

3.0 ENVIRONMENTAL ANALYSIS

This chapter describes the socioeconomic, cultural, natural, and human environments in the project corridor that will be affected by the Preferred Alternative in comparison to the No-Build Alternative. Each section below provides a summary of the potential impacts identified and analyzed by the project team.

3.1 Socioeconomic Impacts

3.1.1 Land Use

This section describes the existing land use and zoning within the project study area. The land use and zoning designations were gathered from existing zoning and land use maps within the comprehensive plan for the City of Overland Park, Kansas.

3.1.1.1 Existing Conditions

Figure 3-1 identifies the existing land use within and adjacent to the project study area. Land uses consist primarily of dedicated ROW, single-family residential, multi-family residential, office, commercial, industrial, vacant/agriculture, public and semipublic parks, recreation, and open space. There are multiple approved land use planning documents with boundaries within the study area. These planning documents are discussed in more detail below.

Existing Zoning

The U.S. 69 project is located entirely within the city limits of Overland Park and zoning within the study area is a mix of residential, office, commercial, agricultural, and light industrial (**Figure 3-2**). Residential zoning is the predominant zoning within the study area north of 167th Street. The predominant zoning south of 167th Street is agricultural. Office, commercial, and light-industrial zones are predominantly located near the interchanges.

Land Use Planning Documents and Decisions

A range of land use planning documents have been prepared by city, county or regional agencies that impact the land use decision-making for the U.S. 69 study area.

Connected KC 2050 (2020)

Connected KC 2050 is the current Long Range Transportation Plan (LRTP) for the nine-county Kansas City metropolitan region developed by MARC. *Connected KC 2050* serves as the Kansas City metro's regional transportation plan and is a

blueprint for managing the region’s transportation system. Adopted on June 23, 2020, according to MARC, “the plan identifies and sets out a budget for federal transportation funds that the metro area expects to receive over the next three decades.” A goal of the plan is to “continue to facilitate integrated land use, transportation and environmental planning in areas with significant pedestrian activity and transit services”. The plan also aims to anticipate both positive and negative impacts on land use.

City of Overland Park, KS Comprehensive Plan (2020)

The current *City of Overland Park, KS Comprehensive Plan* was adopted by the City of Overland Park in December 2020. The Comprehensive Plan is utilized by the City as a policy guide for directing future land use. It includes the following documents: Future Development Map, Greenway Linkages Map, Official Street Map, Plan Implementation, Plan Elements, and Land Use Goals.

Specific studies have also been incorporated into the Comprehensive Plan. Studies that include portions of the U.S. 69 study area are the *K-150 Corridor Study (1986)*, *Stanley-Morse Study (1986)*, *151st Street Corridor Design Concept Plan (2002)*, the *Blue Valley Study (2003)*, and the *West Aubry Study Area (2009)*

151st Street Corridor Design Concept Plan (2002)

The 151st Street Corridor Design Concept Plan in the Stanley area of Overland Park set out to reconfigure the land use of this corridor. The areas in the study close to the U.S. 69 Corridor study area are to the east of U.S. 69 along 151st Street.

- ***Existing Land Use*** – Prior to the plan, much of the existing study area along 151st Street was categorized as office space. The council originally intended for the land to remain office space but then considered a mixed land use for the future land use of the area.
- ***Future Land Use*** – A goal of the plan was to incorporate mixed use development along 151st Street. The plan set forward was for this area to be converted for both office and retail commercial space. The mixed office and retail spaces also have green space incorporated throughout.

Blue Valley Study (2003; Updated 2019)

Initially developed in 2003 and updated in 2019 the *Blue Valley Study* put in place a land use plan for a 4.7 square mile tract of land that at the time of its initial development was located south of the city limits of Overland Park. The portion of the project study area in this plan is located along U.S. 69 from 159th Street to the end of the project study area south of 179th Street.

- **Existing Land Use** - At the time the plan was developed, this area consisted of the 300-acre Merrill Farm tract, additional farms, and vacant/ agricultural land that Overland Park planned to annex into the city limits.
- **Future Land Use** - The Future Development Plan in the study includes 151st Street to 159th Street being planned for low-density residential with a trail along U.S. 69. The plan also includes implementing a light industrial/business park east of U.S. 69 from 159th to 183rd Streets. A mix of parks and recreation spaces and medium-density residential areas were planned to the west of U.S. 69 from 159th Street to 172nd Terrace. A majority of the parks and open spaces are to be located to the west of U.S. 69 and south of 172nd Terrace.
- **Plan Update (2019)** - The existing land use within the *Blue Valley Study* was re-assessed and updated in 2019. The data showed the majority of the *Blue Valley Study* (2003) area was vacant/agricultural (39.5 percent), single-family residential (24.2 percent), or ROW (14.6 percent) as of July 2019.

West Aubry Study Area (2009)

This study was conducted in western Aubry township in Overland Park. The portion of the project study area in the *West Aubry Study Area* is the 167th Street and Antioch Road intersection. This plan was developed following the implementation of the *Blue Valley Study* in 2003 which resulted in this new future land use plan for the area.

- **Existing Land Use** - The existing land use around the project study area is farms and vacant/ agricultural land and single-family residential.
- **Future Land Use** - The future land use plan outlines a designated light industrial/ business park east of U.S. 69 from 159th Street to 167th Street. Office, commercial, parks, recreation, and open space, and low-density residential are planned on the west side of U.S. 69. Between 167th Street and 179th Street there is planned to be a mix of very low, low, and medium residential housing as well as parks, recreation, and open space. The portion of the *West Aubry Study Area* (2009) within the project study area is shown as very low-density residential.
- **Plan Update (2019)** - The existing land use within the *West Aubry Study Area* was re-assessed and updated in 2019. The data showed the majority of the original *West Aubry Study Area* (2009) was still vacant/agricultural (53.3 percent) or single-family residential (23.4 percent) as of July 2019.

Overland Park Existing Land Use Map (2017) and Future Development Map (2020)

Long-range planning documents showing current and proposed land use for the City of Overland Park include an *Overland Park Existing Land Use Map* from 2017 and a *Future Development Map* from the 2020 comprehensive plan. The maps encompass the entire project study area.

- ***Existing Land Use*** – The existing land use in the project study area includes a mix of office; multi-family (triplex, fourplex, townhomes, and apartments); single family; parks, recreation, and open space; commercial; and public and semipublic uses. There is a small area of the corridor on the east side of U.S. 69 between 159th Street and 167th Street that is classified as industrial. Another small area of the corridor on the west side of U.S. 69 between 159th Street and 167th Street is classified as vacant and/or agricultural. The rest of the project study area is a mix of the previously listed classifications with major cross streets being primarily commercial areas and numerous multi-family facilities located adjacent to the east and west of the corridor.
- ***Future Land Use*** – The future land use in the project study area is similar overall to the existing land use map, as a majority of the area surrounding the corridor is already developed (**Figure 3-3**). Some office space in the southwest quadrant of I-435 and U.S. 69 and multi-family area along the west side of U.S. 69 between 127th Street and 135th Street is identified to be converted to commercial space.

3.1.1.2 *Land Use Impacts*

Impacts of the No-Build Alternative

The No-Build Alternative would not change the existing land use within the study area. Land uses under the No-Build Alternative would only experience changes if the city, county, or region made modifications to land use planning and zoning within their documented plans, as summarized in **Section 3.1.1.1**.

Impacts of the Preferred Alternative

Under the Preferred Alternative, some existing commercial, agricultural, and residential land uses will change to roadway use where property displacements would occur and where partial property acquisition would be necessary. However, the Preferred Alternative will be consistent with zoning and the existing and future land uses adjacent to the roadway and would not substantially affect future land use plans of the municipalities. The preliminary design concepts for the Preferred Alternative have been closely coordinated with the City of Overland Park and Johnson County to ensure the proposed improvements and any modified access

points and local road connections are coordinated with adjacent land use needs. Construction of the Preferred Alternative will require property acquisition for ROW. The acquisition of ROW is discussed further in **Section 3.2.6** and is consistent with the *Overland Park Comprehensive Plan*.

The Preferred Alternative will reduce the congestion along U.S. 69 by widening the corridor through express toll lanes to a total of six lanes to accommodate the traffic demands through the 2050 design year. Reducing congestion and improving mobility in the corridor may create future conditions that make adjacent undeveloped property desirable for development. Decisions on any modifications to future land use planning and zoning will be made by the local municipalities.

3.1.2 Neighborhoods and Community Resources

The schools, universities, churches, community centers, libraries, hospitals, and emergency response services within and adjacent to the study area are discussed below. **Figure 3-4** shows the community resources and 68 residential neighborhoods within or adjacent to the U.S. 69 study area.

3.1.2.1 Neighborhoods

Numerous neighborhood and home associations are located within the project study area. These associations are the building blocks of the Overland Park community, providing opportunities to connect residents and form partnerships with government officials.

3.1.2.2 Schools and Universities

The project study area sits primarily within the Blue Valley School District. A small portion along I-435 west of U.S. 69 is within the Olathe School District. No school facilities sit within the project study area; however, the following schools are adjacent to the project study area (**Figure 3-4**).

- Public Schools
 - Indian Valley Elementary School - 11600 Knox Street
 - Heartland Elementary School - 12775 Goodman Street
 - Hilltop Early Childhood Center - 7700 143rd Street
 - Blue Valley Academy - 7500 149th Terrace
 - Center for Advanced Professional Studies - 7501 149th Terrace
 - Sunset Ridge Elementary School - 14901 England Street
 - Blue Valley West High School - 16200 Antioch Road

- Cedar Hills Elementary School - 9100 165th Street
- Pleasant Ridge Middle School - 9000 165th Street
- Wolf Spring Elementary School - 9300 178th Street
- Private Schools
 - Holy Spirit - 11300 103rd Street
 - Christ Lutheran - 11720 Nieman Road,
 - Ascension Catholic School - 9510 127th Street
 - Small Beginnings Montessori - 15801 Metcalf Avenue
 - Heritage Christian Academy - 9333 159th Street
- Colleges and Universities
 - Rasmussen College - 11600 College Boulevard
 - Baker University of Professional and Graduate Studies - 7301 College Boulevard
 - Johnson County Community College - 12345 College Boulevard

3.1.2.3 *Places of Worship*

There are no places of worship within the project study area. Several churches or places of worship are adjacent to the project study area, these include (**Figure 3-4**):

- Holy Spirit Catholic Church - 11300 103rd Street
- Crossroads Church - 10551 Quivira Road
- Grace Covenant Presbyterian Church - 11100 College Boulevard
- Christ Lutheran Church - 11720 Neiman Road
- Overland Park Baptist Temple - 11648 Antioch Road
- Holy Cross Evangelical Lutheran Church - 7851 119th Street
- St. Thomas the Apostle Episcopal Church - 12251 Antioch Road
- Abundant Life Assembly of God - 12400 Antioch Road
- Church of the Ascension - 9510 127th Street
- Overland Park Community Church - 14800 Metcalf Avenue
- Village on Antioch - 14895 Antioch Road
- Faith Chapel Assembly God - 15000 Newton Street
- Blue Valley Baptist Church Overland Park - 8925 151st Street

- Islamic Center of Johnson County – 9001 151st Street
- Grace Church South – 8500 159th Street
- Hope Alive Christian Center – 9675 159th Street
- Redeemer Presbyterian Church – 9333 159th Street
- Southwoods Christian Church – 16110 Metcalf Avenue
- First Apostolic Church – 8633 167th Street
- St. Francis Episcopal Church – 17890 Metcalf Avenue

3.1.2.4 *Community Centers and Libraries*

One community center and two libraries are located adjacent to the project study area (**Figure 3-4**).

- Tomahawk Ridge Community Center – 11902 Lowell Avenue
- Johnson County Community College Billington Library – 12345 College Boulevard
- Blue Valley Library – 9000 151st Street

3.1.2.5 *Hospitals*

Six hospitals or urgent care clinics are adjacent to the project study area. None are within the project study area (**Figure 3-4**).

- Overland Park Regional Medical Center – 10500 Quivira Road
- Saint Luke's South Hospital – 12300 Metcalf Avenue
- Children's Mercy Blue Valley Urgent Care – 6750 135th Street
- Care Spot Overland Park Urgent Care – 7935 151st Street
- Saint Luke's Community Hospital Overland Park South – 7651 159th Street
- Advent Health Hospital Overland Park – 7820 165th Street

3.1.2.6 *Emergency Responder Services*

There are no police or fire stations located within the project study area. The Overland Park Police Department has two stations located adjacent to the project study area at 12400 Foster Street and 16271 Antioch Road. The Overland Park Fire Department has three stations located adjacent to the project study area; Station #4 at 8051 119th Street, Station #3 at 13801 Switzer Road, and Station #5 at 16279 Antioch Road.

3.1.2.7 *Neighborhood and Community Resource Impacts*

Impacts of the No-Build Alternative

The No-Build Alternative would not impact any of the neighborhoods or community resources within or adjacent to the project study area. Under the No-Build Alternative, there would be no construction, therefore, no impacts to existing emergency services or routes. However, emergency response times may be impacted due to congestion along U.S. 69 and the arterial network.

Impacts of the Preferred Alternative

Impacts from the Preferred Alternative on neighborhoods and community cohesion are related to physical and social factors that promote a bond between residents and their community. Community cohesion is a product of people sharing common neighborhood facilities and services that creates a sense of place within their neighborhoods. The Preferred Alternative will address congestion issues along U.S. 69 and the adjacent arterials network, having a positive impact on access to community facilities and community cohesion.

No community resources (schools, universities, churches, community centers, libraries, hospitals or emergency services) are located within the construction limits of the Preferred Alternative. Construction of the Preferred Alternative and reduction of congestion will ensure that emergency response vehicles can maintain access throughout the corridor. Any detours during construction will be temporary and limited in duration to the period of time required to construct project improvements. The exact location, timing, and duration of road closures have not been finalized. A traffic management plan will be developed and implemented by the Design-Build Contractor during the construction phase of the project. Access to properties along the construction corridor will be maintained by phased construction, temporary access roads, or other appropriate means.

Depending on future development and the location of future community emergency response facilities, emergency response times along the U.S. 69 corridor could effectively be reduced with construction of the Preferred Alternative.

3.1.3 Population and Economic Environment

The U.S. 69 Corridor has experienced long-term growth trends in both economic activity and population density. It is anticipated that these trends will continue, placing increasing demands on the existing transportation system.

3.1.3.1 Population

The study area is within the municipal boundary of Overland Park, in Johnson County, Kansas. Population trends in Johnson County and the City of Overland Park show steady growth rates from 2010 to 2019, as shown in **Table 3-1**. The average population growth rates in Johnson County and the City of Overland Park are 1.2 percent and 1.3 percent, respectively, and have consistently exceeded the statewide average annual growth rate of 0.4 percent during the same period.

Table 3-1: Population Trends

Year	State of Kansas		Johnson County		Overland Park	
	Population	Growth	Population	Growth	Population	Growth
2010	2,809,329		531,228		170,515	
2011	2,830,985	0.8%	538,836	1.4%	172,389	1.1%
2012	2,851,183	0.7%	546,046	1.3%	174,503	1.2%
2013	2,868,107	0.6%	552,947	1.3%	176,520	1.2%
2014	2,882,946	0.5%	560,025	1.3%	178,945	1.4%
2015	2,892,987	0.3%	566,814	1.2%	181,464	1.4%
2016	2,898,292	0.2%	572,428	1.0%	183,775	1.3%
2017	2,903,820	0.2%	578,797	1.1%	186,147	1.3%
2018	2,908,776	0.2%	585,502	1.2%	188,687	1.4%
2019	2,910,652	0.1%	591,506	1.0%	191,011	1.2%

Source: American Community Survey 5-Year Estimate (Table B01001)

3.1.3.2 Economy

For purposes of this study, economic activity has been measured using employment statistics and retail sales records. The number of individuals employed provides a direct measure of economic activity, while retail trade represents a substantial portion of the local economy. The strength of retail sales has a direct impact on tax revenues for local governments.

Employment

As employment increases so does economic activity. The employment trend for Johnson County and the City of Overland Park during the period 2000 to 2020 was positive, as shown in **Table 3-2**. The average annual growth during that period for both the City and the County is 1.4 percent, approximately seven times the 0.2 percent statewide average annual employment growth rate for Kansas during the same period. The greatest increase in employment occurred between 2010 and 2015 with 8.9 percent for the County and 9.8 percent for the City.

Table 3-2: Employment Trends

Year	Johnson County			Overland Park		
	Avg. Annual Employment	Growth	Avg. Annual Growth	Avg. Annual Employment	Growth	Avg. Annual Growth
2000	254,515	N/A	N/A	83,373	N/A	N/A
2005	276,214	8.5%	1.7%	90,481	8.5%	1.7%
2010	288,721	4.5%	0.9%	92,668	2.4%	0.5%
2015	314,557	8.9%	1.8%	101,753	9.8%	2.0%
2020	324,544	3.2%	0.6%	105,975	4.1%	0.8%

Source: Local Area Unemployment Statistics, Bureau of Labor Statistics Web Site. (<https://www.bls.gov/lau/home.htm>)

The unemployment rate in a community is a measure of the community’s economic vitality. The unemployment rate is also a measure of employment opportunities available to residents within an area. The unemployment rate in Johnson County and Overland Park remained low from 2000 to 2020, as shown in **Table 3-3**. The average unemployment rate for both Overland Park and Johnson County between 2000 and 2020 was 4.3 percent which was lower than the 4.9 percent statewide average during the same period. It is important to note that increase for 2020 reflects the effects of the worldwide COVID-19 pandemic.

Table 3-3: Unemployment Trends

Year	Johnson County Average Unemployment Rate	Overland Park Average Unemployment Rate
2000	3.0	3.1
2005	4.6	4.7
2010	6.0	5.7
2015	3.4	3.4
2020	5.2	5.2

Source: Local Area Unemployment Statistics, Bureau of Labor Statistics Web Site. (<https://www.bls.gov/lau/home.htm>)

Retail Sales

The other key measure of economic activity is the volume of retail sales in an area. The volume of retail sales has a direct impact on tax revenues for local governments. Taxable retail sales in Johnson County have been increasing, as shown in **Table 3-4**. The highest growth rate was between 2015 and 2016; however, from 2016 to 2019, the growth rate steadily declined. The growth rate increased slightly in 2019 but saw a drastic decline in 2020 due to the worldwide COVID-19 pandemic.

Table 3-4: Johnson County Taxable Retail Sales Trend

Year	Nominal Sales (Millions)	Growth Rate
2015	\$10,759.59	
2016	\$10,978.86	2.0%
2017	\$11,141.49	1.5%
2018	\$11,268.06	1.1%
2019	\$11,399.55	1.2%
2020	\$11,058.70	-3.0%

Source: Kansas Economy: The Center for Economic Development and Business Research.
(<https://www.kansaseconomy.org/economic-indicators/retail-sales>)

The U.S. 69 Corridor is an economically significant corridor within the Kansas City region and for the state. The Johnson County Economic Research Institute (CERI) estimates that the U.S. 69 Corridor generates more than \$6.9 billion in annual economic activity, generating local and state jobs, growth, and tax revenue. The driving factor behind the economic activity is the more than 10,000 businesses in Overland Park, including many of the largest employers in Kansas.

3.1.3.3 Economic Impacts

Impacts of the No-Build Alternative

If the congestion along the corridor is not addressed, it could lead to inefficient travel along the corridor and could potentially make it more challenging to attract new businesses, increase the cost of product delivery, and make it difficult for customers to easily access businesses, thereby impacting future economic conditions.

Impacts of the Preferred Alternative

The Preferred Alternative will reduce traffic congestion along U.S. 69. Reducing congestion along the corridor may create future conditions that make adjacent undeveloped property desirable for development and thereby positively impacting future economic conditions.

Economic Impact of Displacements

Impacts to existing commercially owned properties along the corridor are anticipated to be minor and no commercial displacements or permanent closure of access are estimated to occur as a result of the project. The Preferred Alternative will result in one residential displacement (see **Section 3.1.7.1**). As such, the local tax base will not be substantially reduced as a result of the project.

Short-Term Economic Impacts

The primary short-term economic impacts that can result from a roadway construction project are business disruptions caused by temporary traffic control, temporary access revisions, and an increase in construction employment. Since the Preferred Alternative is located along an existing alignment, the impact to traffic movements along arterial roadways during construction will be limited to locations of access improvements and interchange or ramp reconfigurations. The required temporary traffic control at these locations is not anticipated to cause substantial delays or adversely impact any businesses. Along U.S. 69, construction will require temporary lane closures and potentially minimal short-term detours. Any temporary lane closures or detours are not anticipated to cause substantial delays or adversely impact any businesses. Final decisions on the required temporary traffic control and construction methods will be determined during the Design-Build phase of the project.

Economic Development and Benefit

Economic development results in higher wages, new jobs, more job choices, increased activity choices, increased economic stability through economic diversification, and improved public amenities. Economic development includes business startup, expansion, attraction, and retention. An efficient transportation system is a key ingredient for economic development as the cost of moving people and goods directly affects the cost of doing business.

Construction of the Preferred Alternative will improve the efficiency of the transportation system in the City of Overland Park, Johnson County, and the Kansas City region. Regional accessibility for local businesses will be enhanced by the additional capacity in the transportation system. It will also promote existing business expansion as well as Johnson County's ability to attract new businesses.

Improvements to the transportation system that yield increased efficiency and safety serve important public interests. Improved efficiency means shorter and more reliable travel times. This leads to greater productivity in business and enjoyment in recreational activities.

Cost Impacts of Toll Operations

A net revenue analysis was performed for this project to evaluate the economic impact of tolling through Express Toll Lanes (ETLs). As part of the project, KDOT will continue to maintain all roadway elements of the general-purpose lanes and the express toll lanes while the toll revenue will be used to pay for the City of Overland Park's local contribution to the project, as well as operations and maintenance (O&M) and lifecycle costs associated with the toll collection. The net revenue for the ETLs is

forecast to be positive every year within the design horizon, meaning that the toll revenues can pay for all toll-related leakage (uncollectable toll revenue), processing, and O&M costs.

3.1.4 Environmental Justice

All federal agencies must comply with Title VI of the 1964 Civil Rights Act (Title VI) and Executive Order 12898: *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*. Under Title VI and related statutes, each federal agency is required to ensure that no person is excluded from participation in, denied the benefit of, or subjected to discrimination under any program or activity receiving federal financial assistance on the basis of race, color, national origin, age, sex, disability, or religion. Executive Order 12898 states that “...each federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations...”

Pursuant to the Executive Order, FHWA issued Order 6640.23A, *FHWA Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*. The Secretary of Transportation, along with heads of other federal agencies, signed a Memorandum of Understanding on Environmental Justice (EJ MOU) and Executive Order 12898 confirming the continued importance of identifying and addressing these considerations in agency programs, policies and activities as required by Executive Order 12898.

As part of the EJ MOU, each agency agreed to review and update their Environmental Justice (EJ) strategy as appropriate. The updated strategy relies upon existing authorities for achieving EJ as described by Executive Order 12898, such as the National Environmental Policy Act of 1969 (NEPA), Title VI and related statutes, as well as the commitments and focus areas in the EJ MOU.

FHWA issued Order 6640.23A, *FHWA Actions to Address EJ in Minority Populations and Low-Income Populations*, on June 14, 2012. On December 16, 2011, FHWA issued a memorandum titled “Guidance on Environmental Justice and NEPA.” The memorandum describes the process involved in addressing Environmental Justice during NEPA review, including documentation requirements. This guidance helps FHWA staff and NEPA practitioners ensure compliance with EJ requirements.

FHWA administers its governing statutes to identify and avoid discrimination and disproportionately high and adverse effects on minority populations and/or low-income populations by:

1. Identifying and evaluating environmental, public health, and interrelated social and economic effects of FHWA programs, policies, and activities;
2. Proposing measures to avoid, minimize, and/or mitigate disproportionately high and adverse environmental and public health effects and interrelated social and economic effects and provide offsetting benefits and opportunities to enhance communities, neighborhoods, and individuals affected by FHWA programs, policies, and activities, where permitted by law and consistent with Executive Order 12898;
3. Considering alternatives to proposed programs, policies, and activities where such alternatives would result in avoiding and/or minimizing disproportionately high and adverse human health or environmental impacts, where permitted by law and consistent with Executive Order 12898; and
4. Providing public involvement opportunities and considering the results thereof, including providing meaningful access to public information concerning the human health or environmental impacts and soliciting input from affected minority populations and/or low-income populations in considering alternatives during the planning and development of alternatives and decisions.

3.1.4.1 Minority and Low-income Population Determination Methodology

Utilizing federal law and guidance from FHWA, a methodology was developed to determine the presence of EJ populations within and along the project corridor, which is described in the following sections.

Data Sources

Demographic data from the U.S. Census Bureau's 2015-2019 American Community Survey (ACS) Five-Year Estimates were used to identify the minority and low-income populations at the block group level within the project study area. The data was joined to block group Geographic Information System (GIS) layers for mapping and spatial analysis of the identified EJ populations.

Minority Populations Methodology

In the Environmental Justice Analysis in the *Connected KC 2050 Plan*, MARC defines a minority population as “any identifiable people of color group who live in geographic proximity. This includes people who are Black/ African-American,

Hispanic or Latino, Asian American, American Indian and Alaskan Native, and Native Hawaiian and other Pacific Islander.”

To identify the minority populations in the project study area, the 2019 ACS 5-Year Estimate block group data within Table B03002 (Hispanic or Latino Origin by Race) was utilized to calculate the minority percentages for the block groups, City of Overland Park, Johnson County, and the state of Kansas. A block group was considered to have a minority population if its minority percentage was greater than or equal to the minority percentage for either Johnson County (20.1 percent) or the City of Overland Park (22.5 percent). This threshold follows MARC’s methodology from their *Connected KC 2050 Plan* EJ analysis but utilizes Johnson County and the City of Overland Park as the communities of comparison (COCs) instead of the eight-county MPO planning area.

Low-Income Populations Methodology

In the Environmental Justice Analysis in the *Connected KC 2050 Plan*, MARC defines a low-income population as “people whose median household incomes are at or below 200 percent of the U.S. Department of Health and Human Services (HHS) poverty guidelines.”

To identify low-income populations in the project study area, the 2019 ACS 5-Year Estimate block group data within Table C17002 (Ratio of Income to Poverty Level in the Past 12 Months) was utilized to calculate the percentage of individuals at or below the poverty level and below 200 percent of the poverty level for the block groups, City of Overland Park, Johnson County, and the state of Kansas. Following MARC’s methodology, block groups that met the COC’s percentages at either at or below poverty or at or below 200 percent of the poverty level were considered to have low-income populations.

3.1.4.2 Determination of Minority and Low-income Populations

This section discusses the minority and low-income populations identified by the project team using the above methodology.

Minority Populations

A block group was considered to have a minority population if its minority percentage was greater than or equal to the minority percentage for the state of Kansas (24.1 percent), Johnson County (22.5 percent), or the City of Overland Park (20.1 percent). This threshold follows MARC’s methodology from their *Connected KC 2050 Plan* EJ analysis but utilizes the state of Kansas, Johnson County, and the City of Overland Park as the COCs instead of the eight-county MPO planning area. **Figure 3-5** displays the block groups with minority populations higher than the COCs within

the project study area. **Table C-1** in **Appendix C** displays the population by race and Hispanic ethnicity for each block group in the project study area and the COCs.

Table 3-5 below identifies the block groups within or adjacent to the Preferred Alternative’s proposed construction limits that meet the threshold for minority EJ populations.

Low-Income Populations

A block group was considered to have a low-income population if its percent of individuals at or below poverty level, and/or at or below 200 percent of the poverty level, was greater than or equal to the percent of individuals at or below the poverty level and/or at or below 200 percent of the poverty level for the state of Kansas, Johnson County, or the City of Overland Park. Similar to minority population identification thresholds, this threshold for identifying low-income populations follow MARC’s methodology from their *Connected KC 2050 Plan* EJ analysis but compares it to the City/County instead of the eight-county MPO planning area. **Figure 3-6** displays the block groups with low-income populations higher than the COCs. **Table C-2** in **Appendix C** displays the estimated income level by block groups using the ACS 5-year data. **Table 3-5** below identifies the block groups within or adjacent to the Preferred Alternative construction limits that meet the threshold for low-income EJ populations.

Table 3-5: Block Groups with Minority and Low-Income EJ Populations

Census Area	Percent Minority	Percent Below Poverty	Percent Below 200% of Poverty Level	Minority EJ Population	Low-Income EJ Population
CT 519.08 BG 1	26.0%	2.5%	24.8%	Yes	Yes
CT 530.02 BG 3	23.5%	3.5%	10.6%	Yes	-
CT 531.01 BG 1	29.1%	4.1%	12.0%	Yes	-
CT 531.01 BG 3	53.8%	3.8%	26.2%	Yes	Yes
CT 531.05 BG 1	37.3%	4.8%	14.2%	Yes	Yes
CT 531.05 BG 2	24.2%	9.4%	25.3%	Yes	Yes
CT 531.08 BG 1	20.4%	2.2%	16.6%	Yes	Yes
CT 531.08 BG 2	27.8%	8.1%	13.6%	Yes	Yes
CT 531.09 BG 1	38.7%	4.1%	12.1%	Yes	-
CT 532.03 BG 3	23.0%	3.1%	11.9%	Yes	-
CT 534.15 BG 1	41.2%	21.6%	26.3%	Yes	Yes
CT 534.15 BG 2	28.2%	0.9%	0.9%	Yes	-
CT 534.17 BG 1	32.8%	2.4%	13.2%	Yes	-
CT 534.17 BG 2	16.4%	5.2%	21.8%	-	Yes

Census Area	Percent Minority	Percent Below Poverty	Percent Below 200% of Poverty Level	Minority EJ Population	Low-Income EJ Population
CT 534.18 BG 1	36.7%	2.5%	9.7%	Yes	-
CT 534.18 BG 2	29.3%	0.5%	1.0%	Yes	-
Communities of Comparison					
State of Kansas	24.1%	12.0%	29.8%	-	-
Johnson County	20.1%	5.4%	14.9%	-	-
City of Overland Park	22.5%	4.9%	13.8%	-	-

Source: 2015-2019 American Community Survey 5-Year Estimates - Ethnicity (Table B03002); Income (Table C17002)

3.1.4.3 Environmental Justice Impacts

Impacts of the No-Build Alternative

The No-Build Alternative would have no adverse impacts to EJ populations; however, as forecasted future traffic congestion along the U.S. 69 Corridor is realized, safe and reliable access for EJ populations to jobs and employment centers in or near the study area may be affected.

Impacts of the Preferred Alternative

Direct EJ Impacts

Since there will be no residential or commercial displacements (see **Section 3.1.7.1**) within minority and low-income population block groups identified within the project study area, there will be no direct disproportionate adverse physical impacts for those populations. Additionally, the project will result in improved access to economic development areas, places of employment, and commercial/retail facilities, improved accessibility and safety, improved bicycle-pedestrian facilities, and improved options for public transportation.

The Preferred Alternative will not further the historic bisection of EJ communities. Much of the U.S. 69 corridor was undeveloped when the roadway was originally constructed in the late 1960s and adjacent properties along the U.S. 69 corridor have not developed with extensive EJ communities.

The Project will benefit communities along the corridor by improving several east-west connections across U.S. 69 including arterial roadway enhancements. The Preferred Alternative also includes on-street bike lanes at several of the major arterial street crossings and the addition of sidewalks and off-street recreational use paths.

The sidewalks and off-street recreational paths will provide additional opportunities for pedestrians to safely move along the corridor.

Noise Impacts

The minority and low-income EJ populations encompass 17 of the 23 noise sensitive areas identified in the noise analysis (**Section 3.4.2**). In these 17 noise sensitive areas, 1,359 noise impacts are identified in the Preferred Alternative without any noise abatement. However, all 14 noise walls found to be both feasible and reasonable per KDOT and FHWA noise policies are located in the block groups with EJ populations. The noise walls will benefit 1,783 receptors in the block groups with EJ populations. **Figure 3-7** displays the noise sensitive areas overlaid on the block groups with EJ populations.

Tolling Considerations

As part of the Preferred Alternative, a variable toll will be charged to utilize the ETLs, which will increase or decrease depending on traffic conditions and congestion levels. The toll rate to use the ETLs will be displayed prior to vehicles entering the ETLs to allow travelers the opportunity to decide if they choose to take the express lane or stay in the toll-free general-purpose lanes. Based on this operational model, neither the cost of tolls, nor other direct or indirect impacts, would be “predominantly borne” by EJ populations due to the availability of toll-free general-purpose lanes in the same corridor. Moreover, because transit vehicles will be permitted to use the express lanes at a discounted toll rate, opportunities exist for EJ populations to access similar trip reliability benefits that do not require vehicle ownership or include the cost of using the ETLs.

Additionally, the City of Overland Park chose to provide their local contribution to the project through toll revenues in order to avoid additional tax burden on the community, and because tolling is a direct user fee that would only be paid by those travelers that choose to use the express lane. The express lanes will also accommodate transit bus and other rideshare vehicles, allowing transit users to benefit from the reliability and congestion relief benefits of the Preferred Alternative.

Environmental Justice Outreach

KDOT and its project partners recognize that further engagement with EJ populations, key stakeholders, and the public is needed throughout the planning, design, and construction phases of the U.S. 69 project to determine the best strategies to provide project benefits and equity for all users of the U.S. 69 Corridor. To further evaluate the impacts and equity of tolling on EJ populations located either directly within the project study area, or that use the facility to commute from other areas within the region for jobs or other activities, KDOT and the project team are

conducting targeted outreach through both online and in-person meetings and communications with groups or individuals that represent EJ populations to better understand their transportation needs and provide additional opportunity for input on the Preferred Alternative.

No Limited English Proficiency communities were identified in the corridor. This was determined utilizing American Community Survey data at the Block Group level and comparing the Block Group percentage against the City of Overland Park and Johnson County. Block Groups within the corridor had a lower percentage of Limited English Proficiency communities than the City of Overland Park or Johnson County. However, throughout the NEPA process, the Project Team provided Project information to non-English proficient populations in the following ways:

- The Project Website was available in seven languages: English, Spanish, French, German, Chinese (Simplified), Korean, and Vietnamese;
- All public meetings included an option to request an interpreter. No requests were received; and,
- All content publicly provided was noted as available in alternative languages upon request. No requests for this service were received.

EJ outreach included seven Advisory Group meetings conducted over a period of 12 months. The Advisory Group included representation from multiple organizations that represent a broad spectrum of EJ related communities. Other EJ outreach included notices for public meetings, fact sheets and other Project informational materials, and invitations for individual stakeholder meetings with the Project Team being distributed by hand in residential areas in the corridor identified as EJ communities.

As an outcome of that outreach, KDOT is in the process of forming a toll equity advisory group to provide input on potential strategies for mitigating the economic impacts of tolling on EJ populations and to better understand what types of toll equity programs, transit, rideshare, or other project enhancements would provide meaningful benefits to EJ populations that rely upon U.S. 69 for their access to jobs or other opportunities. The toll equity advisory group would provide input throughout the design and construction phases of the project and the specific details of the toll equity mitigation strategies ultimately selected for the project will be developed through this outreach process.

3.1.5 Parks and Recreation and Section 4(f)/6(f)

The U.S. Department of Transportation (USDOT) refers to publicly owned land from parks, recreation areas, and wildlife and waterfowl refuges, or land from historic sites that are listed or potentially eligible for listing on the National Register of Historic

Places, as “Section 4(f) properties” because they have special status under the provisions of Section 4(f) of the USDOT Act of 1966 (49 USC Part 303 and 23 CFR Part 774). Section 4(f) states that the Administration may not approve the use of a Section 4(f) property unless a determination is made that 1) there is no prudent and feasible avoidance alternative to the use of the property and 2) the action includes all possible planning to minimize harm to the property; or if the use of the property, including any measures to minimize harm (avoidance, minimization, mitigation, or enhancement measures) will have a de minimis impact on the Section 4(f) property. In addition, any public park or recreation land that has used funds from the National Park Service’s (NPS) Land and Water Conservation Fund (LWCF) for acquisition or development is protected under Section 6(f) of the LWCF Act.

For the U.S. 69 project, there are seven parks, five linkages, and one skating rink within or adjacent to the study area. These resources are shown on **Figure 3-8** and described below, listed from north to south through the U.S. 69 Corridor. It is noted in each section if the park is designated as a Section 4(f) or 6(f) property.

Corporate Woods Founders’ Park – Section 4(f) and Section 6(f)

This park is divided into two sections and stretches between I-435 and College Boulevard, with 109th Street dividing the two sections. The northern section is approximately 29 acres in size and is located on the south side of I-435, between Farley Street and Indian Creek Parkway. The southern section is approximately 21 acres in size and located on the north side of College Boulevard, between Mastin Street and Indian Creek Parkway. This park is classified in Overland Park’s 2013 *Comprehensive Park System Master Plan (Parks Master Plan)* as a sub-community park meaning it covers less than 35 acres of land and the park’s main entrance is not on a collector street or a thoroughfare. This is a wooded park that contains portions of the Indian Creek Bike/Hike Trail along the Indian Creek corridor. The park is bordered by street lighting and contains surface parking.

Shannon Valley Park – Section 4(f)

Shannon Valley Park is approximately 17.5 acres in size and located south of Corporate Woods Founders’ Park, on the south side of College Boulevard. In the *Parks Master Plan*, this park is classified as a Greenway with play park. A Greenway is an open space that provides trailheads and connector pathways. The play park component means that the place contains additional resources such as playgrounds and designated picnic areas. This is a wooded park that follows along Indian Creek and contains a portion of the Indian Creek Bike/Hike Trail. The park contains a small picnic shelter, two playgrounds, picnic tables, and parking.

Indian Valley Park – Section 4(f)

This park is a 23.5-acre park located south of Shannon Valley Park on the west and east sides of U.S. 69 and is classified as a sub-community park. The park is adjacent to a school with a playground and contains a portion of the Indian Creek Bike/Hike Trail, the Indian Valley Park Trail, a baseball field, soccer field, picnic area, roller hockey rink, and tennis courts. This park contains formal sports fields which are fields that are maintained at a standard to meet the needs of tournament games and league play. The *Parks Master Plan* identifies that in the future the sports courts will be resurfaced to improve their condition, surface lots will have improvements, and restrooms will be added to the park. The *Parks Master Plan* recommends implementing a park master plan for Indian Valley Park as this is one of the larger and well-used parks in the city.

Cross Creek Park – Section 4(f)

This park is a 54.6-acre park with bike/hike trail connections that border Indian Creek and go through meadows and woodland areas. In the *Parks Master Plan*, this park is classified as a Greenway with play park. The park contains playgrounds, swings, picnic tables, and historical information panels.

Skate City (private facility)

This is a privately owned indoor roller-skating rink located on the east side of U.S. 69, with access from Mastin Street. The skating rink is open to the public Monday through Saturday with applicable entrance and skate rental fees.

127th Street Linkages – Section 4(f)

The 127th Street linkages encompasses 0.1 acres of land per the *Parks Master Plan*. The 127th Street Greenway Linkages are located on the north side of 123rd Street between Lowell Avenue and Blue Valley Parkway. The *Overland Park Greenway Linkages Plan* defines a Greenway linkage as “open space land set aside for public use that is linear in form.” The 127th Street Linkages are listed as a Type 3 (Collector & Commercial Street) Linkages and classified as Greenways without play parks in the *Parks Master Plan*.

U.S. 69 Linkages – Section 4(f)

The U.S. 69 Linkages are located in various locations along the U.S. 69 Corridor, south of 123rd Street. The linkages encompass 34.8 acres of land per the *Parks Master Plan* and are located outside of the highway ROW on both sides of U.S. 69. The U.S. 69 Linkages are listed as Type 5 (Parkway) Linkages. Future park plan developments from the *Park Master Plan* include proposed public park, recreation, and open space along portions of U.S. 69 between I-435 and College Boulevard, between College

Boulevard and 119th Street, and between 159th Street to 179th Street. Goals that the *Parks Master Plan* intends to implement in the design of the Greenway space include integrating flood mitigation into the Greenway design; improving safety issues and missing connections; developing primary and secondary trailheads; and consider multi-modal connections. The U.S. 69 Linkages are classified as Greenways without play parks in the *Parks Master Plan*.

Brandon Place Linkage – Section 4(f)

The Brandon Place Linkage is located on the west side of U.S. 69 between 127th Street and 132nd Street. The linkage encompasses 5.8 acres of land per the *Parks Master Plan*. The Brandon Place Linkage is listed as a Type 5 (Parkway) Linkage. The Brandon Place Linkage is classified as a Greenway without play park in the *Parks Master Plan* and contains the Brandon Place Linkage Trail.

133rd Street Linkages – Section 4(f)

The 133rd Street Linkages are located on the west side of U.S. 69 and north side of 133rd Street. The linkages encompass 10.1 acres of land per the *Parks Master Plan*. The 133rd Street Linkages are listed as a Type 4 (Collector Parkway) Linkage. The 133rd Street linkages are classified as Greenways without play parks in the *Parks Master Plan*.

South Creek Park – Section 4(f)

South Creek Park is located on the east side of U.S. 69 and north of 135th Street. The park is listed in the *Parks Master Plan* as a 6.5 acre Greenway without play park. The park follows Tomahawk Creek and has connections to the Tomahawk Creek Bike/Hike Trail and Metcalf Avenue. In 2021, an additional 5.3 acres were added to the western portion of the park. The new addition follows Tomahawk Creek southwest and connects to the U.S. 69 Linkage.

Nottingham South Park – Section 4(f)

This park is an 8.2-acre open space park and greenway between U.S. 69 and Antioch Road, near the Blue Valley Recreation Sports Complex. Nottingham South Park is a wooded park and contains bike/hike trail connections, open area/multi-use field, soccer fields, and parking. This park is classified as a special use site in the *Parks Master Plan*.

139th Street Linkage – Section 4(f)

The 139th Street Linkage is located on the east side of U.S. 69 and south side of 139th Street. The linkage encompasses 0.9 acres of land per the *Parks Master Plan*. The 139th Street Linkage is listed as a Type 4 (Collector Parkway) Linkage and is classified as Greenway without play park in the *Parks Master Plan*.

Highland View Park – Section 4(f)

This park is an 11.6-acre park on the north side of W. 151st Street adjacent to the Johnson County Blue Valley Library. Highland View Park contains a portion of the Tomahawk Creek Trail. This park is classified as a Greenway without play park in the *Parks Master Plan*.

Kingston Lake Park – Section 4(f)

This park is a 21.5-acre sub-community park on the west side of U.S. 69, south of the U.S. 69 and 151st Street interchange. It contains a six-acre lake stocked with fish, three fishing piers, a shelter, a playground, and approximately 0.6 miles of shared use path and paved walking trails. This park has two playgrounds and surface parking lots. The parking lots are slated to be replaced/ upgraded in the *Parks Master Plan*. Shelters and restrooms will be added to the park as well. In the *Parks Master Plan*, it was recommended that the park develop its own master plan as it is one of Overland Park's larger and well-used parks.

3.1.5.1 Parks and Recreation Impacts

Impacts of the No-Build Alternative

Since no construction would occur under a No-Build Alternative, the No-Build Alternative would have no impacts to parks or recreational facilities.

Impacts of the Preferred Alternative

The Preferred Alternative will have minor impacts to the following five parks: Indian Valley Park, Brandon Place Linkage, U.S. 69 Linkages, Nottingham South Park, and Kingston Lake Park. The impacts to the designated Section 4(f) properties will be *de minimis* impacts, meaning the features, attributes, or activities qualifying for protection under Section 4(f), such as the recreational aspects of the parks, will not be adversely affected by the project. **Table 3-6** summarizes the park impacts of the Preferred Alternative. Coordination regarding concurrence of the *de minimis* impacts with FHWA and the City of Overland Park Parks and Recreation Department was performed by KDOT. In a letter dated December 17, 2021, the Overland Park Parks and Recreation Department agreed with the *de minimis* finding and stated that the “official detour routes will need to be coordinated in tandem with the Overland Park

Parks and Recreation department and the design-build contractor as the project progresses.” The Section 4(f) coordination is located in **Appendix D**. The only Section 6(f) property is Corporate Woods Founders’ Park which will not be impacted by project construction; therefore, the Preferred Alternative will have no impacts to Section 6(f) properties.

Table 3-6: Preferred Alternative Park Impacts

Facility	Impact (acres)	Impact Description
Indian Valley Park	0.68	The park will be impacted by grading and contouring due to roadway realignment and drainage improvements. No recreational amenities will be impacted.
Brandon Place Linkage	1.72	The park will be impacted by grading and contouring due to roadway realignment and retaining wall construction and will include impacts to approximately 990 feet of trail. The trail will be temporarily closed and there may be slight changes in horizontal alignment and vertical ground profile.
U.S. 69 Linkages	6.17	The impacts are due to grading and drainage improvements to accommodate for widening along the U.S. 69 corridor. The only impacts to recreational uses will be temporary trail closures during construction.
Nottingham South Park	0.63	The park will be impacted by grading and contouring due to roadway realignment and will include impacts to approximately 78.0 feet of the Tomahawk Creek Trail. The trail connection to 135 th Street will be relocated from within the interchange to Nottingham South Park. This will require temporary closures of the connection but will result in an ADA compliant connection after relocation.
Kingston Lake Park	0.34	The park will be impacted by grading and contouring due to necessary realignment of the U.S. 69 southbound (SB) On-Ramp from 151 st Street. There will be no recreational amenities impacted by project construction.

Note: Park impacts are listed from north to south throughout the U.S. 69 Express corridor.

3.1.6 Bicycle and Pedestrian Facilities

A review of information pertinent to bicycle and pedestrian facilities took into consideration on-street bike lanes, sidewalks, and multi-use recreational trails. This information was used to identify facilities within the study area which are shown on **Figure 3-8**.

3.1.6.1 *Bike Routes*

There are 14 roadways within the study area with existing bike routes. The existing bike routes within the study area are located at the following locations:

- Bike Route – Switzer Road from College Boulevard to 127th Street. Designated by shared lane markings.
- Bike Route – 109th Street from College Boulevard to Nieman Road. There are no bike lane markings within the study area.
- Bike Route – Nieman Road from College Boulevard to 115th Terrace. Designated by shared lane markings.
- Bike Lane – Grant Street from 119th Street to 124th Street. Designated bike lane with separate lane striping.
- Bike Route – Antioch Road from 119th Street to 151st Street. There are no bike lane markings within the study area.
- Bike Route – 123rd Street from Antioch Road to Nall Avenue. No lane markings within the study area, but shared lane markings begin east of Metcalf Avenue.
- Bike Route – 132nd Street from 133rd Street to Metcalf Avenue. There are no bike lane markings within the study area.
- Bike Route – 139th Street from Antioch Road to Metcalf Avenue. There are no bike lane markings within the study area.
- Bike Lane – 143rd Street from Antioch Road to Metcalf Avenue. Designated bike lane with separate lane striping. U.S. 69 is carried by a bridge over 143rd Street.
- Bike Route – Hardy Street from Hemlock Street to 151st Street. Designated by shared lane markings.
- Bike Route – Lowell Avenue from 151st Street to 159th Street and 165th Street to 167th Street. Designated by shared lane markings.
- Bike Route – Conser Street from 151st Street to 154th Terrace. There are no bike lane markings within the study area.
- Bike Lane – Metcalf Avenue from 159th Street to 183rd Street. There are no bike lane markings within the study area, but a designated bike lane begins north of 167th Street until 159th Street.
- Bike Route – 179th Street from 175th Street to Metcalf Avenue. There are no bike lane markings within the study area.

Impacts of the No-Build Alternative

Since no construction would occur under the No-Build Alternative, the No-Build Alternative would have no impacts to bike routes or pedestrian facilities.

Impacts of the Preferred Alternative

The Preferred Alternative will temporarily impact approximately 4,000 feet of bike routes. Bike lanes are considered to be a Section 4(f) property when they are publicly owned and functioning primarily for recreation. The impacts to the Section 4(f) properties will be *de minimis* impacts, meaning the features, attributes, or activities qualifying for protection under Section 4(f) will not be adversely affected by the project. All impacts to bike lanes will be temporary. Two roadways with dedicated bike lanes within the project study area have been determined to be Section 4(f) properties, Grant Street (596 ft) and 143rd Street (450 ft). These dedicated bike lanes are not identified as a transportation use by the City of Overland Park and are therefore considered to be 4(f) properties. All other bike oriented facilities have been considered to be primarily transportation uses as they are shared facilities with vehicles, these include three roadways with shared lane markings (Hardy Street (108 ft); Switzer Road (67 ft), and Lowell Avenue (255 ft)); and five roads with no lane markings (Antioch Road (509 ft), 132nd Street (378 ft), 139th Street (952 ft), Conser Street (5 ft), and 179th Street (690 ft)). The impacted bike routes will be replaced in-kind during project construction.

3.1.6.2 Trails

There are 18 trails located within or adjacent to the study area. They are all paved shared use paths, and most are ten-foot-wide. Out of the 18 trails, two are regional trails and the remaining 16 are local trails. The trails are shown on **Figure 3-8**. **Table 3-7** below summarizes the trails within or adjacent to the study area. The trails are described in more detail below.

Table 3-7: Trails Within or Adjacent to the Study Area

Facility	Type	Trail Description
103 rd Street Trail	Local	Ten-foot-wide shared use path
Corporate Woods Trail	Local	Ten-foot-wide shared use path
Switzer Road Trail	Local	Ten-foot-wide shared use path
Indian Creek Bike/Hike Trail	Regional	Ten-foot-wide shared use path
Indian Valley Park Trail	Local	Ten-foot-wide shared use path
123 rd Street Trail	Local	Ten-foot-wide shared use path
Brandon Place Linkage Trail	Local	Ten-foot-wide shared use path
Heartland Elementary School Loop Walk	Local	Five-foot-wide shared use path
132 nd Street Trail	Local	Ten-foot-wide shared use path
U.S. 69 Trail	Local	Ten-foot-wide shared use path

Facility	Type	Trail Description
Tomahawk Creek Trail	Regional	Ten-foot-wide shared use path
139 th Street Trail	Local	Ten-foot-wide shared use path
143 rd Street Trail	Local	Ten-foot-wide shared use path
Family Medical Care of Kansas City Stanley Trail	Local	Eight-foot-wide shared use path
151 st Street Trail	Local	Eight-foot-wide shared use path
Kingston Lake Park Trail	Local	Eight-foot-wide shared use path
159 th Street Trail	Local	Ten-foot-wide shared use path
Lowell Avenue Trail	Local	Ten-foot-wide shared use path

103rd Street Trail

The 103rd Street Trail is a multi-use trail on the south side of 103rd Street. It connects to trails on both sides of U.S. 69 along the 103rd Street Bridge. The trail totals 0.38 miles and is classified as an Existing Bike/Hike Trail in the *Parks Master Plan*. It consists of a shared use sidewalk ten feet in width adjacent to the eastbound traffic lane and has no recreational facilities.

Corporate Woods Trail

The Corporate Woods Trail is a multi-use trail passing below U.S. 69 north of College Boulevard. The trail totals approximately 2.1 miles in Overland Park and is classified as an Existing Bike/Hike Trail in the *Parks Master Plan*. It consists of a shared use sidewalk ten feet in width adjacent to the westbound traffic lane and has no recreational facilities.

Switzer Road Trail

The Switzer Road Trail is a multi-use trail in two separate locations along Switzer Road. The northern portion is approximately 0.63 miles long and connects College Boulevard to the Indian Creek Hike/Bike Trail. The southern section is approximately 3.22 miles long, stretches from 135th Street to 159th Street, and has connections to multiple trails. It is classified as an Existing Bike/Hike Trail in the *Parks Master Plan*. The Switzer Road Trail consists of a shared use sidewalk ten feet in width.

Indian Creek Bike/Hike Trail

The Indian Creek Bike/Hike Trail is a 17-mile-long paved shared use path that connects Olathe, Overland Park, Leawood, and Kansas City. Ten miles of the trail exists within Overland Park. This trail connects the city's parks, neighborhoods, schools, recreation facilities, and other attractions. The trail is approximately ten feet in width with mile markers every half mile. The Indian Creek Bike/Hike Trail is designated as part of the American Discovery Trail, which is a cross country trail

stretching from Cape Henlopen State Park in Delaware to Ft. Reyes National Seashore in California. The American Discovery Trail is a network of existing trails operated by local, state, and federal agencies. The organization of the trail network as the American Discovery Trail is overseen by the Non-Profit American Discovery Trail Society. It has no specific regulations or protections other than those for the existing trail system that it utilizes. The trail crosses the study area at Corporate Woods Founders' Park along College Boulevard and Indian Valley Park along U.S. 69.

Indian Valley Park Trail

The Indian Valley Park Trail is a multi-use trail within Indian Valley Park on the east side of U.S. 69. It connects Knox Street to the Indian Creek Bike/Hike Trail. The trail totals 0.48 miles and is classified as an Existing Bike/Hike Trail in the *Parks Master Plan*. It consists of a shared use sidewalk ten feet in width.

123rd Street Trail

The 123rd Street Trail is a multi-use trail on the south side of 123rd Street. It connects Metcalf Avenue to the U.S. 69 Trail along the east side of Blue Valley Parkway. The trail totals 0.33 miles and is classified as an Existing Bike/Hike Trail in the *Parks Master Plan*. It consists of a shared use sidewalk ten feet in width.

Brandon Place Linkage Trail

The Brandon Place Linkage Trail is a multi-use trail on the west side of U.S. 69. The trail is within Brandon Place Linkage and is approximately 0.59 miles long. It connects 127th Street to the 132nd Street Trail and has no recreational facilities.

Heartland Elementary School Loop Walk Trail

The Heartland Elementary School Loop Walk Trail is a 0.32-mile-long, 5-foot-wide, walking loop on Heartland Elementary School property. It is not listed in the *Parks Master Plan* and has no recreational facilities but is adjacent to Brandon Place Linkage.

132nd Street Trail

The 132nd Street Trail is a multi-use path on the north side of the 132nd Street Bridge. The trail totals 0.63 miles in Overland Park and is classified as an Existing Bike/Hike Trail in the *Parks Master Plan*. It consists of a shared use sidewalk ten feet in width adjacent to the eastbound traffic lane and has no recreational facilities.

U.S. 69 Trail

The U.S. 69 Trail is a multi-use trail located adjacent to U.S. 69, mostly within the U.S. 69 Linkages. The trail totals approximately 4.32 miles in length and is classified as a multi-use trail in the *Parks Master Plan*. It consists of a shared use sidewalk ten feet in width and no recreational facilities.

Tomahawk Creek Trail

The Tomahawk Creek Trail is a multi-use trail on the north side of 143rd Street. The trail totals 10.59 miles in Overland Park and is classified as an Existing Bike/Hike Trail in the *Parks Master Plan*. It consists of a shared use sidewalk typically ten feet in width running adjacent to Tomahawk Creek. The trail intersects with the Nottingham South Park boundary within the limits of the Preferred Alternative.

139th Street Trail

The 139th Street Trail is a multi-use trail on the south side of 139th Street that travels through the 139th Street Linkage. It connects Metcalf Avenue to the U.S. 69 Trail along the east side of Blue Valley Parkway. The trail totals 0.34 miles and is classified as an Existing Bike/Hike Trail in the *Parks Master Plan*. It consists of a shared use sidewalk ten feet in width and has no recreational facilities.

143rd Street Trail

The 143rd Street Trail is a multi-use trail on the north side of 143rd Street. The trail totals 4.96 miles in Overland Park and is classified as an Existing Bike/Hike Trail in the *Parks Master Plan*. It consists of a shared use sidewalk ten feet in width adjacent to the westbound traffic lane and has no recreational facilities.

Family Medical Care of Kansas City Stanley Trail

The Family Medical Care of Kansas City Stanley Trail is a shared-use trail along the east side of U.S. 69 and north of 151st Street. The trail totals 0.09 miles and is not listed in the *Parks Master Plan*. It consists of a sidewalk eight feet in width looping around a pond and has no recreational facilities.

151st Street Trail

The 151st Street Trail is a multi-use trail on the north side of 151st Street west of Hardy Street. The trail totals 1.25 miles and is classified as an Existing Bike/Hike Trail in the *Parks Master Plan*. It consists of a shared use sidewalk eight to ten feet in width adjacent to the westbound traffic lane and has no recreational facilities.

Kingston Lake Park Trail

The Kingston Lake Park Trail is a multi-use trail within Kingston Lake Park on the west side of U.S. 69. It is a loop trail that goes around Kingston Lake and totals 0.61 miles and is classified as an Existing Bike/Hike Trail in the *Parks Master Plan*. It consists of a shared use sidewalk eight feet in width with access paths that are four to five feet wide.

159th Street Trail

The 159th Street Trail is a multi-use trail on the north side of 159th Street that extends from Mission Road to Quivira Road. The 5.31-mile trail has multiple trail connections and is classified as an Existing Bike/Hike Trail in the *Parks Master Plan*. It consists of a shared use sidewalk ten feet in width and has no recreational facilities.

Lowell Avenue Trail

The Lowell Avenue Trail is a multi-use trail along the west side of Lowell Avenue, north of 167th Street. The trail totals 0.98 miles and is classified as an Existing Bike/Hike Trail in the *Parks Master Plan*. It consists of a shared use sidewalk eight to ten feet in width and has no recreational facilities.

Impacts of the No-Build Alternative

Since no construction would occur under the No-Build Alternative, the No-Build Alternative would have no trail impacts.

Impacts of the Preferred Alternative

The Preferred Alternative will temporarily impact nine trails with an impacted length totaling approximately 6,500 feet. Trails are considered to be a Section 4(f) property when they are publicly owned and functioning primarily for recreation. The impacts to the Section 4(f) properties will be *de minimis* impacts, meaning the features, attributes, or activities qualifying for protection under Section 4(f) will not be adversely affected by the project. All impacts to trails will be temporary. The potential for horizontal shifts of some trails exists but these will be minor and will not impact the use of the trails. The impacted portions will be replaced during project construction. Although approximately 430 feet of the 143rd Street Trail is within the construction limits of the Preferred Alternative, the trail will not be realigned as the only impacts will be due to a temporary closure during bridge construction. Approximately 380 feet of the 132nd Street Trail exists within the construction limits of the Preferred Alternative; however, the trail will not be impacted as it is carried on a bridge over U.S. 69 and no changes to the 132nd Street Bridge will occur as part of the Preferred Alternative.

Table 3-8 summarizes the impacts to trails as a result of constructing the Preferred Alternative.

Table 3-8: Preferred Alternative Trail Impacts

Facility	Impact (linear feet)	Impact Description
Corporate Woods Trail	415	The trail will be temporarily impacted during construction as it will be shifted horizontally (approximately 15-20 feet) during roadway widening to accommodate U.S. 69 bridge piers. The impacted portion of the trail will be restored during construction.
Indian Creek Bike/Hike Trail	450	The trail will be temporarily closed during U.S. 69 bridge construction and temporarily impacted for box culvert reconstruction. The impacted portion of the trail will be replaced during construction.
Brandon Place Linkage Trail	990	The trail will be temporarily impacted due to roadway realignment. The impacted portion will be replaced during construction with a slight horizontal alignment shift.
U.S. 69 Trail	1,980	The trail will be temporarily impacted due to grading and drainage improvements to accommodate for widening along the U.S. 69 corridor. The impacted portion will be replaced during construction.
Tomahawk Creek Trail	1,650	The trail will be temporarily impacted due to roadway realignment. The impacted portion will be replaced during construction. Temporary trail closure will also occur due to reconstruction of the existing bridges for the 135 th Street interchange ramps and the U.S. 69 bridges that cross over the Tomahawk Creek Trail. Connection to 135 th Street will be relocated into Nottingham South Park south of the U.S. 69 SB on ramp. This relocation will make the connection ADA Compliant.
143 rd Street Trail	450	The trail will be temporarily closed during bridge construction for bridge work on U.S. 69; no other impacts to the trail are expected.
151 st Street Trail	500	The trail will be temporarily impacted during widening of 151 st Street. These impacts include the realignment of the trail slightly to the north (approximately 5 -10 feet) to accommodate extending the outside lane of westbound 151 st Street to the Hardy Street intersection. Temporary closures will impact recreational use of the trail during construction. The impacted portion will be replaced during construction.
Lowell Avenue Trail	65	The trail will be temporarily impacted during grading and contouring improvements to 167 th Street and the interchange improvements which include the addition of a U.S. 69 SB On-Ramp and a U.S. 69 NB Off-Ramp. The impacted portion will be replaced during construction.

Note: Trail impacts are listed from north to south throughout the U.S. 69 Express corridor.

The Preferred Alternative will also include the following new or updated trails:

- The existing sidewalk on the north side of College Boulevard will be upgraded to a hike/bike trail and a new hike/bike trail will be added on the south side of College Boulevard.
- A new hike/bike trail along the north side of 139th Street and a new sidewalk along the south side of 139th Street.
- Upgrading the existing sidewalk along the south side of 151st Street to a hike/bike trail.
- A new hike/bike trail along the north side of 167th Street.

3.1.7 Right-of-Way and Relocation Potential

The project will require additional ROW along U.S. 69 as well as select arterial streets to construct the Preferred Alternative. ROW acquisition was evaluated within the categories of permanent impacts and temporary impacts due to construction activities. Permanent impacts are those property acquisitions that are necessary for the new alignment of U.S. 69 that will be converted to permanent ROW or a permanent easement. Temporary impacts are those property acquisitions that are needed as temporary construction easements and do not require ROW to be permanently acquired.

Relocation impacts were evaluated within the categories of residential, business, parkland, and cemetery displacements. None of the improvements included in the Preferred Alternative impact cemeteries.

3.1.7.1 ROW Impacts and Potential Relocations

It is the policy of KDOT that no person be requested to move from their dwelling until at least one comparable replacement dwelling has been made available to that person. A comparable, replacement dwelling is safe, decent, sanitary, and functionally similar to the present dwelling, and within the financial means of the displaced person. The replacement housing must also be open to persons regardless of race, color, religion, or national origin.

A representative of KDOT will assist each displaced person in securing comparable replacement housing and be sensitive to the special needs of any special group of residents. The relocation coordination office will maintain liaison activities with other agencies rendering services useful to persons who must relocate. The occupants of residences are entitled to receive reasonable and necessary moving costs and related expenses for relocating their personal property.

Impacts of the No-Build Alternative

The No-Build Alternative would not require any property acquisition; therefore, it would have no relocation impacts.

Impacts of the Preferred Alternative

The Preferred Alternative will require the acquisition of one residential property and no commercial properties. The residential displacement is located south of 167th Street on the west side of U.S. 69 and is not located within a Census Block Group that contains an EJ population. The displacement is shown on **Figure 3-8 (Page 10 of 11)**.

Property acquisition for the Preferred Alternative will result in approximately 15 acres of new ROW, 2 acres of permanent easements, and 13 acres of temporary easements.

Property owners will be compensated for property acquisitions as determined by KDOT and FHWA guidelines and processes for ROW acquisitions. All ROW acquisitions and relocations will be conducted in conformance with the Uniform Relocation Assistance and Real Property Acquisition Act of 1970, as amended by the Surface Transportation Assistance Act of 1987 and 49 Code of Federal Regulations, Part 24. Relocation assistance will be made available to all persons to be relocated without discrimination.

3.1.8 Construction and Emergency Routes

This section addresses the potential impacts from construction of the Preferred Alternative on emergency routes and access. It is essential for the health, safety, and general welfare of a community that emergency response vehicles and services have adequate roadway access to all residential, commercial, and industrial properties. U.S. 69 is a vital route in Overland Park and within the Kansas City region. It connects to I-435, I-35, and seven major cross streets including College Boulevard, 119th Street, 135th Street, 151st Street, 159th Street, 167th Street, and 179th Street.

Impacts of the No-Build Alternative

Under the No-Build Alternative, there would be no new construction, therefore, no direct impacts to existing emergency routes. However, emergency response times may be impacted due to roadway congestion and incidents.

Impacts of the Preferred Alternative

Construction of the Preferred Alternative will not result in permanent changes in access to any existing roadways or properties. Construction phasing will be implemented to ensure that emergency response vehicles have access throughout

the corridor. Any detours will be temporary in nature and limited in duration to the period of time required to construct project improvements. The exact location, timing, and duration of road closures will be finalized during the Design-Build phase of the project. A traffic management plan will be developed and implemented by KDOT during construction of the project. Access to properties along the U.S. 69 Corridor will be maintained by phased construction, temporary access roads, or other appropriate means.

Since the Preferred Alternative provides ETLs, emergency response vehicles will be able to use these lanes to avoid congested conditions on the general-purpose lanes when responding to incidents. Additionally, the ETLs will provide system redundancy during incidents occurring on U.S. 69 and could be utilized to manage the flow of traffic due to incidents.

3.1.9 Transportation

The primary roadways within the study area, shown in **Figure 1-1** from Chapter 1 are U.S. 69, 103rd Street, I-435, College Boulevard, 119th Street, 127th Street, 135th Street, 143rd Street, 151st Street, 159th Street, 167th Street, 179th Street, Antioch Road, Switzer Road, Blue Valley Parkway, and Metcalf Avenue. From 103rd Street to the project area's southern limits south of 179th Street, U.S. 69 is generally a four-lane divided access-controlled freeway with a grass median.

U.S. 69 within the project area is part of the Frontier Military Historic Byway. This route runs from Fort Leavenworth in Leavenworth, Kansas south to Fort Scott, Kansas and on to Baxter Springs, Kansas.

A brief description of the roadways that cross or are crossed by U.S. 69 within the study area are included below:

- 103rd Street is a four-lane divided east/west arterial.
- I-435 is an eight lane, barrier separated, east/west highway.
- College Boulevard is a six-lane divided east/west arterial.
- 119th Street is a four-lane divided arterial between Switzer Road and the U.S. 69 interchange; between the U.S. 69 interchange and Antioch Road it is a six-lane divided arterial.
- Blue Valley Parkway north of 123rd Street is a north/south six-lane divided arterial. South of 123rd Street the roadway has two lanes in each direction but transitions to one lane in each direction just north of U.S. 69.
- 135th Street is a six-lane divided east/west arterial.

- 143rd Street is a four-lane divided east/west arterial that crosses under U.S. 69.
- 151st Street and 159th Street are four-lane divided east/west arterials.
- 167th Street is an east/west two-lane, former county road.
- 179th Street is an east/west two-lane undivided arterial road.

Bus transit service within the study area is provided by RideKC. Five bus routes (**Figure 3-9**) serve the study area, Route 51 (Ward Parkway), Route 52 (Ward Parkway Limited), Route 401 (Metcalf - Plaza), Route 403 (Antioch - Olathe), and Route 569 (South OP Express). Effective on October 3, 2021, Routes 51 and 52 will no longer be active. The closure of Routes 51 and 52 is not associated with the proposed project; service along these routes will be switched to a revised Main Max route which will not be located within or adjacent to the study area.

3.1.9.1 *Transportation Impacts*

Impacts of the No-Build Alternative

The No-Build Alternative would not have construction related impacts to the existing roadways or transit services within the project vicinity. The No-Build Alternative would not include access improvements or widening of U.S. 69 or address the existing congestion within the U.S. 69 Corridor. Traffic volumes are forecasted to increase substantially by 2050 and the No-Build Alternative would not alleviate the resulting future congestion or improve safety. Adverse impacts to transportation are likely to occur as a result of increased congestion and increased travel times, decreased safety, and decreased level of service. A full breakdown of 2050 No-Build traffic and safety can be found in **Appendix E**.

Impacts of the Preferred Alternative

The construction of the Preferred Alternative will affect transportation and traffic patterns within the project area. The project improvements include an additional lane (express toll lane) both northbound and southbound on U.S. 69 and reconfigured interchanges at I-435 and Blue Valley Parkway as well as improvements to interchange ramps and arterial streets throughout the corridor. Specific design decisions for the reconfigured interchanges will be determined during the Design-Build phase of the project.

The Preferred Alternative would have temporary construction impacts to bus routes 401, 403, and 569. Bus Route 569 would be impacted for the longest duration as it travels directly on U.S. 69 from the north end of the study area to 135th Street. No impacts would occur to Routes 51 and 52 as they will no longer be active at the time of project construction. The Preferred Alternative will accommodate transit vehicles

within the ETLs to allow for more reliable, congestion free travel via transit on the U.S. 69 Corridor. Any decisions on new or modified bus transit routes would be determined by RideKC as the primary transit provider in the region.

The completion of the Preferred Alternative would result in less congestion and decreased travel times. Transportation system performance will improve from construction of the Preferred Alternative. A full breakdown of 2050 Build (Preferred Alternative) traffic and safety can be found in **Appendix E**.

3.2 Cultural Resources

The Advisory Council on Historic Preservation's (ACHP's) implementing regulations for Section 106 of the National Historic Preservation Act (36 C.F.R. Part 800) requires federal agencies to take into account the effects of their undertakings on historic properties and to provide the ACHP a reasonable opportunity to comment on the undertakings, which in this instance, is the U.S. 69 project. The following sections summarize the coordination and findings for eligible or potentially eligible historic sites or districts, and archaeological sites located in the project study area.

3.2.1 Historical Sites or Districts

The initial step in satisfying Section 106 regulations regarding historic properties is to determine if there are any properties listed or eligible for listing on the National Register of Historic Places (NRHP) that may be affected by the proposed project. The National Historic Preservation Act defines a historic property as any prehistoric or historic district, site, building, structure, or object included on, or eligible for inclusion on, the National Register, including artifacts, records, and material remains relating to the district, site, building, structure, or object.

All standing structures at least 50 years old are potentially eligible for listing on the NRHP. KDOT and the Kansas State Historic Preservation Office (SHPO) reviewed the study area and identified no standing structures currently listed or determined eligible for listing on the NRHP.

3.2.2 Archaeological Sites

Archeological studies have been completed throughout the project study area corridor. The initial review was completed by the Kansas Historical Society (KSHS) for a Phase I review and on July 15, 2021, determined that Phase II work would be required prior to implementation of the project. This includes evaluating whether sites previously affected by construction near the U.S. 69 and 135th Street interchange are still present and whether any component of those sites might be adversely affected by the project. The KSHS identified the following six areas that should receive Phase II intensive surveys:

- The Blue River crossing north of 179th Street;
- The 135th Street interchange (Tomahawk Creek crossing);
- A crossing of the Tomahawk Creek near 127th Street;
- The Indian Creek crossing south of College Boulevard;
- The Indian Creek crossing on College Boulevard; and,
- A crossing of Indian Creek between College Boulevard and I-435.

Phase II Cultural Resource Surveys were completed during the week of August 13, 2021. No significant archeological resources were identified during the survey.

3.2.3 Cultural Resources Impacts

KDOT consulted with SHPO, local governments, Native American Tribes, and other interested parties on cultural resources within the U.S. 69 study area. The tribal consultation period ended on August 9, 2021. Responses have been received from the Eastern Shawnee Tribe of Oklahoma, the Delaware Tribe of Indians, the Osage Nation of Oklahoma, and the Kaw Nation of Oklahoma. KDOT sent initial coordination to the Shawnee Tribe on September 14, 2021, with the consultation period for the Shawnee Tribe closing on November 13, 2021. The coordination process is detailed in section 4.3 of this document. No significant cultural resources were identified.

Impacts of the No-Build Alternative

Since no construction would occur under the No-Build Alternative, the No-Build Alternative would have no impacts to cultural resources.

Impacts of the Preferred Alternative

No Section 4(f) impacts to historical or archeological resources will occur from the Preferred Alternative as no impacts will occur. KDOT coordinated with SHPO on historical and archeological resources within the study area. SHPO historical clearance was received on July 14th, 2021. The clearance letter is available in **Appendix F**. According to SHPO *“Following an architectural review of structures in the project area, the SHPO has determined that the project will not adversely affect any property listed or determined eligible for listing in the National Register. As this is a design/build project, we request that any changes or newly identified structures that will be impacted by this project be submitted to our office for comment and review.”*

SHPO archeological clearance was received on August 25, 2021. The clearance letter, available in **Appendix F**, states that *“Staff review of the above referenced project has been completed at the Phase II level. Pursuant to 36 CFR 800.4, we concur with the*

finding of no historic properties affected for the above referenced undertaking. We therefore have no objection to implementation of the project.”

If during the Design-Build phase of the project modifications are made to the proposed construction limits for the Preferred Alternative, additional reviews and coordination with SHPO will be performed by KDOT for historical and archeological clearance.

3.3 Natural Environment

The following sections describe the natural resource features present in the study area and the anticipated effects of the No-Build Alternative and Preferred Alternative.

3.3.1 Farmland

The United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS), pursuant to the Farmland Protection Policy Act of 1981 (FPPA), is responsible for evaluating the conversion of prime and unique farmland, and statewide and locally important farmland, to non-agricultural use.

Agricultural land can be described in terms of soil types since agricultural productivity is greatly influenced by the land’s soil. The majority of the soils within the study area are classified as either Prime Farmland or Farmland of Statewide Importance by the USDA, NRCS. Farmland soil map units within the study area are shown on **Figure 3-10** and include the following:

Prime farmland soil map units:

- 4015 - Chase silt loam, occasionally flooded
- 7050 - Kennebec silt loam, occasionally flooded
- 7302 - Martin silty clay loam, 3 to 7 percent slopes
- 7525 - Chillicothe silt loam, 2 to 5 percent slopes

Farmland of statewide importance map units:

- 7462 - Oska-Martin silty clay loams, 4 to 8 percent slopes

The project corridor north of 167th Street is identified as urban according to the U.S. Census Bureau and the FPPA does not apply. However, the FPPA is applicable to the project corridor south of 167th Street as it is not identified as urban by the U.S. Census Bureau.

3.3.1.1 *Farmland Impacts*

No-Build Alternative

No construction would occur; therefore, the No-Build Alternative would have no farmland impacts.

Preferred Alternative

The Preferred Alternative will acquire approximately 9.9 acres of farmland soils for ROW. KDOT prepared a Farmland Conversion Impact Rating (FCIR) form and submitted it to the NRCS to determine the extent of impacts to prime and other important farmland. NRCS clearance was received on August 12, 2021. The clearance letter is available in **Appendix F**. If changes to the acres of farmland soils for ROW is modified, KDOT will submit a revised FCIR form to the NRCS for clearance.

3.3.2 **Wetlands and Waters of the United States**

The U.S. Army Corps of Engineers (USACE) and the U.S. Environmental Protection Agency (USEPA) define wetlands as “areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.”

KDOT performed a field investigation to identify all potential waters of the United States, including wetlands, located within the project study area during June 2021. Wetland delineations were performed using methods outlined in the *1987 Corps of Engineers Manual for Wetland Delineation* and its *Midwest Supplement*. The field investigation identified a total of 2.13 acres of wetlands and approximately 9,990 linear feet of open stream channels located within the study area.

3.3.2.1 *Wetlands and Waters of the United States Impacts*

Waters of the U.S., including wetlands, waterways, lakes, natural ponds, and impoundments, are regulated by the USACE under Section 404 of the Clean Water Act (CWA), which requires a permit to authorize the discharge of dredged or fill material into waters of the U.S. (33 U.S. Code § 1344). Executive Order 11990, *Protection of Wetlands*, directs federal agencies (including FHWA) to implement “no net loss” measures for wetlands (42 Federal Register 26951). These no net loss measures include a phased approach to wetland avoidance, then minimization of impacts if wetlands cannot be avoided, and finally mitigation of unavoidable impacts.

Based on the results of the field investigation, it was determined that there are nine potential wetlands within the study area. The wetlands are spread along the U.S. 69

corridor but generally located in the vicinity of streams (Indian Creek and Tomahawk Creek), ponds, or upland drainage ditches. The wetlands are shown on **Figure 3-8** and the impacts are summarized in **Table 3-9**.

Impacts of the No-Build Alternative

Since no construction would occur under the No-Build Alternative, the No-Build Alternative would have no impacts to wetlands or other waters of the United States.

Impacts of the Preferred Alternative

The Preferred Alternative will impact approximately 0.65 acres of wetlands (**Table 3-9**). Based upon the wetland delineation performed by KDOT, there will be 0.13 acres of jurisdictional wetland impacts, 0.47 acres of non-jurisdictional wetland impacts, and the remaining 0.05 acres of wetland impacts may be assessed as stream impacts. The wetland and stream impacts are shown on **Figure 3-8**.

Table 3-9: Wetland Impacts

Wetland	Description	No-Build Alternative Impact (Acres)	Preferred Alternative Impact Area (Acres)
Wetland 1	Non-jurisdictional 0.10-acre wetland in an interchange drainage ditch.	-	-
Wetland 2	Non-jurisdictional 0.30-acre wetland in an upland ditch drainage.	-	0.30
Wetland 3	Non-jurisdictional 0.20-acre wetland in an isolated area draining to Tomahawk Creek.	-	-
Wetland 4	0.06-acre wetlands within the Kingston Lake spillway; may be assessed as a stream.	-	0.04
Wetland 5	0.02-acre slow flow area with cattails that may be assessed as a stream.	-	-
Wetland 6	0.03-acre scour pool 1-2.5-foot deep; may be assessed as a stream.	-	0.01
Wetland 7	Non-jurisdictional 0.17-acre wetland which could be receiving hydrology via groundwater from a pond located approximately 85 feet to the east.	-	0.17
Wetland 8	Jurisdictional 0.87-acre wetland on the fringe of a pond. It's separated from Wetland 9 by a stream channel.	-	0.12
Wetland 9	Jurisdictional 0.36-acre wetland on the fringe of a pond. It's separated from Wetland 8 by a stream channel.	-	0.001
Totals:		-	0.65

KDOT is coordinating with the USACE regarding Section 404 permitting for project impacts. During the Design-Build phase of the project, wetland impacts will be refined and recalculated based on final design plans. If any changes to wetland impacts occur KDOT will coordinate with the USACE to revise the Section 404 permit application.

3.3.2.2 Mitigation

Mitigation for impacts to waters of the United States, including wetlands, is proposed to be completed through purchasing credits at wetland and stream mitigation banks or in-lieu fee programs. The amount of wetland and stream credits needed for project impacts will be determined during the USACE Section 404 permitting process as the project approaches final design.

3.3.3 Surface Waters and Water Quality

Section 303(d) of the Clean Water Act (CWA) requires states to identify all water bodies where state water quality standards are not being met. Kansas water quality is governed by the Kansas Surface Water Quality Standards administered by the Kansas Department of Health and Environment (KDHE). The KDHE maintains a Kansas Section 303(d) Impaired Waters list which was reviewed to determine if any surface waters within the study area contained impairments that require a Total Maximum Daily Load (TMDL). In the *Methodology for the Evaluation and Development of the 2020 Section 303(d) List of Impaired Waterbodies for Kansas* (Methodology 2020), KDHE states: a TMDL refers to the “total maximum daily load” of a pollutant that achieves compliance with a water quality standard, therefore a TMDL is essentially a regulatory tool which caps the allowable pollutant load to a water body and a planning tool which directs and guides practices that will bring a water body into compliance with the applicable water quality standard.

The below sections discuss those surface waters within the study area that were listed on the Impaired Waters list and provides a description of the groundwater in the vicinity of the study area.

Surface Water

The project study area lies within, and is drained by, the Lower Missouri-Crooked 8-digit hydrologic unit code (HUC 8) subbasin of the Missouri River Basin. Surface waters within the study area include Indian Creek, Tomahawk Creek, Negro Creek, Blue River, unnamed tributaries, and one pond (**Figure 3-8**). The water quality of these resources varies depending upon such factors as water permanence, presence or absence of in-flowing streams, surrounding vegetation, and surrounding land use.

Two waters within the study area, Indian Creek and Blue River, are identified on the KDHE 2020 approved 303(d) Impaired Waters list. Indian Creek is listed for three impaired uses, including aquatic life, water supply, and recreation, with a total of five impairments. The aquatic life use is listed as being impaired by total phosphorus, Diazinon, and biology. The water supply use is listed as being impaired by Chloride. The recreation use of Indian Creek is listed as being impaired by E. coli and has a TMDL developed with a medium priority for implementation.

The Blue River is listed for three impaired uses, including aquatic life, food procurement, and recreation, with a total of four impairments. The aquatic life use is listed as being impaired by biology and Diazinon. The food procurement use is listed as being impaired by mercury. The recreation use is listed as being impaired by E. coli. TMDLs have been developed for the biology and E.coli impairments, both with a medium priority for implementation.

KDHE maintains the Kansas Surface Water Register where the Department rates streams in the state relative to eight designated beneficial uses which include aquatic life, contact recreation, domestic water supply, food procurement, ground water recharge, industrial water supply, irrigation, and livestock watering. The current Kansas Surface Water Register, dated December 12, 2013, lists Indian Creek, Tomahawk Creek, Negro Creek, Wolf Creek, and the Blue River as sources for the eight designated beneficial uses cited above.

None of the waterways in the study area are listed as an Outstanding National or State Resource Water.

Ground Water Quality

A review of the Kansas Geological Survey's (KGS) Water Well Completion (WWC5) database indicates that wells within the study area have static water depths generally from three to 30 feet with low estimated yields of one to three gallons per minute (gpm). One well has a static water depth of 80 feet and an estimated yield of 40 gpm.

Facilities within the study area are served by a reliable municipal water supply system which obtains water directly from the Kansas River. All sources are located outside of the project study area.

Stormwater Management

The KDHE is responsible for administering the National Pollutant Discharge Elimination System (NPDES) to protect waters of the State from sediment and other contaminants. Any project that disturbs greater than one acre from construction activities requires a stormwater permit from the KDHE. In order to obtain a

stormwater permit, a Notice of Intent (NOI) form must be submitted with the \$60 permit fee at least 60 days prior to the start of construction. The primary requirement of the stormwater permit is the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP must specify the “Best Management Practices” (BMPs) to be employed and what controls will be implemented to minimize the contamination of stormwater runoff associated with construction activity.

The major considerations for potential water quality impacts are: sedimentation; contamination from street surface runoffs; agents for weed, insect, and rodent control; contamination from chemical or other toxic material spills; and groundwater pollution. Sediment loads in rivers, streams, and wetlands can have an impact on drinking water quality and on aquatic animals by limiting oxygen absorption and covering eggs.

Sedimentation may result from bridge and drainage facility construction and by erosion from project construction. Standard engineering practices (BMPs) of mitigation, i.e., temporary erosion, sediment, and water pollution control should prove to be adequate to minimize sedimentation and water quality impacts.

3.3.3.1 Water Quality Impacts

Impacts of the No-Build Alternative

Since no construction would occur under the No-Build Alternative, the No-Build Alternative would have no direct impacts on water quality of surface or groundwater resources in the study area.

Impacts of the Preferred Alternative

Surface Water Impacts

As shown in **Table 3-10** and **Figure 3-8** the Preferred Alternative will impact approximately 9,990 linear feet of streams.

Table 3-10: Stream Impacts

Stream	Name	No-Build Alternative Impact (linear feet)	Preferred Alternative Impact (linear feet)*
S-1	Unnamed tributary to Indian Creek	-	-
S-2	Unnamed tributary to Indian Creek	-	668
S-3	Storm sewer	-	370
S-4	North Branch Indian Creek	-	1,161
S-5	Indian Creek	-	442

Stream	Name	No-Build Alternative Impact (linear feet)	Preferred Alternative Impact (linear feet)*
S-6	Unnamed tributary to Indian Creek	-	656
S-7	Unnamed tributary to Tomahawk Creek	-	608
S-8	Unnamed tributary to Tomahawk Creek	-	95
S-9	Tomahawk Creek	-	1,509
S-10	Unnamed tributary to Tomahawk Creek	-	418
S-11	Unnamed tributary to Tomahawk Creek	-	-
S-12	Unnamed tributary to Negro Creek	-	-
S-13	Unnamed tributary to Negro Creek	-	362
S-14	Unnamed tributary to Negro Creek	-	16
S-15	Unnamed tributary to Blue River	-	559
S-16	Unnamed tributary to Blue River	-	1,556
S-17	Blue River	-	428
S-18	Unnamed tributary to Wolf Creek	-	702
S-19	Unnamed tributary to Wolf Creek	-	442
Totals:		-	9,992

* Stream impacts shown are the length of the stream within the limits of the Preferred Alternative. Actual impacts will be identified during final design and are anticipated to be less than those identified in **Table 3-10**.

The Preferred Alternative could have the potential for construction-related water quality impacts to roadside wetlands and roadside ditches that flow into the streams within the study area. Project construction may also require additional bridges and culverts that could temporarily impact the water quality within the stream channels.

There is potential for construction related water quality impacts to Indian Creek and Blue River as drainage patterns bring stormwater runoff to their channels through overland flow or a series of drainage ditches and channels.

Potential operation and maintenance related impacts to water quality could include pollutants such as sediment, petroleum products, coolants, rubber debris, metals, and de-icing minerals/chemicals.

The Preferred Alternative will also require a Stream Obstruction permit from the Kansas Department of Agriculture – Division of Water Resources (DWR) for the impacts within stream channels. KDOT will obtain the initial permit. If any changes to the stream impacts occur during the Design Build phase of the project, the Design Build Contractor will be responsible for coordinating with KDOT and the DWR to obtain additional clearance.

Groundwater Impacts

Pollutants from the construction, operation, and maintenance of the Preferred Alternative will contribute to loadings of the surface waters, which are a recharge component of local alluvial groundwater. Most of the surface loading is flushed during initial high flows associated with precipitation events, with very little being left for infiltration to the groundwater.

3.3.3.2 Mitigation

The USACE is the federal agency authorized to issue Section 404 permits for activities that result in the discharge of dredged, excavated, or fill material in streams and other waters of the U.S. To obtain authorization to disturb regulated streams, the permit applicant must avoid protected resources where possible, minimize unavoidable impacts, and if necessary, mitigate any remaining impacts. Mitigation for stream impacts will be determined during the permitting process and can include, in order of preference, mitigation banking, in-lieu fees, on-site mitigation, and off-site mitigation. KDOT is coordinating with the USACE regarding Section 404 permitting for project impacts. During the Design-Build phase of the project, stream impacts will be refined and recalculated based on final design plans. If any changes to stream impacts occur during the Design Build phase of the project, the Design-Build Contractor will coordinate with KDOT and the USACE to revise the Section 404 permit application.

In order to minimize or avoid impacts to surface water quality, KDOT will submit a Notice of Intent (NOI) to obtain the NPDES stormwater construction permit. The Design-Build Contractor will secure the NPDES Permit and develop a Storm Water Pollution Prevention Plan (SWPPP). This plan utilizes BMPs such as: seeding disturbed areas as soon as possible; installing ditch checks and silt fences at the outset of construction; minimizing disturbances to stream banks and riparian zones; and taking all necessary precautions to prevent petroleum products from entering streams or wetlands. The Design-Build Contractor will be responsible for the monitoring of the BMPs and updating the SWPPP as necessary during project construction.

The Design-Build Contractor will follow BMPs to reduce impact to groundwater during construction and will also follow recommendations set forth in the total maximum daily loads for the Indian Creek and Blue River. BMPs utilizing structural and non-structural systems can effectively minimize the impacts to groundwater quality. Structural BMPs such as detention basins, filters, infiltration basins, grassed swales, and constructed wetlands utilize mechanical removal of pollutants. Other non-structural BMPs such as street sweeping, debris and litter removal, and control of fertilizer, herbicide, and pesticide use can control sources pollutant sources. Best

practice use and control of de-icing materials and methods can also reduce pollutant load.

3.3.3.3 Section 401 Certification Requirement

Prior to issuance of any permit, KDOT will obtain certification that implementation of the proposed Project will not cause any surface or ground water in the area of potential effect to violate water quality standards. In the state of Kansas, the KDHE provides this certification and it is permitted along with the USACE Section 404 permit. Section 401 Water Quality Certification and adequate mitigation measures will be obtained by KDOT prior to issuance of a construction permit. The Design-Build Contractor will follow all conditions of the 401 Water Quality Certification. If there are any changes to the wetland or stream impacts after the Water Quality Certification is received, KDOT will coordinate with the KDHE to ensure the revised impacts still meet the water quality certification requirements.

3.3.4 Floodplains

The study area encompasses portions of the Big Blue River and two of its unnamed tributaries, Indian Creek, North Branch Indian Creek, Tomahawk Creek, and Negro Creek floodplains. Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs) and National Flood Hazard Layer (NFHL) data showing mapped 100-year floodplains are available for Johnson County (see **Figure 3-8**). According to the FIRM and NFHL data, the project will occur within the mapped 500-year floodplain, 100-year floodplain, and regulated floodway.

Executive Order 11988 on Floodplain Management directs federal agencies “to avoid to the extent possible the long- and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative.”

In Johnson County, the DWR has jurisdiction over fill that is placed in a regulatory floodplain to an average height greater than one foot above the existing ground for streams with a drainage area over 640 acres. Fills that meet this definition would require a Floodplain Fills permit from the DWR. Fills with drainage acreage under 640 acres, but greater than 240 acres, and occurring in a mapped FEMA floodplain, also require a Floodplain Fill permit from DWR. Regulations require that a floodplain fill should not have an unreasonable effect on adjacent landowners, adverse to the public interest and environmental concerns, or lack required environmental mitigation.

Fill placed in a FEMA floodplain within the Overland Park City Limits will also require a Floodplain Development Permit from the City. The City of Overland Park Floodplain Management Ordinance – Provisions for Flood Hazard Reduction (18.360.450)

requires that the placement of fill within a regulatory floodway will cause no rise in the base flood elevation and no increase in flood velocities.

3.3.4.1 Floodplain Impacts

Impacts of the No-Build Alternative

No construction would occur under the No-Build Alternative; therefore, the No-Build Alternative would have no direct impacts to FEMA floodplains within the study area.

Impacts of the Preferred Alternative

Construction of the Preferred Alternative will occur within approximately 15.1 acres of floodway, 22.1 acres of 100-year floodplain, and 9.9 acres of 500-year floodplain (**Table 3-11**). The floodways and floodplains impacted are associated with Indian Creek and its unnamed tributaries, Tomahawk Creek and its unnamed tributaries, Negro Creek, and the Blue River and its unnamed tributaries.

Table 3-11: Floodway and Floodplain Impacts

FEMA Resource	Preferred Alternative Impact (Acres)
Floodway	15.1
100-Year Floodplain	22.1
500-Year Floodplain	9.9

Since construction will occur within special flood hazard areas, floodplain permits from DWR and the City of Overland Park will be required.

KDOT will obtain the DWR Floodplain Fills permit. If there are any changes to the floodplain impacts during the Design-Build phase of the project, KDOT will coordinate with the DWR to revise the initial permit.

The Design-Build Contractor will obtain the floodplain permit from the City of Overland Park prior to project construction.

3.3.4.2 Mitigation

There are no additional drainage ditches or specific mitigation features included in the design of the Preferred Alternative. However, the Preferred Alternative will meet the no-rise certification requirement from the City of Overland Park. Should the Design-Build Contractor’s design result in an increase in the base flood elevation, they will be responsible for complying with all local, state and federal regulations.

3.3.5 Natural Habitats and Threatened and Endangered Species

The study area is located in the Osage Cuestas physiographic region of Kansas. The Osage Cuestas is a hill-plain, broad-terraced panorama with a large supply of limestone rock. The study area is also located in the Osage Cuestas and Wooded Osage Plains subregions of the Central Irregular Plains ecoregion. The Osage Cuestas subregion is mostly comprised of a combination of tallgrass prairie and oak-hickory woodlands in eastern Kansas. The Wooded Osage Plains subregion is a broad transition zone that shifts from a mixture of prairie and woodland to more extensive woodland land cover. The watershed in the study area is designated as the Lower Missouri-Crooked eight-digit hydrologic unit code (HUC). The natural habitats (terrestrial and aquatic resources) are shown on **Figure 3-8**.

Terrestrial Resources

The dominant vegetation within the study area is primarily grasses within the ROW with urban woodland vegetation (shrubs and trees) along the stream corridors.

Urban Woodland Vegetation

The urban woodland vegetation within the study area creates habitat diversity and provides food and cover for wildlife. The woodlands are located throughout the U.S. 69 Corridor, but generally in the Greenways, parks, and adjacent to streams and is shown on **Figure 3-8**.

Aquatic Communities

Streams

The primary streams within the study area are Indian Creek, North Branch Indian Creek, Tomahawk Creek, Negro Creek, and the Blue River. Other streams in the study area include unnamed tributaries to the above-mentioned streams and an unnamed tributary to Wolf Creek.

Lakes

There are no lakes within the study area and one lake (Kingston Lake) adjacent to the study area. Kingston Lake is approximately six acres in size and is located within Kingston Lake Park adjacent to the west side of the study area, south of 151st Street.

Ponds

There are four ponds within the study area and eight ponds adjacent to the study area. The smallest pond is approximately 0.2 acres and the largest pond is approximately 12.3 acres in size. These ponds are located throughout the corridor on both sides of U.S. 69. The ponds are shown on **Figure 3-8**.

Threatened and Endangered Species

Both the Kansas Department of Wildlife & Parks (KDWP) and the USFWS utilize the KBS Natural Heritage Database and their special studies to evaluate the presence or absence of species of concern in a given area. The database includes Federal and State threatened and endangered species, species in need of conservation, and rare species. Federally listed threatened and endangered species are subject to the protection afforded under Section 7 of the Endangered Species Act of 1973, as amended (ESA) (16USC 1531 et seq.). The ESA provides protection of animal and plant species that have been determined to be in population decline and are in jeopardy of becoming extinct.

A search of the online KBS Natural Resource Planner, accessed on January 22, 2021, did not identify any records of threatened or endangered species within the study area.

The State of Kansas also maintains a state listing of threatened and endangered species, which are protected by the Kansas Nongame and Endangered Species Conservation Act of 1975. The KDWP web site was visited on January 22, 2021, to obtain a list of the state protected species that are known or likely to occur in Johnson County. The list is shown in **Table 3-12**. The table also identifies if there is any designated critical habitat (DCH) within the study area for each of the listed species. Kansas Administrative Regulations define critical habitat as either of the following:

“Specific geographic areas supporting a population of a listed species and including physical or biological features that are essential to the conservation of the species and require special management or protection; or specific geographic areas not documented as currently supporting a population of a listed species but deemed essential for the conservation of the listed species by the secretary.”

The USFWS and the KDWP list 16 threatened or endangered species for Johnson County, Kansas. There is no DCH defined within the study area. The federal (USFWS) and state (KDWP) listed threatened and endangered species for Johnson County are shown in **Table 3-12**.

Table 3-12: Johnson County Federal & State Listed Threatened & Endangered Species

Common Name	Scientific Name	Federal Status ¹	State Status ²	Critical Habitat w/in Study Area
Plants				
Mead's Milkweed	<i>Asclepias meadii</i>	Threatened	Not Listed	None
Invertebrates				
American Burying Beetle	<i>Nicrophorus americanus</i>	Not Listed	Endangered	None
Fishes				
Flathead Chub	<i>Platygobio gracilis</i>	Not Listed	Threatened	None
Pallid Sturgeon	<i>Scaphirhynchus albus</i>	Endangered	Endangered	None
Plains Minnow	<i>Hybognathus placitus</i>	Not Listed	Threatened	None
Shoal Chub	<i>Macrhybopsis hyostoma</i>	Not Listed	Threatened	None
Sicklefin Chub	<i>Macrhybopsis meeki</i>	Not Listed	Endangered	None
Silver Chub	<i>Macrhybopsis storeriana</i>	Not Listed	Endangered	None
Sturgeon Chub	<i>Macrhybopsis gelida</i>	Not Listed	Threatened	None
Topeka Shiner	<i>Notropis topeka</i>	Not Listed	Threatened	None
Western Silvery Minnow	<i>Hybognathus argyritis</i>	Not Listed	Threatened	None
Birds				
Least Tern	<i>Sterna antillarum</i>	Not Listed	Endangered	None
Piping Plover	<i>Charadrius melodus</i>	Not Listed	Threatened	None
Snowy Plover	<i>Charadrius alexandrinus</i>	Not Listed	Threatened	None
Mammals				
Eastern Spotted Skunk	<i>Spilogale putorius</i>	Not Listed	Threatened	None
Northern Long-Eared Bat	<i>Myotis septentrionalis</i>	Threatened	Not Listed	None

1: Source - <https://ecos.fws.gov/ipac/location/LAVDX5FCXRF4XEOL14QAW3JX4/resources>

2: Source - <https://ksoutdoors.com/Services/Threatened-and-Endangered-Wildlife/List-of-all-Kansas-Counties/Johnson>

Although the endangered Pallid Sturgeon is listed for Johnson County, its habitat (the Kansas River) is not within the study area. As such, the project will have no effect on the Pallid Sturgeon or its habitat.

The Northern Long-eared Bat (NLEB) is listed as threatened by the USFWS. The study area is located within the NLEB range and also within the NLEB White Nose Syndrome Buffer Zone. The USFWS describes the habitat requirements of the NLEB as follows:

NLEBs spend the winter hibernating in caves and mines, called hibernacula. They use areas in various sized caves or mines with constant temperatures, high

humidity, and no air currents. During summer, NLEBs roost singly or in colonies in forests and woodlots containing potential roosts (i.e., live trees and/or snags ≥ 3 inches diameter at breast height (dbh) that have exfoliating bark, cracks, crevices, and/or cavities), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Individual trees may be considered suitable habitat when they exhibit characteristics of suitable roost trees and are within 1,000 feet of other forested/wooded habitat. NLEB has also been observed roosting in human-made structures, such as buildings, barns, bridges, and bat houses. Males and non-reproductive females may also roost in cooler places, like caves and mines.

Wooded areas and scattered trees exist within the study area, as well as bridges that have the potential for acting as roosting structures for NLEBs; however, there is a lack of hibernacula/maternity roost location data in the project area. Due to the presence of wooded areas, and lack of hibernacula/maternity roost location data in the project area, the project may affect, but is not likely to adversely affect the NLEB.

Although the Bald Eagle is not a listed threatened or endangered species, it is still afforded protection by the federal government under the Bald and Golden Eagle Protection Act (BGEPA) and the Migratory Bird Treaty Act (MBTA).

The BGEPA provides for the protection of Bald and Golden Eagles by prohibiting the taking, possession, and commerce of such birds, except under certain specified conditions. There is no nesting habitat for Bald or Golden Eagles within the study area. The habitat within the study area largely consists of maintained ROW with riparian areas around the streams. The stream corridors are narrow with smaller tree species and, except for the Blue River, in close proximity to residential areas. Due to the lack of nesting trees within or adjacent to the study area, the project would not result in the taking of trees serving as nesting trees of Bald or Golden Eagles.

The MBTA makes it unlawful to pursue, hunt, take, capture or kill; attempt to take, capture or kill; possess, offer to or sell, barter, purchase, deliver or cause to be shipped, exported, imported, transported, carried or received any migratory bird, part, nest, egg or product, manufactured or not. Provisions are in place for the protection of migratory birds, parts, nests, eggs, or products. Under the MBTA, “migratory birds” essentially includes all birds native to the U.S. and the regulations pertain to any time of the year, not just during migration. Since the Preferred Alternative will require some tree removal, KDOT will implement conservation measures to minimize the potential impacts to migratory birds, including tree clearing outside of the nesting season (generally March 1st to September 15th) or conducting nest surveys prior to clearing to avoid injuries to eggs or nestlings. Prior to construction, bridges will also be checked for potential nests. Based on the above

conservation measures, impacts to migratory birds will be minimal. The Design-Build Contractor will be responsible for inspecting each bridge, prior to beginning any bridge construction, to ensure there are no active nests. If active nests are present, the Design-Build Contractor will coordinate with KDOT prior to beginning construction.

3.3.5.1 *Natural Habitat and Threatened and Endangered Species Impacts*

Impacts to the terrestrial (urban woodland vegetation) and aquatic (streams and ponds/lakes) communities are summarized in **Table 3-13**.

Stream impacts are conservatively estimated as the length of NHD streams within the impact area of the Preferred Alternative. The actual impacts for permitting will be calculated during the Design-Build phase of the project by the Design-Build Contractor.

There are no ponds impacted by the Preferred Alternative.

Table 3-13: Natural Habitat Impacts

Alternatives	Urban Woodland Vegetation (Acres)	Aquatic Communities	
		Streams (Linear Feet)	Ponds/Lakes (Acres)
No-Build Alternative	0.0	0.0	0.0
Preferred Alternative	66	9,992	0.0

Impacts of the No-Build Alternative

No construction would occur under the No-Build Alternative; therefore, the No-Build Alternative would have no impact on natural habitats or threatened and endangered species.

Impacts of the Preferred Alternative

The Preferred Alternative will impact approximately 66 acres of shrubby and forested habitat and approximately 9,990 linear feet of streams; no ponds will be impacted.

In a letter dated July 2, 2021, the USFWS concurred with KDOT’s NLEB determination of may affect, but not likely to adversely affect and KDOT’s determination that the project will have no effect on Mead’s Milkweed or the Western Prairie Fringed Orchid. The USFWS concluded the letter by stating “No further coordination with the Service is required pursuant to the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) for this project. Should project plans change, or if additional information on listed or proposed species or critical habitat becomes available, this determination may be reconsidered. Until the ongoing project is

complete, we recommend that you contact this office every 90 days from the date of this letter to ensure that listed species presence/absence information for the proposed project is current.” The USFWS concurrence letter is available in **Appendix F**. If changes to the alignment of the Preferred Alternative occur during the Design-Build phase of the project that cause it to go outside of the NEPA study area, KDOT will coordinate with the USFWS to obtain clearance for additional area. KDOT will be responsible for ensuring the listed species presence/absence information remains current during project construction.

In an e-mail dated June 18, 2021, KDOT informed KDWP that per the Programmatic Agreement between KDOT and KDWP, the project does not meet any of the Environmental Review Criteria and will be exempted. A copy of the e-mail is located in **Appendix F**.

3.4 Physical Environment

The following sections describe the physical environment features present in the study area including air quality, energy and emissions; noise; visual features; hazardous material sites; and utilities, and the anticipated effects of the No-Build Alternative and Preferred Alternative.

3.4.1 Air Quality and Greenhouse Gas Emissions

The EPA uses the term “attainment area” to describe those areas where air quality meets health standards for particular air borne pollutants. Johnson County is currently classified by the EPA as an attainment area for all six criteria pollutants comprising the National Ambient Air Quality Standards (NAAQS). The NAAQS were established by the EPA as required by the Federal Clean Air Act (CAA).

The CAA, as amended by the Clean Air Act Amendments of 1990, and other rules and regulations, such as the Control of Hazardous Air Pollutants from Mobile Sources rule promulgated by the EPA, specifies environmental policies and regulations to promote and ensure acceptable air quality. These policies and regulations were adopted in the Final Conformity Rule (40 CFR Parts 51 and 93). The EPA delegates authority to the KDHE for monitoring and enforcing air quality regulations in Kansas.

The CAA defines conformity as the following:

“Conformity to an implementation plan’s purpose of eliminating or reducing the severity and number of violations of the NAAQS and achieving expeditious attainment of such standards; and that such activities will not:

- Cause or contribute to any new violation of any NAAQS in any area;

- Increase the frequency or severity of any existing violation of any standard in any area; or
- Delay timely attainment of any standard or any required interim emission reductions or other milestones in any area.”

The Federal Clean Air Act Amendments of 1990 require states to adopt the NAAQS. These standards were established to limit the amount of sulfur dioxide (SO₂), particulates (PM10 and PM2.5), carbon monoxide (CO), ozone (O₃), nitrogen dioxide (NO₂), and lead (Pb) in the air.

3.4.1.1 Air Quality and Greenhouse Gas Emissions Impacts

To evaluate the potential greenhouse gas (GHG) emissions from the No-Build and Preferred alternatives, the MARC EMME™ travel demand model was used to develop different alternatives for the year 2050: No-Build and Preferred Alternative. The different alternatives were coded into the EMME™ model to estimate the daily vehicle miles traveled (VMT). Because U.S. 69 is a major corridor within the Kansas City region and can affect traffic patterns throughout various parts of the city, VMT was summarized for the entire model area, which includes the nine-county Kansas City metropolitan area. The results are shown below in **Table 3-14**. It can be seen in the table that the Preferred Alternative results in a reduction of daily VMT since it reduces congestion and improves corridor throughput over a No-Build Alternative.

Table 3-14: 2050 Daily Vehicle Miles Traveled in the Kansas City Region

Scenario	Daily VMT
No-Build Alternative	63,236,191
Preferred Alternative	63,229,714

Source: EMME™ Model

To estimate the GHG savings from the reduced VMT, national emissions inventories developed by Transportation Economic Development Impact System (TREDIS®) were used to convert VMT to grams of emissions.

The *2019 FHWA Highway Statistics Series* allows each alternative to be compared to one another in terms of GHG emissions released. Additionally, an average miles traveled per gallon of fuel consumed can convert a VMT to an estimated Carbon Dioxide (CO₂) emission by using the EPA’s “Greenhouse Gases Equivalencies Calculator,” which calculates 8,887 grams of CO₂/gallon of gasoline and 10,180 grams of CO₂/gallon of diesel. The relative GHG emissions compared to the Preferred Alternative (Express Toll Lanes Alternative) are shown below in **Table 3-15**. This shows the Preferred Alternative has lower GHG emissions over the No-Build Alternative.

Table 3-15: Estimated Change in GHG Emissions vs Preferred Alternative

Scenario	Emissions (Metric Tons)			
	NO _x (Nitrogen Oxides)	SO ₂ (Sulfur Dioxide)	PM (Particulate Matter)	CO ₂ (Carbon Dioxide)
No-Build Alternative	0.0030	0.0000	0.0001	3.4388
Preferred Alternative	-	-	-	-

Impacts of the No-Build Alternative

The No-Build Alternative is anticipated to have a daily VMT that is 6,477 miles more than the Preferred Alternative, resulting in an increase in GHG emissions over the Preferred Alternative.

Impacts of the Preferred Alternative

The Preferred Alternative is anticipated to have a daily VMT that is 6,477 miles less than the No-Build Alternative, which ultimately results in fewer GHG emissions. The reduction in GHG emissions will provide a benefit throughout the U.S. 69 Corridor study area and the Kansas City region compared to the No-Build Alternative.

3.4.2 Traffic Noise

This section summarizes the traffic noise study that is being performed in accordance with FHWA standards and regulations (23 CFR Part 772) and KDOT’s *Highway Traffic Noise Analysis and Abatement Policy and Procedures*. The full noise study is included as **Appendix H** for reference.

3.4.2.1 Traffic Noise Methodology

Traffic noise is most commonly measured in “A-weighted” decibels (dBA). An A-weighted decibel corresponds to the manner in which the human ear perceives noise at different frequencies. Since traffic noise is generated by passing vehicles and traffic volumes generally fluctuate, an hourly equivalent sound level, or $L_{eq(h)}$, is used to measure traffic noise. The $L_{eq(h)}$ is the constant, average sound level that contains the same amount of sound energy over the time period as does the varying levels of actual traffic noise.

The project study area was divided into 23 separate Noise Sensitive Areas (NSAs) to group receptors influenced by similar noise sources. Receptors within approximately 700 feet of the project were generally included. Beyond this distance, noise impacts and any benefits provided by noise abatement are not anticipated. In certain locations, receptors were modeled further out to ensure all impacts were identified.

4,092 noise sensitive receptors were identified within the NSAs. The NSAs are defined as follows and are shown in **Figure 3-11**:

- NSA 1 : East of U.S. 69, south of 179th Street and west of Metcalf Avenue;
- NSA 2: North of 183rd Street and west of U.S. 69;
- NSA 3: South of 167th Street and east of U.S. 69;
- NSA 4: West of U.S. 69 between 167th Street and 179th Street;
- NSA 5: West of U.S. 69 and north of 167th Street;
- NSA 6: East of U.S. 69 between 159th Street and 151st Street;
- NSA 7: West of U.S. 69 between 159th Street and 151st Street;
- NSA 8: East of U.S. 69 between 151st Street and 143rd Street;
- NSA 9: East of U.S. 69 between 143rd Street and 135th Street;
- NSA 10: West of U.S. 69 between 151st Street and 143rd Street;
- NSA 11: West of U.S. 69 between 143rd Street and 135th Street;
- NSA 12: East of U.S. 69 and south of 132nd Street;
- NSA 13: East of U.S. 69 and north of 127th Street;
- NSA 14: West of U.S. 69 and south of 132nd Street;
- NSA 15: West of U.S. 69 and between 132nd Street and 127th Street;
- NSA 16: North of U.S. 69 between Antioch Road and Blue Valley Parkway;
- NSA 17: North of U.S. 69 between Antioch Road and 119th Street;
- NSA 18: West of U.S. 69 and north of 127th Street;
- NSA 19: South of U.S. 69 between Antioch Road and 119th Street;
- NSA 20: East of U.S. 69 and north of 119th Street;
- NSA 21: West of U.S. 69 and north of 119th Street;
- NSA 22: West of U.S. 69 and north of College Boulevard; and,
- NSA 23: Between 103rd Street and I-435, west of U.S. 69.

In accordance with FHWA requirements, detailed computer models were created using the FHWA TNM 2.5 software. The computer models were validated to within acceptable tolerances of field-measured traffic noise data and were used to predict loudest-hour equivalent traffic noise levels for noise sensitive receptors in the vicinity of the U.S. 69 Express project.

3.4.2.2 Existing Conditions

The majority of the noise sensitive receptors are residential, which fall under Activity Category B in FHWA's Noise Abatement Criteria (NAC). Other noise sensitive receptors being analyzed for impacts include trails, tennis courts, baseball/softball fields, soccer fields, two churches, a hospital, and other Activity Category C receptors.

FHWA and KDOT define a noise impact as occurring when either noise levels approach (within 1 dB) or exceed NAC or future noise levels substantially exceed (more than 10 dB) existing noise levels. NAC for Activity Categories B and C correlates to an $L_{eq(h)}$ of 67 dBA. **Table 3-16** summarizes the NAC by activity category. In the existing condition, the worst hourly noise levels approach or exceed the NAC at 972 receptors.

Peak hourly noise levels will be analyzed at all noise sensitive receptors for the No-Build and Preferred Alternative. Wherever noise impacts are identified in the Preferred Alternative, abatement will be considered and analyzed using the Feasibility and Reasonableness Criteria set forth in KDOT's *Highway Traffic Noise Analysis and Abatement Policy and Procedures*.

3.4.2.3 Traffic Noise Impacts

This section discusses the noise impacts associated with the No-Build Alternative and the Preferred Alternative. Vehicle noise is a combination of noise produced by the engine, exhaust, and tires. Heavier traffic volumes, higher speeds, and a greater number of trucks all increase the loudness of traffic noise. Traffic noise impacts occur when the predicted noise levels approach or exceed the NAC (with "approach" defined in the KDOT Noise Policy as reaching one decibel less than the NAC values listed in **Table 3-16**) or when the predicted noise levels substantially (greater than a 10 dB increase) exceed the existing noise level. 972 noise impacts were identified under the existing (2019) conditions, 1,156 noise impacts were identified for the No-Build Alternative (2050 design year), and 1,462 noise impacts were identified for the Preferred Alternative (2050 design year). Noise impacts for each NSA are summarized in **Table 3-17**. All impacts identified were due to noise levels approaching the NCA value. No locations are predicted to have a substantial increase in noise levels. Detailed information on the noise impacts can be found in the Noise Study Report located in **Appendix H**.

Table 3-16: Noise Abatement Criteria

Hourly Equivalent A-Weighted Sound Level (decibels (dB(A)))			
Activity Category	Activity Criteria ¹ L _{eq(h)} ²	Evaluation Location	Activity Description
A	57	Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B ³	67	Exterior	Residential.
C ³	67	Exterior	Active sport areas, amphitheatres, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52	Interior	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E ³	72	Exterior	Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A- D or F.
F	--	--	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing.
G	--	--	Undeveloped lands that are not permitted.

1. The L_{eq(h)} Activity Criteria values are for impact determination only, and are not design standards for noise abatement measures.
2. The equivalent steady-state sound level which in a stated period of time contains the same acoustic energy as the time-varying sound level during the same time period, with L_{eq(h)} being the hourly value of L_{eq}.
3. Includes undeveloped lands permitted for this activity category.

Table 3-17: Summary of Traffic Noise Impacts

NSA	Total Receptors	Number of Impacted Receptors		
		Existing (2019)	No-Build Alternative Design Year (2050)	Preferred Alternative Design Year (2050)
1	1	0	0	0
2	2	1	1	1
3	4	0	1	1
4	6	0	2	2
5	189	27	70	69
6	232	40	65	85
7	193	37	52	77
8	163	31	32	57
9	319	118	142	183
10	207	51	53	74
11	143	32	34	52
12	221	116	124	144

NSA	Total Receptors	Number of Impacted Receptors		
		Existing (2019)	No-Build Alternative Design Year (2050)	Preferred Alternative Design Year (2050)
13	138	19	27	22
14	92	5	18	36
15	75	21	22	33
16	347	115	115	137
17	519	103	111	143
18	3	1	1	1
19	512	103	113	155
20	356	72	80	91
21	70	0	0	0
22	16	0	1	3
23	284	80	92	96
Total:	4,092	972	1,156	1,462

The Preferred Alternative is predicted to result in approximately 300 more noise impacts in the 2050 design year than the No-Build Alternative without any noise abatement implemented. The average increase in noise without abatement is predicted to be less than 2 dBA. For reference, a 3 dBA change is considered a “Barely Perceptible Change” to the human ear. However, because the Preferred Alternative is a Type I project, noise abatement is analyzed and has the opportunity to be implemented where feasible and reasonable. The noise abatement measures meeting these qualifications, discussed further in the following sections, help mitigate these impacts and are predicted to benefit over 1,700 total receptors, including both impacted and non-impacted receptors. With the qualifying abatement measures implemented, just over 600 noise impacts are predicted to still exist in the 2050 design year, fewer than the existing (2019) conditions and No-Build Alternative (2050 design year). **Table 3-18** summarizes the total number of impacted receptors for the 2019 (existing), 2050 No-Build, 2050 Build with Abatement, and 2050 Build without Abatement scenarios.

Table 3-18: Comparison of Impacted Receptors by Scenario

Existing (2019)	2050 No-Build	2050 Build without Abatement	2050 Build with Abatement
972	1,156	1,462	612

3.4.2.4 Noise Abatement Criteria

FHWA and KDOT require that feasible and reasonable noise abatement measures be considered and evaluated for the benefit of all predicted build-condition traffic noise impacts. Feasibility and reasonableness are distinct and separate considerations. Feasibility is the combination of acoustical and engineering factors considered in the evaluation of a noise barrier, such as topography, access, drainage, safety, and

maintenance. Reasonableness is the consideration of the social, economic, and environmental factors considered in the evaluation of a noise barrier. The 2011 KDOT Noise Policy, reviewed and approved by FHWA, was used to determine whether noise abatement would be reasonable for impacted receptors; however, because locations of the project area had been evaluated as part of a 2004 Environmental Assessment which recommended noise abatement, and to avoid evaluating different parts of the project with significantly different reasonableness criteria, the noise reduction design goal and cost effectiveness criteria were modified for this study to match the criteria from the previous study.

Feasibility criteria specifically include:

- Safety: The noise barrier shall not excessively restrict sight distances, restrict drainage, or exacerbate potential flooding.
- Maintenance: Access is needed to both sides of the barrier.
- Acoustic Considerations: An acoustically feasible noise barrier must achieve at least a five dB(A) highway traffic noise reduction for 80 percent of first row impacted receptors and 2/3 of all impacted receptors.

Reasonableness criteria used in the analysis, which meet the requirements outlined in 23 CFR 772.13(d)(2), specifically include:

- Noise Reduction Design Goal: In line with 23 CFR 772.13(d)(2)(iii), the noise barrier must achieve a minimum of seven (7) decibel reduction at a minimum of one (1) benefitted receptor. This threshold makes the possibility of noise abatement being considered reasonable more likely than the 2011 policy goal, which requires a majority of benefitted receptors to achieve a minimum of 10 decibel insertion loss.
- Cost: The cost threshold was measured in terms of square feet of noise barrier. A reasonable wall was considered one that has a maximum of 1,800 square feet of wall per benefitted receptor. This number was calculated based on the cost allowance and the cost per square foot of wall used in the 2004 EA, which were a maximum of \$36,000 per benefitted receptor and \$20/square feet of wall at the time of the study. A minimum of five (5) dB insertion loss per receptor was used to determine a benefitted receptor. Other receptors not impacted but receiving a benefit are counted in the evaluation (non-impacted benefitted receptors). This threshold makes the possibility of noise abatement being considered reasonable more likely than the 2011 policy, which determines a maximum of \$30,000 per benefitted receptor to be considered cost effective and only counts receptors with a seven (7) decibel insertion loss as benefitted.

- Public Approval: Viewpoints of benefited receptors are solicited via a ballot. Owners and tenants at non-owner occupied residences are each given the opportunity to vote. A noise barrier shall be permitted when 70 percent or more of the responses received indicate approval of the barrier.

See **Appendix H** for more information on the feasibility and reasonableness criteria utilized for this project.

3.4.2.5 Potential for Noise Abatement

The potential for noise barriers was analyzed for every receptor predicted to be impacted in the Preferred Alternative. Generally, the barriers were analyzed along the shoulder of U.S. 69 or near the ROW line depending on the topography of the area.

Fourteen (14) noise barriers were determined to be both feasible and reasonable per the criteria used and will benefit 1,783 receptors. Additional information on the noise walls can be found in the Noise Study Report located in **Appendix H**.

3.4.3 Visual

The study area is located in the Osage Cuestas physiographic region of Kansas. The Osage Cuestas is a hill-plain, broad-terraced panorama with the eastern slopes of the hills being steeper than the western slopes.

The visual environment within the study area can be divided along the U.S. 69 corridor at 167th Street. The visual environment to the north of 167th Street consists mostly of urban/residential areas, scattered woodland and riparian zones, and scattered parks, greenways, and open space. The visual environment to the south of 167th Street consists of gently rolling fields used as agricultural grassland, and scattered woodland and riparian zones. There are scattered wetlands and recreational areas located on both sides of U.S. 69. Visual resources are identified on **Figure 3-12**.

3.4.3.1 Visual Quality Rating

The study area can be divided into discrete units each having consistent visual characteristics and providing a uniform visual experience. These units can be thought of as “outdoor rooms,” each having a unique, internally consistent character and use. The boundaries of these visual environments occur where the visual character changes. The strongest manifestations of visual boundaries are topography (landforms) and landscape components (trees, water, open areas, developed land, etc.).

In order to assign a visual quality rating, the visually distinct areas within the study area were separated into “visual assessment units.” Visual assessment units were

determined by analyzing the topography of the area and studying the major landscape components by use of onsite observations and aerial photography. The quality of the visual environment can be collectively defined using the attributes of vividness, intactness, and unity. Vividness is the relative strength of the image, intactness is the visual integrity of the natural or man-made landscape and its freedom from encroaching elements, and unity is the overall visual harmony of a composition and the degree to which the various elements combine in a coherent manner.

The study area was divided into the following visual assessment units:

1. U.S. 69 Corridor North of 167th Street
2. U.S. 69 Corridor South of 167th Street

The relative quality of the visual assessment units was rated on a scale of low, moderately low, moderate, moderately high, or high and is presented in **Table 3-19**. A low visual quality rating represents a less attractive view from the road as compared to a high visual quality rating.

Table 3-19: Visual Quality Rating

Visual Assessment Unit	Visual Quality Rating
North of 167 th Street	Moderately Low to Moderate
South of 167 th Street	Moderately High

3.4.3.2 Notable Visual Resources

The most notable visual resources within the study area are the woodland areas, Indian Creek, Tomahawk Creek, Blue River, and the rural landscape and open space (**Figure 3-12**). Each of these areas possess a moderate or moderately high degree of visual quality.

Woodland Areas

Woodland areas possess a moderately high degree of visual quality and are located throughout the study area and mostly associated with streams, parks, or greenways. Although these areas are scattered within the study area, they provide vertical visual elements in a predominantly flat landscape.

Indian Creek

Indian Creek possesses a moderately high degree of visual quality and is characterized by a relatively narrow meandering stream with a wooded riparian fringe. The stream is crossed by U.S. 69 and flows into the Blue River.

Tomahawk Creek

Tomahawk Creek possesses a moderately high degree of visual quality and is characterized by a relatively narrow meandering stream with a wooded riparian fringe. The stream is crossed by U.S. 69 and flows into Indian Creek.

Rural Landscape and Open Space

Rural landscape and open space areas along the U.S. 69 corridor, south of 167th Street, consist of rolling grasslands, scattered ponds and wood lots, and the Blue River. These elements combine to give this area a moderately high visual quality rating.

3.4.3.3 Viewers

Visual impacts can vary substantially through a project area since landscape elements can vary in their degree of visual quality and in viewer concern. There are two distinct categories of views: 1) a view of the road, which represents individuals (visual receptors) that can observe the roadway from an adjacent vantage point or who would have desirable views interrupted by the road, and 2) a view from the road which represents viewers who are users of the proposed facility.

3.4.3.4 Visual Environment Impacts

In highway projects, visual quality impacts are determined by the degree of change that will occur in the visual environment as a result of building a new highway facility. Areas that possess a high degree of visual quality may be more sensitive to change in the visual environment than areas that possess a low or moderate degree of visual quality.

The degree in change of visual quality is also related to viewer response, or how individuals who can see the roadway from an adjacent vantage point respond to the change in view. The most sensitive visual receptors are those individuals located in the vicinity of the existing U.S. 69 corridor which would have the potential of undesirable views of a wider road.

The other category of viewer is the user of the roadway that responds to views from the road. Since the proposed project consists of widening an existing road, it is

anticipated that views from the roadway will have a minimal change and a minimal impact to the visual environment within the study area.

Impacts of the No-Build Alternative

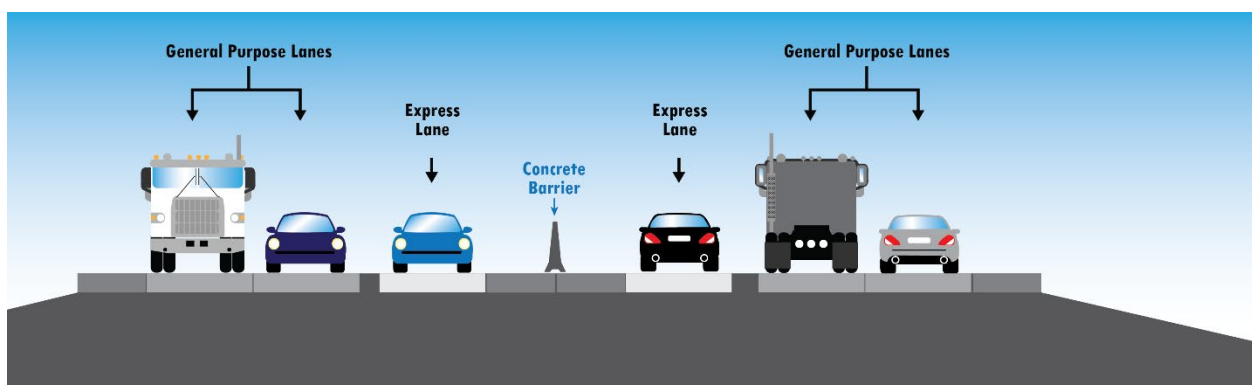
The No-Build Alternative would have no direct impacts to the visual environment of the study area. However, based on traffic projections, congestion on the roadway will continue to increase, which can be considered a visual impact. Since the residents living near the road are already experiencing views of the existing traffic, the visual impacts would be minor.

Impacts of the Preferred Alternative

The majority of the Preferred Alternative is within an urban area which has a moderately low to moderate visual quality rating. The portion of the study area south of 167th Street is more rural in nature and has a moderately high visual quality rating. However, with the low number of visual receptors south of 167th Street, there will be a low degree of visual impact.

Since most of the residents living near U.S. 69 are accustomed to living near a roadway, and the roadway changes will not be a substantial change to the visual environment, the visual impacts of the Preferred Alternative will be minor. The main change from the visual impacts of the Preferred Alternative will be the addition of toll lanes, toll signage/gantries, and noise walls at select locations along the U.S. 69 corridor. **Figure 3-13** below illustrates the typical section of the roadway with the ETLs.

Figure 3-13: Roadway Typical Section with Express Toll Lanes



In addition, the construction of 10-foot to 16-foot-tall noise walls near residential neighborhoods will provide a visual shield between the neighborhoods and U.S. 69. The construction of noise walls will create visual impacts to views from the road by replacing views of trees/shrubs and residential areas with views of noise walls.

3.4.3.5 Mitigation

The existing roadway alignment and ROW throughout the U.S. 69 corridor will allow the additional lanes to be easily integrated with the existing environment. In areas where existing bridges would need to be modified, extended, or rebuilt, they could be designed to mimic the existing structure and blend in with the surroundings to minimize impacts.

Visual impacts can be minimized in fill areas by revegetating soil slopes with native plants. In areas where the roadway is visible to sensitive visual receptors, landscaping with evergreen trees and native deciduous trees, shrubs grasses, and wildflowers could help to screen and soften the views of the road.

Visual impacts from noise walls can be mitigated by taking public input into consideration during the design process. This will allow the visual character of the neighborhoods to be maintained.

3.4.4 Hazardous Material Sites

The identification of potential hazardous material site locations within the study area was completed through a review of regulatory environmental program records, aerial photography, testing, and a visual survey from publicly accessible rights-of-way. Regulatory program records reviewed include the EPA Envirofacts Database and the KDHE databases.

The search identified four closed leaking underground storage tank (LUST) sites, one landfill, one Dry Cleaner facility, one wastewater treatment plant, two bridges with lead paint, and 14 locations of spills that have been closed by KDHE. Hazardous Material Sites within the study area can be seen on **Figure 3-8**.

3.4.4.1 Hazardous Material Site Impacts

Out of the sites identified above, only the landfill (APAC Stanley C&D Landfill) will be affected by the proposed project improvements. The APAC Stanley C&D Landfill is located on the north side of 167th Street, east of U.S. 69, approximately 400 feet east of the entrance to a KDOT maintenance facility. The impacts to the landfill from the Preferred Alternative are discussed in further detail below.

Impacts of the No-Build Alternative

No construction would occur under the No-Build Alternative; therefore, the No-Build Alternative would have no direct impacts to hazardous material sites within the study area.

Impacts of the Preferred Alternative

The Preferred Alternative will impact the entrance to the APAC Stanley C&D Landfill and require moving two monitoring wells that are currently located near the entrance. The Preferred Alternative will also acquire ROW adjacent to the landfill. The boundary shown on the existing landfill permit extends into the middle of 167th Street, therefore, any property acquisition adjacent to the landfill on the north side of 167th Street will require a permit modification to update the boundary.

KDOT performed asbestos and lead testing on the bridge structures along U.S. 69. The asbestos testing showed there was no asbestos on the bridges. The lead paint testing showed that the Antioch Road crossings over U.S. 69 (Bridge #0122 and Bridge #0284) were positive for lead. Lead remediation (worker and environmental protection) should be performed by the Design-Build Contractor in accordance with all KDOT specifications and provisions if impacts to the painted surfaces on Bridge #0122 or Bridge #0284 occur. At this time these two bridges are not anticipated to be impacted by the Preferred Alternative.

Mitigation

KDOT will coordinate with the APAC Stanley C&D Landfill to mitigate any impacts during the construction of the Preferred Alternative. KDOT coordinated with KDHE and in a letter dated October 28, 2021, KDHE proposed the below process, agreed upon by KDOT, to mitigate the landfill impacts. The letter from KDHE detailing the mitigation process is located in **Appendix F**.

1. The two impacted monitoring wells will be relocated prior to the start of construction to a suitable location outside the Project Area of Maximum Disturbance. The new locations of the monitoring wells will be coordinated by APAC and their engineer with KDHE.
2. KDOT will purchase ROW and establish Access Easements according to relevant protocol. These will not adversely impact Waste Limits or operations of the facility.
3. No waste, soil cover, or other landfill infrastructure, beyond what has been explicitly concurred on in this letter, will be disturbed during construction. Any disturbances beyond what has been agreed upon must be coordinated with KDHE.
4. APAC and KDOT will coordinate with KDHE to preserve the existing restrictive covenant on the permit property.
5. APAC will submit a request to transfer portions of their permitted property before any change in ownership of the currently permitted property occurs. This request shall include:

- a. A survey identifying the property remaining under permit 487 after transfer.
- b. A description of the prospective owner of the transferred property.
- c. A broad description of any anticipated use of transferred property, including alterations to the land and the construction of permanent structures.
- d. A description of facility operations that may be affected by the transfer of property, if any, including closure and post-closure activities.
- e. An application for non-significant permit modification.

3.4.5 Utilities

Electrical services within the study area are provided by Evergy Kansas Metro, INC. WaterOne provides water service and Johnson County Wastewater provides sewer lines within the project vicinity. In addition, there are two cell towers within or adjacent to the study area. Other utilities within the study area include resources from the following providers:

- Gas: Atmos Energy and Kansas Gas, Southern Star Gas, Magellan/Sinclair;
- Telephone: AT&T;
- Television: DIRECTV, Dish, Spectrum, Charter, and Comcast; and
- High-Speed Internet: Google Fiber, Spectrum, AT&T, DIRECTV, and Dish.

Figure 3-14 displays select utilities within the project study area.

3.4.5.1 Utility Impacts

This section discusses impacts of the No-Build Alternative and Preferred Alternative on the utility resources within the study area.

Impacts of the No-Build Alternative

No construction would occur under the No-Build Alternative; therefore, the No-Build Alternative would have no direct impacts to utilities within the study area.

Impacts of the Preferred Alternative

The Preferred Alternative will have impacts on underground and aboveground utilities. Relocation of some utilities within the corridor will be necessary to accommodate the project improvements. The extent and exact nature of other utility impacts will be determined during the final design phase of the project.

Other impacted utilities will likely be relocated in the same vicinity of their current location. Coordination with the public and private utility companies will be needed to ensure utility service is uninterrupted or only minimally disrupted during utility relocation and construction of the proposed improvements.

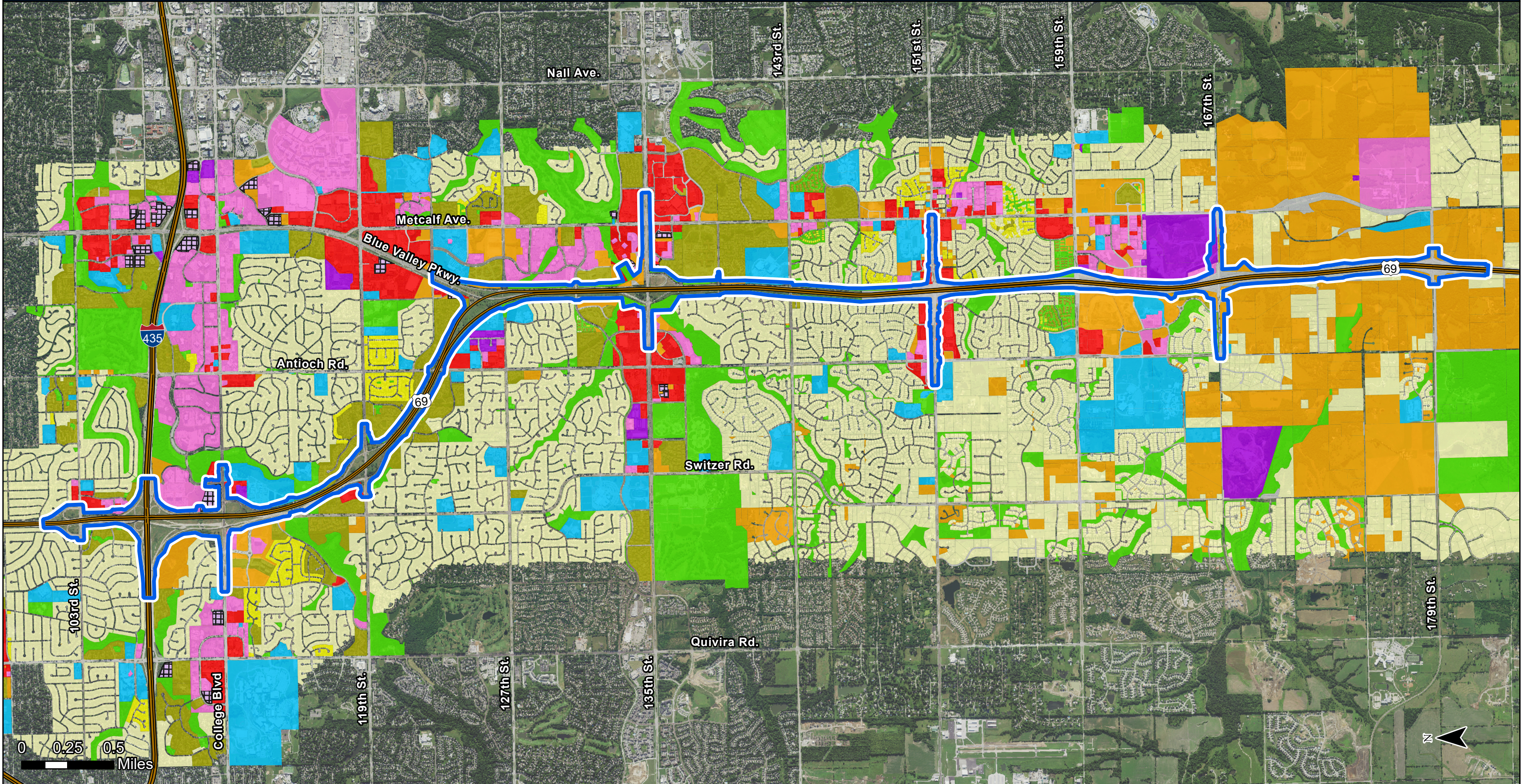
There are two major gas pipelines that cross the U.S. 69 corridor. Southern Star has a 26" gas pipeline on the south side of Indian Creek. Magellan/Sinclair has an 8" petroleum line on the north side of 143rd Street. Preliminary engineering efforts are accounting for each of these lines and currently do not impact either of these utilities. There are on-going coordination activities occurring with each of the utility owners. If an impact to either of these utilities arises, there will be additional levels of coordination that occur with the utility owner. KDOT will coordinate with all utility providers for utilities that need to be relocated to accommodate construction or for which plans will need to be developed to maintain continuous service during construction.

3.5 Streamlined Resource Summary

Table 3-20 summarizes the impacts of the Preferred Alternative to the resources discussed in the sections above.

Table 3-20: Summary of Impacts

Resource	Measure	No-Build Alternative	Preferred Alternative
Churches and Schools	Quantity	0	0
Community Resources (Police, Fire, Libraries, Hospitals)	Quantity	0	0
Environmental Justice Impacts (Displacements in EJ Areas)	Quantity	0	0
Economic	Positive / Negative Impacts	Negative	Positive
Park and Recreation Areas	Quantity and acres	0	5 parks. 9.54 acres
Bike Routes	Quantity and linear feet	0	10 Bike Routes 3,992 feet
Trails	Quantity and linear feet	0	8 Trails. 6,500 feet
Historical Sites or Districts	Quantity	0	0
Archeological Sites	Quantity	0	0
Section 4(f) Properties	Quantity	0	5 parks, 2 bike lanes, 8 recreational trails. 0 cultural resources
Section 6(f) Properties	Quantity	0	0
ROW and Permanent Easement Acquisitions	Acres	0	ROW - 15 Easement - 2
Displacements	Quantity	0	Residential - 1 Commercial - 0
Farmland Impacts	Acres	0	9.9
Wetland Impacts	Acres	0	0.65
Stream Impacts	Linear feet	0	9,992
Floodway Impacts	Acres	0	15.1
100-year Floodplain Impacts	Acres	0	22.1
500-year Floodplain Impacts	Acres	0	9.9
Woodland Vegetation	Acres	0	66
Noise Impacts (2050 Design Year)	Number of sensitive receptors with impacts	1,156	1,462
Contaminated and Regulated Material sites	Quantity and type	0	Landfill - 1 Bridges with lead paint - 2

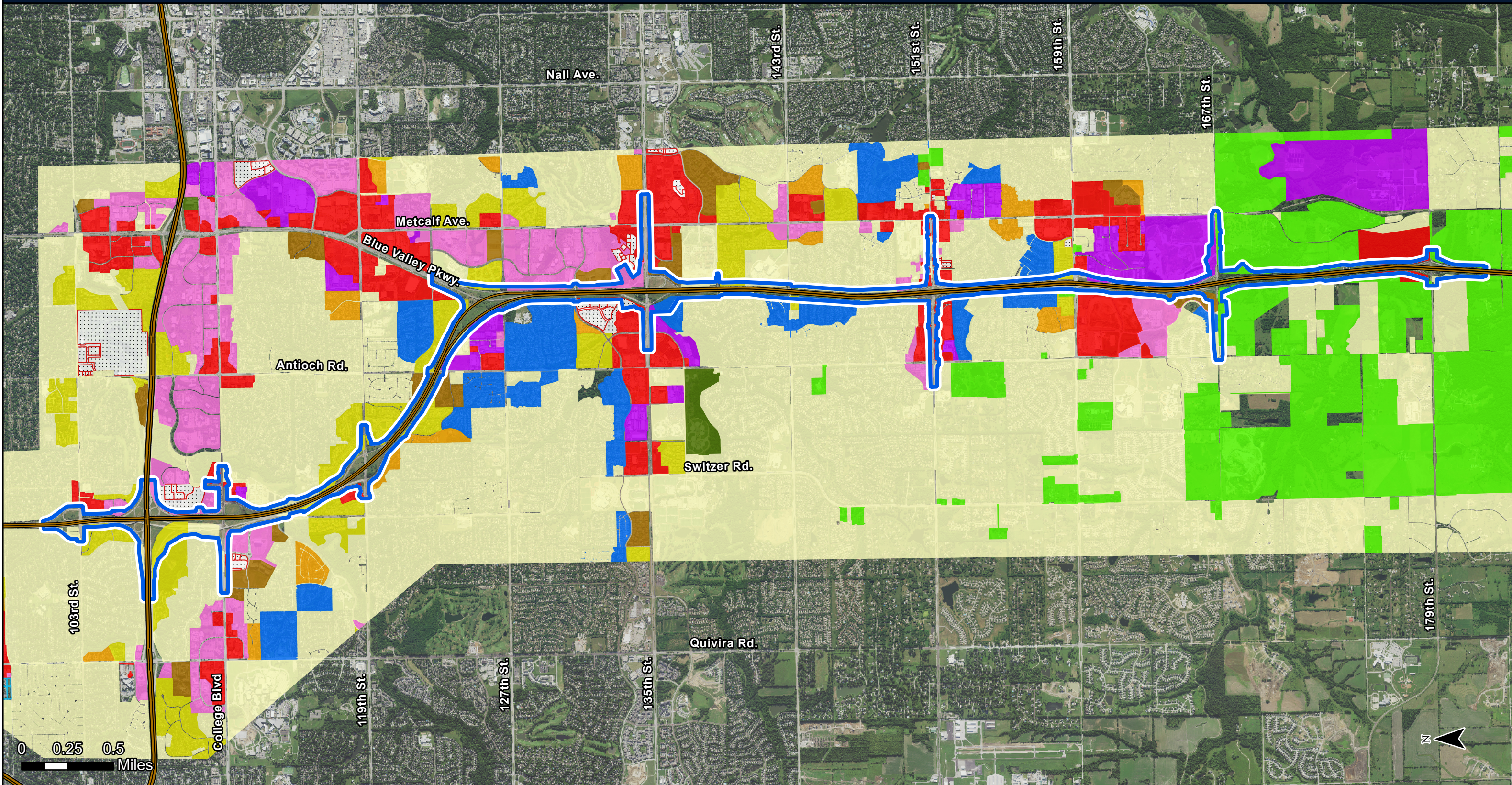


Legend

Study Area	Industrial	Right-of-Way
Agriculture / Vacant	Office	Multi-Family Residential
Commercial	Parks / Open Space	Two-Family Residential
Hotels / Motels	Public / Semi-Public	Single-Family Residential

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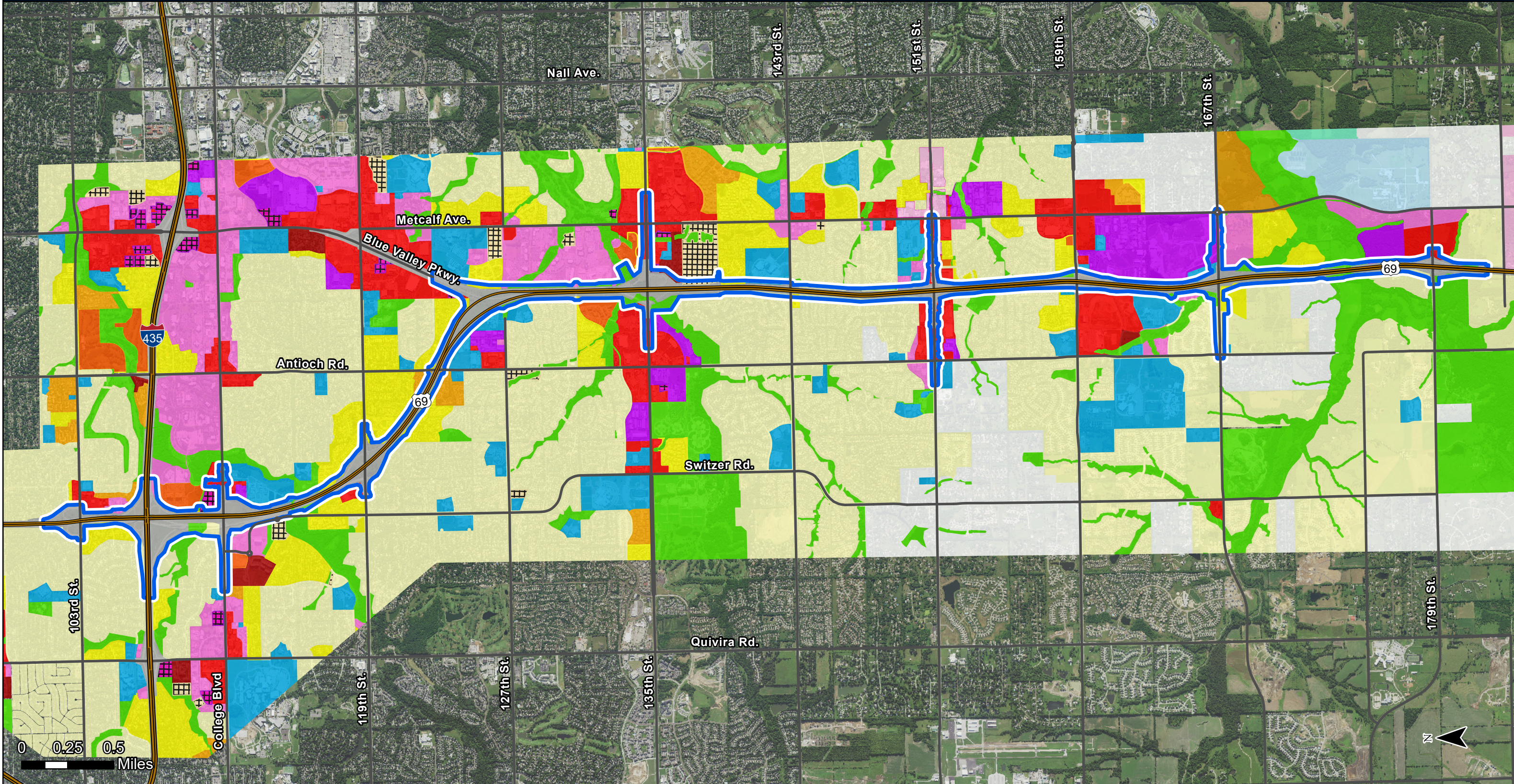




Legend			
	Study Area		Office
	Agricultural		Commercial
	Industrial		Two-Family Residential
	Mixed Land Use		Medium-Density Residential
	Single-Family Residential		High-Density Residential
	Small-Lot Single-Family Residential		Residential Cluster
	Recreation		Planned Residential

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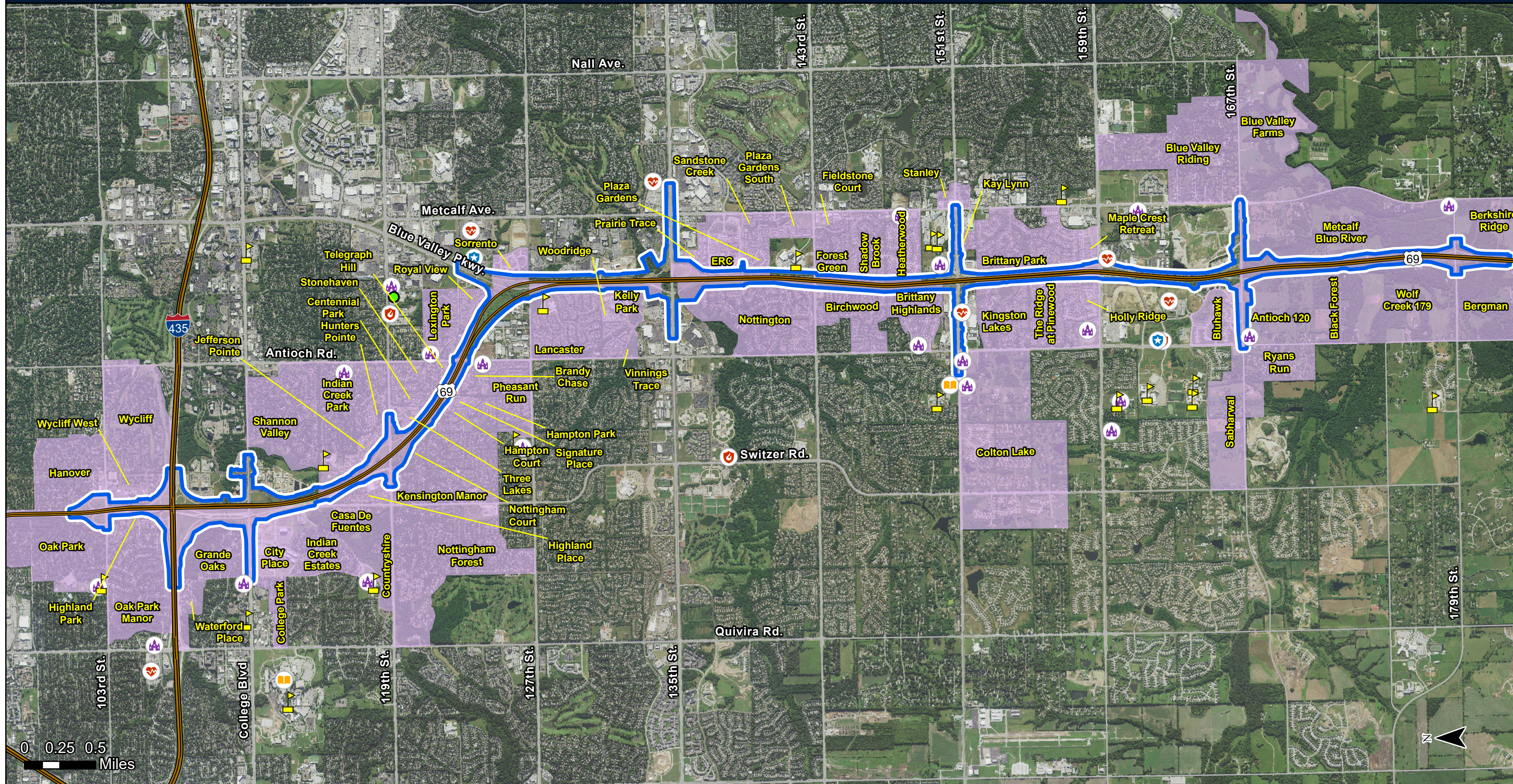













Legend	
	Study Area
	Agriculture / Vacant
	Commercial
	Mixed-Use
	151st Street Corridor DCP Area
	Office
	Hotels / Motels
	Industrial
	Existing Residential
	Public / Semi-Public
	Parks / Open Space
	Rural Policy Area
	Research & Development
	Right-of-Way
	GPA Planned Residential
	High-Density Residential
	Medium-High-Density Residential
	Medium-Density Residential
	Low-Density Residential
	Very-Low-Density Residential
	Elderly

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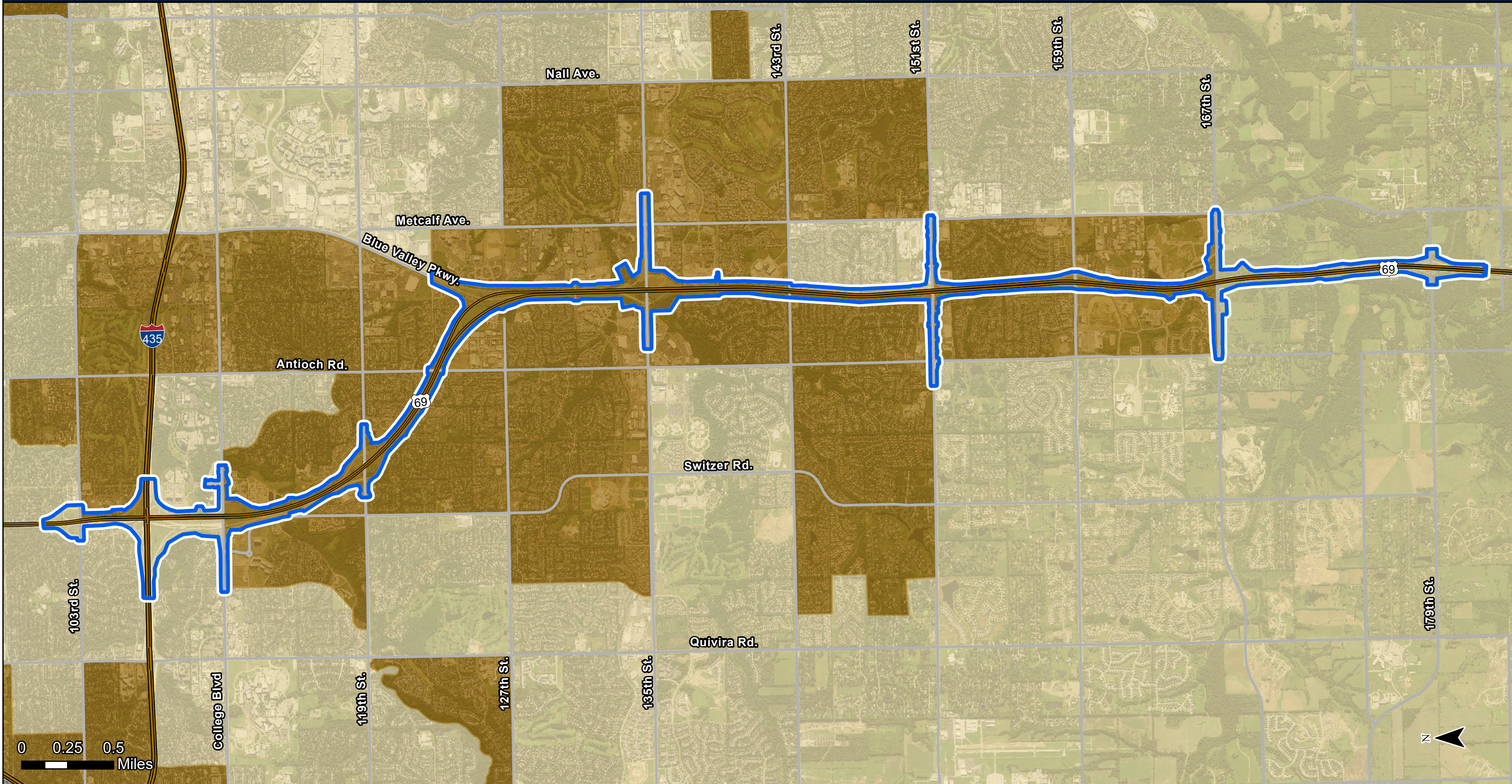




- Legend**
-  Study Area
 -  Neighborhoods
 -  Churches
 -  Schools
 -  Fire Station
 -  Police Station
 -  Hospital
 -  Library
 -  Community Center

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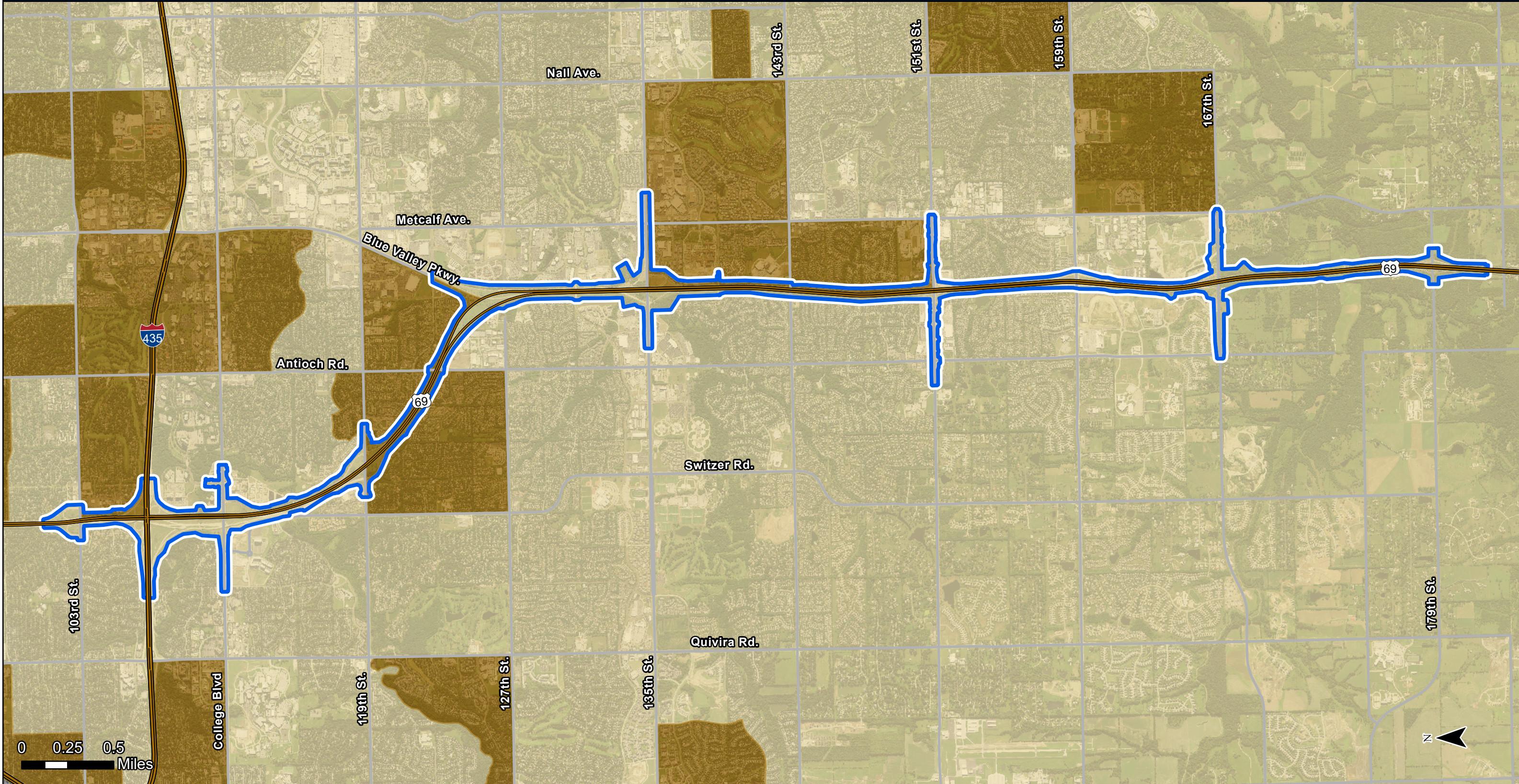


Legend

- Study Area
- Block Groups without Minority Populations
- Block Groups with Minority Populations

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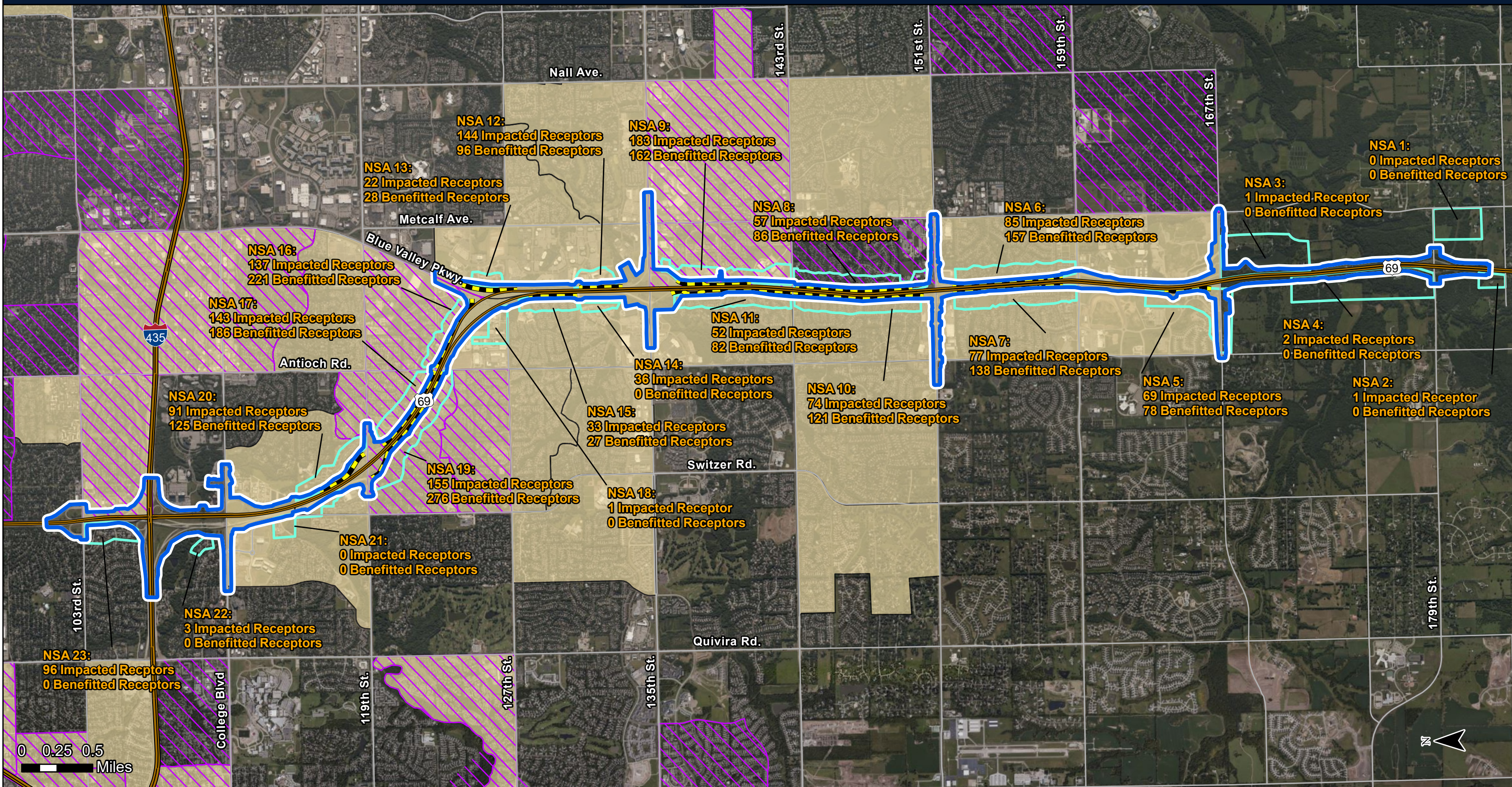




- Legend
- Study Area
 - Block Groups without Low-Income Populations
 - Block Groups with Low-Income Populations

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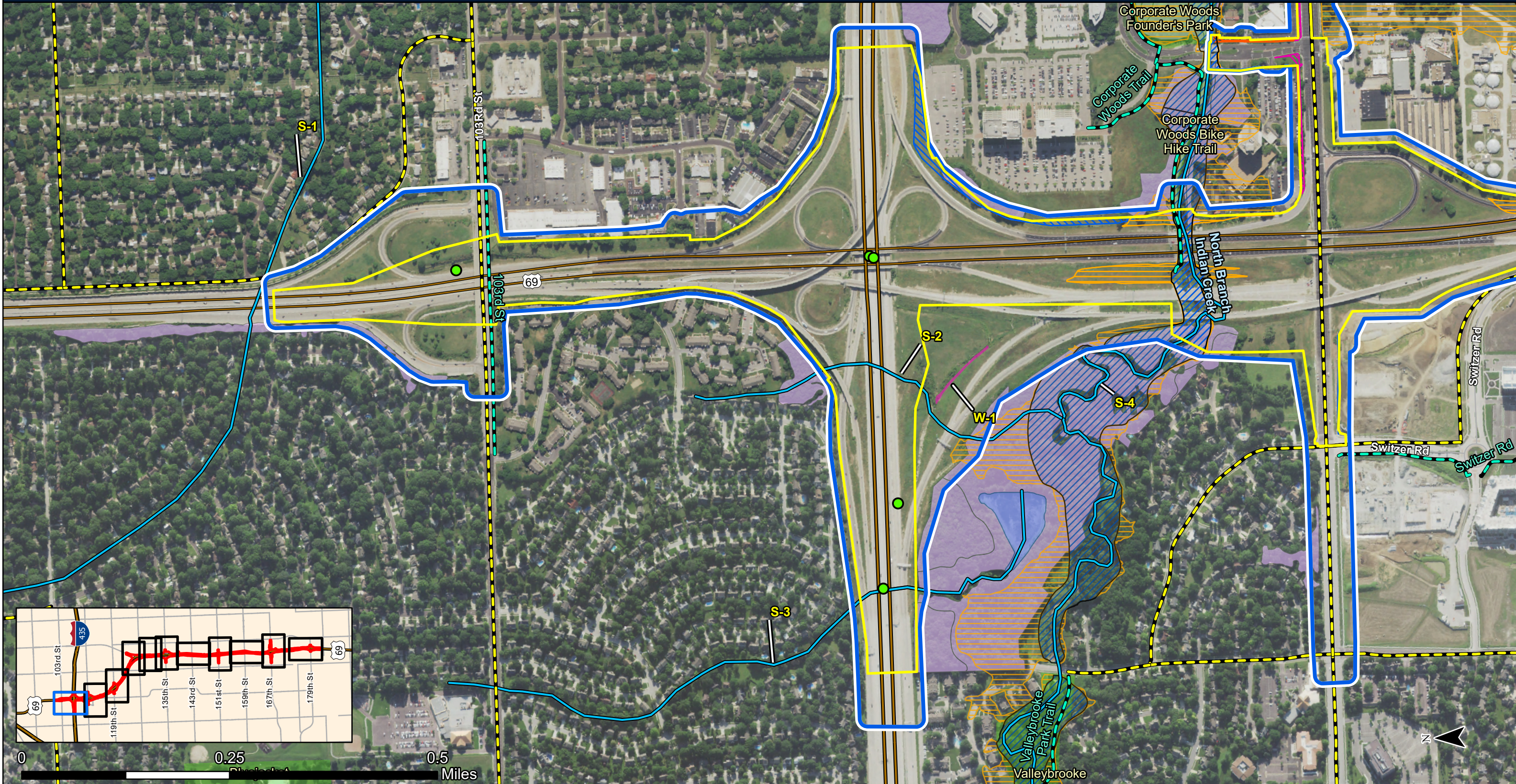


Legend

- Study Area
- Noise Sensitive Area
- Block Group with Minority EJ Populations
- Block Group with Low-income EJ Populations
- Preliminary Noise Wall - Feasible and Reasonable

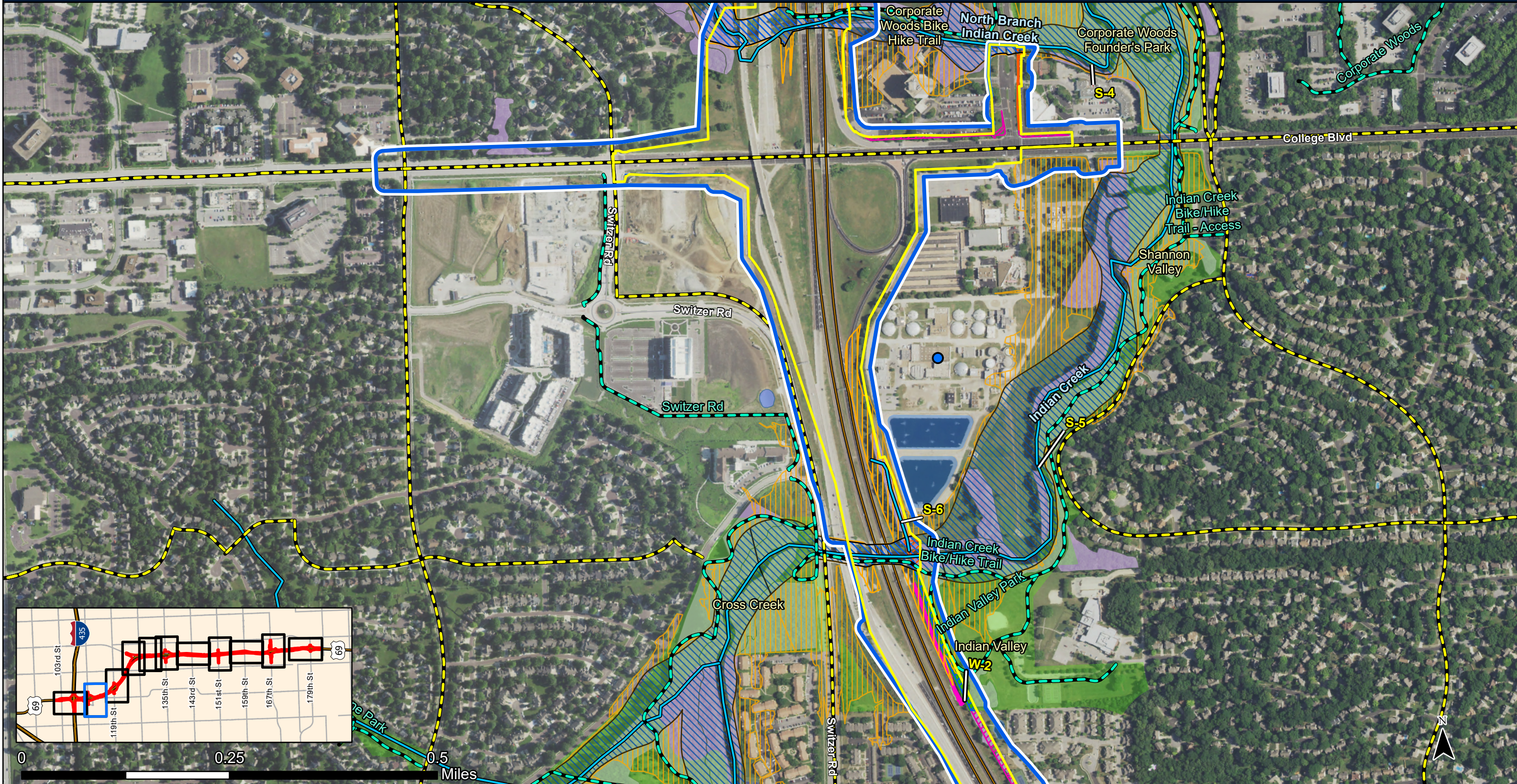
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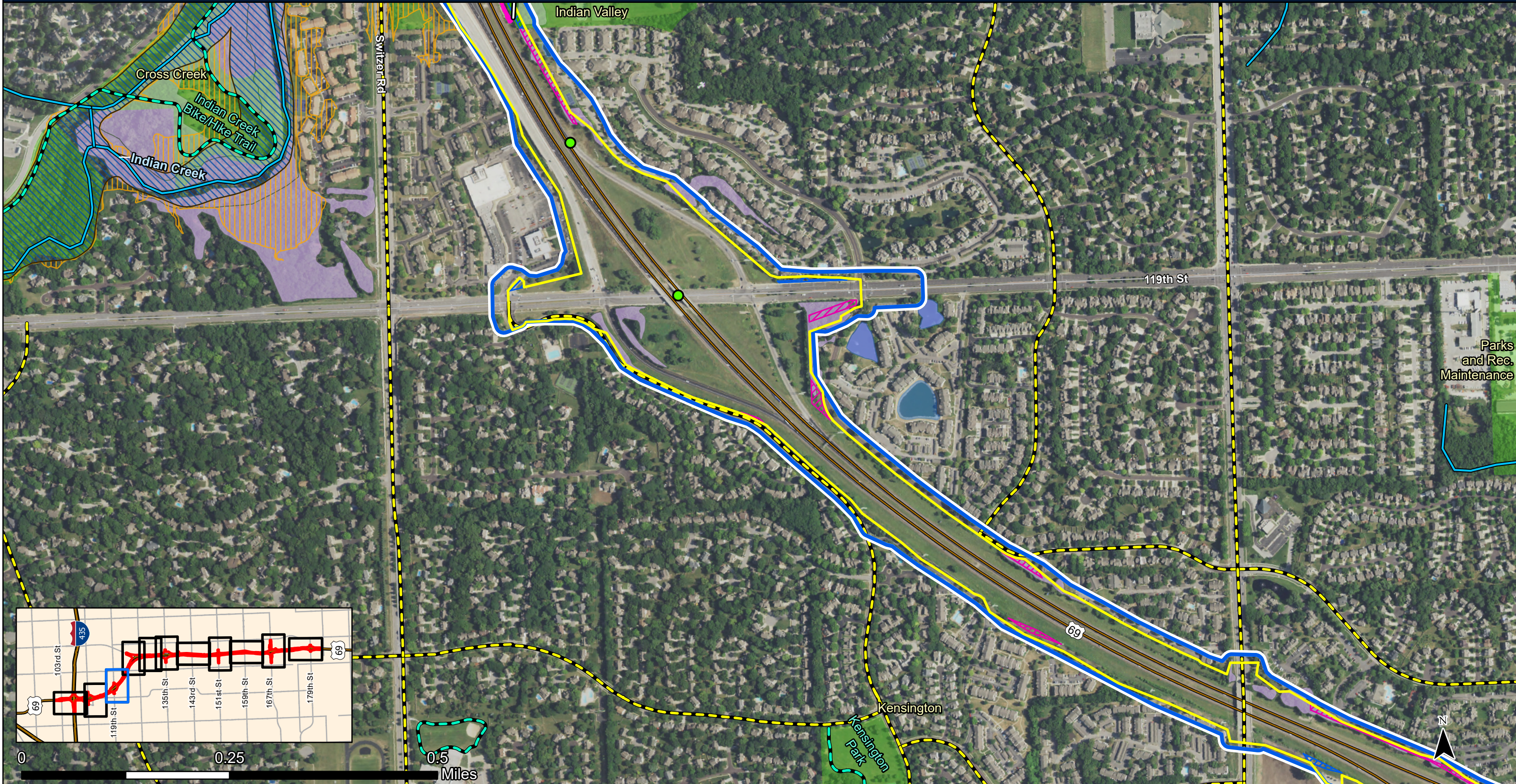
Legend	
	Study Area
	Construction Limits
	Displacements
	Hazardous Materials Bridges with Lead Paint
	Closed HazMat Site
	WWTP
	Dry Cleaner
	Landfill
	Bike Routes
	Trails
	Streams
	Floodway
	100-Year Floodplain
	Parks
	Wetlands
	Ponds
	Urban Woodland
	New Right-of-Way
	Temporary Easement
	Permanent Easement

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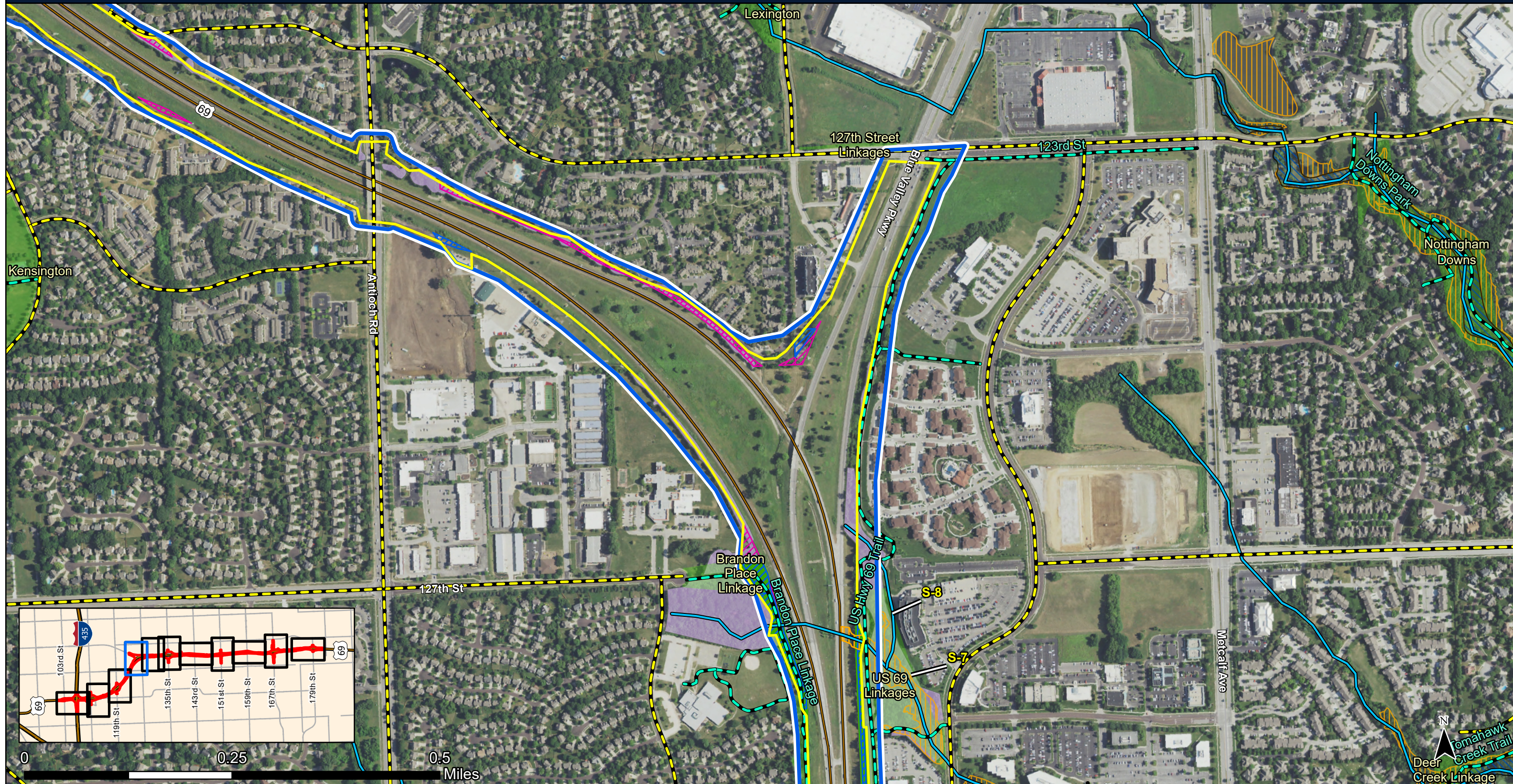
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	Construction Limits
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	Hazardous Materials Bridges with Lead Paint
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	WWTP
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	Landfill
	Bike Routes
	Trails
	Streams
	Floodway
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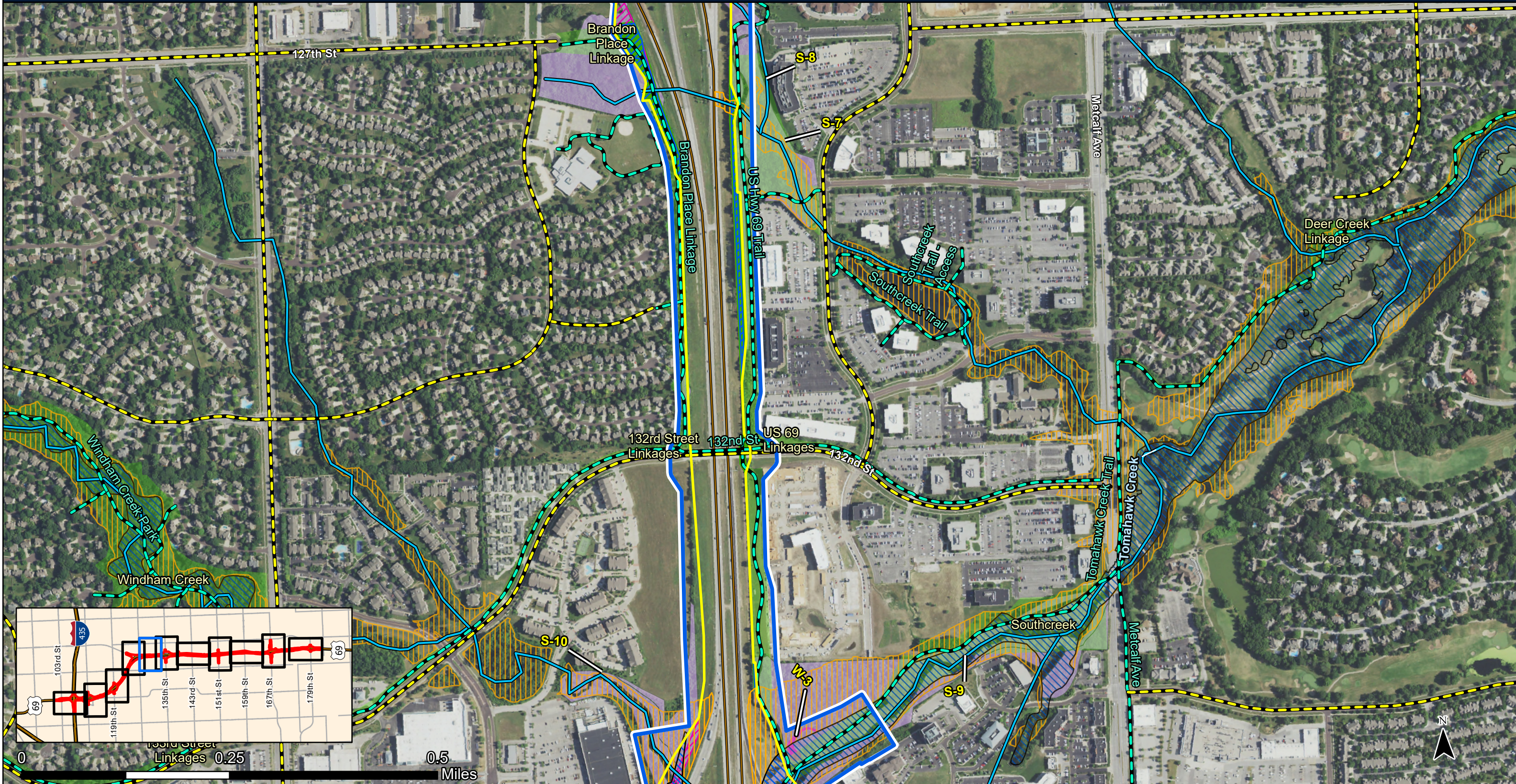


Legend	
	Study Area
	Construction Limits
	Displacements
	Hazardous Materials Bridges with Lead Paint
	Closed HazMat Site
	WWTP
	Dry Cleaner
	Landfill
	Bike Routes
	Trails
	Streams
	Floodway
	100-Year Floodplain
	Parks
	Wetlands
	Ponds
	Urban Woodland
	New Right-of-Way
	Temporary Easement
	Permanent Easement

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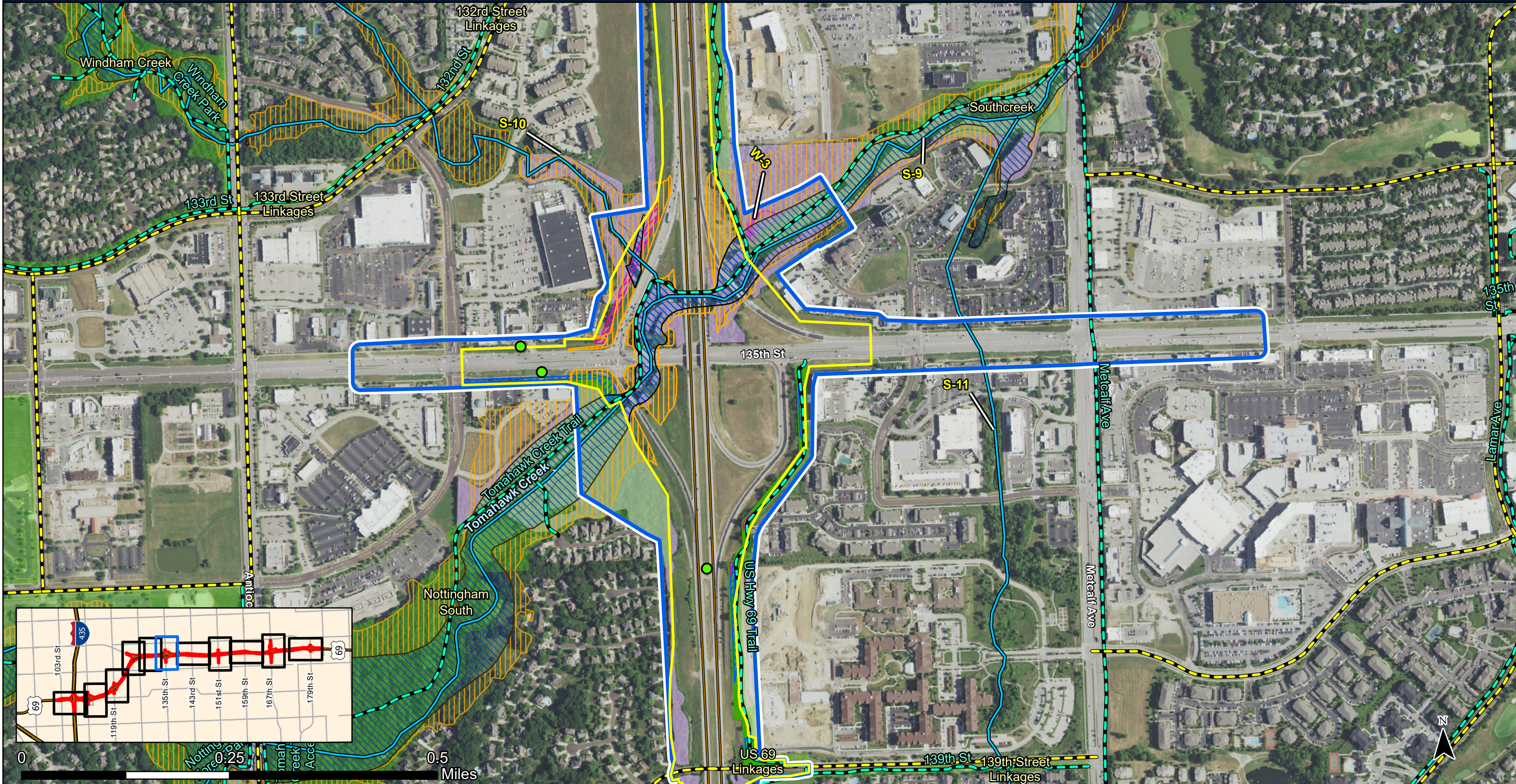


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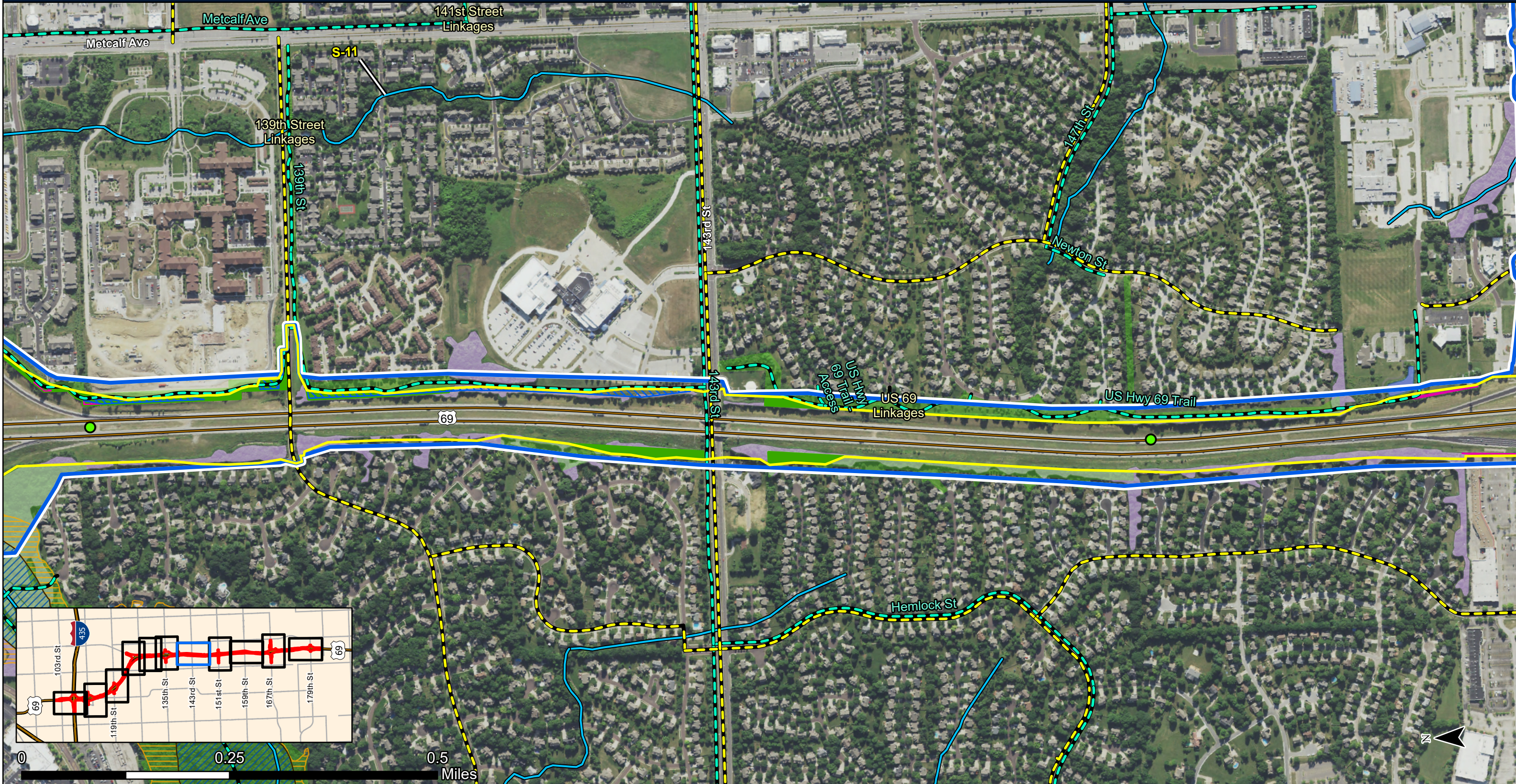
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	Construction Limits
	Displacements
	Hazardous Materials: Bridges with Lead Paint
	Hazardous Materials: Closed HazMat Site
	WWTTP
	Dry Cleaner
	Landfill
	Bike Routes
	Trails
	Streams
	Floodway
	100-Year Floodplain
	Parks
	Wetlands
	Ponds
	Urban Woodland
	New Right-of-Way
	Temporary Easement
	Permanent Easement

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Legend	
	Study Area
	Construction Limits
	Displacements
	Bridges with Lead Paint
	Closed HazMat Site
	WWTP
	Dry Cleaner
	Landfill
	Bike Routes
	Trails
	Streams
	Floodway
	100-Year Floodplain
	Parks
	Wetlands
	Ponds
	Urban Woodland
	New Right-of-Way
	Temporary Easement
	Permanent Easement

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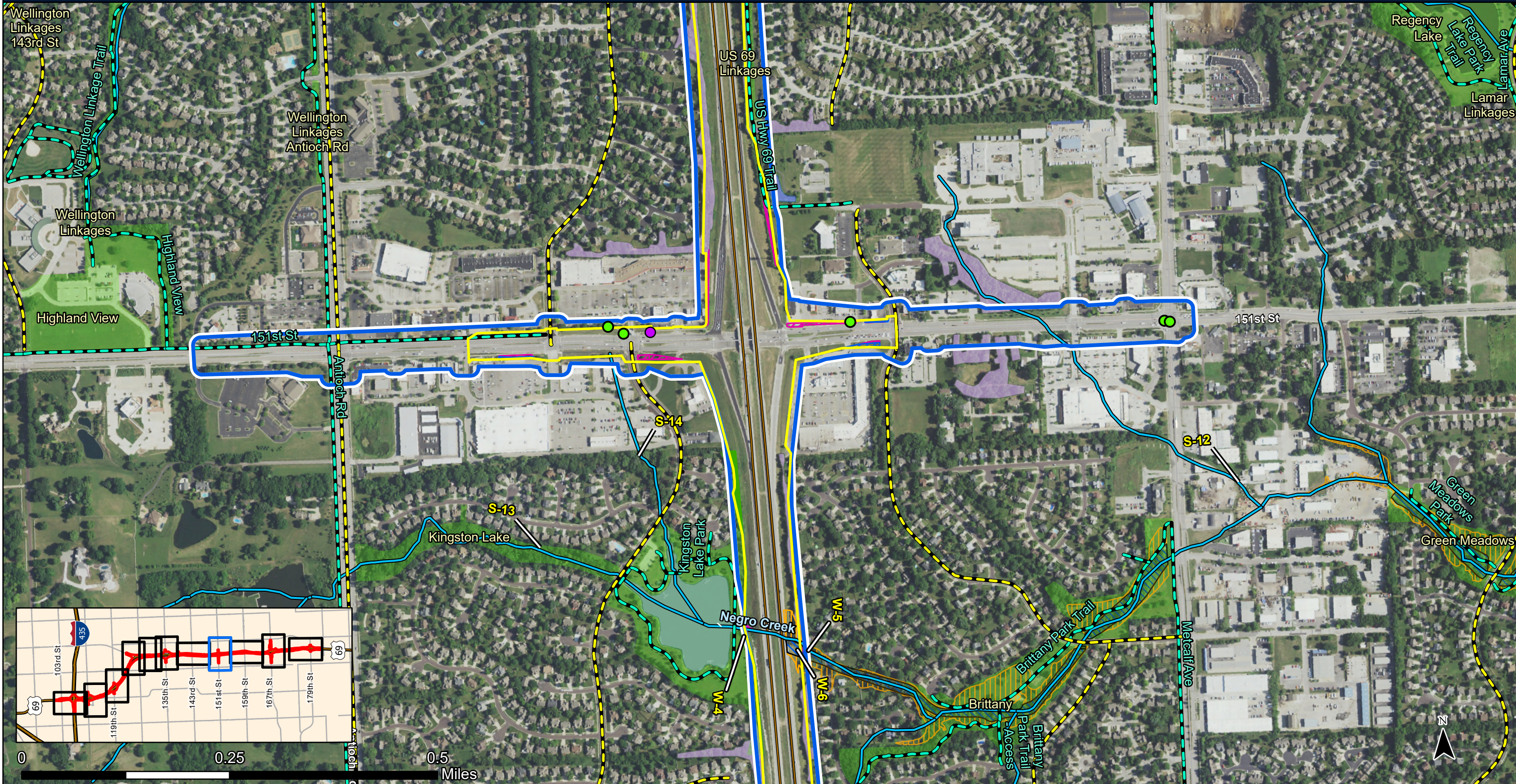


Legend	
Study Area	Hazardous Materials: Bridges with Lead Paint
Construction Limits	Closed HazMat Site
Displacements	WWTP
Landfill	Dry Cleaner
Bike Routes	Trails
100-Year Floodplain	Streams
Parks	Floodway
Wetlands	Urban Woodland
Ponds	New Right-of-Way
Urban Woodland	Temporary Easement
New Right-of-Way	Permanent Easement

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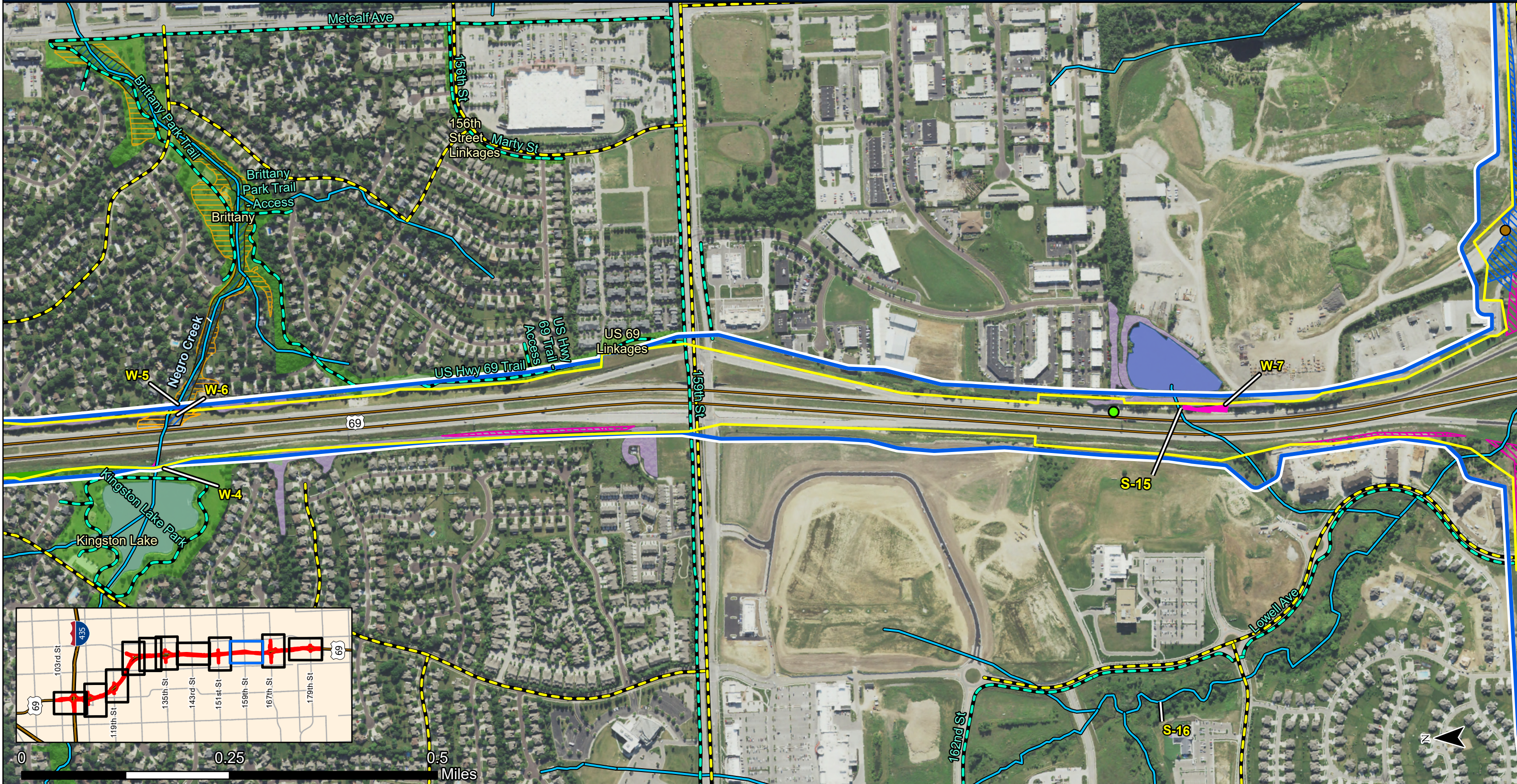
Preferred Alternative Impacts

Figure 3-8



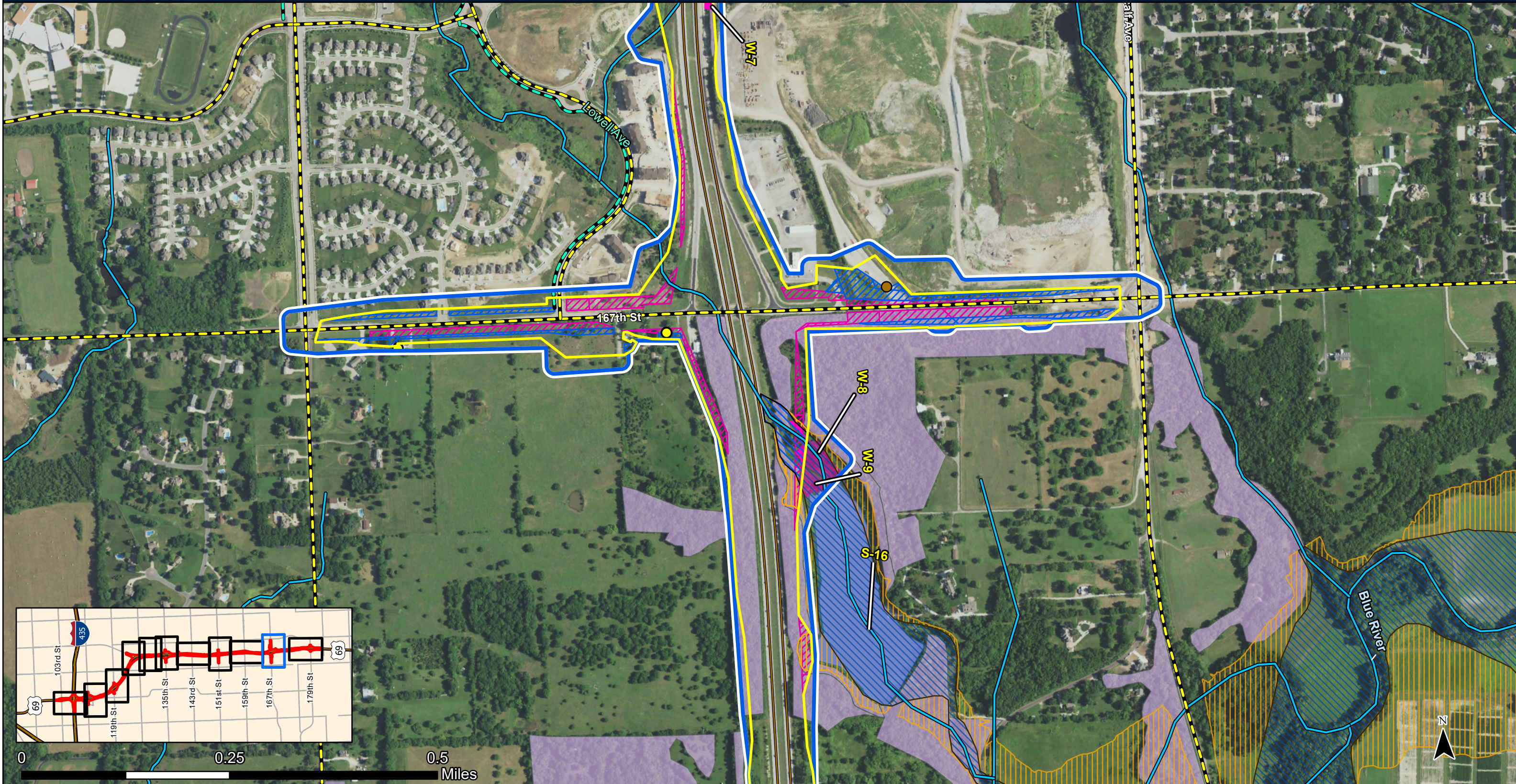
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	Construction Limits
	Displacements
	Hazardous Materials: Bridges with Lead Paint
	Closed HazMat Site
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	Urban Woodland
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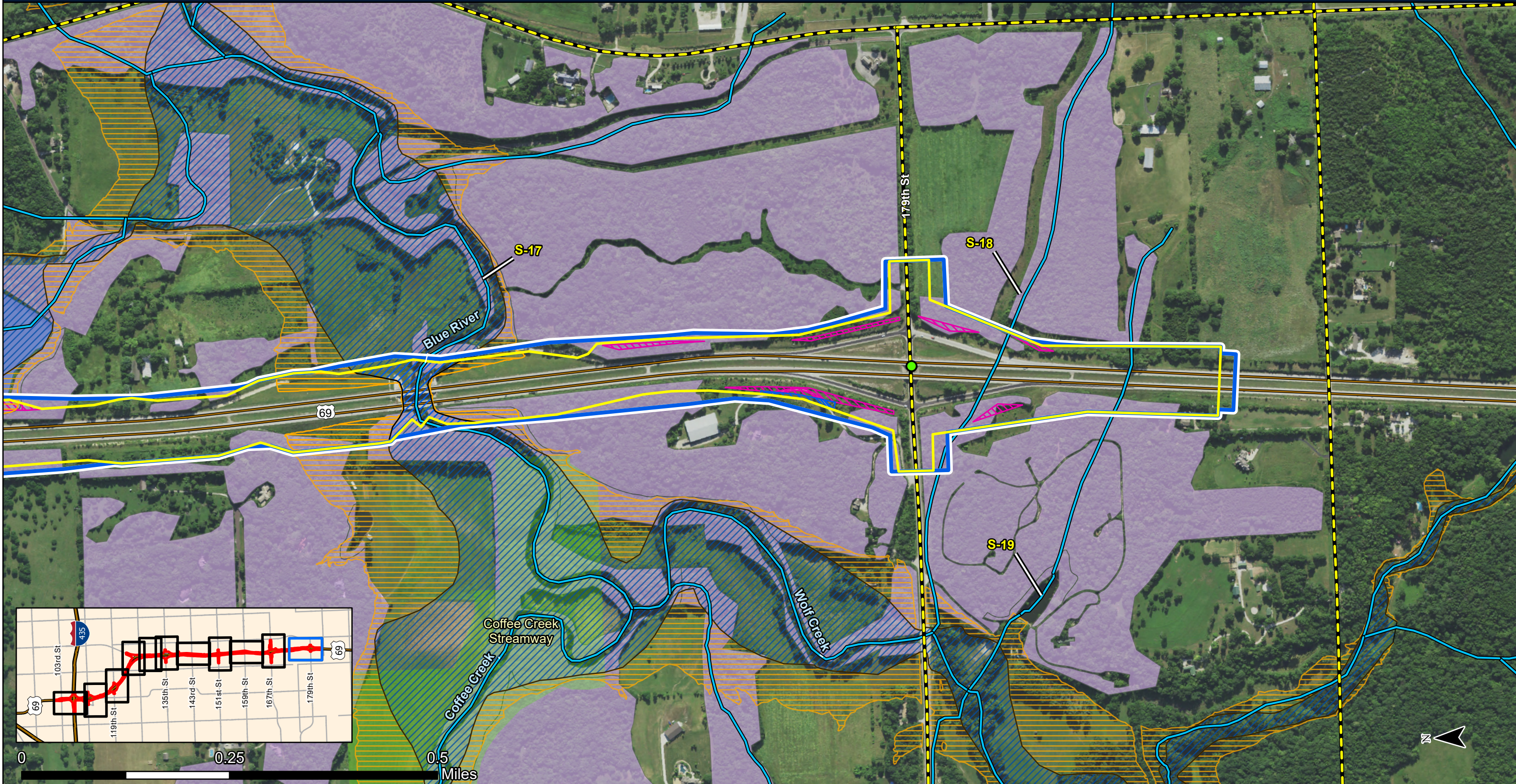
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	Construction Limits
	Displacements
	Hazardous Materials: Bridges with Lead Paint
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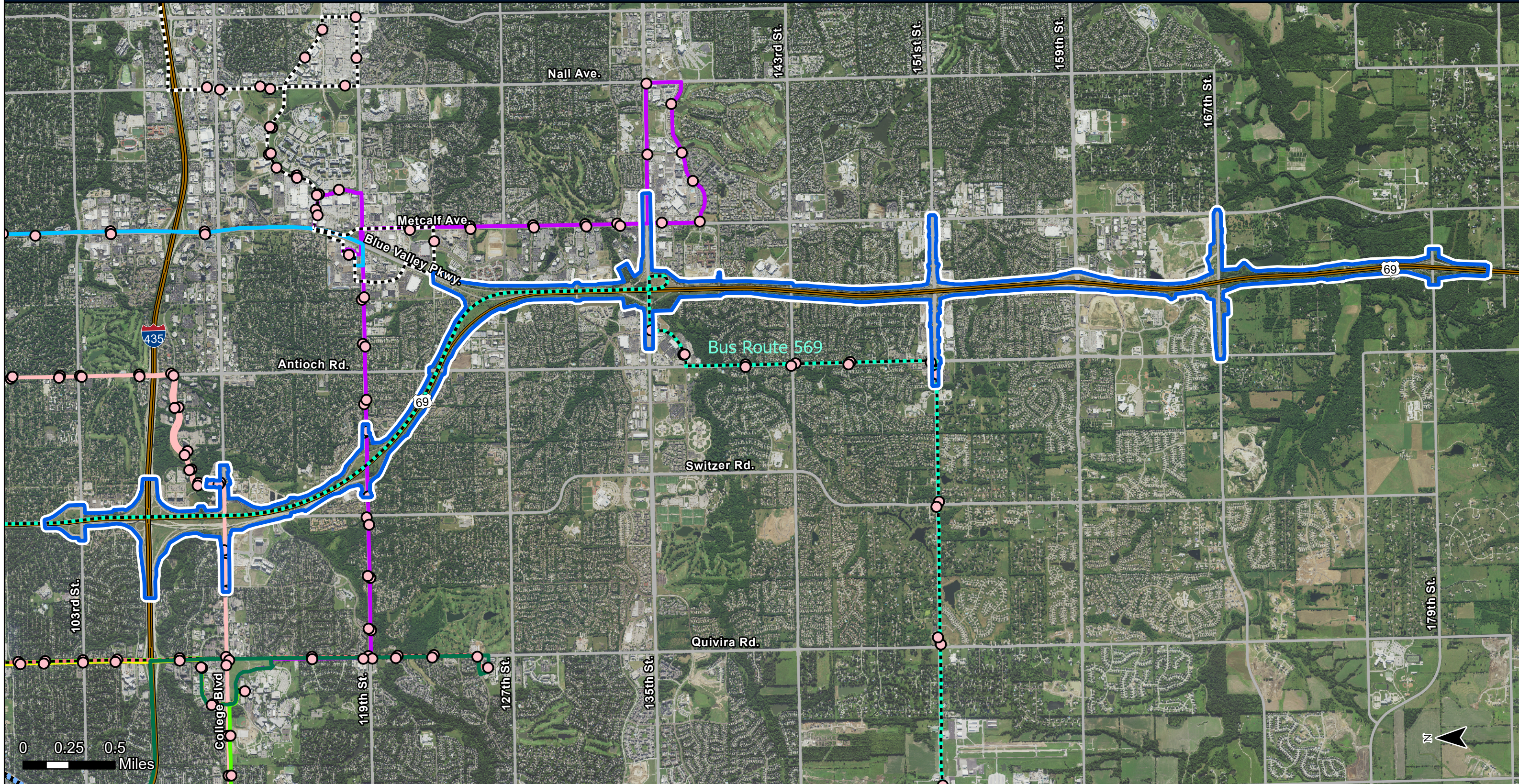
Legend	
Study Area	Bridges with Lead Paint
Construction Limits	Closed HazMat Site
Displacements	WWTP
Bike Routes	Dry Cleaner
Trails	Landfill
Streams	Floodway
100-Year Floodplain	Urban Woodland
Parks	New Right-of-Way
Wetlands	Temporary Easement
Ponds	Permanent Easement

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Legend	
Study Area	Hazardous Materials
Construction Limits	Bridges with Lead Paint
Displacements	Closed HazMat Site
Bike Routes	WWTP
Trails	Dry Cleaner
Streams	Landfill
Floodway	100-Year Floodplain
Parks	Wetlands
Ponds	Urban Woodland
New Right-of-Way	Temporary Easement
Permanent Easement	

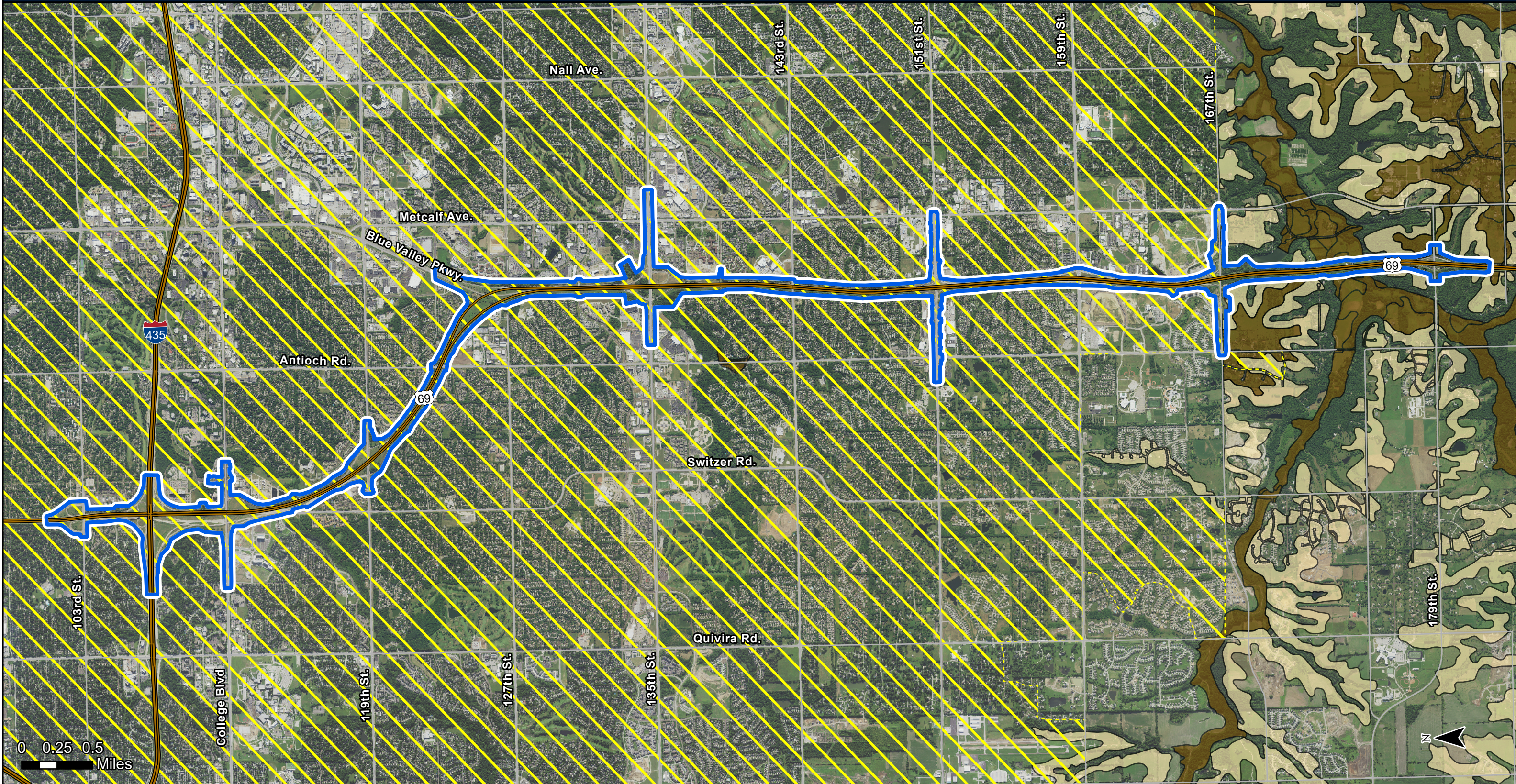
U.S. 69 Modernization and Expansion Project
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- Legend
- Study Area
 - Bus Route 401
 - Bus Route 402
 - Bus Route 403
 - Bus Route 404
 - Bus Route 435
 - Bus Route 475
 - Bus Route 510
 - Bus Route 519
 - Bus Route 569
 - Bus Route 57
 - Bus Route 595
 - Bus Stops
 - Bus Route 51

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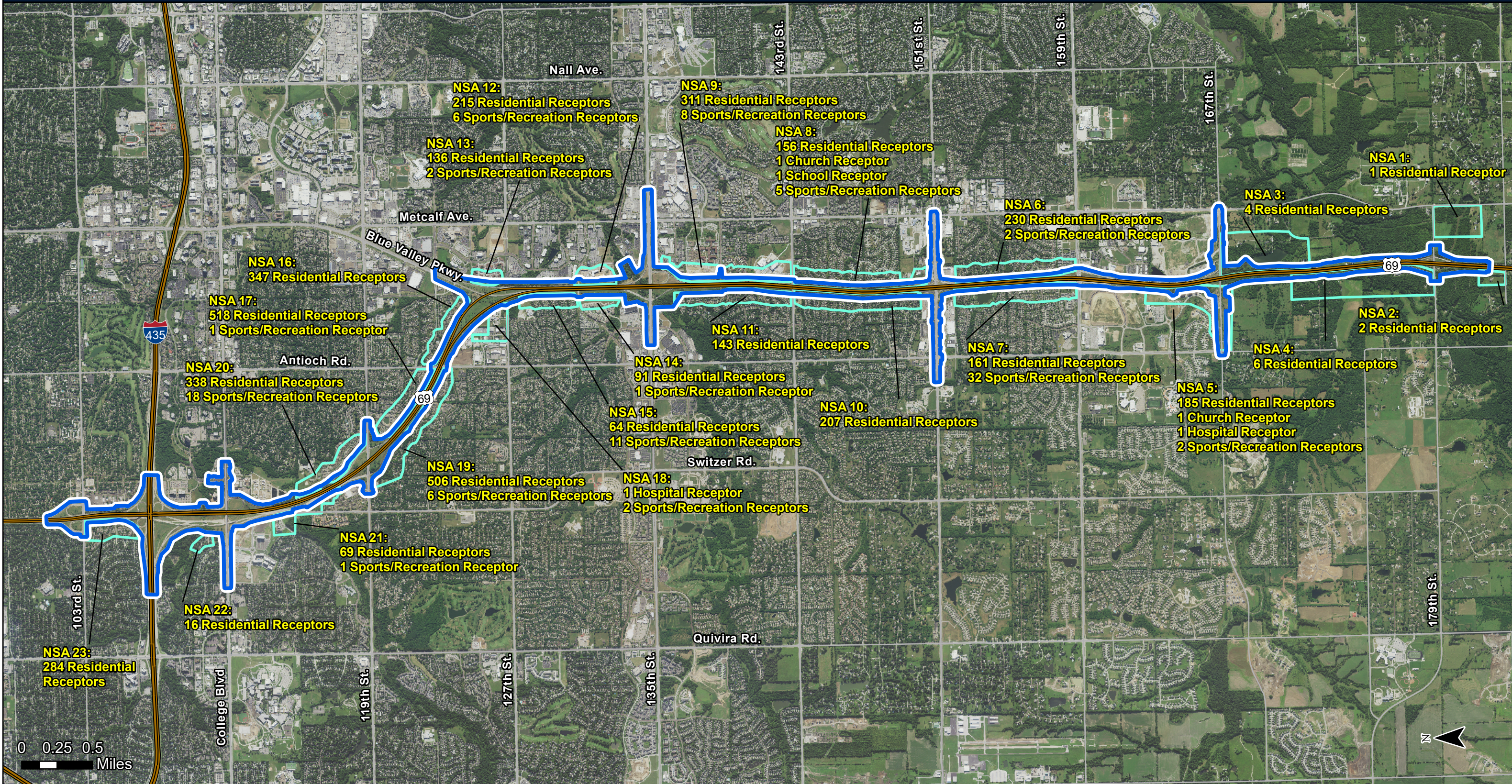




- Legend
- Study Area
 - Prime Farmland Soils
 - Farmland of Statewide Importance soils
 - U.S. Census Urbanized Area

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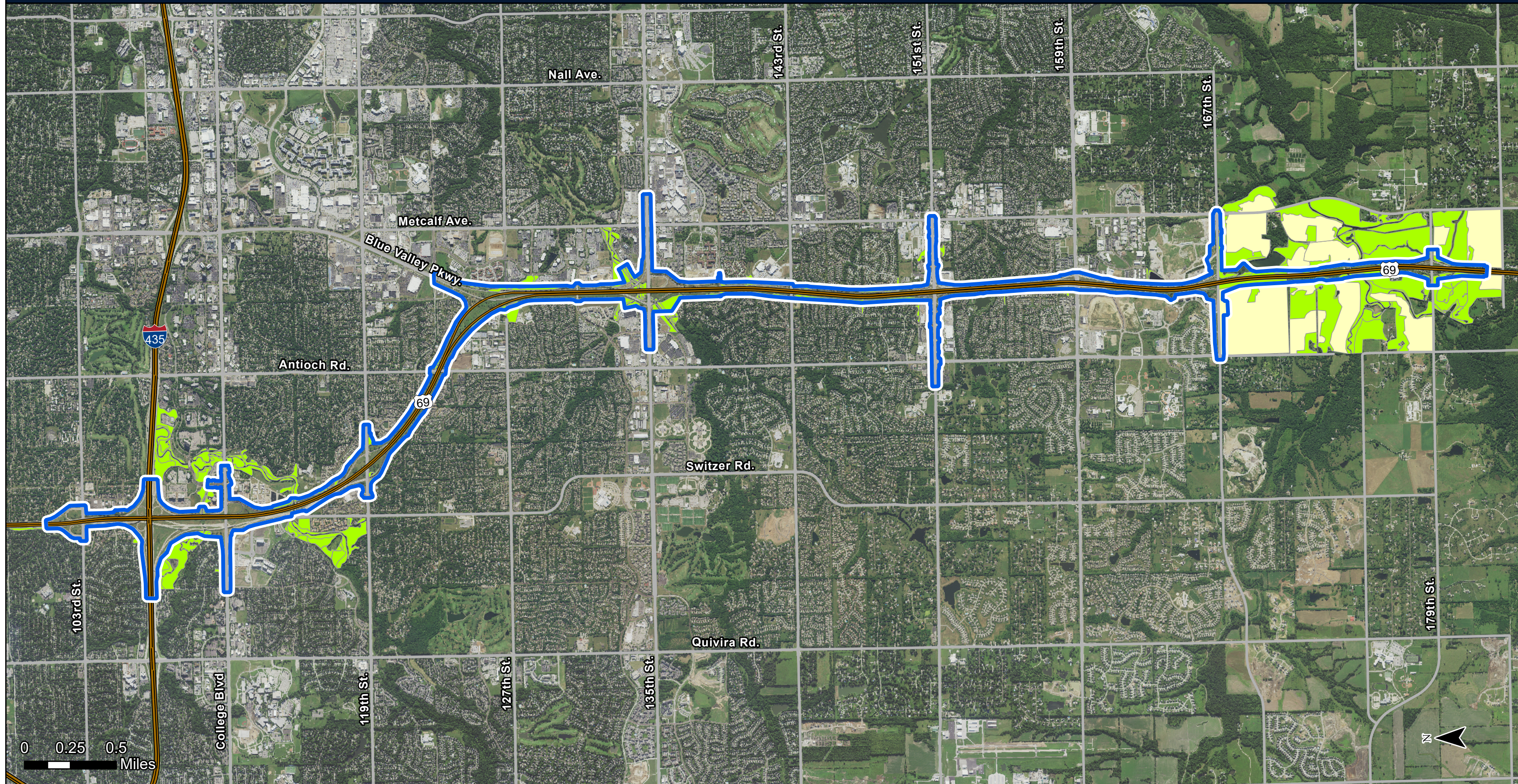


Legend

- Study Area
- Noise Sensitive Area

U.S. 69 Modernization and Expansion Project
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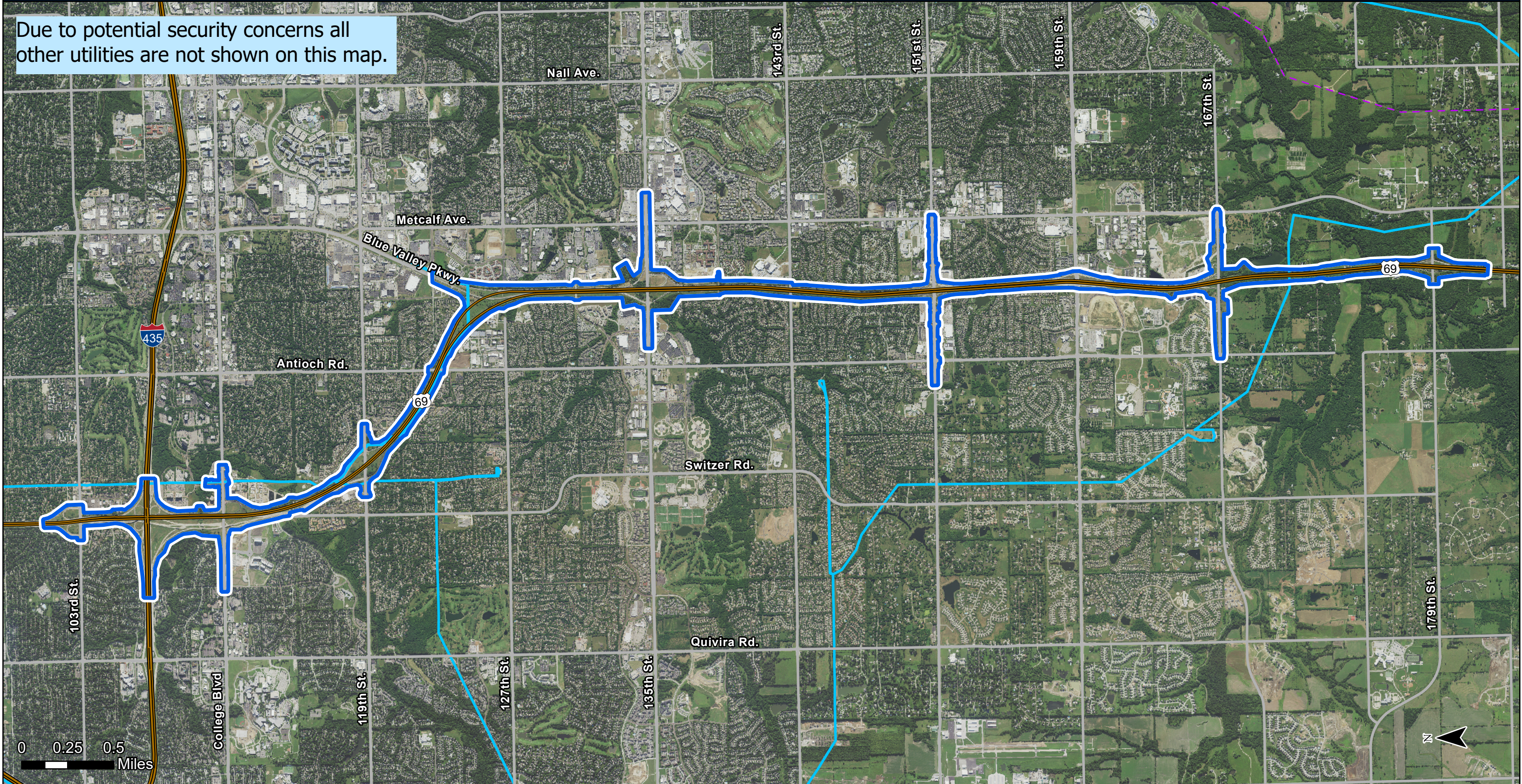
- Legend
- Study Area
 - Rural Landscape/Rolling Grassland
 - Woodland Areas

*Areas outside of Woodland and Rural Areas are considered Urban Areas

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Due to potential security concerns all other utilities are not shown on this map.



- Legend
- Study Area
 - 34.5 Volt Electric Transmission Line
 - 69 Volt Electric Transmission Line
 - 115 Volt Electric Transmission Line
 - 161 Volt Electric Transmission Line
 - 230 Volt Electric Transmission Line
 - 240 Volt Electric Transmission Line
 - 345 Volt Electric Transmission Line

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