

## **Appendix C: Environmental Justice Review**

GREEN RIVER AREA DEVELOPMENT DISTRICT

# Environmental Justice Review

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Bluegrass Crossings Regional Business Centre  
Improved Access Road Study  
September 2014

Prepared for  
Kentucky Transportation Cabinet (KYTC) – Division of Planning



Prepared by  
Green River Area Development District



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

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## Introduction

This report presents an overview of the findings for selected socioeconomic characteristics in the Bluegrass Crossings Regional Business Centre Improved Access Road Study. The objective of the study is to improve safety, traffic operations, and the existing accessibility to the Bluegrass Crossings Regional Business Centre.

The information in this report outlines 2008-2012 American Community Survey statistics in and near the project area using tables, charts, and maps. The data presented in this document is intended to highlight areas of concern that will require additional analysis should any project be advanced to future phases. Statistics are provided for minority, elderly, poverty status, and disabled populations for the nation, state, county, and block groups located within the project area.

This information is intended to aid the Kentucky Transportation Cabinet (KYTC) in making informed and prudent transportation decisions in the project area, especially with regard to the requirements of *Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Poverty status, Populations* (signed February 11, 1994). Executive Order 12898 states:

“...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 policies, and activities on minority populations and poverty status, populations...”

The project study area is located in Ohio County, beginning close to Exit 75 of the Western Kentucky Parkway near Beaver Dam. Ohio County is part of the Western Coal Fields region of Kentucky. According to the 2010 census, the county has a total area of 596.73 square miles (1,545.5 km<sup>2</sup>), of which 593.79 square miles (1,537.9 km<sup>2</sup>) (or 99.51%) is land and 2.94 square miles (7.6 km<sup>2</sup>) (or 0.49%) is water. Much of Ohio County is farmland and the eastern and northern parts have rolling hills. Of the 120 counties in Kentucky, it is the fifth largest. The county is intersected by the Rough River and the Green River runs along its southwestern border. According to the 2008-2012 ACS, it has a population of 23,972 persons. The county seat is Hartford.

Ohio County is composed of 20 census tracts. The planning study area is situated in Block Group (BG) 1 in Census Tract (CT) 9205. A map of the planning study area in relation to the CTs is displayed in Appendix A.

## What is Environmental Justice?

The U.S. Department of Transportation (DOT) outlines three primary Environmental Justice Concepts as:

1. To avoid, minimize, or mitigate disproportionately high and adverse human health or environmental effects, including social and economic effects, on minority populations and poverty status, populations.
2. To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.
3. To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority population and poverty status, populations.

The U.S. DOT order defines minority as:

1. Black (a person having origins in any of the 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).

A minority population is “any readily identifiable groups of minority persons who live in geographic proximity, and if circumstances warrant geographically dispersed/transient persons...”

Low-income, is defined in U.S. DOT Order (5610.2) as “a person whose median household income is at or below the Department of Health and Human Services (HHS) poverty guidelines.” A low-income, population is “any readily identifiable group of low-income, persons who live in geographic proximity, and, if circumstances warrant, geographically dispersed/transient persons...”

A 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.

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

## Methodology

The data was collected using the method outlined by the KYTC document “Methodology for Assessing Potential Environmental Justice Concerns for KYTC Planning Studies” (See Appendix B). The demographics of the affected area should be defined using U.S. Census Bureau data and the percentages for minorities, poverty status, elderly and disabled populations should be compared to the Census tracts and block groups, the county as a whole, the entire state and the United States.

The primary source of data for this report is the 2008-2012 US Census Bureau American Community Survey including tables:

- BO1001
- BO3002
- B17021
- C23023

The data presented in this document is intended to highlight areas of concern that will require additional analysis should any project be advanced to future phases.

The Census tables (See Appendix C) in this report include the total number and percentages for minorities, elderly, low-income, and disabled population levels for the census tract, county, state and nation. This report uses the population percentages for Ohio County as the reference threshold for identifying target populations. The county numbers were selected as the reference threshold because the project is completely within the county limits. The county numbers most likely provide a better snapshot of the overall population characteristics of the one census tract in the study area as opposed to the United States or state percentages.

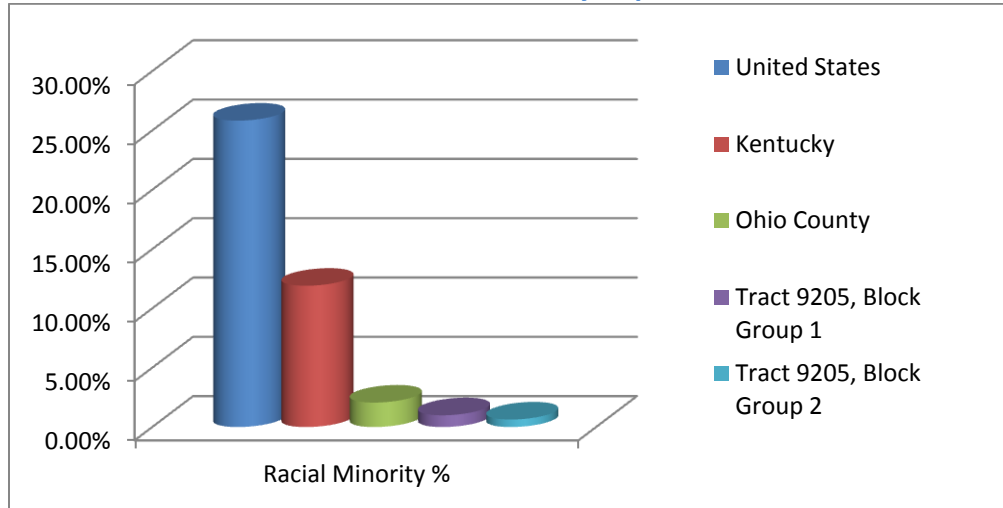
In reviewing the census tract for target populations, an analysis range was determined based on the reference threshold in each of the four census categories reviewed in this report. This range was set at 25 percent above the threshold to 25 percent below the threshold (See Appendix D).

The methodologies used in this planning document are appropriate for identifying 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 poverty status, and minority populations.

## Study Findings

### Population by Persons of Racial Minority Origin

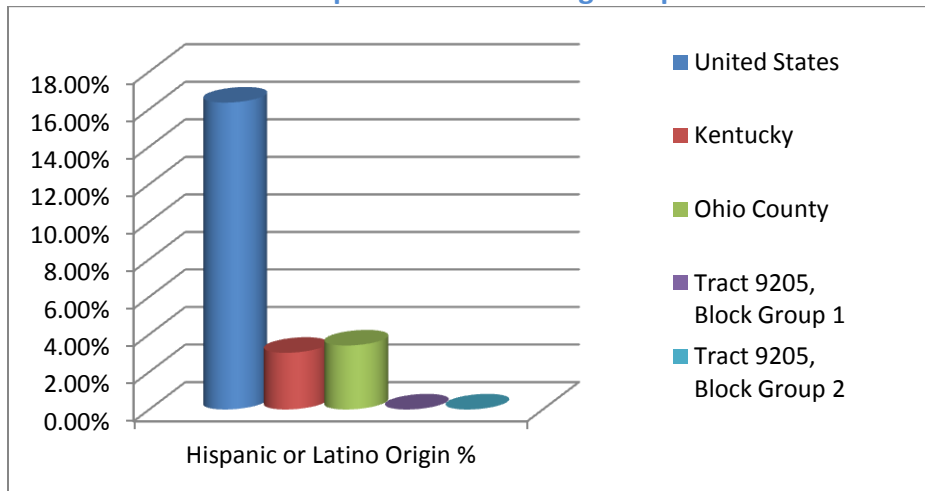
Chart 1: Racial Minority Population



Racial minorities in the United States make up 25.83% of the population, but in Kentucky that percentage drops significantly to just 11.91%. Ohio County displays a lower percentage of racial minorities than that of the state with 2.06% being reported as racial minorities by the 2008-2012 American Community Survey. Block Group (BG) 1 of Census Tract (CT) 9205 has a minority population accounting for 0.99% of the CT's population which is just below threshold for the county. BG 2 of CT 9205 has a minority population that is, percentage wise, significantly below the reference threshold with .63% of the population reporting as a racial minority.

## Population by Persons of Hispanic or Latino Origin

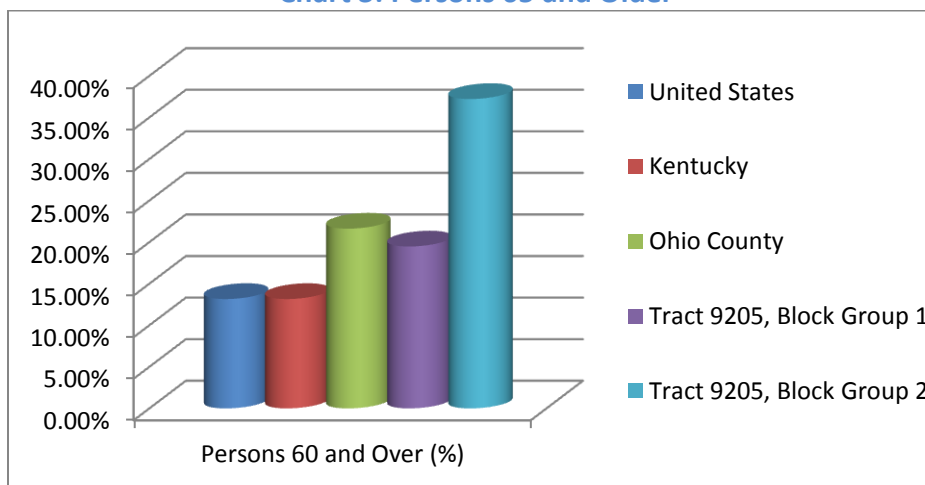
Chart 2: Hispanic or Latino Origin Population



Persons of Hispanic or Latino origin are an ethnic minority group growing at a rapid rate nationwide. In the United States this group represents 16.35% of the total population. In Kentucky only 3.02% of the population was reported as being of Hispanic or Latino origin on the 2008-2012 ACS. Ohio County has a higher representation of Hispanic or Latino individuals than that of the state with 3.41% of the county's population indicating they belong to this ethnic minority. The 2008-2012 ACS reported that both BG 1 and BG 2 of CT 9205 had 0.00% which is significantly below the reference threshold of population being of Hispanic or Latino origin.

## Population by Persons Age 60 Years and Older

Chart 3: Persons 65 and Older

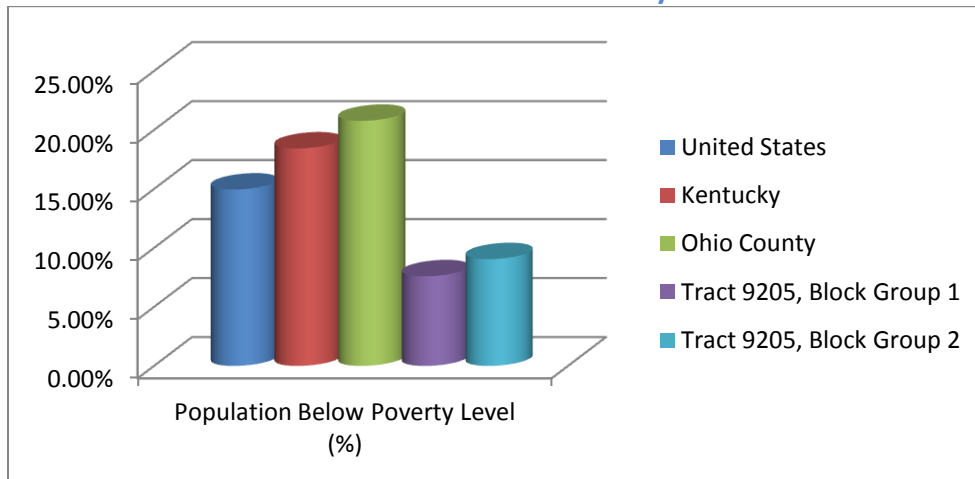


Ohio County has a much higher percentage (21.62%) of *Persons Age 60 Years and Older* than both the state (13.43%) and the U.S. (13.16%). Both CTs in the project area have elevated percentages of elderly persons. BG 1 of CT 9205 is just below threshold the reference threshold with 19.48% of persons being 60 years or older. BG 2 of CT 9205 reported 37.22% which is significantly above the referenced threshold.



## Population by Persons below Poverty Level

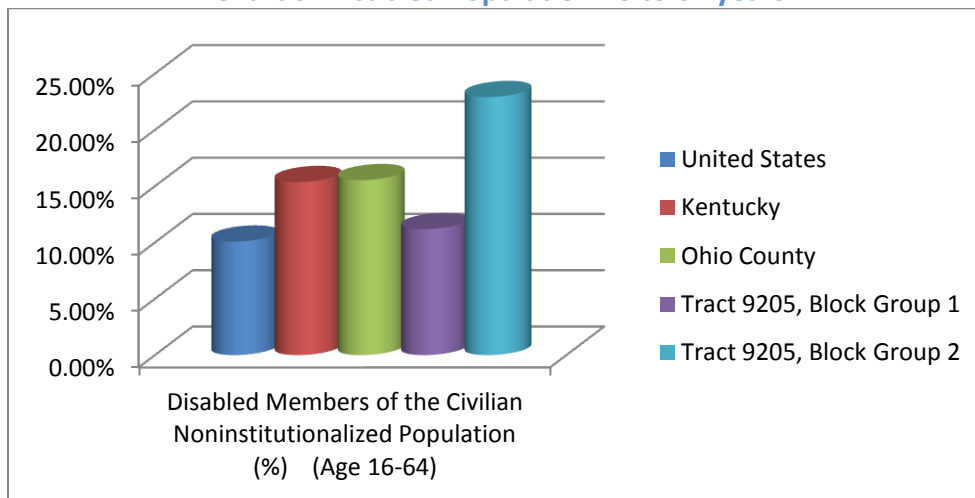
Chart 4: Persons below Poverty Level



The percentage of persons living below the poverty level in Kentucky (18.44%) is significantly higher than that of the United States (14.95%). Ohio County has a notably higher percentage than the state and nation at 20.78%. BG 1 of CT 9205 has significantly lower levels of poverty than does the county, state, and U.S with 7.60% of persons living below the poverty level. BG 2 of 9205 is significantly lower than the threshold with 9.05% population living below the poverty level.

## Disabled Population 16 to 64 years

Chart 5: Disabled Population 16 to 64 years



According to 2008-2012 American Community Survey numbers, Kentucky had 15.37% percent of its civilian non-institutionalized population age 16-64 with some type of disability. This is considerably higher than the national percentage (10.08%). Ohio County also reports a higher percentage of disabled persons (15.54%) than does the state and nation. 2008-2012 ACS data shows BG 1 of 9205 to have a percentage of disabled persons that is just below threshold (11.19%), however BG 2 of the same CT has a significantly above threshold (22.92%) reported as having a disability.

## Conclusion

Analysis of Block Group 1 of Census Tract 9205 shows a slightly elevated percentage of persons 60 and over (19.48%) and a significantly elevated percentage of disabled population (11.19%) located in this area relative to the state. It should be noted that small concentrations of persons over 60 and disabled persons do exist. The percentage is however consistent with county levels. Also noted is the significantly below threshold of racial minorities (.99%) and population below poverty (7.60%) for this Block Group.

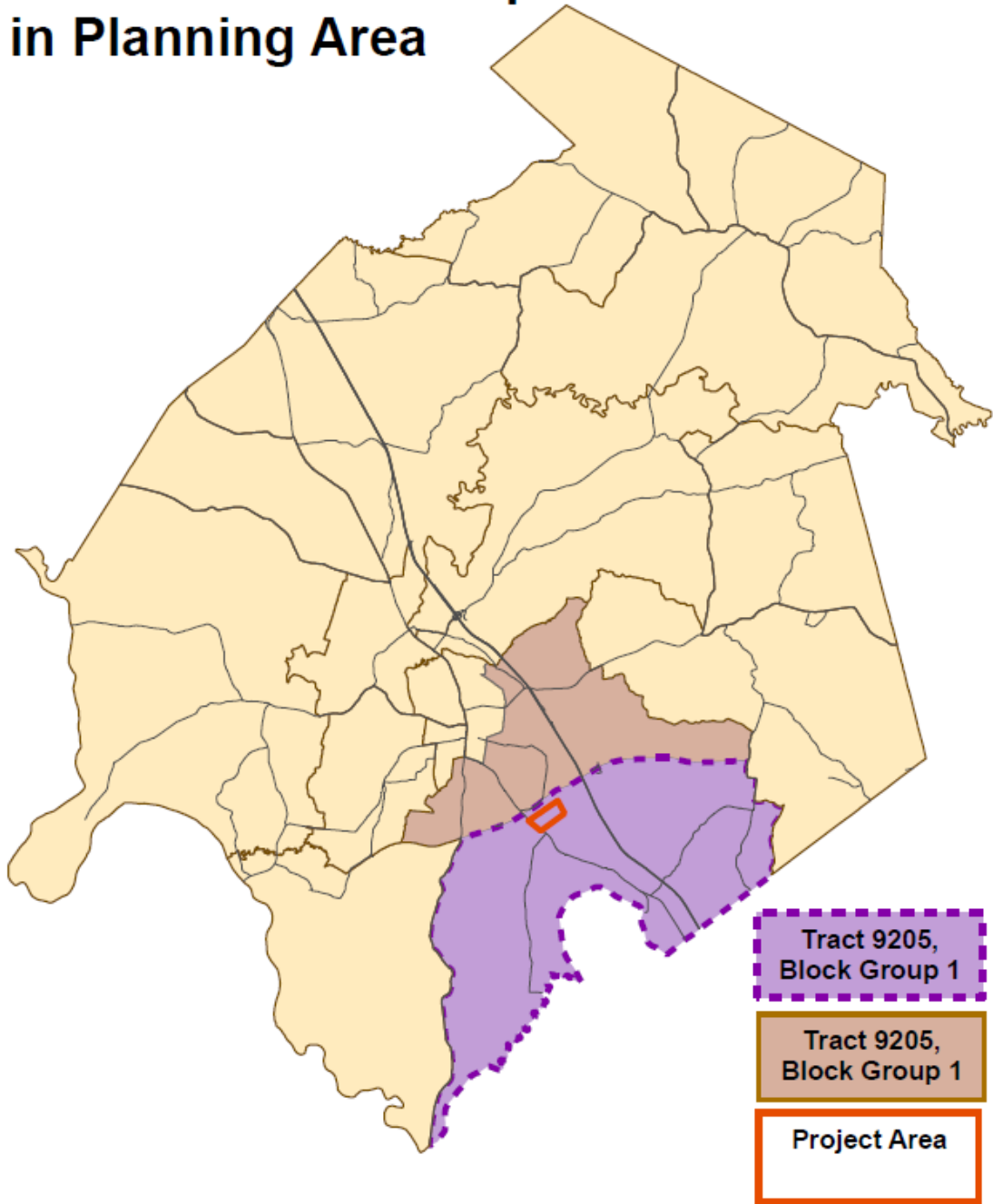
Block Group 2 of Census Tract 9205 shows significantly elevated percentages of persons 60 and over (37.221%) and persons disabled (22.92%). Both are higher than the county, state, and nation. These populations should be taken into consideration in the recommended short-term improvements and long-term solutions of the planning study. The percentage of racial minorities (.63%) and population below poverty level (9.05%) are significantly below the county, state and nation.

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 poverty status, and minority populations.

## Appendices

Appendix A: Map of Study Area

# Ohio County Census Block Groups in Planning Area



Source: Kentucky State Data Center Census  
2012 American Community Survey 5 Year Data (2008-2012)



## Appendix B: Methodology from KYTC

### Methodology for Assessing Potential Environmental Justice Concerns for KYTC Planning Studies Updated: March 2014

#### Analysis

Environmental Justice (EJ) analysis is required for any study that may result in disproportionately high adverse impact on a minority, low income, elderly or disabled population in or near the Affected Community.

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 Communities (AC) with potential EJ impacts are determined by locating target populations of minority, poverty status, disabled or elderly and calculating their percentage in the area relative to a reference community of comparison (COC). A determination may then be made if there are potential adverse impacts to the AC.

Potential communities of comparison:

- The county percentage
- Nearby block groups
- Kentucky percentage
- The United States percentage

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 for minorities, poverty status, elderly, and disabled populations on a yearly basis as the update schedule allows.

Target Population concentrations are considered elevated when:

- Percentages of a population reach 25% greater than the county threshold
- Percentages of a population reach 50% or more of the affected community
- More than one EJ group is present

Thresholds or Census level of analysis from above, may be required pending size, sensitivity or other factors specific to given study. The selection of the appropriate unit of analysis may be a governing body's jurisdiction, a neighborhood, Census tract, or other similar unit that is to be chosen so as not to artificially dilute or inflate the affected population. If a level of analysis other than block group is needed, it should be agreed upon at the outset.

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, and the consultant will summarize the information provided by the ADD in the final report. The full EJ should be placed in an Appendix.

Maps should be included in the EJ that depict the project area in relation to the Census tracts and block groups included in the analysis.

## Appendix C: U.S. Census Data Tables for Study Area and Maps

### Statistics for Racial and Ethnic Minorities

	Total	Total Minority	Minority %	Black or African American Alone	Black or African American Alone (%)	American Indian and Alaska Native Alone	American Indian and Alaska Native Alone (%)	Asian Alone	Asian Alone (%)
<b>United States</b>	309,138,711	79,839,805	25.83%	38,825,848	12.56%	2,529,100	0.82%	14,859,795	4.81%
<b>Kentucky</b>	4,340,167	516,823	11.91%	339,228	7.82%	8,607	0.20%	49,681	1.14%
<b>Ohio Co.</b>	23,972	494	2.06%	367	1.53%	5	0.02%	11	0.05%
<b>Tract 9205, Block Group 1</b>	2,526	25	0.99%	19	0.75%	0	0.00%	0	0.00%
<b>Tract 9205, Block Group 2</b>	790	5	0.63%	5	0.63%	0	0.00%	0	0.00%

	Total	Some other race alone	Some other race alone (%)	Two or more races	Two or more races (%)	Native Hawaiian and other Pacific Islander alone	Native Hawaiian and other Pacific Islander alone (%)	Hispanic or Latino Origin*	Hispanic or Latino Origin (%)*
<b>United States</b>	309,138,711	14,814,369	4.79%	8,296,291	2.68%	514,402	0.17%	50,545,275	16.35%
<b>Kentucky</b>	4,340,167	42,557	0.98%	74,380	1.71%	2,370	0.05%	131,039	3.02%
<b>Ohio Co.</b>	23,972	20	0.08%	91	0.38%	0	0.00%	817	3.41%
<b>Tract 9205, Block Group 1</b>	2,526	0	0.00%	6	0.24%	0	0.00%	0	0.00%
<b>Tract 9205, Block Group 2</b>	790	0	0.00%	0	0.00%	0	0.00%	0	0.00%

Source: US Census Bureau, 2008-2012 American Community Survey

Table: B03002

\*Hispanic or Latino Origin represents ethnicity data rather than racial. These figures have been kept out of the calculation for total minority as they could result in duplication of individuals also reporting as a racial group listed in this table.

## Statistics for Age, Poverty, and Disabled Populations

	Total	Persons 60 and Over	Persons 60 and Over (%)
<b>United States</b>	309,138,711	40,671,441	13.16%
<b>Kentucky</b>	4,340,167	583,077	13.43%
<b>Ohio Co.</b>	23,972	5,183	21.62%
<b>Tract 9205, Block Group 1</b>	2,526	492	19.48%
<b>Tract 9205, Block Group 2</b>	790	294	37.22%

Source: US Census Bureau, 2008-2012 American Community Survey  
Table: B01001

	Total Civilian Non-institutionalized Population (Age 16-64)	Disabled Members of the Civilian Non-institutionalized Population (Age 16-64)	Disabled Members of the Civilian Non-institutionalized Population (%) (Age 16-64)
<b>United States</b>	203,138,612	20,480,999	10.08%
<b>Kentucky</b>	2,850,449	438,077	15.37%
<b>Ohio Co.</b>	14,934	2,321	15.54%
<b>Tract 9205, Block Group 1</b>	1,742	195	11.19%
<b>Tract 9205, Block Group 2</b>	445	102	22.92%

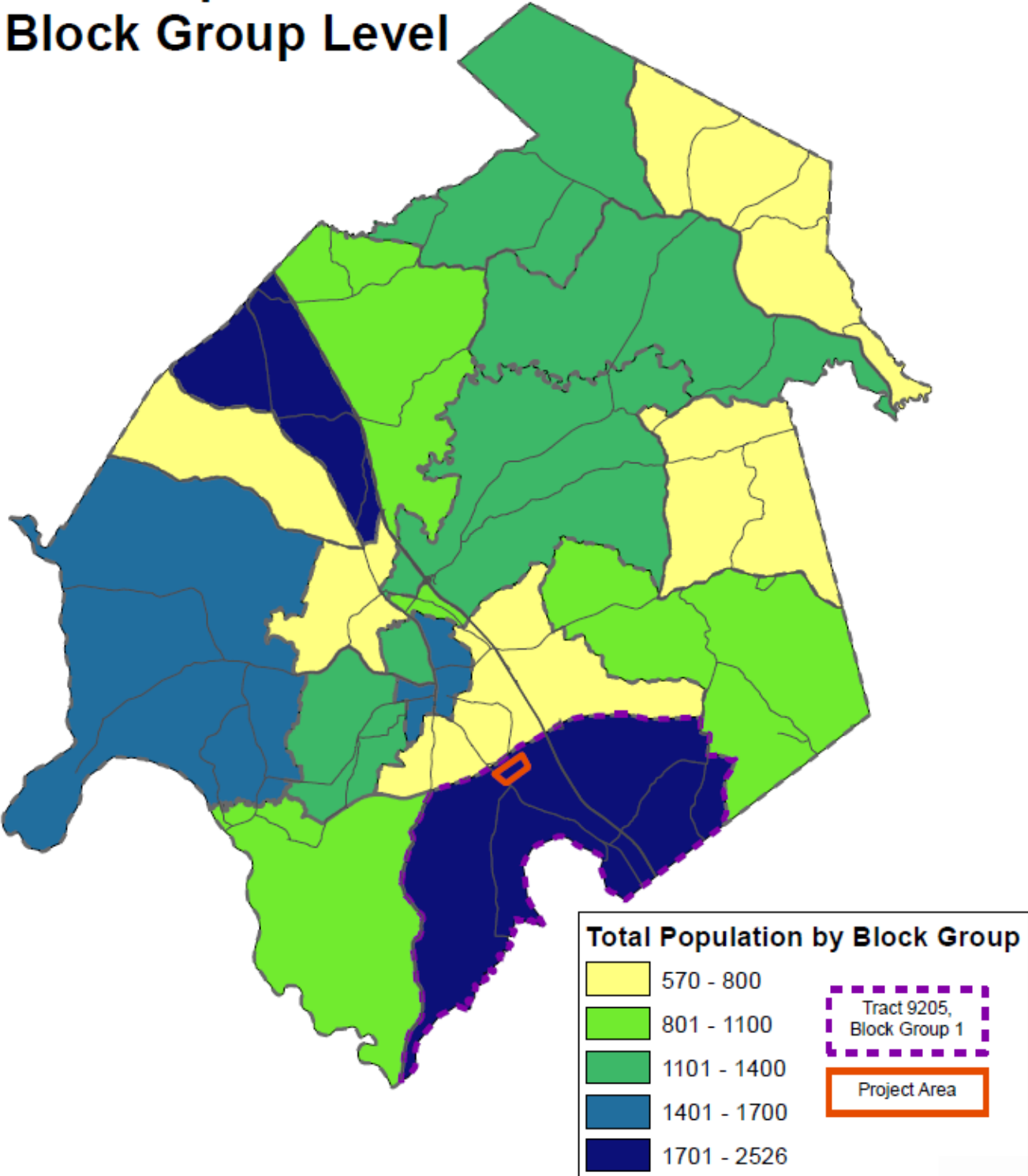
Source: US Census Bureau, 2008-2012 American Community Survey  
Table: C23023

	Total	Population Below Poverty Level	Population Below Poverty Level (%)
<b>United States</b>	309,138,711	46,215,956	14.95%
<b>Kentucky</b>	4,340,167	800,226	18.44%
<b>Ohio Co.</b>	23,502	4,883	20.78%
<b>Tract 9205, Block Group 1</b>	2,526	192	7.60%
<b>Tract 9205, Block Group 2</b>	707	64	9.05%

Source: US Census Bureau, 2008-2012 American Community Survey  
Table: B17021



# Ohio County Total Population Block Group Level



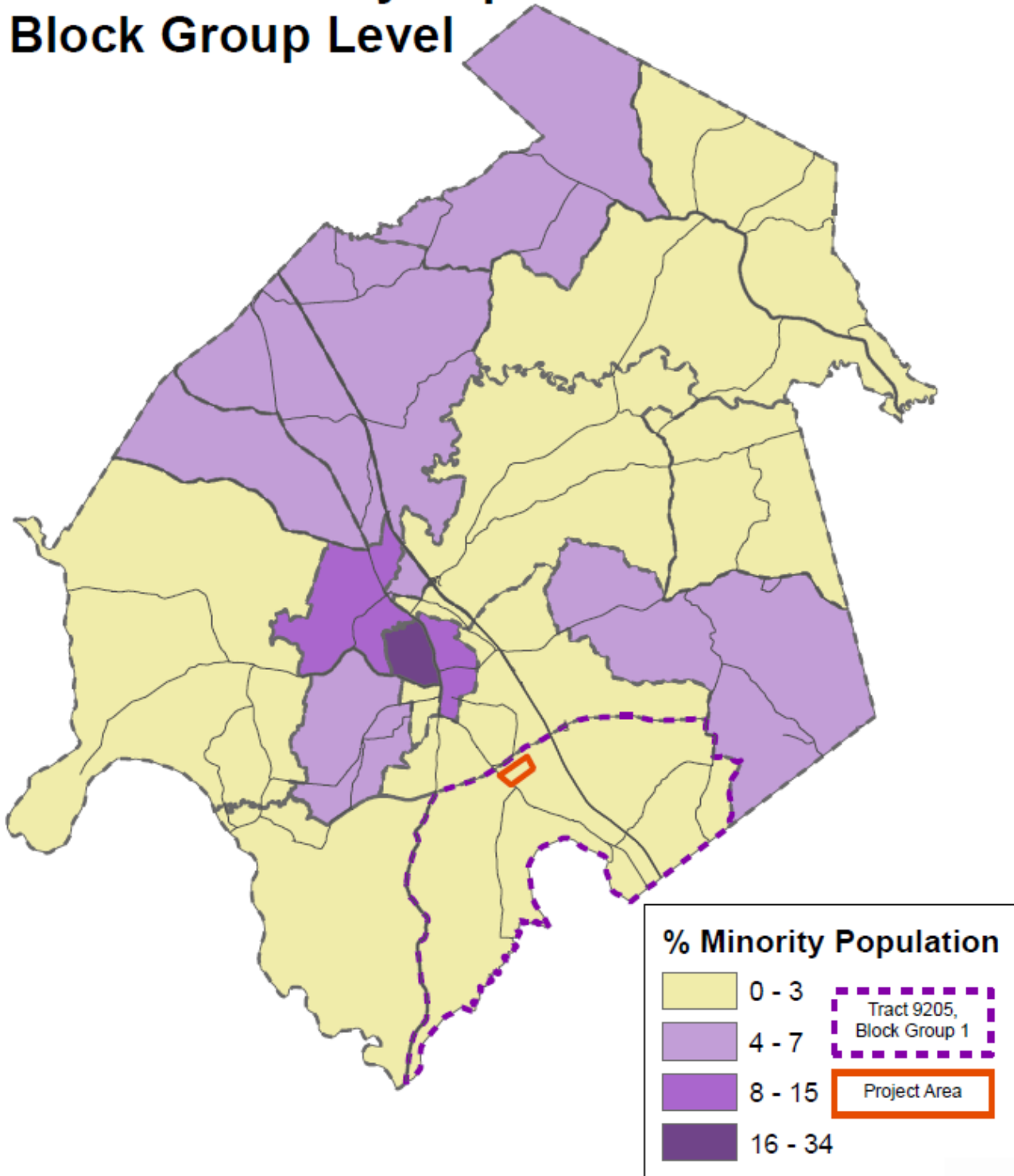
Source: Kentucky State Data Center Census 2012 American Community Survey 5 Year Data (2008-2012) Table B03002 – Hispanic or Latino Origin by Race

0 1 2 4 6 Miles

N

This map was produced in cooperation with the Kentucky Transportation Cabinet

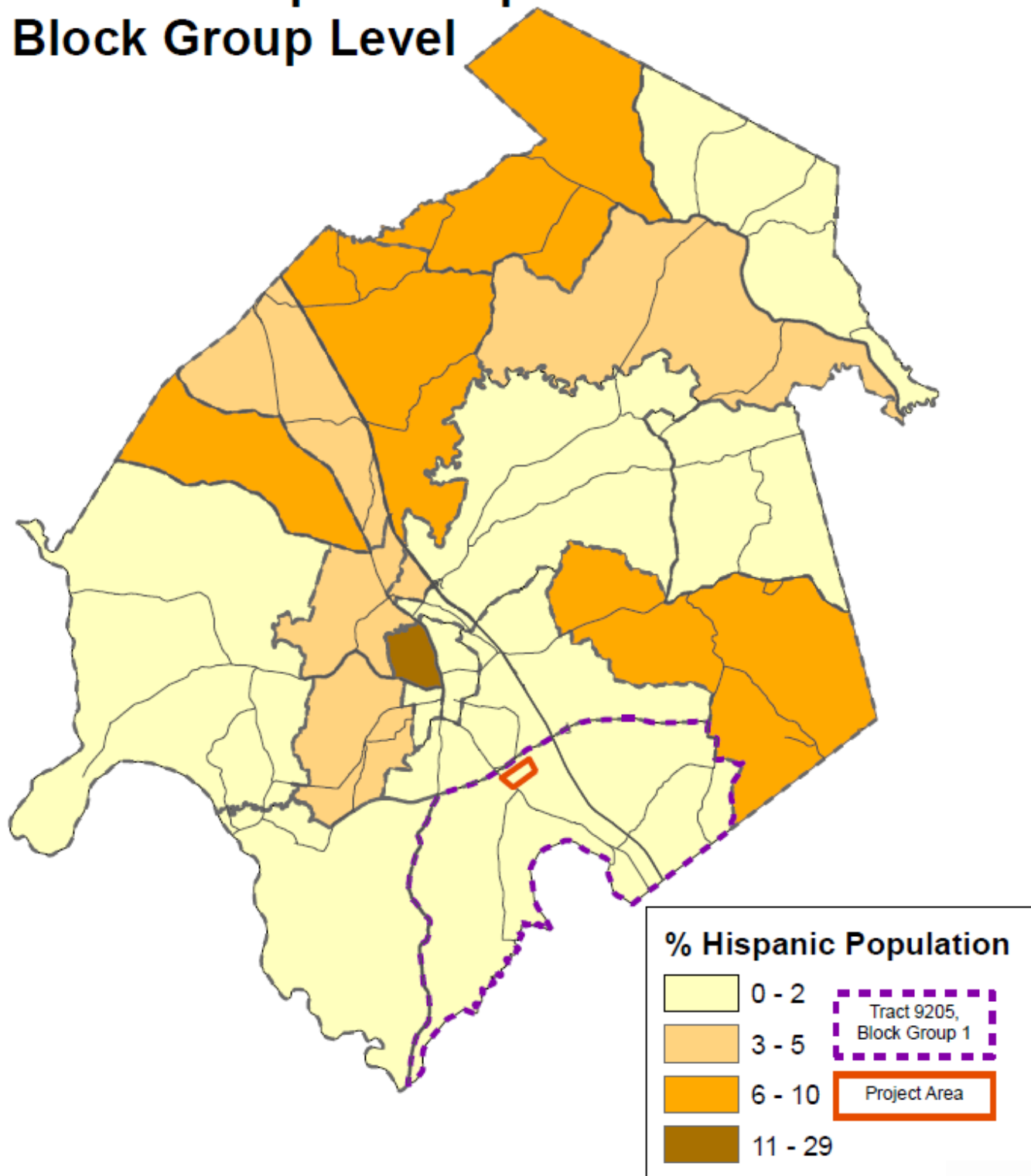
# Ohio County Percent Minority Population Block Group Level



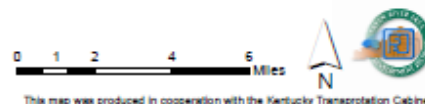
Source: Kentucky State Data Center Census 2012 American Community Survey 5 Year Data (2008-2012) Table B03002 – Hispanic or Latino Origin by Race



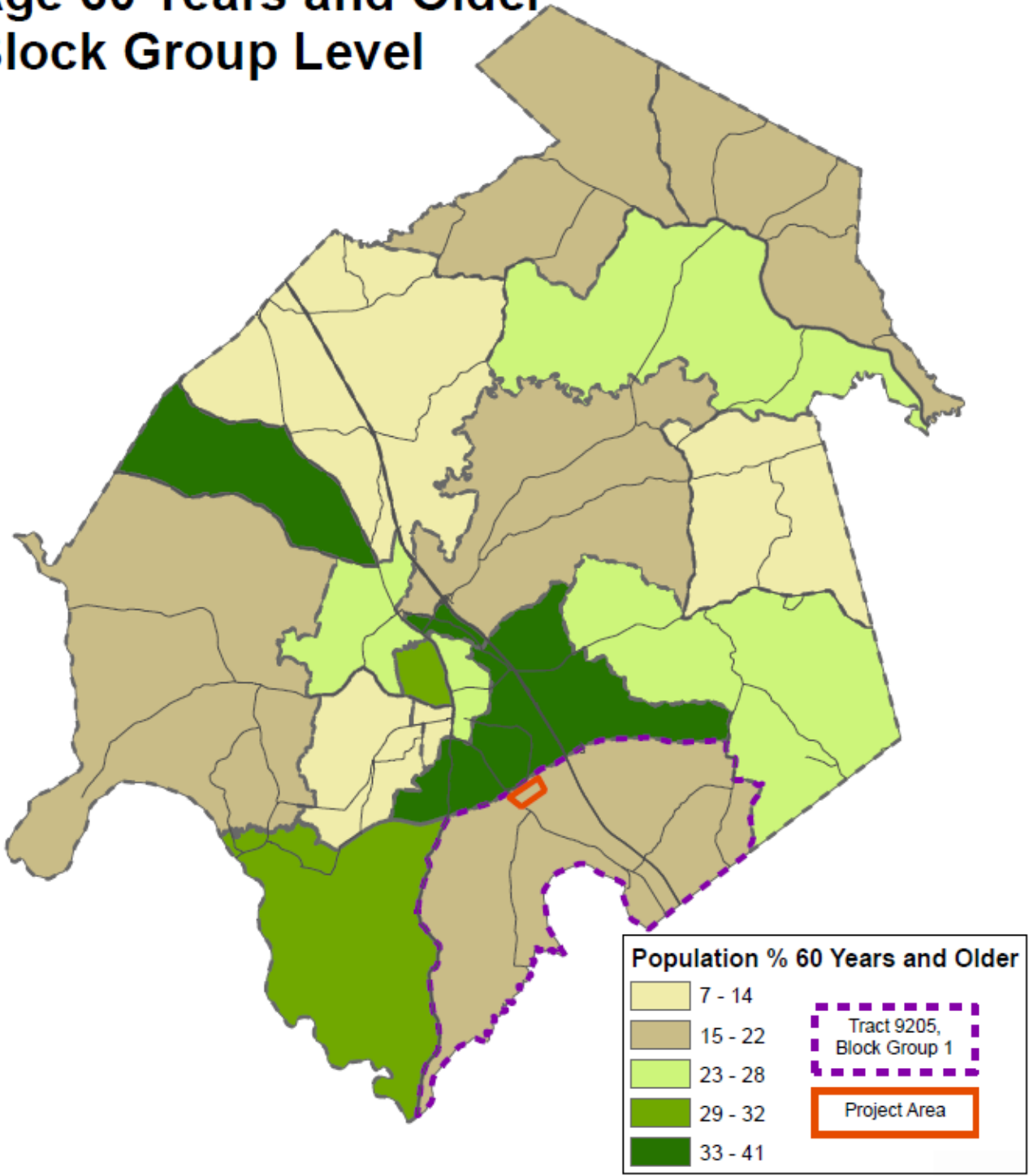
# Ohio County Percent Hispanic Population Block Group Level



Source: Kentucky State Data Center Census 2012 American Community Survey 5 Year Data (2008-2012) Table B03002 – Hispanic or Latino Origin by Race



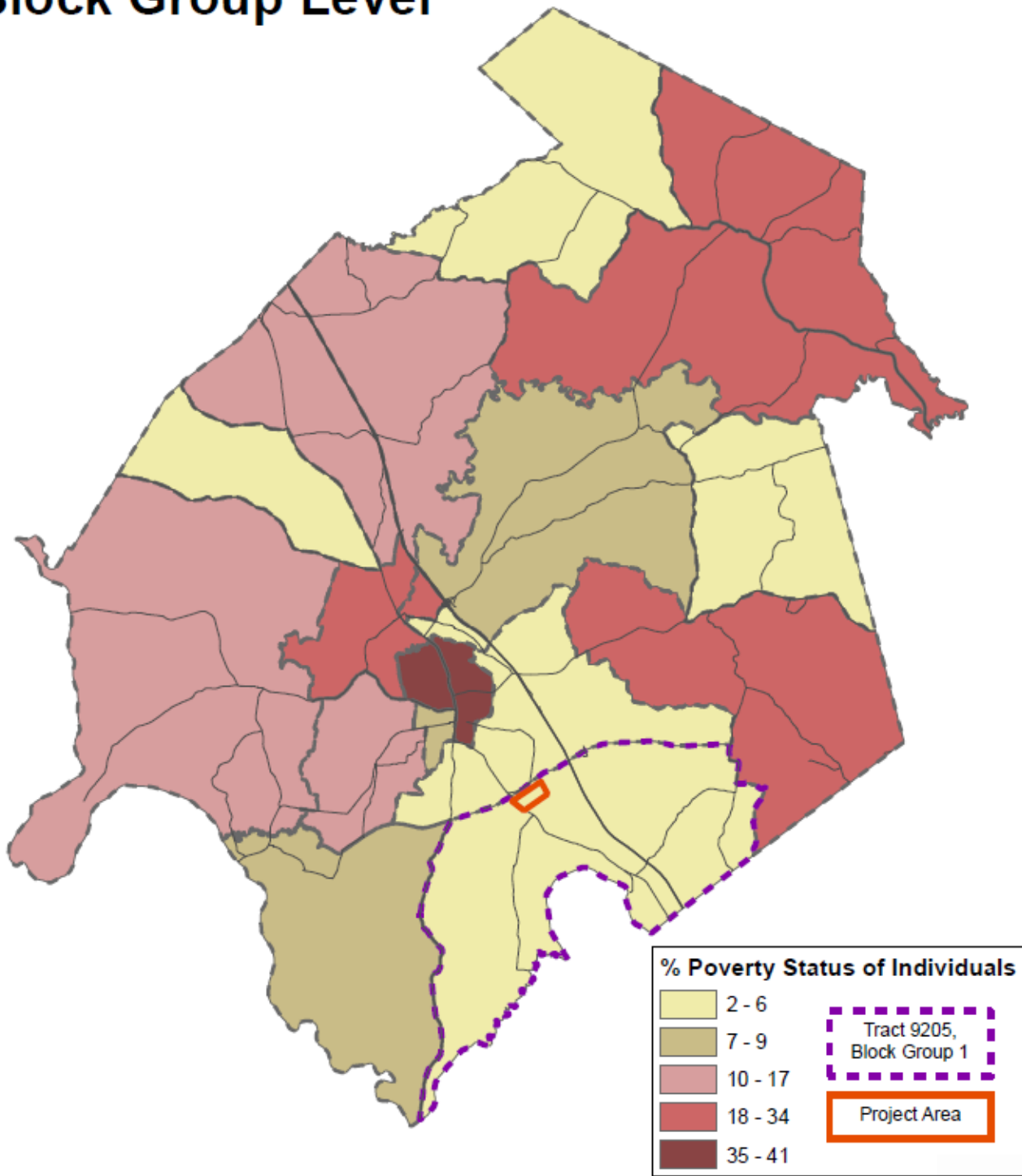
# Ohio County Percent Population Age 60 Years and Older Block Group Level



Source: Kentucky State Data Center Census 2012 American Community Survey 5 Year Data (2008-2012) Table B01001 - Sex by Age



# Ohio County Percent Poverty Status of Individuals Block Group Level



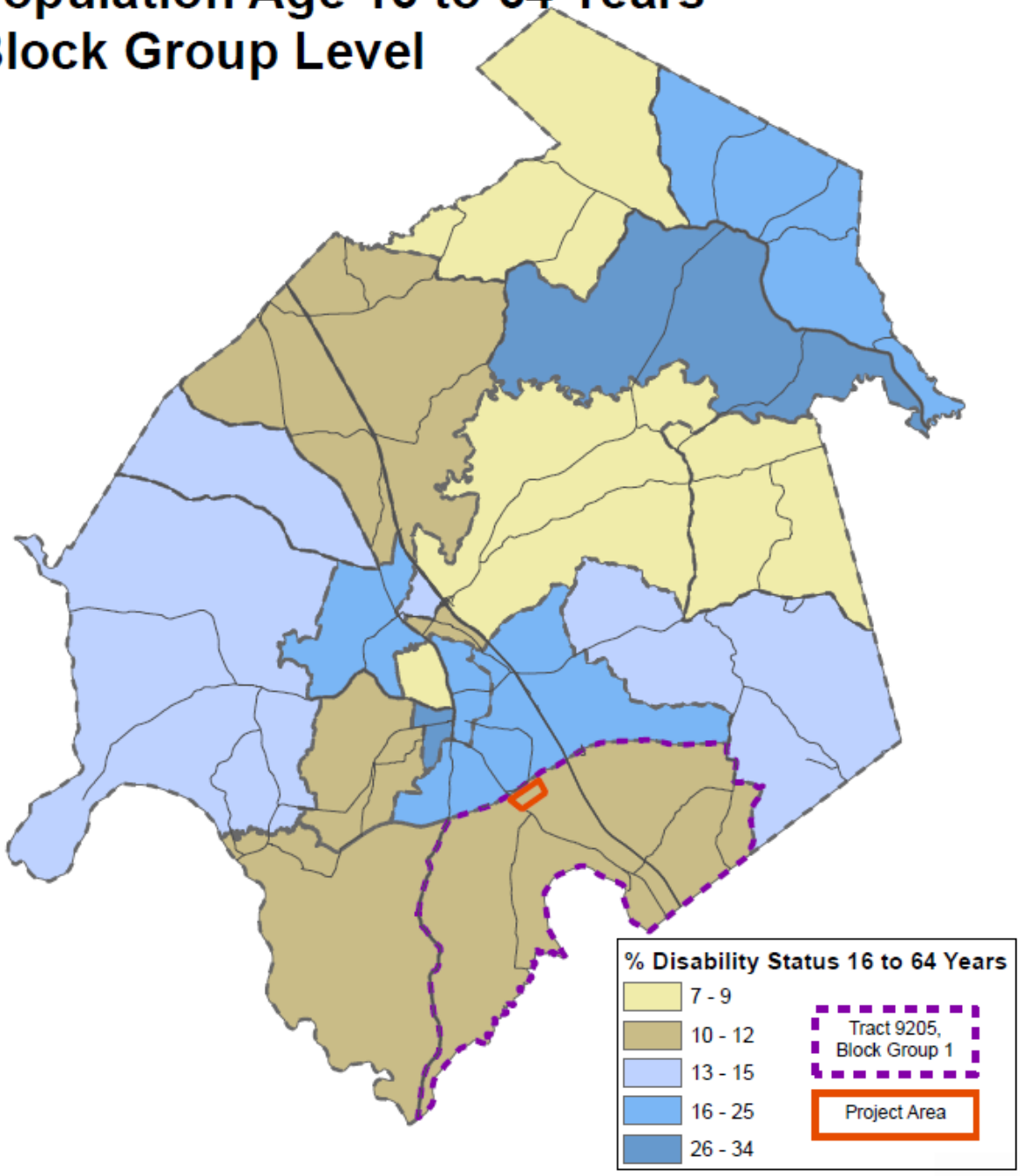
Source: Kentucky State Data Center Census 2012 American Community Survey 5 Year Data (2008-2012) Table B17021 – Poverty Status of Individuals in the Past 12 Months by Living Arrangement

0 1 2 4 6 Miles

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This map was produced in cooperation with the Kentucky Transportation Cabinet

# Ohio County Percent Disability Status Population Age 16 to 64 Years Block Group Level



Source: Kentucky State Data Center Census 2012 American Community Survey 5 Year Data (2008-2012) Table C23023 - Sex by Disability by Full-time work status in the past 12 months for the population 16 - 64 Years



## Appendix D

### Analysis Range Explanation and Methodology for Population Percentages Above or Below the County of Ohio Threshold

#### Percent Racial Minority

Analysis Range	Percent Minority
Significantly Above Threshold (> 125%)	> 2.58%
Just Above Threshold (100% - 125%)	2.06% - 2.58%
<b>REFERENCE THRESHOLD (COUNTY PERCENTAGE)</b>	<b>2.06%</b>
Just Below Threshold (75% - 100%)	1.55%-2.06%
Significantly Below Threshold (< 75%)	< 1.55%

#### Percent Hispanic or Latino Origin

Analysis Range	Percent Minority
Significantly Above Threshold (> 125%)	> 4.26%
Just Above Threshold (100% - 125%)	3.41% - 4.26%
<b>REFERENCE THRESHOLD (COUNTY PERCENTAGE)</b>	<b>3.41%</b>
Just Below Threshold (75% - 100%)	2.56% - 3.41%
Significantly Below Threshold (< 75%)	< 2.56%

#### Percent 60 and Older

Analysis Range	Percent 60 and Older
Significantly Above Threshold (> 125%)	> 27%
Just Above Threshold (100% - 125%)	21.6% - 27%
<b>REFERENCE THRESHOLD (COUNTY PERCENTAGE)</b>	<b>21.6%</b>
Just Below Threshold (75% - 100%)	16.20% - 21.6%
Significantly Below Threshold (< 75%)	< 16.20%

#### Percent Below Poverty

Analysis Range	Percent Below Poverty
Significantly Above Threshold (> 125%)	>25.98%
Just Above Threshold (100% - 125%)	20.78% - 25.98%
<b>REFERENCE THRESHOLD (COUNTY PERCENTAGE)</b>	<b>20.78%</b>
Just Below Threshold (75% - 100%)	15.59% - 20.78%
Significantly Below Threshold (< 75%)	< 15.59%

#### Percent Disabilities

Analysis Range	Percent Disabilities Age 16-64
Significantly Above Threshold (> 125%)	> 19.43%
Just Above Threshold (100% - 125%)	15.54% - 19.43%
<b>REFERENCE THRESHOLD (COUNTY PERCENTAGE)</b>	<b>15.54%</b>
Just Below Threshold (75% - 100%)	11.66% - 15.54%
Significantly Below Threshold (< 75%)	< 11.66%