3

Context
Demographics
Land Use
Zoning
Transportation
Utility Services

EXISTING CONDITIONS

3 EXISTING CONDITIONS

This portion of the WSISAP provides a base assessment of the study area's existing conditions. This section 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, transportation, and utilities.

CONTEXT

The Washburn Switch Interchange study area is an approximately 2,318 acre (3.62 square miles) area on the west end of the City of Shelby. The study area extends from Washburn Switch Road and Farmville Road to the north, the railroad and Brushy Creek to the east, the existing US 74 to the south, and Plato Lee Road on the west.

The study area currently serves as a hub for industrial uses. There are several established industrial sites within and right outside of the study area. The Foothills Commerce Center, located within the study area, is an industrial center with the potential to accommodate up to ten sites. In addition, Cleveland County has proposed an industrial park for the northern portion of the study area.

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 Washburn Switch Interchange study area.

Foothills Commerce Center is the main industrial center off of Washburn Switch Road. Truck and employee traffic will only increase as the center continues to expand.

The approximant location of the Westbound on and off ramps for US 74 Bypass.

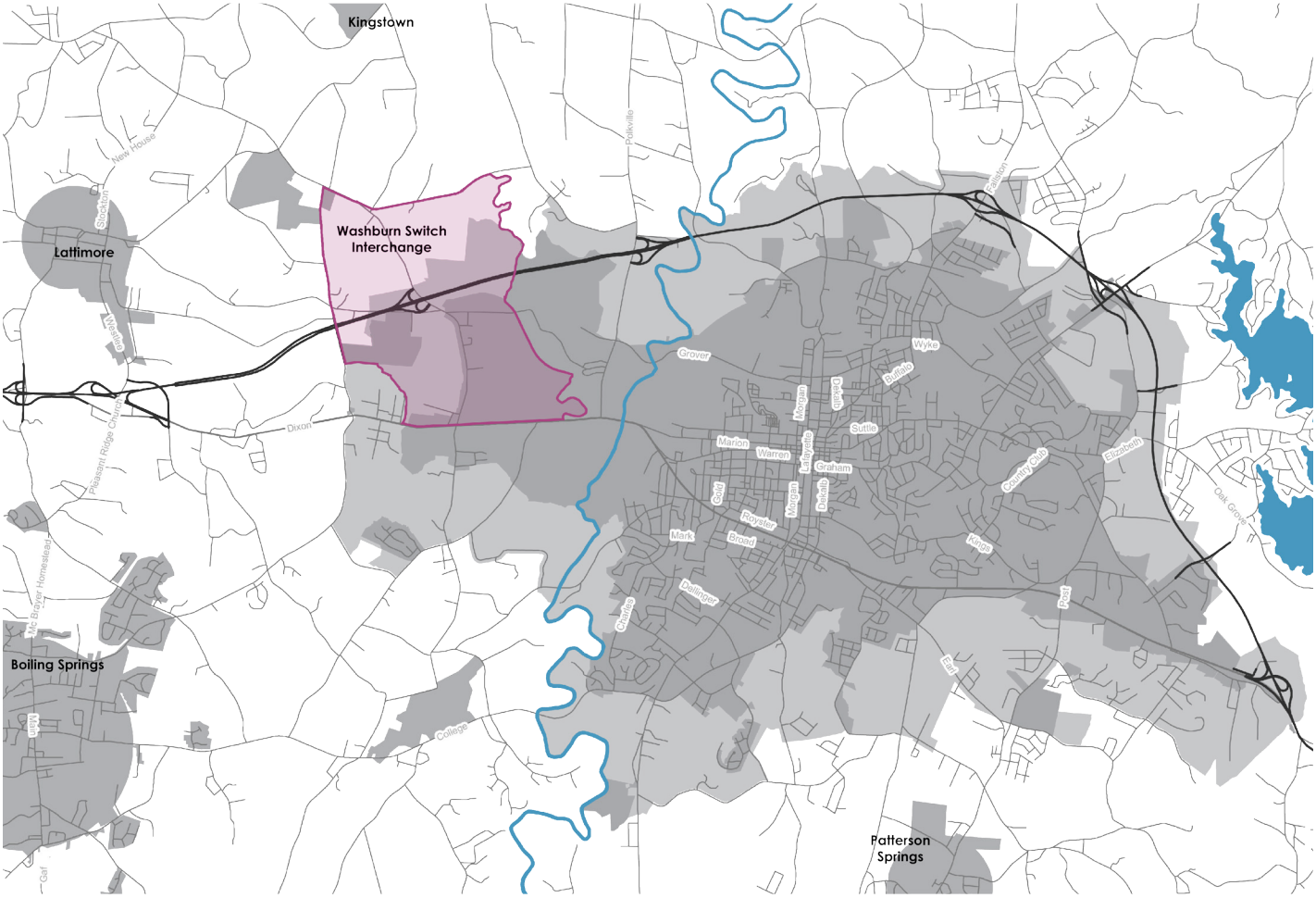


FIGURE 3.2:
Washburn Switch Interchange Study Area Location Map

- Washburn Switch Study Area
- City Limits
- Shelby ETJ

Traffic on Washburn Switch Road at Randolph Road.

Traffic on Washburn Switch Road at Artee Road.

Yard sculptures along Washburn Switch Road.

DEMOGRAPHICS

The Washburn Switch Interchange study area is located within Census Tracts 9513 and 9514. The demographic data cited in the WSISAP uses US Census information from Census Tracts 9513 and 9514 to maintain consistency and accuracy, rather than an estimate based on the actual study area. It should be noted that the Census Tracts and the study area do not share the same boundaries.

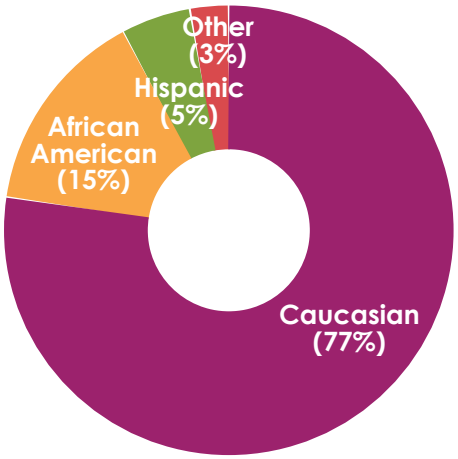
There are 9676 residents within Census Tracts 9513 and 9514 (U.S. Census Bureau, 2008-2012 American Community Survey), with approximately 400 residents inside the Washburn Switch Interchange study area. The study area is largely Caucasian, with 77% of residents being Caucasian; fifteen percent (15%) are African American, 5% Hispanic, and 3% other ethnicities. Also, there are slightly more females than males.

From the Cleveland County Economic Development Partnership employment data, there are 552 employees within the study area. However this does not incorporate the commercial uses within the study area. A majority of employment opportunities are industrial, as this land use continues to grow.

Figure 3.3 demonstrates the estimated distribution of resident and employees within the study area. One dot represents approximately one resident or employee.

FIGURE 3.3:
Ethnicity of Census Tracts 9513 and 9514

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



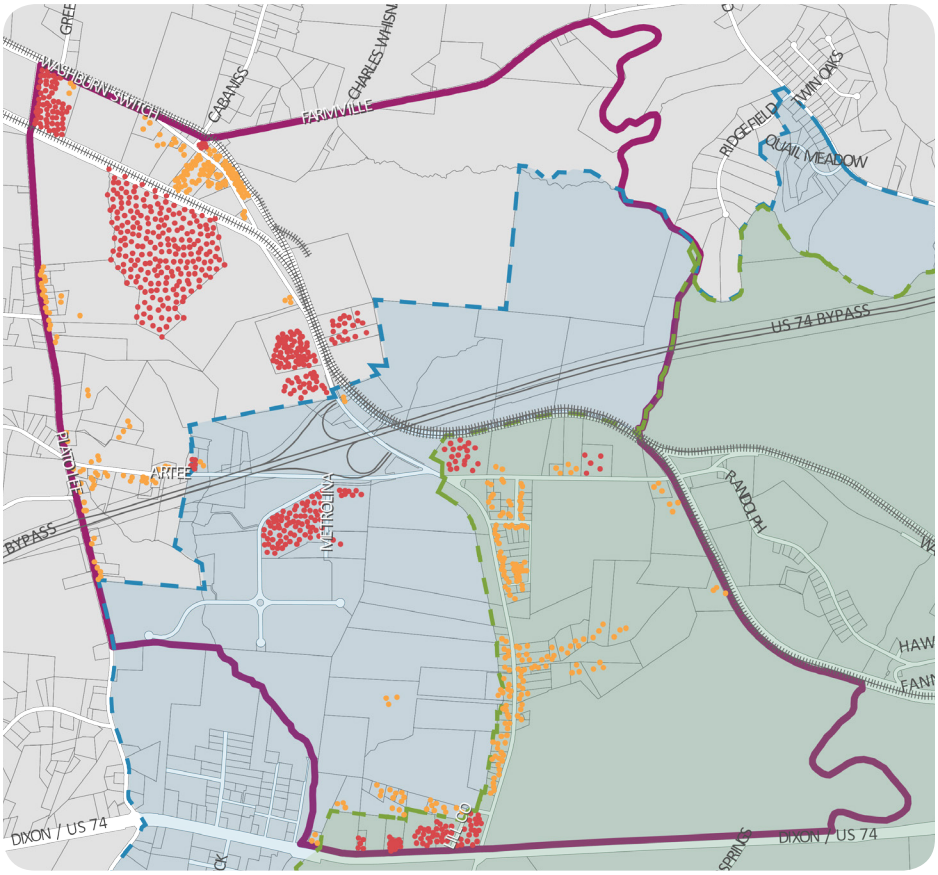


FIGURE 3.4:
Residents and Employees Demographic Map

Employees

Residents

Shelby City Limits

Shelby ETJ

One (1) dot represents approximately one (1) resident or employee.

Source: Based off of internal records from the Cleveland County Economic Development Partnership.

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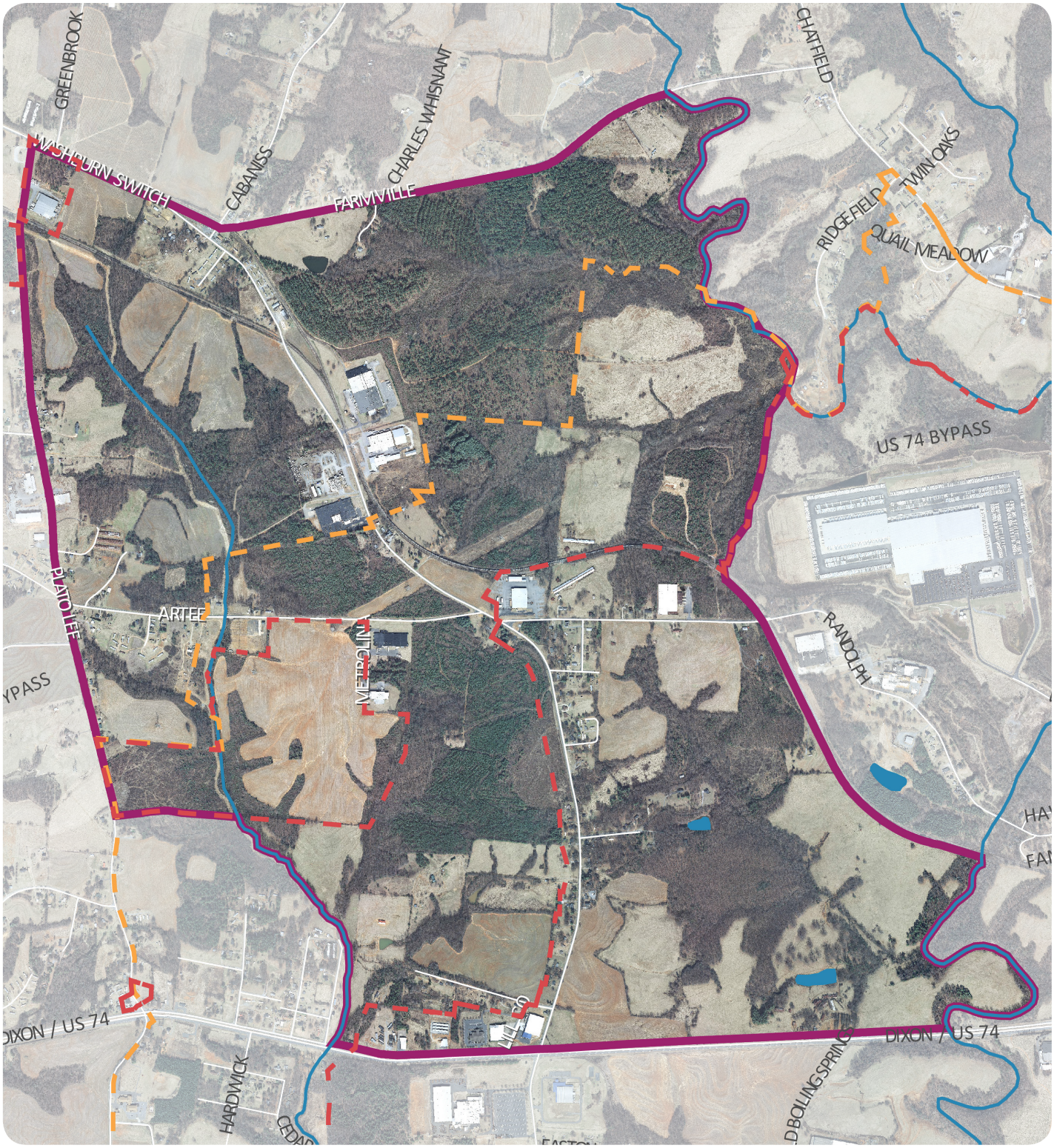

FIGURE 3.5:
Washburn Switch Interchange Study Area Existing Conditions Aerial Map*

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

*Please note the aerial is from 2010. It does not depict the Foothills Commerce Center or other developments since 2010.

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LAND USE

Existing Land Use

The Washburn Switch Interchange study area has many opportunities for development. Currently, the study area is primarily undeveloped, agriculture, industrial, and residential. By percentage, the study area is approximately 40% undeveloped with approximately 594 acres (67.2% of undeveloped properties) dedicated for industrial uses within the Foothills Commerce Center and Washburn Switch Industrial Park. However, properties that are being currently used as industrial encompass roughly 13% of the study area.

Residential uses total 13.9% of land within the study area with a majority being low density. Mobile homes make up approximately 1.3% of housing in the study area.

Land needed to construct the Bypass takes up less than 5% (approximately 95 acres) of land inside the plan study area. The remaining land in the plan study area consists of commercial, professional office, and institutional uses, totaling roughly 1% of land within the study area.

Figure 3.6, 3.7 and 3.8 illustrate the existing land uses within the Washburn Switch Interchange study area.

FIGURE 3.6:
Washburn Switch Interchange Study Area Existing Land Uses

Land Use	Area (Acres)	% of Plan Area
Commercial	12.8	0.6%
Professional Office	6.5	0.3%
Mixed Use	0.0	0%
Residential	310.1	13.9%
Low Residential	***280.2***	***12.5%***
Med Residential	***0.9***	***0.04%***
High Residential	***0.2***	***0.01%***
Mobile Homes	***28.8***	***1.3%***
Institutional	2.1	0.1%
Industrial	282	12.6%
Transportation	91.9	4.1%
Agriculture	638.6	28.5%
Open Space/Parks	0.0	0%
Undeveloped	892.95	39.9%
Study Area Total	**2237**	

Pine tree farm along Washburn Switch Road.

The City of Shelby water tank is considered a transportation/ utility land use.

Eskridge Baptist Church located across from the west bound interchange ramp.

Schletter is one of the many industrial sites in the study area.

FIGURE 3.7:
Examples of existing land uses in the Washburn Switch Interchange Study Area.

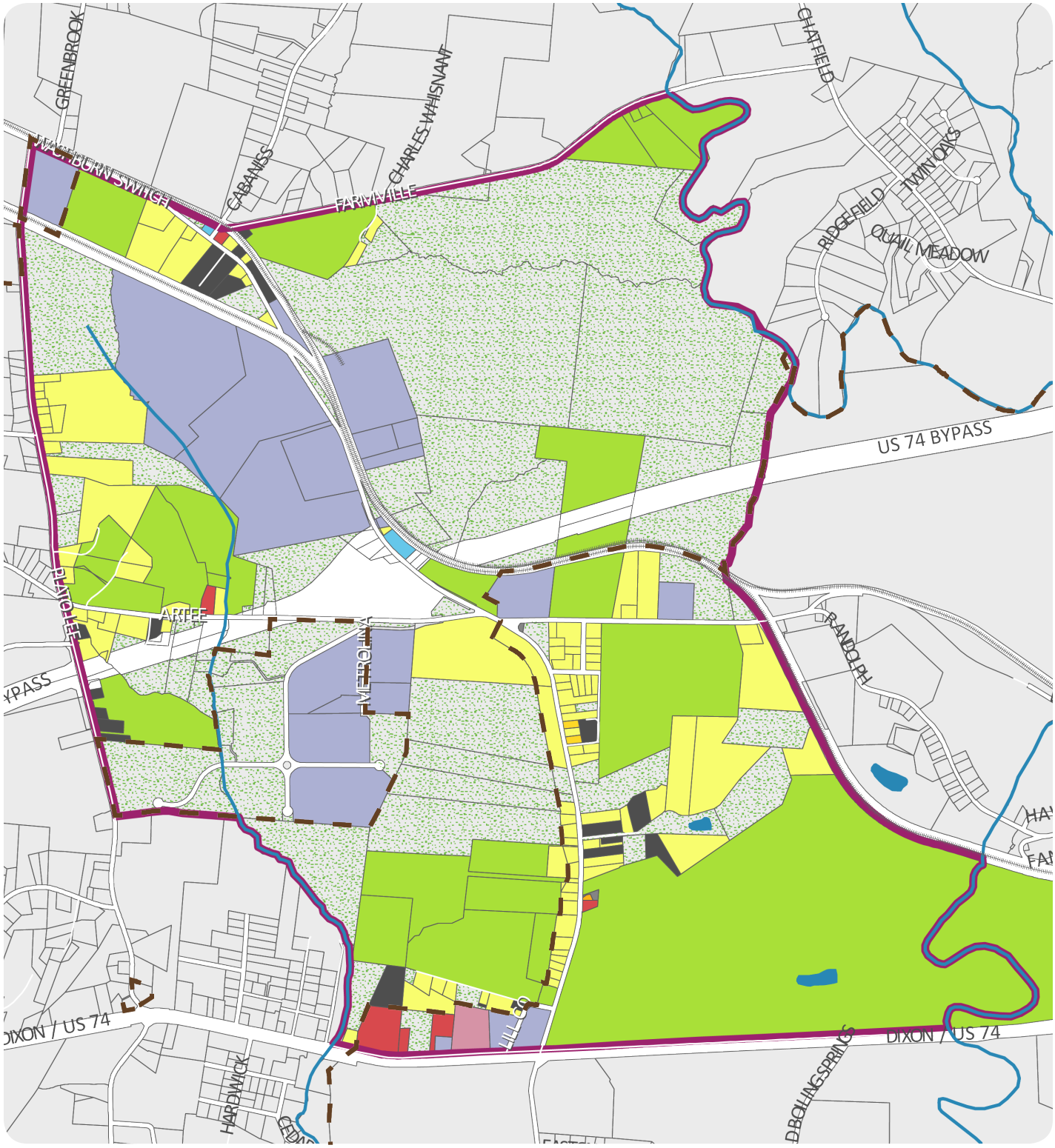

FIGURE 3.8:
Washburn Switch Interchange Study Area Existing Land Use Map

Comprehensive Land Use Plan
Future Land Use

The *Comprehensive Land Use Plan*'s Future Land Use Map depicts the area within the Washburn Switch Interchange study area as mainly conservation development and employment land uses. The Plan preserved the land for the, at the time, future US 74 Bypass. This was the land that would have eventually been needed for the Bypass. With the Bypass under construction, the surrounding lands can be developed as the Bypass is completed.

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 CB, CPD, GB, GB2, GI, LI, and the conditional use zoning districts of each district mentioned. See the Appendix for a full description of land use classifications from the City of Shelby *Comprehensive Land Use Plan*.

Figure 3.10 shows the Washburn Switch Interchange study area from the Future Land Use Map in the City of Shelby *Comprehensive Land Use Plan*.

FIGURE 3.9:
Examples of the major future land use designations in the Washburn Switch Interchange study area from the City of Shelby *Comprehensive Land Use Plan*.

Conservation Development

Employment

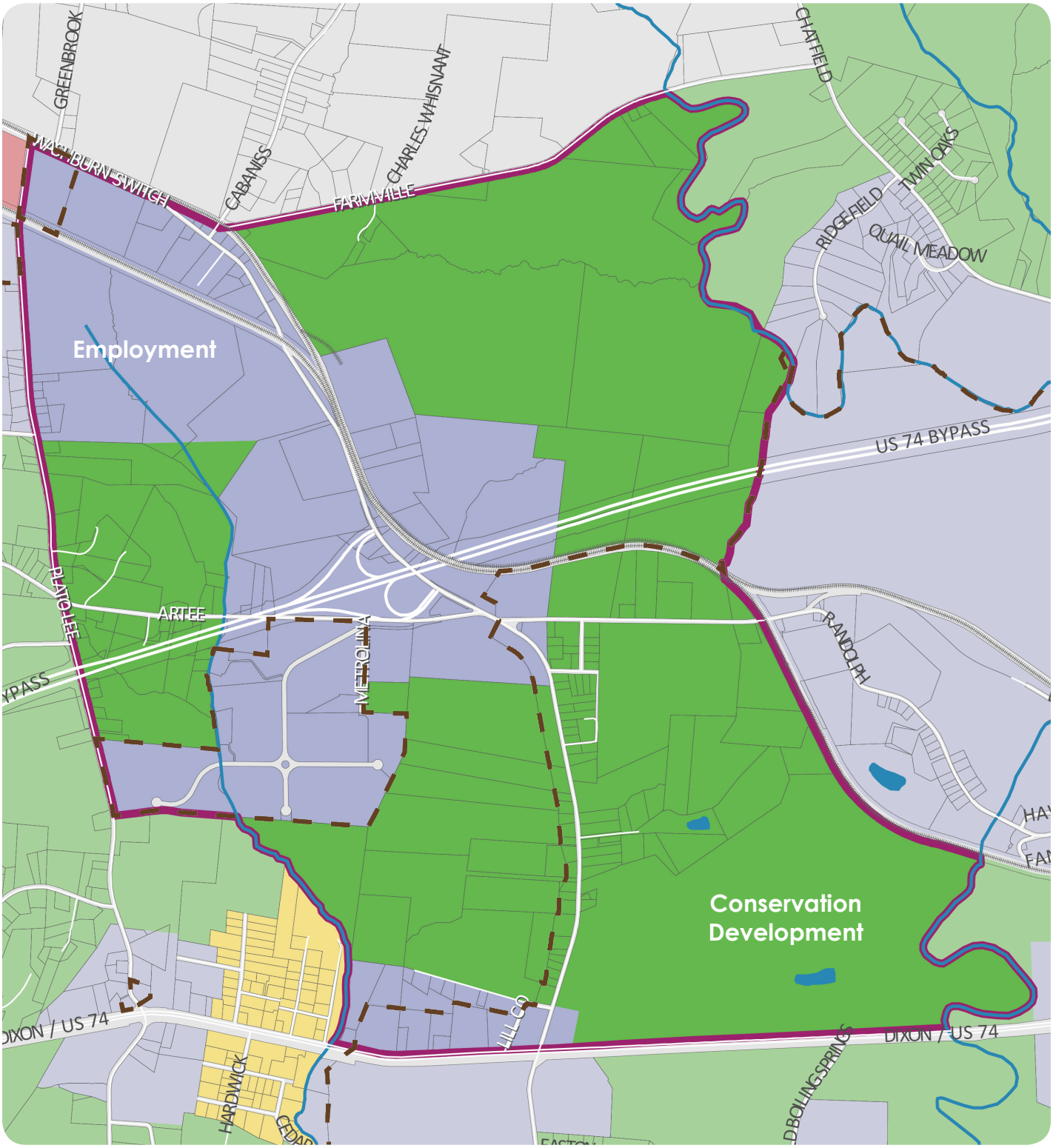

FIGURE 3.10:
Washburn Switch Interchange Study Area Comprehensive Land Use Plan Future Land Use Map

- Conservation Development
- Agriculture
- Res Low Density
- Res Med Density
- Res High Density
- Commercial
- Employment
- Outside Comp. Plan Scope
- Shelby City Limits

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ZONING

The Washburn Switch Interchange study area contains seven 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). The other zoning districts are commercial uses (GB2 and GB) and conditional uses for specific properties (GI-CU and GB-CU). Not all of the Washburn Switch interchange study area is within the City of Shelby zoning jurisdiction; a little less than half the study area is considered to be in the Cleveland County zoning jurisdiction. The area within the County is mainly zoned Heavy Industrial (HI) and Residential (R). See the Appendix for a full description of City of Shelby and Cleveland County zoning district classifications.

Figure 3.11 and Figure 3.12 depict the current zoning based off of zoning GIS data from the City of Shelby and Cleveland County.

FIGURE 3.11:
Washburn Switch Interchange Study Area Current Zoning

Zoning District	Area (Acres)	% of Plan Area
City of Shelby		
Commercial (GB-CU, and GB2)	40.7	1.8
Residential Zoning Districts	772	34.5
R20 and R20-CU	***772***	***34.5***
R10	***0***	***0***
R8	***0***	***0***
R6 AND R6-CU	***0***	***0***
Light Industrial (LI)	501.8	22.4
General Industrial (GI)	118.7	5.3
Cleveland County		
Commercial (GB)	9.9	0.4
Residential	285.4	12.8
Light Industrial (LI)	11.4	0.5
Heavy Industrial (HI)	497	22.2
Study Area Total	**2237**	

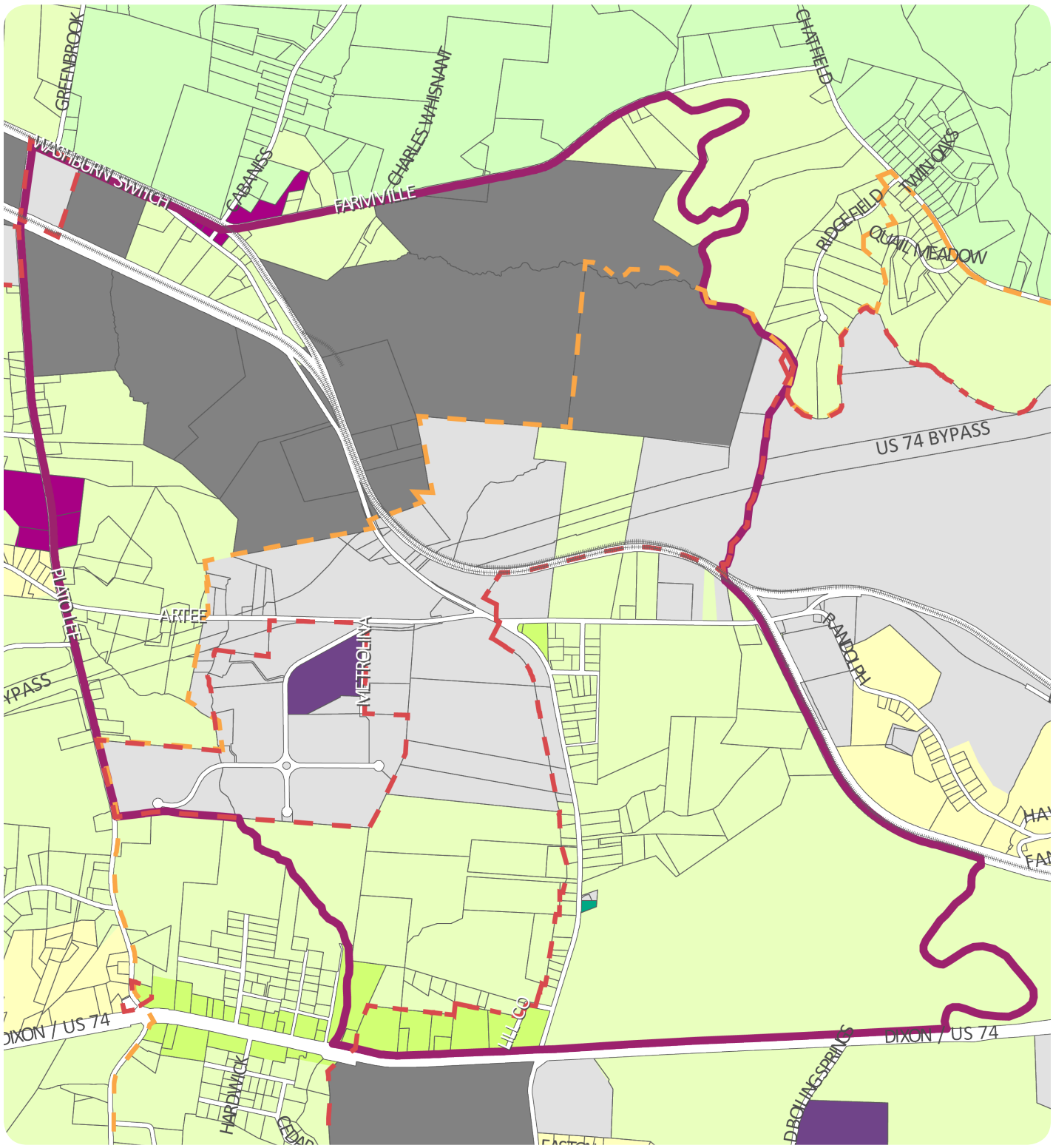

FIGURE 3.12:
Washburn Switch Interchange Study Area Current Zoning Map

GB	LI	Shelby City Limits
GB-CU	R20 / R	Shelby ETJ
GB2	R10	
GI/HI	Restricted Residential	
GI-CU		

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TRANSPORTATION

The Washburn Switch Interchange study area's transportation system is disproportionately connected, meaning it is easier to travel north/south than it is to travel east/west. The main east/west street is Dixon Boulevard/US 74, while the north/south streets are connected to most other streets within the study area. 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.

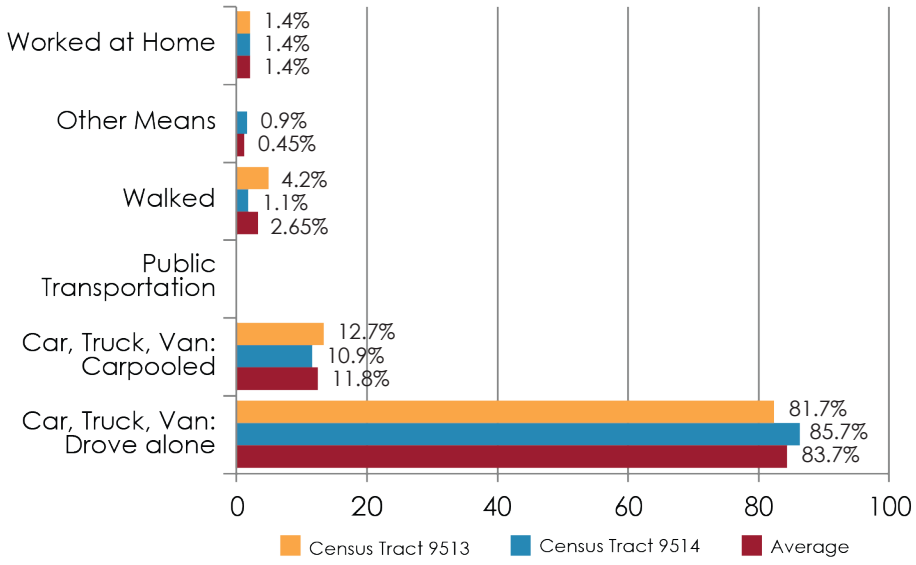
The major streets in the study area are Washburn Switch Road, Artee Road, Randolph Road, Plato Lee Road, Farmville Road, Dixon Blouevard/US 74 and US 74 Bypass.

Each street in the study area is classified based on the purpose of the street. Figure 3.14 depicts the street classifications within the study area.

Major Thoroughfares:
- Dixon Boulevard/US 74
- US 74 Bypass (Future classification)

Collector Streets:
- Washburn Switch Road
- Plato Lee Road
- Farmville Road (Future classification)

Local Streets:
- Artee Road
- Randolph Road
- Cabaniss Road (Future classification)
- Metrolina Drive
- Commerce Center Drive
- Partnership Drive
- All other residential streets within study area



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

FIGURE 3.13:
Commute to Work for Census Tracts 9513 and 9514)

With the completion of the Bypass, Washburn Switch Road could become a minor thoroughfare. This depends on how the increased traffic will circulate through the Washburn switch Interchange study area. Currently, Washburn Switch Road collects the traffic from local streets and disperses that traffic onto larger roadways. With new developments and roadway intersection changes, Cabaniss Road may become a local street; whereas 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 development of the Washburn Switch Industrial Park.

Artee Road will no longer be a through street with the completion of the US 74 Bypass.

See the Appendix for detailed information on street classifications.

Commuting Patterns

An average of 83.7 percent of residents in Census Tracts 9513 and 9514 commute by automobile (alone) and 11.8% commute by carpool. No residents commute by public transportation and less than 3% commute by walking or biking. See Figure 3.13 for commuting pattern information.

The average commute time for residents in Census Tracts 9513 and 9514 is 22.75 minutes. This means that residents work

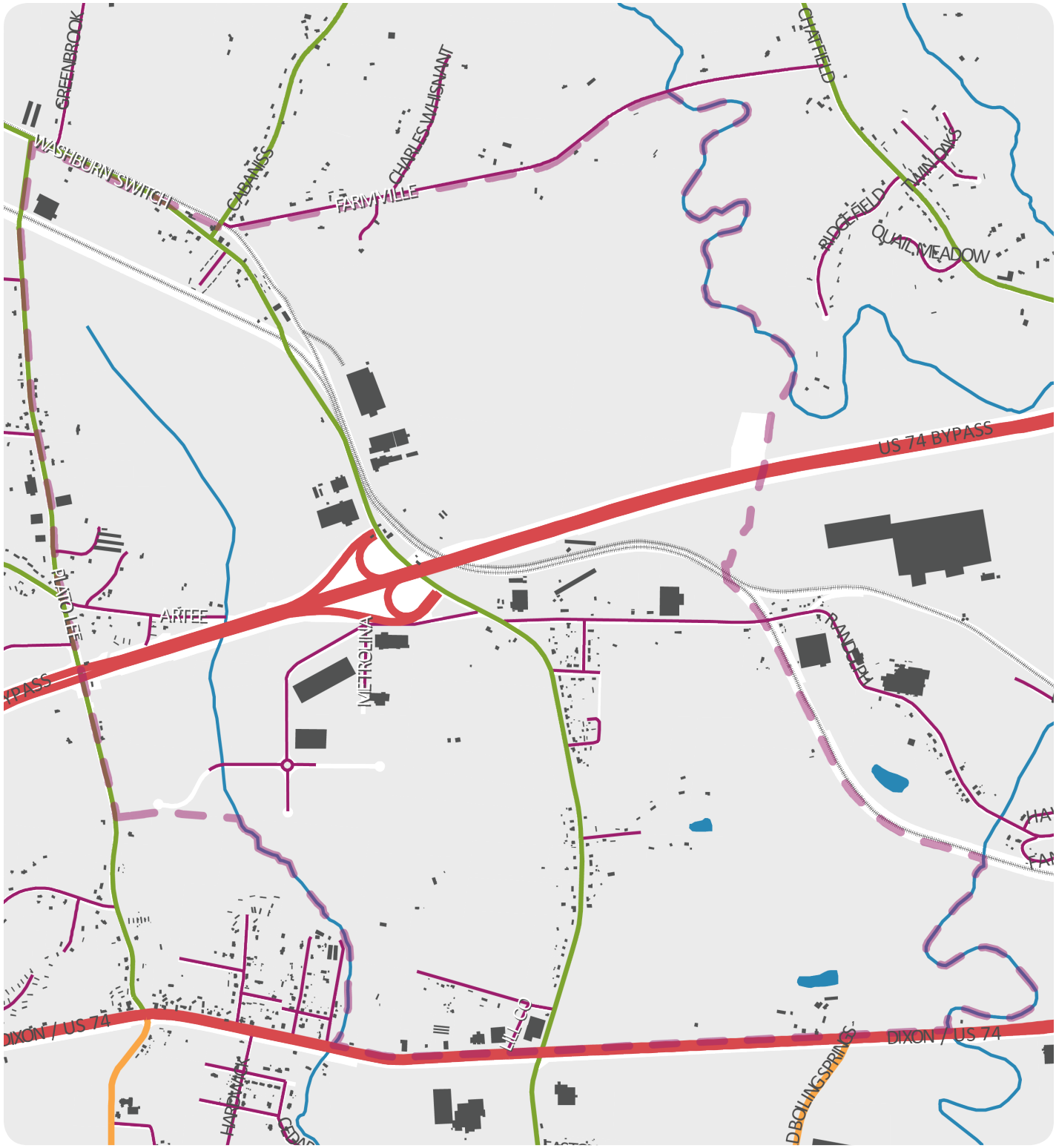


FIGURE 3.14:
Washburn Switch Interchange Study Area Current Street Classification Map

- Major Thoroughfares
- Minor Thoroughfares
- Collector Streets
- Local Streets
- Buildings
- Study Area
- Water

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Traffic Counts

outside of the Washburn Switch Interchange study area. The commute pattern data cited in the WSISAP uses US Census information from Census Tracts 9513 and 9514 to maintain consistency and accuracy.

TTraffic in the Washburn Switch 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. However, estimations for Washburn Switch Road in 2035 show traffic decreasing. This is due to how estimates were calculated. Traffic from the US 74 Bypass was not calculated into Washburn Switch Road's 2035 AADT. See Figure 3.15 for further explanation of traffic in the Washburn Switch Interchange study area.

Based on the transportation systems in the study area and the potential build out for employment, there will be a traffic impact as more industrial uses locate to the Washburn Switch Interchange study area. The potential build out of the industrial parks in the study area could add 4,500 more employees, generating an additional 9,000 trips per day. This does not include truck traffic or traffic on the US 74 Bypass.

FIGURE 3.15:
Traffic Counts related to Washburn Switch Interchange Study Area

Source: Cleveland County Comprehensive Transportation Plan, July 2012.

Location	Existing Capacity	AADT 2009	AADT 2013	AADT 2035 w/ E+C*
US 74 Bypass (Dixon Blvd to Polkville Rd)	N/A	N/A	N/A	20,000
Artee Rd (Latimore to US 74 Bypass)	9,000	900	900	1,200
Artee Rd (US 74 Bypass to Washburn Switch Rd)	9,000	900	900	5,000
Plato Lee Rd (Dixon Blvd to Artee Rd)	9,000	2,500	2,600	3,000
Plato Lee Rd (Artee Rd to Washburn Switch Rd)	9,000	1,500	1,600	2,000
Randolph Rd (Washburn Switch Rd to Southern Dr)	9,500	1,900	2,300	3,600
Washburn Switch Rd (Artee Rd to Cabaniss Rd)	13,000	4,500	6,700	5,000
Washburn Switch Rd (Dixon Blvd to Artee Rd)	12,000	4,200	5,000	4,500
Dixon Blvd, Averaged (Shelby ETJ to Polkville Rd)	28,000	27,900	24,600	31,300

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.
** Not a through street with the completion of the US 74 Bypass.

Level of Service Designations

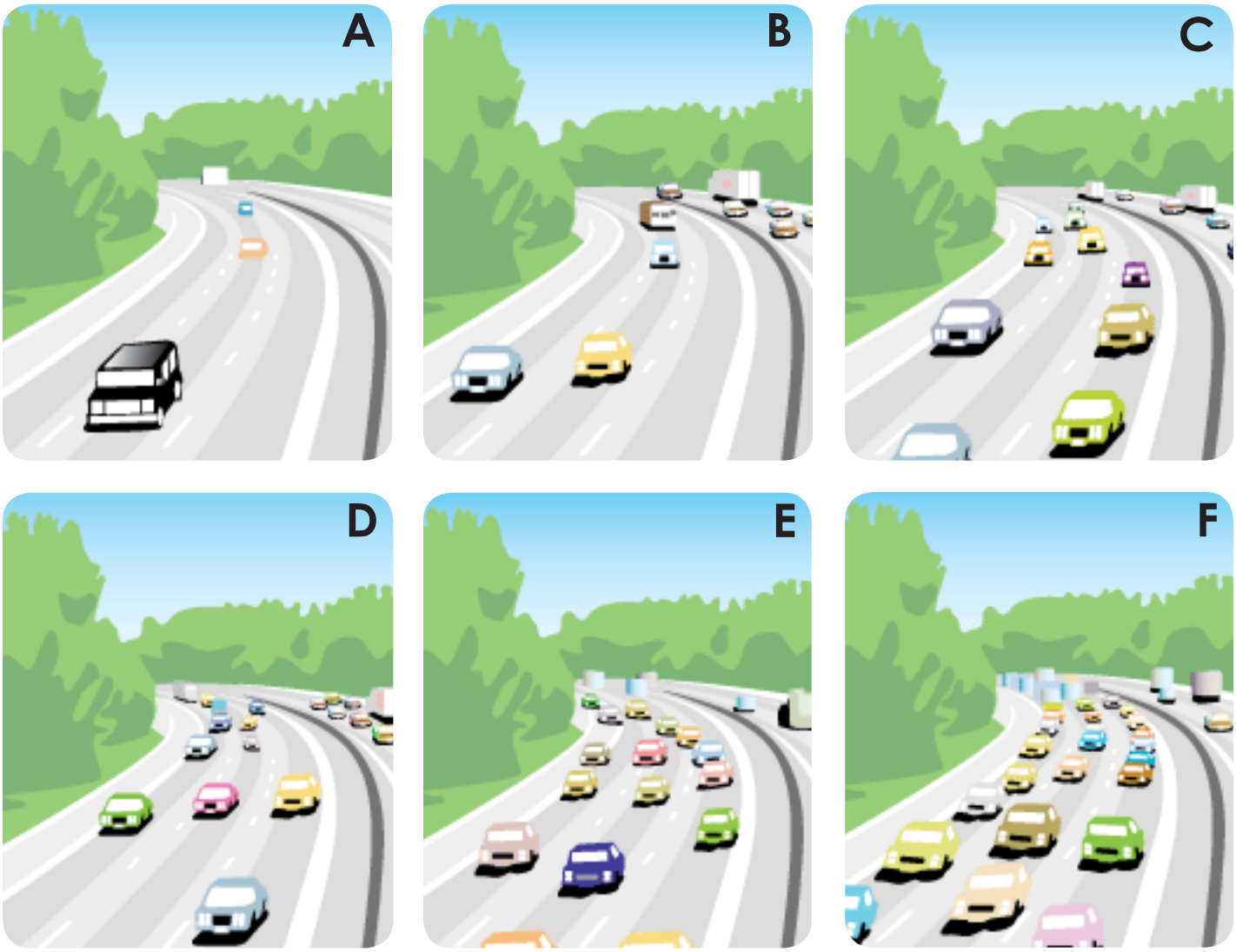
A roadway level of service is a grade based on the relationship of travel demand and the roadway capacity. There are six levels of service that identify possible roadway conditions. These designations range from LOS A, which represents the best roadway conditions, to LOS F, which represents the worst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

Of the roadways in the Washburn Switch Interchange study area, the Cleveland County Transportation Plan (2012) designates Dixon Boulevard/current US 74 with a LOS D.

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 3.16:
Level of Service roadway and traffic examples.

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



UTILITY SERVICES

Sewer Service

The Westside Sewer Project consisted of a 15" gravity outfall and a 1700 gallon per minute (GPM) pump station. It serves the drainage basin along Little Beaver Dam Creek from Crest High School and Crest Middle School to just north of the intersection of Plato Lee Road and Washburn Switch Road. This system collects domestic, commercial, and industrial flows from KSM Castings, Inc. and Clearwater Paper Corporation. The construction of this project also enabled the elimination of NPDES discharges of the former Smurfit Stone and Artee Lighting facilities. This project also allowed for the development of the Foothills Commerce Center, an industrial park developed jointly by the City of Shelby and Cleveland County.

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 to the Washburn Switch Business park, an approximately 400 acre tract of land owned by Cleveland County for commercial/industrial development.

Water Service

The Westside Water Project provided for a new 2 million gallons per day (MGD) Booster Pump Station and an additional 16" ductile iron water line loop along Artee Road and Plato Lee Road back to the intersection of Plato Lee Road and Washburn Switch Road. Previously, this area was serviced by a single 16" water line along Washburn Switch Road that terminated at PPG Industries. The former Booster Pump Station was in conflict with the new US 74 Bypass and was relocated to the intersection of Washburn Switch Road and Randolph Road. The project also consisted of a new 750,000 gallon elevated storage tank along Plato Lee Road, adjacent to CSX Railroad. It enabled the City to eliminate the original 100,000 gallon elevated tank at PPG Industries. The City has installed an additional 16" waterline through the Foothills Commerce Center providing industrial service and fire flow to the Center, eliminating conflicts with the Bypass construction across Artee Road.

Gas Service

The Lattimore Gas Line Project replaced the original 1950's constructed gas line along Washburn Switch Road. In addition, the City constructed a new regulator station near PPG Industries. The new gas line is a high pressure (150 psi) steel gas line which serves the industrial corridor along Washburn Switch Road. Over the past few years, the City has constructed additional gas line extensions to serve and feed through the Foothills Commerce Center and eliminate conflicts with the Washburn switch interchange. These lines connect with the same high pressure lines on Plato Lee Road, providing a looped system to deliver more volume and pressure to the area.

Electric Service

The City has an existing overhead 3-Phase 7.2/12.47 kV electric line along Randolph Road to Washburn Switch Road and down Artee Road to the City's Foothills Commerce Center. The overhead line transitions to underground construction at the entrance of the Foothills Commerce Center and delivers electric service for commercial/ industrial development through the Commerce Center over to Plato Lee Road. The City substation serving these facilities is located in close proximity approximately 3 miles east along Grover Street in Shelby.

In addition, Duke Energy supplies electric services within the Washburn Switch Interchange study area.

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

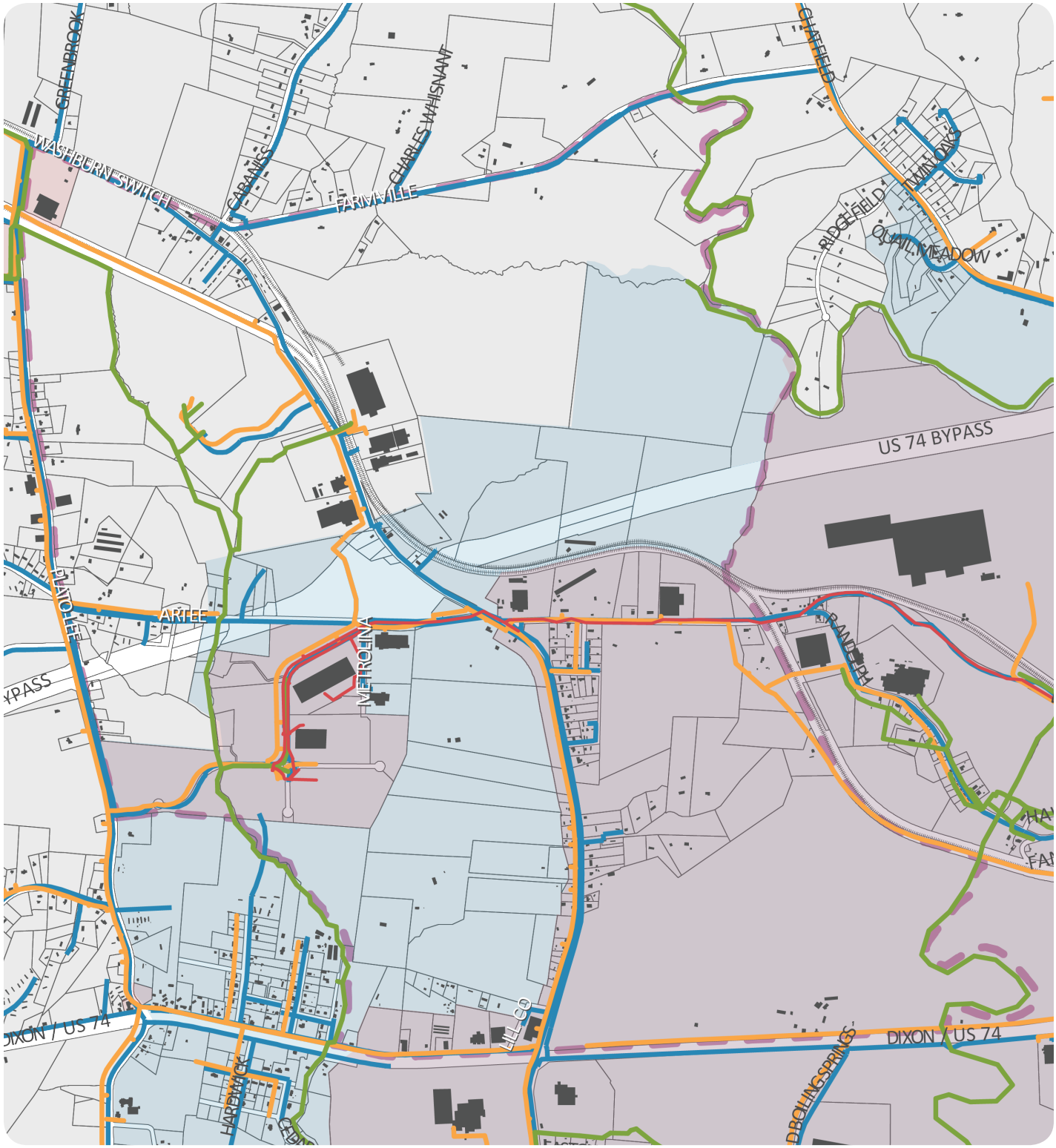


FIGURE 3.17:
Washburn Switch Interchange Study Area Utility Services Map

- Sewer Service Lines
- Water Service Lines
- Gas Service Lines
- Electric Service
- Shelby City Limits
- Shelby ETJ

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