DRAFT

2043 Dickson County Comprehensive Plan

September 2023

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INTRODUCTION

The *2043 Dickson County Comprehensive Plan* (Plan) is a county-wide comprehensive planning document that outlines goals, policies, and implementation strategies developed through a public engagement process. The purpose of the plan is to enable government officials and citizens to anticipate and constructively respond to growth and change; to encourage the development of a vibrant build environment and a healthy natural environment; and to provide equitable opportunities for all citizens to enjoy a high quality of life.

CRITICAL GOALS OF THE COMPREHENSIVE PLAN

- The County and municipalities co-operate to create a community-wide vision for the future.
- Create a resource to inform policy decisions.
- Set priorities for staff and leadership to initiate tasks and aid decision making.
- Outline specific goals and strategies to achieve one vision.

"By failing to prepare, you are preparing to fail"
– Benjamin Franklin

WHY IS IT NEEDED?

A Comprehensive Plan is required by state law in all jurisdictions that have zoning. In Tennessee this is dictated by the Tennessee Advisory Commission on Intergovernmental Relations (TACIR). The TACIR was created in 1978 in response to the need for a permanent intergovernmental body to study and take action on questions of organizational patterns, powers, functions, and relationships among federal, state, and local governments.

The plan sets out a vision for the future, establishes goals, and recommends actions to achieve those goals. It also serves as a guide to new development and for a way to preserve land for specific use.

What Does It Include?

Population:
Consideration for historic trends, projections, household number and sizes, education levels, and income.

Economic Development:
Consideration for labor force characteristics, employment, and analysis of the economic base.

Natural Resources:
Consideration for the natural environment (agricultural and forest land, plants and animal habitat, parks and recreation areas, scenic views, and soils).

Cultural Resources:
Consideration for historic buildings, structures, districts, and natural/scenic sites.

Community Facilities:
Consideration for utilities, solid waste collection and disposal, fire protection, police protection, emergency medical services, government facilities, educational facilities, and cultural facilities.

Land Use:
Consideration for existing and future categories, including new residential, commercial, industrial, agricultural, forestry, mining, public and quasi-public recreation, parks, open space and vacant or undeveloped land.

Transportation:
Consideration for major road improvements, new roads, transit projects, pedestrian and bicycle projects, and other elements of a network in coordination with land use.

Comprehensive Plan Priorities

5 Year Priorities

- Competitive Pay
- Larger Workforce
- More Affordable Housing
- More Youth Activities
- Diversity, Equity, and Inclusion

10 Year Priorities

- More Recreational Facilities
- Technology-Based Employment Opportunities
- Improved Entertainment Options
- Extension of Interstate 840 to State Route 96
- Expansion of the Airport
- Higher Education Opportunities
- Expand Tennessee College of Applied Technology (TCAT)

20 Year Priorities

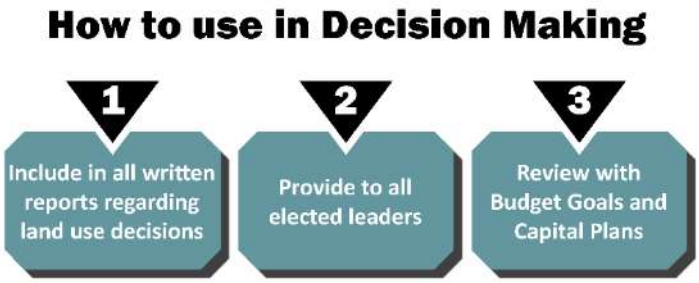
- Revitalize Existing Developments
- Promote Internal Talent
- Generational Land Turnover – Create Higher Density Development
- Diversify Existing Population
- Additional Recreational Opportunities
- Enhance Work From Home (WFH) Opportunities

How To Use This Document

Each of the core values, strategies, and actions included in this document are important for Dickson County to achieve its vision. In that sense, this plan is a living document that needs to be used and updated regularly. To be effective, it needs to influence the actions of County and municipal departments and encourage collaboration and cooperation between them. The Plan is a starting point where vision is articulated, themes are established, strategies are identified, and action items are defined.

A Tool for Decision Making

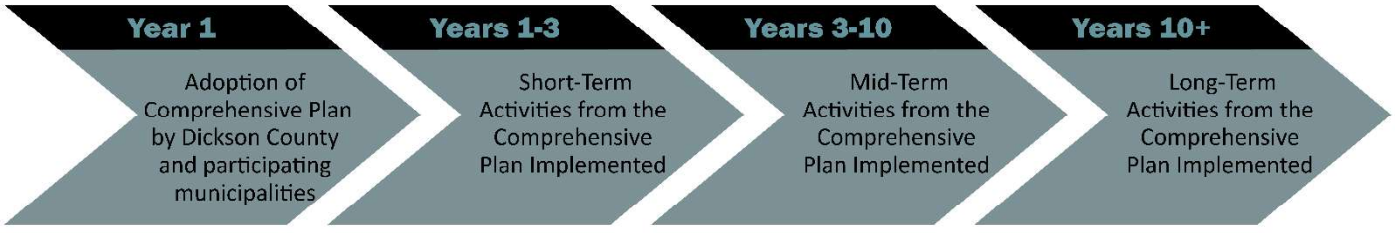
First and foremost, the Plan should serve as a reference tool that is referred to regularly and should be the foundation for internal actions and interactions with the County, local municipalities, and the region. The Core Values and Strategies in each element serve as these tools for decision making.



A Comprehensive Plan for Action:

The Plan also outlines specific action items in each element that achieves the core values and strategies. These action items are intended to be implemented within ten years' time. While this Plan provides specific steps for future action, it purposefully does not resolve all core principles and strategies with specific recommendations.

The Plan describes actions in terms of immediate activities that consist of:



PROCESS: CAPTURING COMMUNITY VISION/GOALS

The comprehensive planning process was conducted after the social distancing requirements during the pandemic were lifted. Coming at the end of the pandemic, community engagement was slowly beginning again. As a result, community engagement changed resulting in citizens communicating through a variety of different platforms including virtual, web-based and in-person. We accommodated each of these communication avenues throughout the process.

PUBLIC INVOLVEMENT PROCESS

The process was organized in the following stages.

1 Stakeholder Committee Meeting

Analysis of Dickson County's environment, role within the region, economic conditions and projected growth. Meet with Stakeholder Committee to better understand this data. The Committee will include representatives from Dickson County, The City of Dickson, The Town of White Bluff and the Town of Burns as well as other identified stakeholders.

2 Community Outreach and Engagement Meetings

Develop a strategy and vision for the Comprehensive Plan which included an extensive community outreach and engagement plan. This plan outlined the number of meetings and locations that would help identify goals, strategies and implementation steps for the Comprehensive Plan.

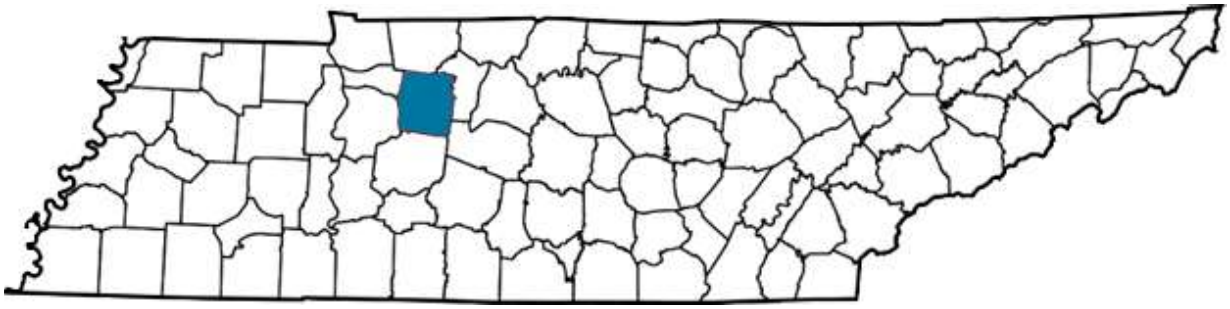
3 Media Campaign (digital/print/social)

In light of the Pandemic a series of meetings were held throughout the County structured to attract citizens to attend at least one of three community input meetings. These meetings were held in-person, virtually, email and through social media applications to reach as many citizens and stakeholders as possible.

In 1790, President George Washington and the First United States Congress began to take the first US Census. Prior to this time, they had no idea how many citizens that the newly formed country held. This process was instrumental in helping them to develop the basic taxation laws and make plans for the future of the newly formed United States. In the same vein, it is important for each community to understand their population and the demographics of their community as they make plans for the future. The *Dickson County Comprehensive Plan* started by understanding the existing citizens and utilized data from the 2020 US Census.

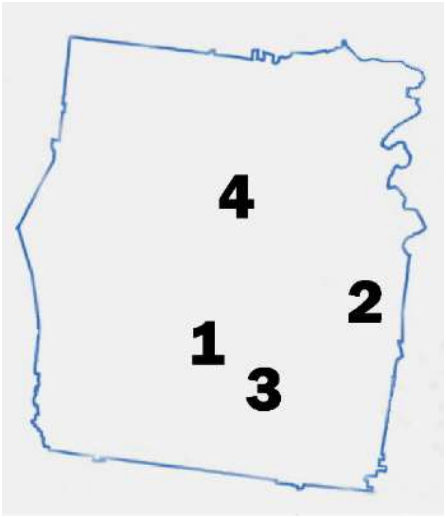
A GLIMPSE OF DICKSON COUNTY

US CENSUS BUREAU



Dickson County At A Glance

Population	54,315
Employment Rate	58.6%
Median Age	39.2
Median Household Income	$61,388



1. City of Dickson 2. Town of White Bluff 3. Town of Burns 4. City of Charlotte

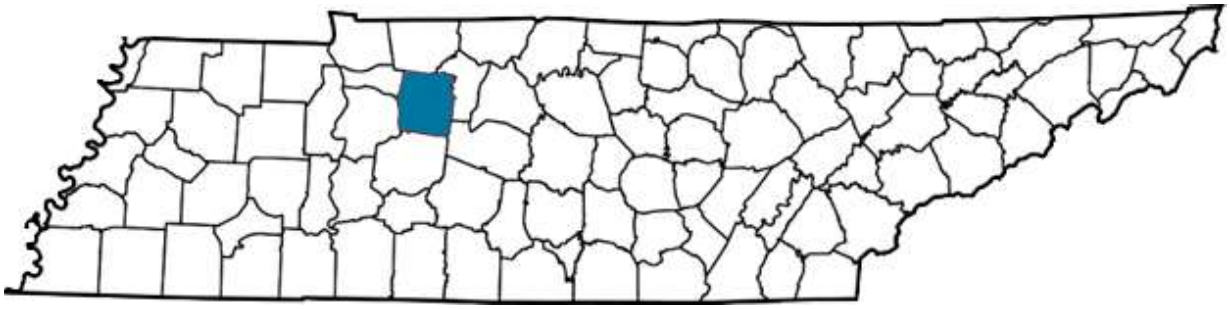
Dickson County has over 489.9 square miles of land area with a population that is over 83% White. The largest minority groups consider themselves two or more races (5%) followed closely by the Hispanic or Latino population (4.5%) and the Black or African American Population (3%). Over 97% of the population speaks English. Dickson County and surrounding municipalities fall within the income averages with a small percentage of citizens below the poverty line. Only Burns and Charlotte currently fall below the national average. Dickson County is the 40th largest county in Tennessee by total area. Whether a railroad enthusiast, Civil War historian, or a music fan there is something fun and exciting waiting for you in Dickson County.

We have included similar information on the following pages for the areas that make up the 2043 Comprehensive Plan.

Based on 2020 Demographics *Source: Unites States Census Bureau*

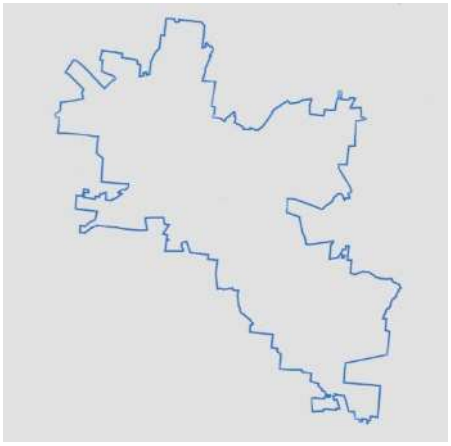
A GLIMPSE OF DICKSON COUNTY

US CENSUS BUREAU



City of Dickson At A Glance

Population	16,058
Employment Rate	59.4%
Median Age	35.0
Median Household Income	$55,318



The City of Dickson has over 20.41 square miles of land area and owes much of its history to the railroad which connected Nashville to the Tennessee River as well as the Cumberland Furnace iron industry that ran between Dickson and the Cumberland River in Clarksville. The area is also home to the Clement Railroad Museum which celebrates the area's railroad heritage. Established in 1958, Dickson has hosted an Old Timers Day Festival every May that celebrates the history of the area through music and art.

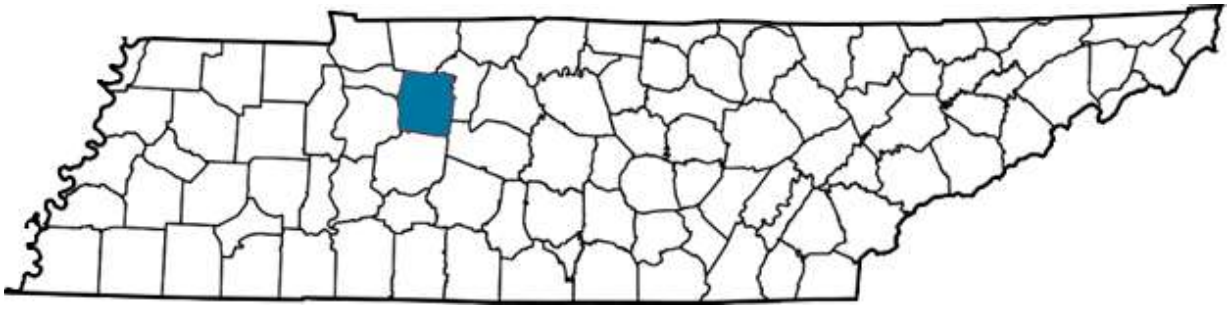
Today Dickson is the 26th largest City in Tennessee with a population of 77% white, 8% African American, with Native Americans, Asians, and Hispanic and Latino races rounding out the racial makeup of the City.

https://www.cityofdickson.com/

Based on 2020 Demographics *Source: Unites States Census Bureau*

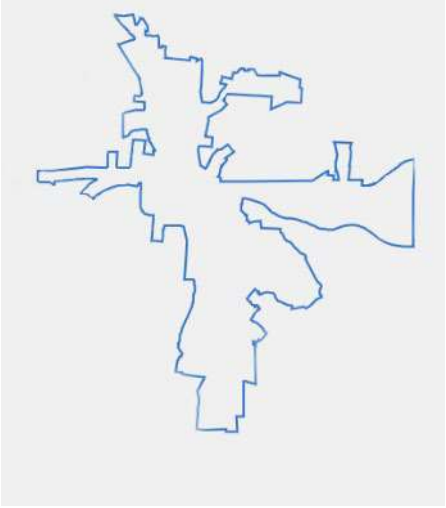
A GLIMPSE OF DICKSON COUNTY

US CENSUS BUREAU



Town of White Bluff At A Glance

Population	3,862
Employment Rate	66.5%
Median Age	44.2
Median Household Income	$53,696



Established in 1869, the Town of White Bluff has over 5.9 square miles of land area along US Route 70 in close proximity to the Nashville area. The population of White Bluff is over 90% white with Hispanic/Latino, Black/African American, and Native Americans making up the rest.

White Bluff plays host to many community events including the White Bluff Arts and Music Festival, Spring Fling, the Taste of White Bluff, Main Street Festival, July 4th Fireworks, Halloween Spooktacular and Christmas Parade. White Bluff is also home to the Bibb-White Bluff Civic Center, the Van F. Mills, M.D. Amphitheater, and the Jennie Woodworth Library.

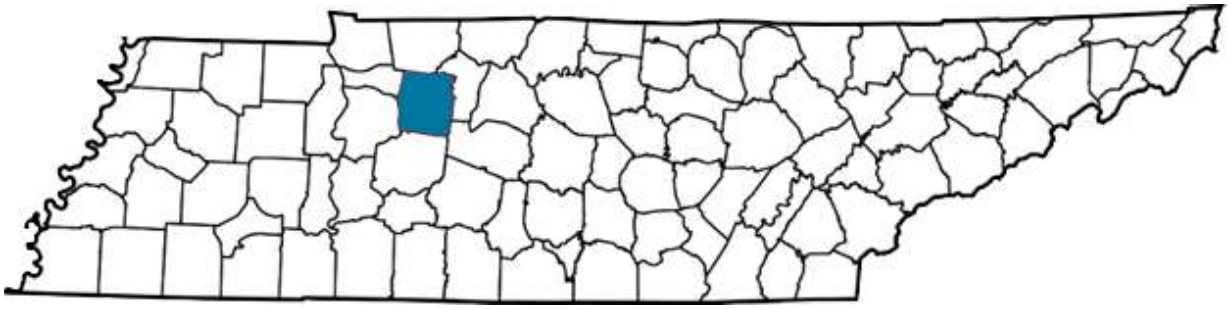
Currently under development, the future Bibb-White Bluff Nature Park promises to be another wonderful asset for this vibrant, growing community.

https://townofwhitebluff.com/

Based on 2020 Demographics *Source: Unites States Census Bureau*

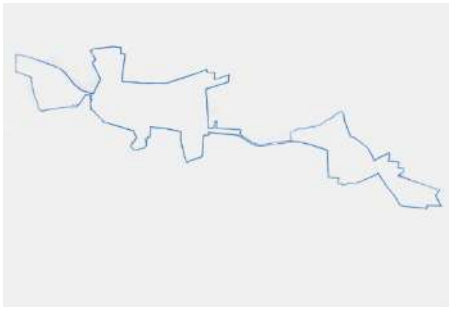
A GLIMPSE OF DICKSON COUNTY

US CENSUS BUREAU



Town of Burns At A Glance

Population	1,573
Employment Rate	63.6%
Median Age	42.2
Median Household Income	$60,417



The Town of Burns is home to the Montgomery Bell State Park which is a natural oasis with three lakes nestled into 3,850 acres that provides camping, cabins, and a lodge available for events and festivals year round.

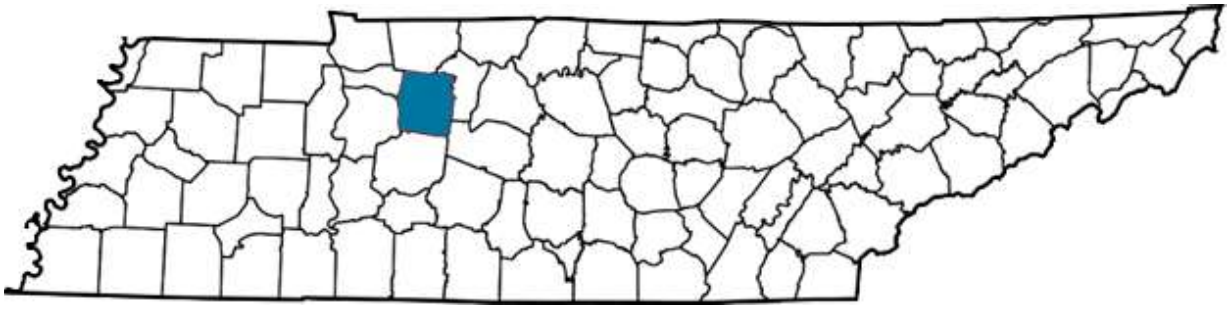
The area is over 88% white with nearly 2% black or African American with Native American, Hispanic/Latino making up the rest of the population. It's nearby access to I-840 and I-40 drives economic development and residential growth.

http://townofburnstn.net/

Based on 2020 Demographics *Source: Unites States Census Bureau*

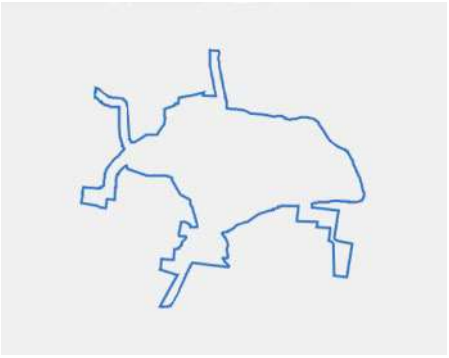
A GLIMPSE OF DICKSON COUNTY

US CENSUS BUREAU



City of Charlotte At A Glance

Population	1,656
Employment Rate	41.9%
Median Age	37.4
Median Household Income	$47,941



Established in 1804, Charlotte serves as the County Seat of Dickson County. Charlotte, home to the oldest still in use Courthouse in the State of Tennessee, sits along the western section of the Highland Rim. The area is over 87% white with nearly 7% Black or African American with Hispanic/Latino rounding out the rest of the municipality.

https://www.dicksoncountychamber.com/

Based on 2020 Demographics *Source: Unites States Census Bureau*

DEMOGRAPHIC FORECASTS DASHBOARD

Datasets summarizing Dickson County's demographic forecasts were downloaded from the Greater Nashville Regional Council (GNRC) Demographic Forecasts Dashboard. The GNRC Dashboard provides public data on population and job projections for GNRC's 14 county region from 2017 through 2045, with projections provided incrementally through 2045. Demographic forecasts include base year totals and projections for population, population by race and ethnicity, population by age, jobs, and jobs by sector.

The base year, or 2017, is the first year from which projections begin. The population projection's base year data source is the American Community Survey 5-year estimates (2013-2017). The job projection's base year data source is the United States Bureau of Economic Analysis. GNRC sourced the projections from Woods and Poole Economics. Job sector classifications are based on the United States Census Bureau's North American Industry Classification System (NAICS).

Key takeaways from the Dashboard include the following:

- Dickson County's population and jobs are projected to grow 29% between 2017 and 2045.
- The Non-White population is projected to grow 165%.
- The Hispanic/Latino population is projected to grow 729%.
- 65 and Older are projected to grow the most at 115%.
- 25- to 65-year-olds are projected to grow 51% and still be the largest age demographic.
- Retail jobs will grow the most at 54%.
- Office jobs are projected to grow 37% and still be the largest job sector.

Table 1 summarizes the demographic projections from the Dashboard except for age and job sector. **Table 2** summarizes the demographic projections by age. **Table 3** summarizes the demographic projections by job sector.

TABLE 1: DICKSON COUNTY PROJECTIONS FOR POPULATION AND JOBS

Demographic	2017	2020 (Growth)	2025 (Growth)	2035 (Growth)	2045 (Growth)	Growth (2017 to 2045)
Total Population	51,341	53,116 (3.46%)	56,089 (5.6%)	61,698 (10%)	66,221 (7.33%)	28.98%
Non-White Population	2,443	2,723 (11.46%)	3,265 (19.9%)	4,700 (43.95%)	6,446 (37.15%)	163.86%
Hispanics/ Latinos	1,699	3,080 (81.28%)	5,447 (76.85%)	10,730 (96.99%)	15,176 (41.44%)	793.23%
Jobs	25,579	26,664 (4.24%)	27,705 (3.9%)	31,124 (12.34%)	33,019 (6.09%)	29.09%

TABLE 2: POPULATION PROJECTIONS BY AGE GROUP

Age Group	2017	2020 (Growth)	2025 (Growth)	2035 (Growth)	2045 (Growth)	Growth (2017 to 2045)
Under 5	132,538	151,252 (14.12%)	164,594 (8.82%)	190,332 (15.64%)	224,306 (18.85%)	69.24%
5 to 19	391,406	405,413 (3.58%)	448,750 (10.69%)	554,289 (23.52%)	637,894 (15.08%)	62.98%
20 to 24	142,528	144,971 (1.78%)	159,844 (10.26%)	175,228 (9.62%)	225,630 (28.76%)	58.31%
25 to 64	1,076,481	1,120,412 (4.08%)	1,189,112 (6.13%)	1,385,043 (16.48%)	1,628,436 (17.57%)	51.27%
65 and Older	238,435	276,518 (15.97%	343,672 (23.29%)	450,591 (31.11%)	512,755 (13.80%)	115.05%

TABLE 3: JOB PROJECTIONS BY SECTOR

Sector	2017	2018 (Growth)	2020 (Growth)	2025 (Growth)	2035 (Growth)	2045 (Growth)	% Growth (2017 to 2045)
Agriculture	3,497	3,611 (3.27%)	3,829 (6.03%)	4,332 (13.13%)	4,613 (6.50%)	4,596 (-0.38%)	31.42%
Government	2,882	2,903 (0.72%)	2,941 (1.32%)	3,023 (2.77%)	3,111 (2.92%)	3,115 (0.13%)	8.08%
Manufacturing	3,785	3,795 (0.27%)	3,808 (0.34%	3,805 -0.08%)	3,729 (-2.00%)	3,608 (-3.25%)	-4.68%
Office	9,383	9,493 (1.18%)	9,740 (2.60%)	10,441 (7.20%)	11,858 (13.56%)	12,889 (8.70%)	37.37%
Retail	4,829	4,936 (2.21%)	5,126 (3.84%)	5,572 (8.71%)	6,485 (16.40%)	7,443 (14.76%)	54.13%
Transportation & Warehousing	1,203	1,208 (0.29%)	1,220 (1.02%)	1,256 (2.98%)	1,327 (5.64%)	1,368 (3.08%)	13.73%

ECONOMIC DEVELPMENT

Core Values

1. We are business friendly and create incentives to attract new businesses and support existing businesses.
2. We recognize that regional cooperation and coordination will expand opportunities for all.
3. We prepare our workforce with the skills to meet the needs of emerging opportunities.
4. We support clean and environmentally friendly industries and businesses that provide competitive pay to our citizens.
5. We support the growth and success of our County and local municipalities and collaborate on growth management and land use issues.

CONTEXT

DICKSON COUNTY BY THE NUMBERS….

- Job growth – 14% in 2022
- Employs 24,600 people
- 1 industrial park
- 9 active Industrial Sites
- Class I railroads – 2,940 miles
- Class III railroads – 763 Miles
- 2,400 businesses
- 1.2 million workers within 60 minutes of Dickson County
- $4.7 million in tourism taxes directly generated by visitors
- 672 hotel rooms with occupancy for over 654 visitors
- Average nightly hotel rate $155.50
- 3 campgrounds
- 109 campsites with occupancy for over 600 visitors
- Average campsite cost $28

Dickson County's economy has a strong tradition of agricultural and forestry production. It is considered a suburb of Metro Nashville, which does provide significant opportunities.

Geographically

Dickson County is located in the Nashville metropolitan area within the State of Tennessee. It has relative proximity to regional transportation hubs like Chattanooga, Memphis, and Huntsville. Dickson County is situated in the central part of the state and is part of the Middle Tennessee region.

Geographically, Dickson County is bordered by several other counties:

- **To the north:** bordered by Montgomery County.
- **To the east:** bordered by Cheatham County.
- **To the southeast:** bordered by Williamson County.
- **To the south:** shares a border with Hickman County.
- **To the west:** bordered by Humphreys County.
- **To the northwest:** bordered by Houston County.

The County seat of Dickson County is the City of Charlotte, and the largest city in the County is the City of Dickson. The County covers an area of approximately 491 square miles (1,271 square kilometers) and is characterized by a mix of rural and suburban areas, with a variety of landscapes including rolling hills, farmland, and forests.

Economic Drivers

Dickson County has a strong manufacturing and industrial base, with companies in sectors such as automotive, aerospace, and advanced manufacturing. These industries provide employment opportunities and contribute to the local economy through job creation, capital investment, and export of goods. The County has a rich agricultural heritage and is known for its diverse agricultural products, including crops, livestock, and poultry.

Agribusinesses such as food processing, distribution, and equipment manufacturing play a significant role in the local economy.

The healthcare sector is another major economic driver in Dickson County. The presence of hospitals, medical clinics, and specialized healthcare providers not only provides essential services to the community but also creates jobs and attracts healthcare-related businesses.

Retail and hospitality sectors contribute to the local economy by providing goods and services to citizens and visitors. The presence of shopping centers, restaurants, hotels, and other tourism-related businesses generate employment opportunities and support local businesses.

Dickson County's educational institutions, including schools, colleges, and vocational training centers, contribute to the local economy by providing quality education and workforce development programs. They prepare students for careers and attract education-related businesses and investments.

There are 1.2 million workers within 60 minutes of Dickson County. Many who live in Dickson County but work elsewhere. Dickson County has Interstate thoroughfares (I-40 and I-840), and State Highways 70, 46, 47, 48 and 49 that provide easy access to the region's largest cities. Railroad access is essential to a variety of manufacturing industries in the area.

Dickson County has access to both Class I and Class III railway lines. Dickson County Municipal Airport offers two runways to service a variety of small engine aircraft.

The County's strategic location with access to major transportation routes, including highways and rail, makes it attractive for transportation and logistics companies. These businesses facilitate the movement of goods, create employment, and support supply chain activities. Dickson County fosters a vibrant small business community and entrepreneurial spirit.

Local businesses in various sectors, including retail, services, and professional services, contribute to the local economy and create job opportunities. Dickson County's natural beauty, recreational areas, and historical sites attract

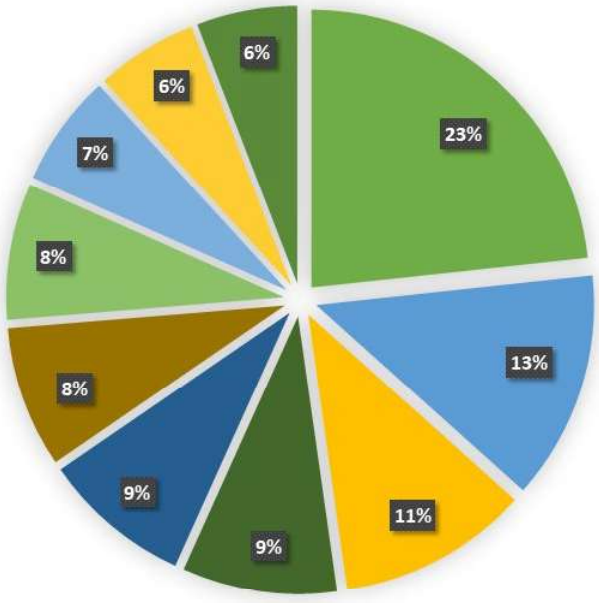
tourists and contribute to the local economy. Outdoor activities such as fishing, camping, hiking, and boating, as well as cultural and historical attractions, generate revenue through tourism-related businesses. The County's Comprehensive Plan aims to support and nurture these economic opportunities in the area.

Industries

While the Cumberland Furnace Iron Works closed in 1942, it began the long history of manufacturing in Dickson County in 1793. Manufacturing has continued to be a prosperous industry within Dickson County as currently the community houses over 30 manufacturing locations. Manufacturing provides 12.9% of the positions within the County.

The service and retail industry currently provides over 60% of the jobs within Dickson County. Service and retail positions include healthcare, government and education employees that serve the citizens of Dickson County as well as the Nashville Metropolitan Area.

Largest Employers in Dickson County



- Dickson County School District 23%
- Tennsco 13%
- TriStar Horizon Medical Center 11%
- Walmart Super Center 9%
- Nemak 9%
- Dickson County Government 8%
- Shiloh Industries 8%
- Monogram Foods (ConAgra Foods) 7%
- NHC Dickson 6%
- Dickson Medical Associates 6%

Education and Workforce

Dickson County is home to over 54,315 people. There are over 1.2 million potential workers within 60 minutes of Dickson County. The population is projected to grow to 80,709 people by 2040.

Dickson County is home to the Tennessee College of Applied Technology (TCAT) which provides technical and workforce specific education including industrial maintenance, machine tool technology, mechatronics, HVAC, diesel powered equipment technology, welding and more. Through the state programs, they can offer custom employee training as well.

Nashville State Community College has a satellite campus in Dickson offering access to over 80 programs across several industries. This provides undergraduate, graduate, and doctoral degrees in behavioral sciences, business, education, nursing, and theology.

Tourism

Dickson County offers various attractions and activities that appeal to tourists such as Montgomery Bell State Park. This state park offers a range of outdoor activities such as hiking, fishing, camping, boating, and golfing. The park features scenic trails, lakes, picnic areas, and a historic iron ore furnace site.

Situated in the historic downtown Dickson area, the Clement Railroad Hotel and Museum highlights the history of the town during the Civil War and its connection to the railroad industry. The museum offers opportunities to explore exhibits, artifacts, and learn about the impact of railroads on the local community.

The Hotel Halbrook, formerly managed by the family of Tennessee Governor Frank G. Clement, holds the distinguished status of being a State Historic Site under the supervision of the Tennessee Historical Commission.

Just to the east of Dickson County, the Narrows of the Harpeth is a natural scenic area along the Harpeth River that offers opportunities for canoeing, kayaking, hiking, and wildlife viewing. It is also known for its limestone bluffs, historic sites, and picturesque landscapes.

Dickson County hosts a variety of festivals and events throughout the year, showcasing local music, arts and crafts, food, and community spirit.

These include:

- The Dickson County Fair
- White Bluff Main Street Festival
- Old Timer's Day
- Charlotte Festival
- White Bluff Arts and Music Festival
- Promise Land Arts and Music Festival
- Burns BBQ Bash

The County's agricultural heritage provides opportunities for agritourism, where visitors can experience farm life, pick fruits or vegetables, go on hayrides, and participate in farm tours. Agriculture tourism is strong in the area, giving opportunities to capitalize on Dickson County's picturesque agricultural setting as a backdrop for weddings, recreation, and corporate events. Some farms in Dickson County offer these experiences to visitors such as Keller's Corny Country Pumpkin Patch & Corn Maze and Welker's Farm.

The downtown area of Dickson has historic charm with its well-preserved buildings, local shops, restaurants, and community events. Visitors can explore the downtown area and experience its unique atmosphere. Dickson County also has various antique shops, thrift stores, and flea markets that attract collectors and bargain hunters. Visitors can browse through unique items and discover hidden treasures. The County's natural beauty, recreational opportunities, historical sites, and local events contribute to its appeal as a tourist destination. Dickson County has six stops on the Screaming Eagle Tennessee State trail system which is part of the State's Tourism Campaign.

Montgomery Bell State Park is the main tourist attraction in Dickson County. As one of Tennessee's largest state parks, it provides a variety of outdoor activities and hosts multiple events each year. GreyStone Golf Club was named Golf Advisors' #1 Public Golf Course hosting the 2019 State Open and was home to the 2023 Tennessee State Open.

STRENGTHS

- **Location –** Dickson County lies within the Nashville Metropolitan Statistical Area which allows for a variety of benefits within the area including educational, business, and tourism opportunities that capitalize on the area's natural landscape & beauty.
- **Administrative –** The County has taken steps to create the Economic Development Alliance. The working relationships between the various municipalities and the County regarding economic growth and projects are agreeable and progressive. The Economic Development Alliance has programs in place for Industrial recruitment, business retention and expansion while the Chamber of Commerce focuses on relationships with local businesses.
- **Montgomery Bell State Park –** The recent renovations as well as the increased interest in hiking, nature and camping are an asset to the livability of Dickson County and its tourism industry.
- **Transportation –** Interstate, railroad, and aviation access provide a solid base for distribution of goods and services.
- **Tourism -** Multiple wedding venues and agriculture tourism opportunities that take advantage of the natural landscape and beauty of the area.

WEAKNESSES

- Availability & capacity of infrastructure (wastewater treatment plant and broadband access).
- Younger generation moving out of the County seeking job opportunities elsewhere.
- Limited resources to dedicate to economic development, and a public conflict between growth and types of appropriate growth.
- Lack of public transit to work in the Nashville Metropolitan Area while living in Dickson County.

OPPORTUNITIES

- Large sites available for development to recruit industrial opportunities.
- Increase tourism by maximizing opportunities and potential to create 3-day events generating overnight stays, restaurant needs, and campground accommodation.
- Increase tourism with day trips from Nashville into Dickson County.
- Small business incubator program. There are a couple of existing facilities within the County that offer assistance to start-up businesses, but educating business entities as to how these facilities could benefit them would encourage more use.
- Expansion of agricultural tourism & wedding destination opportunities.

THREATS

- Conversion of available land to residential supply supporting the Nashville Metropolitan economy could cause a bedroom community effect which results in an increase in taxes to efficiently supply services to the citizens.
- Loss of a major employer or a downturn in the housing market could negatively impact Dickson County.
- Lack of options for wastewater treatment plant expansions and water/wastewater services.
- Citizen push for anti-growth policies.

NATURAL RESOURCES

Core Values

1. We depend on clean water to support our economy and recreational lifestyle.
2. We balance development with the preservation of our natural systems.
3. We value our agriculture heritage and our regional position as a provider of agricultural goods and services.
4. We value our relationship with Montgomery Bell State Park and the natural environment and the habitat that it preserves.
5. We recognize that our natural resources are also a source of tourism and economic vitality and embrace that legacy with a balance of preservation and conservation.

CONTEXT

DICKSON COUNTY BY THE NUMBERS

- 53 inches of rain on average per year
- 208 sunny days on average per year
- 2 inches of snow on average per year
- 120 freshwater streams

Climate and Weather

Generally, Tennessee has a temperate climate, with warm summers and mild winters. Specifically, the middle Tennessee climate is classified as humid subtropical climate. The area has an average of 53 inches of precipitation each year and only 2 inches of snow and the average number of sunny days is 208.

Elevation

Dickson County is located within an area known as the Highland Rim. The Highland Rim is identified as a wide circle touching the Tennessee River Valley in the west and the Cumberland Plateau in the east, together with the enclosed Central Basin make up the whole of Middle Tennessee. The Highland Rim ranges from about 600 feet in elevation along the Tennessee River to 1,000 feet in the east and rises 300 to 400 feet above the Central Basin which is a rolling plain of about 600 feet average elevation, but with a crescent of hills reaching to over 1,000 feet south of Nashville. The highest point in Dickson County is 960-980 feet. There are 12 named elevations in Dickson County, Tanbark Hill is the highest point, and the most prominent elevation change is Paint Rock Bluff.

Soils

In a typical profile of Dickson County, the topsoil is brown, friable (easily crumbles) silt loam. The subsoil is yellowish brown to pale brown, friable silt loam. The subsoil layer, at a depth ranging from 18 to 36 inches, is a compact and brittle layer called fragipan.

Groundwater

Tennessee, except for a small area east of Chattanooga, lies entirely within the drainage of the Mississippi River System.

Open Space

Montgomery Bell State Park is one of the largest natural resources in the County. It is preserved largely in a natural state and provides an area of recreation for all citizens.

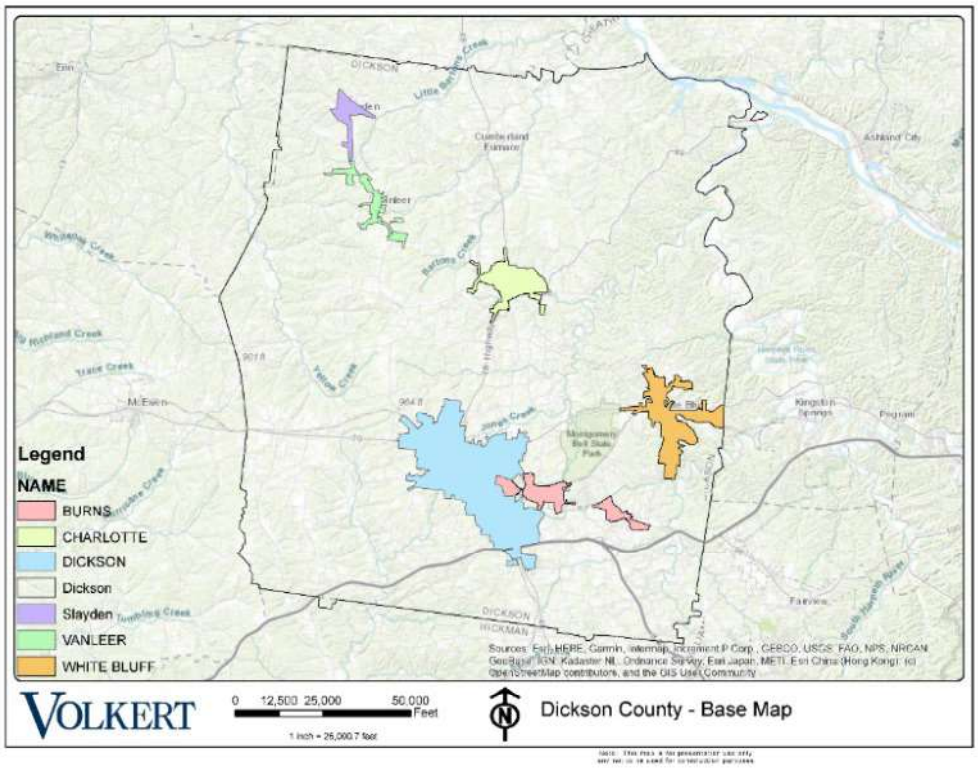
The City of Dickson and Town of White Bluff provide a variety of smaller parks and open spaces as well. Luther Lake is a 14-acre man-made lake popular for fishing and wildlife viewing as well as walking and running. City Lake is a 27-acre man-made lake that operates as a passive open space. White Bluff is currently planning an additional 50-acre nature park.

Environmental Strengths

- Citizen pride in the natural environment as evidenced by the investment in natural parks throughout the area surrounding the Montgomery Bell State Park.
- Montgomery Bell State Park recently renovated the Montgomery Bell Inn & Conference Center with support from the State of Tennessee.
- Vacant natural property is readily available.

Environmental Threats

- Growth pressure from the Nashville Area has caused stress on natural resources and ecosystems. As land is developed and natural habitats are fragmented or destroyed, biodiversity loss and habitat degradation occur. Increased pollution, deforestation, water scarcity, and air pollution are some of the environmental impacts associated with growth.



CULTURAL RESOURCES

Core Values

1. We believe in protecting historic structures, communities, and characteristics within our County.
2. We believe in providing a variety of recreation opportunities that promote healthy living, social interactions, and our natural environment.
3. We understand that the County's attractiveness as a destination to live, work and play depends on a quality of life that includes cultural diversity and opportunities.
4. We support a variety of organizations that offer events and cultural opportunities.
5. We know that cultural diversity makes a strong and healthy community.

CONTEXT

DICKSON COUNTY CULTURAL ATTRACTIONS

- Dickson Railroad Depot
- Montgomery Bell State Park
- Old Timers Day Festival
- Promise Land Community
- Bibb-White Bluff Civic Center
- Clement Railroad Hotel and Museum
- Cumberland Furnace Historic District
- Dickson County Historic Courthouse

Historic Resources

Railroad History – Dickson County has six communities that were developed along the Nashville to Tennessee River rail line. This created railroad history throughout the County in the forms of museums, tourist attractions, and educational opportunities.

The Dickson Railroad Depot, located in downtown Dickson, is a historic train station, built in 1914, that served as a hub for rail transportation in the county.

The Clement Railroad Hotel and Museum, situated in Dickson, is a historic building that originally served as a hotel for railroad passengers in the early 20th century. It now operates as a museum, showcasing the local history of the railroad and the role it played in the county's development.

Located just east of Dickson County in the Harpeth River State Park, the Montgomery Bell Tunnel is an impressive historic engineering feat associated with the area's early iron industry. Constructed in the mid-19th century, this tunnel is recognized as a National Historic Civil Engineering Landmark.

The Promise Land Community was established and settled by African Americans during the reconstruction period. In 2007 the Promise Land School was listed on the National Register of Historic Places (NRHP). In 2010, civil war trail markers were placed on the site of the historic school building. This opens the opportunity for educational and tourist attractions around this facility.

Scenic Highways

Dickson County is located within the Tennessee Trail System and is part of the Screaming Eagle Trail. The point of the trail is to explore charming small towns built by the iron industry featuring restaurants, tourist attractions, recreational activities, and retail opportunities.

It has six stops including:

- Three Creeks Farm
- Historic Charlotte Square
- Country View Market
- Montgomery Bell State Park
- Historic Downtown Dickson
- Keller's Farm

This opens the opportunity for tourist attractions around these locations that can show off the area's agricultural heritage.

Visual and Performing Arts

The Downtown Dickson area occasionally hosts art walks, where local artists display their works in participating businesses. This event allows visitors to explore the downtown area while enjoying diverse art forms.

The Dickson County Community Arts Council is dedicated to promoting and supporting the arts in the community. They organize events, exhibitions, and workshops, fostering collaboration and showcasing local talent. Dickson County's schools often host student performances, art showcases, and exhibitions, providing opportunities for young artists to showcase their talents and engage with the community.

Several music and theater groups in Dickson County contribute to the performing arts scene. These groups may organize concerts, theater productions, and musical performances throughout the year, showcasing local talent and providing entertainment for the community.

Various individuals and organizations in Dickson County offer art classes and workshops in different mediums, providing opportunities for community members to learn and develop their artistic skills. Dickson County features public art installations, including sculptures, murals, and other forms of visual art, which contribute to the aesthetics and cultural enrichment of the area.

In White Bluff, the Bibb-White Bluff Civic Center, an arts and education focused facility, hosts concerts, live theater, singer-songwriter rounds, art shows and lectures. The Civic Center grounds, including the Van F. Mills, M.D. Amphitheater and a recently completed covered pavilion, offers a premier location for outdoor concerts, theater productions, festivals, and private events.

Located near Nashville, Dickson County has deep music connections that can be branded as tourist destinations that would result in overnight stays and hotel accommodations.

COMMUNITY FACILITIES

Core Values

1. We desire equitable access to quality facilities and services for all citizens to enjoy.
2. We believe that these facilities encourage community members to pursue personal and professional development through access to resources and educational opportunities.
3. We believe this is best achieved by providing common areas, meeting rooms, gathering spaces, and recreational amenities that encourage community members to connect and build relationships.

CONTEXT

DICKSON COUNTY BY THE NUMBERS

- 1 Detention Center
- 9 Fire Departments
- 150 Deputies
- 23rd Largest School District
- 8,500 Students

General Government

Dickson County has several governmental buildings located in the Charlotte area, including the Dickson County Administration Building, the Dickson County Justice Center, and the Dickson County Election Commission office.

In addition, located in the City of Dickson is the Dickson County Health Department and the Dickson County Government Building that includes the Dickson County Public Library and Life-long Learning Center and offers large meeting rooms and executive meeting space suitable for corporate events. There are also other County offices, City/Town Halls, and other municipal buildings available for public use upon request throughout the County.

The Town of White Bluff provides executive, corporate and public meeting and event spaces in the Bibb-White Bluff Civic Center, White Bluff Community Center, and White Bluff Town Hall. The Civic Center also contains the Jennie Woodworth Library, a local library of over 10,000 resources. Dickson County provides a branch of the Dickson County Health Department in White Bluff.

Fire

Dickson County is fortunate to have a variety of fire departments, both municipal and volunteer, which play a crucial role in ensuring the safety and well-being of our community.

These departments include:

- Dickson County Fire & Rescue Service
- City of Dickson – 2 Stations
- White Bluff Fire Department
- Burns Volunteer Fire Department
- Vanleer Fire Department
- Charlotte Fire Department
- Claylick Volunteer Fire Department
- Cumberland Furnace Volunteer Fire Department
- Harpeth Ridge Volunteer Fire Department

Police & Detention Centers

Dickson County has law enforcement agencies responsible for maintaining public safety, including the Dickson County Sheriff's Office and municipal police departments. These agencies work collaboratively to enforce the law, respond to emergencies, and serve and protect the community.

The Dickson County Sheriff's Office serves as the primary law enforcement agency for the County, responsible for patrolling unincorporated areas and providing various law enforcement services. The sheriff's office in Dickson County is led by an elected sheriff and has specialized units such as investigations, K-9 units, and traffic enforcement. In addition to the sheriff's office, there are municipal police departments within Dickson County. The Patrol Division of the Dickson Police Department consists of 30 uniformed officers, commanded by a Captain and 4 shift supervisors. The Town of White Bluff Police Department consists of a Chief, Assistant Chief, 6 uniformed officers and various part-time and reserve officers and the Town of Burns has a Chief and 1 uniformed officer.

Dickson County operates the only detention center in the County, the Dickson County Jail, which serves as a secure facility for housing individuals who are arrested, awaiting trial, or serving sentences for criminal offenses. The jail is managed by the Dickson County Sheriff's Office and adheres to applicable laws and regulations concerning the custody and care of inmates.

Educational Facilities

The Dickson County school system is the 23rd largest school district in the state out of 142 different districts. The district services approximately 8,500 students and employees approximately 1,200 people. Over 6,000 students are transported each school day using 103 total buses which includes 17 special needs buses. They run 68 different bus routes with 13 special needs routes.

8 elementary schools:

- Dickson Elementary School
- Centennial Elementary School
- Oakmont Elementary School
- The Discovery School
- Stuart Burns Elementary School
- White Bluff Elementary School
- Charlotte Elementary School
- Vanleer Elementary School

4 Middle Schools:

- Dickson Middle School
- Burns Middle School
- William James Middle School
- Charlotte Middle School

2 High Schools:

- Dickson County High School
- Creek Wood High School

2 Alternative Schools:

- New Direction Academy
- Distance Learning Academy

2 higher education schools:

- Tennessee College of Applied Technology (TCAT)
- Nashville State Community College

Parks & Recreational Facilities

Dickson County is home to several parks maintained by local municipalities for residents and visitors to enjoy.

- Montgomery Bell State Park is a popular outdoor destination. It offers a wide range of recreational activities, including hiking trails, fishing, boating, camping, picnicking, and golfing. The park also has facilities for swimming, tennis, and basketball.
- Luther Lake is a 14-acre man-made lake popular for fishing and wildlife viewing as well as walking and running.
- J. Dan Buckner Park is a community park located in the heart of Dickson. The park offers amenities such as playgrounds, sports fields, walking trails, and picnic areas. Situated in downtown Dickson, War Memorial Plaza is a small park that pays tribute to the county's veterans. It features memorials, monuments, and green spaces for reflection and remembrance.

Henslee Park, which opened in 2023, has walking, running and biking trails as well as a 4,000 square foot splash pad and 25,000 square foot playground with inclusive and unique features. The seasonal splash pad opens around July 4th and closes around the time that the children head back to school with scheduled maintenance and cleaning days throughout use. It also includes a dog park open from sunrise to 10pm.

The Town of White Bluff, Town of Burns, and City of Charlotte offer additional amenities such as playgrounds, sports fields, walking trails, and community centers to the citizens. Throughout the county there are recreation centers that provide indoor facilities and programs for fitness, sports, and community activities. These centers may offer fitness equipment, gymnasiums, indoor pools, and dance classes for various age groups. These parks and recreational facilities can be utilized to attract multi-day athletic events which generate tourism dollars via hotel stays, restaurant usage and retail shopping.

Utility Infrastructure

Dickson County is completely served by the Dickson Electric Systems (DES) which is a public utility serving 38,000 customers in five counties in Tennessee: Dickson, Hickman, Cheatham, Houston, and Montgomery. The DES is a municipal electric utility owned and operated by the City of Dickson. The DES purchases power from the Tennessee Valley Authority (TVA) to provide reliable and affordable electricity to customers, offering services to residential, commercial, and industrial customers, setting rates based on factors like power purchase costs, infrastructure maintenance, and service provision. The DES emphasizes customer service and provides channels for inquiries, such as phone support and online account management. They also have programs to promote energy efficiency and may offer incentives for customers to reduce energy consumption. The DES is responsible for managing power outages in its service area. They often communicate outage updates and restoration timelines to customers through various means, such as automated phone calls, text messages, and online platforms.

DES is currently working on providing broadband services across Dickson County in partnership with Ignite Broadband. Ignite Broadband is a telecommunications company that provides high-speed Internet services in Dickson County to residential and business customers. Ignite Broadband employs various technologies to deliver Internet services, such as fiber-optic and fixed wireless connections. AT&T and Xfinity also provide fiber internet services in the more populated municipalities while other residents utilize satellite or home wireless capabilities.

Water & Wastewater

The Water Authority of Dickson County (WADC) is the largest provider of water in the County. The Water Authority was established in 2002 by the consolidation of the City of Dickson Water and Wastewater System, Turnbull-White Bluff Utility District and Harpeth Utility District. In 2006, they acquired the City of Fairview Water and Wastewater Department. This has allowed them to provide service to over 75% of the land mass in Dickson County as well as portions of the surrounding districts.

The WADC utilizes the Cumberland River in the north to produce drinking water. The Cumberland River Water Treatment Plant was completed in late 2003 as the first ultrafiltration membrane treatment facility in Tennessee. The Plant was designed to meet water supply needs for at least 50 years. It has a capacity of five-million-gallons-per-day with options for upgrades to 15-million-gallon-per-day with expansions. Combined with the Dickson Water Plant's 2.1-million-gallon capacity and the Turnbull Water Plant's capacity of 4.5-million-gallon-per-day, the WADC is prepared to supply customers' water needs in the County and beyond.

While the WADC operates multiple wastewater treatment Plants (WWTP), it is currently working to provide a fourth WWTP which would allow for future growth. The Jones Creek WWTP has recently implemented a rehabilitation project which has resulted in extending the life of the plant and allowing for improvements/opportunities in specific areas surrounding the Plant.

In 2006, WADC acquired the Fairview WWTP that resulted in improved compliance, termination of a sewer moratorium and removal of Flat Rock Branch as an impaired stream. This wastewater plant has the ability to take on additional customers in the Fairview area. In 2015, WADC acquired the Town of White Bluff's wastewater treatment facility as well as 933 customers and nearly 25 miles of sewer main.

Vanleer Water Works operates in the northern portion of the County to 1,200 customers in and around the town of Vanleer providing water services. The City of Charlotte has retained a wastewater treatment plant and provides sewer service.

Solid Waste & Recycling Centers

Dickson County provides ten convenience centers across the County. The County operates a landfill located on Eno Road in Dickson County. This landfill was operated by the City of Dickson from 1968 to 1977 when Dickson County assumed operations. It consists of approximately 74 acres. The landfill has undergone three expansions since it was first approved as a landfill in 1972. To reduce the number of recyclables going into the landfill, Dickson County has several projects including litter programs, Earth Day programs, public awareness campaigns, composting and expanding recycling at the Convenience Centers.

Dickson County's solid waste process involves the management and disposal of waste generated within the County. Residential, commercial, and industrial waste is collected by waste management services within the County. This typically includes the regular collection of household garbage, recycling materials, and bulk waste. Dickson County operates transfer stations where waste collected from various sources is consolidated and prepared for transportation to a designated landfill or recycling facility. These transfer stations serve as intermediate points between waste collection and final disposal.

Dickson County has a designated landfill for the disposal of non-recyclable waste. The landfill operates in compliance with state and federal regulations to ensure proper waste management and environmental protection. Waste is deposited in designated cells and covered with soil or other approved materials to minimize odor, litter, and environmental impact.

Dickson County promotes recycling as part of its solid waste management efforts. Recycling centers or drop-off locations are available for residents to deposit recyclable materials such as paper, plastic, glass, and metal. These materials are then processed and sent to recycling facilities for reuse or further processing. To ensure the proper handling and disposal of hazardous waste materials, Dickson County provides special collection events or designated facilities where residents can safely dispose of items such as household chemicals, batteries, electronics, and

other hazardous materials. Dickson County actively engages in education and outreach programs to promote waste reduction, recycling, and responsible waste management practices. These initiatives aim to raise awareness among residents, businesses, and schools about the importance of waste reduction, recycling, and the proper disposal of different waste streams.

LAND USE

Core Values

1. We believe that development should be focused on where it is best suited from an environmental, economic, infrastructure, and community service standpoint.
2. We respect private property and the ability for landowners to profit from their own land.
3. We collaborate regionally to coordinate the development of the built environment while protecting our natural environment.

CONTEXT

DICKSON COUNTY EXISTING LAND USE

Agricultural Land

- Land used for Agriculture purposes or vacant property

Industrial

- Land utilized for manufacturing or more intense uses

Low Density Residential

- Residential uses of 1 acre or more in the County; .5 acres or more in the municipalities.

High Density Residential

- Residential uses on less than .5 acres

Natural

- Land uses that are left in forested or vacant states

Public

- Land owned for civic purposes

Historical Background

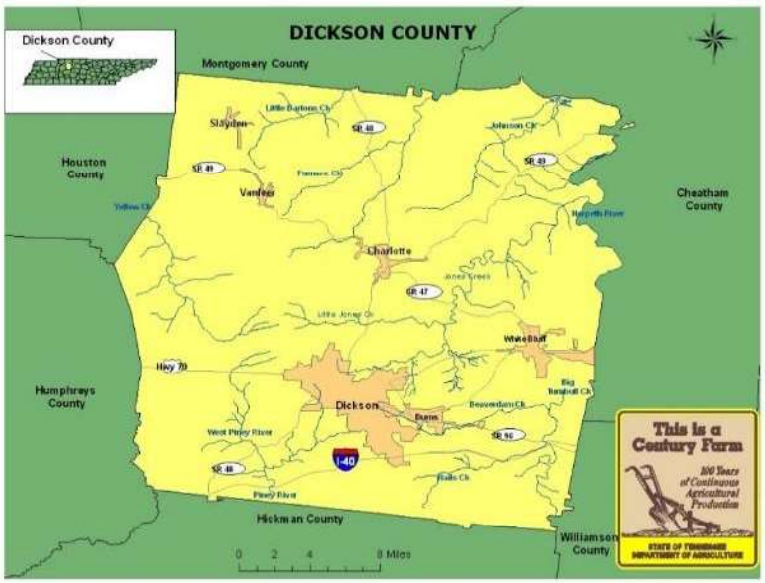
Dickson County has a long history of agricultural uses. Dickson County, the City of Dickson, Town of White Bluff and Town of Burns have all established their own zoning jurisdictions.

The current pressure from the growth rate of the nearby Nashville Area has created a pressure for agricultural land to turn into residential or commercial properties. This has created issues for community services such as water, sewer, and emergency services.

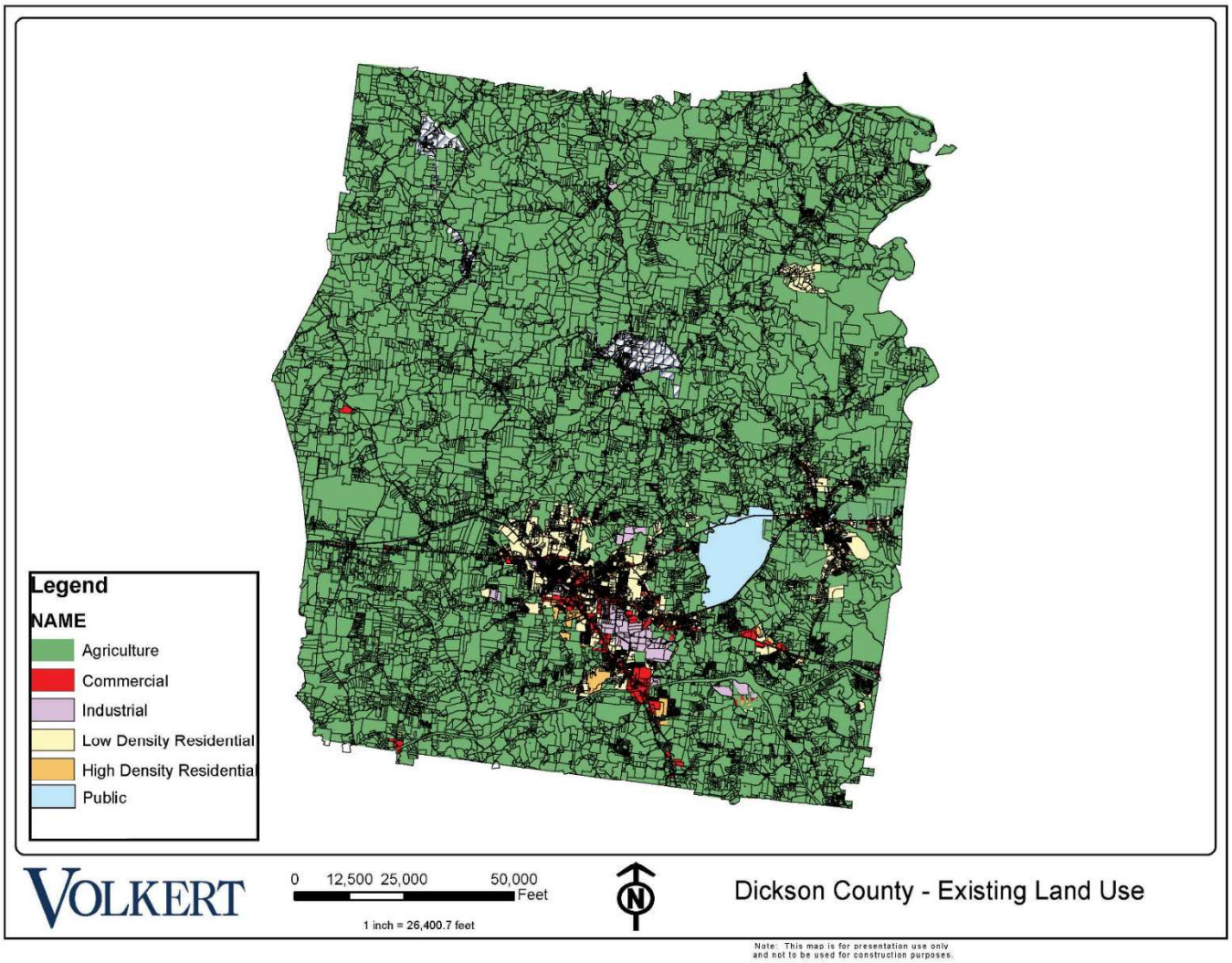
Current Planning Framework

Dickson County and local municipalities have a broad district that encompasses agricultural uses as well as commercial and residential uses.

The current planning framework includes an agricultural zone to preserve the agricultural land use. This has been utilized in multiple counties across the state very effectively.



Land use and growth maps for the area can be found on the following pages.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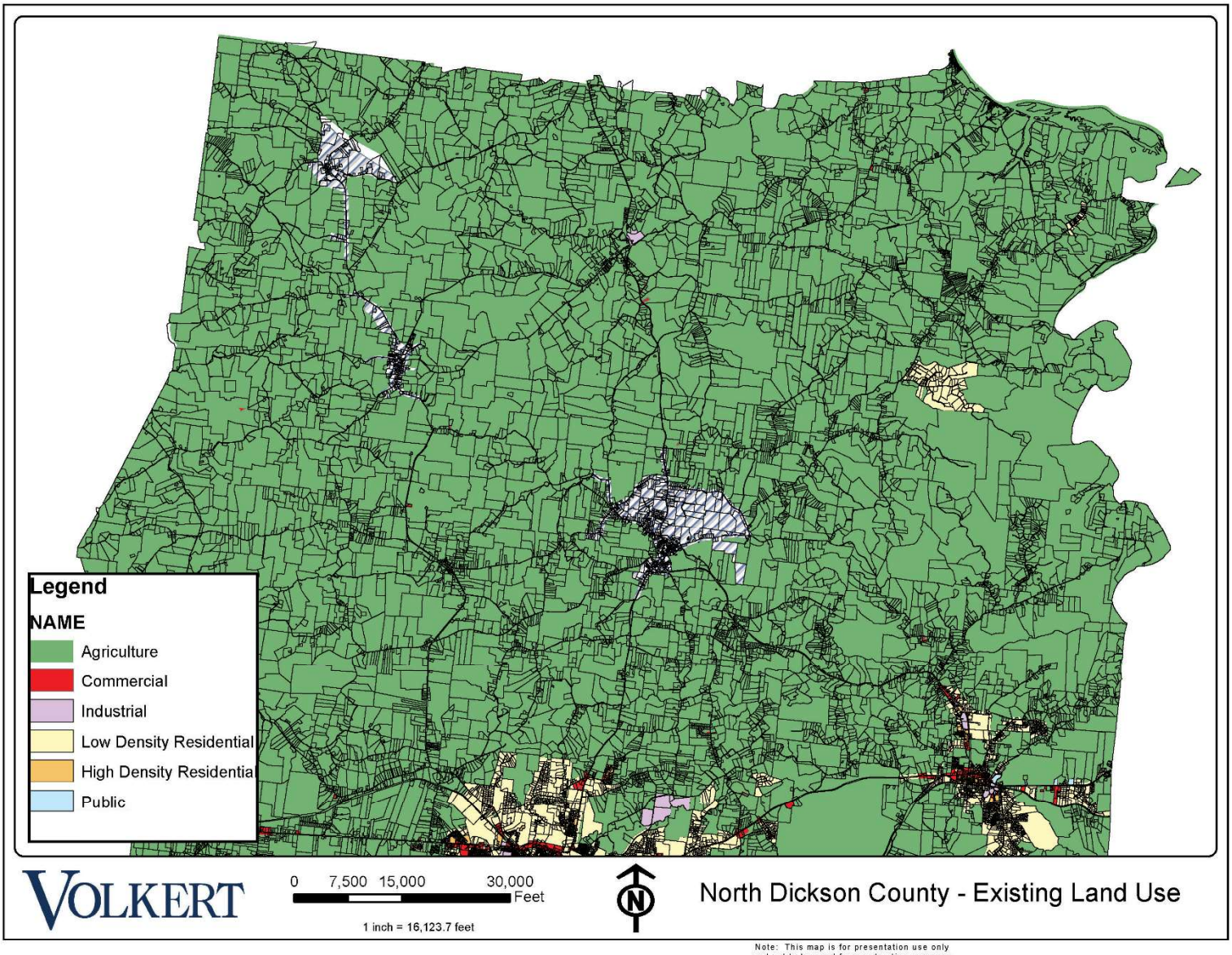
Dickson County - Existing Land Use
Note: This map is for presentation use only and not to be used for construction purposes.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North Dickson County - Existing Land Use
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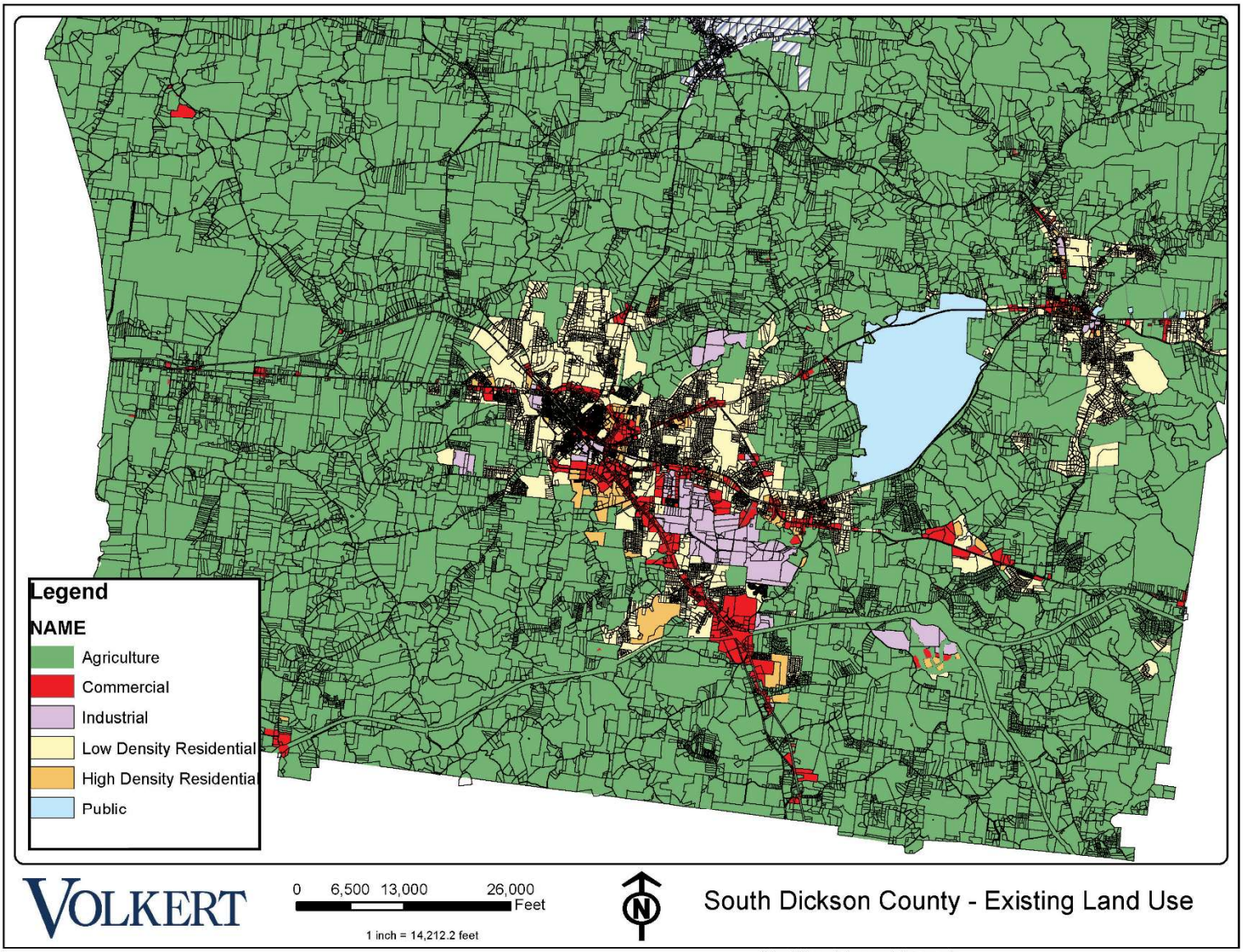
and not to be used for construction purposes.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Feet
1 inch = 14,212.2 feet
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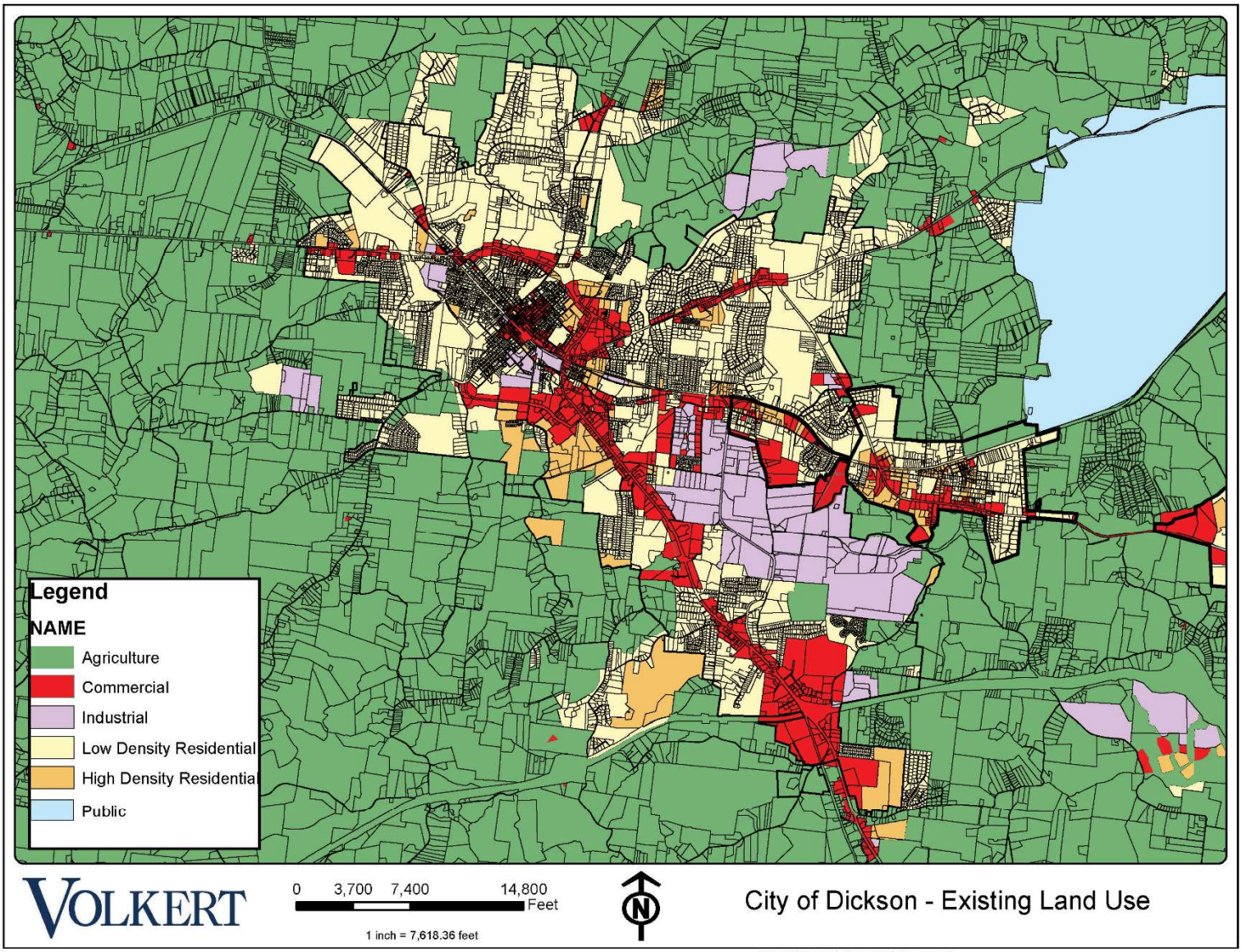
South Dickson County - Existing Land Use
Note: This map is for presentation use only
and not to be used for construction purposes.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Feet
1 inch = 7,618.36 feet
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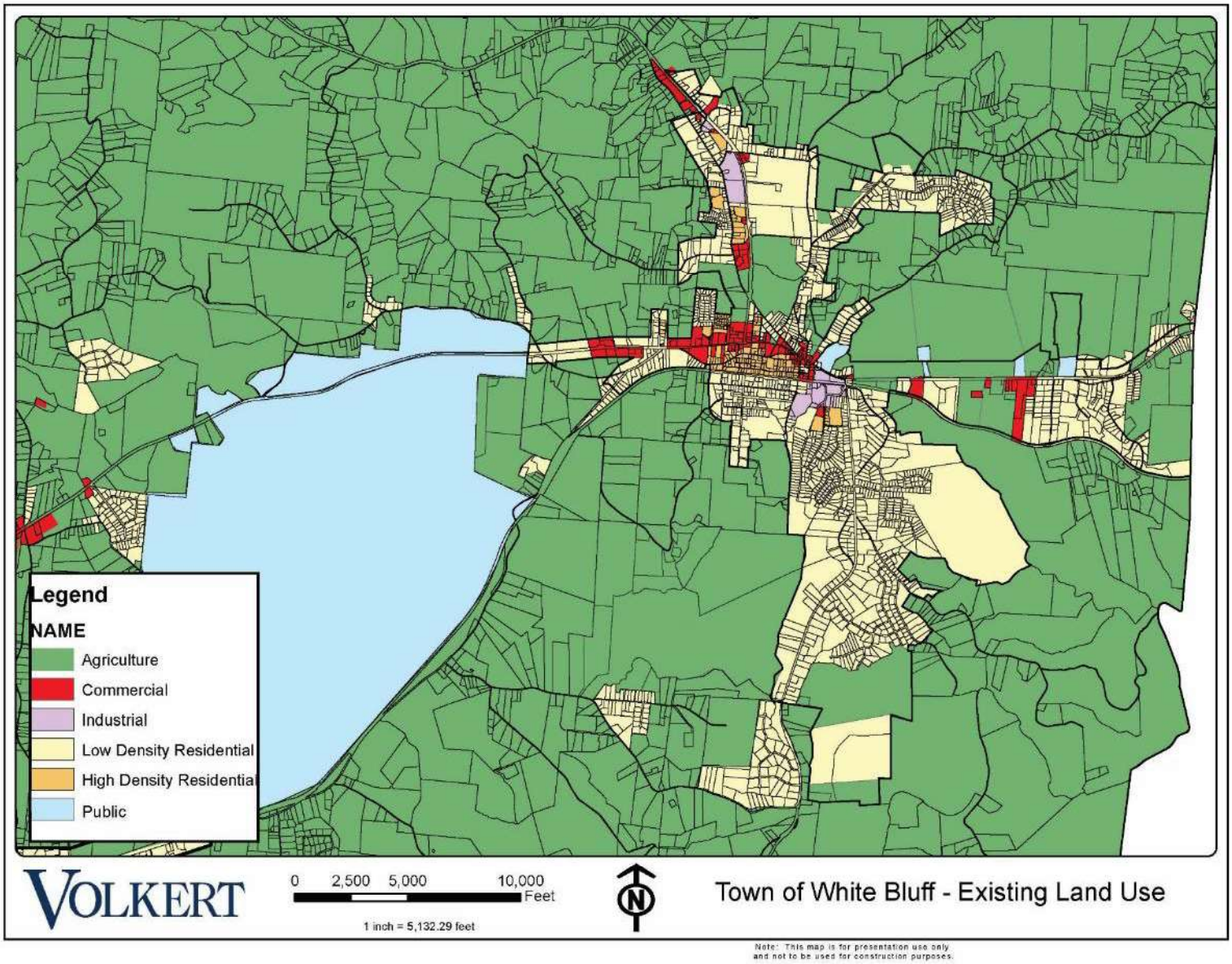
City of Dickson - Existing Land Use
Note: This map is for presentation use only and not to be used for construction purposes.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Feet
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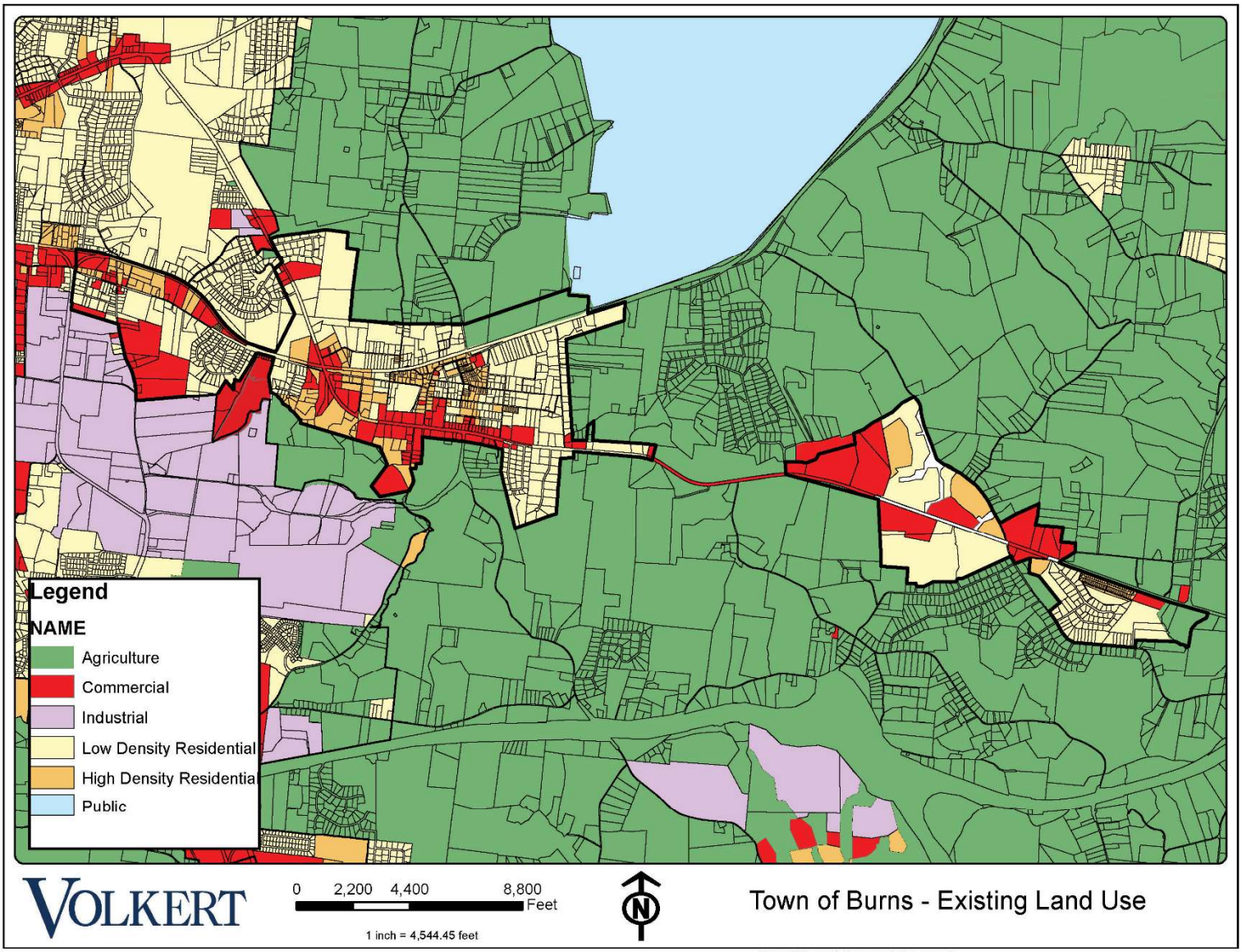
Town of White Bluff - Existing Land Use
Note: This map is for presentation use only and not to be used for construction purposes.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VOLKERT
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Feet
1 inch = 4,544.45 feet
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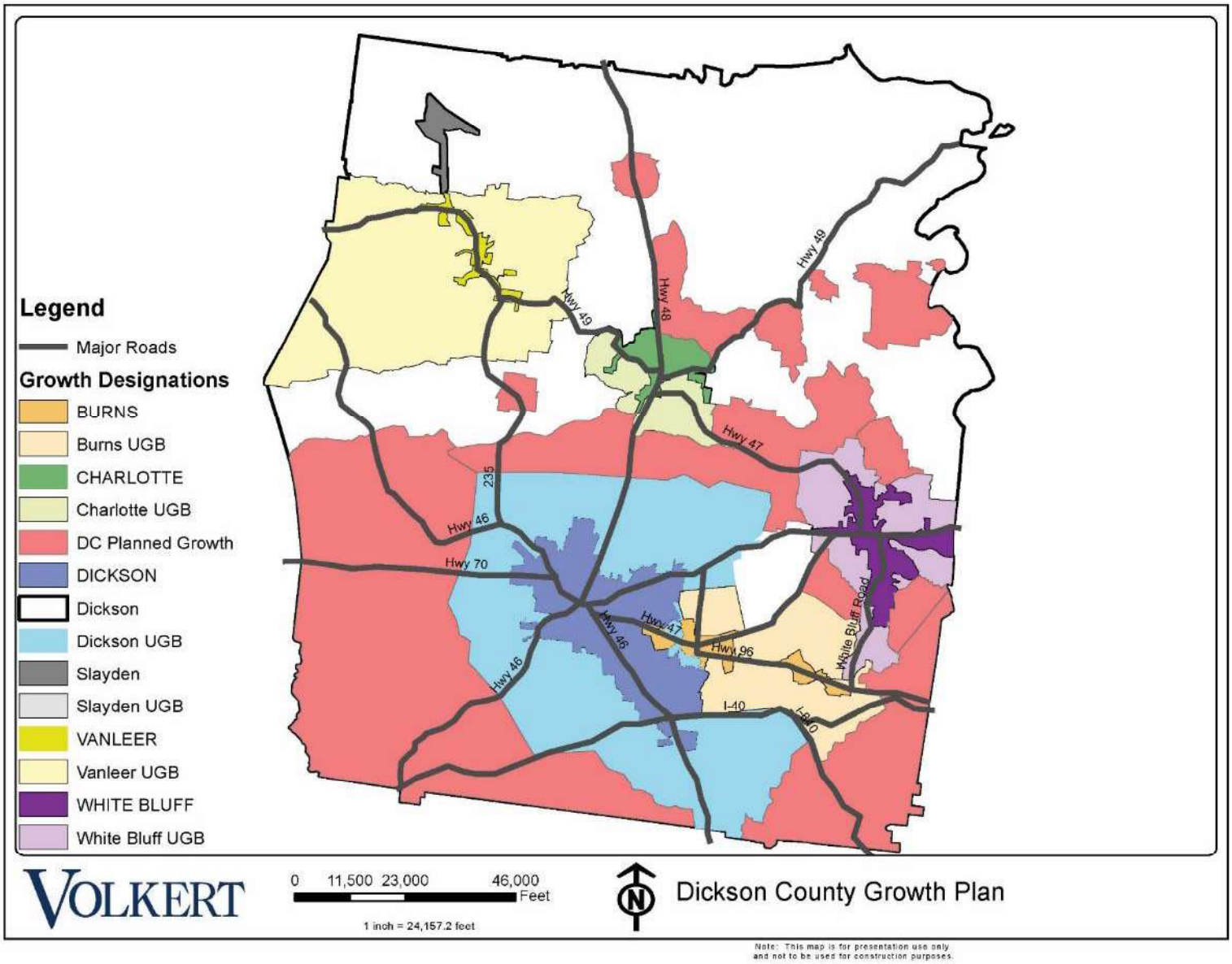
Town of Burns - Existing Land Use
Note: This map is for presentation use only and not to be used for construction purposes.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Major Roads
Growth Designations
BURNS
Burns UGB
CHARLOTTE
Charlotte UGB
DC Planned Growth
DICKSON
Dickson
Dickson UGB
Slayden
Slayden UGB
VANLEER
Vanleer UGB
WHITE BLUFF
White Bluff UGB
Hwy 49
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Hwy 47
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Hwy 70
Hwy 96
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Dickson County Growth Plan
Note: This map is for presentation use only and not to be used for construction purposes.

Proposed Future Land Use

The committee reviewed a variety of sources in determining the Future Land Use of Dickson County. This included public input from previously held meetings as well as information from utility providers, the state and economic development corporations. The following designations were created:

Agriculture — This district would be patterned after the existing agriculture district which allows for a variety of agriculture, commercial, and residential use. This requires that a minimum of a 1.5 acre lot size be reserved for agricultural use.

Agriculture Conservation — This district is proposed in areas where agriculture use has been present for 100+ years and is designated to receive a zoning that would allow for a minimum of 1.5 acre lot sizes reserved for agricultural use only.

Parks & Recreation — This district would allow for the property to remain in either passive parks, forested or formal recreation activity parks with no documented further restrictions.

Civic — This district is specifically for the use of the various jurisdictions at the state, County, and municipal level with no documented further restrictions.

Commercial/Mixed Commercial — This district would allow for all types of commercial uses including retail and restaurants with no documented further restrictions. For mixed commercial areas the district would allow for smaller and rural commercial uses such as produce stands, convenience stores, personal services such as offices, hair salons, etc. In the municipalities, this would allow for a true mix of residential uses with light commercial uses such as offices and personal services.

Industrial — Dickson County is fertile ground for emerging industries such as back-office enterprises or medical and automotive equipment production. Industrial districts include manufacturing facilities as well as warehouses, storage facilities, and other identified areas of site development for these types of facilities that utilize skilled workers to drive the local economy.

Residential Districts

- ***Low Density Residential*** **-** This would include single family residential lots with a minimum of 20,000 sq ft.
- ***Medium Density Residential*** **-** This would include a mixture of single-family residential lots with duplexes, town homes and condominium complexes. This should include a minimum of 7,500 sq ft lot sizes.
- ***High Density Residential*** **-** This would include multi-family residential lots with requirements for lot size.

STRATEGIES & ACTION PLANS

Core Values

1. A Comprehensive Plan without strategies and actions for improvements remains stagnant and little use to the communities it's been designed to serve.
2. These strategies should only be implemented with the initial Core Values in mind of:
   - creating a community wide vision for the future.
   - creating resources to inform policy decisions.
   - set priorities for leadership to aid in decision making while achieving the goals of the Comprehensive Plan.

Formalize Existing Programs

There are informal programs in place across Dickson County regarding business expansion and start-up businesses including a facility that is currently operating as an incubator to offer support and guidance for these expansions. These programs should be formalized and supported.

Suggested Actions

1. Hold regular meetings with existing businesses.
2. Hold regular meetings with facility owners of potential incubators to discuss issues and concerns that are impending development and land use.
3. Discussions on how to overcome those issues and concerns with County and municipal administrators.

Entrepreneur Business Program & Incubator

Entrepreneurs, with the right support, can evolve from small and rural communities and make a large impact. They are typically loyal and supportive to the community that supported them and are known to give back to the citizens that support them.

Suggested Actions

1. Set up a committee of local business owners to review other incubators and entrepreneurship programs.
2. Develop financial resources to create a grant program and mentor program to entice potential start-up programs and encourage site development without losing the natural agricultural history that attracted them to Dickson County in the first place.

Tourism Programs

Several existing tourism programs should be formalized and utilized to create more formal campaigns.

Suggested Actions

1. **Tourism Day Trips –** Organize specific day trips between Nashville & Dickson County in order to attach the community to the larger tourist attractions in the Nashville area. This should include the potential of working with existing travel businesses or bus systems.
2. **Wedding Destination Campaign –** Dickson County should build upon the successful and growing wedding industry in the area to become the preferred "Rural Wedding" destination outside of Nashville. A cost saving alternative to Nashville could potentially include working with wedding services such as florists, photographers,

venues, catering, and rental companies to market the area as a full-service wedding destination. The first step would be to create a listing of all the services and venues available and begin to work with them to create a campaign that can generate business for them while supporting County resources at the same time.

3. **Tourism Events –** The current festivals and events add to the livability and character of the communities. However, this does not typically result in an increase in overnight stays resulting in an increase in tourism dollars. A complete inventory of available facilities in Dickson County should be developed that highlights meeting spaces, overnight rooms available, natural and event spaces that could be utilized to boost tourism.

Directing Appropriate Growth

Bedroom community is the term used to identify areas in which people live, but all work, play, and business is completed in other adjacent communities. This causes difficulties in keeping taxes low to maintain services to the citizens including water, sewer, police, fire, and recreation. To combat the natural ability of the surrounding communities to become suburban areas of Nashville the following actions should be taken:

Suggested Actions

1. Review of existing zoning districts that would allow an increase in density in specific areas that have access to infrastructure and services allowing more rural areas to remain agriculture/nature specific.
2. Break down the County zoning Agricultural Districts into 3 different agricultural zones that would create distinct areas of preservation while outlining a plan for growth.

Industrial Site Survey & Expansion

The current industrial land is limited and difficult to market to the needs of the current job market.

Suggested Actions

1. Future Land Use Plans should identify the areas currently adjacent to existing industrial areas or services such as the interstate system and the airport as Industrial.
2. An Industrial Survey should be completed to identify potential industrial sites within the area. Consider a regional approach to sites that span boundaries (County/County) or (County/Municipal).

Airport Expansion and Regional Coordination

The Nashville Region has become a leader in aviation due to education programs at Middle Tennessee State University and Austin Peay State University as well as the variety of airports and the climate.

Suggested Actions

1. Develop regional partnerships with technical colleges and universities to provide additional training space and other programs within Dickson County.

Preservation of Montgomery Bell State Park

Montgomery Bell State Park is a highlight of Dickson County but it lies within the triangle of the three municipalities including Dickson, White Bluff and Burns. The growth of these jurisdictions has the potential to impact the natural aesthetic and tourism function of the park positively or negatively.

Suggested Actions

1. An overlay district should be created surrounding the Montgomery Bell State Park Area that allows for specific uses, design guidelines and required open space.

New Zoning Map and Ordinance

Dickson County should consider the establishment of a new zoning ordinance that includes the recommendations from the Land Use Plan and develop specific maps that will encourage growth without losing the area's history (i.e., new agricultural zones). Municipalities and other areas with appropriate infrastructure should support appropriate higher densities to help rural areas stay rural.

Suggested Actions

1. Discussion with the Planning Commission and staff regarding creating a new zoning ordinance.

FIRST STEPS

Set up the following Committees to oversee the implementation of this plan:

1. Existing Business Owners.
2. Entrepreneurship Committee.
3. Wedding Services Committee.
4. Task force of representatives of municipal Planning Commissions to begin the creation of an overlay district.
5. County Planning Commission to establish a Zoning Committee to study and implement a new zoning ordinance.

Detailed ***Proposed*** Future Land Use maps for Dickson County, City of Dickson, Town of White Bluff and Town of Burns as discussed during the preliminary planning phases of the Comprehensive Plan, can be made available for further discussion by municipalities.

TRANSPORTATION

Core Values

1. We believe in creating safe facilities for all modes of travel by designing and maintaining infrastructure to minimize accidents and injuries.
2. We will work towards efficiency of our transportation system to reduce congestion, travel times, and delays to enhance tourism and service to citizens by providing a connected multimodal network.
3. We believe in improving the non-vehicular infrastructure by creating transportation systems that promote active transportation such as walking and cycling.
4. We will improve connections between different modes of transportation, such as public transit, biking, walking, and private vehicles, to provide users with a wide range of transportation choices while recognizing the value of maintaining and preserving existing transportation infrastructure and assets to extend their useful life and minimize costs.

Prepared by: THE CORRADINO GROUP

Executive Summary

The transportation piece of the Comprehensive Plan is a strategic effort that incorporates consideration of all users of the transportation system. It acts as a guide for community decision-makers as they respond to and anticipate future growth while preserving the unique character found throughout the county and each municipality. This Plan differs from a traditional major thoroughfare plan in that analyses and recommendations consider all modes of travel, versus solely focusing on highway capacity (moving vehicles as efficiently as possible).

For the purposes of the transportation piece of the Plan, existing studies, plans, and guidelines for Dickson County, the City of Dickson, the Town of White Bluff, and the Town of Burns were reviewed to establish where and how the transportation network is being guided for future growth. Existing roadways, sidewalks, bicycle facilities and truck routes were inventoried, along with the collection of traffic data and crash history. Finally, analysis of the existing system and future growth helped determine recommendations for the transportation network, including infrastructure and policy, that will encourage safe, connected mode choices to enhance the overall mobility of the community.

Existing Conditions and Data Collection

For the Plan, the Annual Average Daily Traffic (AADT) volumes collected from TDOT count stations for the year of 2021 for all vehicle classifications, passenger vehicles, motorcycles, and trucks of all sizes was used for the analysis of the roadway segments.

Existing Traffic Operations

Based on the 2021 traffic volumes and existing roadway characteristics, evaluations were conducted to determine how well the roadways function throughout Dickson County. Specifically, the roadway segments that were determined to be operating at LOS D, E or F were identified for further study and potential improvements.

Projected 2043 Levels of Service (Existing Conditions)

By the year 2043, assuming no major improvements are made to the network, the levels of service are expected to degrade on some of Dickson County's major corridors. LOS analyses and evaluations were conducted to determine how well the roadways are expected to function throughout Dickson County in 2043. This resulting data was used to develop potential improvement projects for the network.

Safety Analysis of the Roadway Network

As part of this CTP, crash data for the last five years (2017-2021) was collected from the TDOT Enhanced Tennessee Roadway Information Management System (E-TRIMS) crash database. Once the top crash locations were identified, the study team delved into each segment to gather more information on crash trends, crash severity and manner of crash. Additionally, a site visit

was conducted on these selected roads to collect additional information on crash contributing factors. This analysis helped to propose recommended safety projects.

Pedestrian, Bicycle and Truck Analysis

Sidewalks are intended to help pedestrians move in a safe manner along a roadway, outside the vehicular path. When they are constructed to be aesthetically pleasing and properly located between uses, sidewalks further encourage walking trips.

According to the data collected from TDOT, there are two types of Bicycle Routes: Designated Bicycle Route and TN Bicycle Route. There are two state bicycle routes that intersect within Dickson County. One route is along US-70 within the project limits and the other is along SR 46, to the south of Dickson County, SR 235 (College Street) through the City of Dickson, and SR 46 north of the city. Other routes run along SR 48 (North), SR 96 (East), and SR 47.

According to the data collected from TDOT, there are two federal designated truck routes within Dickson County, US-70, and SR 96.

Recommendations

To keep the city's road system functioning safely and efficiently, recommended projects were selected based on the following:

- Existing reports and plans projects
- Public outreach and engagement
- Systematic safety analysis
- Existing and future traffic operations
- Future land use evaluation

Recommended Projects with Cost Estimates

The projects identified as part of this study will help to meet three broad goals for improving the transportation system for Dickson County and participating public agencies:

- Relieving traffic congestion by providing additional capacity on the major corridors.
- Improving circulation by increasing the connectivity of the area network as the city continues to develop.
- Addressing the site-specific safety.

Proposed roadway projects for the 2043 Comprehensive Transportation Plan are grouped according to two timeframes: Short-Term and Long-Term. In all, as shown on Table 17: Recommended Projects and Cost, there were 15 identified Short-Term projects and 19 Long-Term projects.

Project Prioritization and Implementation

Implementation of transportation projects required justification for constructing the project and identification of funding sources. The projects identified in this Comprehensive Plan

Recommendations Section will address safety, connectivity, and mobility. The first step in the prioritization process requires the jurisdiction to determine a percentage of the total score that applies to each traffic issue (safety, operation, and connectivity) based on the benefits expected from construction of the project.

Identifying projects in the Comprehensive Plan is only the first step in the project delivery process. Moving projects through the design and construction phases requires planning and coordination that begins once funding for the project is identified. The possible funding sources identified in this plan include both federal and state options that usually require a local match. It is important to realize private funding through local developers can also serve as a funding source for some of these projects.

CONTEXT

The transportation portion of the Comprehensive Plan is a strategic effort that incorporates consideration of all users of the transportation system. This Plan particularly focuses on the intersection of land use and transportation goals. It acts as a guide for community decision-makers as they respond to and anticipate future growth while preserving the unique character found throughout the county and each municipality. The Plan differs from a traditional major thoroughfare plan in that analyses and recommendations consider all modes of travel, versus solely focusing on highway capacity (moving vehicles as efficiently as possible), and that links roadway function and accommodations to the area it serves.

To plan for the future, a strong understanding of the existing facilities in the transportation network and the pattern of land use in the community is required. For the purposes of this transportation part of the Plan, the Corradino Group reviewed existing studies, plans, and guidelines for Dickson County, the City of Dickson, the Town of White Bluff, and the Town of Burns to establish where and how the transportation network is being guided for future growth. They inventoried the existing roadways, sidewalks, bicycle facilities and truck routes, along with traffic data and crash history made available from TDOT for the communities. To prepare for future growth, the Corradino Group coordinated with County and municipal representatives to identify future projects and developments. Analysis of the existing system and future growth helped us determine recommendations for the transportation network, including infrastructure and policy, that will encourage safe, connected mode choices to enhance the overall mobility of the community.

Scope of Study

The scope of study for the transportation element of Plan is divided into five tasks: existing conditions & data collection, network analysis & evaluation, recommendations with cost estimates, prioritization & implementation, documentation, and GIS. Through these tasks the study focuses on four major aspects of inclusive transportation: Safety, Connectivity, Mode Choice, and Mobility [Figure 1].

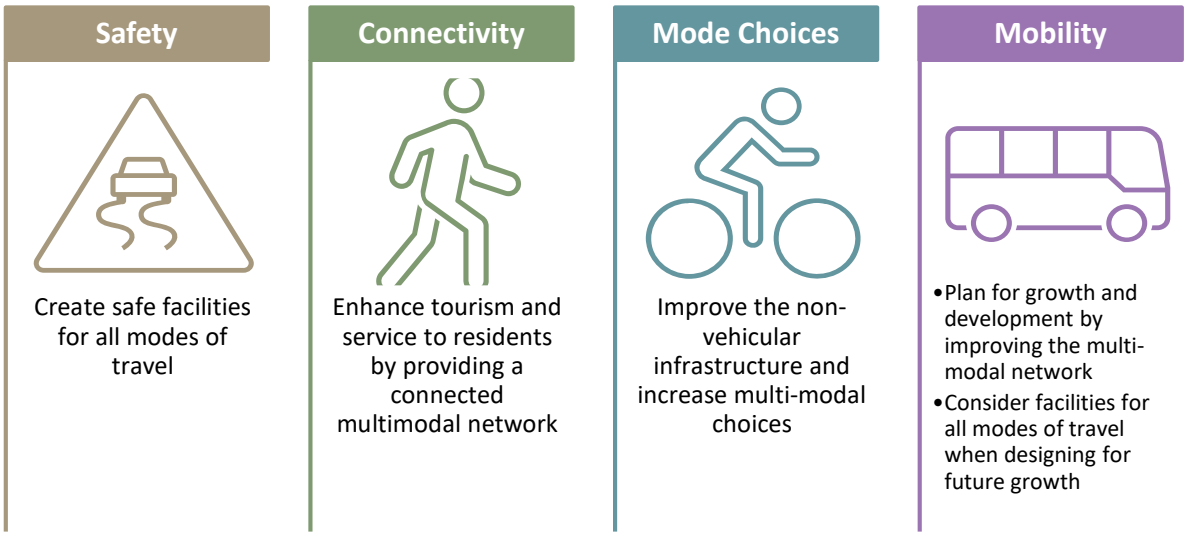


FIGURE 1: MAJOR ASPECTS OF THE INCLUSIVE TRANSPORTATION

All communities strive to provide a safe transportation network for all users. Planning adequate facilities designed for users of all levels, including children, older users, and various physical abilities, requires a design focused on expected movement between vehicles, pedestrians, and bicyclists. Properly connected facilities contribute to safer trips on the network.

An area with adequate connectivity is one that provides modal choices between different land uses identified as origin and destination trip pairs. For example, networks that connect residential areas with local parks and schools via sidewalks or separate bicycle facilities will promote walking and biking trips. Connecting residential areas to neighborhood retail, such as restaurants, convenience stores, and grocery stores, via sidewalks and separate bicycle facilities can also promote biking and walking trips. Promoting connected bicycle and pedestrian facilities accommodates mode choices for transportation trips.

Mode choices include providing safe, comfortable facilities for walking, biking, and vehicular trips. Separate facilities for vehicles, pedestrians, and bicycles and properly designed intersections where the three modes interact will help maintain good operation of the network.

Networks designed with these mode choices provide adequate mobility throughout the community.

Providing appropriate roadway characteristics so that interaction with pedestrians and cyclists occurs at expected locations is needed for a successful transportation network. The operation of a network's design is most successful when users can easily choose to walk or bike to destinations while providing adequate movement of vehicles.

This section deals with roadway operations focusing on the amount of traffic travelling through the road network of Dickson County and the various municipalities. Roadway level of service is analyzed for both existing and future conditions (without improvements) to understand current and future mobility of the study area.

Existing Functional Classification

The first step in gathering the existing conditions in Dickson County was to identify the roadway classifications based on established Federal Highway Administration (FHWA) standards which are like the TDOT functional classification system. Classifications are based on the purpose of the roadway and the purpose of the trips typically taken on the roadway. A brief description of each roadway classification is shown in Figure 2.

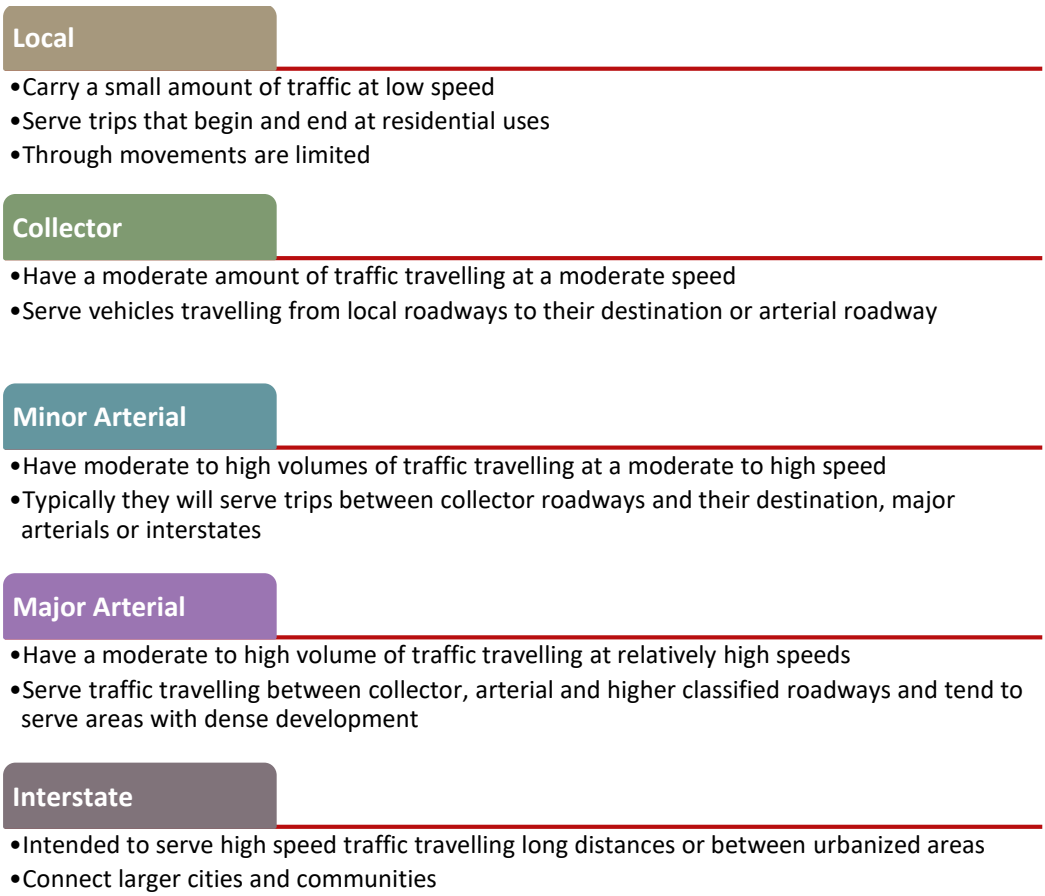


FIGURE 2: TDOT FUNCTIONAL CLASSIFICATION SYSTEM

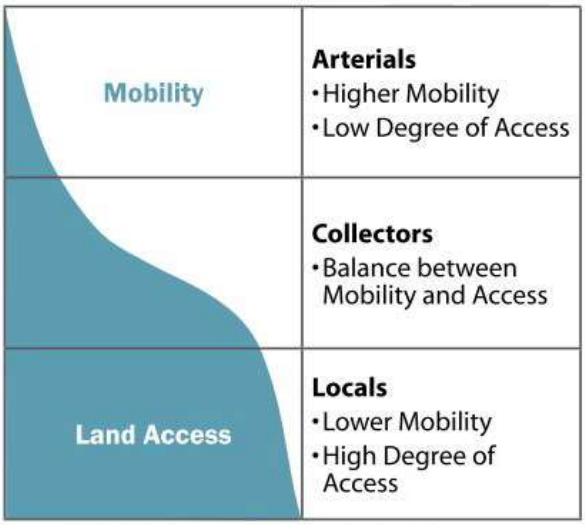


FIGURE 3: FUNCTIONAL CLASSIFICATION'S RELATIONSHIP TO MOBILITY AND ACCESS[1]

[1] Safety Effectiveness of Highway Design Features: Volume I, Access Control, FHWA, 1992

Categories typically include interstate, principal and minor arterials, collectors, and local roads. As one moves up the hierarchy from local to collector to arterial to interstate, speeds generally increase and there is a corresponding decrease in access provided to adjoining properties (see Figure 3). Figure 4 shows the functional classification maps for the existing roads of Dickson County. The functional classification map and description of roadways in this study is limited to arterial and collector roads.

Based on the land use character, the roadway network and population base, it is evident that most of these arterial and collector roads are within rural settings. Primarily, the urban arterial and collector roads are mostly located within the City of Dickson. To understand the distribution of different road settings, a comparison of road mileage by functional classification between Dickson County and FHWA guideline is shown in Table 1 in Appendix B.

As discussed, it is important for the County and municipalities to continue establishing an adequate number of collector routes as new areas are developed, as opposed to having many local streets connect directly to arterial highways.

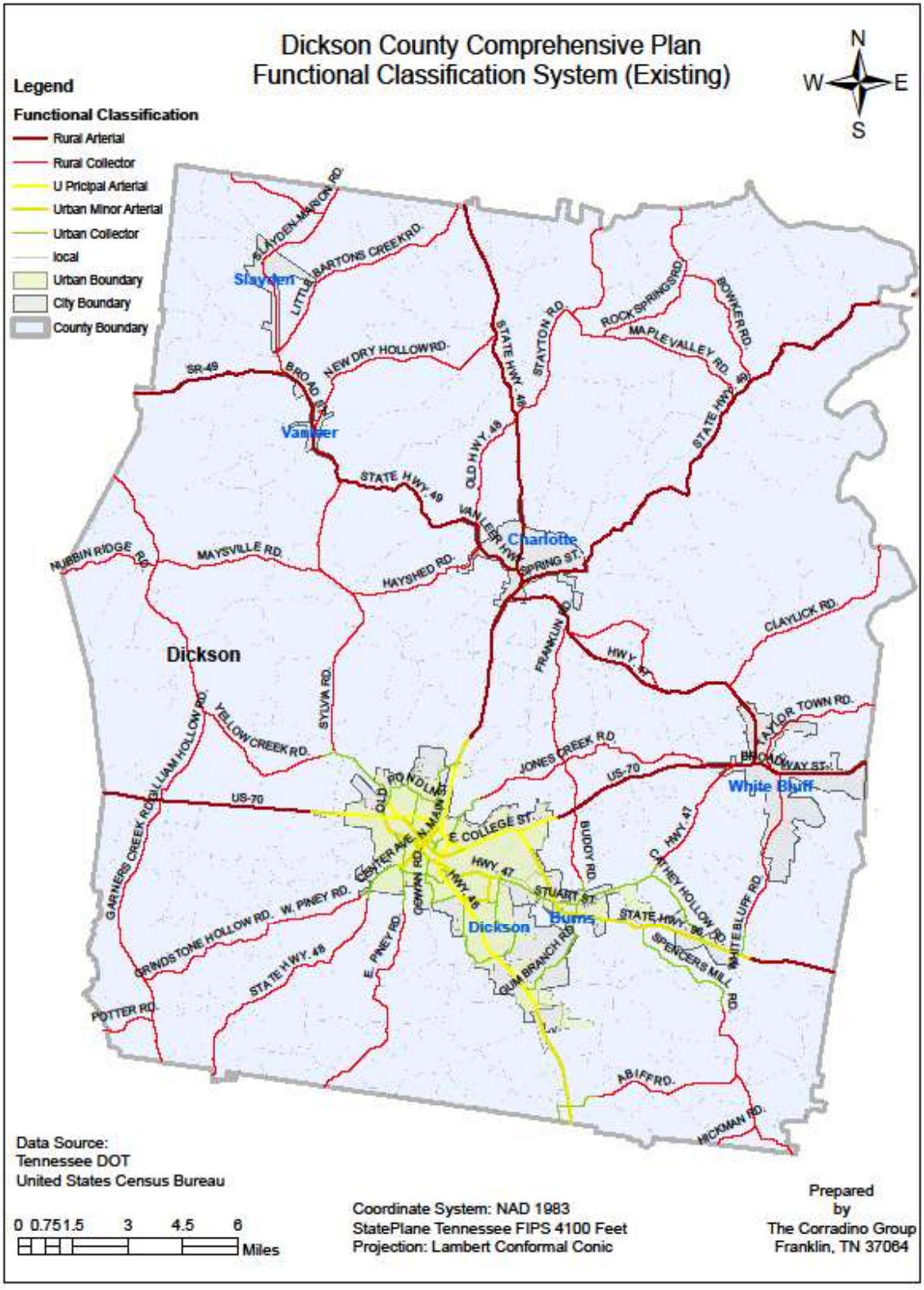


FIGURE 4: FUNCTIONAL CLASSIFICATION MAP FOR DICKSON COUNTY

Existing Traffic Volumes

Traffic volumes on the roadways help us identify where operational issues exist. For this Plan, the Annual Average Daily Traffic (AADT) volume was used for the analysis of the roadway segments. AADT volumes were collected from TDOT count stations for the year of 2021 for all vehicle classifications, passenger vehicles, motorcycles, and trucks of all sizes. It should be noted that the 2021 traffic volume data likely was still impacted by the COVID pandemic, which may have recorded some lower traffic volumes. However, with the generalized operational analysis of the corridors, the resulting Level of Service (LOS) is not expected to be significantly impacted by the potentially COVID impacted volumes.

Most often, the arterial roadways serve as the backbone of a region's transportation system, providing for the expeditious movement of people and goods. Dickson County is no different in that the arterials provide the much-needed mobility to/from major trip generators. Additionally, some collector roadways act as main commuting corridors in the county, specifically within the municipalities. Figure 5 shows the AADT map for Dickson County. Table 2 located in Appendix B shows the road segments having AADT of more than 10,000.

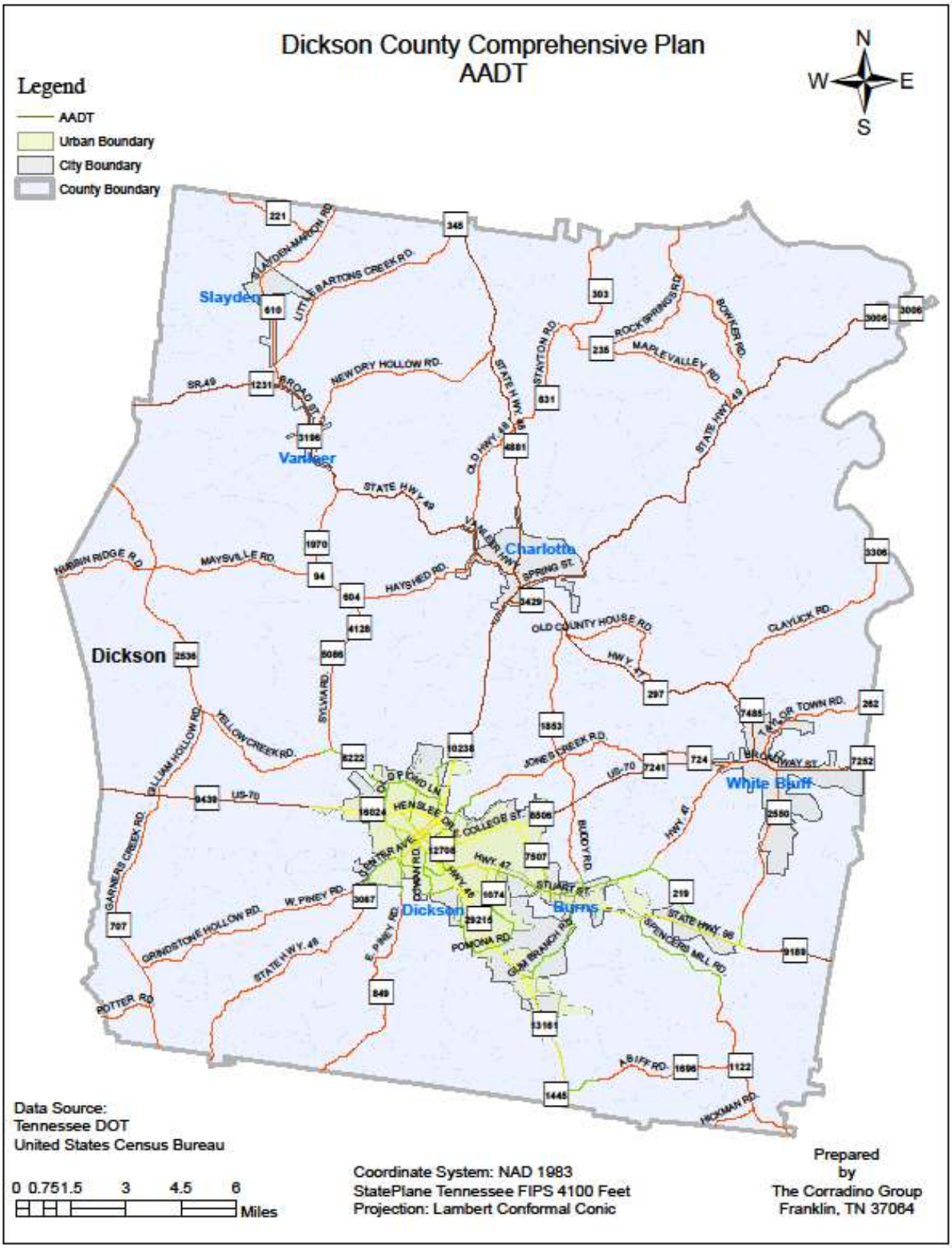


FIGURE 5: AADT MAP OF DICKSON COUNTY

Existing Traffic Operations

Based on the 2021 traffic volumes and existing roadway characteristics, evaluations were conducted to determine how well the roadways function throughout Dickson County. The segment analysis results in a LOS which represents operational function based on maneuverability, delays, and speed of vehicles. The LOS based on the daily traffic volumes and roadway geometry results in a value denoted as A through F as defined in Figure 6.

The evaluation is conducted using Highway Capacity Software (HCS). For the LOS determination, the following variables are used: AADT, design hourly volume (DHV), lane width, speed limit, shoulder width, access point density, truck traffic percentages, and peak hour factor. Analysis was conducted for all 203 roadway corridors, classified as collectors and arterials. Typically, LOS A through D is considered acceptable operation and LOS E or F is considered unacceptable. Figure 7 shows the LOS map for Dickson County. Table 3 shows the road segments having LOS E and/or LOS F. Table 4 shows the corridors with LOS D. The results of this analysis are included in Appendix C.

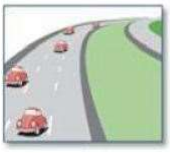
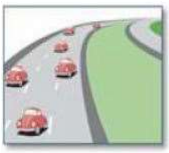
	**A**	Free flow operations. Vehicles are almost completely unimpeded in their ability to maneuver with the traffic stream. The general level of physical and psychological comfort provided to the driver is high.
	**B**	Reasonable free flow operations. The ability to maneuver with the traffic stream is only slightly restricted and the general level of physical and psychological comfort provided to the driver is high.
	**C**	Flow with speeds at or near free flow speeds. Freedom to maneuver within the traffic stream is noticeably restricted and lane changes require more vigilance on the part of the driver. The driver notices an increase in tension.
	**D**	Speeds decline with increasing traffic. Freedom to maneuver within the traffic stream is more noticeably limited. The driver experiences reduced physical and psychological comfort levels.
	**E**	At lower boundary, the facility is at capacity. Operations are volatile because there are virtually no gaps in the traffic stream. There is little room to maneuver. The driver experiences poor levels of physical and psychological comfort.
	**F**	Breakdowns in traffic flow. The number of vehicles entering the highway section exceeds the capacity or ability of the highway to accommodate that number of vehicles. There is little room to maneuver. The driver experiences poor levels of physical and psychological comfort.

FIGURE 6: DESCRIPTION OF LEVEL OF SERVICE (LOS)

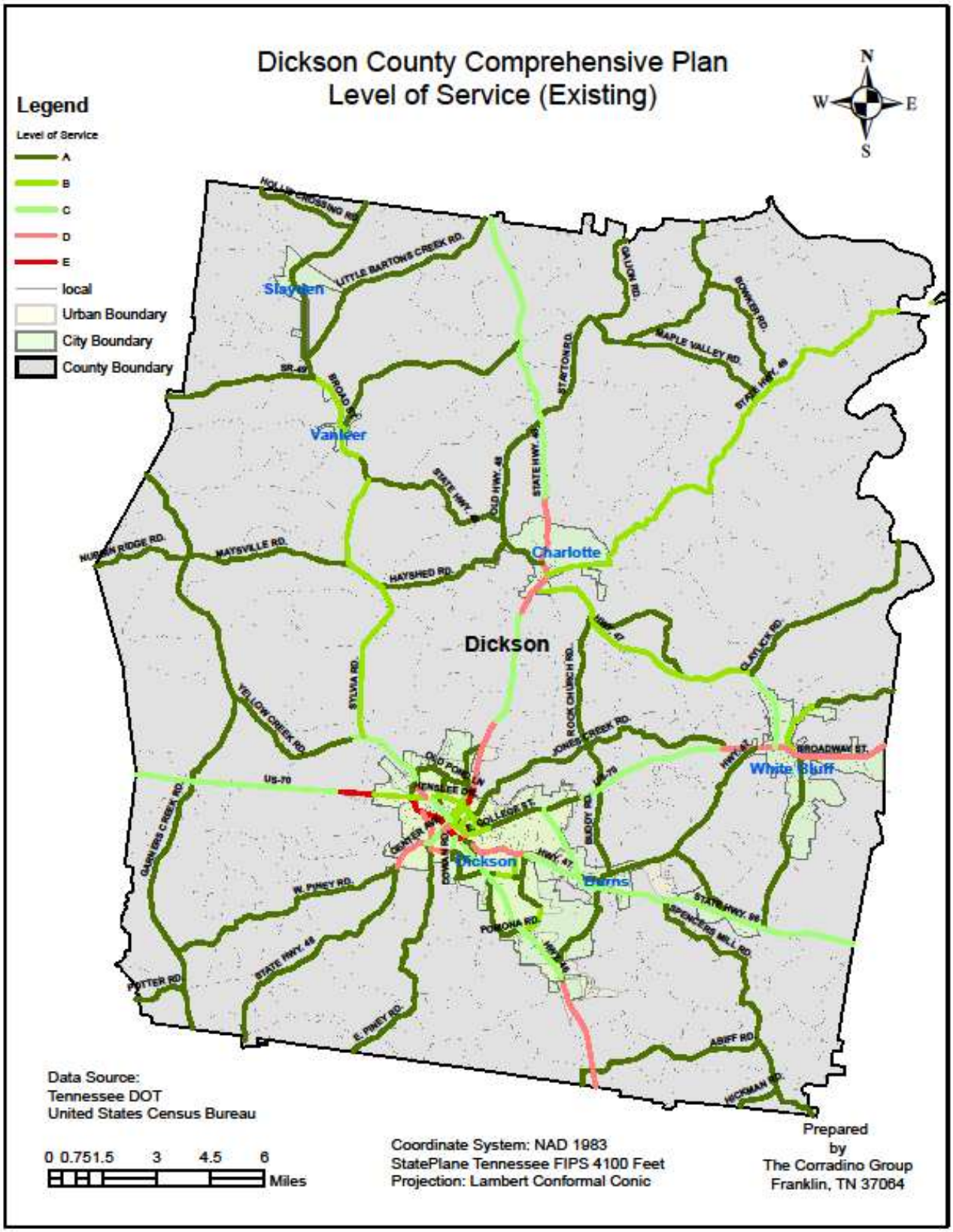


FIGURE 7: LOS MAP FOR DICKSON COUNTY (EXISTING)

2.4 Projected 2043 Levels of Service (Existing Conditions)

By the year 2043, assuming no major improvements are made, the level of service is expected to degrade on some of Dickson County's major corridors. The growth rate for every road segment was calculated using the TDOT count station. AADT for the last 10 years is utilized to calculate the growth rate. The final growth rate that is used for LOS calculation is determined using the calculated 10-year average growth and engineering judgement. Figure 8 shows the map for anticipated traffic operations on area roadways. Table 5, found in Appendix C, shows the 2043 AADT calculations based on the growth rate, existing and future 2043 LOS (LOS E and LOS F).

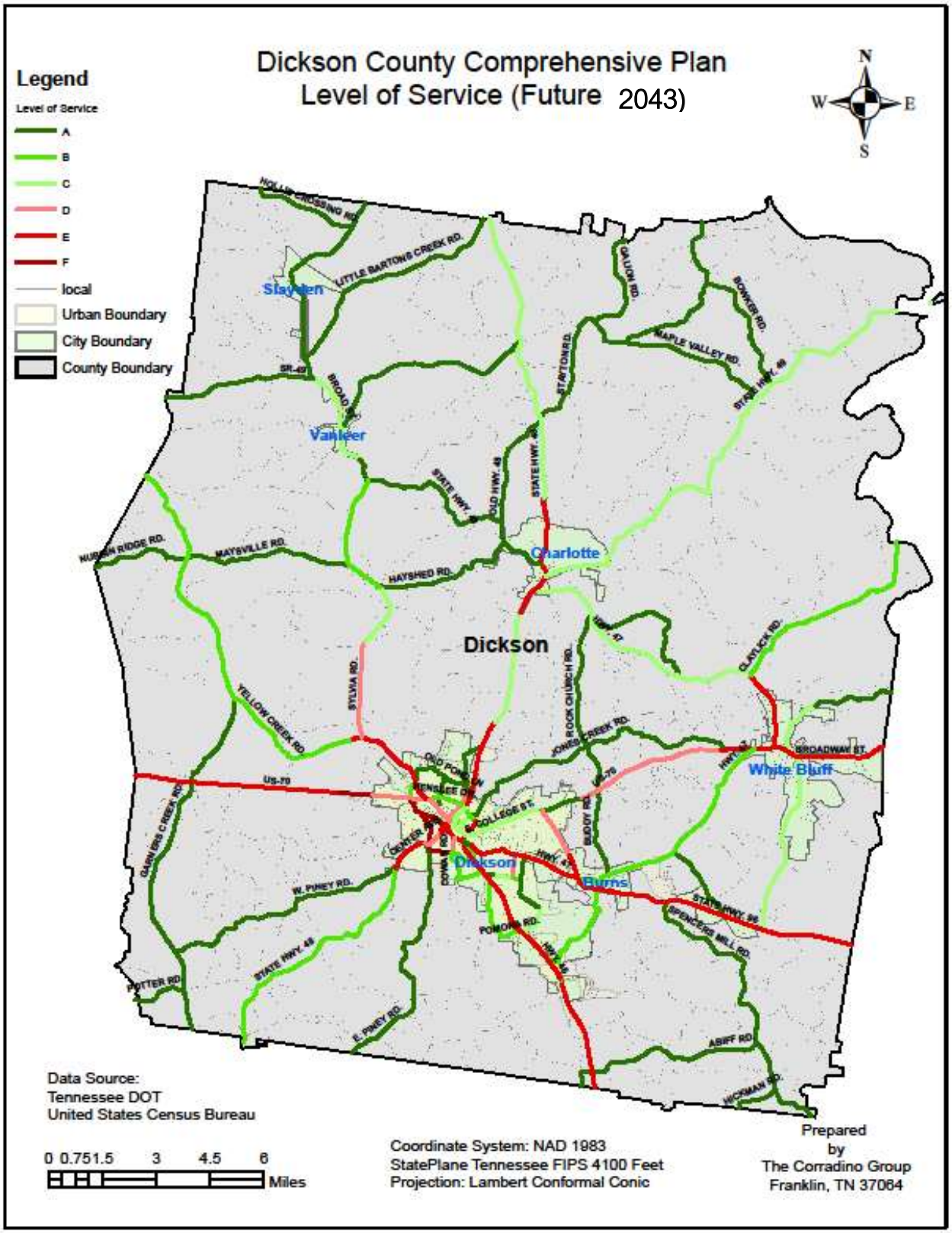


FIGURE 8: LOS MAP FOR DICKSON COUNTY (FUTURE 2043)

Traffic Safety Analysis

Safety Analysis of the Roadway Network

All agencies strive to provide a safe transportation network for vehicles, pedestrians, and cyclists. To achieve this goal, it is important to create a system where all users have an understanding and comfort with the use of facilities by all modes and interaction by all users is clearly established. As part of this CTP, crash data for the last five years (2017-2021) was collected from the TDOT Enhanced Tennessee Roadway Information Management System (E-TRIMS) crash database. Data obtained from the database includes severity of crash, collision type, time of crash, weather, and roadway conditions. From the information obtained and review of the data, a crash trend is attempted to be identified. A systematic approach was used to identify high crash locations and reduce the number of locations evaluated. Figure 9 shows the five-year crash history and associated severity map of Dickson County.

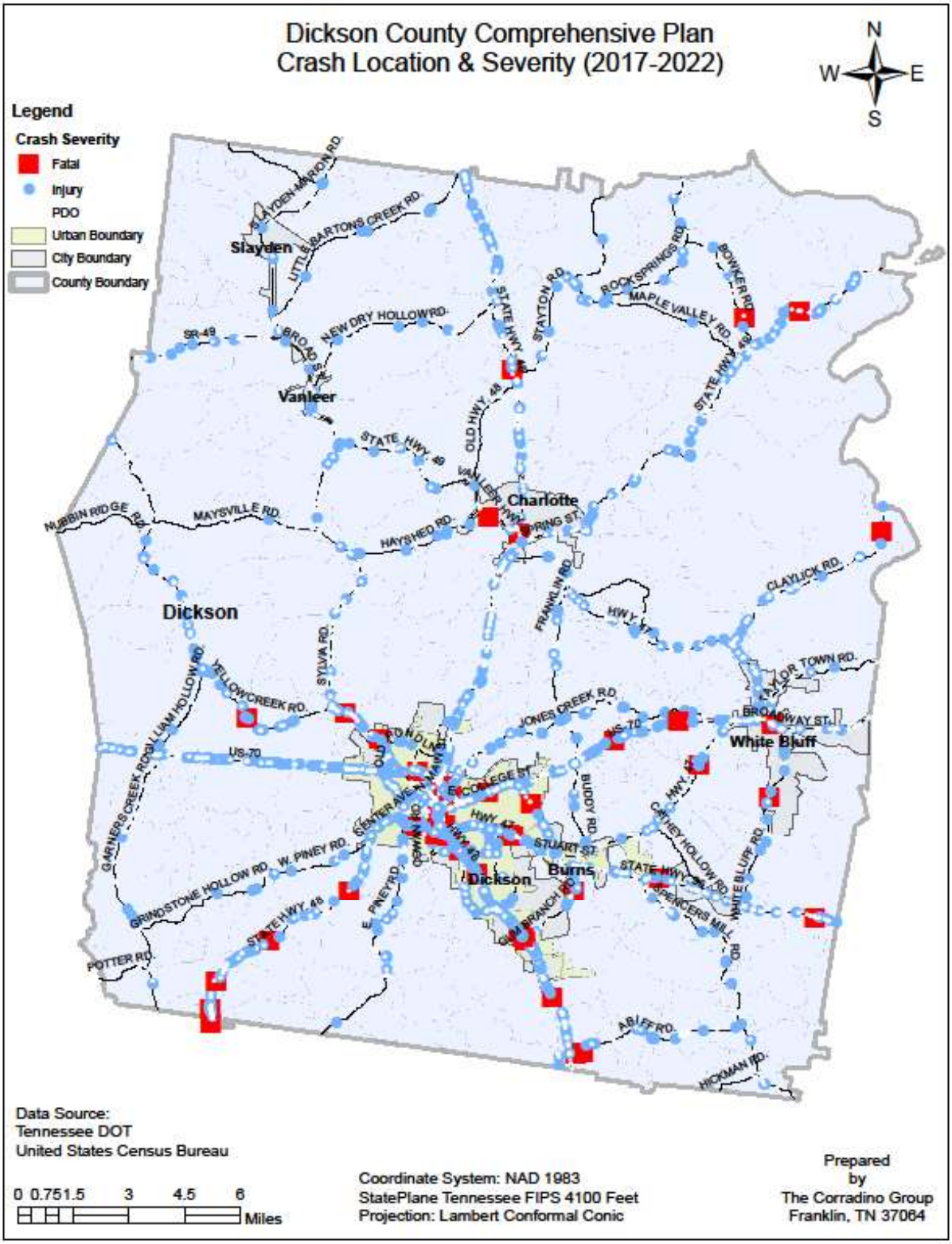
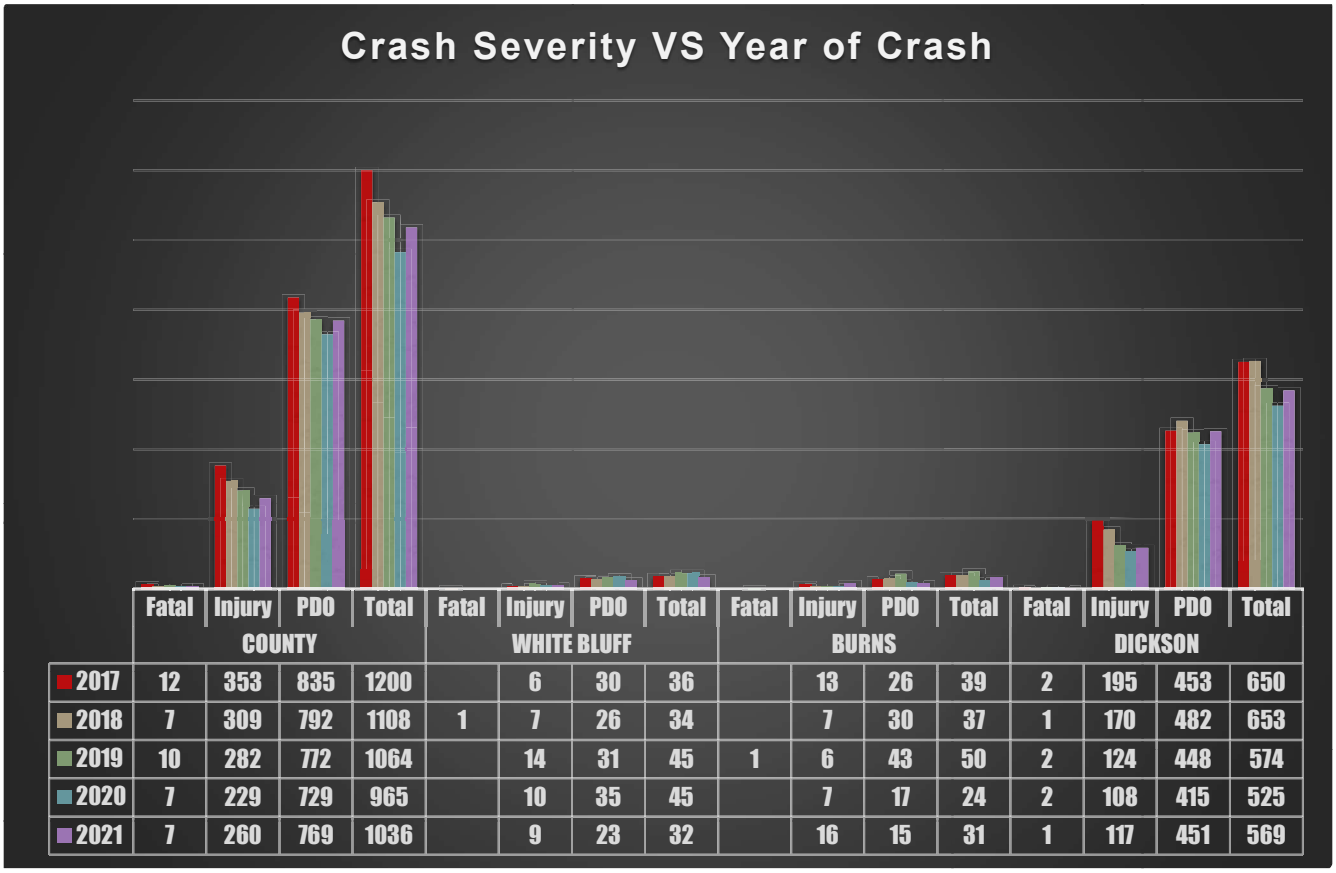


FIGURE 9: 5-YEAR (2017-2021) CRASH FOR DICKSON COUNTY

Crash Trend

Figure 10 shows the crash trends for Dickson County, the Town of White Bluff, the Town of Burns, and the City of Dickson in terms of severity. The information in the figure shows:

- From 2017-2020, a slight decreasing trend for the number of crashes. However, the 2021 crashes increased from 2020.
- The fatal crash proportion is less than one percent.
- Property Damage Only (PDO) crashes dominate the crash type in the study area.



	COUNTY				WHITE BLUFF				BURNS				DICKSON			
	Fatal	Injury	PDO	Total	Fatal	Injury	PDO	Total	Fatal	Injury	PDO	Total	Fatal	Injury	PDO	Total
2017	12	353	835	1200		6	30	36		13	26	39	2	195	453	650
2018	7	309	792	1108	1	7	26	34		7	30	37	1	170	482	653
2019	10	282	772	1064		14	31	45	1	6	43	50	2	124	448	574
2020	7	229	729	965		10	35	45		7	17	24	2	108	415	525
2021	7	260	769	1036		9	23	32		16	15	31	1	117	451	569

FIGURE 10: 5-YR CRASH TREND OF DICKSON COUNTY

Pedestrian, Bicycle and Truck Analysis

EXISTING SIDEWALKS AND BIKE FACILITIES

Walking and biking along roadways is allowed per law but adequate planning and construction of safe facilities are needed to help increase the number of pedestrians and bicyclists. The more comfortable it is for people to walk or bike, the more likely they are to choose this mode of travel.

Existing Sidewalk

Sidewalks are intended to help pedestrians move in a safe manner along a roadway, outside the vehicular path. When they are constructed to be aesthetically pleasing and properly located between uses, sidewalks further encourage walking trips. Inventory of the sidewalks conducted for Dickson County is illustrated in Figure 25. As shown, sidewalks are primarily only present within the urbanized areas.

In downtown area of the City of Dickson, especially College Street and Main Street, is 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. Sidewalks are available on West/East College Street, West/East Walnut Street, South/North Charlotte Street, South/North Main Street, and Center Avenue/Church Street near or within the downtown area of the City of Dickson.

Sidewalks in the Town of White Bluff are provided along portions of Highway 70/Broadway Street, along SR 47N from Highway 70 to just north of the commercial development, and on a portion of Charles Walton Speight Highway. In the City of Charlotte, sidewalks are available on Dunning Street, Court Square and Clark Street.

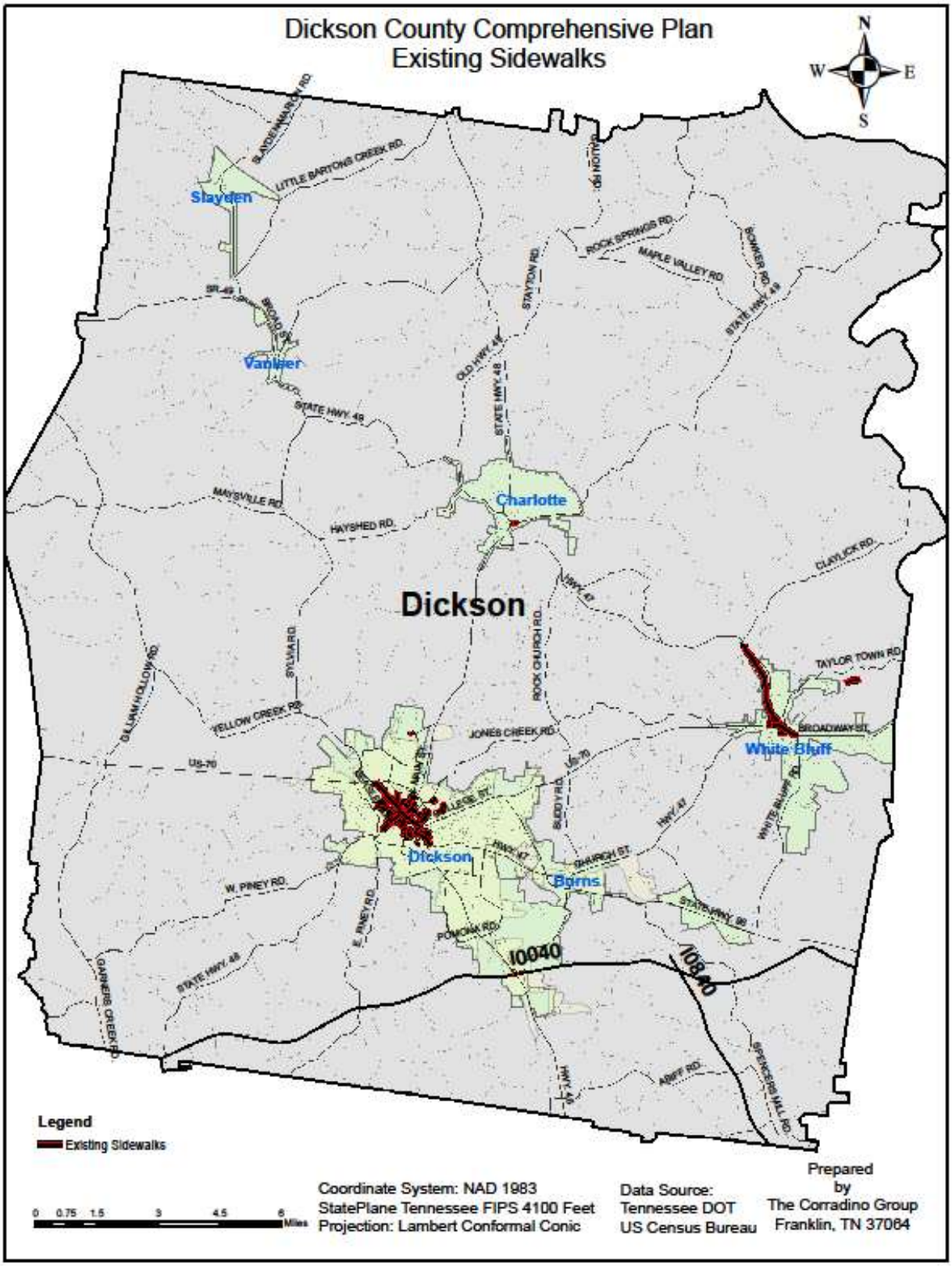


FIGURE 25: EXISTING SIDEWALK IN DICKSON COUNTY

Existing Bicycle Route

Some bicycle facilities require vehicles to share the lanes with bicycles. These types of facilities tend to be limited to most bicycle users who are not comfortable riding within the same stream of traffic as vehicles. Bicycle facilities that provide a separation from vehicular traffic encourage users of all abilities to utilize the routes. Separate bicycle facilities, including bike lanes, bike boulevards, side paths and greenways, create a safer, friendlier environment. These facilities, intended to serve all users, are good for providing a connection to parks and other recreational areas.

According to the data collected from TDOT, there are two types of Bicycle Routes: Designated Bicycle Route and TN Bicycle Route. Figure 26 shows the location of the bicycle routes for Dickson County. There are two state bicycle routes that intersect within Dickson County. One route is along US-70 within the project limits and the other is along SR 46, to the south of Dickson County, SR 235 (College Street) through the City of Dickson, and SR 46 north of the city. Other routes run along SR 48 (North), SR 96 (East), and SR 47.

Existing Truck Route

According to the data collected from TDOT, there are federal designated truck routes within Dickson County. The details of the routes are shown in Figure 27 and Table 16 (Appendix E). Most of the designated truck routes have acceptable LOS. However, US-70 starting from Valley Wood Drive going west 0.6 miles beyond, has LOS of E.

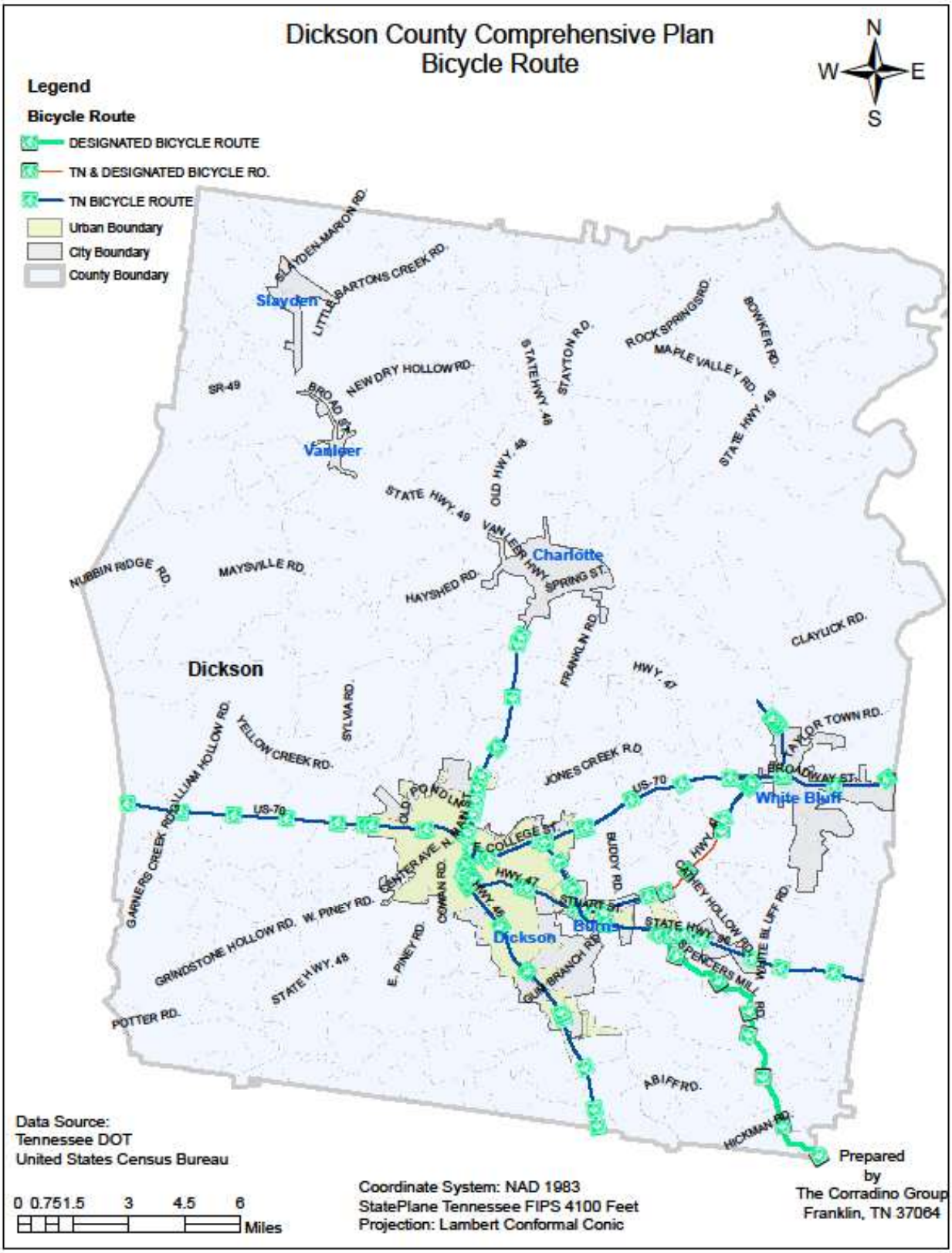


FIGURE 26: TN AND DESIGNATED BICYCLE ROUTE

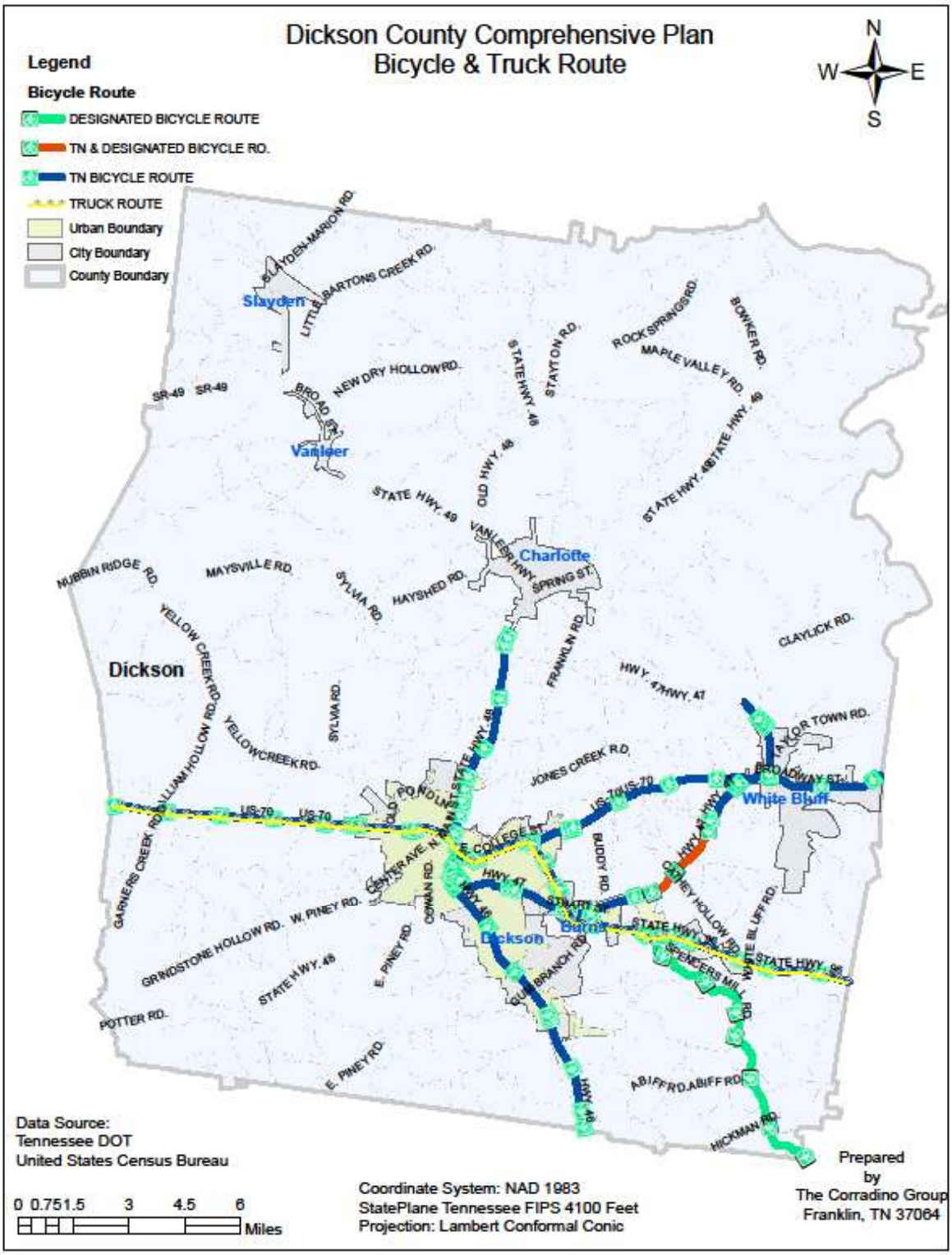


FIGURE 27: TN TRUCK AND BICYCLE ROUTE

Recommendations

Previous sections identified Dickson County area roadways that currently need improvement, or will by the year 2043, to keep the County's road system functioning safely and efficiently. This section presents recommendations to address safety and mobility for the study area. Recommended projects were selected based on the following:

- Existing reports and plans projects
- Public outreach and engagement
- Systematic safety analysis
- Existing and future traffic operations
- Future land use evaluation

Details of Reports, Plans, and Guidelines, public outreach and engagement, and future land use evaluation are described in the following paragraphs. Details on existing and future traffic operations and systematic safety analysis are already elaborated on in sections 2, 3 and 4.

Reports, Plans, and Guidelines that Influence Dickson County's Transportation System

To understand the influence of development and the effect future growth will have on the transportation system, a review of reports, plans, and guidelines that influence Dickson County's transportation system was performed. A summary of how each report, plan and guideline affects the transportation network is detailed in the following sections.

Bicycle and Pedestrian Master Plan (City of Dickson, October 2019)

The Dickson Bicycle and Pedestrian Master Plan was an important step in this endeavor, highlighting how improvements to the non-motorized realm can enhance the lives of residents. The City of Dickson hoped to extend the existing non-motorized facilities into areas where they were unavailable but needed for increased bicycle and pedestrian traffic. This comprehensive bicycle and pedestrian master plan were aimed 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 was set in line with the other 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 Comprehensive Plan 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 with 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.

Recommended projects that will improve bicycle and pedestrian connectivity throughout the study area are highlighted in Figure 28 to Figure 30. These projects were developed based on feedback from City of Dickson staff and the public, safety concerns, connections to and from neighborhoods, and the state of existing facilities. Although this was not an exhaustive list of potential projects, they were of the highest priority, giving the city an understanding and a tool to use to plan for future facility implementation. Each facility area was capable of being its own project and could be paired with federal aid provided by TDOT.

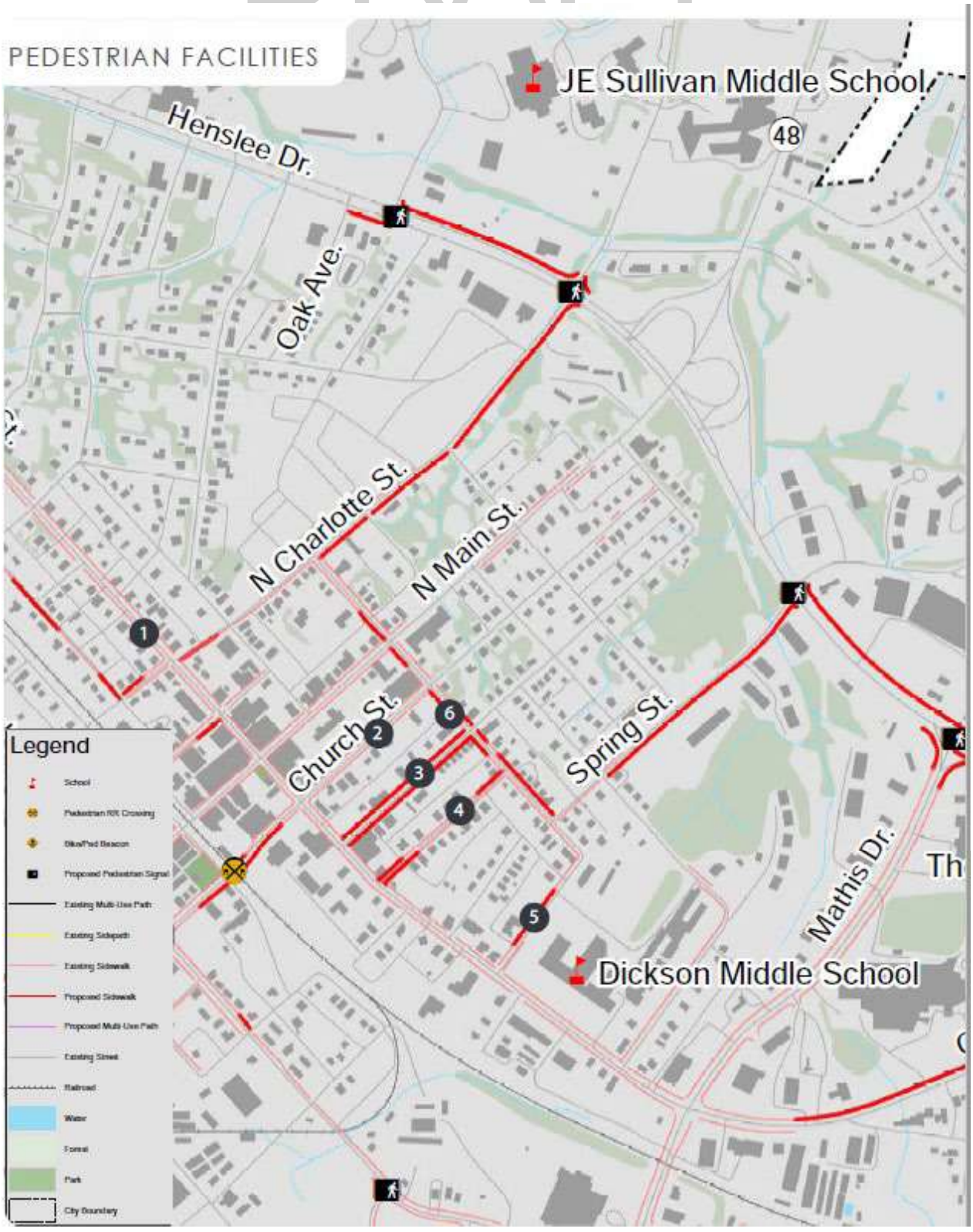


FIGURE 28: PROPOSED BICYCLE AND PEDESTRIAN ROUTES (SOURCE: BICYCLE AND PEDESTRIAN MASTER PLAN (CITY OF DICKSON, OCTOBER 2019)

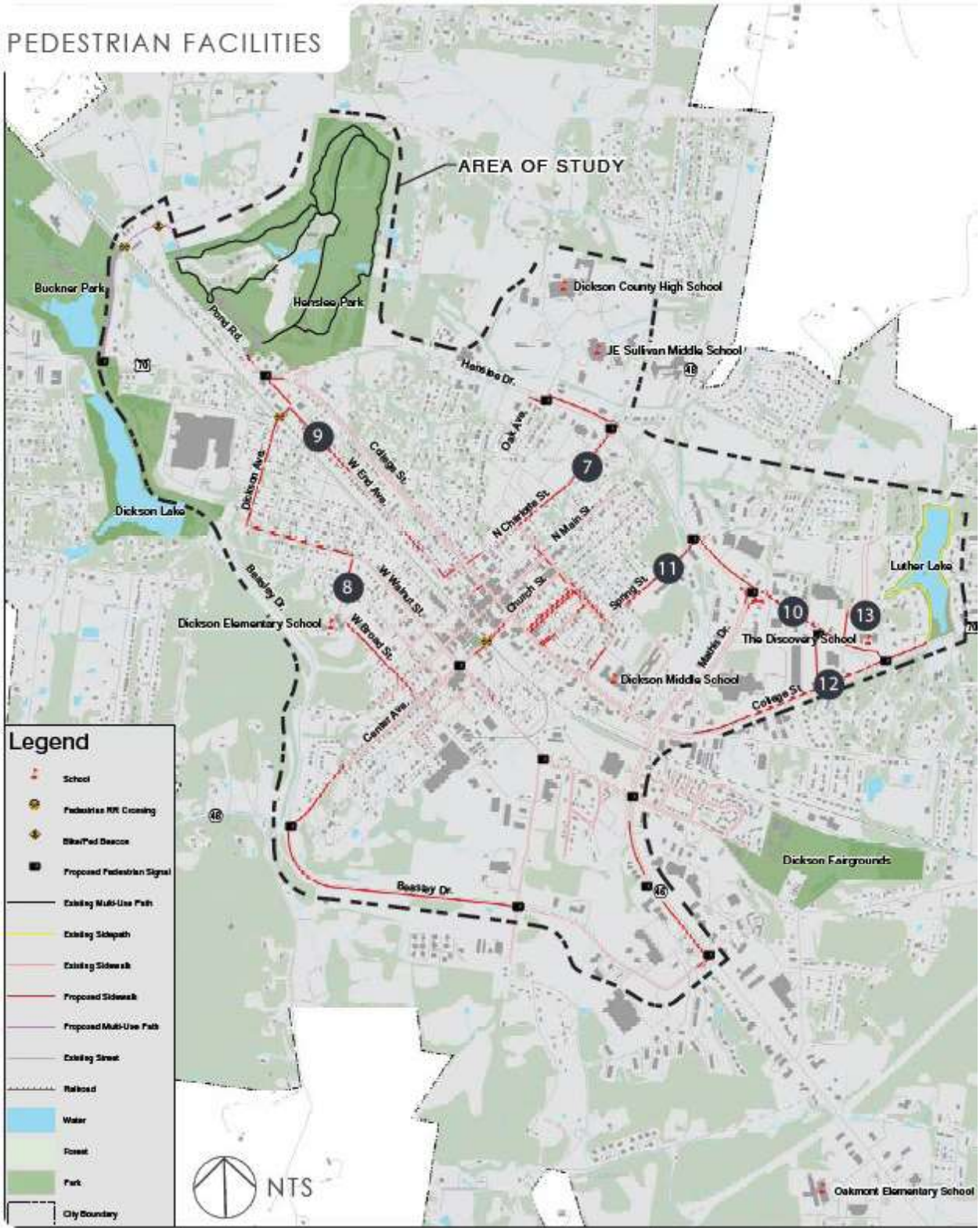


FIGURE 29: PROPOSED BICYCLE AND PEDESTRIAN ROUTES (SOURCE: BICYCLE AND PEDESTRIAN MASTER PLAN (CITY OF DICKSON, OCTOBER 2019)

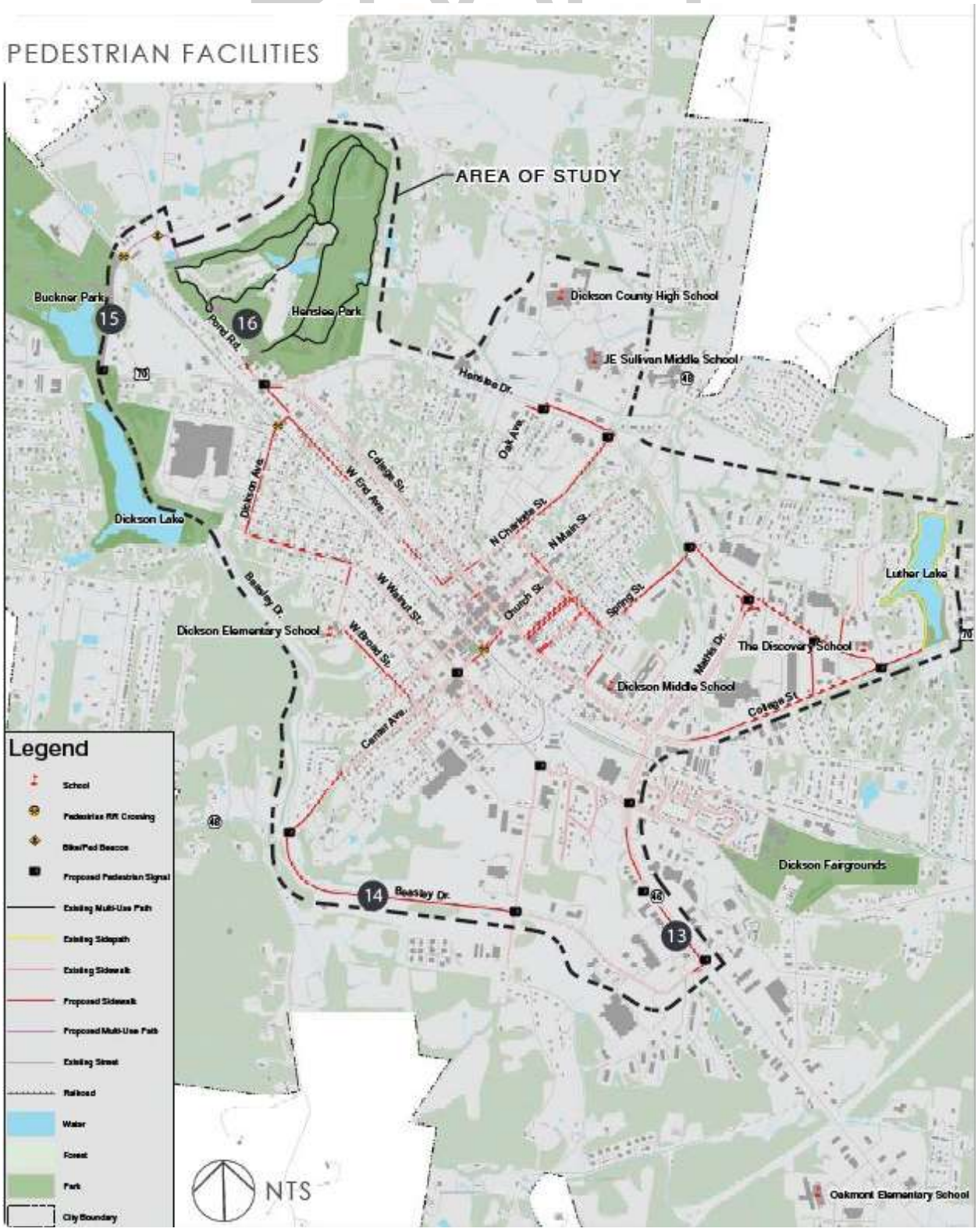


FIGURE 30: PROPOSED BICYCLE AND PEDESTRIAN ROUTES (SOURCE: BICYCLE AND PEDESTRIAN MASTER PLAN (CITY OF DICKSON, OCTOBER 2019)

Town Of White Bluff Community Mobility Plan (July 2021)

The goals and objectives of the plan were established with the Town of White Bluff and Dickson County to provide a safe transportation network for all users. Planning aimed to provide adequate facilities designed for users of all levels, including children, older users, and various physical abilities, requires a design focused on expected movement between vehicles, pedestrians, and bicyclists.

The Town of White Bluff Community Mobility Plan includes multimodal projects that contain roadways, greenways, sidewalks, and bicycle routes. This plan also outlines the types of Pedestrian and Bicycle facilities that White Bluff can follow in the future. Details of recommended projects are shown in Figure 31.

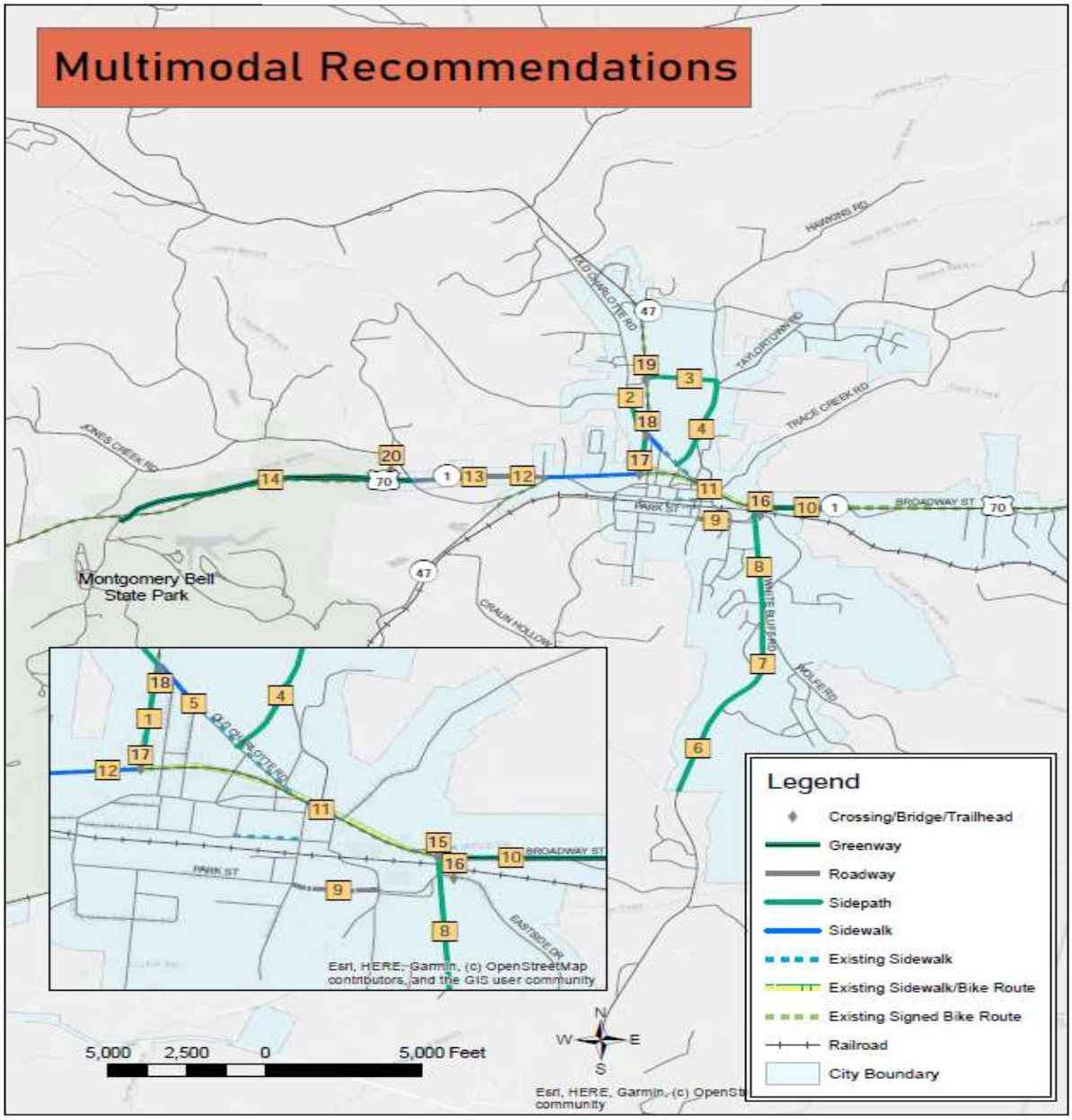


FIGURE 31: PROPOSED MULTIMODAL PROJECTS (SOURCE: TOWN OF WHITE BLUFF COMMUNITY MOBILITY PLAN, JULY 2021)

Both existing and future land use plans show that pedestrian and bicycle trip generators in Dickson County are mainly centered in the City of Dickson. A small share of generators exists in the Town of White Bluff. The future land use plan prepared for Dickson County supports these two studies. Therefore, this study would refer to these two studies for projects related to bicycle and pedestrian routes. With so much opportunity in Dickson County, it is vital that the public agencies continue to improve the facilities and infrastructure that provide the residents with alternative forms of safe pedestrian and bicyclist friendly transportation.

Public Outreach and Engagement

Successful transportation projects inform and involve the public from the planning phase through construction. As part of the Comprehensive Plan, we conducted in-person stakeholder and public meetings during the last year. Public participation was modified for safe outreach while ensuring everyone in the community was provided an equal opportunity to participate. To accomplish this, our team exhibited a series of maps to introduce the project to the public and give them an additional opportunity to ask questions and provide feedback. Comments from stakeholders and public meetings are attached in Appendix F.

FIGURE 32: PUBLIC MEETINGS FOR DICKSON COUNTY COMPREHENSIVE PLANNING

We used this information along with the existing characteristics of the network and existing operation to prepare recommendations for improving mobility in the community. The recommendations were presented to the stakeholder committee and the public to gather additional thoughts regarding where the transportation network needs improvements. Revisions were made to the recommendations based on the feedback provided.

Future Land Use Plan Evaluation

The future land use plan was reviewed from the transportation point of view to identify potential areas of major traffic generators. Focus was given to industrial and commercial development that has more connections with collector and arterial roads. Major industrial and commercial developments are observed near the City of Dickson and I-40/I-840. Also, under a proposal being studied by TDOT, westbound I-840 is potentially planned to continue to intersect with SR 96 in Burns.

Additionally, industrial and commercial development is expected just north and south of I-40 starting at/near SR 46 and going west for couple of miles. Another proposed industrial development area is anticipated on the southwest quadrant of the I-40 and I-840 interchange. Just north of the City of Dickson, near/around Jones Creek Road there is industrial zoning for future development. In addition to these large developments, other considerable industrial and commercial developments are expected along US-70 (west of the City of Dickson), east of North SR 47/ Charles Speight Highway, Cowan Road, Yellow Creek Road, and Pond Switch Road.

Recommended Projects with Cost Estimates

The projects identified as part of this study will help to meet three broad goals for improving the transportation system for Dickson County and participating public agencies:

- Relieving traffic congestion by providing additional capacity on the major corridors.
- Improving circulation by increasing the connectivity of the area network as the city continues to develop.
- Addressing the site-specific safety.

Proposed roadway projects for the 2043 Comprehensive Plan are grouped according to two timeframes: Short-Term and Long-Term. Table 17 represents a comprehensive list of the short- and long-term projects. Figure 33 and Figure 34 graphically show the recommended projects. Project sheets are included in Appendix G.

For purposes of capital improvement planning and long-range budgeting, Table 17 also includes high-level planning opinion of probable cost of each project. The costs are presented in current (2022) dollars and were developed using TDOT's methodology for planning-level cost estimates. This method uses a typical base unit cost per foot (adjusted periodically by TDOT to reflect current conditions). Adjustment factors are applied depending on the nature of construction (route is being widened, new roads being built, etc.), the type of terrain involved, and the intensity of adjoining land uses, which affects right-of-way costs. Once a project begins development, additional factors may be discovered which result in greater or lower costs.

TABLE 17: RECOMMENDED PROJECTS AND COST

ID	Route Name (Number)	Location	Length (Mile)	Improvement	Planning Level Opinion of Cost
Short Term Projects					
S1	Beasley Drive	Center Avenue to West Walnut Street	1.00	Widen to 3 lanes OR Widen to 5 lanes	$1,750,000 to $5,250,000
S2	Beasley Drive	West Walnut Street to US-70/ West College Street	0.60	Widen to 3 lanes OR Widen to 5 lanes	$1,050,000 to $3,250,000
S3	Broadway Street	SR 47 North to SR 47 South	0.60	TWLTL	$1,050,000
S4	Beasley Drive	SR 46 to Cowan Road	0.60	Safety measures	$450,000
S5	SR 46	I-40 to East College Street	5.00	Safety measures	$1,250,000
S6	Mathis Drive	East College Street to Henslee Drive	0.50	Safety measures	$325,000
S7	Pump Hill Road / Jones Creek Road	Henslee Drive to US-70	8.50	Safety measures	$250,000
S8	North Main Street	Henslee Drive to Greer Circle	0.65	Widen to 3 lanes OR Widen to 5 lanes	$1,200,000 to $3,500,000
S9	US-70	Valley West Drive to Pond Switch Road	0.80	Widen to 4 lanes with a positive median barrier	$3,500,000
S10	Railroad Bridge & SR 47/ Cain Brake Road	At Railroad Bridge & SR 47/Cain Brake Road	0.20	Safety measures	$30,000
S11	Abiff Road	Old SR 46 to Spencer Mill Road	5.30	Safety measures	$200,000
S12	Gum Branch Road	McCutcheon Road to Reliance Road	0.30	Safety measures	$150,000
S13	SR 48	From just south of I-40 to West Piney Road	7.30	Safety measures	$225,000
S14	Henslee Drive	SR 46 to Mathis Drive	1.60	Safety measures	$1,000,000
S15	SR 48	SR 47 to SR 49	0.80	Widen to 4 lanes with access management.	$4,200,000
Long Term Projects					
L1	SR 96	SR 47 to I-40 Interchange (Williamson County)	9.00	Widen to 4 lanes	$48,000,000
L2	US-70	Pond Switch Road to county boundary (west)	5.50	Widen to 4 lanes with a positive median barrier	$35,000,000
L3	North Main Street	Greer Circle to Sylvia Road	1.20	Widen to 5 lanes	$8,500,000
L4	SR 47	East Railroad Street to SR 96	4.00	Widen to 4 - 5 lanes	$29,000,000
L5	Charles Walton Speight Highway/ SR 47	Old Charlotte Road to Claylick Road	2.00	Widen to 4 lanes	$14,000,000
L6	White Bluff Road	Broadway Street to SR 96	5.20	Widen to 3 - 4 lanes with access management.	$31,000,000
L7	Cowan Road	Beasley Drive to Barbeque Road	0.90	Widen to 3 - 4 lanes	$4,750,000

ID	Route Name (Number)	Location	Length (Mile)	Improvement	Planning Level Opinion of Cost
L8	Livestock Road (New Road)	Livestock Road to East Piney Road	4.00+/-	Extend Livestock Road to East Piney Road. Classified as a Major Collector Road.	$17,500,000
L9	Park Street/ Industrial Drive (New Road)	From Industrial Drive West to Main Street	0.20	Extend Industrial Drive to Park Street. Classified as a Minor Collector Road.	$750,000
L10	Hwy 96/ North Hummingbird Lane (New Road)	US-70 to SR 48 via North Hummingbird Lane	3.50+/-	Extend SR 96 north to SR 48. Classified as a Major Collector Road.	$13,500,000
L11	Two Mile Road	Hogan Road to Titan Partners Fuel Terminal	1.30	Convert to a Collector Road (Improve to collector standards).	$2,500,000
L12	Two Mile Road (New Road)	Titan Partners Fuel Terminal to Porter Road	1.00	Extend Two Mile Road south to Porter Road. Classified as a Collector Road.	$3,500,000
L13	Porter Road	Hogan Road/Porter Road to southbound I-840	0.70	Convert to a Collector Road (Improve to collector standards).	$1,750,000
L14	I-840 (New Road)	I-840 to SR 96	1.50	Extend I-840 north to SR 96.	(TDOT Plan)
L15	Sylvia Road (New Road)	SR 46 to US-70	1.75+/-	Extend Sylvia Road south to US-70. Classified as a Collector Road.	$6,500,000
L16	South Hummingbird Lane (New Road)	Blue Road to Marshall Stuart Drive	0.80	Extend South Hummingbird Lane south to Marshall Stuart Drive. Classified as a Collector Road.	$3,000,000
L17	South Hummingbird Lane	Blue Road to US-70	0.75	Convert to a Collector Road (Improve to collector standards).	$1,750,000
L18	Sylvia Road (New Road)	US-70 to East Piney Road	6.00	Extend Sylvia Road south to East Piney Road. Classified as a Collector Road.	$25,000,000
L19	I-40 Interchange (New Interchange)	At East Piney Road	-	Construct a new Interchange with East Piney Road.	-

**S=Short Term Project

**L=Long Term Project

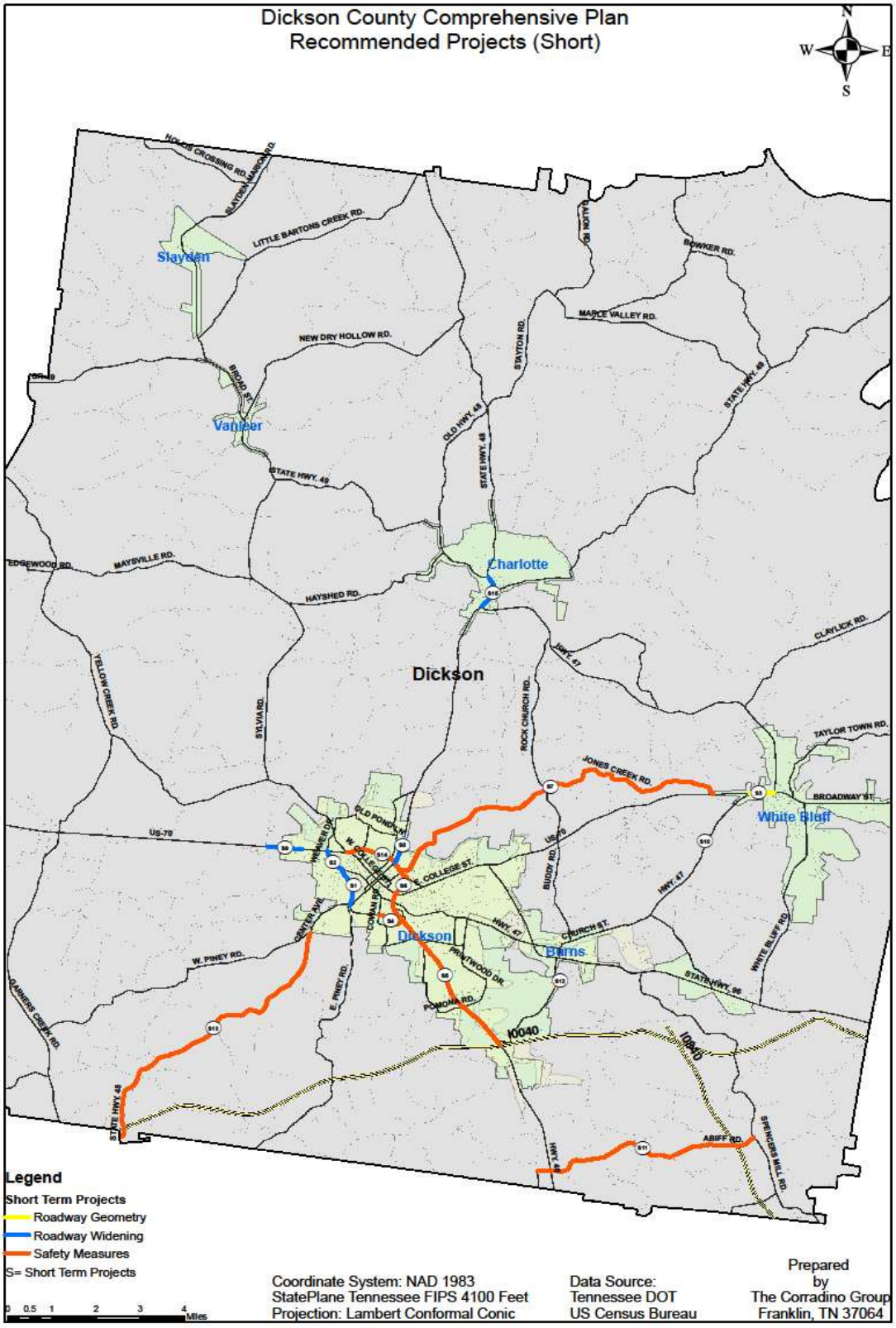


FIGURE 33: RECOMMENDED PROJECTS (SHORT TERM)

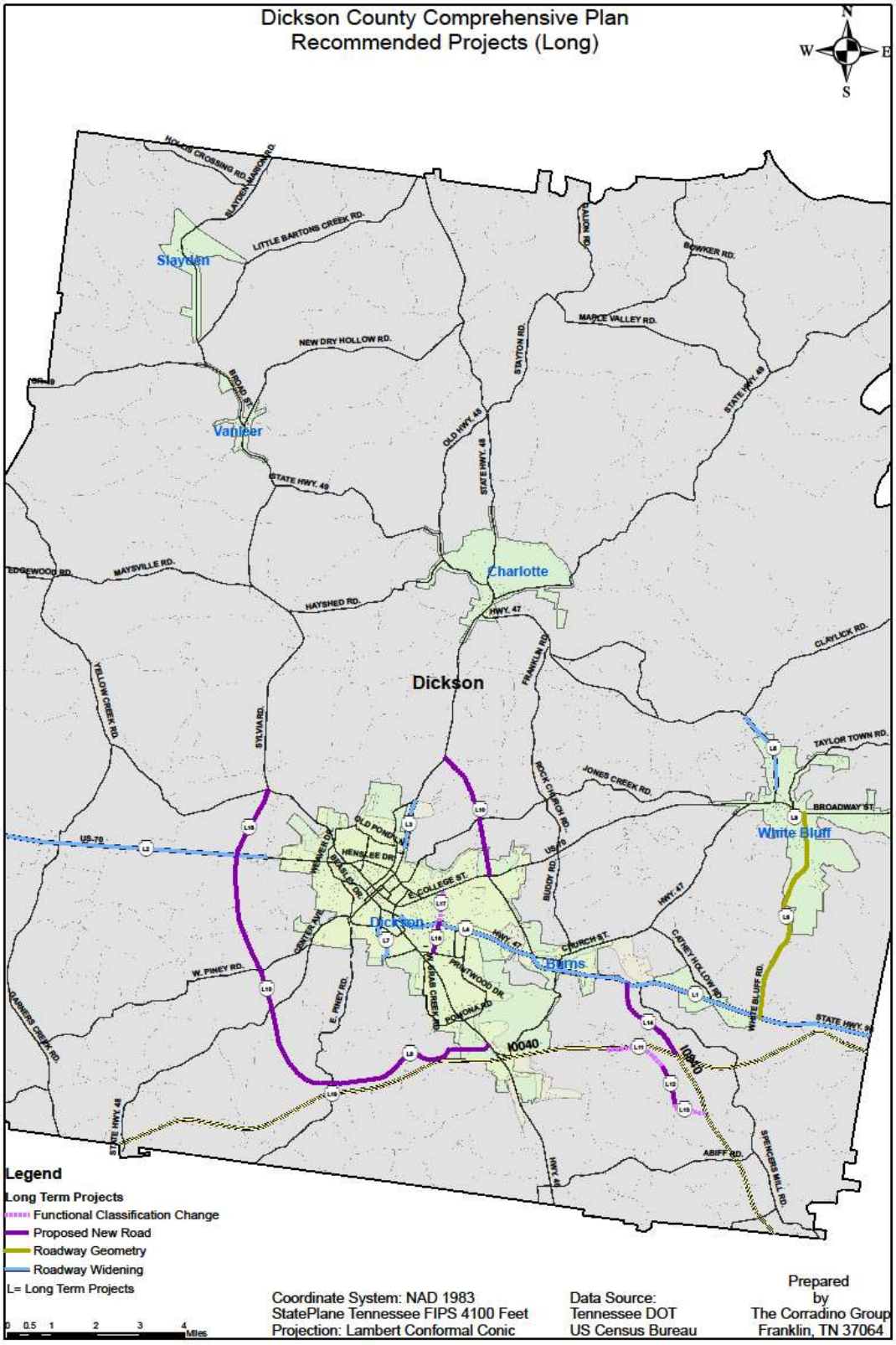


FIGURE 34: RECOMMENDED PROJECTS (LONG TERM)

Short Term Projects

Projects S1 & S2: Beasley Drive was built as a bypass to carry traffic mainly from SR 46 and US-70. These two segments of Beasley Drive, between Center Avenue and US-70, currently have two travel lanes. The southern segment ***(S1)*** carries a high volume of traffic mainly to and from SR 46. The northern segment ***(S2)*** has a high AADT coming to and from US-70 and West/East Walnut Drive. Both the segments have a high traffic growth rate of approximately 5%. Additionally, according to the future land use plan, the segment between West Walnut Drive and US-70 is expected to have industrial development on both sides of the road. Widening these two segments is expected to improve current traffic operation as well as accommodate newly generated traffic. Notably, the City of Dickson already has acquired ROW for ***S1***.

Project S3: This 2-lane road segment runs east-west between SR 47 North and SR 47 South and has no median. Several driveways are present in this segment, particularly on the north side of the road. Currently this segment is operating at LOS D and has safety issues. According to TDOT Access Management Report, delay and the average crash rate on roadways with a two-way left-turn lane design guide (TWLTL) is less than that for undivided roadways. Therefore, changing median from no median to TWLTL is expected to help left turning vehicles thus improving mobility. Notably, upstream east of this segment already has TWLTL that needs to extend to SR 47 South.

Project S4: The main trip attraction of this segment is Walmart. Injury and PDO crashes are frequently observed on the segment between Thornton Drive and the Walmart north access. Also, a cluster of PDO and injury crashes were reported upstream of the intersection with SR 46. This segment requires different safety measures at various locations. Potential mitigations measures include:

- Replacing the TWLTL with a non-traversable median
- Constructing two northbound left turn lanes on Beasley Drive at the Walmart north access
- Converting the Walmart south access to a right-in and right-out only
- Adding signing and pavement markings
- Conducting a signal warrant analysis at the Walmart north access

Projects S5, S6 & S14: These segments of SR 46, Mathis Drive and Henslee Drive have identified safety issues. According to the crash analysis, the primary collision type is angle and rear-end crashes. Potential contributing factors are the presence of numerous driveways, TWLTL and closely spaced signalized intersections on a major arterial road. Additional studies for coordinated signal timings and access management could provide specific mitigation measures to improve safety and operations. According to TDOT Access Management Report, the safety advantage of a non-traversable median over a TWLTL increases when the ADT exceeds 24,000 to 28,000 VPD.

Projects S7, S10-S13: All these segments have similar safety issues with similar contributing factors: run-off-road crashes, horizontal and vertical curvature, potential speeding, and sight distance issues; thus, requiring similar safety countermeasures. Further study should focus on speeds and geometric deficiencies throughout the corridor and installation of warning and advisory signs/markings at curves (e.g., Curve Ahead). Additionally, installation of a guard rail along certain segments should be considered, such as on Gum Brunch Road ***(S12)***.

Projects S8 & S9: Both segments currently operate at a poor LOS. The segment on US-70 ***(S9)*** between Valley West Drive and Pond Switch Road, carries traffic from the west side of Dickson County to the City of Dickson. Additionally, it is anticipated that traffic from Pond Switch Road merges with US-70 and travels on this two-lane road segment. Similarly, the segment between Henslee Drive and Greer Circle on SR 48/North Main Street ***(S8)*** carries traffic from the north of the county. This segment additionally has identified safety issues.

Project 15: This segment of the road runs north-south within the City of Charlotte between SR 47 and SR 49. Therefore, a decent volume of traffic travels along this segment, which creates a poor LOS. With the recent growth and future land use plan, this corridor needs to be widened to 3 - 4 lanes to efficiently handle the projected increased traffic loading and maintain adequate traffic operations.

Long Term Projects

Long-term projects are selected based on future land use plans and traffic operations analysis. For traffic operation, focus is given on the segments where a change from LOS C (existing) to LOS E/F (future 2043) is found. Growth rate and AADT are also considered in the selection process. Finally, traffic operations coupled with future land use development are used to recommend long term projects. Four types of recommendations are made: Roadway Widening, Roadway Geometry, Functional Classification Change and Proposed New Road.

Project L1: This segment is projected to have a future LOS of E/F degrading from LOS C. Future traffic growth rate varies between 3.5% to 5%. According to the future land use plan, SR 96 has both industrial and mixed-use development on the south side of the road. With the anticipated growth and future land use plan, this corridor needs to be widened to four lanes to efficiently handle the projected increased traffic loading and maintain adequate traffic operations from I-40 intersection to SR 47.

Project L2: This segment is projected to have a future LOS of E/F degrading from LOS C. Future traffic growth rate varies between 3.5% to 5%. According to the future land use plan, US 70 has mixed use development on both sides of the road. With the anticipated growth and future land use plan, this corridor needs to be widened to four lanes with a positive median barrier to efficiently handle the projected increased traffic loading and maintain adequate traffic operations from Pond Switch Road to the western county line.

Project L3: This segment is projected to have a future LOS of E/F degrading from LOS E. Future traffic growth rate varies between 2% to 3.5%. Traffic uses North Main Street to enter/exit City of Dickson from north. Upstream of this roadway segment is a four-lane highway. With the anticipated growth and future land use plan, this corridor from Greer Circle to Sylvia Road needs to be widened to five lanes to efficiently handle the projected increased traffic loading and maintain adequate traffic operations.

Project L4: This segment is projected to have a future LOS of E/F degrading from LOS C. Future traffic growth rate varies between 2% to 3.5%. Traffic uses SR 47 to enter/exit the City of Dickson from east. Upstream of this segment is a four-lane highway. With the anticipated growth and future land use plan, this corridor from East Railroad Street to SR 96 needs to be widened to 4 - 5 lanes to efficiently handle the projected increased traffic loading and maintain adequate traffic operations.

Project L5: This segment is projected to have a future LOS of E/F degrading from LOS C. Future traffic growth rate varies between 2% to 3.5%. Traffic uses Charles Walton Speight Highway/SR 47 to enter/exit the Town of White Bluff from the north. Upstream of this segment is a four-lane highway. With the anticipated growth and future land use plan, this corridor from Old Charlotte Road to Claylick Road needs to be widened to four lanes to efficiently handle the projected increased traffic loading and maintain adequate traffic operations.

Project L6: This segment of the road runs north-south between Broadway Street in the Town of White Bluff and SR 96 connecting people from White Bluff to I-40. With the proposed extension of SR 96 this segment of the road is expected to carry substantial future traffic volumes. There is currently residential development along both sides of this road with expectations of future development. With the anticipated growth and changes to the roadway connectivity, this corridor needs to be widened to 3 - 4 lanes with an access management strategy to efficiently handle the projected increased traffic loading and maintain adequate traffic operations from Broadway Street to SR 96.

Project L7: This segment connects Beasley Drive to Barbeque Road. Just upstream (north) of this segment there is a three-lane cross-section. According to the future land use plan, high density residential and light commercial development will be on both sides of the road. Widening this segment of Cowan Road to a 3 -4 typical section will help reduce traffic congestion on Beasley Drive.

Project L8, L15, L18 & L19: According to future land use plan, there is potential industrial and medium density mixed use development be built along the north side of I-40 starting at SR 46 going west to East Piney Road.

This proposed new road, ***L8*** - Extended Livestock Road will connect the new development area to SR 46 and I-40 interchange area.

L18 - New Road between US-70 and East Piney Road and ***L15*** - New Road between Sylvia Road and US 70 will connect traffic coming from the north and west of the new development area.

L19 - Proposed interchange of East Piney Road and I-40 to provide a direct connection to I-40, the new development area.

Project L9: Currently, Industrial Drive collects traffic from White Bluff Road/ E. Highway 70 and serves the residential development west of White Bluff Road. According to the future land use plan, there will be potential commercial development between Industrial Drive and Main Street/Park Street. This proposed new road extension will connect Industrial Drive and Park Street.

Project L10: According to future land use plan, industrial land uses are proposed north of the City of Dickson boundary around the intersection of North Hummingbird Lane and Jones Creek Road. To provide access to the potential development area, SR 96 is proposed to be extended from US-70 to SR 48.

Project L11, L12 & L13: All three of these segments are located in the southwest quadrant of the I-40 and I-840 interchange. With the proposed industrial land uses in the vicinity of the interchange, these three projects are to extend and improve Two Mile Road and Porter Road to provide adequate access to support the proposed industrial land use.

Project L14: This a TDOT interstate extension study/project to extend I-840 from the current termini at I-40 to a new terminus at SR 96.

Project L16 & 17: Based on the future land use plan and the anticipated traffic volume increases, projects ***L16*** & ***L17*** are proposed to provide better access on the eastern side of the City of Dickson between Marshall Stuart Drive and East College Street. It is anticipated these improvements would help support access to the proposed industrial land uses on the north side of the City near Hummingbird Lane.

Project Prioritization and Implementation

Prioritization

Implementation of transportation projects required justification for constructing the project and identification of funding sources. The projects identified in this Comprehensive Plan Recommendations Section will address safety, connectivity, and mobility. This section will present a process that identifies the issues addressed by the projects, creates a point system tied to data identifying the problems, and calculates a value based on the need for each project. This process, combined with the funding sources available, can be used for prioritization.

The first step in the prioritization process requires the County to determine a percentage of the total score that applies to each traffic issue based on the benefits expected from construction of the project. An example of the prioritization percentage structure is shown in the chart [Figure 35) using the goals of this comprehensive plan as well as ways to address measurable data factors [Figure 36]. The ranking values are based on stakeholder and public input where issues and concerns were identified. Each item addressed is given a point value based on a measurable variable.

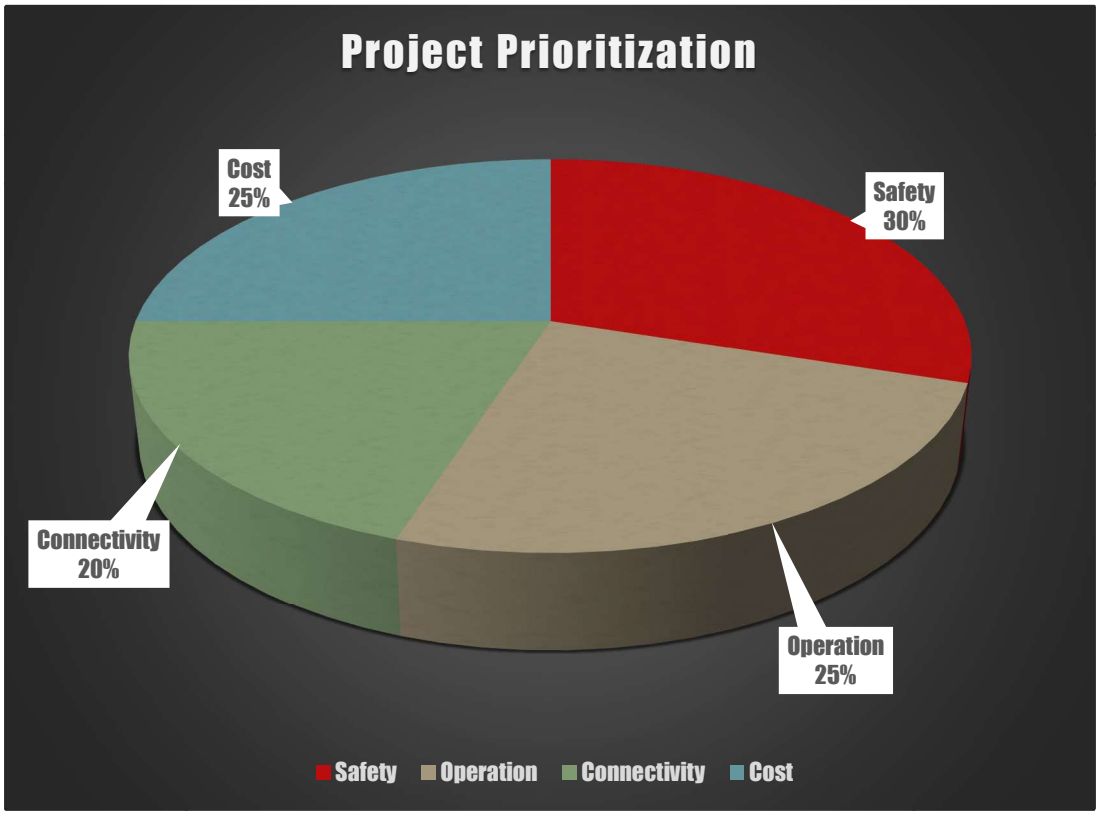
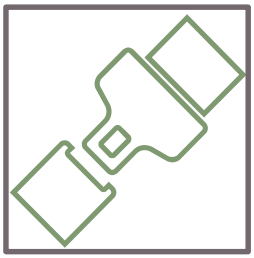


FIGURE 35: PROJECT PRIORITIZATION PERCENTAGE STRUCTURE



Does the project improve safety?

- Points are based on the number of crashes in a location for an established time frame, such as five years. In this example, more crashes equates to more points.

Will the project provide connectivity?

- Points are based on the FHWA roadway classification, assigning more points for higher classified roads.
- Assign points for projects located on state routes.

Does the project improve vehicular operation (mobility)?

- Assign points for projects that relieve delays on the system.
- Assign points based on the LOS so roadways with poor LOS will receive higher points.

FIGURE 36: EXAMPLES OF THE ISSUES DICKSON COUNTY CAN ADDRESS WITH MEASURABLE DATA DRIVEN FACTORS

Implementation

Identifying transportation projects in the Comprehensive Plan is only the first step in the project delivery process. Moving projects through the design and construction phases requires planning and coordination that begins once funding for the project is identified. For the purposes of this plan, as shown in Table 18, the possible funding sources were identified as federal and state options that usually require a local match. It is important to realize private funding through local developers can also serve as a funding source for some of these projects.

TABLE 18: POTENTIAL FUNDING SOURCES

Fund Name	Program Description	Funding Ratio
National Highway Performance Program (NHPP)	Provides funding for construction, reconstruction, resurfacing, restoration, rehabilitation, preservation, or operational improvement of segments of the National Highway System. This includes Interstate highways and bridges on the NHS. Projects must support progress toward national goals for the condition and performance of the system.	80% to 90% federal 10% to 20% nonfederal
State Surface Transportation Block Grant (S-STBG)	Provides funding for roads functionally classified as rural major collector and above. Also, funds bridge replacement and rehabilitation on non-federal aid routes. Eligible activities also include bicycle and pedestrian facilities, safety, highway-rail crossings, and environmental mitigation.	80% federal 20% non-federal Some projects are eligible at 100% federal
Local Surface Transportation Block Grant (L-STBG)	Provides funding for small urban areas (5,000 to 50,000 persons) and urbanized areas (50,000 and greater in population) for projects on roads functionally classified as urban collectors or higher. Funds may also be used for bicycle/pedestrian projects or “flexed” for transit use.	80% federal 20% non-federal Some projects are eligible at 100% federal.
Highway Safety Improvement Program (HSIP)	Provides funds to improve high hazard locations on eligible roadways, including highway-rail grade crossings. Projects are selected based on crash rate and crash frequency.	90% to 100% federal 0% to 10% nonfederal
State Industrial Access (SIA) Program	This program does not typically require a local match, but it is limited to locations where improved road access will leverage a significant new industry location or expansion. TDOT works with the State Department of Economic & Community Development to identify locations as the need arises.	-
Local Roadway Funding	About $230 million of the statewide gasoline tax revenue each year is distributed to cities and counties as the State Street-Aid fund. For cities, the funds are distributed based on population. Many local governments use these funds for roadway maintenance and operations, including expenses for paving, street lighting and signal operations.	-

APPENDIX

A. List of Tables and Figures
B. Road Mileage Classification & Existing Traffic Volume Tables
C. LOS Report & Tables
D. Crash Data-Vehicular, Pedestrian & Bicycle
E. TDOT Existing Truck Route Table
F. Public & Stakeholder Meeting Comments
G. Proposed Project Sheets – Short-Term and Long-Term

APPENDIX A:

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APPENDIX B:

TABLE 1: ROAD MILEAGE BY FUNCTIONAL CLASSIFICATION

	Dickson County		City of Dickson		Town of Burns		Town of White Bluff		FHWA Guideline % of Total Miles
FUNC_CLASS	# of Miles	% of Total Miles	# of Miles	% of Total Miles	# of Miles	% of Total Miles	# of Miles	% of Total Miles	
Rural									
R / LOCAL	612.7	55.9	N/A	N/A	N/A	N/A	27.1	71.7	62%-74%
R / MIN COL	115.1	10.5	N/A	N/A	N/A	N/A	4.1	10.8	3%-15%
R / MAJ COL	42.5	3.9	N/A	N/A	N/A	N/A	0.4	1.1	8%-19%
R / MIN ART	70.0	6.4	N/A	N/A	N/A	N/A	6.2	16.4	2-6%
Urban									
U / LOCAL	178.1	16.3	101.8	68.4	11.4	57.3	N/A	N/A	66%-74%
U / MIN COL	11.5	1.0	0.3	0.2	0.8	4.0	N/A	N/A	5%-13%
U / MAJ COL	28.9	2.6	21.6	14.5	3.5	17.6	N/A	N/A	10%-17%
U / MIN ART	22.7	2.1	11.3	7.6	4.2	21.1	N/A	N/A	3%-7%
U OTH PRIN ART	14.8	1.3	13.9	9.3	--	--	N/A	N/A	2%-5%
Grand Total	1096.3	--	148.9	--	19.9	--	37.8	--	--

Table 1 shows the percentage of roadway mileage for each functional classification. The percentage of road-miles that fall into each category is generally consistent with federal guidelines, indicating a fairly well distributed system.

TABLE 2: EXISTING TRAFFIC VOLUME: AADT >10,000

Route Number (Based on TDOT)	Route Name	BLM	ELM	AADT	Functional Classification
SR046	SR 46	3.228	8.18	29,215	U Principal Arterial
SR046	Mathis Drive	8.18	8.66	19,018	U Principal Arterial
SR001	US-70/ West College Street	5.72	8.15	16,024	Urban Minor Arterial
SR001	East College Street	10.18	11.8	15,748	U Principal Arterial
SR001	Henslee Drive	8.15	9.79	14,369	U Principal Arterial
SR046	SR 46	0	3.228	13,161	U Minor Arterial
05684	Beasley Drive	0	1.727	13,154	U Collector
SR235	East College Street	0	1.215	12,708	U Minor Arterial
04529	Beasley Drive	0.429	1.08	12,676	U Collector
03151	West Walnut Street/ Beasley Drive	0.69	2.04	11,323	U Minor Arterial
SR001	Henslee Drive	9.79	10.18	10,441	U Principal Arterial
SR048	North Main Street/ SR 48	10.8	12.747	10,238	U Principal Arterial

It is evident from the AADT volume that many of the road segments with high AADT are located within the City of Dickson or near its perimeter. SR 46 carries the highest amount of traffic within Dickson County. Notably, this state route is connected to I-40 in the south where commuter-based traffic travels to/from Metropolitan Nashville. US 70, East/West College Street, and Henslee Drive also experience a higher volume of traffic travelling in the east-west direction within Dickson County. Similarly, SR 48/North Main Street and Highway 96 carries high traffic in the north-south and east-west directions, respectively. As identified, many of these roads are classified as urban arterials.

Most collector roads have lower traffic volumes (< 3,500 vehicles/day (vpd) except for Beasley Drive, Center Avenue, Yellow Creek Road, Sylvia Road, Cowan Road, and Weaver Drive. Beasley Drive, which is a bypass to Highway 46, has an AADT of more than 12,000 vpd.

APPENDIX C:

LOS Report

TABLE 3: EXISTING LEVEL OF SERVICE: LOS E/F

Route Number	Route Name	BLM	ELM	AADT	FUNC_CLASS	City
03151	East Walnut Street	0	0.69	6,693	Urban Minor Arterial	Dickson
03151	West Walnut Street	0.69	1.461	11,323	Urban Minor Arterial	Dickson
03151	Beasley Drive	1.461	2.04	11,323	Urban Minor Arterial	Dickson
SR001	US-70	5.72	6.464	16,024	Urban Minor Arterial	--
SR001	US-70	6.464	6.649	16,024	U Principal Arterial	--
SR048	North Main Street	10.28	10.8	10,238	U Principal Arterial	Dickson

TABLE 4: EXISTING LEVEL OF SERVICE: LOS D

Route Number	Route Name	BLM	ELM	AADT	FUNC_CLASS	City
05684	Beasley Drive	0	1.727	13,154	Urban Collector	Dickson
SR001	Broadway Street	17.179	21.847	7,252	Rural Arterial	White Bluff
SR046	SR 46	0	0.44	13,161	Urban Minor Arterial	--
SR046	SR 46	0.44	1.617	13,161	Urban Minor Arterial	--
SR046	SR 46	1.617	3.173	13,161	Urban Minor Arterial	--
SR046	Yellow Creek Road	8.66	9.225	8,222	U Principal Arterial	Dickson
SR047	SR 47	0.251	1.872	4,489	Urban Minor Arterial	Dickson
SR048	Center Avenue	7.379	8.534	8,257	Urban Collector	Dickson
SR048	North Main Street	10.8	11.18	10,238	U Principal Arterial	Dickson
SR048	SR 48	11.18	11.21	10,238	U Principal Arterial	Dickson
SR048	SR 48	11.21	11.533	10,238	U Principal Arterial	--
SR048	SR 48	11.533	11.864	10,238	U Principal Arterial	--
SR048	SR 48	11.864	12.747	10,238	Urban Minor Arterial	--
SR048	SR 48	15.96	19.52	7,264	Rural Arterial	Charlotte
SR048	Center Avenue	0	0.25	5,891	Urban Minor Arterial	Dickson
SR048	Church Street	0.25	0.35	5,891	Urban Minor Arterial	Dickson

Based on the segment analysis, much of the corridor operating at LOS D and below lies within the boundary of the City of Dickson or near its perimeter. Only Broadway Street within the Town of White Bluff and SR 48 within the City of Charlotte operate at LOS D. It is anticipated that traffic travelling along US-70 from the west utilizes East/West Walnut and Beasley Drive to merge onto SR 46 and finally I-40 to commute to/from Metropolitan Nashville.

Traffic travelling to and from the east to the City of Dickson is anticipated to travel along US-70 (East), East College Street and Henslee Drive. Traffic to and from the north takes SR 48 and North Main Street to the City of Dickson.

TABLE 5: PROJECTED 2043 LEVELS OF SERVICE: LOS E & LOS F

Route Num	Route Name	BLM	ELM	Existing AADT	Growth Rate	2043 AADT	2043 LOS	Existing LOS	City
03151	East Walnut Street	0	0.69	6693	2.00	9,906	E	E	Dickson
03151	West Walnut Street	0.69	1.461	11323	5.77	26,990	F	E	Dickson
03151	Beasley Drive	1.461	2.04	11323	5.77	26,990	F	E	Dickson
05684	Beasley Drive	0	1.727	13154	5.00	28,939	F	D	Dickson
SR001	US-70	0	5.72	9439	3.00	16,235	E	C	--
SR001	US-70	5.72	6.464	16024	5.00	35,253	F	E	--
SR001	US-70	6.464	6.649	16024	5.00	35,253	F	E	--
SR001	Broadway Street	17.179	21.847	7252	2.50	11,603	E	D	White Bluff
SR046	SR 46	0	0.44	13161	2.50	21,058	E	D	--
SR046	SR 46	0.44	1.617	13161	2.50	21,058	E	D	--
SR046	SR 46	1.617	3.173	13161	2.50	21,058	E	D	--
SR046	SR 46	3.228	7.54	29215	4.00	57,261	E	C	Dickson
SR046	SR 46	7.54	7.74	29215	4.00	57,261	E	C	Dickson
SR046	SR 46	7.74	7.983	29215	4.00	57,261	E	C	Dickson
SR046	SR 46	7.983	8.18	27325	2.00	40,441	E	D	Dickson
SR046	Mathis Drive	8.18	8.66	19018	3.00	32,711	E	B	Dickson
SR046	Yellow Creek Road	8.66	9.225	8222	3.00	14,142	E	D	Dickson
SR046	Yellow Creek Road	9.225	9.67	8222	3.00	14,142	E	C	Dickson
SR046	Yellow Creek Road	9.67	11.67	8222	3.50	15,128	E	C	--
SR047	SR 47	0.251	1.872	4489	3.00	7,721	E	D	Dickson
SR047	SR 47	1.872	3.49	4489	3.00	7,721	E	C	Burns
SR047	Charles Walton Speight Highway	10.19	11.574	7485	2.00	11,078	E	C	White Bluff
SR047	SR 47	11.574	11.637	7485	2.00	11,078	E	C	--
SR047	SR 47	11.637	11.803	7485	2.00	11,078	E	C	White Bluff
SR047	SR 47	11.803	12.46	7485	2.00	11,078	E	C	--
SR048	Center Avenue	7.379	8.534	8257	4.00	16,184	E	D	Dickson
SR048	South Main Street	9.235	9.58	3724	2.00	5,512	E	C	Dickson
SR048	North Main Street	10.28	10.8	10238	3.50	18,838	E	E	Dickson
SR048	North Main Street	10.8	11.18	10238	3.50	18,838	E	D	Dickson
SR048	SR 48	11.18	11.21	10238	3.50	18,838	E	D	Dickson
SR048	SR 48	11.21	11.533	10238	3.50	18,838	E	D	--
SR048	SR 48	11.533	11.864	10238	3.50	18,838	E	D	--
SR048	SR 48	11.864	12.747	10238	3.50	18,838	E	D	--
SR048	SR 48	15.96	19.52	7264	1.50	9,879	E	D	Charlotte
SR048	Center Avenue	0	0.25	5891	3.50	10,839	E	D	Dickson
SR048	Church Street	0.25	0.35	5891	3.50	10,839	E	D	Dickson
SR096	SR 96	1.482	4.83	8918	3.50	16,409	E	C	Burns
SR096	SR 96	4.83	5.124	8918	3.50	16,409	E	C	Burns
SR096	SR 96	5.124	5.641	8918	3.50	16,409	E	C	Burns
SR096	SR 96	5.641	7.901	8918	3.50	16,409	E	C	--
SR096	SR 96	7.901	10.21	9189	2.50	14,702	E	C	--

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	Sr235_W. College St	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	4514
Lane Width, ft	12	Shoulder Width, ft	2
Speed Limit, mi/h	30	Access Point Density, pts/mi	45.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	259	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	4.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.15

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	21.3
Speed Slope Coefficient	4.91432	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.45227	PF Power Coefficient	0.56473
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	6.7
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4514	-	-	19.0

Vehicle Results

Average Speed, mi/h	19.0	Percent Followers, %	49.2
Segment Travel Time, minutes	2.70	Follower Density, followers/mi/ln	6.7
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	259	Bicycle Effective Width, ft	14
Bicycle LOS Score	4.40	Bicycle Effective Speed Factor	3.39
Bicycle LOS	D		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	6.7	C

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	SR235_Sylvia Rd	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	13739
Lane Width, ft	11	Shoulder Width, ft	4
Speed Limit, mi/h	55	Access Point Density, pts/mi	14.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	360	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	6.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.21

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	56.5
Speed Slope Coefficient	3.15434	Speed Power Coefficient	0.47394
PF Slope Coefficient	-1.44729	PF Power Coefficient	0.69057
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	3.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	13739	-	-	54.8

Vehicle Results

Average Speed, mi/h	54.8	Percent Followers, %	51.1
Segment Travel Time, minutes	2.85	Follower Density, followers/mi/ln	3.4
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	360	Bicycle Effective Width, ft	19
Bicycle LOS Score	4.90	Bicycle Effective Speed Factor	4.79
Bicycle LOS	E		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	3.4	B

HCS7 Multilane Highway Report

Project Information

Analyst	TCG	Date	9/28/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	SR235_E. College Street (Multilane)	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	North		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	47.0	Access Point Density, pts/mi	45.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	8
Free-Flow Speed (FFS), mi/h	36.1		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	743	Heavy Vehicle Adjustment Factor (f_{HV})	0.926
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	436
Total Trucks, %	4.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.23

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	36.1
Total Lateral Clearance Adj. (f_{LLC})	0.9	Density (D), pc/mi/ln	12.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	10.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	404	Effective Speed Factor (S_t)	4.17
Effective Width of Volume (W_v), ft	14	Bicyle LOS Score (BLOS)	4.93
Average Effective Width (W_e), ft	14	Bicycle Level of Service (LOS)	E

Direction 2 Geometric Data

Direction 2	Opposite		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	47.0	Access Point Density, pts/mi	45.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	8
Free-Flow Speed (FFS), mi/h	36.1		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	400	Heavy Vehicle Adjustment Factor (f_{HV})	0.926
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	235
Total Trucks, %	4.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.12

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	36.1
Total Lateral Clearance Adj. (f_{LLC})	0.9	Density (D), pc/mi/ln	6.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	10.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	404	Effective Speed Factor (S_t)	4.17
Effective Width of Volume (W_v), ft	14	Bicyle LOS Score (BLOS)	4.93
Average Effective Width (W_e), ft	14	Bicycle Level of Service (LOS)	E

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	SR096_State Hwy 96	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	17677
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	50	Access Point Density, pts/mi	18.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	693	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	4.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.41

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	52.2
Speed Slope Coefficient	3.11550	Speed Power Coefficient	0.44925
PF Slope Coefficient	-1.53547	PF Power Coefficient	0.66134
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	9.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	17677	-	-	49.7

Vehicle Results

Average Speed, mi/h	49.7	Percent Followers, %	70.0
Segment Travel Time, minutes	4.04	Follower Density, followers/mi/ln	9.8
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	693	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.49	Bicycle Effective Speed Factor	4.62
Bicycle LOS	C		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	9.8	C

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	SR096_State Hwy 96	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	3326
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	55	Access Point Density, pts/mi	13.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	440	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	4.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.26

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	59.1
Speed Slope Coefficient	3.44974	Speed Power Coefficient	0.44196
PF Slope Coefficient	-1.39144	PF Power Coefficient	0.73692
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	4.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3326	-	-	56.9

Vehicle Results

Average Speed, mi/h	56.9	Percent Followers, %	53.2
Segment Travel Time, minutes	0.66	Follower Density, followers/mi/ln	4.1
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	440	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.33	Bicycle Effective Speed Factor	4.79
Bicycle LOS	C		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	4.1	C

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	SR049_Vanleer Hwy	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	3538
Lane Width, ft	11	Shoulder Width, ft	2
Speed Limit, mi/h	40	Access Point Density, pts/mi	30.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	116	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	6.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.07

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	34.5
Speed Slope Coefficient	3.84373	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.51347	PF Power Coefficient	0.64977
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3538	-	-	33.8

Vehicle Results

Average Speed, mi/h	33.8	Percent Followers, %	31.2
Segment Travel Time, minutes	1.19	Follower Density, followers/mi/ln	1.1
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	116	Bicycle Effective Width, ft	19
Bicycle LOS Score	4.00	Bicycle Effective Speed Factor	4.17
Bicycle LOS	D		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	1.1	A

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	SR049_Spring St/State Hwy 49/Hwy 49	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	10945
Lane Width, ft	10	Shoulder Width, ft	2
Speed Limit, mi/h	40	Access Point Density, pts/mi	20.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	212	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	5.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.12

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	36.4
Speed Slope Coefficient	3.68733	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.50359	PF Power Coefficient	0.63721
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	2.6
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	10945	-	-	35.0

Vehicle Results

Average Speed, mi/h	35.0	Percent Followers, %	42.9
Segment Travel Time, minutes	3.56	Follower Density, followers/mi/ln	2.6
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	212	Bicycle Effective Width, ft	12
Bicycle LOS Score	5.12	Bicycle Effective Speed Factor	4.17
Bicycle LOS	E		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	2.6	B

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	SR049_Broad Street	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	15518
Lane Width, ft	10	Shoulder Width, ft	2
Speed Limit, mi/h	30	Access Point Density, pts/mi	20.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	197	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	6.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.12

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	25.0
Speed Slope Coefficient	4.61228	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.59015	PF Power Coefficient	0.53801
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	4.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	15518	-	-	23.3

Vehicle Results

Average Speed, mi/h	23.3	Percent Followers, %	48.5
Segment Travel Time, minutes	7.58	Follower Density, followers/mi/ln	4.1
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	197	Bicycle Effective Width, ft	12
Bicycle LOS Score	4.94	Bicycle Effective Speed Factor	3.39
Bicycle LOS	E		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	4.1	B

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	SR048_State Hwy 48	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	18797
Lane Width, ft	12	Shoulder Width, ft	3
Speed Limit, mi/h	30	Access Point Density, pts/mi	25.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	462	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	5.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.27

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	25.7
Speed Slope Coefficient	4.55701	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.60383	PF Power Coefficient	0.53980
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	13.3
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	18797	-	-	22.7

Vehicle Results

Average Speed, mi/h	22.7	Percent Followers, %	65.3
Segment Travel Time, minutes	9.41	Follower Density, followers/mi/ln	13.3
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	462	Bicycle Effective Width, ft	15
Bicycle LOS Score	4.75	Bicycle Effective Speed Factor	3.39
Bicycle LOS	E		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	13.3	D

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	SR048_State Hwy 48	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	16917
Lane Width, ft	12	Shoulder Width, ft	3
Speed Limit, mi/h	55	Access Point Density, pts/mi	20.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	462	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	5.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.27

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	55.0
Speed Slope Coefficient	3.11550	Speed Power Coefficient	0.46974
PF Slope Coefficient	-1.51200	PF Power Coefficient	0.66948
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	5.2
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	16917	-	-	53.0

Vehicle Results

Average Speed, mi/h	53.0	Percent Followers, %	59.4
Segment Travel Time, minutes	3.62	Follower Density, followers/mi/ln	5.2
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	462	Bicycle Effective Width, ft	15
Bicycle LOS Score	5.40	Bicycle Effective Speed Factor	4.79
Bicycle LOS	E		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	5.2	C

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	SR048_State Hwy 48	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	38042
Lane Width, ft	11	Shoulder Width, ft	2
Speed Limit, mi/h	45	Access Point Density, pts/mi	24.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	218	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	5.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.13

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	41.7
Speed Slope Coefficient	3.25880	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.59899	PF Power Coefficient	0.62700
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	2.5
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	38042	-	-	40.4

Vehicle Results

Average Speed, mi/h	40.4	Percent Followers, %	46.0
Segment Travel Time, minutes	10.70	Follower Density, followers/mi/ln	2.5
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	218	Bicycle Effective Width, ft	13
Bicycle LOS Score	5.13	Bicycle Effective Speed Factor	4.42
Bicycle LOS	E		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	2.5	A

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	SR048_S. Main Street	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	1822
Lane Width, ft	10	Shoulder Width, ft	6
Speed Limit, mi/h	25	Access Point Density, pts/mi	45.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	251	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	4.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.15

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	17.2
Speed Slope Coefficient	5.24601	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.51651	PF Power Coefficient	0.51423
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	8.9
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1822	-	-	14.8

Vehicle Results

Average Speed, mi/h	14.8	Percent Followers, %	52.5
Segment Travel Time, minutes	1.40	Follower Density, followers/mi/ln	8.9
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	251	Bicycle Effective Width, ft	22
Bicycle LOS Score	2.63	Bicycle Effective Speed Factor	2.61
Bicycle LOS	C		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	8.9	C

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	SR048_N.Main Street/State Hwy 48	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	4662
Lane Width, ft	12	Shoulder Width, ft	3
Speed Limit, mi/h	45	Access Point Density, pts/mi	45.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	651	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	9.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.38

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	38.9
Speed Slope Coefficient	3.48777	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.47542	PF Power Coefficient	0.67445
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	12.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4662	-	-	36.2

Vehicle Results

Average Speed, mi/h	36.2	Percent Followers, %	66.9
Segment Travel Time, minutes	1.46	Follower Density, followers/mi/ln	12.0
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	651	Bicycle Effective Width, ft	15
Bicycle LOS Score	6.67	Bicycle Effective Speed Factor	4.42
Bicycle LOS	F		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	12.0	D

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	SR048_N.Main Street	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	2746
Lane Width, ft	12	Shoulder Width, ft	3
Speed Limit, mi/h	35	Access Point Density, pts/mi	45.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	651	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	9.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.38

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	27.5
Speed Slope Coefficient	4.41003	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.53298	PF Power Coefficient	0.60751
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	18.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2746	-	-	24.1

Vehicle Results

Average Speed, mi/h	24.1	Percent Followers, %	69.3
Segment Travel Time, minutes	1.30	Follower Density, followers/mi/ln	18.8
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	651	Bicycle Effective Width, ft	15
Bicycle LOS Score	6.23	Bicycle Effective Speed Factor	3.84
Bicycle LOS	F		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	18.8	E

HCS7 Multilane Highway Report

Project Information

Analyst	TCG	Date	9/28/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	SR048_N. Main Street (Multilane)	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	North		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	45.0
Lane Width, ft	11	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Undivided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	31.5		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	599	Heavy Vehicle Adjustment Factor (f_{HV})	0.847
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	384
Total Trucks, %	9.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.20

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	1.9	Average Speed (S), mi/h	31.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	12.2
Median Type Adjustment (f_M)	1.6	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	10.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	326	Effective Speed Factor (S_t)	3.39
Effective Width of Volume (W_v), ft	17	Bicyle LOS Score (BLOS)	4.03
Average Effective Width (W_e), ft	23	Bicycle Level of Service (LOS)	D

Direction 2 Geometric Data

Direction 2	Opposite		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	45.0
Lane Width, ft	11	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Undivided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	31.5		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	322	Heavy Vehicle Adjustment Factor (f_{HV})	0.847
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	206
Total Trucks, %	9.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.11

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	1.9	Average Speed (S), mi/h	31.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	6.5
Median Type Adjustment (f_M)	1.6	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	10.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	326	Effective Speed Factor (S_t)	3.39
Effective Width of Volume (W_v), ft	17	Bicyle LOS Score (BLOS)	4.03
Average Effective Width (W_e), ft	23	Bicycle Level of Service (LOS)	D

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	SR048_Church St/E.Ricket Ave	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	950
Lane Width, ft	16	Shoulder Width, ft	2
Speed Limit, mi/h	30	Access Point Density, pts/mi	50.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	212	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	4.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.12

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	23.7
Speed Slope Coefficient	1.79146	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.40274	PF Power Coefficient	0.59033
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	4.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	950	-	-	22.9

Vehicle Results

Average Speed, mi/h	22.9	Percent Followers, %	43.0
Segment Travel Time, minutes	0.47	Follower Density, followers/mi/ln	4.0
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	212	Bicycle Effective Width, ft	18
Bicycle LOS Score	3.65	Bicycle Effective Speed Factor	3.39
Bicycle LOS	D		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	4.0	B

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	SR048_Center Ave/Church St.	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	1320
Lane Width, ft	10	Shoulder Width, ft	2
Speed Limit, mi/h	30	Access Point Density, pts/mi	50.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	375	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	4.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.22

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	20.1
Speed Slope Coefficient	1.59634	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.34768	PF Power Coefficient	0.56673
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	10.6
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1320	-	-	19.1

Vehicle Results

Average Speed, mi/h	19.1	Percent Followers, %	53.8
Segment Travel Time, minutes	0.78	Follower Density, followers/mi/ln	10.6
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	375	Bicycle Effective Width, ft	12
Bicycle LOS Score	4.84	Bicycle Effective Speed Factor	3.39
Bicycle LOS	E		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	10.6	D

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	SR048_Center Ave	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	6098
Lane Width, ft	11	Shoulder Width, ft	2
Speed Limit, mi/h	45	Access Point Density, pts/mi	45.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	584	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.34

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	37.8
Speed Slope Coefficient	3.57677	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.46946	PF Power Coefficient	0.66402
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	10.7
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	6098	-	-	35.2

Vehicle Results

Average Speed, mi/h	35.2	Percent Followers, %	64.2
Segment Travel Time, minutes	1.97	Follower Density, followers/mi/ln	10.7
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	584	Bicycle Effective Width, ft	13
Bicycle LOS Score	5.11	Bicycle Effective Speed Factor	4.42
Bicycle LOS	E		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	10.7	D

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	SR048_Center Ave 2	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	3358
Lane Width, ft	11	Shoulder Width, ft	4
Speed Limit, mi/h	30	Access Point Density, pts/mi	45.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	251	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	4.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.15

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	22.1
Speed Slope Coefficient	4.84960	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.48635	PF Power Coefficient	0.56806
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	6.2
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3358	-	-	19.9

Vehicle Results

Average Speed, mi/h	19.9	Percent Followers, %	49.2
Segment Travel Time, minutes	1.92	Follower Density, followers/mi/ln	6.2
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	251	Bicycle Effective Width, ft	19
Bicycle LOS Score	3.56	Bicycle Effective Speed Factor	3.39
Bicycle LOS	D		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	6.2	C

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	047_Stuart St/Church St/ Hwy47	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	3342
Lane Width, ft	10	Shoulder Width, ft	2
Speed Limit, mi/h	30	Access Point Density, pts/mi	30.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	116	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.07

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	22.6
Speed Slope Coefficient	4.80645	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.49163	PF Power Coefficient	0.57146
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.9
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3342	-	-	21.7

Vehicle Results

Average Speed, mi/h	21.7	Percent Followers, %	35.4
Segment Travel Time, minutes	1.75	Follower Density, followers/mi/ln	1.9
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	116	Bicycle Effective Width, ft	18
Bicycle LOS Score	3.16	Bicycle Effective Speed Factor	3.39
Bicycle LOS	C		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	1.9	A

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	SR047_Hwy 47	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	1753
Lane Width, ft	11	Shoulder Width, ft	6
Speed Limit, mi/h	55	Access Point Density, pts/mi	15.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	339	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	6.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.20

Intermediate Results

Segment Vertical Class	3	Free-Flow Speed, mi/h	57.2
Speed Slope Coefficient	5.28182	Speed Power Coefficient	0.54438
PF Slope Coefficient	-1.45049	PF Power Coefficient	0.73511
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	3.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1753	-	-	54.8

Vehicle Results

Average Speed, mi/h	54.8	Percent Followers, %	48.1
Segment Travel Time, minutes	0.36	Follower Density, followers/mi/ln	3.0
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	339	Bicycle Effective Width, ft	23
Bicycle LOS Score	4.03	Bicycle Effective Speed Factor	4.79
Bicycle LOS	D		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	3.0	B

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	SR047_Hwy 47	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	11194
Lane Width, ft	11	Shoulder Width, ft	3
Speed Limit, mi/h	55	Access Point Density, pts/mi	15.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	339	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	6.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.20

Intermediate Results

Segment Vertical Class	4	Free-Flow Speed, mi/h	54.2
Speed Slope Coefficient	7.26153	Speed Power Coefficient	0.36797
PF Slope Coefficient	-1.98060	PF Power Coefficient	0.74442
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	4.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	11194	-	-	49.9

Vehicle Results

Average Speed, mi/h	49.9	Percent Followers, %	58.7
Segment Travel Time, minutes	2.55	Follower Density, followers/mi/ln	4.0
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	339	Bicycle Effective Width, ft	14
Bicycle LOS Score	5.70	Bicycle Effective Speed Factor	4.79
Bicycle LOS	F		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	4.0	B

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	SR047_Hwy 47	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	8543
Lane Width, ft	10	Shoulder Width, ft	2
Speed Limit, mi/h	30	Access Point Density, pts/mi	30.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	338	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.20

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	22.6
Speed Slope Coefficient	4.80645	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.45080	PF Power Coefficient	0.56513
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	9.2
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	8543	-	-	20.0

Vehicle Results

Average Speed, mi/h	20.0	Percent Followers, %	54.4
Segment Travel Time, minutes	4.86	Follower Density, followers/mi/ln	9.2
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	338	Bicycle Effective Width, ft	12
Bicycle LOS Score	4.60	Bicycle Effective Speed Factor	3.39
Bicycle LOS	E		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	9.2	C

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	SR047_Hwy 47	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	8559
Lane Width, ft	10	Shoulder Width, ft	1
Speed Limit, mi/h	30	Access Point Density, pts/mi	45.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	338	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.20

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	19.4
Speed Slope Coefficient	5.06533	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.42711	PF Power Coefficient	0.54005
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	11.2
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	8559	-	-	16.6

Vehicle Results

Average Speed, mi/h	16.6	Percent Followers, %	54.8
Segment Travel Time, minutes	5.85	Follower Density, followers/mi/ln	11.2
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	338	Bicycle Effective Width, ft	11
Bicycle LOS Score	4.71	Bicycle Effective Speed Factor	3.39
Bicycle LOS	E		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	11.2	D

HCS7 Multilane Highway Report

Project Information

Analyst	TCG	Date	9/28/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	SR047_E.Walnut Street (Multilane)	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	North		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	60.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Undivided	Total Lateral Clearance (TLC), ft	7
Free-Flow Speed (FFS), mi/h	32.1		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	311	Heavy Vehicle Adjustment Factor (f_{HV})	0.943
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	179
Total Trucks, %	3.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.09

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	32.1
Total Lateral Clearance Adj. (f_{LLC})	1.3	Density (D), pc/mi/ln	5.6
Median Type Adjustment (f_M)	1.6	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	10.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	169	Effective Speed Factor (S_t)	3.39
Effective Width of Volume (W_v), ft	13	Bicyle LOS Score (BLOS)	4.12
Average Effective Width (W_e), ft	13	Bicycle Level of Service (LOS)	D

Direction 2 Geometric Data			
Direction 2	Opposite		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	60.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Undivided	Total Lateral Clearance (TLC), ft	7
Free-Flow Speed (FFS), mi/h	32.1		

Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity			
Volume(V) veh/h	183	Heavy Vehicle Adjustment Factor (f_{HV})	0.943
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	106
Total Trucks, %	3.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.06

Direction 2 Speed and Density			
Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	32.1
Total Lateral Clearance Adj. (f_{LLC})	1.3	Density (D), pc/mi/ln	3.3
Median Type Adjustment (f_M)	1.6	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	10.0		

Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (v_{OL}),veh/h	169	Effective Speed Factor (S_t)	3.39
Effective Width of Volume (W_v), ft	13	Bicyle LOS Score (BLOS)	4.12
Average Effective Width (W_e), ft	13	Bicycle Level of Service (LOS)	D

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	SR047_Charles Walton Speight/Hwy 47	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	3469
Lane Width, ft	11	Shoulder Width, ft	2
Speed Limit, mi/h	40	Access Point Density, pts/mi	15.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	529	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	5.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.31

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	38.3
Speed Slope Coefficient	3.53767	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.51032	PF Power Coefficient	0.66742
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	9.3
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3469	-	-	35.8

Vehicle Results

Average Speed, mi/h	35.8	Percent Followers, %	62.8
Segment Travel Time, minutes	1.10	Follower Density, followers/mi/ln	9.3
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	529	Bicycle Effective Width, ft	13
Bicycle LOS Score	5.46	Bicycle Effective Speed Factor	4.17
Bicycle LOS	E		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	9.3	C

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	SR046_Yellow Creek Rd (Rural)	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	60509
Lane Width, ft	10	Shoulder Width, ft	2
Speed Limit, mi/h	45	Access Point Density, pts/mi	13.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	197	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	5.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.12

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	43.9
Speed Slope Coefficient	3.11550	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.58868	PF Power Coefficient	0.63527
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	2.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	60509	-	-	42.7

Vehicle Results

Average Speed, mi/h	42.7	Percent Followers, %	43.2
Segment Travel Time, minutes	16.10	Follower Density, followers/mi/ln	2.0
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	197	Bicycle Effective Width, ft	12
Bicycle LOS Score	5.20	Bicycle Effective Speed Factor	4.42
Bicycle LOS	E		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	2.0	A

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	SR046_Yellow Creek Road	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	10560
Lane Width, ft	11	Shoulder Width, ft	2
Speed Limit, mi/h	45	Access Point Density, pts/mi	20.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	572	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.34

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	42.8
Speed Slope Coefficient	3.17227	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.47977	PF Power Coefficient	0.66614
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	9.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	10560	-	-	40.5

Vehicle Results

Average Speed, mi/h	40.5	Percent Followers, %	63.9
Segment Travel Time, minutes	2.96	Follower Density, followers/mi/ln	9.0
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	572	Bicycle Effective Width, ft	13
Bicycle LOS Score	5.10	Bicycle Effective Speed Factor	4.42
Bicycle LOS	E		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	9.0	C

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	SR046_Yellow Creek Road	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	10560
Lane Width, ft	11	Shoulder Width, ft	2
Speed Limit, mi/h	35	Access Point Density, pts/mi	20.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	572	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.34

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	31.4
Speed Slope Coefficient	4.09453	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.50288	PF Power Coefficient	0.61177
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	13.2
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	10560	-	-	28.4

Vehicle Results

Average Speed, mi/h	28.4	Percent Followers, %	65.6
Segment Travel Time, minutes	4.22	Follower Density, followers/mi/ln	13.2
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	572	Bicycle Effective Width, ft	13
Bicycle LOS Score	4.90	Bicycle Effective Speed Factor	3.84
Bicycle LOS	E		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	13.2	D

HCS7 Multilane Highway Report

Project Information

Analyst	TCG	Date	9/28/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	SR046_Mathis Drive (Multilane)	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	North		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	30.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	8
Free-Flow Speed (FFS), mi/h	36.6		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	791	Heavy Vehicle Adjustment Factor (f_{HV})	0.847
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	508
Total Trucks, %	9.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.27

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	36.6
Total Lateral Clearance Adj. (f_{LLC})	0.9	Density (D), pc/mi/ln	13.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	7.5		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	430	Effective Speed Factor (S_t)	3.39
Effective Width of Volume (W_v), ft	14	Bicyle LOS Score (BLOS)	5.83
Average Effective Width (W_e), ft	14	Bicycle Level of Service (LOS)	F

Direction 2 Geometric Data

Direction 2	Opposite		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	30.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	8
Free-Flow Speed (FFS), mi/h	36.6		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	730	Heavy Vehicle Adjustment Factor (f_{HV})	0.847
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	468
Total Trucks, %	9.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.25

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	36.6
Total Lateral Clearance Adj. (f_{LLC})	0.9	Density (D), pc/mi/ln	12.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	7.5		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	430	Effective Speed Factor (S_t)	3.39
Effective Width of Volume (W_v), ft	14	Bicyle LOS Score (BLOS)	5.83
Average Effective Width (W_e), ft	14	Bicycle Level of Service (LOS)	F

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	SR046_Mathis Drive	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	2534
Lane Width, ft	12	Shoulder Width, ft	2
Speed Limit, mi/h	30	Access Point Density, pts/mi	30.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	860	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	9.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.51

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	23.6
Speed Slope Coefficient	4.72554	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.52513	PF Power Coefficient	0.57863
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	33.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2534	-	-	19.4

Vehicle Results

Average Speed, mi/h	19.4	Percent Followers, %	75.3
Segment Travel Time, minutes	1.49	Follower Density, followers/mi/ln	33.4
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	860	Bicycle Effective Width, ft	14
Bicycle LOS Score	6.18	Bicycle Effective Speed Factor	3.39
Bicycle LOS	F		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	33.4	E

HCS7 Multilane Highway Report

Project Information

Analyst	TCG	Date	9/28/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	SR046_Hwy 46(Multilane)	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	North		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	52.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	47.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	776	Heavy Vehicle Adjustment Factor (f_{HV})	0.877
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	481
Total Trucks, %	7.00	Capacity (c), pc/h/ln	1940
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1940
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.25

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	47.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	10.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	5.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	422	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	4.02
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	D

Direction 2 Geometric Data

Direction 2	Opposite		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	52.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	47.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	540	Heavy Vehicle Adjustment Factor (f_{HV})	0.877
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	334
Total Trucks, %	7.00	Capacity (c), pc/h/ln	1940
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1940
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.17

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	47.0
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	7.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	5.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	422	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	4.02
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	D

HCS7 Multilane Highway Report

Project Information

Analyst	TCG	Date	9/28/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	SR046_Hwy 46(Multilane)	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	North		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	30.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	8
Free-Flow Speed (FFS), mi/h	36.6		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1599	Heavy Vehicle Adjustment Factor (f_{HV})	0.847
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	1026
Total Trucks, %	9.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.54

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	36.6
Total Lateral Clearance Adj. (f_{LLC})	0.9	Density (D), pc/mi/ln	28.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f_A)	7.5		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	869	Effective Speed Factor (S_t)	3.84
Effective Width of Volume (W_v), ft	14	Bicyle LOS Score (BLOS)	6.52
Average Effective Width (W_e), ft	14	Bicycle Level of Service (LOS)	F

Direction 2 Geometric Data

Direction 2	Opposite		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	30.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	8
Free-Flow Speed (FFS), mi/h	36.6		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	861	Heavy Vehicle Adjustment Factor (f_{HV})	0.847
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	552
Total Trucks, %	9.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.29

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	36.6
Total Lateral Clearance Adj. (f_{LLC})	0.9	Density (D), pc/mi/ln	15.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	7.5		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	869	Effective Speed Factor (S_t)	3.84
Effective Width of Volume (W_v), ft	14	Bicyle LOS Score (BLOS)	6.52
Average Effective Width (W_e), ft	14	Bicycle Level of Service (LOS)	F

HCS7 Multilane Highway Report

Project Information

Analyst	TCG	Date	9/28/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	SR046_Hwy 46(Multilane)	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	North		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	52.0	Access Point Density, pts/mi	30.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	44.5		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1341	Heavy Vehicle Adjustment Factor (f_{HV})	0.877
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	831
Total Trucks, %	7.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.44

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	44.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	18.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f_A)	7.5		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	729	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	4.30
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	D

Direction 2 Geometric Data			
Direction 2	Opposite		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	52.0	Access Point Density, pts/mi	30.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	44.5		

Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity			
Volume(V) veh/h	1288	Heavy Vehicle Adjustment Factor (f_{HV})	0.877
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	798
Total Trucks, %	7.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.42

Direction 2 Speed and Density			
Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	44.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	17.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	7.5		

Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (v_{OL}),veh/h	729	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	4.30
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	D

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	SR046_Hwy 46	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	8216
Lane Width, ft	12	Shoulder Width, ft	3
Speed Limit, mi/h	55	Access Point Density, pts/mi	20.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	843	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	7.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.50

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	54.9
Speed Slope Coefficient	3.18638	Speed Power Coefficient	0.44603
PF Slope Coefficient	-1.37884	PF Power Coefficient	0.72239
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	11.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	8216	-	-	52.1

Vehicle Results

Average Speed, mi/h	52.1	Percent Followers, %	70.5
Segment Travel Time, minutes	1.79	Follower Density, followers/mi/ln	11.4
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	843	Bicycle Effective Width, ft	15
Bicycle LOS Score	6.35	Bicycle Effective Speed Factor	4.79
Bicycle LOS	F		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	11.4	D

HCS7 Multilane Highway Report

Project Information

Analyst	TCG	Date	9/28/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	SR001_E.College Street	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	East		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	52.0	Access Point Density, pts/mi	30.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	8
Free-Flow Speed (FFS), mi/h	43.6		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	737	Heavy Vehicle Adjustment Factor (f_{HV})	0.847
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	473
Total Trucks, %	9.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.25

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.6
Total Lateral Clearance Adj. (f_{LLC})	0.9	Density (D), pc/mi/ln	10.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	7.5		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	401	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	14	Bicyle LOS Score (BLOS)	6.57
Average Effective Width (W_e), ft	14	Bicycle Level of Service (LOS)	F

Direction 2 Geometric Data

Direction 2	Opposite		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	52.0	Access Point Density, pts/mi	30.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	8
Free-Flow Speed (FFS), mi/h	43.6		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	680	Heavy Vehicle Adjustment Factor (f_{HV})	0.847
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	436
Total Trucks, %	9.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.23

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.6
Total Lateral Clearance Adj. (f_{LLC})	0.9	Density (D), pc/mi/ln	10.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	7.5		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	401	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	14	Bicyle LOS Score (BLOS)	6.57
Average Effective Width (W_e), ft	14	Bicycle Level of Service (LOS)	F

HCS7 Multilane Highway Report

Project Information

Analyst	TCG	Date	9/28/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	SR001_W.College St (Multilane)	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	East		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	52.0	Access Point Density, pts/mi	30.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	2
Median Type	Divided	Total Lateral Clearance (TLC), ft	5
Free-Flow Speed (FFS), mi/h	42.8		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	995	Heavy Vehicle Adjustment Factor (f_{HV})	0.847
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	638
Total Trucks, %	9.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.34

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.8
Total Lateral Clearance Adj. (f_{LLC})	1.7	Density (D), pc/mi/ln	14.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	7.5		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	541	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	15	Bicyle LOS Score (BLOS)	6.57
Average Effective Width (W_e), ft	15	Bicycle Level of Service (LOS)	F

Direction 2 Geometric Data

Direction 2	Opposite		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	52.0	Access Point Density, pts/mi	30.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	2
Median Type	Divided	Total Lateral Clearance (TLC), ft	5
Free-Flow Speed (FFS), mi/h	42.8		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	447	Heavy Vehicle Adjustment Factor (f_{HV})	0.847
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	287
Total Trucks, %	9.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.15

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	42.8
Total Lateral Clearance Adj. (f_{LLC})	1.7	Density (D), pc/mi/ln	6.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	7.5		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	541	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	15	Bicyle LOS Score (BLOS)	6.57
Average Effective Width (W_e), ft	15	Bicycle Level of Service (LOS)	F

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	SR001_US-70(Urban Arterial)/W.College St.	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	3928
Lane Width, ft	11	Shoulder Width, ft	3
Speed Limit, mi/h	45	Access Point Density, pts/mi	20.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	1082	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	9.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.64

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	43.3
Speed Slope Coefficient	3.13181	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.47473	PF Power Coefficient	0.69224
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	21.2
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3928	-	-	40.2

Vehicle Results

Average Speed, mi/h	40.2	Percent Followers, %	78.9
Segment Travel Time, minutes	1.11	Follower Density, followers/mi/ln	21.2
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	1082	Bicycle Effective Width, ft	14
Bicycle LOS Score	7.07	Bicycle Effective Speed Factor	4.42
Bicycle LOS	F		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	21.2	E

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	SR001_US-70 (Rural)	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	22276
Lane Width, ft	12	Shoulder Width, ft	4
Speed Limit, mi/h	55	Access Point Density, pts/mi	16.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	512	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	5.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.30

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	56.7
Speed Slope Coefficient	3.14396	Speed Power Coefficient	0.47979
PF Slope Coefficient	-1.49758	PF Power Coefficient	0.67378
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	5.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	22276	-	-	54.6

Vehicle Results

Average Speed, mi/h	54.6	Percent Followers, %	61.5
Segment Travel Time, minutes	4.64	Follower Density, followers/mi/ln	5.8
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	512	Bicycle Effective Width, ft	20
Bicycle LOS Score	4.57	Bicycle Effective Speed Factor	4.79
Bicycle LOS	E		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	5.8	C

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	SR001_US-70(Rural Arterial)	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	30202
Lane Width, ft	12	Shoulder Width, ft	3
Speed Limit, mi/h	55	Access Point Density, pts/mi	20.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	600	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	6.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.35

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	54.8
Speed Slope Coefficient	3.11550	Speed Power Coefficient	0.47234
PF Slope Coefficient	-1.51195	PF Power Coefficient	0.66979
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	7.5
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	30202	-	-	52.6

Vehicle Results

Average Speed, mi/h	52.6	Percent Followers, %	65.8
Segment Travel Time, minutes	6.53	Follower Density, followers/mi/ln	7.5
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	600	Bicycle Effective Width, ft	15
Bicycle LOS Score	5.84	Bicycle Effective Speed Factor	4.79
Bicycle LOS	F		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	7.5	C

HCS7 Multilane Highway Report

Project Information

Analyst	TCG	Date	9/28/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	SR001_Henslee Drive	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	East		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	52.0	Access Point Density, pts/mi	30.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	44.5		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	841	Heavy Vehicle Adjustment Factor (f_{HV})	0.847
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	540
Total Trucks, %	9.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.28

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	44.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	12.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	7.5		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	457	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	4.73
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	E

Direction 2 Geometric Data

Direction 2	Opposite		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	52.0	Access Point Density, pts/mi	30.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	44.5		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	453	Heavy Vehicle Adjustment Factor (f_{HV})	0.847
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	290
Total Trucks, %	9.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.15

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	44.5
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	6.5
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	7.5		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	457	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	4.73
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	E

HCS7 Multilane Highway Report

Project Information

Analyst	TCG	Date	9/28/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	SR001_Henslee Drive	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	East		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	8
Free-Flow Speed (FFS), mi/h	39.1		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	626	Heavy Vehicle Adjustment Factor (f_{HV})	0.847
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	402
Total Trucks, %	9.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.21

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	39.1
Total Lateral Clearance Adj. (f_{LLC})	0.9	Density (D), pc/mi/ln	10.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	5.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	340	Effective Speed Factor (S_t)	3.84
Effective Width of Volume (W_v), ft	14	Bicyle LOS Score (BLOS)	6.05
Average Effective Width (W_e), ft	14	Bicycle Level of Service (LOS)	F

Direction 2 Geometric Data			
Direction 2	Opposite		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	8
Free-Flow Speed (FFS), mi/h	39.1		

Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity			
Volume(V) veh/h	418	Heavy Vehicle Adjustment Factor (f_{HV})	0.847
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	268
Total Trucks, %	9.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.14

Direction 2 Speed and Density			
Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	39.1
Total Lateral Clearance Adj. (f_{LLC})	0.9	Density (D), pc/mi/ln	6.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	5.0		

Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (v_{OL}),veh/h	340	Effective Speed Factor (S_t)	3.84
Effective Width of Volume (W_v), ft	14	Bicyle LOS Score (BLOS)	6.05
Average Effective Width (W_e), ft	14	Bicycle Level of Service (LOS)	F

HCS7 Multilane Highway Report

Project Information

Analyst	TCG	Date	9/28/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	SR001_E.College St/US-70 (Multi)	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	East		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Access Point Density, pts/mi	30.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	10
Free-Flow Speed (FFS), mi/h	52.1		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	498	Heavy Vehicle Adjustment Factor (f_{HV})	0.847
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	320
Total Trucks, %	9.00	Capacity (c), pc/h/ln	2042
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2042
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.16

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	52.1
Total Lateral Clearance Adj. (f_{LLC})	0.4	Density (D), pc/mi/ln	6.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	7.5		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	271	Effective Speed Factor (S_t)	4.79
Effective Width of Volume (W_v), ft	16	Bicyle LOS Score (BLOS)	5.62
Average Effective Width (W_e), ft	20	Bicycle Level of Service (LOS)	F

Direction 2 Geometric Data

Direction 2	Opposite		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Access Point Density, pts/mi	30.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	10
Free-Flow Speed (FFS), mi/h	52.1		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	268	Heavy Vehicle Adjustment Factor (f_{HV})	0.847
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	172
Total Trucks, %	9.00	Capacity (c), pc/h/ln	2042
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2042
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.08

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	52.1
Total Lateral Clearance Adj. (f_{LLC})	0.4	Density (D), pc/mi/ln	3.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	7.5		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	271	Effective Speed Factor (S_t)	4.79
Effective Width of Volume (W_v), ft	16	Bicyle LOS Score (BLOS)	5.62
Average Effective Width (W_e), ft	20	Bicycle Level of Service (LOS)	F

HCS7 Multilane Highway Report

Project Information

Analyst	TCG	Date	9/28/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	SR001_E.College St(Multi)	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	East		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	52.0	Access Point Density, pts/mi	30.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	8
Free-Flow Speed (FFS), mi/h	43.6		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	737	Heavy Vehicle Adjustment Factor (f_{HV})	0.847
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	473
Total Trucks, %	9.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.25

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.6
Total Lateral Clearance Adj. (f_{LLC})	0.9	Density (D), pc/mi/ln	10.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	7.5		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	401	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	14	Bicyle LOS Score (BLOS)	6.57
Average Effective Width (W_e), ft	14	Bicycle Level of Service (LOS)	F

Direction 2 Geometric Data

Direction 2	Opposite		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	52.0	Access Point Density, pts/mi	30.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	8
Free-Flow Speed (FFS), mi/h	43.6		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	680	Heavy Vehicle Adjustment Factor (f_{HV})	0.847
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	436
Total Trucks, %	9.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.23

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	43.6
Total Lateral Clearance Adj. (f_{LLC})	0.9	Density (D), pc/mi/ln	10.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	7.5		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	401	Effective Speed Factor (S_t)	4.42
Effective Width of Volume (W_v), ft	14	Bicyle LOS Score (BLOS)	6.57
Average Effective Width (W_e), ft	14	Bicycle Level of Service (LOS)	F

HCS7 Multilane Highway Report

Project Information

Analyst	TCG	Date	9/28/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	SR001_E.College St	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	East		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Access Point Density, pts/mi	30.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	10
Free-Flow Speed (FFS), mi/h	52.1		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	498	Heavy Vehicle Adjustment Factor (f_{HV})	0.847
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	320
Total Trucks, %	9.00	Capacity (c), pc/h/ln	2042
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2042
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.16

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	52.1
Total Lateral Clearance Adj. (f_{LLC})	0.4	Density (D), pc/mi/ln	6.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	7.5		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	271	Effective Speed Factor (S_t)	4.79
Effective Width of Volume (W_v), ft	16	Bicyle LOS Score (BLOS)	5.62
Average Effective Width (W_e), ft	20	Bicycle Level of Service (LOS)	F

Direction 2 Geometric Data			
Direction 2	Opposite		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Access Point Density, pts/mi	30.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	10
Free-Flow Speed (FFS), mi/h	52.1		

Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity			
Volume(V) veh/h	268	Heavy Vehicle Adjustment Factor (f_{HV})	0.847
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	172
Total Trucks, %	9.00	Capacity (c), pc/h/ln	2042
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2042
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.08

Direction 2 Speed and Density			
Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	52.1
Total Lateral Clearance Adj. (f_{LLC})	0.4	Density (D), pc/mi/ln	3.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	7.5		

Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (v_{OL}),veh/h	271	Effective Speed Factor (S_t)	4.79
Effective Width of Volume (W_v), ft	16	Bicyle LOS Score (BLOS)	5.62
Average Effective Width (W_e), ft	20	Bicycle Level of Service (LOS)	F

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	SR001_Broadway Street	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	24647
Lane Width, ft	12	Shoulder Width, ft	3
Speed Limit, mi/h	30	Access Point Density, pts/mi	20.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	512	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	5.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.30

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	26.9
Speed Slope Coefficient	4.45588	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.60905	PF Power Coefficient	0.54851
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	14.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	24647	-	-	23.9

Vehicle Results

Average Speed, mi/h	23.9	Percent Followers, %	67.2
Segment Travel Time, minutes	11.74	Follower Density, followers/mi/ln	14.4
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	512	Bicycle Effective Width, ft	15
Bicycle LOS Score	4.80	Bicycle Effective Speed Factor	3.39
Bicycle LOS	E		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	14.4	D

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	05693_Pamona Rd/Lena/ W.Grab Creek/Grab Creek Rd	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	3037
Lane Width, ft	10	Shoulder Width, ft	1
Speed Limit, mi/h	30	Access Point Density, pts/mi	45.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	105	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.06

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	19.4
Speed Slope Coefficient	5.06533	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.47695	PF Power Coefficient	0.54415
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	2.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3037	-	-	18.8

Vehicle Results

Average Speed, mi/h	18.8	Percent Followers, %	35.2
Segment Travel Time, minutes	1.83	Follower Density, followers/mi/ln	2.0
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	105	Bicycle Effective Width, ft	17
Bicycle LOS Score	3.28	Bicycle Effective Speed Factor	3.39
Bicycle LOS	C		

Facility Results

T	Follower Density, followers/mi/ln	LOS

1	2.0	A

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	05688_Skyline Cir	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	2529
Lane Width, ft	12	Shoulder Width, ft	1
Speed Limit, mi/h	30	Access Point Density, pts/mi	36.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	122	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.07

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	21.6
Speed Slope Coefficient	4.88735	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.51825	PF Power Coefficient	0.55912
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	2.2
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2529	-	-	20.6

Vehicle Results

Average Speed, mi/h	20.6	Percent Followers, %	37.4
Segment Travel Time, minutes	1.39	Follower Density, followers/mi/ln	2.2
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	122	Bicycle Effective Width, ft	19
Bicycle LOS Score	3.00	Bicycle Effective Speed Factor	3.39
Bicycle LOS	C		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	2.2	A

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	05686_Cowan Rd/Bar-B-Q Rd.	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	3993
Lane Width, ft	11	Shoulder Width, ft	1
Speed Limit, mi/h	30	Access Point Density, pts/mi	16.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	155	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.09

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	26.0
Speed Slope Coefficient	4.53139	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.49110	PF Power Coefficient	0.59797
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	2.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3993	-	-	24.6

Vehicle Results

Average Speed, mi/h	24.6	Percent Followers, %	38.7
Segment Travel Time, minutes	1.84	Follower Density, followers/mi/ln	2.4
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	155	Bicycle Effective Width, ft	15
Bicycle LOS Score	3.80	Bicycle Effective Speed Factor	3.39
Bicycle LOS	D		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	2.4	A

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	05685_N.Charlotte/ Westfield Rd/Old Charlotte Pk.	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	3400
Lane Width, ft	11	Shoulder Width, ft	2
Speed Limit, mi/h	30	Access Point Density, pts/mi	60.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	65	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.04

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	20.7
Speed Slope Coefficient	4.96016	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.47569	PF Power Coefficient	0.55671
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.9
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3400	-	-	20.7

Vehicle Results

Average Speed, mi/h	20.7	Percent Followers, %	27.6
Segment Travel Time, minutes	1.87	Follower Density, followers/mi/ln	0.9
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	65	Bicycle Effective Width, ft	22
Bicycle LOS Score	2.06	Bicycle Effective Speed Factor	3.39
Bicycle LOS	B		

Facility Results

T	Follower Density, followers/mi/ln	LOS

1	0.9	A

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	11/29/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	05684_Beasley Drive	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	9118
Lane Width, ft	12	Shoulder Width, ft	4
Speed Limit, mi/h	45	Access Point Density, pts/mi	5.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	837	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.49

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	48.6
Speed Slope Coefficient	3.11550	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.43221	PF Power Coefficient	0.69531
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	13.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	9118	-	-	45.8

Vehicle Results

Average Speed, mi/h	45.8	Percent Followers, %	71.8
Segment Travel Time, minutes	2.26	Follower Density, followers/mi/ln	13.1
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	837	Bicycle Effective Width, ft	20
Bicycle LOS Score	4.13	Bicycle Effective Speed Factor	4.42
Bicycle LOS	D		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	13.1	D

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	04608_Marshall Stuart Drive	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	1177
Lane Width, ft	12	Shoulder Width, ft	5
Speed Limit, mi/h	40	Access Point Density, pts/mi	5.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	240	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.14

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	43.6
Speed Slope Coefficient	2.86914	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.50049	PF Power Coefficient	0.69095
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	2.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1177	-	-	42.3

Vehicle Results

Average Speed, mi/h	42.3	Percent Followers, %	42.9
Segment Travel Time, minutes	0.32	Follower Density, followers/mi/ln	2.4
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	240	Bicycle Effective Width, ft	22
Bicycle LOS Score	2.99	Bicycle Effective Speed Factor	4.17
Bicycle LOS	C		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	2.4	A

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	04529_Cowan Rd.	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	2265
Lane Width, ft	12	Shoulder Width, ft	2
Speed Limit, mi/h	30	Access Point Density, pts/mi	30.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	278	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.16

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	23.8
Speed Slope Coefficient	4.70937	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.54818	PF Power Coefficient	0.57433
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	6.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2265	-	-	21.5

Vehicle Results

Average Speed, mi/h	21.5	Percent Followers, %	52.4
Segment Travel Time, minutes	1.20	Follower Density, followers/mi/ln	6.8
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	278	Bicycle Effective Width, ft	14
Bicycle LOS Score	4.24	Bicycle Effective Speed Factor	3.39
Bicycle LOS	D		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	6.8	C

HCS7 Multilane Highway Report

Project Information

Analyst	TCG	Date	9/28/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	04529_Beasley Dr (Multilane)	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	North		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	30.0
Lane Width, ft	11	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	8
Free-Flow Speed (FFS), mi/h	34.7		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	659	Heavy Vehicle Adjustment Factor (f_{HV})	0.943
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	380
Total Trucks, %	3.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.20

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	1.9	Average Speed (S), mi/h	34.7
Total Lateral Clearance Adj. (f_{LLC})	0.9	Density (D), pc/mi/ln	11.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	7.5		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	358	Effective Speed Factor (S_t)	4.17
Effective Width of Volume (W_v), ft	13	Bicyle LOS Score (BLOS)	4.77
Average Effective Width (W_e), ft	13	Bicycle Level of Service (LOS)	E

Direction 2 Geometric Data

Direction 2	Opposite		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	30.0
Lane Width, ft	11	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	8
Free-Flow Speed (FFS), mi/h	34.7		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	355	Heavy Vehicle Adjustment Factor (f_{HV})	0.943
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	204
Total Trucks, %	3.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.11

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	1.9	Average Speed (S), mi/h	34.7
Total Lateral Clearance Adj. (f_{LLC})	0.9	Density (D), pc/mi/ln	5.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	7.5		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	358	Effective Speed Factor (S_t)	4.17
Effective Width of Volume (W_v), ft	13	Bicyle LOS Score (BLOS)	4.77
Average Effective Width (W_e), ft	13	Bicycle Level of Service (LOS)	E

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	03155_Spring St.	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	1848
Lane Width, ft	15	Shoulder Width, ft	1
Speed Limit, mi/h	30	Access Point Density, pts/mi	30.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	180	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.11

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	24.9
Speed Slope Coefficient	4.62038	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.58330	PF Power Coefficient	0.57899
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	3.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1848	-	-	23.3

Vehicle Results

Average Speed, mi/h	23.3	Percent Followers, %	44.4
Segment Travel Time, minutes	0.90	Follower Density, followers/mi/ln	3.4
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	180	Bicycle Effective Width, ft	16
Bicycle LOS Score	3.72	Bicycle Effective Speed Factor	3.39
Bicycle LOS	D		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	3.4	B

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	03155_Academy St/ E.Ricket St.	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	792
Lane Width, ft	11	Shoulder Width, ft	1
Speed Limit, mi/h	30	Access Point Density, pts/mi	50.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	185	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.11

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	20.0
Speed Slope Coefficient	1.59273	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.34666	PF Power Coefficient	0.56615
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	3.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	792	-	-	19.4

Vehicle Results

Average Speed, mi/h	19.4	Percent Followers, %	40.4
Segment Travel Time, minutes	0.46	Follower Density, followers/mi/ln	3.8
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	185	Bicycle Effective Width, ft	12
Bicycle LOS Score	4.29	Bicycle Effective Speed Factor	3.39
Bicycle LOS	D		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	3.8	B

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	03153_Tennsco Dr.	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	3432
Lane Width, ft	12	Shoulder Width, ft	2
Speed Limit, mi/h	30	Access Point Density, pts/mi	25.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	192	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	4.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.11

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	25.0
Speed Slope Coefficient	4.61094	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.50143	PF Power Coefficient	0.59027
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	3.6
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3432	-	-	23.3

Vehicle Results

Average Speed, mi/h	23.3	Percent Followers, %	43.3
Segment Travel Time, minutes	1.67	Follower Density, followers/mi/ln	3.6
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	192	Bicycle Effective Width, ft	14
Bicycle LOS Score	4.24	Bicycle Effective Speed Factor	3.39
Bicycle LOS	D		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	3.6	B

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	
Project Description	03153_Marshall Stuart Dr.	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	3934
Lane Width, ft	12	Shoulder Width, ft	2
Speed Limit, mi/h	40	Access Point Density, pts/mi	25.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	279	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	4.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.16

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	36.4
Speed Slope Coefficient	3.68868	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.50184	PF Power Coefficient	0.65895
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	3.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3934	-	-	34.6

Vehicle Results

Average Speed, mi/h	34.6	Percent Followers, %	47.7
Segment Travel Time, minutes	1.29	Follower Density, followers/mi/ln	3.8
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	279	Bicycle Effective Width, ft	14
Bicycle LOS Score	4.75	Bicycle Effective Speed Factor	4.17
Bicycle LOS	E		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	3.8	B

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	03152_E.Ricket St.	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	1003
Lane Width, ft	16	Shoulder Width, ft	1
Speed Limit, mi/h	30	Access Point Density, pts/mi	17.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	142	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.08

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	28.8
Speed Slope Coefficient	2.06698	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.45894	PF Power Coefficient	0.62136
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1003	-	-	28.2

Vehicle Results

Average Speed, mi/h	28.2	Percent Followers, %	35.2
Segment Travel Time, minutes	0.40	Follower Density, followers/mi/ln	1.8
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	142	Bicycle Effective Width, ft	23
Bicycle LOS Score	2.23	Bicycle Effective Speed Factor	3.39
Bicycle LOS	B		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	1.8	A

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	03151_Weaver Dr.	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	2376
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	40	Access Point Density, pts/mi	20.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	178	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	4.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.10

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	40.5
Speed Slope Coefficient	3.36104	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.55349	PF Power Coefficient	0.67189
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2376	-	-	39.3

Vehicle Results

Average Speed, mi/h	39.3	Percent Followers, %	38.6
Segment Travel Time, minutes	0.69	Follower Density, followers/mi/ln	1.8
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	178	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.62	Bicycle Effective Speed Factor	4.17
Bicycle LOS	C		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	1.8	A

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	03151_W.Walnut St.	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	4071
Lane Width, ft	12	Shoulder Width, ft	2
Speed Limit, mi/h	30	Access Point Density, pts/mi	50.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	720	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	4.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.42

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	21.3
Speed Slope Coefficient	4.91432	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.46102	PF Power Coefficient	0.56401
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	29.3
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4071	-	-	17.2

Vehicle Results

Average Speed, mi/h	17.2	Percent Followers, %	70.3
Segment Travel Time, minutes	2.68	Follower Density, followers/mi/ln	29.3
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	720	Bicycle Effective Width, ft	14
Bicycle LOS Score	4.91	Bicycle Effective Speed Factor	3.39
Bicycle LOS	E		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	29.3	E

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	03151_E. Walnut St.	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	3643
Lane Width, ft	12	Shoulder Width, ft	2
Speed Limit, mi/h	30	Access Point Density, pts/mi	50.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	473	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	4.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.28

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	21.3
Speed Slope Coefficient	4.91432	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.47179	PF Power Coefficient	0.56283
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	16.3
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3643	-	-	18.0

Vehicle Results

Average Speed, mi/h	18.0	Percent Followers, %	61.9
Segment Travel Time, minutes	2.30	Follower Density, followers/mi/ln	16.3
Vehicle LOS	E		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	473	Bicycle Effective Width, ft	14
Bicycle LOS Score	4.70	Bicycle Effective Speed Factor	3.39
Bicycle LOS	E		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	16.3	E

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	03151_Beasley Drive	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	3057
Lane Width, ft	12	Shoulder Width, ft	4
Speed Limit, mi/h	40	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	720	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	4.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.42

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	41.6
Speed Slope Coefficient	3.27205	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.51579	PF Power Coefficient	0.67969
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	13.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3057	-	-	38.9

Vehicle Results

Average Speed, mi/h	38.9	Percent Followers, %	70.2
Segment Travel Time, minutes	0.89	Follower Density, followers/mi/ln	13.0
Vehicle LOS	D		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	720	Bicycle Effective Width, ft	20
Bicycle LOS Score	4.21	Bicycle Effective Speed Factor	4.17
Bicycle LOS	D		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	13.0	D

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	03150_S.Charlotte St.	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	1109
Lane Width, ft	16	Shoulder Width, ft	2
Speed Limit, mi/h	30	Access Point Density, pts/mi	60.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	143	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	4.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.08

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	23.7
Speed Slope Coefficient	1.79146	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.40274	PF Power Coefficient	0.59033
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	2.2
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1109	-	-	23.2

Vehicle Results

Average Speed, mi/h	23.2	Percent Followers, %	36.0
Segment Travel Time, minutes	0.54	Follower Density, followers/mi/ln	2.2
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	143	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.20	Bicycle Effective Speed Factor	3.39
Bicycle LOS	B		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	2.2	A

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	03150_N.Charlotte Street	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	3010
Lane Width, ft	11	Shoulder Width, ft	2
Speed Limit, mi/h	30	Access Point Density, pts/mi	40.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	180	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.11

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	20.7
Speed Slope Coefficient	4.96016	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.48948	PF Power Coefficient	0.55484
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	4.2
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3010	-	-	19.0

Vehicle Results

Average Speed, mi/h	19.0	Percent Followers, %	43.8
Segment Travel Time, minutes	1.80	Follower Density, followers/mi/ln	4.2
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	180	Bicycle Effective Width, ft	13
Bicycle LOS Score	4.15	Bicycle Effective Speed Factor	3.39
Bicycle LOS	D		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	4.2	B

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	01862_Taylor Town Rd.	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	9187
Lane Width, ft	10	Shoulder Width, ft	2
Speed Limit, mi/h	30	Access Point Density, pts/mi	40.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	145	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.09

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	20.1
Speed Slope Coefficient	5.00870	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.43851	PF Power Coefficient	0.54254
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	3.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	9187	-	-	18.7

Vehicle Results

Average Speed, mi/h	18.7	Percent Followers, %	39.6
Segment Travel Time, minutes	5.57	Follower Density, followers/mi/ln	3.1
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	145	Bicycle Effective Width, ft	16
Bicycle LOS Score	3.61	Bicycle Effective Speed Factor	3.39
Bicycle LOS	D		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	3.1	B

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	01860_Pump Hill Rd./ Jones Creek Rd.	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	2640
Lane Width, ft	10	Shoulder Width, ft	3
Speed Limit, mi/h	30	Access Point Density, pts/mi	26.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	61	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.04

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	24.3
Speed Slope Coefficient	4.66892	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.53065	PF Power Coefficient	0.58068
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.7
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2640	-	-	24.3

Vehicle Results

Average Speed, mi/h	24.3	Percent Followers, %	26.0
Segment Travel Time, minutes	1.23	Follower Density, followers/mi/ln	0.7
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	61	Bicycle Effective Width, ft	22
Bicycle LOS Score	2.03	Bicycle Effective Speed Factor	3.39
Bicycle LOS	B		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	0.7	A

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	01860_Jones Creek Rd.	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	37060
Lane Width, ft	10	Shoulder Width, ft	3
Speed Limit, mi/h	45	Access Point Density, pts/mi	13.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	61	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.04

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	44.6
Speed Slope Coefficient	3.11550	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.58692	PF Power Coefficient	0.63683
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.3
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	37060	-	-	44.6

Vehicle Results

Average Speed, mi/h	44.6	Percent Followers, %	23.4
Segment Travel Time, minutes	9.43	Follower Density, followers/mi/ln	0.3
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	61	Bicycle Effective Width, ft	22
Bicycle LOS Score	2.39	Bicycle Effective Speed Factor	4.42
Bicycle LOS	B		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	0.3	A

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	01858_Grindstone Hollow/ W.Piney Rd.	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	14589
Lane Width, ft	10	Shoulder Width, ft	2
Speed Limit, mi/h	30	Access Point Density, pts/mi	13.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	85	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.05

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	26.9
Speed Slope Coefficient	4.46263	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.57670	PF Power Coefficient	0.55611
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	14589	-	-	26.9

Vehicle Results

Average Speed, mi/h	26.9	Percent Followers, %	32.9
Segment Travel Time, minutes	6.17	Follower Density, followers/mi/ln	1.0
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	85	Bicycle Effective Width, ft	19
Bicycle LOS Score	2.81	Bicycle Effective Speed Factor	3.39
Bicycle LOS	C		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	1.0	A

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	01854_E. Piney Rd	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	33887
Lane Width, ft	10	Shoulder Width, ft	3
Speed Limit, mi/h	30	Access Point Density, pts/mi	16.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	66	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	1.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.04

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	26.9
Speed Slope Coefficient	4.46129	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.61365	PF Power Coefficient	0.54556
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	33887	-	-	26.9

Vehicle Results

Average Speed, mi/h	26.9	Percent Followers, %	30.7
Segment Travel Time, minutes	14.33	Follower Density, followers/mi/ln	0.8
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	66	Bicycle Effective Width, ft	22
Bicycle LOS Score	1.73	Bicycle Effective Speed Factor	3.39
Bicycle LOS	B		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	0.8	A

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	01851-53_Gilliam Hollow/ Hickman/Galion Rd.	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	17002
Lane Width, ft	9	Shoulder Width, ft	3
Speed Limit, mi/h	30	Access Point Density, pts/mi	12.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	26	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	27.2
Speed Slope Coefficient	4.43431	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.61245	PF Power Coefficient	0.54907
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.2
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	17002	-	-	27.2

Vehicle Results

Average Speed, mi/h	27.2	Percent Followers, %	19.6
Segment Travel Time, minutes	7.10	Follower Density, followers/mi/ln	0.2
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	26	Bicycle Effective Width, ft	23
Bicycle LOS Score	1.37	Bicycle Effective Speed Factor	3.39
Bicycle LOS	A		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	0.2	A

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	01849_Franklin Rd/Rock Church Rd.	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	23237
Lane Width, ft	10	Shoulder Width, ft	3
Speed Limit, mi/h	45	Access Point Density, pts/mi	25.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	143	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.08

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	41.6
Speed Slope Coefficient	3.26545	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.60173	PF Power Coefficient	0.62544
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.3
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	23237	-	-	40.8

Vehicle Results

Average Speed, mi/h	40.8	Percent Followers, %	37.8
Segment Travel Time, minutes	6.48	Follower Density, followers/mi/ln	1.3
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	143	Bicycle Effective Width, ft	17
Bicycle LOS Score	3.79	Bicycle Effective Speed Factor	4.42
Bicycle LOS	D		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	1.3	A

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	01849_Buddy Rd.	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	10212
Lane Width, ft	10	Shoulder Width, ft	3
Speed Limit, mi/h	45	Access Point Density, pts/mi	25.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	126	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.07

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	41.7
Speed Slope Coefficient	3.26531	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.47963	PF Power Coefficient	0.66356
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	10212	-	-	40.9

Vehicle Results

Average Speed, mi/h	40.9	Percent Followers, %	31.2
Segment Travel Time, minutes	2.83	Follower Density, followers/mi/ln	1.0
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	126	Bicycle Effective Width, ft	18
Bicycle LOS Score	3.55	Bicycle Effective Speed Factor	4.42
Bicycle LOS	D		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	1.0	A

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	01847_White Bluff Rd.	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	12234
Lane Width, ft	11	Shoulder Width, ft	4
Speed Limit, mi/h	40	Access Point Density, pts/mi	28.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	180	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.11

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	36.5
Speed Slope Coefficient	3.68194	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.52891	PF Power Coefficient	0.62799
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	2.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	12234	-	-	35.2

Vehicle Results

Average Speed, mi/h	35.2	Percent Followers, %	40.6
Segment Travel Time, minutes	3.95	Follower Density, followers/mi/ln	2.1
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	180	Bicycle Effective Width, ft	19
Bicycle LOS Score	3.46	Bicycle Effective Speed Factor	4.17
Bicycle LOS	C		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	2.1	A

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	01845_Old Columbia Rd/ Pamona Rd.	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	2973
Lane Width, ft	12	Shoulder Width, ft	5
Speed Limit, mi/h	30	Access Point Density, pts/mi	23.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	224	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.13

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	27.7
Speed Slope Coefficient	4.39791	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.53010	PF Power Coefficient	0.60577
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	4.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2973	-	-	25.8

Vehicle Results

Average Speed, mi/h	25.8	Percent Followers, %	46.1
Segment Travel Time, minutes	1.31	Follower Density, followers/mi/ln	4.0
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	224	Bicycle Effective Width, ft	22
Bicycle LOS Score	2.69	Bicycle Effective Speed Factor	3.39
Bicycle LOS	C		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	4.0	B

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	01843_E.Christy/Gum Branch/Lime Kiln/Church St.	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	13258
Lane Width, ft	10	Shoulder Width, ft	2
Speed Limit, mi/h	35	Access Point Density, pts/mi	16.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	107	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	1.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.06

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	31.6
Speed Slope Coefficient	4.08106	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.55641	PF Power Coefficient	0.59379
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.2
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	13258	-	-	31.1

Vehicle Results

Average Speed, mi/h	31.1	Percent Followers, %	33.8
Segment Travel Time, minutes	4.85	Follower Density, followers/mi/ln	1.2
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	107	Bicycle Effective Width, ft	17
Bicycle LOS Score	3.06	Bicycle Effective Speed Factor	3.84
Bicycle LOS	C		

Facility Results

T	Follower Density, followers/mi/ln	LOS

1	1.2	A

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	01808_Nubbin Ridge Rd/ Edgewodd Rd.	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	12012
Lane Width, ft	10	Shoulder Width, ft	2
Speed Limit, mi/h	35	Access Point Density, pts/mi	9.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	22	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.01

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	33.3
Speed Slope Coefficient	3.94487	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.52815	PF Power Coefficient	0.61287
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	12012	-	-	33.3

Vehicle Results

Average Speed, mi/h	33.3	Percent Followers, %	13.6
Segment Travel Time, minutes	4.11	Follower Density, followers/mi/ln	0.1
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	22	Bicycle Effective Width, ft	22
Bicycle LOS Score	1.67	Bicycle Effective Speed Factor	3.84
Bicycle LOS	B		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	0.1	A

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	01420_New Dry Hollow Rd.	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	32989
Lane Width, ft	11	Shoulder Width, ft	5
Speed Limit, mi/h	35	Access Point Density, pts/mi	16.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	54	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.03

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	34.5
Speed Slope Coefficient	3.84374	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.62126	PF Power Coefficient	0.59263
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	32989	-	-	34.5

Vehicle Results

Average Speed, mi/h	34.5	Percent Followers, %	25.1
Segment Travel Time, minutes	10.87	Follower Density, followers/mi/ln	0.4
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	54	Bicycle Effective Width, ft	33
Bicycle LOS Score	0.00	Bicycle Effective Speed Factor	3.84
Bicycle LOS	A		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	0.4	A

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/20/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	01798_Potter Rd.	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	8078
Lane Width, ft	9	Shoulder Width, ft	2
Speed Limit, mi/h	35	Access Point Density, pts/mi	15.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	39	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	31.5
Speed Slope Coefficient	4.09049	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.47666	PF Power Coefficient	0.62495
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.2
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	8078	-	-	31.5

Vehicle Results

Average Speed, mi/h	31.5	Percent Followers, %	17.7
Segment Travel Time, minutes	2.92	Follower Density, followers/mi/ln	0.2
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	39	Bicycle Effective Width, ft	20
Bicycle LOS Score	2.38	Bicycle Effective Speed Factor	3.84
Bicycle LOS	B		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	0.2	A

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/17/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	00967_Old Hwy 48/ Stayton Rd.	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	17392
Lane Width, ft	9	Shoulder Width, ft	3
Speed Limit, mi/h	45	Access Point Density, pts/mi	13.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	59	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.03

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	44.0
Speed Slope Coefficient	3.11550	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.59015	PF Power Coefficient	0.63465
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.3
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	17392	-	-	44.0

Vehicle Results

Average Speed, mi/h	44.0	Percent Followers, %	23.1
Segment Travel Time, minutes	4.49	Follower Density, followers/mi/ln	0.3
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	59	Bicycle Effective Width, ft	21
Bicycle LOS Score	2.58	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	0.3	A

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/17/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	Existing
Project Description	00967_Maple Valley Rd.	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	22598
Lane Width, ft	10	Shoulder Width, ft	3
Speed Limit, mi/h	45	Access Point Density, pts/mi	13.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	126	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.07

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	44.6
Speed Slope Coefficient	3.11550	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.58692	PF Power Coefficient	0.63683
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	22598	-	-	44.0

Vehicle Results

Average Speed, mi/h	44.0	Percent Followers, %	34.6
Segment Travel Time, minutes	5.84	Follower Density, followers/mi/ln	1.0
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	126	Bicycle Effective Width, ft	18
Bicycle LOS Score	3.55	Bicycle Effective Speed Factor	4.42
Bicycle LOS	D		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	1.0	A

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/17/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	
Project Description	00965_Garners Creek Rd.	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	39494
Lane Width, ft	10	Shoulder Width, ft	2
Speed Limit, mi/h	45	Access Point Density, pts/mi	14.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	48	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.03

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	43.7
Speed Slope Coefficient	3.11550	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.59197	PF Power Coefficient	0.63336
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.2
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	39494	-	-	43.7

Vehicle Results

Average Speed, mi/h	43.7	Percent Followers, %	20.7
Segment Travel Time, minutes	10.27	Follower Density, followers/mi/ln	0.2
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	48	Bicycle Effective Width, ft	21
Bicycle LOS Score	2.48	Bicycle Effective Speed Factor	4.42
Bicycle LOS	B		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	0.2	A

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/17/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	
Project Description	00957_Spencers Mill Rd.	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	26352
Lane Width, ft	10	Shoulder Width, ft	2
Speed Limit, mi/h	45	Access Point Density, pts/mi	20.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	96	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.06

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	42.2
Speed Slope Coefficient	3.22095	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.59927	PF Power Coefficient	0.62762
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.7
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	26352	-	-	42.2

Vehicle Results

Average Speed, mi/h	42.2	Percent Followers, %	30.7
Segment Travel Time, minutes	7.10	Follower Density, followers/mi/ln	0.7
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	96	Bicycle Effective Width, ft	19
Bicycle LOS Score	3.23	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	0.7	A

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/17/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	
Project Description	00957_Spencers Mill Rd.	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	18871
Lane Width, ft	10	Shoulder Width, ft	2
Speed Limit, mi/h	45	Access Point Density, pts/mi	18.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	76	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	1.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.04

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	42.8
Speed Slope Coefficient	3.17502	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.59898	PF Power Coefficient	0.62859
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.5
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	18871	-	-	42.8

Vehicle Results

Average Speed, mi/h	42.8	Percent Followers, %	27.1
Segment Travel Time, minutes	5.01	Follower Density, followers/mi/ln	0.5
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	76	Bicycle Effective Width, ft	20
Bicycle LOS Score	2.47	Bicycle Effective Speed Factor	4.42
Bicycle LOS	B		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	0.5	A

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/17/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	
Project Description	00954_Cathy Hollow Rd.	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	12672
Lane Width, ft	9	Shoulder Width, ft	2
Speed Limit, mi/h	45	Access Point Density, pts/mi	12.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	17	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	1.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.01

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	43.7
Speed Slope Coefficient	3.11550	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.51553	PF Power Coefficient	0.65458
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	12672	-	-	43.7

Vehicle Results

Average Speed, mi/h	43.7	Percent Followers, %	10.1
Segment Travel Time, minutes	3.30	Follower Density, followers/mi/ln	0.0
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	17	Bicycle Effective Width, ft	21
Bicycle LOS Score	1.51	Bicycle Effective Speed Factor	4.42
Bicycle LOS	B		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	0.0	A

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/17/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	
Project Description	00956_Rock Springs Rd.	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	16315
Lane Width, ft	9	Shoulder Width, ft	2
Speed Limit, mi/h	45	Access Point Density, pts/mi	12.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	16	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.01

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	43.6
Speed Slope Coefficient	3.11550	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.59249	PF Power Coefficient	0.63299
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	16315	-	-	43.6

Vehicle Results

Average Speed, mi/h	43.6	Percent Followers, %	11.1
Segment Travel Time, minutes	4.25	Follower Density, followers/mi/ln	0.0
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	16	Bicycle Effective Width, ft	21
Bicycle LOS Score	1.92	Bicycle Effective Speed Factor	4.42
Bicycle LOS	B		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	0.0	A

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/17/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	
Project Description	00952_Abiff Rd/Old Hwy 46 S.	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	21769
Lane Width, ft	10	Shoulder Width, ft	3
Speed Limit, mi/h	40	Access Point Density, pts/mi	20.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	111	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	1.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.07

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	37.3
Speed Slope Coefficient	3.61993	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.61902	PF Power Coefficient	0.60513
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	21769	-	-	36.7

Vehicle Results

Average Speed, mi/h	36.7	Percent Followers, %	34.8
Segment Travel Time, minutes	6.74	Follower Density, followers/mi/ln	1.1
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	111	Bicycle Effective Width, ft	19
Bicycle LOS Score	2.80	Bicycle Effective Speed Factor	4.17
Bicycle LOS	C		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	1.1	A

HCS7 Two-Lane Highway Report

Project Information

Analyst	TCG	Date	6/17/2022
Agency	TCG	Analysis Year	2022
Jurisdiction	Dickson County	Time Analyzed	
Project Description	00839_Bowker Rd/Rock Springs Rd	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	20439
Lane Width, ft	9	Shoulder Width, ft	2
Speed Limit, mi/h	35	Access Point Density, pts/mi	18.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	43	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.92	Total Trucks, %	1.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.03

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	30.8
Speed Slope Coefficient	4.14578	Speed Power Coefficient	0.41622
PF Slope Coefficient	-1.62330	PF Power Coefficient	0.57052
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.3
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	20439	-	-	30.8

Vehicle Results

Average Speed, mi/h	30.8	Percent Followers, %	23.8
Segment Travel Time, minutes	7.55	Follower Density, followers/mi/ln	0.3
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	43	Bicycle Effective Width, ft	20
Bicycle LOS Score	2.04	Bicycle Effective Speed Factor	3.84
Bicycle LOS	B		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	0.3	A

APPENDIX D:

Crash Data

Vehicular, Pedestrian, & Bicycle

Analysis of Crash Severity and Collision Type

Crash severity and collision type are analyzed with respect to segments and intersections. Figure 11 through 14 shows the intersection and segments crashes in relation to the crash severity. Table 6 through Table 8 describes the crash severity and manner of collision.

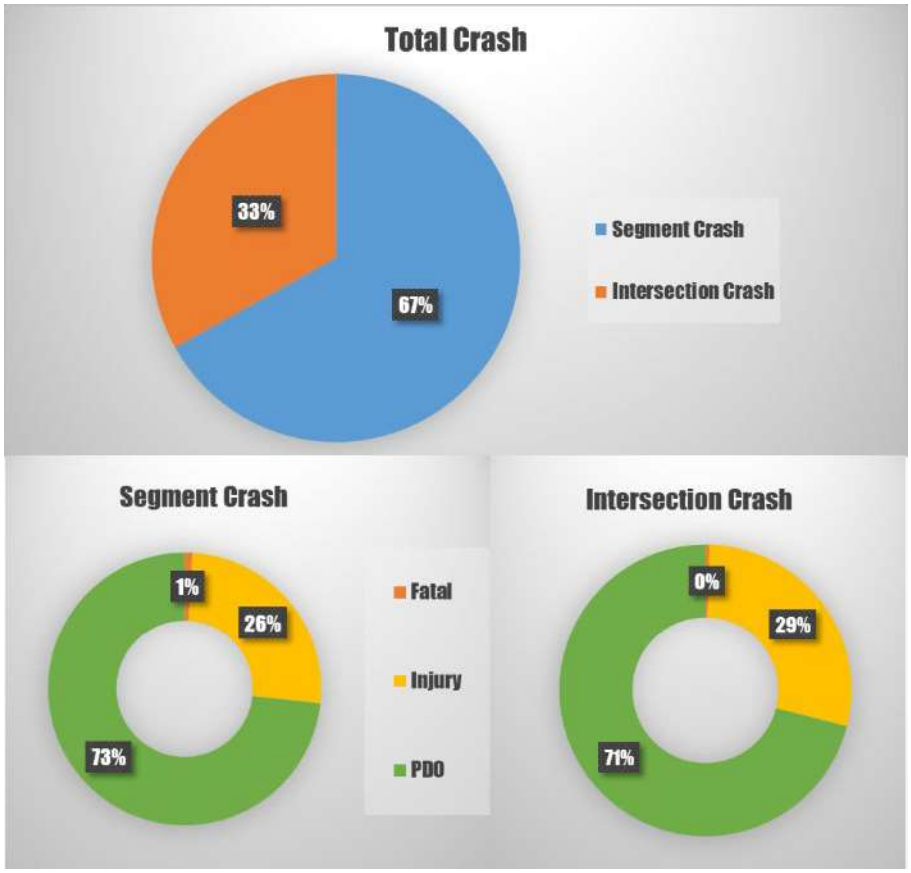

FIGURE 11: SEGMENT & INTERSECTION CRASH IN RELATION TO CRASH SEVERITY (DICKSON COUNTY)

TABLE 6: CRASH SEVERITY AND MANNER OF COLLISION (DICKSON COUNTY)

Dickson County												
Collision Type	Segment Crash		Intersection Crash		Fatal		Injury		PDO		Total Crash	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Angle	564	15.9	543	31.1	12	27.9	386	26.9	729	18.7	1,127	21.0
No Collision W/ Vehicle	1,313	37.1	199	11.4	23	53.5	483	33.7	1,019	26.2	1,525	28.4
Oppo_head_ sideswipe	207	5.8	120	6.9	8	18.6	113	7.9	210	5.4	331	6.1
Rear-End	991	28.0	674	38.6	0	0.0	389	27.2	1,309	33.6	1,698	31.6
Sideswipe	296	8.4	112	6.4	0	0.0	27	1.9	391	10.0	418	7.8
Unknown	171	4.8	99	5.6	0	0.0	35	2.4	239	6.1	274	5.1
Grand Total	3,542	100.0	1,747	100.0	43	100.0	1,433	100.0	3,897	100.0	5,373	100.0

Notes on Dickson County

- Road segment crashes are 30% higher than intersection crashes.
- Segment crashes are mainly due to no collision with vehicle (37%) and rear-end (28%).
- As expected, intersection crashes occur mostly due to angle (31%) and rear-end (39%).

City of Dickson

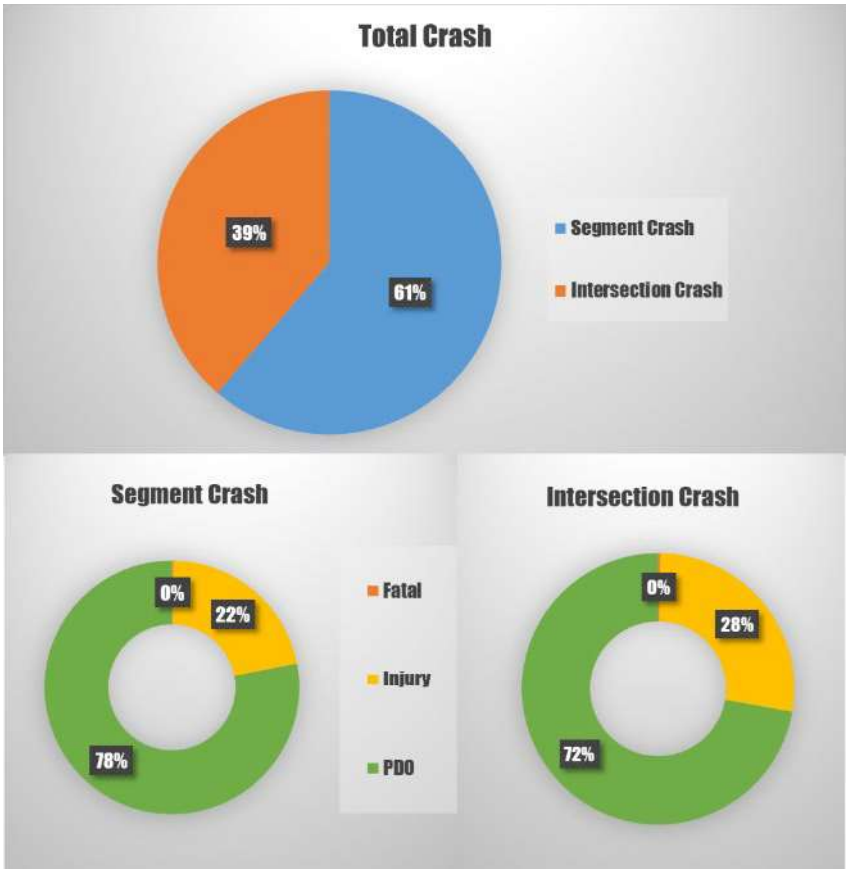

FIGURE 12: SEGMENT & INTERSECTION CRASH IN RELATION TO CRASH SEVERITY (CITY OF DICKSON)

TABLE 7: CRASH SEVERITY AND MANNER OF COLLISION (CITY OF DICKSON)

City of Dickson												
Collision Type	Segment Crash		Intersection Crash		Fatal		Injury		PDO		Total Crash	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Angle	419	23.6	343	30.6	3	37.5	242	33.9	533	23.7	778	26.2
No Collision W/ Vehicle	256	14.4	59	5.2	4	50.0	111	15.5	209	9.3	324	10.9
Oppo_head_ sideswipe	95	5.3	76	6.8	1	12.5	60	8.4	114	5.1	175	5.9
Rear-End	640	36.0	486	43.3	0	0.0	254	35.6	903	40.1	1,157	38.9
Sideswipe	250	14.1	84	7.5	0	0.0	19	2.7	323	14.4	342	11.5
Unknown	118	6.6	74	6.6	0	0.0	28	3.9	167	7.4	195	6.6
Grand Total	1,778	100.0	1,122	100.0	8	100.0	714	100.0	2,249	100.0	2,971	100.0

Town of White Bluff

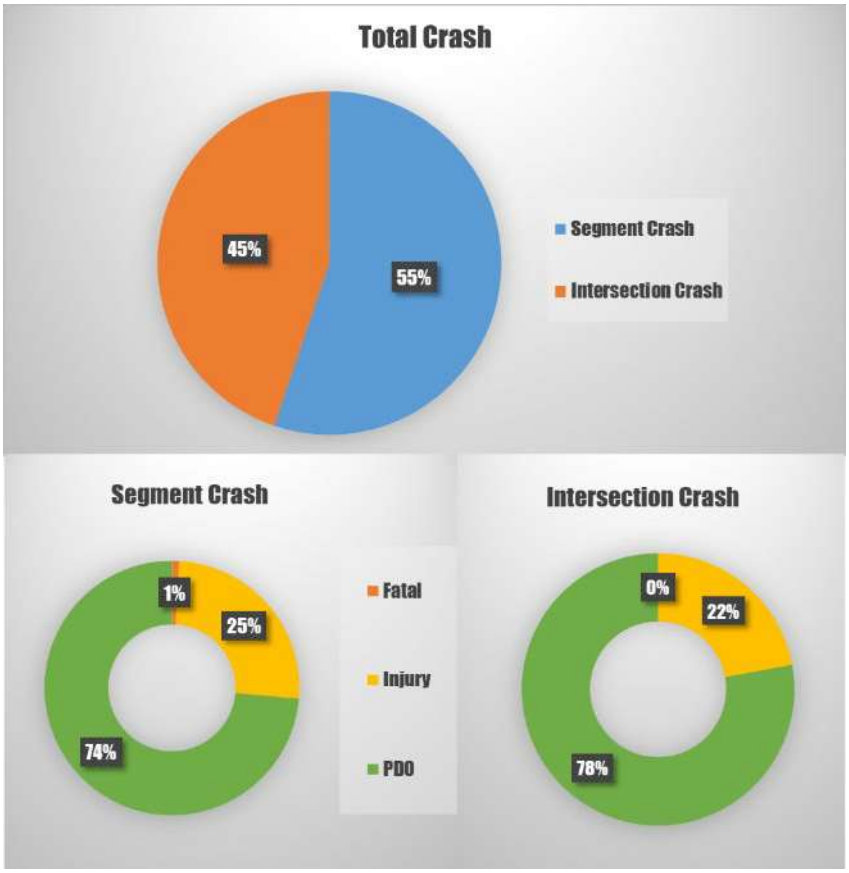

FIGURE 13: SEGMENT & INTERSECTION CRASH IN RELATION TO CRASH SEVERITY (TOWN OF WHITE BLUFF)

TABLE 8: CRASH SEVERITY AND MANNER OF COLLISION (TOWN OF WHITE BLUFF)

Town of White Bluff												
Collision Type	Segment Crash		Intersection Crash		Fatal		Injury		PDO		Total Crash	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Angle	7	6.6	12	14.0	0	0.0	1	2.2	18	12.4	19	9.9
No Collision W/ Vehicle	39	36.8	18	20.9	0	0.0	19	41.3	38	26.2	57	29.7
Oppo_head_ sideswipe	10	9.4	11	12.8	1	100.0	4	8.7	16	11.0	21	10.9
Rear-End	37	34.9	32	37.2	0	0.0	19	41.3	50	34.5	69	35.9
Sideswipe	8	7.6	6	7.0	0	0.0	1	2.2	13	9.0	14	7.3
Unknown	5	4.7	7	8.1	0	0.0	2	4.3	10	6.9	12	6.3
Grand Total	106	100.0	86	100.0	1	100.0	46	100.0	145	100.0	192	100.0

Town of Burns

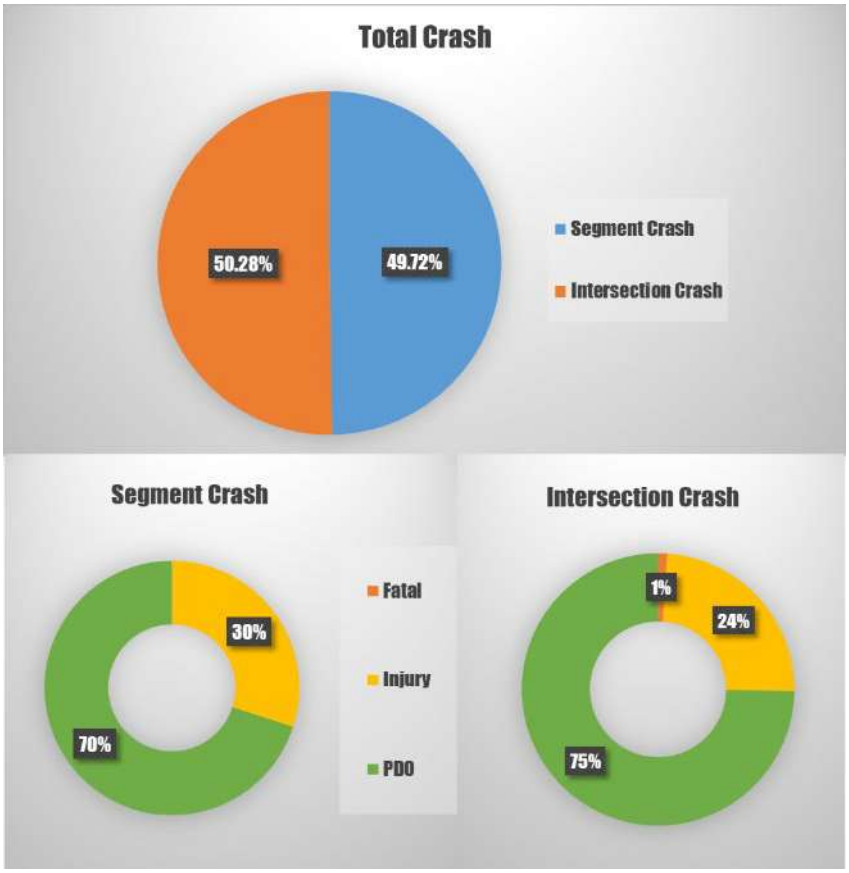

FIGURE 14: SEGMENT & INTERSECTION CRASH IN RELATION TO CRASH SEVERITY (TOWN OF BURNS)

TABLE 9: CRASH SEVERITY AND MANNER OF COLLISION (TOWN OF BURNS)

Town of Burns												
Collision Type	Segment Crash		Intersection Crash		Fatal		Injury		PDO		Total Crash	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Angle	11	12.2	34	37.3	0	0.0	18	36.8	27	20.6	45	24.9
No Collision W/ Vehicle	43	47.8	8	8.8	1	100.0	13	26.5	37	28.3	51	28.2
Oppo_head_ sideswipe	7	7.8	8	8.8	0	0.0	4	8.2	11	8.4	15	8.3
Rear-End	25	27.8	29	31.9	0	0.0	12	24.5	42	32.1	54	29.8
Sideswipe	3	3.3	5	5.5	0	0.0	1	2.0	7	5.3	8	4.4
Unknown	1	1.1	7	7.7	0	0.0	1	2.0	7	5.3	8	4.4
Grand Total	90	100.0	91	100.0	1	100.0	49	100.0	131	100.0	181	100.0

Effect of Weather and Light Condition

Figure 15 and Figure 16 show the effect of weather and light conditions on the number of crashes that occurred in the study area.

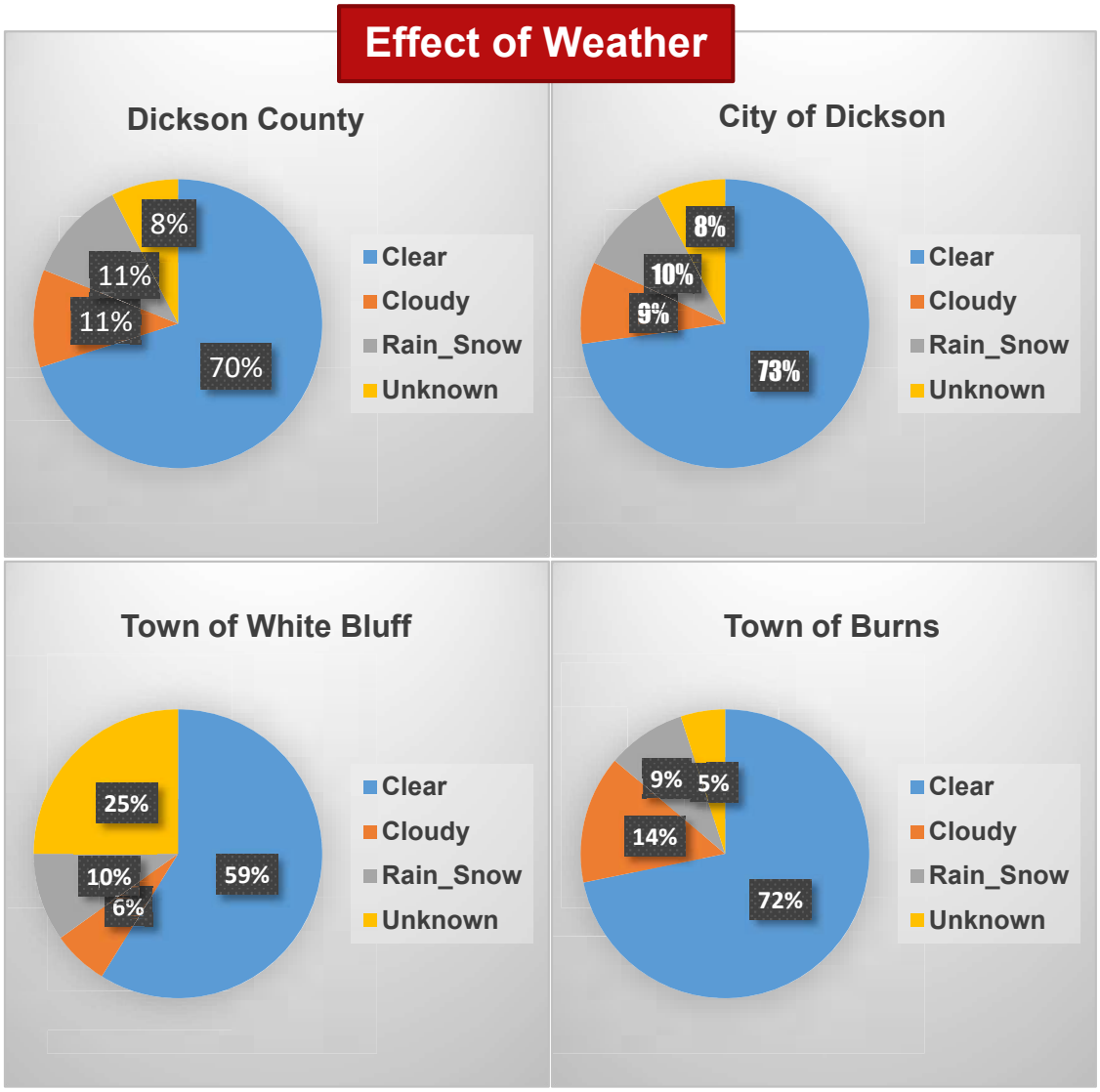

FIGURE 15: PERCENTAGES OF CRASH BASED ON DIFFERENT WEATHER CONDITION

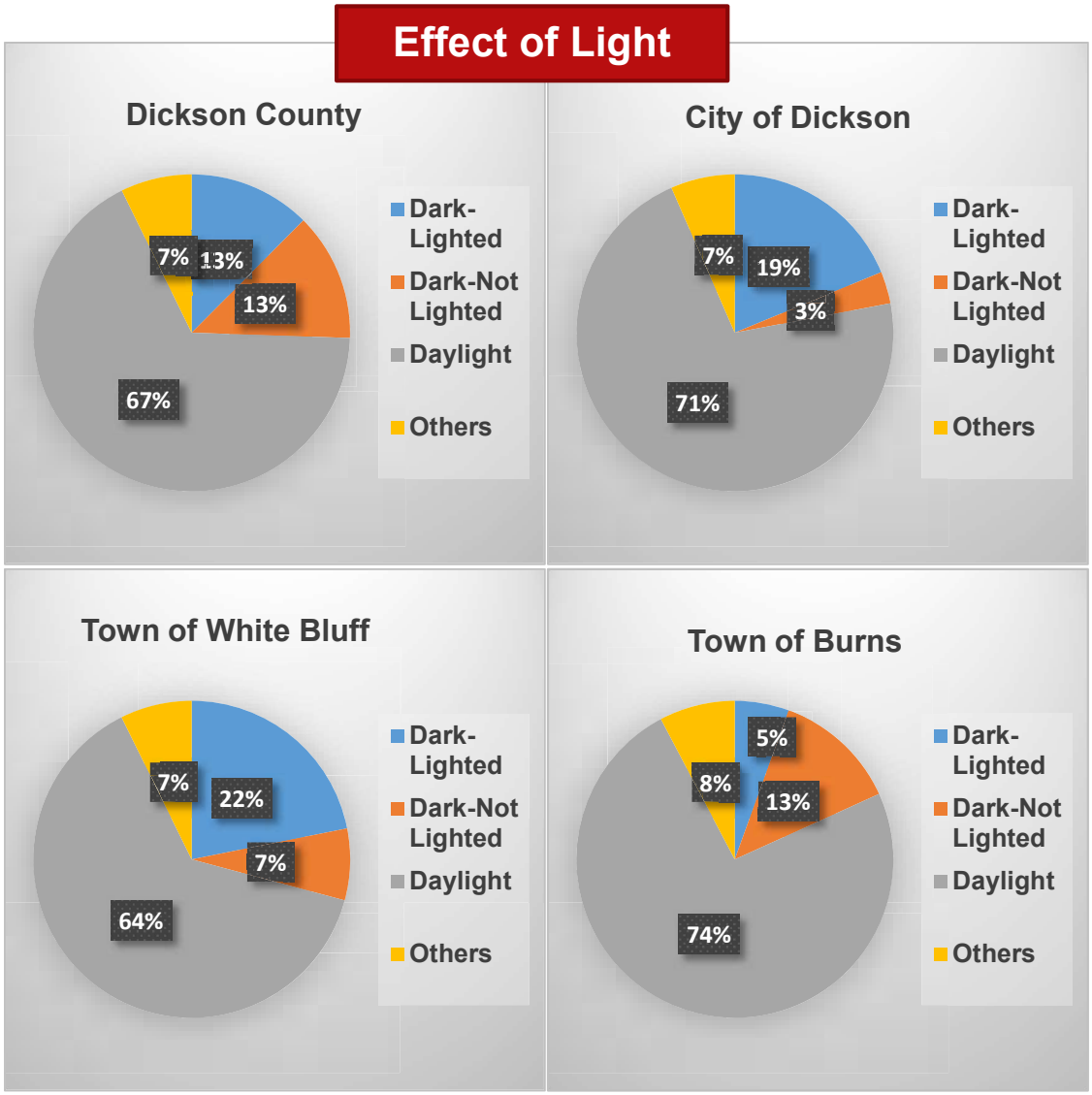

FIGURE 16: PERCENTAGES OF CRASH BASED ON DIFFERENT LIGHT CONDITION

Most of the crashes occur in daylight when the weather is clear. For the City of Dickson and the Town of White Bluff, crashes that occur at night occur in lighted conditions. So, weather and lighting does not have any specific impact on occurrence of crashes in the study areas.

Time of Crash Analysis

Figure 17 shows the percentages of crashes that occurred during different times of the day. Time was divided into four categories: 12:00 AM – 6:00 AM, 6:00 AM – 12:00 PM, 12:00 PM- 6:00 PM, 6:00 PM- 12:00 AM. Many of the crashes occur in the afternoon between 12:00 PM to 6:00 PM. School dismissal time and evening peak period are within this time frame.

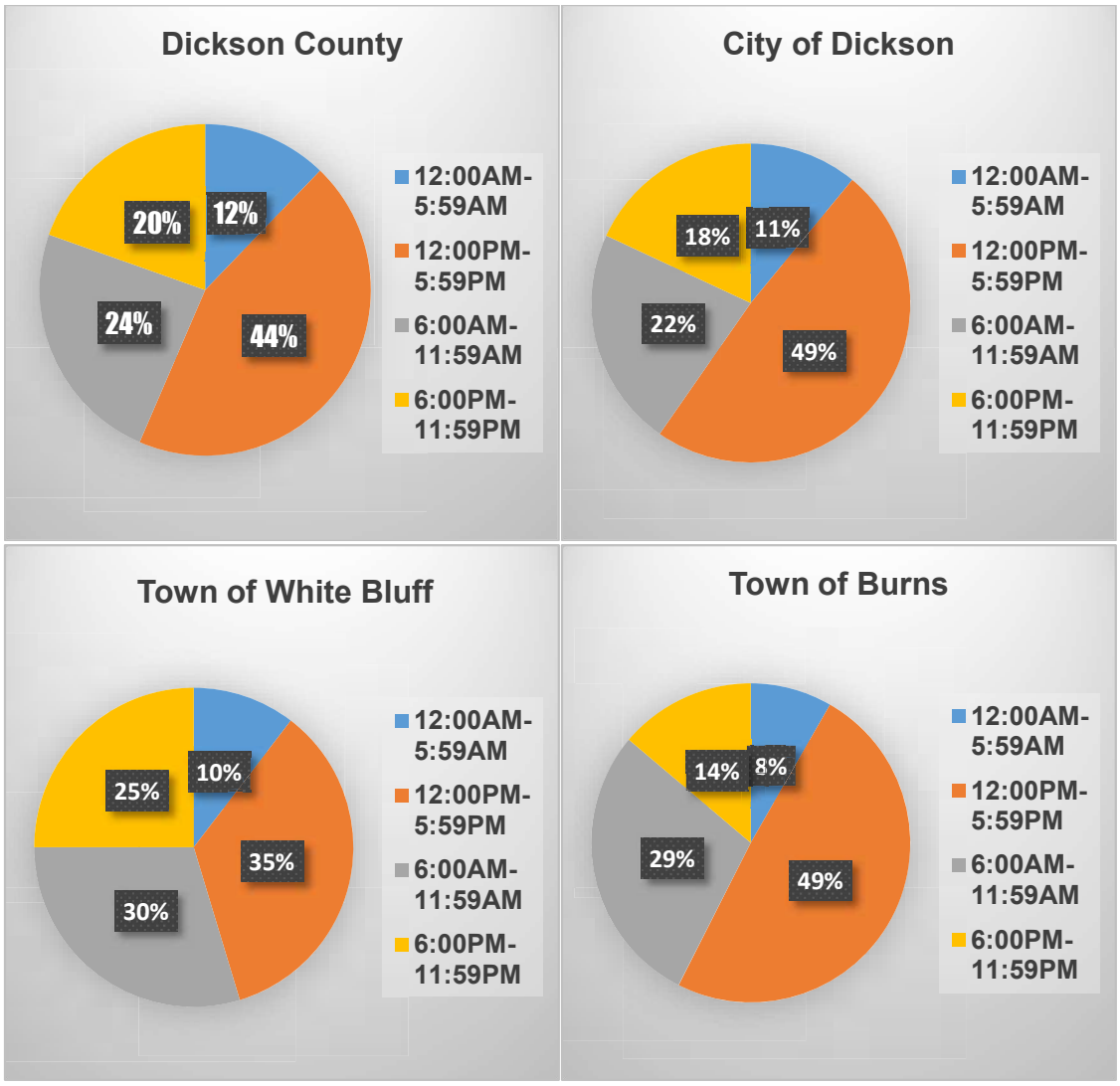

FIGURE 17: PERCENTAGES OF CRASH BASED ON DIFFERENT TIME OF THE DAY

Selection of Top Crash Location

For the selection of the high crash locations, total crash, crash rate (per 100 million vehicles miles travelled) and equivalent property damage only (EPDO) variables were used. The crash rate is a calculation used to disseminate information based on the traffic volumes travelling on a particular segment of roadway. Sometimes a short segment having less traffic might show a small number of total crashes but should be taken into consideration as the number of crashes related to the volume is high. EPDO is used to account for fatal and injury crashes. According to FHWA Highway data, one fatal crash is equivalent to 950 PDO crashes and one injury crash is equivalent to 23 PDO crashes. Table 10 shows the top 30 locations in terms of total crash, crash rate and EPDO value.

TABLE 10: TOP 30 CRASH LOCATION BASED ON TOTAL NUMBER OF CRASHES, CRASH RATE AND EPDO TOTAL CRASH

Total Number of Crashes			Crash Rate			EPDO Total Crash		
Rank	Route	Total 5-yr Crash	Rank	Route	Crash Rate (100MVMT)	Rank	Route	EPDO Value
1	SR 46	826	1	Brook Drive	2238	1	SR 46	6,156
2	Henslee Drive	135	2	Dykeman Road	1740	2	Yellow Creek Road	4,333
3	SR 48	132	3	Skyline Circle	875	3	Spring Street/SR 49	3,916
4	US-70	129	4	Beasley Drive	837	4	SR 48	3,856
5	Beasley Drive	126	5	Mathis Drive	733	5	SR 46	3,265
6	Spring Street/SR 49	123	6	Maysville Road	618	6	SR 48	2,676
7	Mathis Drive	122	7	SR 49	608	7	US-70/Broadway Street	1,970
8	US-70/Broadway Street	119	8	Center Avenue East Broad Street South Main Street	478	8	US-70	1,958
9	SR 48	118	9	East Rickert Street	472	9	North Main Street SR 48	1,377
10	SR 48	107	10	Rock Springs Road	453	10	Beasley Drive	1,326
11	SR 96	85	11	North Charlotte Street/ Westfield Road/ Old Charlotte Pike	438	11	Claylick Road	1,321
12	US-70/West College Street	76	12	Henslee Drive	431	12	SR 47	1,302
13	Yellow Creek Road	75	13	Dykeman Road	420	13	Pump Hill Road/Jones Creek Road	1,236
14	SR 46	66	14	Pump Hill Road/Jones Creek Road	393	14	SR 96	1,199
15	North Main Street SR 48	54	15	East Christy Drive Gum Branch Road Lime Kiln Road Church Street	392	15	SR 49/Broad Street	293

Total Number of Crashes			Crash Rate			EPDO Total Crash		
Rank	Route	Total 5-yr Crash	Rank	Route	Crash Rate (100MVMT)	Rank	Route	EPDO Value
16	Beasley Drive	48	16	SR 47	391	16	Grindstone Hollow Road/West Piney Road	1,120
17	Yellow Creek Road	48	17	North Main Street	384	17	Slayden-Marion Road	1,092
18	East Walnut Street/SR 47	48	18	Taylor Town Road	356	18	Bowker Road/Rock Springs Road	1,077
19	East College Street	48	19	Pomona Road/ Lena Road/ West Grab Creek Road /Grab Creek Road	343	19	New Dry Hollow Road	1,072
20	East College Street	46	20	Gilliam Hollow Road	333	20	Little Bartons Creek Road	1,069
21	SR 47	45	21	Spencers Mill Road	328	21	White Bluff Road	1,061
22	Pump Hill Road /Jones Creek Road	45	22	Vanleer Highway	323	22	Beasley Drive	764
23	SR 250 Claylick Road	42	23	North Charlotte Street	319	23	Henslee Drive	729
24	SR 47	37	24	Henslee Drive	314	24	SR 48	726
25	East Christy Drive /Gum Branch Road/Lime Kiln Road/Church Street	35	25	SR 46	312	25	SR 96	635
26	Center Avenue/East Broad Street/South Main Street	34	26	SR 49/Broad Street	293	26	Yellow Creek Road	48
27	Charles Walton Speight Highway/SR 47	33	27	SR 48	284	27	Mathis Drive	122
28	Henslee Drive	32	28	Bowker Road Rock Springs Road	281	28	US 70/West College Street	76
29	East Piney Road	31	29	Old Pond Lane	272	29	East College Street	46
30	SR 96	30	30	East Piney Road	266	30	East Christy Drive /Gum Branch Road /Lime Kiln Road /Church Street	35

Selection and assessment on top crash locations:

Using these three criteria and engineering judgement, the top crash locations are identified and represented in Table 11. Top crash locations were selected by taking an average of the ranks of the total crash, crash rate and EPDO value.

TABLE 11: SELECTED TOP CRASH LOCATIONS

Rank	Route	BLM-ELM	Total Rank	EPDO Rank	Crash Rate Rank	Average Score	AADT	LOS
1	SR 46	3.228-8.18	1	1	26	9.33	29,215	C/D
2	Beasley Drive	0.429-1.08	5	22	4	10.33	12,676	A
3	Mathis Drive	8.18-8.66	7	27	5	13.0	19,018	B
4	SR 48	0-7.379	9	6	28	14.33	3,087	A
5	Jones Creek Road	0-8.68	22	13	14	16.33	724	A
6	Henslee Drive	8.15-9.79	2	23	25	16.67	14,369	B
7-10	East Christy Drive Gum Branch Road Lime Kiln Road Church Street	0-3.24	25	30	15	23.33	1,510	A

Once the top crash locations were identified, the study team delved into each segment to gather more information on crash trends, crash severity and manner of crash. Additionally, a site visit was conducted on these selected roads to collect additional information on crash contributing factors. This analysis helped to propose recommended safety projects.

Rank 1: SR 46

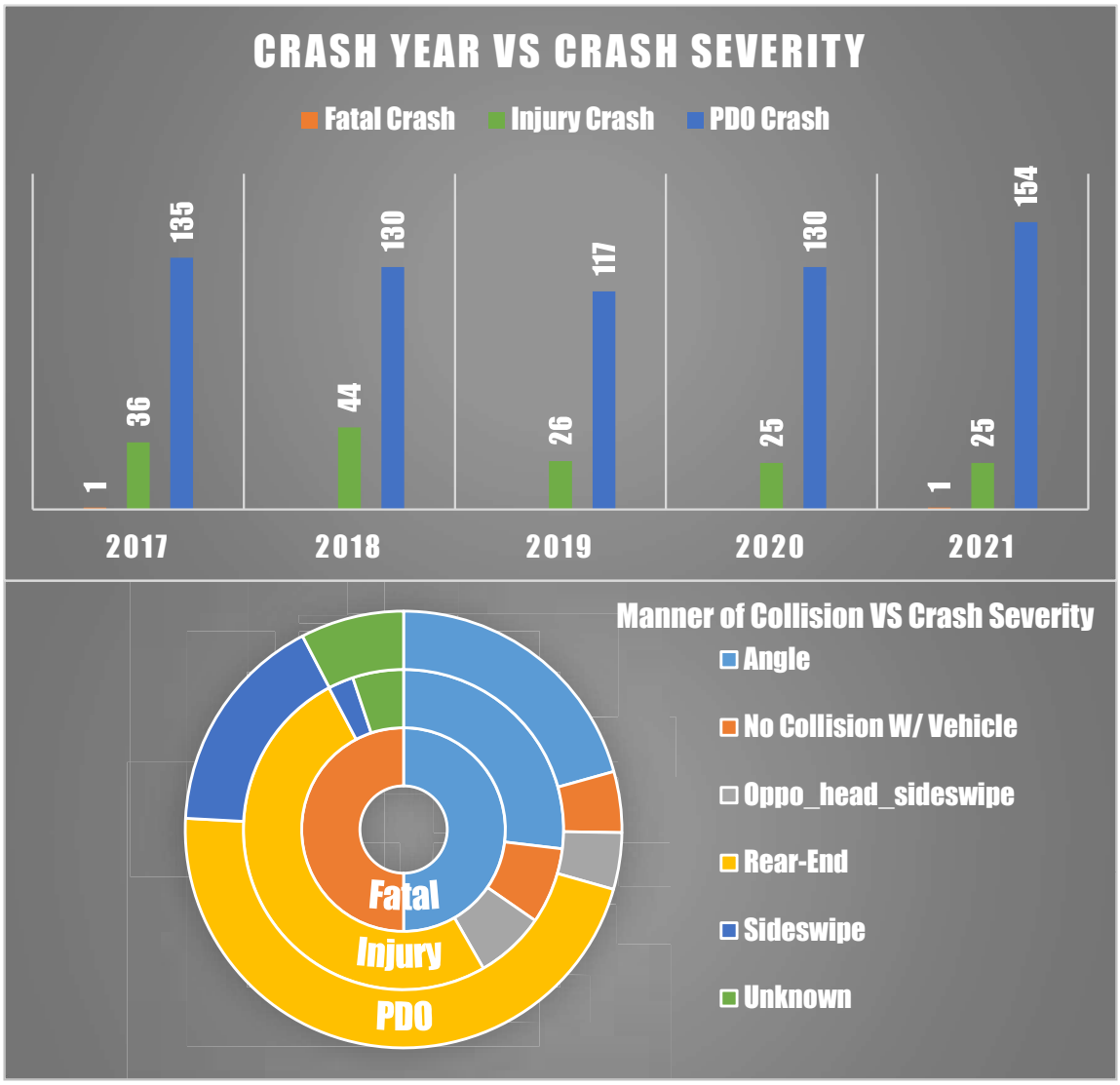

FIGURE 18: CRASH ANALYSIS FOR SR 46 (RANK 1)

Notes

- Primary collision types are angle crash and rear-end crash. This situation arises when there is a high volume of traffic travelling through the corridor and with numerous driveways and intersections. Driveway density is approximately 30 driveways/mile.
- A substantial number of semi-truck traffic was observed in the corridor and making various turning movements at intersections/driveways.
- SR 46 is an arterial road. Arterial roads are mainly for mobility. However, due to the number of driveways and access, the overall operations and safety are impacted. Future development might consider focusing on creating more collector/local roads around SR 46 and circulate the accessibility through newly built roads.

Rank 2: Beasley Drive

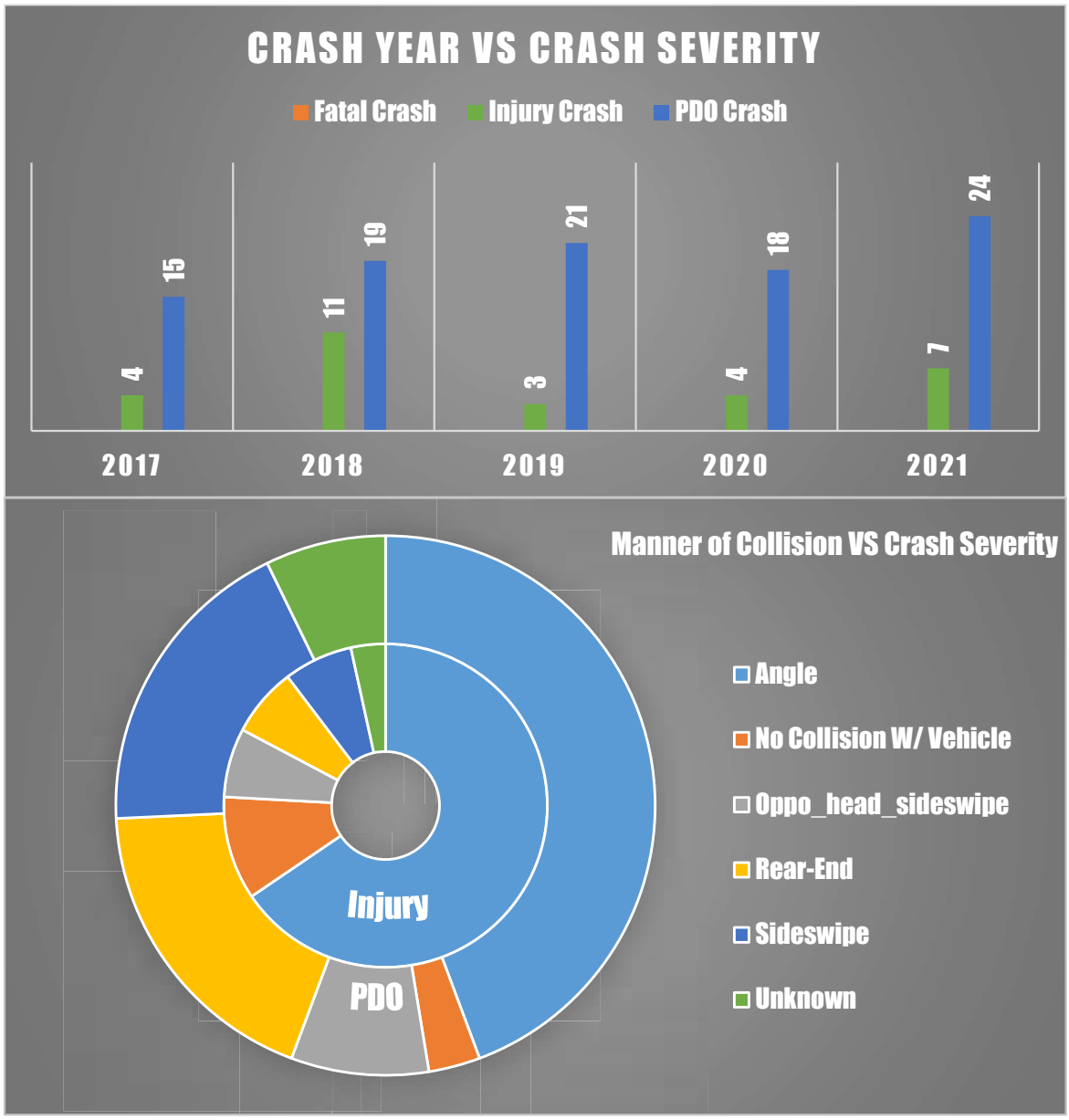

FIGURE 19: CRASH ANALYSIS FOR BEASLEY DRIVE (RANK 2)

Notes

- Total crashes have increased each year.
- Primary collision type is an angle crash.
- The high AADT, roadway speeds and the two-way left-turn lane (TWLTL) are all potential contributing factors to the crashes along this segment of roadway.

Rank 3: Mathis Drive

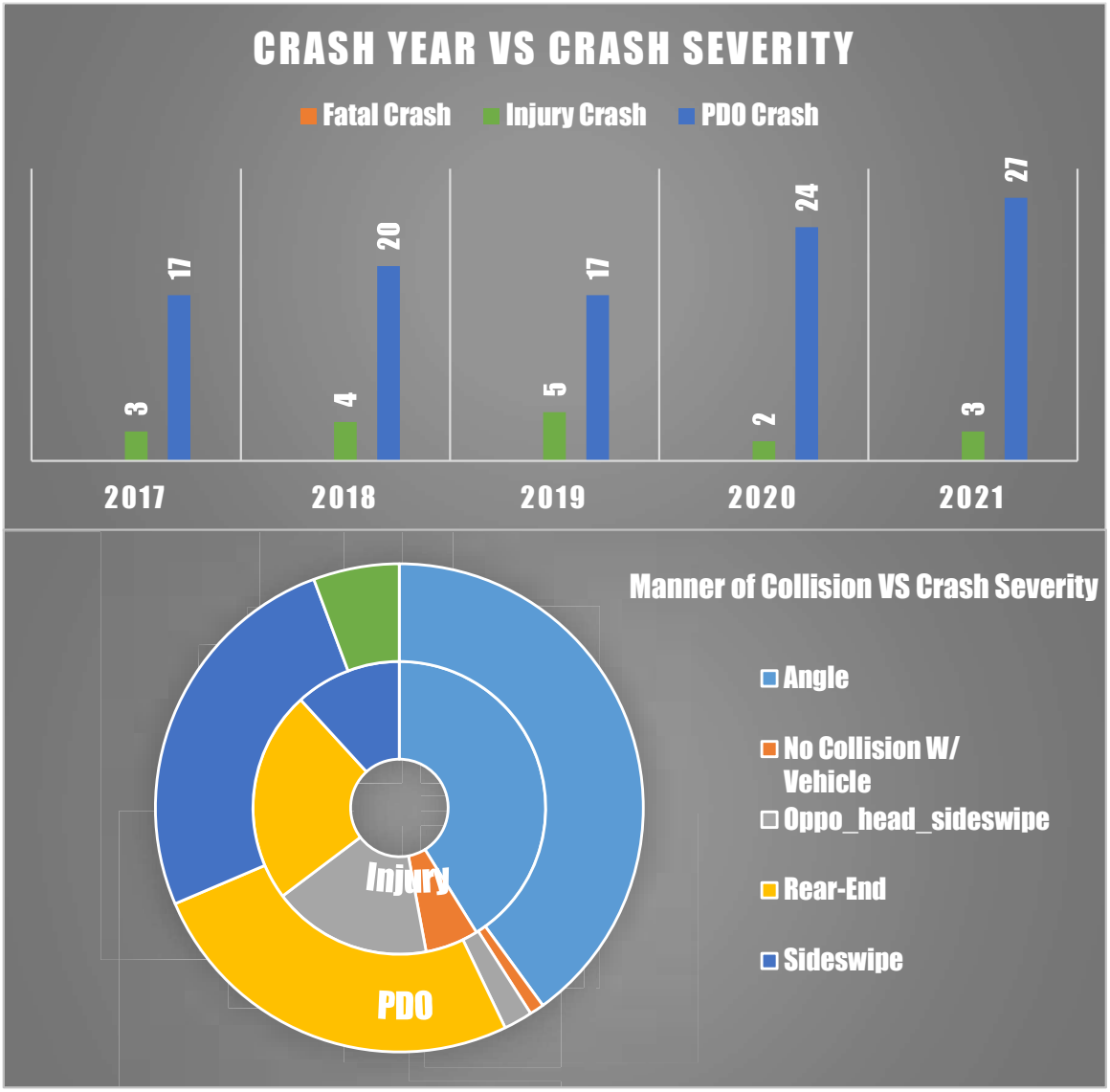

FIGURE 20: CRASH ANALYSIS FOR MATHIS DRIVE (RANK 3)

Notes

- Primary collision type is an angle crash.
- The high AADT, roadway speeds and the two-way left-turn lane (TWLTL) are all potential contributing factors to the crashes along this segment of roadway.

Rank 4: SR 48

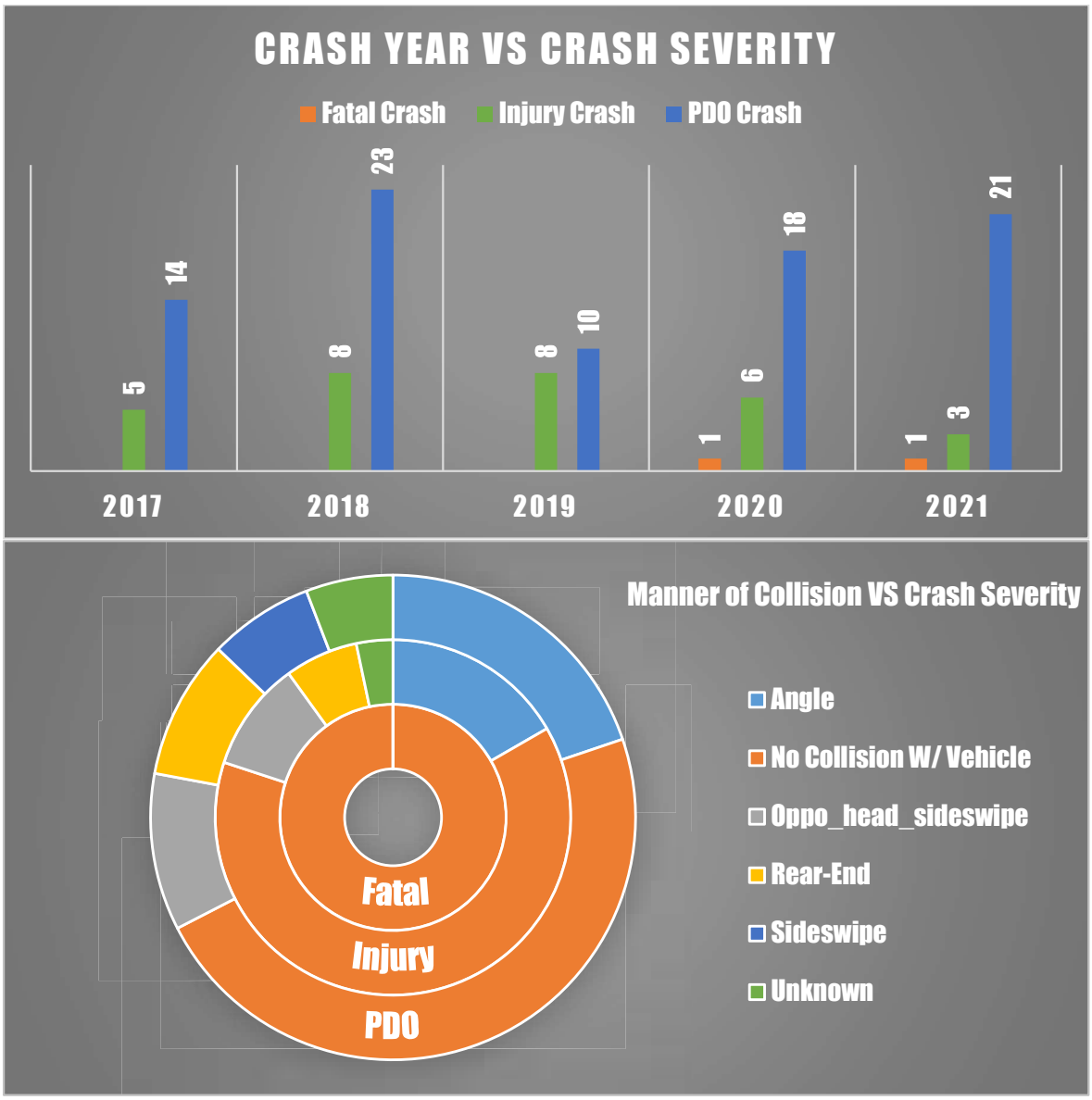

FIGURE 21: CRASH ANALYSIS FOR SR 48 (RANK 4)

Notes

- Sharp curves and sight distance issues are present.
- Southernmost segment just before I-40 has TWLTL.
- The major reason is run-off-road crashes. Speeding could also be an issue.

Rank 5: Jones Creek Road

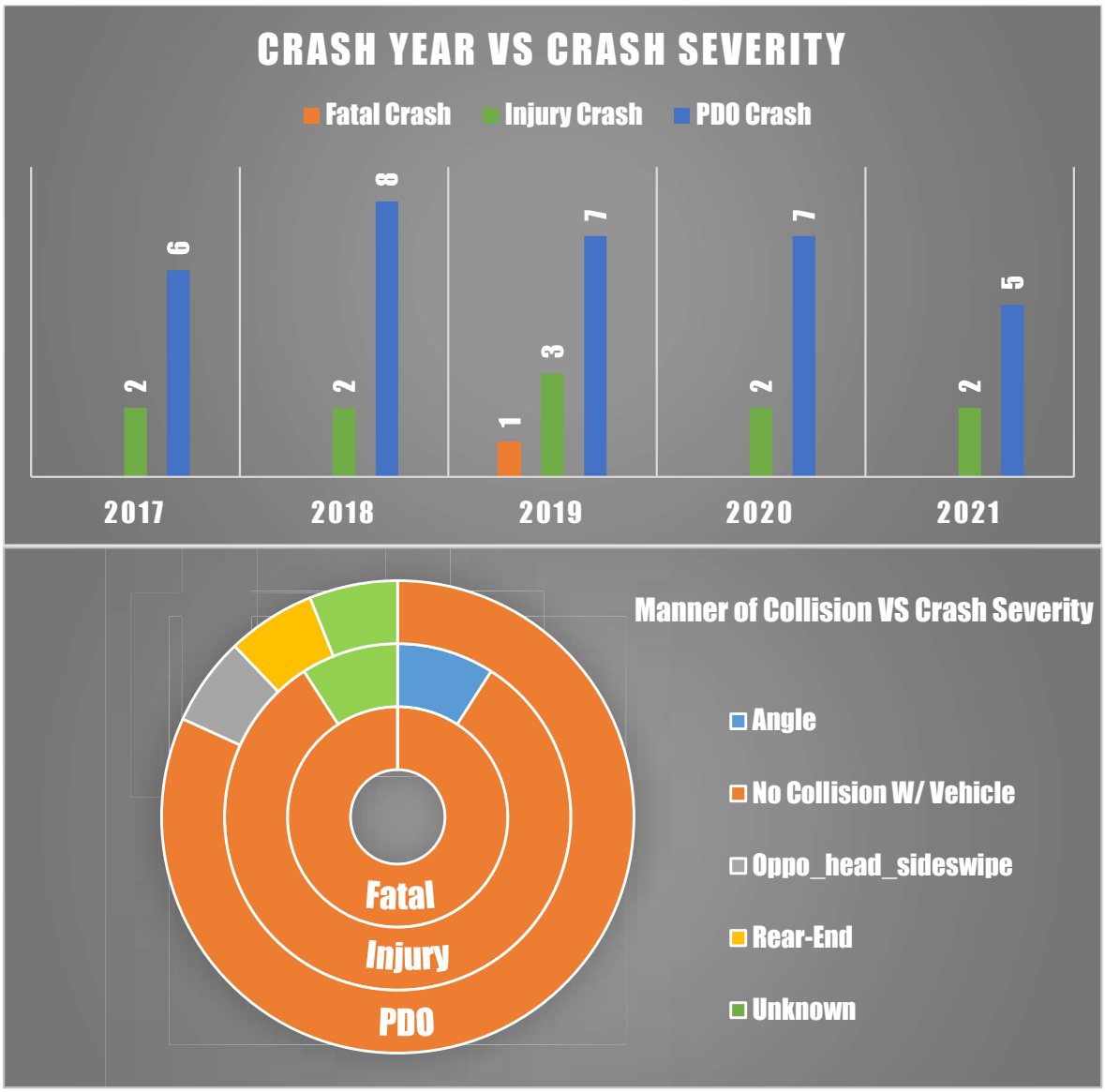

FIGURE 22: CRASH ANALYSIS FOR JONES CREEK ROAD (RANK 5)

Notes

- Low AADT and high driveway density are present.
- Primary crash type is run-off-road crashes.
- Sharp curves throughout the road segment - sight distance and speeding potential contributing factors.

Rank 6: Henslee Drive

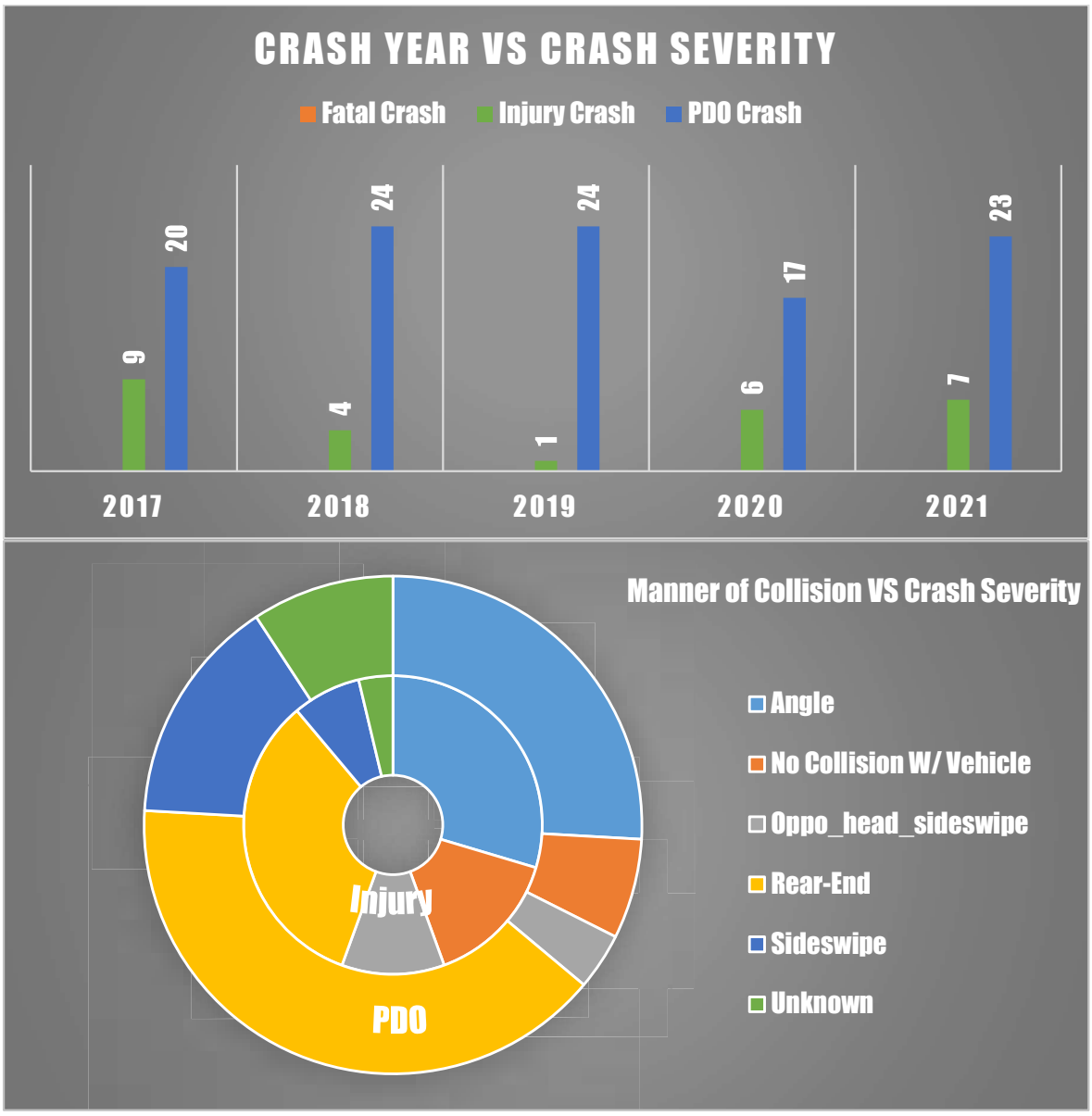

FIGURE 23: CRASH ANALYSIS FOR HENSLEE DRIVE (RANK 6)

Notes

- Angle and rear-end crash types are the dominate types.
- Road geometry and traffic conditions are contributing factors.