period.

Of the 112 crashes, 102 resulted in property damage only. This means that vehicles and road features were damaged, but no motorists, pedestrians, or bicyclists were injured. The 10 remaining crashes resulted in suspected minor injuries. None of the 123 crashes resulted in fatalities.

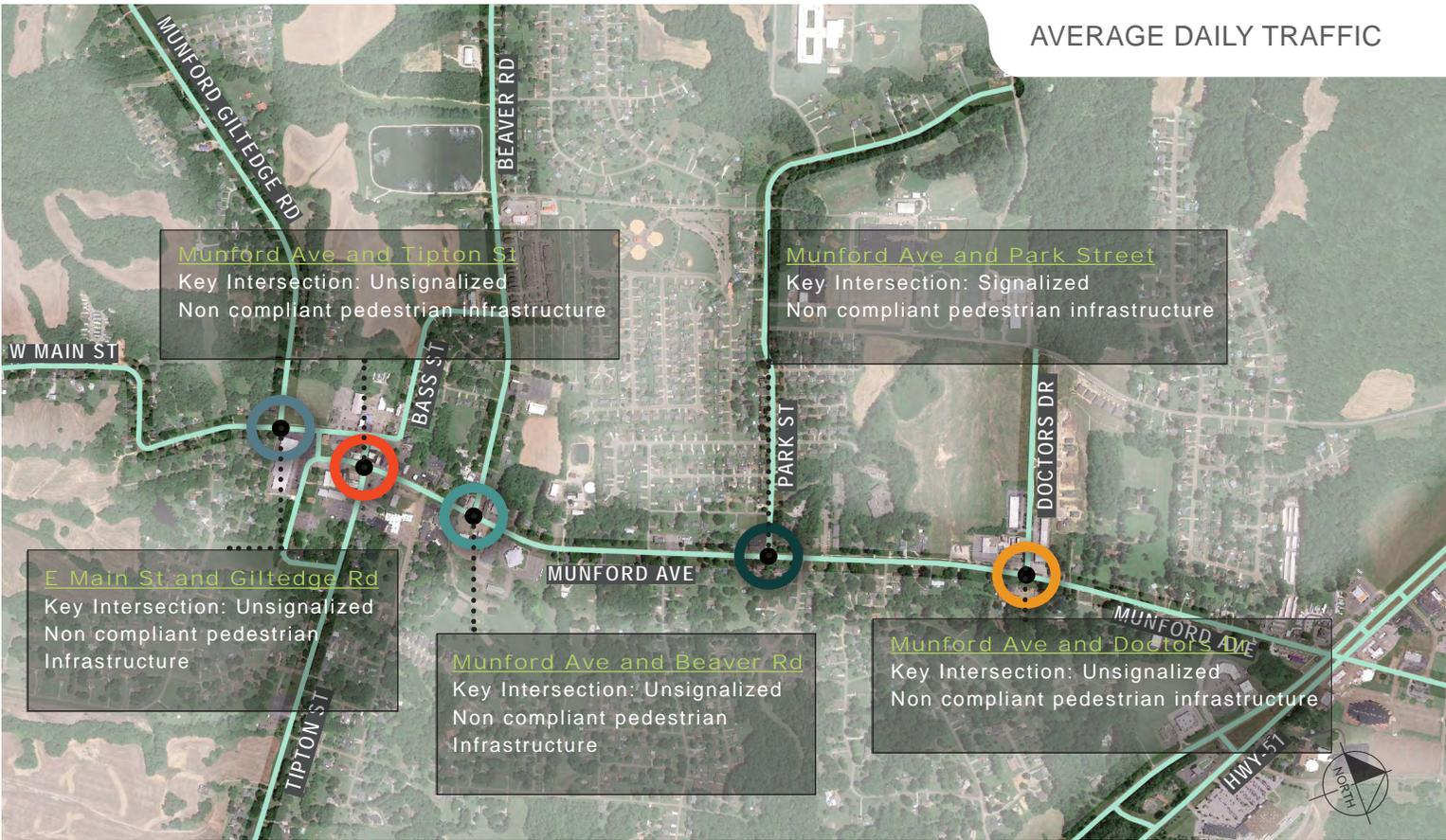
Fig. 1 is a heat map that shows the density of crashes along the corridor. The figure indicates that the high density areas of crashes along the corridors occur at the intersections along the corridors, primarily where the routes intersect Highway 51.

Crash rates were calculated for road segments and intersections. Crash rates represent the number of crashes that occur over a specified time taking into account the exposure over the time period. The crash rates along Munford Ave, Tipton Rd, and Munford Gilt Edge Rd all exceed the statewide averages for similar facilities. Of the 112 crashes reported along the project corridors, 20% occurred at intersections with the remainder occurring along the roadways. Half of the crashes that were reported were classified as rear-end collisions. The recommendations made as a part of this plan are expected to help reduce these types of crashes at intersections and along roadways.

OPERATIONAL SUMMARY

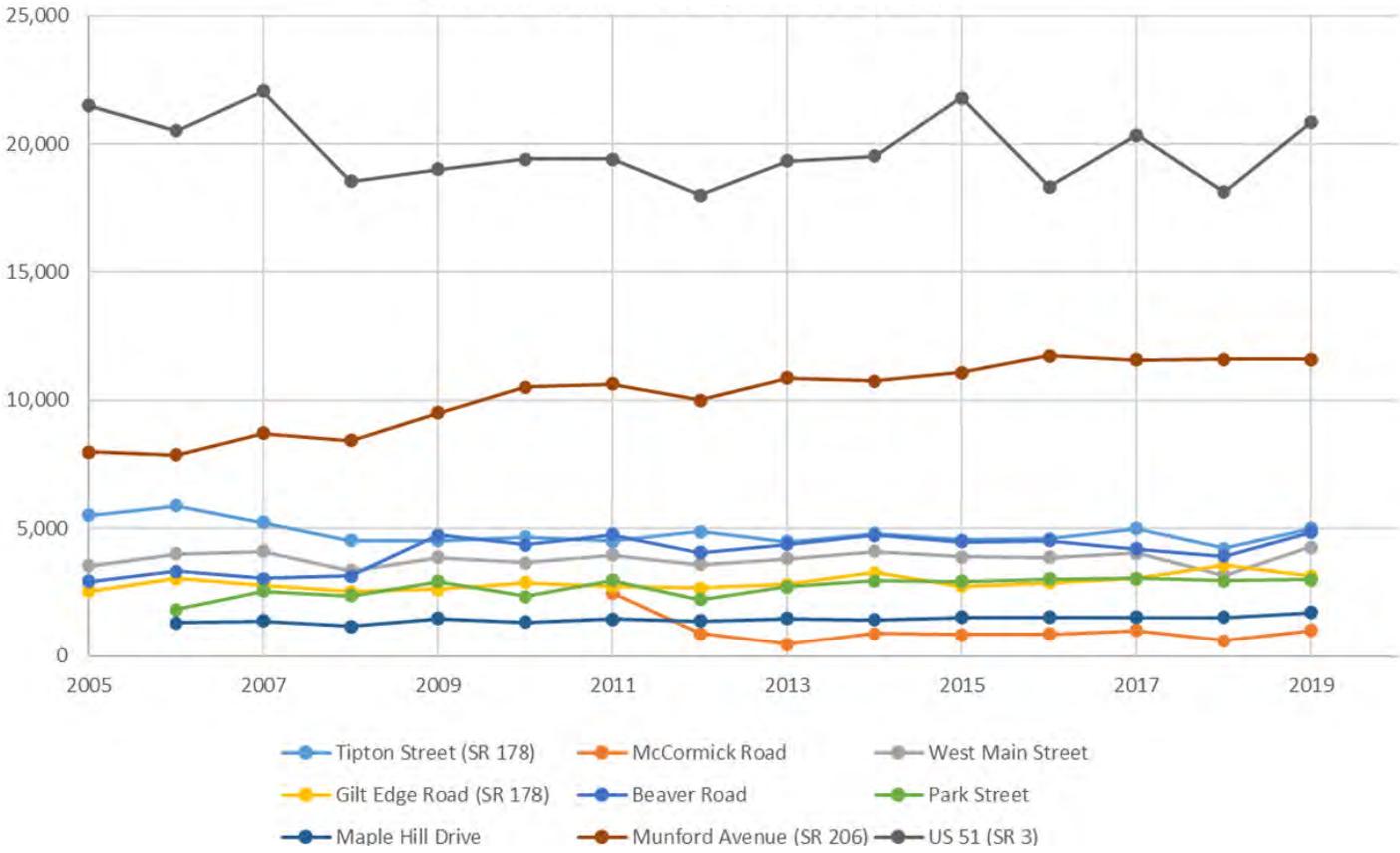
Historic traffic counts along each of the corridors were collected from TDOT. The counts were average annual daily traffic (AADT) counts which represent the number of trips that use a roadway on an average day. Counts were collected from 2005 to 2019. 2020 volumes were not evaluated due to the impacts on travel patterns stemming from the pandemic.

In the project study area, current traffic volumes range from 1,000 to 21,000 vehicles per day. Trends since the year 2005 show a that traffic volumes have remained generally consistent over a period of 14 years (study was conducted form 2005 to 2019). Traffic along Munford shows a steady increase form around 7,000 to 12,000 cars per day on Munford Avenue, while traffic along Tipton Street showed a slight decline from 5,500 to 5,000 vehicles.



Traffic Volumes - Average Annual Daily Traffic

1.0 Average Daily Traffic Volumes



EXISTING STREETScape INFRASTRUCTURE

1

E MAIN ST & GILTEDGE RD INTERSECTION

E Main St

- 2 lanes
- 30 mph speed limit
- Lane width- 11'
- Sidewalks on north side

Giltedge Rd

- 2 lanes
- 30 mph speed limit
- Lane width- 11'
- Sidewalks on west side



2

TIPTON ST & MUNFORD AVE INTERSECTION

Tipton St

- 2 lanes
- 20 mph speed limit
- Lane width- 11'
- Sidewalks on west side

Munford Ave

- 2 lanes
- 30 mph speed limit
- Lane width- 11'



3

BEAVER RD & MUNFORD AVE INTERSECTION

Beaver Road

- 2 lanes
- 30 mph speed limit
- Lane width- 11'
- No shoulders or sidewalks

Munford Ave

- 2 lanes
- 30 mph speed limit
- Lane width- 11'



4

PARK ST & MUNFORD AVE INTERSECTION

Park Street

- 3 lanes at intersection
- 30 mph speed limit
- Lane width- 11'
- Sidewalk connectivity on East side

Munford Ave

- 2 lanes
- 30 mph speed limit
- Lane width- 11'



5

DOCTORS DR & MUNFORD AVE INTERSECTION

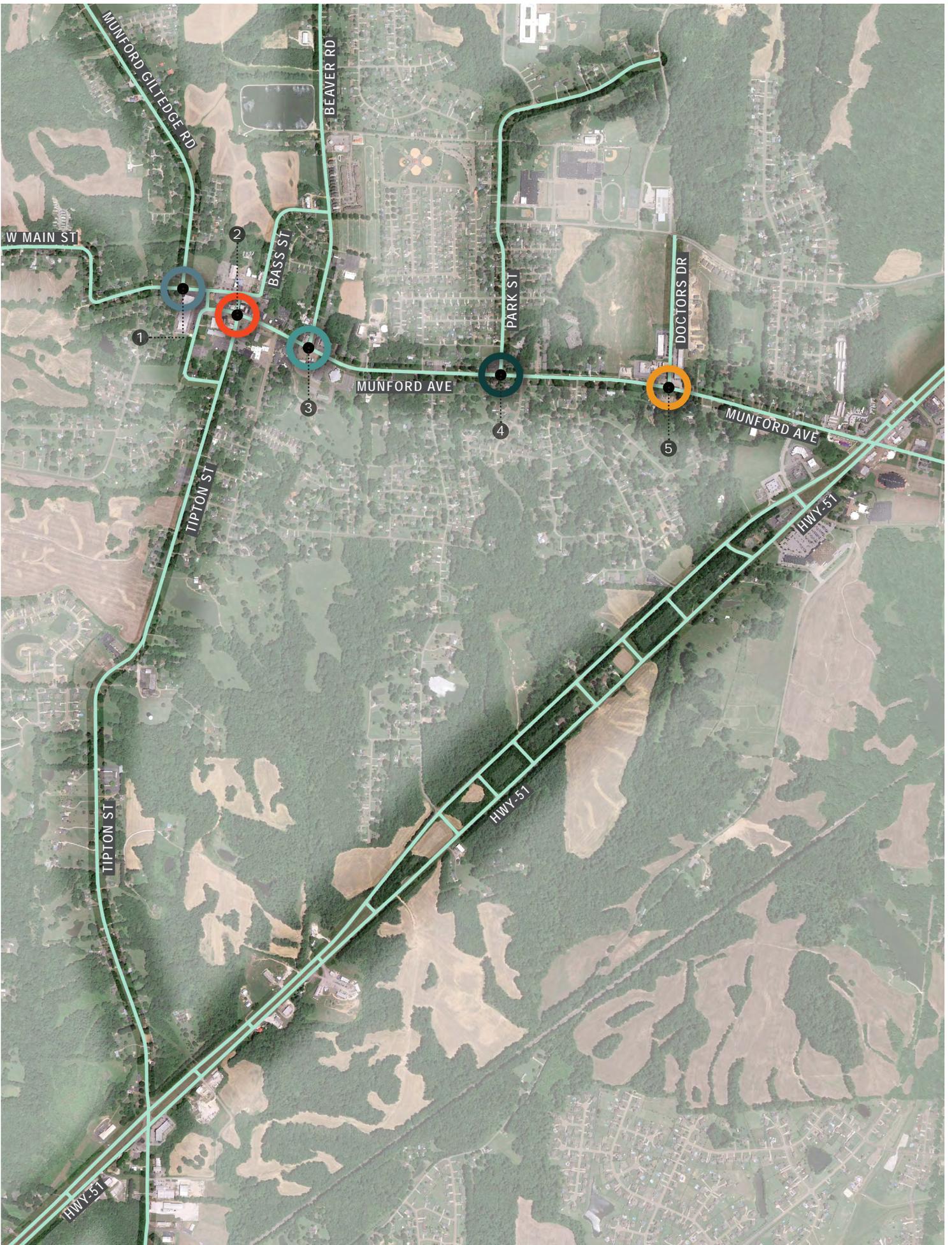
Doctors Dr

- 2 lanes
- 30 mph speed limit
- Lane width- 11'
- No defined sidewalks

Munford Ave

- 2 lanes
- 30 mph speed limit
- Lane width- 11'
- Sidewalks on both sides





EXISTING STREETScape INFRASTRUCTURE

SITE ANALYSIS

The intersection of Main Street and Giltedge Road is an important access point to and from the center of Munford. It currently lacks turning lanes and pedestrian connectivity. Anticipated future growth to the North would affect the functionality of this intersection as it currently exists. This intersection is located between the Central Business District and Residential areas.

PRIMARY
OBJECTIVE

IMPROVE
INTERSECTION
FUNCTIONALITY



NO TURN LANES AT INTERSECTION



UTILITY LINES ALONG MAIN STREET



MINIMAL STREETScape



NO CROSSWALKS



LACK OF SIDEWALKS ON EAST SIDE OF GILT EDGE RD



LACK OF SIDEWALKS ON SOUTH SIDE OF MAIN ST



LOOKING NORTH AT THE INTERSECTION OF MAIN STREET AND GILTEDGE ROAD.

EXISTING STREETScape INFRASTRUCTURE

SITE ANALYSIS

The current intersection of Munford Avenue and Tipton Street is a prime location for multimodal improvements to accompany improved land uses. Current zoning is Central Business District (CBD) and there is anticipated increase in traffic flow due to future growth of the city to the north. There is a lack of pedestrian and bicycle facilities. Excessive and unneeded asphalt pavement provides opportunity for multimodal improvements.

PRIMARY OBJECTIVE

IMPROVE INTERSECTION FUNCTIONALITY



OPPORTUNITY FOR INCREASED BUMPOUT SPACE



EXCESSIVE ASPHALT ON TIPTON STREET



LACK OF PEDESTRIAN SIGNAGE AND LIGHTING



LARGE CURB RADII AND NARROW SIDEWALKS



OPPORTUNITY TO CREATE SENSE OF PLACE



FOUR-WAY STOP CONDITION

MUNFORD AVE AT TIPTON ST



LOOKING WEST AT THE INTERSECTION OF MUNFORD AVENUE AND TIPTON STREET.

EXISTING STREETScape INFRASTRUCTURE

SITE ANALYSIS

The current intersection of Beaver Road and Munford Avenue is in much need of improvements. Currently there are no defined pedestrian facilities nor streetscape character elements. This intersection is in the Eastern portion of the Central Business District (CBD). Vehicular proposed improvements are in process through an existing TDOT STBG project.

PRIMARY OBJECTIVE

IMPROVE PEDESTRIAN SAFETY



DRAINAGE IMPROVEMENTS NEEDED



UTILITIES CREATE CONNECTIVITY ISSUES



LACK OF BIKE AND PEDESTRIAN CONNECTIVITY



LACK OF SAFE PEDESTRIAN STREET CROSSING



LACK OF TURN LANE CREATES TRAFFIC CONGESTION



LACK OF STREET AESTHETICS



LOOKING WEST AT THE INTERSECTION OF MUNFORD AVENUE AND BEAVER ROAD.

EXISTING STREETScape INFRASTRUCTURE

SITE ANALYSIS

The current intersection of Park Street and Munford Avenue is in need of improvement. The curb radii and lane widths are larger than needed. There are no sidewalks to the south of Munford Avenue at the intersection and a lack of streetscape. This intersection serves residential land uses and is zoned as low and medium density residential.

PRIMARY OBJECTIVE

IMPROVE PEDESTRIAN SAFETY



NARROW SIDEWALKS ALONG STREET EDGE



LACKING SPACE FOR PEDESTRIAN SAFETY



CROSSING DOES NOT CONNECT TO A SIDEWALK



NARROW SIDEWALKS COULD BE ENHANCED



LARGE CORNER TURNING RADII



EXCESSIVE LANE WIDTH

MUNFORD AT PARK ST



LOOKING WEST AT THE INTERSECTION OF MUNFORD AVENUE AND PARK STREET.

EXISTING STREETScape INFRASTRUCTURE

SITE ANALYSIS

The current intersection of Munford Avenue and Doctors Drive is in much need of improvements. There are no turn lanes, no sidewalks along the intersection, and no delineated pedestrian crossings. This intersection serves commercial purposes and is zoned as general business.

PRIMARY
OBJECTIVE

IMPROVE
INTERSECTION
FUNCTIONALITY



LACKING A SENSE OF PLACE



AESTHETIC IMPROVEMENTS TO CREATE CHARACTER



MINIMAL STREETSCAPE



NO SIDEWALKS ALONG INTERSECTION



VEHICULAR TURN LANES TO REDUCE CONGESTION



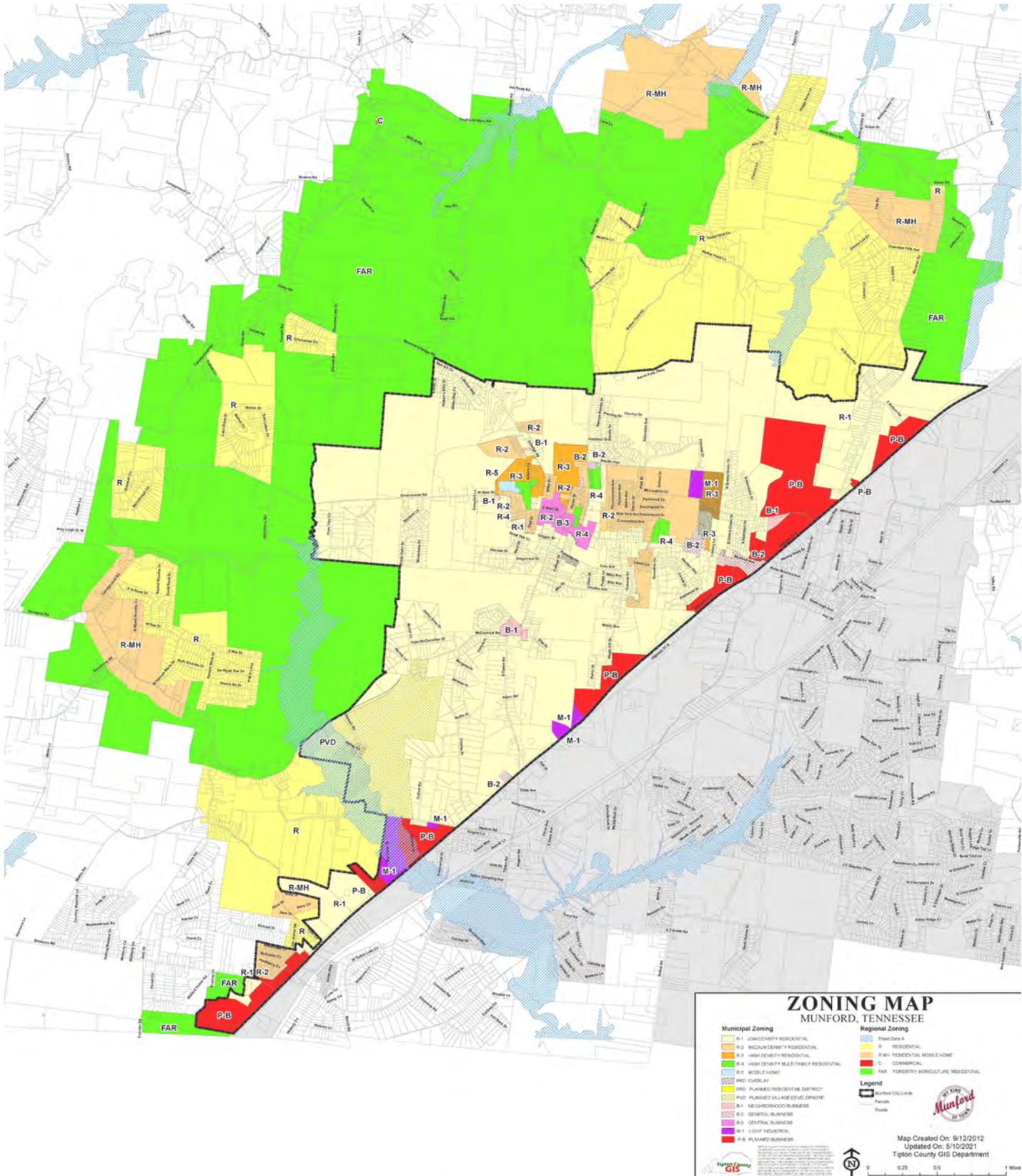
NO CROSSWALKS FOR PEDESTRIAN SAFETY



LOOKING SOUTHEAST AT THE INTERSECTION OF MUNFORD AVENUE AND DOCTORS DRIVE.

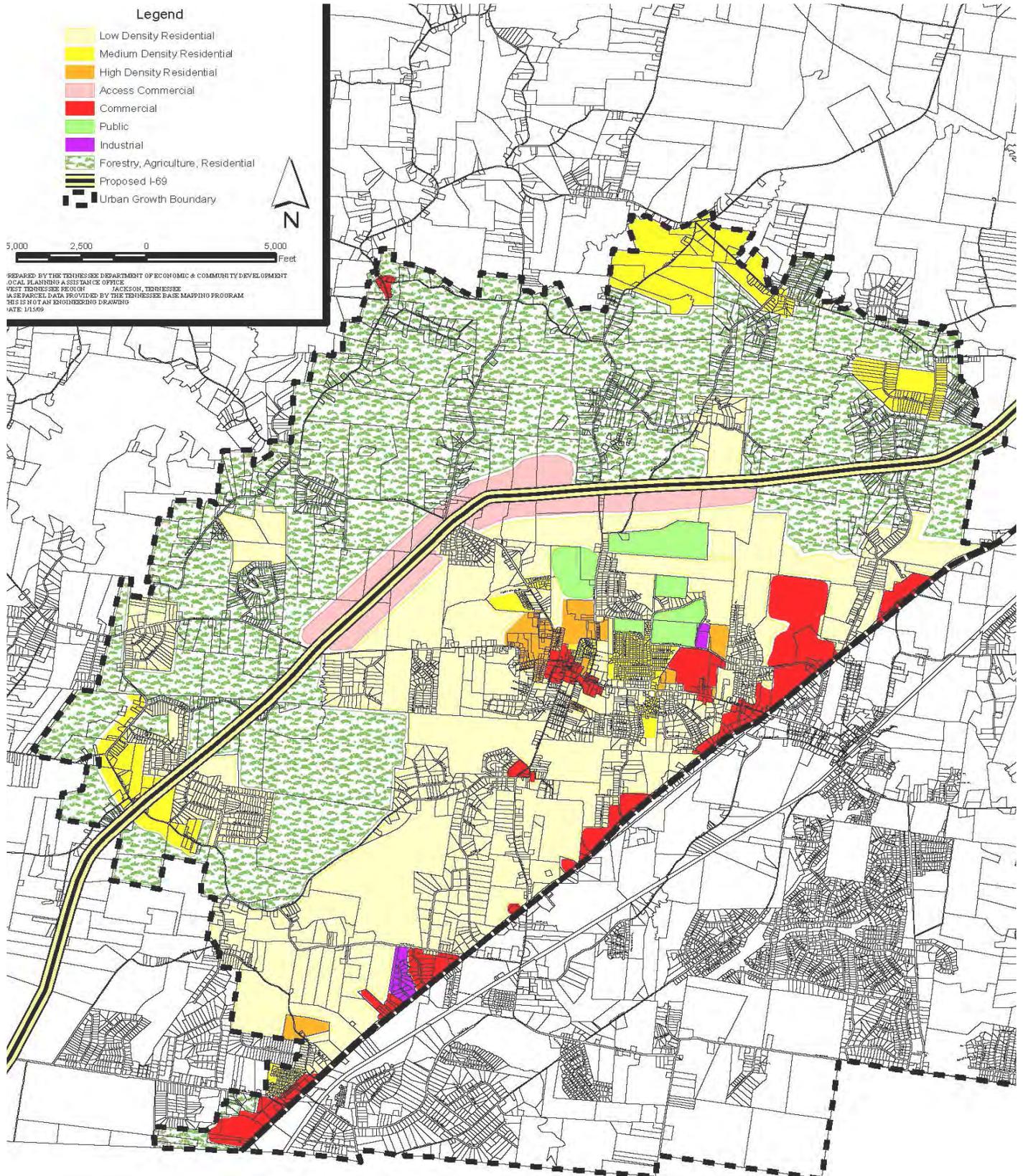
EXISTING ZONING

The zoning along the study corridors includes residential, central business district, and general business. Much of the area within the urban growth boundary is zoned residential and forestry.



EXISTING LAND USE

Land use in the city consists mainly of residential uses with pockets of commercial and public lands. The majority of commercial land use is located alongside Highway 51 and the perimeter of the city consists of primarily forest, agriculture, and some residential land uses.





MUNFORD CITY HALL

1397

COMMUNITY ENGAGEMENT

Public Input Meetings

Public Survey Results



COMMUNITY ENGAGEMENT

The Planning Team met with the city on multiple occasions to verify desired scope of work and perceived issues along the corridors. Meetings were held virtually during COVID-19 restrictions and in person when able.

In an effort to engage with the community and to gain insight Kimley-Horn Associates team members hosted two Public Input Meetings (one virtual and one in person). The City of Munford advertised the meetings to the community, including social media blasts (image right, bottom left). In addition, an online survey was promoted to obtain feedback from the public on desired improvements and existing conditions.

City of Munford Community Mobility Study Project Kick-off Meeting February 19, 2021 at 11:30AM

Agenda:

- **Introductions**
- **Review of Project Scope** – *Discuss scope items that are needed for the study to achieve the goals of the City of Munford and TDOT.*
- **Confirm Goals of this Study** – *Review existing conditions exhibit and discuss items that are important for the City of Munford and TDOT to address within the corridors.*
- **Project Schedule**

Community Mobility Study Munford Ave and Tipton Rd

Community Meeting #1
March 23, 2021 at 6PM

When: Tuesday, March 23, 2021 from 6pm to 7pm

Why: Provide input on sidewalks, bike lanes, safety, and connectivity opportunities along Munford Ave and Tipton Road.

Where: Virtual Zoom Meeting – Required Pre-registration link:
<http://bit.ly/MunfordMobilityPlan>

Public Online Survey:

<https://www.surveymonkey.com/r/MunfordCommunityMobility>



Community Mobility Study – Community Meeting #2

June 8, 2021 at 5:30
Munford City Board Room
70 College Street

Community Input is needed!

Munford Community Mobility Study – Community Transportation Planning Grant
Public Meeting #2
June 8, 2021

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Mayor Dwayne Cole	City of Munford	Munford, TN		dwaynecole1234@gmail.com

SURVEY FINDINGS

The below survey findings are arranged by each question that was present in the public input survey. The percentages are based off responses from community survey participants. Questions focused primarily on the Munford Avenue and Tipton Street corridors and looked at how people currently use the street network, improvements they see fit, and the likelihood of multi-modal use (walking, biking). This was a key step in determining how the streets are used, what people see as major issues of the existing corridors. This data informed the roadway improvements to better serve the community.

HOUSEHOLD AGE GROUP



Under 5	6.3%
5-17	18.92%
18-24	8.11%
25-44	23.42%
45-64	27.03%
65+	16.22%

Findings show that the most common age group among participants to be residents aged 45-64, with the least common being those under the age of five. Understanding the percentage of potential working-aged commuters on the road and children that may be using the roadways for walking and biking is valuable for designing safer and more efficient street infrastructure.

TRANSIT ON MUNFORD AVE (SR-206)



Drive	97.92%
Walk	29.17%
Bike	14.58%
Not Used	2.08%
Other	2.08%

Survey participants were asked all ways in which they are currently utilizing Munford Avenue (SR-206) in regards to transit and were asked to check all applicable categories. The evidence shows that Munford Ave is heavily used for vehicular transit, less so for walking, and is rarely used by cyclists. Improved pedestrian infrastructure and facilities (sidewalks, crosswalks, shade trees, etc.) could increase alternate modes of transit.

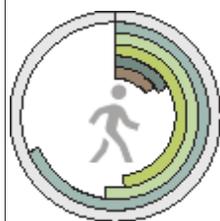
USAGE ON MUNFORD AVE (SR-206)



Employment	93.75%
Errands	62.5%
Social/Recreation	45.83%
Other	12.5%
Not Used	2.08%

Survey participants were asked all the reasons they use Munford Avenue on an average day (respondents checked all that apply). Highest on the list was for employment purposes (commuting to and from places of work), followed by running errands (groceries, mail, etc.), and then socialization and recreation.

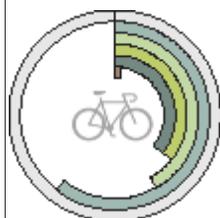
WALKABILITY ON MUNFORD AVE (SR-206)



Sidewalks	68.75%
Crossing Improvements	52.08%
Lighting Improvements	47.92%
None	16.67%
Other	14.58%

Survey participants were asked what improvements to walkability along Munford Avenue they would want to see in order to walk on this corridor (respondents checked all that apply). Highest on the list was the need for sidewalks. Other major needs include improvements to crossings and lighting.

BIKING ON MUNFORD AVE (SR-206)



Bike Paths, Lanes, etc.	60.42%
Crossing Improvements	41.67%
Lighting Improvements	35.42%
None	35.42%
Other	2.08%

Survey participants were asked what improvements to bicycle facilities along Munford Avenue they would want to see in order to bike on this corridor (respondents checked all that apply). Highest on the list was the need for bike facilities in the form of bike paths, bike lanes, bike shoulder, bike racks and storage options. Other major needs include crossings and lighting.

VEHICLE OWNERSHIP



1 CAR	6.25%
2 CARS	45.83%
3 CARS	29.17%
4+ CARS	18.75%

The survey participants indicate that most people own two vehicles, while the least amount of people own only one vehicle. This gives insight into how heavily residents are relying upon vehicular transit in their day to day lives, and how the street infrastructure can improve overall safety and efficiency for residents.

TRANSIT ON TIPTON STREET (SR-178)



Drive	97.92%
Walk	14.58%
Bike	6.25%
Not Used	2.08%
Other	2.08%

Survey respondents were asked all ways in which they are currently utilizing Tipton Street (SR-178) in regards to transit and were asked to check all applicable categories. The evidence shows that Tipton Street is heavily used for vehicular transit, less so for walking, and is rarely used by cyclists. Improved pedestrian infrastructure and facilities could increase alternate modes of transit.

USAGE ON TIPTON STREET (SR-178)



Errands	91.67%
Employment	64.58%
Social/Recreational	56.25%
Other	10.42%
Not Used	2.08%

Survey participants were asked all the reasons they use Tipton Street on an average day (respondents checked all that apply). Highest on the list was for running errands (groceries, mail, etc.), followed by employment purposes (commuting), and then socialization and recreation.

WALKABILITY ON TIPTON STREET (SR-178)



Sidewalks	75.0%
Crossing Improvements	58.33%
Lighting Improvements	52.08%
None	20.83%
Other	6.25%

Survey participants were asked what improvements to walkability along Tipton Street they would want to see in order to walk on this corridor (respondents checked all that apply). Highest on the list was the need for sidewalks. Other major needs include improvements to crossings and lighting.

BIKING ON TIPTON STREET (SR-178)



Bike Paths, Lanes, etc.	60.42%
Crossing Improvements	43.75%
Lighting Improvements	41.67%
None	37.50%
Other	2.08%

Survey participants were asked what improvements to bicycle facilities along Tipton Street they would want to see in order to bike on this corridor (respondents checked all that apply). Highest on the list was the need for bike facilities in the form of bike paths, bike racks and storage options. Other major needs include crossings and lighting.



PROPOSED IMPROVEMENTS

Connectivity

Proposed Improvements



CONNECTIVITY

SITE ANALYSIS

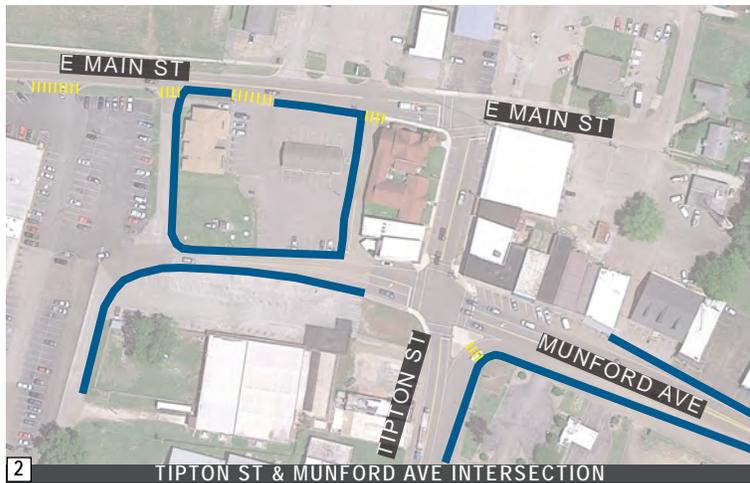
The implementation of proposed design improvements will improve pedestrian connectivity and help create a safe and accessible pedestrian environment. The improvements will also help create more friction along the corridors for local and thru traffic. The Additional pedestrian infrastructure will provide a network of pedestrian facilities which will connect the various assets of the City of Munford.

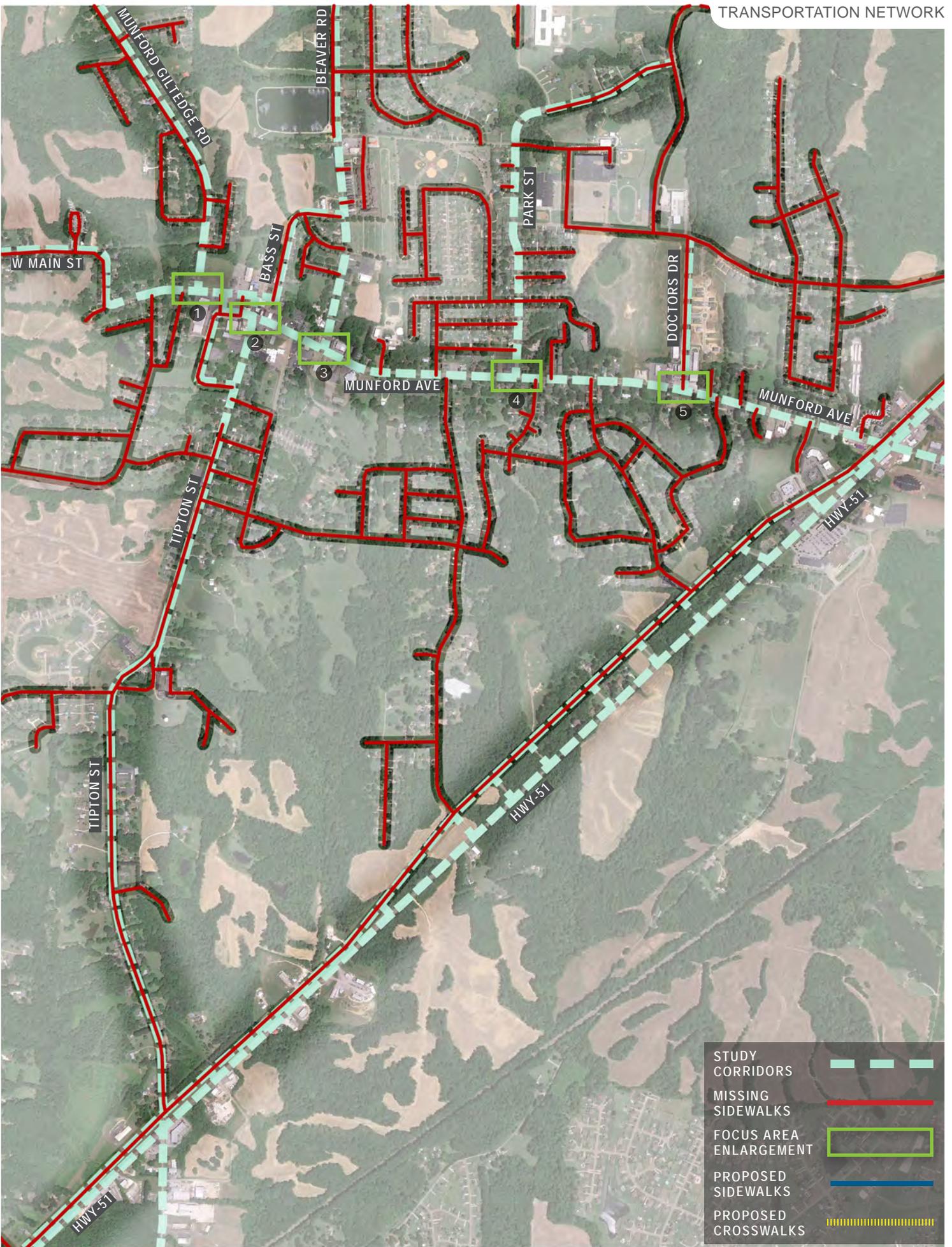
IMAGE RIGHT

Existing Pedestrian Connectivity map highlighting missing sidewalks, study area corridors, and intersection enlargement focus areas.

IMAGES LEFT

Enlarged focus areas showing proposed pedestrian sidewalks and crosswalks





STUDY CORRIDORS	
MISSING SIDEWALKS	
FOCUS AREA ENLARGEMENT	
PROPOSED SIDEWALKS	
PROPOSED CROSSWALKS	

PROPOSED IMPROVEMENTS

MAIN STREET AT GILTEDGE ROAD

The key improvements for this intersection would include the implementation of turn lanes to alleviate future traffic congestion and the installation of ADA compliant sidewalks on the south side of Main St. Painted crosswalks will be added at the intersection, along with street trees to improve the aesthetic experience of the area. The curb radii and lane widths are proposed to be reduced.

KEY INTERSECTION IMPROVEMENTS

- Install ADA compliant sidewalks
- Defined pedestrian crossings
- Reduced curb radii to maximize pedestrian space
- Add turn lanes for vehicular safety and intersection operation
- Street trees where there is no conflict with overhead/underground utilities

KEY INTERSECTION IMPROVEMENTS



Street trees improve sense of place

Landings at corners increase sidewalk functionality

PRIMARY OBJECTIVE

IMPROVE INTERSECTION FUNCTIONALITY



Enhanced pedestrian landing



Delineated crossings for pedestrians



Turn lanes improve intersection functionality and safety

Crosswalks and sidewalks improve safety

MAIN ST AT GILTEDGE RD

BEFORE



AFTER



R 209

PROPOSED IMPROVEMENTS

MUNFORD AT TIPTON

The key improvements for this intersection would include the installation of ADA compliant sidewalks, a traffic signal, and pedestrian facilities such as crosswalks, push buttons, and pedestrian displays. Curb radii and lane width will be reduced and street trees will be added where there is no conflict with overhead and underground utilities to strengthen the sense of place. A traffic signal warrants analysis will need to be completed by the City and approved by TDOT prior to a traffic signal being installed.

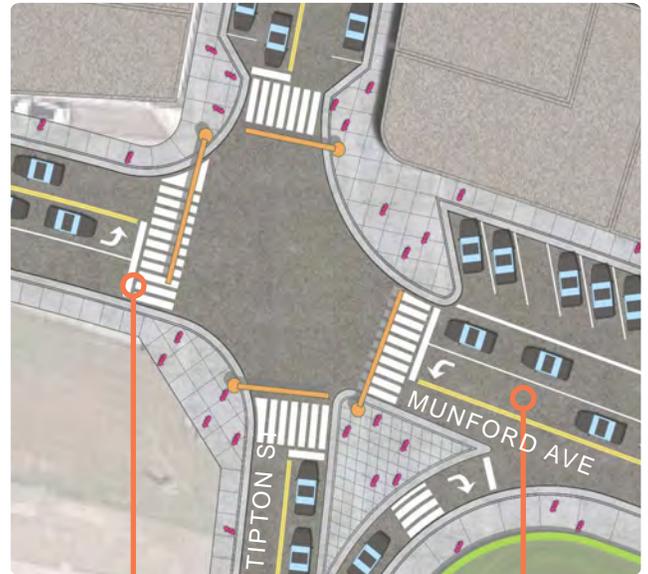


Traffic lights at intersection



Landings increase safety

KEY INTERSECTION IMPROVEMENTS



Painted crosswalks increase pedestrian safety

Defined turning lane to reduce vehicular congestion at intersection

KEY INTERSECTION IMPROVEMENTS

- Install ADA compliant sidewalks
- Defined crossing areas with required pedestrian facilities
- Install a traffic signal
- Reduced curb radii and lane width
- Street trees where there is no conflict with overhead/underground utilities

PRIMARY OBJECTIVE

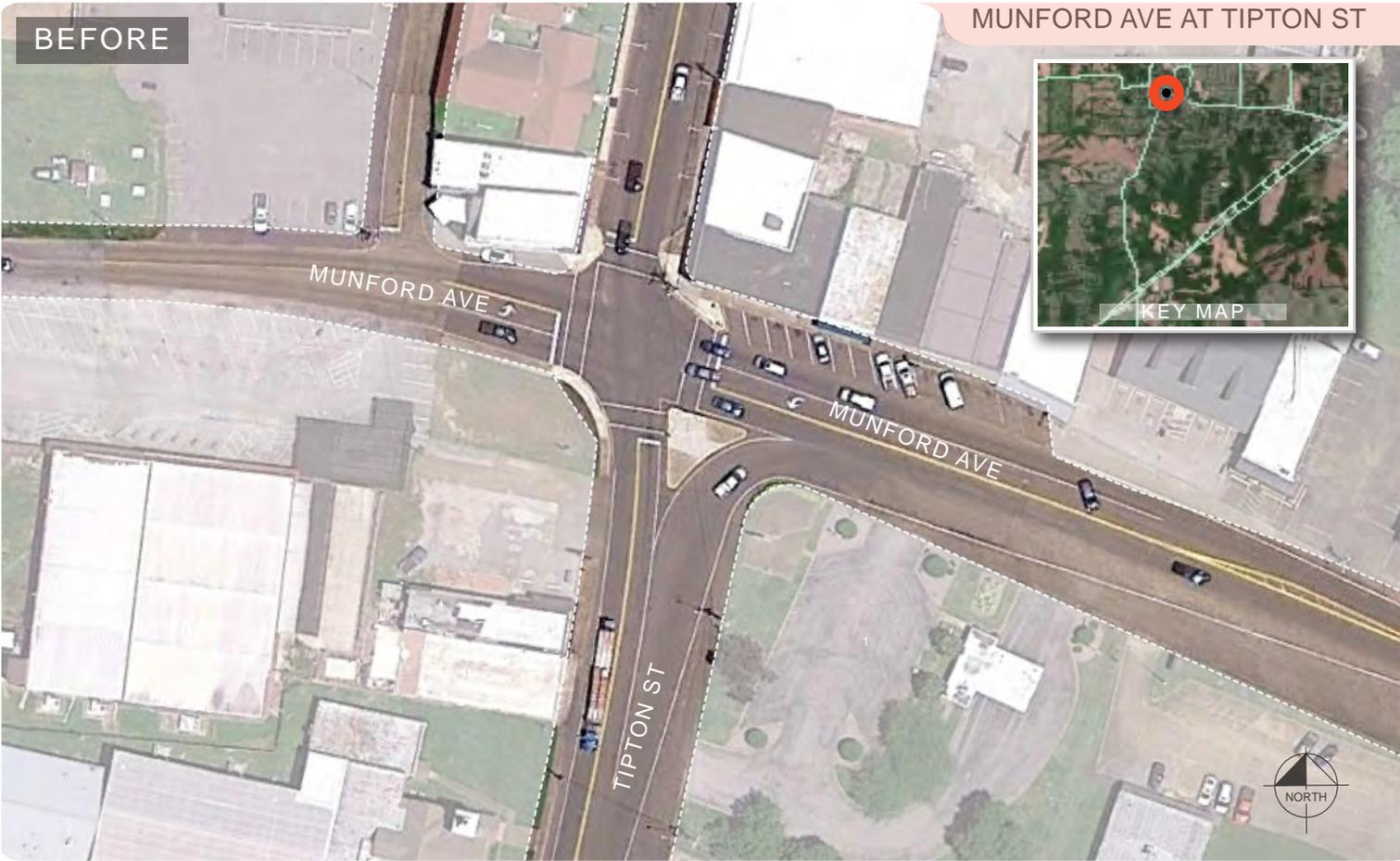
IMPROVE INTERSECTION FUNCTIONALITY



Traffic signals increase vehicular safety

Bump-outs provide landing space from crosswalks

BEFORE



AFTER



PROPOSED IMPROVEMENTS

MUNFORD AT BEAVER ROAD

In addition to improvements already planned at this location, the key improvements for this intersection would include the installation of ADA compliant sidewalks to the south of the intersection. Painted crosswalks will be added at the intersection for safe pedestrian crossing, along with street trees to improve the aesthetic experience of the area. Turn lanes will be added and the curb radii and lane width will be reduced.

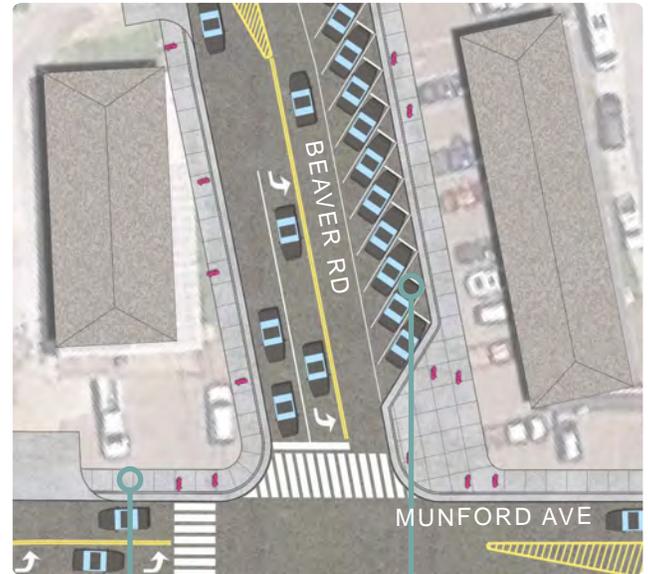


Enhanced pedestrian landing



Delineated crossings for pedestrians

KEY INTERSECTION IMPROVEMENTS



Enhanced sidewalks and landing spots increase usability

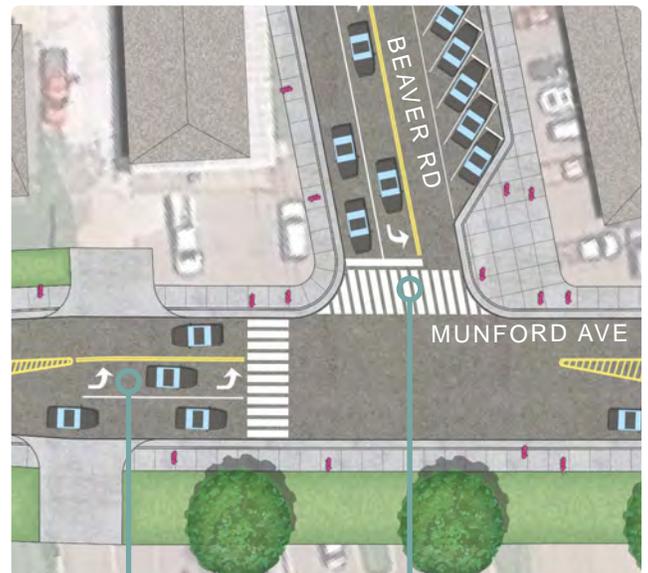
Defined sidewalks and parking along Beaver Road

KEY INTERSECTION IMPROVEMENTS

- Install ADA compliant sidewalks
- Defined crossing areas with painted crosswalks
- Reduced curb radii and lane width
- Add turn lanes for vehicular safety and intersection operation
- Street trees where there is no conflict with overhead/underground utilities

PRIMARY OBJECTIVE

IMPROVE PEDESTRIAN SAFETY AND REDUCE VEHICULAR CONGESTION



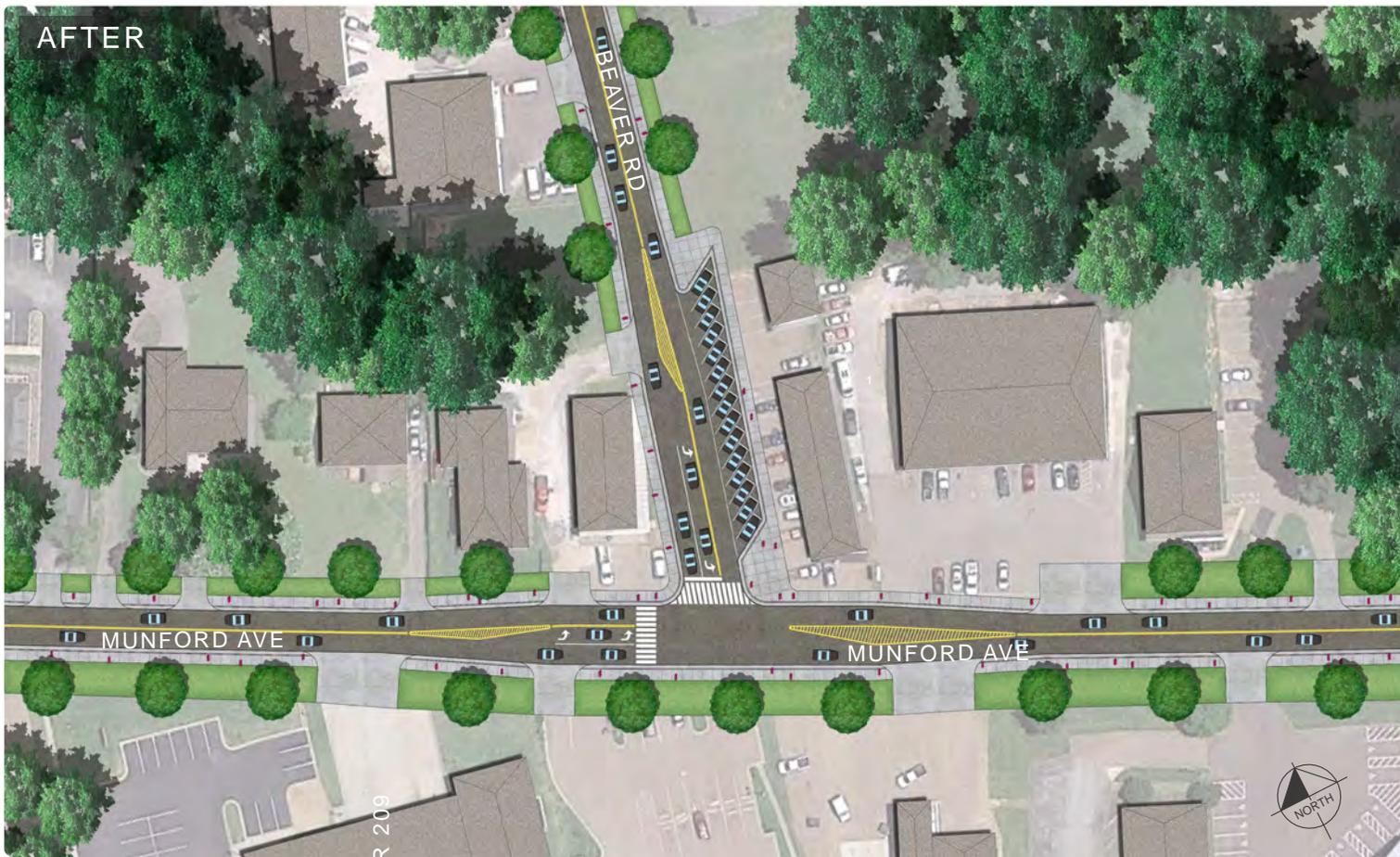
Turn lanes and pedestrian crossings improve vehicular and pedestrian safety

Sidewalks and associated drainage improvements

BEFORE



AFTER



PROPOSED IMPROVEMENTS

MUNFORD AT PARK STREET

Curb radii and lane widths will be reduced to maximize usability of the intersection, and ADA compliant sidewalks will be added to the south of Munford Avenue to improve accessibility to surrounding areas. Crosswalks will also be updated in compliance with ADA standards. Street trees along the intersection will enhance the streetscape and improve the aesthetic appearance of the area.

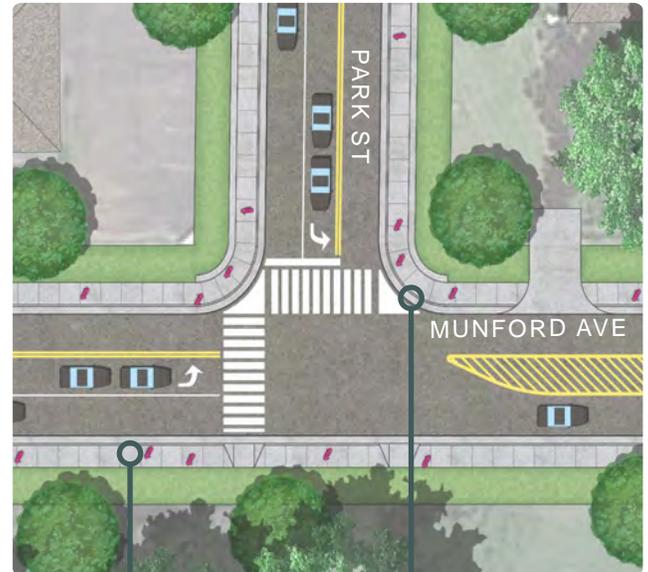


Street trees enhance aesthetic



Painted crosswalks at intersection

KEY INTERSECTION IMPROVEMENTS



Additional sidewalks

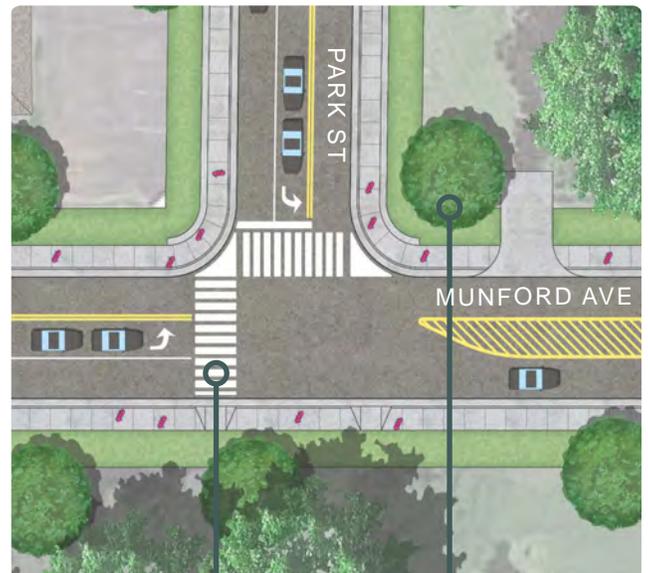
Reduced curb radii and lane width to slow traffic and increase pedestrian space

KEY INTERSECTION IMPROVEMENTS

- Install ADA compliant sidewalks
- Enhance pedestrian crosswalk markings
- Reduced turn radii to minimize pedestrian crossing length
- Street trees where there is no conflict with overhead/underground utilities

PRIMARY OBJECTIVE

IMPROVE PEDESTRIAN SAFETY



Painted crosswalks improve pedestrian safety

Street trees enhance sense of place and aesthetic experience

BEFORE



AFTER



R 209

PROPOSED IMPROVEMENTS

MUNFORD AT DOCTORS DRIVE

The key improvements for this intersection would include the enhancement of existing sidewalks and installation of additional sidewalks that are ADA compliant where necessary. Painted crosswalks for safe pedestrian crossing will be added where necessary. Furthermore, turn lanes will be added for vehicular safety and intersection operation. The curb radii and lane widths will also be reduced to maximize use of the intersection. Street trees will enhance the sense of place at this intersection and improve the aesthetic appearance of the intersection.

KEY INTERSECTION IMPROVEMENTS

- Install ADA compliant sidewalks
- Defined crossing areas with painted crosswalks
- Addition of vehicular turning lanes, reduced curb radii, and reduced lane widths to maximize use of intersection
- Street trees where there is no conflict with overhead/underground utilities
- Proposed widening of Munford Ave from Doctors Dr to Hwy-51

PRIMARY OBJECTIVE

IMPROVE INTERSECTION FUNCTIONALITY

KEY INTERSECTION IMPROVEMENTS



Street trees enhance sense of place

Crosswalks and sidewalks improve safety



Turn lanes improve intersection functionality

Reduced curb radii and lane width maximizes intersection functionality

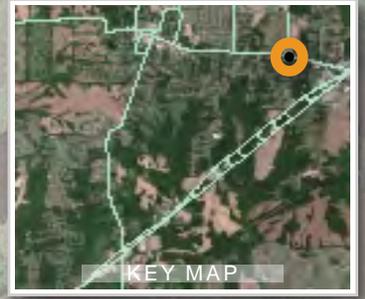


Sidewalks increase safety



Turn lanes decrease traffic congestion

BEFORE



AFTER



R 209



IMPLEMENTATION PLAN

Implementation Priorities
Funding Recommendations



Opinion of Probable Construction Costs

Steps Toward Implementation:

The Munford Community Mobility Plan provides recommendations that were developed from input and feedback from the local community. These recommendations should be undertaken in the short term to make the vision of the corridors become a reality. The first step in the implementation process involves identifying and quantifying the proposed improvements to the corridors. An "opinion of probable construction costs" is a necessary first step in prioritizing improvements.

The budget ranges below have been assembled based on TDOT average unit prices (2020). The following areas represent identified priority projects with approximate budget ranges. The graphic plans outline the "limit of work" boundaries for the identified intersections and associated connections.

MAIN ST & MUNFORD GILTEDGE RD

BUDGET: \$600K - \$800K

- REMOVAL OF EXISTING ASPHALT, CONCRETE AND VEGETATION / SOIL
- COLD PLANING OF EXISTING ASPHALT
- NEW CONCRETE CURB AND GUTTER
- NEW CONCRETE CURB RAMP (ADA)
- NEW CONCRETE DRIVE APRONS
- NEW CONCRETE SIDEWALKS
- NEW PAINTED PAVEMENT MARKING (TURN ARROWS)
- NEW PAINTED PAVEMENT MARKING (STOP LINE)
- NEW PAINTED PAVEMENT MARKING (CROSSWALKS)
- NEW PAINTED PAVEMENT MARKING (PARKING, SOLID WHITE LANE)
- NEW PAINTED PAVEMENT MARKING (YELLOW BARRIER)
- NEW SOD / LANDSCAPE AREAS



MUNFORD AVE & TIPTON ST

- REMOVAL OF EXISTING ASPHALT, CONCRETE AND VEGETATION / SOIL
- COLD PLANING OF EXISTING ASPHALT
- NEW CONCRETE CURB AND GUTTER
- NEW CONCRETE CURB RAMP (ADA)
- NEW CONCRETE DRIVE APRONS
- NEW CONCRETE SIDEWALKS
- NEW SOD / LANDSCAPE AREAS

BUDGET: \$1,200,000 - \$1,700,000

- NEW PAINTED PAVEMENT MARKING (TURN ARROWS)
- NEW PAINTED PAVEMENT MARKING (STOP LINE)
- NEW PAINTED PAVEMENT MARKING (CROSSWALKS)
- NEW PAINTED PAVEMENT MARKING (PARKING, SOLID WHITE LANE)
- NEW PAINTED PAVEMENT MARKING (YELLOW BARRIER)
- NEW WHEEL STOP (ANGLED PARKING STALLS)
- SIGNALIZED TRAFFIC POLES (4)



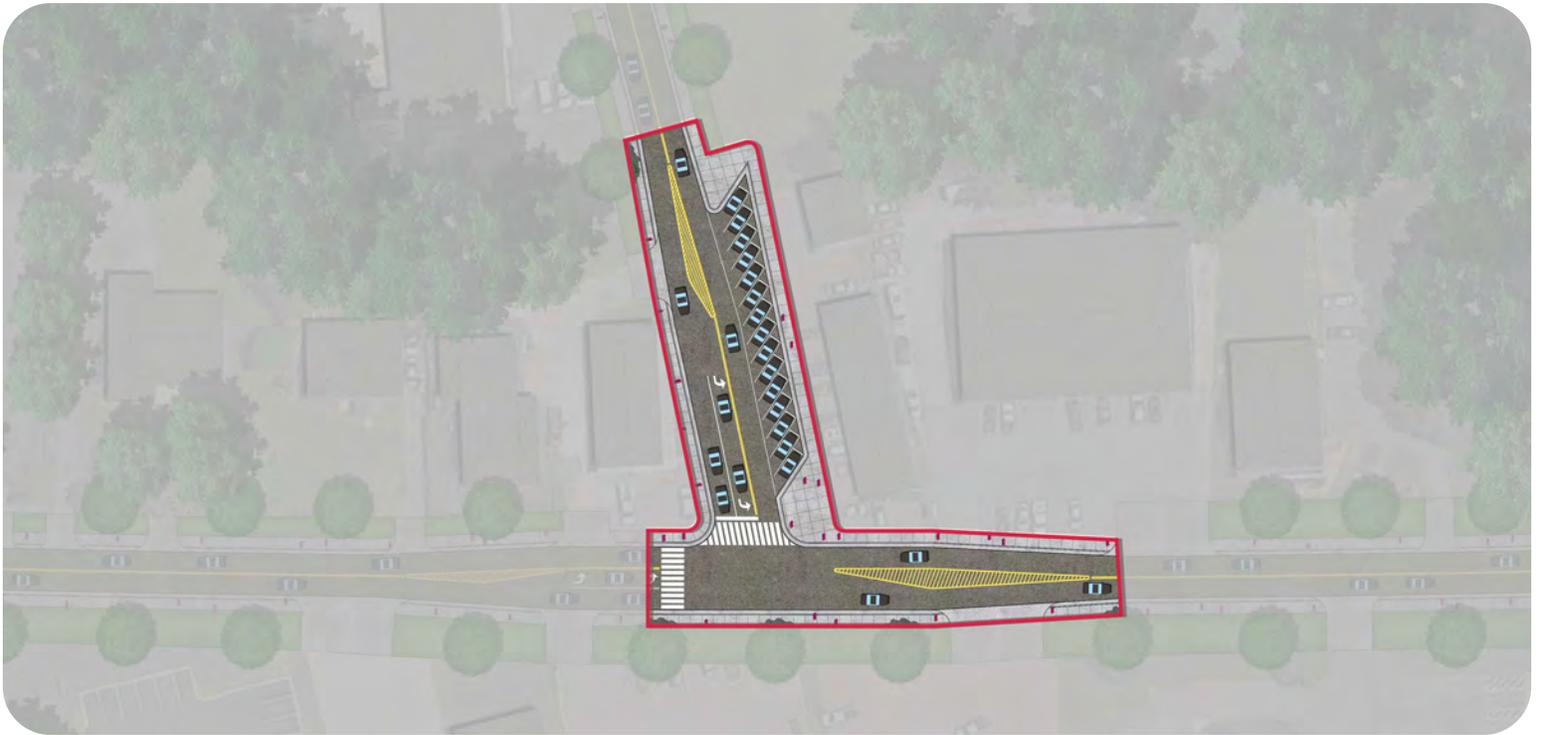
Opinion of Probable Construction Costs

MUNFORD AVE & BEAVER RD

- REMOVAL OF EXISTING ASPHALT, CONCRETE AND VEGETATION / SOIL
- COLD PLANING OF EXISTING ASPHALT
- NEW MINERAL AGGREGATE, ASPHALT CONCRETE MIX, ACS MIX GRADING
- NEW CONCRETE CURB AND GUTTER
- NEW CONCRETE CURB RAMP (ADA)
- NEW CONCRETE DRIVE APRONS

BUDGET DEPENDENT UPON EXISTING PROJECT IMPLEMENTATION

- NEW CONCRETE SIDEWALKS
- NEW PAINTED PAVEMENT MARKING (TURN ARROWS)
- NEW PAINTED PAVEMENT MARKING (STOP LINE)
- NEW PAINTED PAVEMENT MARKING (CROSSWALKS)
- NEW PAINTED PAVEMENT MARKING (PARKING, SOLID WHITE LANE)
- NEW PAINTED PAVEMENT MARKING (YELLOW BARRIER)
- NEW SOD / LANDSCAPE AREAS



MUNFORD AVE & DOCTORS DR

BUDGET: \$500K - \$750K

- REMOVAL OF EXISTING ASPHALT, CONCRETE AND VEGETATION / SOIL
- COLD PLANING OF EXISTING ASPHALT
- NEW CONCRETE CURB AND GUTTER
- NEW CONCRETE CURB RAMP (ADA)
- NEW CONCRETE DRIVE APRONS
- NEW CONCRETE SIDEWALKS
- NEW PAINTED PAVEMENT MARKING (TURN ARROWS)
- NEW PAINTED PAVEMENT MARKING (STOP LINE)
- NEW PAINTED PAVEMENT MARKING (CROSSWALKS)
- NEW PAINTED PAVEMENT MARKING (PARKING, SOLID WHITE LANE)
- NEW PAINTED PAVEMENT MARKING (YELLOW BARRIER)
- NEW WHEEL STOP (ANGLED PARKING STALLS)
- NEW SOD / LANDSCAPE AREAS



Federal and State Grant Programs

MULTIMODAL ACCESS GRANT

Match: 95% State, 5% Local

Maximum for Project: \$1M

TDOT's Multimodal Access Grant is a state-funded program created to support the transportation needs of transit users, pedestrians, and bicyclists through infrastructure projects that address existing gaps along state routes.

Typical Projects: Sidewalks, bike lanes, park-and-ride facilities, greenways, transit facilities, streetscapes

TRANSPORTATION ALTERNATIVES GRANT (TAP)

Match: 80% Federal, 20% Local

More than \$317 million in grants has gone to 267 communities across the Volunteer State to build sidewalks, bike and pedestrian trails and to renovate historic train depots and other transportation related structures. These projects serve to improve access and providing a better quality of life for people in the state of Tennessee.

Typical Projects: Sidewalks, bike and pedestrian trails, streetscapes, renovation of historic train depots and other transportation-related structures.

LOCAL PARKS AND RECREATION FUND (LPRF)

Match: 50% State, 50% Local

Maximum for Project: \$1M

The LPRF program provides state funding for the purchase of land for parks, natural areas, greenways and the purchase of land for recreational facilities. Funds also may be used for trail development and capital projects in parks, natural areas and greenways.

Typical Projects: Land acquisition, indoor and outdoor recreation facilities, trail development

RECREATIONAL TRAILS PROGRAM (RTP)

Match: 80% State, 20% Local

Maximum for Project: \$250K

The RTP provides grant funding for land acquisition for trails, trail maintenance, trail construction, trail rehabilitation and for trail head support facilities on publicly owned land.

Typical Projects: Hard / Natural-surfaced trails and greenways (land acquisition, maintenance, construction, trail heads).

SPOT SAFETY AND HIGHWAY SPOT IMPROVEMENT PROGRAM

The Highway Safety Improvement Program (HSIP) is a core Federal-aid program with the purpose to achieve a significant reduction in traffic fatalities and serious injuries on all public roads, including non-State owned roads and roads on tribal land.

Typical Projects: Safety improvements (e.g., guardrail, turn lanes, signage, signals)

LOCAL PROGRAMS GRANTS

TDOT's Local Programs Development Office oversees federal and state funding programs that are available to local governments to improve transportation systems. Local programs grants include, but are not limited to, the Interchange Lighting Program, Surface Transportation Program, and Local Interstate Connector Program.

Typical Projects: Roadway resurfacing and restriping, pedestrian infrastructure, transportation planning

