

Context
Demographics
Land Use
Zoning
Environmental Features
Transportation
Utility Services

EXISTING CONDITIONS

3 EXISTING CONDITIONS

This section of the PRISAP provides a base assessment of the study area's existing conditions. It is intended to help inform and direct the vision and plan recommendations throughout the planning process. The categories that are examined include study area context, demographics, land use, zoning, environmental features, transportation, and utilities.

CONTEXT

The Polkville Road Interchange study area is an area of approximately 2,139 acres (3.34 square miles) on the western side of the City of Shelby. The study area extends from Farmville Road and Barbee Road in the north, the First Broad River and Metcalf Road on the east, existing Dixon Boulevard/US 74 to the south, and the Brushy Creek in the west.

The study area is currently residential and rural in nature.

However, there are a few commercial/industrial sites within the study area. The most prominent industrial site, the Wal-Mart Distribution Center, is at the heart of the Polkville Road interchange study area. One of the more commonly known commercial sites include the Ingles shopping center at the US 74/Dixon Boulevard and Polkville Road intersection.

Uncertainty related to the completion of the new US 74

Bypass and accompanying development is a concern to residents of the study area and surrounding areas. Growth is likely to occur around the interchanges of the new Bypass, but the existing plans for the City of Shelby and Cleveland County do not specifically address plans for this growth.

FIGURE 3.1: Photos from throughout the Polkville Road Interchange study area.



The Wal-Mart Distribution Center off of Polkville Road.



The Ingles and CVS at the intersection of Polkville Road and Dixon Boulevard/US 74.



The Doran Mill Co., more commonly known as the Dover Mill, along Polkville Road.



A nursery now turned into a pawn shop on Polkville Road.

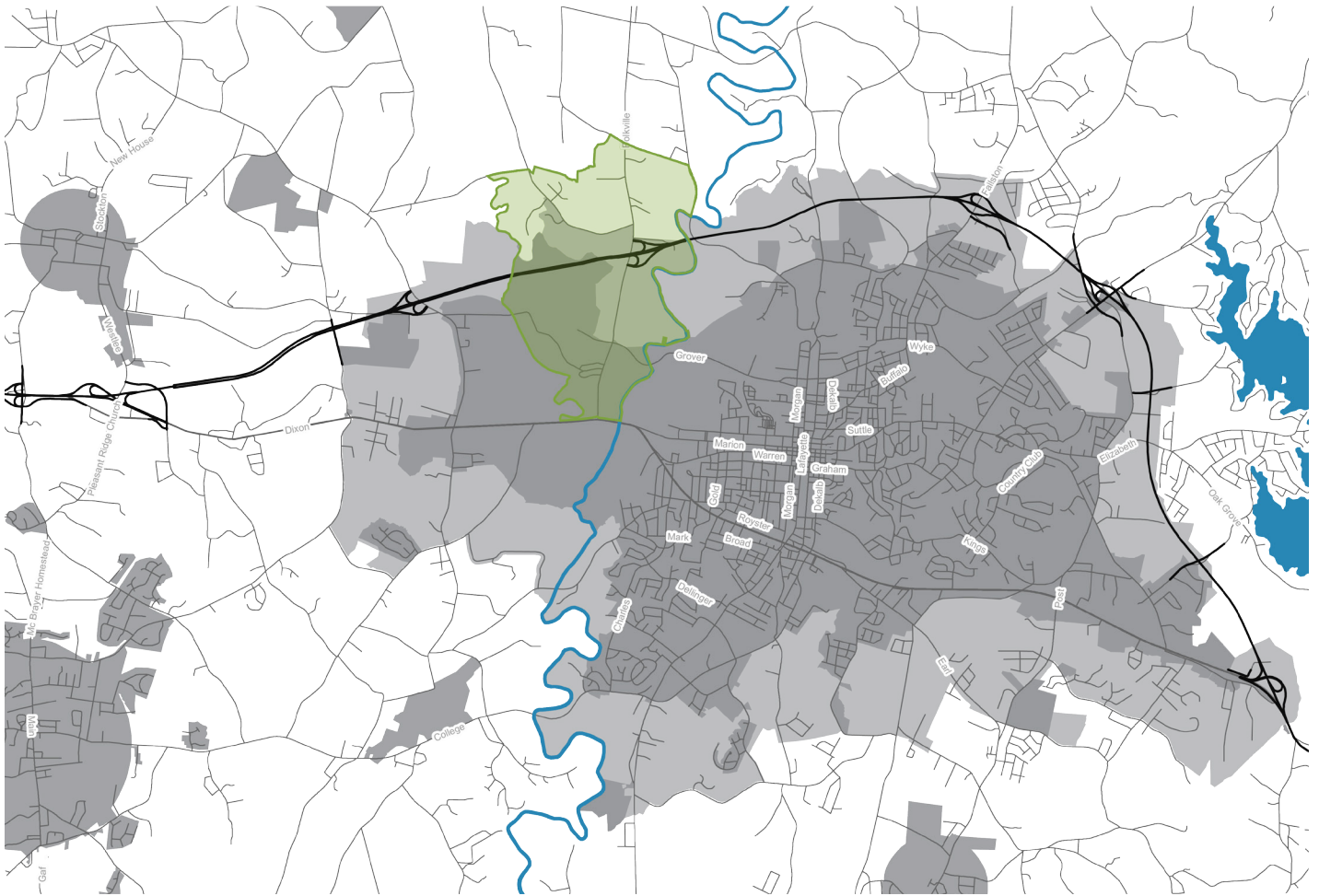


FIGURE 3.2:
Polkville Road Interchange Study Area Location Map

- Polkville Road Study Area
- City Limits
- Shelby ETJ



A residential property along Polkville Road.



One of the many churches along Polkville Road.



Salvage yard on Grover Street.

DEMOGRAPHICS

The Polkville Road Interchange study area is located within Census Block Group 951300-1. The demographic data cited in the PRISAP uses US Census information from the Census Block Group to maintain consistency and accuracy, rather than an estimate demographic data based on the study area boundary. A census block group is a geographic area defined by the United States Census Bureau. On average, a census block group has around 1,500 residents. Census block groups and census tracts are an excellent way to understand locations on a smaller scale. It should be noted the Census Block Group and the study area do not

share the same boundaries; however, the Polkville Road Interchange study area comprises approximately 22% of the Census Block Group land area. A detailed map of the boundaries is shown in Figure 3.3.

There are 1325 residents within Census Block Group (U.S. Census Bureau, 2010 Census Data), with approximately 289 residents inside the Polkville Road Interchange study area. The Census Block Group is largely Caucasian, with eighty eight percent (88%) Caucasian; eight percent (8%) African American, three percent (3%) Hispanic, and one percent (1%) other ethnicities. There are slightly more males

than females within the Census Block Group.

From the Cleveland County Economic Development Partnership (CCEDP) employment data, the largest employer within the Polkville Road Interchange study area is the Wal-Mart Distribution Center with 850 employees. However, the CCEDP does not have data on the other commercial uses within the study area.

Figure 3.4 and 3.5 demonstrate demographics related to the Census Block Group and Polkville Road Interchange study area.

FIGURE 3.3:
Census Block Group 915300-1 and Polkville Road Interchange study area Map.

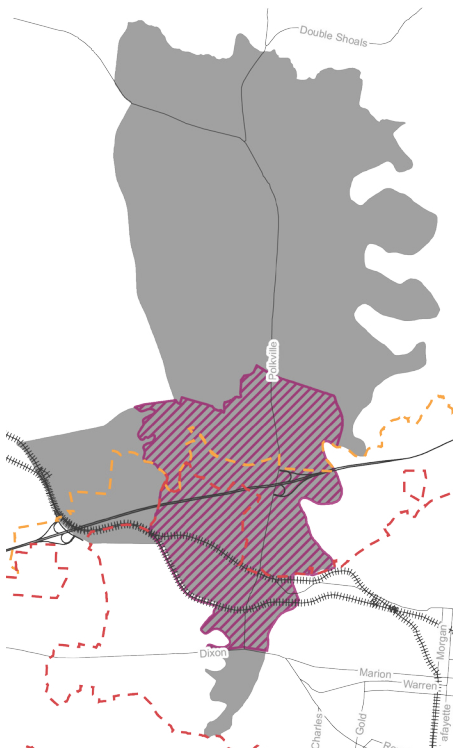
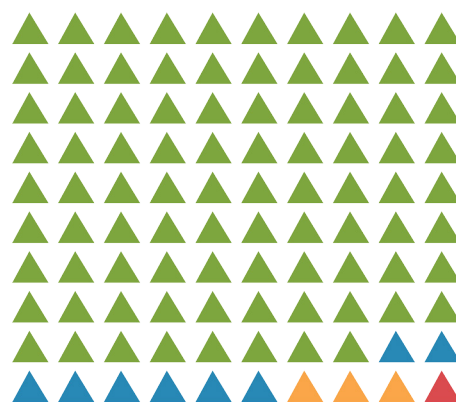


FIGURE 3.4:
Ethnicity of Census Block Group 915300-1.

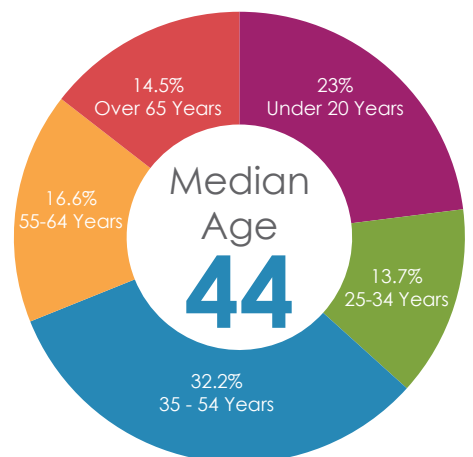
Source: U.S. Census Bureau, 2008-2012 American Community Survey.



- ▲ = 1% of Block Group Population
- ▲ = Caucasian (88%)
- ▲ = African American (7%)
- ▲ = Hispanic (3%)
- ▲ = Other (1%)

FIGURE 3.5:
Age Distribution of Census Block Group 915300-1.

Source: U.S. Census Bureau, 2008-2012 American Community Survey.



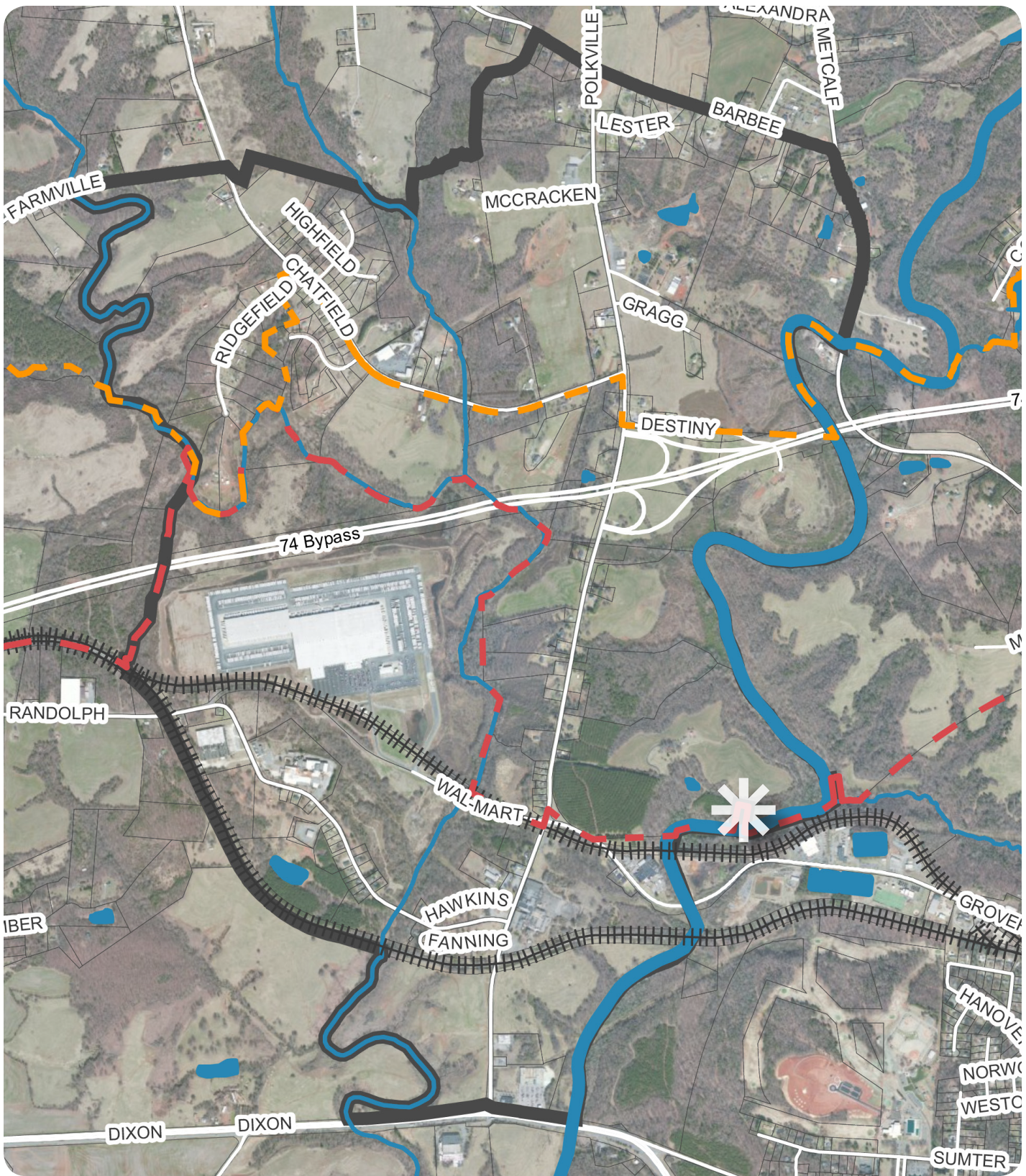




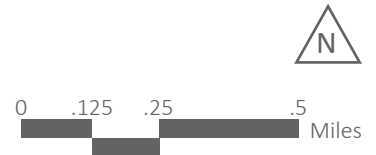


FIGURE 3.6:
Polkville Road Interchange Study Area Existing Conditions Aerial Map*

-  Study Area Boundary
-  Water
-  Shelby City Limits
-  Shelby ETJ

*Please note the aerial is from 2010. It may not depict exact current conditions in the study area.



LAND USE

Existing Land Use

The Polkville Road Interchange study area has many opportunities for development. Currently, the study area is primarily agriculture (39%) and undeveloped (22.9%).

Residential uses total sixteen point two percent (16.2%) of land within the study area with a majority being low density. Mobile homes make up approximately six percent (6%) of housing in the study area.

Industrial land uses total approximately 14 percent (14.2%).

Land needed to construct the Bypass takes up five point two percent (5.2%), approximately 105 acres, of land inside the Polkville Road Interchange study area.

The remaining land use in the study area consists of commercial uses, institutional uses and mixed uses, totaling roughly 1.6% of land within the study area.

Figures 3.7, 3.8 and 3.9 illustrate the existing land uses within the Polkville Road Interchange study area.

FIGURE 3.7:
Examples of existing land uses in the Polkville Road Interchange Study Area.

FIGURE 3.8:
Polkville Road Interchange Study Area Existing Land Uses.

Land Use	Area (Acres)	% of Plan Area
Commercial	16	0.8
Mixed Use	2.5	0.1
Residential Land Uses	328.3	16.2
Low Residential	195.8	9.6
Med Residential	9.9	0.5
Mobile Homes	122.7	6.0
Institutional	31.5	1.6
Industrial	288.9	14.2
Transportation	104.7	5.2
Agriculture	792.0	39.0
Undeveloped	464.7	22.9
Study Area Total	2028.6	



Agriculture along Polkville Road.



Residential along Polkville Road.



Much of the undeveloped lands are forested areas within the study area.



The Wal-Mart Distribution Center is considered an industrial land use.

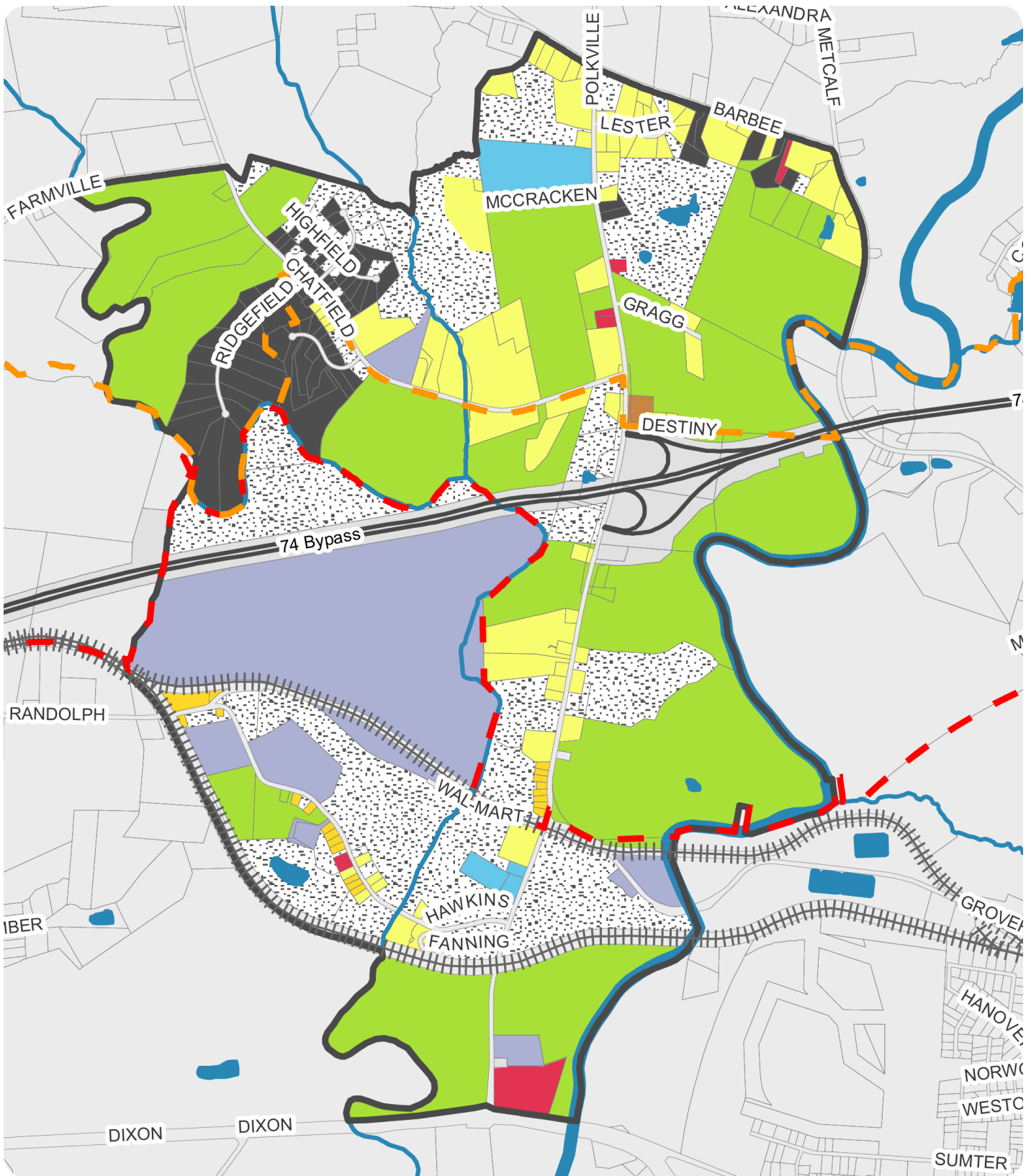
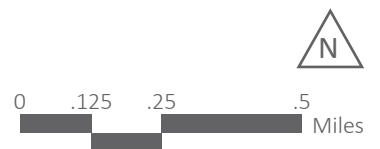
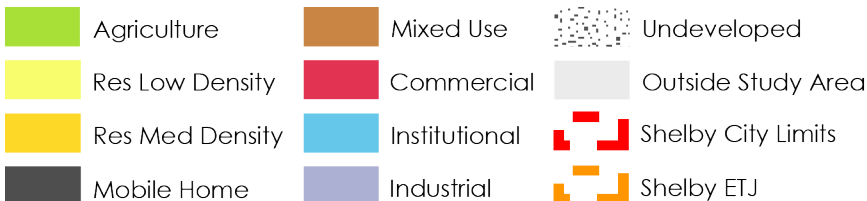


FIGURE 3.9:
Polkville Road Interchange Study Area Existing Land Use Map



Comprehensive Land Use Plan - Future Land Use

The *Comprehensive Land Use Plan's* Future Land Use Map depicts the area within the Polkville Road Interchange study area as mainly Conservation Development and Employment. The Plan preserved the land for the, at the time, future US 74 Bypass. This was the land that would have eventually been needed. With construction continuing, the surrounding lands can be developed as the Bypass is completed. Other designations within the area include Institutional and Commercial.

The Comprehensive Land Use Plan states that areas designated as conservation development are areas in which the number of lots permitted by a given zoning classification is allowed, but the development is encouraged to preserve an amount of open space in exchange for building the permitted number of residential units on smaller lots. The open space could be natural area, equestrian facilities, golf courses, or similar types of open space. For example, if a parcel of land

were entitled to build 100 1-acre lots under its current zoning classification, it would be allowed to build 100 1/2-acre lots in exchange for leaving half of the property in permanent open space. Conservation development is generally most applicable to 1/2-acre lots or larger.

The employment land use designation includes a broad range of land uses: office with supportive commercial services, office parks, light industrial, and heavy industrial. The zoning districts typically associated with these land uses are Central Business (CB), Corridor Protection District (CPD), General Business (GB), General Business 2 (GB2), General Industrial (GI), Light Industrial (LI), and the conditional use zoning districts of each district mentioned.

Institutional land uses include public and private schools, city and county government facilities, churches, colleges and universities, and similar non-commercial uses. Currently many zoning classifications

allow institutional uses; however, the Residential Office (RO) zoning district is most appropriate for these kind of uses.

Commercial land uses include services serving the needs of the surrounding neighborhoods. The City of Shelby has many zoning districts that commercial land uses can fall under. For the PRISAP, the Neighborhood Business (NB) zoning classification is an appropriate district for this land use in the study area.

Figure 3.11 shows the Polkville Road Interchange study area from the Future Land Use Map in the *City of Shelby Comprehensive Land Use Plan*. See the Appendix for a full description of land use classifications from the City of Shelby Comprehensive Land Use Plan.

FIGURE 3.10: Examples of the major future land use designations in the Polkville Road Interchange study area from the *City of Shelby Comprehensive Land Use Plan*.



Conservation Development



Employment

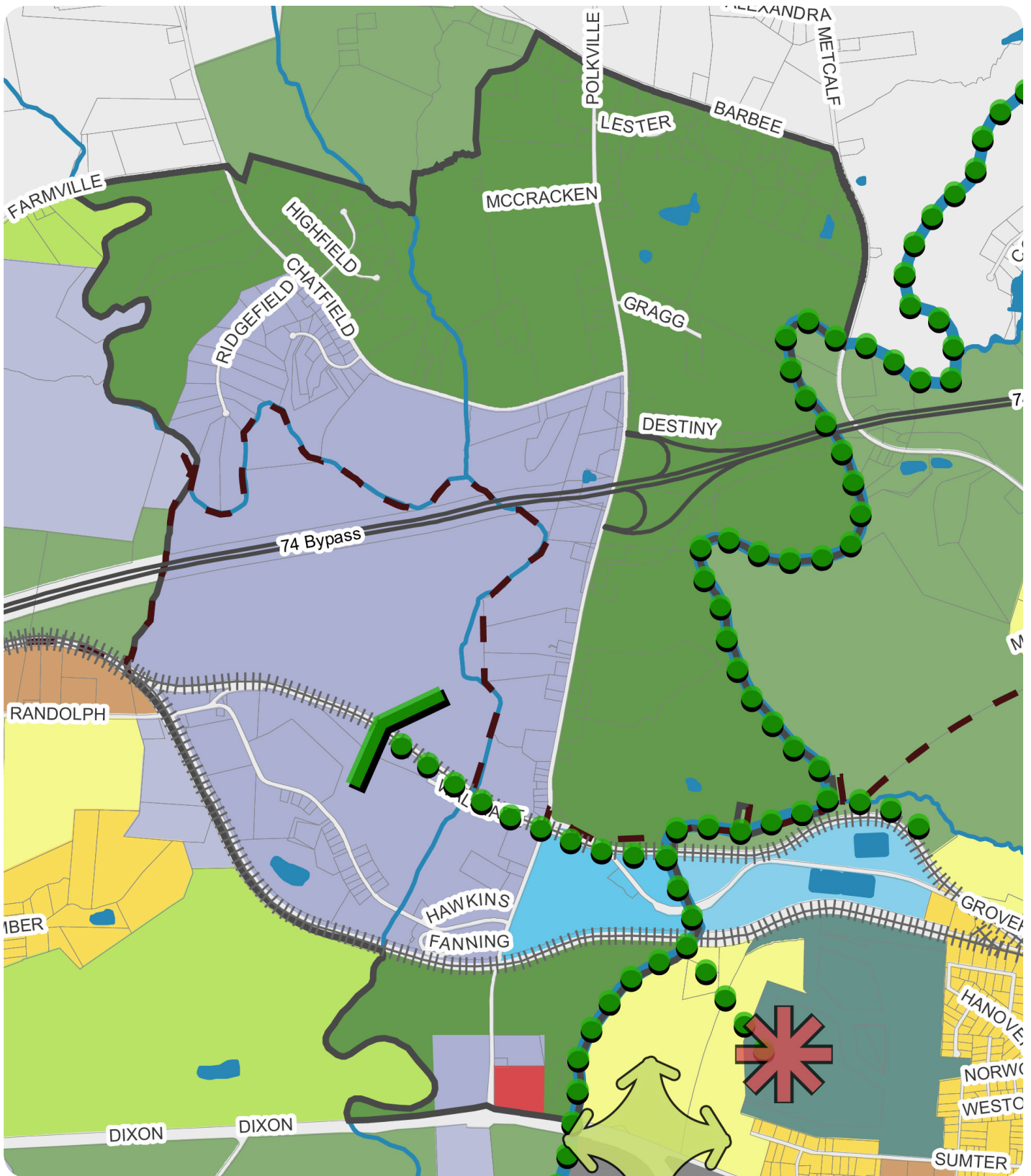
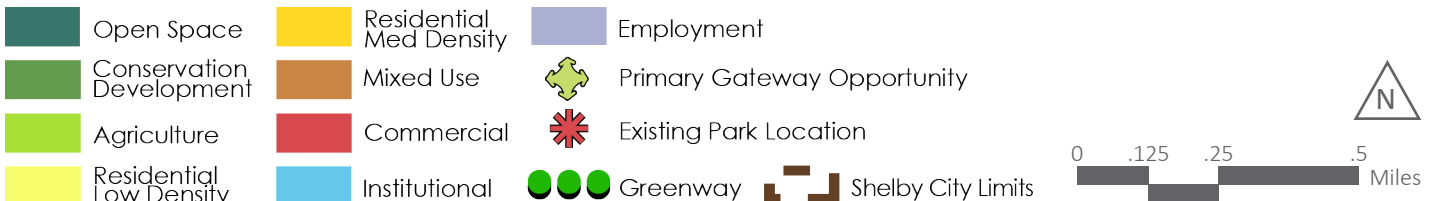


FIGURE 3.11:
Polkville Road Interchange Study Area Comprehensive Land Use Plan Future Land Use Map



ZONING

The Polkville Road Interchange study area contains five of the City's 20 base zoning classifications. A majority of the study area is zoned Residential 20 (R20), Light Industrial (LI), and General Industrial (GI). Not all of the Polkville Road Interchange study area is within the City of Shelby zoning jurisdiction; about one fourth of the study area is in the Cleveland County jurisdiction. The area within the County is mainly zoned Residential (R) and Restricted Residential (RR).

City of Shelby Zoning Districts

The Residential 20 (R20) Zoning District is intended to accommodate very low density single-family dwellings, modular homes, two-family dwellings, and manufactured homes. Some nonresidential uses are permitted as well.

The Residential 10 (R10) Zoning District is intended to accommodate low density moderate density single-family dwellings and modular homes at a maximum density of approximately 4 dwelling units per gross acre. Some nonresidential uses are permitted within this district.

The General Industrial (GI) Zoning District is intended to accommodate a wide range of assembling, fabricating and manufacturing uses.

The Light Industrial (LI) Zoning District is intended to accommodate limited manufacturing, warehousing, wholesaling, and related

Zoning District	Area (Acres)	% of Plan Area
City of Shelby		
Commercial (NB & GB-CU)	17.3	0.8
Residential Zoning Districts	805.9	39.4
R20	628.2	30.7
R10	177.6	8.7
Light Industrial (LI)	462.1	22.6
General Industrial (GI)	10.2	0.5
Cleveland County		
Residential (R)	369.0	18.1
Restricted Residential (RR)	379.6	18.6
Study Area Total	2044.0	

FIGURE 3.12: Polkville Road Interchange Study Area Current Zoning.

commercial and service activities which have little or no adverse impact upon adjoining residential, business, and industrial properties.

The Neighborhood Business (NB) Zoning District allows small, limited retail services that provide goods and services primarily to surrounding residential neighborhoods. Some residential use are allowed in this district.

The General Business Conditional Use (GB-CU) Zoning District designation for the property located at 602 Polkville Road is to allow a machine shop.

Cleveland County Zoning Districts

The Residential (R) Zoning District is intended to accommodate low-density

single-family detached dwellings, modular homes, manufactured homes at a maximum density of two (2) dwelling units per acre, and some multi-family housing.

The Restricted Residential (RR) Zoning District is the most restrictive residential district intended to accommodate low-density single-family detached dwellings and modular homes at a maximum density of two (2) dwelling units per acre.

Figure 3.9 and Figure 3.10 depict current zoning based off of GIS data from the City of Shelby and Cleveland County. See the Appendix for a full description of City of Shelby and Cleveland County zoning district classifications.

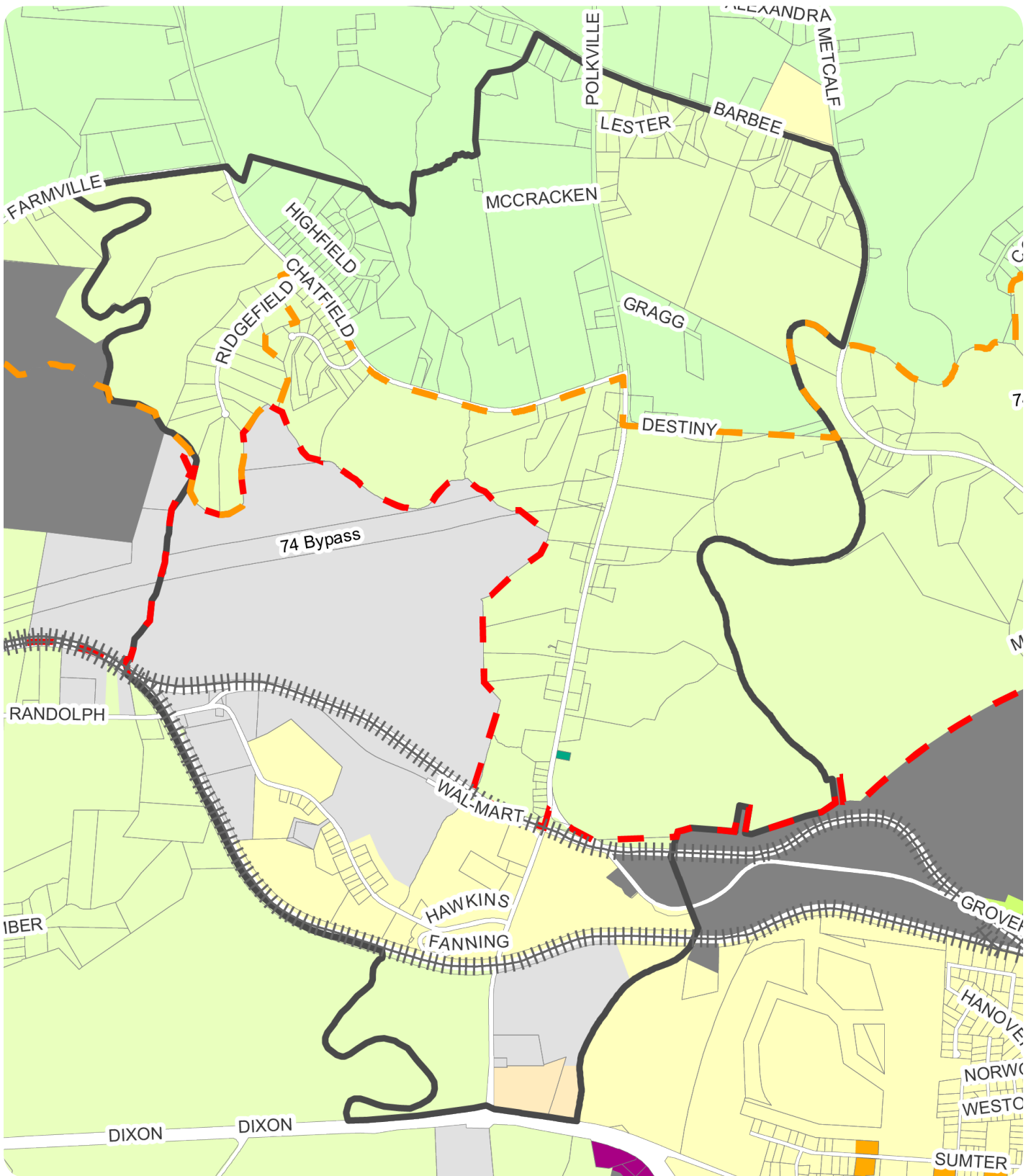
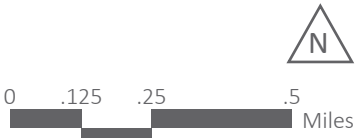
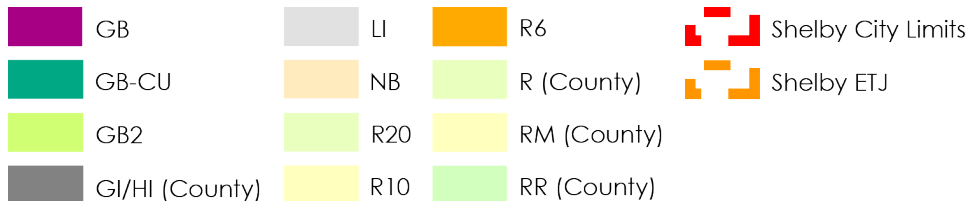


FIGURE 3.13:
Polkville Road Interchange Study Area Current Zoning Map



ENVIRONMENTAL FEATURES

Watershed areas are designed to protect designated public water supply from activities which could degrade water quality by establishing regulations to protect public drinking water supplies. These watershed areas consist of two separate districts: the Critical Watershed Area and the Watershed Protection Area. Much of the Polkville Road Interchange study area falls within both of these watershed areas. Approximately 430 acres of the study area are within the Watershed Protection Area and approximately 156 acres are within the Critical Watershed Area. Developments in these watershed areas should minimize built-upon surface area, direct stormwater away from surface waters, and incorporate stormwater best management practices to minimize water quality impacts.

The City of Shelby water intake supplies the City's drinking water. It is located on West Grover Street along the First Broad River and is adjacent to the Polkville Road Interchange study area. The Critical Watershed Area is located here because of the City's water intake.

In the Critical Watershed Area, single-family residential with public sewer uses may not exceed a maximum density of two dwelling units per acre and no lot should be less than 20,000 square feet in area. However, where public sewer service is not available, lots must be a minimum of 40,000 square feet for each single-family residential

lot. All developments, other than single-family development, are allowed a 24% built-upon area.

In the Watershed Protection Areas, single-family residential uses must not exceed a maximum density of two dwelling units per acre. For projects without curb and gutter, a maximum of three dwelling units per acre is allowed. No single-family residential lot shall be less than 20,000 square feet or 14,500 square feet for projects without a curb and gutter street system, unless located within an approved cluster development. However, where public sewer service is not available, a minimum of 40,000 square feet in lot area is required for each single-family residential lot. All developments, other than single-family development, are

allowed at a maximum 24% built-upon area or 36% built-upon area for projects without a curb and gutter street system.

Properties within the general Watershed Protection Area are eligible for a special permit from the City of Shelby City Council, which allows for a nonresidential development to be developed with a maximum of 70% built-upon area. However, only 10% of the total land area of the general Watershed Protection Area may receive such a permit. Therefore, it is important for the City of Shelby to be mindful of the locations these permits are granted.

See the Appendix for a map of the contours for the Polkville Road Interchange study area.

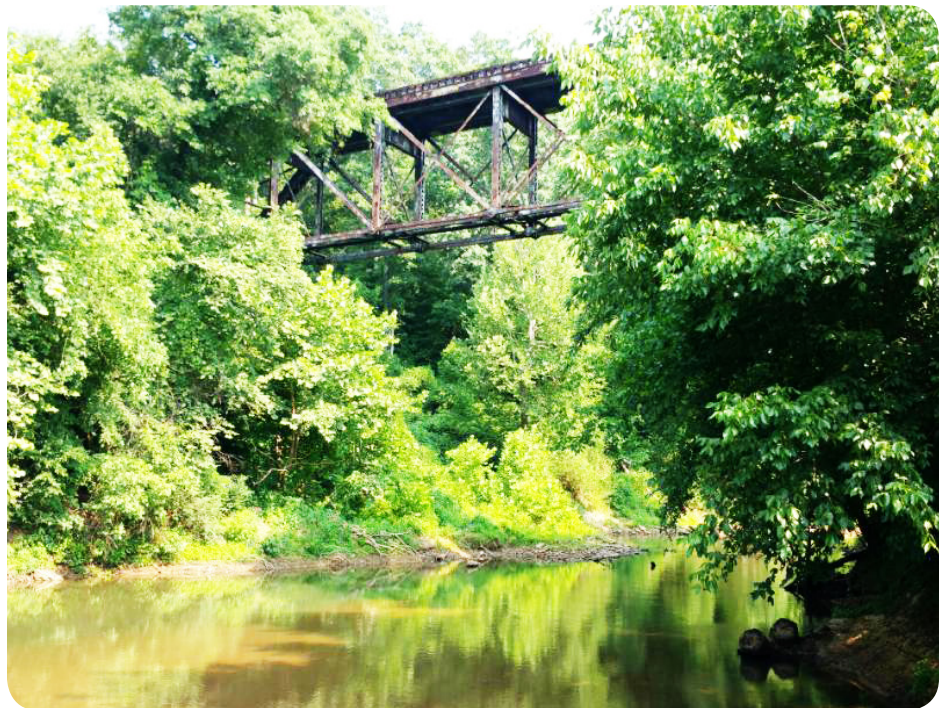


FIGURE 3.14:
First Broad River in the WS-IV Critical Area Watershed along the eastern side of the Polkville Road Interchange study area.

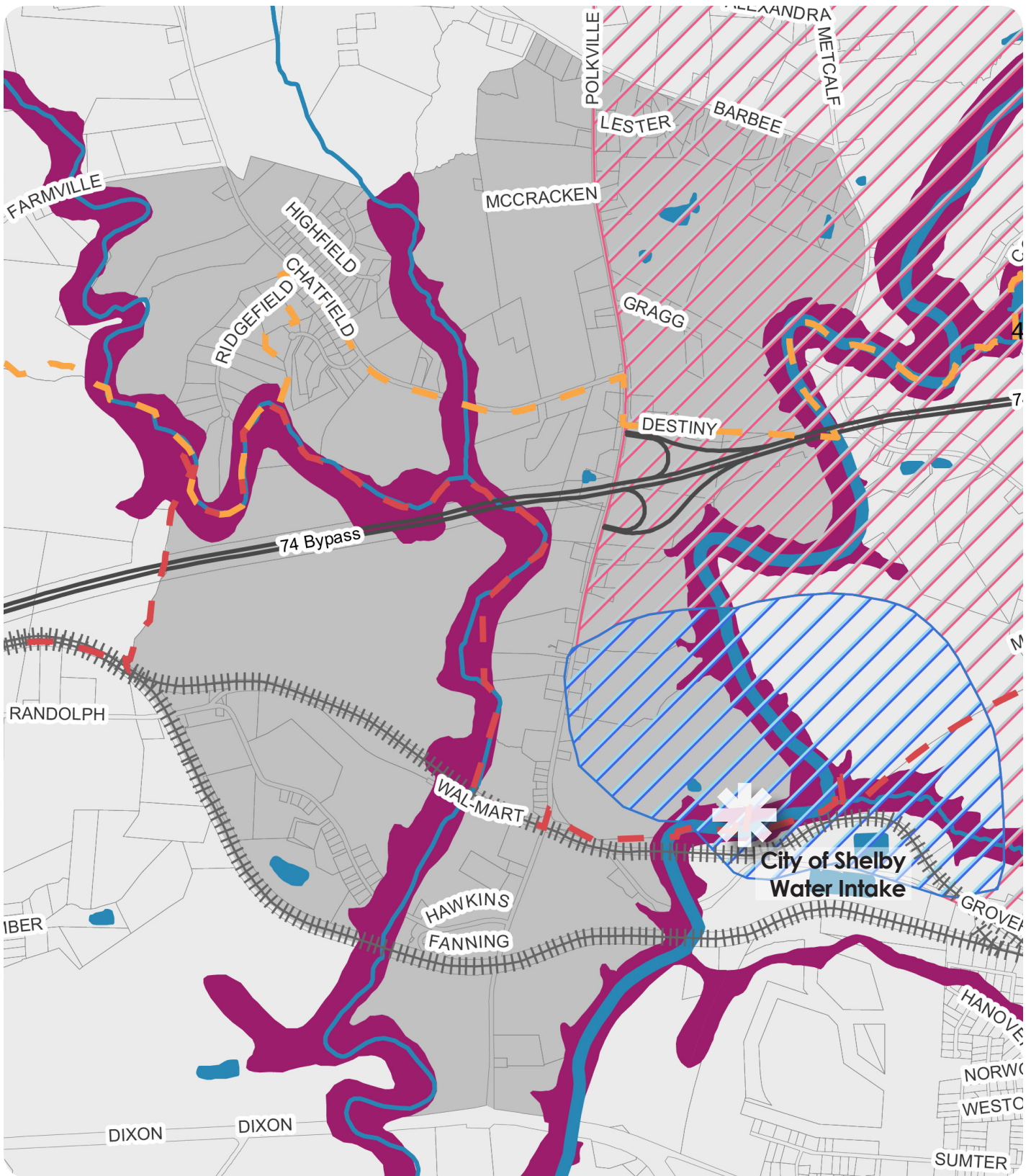
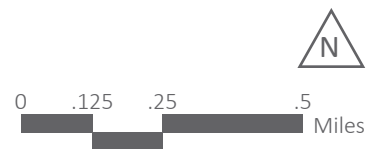


FIGURE 3.15:
Polkville Road Interchange Study Area Environmental Features Map

-  WS-IV Watershed
-  WS-IV Critical Area
-  Floodplain
-  Shelby City Limits
-  Shelby ETJ
-  Study Area Boundary



TRANSPORTATION

The Polkville Road Interchange study area's transportation system is a fairly connected network. The local streets branch off of the major streets within the study area. With the completion of the US 74 Bypass, there will be a stronger east/west connection to the greater area.

The major streets in the study area are Polkville Road/NC 226, Randolph Road, West Grover Street, Chatfield Road, Barbee Road, Metcalf Road, Dixon Boulevard/US 74 and US 74 Bypass. Each street in the study area is classified based on the purpose of the street. Figure 3.17 depicts the street classifications within the study area.

Major Thoroughfares:

- Dixon Boulevard/US 74
- US 74 Bypass (Future classification)

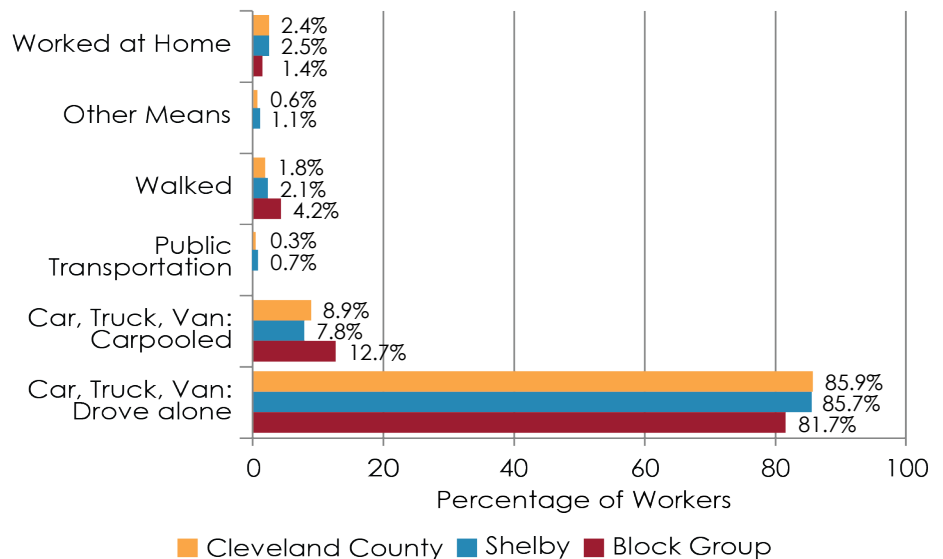
Collector Streets:

- Polkville Road/NC 226
- West Grover Street
- Metcalf Road

Local Streets:

- Randolph Road
- Barbee Road
- Wal-Mart Drive
- All other residential streets

With new developments and roadway improvements, Farmville Road is expected to become a collector street. A new bridge is currently under construction on Farmville Road and there are potential road improvements with the completion of the Bypass.



Source: U.S. Census Bureau, 2008-2012 American Community Survey.

FIGURE 3.16: Commute to Work Comparison (Cleveland County, Shelby, Block Group 951300-1).

See the Appendix for detailed information on street classifications.

Commuting Patterns

On average, approximately eighty two percent (81.7%) of residents in the Census Block Group commute by automobile (alone) and approximately thirteen percent (12.7%) commute by carpool. No residents commute by public transportation and less than five percent (4.2%) commute by walking or biking. See Figure 3.11 for commuting pattern information.

The average commute time for residents in the Census Block Group is 22.75 minutes. This means that many residents work outside of the Polkville Road Interchange study area or there is traffic. However, with there being very few employers in the study area, it

is more likely that residents work outside of the study area.

The commute pattern data cited in the PRISAP uses US Census information from Census Block Group 951300-1 to maintain consistency and accuracy.

Traffic Counts

Traffic in the Polkville Road Interchange study area varies significantly throughout the study area. Traffic is expected to increase over time, with Annual Average Daily Traffic (AADT) estimated to the year 2035.

See Figure 3.19 for further explanation of traffic in the Polkville Road Interchange study area.

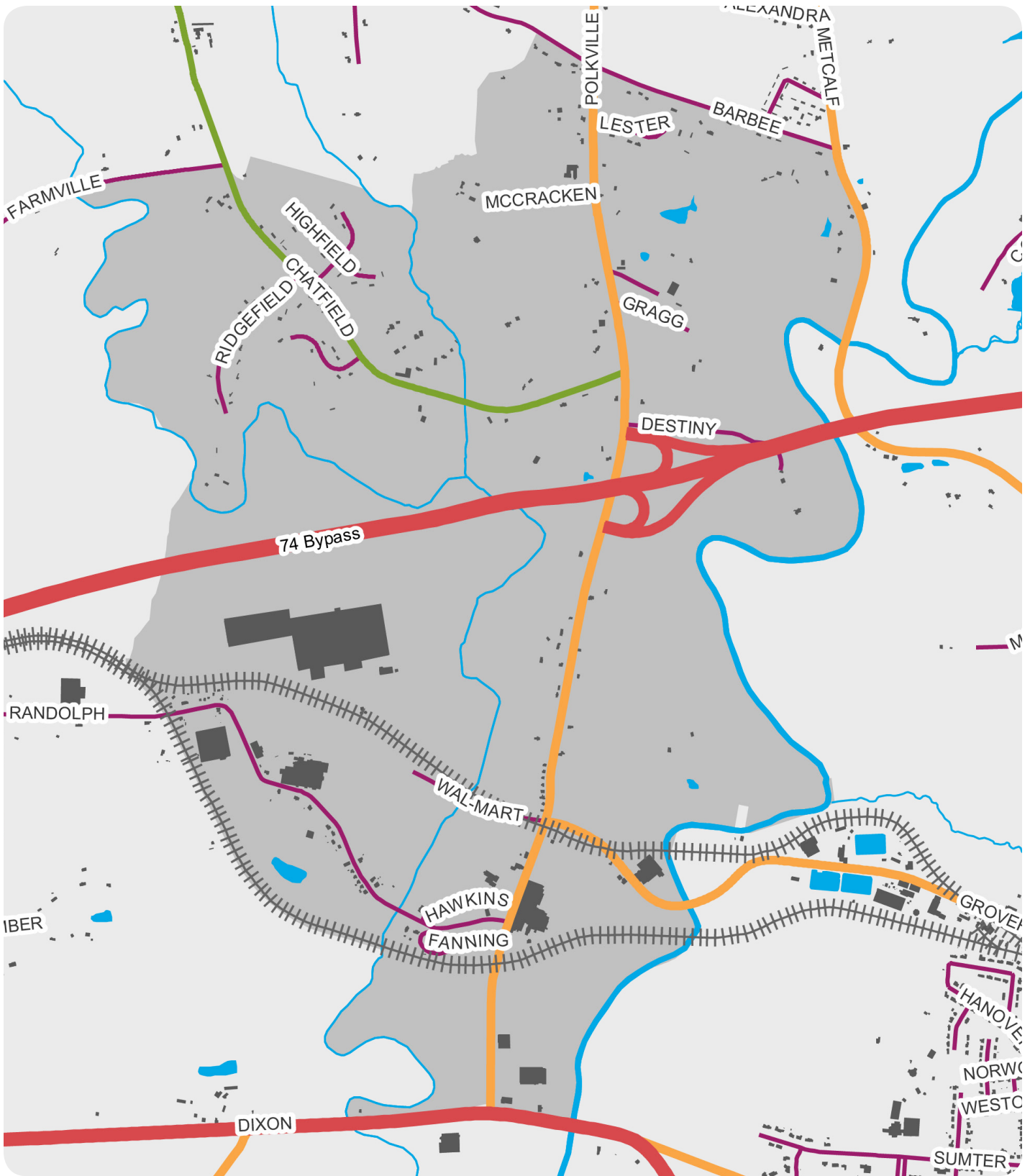


FIGURE 3.17:
Polkville Road Interchange Study Area Current Street Classification Map

- Major Thoroughfares
- Minor Thoroughfares
- Collector Streets
- Local Streets
- Buildings
- Polkville Road Interchange Study Area
- Water

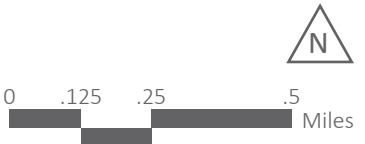


FIGURE 3.18:

Traffic on Polkville Road during the Wal-Mart Distribution Center 4 pm shift change at the Grover Road and Polkville Road intersection.



FIGURE 3.19:

Traffic Counts related to Polkville Road Interchange Study Area.

Level of Service Designations

A roadway level of service (LOS) is a grade based on the relationship of travel demand and the roadway capacity. There are six levels of service that identify possible roadway conditions. These designations range from LOS A, which represents the best roadway conditions, to LOS F, which represents the worst roadway conditions.

Of the roadways in the Polkville Road Interchange study area, the current Cleveland County Transportation Plan (2012) specifically designates Dixon Boulevard/current US

Location	Existing Capacity	AADT 2009	AADT 2012	AADT 2035 w/ E+C*	Proposed Capacity
US 74 Bypass (Dixon Blvd to Polkville Rd)	N/A	N/A	N/A	20,000	54,000
US 74 Bypass (Polkville Rd to Falston Rd)	N/A	N/A	N/A	26,500	54,000
Polkville Rd (US 74 Bypass to Shelby City Limits)	12,000	15,000	13,000	16,500	22,000
Polkville Rd (Shelby City Limits to Chatfield Rd)	12,000	11,000	7,300	16,500	40,000
Polkville Rd (Chatfield Rd to W Zion Church Rd)	13,000	9,000	6,200	16,000	40,000
W Grover St (Polkville Rd to Lee St)	12,000	6,500	5,900	9,000	12,000
Randolph Rd (Washburn Switch Rd to Southern Dr)	9,500	1,900	1,600	3,600	9,500
Southern Dr/Wal-Mart Dr (Wal-Mart Dr to Polkville Rd)	12,000	2,400	2,200	3,600	12,000
Metcalf Rd (W Zion Church Rd to Shelby City Limits)	11,000	3,500	1,900	6,400	11,000
Dixon Blvd, Averaged (Washburn Switch Rd to Charles Rd)	28,000	26,400	28,300	30,000	40,000

AADT = Annual Average Daily Traffic

*E+C: Estimate of the volume in 2035 with only existing projects and committed projects assumed to be in place.

Committed project are projects programmed for construction in the 2009-2018 Transportation Improvement Program.

Source: Cleveland County Comprehensive Transportation Plan, July 2012.

74 with a LOS C. the following LOS designations are from the 2040 Volumes and Capacity Deficiencies: Cleveland County Map from the Gaston-Cleveland-Lincoln Metropolitan Planning Organization.

- Level of Service E or F
 - Intersection of Polkville Road and West Grover Street
- Level of Service C or better
 - US 74 Bypass
 - Dixon Boulevard/US 74
 - Chatfield Road
 - Farmville Road
 - Polkville Road/NC 226

- West Grover Street
- Metcalf Road

Figure 3.20 illustrates roadways and traffic for each LOS designation.

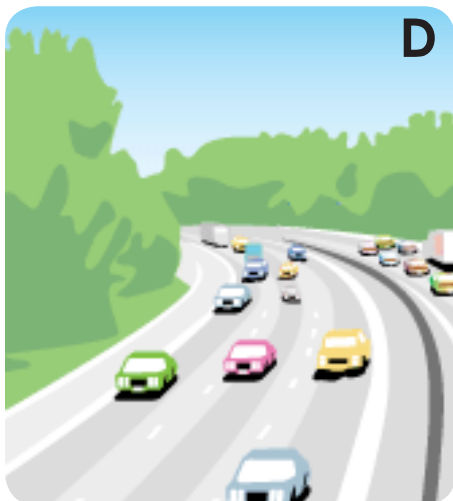
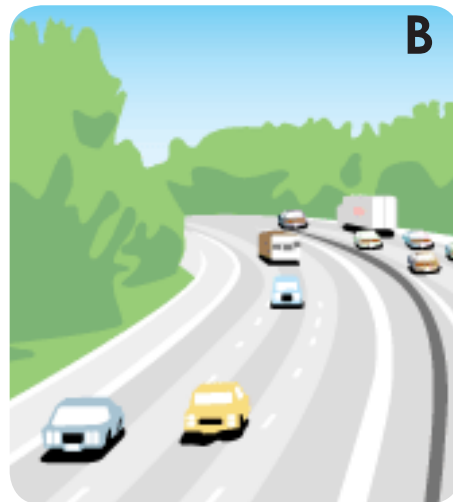
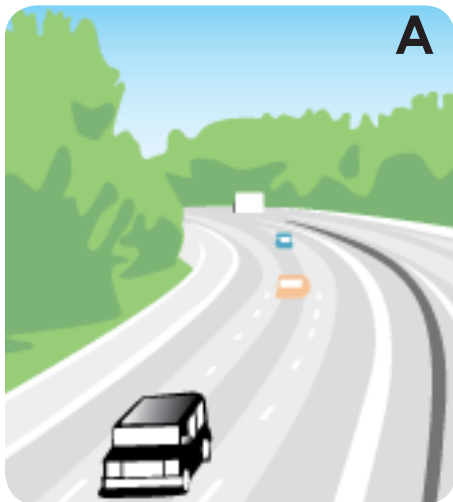
LOS E and F indicate that the travel operation is at capacity. LOS D indicates the “practical capacity” of a roadway, or the capacity at which the public begins to express dissatisfaction. The practical capacity was developed based on the 2000 Highway Capacity Manual using the NCLOS program and LOS tables. Recommended

improvements and overall design of the transportation plan were based upon achieving a minimum LOS D on existing facilities and a LOS C for new facilities. The City of Shelby strives to achieve a LOS C or better for City roads.

See the Appendix for detailed information on LOS.

FIGURE 3.20: Level of Service roadway and traffic examples.

Source: Level of Service from Maryland Transportation Authority, I-95 Express Toll Lanes.



UTILITY SERVICES

Electric Services

The City has an existing overhead 3-Phase 7.2/12.47 kV electric line along West Grover Street to Wal-Mart Drive and connects back to Randolph Road. The City substation serving these facilities is located in close proximity, approximately 1 miles east along Grover Street in Shelby.

In addition, Duke Energy supplies electric services within much of the Polkville Road Interchange study area.



Gas Services

Gas services are available in the Polkville Road Interchange study area in various pressures.

Sewer Services

City Council, in conjunction with Cleveland County, has appropriated funding for design engineering and permitting of the Brushy Creek Outfall Project. This project will consist of a large regional pump station located at the confluence of Brushy Creek and the First Broad River and meander north through the Brushy Creek Drainage basin. This project will allow for the future development of the Foothills Commerce Center, the Washburn Switch Business Park, and the Polkville Road Interchange study area.

Water Services

The City of Shelby provides water services for many residents and businesses within the city limits in the Polkville Road Interchange study area; while Cleveland County supplies water services for much of the residents in the ETJ and northern portion of the Polkville Road Interchange study area.

The Farmville Road/Polkville Road Loop Project is an addition to the Westside Water Project. The Farmville Road/Polkville Road Loop Project will provide a 16" ductile iron water line loop that will run up Polkville Road and Chatfield Road, and turn down Farmville Road and Washburn Switch Road.

See the Appendix for more detailed, individual Utility Services maps (Electric, Gas, Sewer, and Water) and proposed utility services extension maps.



FIGURE 3.21: Examples of utility services located within the Polkville Road Interchange study area: Wal-Mart Distribution Center Lift Station and the City of Shelby Water Intake .

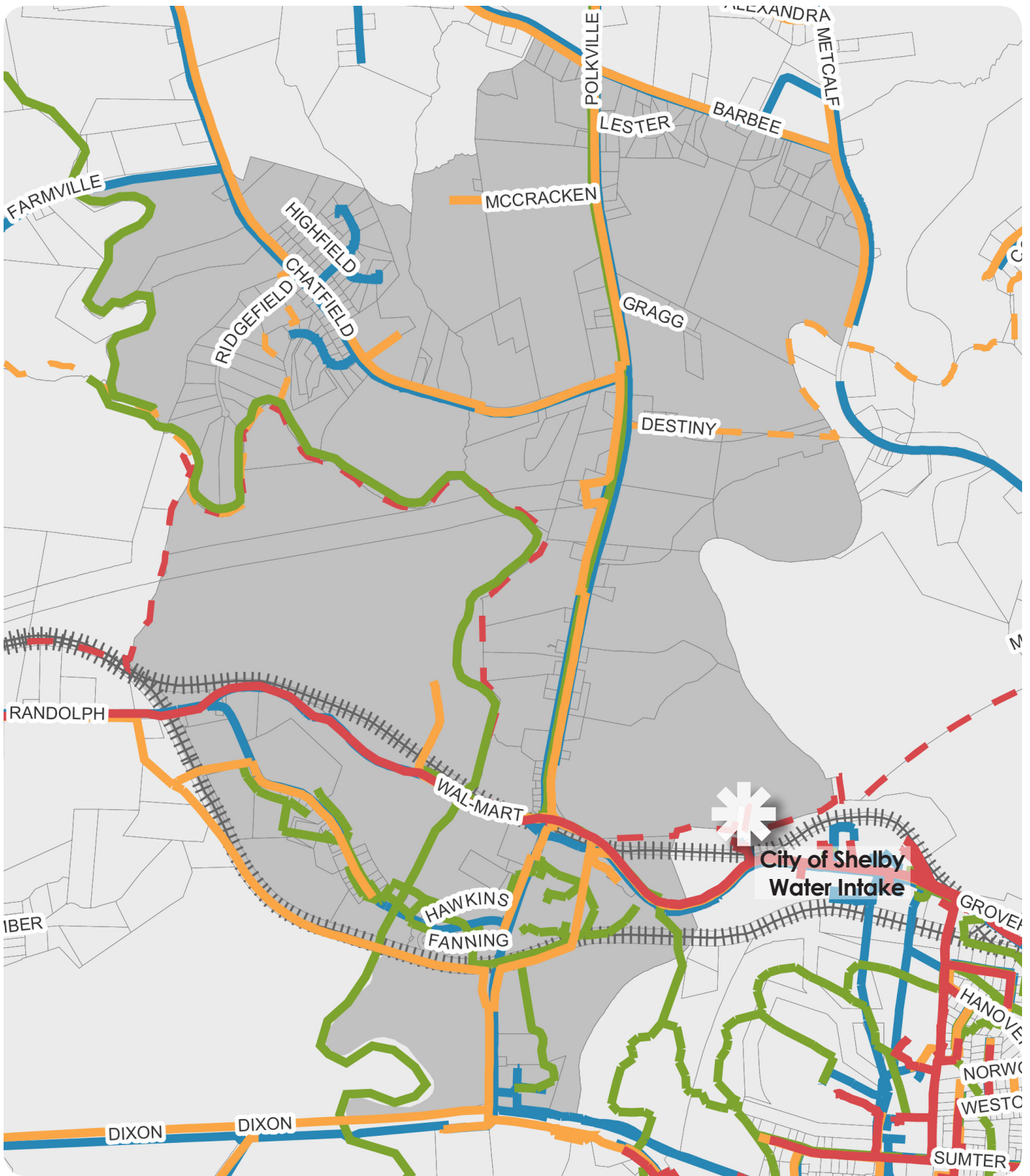


FIGURE 3.22:
Polkville Road Interchange Study Area Utility Services Map

- Electric Service Lines
- Gas Service Lines
- Sewer Service Lines
- Water Service Lines
- Shelby City Limits
- Shelby ETJ
- Study Area Boundary

