

# APPENDIX

## C ENVIRONMENTAL OVERVIEW



# Environmental Overview

US 127 Corridor Study

KYTC Item No. 8-80150.0

*Casey & Lincoln Counties*

August 29, 2023

## Table of Contents

Introduction .....	1
Environmental Considerations .....	1
Natural Environment.....	1
Streams, Wetlands, and Floodplains.....	1
Threatened and Endangered Species.....	2
Human Environment.....	3
Air Quality .....	3
Traffic Noise.....	3
Environmental Justice.....	3
Farmland.....	4
Land Use and Neighborhoods.....	4
Communities and Community Facilities .....	5
Underground Storage Tanks (USTs) and Hazardous Materials.....	6
Cultural Resources .....	9
Conceptual Improvements and Impacts .....	11

## Tables

Table 1 – Study Area Block Groups (2020 Decennial Census) Meeting EJ Criteria .....	4
Table 2 – Potential UST and Hazardous Materials Sites in Study Area.....	7
Table 3 – Environmental Constraints within the US 127 Study Area .....	9
Table 4 – Conceptual Improvements and Anticipated Environmental Impacts .....	11

## Figures

Figure 1 – US 127 Corridor Study Area.....	12
Figure 2 – Environmental Considerations (Casey County) .....	13
Figure 3 – Environmental Considerations (Lincoln County).....	14

## Attachments

Attachment A – Information for Planning and Consultation (IPaC) .....	15
Attachment B – US 127 Corridor Study, Casey and Lincoln Counties, Socioeconomic Study, March 2023 (Draft #2), Lake Cumberland Area Development District .....	25

# Introduction

A planning study was conducted to evaluate the US 127 corridor to develop and evaluate potential improvement concepts to address safety and mobility along US 127. The study area covers approximately 18.9 miles from Milepoint (MP) 15.500 to MP 23.715 in Casey County and MP 0.0 to 10.690 in Lincoln County. The study area is shown in **Figure 1**.

US 127 in the study area extends from the intersection with KY 817 in Liberty, Kentucky northward to its terminus at the Lincoln/Boyle County line, south of Junction City, and includes small portions of the incorporated cities of Liberty in Casey County and Hustonville in Lincoln County. US 127 is classified as a principal arterial in the study area. US 127 in the study area has two 11-foot or 12-foot lanes throughout with intermittent turn lanes. Shoulders range from 2-foot to 11-foot wide. Posted speed limit is 55 miles per hour.

This Environmental Overview (EO) documents the environmental features known to exist within the study area. The study area for the EO considers a 600-foot buffer along existing US 127 relative to most resources with a larger one-half mile considered for cultural resources (i.e., 300 feet or one-quarter mile, respectively, on either side of the existing roadway).

Data collected for the EO is based on a review of existing GIS datasets, state and federal agency databases, literature research, and archival data. Desktop research was performed to identify and locate areas of importance or concern that lie within the study area. The EO considers resources in the following two categories: Natural Environment (ecological resources [i.e., streams, wetlands, and floodplains]; threatened and endangered species and important habitats) and Human Environment (air quality and noise issues; Environmental Justice / socioeconomic data; land use; hazardous materials; and historic and archaeological resources).

## Environmental Considerations

Areas of environmental consideration that apply to the study area are briefly discussed below, by natural environments and human environments. Following these discussions, information gathered is presented in table format. Figure 2 and Figure 3 show these considerations for Casey County and Lincoln County, respectively.

### Natural Environment

**Streams, Wetlands, and Floodplains** – Based on KY Division of Water information, no streams within the study area are Outstanding State Resource Waters (OSRWs). However, based on EPA data (WATERS GeoViewer 2.0) and the National Hydrography Dataset (NHD), several streams in the Lincoln County portion of the study area are listed as impaired. The project area is located in the headwaters of a major drainage basin leading to the Mammoth Cave National Park. The Green River, although not crossed by US 127 in the study area, roughly parallels the study area near its beginning in Casey County and is in places within the study area boundary.

Aquatic resources crossed by the study area within Casey County include, from south to north, Barger Branch, Moore Branch, Unnamed Tributary 1 (UT [1]) to Carpenter Creek, UT(2) to

Carpenter Creek, George Branch, Frey Creek, and Carpenter Creek. Carpenter Creek also generally parallels US 127 for much of its distance. Aquatic resources in Lincoln county and crossed by the study area, from south to north, include UT to Carpenter Creek, UT to UT to Carpenter Creek, UT(1) to Hanging Fork Creek, Hanging Fork Creek (impaired), Baughman Creek (impaired), UT(2) to Hanging Fork Creek (impaired), Frog Branch (impaired), Harris Creek (impaired), White Oak Creek (impaired), and UT to White Oak Creek (impaired).

Based on National Wetlands Inventory (NWI) mapping, 10 wetlands were identified within the Casey County portion of the study area. They include one freshwater forested/shrub (PFO1A), one freshwater emergent (PEM1A), and eight farm ponds (PUBHh). Within Lincoln County, NWI wetlands include one freshwater emergent (PEM1Fh), one freshwater forested/shrub (PFO1A), and eight farm ponds (PUBHh).

Within Casey County, floodplains either extend into the US 127 study area or are parallel to the study area for nearly the entirely length and are mainly associated with the Green River and a major tributary. Within Lincoln County, floodplains are more limited, with the floodplains initially being within the study area and parallel US 127 for approximately one mile. Then, floodplains again intersect the study area in the city of Hustonville and by three more perpendicular crossings as the study area proceeds northward.

**Threatened and Endangered Species** – The study area is located within potential habitat for the endangered gray bat, Indiana bat, and northern long eared bat as identified in the attached Information for Planning and Consultation (IPaC) coordination document provided by the United States Fish and Wildlife Service (USFWS). The IPaC coordination also lists eight endangered or threatened freshwater mussels as potentially occurring in the study area, along with the monarch butterfly, which is a candidate species.

Forested areas adjacent to the study area would be considered potential habitat for the above listed bats. Such areas are more limited in the Lincoln County portion of the study area as compared to the Casey County portion. Stream corridors which contain forested riparian buffers would also be potential habitat for the listed bat species. These stream corridors serve as flyways for bat species to larger forest blocks outside of the roadway right of way. Gray bat mainly uses stream corridors to commute and feed, although it typically roosts in caves year-round. Indiana bat and northern long-eared bat winter in caves. Nearly all of the Casey County portion of the project is in a non-karst area except for the northernmost portion where there is karst potential. This karst potential area extends northward for approximately half of the Lincoln County portion of the study area before returning to non-karst potential. Sinkholes are very limited in the study area and beyond with the closest mapped sinkhole being more than 500 feet from the existing roadway.

Green River is habitat for the listed mussel species. Other larger streams in the study area may also have potential to provide habitat for these mussel species. Such streams would need to be assessed further during any NEPA documentation phase for their potential to be habitat for the listed mussel species.

## Human Environment

**Air Quality** – Areas of the state that have had levels of criteria air pollutants that have exceeded the threshold levels set by the Environmental Protection Agency (EPA) are considered in nonattainment or maintenance for that pollutant and must demonstrate how future transportation improvements are not going to worsen the air quality conditions. The study area is in attainment for all criteria pollutants and as such, a project in the study area will not require any comprehensive air quality review.

A project in the study area would also be considered “Lower Potential for Meaningful MSAT (Mobile Source Air Toxics) Effects” since the design year traffic would be less than 140,000 to 150,000 AADT. As such, a qualitative assessment of the emissions projections should be included in any future NEPA document.

**Traffic Noise** – The Federal Highway Administration (FHWA) Noise Standard requires that noise abatement measures be considered when traffic noise impacts are identified for Type I federal projects. As the Kentucky Transportation Cabinet’s 2020 *Noise Analysis and Abatement Policy (2022 Update)* directs, Type I projects are identified as “The construction of a highway on new location; or the physical alteration of an existing highway where there is either: i. Substantial Horizontal Alteration; or ii. Substantial Vertical Alteration.” Alignment changes which move the roadway off existing alignment and on new location meet Type I criteria. Significant alterations to the existing alignment could also meet Type I criteria. Such alternations could include the addition of turn lanes with which the distance between a noise receptor and the traffic noise source is halved or the shielding between a receptor and the traffic noise source is removed exposing the line of sight between the two. In such cases, the entire project corridor would be considered a Type I project and a noise analysis, which at minimum may require utilization of the *Traffic Noise Impact Screening Tool*, would be required for the entire project per KYTC policy.

**Environmental Justice** – The U.S. EPA Office of Environmental Justice defines Environmental Justice (EJ) as “The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation and enforcement of environmental laws, regulations and policies.” The Lake Cumberland Area Development District (LCADD) prepared the *US 127 Corridor Study Casey and Lincoln Counties Socioeconomic Study* (last revised March 2023) to assess the potential to encounter EJ populations within the study corridor. The report used 2021 U.S. Census Bureau American Community Survey (ACS) data. The LCADD reported data for the United States, Kentucky, Casey County, Lincoln County, the six census tracts (CTs) that include the study area, and the nine block groups (BGs) that include the study area. In Casey County, there are four CTs and five BGs. In Lincoln County, there are two CTs and four BGs.

LCADD’s analysis uses the county as the threshold for all EJ criteria, based on the data obtained from the U.S. Census Bureau for race, income, age, disability, and English proficiency. The table below shows those locations where LCADD’s analysis determined that the BG’s population is above that of the reference threshold. Any future NEPA document must consider a



project’s potential to disproportionately impact these populations. The full *Socioeconomic Study* is attached.

**Table 1 – Study Area Block Groups (2020 Decennial Census) Meeting EJ Criteria**

County	Census Tract (CT)	Block Group (BG)	Above Reference Threshold for Populations of				
			Minorities	Below Poverty Level	Age 65 and Older	Disability	Limited English Proficiency
Casey	9501	01	✓				
	9503.01	01	✓		✓	✓	
	9503.02	01					
		03	✓		✓	✓	✓
	9504	01			✓	✓	
Lincoln	9201.02	03		✓			
	9202	01					
		03			✓	✓	
		04	✓	✓	✓	✓	✓

**Farmland** – The Farmland Protection Policy Act (FPPA) of 1981 (7 U.S.C. 4201 and 7 CFR Ch. VI Part 658) is intended to minimize conversion of farmland through consideration of impacts and alternative actions. The FPPA applies to activities where federal funds are involved and an irreversible conversion of prime, unique, or state and locally important farmland to non-agricultural use occurs. Some lands are exempt. Those lands may include lands not considered farmland such as land that has been previously developed (e.g. US Census urban areas or existing rights-of-way) or is committed to urban development or water storage.

Prime farmland soils exist throughout the study area, although a large portion of the study area has been previously developed as right of way and no longer qualifies as farmland. In terms of soil classifications, around 60 percent soils within each of the Casey County and Lincoln County portions of the study area are prime farmland soils or farmland soils of statewide importance. Lincoln County farmland also includes soils that are only prime farmland if drained and either protected from flooding or not frequently flooded during the growing season. Any future NEPA document will need to consider potential impacts to farmland, and particularly so if any improvements are proposed outside of existing right of way.

**Land Use and Neighborhoods** – In general, the most developed areas along the route are at the southern terminus in Liberty in Casey County and near Hustonville in Lincoln County. Along US 127 in Casey County, there are scattered driveways to residences and a small subdivision with one cul-de-sac; however, this residential use is not the majority of what is located off US 127. Most of the developed area in Casey County is in light industrial use within the context of an overall rural setting; examples of this include two gate/animal pen manufacturing companies and a concrete/aggregate company.

North of Hustonville in Lincoln County but outside of the study area, there are multiple residential subdivisions. Due to the ample residential use, many commercial uses and community facilities occur as well. Commercial uses include franchises and independent small businesses. From google imagery, there are sizeable swaths of agricultural land, primarily in pasture or hayfields.

**Communities and Community Facilities** – Based on a review of available online resources, Lincoln County has planning and zoning regulations and requirements, as governed by the county entity. No online resources indicated that Casey County has a planning and zoning agency. As such, a review of google imagery, indicates that residences are located sporadically along US 127, particularly in the Casey County portion of the study area, with more clustering of residential area adjacent to US 127 in Lincoln County. Amish community influences have also been noted as evident in Casey County, as well as locations of manufactured homes and an apartment complex in the Lincoln County portion of the study area. Businesses are also located sporadically throughout the study area, both along US 127 and on intersecting roadways.

Several community facilities are located within the study area. These include three cemeteries, two educational facilities, two parks, a fire department, and one place of worship. One school and an additional place of worship are located outside but near the study area; they include Hustonville Elementary School and Hustonville Baptist Church, respectively. Both Hustonville Elementary School and Hustonville Baptist Church are located on Main Street in Hustonville, approximately 1,000 feet east of US 127.

The three cemeteries are Glenwood Cemetery, Hustonville African American Cemetery, and Sandidge Cemetery. Glenwood Cemetery is located at the southern terminus of the study area in Liberty in Casey County. Hustonville African American Cemetery is denoted by a location point on google maps between US 127 and Walnut Grove Lane, although aerial imagery does not provide a specific street address for the cemetery or visual evidence of cemetery boundaries. It is located near Hustonville in Lincoln County. Further north is Sandidge Cemetery, which is located between US 127 and KY 2141 (Stanford, Lincoln County).

Educational facilities include the Casey County Board of Education and Casey County Board of Education Annex. Both are located outside of the Liberty city limits and within the county boundary. The Board of Education facility is just outside of the city limits, along US 127, and the Annex building is located approximately 1.6 miles north of the main building, also along US 127.

As noted, two parks are identifiable using online data sources. If the parks are publicly owned, they would be considered Section 4(f) [of the U.S. Department of Transportation Act of 1966] resources. The two parks include an unnamed roadside park near the southern terminus of the study area, in Liberty, and a second park located in Hustonville. Based on review of online data, neither park has indication that Section 6(f) (i.e., Land and Water Conservation Fund) funds have been used in their development. The unnamed roadside park, located across US 127 from Glenwood Cemetery, shows on aerial imagery a loop, paved circular pull-off, John Fry historic marker, two park benches, and a gazebo. No online resources indicate that the unnamed park is part of the parks or recreational facilities operated by Casey County. Carl Russell Memorial Ruritan Park, on Main Street Hustonville, is the second park. Park facilities are visibly located



east of Baughman Creek, although the boundary of the park is unknown. Baughman Creek is approximately 250 feet east of the US 127 centerline.

Additional community facilities in the study area are the Hustonville Fire Department and Westside Community United Methodist Church. The Fire Department is located on Main Street in Hustonville across from the Carl Russell Memorial Ruritan Park. The church is located further north at the intersection of US 127 and Master Court.

**Underground Storage Tanks (USTs) and Hazardous Materials** – A review of aerial (Google) imagery, the Environmental Protection Agency (EPA) Envirofacts Multisystem Search, and EPA's UST Finder database was completed of the study area. Envirofacts, an integrated database of information from a variety of databases, provides information on facilities that are required to report activities to state or federal programs, specific to hazardous wastes, toxic and air releases, Superfund sites, and water discharge permits. UST Finder is a web map application containing a comprehensive, state-sourced national map of underground storage tank (UST) and leaking UST (LUST) data. It provides attributes and locations of active and closed USTs, UST facilities, and LUST sites from states as of 2018-2019, plus data for US territories and tribal lands.

These identified sites may require additional assessment during any future design phase for potential to encounter hazardous materials and/or USTs.



**Table 2 – Potential UST and Hazardous Materials Sites in Study Area**

Site Name	Latitude	Longitude	Address	Type*	Source
Davis Properties/ Discount Auto Sales of Liberty	37.32745	-84.918024	1200 Wallace Wilkinson Blvd, Liberty	NPDES	EPA Envirofacts
Pyles Concrete Inc. Casey Plant	37.341248	-84.898776	2986 US 127 N, Liberty	AIRS_AFS, NPDES	EPA Envirofacts
imi Concrete	37.340935	-84.899600	2689 US 127, Liberty	Hazardous Material	Google Map Imagery
Site Improvements	37.345034	-84.890573	3277 US 127 N, Liberty	NPDES	EPA Envirofacts
Atwood's Concrete Products; and Recycling	37.346243	-84.885760	3553 US 127, Liberty	Hazardous Material	Google Map Imagery
Ashley's Automotive	37.347635	-84.878052	4004 US 127, Liberty	Hazardous Material	Google Map Imagery
Hickory Hills Market	37.361489	-84.866889	5200 US 127, Liberty	UST	EPA UST Finder
Chubby Baird Gate Company	37.383701	-84.86741	6783 US 127, Middleburg	Hazardous Material	Google Map Imagery
Green River Gate Company			7011 US 127, Middleburg	AIRS_AFS, RCRAINFO, NPDES	EPA Envirofacts
	37.387504	-84.867228			
Phillips Lumber Co., Inc.	37.40203	-84.8619	13475 Liberty Rd, Hustonville	NPDES	EPA Envirofacts
Browns Diesel and Auto Repair	37.402104	-84.86211	8135 US 127, Hustonville	Hazardous Material	Google Map Imagery
Ohio Valley Veneer	37.413573	-84.85455	9053 US 127, Hustonville	Hazardous Material	Google Map Imagery
Unnamed Site	37.417064,	-84.853646	N/A	Hazardous Material	Google Map Imagery
Sunshine Food Mart	37.471932	-84.823084	10450 KY 78, Hustonville,	UST	EPA UST Finder
Rothwells Service Station	37.467278	-84.818139	10645 Hwy 78 West, Hustonville	RCRAINFO	EPA Envirofacts
C & C Security	37.489326	-84.815891	KY 2141, Hustonville	NPDES	EPA Envirofacts
Phase One A,	37.51258	-84.80685	US 127, Hustonville	NPDES	EPA Envirofacts
D J Food Mart	37.515863	-84.805848	3300 US 127, Hustonville	UST	Google Map Imagery
Dollar General	37.519402	-84.805672	7269 KY 1194, Stanford	NPDES	EPA Envirofacts
Unnamed Site	37.542575	-84.802281	2643 Hwy 2141, Stanford	Hazardous Material	Google Map Imagery
Unnamed Site	37.54768	-84.802386	Stanford	Hazardous Material	Google Map Imagery
Meade Machinery and Industrial Services	37.559967	-84.799788	115 Troy Avenue, Stanford	Hazardous Material	Google Map Imagery
Grigsby Auto Sales	37.560603	-84.799256	114 Troy Avenue, Stanford	Hazardous Material	Google Map Imagery
Grubbs Body Shop	37.562004	-84.799317	63 Troy Avenue, Stanford	Hazardous Material	Google Map Imagery
Bobby Payton Storage Units,	37.56408	-84.79878	470 N Troy Ave, Stanford	NPDES	EPA Envirofacts
Payton Run Storage Additions	37.565249	-84.798036	470 N Troy Ave, Stanford	NPDES	EPA Envirofacts
US 127 Lincoln Co.	37.5625	-84.7981	US 127, Hustonville	NPDES	EPA Envirofacts
Eastway Market #14 / BP	37.562905	-84.798526	28 Michelle Drive, Stanford	UST	EPA UST Finder



Site Name	Latitude	Longitude	Address	Type*	Source
Frank's Pit Stop Automotive Care Center	37.562768	-84.799152	25 Troy Avenue, Stanford	Hazardous Material	Google Map Imagery
Don's Auto Sales	37.563157	-84.797513	6710 US 127, Stanford	Hazardous Material	Google Map Imagery
Witte Auto Recycling	37.564229	-84.797095	6754 US 127, Stanford	Hazardous Material	Google Map Imagery
Lawson Tractor and Implement Inc.	37.566258	-84.797254	6829 US 127, Stanford	Hazardous Material	Google Map Imagery

\*Note: EPA Envirofacts acronyms in the Type column mean the following: **NPDES** - National Pollutant Discharge Elimination System, **RCRAINFO** - Resource Conservation and Recovery Act Information, **AIR\_AFS** - Integrated Compliance Information System for Air (AIR) Air Facility System (AFS)

**Cultural Resources** – Historic and archaeological resources exist in the study area (i.e., within one-quarter mile either side of the existing roadway). Coordination with the Kentucky Heritage Council (KHC) and Kentucky Office of State Archaeology (OSA) along with other GIS datasets were used to obtain known resources of significance. Nathan Huston House (Site #: LI 19) was built before 1800 and is the only property in the study area on the national register. There are five other properties that meet the national register criteria and 18 other properties of undetermined status within the study area. Those of undetermined status will require a historic assessment to determine eligibility for the NRHP during the design phase. Most of the buildings in the initial screening, specifically 21 of the 24, are clustered around Hustonville.

The OSA provided information which identified six archaeological sites that were categorized as “open habitation without mounds” within the study area. There was also an identified mound complex within the study area. All seven archeological sites were not assessed for NRHP eligibility. Any future preferred alignment identified during a design phase of project development will likely require a phase I archaeology survey especially if it exists outside of the current right of way.

The table below summarizes the environmental constraints identified within the study area.

**Table 3 – Environmental Constraints within the US 127 Study Area**

Environmental Category	County	Environmental Constraint
<b>Natural Environment</b>		
<b>Streams</b>	Casey	<ul style="list-style-type: none"> <li>• Green River,</li> <li>• Barger Branch,</li> <li>• Moore Branch,</li> <li>• Unnamed Tributary 1 (UT [1]) to Carpenter Creek,</li> <li>• UT(2) to Carpenter Creek,</li> <li>• George Branch,</li> <li>• Frey Creek,</li> <li>• and Carpenter Creek.</li> </ul>
	Lincoln	<ul style="list-style-type: none"> <li>• UT to Carpenter Creek,</li> <li>• UT to UT to Carpenter Creek,</li> <li>• UT(1) to Hanging Fork Creek,</li> <li>• Hanging Fork Creek (impaired),</li> <li>• Baughman Creek (impaired),</li> <li>• UT(2) to Hanging Fork Creek (impaired),</li> <li>• Frog Branch (impaired),</li> <li>• Harris Creek (impaired),</li> <li>• White Oak Creek (impaired),</li> <li>• and UT to White Oak Creek (impaired).</li> </ul>
<b>Wetlands</b>	Casey	10 wetlands <ul style="list-style-type: none"> <li>• one freshwater forested/shrub (PFO1A),</li> <li>• one freshwater emergent (PEM1A),</li> <li>• and eight farm ponds (PUBHh).</li> </ul>
	Lincoln	10 wetlands <ul style="list-style-type: none"> <li>• one freshwater emergent (PEM1Fh),</li> <li>• one freshwater forested/shrub (PFO1A),</li> <li>• and eight farm ponds (PUBHh).</li> </ul>

Environmental Category	County	Environmental Constraint
Floodplains	Casey	Floodplains either extend into the US 127 study area or are parallel to the study area for nearly the entirely length.
	Lincoln	Floodplains are more limited, with the floodplains initially being within the study area and parallel US 127 for approximately one mile.
Threatened & Endangered Species	Casey and Lincoln	<ul style="list-style-type: none"> <li>• Within Gray Bat, Indiana Bat and Northern Long-Eared Bat potential habitat;</li> <li>• Additionally, eight endangered or threatened freshwater mussels, and one insect are potentially occurring in the study area</li> </ul>
Soils (Prime Farmland)	Casey and Lincoln	Approximately 60 percent of the soils in the study area of both counties are prime farmland soils or farmland soils of statewide importance.
<b>Human Environment</b>		
Land Use-Neighborhoods	Casey	Outside of Liberty, there is sparse residential and industrial development.
	Lincoln	There is residential development between Hustonville and Junction City. Due to ample residential development there are also many commercial and community facilities.
Environmental Justice	Casey	Future consideration of EJ populations needed due to minority populations, people over the age of 65, a population with disabilities, and low English Proficiency in the study area that are above the county reference threshold.
	Lincoln	Future consideration of EJ populations needed due to minority populations, low-income populations, people over the age of 65, a population with disabilities, and low English Proficiency in the study area that are above the county reference threshold.
Section 4(f) Properties	Casey and Lincoln	One possible 4(f) property - Carl Russell Memorial Ruritan Park
Section 6(f) Properties (LWCF)	Casey and Lincoln	None
Hazardous Materials/USTs	Casey	9 sites
	Lincoln	23 sites
Archaeology	Casey	None
	Lincoln	7 sites including: <ul style="list-style-type: none"> <li>• One mound complex</li> <li>• Six sites that had “open habitation without mounds”</li> <li>• No sites were assessed for NRHP Eligibility</li> </ul>
Cultural Historic	Casey	None
	Lincoln	24 sites including: <ul style="list-style-type: none"> <li>• 1 NRHP listed site</li> <li>• 5 meet national register's criteria</li> <li>• 18 with undetermined status</li> </ul>
Cemetery	Casey	1 cemetery <ul style="list-style-type: none"> <li>• Glenwood Cemetery</li> </ul>
	Lincoln	2 cemeteries <ul style="list-style-type: none"> <li>• Hustonville African American Cemetery</li> <li>• Sandidge Cemetery</li> </ul>

# Conceptual Improvements and Impacts

A key consideration for all improvements will be whether they occur outside of existing right-of-way. Those occurring outside of existing right of way have greater potential to impact natural and environmental resources. For archaeological considerations, in most cases, impacts outside of existing right of way may be an environmental constraint; any future design will need to consider archaeological resources in particular where ground disturbance occurs. The table below summarizes potential impacts or considerations that may be anticipated for future design of the conceptual improvements.

**Table 4 – Conceptual Improvements and Anticipated Environmental Impacts**

Improvement	Location / MP*	Conceptual Improvement	Anticipated Environmental Impact
1	Corridor Wide	2+1 segments NB and SB	Archaeology (Casey Co. Only), Tree Removal (bats), Possible Historic, UST/HAZ, Potential Noise Screening Tool, Stream Crossings, Floodplains, Wetlands Potential
<b>Spot Improvement</b>			
1	15.6-16.1 (Casey)	Add curve chevrons near Liberty – Northbound (NB) and Southbound (SB)	None
2	18.9-19.0 (Casey)	Improve sight distance at Short Town Road, add SB Left Turn Lane	Archaeology (right of way [ROW]), Tree Removal (bats), UST/HAZ, Possible Historic
3	21.6-21.8 (Casey)	Improve sight distance at Patsy Riffe Road	Archaeology (ROW), Wetlands, Floodplains, UST/HAZ
4	22.8-22.85 (Casey)	Multiple improvements at KY 906	Archaeology, Tree Removal (bats), Stream Crossing, Floodplain, UST/HAZ
5	3.43 (Lincoln)	Improve sight distance at KY 78	None
6A	4.20 (Lincoln)	Reduce potential conflicts at KY 2141/Danville Pike - Option A	None
6B	4.20 (Lincoln)	Reduce potential conflicts at KY 2141/Danville Pike - Option B	None
7	5.75 (Lincoln)	Add SB Left Turn Lane at Jefferies Lane	Stream Crossing, Wetlands, Archaeology (ROW)
8	6.41 (Lincoln)	Add SB Left Turn Lane at Ash Road	None
9A	6.94 (Lincoln)	Multiple improvements at KY 1194 - Option A	Archaeology (ROW)
9B	6.94 (Lincoln)	Multiple improvements at KY 1194 - Option B	Archaeology (ROW)
9B	6.94 (Lincoln)	KY 1194 EB Approach Convert to Right In/Right Out, Remove NB Left Turn Lane	Archaeology (ROW)
10	8.25 (Lincoln)	Add SB Right Turn Lane at KY 2141/ Sierra Lane	Tree Removal (Bats), Archaeology (ROW)
11	9.68 (Lincoln)	Add SB Left Turn Lane at Arcadia View Drive	Tree Removal (bats, Archaeology (ROW), Stream Crossing
12	Various	Stripe angled intersection 'flares'	None

\*MP - Milepoint

Figure 1 – US 127 Corridor Study Area

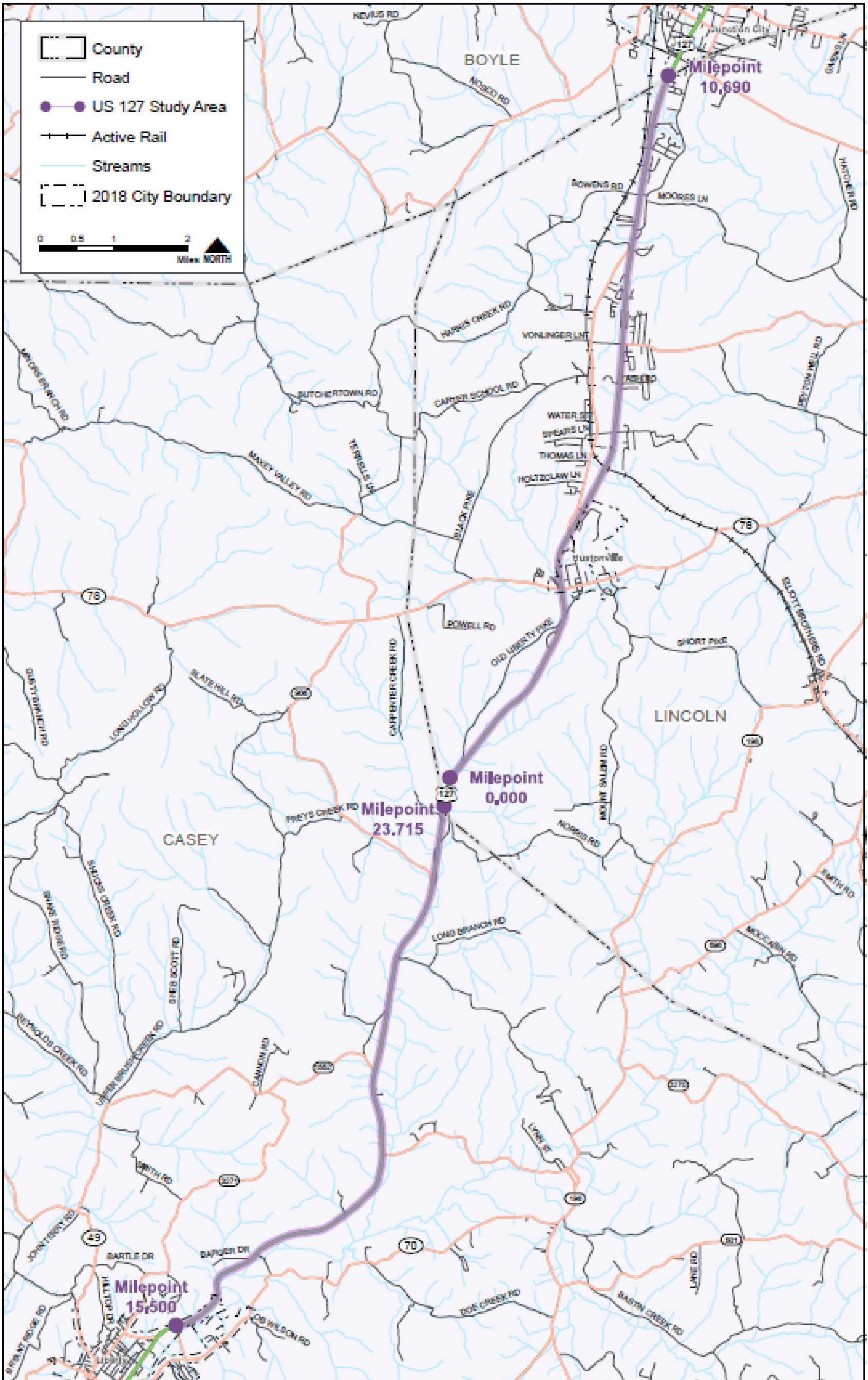


Figure 2 – Environmental Considerations (Casey County)

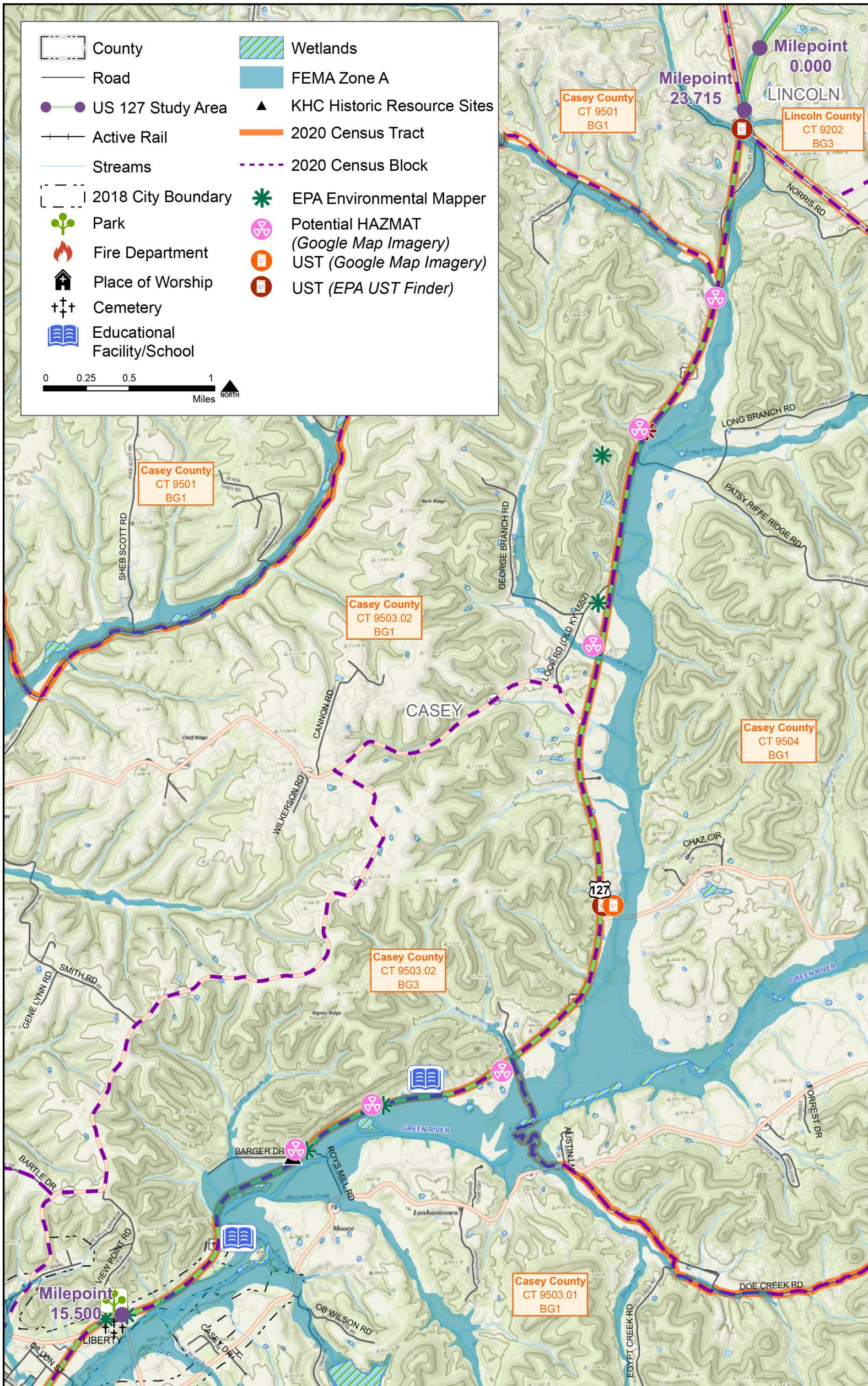
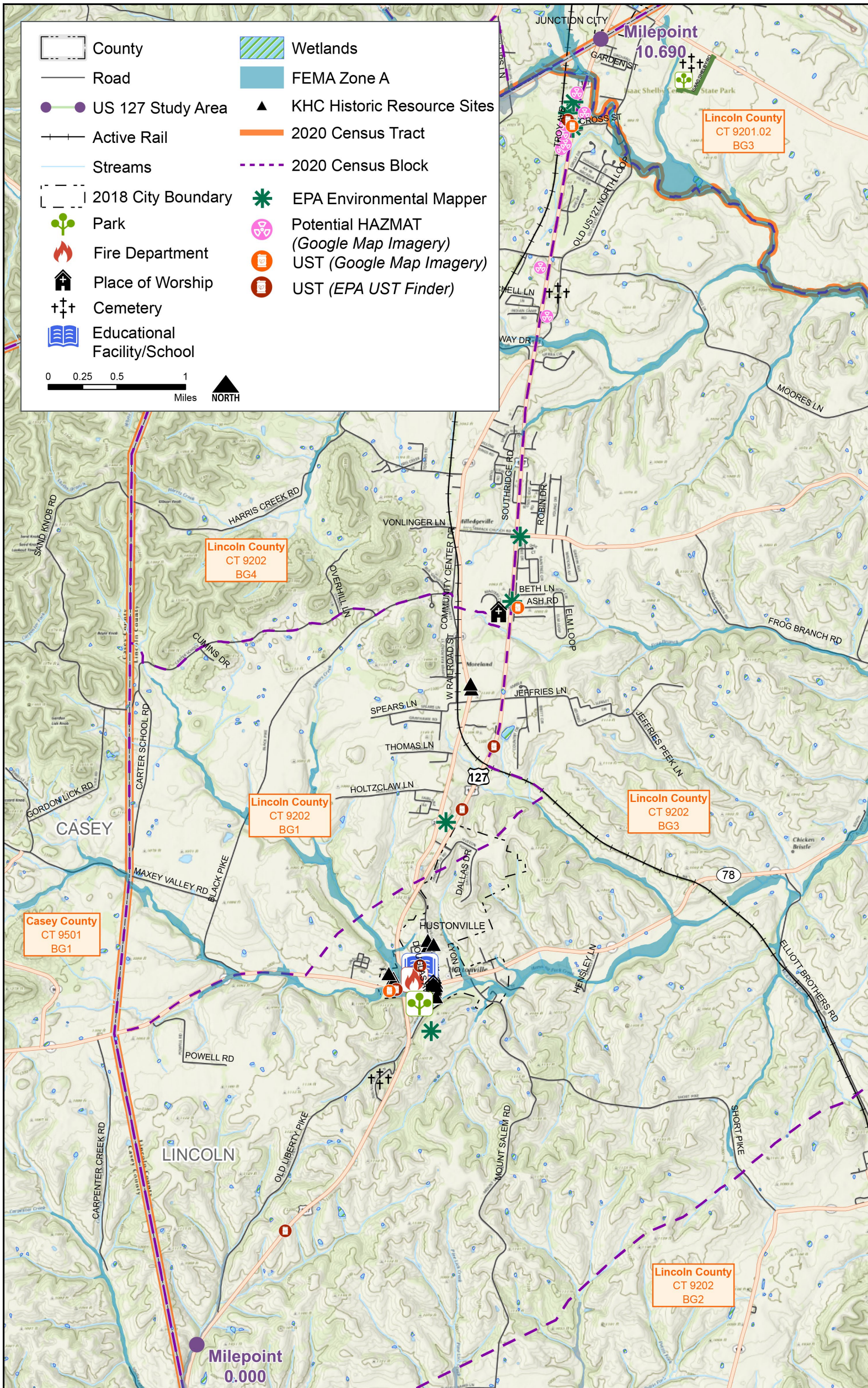




Figure 3 – Environmental Considerations (Lincoln County)



## **Attachment A – Information for Planning and Consultation (IPaC)**



## United States Department of the Interior



FISH AND WILDLIFE SERVICE  
Kentucky Ecological Services Field Office  
J C Watts Federal Building, Room 265  
330 West Broadway  
Frankfort, KY 40601-8670  
Phone: (502) 695-0468 Fax: (502) 695-1024  
Email Address: [kentuckyes@fws.gov](mailto:kentuckyes@fws.gov)

In Reply Refer To:

January 26, 2023

Project Code: 2023-0038479

Project Name: US 127 Corridor Study, KYTC Item No. 8-80150.00, Casey & Lincoln Counties, KY

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

**Migratory Birds:** In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see <https://www.fws.gov/birds/policies-and-regulations.php>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see <https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of

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this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

## **Official Species List**

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

### **Kentucky Ecological Services Field Office**

J C Watts Federal Building, Room 265

330 West Broadway

Frankfort, KY 40601-8670

(502) 695-0468

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## Project Summary

Project Code: 2023-0038479

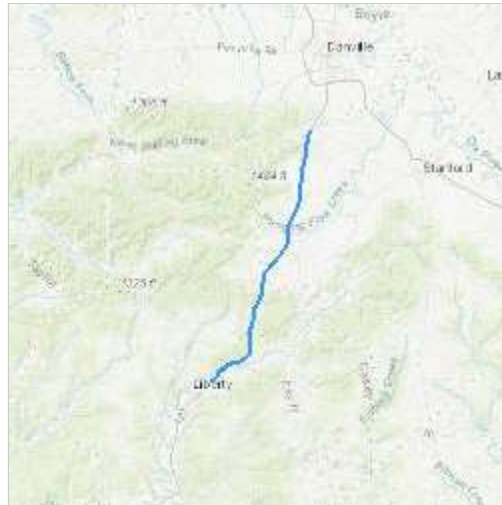
Project Name: US 127 Corridor Study, KYTC Item No. 8-80150.00, Casey & Lincoln Counties, KY

Project Type: Road/Hwy - Maintenance/Modification

Project Description: US 127 corridor study for 18.9 miles in Casey and Lincoln counties, KY

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@37.4490237,-84.83426259316079,14z>



Counties: Casey and Lincoln counties, Kentucky

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## Endangered Species Act Species

There is a total of 12 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 2 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

- 
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

## Mammals

NAME	STATUS
<p>Gray Bat <i>Myotis grisescens</i></p> <p>No critical habitat has been designated for this species. This species only needs to be considered under the following conditions:</p> <ul style="list-style-type: none"> <li>▪ The project area includes potential gray bat habitat.</li> </ul> <p>Species profile: <a href="https://ecos.fws.gov/ecp/species/6329">https://ecos.fws.gov/ecp/species/6329</a> General project design guidelines: <a href="https://ipac.ecosphere.fws.gov/project/JWISKXUTBZD6ZNQADN5SCN52QA/documents/generated/6422.pdf">https://ipac.ecosphere.fws.gov/project/JWISKXUTBZD6ZNQADN5SCN52QA/documents/generated/6422.pdf</a></p>	Endangered
<p>Indiana Bat <i>Myotis sodalis</i></p> <p>There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. This species only needs to be considered under the following conditions:</p> <ul style="list-style-type: none"> <li>▪ The project area includes 'potential' habitat. All activities in this location should consider possible effects to this species.</li> </ul> <p>Species profile: <a href="https://ecos.fws.gov/ecp/species/5949">https://ecos.fws.gov/ecp/species/5949</a> General project design guidelines: <a href="https://ipac.ecosphere.fws.gov/project/JWISKXUTBZD6ZNQADN5SCN52QA/documents/generated/6422.pdf">https://ipac.ecosphere.fws.gov/project/JWISKXUTBZD6ZNQADN5SCN52QA/documents/generated/6422.pdf</a></p>	Endangered
<p>Northern Long-eared Bat <i>Myotis septentrionalis</i></p> <p>No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9045">https://ecos.fws.gov/ecp/species/9045</a> General project design guidelines: <a href="https://ipac.ecosphere.fws.gov/project/JWISKXUTBZD6ZNQADN5SCN52QA/documents/generated/6422.pdf">https://ipac.ecosphere.fws.gov/project/JWISKXUTBZD6ZNQADN5SCN52QA/documents/generated/6422.pdf</a></p>	Endangered

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## Clams

NAME	STATUS
<p>Clubshell <i>Pleurobema clava</i></p> <p>Population: Wherever found; Except where listed as Experimental Populations            No critical habitat has been designated for this species.            Species profile: <a href="https://ecos.fws.gov/ecp/species/3789">https://ecos.fws.gov/ecp/species/3789</a>            General project design guidelines:  <a href="https://ipac.ecosphere.fws.gov/project/JWISKXUTBZD6ZNQADN5SCN52QA/documents/generated/5639.pdf">https://ipac.ecosphere.fws.gov/project/JWISKXUTBZD6ZNQADN5SCN52QA/documents/generated/5639.pdf</a></p>	Endangered
<p>Fanshell <i>Cyprogenia stegaria</i></p> <p>No critical habitat has been designated for this species.            Species profile: <a href="https://ecos.fws.gov/ecp/species/4822">https://ecos.fws.gov/ecp/species/4822</a>            General project design guidelines:  <a href="https://ipac.ecosphere.fws.gov/project/JWISKXUTBZD6ZNQADN5SCN52QA/documents/generated/5639.pdf">https://ipac.ecosphere.fws.gov/project/JWISKXUTBZD6ZNQADN5SCN52QA/documents/generated/5639.pdf</a></p>	Endangered
<p>Northern Riffleshell <i>Epioblasma rangiana</i></p> <p>No critical habitat has been designated for this species.            Species profile: <a href="https://ecos.fws.gov/ecp/species/527">https://ecos.fws.gov/ecp/species/527</a>            General project design guidelines:  <a href="https://ipac.ecosphere.fws.gov/project/JWISKXUTBZD6ZNQADN5SCN52QA/documents/generated/5639.pdf">https://ipac.ecosphere.fws.gov/project/JWISKXUTBZD6ZNQADN5SCN52QA/documents/generated/5639.pdf</a></p>	Endangered
<p>Pink Mucket (pearlymussel) <i>Lampsilis abrupta</i></p> <p>No critical habitat has been designated for this species.            Species profile: <a href="https://ecos.fws.gov/ecp/species/7829">https://ecos.fws.gov/ecp/species/7829</a>            General project design guidelines:  <a href="https://ipac.ecosphere.fws.gov/project/JWISKXUTBZD6ZNQADN5SCN52QA/documents/generated/5639.pdf">https://ipac.ecosphere.fws.gov/project/JWISKXUTBZD6ZNQADN5SCN52QA/documents/generated/5639.pdf</a></p>	Endangered
<p>Rabbitsfoot <i>Quadrula cylindrica cylindrica</i></p> <p>There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat.            Species profile: <a href="https://ecos.fws.gov/ecp/species/5165">https://ecos.fws.gov/ecp/species/5165</a>            General project design guidelines:  <a href="https://ipac.ecosphere.fws.gov/project/JWISKXUTBZD6ZNQADN5SCN52QA/documents/generated/5639.pdf">https://ipac.ecosphere.fws.gov/project/JWISKXUTBZD6ZNQADN5SCN52QA/documents/generated/5639.pdf</a></p>	Threatened
<p>Ring Pink (mussel) <i>Obovaria retusa</i></p> <p>No critical habitat has been designated for this species.            Species profile: <a href="https://ecos.fws.gov/ecp/species/4128">https://ecos.fws.gov/ecp/species/4128</a>            General project design guidelines:  <a href="https://ipac.ecosphere.fws.gov/project/JWISKXUTBZD6ZNQADN5SCN52QA/documents/generated/5639.pdf">https://ipac.ecosphere.fws.gov/project/JWISKXUTBZD6ZNQADN5SCN52QA/documents/generated/5639.pdf</a></p>	Endangered
<p>Rough Pigtoe <i>Pleurobema plenum</i></p> <p>No critical habitat has been designated for this species.            Species profile: <a href="https://ecos.fws.gov/ecp/species/6894">https://ecos.fws.gov/ecp/species/6894</a>            General project design guidelines:  <a href="https://ipac.ecosphere.fws.gov/project/JWISKXUTBZD6ZNQADN5SCN52QA/documents/generated/5639.pdf">https://ipac.ecosphere.fws.gov/project/JWISKXUTBZD6ZNQADN5SCN52QA/documents/generated/5639.pdf</a></p>	Endangered

NAME	STATUS
<b>Snuffbox Mussel</b> <i>Epioblasma triquetra</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/4135">https://ecos.fws.gov/ecp/species/4135</a>	<b>Endangered</b>

## Insects

NAME	STATUS
<b>Monarch Butterfly</b> <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a>	<b>Candidate</b>

## Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

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## **IPaC User Contact Information**

Agency: Kentucky Transportation Cabinet

Name: Rebecca Colvin

Address: 2517 Sir Barton Way

City: Lexington

State: KY

Zip: 40509

Email: rebecca.colvin@hdrinc.com

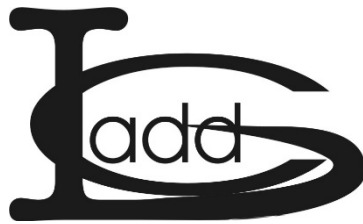
Phone: 8596294848

## **Lead Agency Contact Information**

Lead Agency: Federal Highway Administration

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**Attachment B – US 127 Corridor Study, Casey and Lincoln  
Counties, Socioeconomic Study, March 2023 (Draft #2), Lake  
Cumberland Area Development District**



US 127 Corridor Study  
Casey and Lincoln  
Counties Socioeconomic  
Study

March, 2023

DRAFT #2

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## TABLE OF CONTENTS

1.0 Introduction.....	3
1.1 Map: Study Area.....	4
2.0 What Is Environmental Justice.....	7
2.1 Definitions.....	8
3.0 Methodology.....	9
4.0 Census Data Analysis.....	10
5.0 Study Findings.....	10
6.0 A. Casey Population by Persons of Minority Origin.....	11
6.0 B. Lincoln Population by Persons of Minority Origin.....	13
6.1 Map 1.....	12/14
7.0 A. Casey Population by Poverty Level.....	15
7.0 B. Lincoln Population by Poverty Level.....	17
7.1 Map 2.....	16/18
8.0 A. Casey Population by Person 65 and Over.....	19
8.0 B. Lincoln Population by Person 65 and Over.....	21
8.1 Map 3.....	20/22
9.0 A. Casey Population by Disability Status.....	23
9.0 B. Lincoln Population by Disability Status.....	25
9.1 Map 4.....	24/26
10.0 A. Casey Population by Limited English Proficiency.....	27
10.0 B. Lincoln Population by Limited English Proficiency.....	29
10.1 Map 5.....	28/30
11.0 Conclusion.....	31

APPENDIX A: Affected Census Tract and Block Group Table

APPENDIX B: Methodology for Assessing Potential Environmental Justice Concerns for KYTC  
Planning Studies

APPENDIX C: Methodology for assessing underserved populations including Environmental  
Justice, Title VI, Age and Disability in Planning Studies.





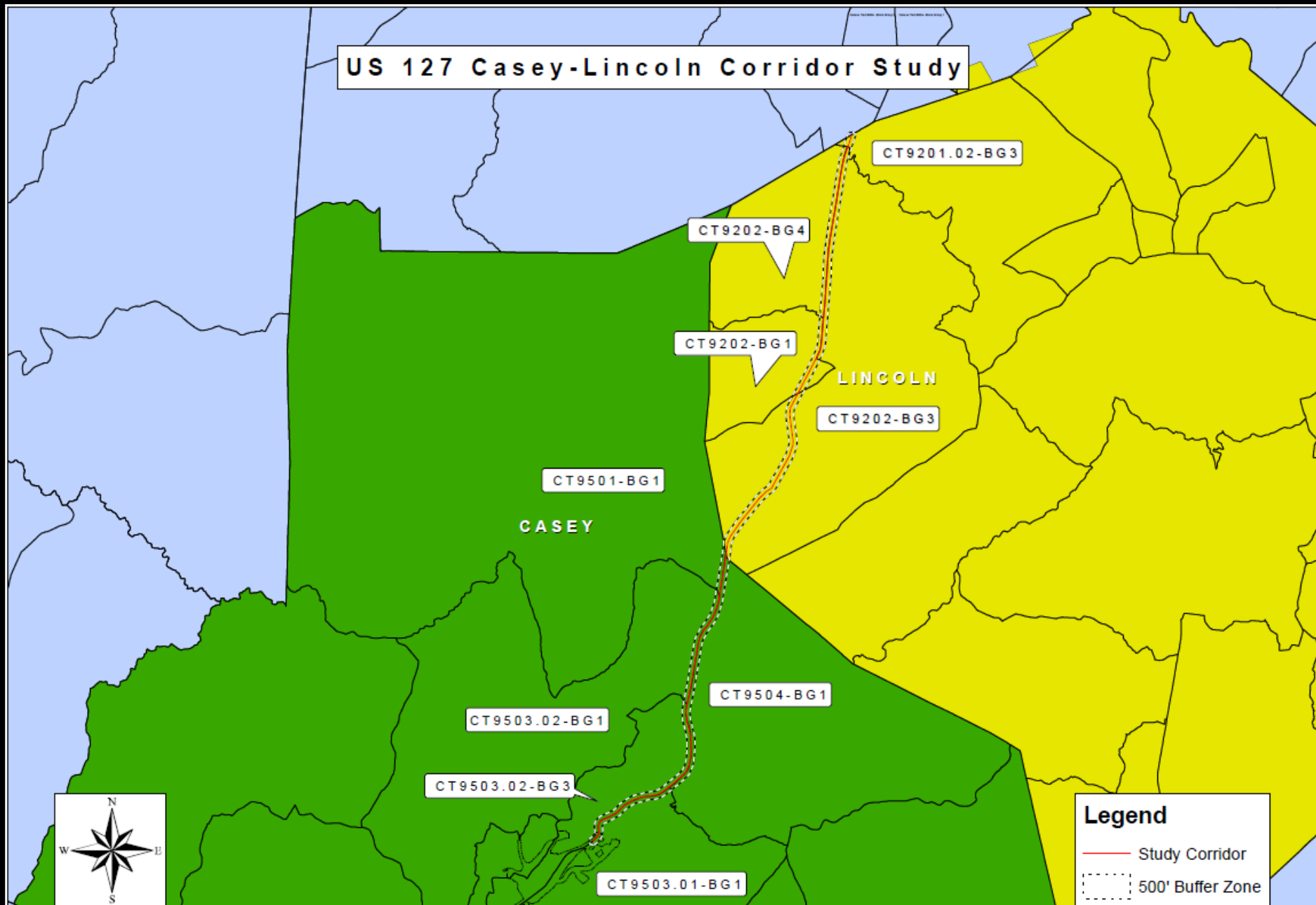
## 1.0 Introduction

This document includes a review of the socioeconomic characteristics in the study area (indicated in map on next page) for the US 127 Corridor Study in Casey County and Lincoln County, one of which is located within the Lake Cumberland Area Development District (LCADD). Data from the 2021 American Community Survey (ACS) has been utilized for the analysis of the study area. Please see the KSDC website for more information, data limitations, and an explanation of the methodology used to obtain the data (<https://data.census.gov/>).

The intent of this review is to assist the Kentucky Transportation Cabinet in making informed and prudent transportation decisions in the study area, especially with regard to the requirements of *Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (signed February 11, 1994). Executive Order 12898.

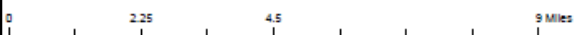
This report uses the 2021 ACS 5-year estimates and data tables to compare the populations of the census divisions within the study area at the county, state, and national levels. Statistics are provided on minority, low-income, elderly, disabled, and low English proficiency populations for the census tracts within the study area.

# US 127 Casey-Lincoln Corridor Study

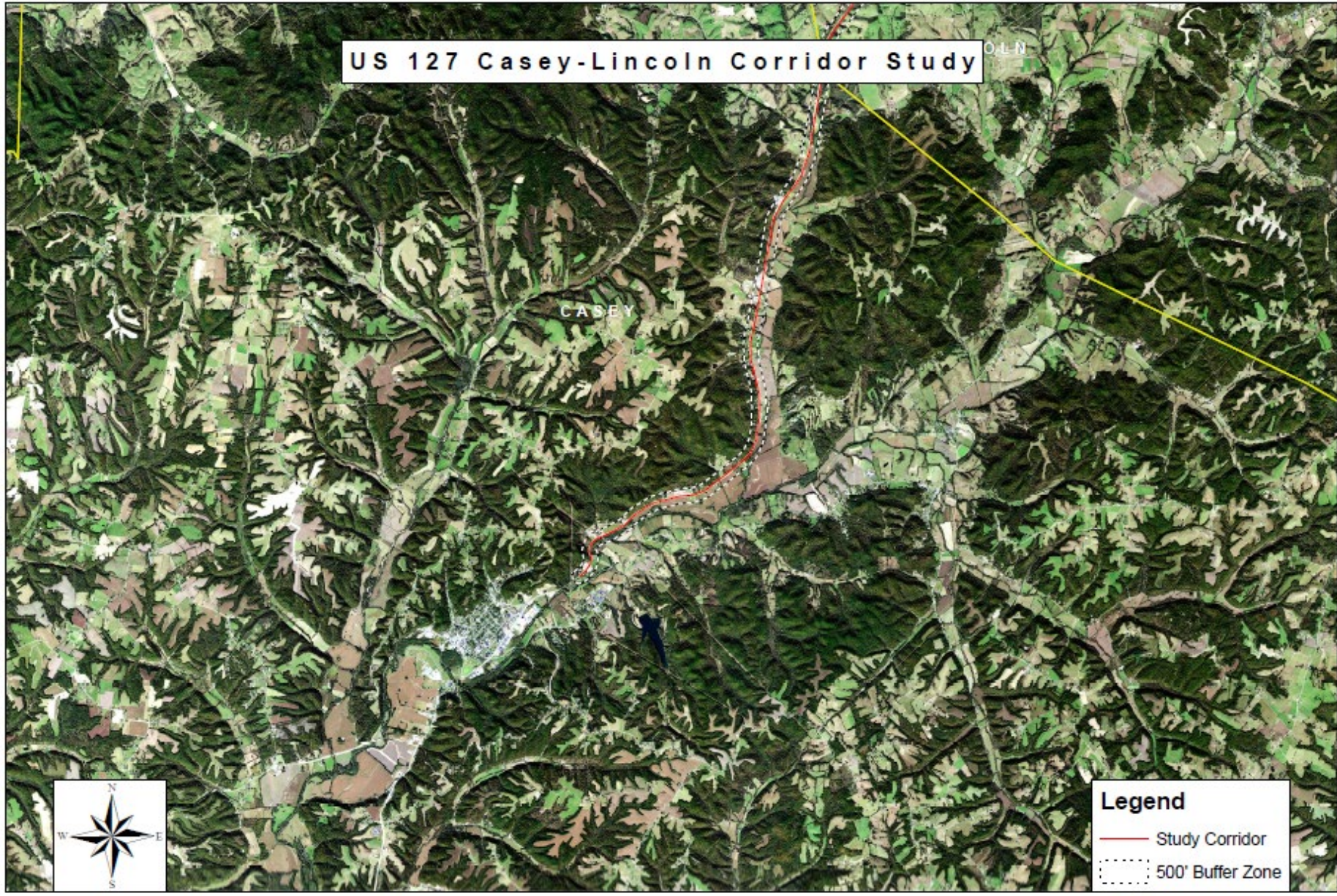


**Legend**

- Study Corridor
- - - 500' Buffer Zone



# US 127 Casey-Lincoln Corridor Study

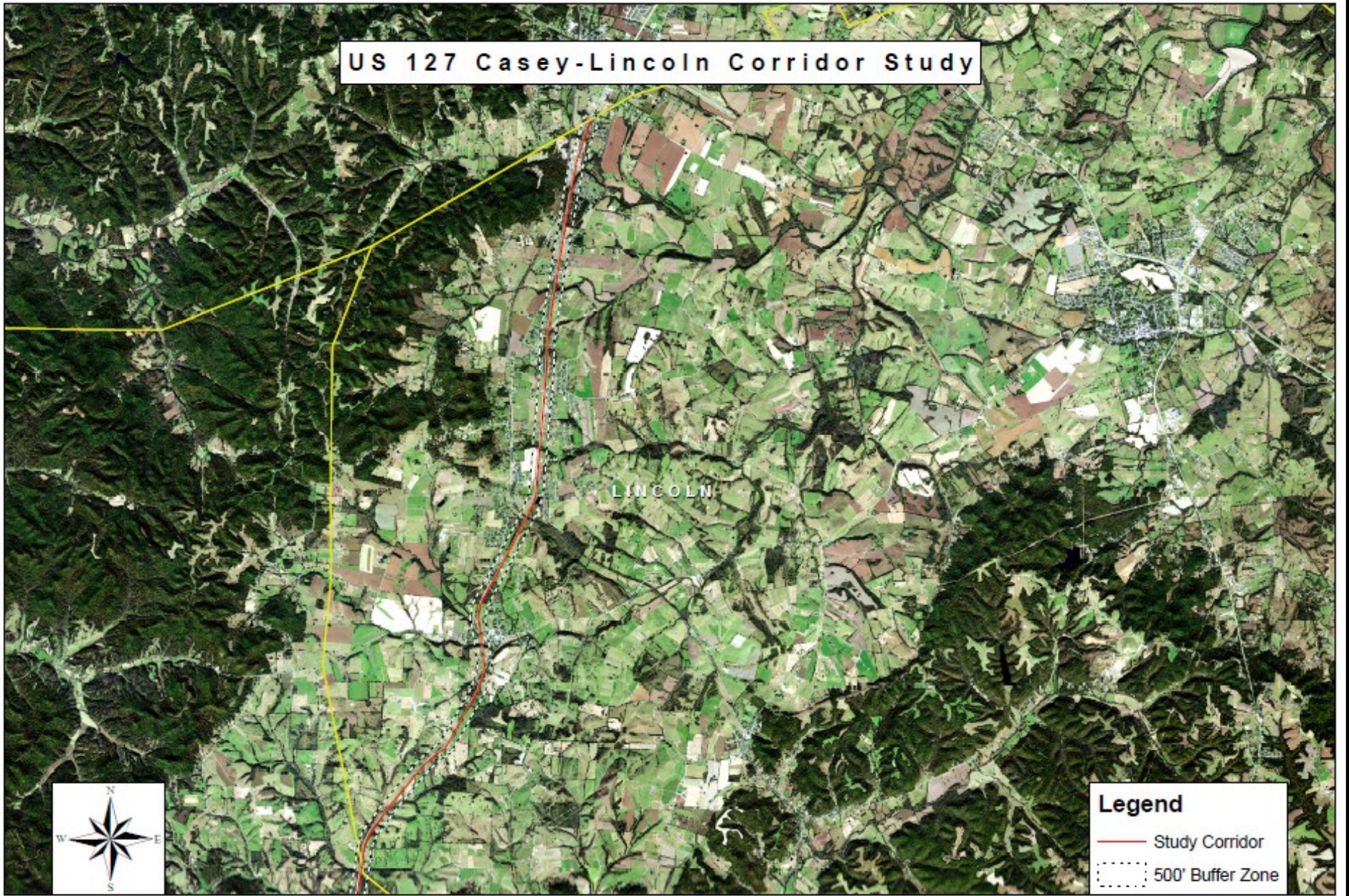


**Legend**

- Study Corridor
- - - 500' Buffer Zone



# US 127 Casey-Lincoln Corridor Study



**Legend**

- Study Corridor
- - - 500' Buffer Zone



## 2.0 What is Environmental Justice?

The U.S. EPA Office of Environmental Justice (EJ) defines EJ as:

“The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation and enforcement of environmental laws, regulations and policies.

<https://www.epa.gov/environmentaljustice> describes fair treatment as:

“Fair treatment means no group of people should bear a disproportionate share of the negative environmental consequences resulting from industrial, governmental and commercial operations or policies.”

The National Environmental Justice Advisory Council (NEJAC) suggestions for meaningful public involvement include: (1) Encourage public participation in all aspects of environmental decision making. (2) Encourage active community participation. (3) Institutionalize public participation. (4) Recognize community knowledge. (5) Utilize cross-cultural formats and exchanges.

While exact thresholds or benchmarks have not been established, and there is no further guidance on what “elevated” percentages of disadvantaged populations mean, for the purpose of this study “disproportionately high and adverse effect on a minority or low-income population” means an adverse effect that:

- 1) Is predominately borne by a minority population and/or low-income population, or
- 2) Will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-minority population and/or non-low-income population.

## 2.1 Definitions

USDOT Order 5610.2 on EJ, issued in the April 15, 1997 Federal Register, defines what constitutes low-income and minority population.

**Low-Income** is defined as a person whose median household income is at or below the U.S. Department of Health and Human Services poverty guidelines.

**Minority** is defined as a person who is: (1) Black (a person having origins in any black racial groups of Africa); (2) Hispanic (a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race); (3) Asian American (a person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands); or (4) American Indian and Alaskan Native (a person having origins in any of the original people of North America and who maintains cultural identification through tribal affiliation or community recognition).

**Low-Income Population** is defined as any readily identifiable group of low-income persons who live in geographic proximity and, if circumstances warrant, geographically dispersed/transient persons who will be similarly affected by a proposed DOT program, policy or activity.

**Minority Population** is defined as any readily identifiable group of minority persons who live in geographic proximity and, if circumstances warrant, geographically dispersed/transient persons who will be similarly affected by a proposed DOT program, policy or activity.

**Elderly and disabled populations** (also used in this analysis) are not specifically recognized under the definition of an Environmental Justice community. However, the U.S. DOT specifically encourages the early examination of potential populations of the

elderly, children, disabled, and other populations protected by Title VI of the Civil Rights Act of 1964 and related nondiscrimination statutes.

### **Limited English Proficiency**

The term Limited English Proficient (LEP) refers to any person age 5 and older who reported speaking English less than "very well" as classified by the U.S. Census Bureau. The term English proficient refers to people who reported speaking English only or "very well."

## **3.0 Methodology**

Data for this study was collected by using the method outlined by the KYTC document "Methodology for Assessing Potential Environmental Justice Concerns for KYTC Planning Studies," located in Appendix B.

The primary source of data for this report was assembled from the American Community Survey 2021 Five Year Estimate tables B03002 (Minority Status), B17021 (Poverty status), B01001 (Over 65 status), C21007 (Disabled), and B16004 (Limited English Proficiency) status via the American Fact Finder website (<https://data.census.gov/>), and GIS data provided by KYTC.

In reviewing each census block group for target populations, and analysis range was determined based on the reference threshold in each of the five census categories reviewed in this report. For this study the threshold established was the county (Casey or Lincoln County percentages for each population). Casey Counties For Minority that is 5.61%, Poverty is 24.86%, Over 65 is 20.36%, Disability status is 23.24%, and Limited English Proficiency is 1.96%. Lincoln Counties For Minority that is 6.66%, Poverty is 18.86%, Over 65 is 18.27%, Disability status is 20.54%, and Limited English Proficiency is 1.85%.

## 4.0 Census Data Analysis

The U.S. Census Bureau defines geographical units as:

**Census Tract (CT)** – A small, relatively permanent statistical subdivision of a county or statistically equivalent entity delineated for data presentation purposes by a local group of census data users or the geographic staff of a regional census center in accordance with Census Bureau guidelines. CTs generally contain between 1,000 and 8,000 people. CT boundaries are delineated with the intention of being stable over many decades, so they generally follow relatively permanent visible features. They may also follow governmental unit boundaries and other invisible features in some instances; the boundary of a state or county is always a census tract boundary.

**Block Group (BG)** – A statistical subdivision of a CT. A BG consists of all tabulation blocks whose numbers begin with the same digit in a CT. BGs generally contain between 300 and 3,000 people, with an optimum size of 1,500 people.

## 5.0 Study Findings/Overview

These Socioeconomic Studies are to be used as a component of the US 127 Corridor Study for Casey and Lincoln Counties currently being conducted by the Kentucky Transportation Cabinet Division of Planning. This report is intended to help define the location of the project and meet the Federal requirements regarding the possible environmental issues as defined in the National Environment Policy Act (NEPA).

According to the 5-year 2021 ACS, there are four (4) Census Tract's (CT); and a total of five (5) Block Groups (BG) that encompass the population of the study area for Casey County. For Lincoln County there are two (2) Census Tract's (CT), and four (4) Block Groups (BG).



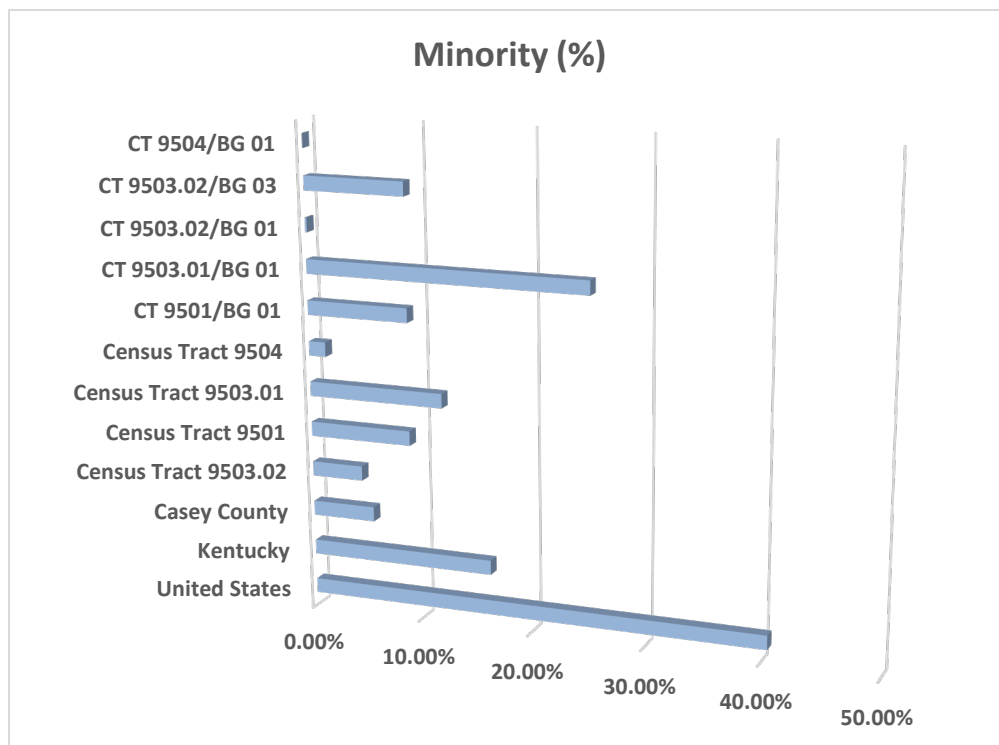
## 6.0 A. Casey County Population by Persons of Minority Origin

*See Map 1 for reference*

The total minority population for Casey County is 5.61%. This is the established reference threshold for this category (see below). This percentage is below the state (16.36%) and the U.S. (40.55%). For the study area, two (2) of the Census Tracts (CT 9501 9.13%, CT 9503.01 12.12%) and three (3) Block Groups (CT 9501/BG 01 9.13%, CT 9503.01/BG 01 25.32%, CT 9503.02/ BG 03 9.06%) were identified as having percentages above the established threshold.

### Reference Thresholds and Analysis Range

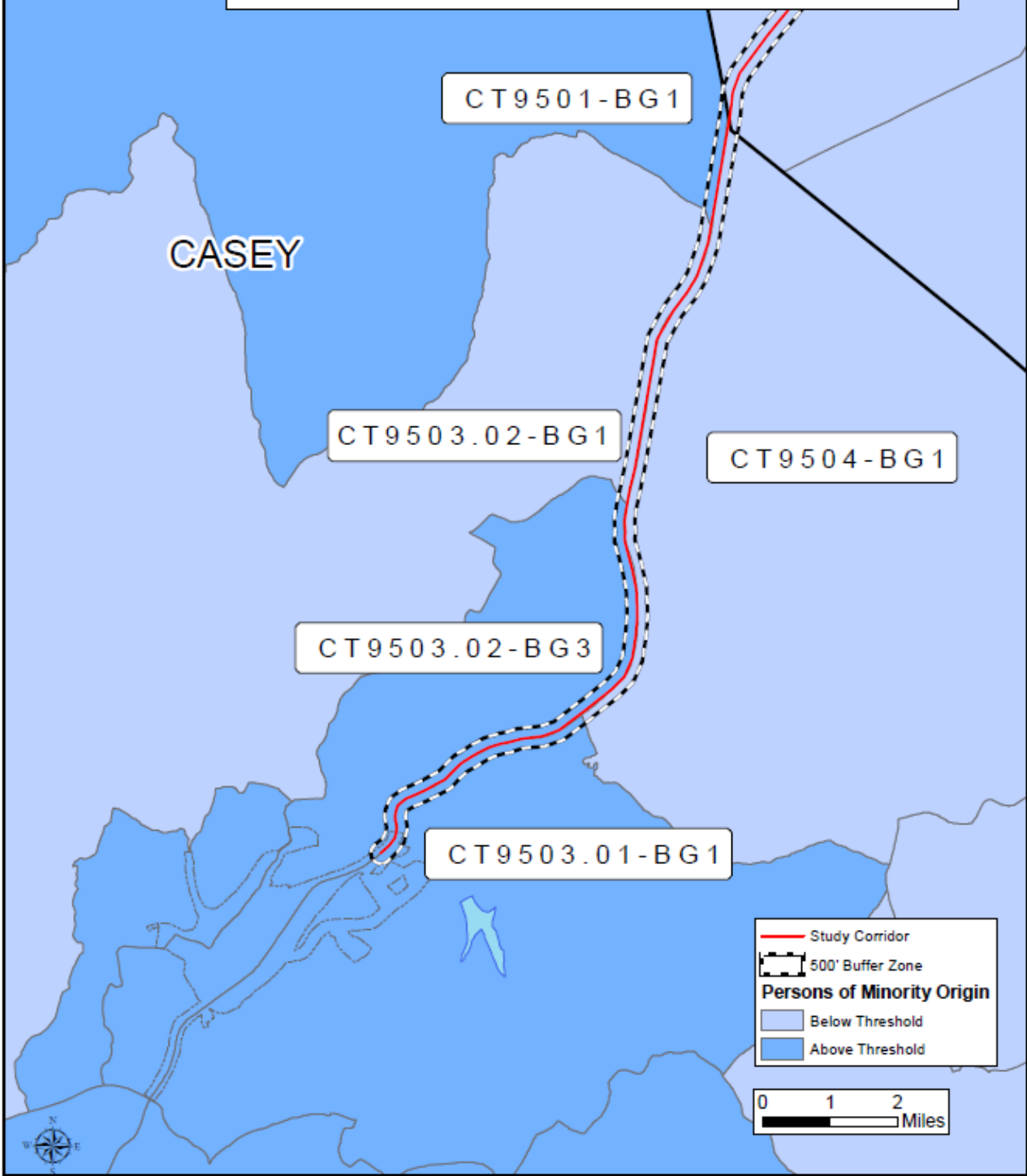
<u>Analysis Range</u>	<u>Percent Minority</u>
Above Threshold	>5.61%
Reference Threshold (County Percentage)	<b>5.61%</b>
Below Threshold	<5.61%



Map 1



**US 127 Corridor Study  
Persons of Minority Origin**



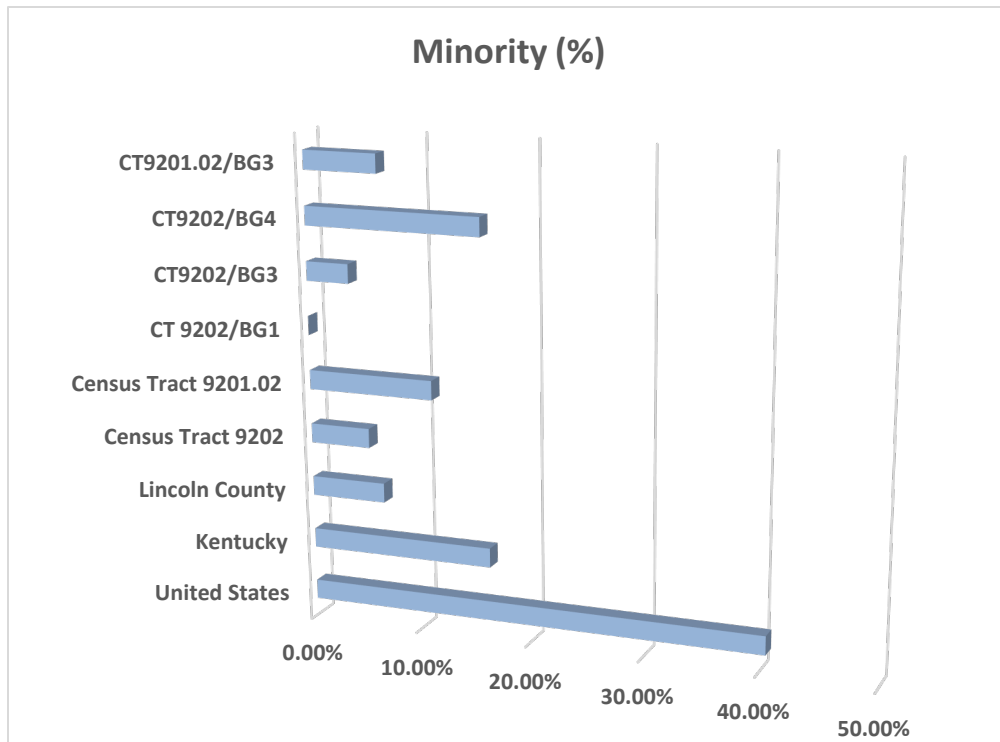
## 6.0 B. Lincoln County Population by Persons of Minority Origin

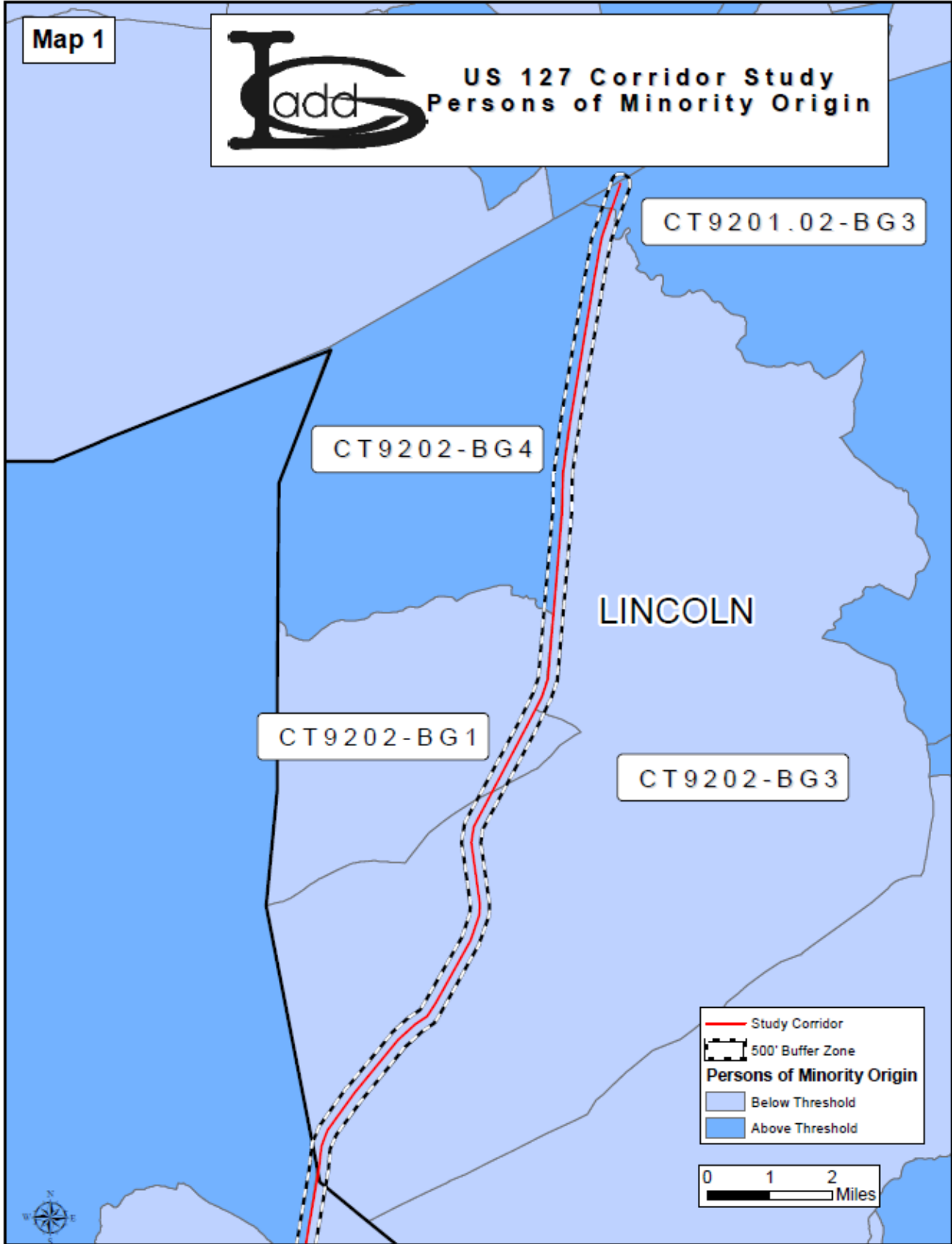
*See Map 1 for reference*

The total minority population for Lincoln County is 6.66%. This is the established reference threshold for this category (see below). This percentage is below the state (16.36%) and the U.S. (40.55%). For the study area, one (1) Census Tract (CT 9201.02 11.25%) and one (1) Block Group (CT 9202/BG4 15.82%) were identified as having percentages above the established threshold.

### Reference Thresholds and Analysis Range

<u>Analysis Range</u>	<u>Percent Minority</u>
Above Threshold	>6.66%
Reference Threshold (County Percentage)	<b>6.66%</b>
Below Threshold	<6.66%





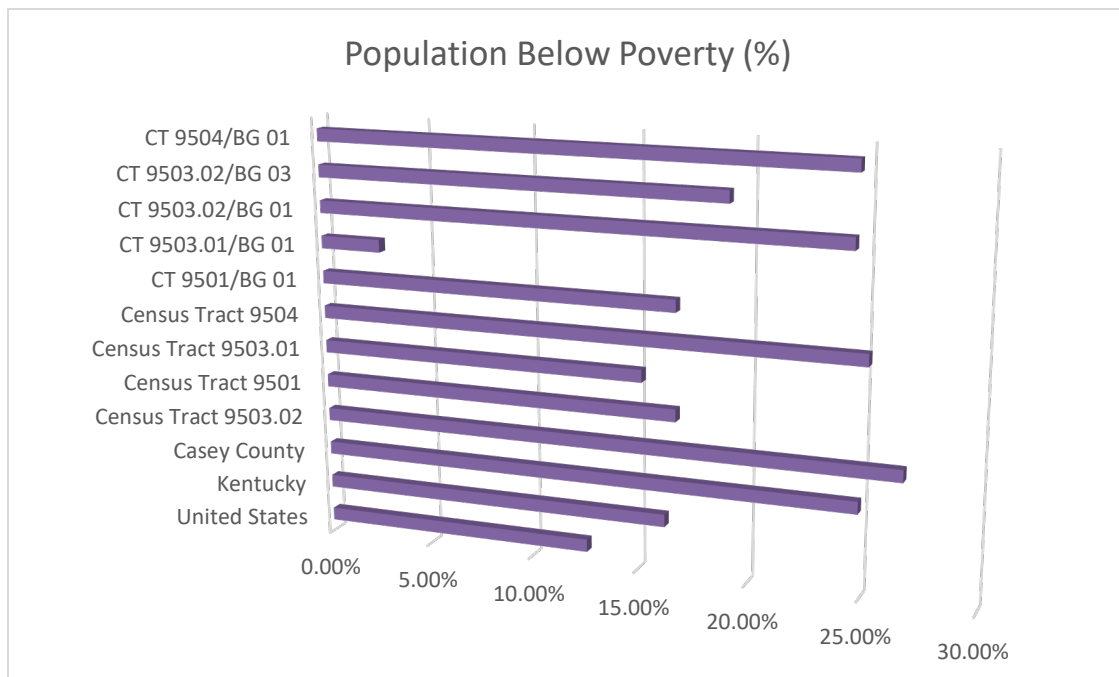
## 7.0 A. Casey Population by Below Poverty Status

*See Map 2 for reference*

The total below poverty population for Casey County is 24.86%. This is the established reference threshold for this category (see below). This percentage is above the state (16.27%) and the U.S. (12.63%). For the study area, two (2) Census Tracts (CT 9503.02 26.76%, CT 9504 25.16%) but no Block Groups were identified as having percentages above the threshold established for below poverty status.

### Reference Thresholds and Analysis Range

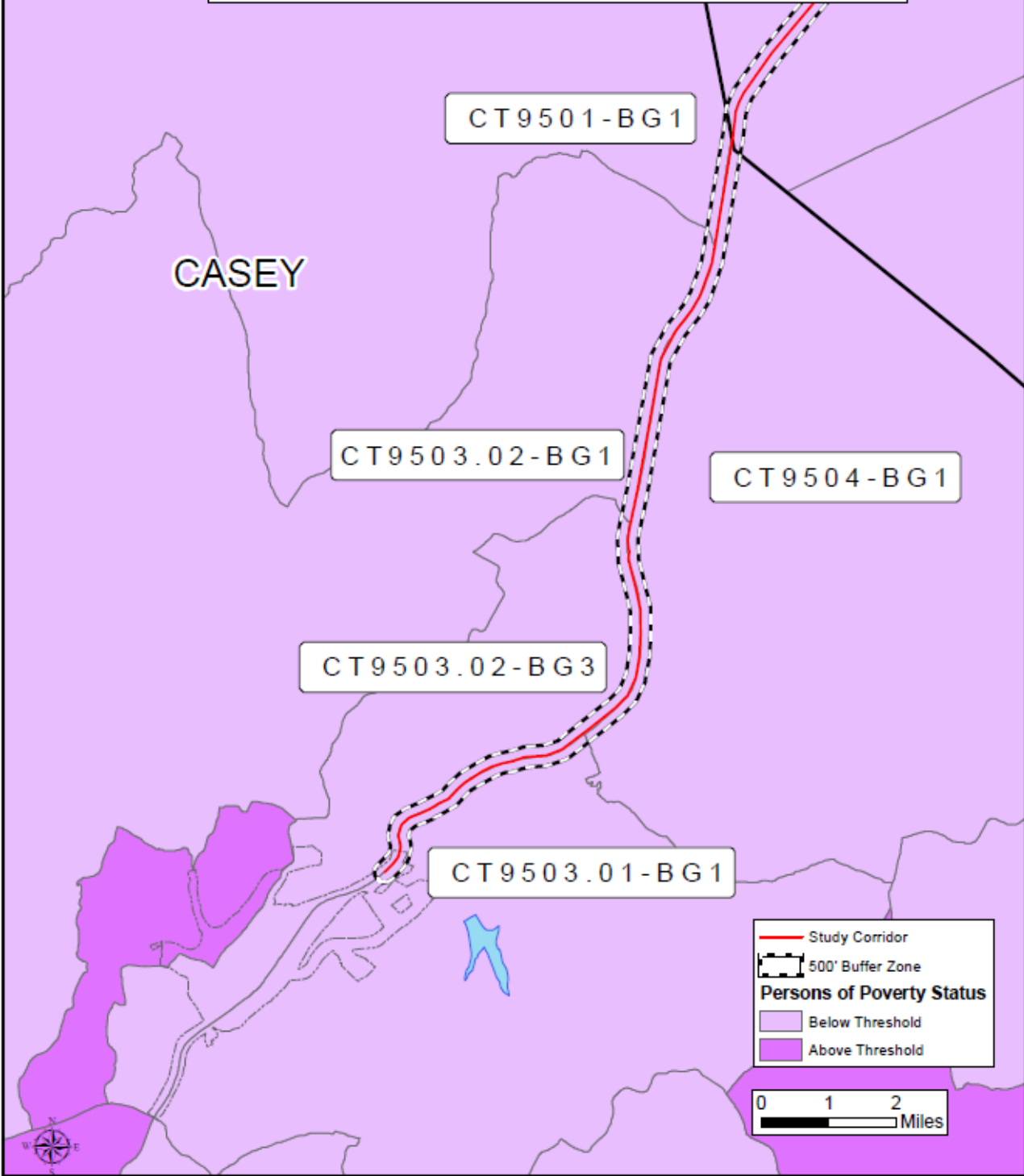
<u>Analysis Range</u>	<u>Percent Below Poverty</u>
Above Threshold	>24.86%
Reference Threshold (County Percentage)	<b>24.86%</b>
Below Threshold	< 24.86%



Map 2



**US 127 Corridor Study  
Persons of Poverty Status**



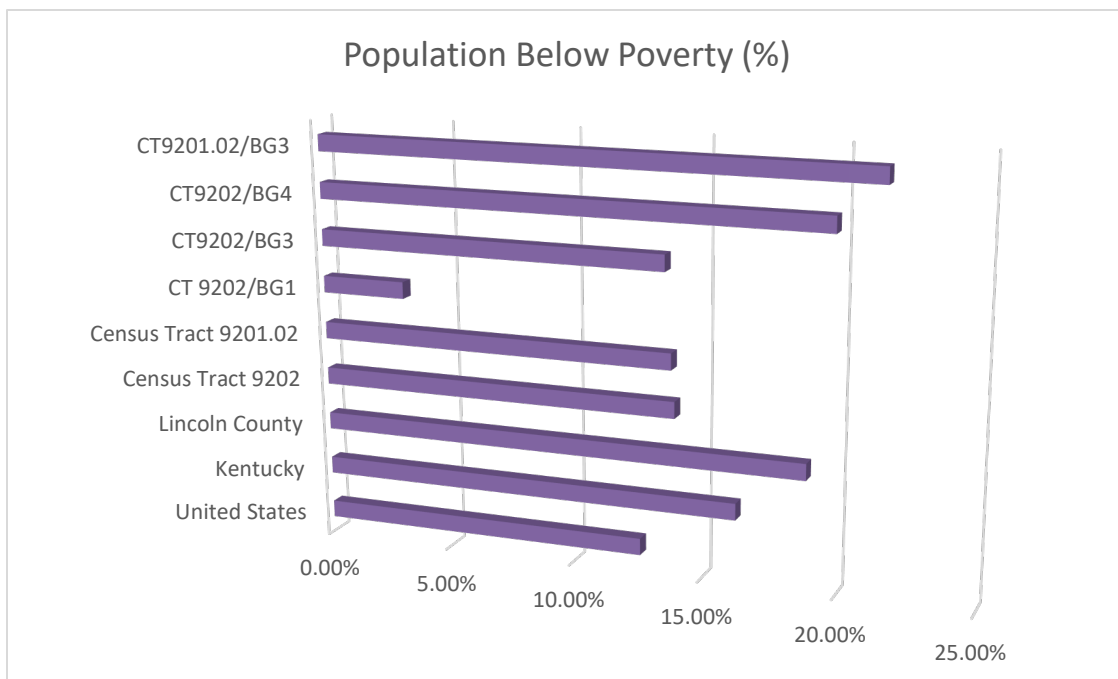
## 7.0 B. Lincoln Population by Below Poverty Status

*See Map 2 for reference*

The total below poverty population for Lincoln County is 18.86%. This is the established reference threshold for this category (see below). This percentage is above the state (16.27%) and the U.S. (12.63%). For the study area, no whole Census Tracts but two (2) Block Groups (CT 9202/ BG4 19.77%, CT 9201.02/ BG3 21.54%) were identified as having percentages above the threshold established for below poverty status.

### Reference Thresholds and Analysis Range

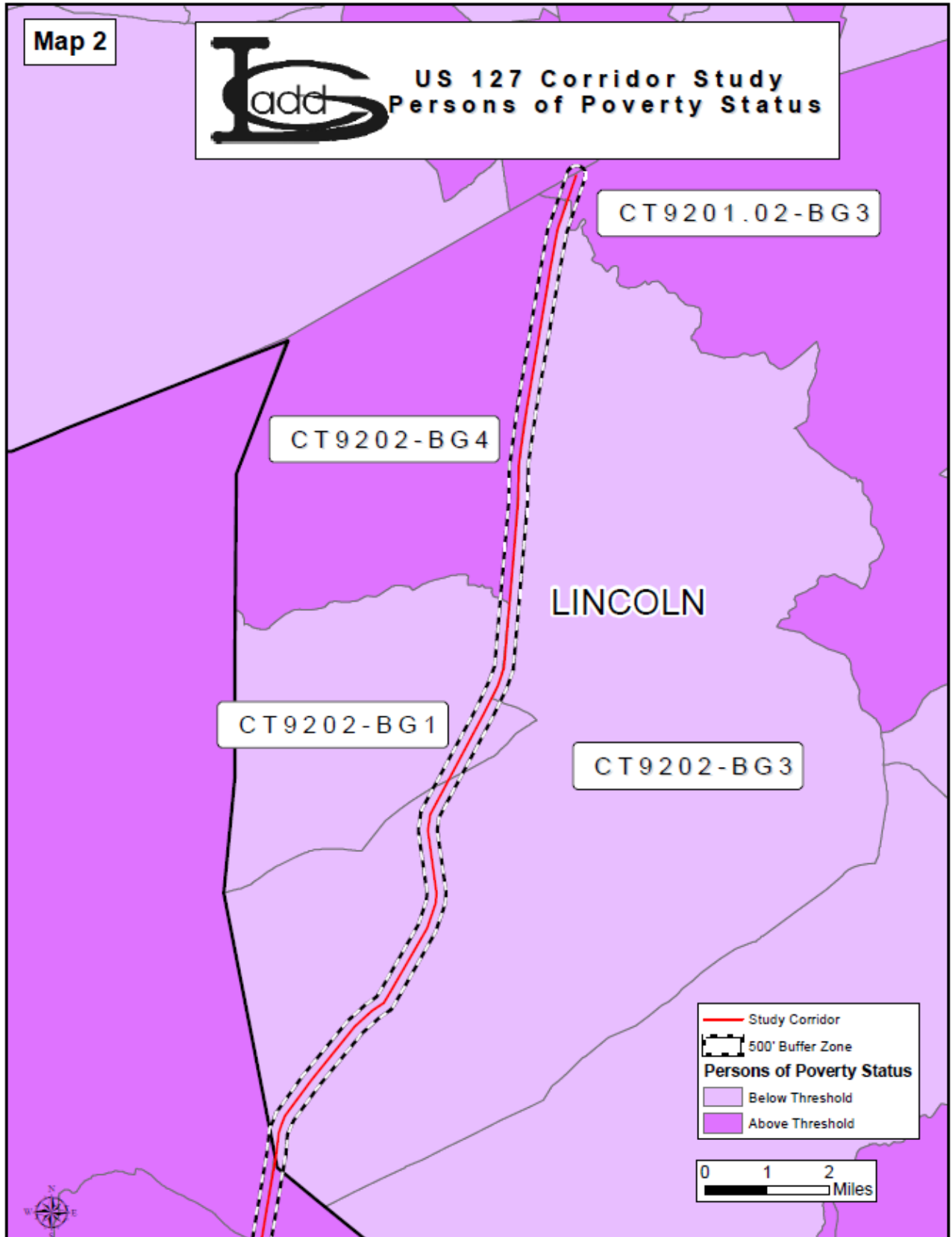
<u>Analysis Range</u>	<u>Percent Below Poverty</u>
Above Threshold	>18.86%
Reference Threshold (County Percentage)	18.86%
Below Threshold	< 18.86%



Map 2



**US 127 Corridor Study  
Persons of Poverty Status**





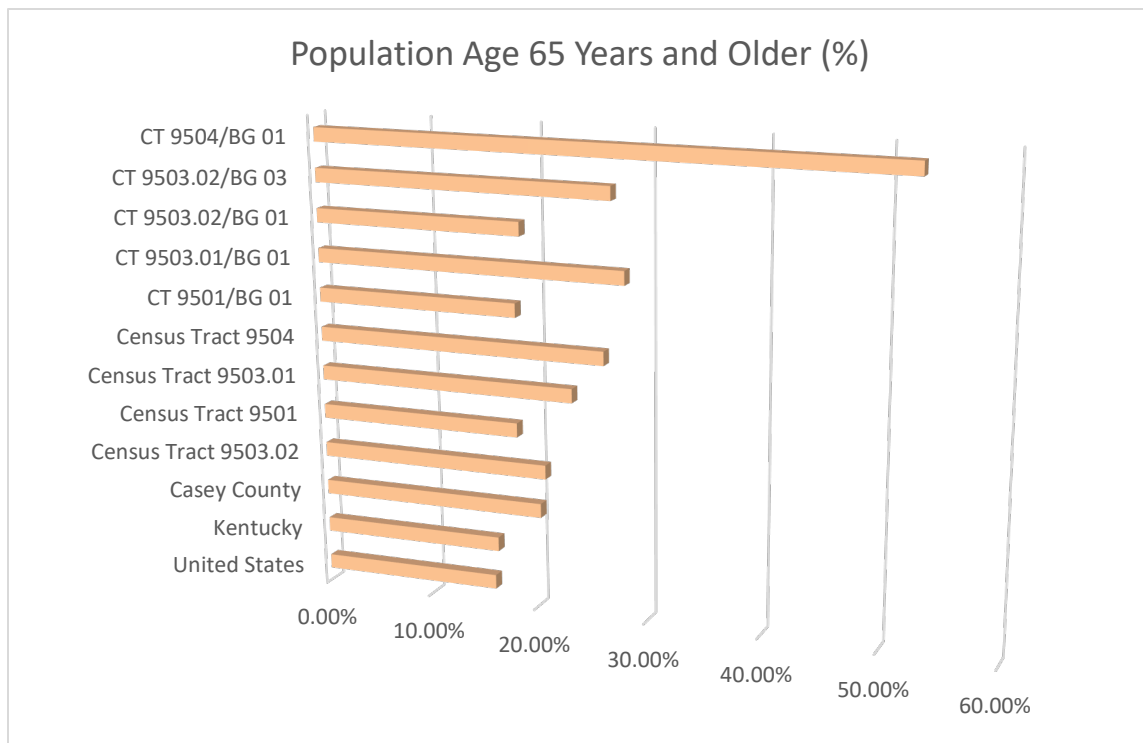
## 8.0 A. Casey Population by Person 65 and Over

*See Map 3 for reference*

The total population of those over 65 years of age for Casey County is 20.36%. This is the established reference threshold (see below) for this category. This percentage is above the state (16.35%) and the U.S. (16.04%). For the study area, three (3) Census Tracts (CT 9503.02 20.83%, CT 9503.01 23.32%, CT 9504 26.20%) and three (3) Block Groups (CT 9503.01/ BG 01 28.08%, CT 9503.02/ BG 03 26.91%, CT 9504/ BG 01 52.77%) were identified as having percentages above the threshold established for persons 65 and over.

### Reference Thresholds and Analysis Range

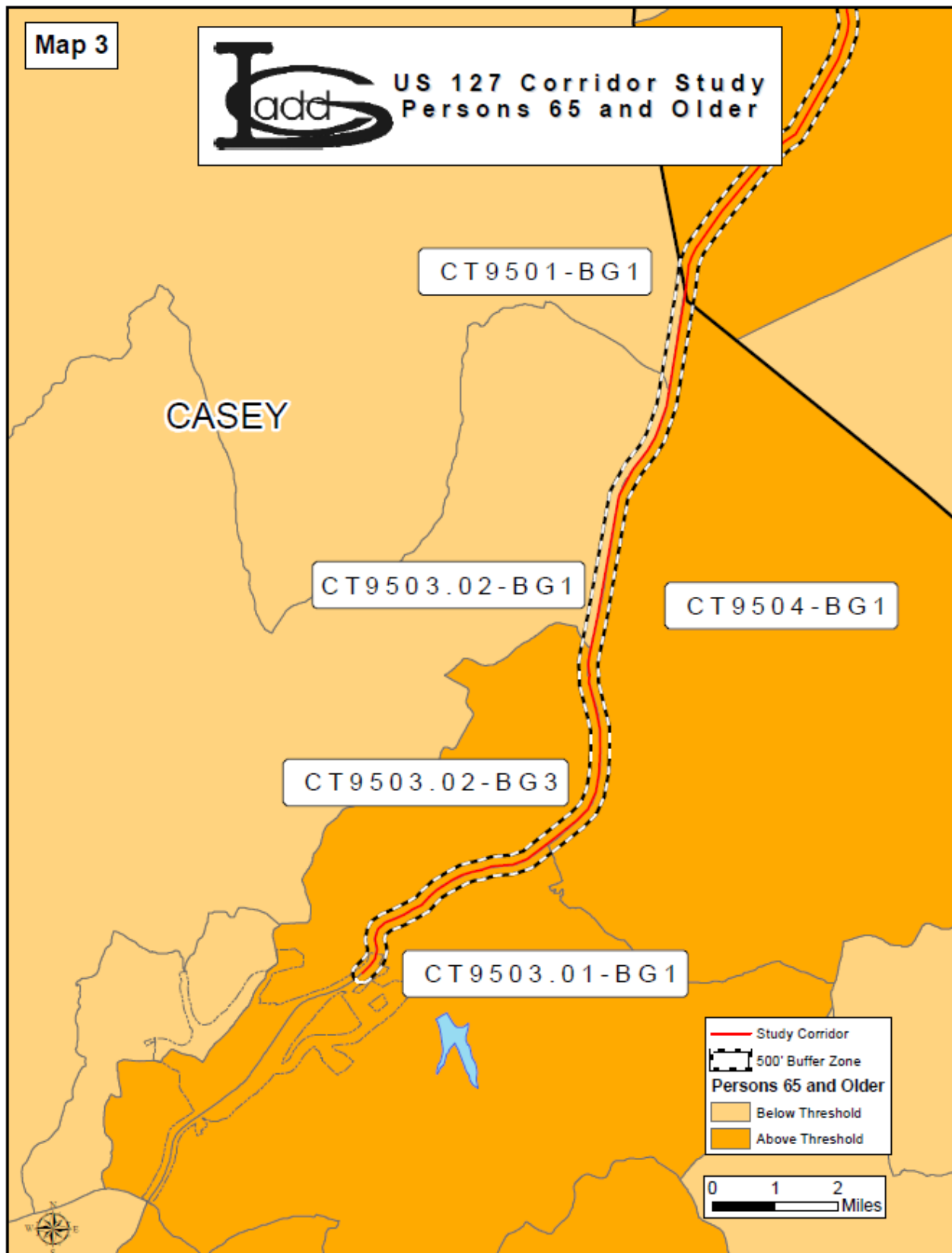
<u>Analysis Range</u>	<u>Percent 65 and Over</u>
Above Threshold	> 20.36%
Reference Threshold (County Percentage)	<b>20.36%</b>
Below Threshold	< 20.36%



Map 3



US 127 Corridor Study  
Persons 65 and Older



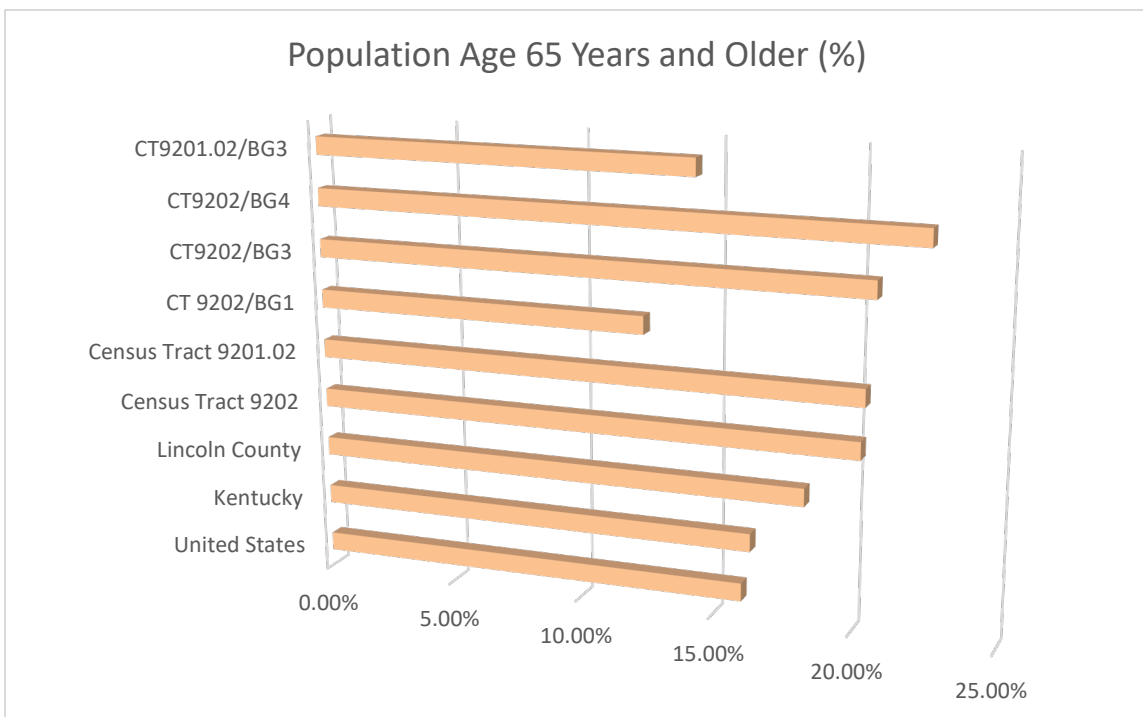
## 8.0 B. Lincoln Population by Person 65 and Over

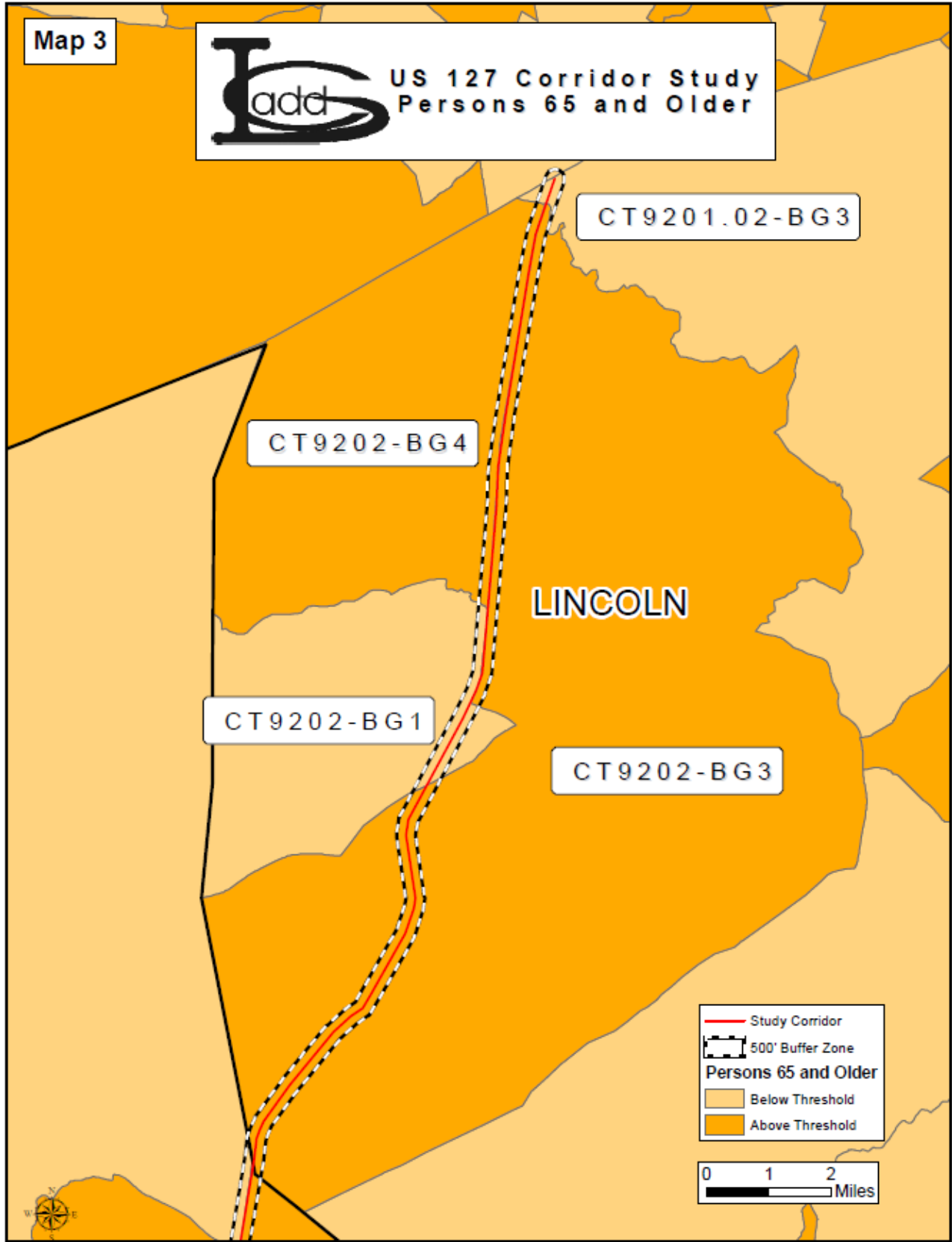
*See Map 3 for reference*

The total population of those over 65 years of age for Lincoln County is 18.27%. This is the established reference threshold (see below) for this category. This percentage is above the state (16.35%) and the U.S. (16.04%). For the study area, two (2) Census Tracts (CT 9202 20.22%, CT 9201.02 20.34%) and two (2) Block Groups (CT 9202/ BG3 20.65%, CT 9202/ BG4 22.46%) were identified as having percentages above the threshold established for persons 65 and over.

### Reference Thresholds and Analysis Range

<u>Analysis Range</u>	<u>Percent 65 and Over</u>
Above Threshold	> 18.27%
Reference Threshold (County Percentage)	<b>18.27%</b>
Below Threshold	< 18.27%





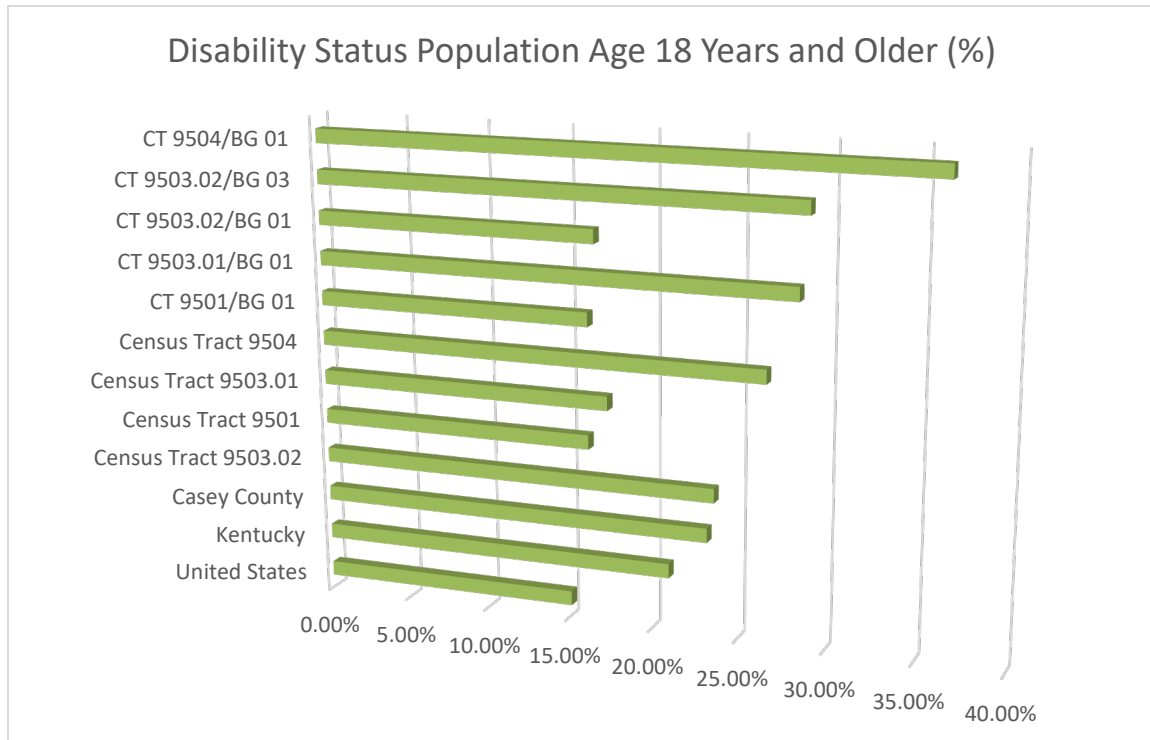
## 9.0 A. Casey Population by Disability Status

*See Map 4 for reference*

The total population claiming disability status in Casey County is 23.24%. This is the established reference threshold (see below) for this category. This percentage is above the state (21.01%) as well as the U.S. (15.17%). For the study area two (2) Census Tracts (CT 9503.02 23.64%, CT 9504 26.58%) and three (3) Block Groups (CT 9503.01/ BG 01 28.36%, CT 9503.02/ BG 03 28.90%, CT 9504/ BG 01 36.42%) were identified as having percentages above the threshold established for disability status.

### Reference Thresholds and Analysis Range

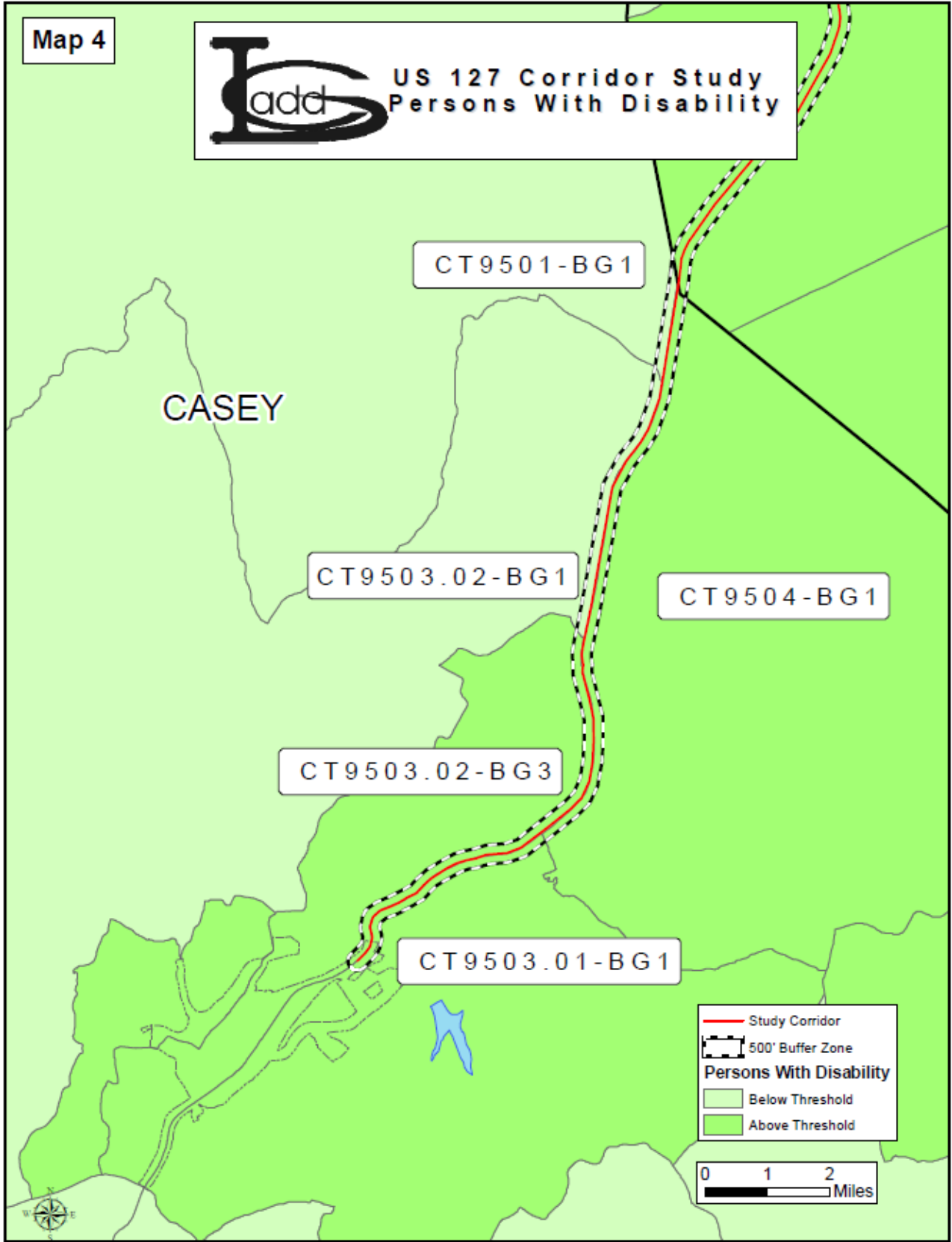
<u>Analysis Range</u>	<u>Percent Disabilities</u>
Above Threshold	> 23.24%
Reference Threshold (County Percentage)	<b>23.24%</b>
Below Threshold	< 23.24%



Map 4



US 127 Corridor Study  
Persons With Disability



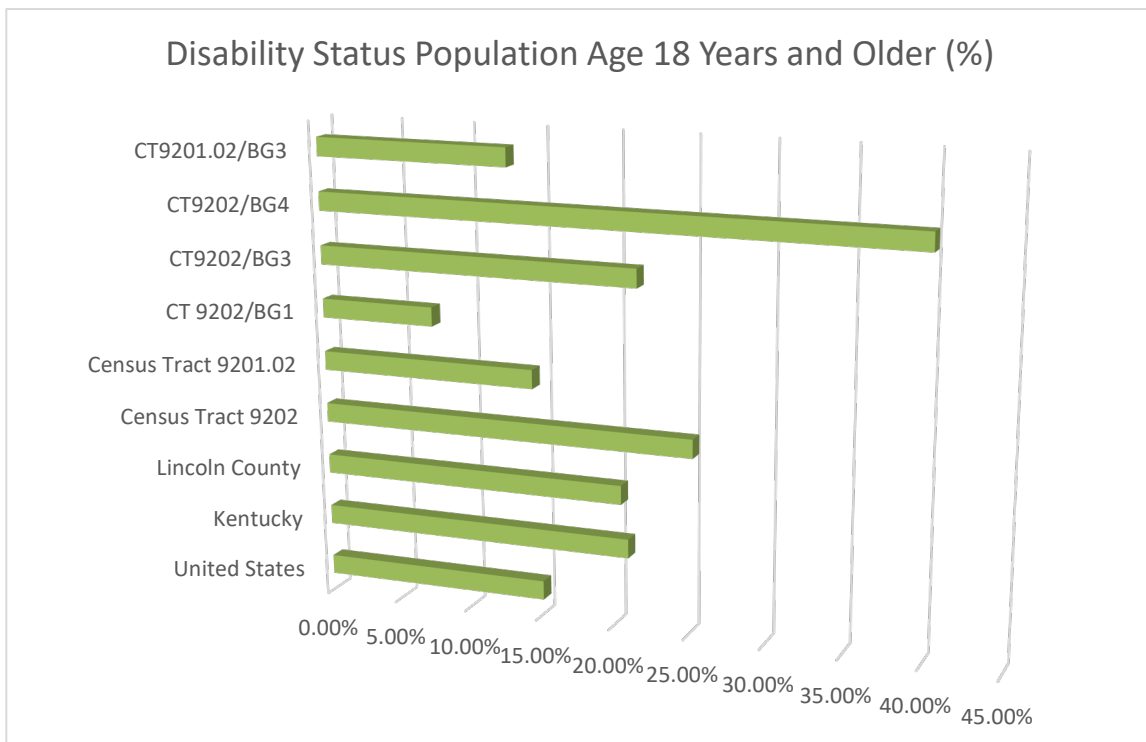
## 9.0 B. Lincoln Population by Disability Status

*See Map 4 for reference*

The total population claiming disability status in Lincoln County is 20.54%. This is the established reference threshold (see below) for this category. This percentage is below the state (21.01%) but above the U.S. (15.17%). For the study area one (1) Census Tracts (CT 9202 25.30%) and two (2) Block Groups (CT 9202/ BG 3 21.65%, CT 9202/ BG 4 40.13%) were identified as having percentages above the threshold established for disability status.

### Reference Thresholds and Analysis Range

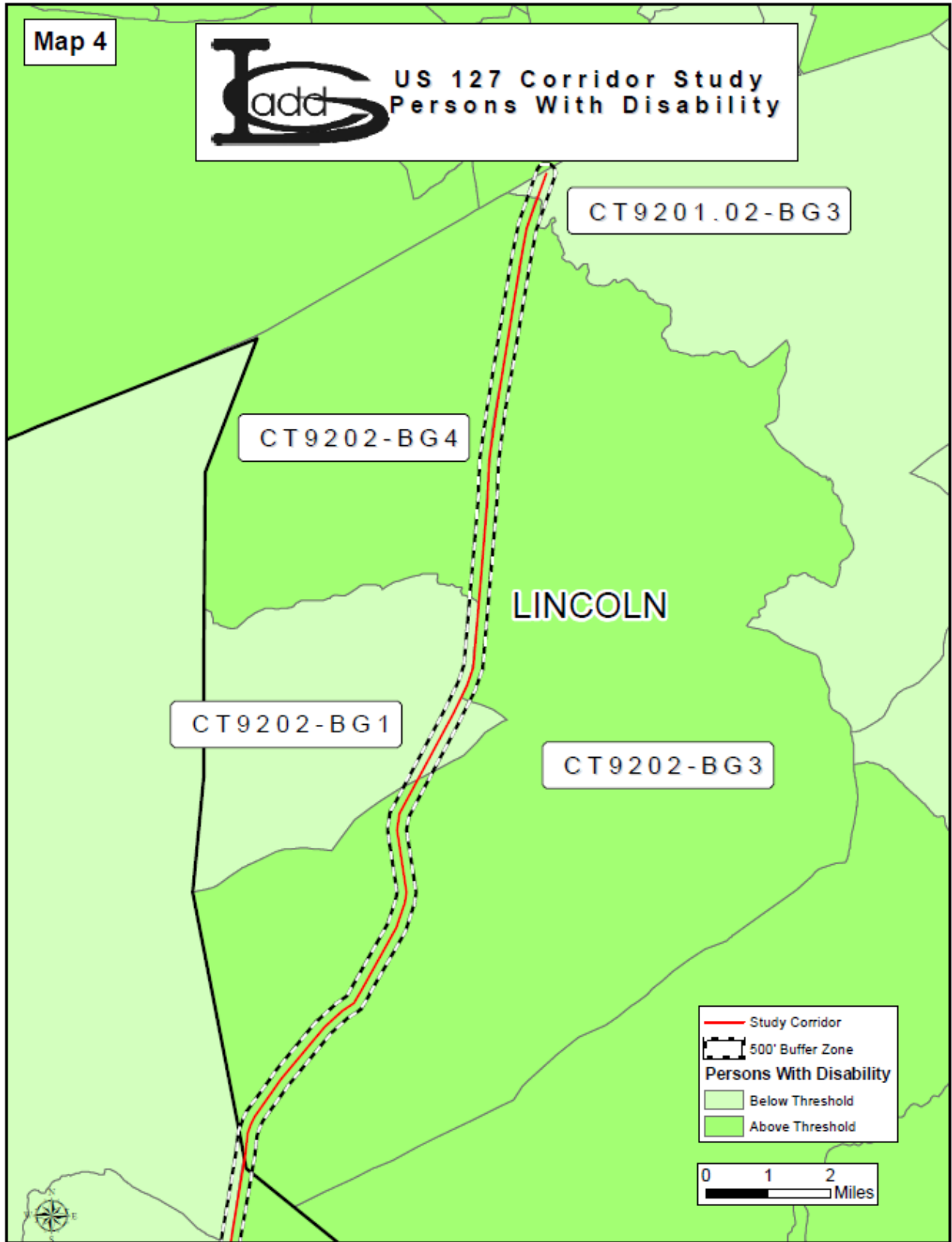
<u>Analysis Range</u>	<u>Percent Disabilities</u>
Above Threshold	> 20.54%
Reference Threshold (County Percentage)	<b>20.54%</b>
Below Threshold	< 20.54%



Map 4



**US 127 Corridor Study  
Persons With Disability**





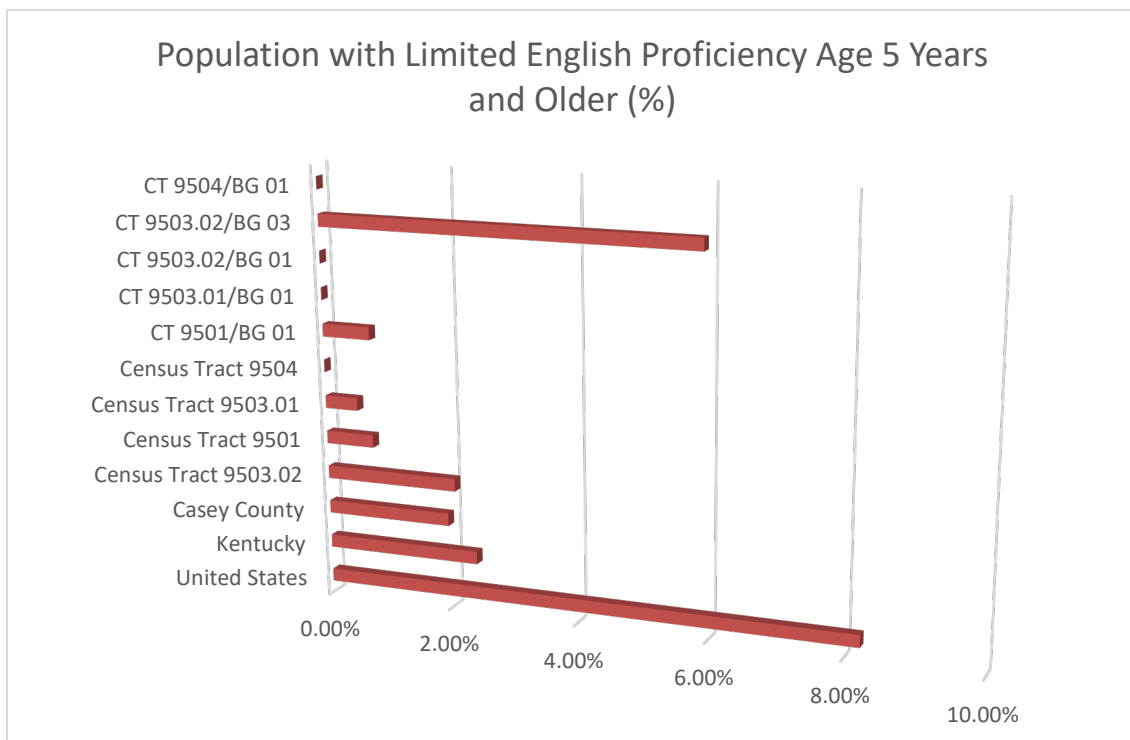
## 10.0 A. Casey Population Limited English Proficiency

*See Map 5 for reference*

The total population claiming limited English status in Casey County is 1.96%. This is the established reference threshold (see below) for this category. This percentage is below the state (2.41%) and the U.S. (8.23%). For the study area one Census Tract (CT 9503.02 2.08%) and one Block Group (CT 9503.02/ BG 03 5.92%) were identified as having percentages above the threshold established for Populations with Limited English Proficiency.

### Reference Thresholds and Analysis Range

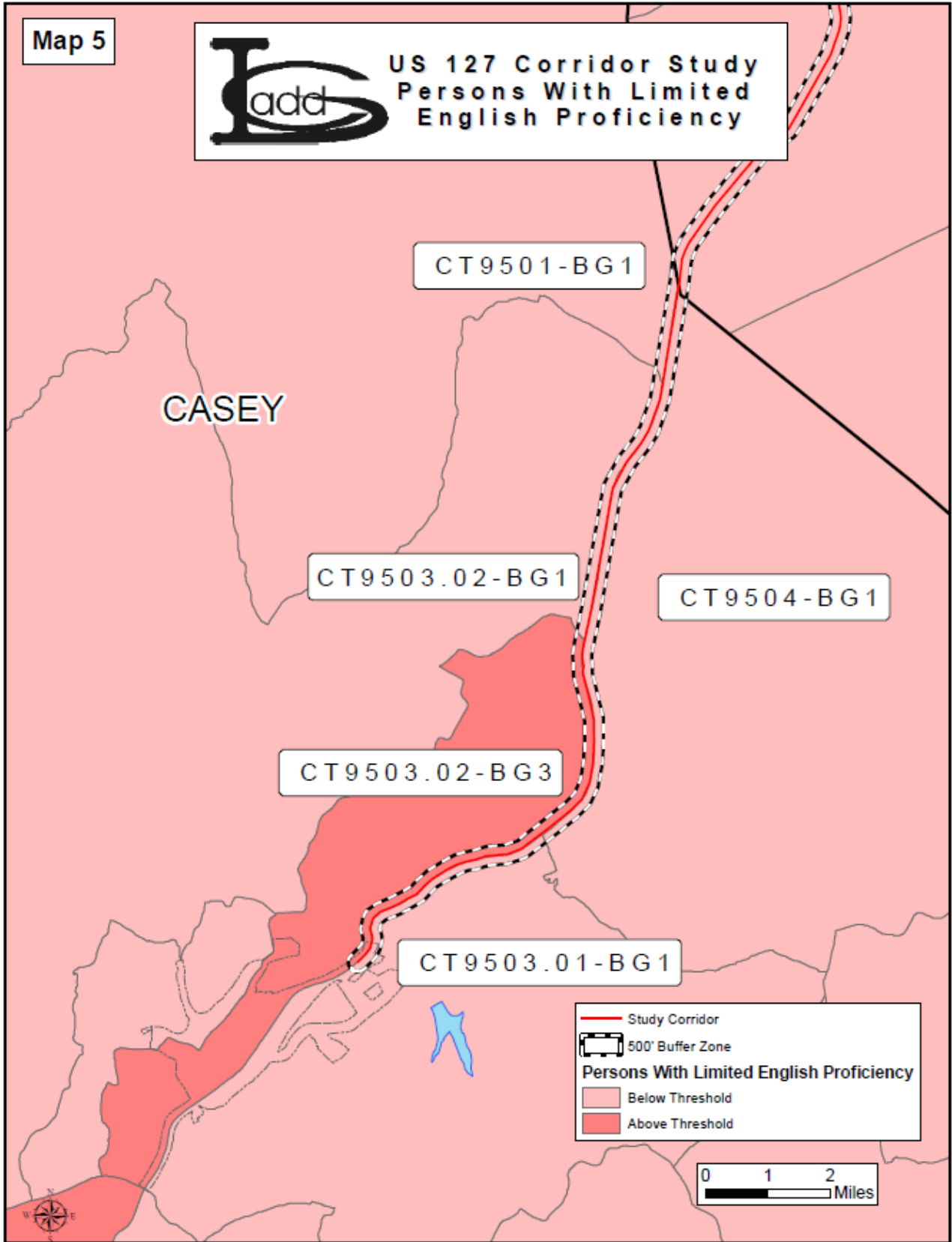
<u>Analysis Range</u>	<u>Percent Disabilities</u>
Above Threshold	> 1.96%
Reference Threshold (County Percentage)	<b>1.96%</b>
Below Threshold	< 1.96%



Map 5



**US 127 Corridor Study  
Persons With Limited  
English Proficiency**



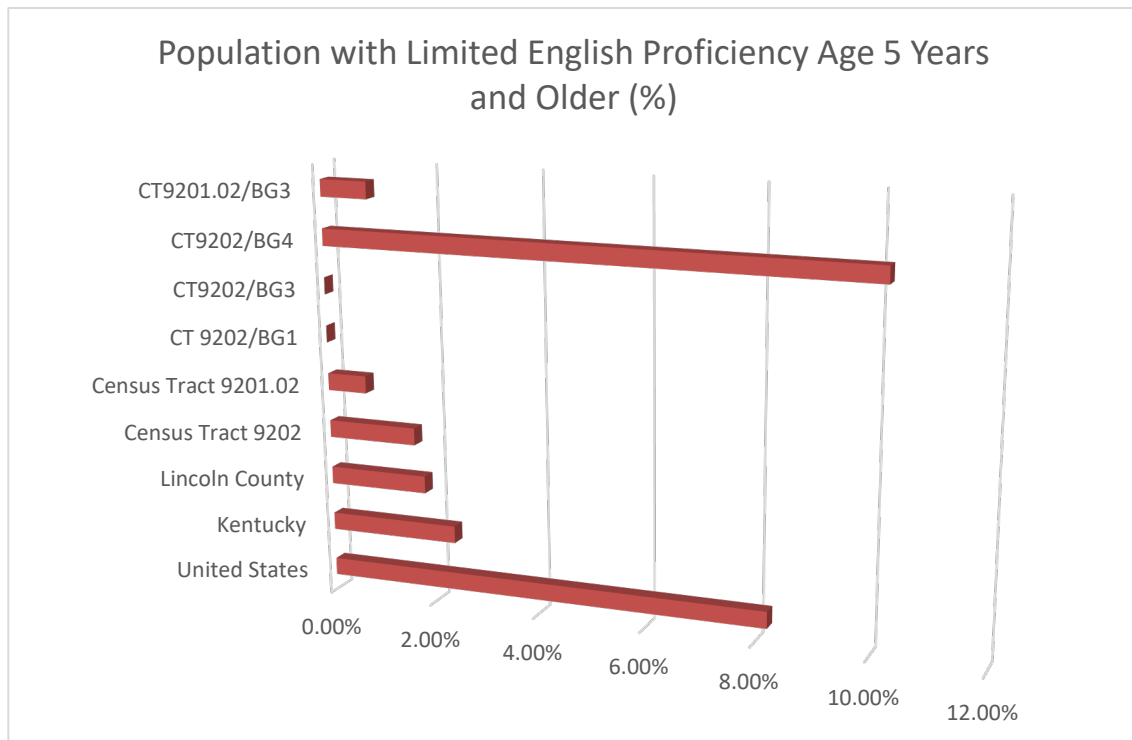
## 10.0 B. Lincoln Population Limited English Proficiency

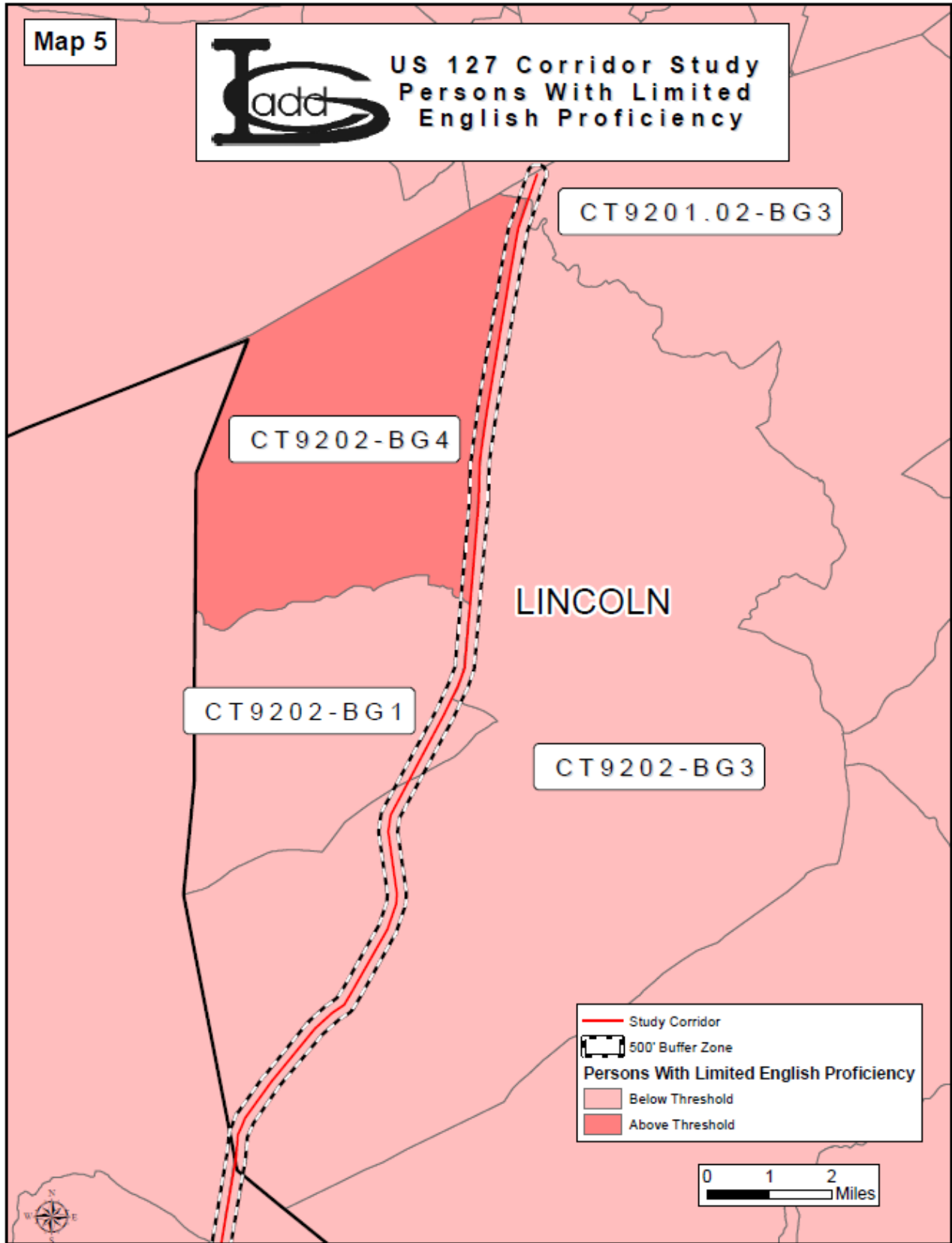
*See Map 5 for reference*

The total population claiming limited English status in Casey County is 1.85%. This is the established reference threshold (see below) for this category. This percentage is below the state (2.41%) and the U.S. (8.23%). For the study area no Census Tracts and one Block Group (CT 9202/ BG4 10.20%) were identified as having percentages above the threshold established for Populations with Limited English Proficiency.

### Reference Thresholds and Analysis Range

<u>Analysis Range</u>	<u>Percent Disabilities</u>
Above Threshold	> 1.85%
Reference Threshold (County Percentage)	<b>1.85%</b>
Below Threshold	< 1.85%





## **11.0 Conclusion**

### Population by Persons of Racial Minority Origin

Casey County:

Census Tract 9501 – BG 01, 9503.01 BG 01, and 9503.02 BG 03 were found to be above the reference threshold.

Lincoln County:

Census Tract 9202 -BG 04 was found to have a higher percentage than the reference threshold.

### Population by Persons Below Poverty Level

Casey County:

No Block Groups bordering the corridor study area were found to be above the reference threshold.

Lincoln County:

Census Tract 9202 – BG 04 and 9201.02 - BG 03 were found to be above the reference threshold.

### Population by Persons 65 and Older

Casey County:

Census Tracts 9503.01 – BG 01, 9503.02 – BG 03, and CT 9504 – BG 01 area all at a higher percentage than the reference threshold for the County.

Lincoln County:

Census Tracts 9202 – BG 03 and 9202 – BG 04 were both found to be at a higher percentage than the reference threshold.

### Population by Disability Status

Casey County:

Census Tracts 9503.01 – BG 01, 9503.02 – BG 03, and 9504 – BG 01 were all found as having percentages above the reference threshold.

Lincoln County:

Census Tracts 9202 – BG 03 and 9202 – BG 04 were both found to have a percentage higher than the reference threshold.

Persons with Limited English Proficiency

Casey County:

Census Tract 9503.02 – BG 03 was found to be the only Block Group above the reference threshold.

Lincoln County:

Census Tract 9202 – BG 04 was found to be the only Block Group above the reference threshold.

**APPENDIX A: Affected Census Tract and Block Group Table**

		<b>Total Pop</b>	<b>Minority</b>	<b>Poverty</b>	<b>Over 65</b>	<b>Disability</b>	<b>LEP</b>
United States		329,725,481	40.55%	12.63%	16.04%	15.17%	8.23%
Kentucky		4,494,141	16.36%	16.27%	16.35%	21.01%	2.41%
Casey County		15,863	5.61%	24.86%	20.36%	23.24%	1.96%
Lincoln County		24,314	6.66%	18.86%	18.27%	18.86%	1.85%
<b>Casey Census Tract</b>	<b>Block Group</b>						
9501	01	1,741	9.13%	16.77%	18.27%	16.27%	0.76%
9503.02	01	1,920	0.16%	24.48%	18.75%	16.68%	0.00%
9503.02	03	1,126	9.06%	19.11%	26.91%	28.90%	5.92%
9504	01	739	0%	24.63%	52.77%	36.42%	0.00%
9503.01	01	1,015	25.32%	2.86%	28.08%	28.36%	0.00%
<b>Lincoln Census Tract</b>	<b>Block Group</b>						
9201.02	03	1,459	6.65%	21.54%	14.32%	21.54%	.89%
9202	01	563	0%	3.28%	12.43%	3.28%	0.00%
9202	03	2,523	3.84%	13.58%	20.65%	21.65%	0.00%
9202	04	828	15.82%	19.77%	22.46%	40.13%	10.20%

## **APPENDIX B:**

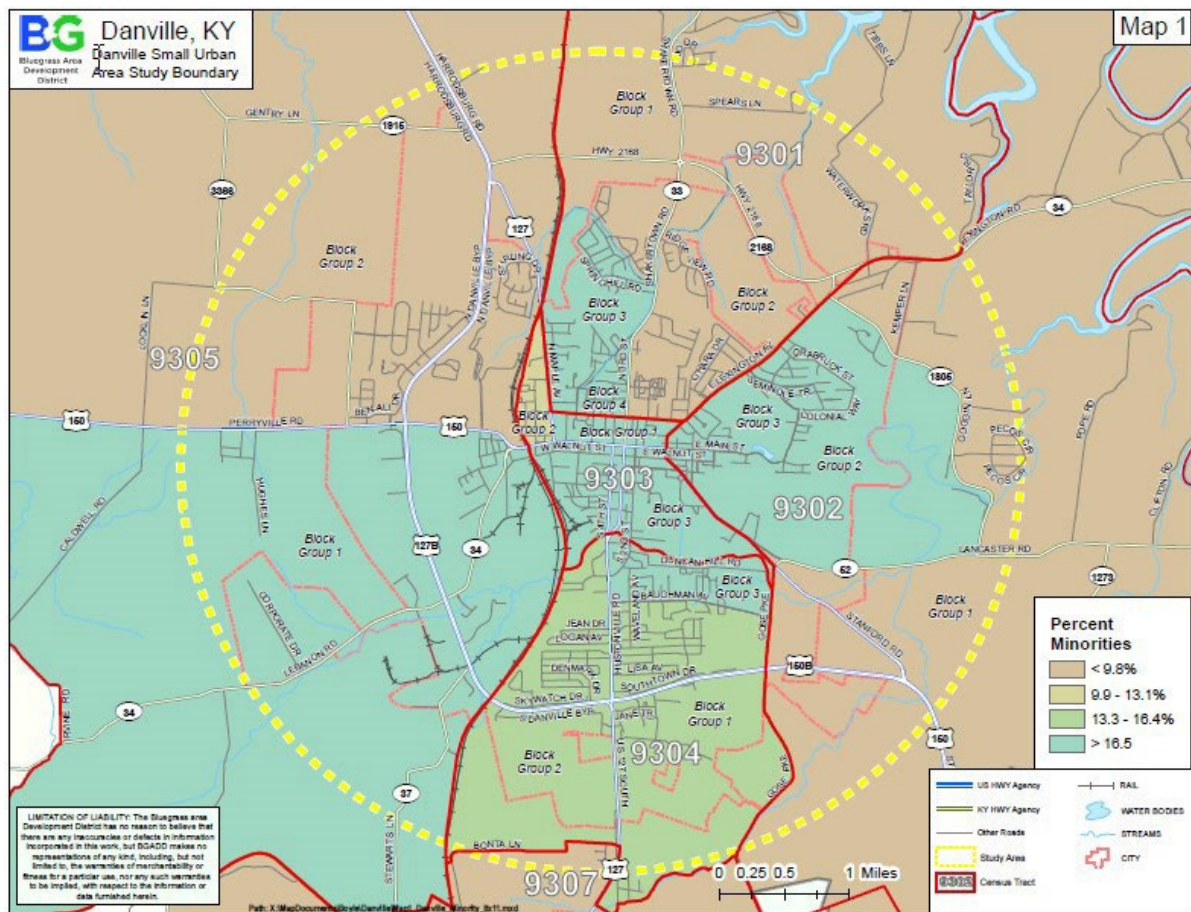
### **Methodology for Assessing Potential Environmental Justice Concerns for KYTC Planning Studies**

The methodologies used in this planning document are appropriate for identifying possible areas of concern in small urban areas and potential project corridors. However, during future phases of project development a more detailed and robust analysis would be required for the NEPA documentation when assessing the potential for adverse and disproportionate impacts to low- income and minority populations.

A map or shapefile of the alternatives will be provided by the consultant or KYTC to the applicable Area Development District (ADD). KYTC, in conjunction with the consultant, will review the ADD data for quality and completeness. The consultant will summarize the information provided by the ADD in the final report. The full Socioeconomic analysis should be placed in an Appendix for reference as necessary.

Maps should be included with the analysis that depict the project area in relation to the Census tracts and block groups included in the analysis. Maps similar to **Figure 1** should be symbolized utilizing and appropriate range dependent on the relevant data being studied.

Figure 1



### Additional Information

The below information may be beneficial to note for future reference

- Changes due to new residential developments in the area
- Increases in Asian and/or Hispanic populations.
- Concentrations or communities that share a common religious, cultural, ethnic, or other background, e.g., Amish communities.
- Communities or neighborhoods that exhibit a high degree of community cohesion or interaction and the ability to mobilize community actions at the start of community



involvement.

- Concentrations of common employment, religious centers, and/or educational Institutions.

**Tips:**

- Only include data that is being analyzed. For instance, there is no need to define Block Groups if they are not used. Similarly, Census Tracts should only be referenced as they relate to location of Block Groups discussed.
- Choropleth maps (shaded, color gradation) should be developed based on population percentage.
- 1 page summary facing the adjacent related map is a functional, readily relatable format.
- At this stage, there is no proposed alignment; therefore we can make no assumptions regarding adverse impacts or mitigation efforts to any populations. We can only identify potential locations of Affected Communities.

## APPENDIX C:

### **Methodology for assessing underserved populations including Environmental Justice, Title VI, Age and Disability in Planning Studies.**

Appendix: Methodology from KYTC

#### **METHODOLOGY FOR ASSESSING UNDERSERVED POPULATIONS INCLUDING ENVIRONMENTAL JUSTICE, TITLE VI, AGE AND DISABILITY IN PLANNING STUDIES Updated May 2022**

#### Cover Page

**Title:** Insert specific study type/area

**Subtitle:** Socioeconomic Study

**Date:**

**Author:**

#### Analysis

Environmental Justice refers to the fair treatment of all people regardless of race, color, national origin or income. Specifically, agencies must demonstrate meaningful involvement with the above stated groups with respect to development, implementation and enforcement of environmental laws, regulations and policies. Environmental Justice analysis is undertaken for any study that may result in impacts on a minority and/or low income population that has a federal nexus (funding or approval).

Additionally KYTC works to identify potential populations of the Elderly, Disabled, Limited English Proficiency and Limited Transportation Options that may be impacted in or near the Affected Community (AC) should highway improvements take place in the future.

Examples of these studies include, but are not limited to:

- Corridor Studies
- Traffic Studies
- Small Urban Area Studies
- Feasibility Studies
- Interchange Justification Studies
- Interchange Modification Reports

Affected Community with potential environmental justice impacts are determined by locating populations of minority, low-income, elderly, disabled, and limited English proficiency and calculating their percentage in the area relative to a reference community of comparison (COC).

Communities of comparison:

- The county percentage
- Kentucky percentage
- Block groups within reasonable proximity of the study area
- United States
- ADD Region

The demographics of the study area should be defined using block group data accessed via the American Community Survey 5-year data. KYTC will work in conjunction with the State Data Center to provide pertinent spatial data on a yearly basis for the following, as the update schedule allows:

- Minority
- Low-income
- Elderly
- Disabled populations
- Limited English Proficiency

## **Applicable Laws, Acts and Executive Orders**

**Civil Rights Act of 1964, Title VI (42 USC 2000d et seq.)** -This title declares it to be the policy of the United States that discrimination on the grounds of race, color, or national origin shall not occur in connection with programs and activities receiving federal financial assistance, and authorizes and directs the appropriate federal departments and agencies to take action to carry out this policy. The Presidential Memorandum accompanying Executive Order 12898 states that in accordance with this title, each federal agency should ensure that all programs or activities receiving federal financial assistance that affect human health or the environment do not directly, or through contractual or other arrangements, use criteria, methods, or practices that discriminate on the basis of race, color, or national origin.

**Age Discrimination Act of 1975 - 42 U.S.C. 6101**, provides: No person in the United States shall, on the basis of age, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.

**Rehabilitation Act of 1973, Section 504 - 42 U.S.C. 794, et seq.**, provides: No qualified handicapped person shall, solely by reason of his handicap, be excluded from participation in, be denied the benefits of, be subjected to discrimination under any program or activity that receives or benefits from Federal financial assistance.

**Americans With Disabilities Act of 1990 - 42 U.S.C. 12131, et seq.**, provides: No qualified individual with a disability shall, by reason of such disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination by a department, agency, special purpose district, or other instrumentality of a State or local government.

**Executive Order #12898** - (Environmental Justice) directs federal agencies to develop strategies to address disproportionately high and adverse human health or environmental effects of their programs on minority and low-income populations.

**Executive Order #13166** - (Limited-English-Proficiency) directs federal agencies to evaluate services provided and implement a system that ensures that Limited English Proficiency persons are able to meaningfully access the services provided consistent with and without unduly burdening the fundamental mission of each federal agency.



This document was prepared in cooperation with the  
Kentucky Transportation Cabinet, 2023.