CITY OF DICKSON

BICYCLE AND PEDESTRIAN MASTER PLAN

TN TDOT Department of Transportation

U.S. Department of Transportation Federal Highway Administration

Kimley»Horn

October 2019

ACKNOWLEDGMENTS

This planning effort would not be possible without the hard work and dedication of the City of Dickson and the Tennessee Department of Transportation staff. Thank you.

City of Dickson

Don Weiss Jr, Mayor
Chris Hooper, Senior Project Coordinator
David Travis, Public Works Director
Karyssa Helton, Mid-Cumberland Human Resource Agency

Tennessee Department of Transportation

Jonathan Russell, Transportation Planning Supervisor, Region 3
Melanie Murphy, Senior Community Transportation Planner, Region 3
Ian Preston, Community Transportation Planner, Region 3

Rural Planning Organization

Karyssa Helton, Mid-Cumberland Human Resource Agency

Planning Team

Terrance Hill, PE, Kimley-Horn
Nate Sweitzer, PLA, Kimley-Horn
Alisha Eley, PLA, Kimley-Horn

Prepared by Kimley-Horn
214 Oceanside Drive, Nashville, TN 37204
615-564-2701 | www.kimley-horn.com

TABLE OF CONTENTS


KNOXVILLE
ROCKWOOD
KINGSTON
BRO
E
R
ERWIN
I
N
4·17·18

1 INTRODUCTION

Background
Project Process

BACKGROUND

With the rapid growth of Middle Tennessee over the last several years, the City of Dickson has seen positive change in economic development. As more people move to the area, it has never been more important for the City to continually improve its infrastructure and quality of living for its residents. The development of planning documents enable the City to take the steps necessary to create a safer community, help spur economic development, and upgrade existing infrastructure. The Dickson Bicycle and Pedestrian Master Plan is an important step in this endeavor, highlighting how improvements to the non-motorized realm can enhance the lives of residents.

Community Transportation Planning Grant

The preparation of this plan has been financed in part by the Tennessee Department of Transportation (TDOT) Community Transportation Planning Grant, which is made available by State Planning and Research funds through the Federal Highway Adminstration (FHWA), a division of the U.S. Department of Transportation (USDOT). The contents of this report do not necessarily reflect the official views or policies of the USDOT, FHWA, and/or TDOT. It is the policy under Title VI of the Civil Rights Act of 1964 that TDOT prohibits discrimination on the basis of race, color, or national origin in programs and activities receiving Federal financial assistance.

It is the hope of the City of Dickson to extend the existing non-motorized facilities into areas where they are currently unavailable but are needed for increased bicycle and pedestrian traffic. A comprehensive bicycle and pedestrian master plan is needed to best determine the appropriate facility locations and extension and rehabilitation of current facilities to best create and maintain safe and reliable access for bicycle and pedestrian traffic to and from public spaces. This need is in line with the CTPG program goals which include the following:

- Assist rural municipalities with planning efforts that define transportation cohesiveness between multimodal transportation systems and local land use objectives that achieve the statewide transportation goals
- Aid in rural municipalities with the creation of planning documents that support improvements in traffic flow, safety, and overall efficiency of the transportation system
- Provide rural city governments with planning resources to achieve community visions as related to transportation and land use needs that promote future economic growth

Creating a Bicycle and Pedestrian Master Plan through a CTPG will help lead to the improvement of many aspects of the community through the identification of typical facilities associated with bicycle and pedestrian travel. Using greenways, sidewalks, cycle tracks, and bike lanes can improve the following within a community:

- Improve the health and well-being of residents from active travel
- Reduce costs for transportation due to less public mobility ridership
- Reduce pollution and energy consumption brought on by automobiles
- Improve local economy from spurring economic development
- Enhance reliable and safe access to education and employment
- Increase home values due to proximity of bicycle and pedestrian facilities

PROJECT PROCESS

The process to develop a Bicycle and Pedestrian Master Plan follows certain guidelines in order to realize a successful final comprehensive plan. Without all the proper steps in place, progress and future facility development would be difficult and possibly disjointed. The proper process for the successful development and construction of bicycle and pedestrian facilities through the CTPG are as follows:

Step 1: Project Development

Leadership Commitment: Community leaders must demonstrate a clear commitment to support the project.

- **Dickson has completed many streetscape projects to improve the downtown core and pedestrian safety and mobility, and the City looks to expand those efforts within and beyond downtown.**

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 process.

- **An important component to this project is the involvement of the community. Their input was key in determining needs and prioritization.**

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.

- **Once needs have been identified, the appropriate solution for each location was evaluated. Projects were prioritized based on need, connectivity, and complexity.**

Step 2: Project Implementation

Funding for Implementation: Communities should seek diverse funding sources to implement their bicycle and pedestrian plans such as partnering with private industry as well as seeking funding from other state and federal sources.

TDOT offers the following competitive programs to assist with implementation:

Federal-Aid

- Multimodal Access Grant (MMAG): Provides funding to support the transportation needs of transit users, pedestrians and bicyclists through infrastructure projects that address existing gaps along state routes
- Surface Transportation Block Grant (STBG): Targets improvements and new infrastructure to sidewalks, shared-use paths, safe routes to school, complete streets, and bridge enhancements
- Transportation Alternatives Program (TAP): Functions as the main funding source for general pedestrian and bicycling infrastructure projects

(See Funding Alternatives on page 38 for additional municipal grant opportunities)

Source: Community Transportation Planning Grant Fact Sheet; TDOT Long Range Planning Division. 2019

PROJECT DEVELOPMENT

STEPS:

1. Leadership Commitment
2. Visioning & Consensus
3. Planning and Design


THULE

2 EXISTING CONDITIONS

Area of Study
Trip Generators
Crash Analysis
Traffic Analysis
Bicycle Level-of-Service

AREA OF STUDY

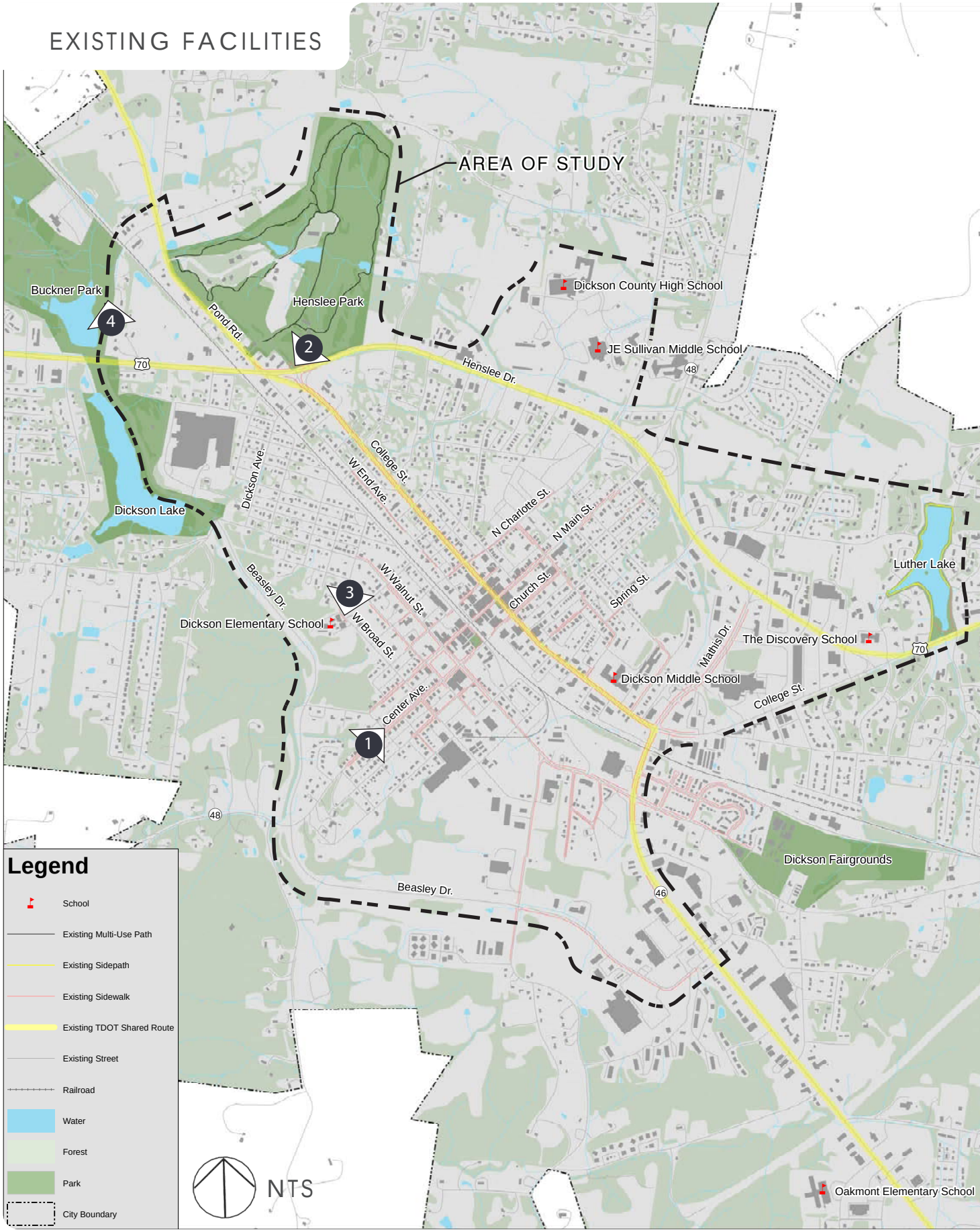
Known for its rich history and timeless downtown center, the CIty of Dickson has drawn residents and visitors alike for generations. Located 35 miles west of Nashville, Tennessee, the City is the largest in Dickson County, and growing. The 2018 estimated po pulation of Dickson is 15,583, a 7% increase since 2010. Interstate-40 cradles the south si de of the City and has had a large part in shaping the growth and economy of Dickson. In a ddition, U.S. 70 and State Highway 46 both pass through the strong downtown core and ar e designated state bicycle routes. Public parks, lakes, schools, and places of work provide opportunities for residents to flourish and are important to the overall physical and mental health of the community.

The project limits primarily encompass the portion of the City of Dickson roughly bounded by US 70/State Route (SR) 1 (Henslee Drive) to the north and east; SR 235 (College Street), SR 47 (Walnut Street), and SR 48 (Beasley Drive) to the south; and SR 48 Beasley Drive to the west. Additional areas of interest located adjacent to the project boundary include Walmart, Dickson Lake, and the Dickson County Fairgrounds.

Pedestrian Facility Conditions

With so much opportunity in Dickson, it is vital that the City continue to improve the facilities and infrastructure that provide the residents with alternative forms of transportation. As shown in the photos below, some of Dickson's existing infrastructure is not ideal for residents and visitors. Although the city has sidewalk in many locations, they are often disconnected from block to block and do not provide continuous routes for pedestrians between locations. Many of the City's sidewalks do not meet the minimum width of five feet, and curb ramps are too steep for wheelchairs and are missing truncated domes, which warn pedestrians with little to no vision that they are entering the street. Additionally, at a number of locations, the sidewalks abruptly form into stairs and are in disrepair (photo 1). Also, the City lacks bicycle facilities or accommodations such as bike lanes or signed routes. Two state bike routes pass through Dickson; however, there are no signs indicating this fact. The entrances into Buckner Park (photo 3) and Henslee Park (photo 2) have potential for improvements for both bike and pedestrians as neither have connectivity to the surrounding residential neighborhoods.

EXISTING FACILITIES



TRIP GENERATORS

Downtown Dickson

Dickson's downtown center, especially College and Main Streets, are where the heart and charm of the City reside. Businesses, restaurants, historic buildings, streetscapes, plazas, and pocket parks all add to the attraction of the downtown district. These recent streetscape enhancements have allowed Dickson to implement complete street concepts in which any particular street is designed to have accommodations and/or facilities for all road users. Providing accessibility within this realm has allowed the City network as a whole to work more cohesively. The downtown complete street corridors prioritize accessible sidewalks for pedestrian circulation, bike lanes and shared routes for efficient alternative transportation, on-street parking located in strategic areas for enhanced vehicular movement, and beautification of the corridor to promote visitation and economic development. When and where possible, the City should continue to improve the downtown corridors to meet these standards.

Public Recreational Areas

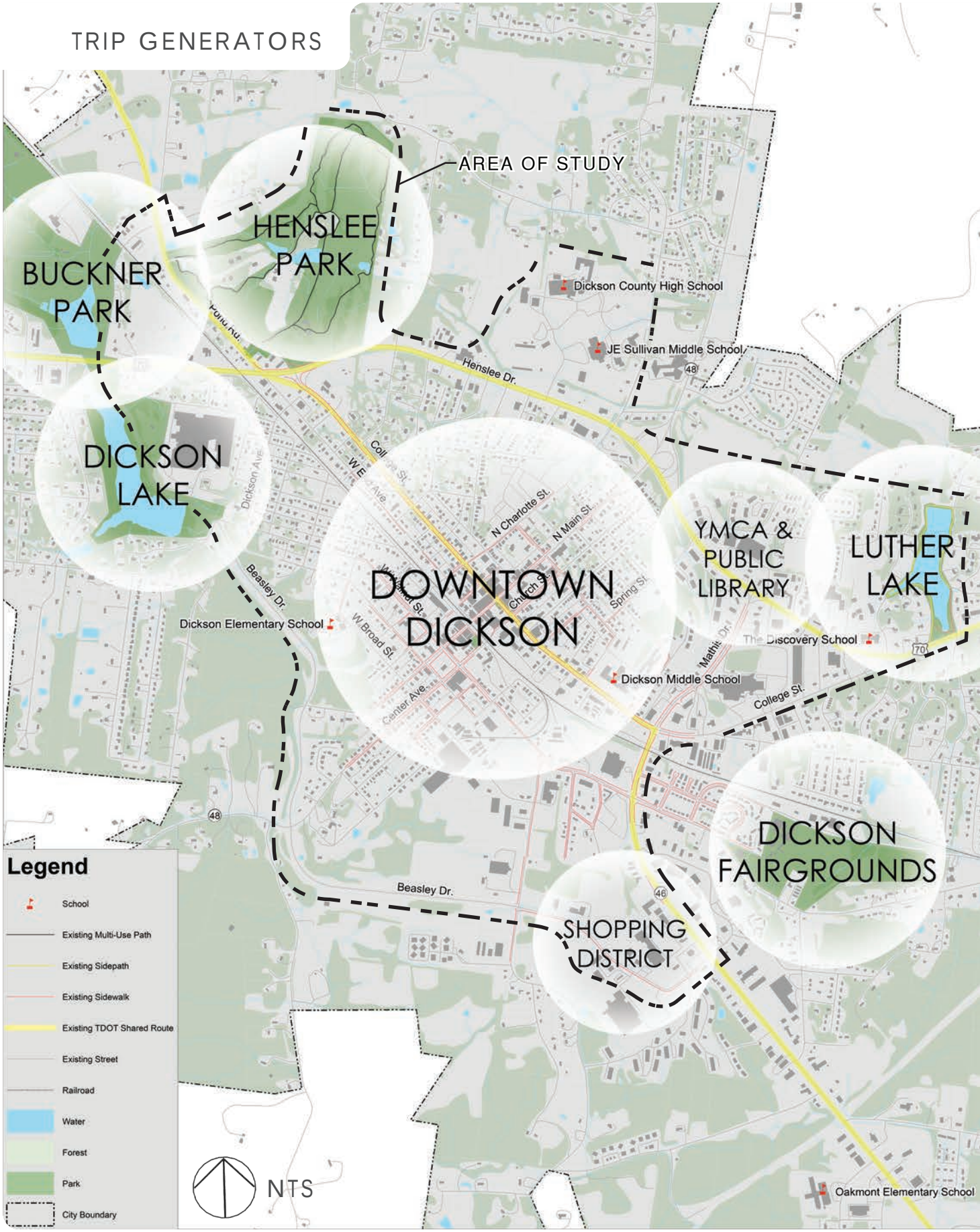
There are several City public parks and natural recreational areas that pique the interest of residents and visitors within or connected to the study area, including, Buckner, Henslee, and Holland Parks, Dickson and Luther Lakes, and Dickson Fairgrounds. Providing easy access to these areas is vital to creating a healthy community.

- **Buckner Park** - As Dickson's main active recreational park, Buckner Park provides the community with ballfields, tennis courts, soccer fields, a swimming pool, an arboretum, a disc gold course, fishing, and a shooting range. A master plan for Buckner Park is currently being created to include additional ballfields and indoor and swimming and recreational facility, and camping and hiking trails.
- **Henslee Park** - Recently obtained by the City in 2018, Henslee Park was once home to Pine Hills Golf Club. The park has picturesque views of rolling hills and mature trees that can be viewed by walking the miles of existing shared-use paths on site.
- **Holland Park** - Located in the heart of downtown, Holland Park is used as a local gathering place for residents and visitors alike, and a common place of congregation during City events and festivals. Although small, the open green space and seating areas are perfect for a natural escape in the center of the City.
- **Dickson Lake** - Once used as the main source for drinking water in the City, Dickson Lake is now a recreational opportunity for fishing and leisure.
- **Luther Lake** - Located on the east side of the City and study area, Luther Lake is a popular destination for pedestrians and bicyclists. It offers a walkable loop around the lake that is one mile in distance, allowing users to enjoy the scenic views and wildlife the lake contains.
- **Dickson Fairgrounds** - Although outside of the study area, Dickson Fairgrounds is an important public space that must be looked at with the city-wide bicycle and pedestrian network. Home to the annual Dickson County Fair, tractor pulls, year-round festivals, and more, the Dickson Fairgrounds is a vital point of interest that often attracts bicyclists and pedestrians from the downtown area and the surrounding area.

Additional Generators

There are five public schools within the area of study. It is important that students have accessible routes to and from school to increase safety, encourage physical activity, and provide a sense of community. Special care was given to improve walking and bicycling conditions around schools, and vital connections are made in the recommendations that connect students to bike lanes and sidewalks that lead to the downtown center, public parks and facilities, and neighborhoods. Providing connections to retail and restaurants on the southern tip of the study area is a necessary component. Portions of the Walmart shopping center, Hillcrest Plaza, and the Crossings of Dickson have internal and adjacent sidewalks that would help provide connectivity to customers. Additionally, connections to the Dickson Public Library and the YMCA near the corner of Henslee Drive and Walnut Street are vital to students and the adjoining neighborhoods.

TRIP GENERATORS



CRASH ANALYSIS

Historical Crash Data

Historical crash data for the study area was obtained from TDOT's Enhanced Tennessee Roadway Information Management System (E-TRIMS) for the most recent three years (January 1, 2016 to December 31, 2018). A total of 924 crashes, including one fatal crash, 24 suspected serious injury crashes, and 196 suspected minor injury crashes were observed within the study timeframe along Mathis Drive (SR 46), Walnut Street (SR 47), Center Avenue/Main Street (SR 48), Beasley Drive/Weaver Drive, Henslee Drive (US 70) and College Street (SR 235). One bicycle crash and four pedestrian crashes have occurred within the study timeframe equating to approximately 0.5% of all reported crashes with zero fatalities, one suspected serious injury crash and four suspected minor injury crashes. The crash data map depicts the location of the bicycle and pedestrian crashes.

First Harmful Event	2018	2017	2016	Total Crashes	Percent of Total
Vehicles in Transport	286	282	277	845	91.5%
Other	9	5	8	22	2.4%
Object	11	7	3	21	2.3%
Animal	4	2	3	21	2.3%
Ditch/Embankment	4	1	3	8	0.9%
Parked Motor Vehicle	0	1	4	5	0.5%
Pedestrian	**3**	**1**	**0**	**4**	**0.4%**
Unknown	2	1	0	3	0.3%
Overturn	2	0	1	3	0.3%
Building	1	0	2	3	0.3%
Bicycle	**0**	**0**	**1**	**1**	**0.1%**
Total	322	300	302	924	100.0%
Percent of Total	35%	32%	33%	100%	

Bicycle and Pedestrian Safety

Analyzing the information above as well as the crash reports from the Tennessee Department of Safety and Homeland Security's Tennessee Integrated Traffic Analysis Network (TITAN), the design team was able to understand how crashes involving motorists and bicyclists and pedestrians occurred within the study area and how best to design facilities to mitigate future crashes. Below is a brief summary of the bicycle and pedestrian crashes that occurred within the study area.

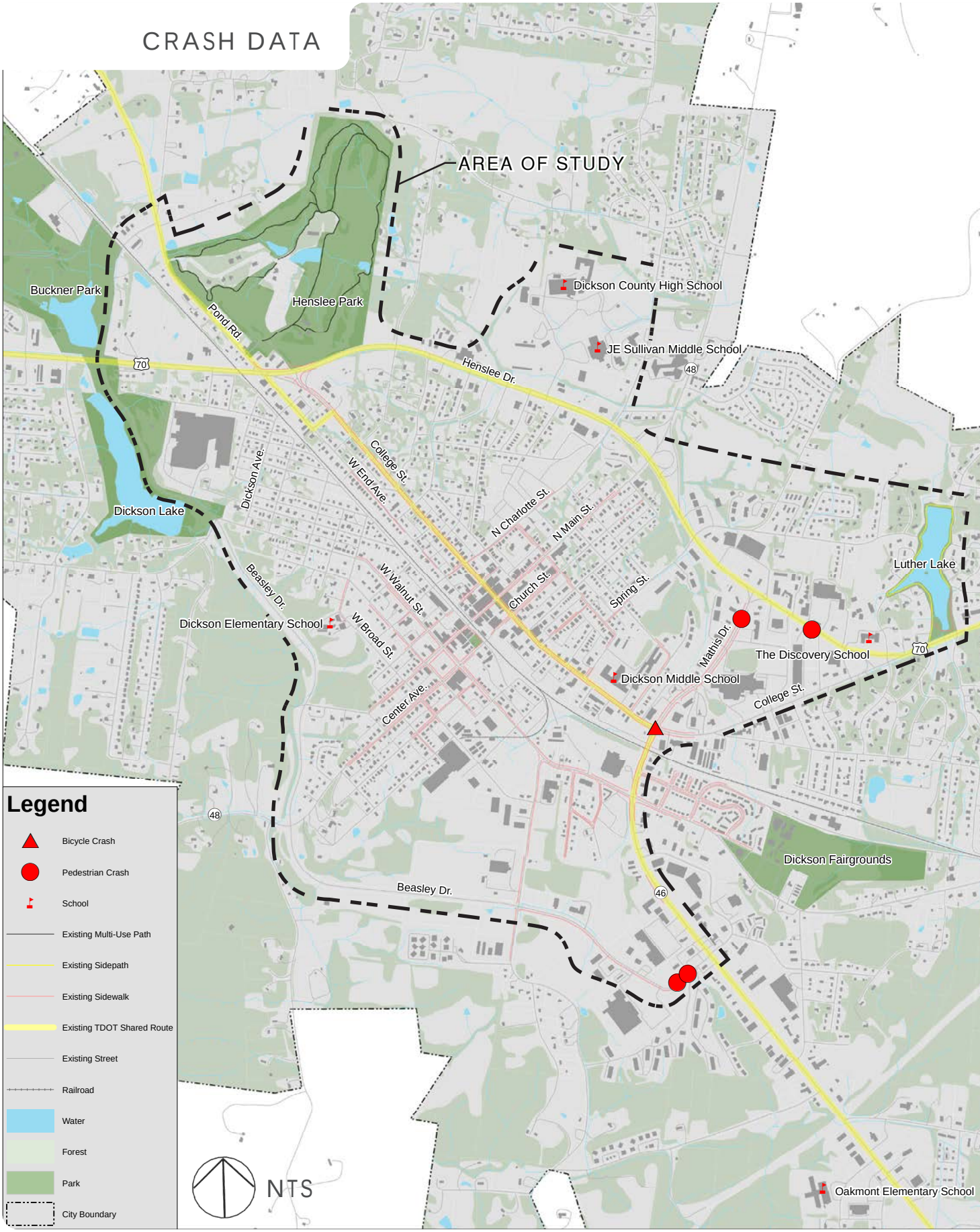
Bicycle Crash Analysis

The bicycle crash occurred at the intersection of College Street and Mathis Drive in which a bicyclist proceeded through the intersection within the crosswalk against the pedestrian indications. Despite the circumstances of the reported bicycle crash, the installation of bicycle accommodations such as signs or bicycle lanes would benefit bicyclists by making motor vehicle drivers more aware of their potential presence. Dickson has two state bike routes within the City which will attract bicyclists from other areas.

Pedestrian Crash Analysis

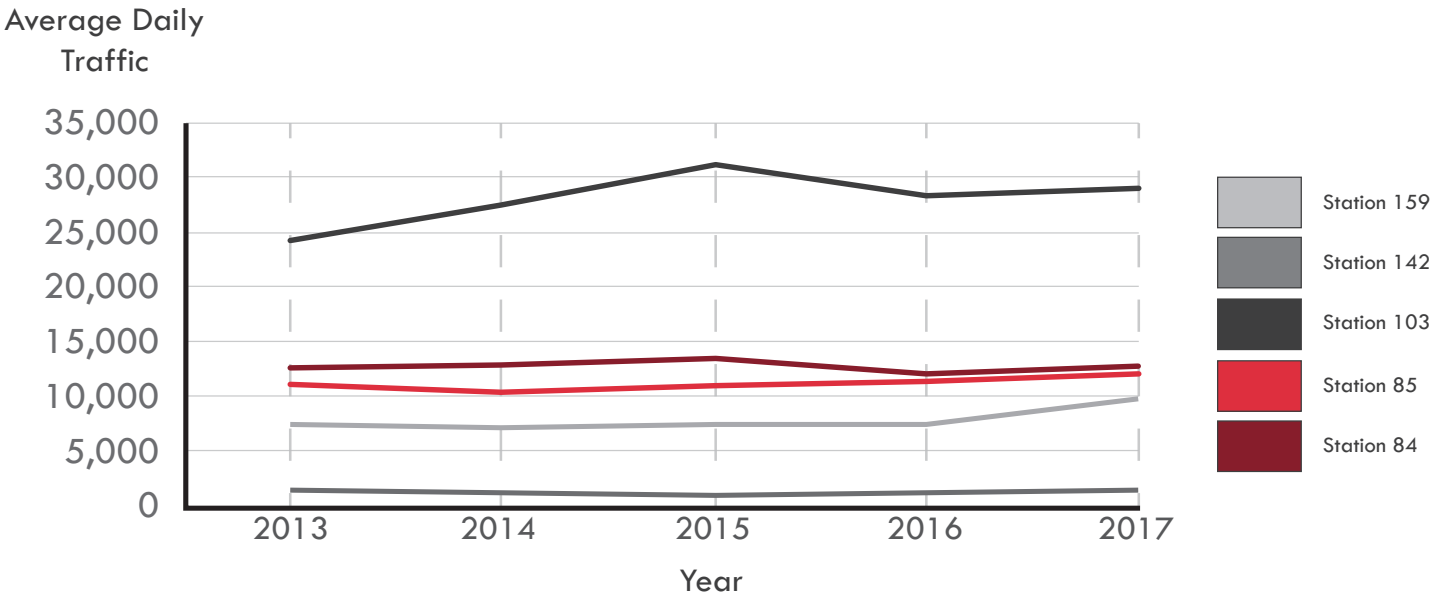
Of the four pedestrian crashes within the study area, two pedestrian crashes occurred along Beasley Drive near Walmart, one of which involved a pedestrian under the influence of alcohol, while the other involved a man crossing Beasley Drive that had to be taken to the hospital. Another crash occurred on Henslee Drive at the driveway to Kroger in which a vehicle exiting Kroger struck a pedestrian while making a right turn. The fourth pedestrian crash occurred along Mathis at a restaurant in which an exiting vehicle struck a pedestrian walking along Mathis. Pedestrian infrastructure improvements would not only enhance conditions for disabled individuals, but provide safer connections from trip origins to destinations.

CRASH DATA


AREA OF STUDY
Buckner Park
Henslee Park
Pond Rd.
Dickson County High School
JE Sullivan Middle School
Henslee Dr.
70
48
Dickson Ave.
College St.
W End Ave.
N Charlotte St.
N Main St.
Dickson Lake
Beasley Dr.
W Walnut St.
Church St.
Spring St.
Luther Lake
Dickson Elementary School
W Broad St.
Mathis Dr.
The Discovery School
Dickson Middle School
College St.
Center Ave.
Dickson Fairgrounds
Beasley Dr.
46
Oakmont Elementary School
Legend
Bicycle Crash
Pedestrian Crash
School
Existing Multi-Use Path
Existing Sidepath
Existing Sidewalk
Existing TDOT Shared Route
Existing Street
Railroad
Water
Forest
Park
City Boundary
NTS

TRAFFIC ANALYSIS

Dickson has experienced a great deal of growth in recent years. The traffic counts collected by TDOT over the last five years show a trend along most of the corridors of increased volumes. When combined, the count stations below show that traffic has increased overall at a rate of 1% a year over the past three years.



A Signal Warrant Analysis was conducted at three intersections within the City: Academy Street at College Street, Church Street at College Street, and College Street at Main Street. The analysis of each study intersection was performed using the methodology provided in Chapter 4C of the Manual on Uniform Traffic Control Devices (MUTCD), 2009 Edition published by the Federal Highway Administration (FHWA). The MUTCD provides the following standard, among others, regarding justification for traffic control signals:

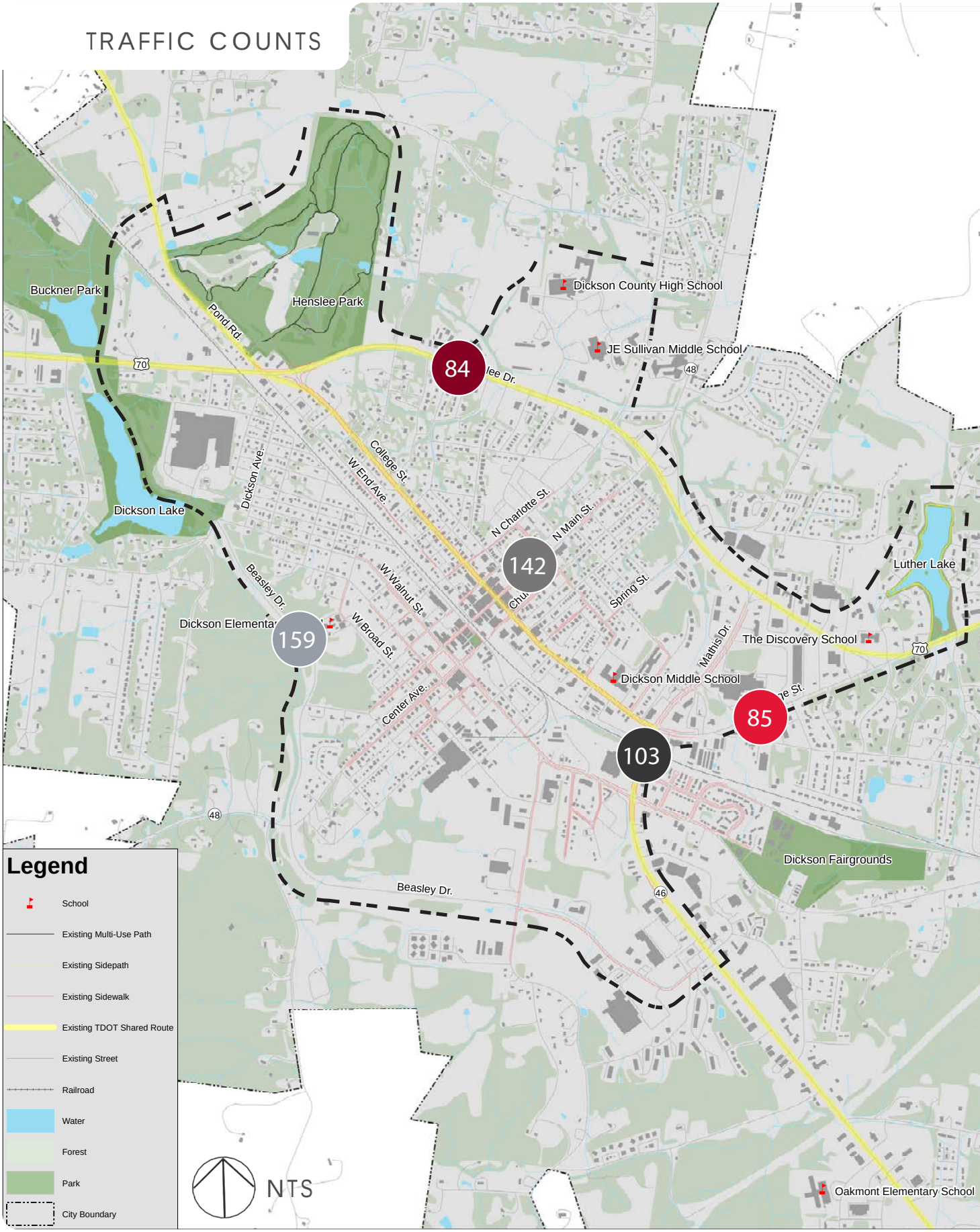
> "The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal."
> (Source: MUTCD 2009, Section 4C.01, Paragraph 03)

There are eight total signal warrants within the MUTCD. The following three were analyzed to determine if a traffic signal could be placed at the above-referenced intersections:

- Warrant 1, Eight-Hour Vehicular Volume
- Warrant 2, Four-Hour Vehicular Volume
- Warrant 3, Peak Hour

The intersection at Church Street and College Street satisfied Warrant 2. As traffic in downtown Dickson continues to increase, the City should consider a traffic signal at this location.

TRAFFIC COUNTS



BICYCLE LEVEL-OF-SERVICE

Since there are two state bike routes that intersect within the City of Dickson, the City wanted to evaluate ways to accommodate potential cyclists along those routes within the project limits. One route, Memphis to Nashville, is along US 70 within the project limits and the other, Kentucky to Alabama, is along SR 46 south of downtown, College Street (SR 235) through downtown, and SR 46 north of downtown. Proposed improvements along these corridors were made after reviewing the bicycle level of service (BLOS), which measures the effectiveness of a facility in accommodating bicycles. BLOS is primarily based on the perception and comfort level of the cyclist. The method used for analysis for this report follows the equation in the 2010 Highway Capacity Manual (HCM) published by the Transportation Research Board (TRB). Level of service is calculated using the following equation:

$$BLOS = a_1 \ln (Vol_{OL}/N) + a_2 S_t(1+10.38HV)2 + a_3 (1/PR5)2 + a_4 (W_e)2 + C$$

Where:

- a_1 = 0.507
- VolOL = directional demand flow rate in the outside lane (veh/h)
- N = number of directional lanes
- a_2 = 0.199
- S_t = effective factor
- HV = percentage of heavy vehicles (%)
- a_3 = 7.066
- PR5 = FHWA s five-point pavement surface condition rating
- a_4 = -0.005
- W_e = average effective width of outside through lane (ft)
- C = 0.760

The following table outlines the LOS criteria for bicycles for both two-lane and multi-lane highways.

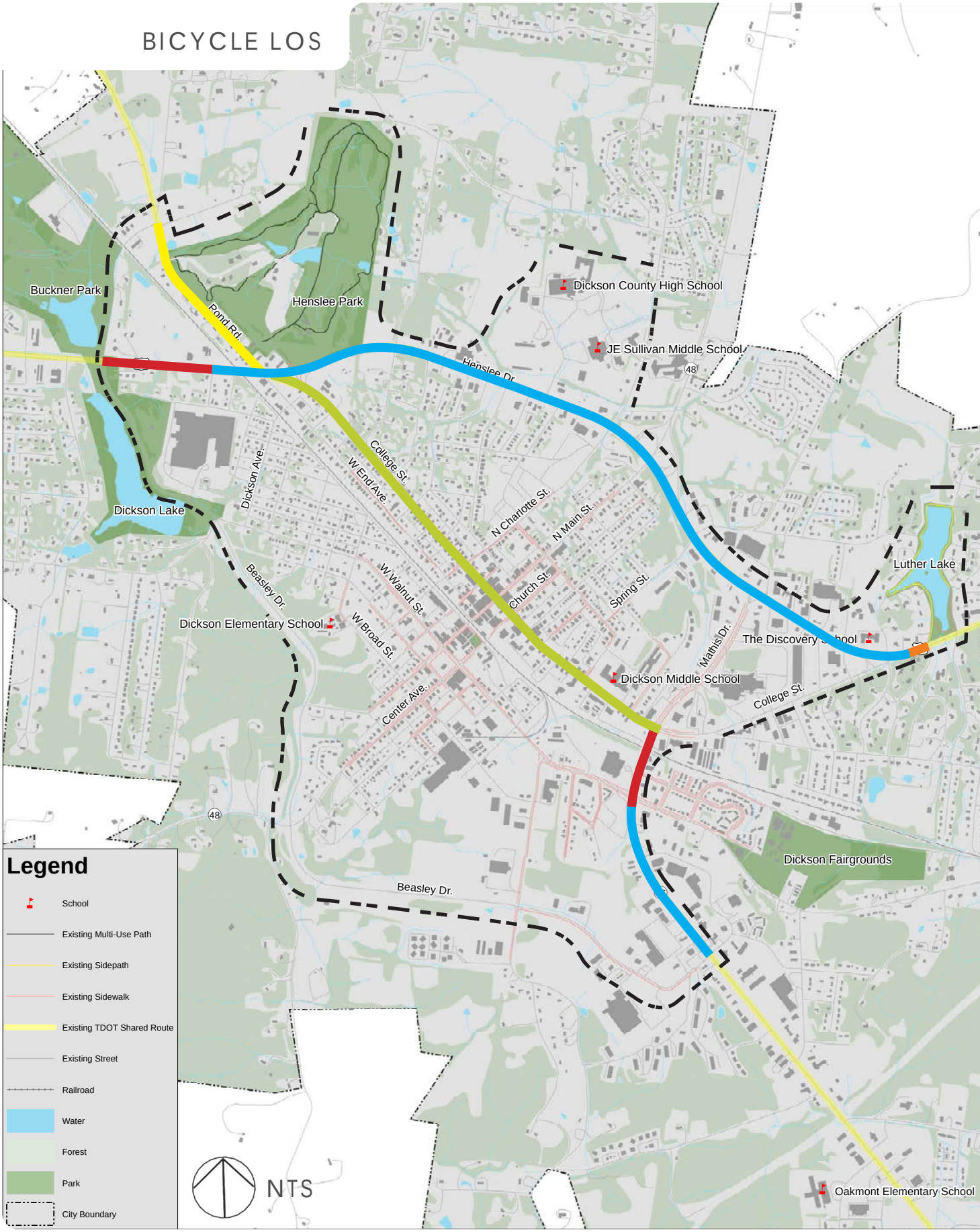
LEVEL-OF-SERVICE	BLOS SCORE	BLOS SYMBOL KEY
A	≤ 1.5	
B	> 1.5 and ≤ 2.5	
C	> 2.5 and ≤ 3.5	
D	> 3.5 and ≤ 4.5	
E	> 4.5 and ≤ 5.5	
F	> 5.5	

BLOS Results:

The following table displays the results from the analysis. The bike routes were divided into segments within the project limits based on significant changes in geometric configuration along the route. It should be noted that a large percentage of truck traffic and high speeds negatively affect the BLOS score, while shoulders eight feet in width or greater had positive affect on the score.

Road Segment	BLOS Score	
Memphis to Nashville Bike Route		
US 70 from Beasley to Pickett	6.09	**F**
Henslee from Pickett to College	0.06	**A**
College from Henslee to Lake Circle	5.09	**E**
Kentucky to Alabama Mid-state Bike Route		
SR 46 from Beasley to south of Walnut	1.10	**A**
SR 46 from south of Walnut to College	6.34	**F**
College (SR 235) from SR 46 to Henslee	3.11	**C**
SR 46 from Henslee to Weaver	3.78	**D**

BICYCLE LOS


Buckner Park
Pond Rd.
Henslee Park
Dickson County High School
JE Sullivan Middle School
Henslee Dr.
48
College St.
W End Ave.
Dickson Ave.
Dickson Lake
N Charlotte St.
N Main St.
Church St.
Spring St.
W Walnut St.
W Broad St.
Beasley Dr.
Dickson Elementary School
Center Ave.
Mathis Dr.
Dickson Middle School
The Discovery School
Luther Lake
College St.
Dickson Fairgrounds
Beasley Dr.
Oakmont Elementary School
Legend
School
Existing Multi-Use Path
Existing Sidepath
Existing Sidewalk
Existing TDOT Shared Route
Existing Street
Railroad
Water
Forest
Park
City Boundary
NTS


D C H

3 RECOMMENDATIONS

Community Outreach
Case Studies
Route Recommendations
Recommended Facilities
Design Standards

COMMUNITY OUTREACH

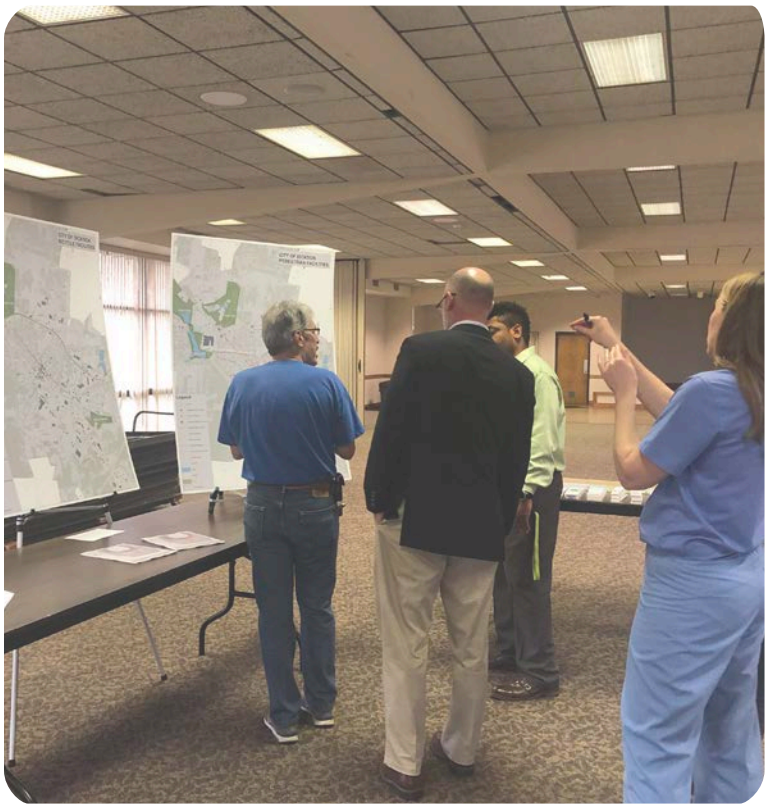
Community involvement and input is crucial to the success of any planning process. It guides the project team in understanding the desires of city officials and citizens. It allows citizens to have a voice in shaping the future of the community, giving the project team the ability to discover concerns that may not be readily apparent from field visits, crash reports, or traffic analysis. The outreach event broadened the project team's understanding of Dickson and the surrounding area as well as the project limits. These findings led to the identification of the route recommendations later on in this chapter.

Project Kickoff & Steering Committee Meeting - Dec. 19, 2018

To help establish the goals, objectives, and the overall direction of the Dickson Bicycle and Pedestrian Master Plan, the project team met with Dickson staff and TDOT. This meeting helped establish the project time frame, determine what information was crucial to gather from the community, and what contextual information regarding the existing bicycle and pedestrian network was important to gather and analyze. After the meeting, the design team conducted a field visit with City and TDOT staff to review vehicular, pedestrian and bicycle conflicts, infrastructure conditions, and safety issues. This helped the design team begin the analysis process and preliminary route recommendations that ultimately were shown in the community meeting.

Community Meeting - Aug. 26, 2019

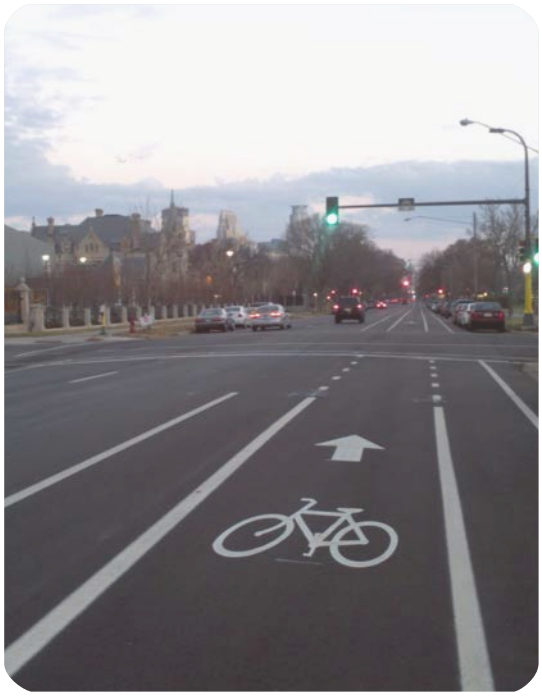
The community meeting, held at the Lester Speyer Community Complex, focused on gathering information from Dickson residents based on existing conditions and proposed bicycle and pedestrian networks. The project team showcased potential bicycle and pedestrian routes and asked for resident input on preferred design scenarios and priorities. A series of exercises were conducted with meeting attendees to help the design team better understand needs of residents and additional safety issues around schools, parks, and other routes around the City.



Exercise #1 - What Makes a Great Place?

Featuring three boards of streetscape images collected from across the country, the "What Makes a Place Great?" exercise provided a setting where participants could place stickers on images that they felt were great places to visit, experience, live, work, and play. Without having to provide a written verbal explanation, they were able to respond to the visual cues and aesthetics in the photographs. The images below represent the four most popular choices during the exercise.

Based on the photos that were chosen, it is clear that Dickson resident's are passionate about implementing bicycle infrastructure and safe, reliable pedestrian networks.



COMMUNITY OUTREACH

Exercise #2 - Priority Pyramid

This exercise allowed participants to prioritize a list of planning themes as shown on the following page. Each participant received a board displaying a pyramid and 8 cards representing a destination within the Dickson community. They were challenged to place the themed cards on the pyramid based on the destination's importance to them, the top being the most important. The project team collected the pyramids and placed them in view for participants to discuss.

Results

Pedestrian Priorities
Enabling residents to provide their feedback during the public meeting was essential to understanding their needs in relation to important connections in the City. Through the priority pyramid exercise, the design team discovered the high importance of pedestrian connectivity to parks and open space and schools, which helped to influence where proposed connections will be made.

PEDESTRIAN PRIORITIES

Bicycle Priorities
Resident feedback through this exercise made it clear that parks and open space and downtown destinations are most important to bicycle connectivity. Exercise is also an important factor when discussing city-wide connectivity, and it rated highly on both pedestrian and bicycle pyramids. Bicycling is an excellent alternative mode of transportation that can enhance the community's health and lives in the process.

BICYCLE PRIORITIES

Community Feedback
The public meeting provided project specific input including the need to provide an alternate route to connect Luther Lake to Henslee Drive and sidewalk connecting Dickson County High to Oak Avenue. The proposed projects were well-received by attendees.

EXERCISE

One of the biggest benefits of providing alternative modes of transportation, such as walking and bicycling, is creating a healthy environment for residents and visitors.

PARKS AND OPEN SPACE

Throughout the City of Dickson, parks and open space provide places of recreation and solitude. Special attention was made to parks and open space connectivity based on the strong priority comments from residents.

PLACES OF WORSHIP

There are over a dozen places of worship within the Bicycle and Pedestrian Master Plan area of study. In addition, it was noted during the public meeting that these connections are important and should not be left unnoticed.

EDUCATION

Providing safe and reliable connectivity to and from schools for children is vital to creating a strong pedestrian and bicycle network. These projects are typically of highest priority for Cities, and Dickson is no exception. Both City staff and Dickson residents expressed the importance for these connections.

RETAIL

There are several retail districts within the study area that are close in proximity to residential neighborhoods. Providing access to and from these places of business are important to allow residents a safe, alternative mode of transportation to coffee shops, grocers, restaurants, and more.

DOWNTOWN

Dickson's downtown district is continuing to change and grow, making it important for multimodal connections to be created to and from it's shops, restaurants, and public spaces.

NEIGHBORHOOD

There are several large neighborhoods within the area of study. Connecting these residences, especially school children to schools, parks, businesses and public spaces should be considered and implemented.

EMPLOYMENT

Considering bicycle and pedestrian connections to places of employment is sometimes overlooked, but a large number of people utilize non-motorized transportation to get to and from work.

CASE STUDIES

As the design team conducted site visits and analyzed the pedestrian connectivity needs and desires of the Dickson community, the team also looked at similar studies, helping them to visualize the purpose and intent of the Dickson Bicycle and Pedestrian Master Plan.

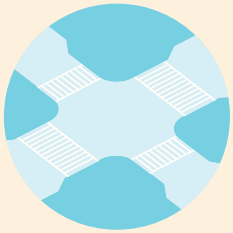
Maryville Connectivity Study - 2018

The City of Maryville has an extensive and well traveled greenway network spanning the city limits. Built in 1976 and extended in the late 90's, the greenway provides a connection between Foothills Elementary School to the south, connecting through downtown, and eventually tying into the City of Alcoa's greenway infrastructure to the northwest. Schools and parks to the northeast of downtown, separated by Brown Creek, are lacking connectivity and access to comfortable bicycle and pedestrian routes. It is the intent of this study to provide routes to the City's schools, parks, and existing greenway through the provision of better overall connectivity, increasing user safety, and continuing the greenway experience throughout the City of Maryville.

The scope of this study focused on identifying a pedestrian and bicycle route between schools and parks; therefore, it did not include all outlying neighborhoods. The City of Maryville recognizes the need for improved pedestrian and bicycle access in other areas of the city, notably along collector streets such as Old Niles Ferry Road, Wilkinson Pike, and others. It is the intention of the City that these areas be redesigned to include shared-use pathways and bike lanes to better connect residential areas to established thoroughfares.

The priority alignment as shown on the following page was developed to increase connectivity for bicyclists and pedestrians to access local schools and parks. A variety of on- and off-street bicycle and pedestrian facilities are recommended to provide a safe and comfortable user experience and invite users of all ages and abilities. The priority alignment is supplemental to the existing greenway, and when fully implemented, will function in harmony with the existing infrastructure to establish an overall bicycle and pedestrian network. The study area extended from John Sevier Elementary school in the north to Foothills Elementary School in the south. Through data collection and analysis of existing conditions, the priority alignment development will serve as a key City-wide connection for bicycles and pedestrians.

Resource: Maryville Connectivity Study; Toole Design Group, Kimley-Horn. 2018



INTERSECTIONS

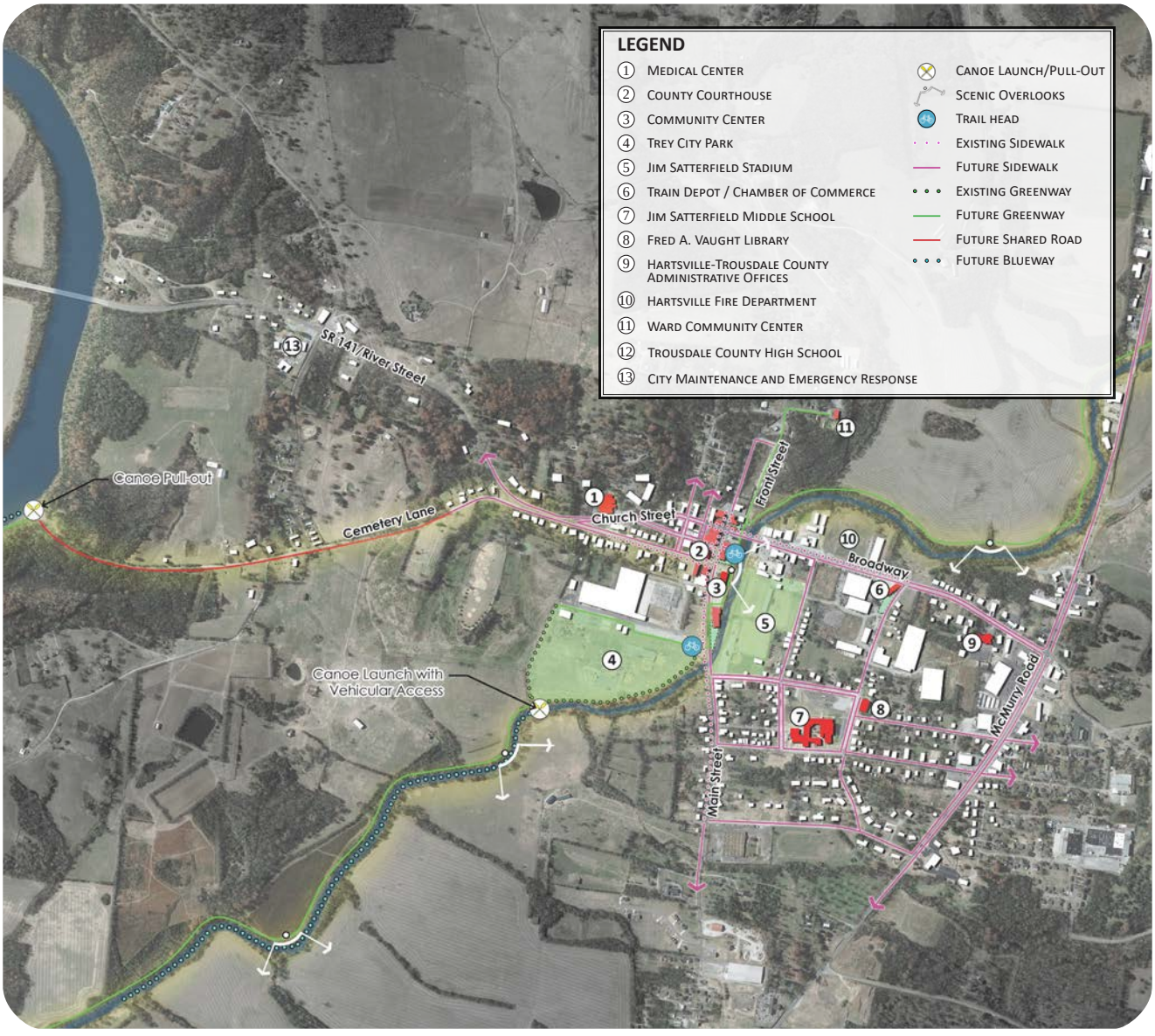
SCHOOLS

Hartsville Connectivity Plan - 2017

A connectivity plan analyzes a community's alternative modes of transportation and generates a plan that works to link and connect the network with the inclusion of new trails and routes. Connectivity plans are often used to inspire the use of multi-modal transportation options for work and recreation, while leading the community to take an active approach to health and fitness.

The connectivity plan for Hartsville, as shown on the following page, depicts the network of existing sidewalks and greenways paired with future connections to blueways, new sidewalks, greenway trails, and shared streets. The plan strives to build a network of connectivity around Downtown Hartsville connecting the community's resources together and allowing them to be more accessible to its residents. In addition to downtown circulation, the plan also connects downtown to the Cumberland River through a series of greenways and blueways running with Little Goose Creek. The greenway trail would also provide many opportunities for scenic overlooks along the trail.

Resource: Hartsville Connectivity Plan; Kimley-Horn. 2017



ROUTE RECOMMENDATIONS

Upgrading Facilities

Providing safe and accessible bicycle and pedestrian facilities for residents and visitors is vital to the livability of any community. Those individuals that rely on facilities that follow the American Disabilities Act (ADA) must be taken into consideration when planning city-wide bicycle and pedestrian connections. There is a demand for ADA facilities in the City of Dickson that must be addressed in order to give everyone an equal opportunity to safely access public buildings and areas throughout Dickson. In addition to the following proposed bicycle and pedestrian facilities, the City must review all existing sidewalks and shared-use paths to ensure they comply with ADA. Doing so will heighten the overall accessibility and enjoyment of public spaces that the City of Dickson has to offer.

The following is a list of recommended projects that will improve bicycle and pedestrian connectivity throughout the study area. These projects were developed based on feedback from City staff and the public, safety concerns, connections to and from neighborhoods, and the state of existing facilities. Although this is not an exhaustive list of potential projects, they are of the highest priority, giving the City an understanding and a tool to use to plan for future facility implementation. Each facility area is capable of being its own project and can be paired with Federal Aid provided by TDOT as described in Chapter 1 and 4 of this report.

Pedestrian Facilities

1. **College Street**
   Project Limits: College Street from Mulberry to Walker
   Project Description: This project extends along College Street, implementing sidewalks on both sides beginning at Mulberry Street and ending at Walker Street. Being that College Street is such an important corridor in the City of Dickson, this project is a first of many along College Street to continue improving sidewalk conditions.

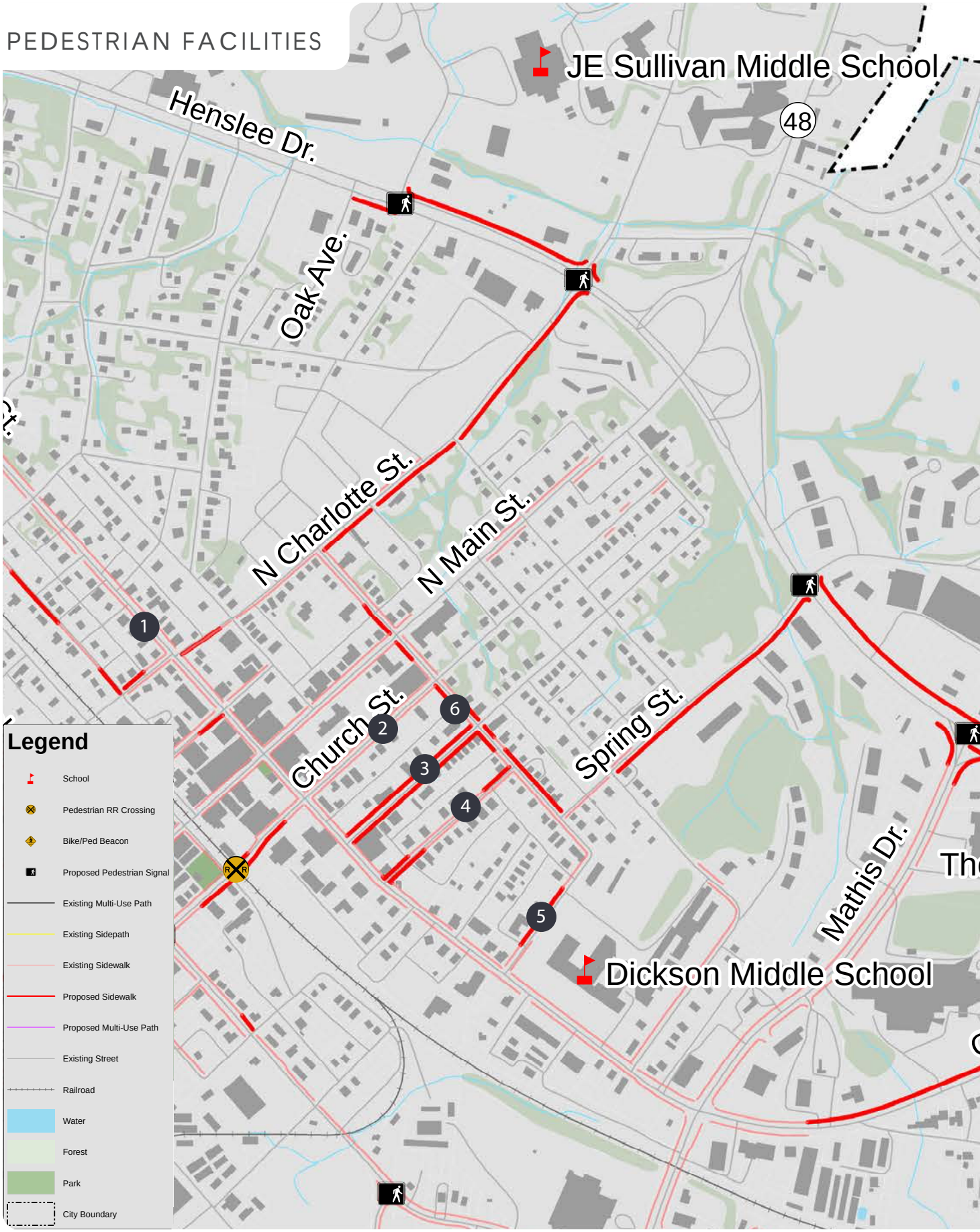
2. **Church Street**
   Project Limits: Church Street from College to Rickert
   Project Description: This project begins at College Street and runs northeast until tying into Rickert. Sidewalks will be reconstructed along both sides of Church Street. The College-Rickert connection is important within the downtown area, creating a stronger, safer connection between them.

3. **Sylvis Street**
   Project Limits: Sylvis Street from College to Rickert
   Project Description: This project aims to implement new sidewalks along both sides of Sylvis Street, joining together College and Rickert.

4. **Poplar Street**
   Project Limits: Poplar Street from College to Rickert
   Project Description: Connecting College and Rickert, this project aims to reconstruct existing sidewalks and add new sidewalks along both sides of Poplar Street.

5. **Academy Street**
   Project Limits: Academy Street from College to Rickert
   Project Description: This project aims to implement sidewalks along Academy Street, tying into College and Rickert Streets. It is important to include the Dickson Middle School into the downtown pedestrian network, ensuring students have a safe route to walk to and from school.

6. **Rickert Street**
   Project Limits: Rickert Street from North main to Academy
   Project Description: Parallel to College Street, and tying important connections to schools, places of business and residential homes, Rickert Street is vital to the pedestrian movement of the downtown area. This project aims to provide a strong link between Rickert and the downtown core by extending sidewalks along both sides of Rickert from Academy to North Main Street.


JE Sullivan Middle School
Henslee Dr.
48
Oak Ave.
N Charlotte St.
N Main St.
Church St.
Spring St.
Mathis Dr.
Dickson Middle School
1
2
3
4
5
6
Legend
School
Pedestrian RR Crossing
Bike/Ped Beacon
Proposed Pedestrian Signal
Existing Multi-Use Path
Existing Sidepath
Existing Sidewalk
Proposed Sidewalk
Proposed Multi-Use Path
Existing Street
Railroad
Water
Forest
Park
City Boundary

ROUTE RECOMMENDATIONS

Pedestrian Facilities

7. Dickson County High School Safe Route

Project Limits: Dickson County High School - Henslee Drive & N. Charlotte St.
Project Description: This route enables students to travel from the high school to downtown and on to other neighborhoods. Starting at the high school entry, sidewalk follows the north side of Henslee Drive until meeting the Charlotte Avenue intersection (a pedestrian signal will be installed). After crossing Henslee Drive, sidewalk follows the east side of Charlotte Street traveling south until meeting W Rickert Avenue at existing sidewalk.
After feedback from residents at the community meeting, it was strongly suggested the design team look into a pedestrian crossing at the high school entrance. Many students currently cross the street at this point without any proper pedestrian infrastructure or safety measures. The design team included a proposed crossing at this location as well as a sidewalk connecting to Oak Avenue, a prevalent connector street that many students utilize when traveling to and from school.

8. Dickson Elementary Safe Route

Project Limits: Center Avenue - West End Avenue
Project Description: Dickson Elementary is situated in a quiet neighborhood, northwest of the downtown center. Currently, there are no sidewalks that connect to the main nearby routes of Center Avenue or West Walnut Street. The City should consider providing a route that extends from Center Avenue, down the left side of W Broad Street, W Walnut Street, and Dickson Avenue, connecting to the proposed sidewalk along W End Avenue. A pedestrian railroad crossing will need to be installed on Dickson Avenue near West End Avenue.

9. West End Avenue Connector

Project Limits: West End Avenue Corridor
Project Description: West End Avenue currently has approximately 1,600 linear feet of sidewalk between S Charlotte Street and Henslee Drive. This project proposes an additional 2,300 linear feet of sidewalk along the west side, helping to connect downtown to Buckner and Henslee Parks.

10. Henslee Drive Connector

Project Limits: College Street to Spring Street
Project Description: The Henslee Drive Corridor connection is a very important project that links users to the Dickson YMCA, local grocers and businesses, and Luther Lake. The proposed sidewalk travels along the north side of Henslee Drive, stretching from the proposed Spring Street connection to Luther Lake where many locals travel to utilize the lake's walking path. Pedestrian signal infrastructure is proposed at Mathis Drive and Dickson Plaza Drive.

11. Spring Street Connector

Project Limits: Henslee Drive to Hunt Street
Project Description: Spring Street is used as a sidewalk connector to link downtown to Henslee Drive. The sidewalk runs along the east side of Spring Street, connecting users from the downtown core and Dickson Middle School to the proposed Henslee Drive connector that leads to a multitude of public and private facilities.

12. College Street Connector

Project Limits: West of Luther Road to E. Lake Circle
Project Description: The proposed sidewalk along College Street connects downtown to Luther Lake while providing a pedestrian friendly route that takes advantage of the flat nature of this corridor.

13. Luther Lake Connector

Project Limits: Lake Villa Boulevard from Henslee Drive to Pumphill Road
Project Description: The proposed sidewalk along the east side of Lake Villa Boulevard connects Henslee Drive to Pumphill Road, a lightly traveled local street. This alternative route to Luther Lake is a great opportunity for an alternative connection to the popular walking track around the Lake.

PEDESTRIAN FACILITIES

ROUTE RECOMMENDATIONS

Pedestrian Facilities

14. Route 46 Connector
Project Limits: Beasley Drive - E Walnut Street
Project Description: This route enables users to travel from Beasley Drive to the downtown center. The sidewalk will connect to the existing sidewalk along Beasley Drive, extending to a sidewalk path on the west side of Route 46 to E Walnut Street. This route is important when taking into account vehicular-bicycle and pedestrian crashes that have taken place along this corridor.

15. Beasley Drive Connector
Project Limits: Center Avenue - Cowan Road
Project Description: This connection offers users a safe route between the south end of Center Avenue and Route 46 along the busy Beasley Drive corridor.

16. Buckner Park Shared-Use Path
Project Limits: Along Weaver from U.S. Route 70 - Henslee Park
Project Description: The shared-use path connection is vital to the accessibility to Buckner and Henslee Parks. Beginning at State Route 70 and the proposed bike lanes along it as shown on page 27, the proposed shared-use path travels north along the western shoulder of Beasley Drive, through the Pond Road intersection, and onto Few Road. Due to the road width restrictions on Pond Road, a shared-use path traveling south on Pond Road is not feasible. The City will need to work with property owners to allow the shared-use path behind the existing wetland pond, connecting to the existing Henslee Park greenway. This shared-use path also allows a direct connection into Buckner Park as shown in the proposed map on the following page, enhancing safe accessibility into the park.

17. Henslee Park Greenway Connector
Project Limits: Henslee Drive - Henslee Park Greenway
Project Description: This greenway connector allows users to travel from the pedestrian crossing at Henslee Drive and Pond Road, and safely enter Henslee Park. This link connects users of the Henslee Drive bike lanes and those walking from downtown to utilize Henslee Park. With the creation of the Buckner Park shared-use path as mentioned above, users will be able to safely continue on to Buckner Park.

PEDESTRIAN FACILITIES

ROUTE RECOMMENDATIONS

Bicycle Facilities

1. **College Street Shared Route**
   Project Limits: College Street Corridor
   Project Description: Given that College Street through the downtown area is currently designated as a state bike route, it is easy to add the proper striping and signage to denote it as a shared route. Bike route signs and share-the-road signs should be erected to allow motorists to be aware of the presence of bicycles.

2. **Henslee Drive Bike Lanes**
   Project Limits: Henslee Drive Corridor
   Project Description: Henslee Drive is currently designated as a state bike route, but with the high speeds and heavier traffic it would be safer to travel via bicycle with dedicated facilities. Bike lanes are the best facility type to increase and maintain safety; in addition, implementing the proposed sidewalks along Henslee will also increase safety and allow motorists to recognize that this route should be shared with bicyclists and pedestrians.

3. **Charlotte Street Shared Route**
   Project Limits: College Street - Henslee Drive via Charlotte Street
   Project Description: Charlotte Street is an important direct connection from the downtown center to the proposed Henslee Drive bike lanes and the middle and high schools. With the addition of sidewalks also along this route, it becomes a pedestrian and bicycle corridor, strengthening the safety along this route.

4. **Spring Street Shared Route**
   Project Limits: College Street - Henslee Drive
   Project Description: The Spring Street shared bike route provides library and YMCA connectivity between the downtown center and Henslee Drive. Users will be will be able to travel more safely travel between these areas, connecting them to the Henslee Drive bike lanes as shown in the map on the following page.

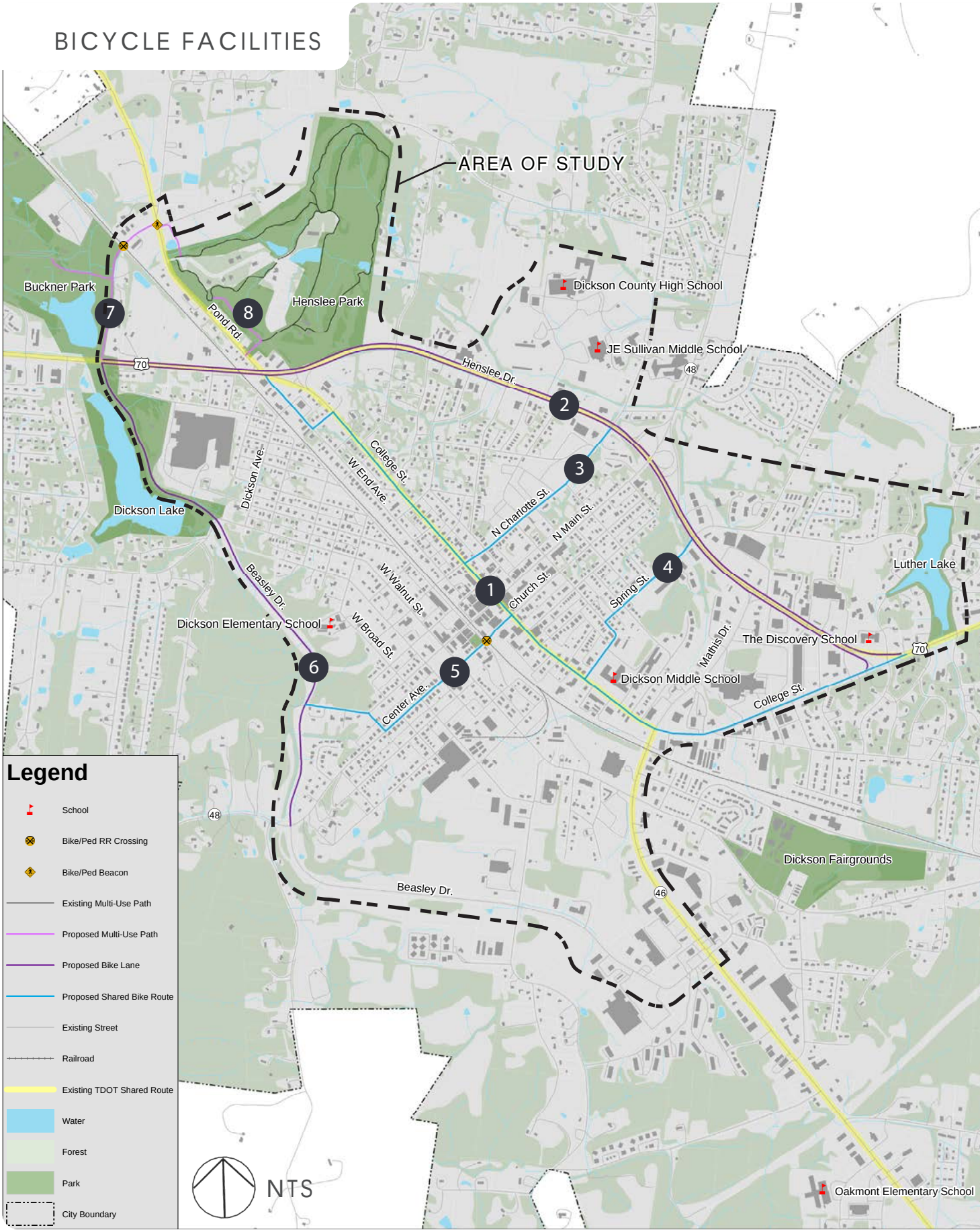
5. **Center Avenue Shared Route**
   Project Limits: College Street - Beasley Drive via Center Avenue
   Project Description: Shared route connections stemming from College Street and the downtown area are important in moving people around efficiently and safely. The Center Avenue shared route allows bicyclists to connect to the Beasley Drive bike lanes and surrounding neighborhoods.

6. **Beasley Drive Bike Lanes**
   Project Limits: Beasley Drive Corridor
   Project Description: Bike lanes along Beasley Drive allow bicyclists a direct route from the south side of the City to the proposed Buckner and Henslee Park connections. Bike lanes are proposed on both sides of Beasley Drive.

7. **Buckner Park Shared-Use Path**
   Project Limits: U.S. Route 70 - Henslee Park
   Project Description: The shared-use path connection is vital to the accessibility to Buckner and Henslee Parks. Beginning at State Route 70 and the proposed bike lanes along it, the proposed shared-use path travels north along the western shoulder of Weaver Drive ending at the Pond Road intersection.

8. **Henslee Park Greenway Connector**
   Project Limits: Henslee Drive - Henslee Park Greenway
   Project Description: Continuing from the Buckner Park shared-use path, this project begins at the intersection of Weaver Drive and Few Road. Due to the road width restrictions on Pond Road, a shared-use path traveling south on Pond Road is not feasible. The City will need to work with property owners to allow the shared-use path behind the existing wetland pond off of Few Road, connecting to the existing Henslee Park greenway. This greenway connector allows users to travel from the enhanced pedestrian crossing at Henslee Drive and Pond Road, and safely enter Henslee Park. This link connects users of the Henslee Drive bike-lanes and those walking from downtown to utilize Henslee Park. With the creation of the Buckner Park shared-use path as mentioned above, users will be able to safely continue on to Buckner Park.

BICYCLE FACILITIES



ROUTE RECOMMENDATIONS

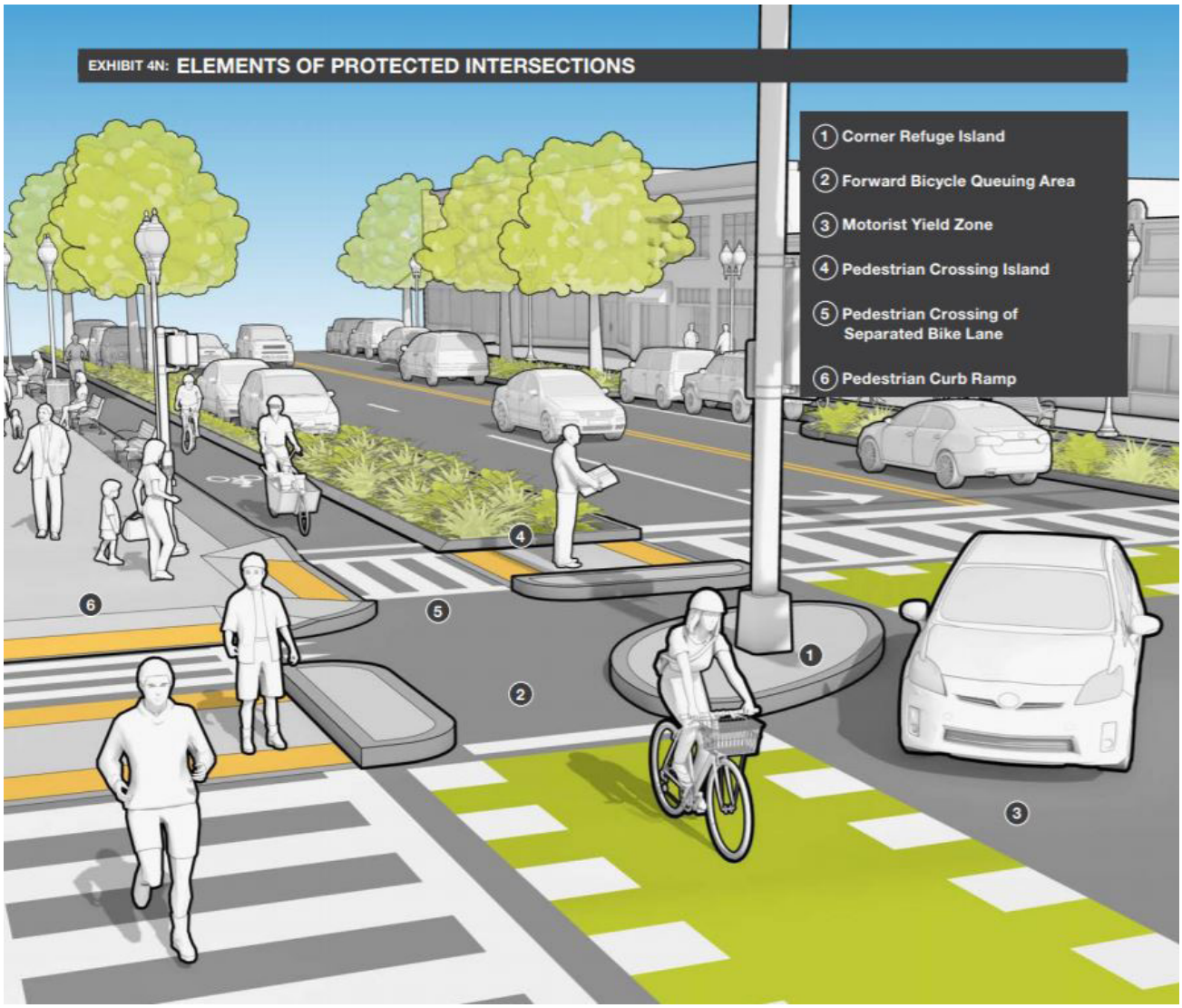
Citywide Connectivity

Joining the bicycle and pedestrian maps and analyzing them together provides a look at the holistic network of connections throughout the City. It is important the City understands that in order for the network to operate most efficiently, both facility types must be built. The phasing plan, as shown on page 36 helps put these projects on a timeline to make it easy to see what steps need to take place.

Integrating Facilities

Ensuring the integration of facility types throughout the City is vital to providing reliable and safe bicycle and pedestrian networks. In addition to making important connections to get users from point A to point B, the use of protected intersections should be considered when planning for future facilities to create safe interchanges between vehicular, bicycle, and pedestrian travel. The image below shows the typical elements of a protected intersection, which help provide safer movements for all modes of transportation. Protected intersections increase visibility and promote predictability of movement for each user group.

Source: MassDOT Separated Bike Lane Planning and Design Guidelines, 2015



ALL FACILITIES

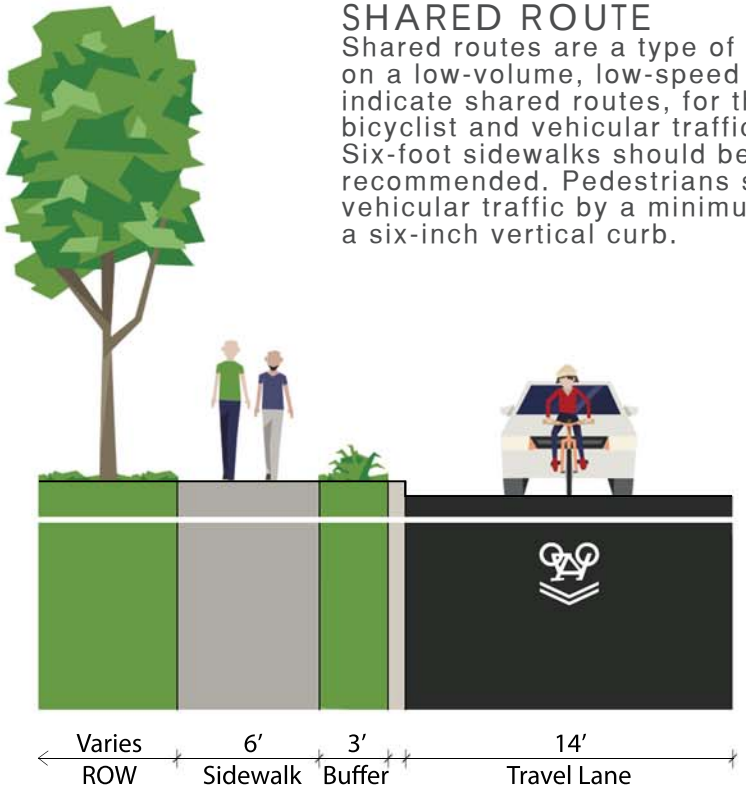
RECOMMENDED FACILITIES

When planning the implementation of public bike facilities, there are important elements to consider to ensure they are designed for all ages and abilities. Vehicular speeds and volumes, operational uses, and sensitivity to vehicular-pedestrian conflict areas are vital to the safety and overall functionality of the bikeway network. The following cross sections are considered best practices for walkways and bikeways. These sections are the minimum that should be attained in order for Dickson to become a more walkable and bikeable community.

SHARED ROUTE

Shared routes are a type of bikeway that are typically implemented on a low-volume, low-speed road. Signage and pavement markings indicate shared routes, for there is no separation between the bicyclist and vehicular traffic.

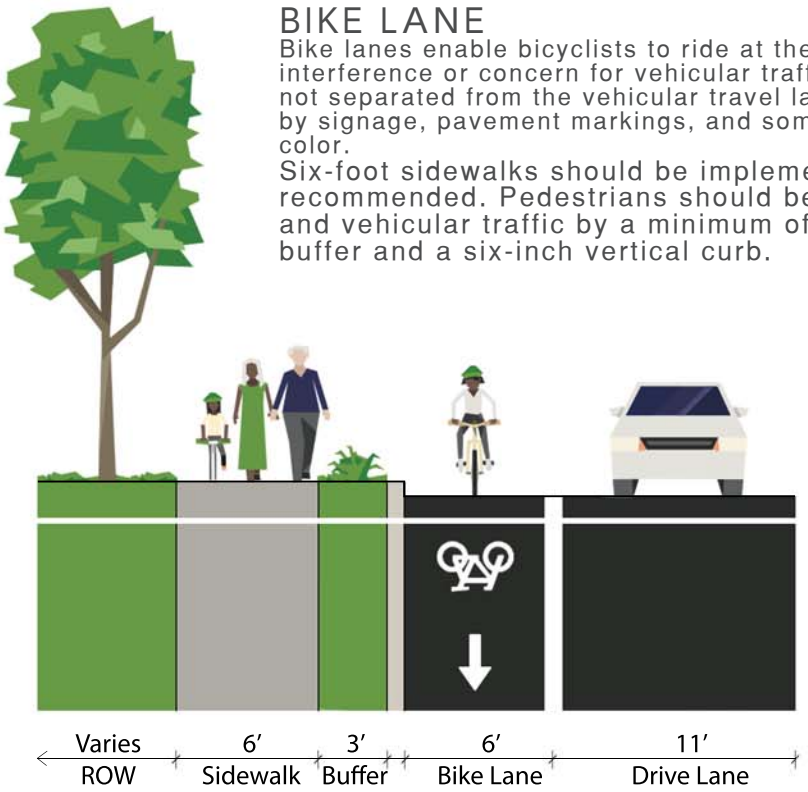
Six-foot sidewalks should be implemented where shared routes are recommended. Pedestrians should be separated from bicycle and vehicular traffic by a minimum of a three-foot landscaped buffer and a six-inch vertical curb.



BIKE LANE

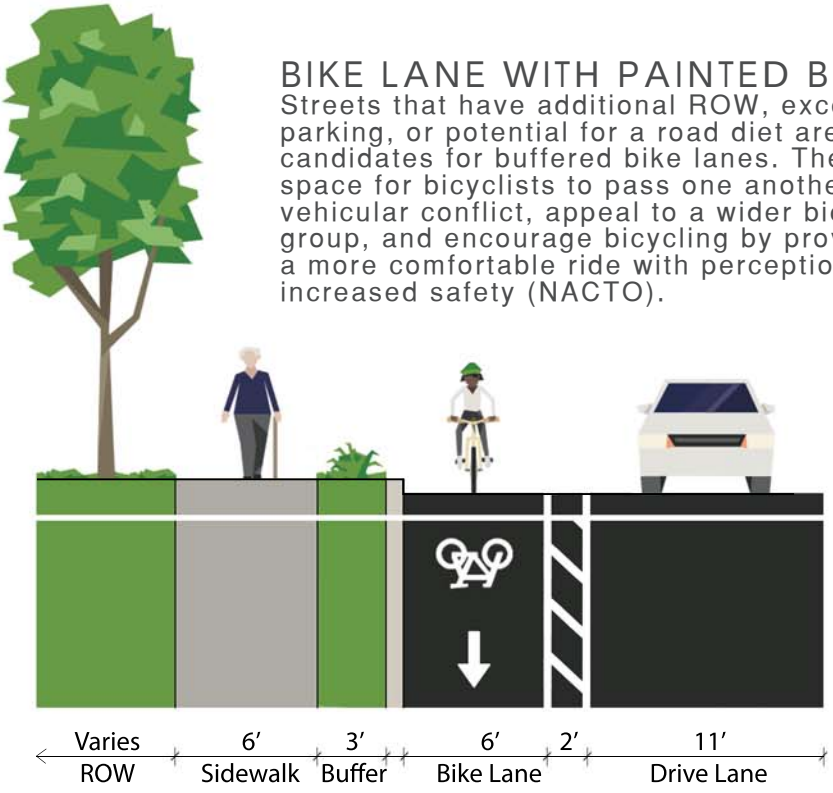
Bike lanes enable bicyclists to ride at their preferred speed without interference or concern for vehicular traffic. Bike lanes are typically not separated from the vehicular travel lane, and are distinguished by signage, pavement markings, and sometime a change in pavement color.

Six-foot sidewalks should be implemented where bike lanes are recommended. Pedestrians should be separated from bicycle and vehicular traffic by a minimum of a three-foot landscaped buffer and a six-inch vertical curb.



BIKE LANE WITH PAINTED BUFFER

Streets that have additional ROW, excess parking, or potential for a road diet are good candidates for buffered bike lanes. They provide space for bicyclists to pass one another with vehicular conflict, appeal to a wider bicycle user group, and encourage bicycling by providing a more comfortable ride with perception of increased safety (NACTO).



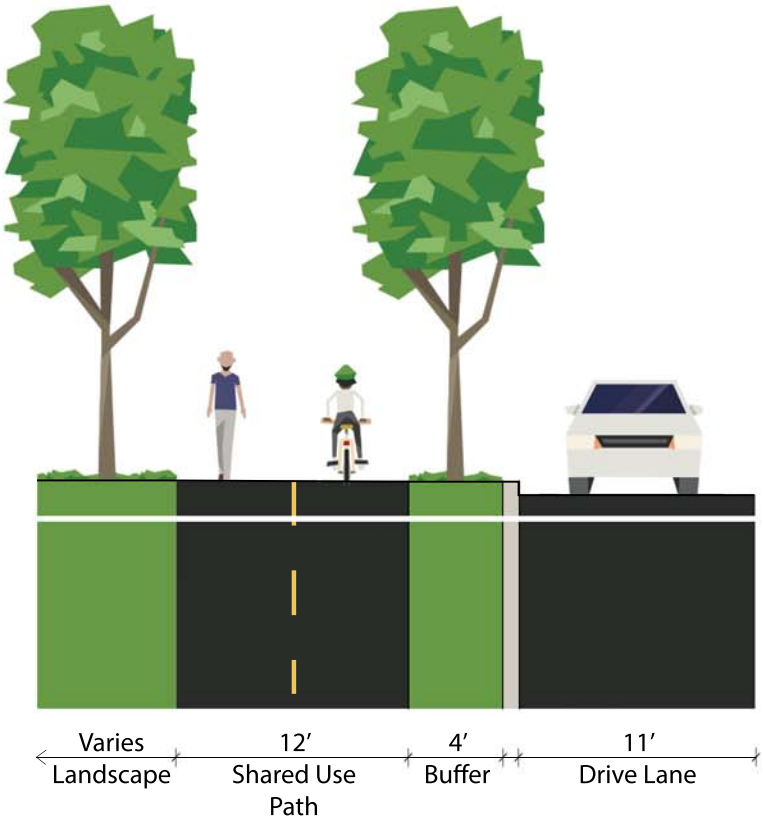
RECOMMENDED FACILITIES

TYPES:

1. Shared Route
2. Bike Lane
3. Bike Lane with Painted Buffer

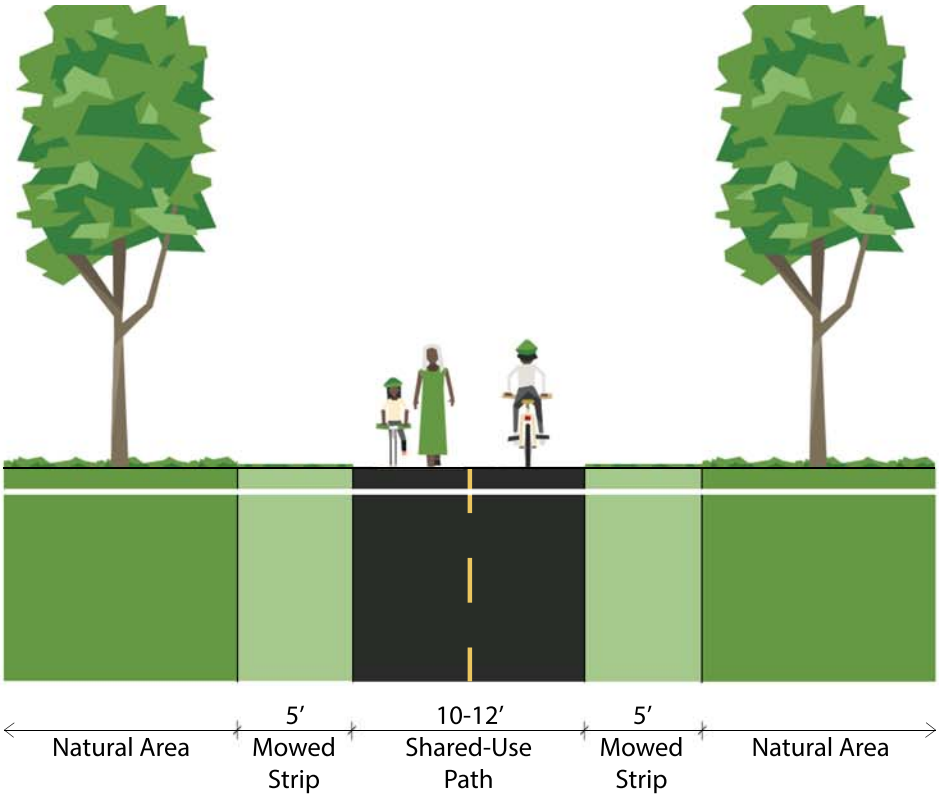
RECOMMENDED FACILITIES

When planning the implementation of public bike facilities, there are important elements to consider to ensure they are designed for all ages and abilities. Vehicular speeds and volumes, operational uses, and sensitivity to vehicular-pedestrian conflict areas are vital to the safety and overall functionality of the bikeway network. The following cross sections are considered best practices for walkways and bikeways. These sections are the minimum that should be attained in order for Dickson to become a more walkable and bikeable community.



SHARED-USE PATH TWO-WAY

Shared-use paths are often used in rural and suburban areas adjacent to existing streets. These facilities provide a physical separation between the vehicular travel lanes with the use of landscape buffer and a vertical curb. Shared-use paths are best suited where there is little conflict with driveways, utility poles, and steep areas. These types of pathways are typically pleasing to the eye and provides a safe and comfortable ride for users.

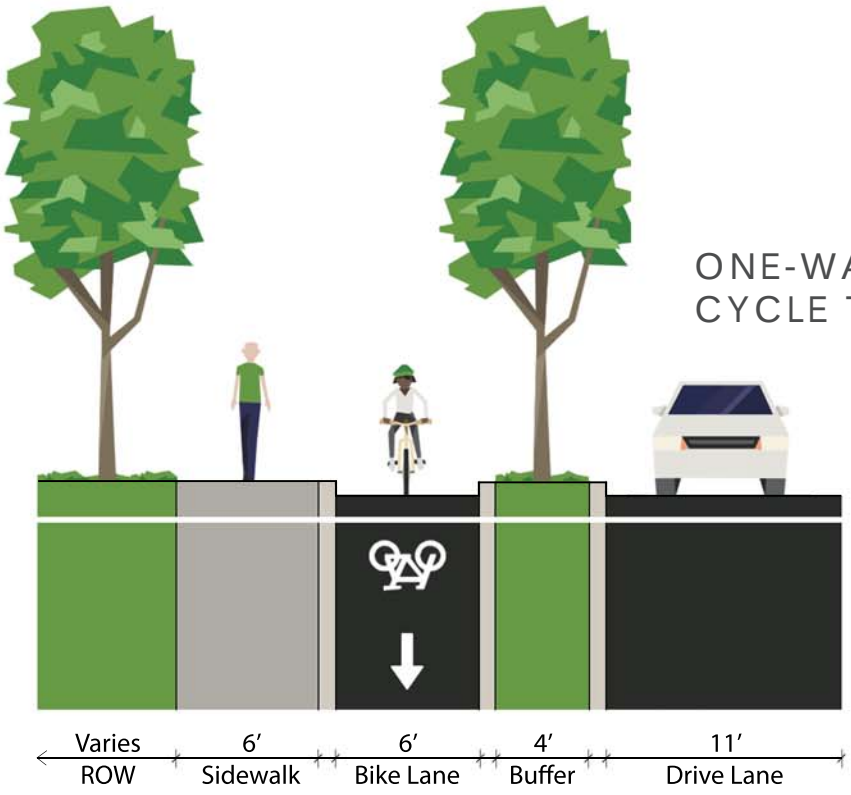


PAVED SURFACE GREENWAY

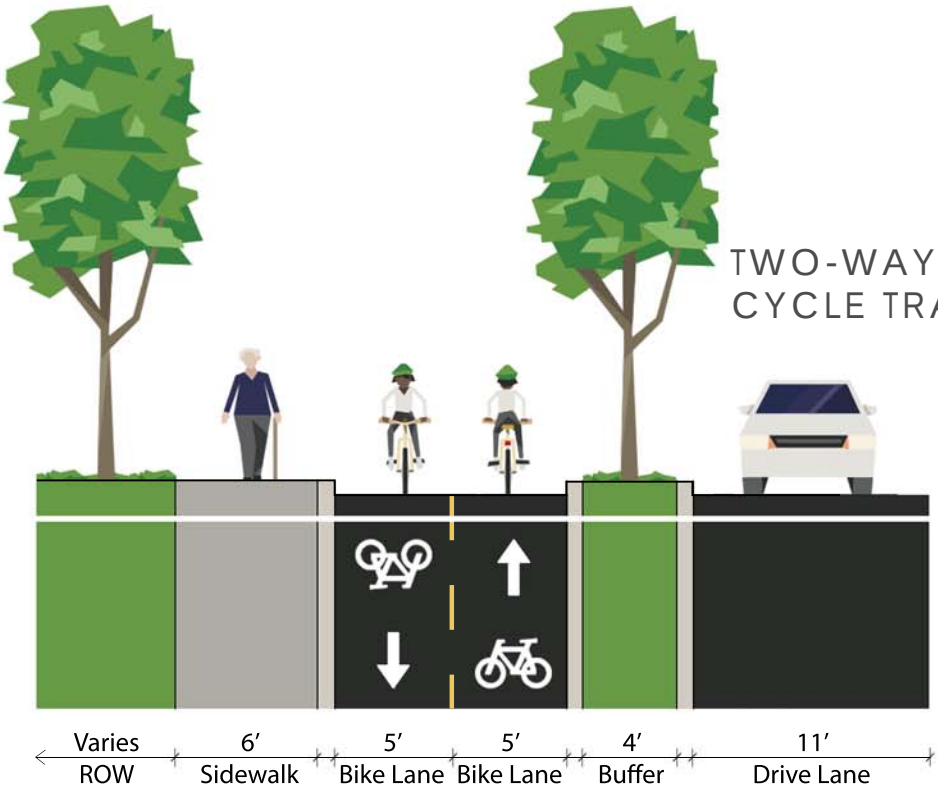
Greenways may be the most important means of alternative transportation for all ages and abilities. Greenways are typically away from vehicular travel ways, traveling through open public space such as parks, natural areas, and abandoned railroad corridors. They appeal to families and casual bicyclists since there are usually very few interactions or conflicts with vehicles. Greenways are an excellent choice for areas of a City where the streets have little additional right-of-way or physical constraints for roadway facilities. A minimum of ten feet in width is recommended to allow users to pass one another comfortably. The five-foot mowed strip along each side minimizes maintenance and provides a clear and safe greenway.

CYCLE TRACKS

Separated bike lanes are bikeways that physically protect bicyclists from the vehicular travel lanes using a landscape buffer and vertical curb. It combines the user experience of a separated path with the on-street infrastructure of a conventional bike lane (NACTO). Separated bike lanes can be one-way or two-way and have many benefits. They dedicate and protect space for bicyclists in order to improve perceived comfort and safety, generally provide overall low-implementation costs by making use of existing pavement and drainage, and are more attractive for bicyclists of all levels and ages.



ONE-WAY CYCLE TRACK



TWO-WAY CYCLE TRACK

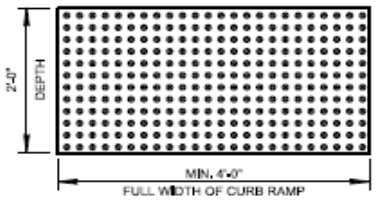
RECOMMENDED FACILITIES

TYPES:

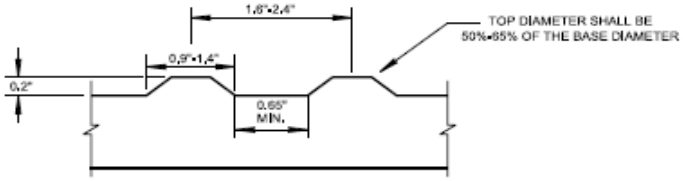
5. Shared-Use Path Two-Way
6. Paved Surface Greenway
7. Cycle Tracks

DESIGN STANDARDS

The City of Dickson is developing an American with Disabilities (ADA) transition plan that evaluates all the sidewalks and curb ramps within the entire city to determine if they need to be improved to meet ADA standards. While the transition plan focuses on the entire city, this Bicycle and Pedestrian Master Plan focuses on improvements within the project limits that make important connections to trip generators and attractors. Below are examples of elements of pedestrian improvements that should be considered when planning, designing, and constructing roadway and sidewalk projects. Images are from TDOT standard drawings, the American Association of State Highway and Transportation Officials (AASHTO) Guide for the Planning, Design and Operation of Pedestrian Facilities, The Federal Highway Administration's (FHWA) Manual on Uniform Traffic Control Devices (MUTCD), and the U.S. Access Board's Public Right of Way Accessibility Guidelines (PROWAG).

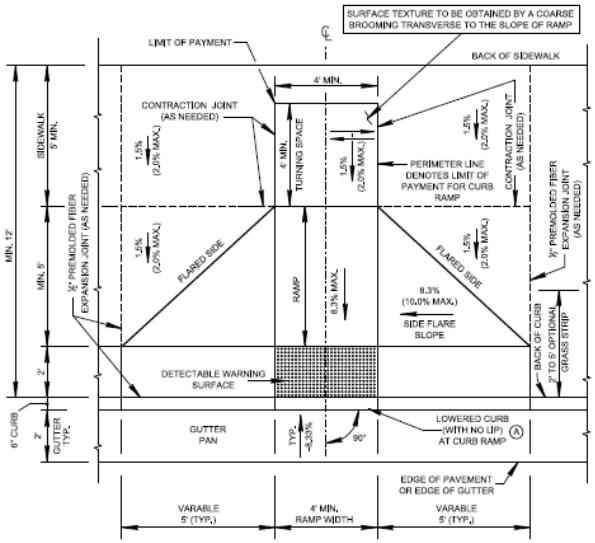


DETECTABLE WARNING SURFACE DETAIL

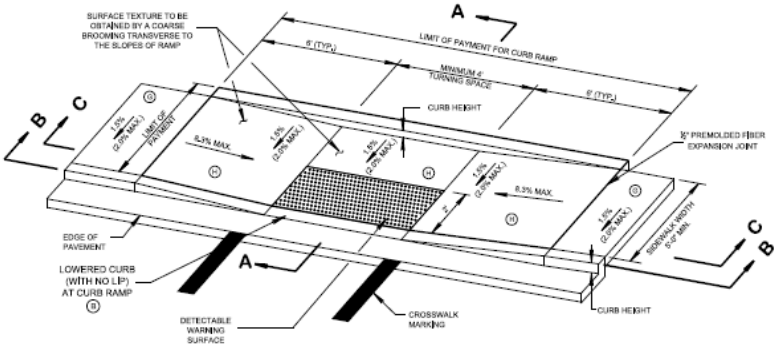


DETECTABLE WARNING SURFACE ELEVATION VIEW (TYP.)

Detectable warning surfaces are used to warn pedestrians with low or no vision that they are entering the street, railroad crossing, or transit stop/platform. The color of the surface must contrast visually with the adjacent ramp, gutter, sidewalk, or street.



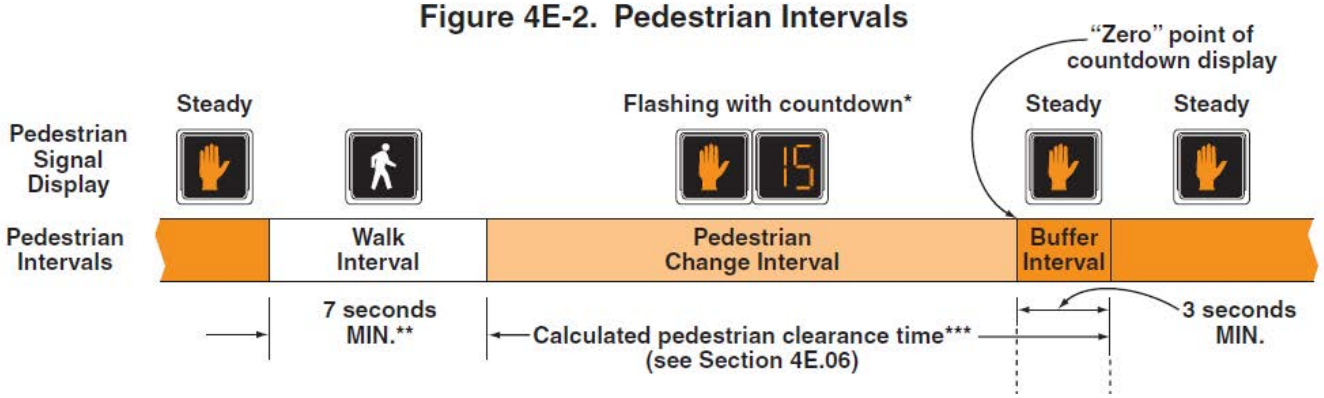
PERPENDICULAR CURB RAMP
PLAN VIEW



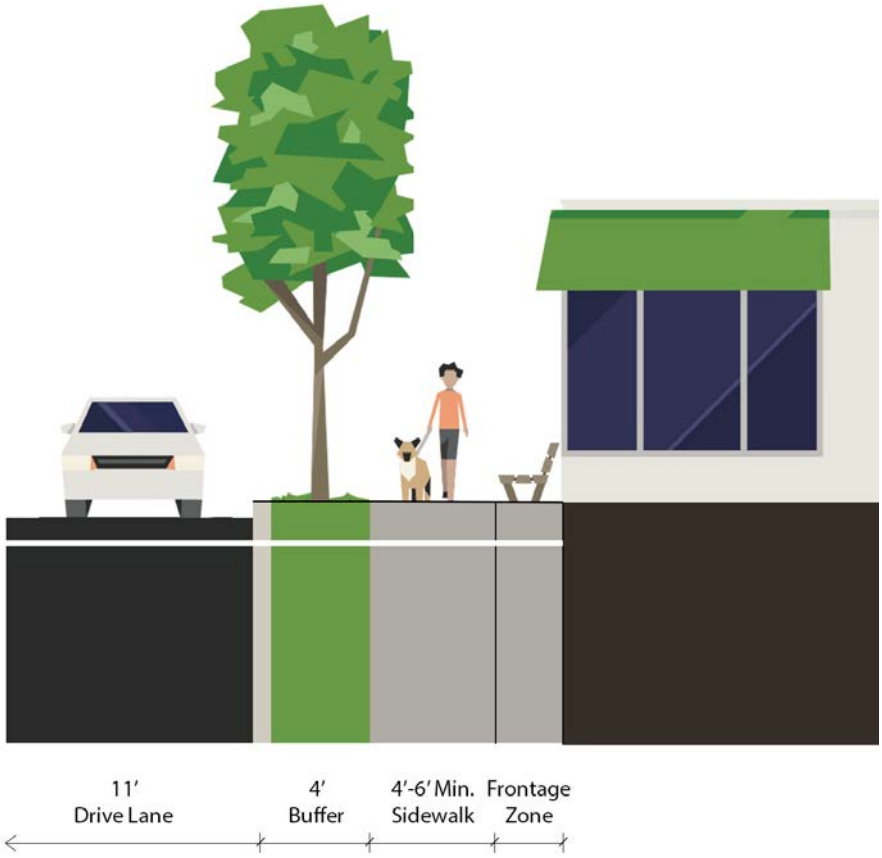
PARALLEL CURB RAMP DETAIL
DIMENSIONS SHOWN ABOVE FOR 0% LONGITUDINAL ROADWAY GRADE

Depending on the geometry of the intersection, there are several types of curb ramps that can be used to allow pedestrians to cross a street. Perpendicular ramps work best when there is a grass strip between the sidewalk and the back of curb, and parallel ramps are best for sidewalk adjacent to the back of curb.

Figure 4E-2. Pedestrian Intervals



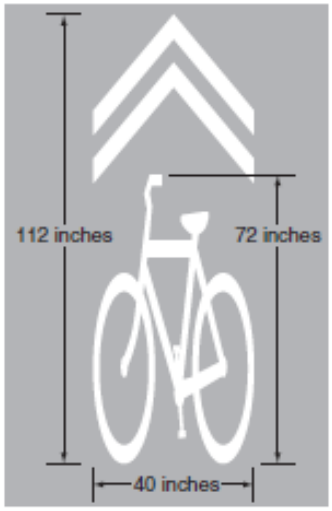
If pedestrian signals are installed at an intersection, they should include a countdown display to warn pedestrians how much time they have left to cross.



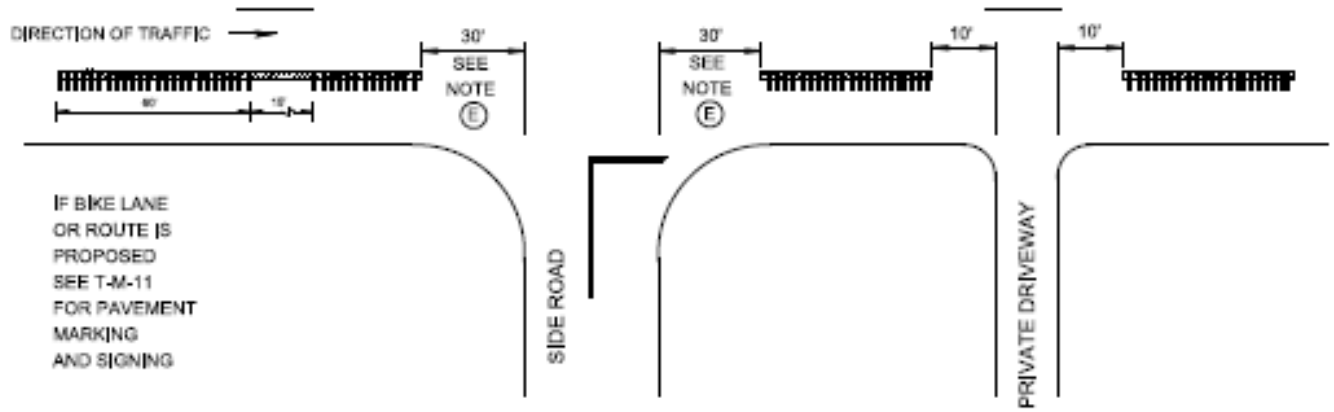
The pedestrian access route (sidewalk) should be at least four feet in width (preferably five to six feet) and kept clear of obstructions such as doors, table/benches, signs, and vegetation. The pedestrian access route is typically accompanied by a frontage zone adjacent to the building face, providing room for benches, cafe tables, lighting, and signage.

DESIGN STANDARDS

Although some of the proposed bicycle recommendations may require the alteration or reconstruction of existing roadways, there are low-cost measures that can be implemented to improve the roadway environment for cyclists. The MUTCD provides a number of signs and pavement markings to alert drivers of the possibility of cyclists within or adjacent to the roadway. Those improvements include striping bike lanes on existing shoulders of at least four feet in width, installation of signs and pavement markings to inform drivers that they must allow space for cyclists within the travel way, and directional signs for cyclists along designated bike routes.



Additionally, TDOT has developed standard drawings for rumble strips and stripes that accommodate bicycle traffic. Rumble stripes (as pictured below) are located on the edge line and warn drivers that they are near the edge of the travel way. Both rumble strips and rumble stripes now have a 15-foot gap every 60 feet to allow cyclists to enter and exit the shoulder if necessary.



SIDE ROAD AND DRIVEWAY
RUMBLE STRIPE INSTALLATION DETAILS

4 CONCLUSION

Phasing Plan
Funding Alternatives

PHASING PLAN

Community Partnership

The projects outlined in the route recommendation section of this report are considered the most important projects for the City of Dickson. The following project list narrows the list of recommended projects and presents them in order of implementation based on input from City of Dickson staff and the public meeting as well as field observations, engineering judgement, and cost analysis. Information such as estimated costs and timeframe are provided for these priority projects to assist the City in planning and budgeting. The timeframe for implementation includes short-term (zero to three years), mid-term (three to ten years), and long-term (more than ten years). While the Dickson Bicycle and Pedestrian Master Plan represents the contribution of the City staff and local community, successfully implementing the recommended projects will require cooperation among government entities; stakeholders; private developers; and people that live, work and visit the City.

P1. **College Street**
Project Limits: From Mulberry to Walker
Project Cost: $1.30 million
Project Timeline: Short-term

P2. **Church Street**
Project Limits: From College to Rickert
Project Cost: $1.26 million
Project Timeline: Short-term

P3. **Rickert Street**
Project Limits: From Charlotte to Academy
Project Cost: $2.80 million
Project Timeline: Mid-term

P4. **West End Avenue Connector**
Project Limits: From US 70 to N. Charlotte
Project Cost: $1.50 million
Project Timeline: Long-term

P5. **Dickson County High School Safe Route**
Project Limits: Henslee & N. Charlotte
Project Cost: $3.10 million
Project Timeline: Long-term

P6. **Spring Street Connector**
Project Limits: From Henslee to Rickert
Project Cost: $1.30 million
Project Timeline: Mid-term

P7. **Henslee Drive Connector**
Project Limits: From College to Spring
Project Cost: $1.95 million
Project Timeline: Mid-Term

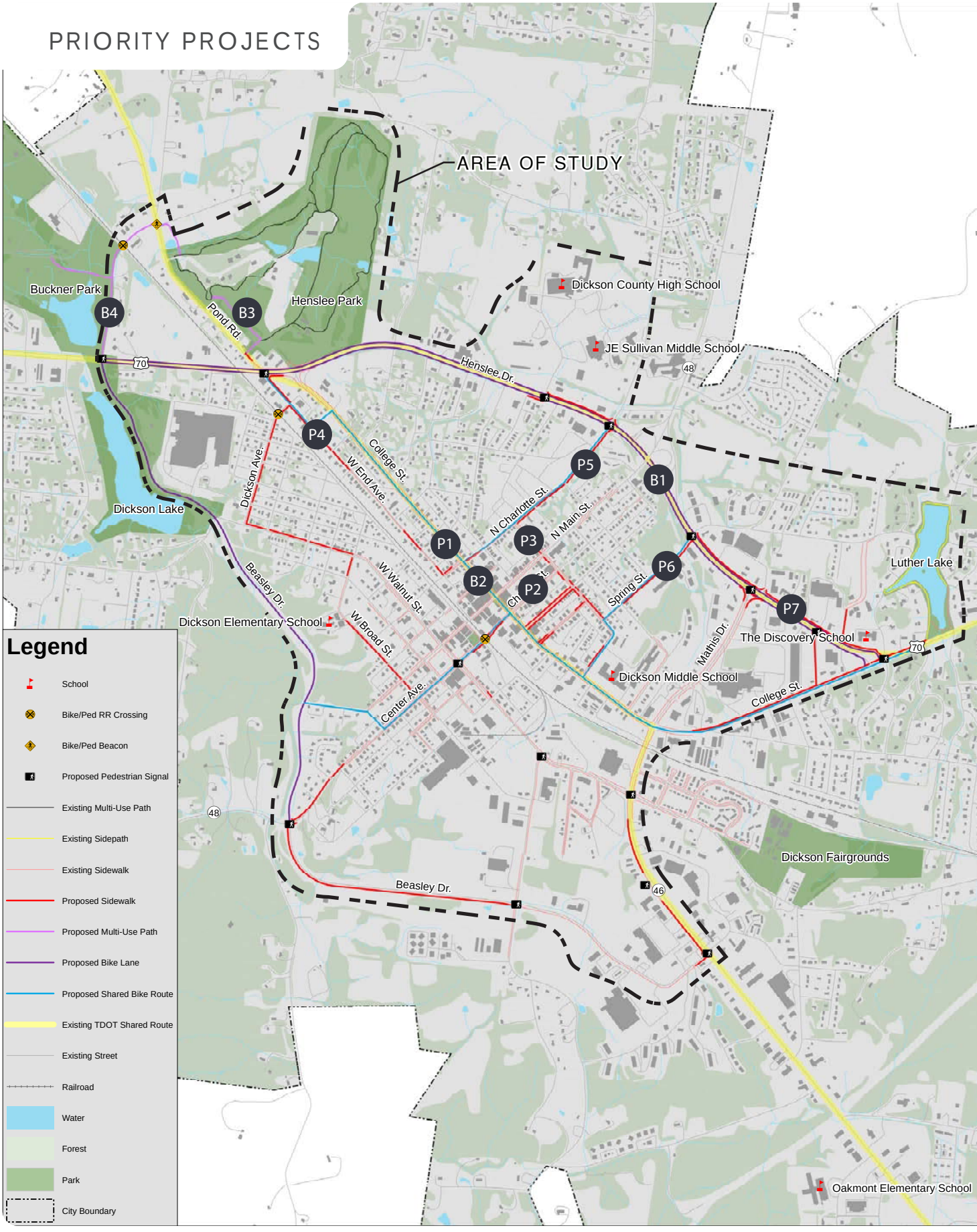
B1. **Henslee Drive Bike Lanes**
Project Limits: From Beasley to College
Project Cost: Included in the next TDOT repaving project
Project Timeline: Short-term to Mid-term

B2. **College Street Shared Route**
Project Limits: From Mathis to Henslee
Project Cost: Included in the next TDOT repaving project
Project Timeline: Short-term to Mid-term

B3. **Henslee Park Greenway Connector**
Project Limits: Henslee Park & SR 46
Project Cost: $1.19 million
Project Timeline: Mid-term

B4. **Buckner Park Shared-Use Path**
Project Limits: Buckner Park & Weaver
Project Cost: $1.93 million
Project Timeline: Long-term

PRIORITY PROJECTS



FUNDING ALTERNATIVES

Funding Mechanisms

The recommendations from the Dickson Bicycle and Pedestrian Master Plan will not be implemented through a single source, but a combination of multiple sources, including all or some of the following. The appropriate funding sources will depend on the project type and location.

- Public/Private Investment and Partnerships
- Dickson Capitol Improvement Projects
- Grant Opportunities
- Imposing an Additional Tax

Public/Private Investment and Partnerships

Public/private partnership is a popular source for funding of parks, trails, and other recreational facilities. These partnerships can result in significant positive outcomes by bringing revenue, labor, and other resources for projects. Some typical examples of funding partnerships include park or amenity sponsorship, trail segment adoption, and organization-driven fundraisers. While these partnerships sometimes result in the investment in the parks and recreation system, they can also include shared-use or greenway facilities.

Dickson Capitol Improvement Projects

The City of Dickson should continue planning at least five years out for future infrastructure enhancement projects that help with the safety and efficiency of bicycle and pedestrian transportation.

Grant Opportunities

In addition to self and private funding or partnership agreements, Dickson can pursue a variety of local, state and federal grant options that best fit their needs based on project and location. Current grant options are highlighted on the following page, and the City should take advantage of these opportunities to help build better bicycle and pedestrian facilities.

Imposing Additional Taxes or Fees

Another way the City could be increasing funds to help build bicycle and pedestrian infrastructure is imposing additional taxes and fees. These could include park or facility fees, utility-type fees, solid waste fees, and food and beverage tax. Adding new or increasing fees can help improve Dickson's operational cost-recovery. Operational cost recovery is arrived at by dividing total non-tax revenue by total operational expense. The operational cost recovery is a critical performance indicator that measures how well each department's revenue generation covers the total cost of operations. Increasing the City's cost recovery ultimately means more money the City can put back into its infrastructure, potentially improving bicycle and pedestrian infrastructure.

GRANT OPPORTUNITIES

Multimodal Access Grant	▪ Pedestrian Crossings ▪ Sidewalks ▪ Bike Lanes ▪ ADA Improvements ▪ Pedestrian Lighting ▪ Bus Shelters ▪ Separated Bicycle Facilities ▪ Park and Ride Facilities ▪ Traffic Calming Measures ▪ Utility Relocation
Surface Transportation Block (STBG)	▪ Sidewalks ▪ Shared-Use Paths ▪ Safe Routes to School ▪ Complete Streets ▪ Bridge Enhancements ▪ Tunnel Enhancements
Transportation Alternatives Program (TAP)	▪ Pedestrian Facilities ▪ Shared-Use Paths ▪ Bike Lanes ▪ Safe Routes for Non-Drivers ▪ Safe Routes to School ▪ Historic Preservation ▪ Sidewalks ▪ Signage ▪ Crosswalks
Recreational Trails Program (RTP)	▪ Hard/Natural Surface Trail ▪ Shared-Use Paths ▪ Land Acquisition ▪ Maintenance ▪ Trailheads
Bridge Replacement and Rehabilitation Program (BRR)	▪ Every two years, the Tennessee Department of Transportation inspects all bridges in the State using National Bridge Inspection Standards. Bridges with a rating of 15 tons or less are prioritized from worst to best and then added to either the rehabilitation list or the replacement list.
High Priority Project (HPP)	▪ This program provides designated funding to the state (HPP) and Local Agencies (HPP-L) for specific projects identified by Congress.
Highway Safety Improvement Program (HSIP)	▪ Signage Improvements ▪ Roadway Re-striping ▪ Intersection Enhancements
Local Parks and Recreation Fund (LPRF)	▪ Land Acquisition ▪ Indoor/Outdoor Recreational Facilities ▪ Trail Development

BICYCLE AND PEDESTRIAN MASTER PLAN

October 2019