

Appendix C:

Socioeconomic Study

MURRAY SMALL URBAN AREA STUDY SOCIOECONOMIC REPORT

Prepared for:

Kentucky Transportation Cabinet (KYTC)
Central Office, Division of Planning
Highway District 1, Paducah



Prepared by:

Purchase Area Development District



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

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INTRODUCTION

This report presents an overview of selected socioeconomic characteristics in the Murray Small Urban Area (SUA) Study for the City of Murray including portions of the surrounding unincorporated areas of Calloway County. The SUA study is focused on developing lower cost short-term alternatives, long-term alternatives, and bicycle/pedestrian improvement concepts that address safety and congestion needs of the transportation system within the study area and can be used for further project development and implementation. The socioeconomic analysis includes the identification of potential Environmental Justice communities that may be adversely impacted should transportation improvements take place in the future.

The information in this report outlines 2015-2019 American Community Survey (ACS) 5-year data in and near the study area using tables, charts, and maps. The data presented in this document is intended to highlight areas of concern that may require additional analysis should any transportation project be advanced to future phases. Statistics are provided for minority, elderly, poverty status, Limited English Proficiency (LEP), and disabled populations for the United States, Commonwealth of Kentucky, Purchase Region, Calloway County and block groups located within the study area.

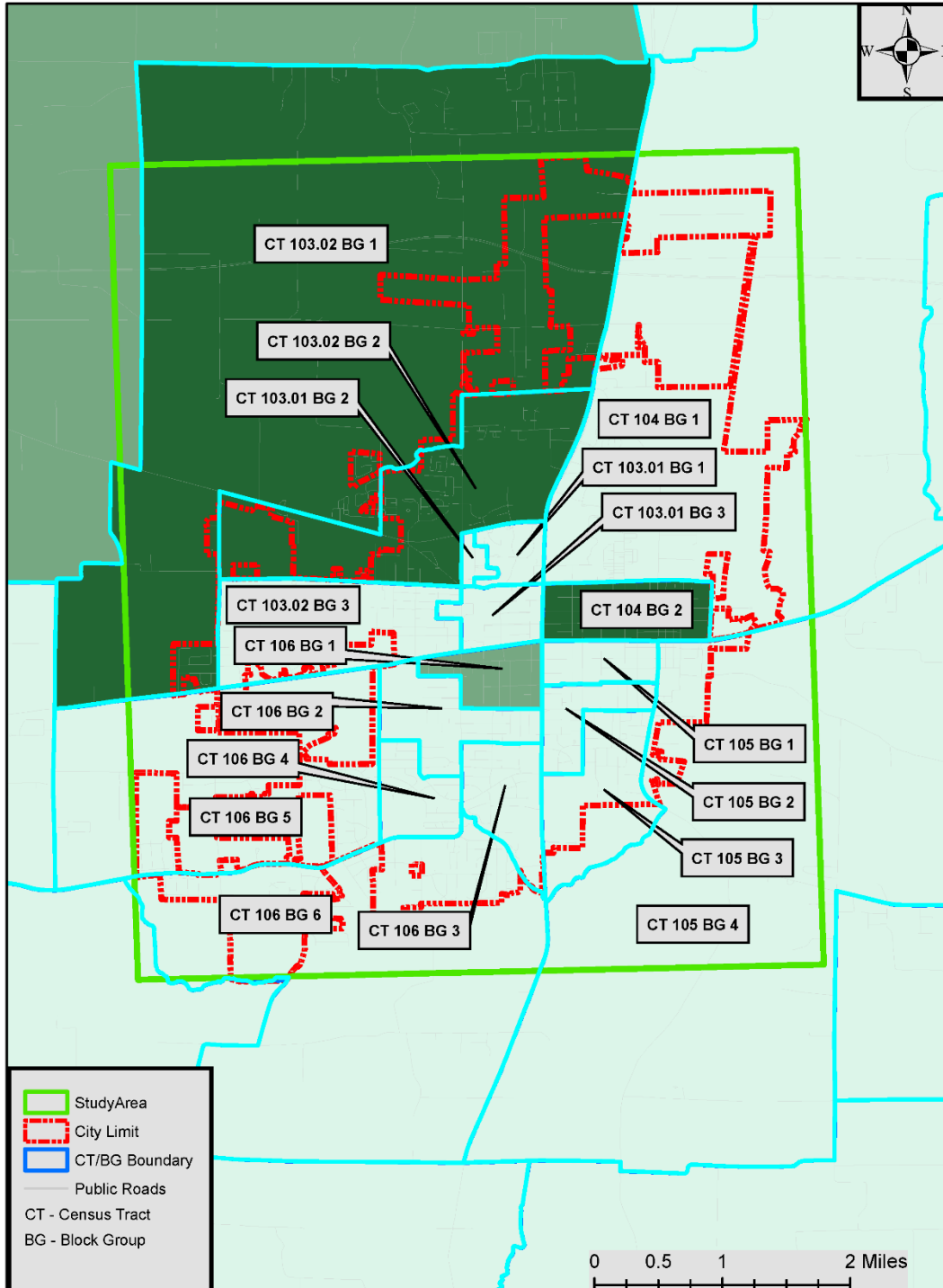
This information is intended to aid the Kentucky Transportation Cabinet (KYTC) in making informed and prudent transportation decisions in the project area, especially with regard to the requirements of *Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income 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 programs, policies, and activities on minority populations and low-income populations...”

The small urban study area (Figure 1) is located in the City of Murray and includes portions of Calloway County, which is located on the southwest border of the Commonwealth of Kentucky in the Jackson Purchase region. Calloway County is located in the east portion of the region and covers a total area of 411 square miles, of which 385 square miles is land and 26 square miles is water. It is bordered to the north by Marshall County, the northeast by Trigg County, the southeast by Stewart County (Tennessee), the south by Henry County (Tennessee), and the west by Graves County. The population estimate (2019) for Calloway County is 37,103. Located in the center of the county, Murray is the county seat and has a population estimate (2019) of 19,171.

Calloway County is composed of 9 Census Tracts that are divided into 31 Census Block Groups. The SUA study area consists of 13 block groups with boundaries that are completely within the study area and 5 block groups that are substantially in the study area. Thirteen of the 31 block groups are completely independent of or are minimal in the identified study area. Due to the nature of the involved boundaries (block group & study area) not being a perfect match, this review will focus on the 18 block groups either completely or substantially within the study area. A table with percentages for the US, Kentucky, Purchase Region and Calloway County for all 31 block groups is included as Appendix A.

Murray Small Urban Area Study
Figure 1: Study Limits



WHAT IS ENVIRONMENTAL JUSTICE?

The U.S. Environmental Protection Agency (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. Fair treatment means that no group of people, including racial, ethnic, or socio-economic groups should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local and tribal programs and policies.”

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:

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.

The United States Department of Transportation (U.S. DOT) Order 5610.2, issued in the April 15, 1997 Federal Register, defines what constitutes minority and low-income populations.

A minority is defined 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 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...”

In addition to the above defined EJ communities the KYTC works to identify potential populations of the elderly, disabled and Limited English Proficiency (LEP). LEP is a term used in the United States that refers to a person who is not fluent in the English language, often because it is not their native language. Both LEP and English-language learner (ELL) are terms used by the Office for Civil Rights, a sub-agency of the U.S. Department of Education. Elderly and disabled populations are not

specifically recognized under the definition of an EJ community. However, the U.S. DOT encourages the early examination of potential populations of the elderly, children, disabled, and other populations protected by the Title VI of the Civil Rights Act of 1964 and related nondiscrimination statutes.

METHODOLOGY

Data for this report was collected in accordance with the guidance provided by the KYTC. The outline for preparing socioeconomic reports “Methodology for Assessing Underserved Populations Including Environmental Justice, Title VI, Age and Disability Considerations in Conjunction with KYTC Planning Studies” is included in 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, LEP, 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 2015 – 2019 U.S. Census Bureau American Community 5-Year Survey including tables:

- B01001 – Sex by Age
- B03002 – Hispanic or Latino Origin by Race
- B16004 – Age by Language Spoken at Home by Ability to Speak English for the Population 5 Years and Over
- B17021 – Poverty Status of Individuals in the Past 12 Months by Living Arrangement
- C21007 – Age by Veteran Status by Poverty Status in the Past 12 Months by Disability Status for the Civilian Population 18 Years and Over

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.

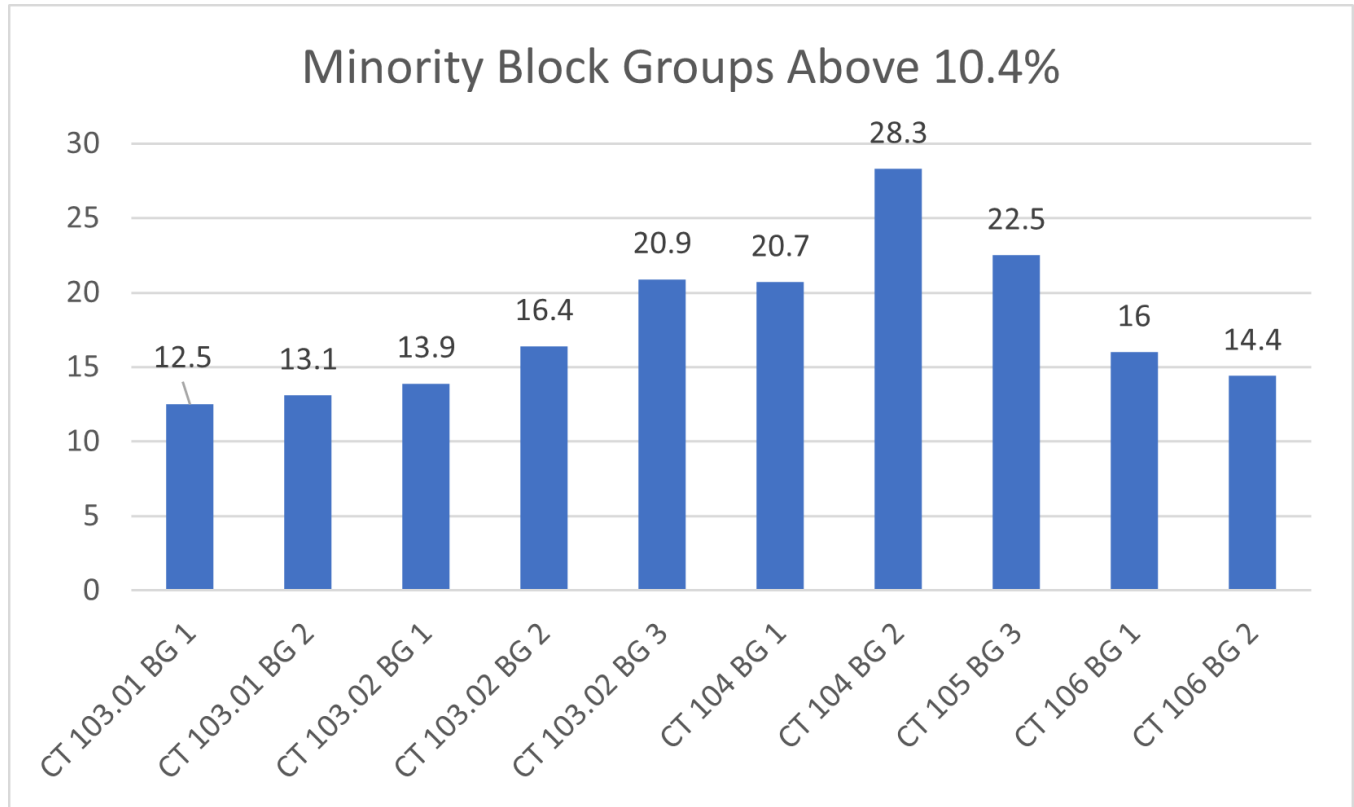
The Census tables in this report include the total number and percentages for minorities, elderly, low-income, LEP, and disabled population levels for the census tract block groups, county, region, state, and nation. This report uses the population percentages for Calloway County as the reference threshold 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 in the study area as opposed to the United States, Kentucky, or even regional percentages.

The methodologies used in this report 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 National Environmental Policy Act (NEPA) when assessing the potential for adverse and disproportionate impacts to poverty status and minority populations.

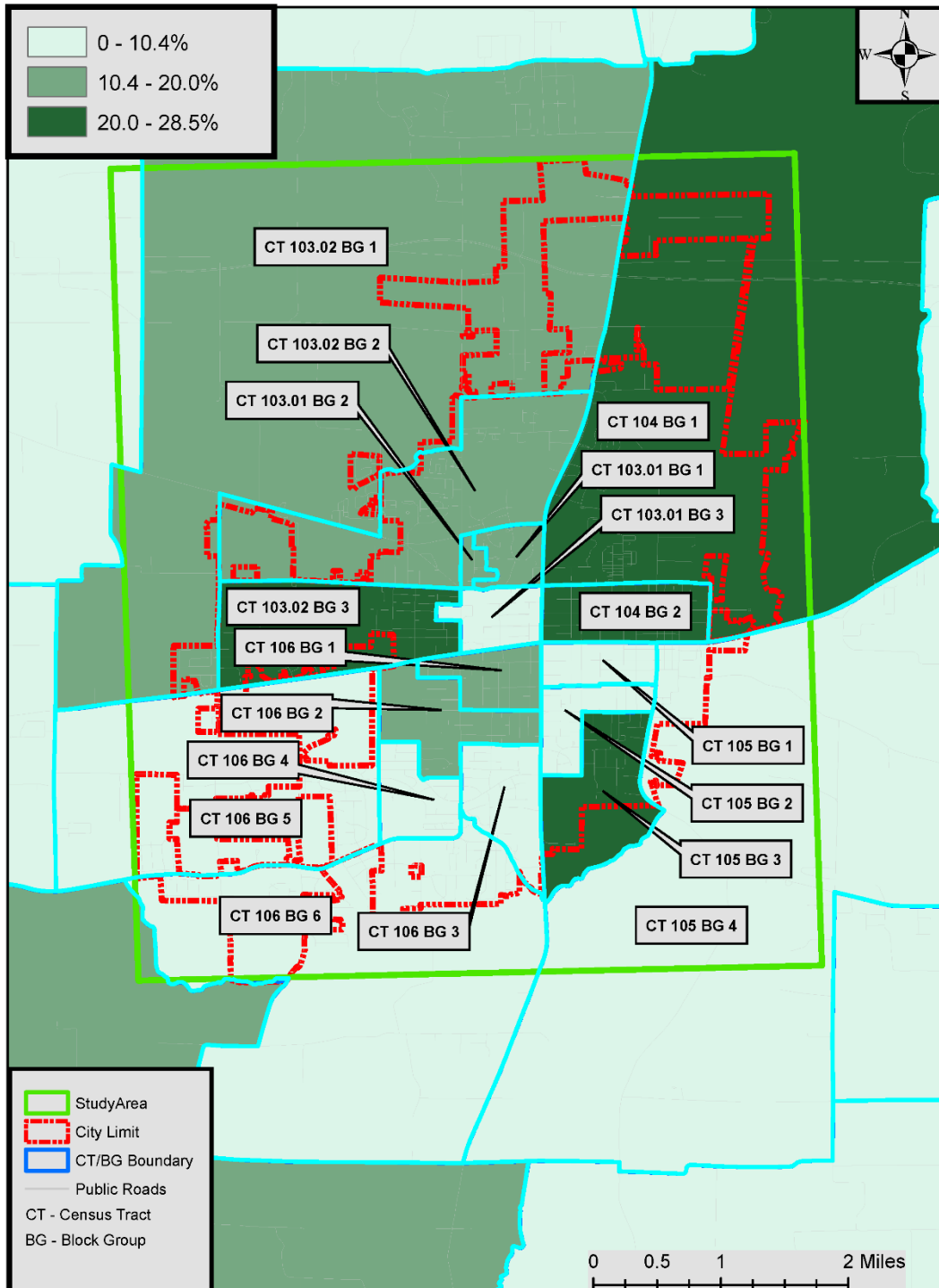
Study Findings

Population by Persons of Minority Origin

Racial minorities compose 10.4% of the population in Calloway County. Using that number as a reference threshold, 10 of 18 block groups within the study area have a higher percentage of minorities than that of the county. The percentages are identified in the chart below. Block groups above 10.4% are labeled in Figure 2.

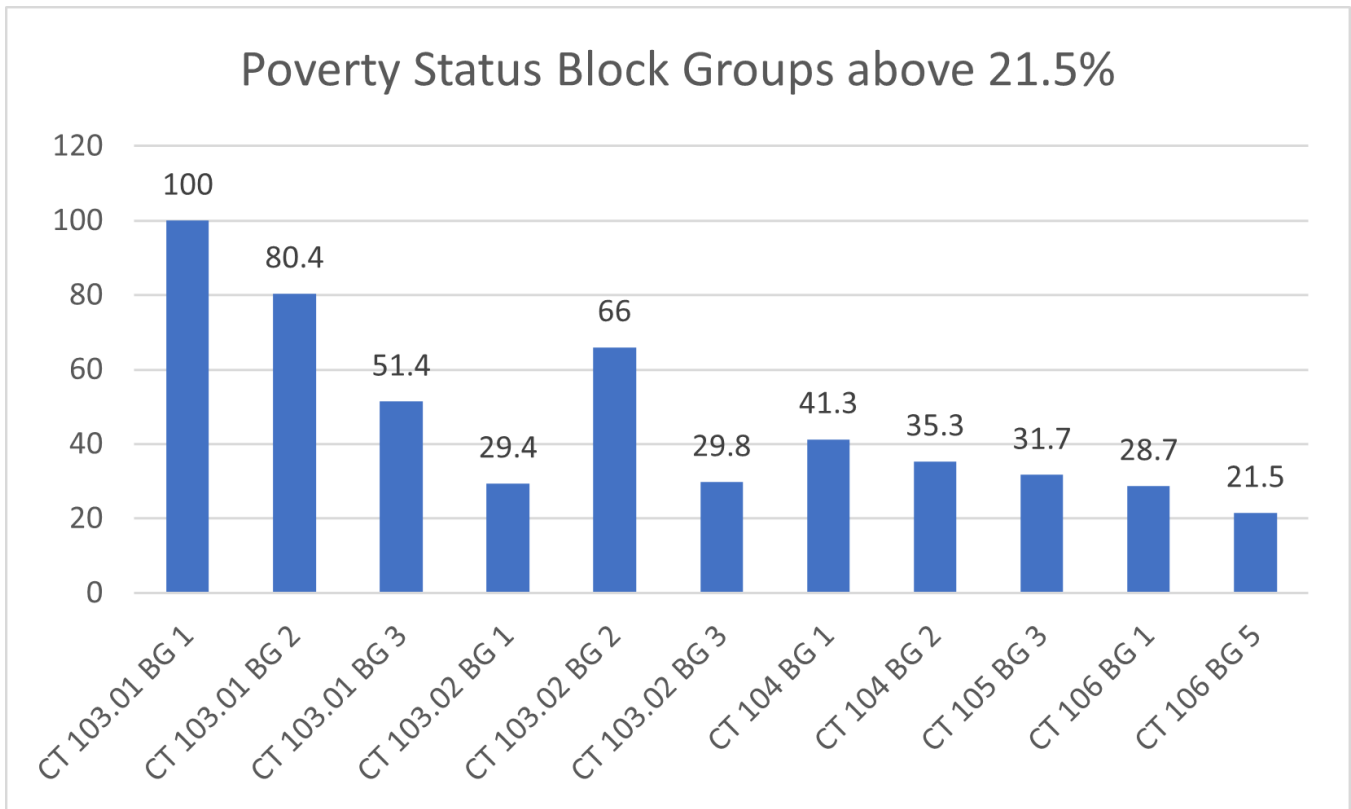


Murray Small Urban Area Study
Figure 2: Minority Population Block Groups above 10.4%

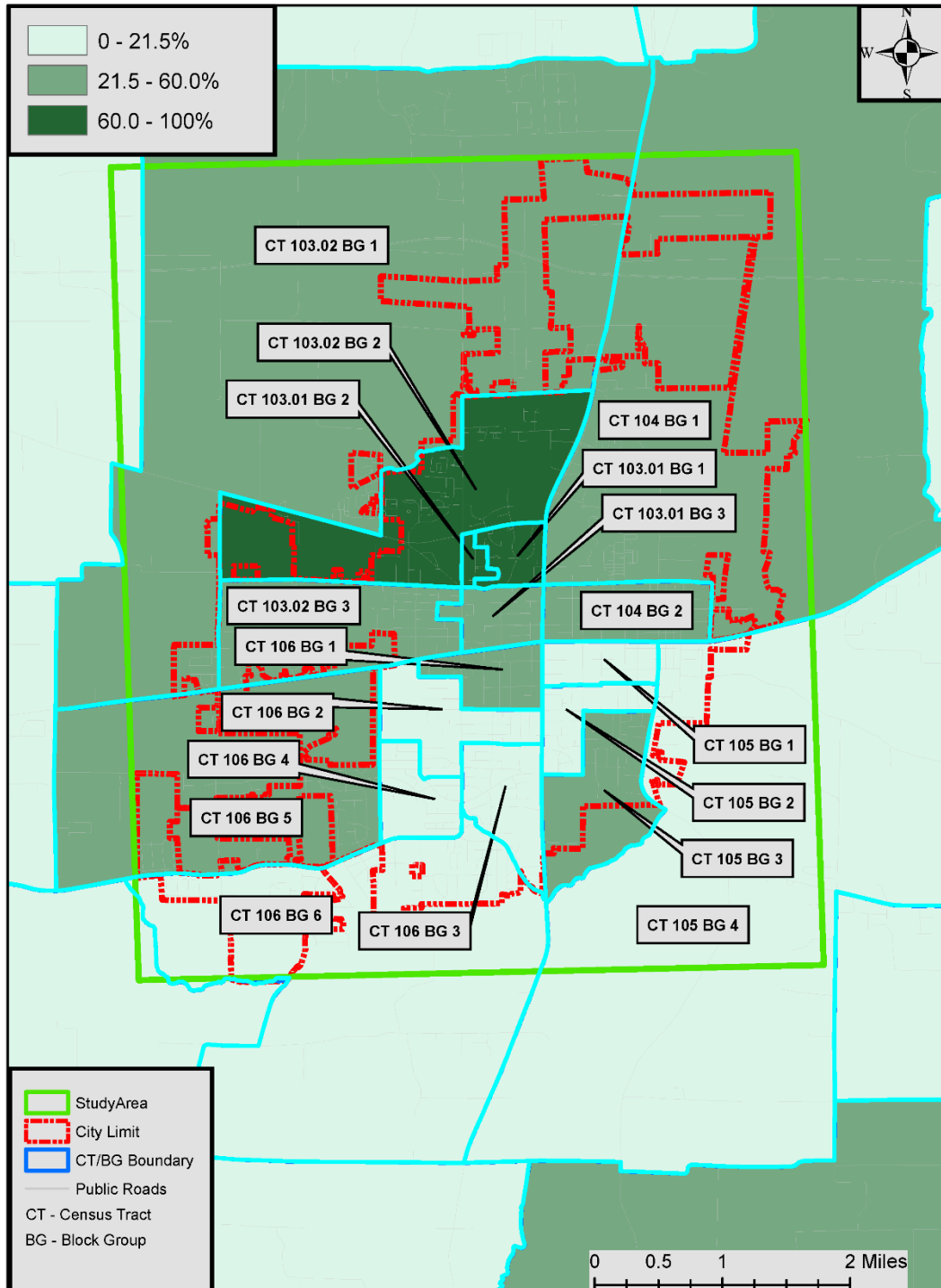


Population by Persons below Poverty Level

The percentage of persons living below the poverty level in Calloway County is 21.5% of the population. Eleven of the 18 block groups in the study area have a higher percentage poverty population than the county. The percentages are identified in chart below. Block groups above 21.5% are labeled in Figure 3.

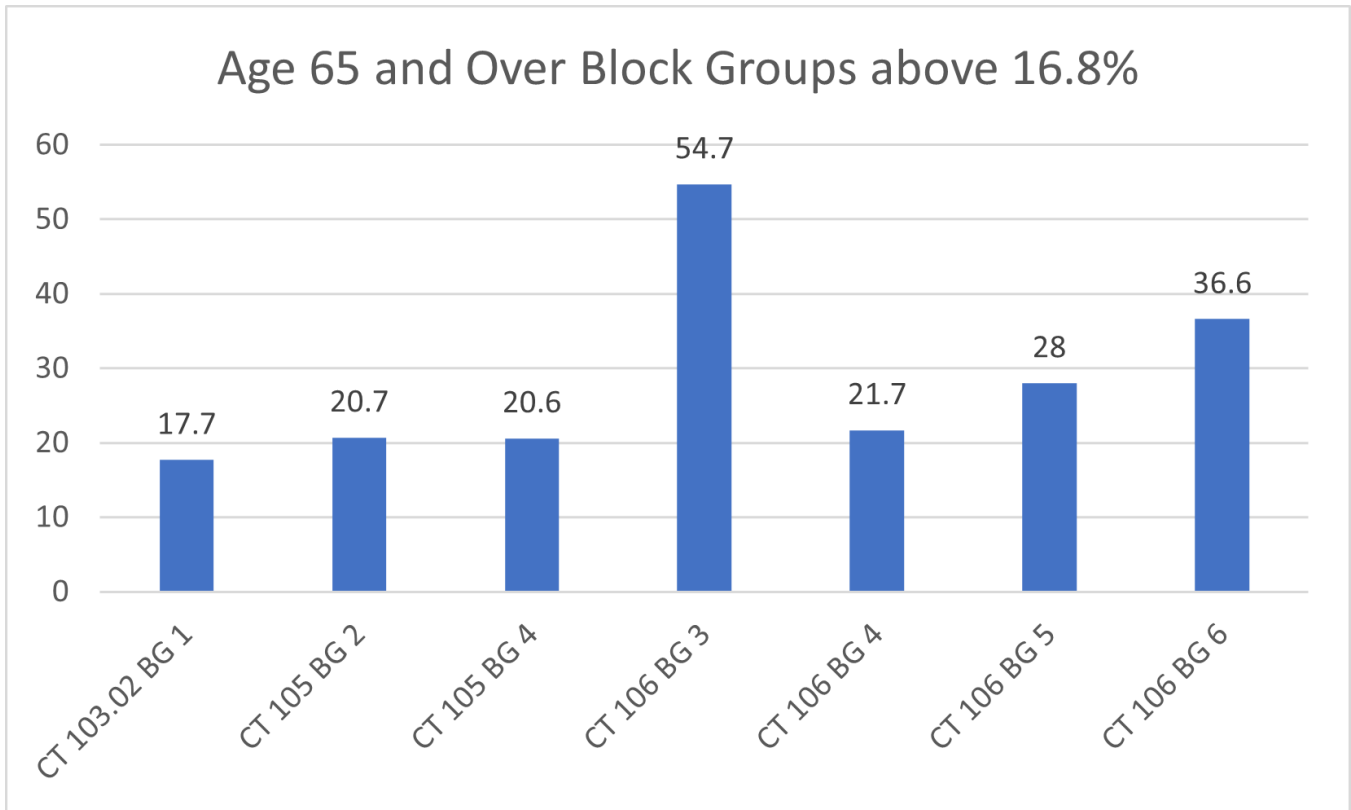


Murray Small Urban Area Study
Figure 3: Poverty Status Block Groups above 21.5%

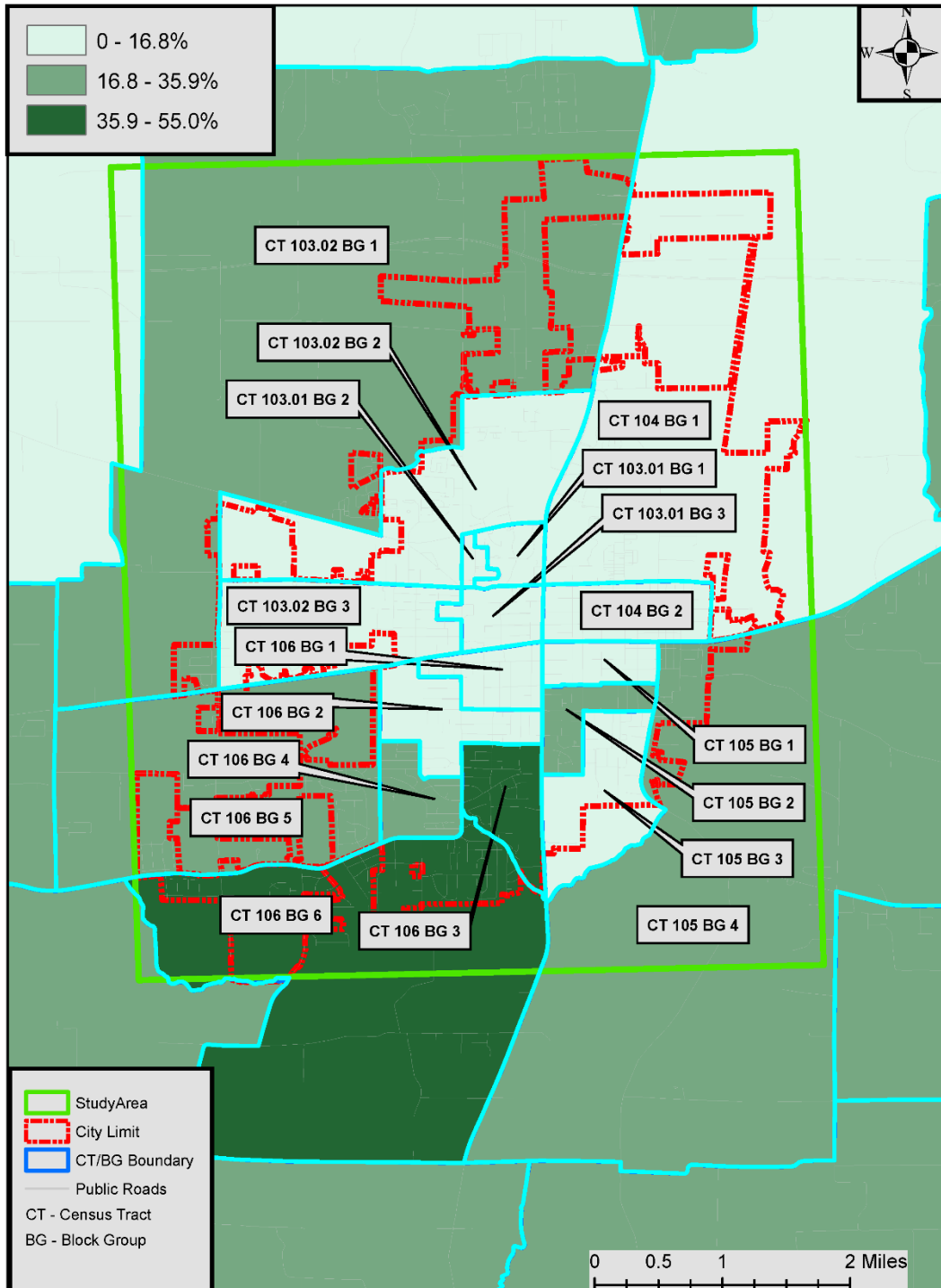


Population by Persons Aged 65 Years and Over

Calloway County has an 16.8% population of persons aged 65 years or older. The study area consists of seven of 18 block groups with a percentage higher than 16.8%. The percentages are identified in the chart below. Block groups above 16.8% are labeled in Figure 4.

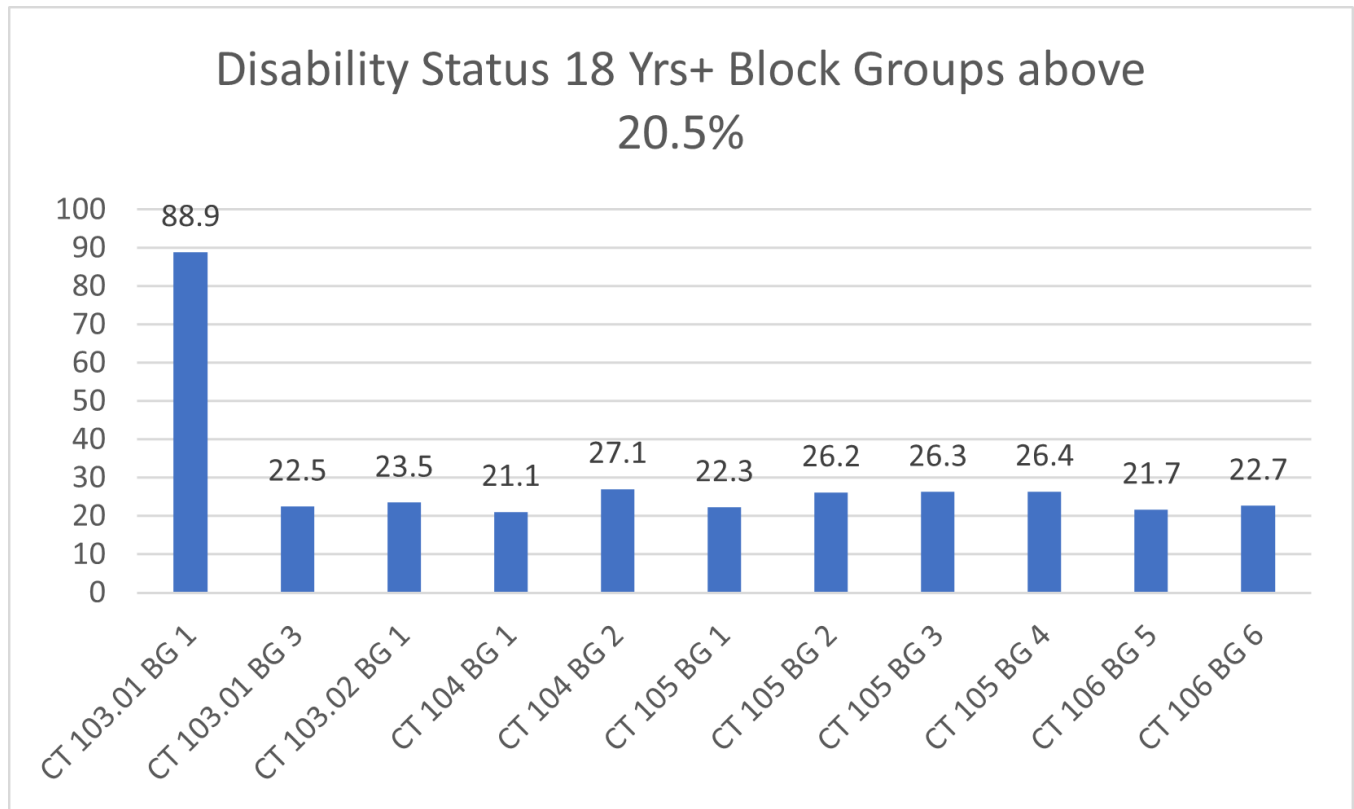


Murray Small Urban Area Study
Figure 4: Age 65 and Over Block Groups above 16.8%



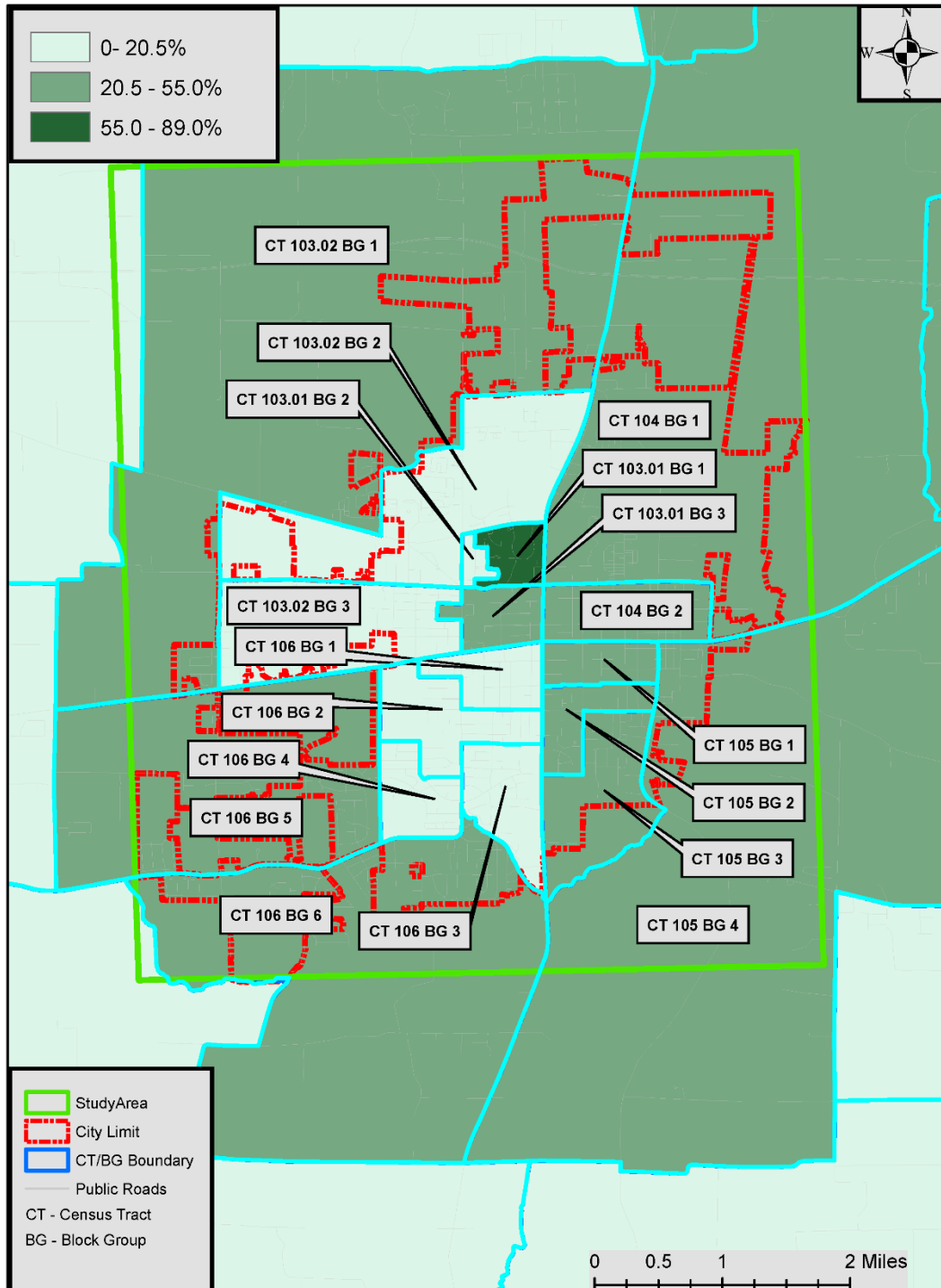
Population by Disability Status 18 Years and Over

The total population claiming disability status in Calloway County is 20.5%. Eleven of the 18 block groups in the study area have a higher percentage population 18 years and over claiming disability status. The percentages are identified in the chart below. Block groups above 20.5% are labeled in Figure 5.



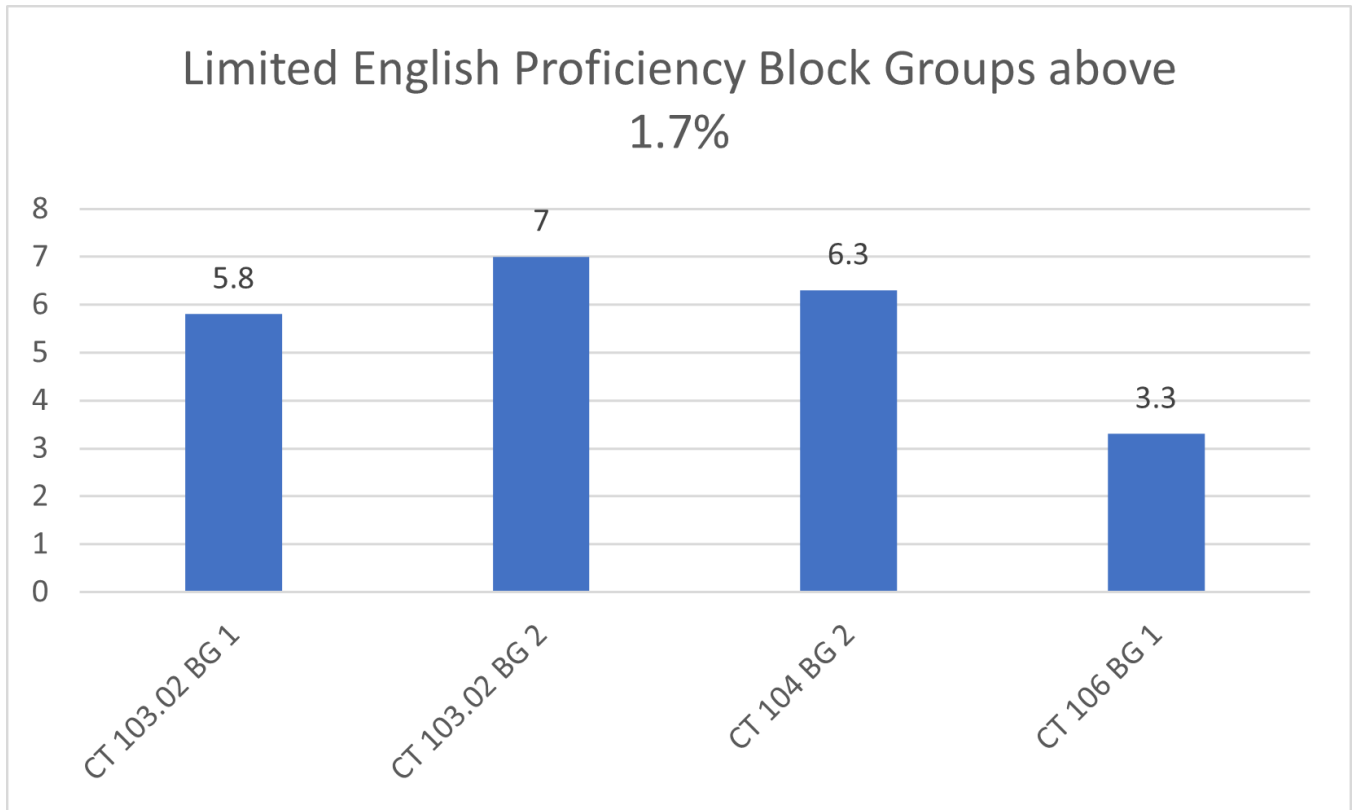
Murray Small Urban Area Study

Figure 5: Disability Status 18 Yrs+ Block Groups above 20.5%



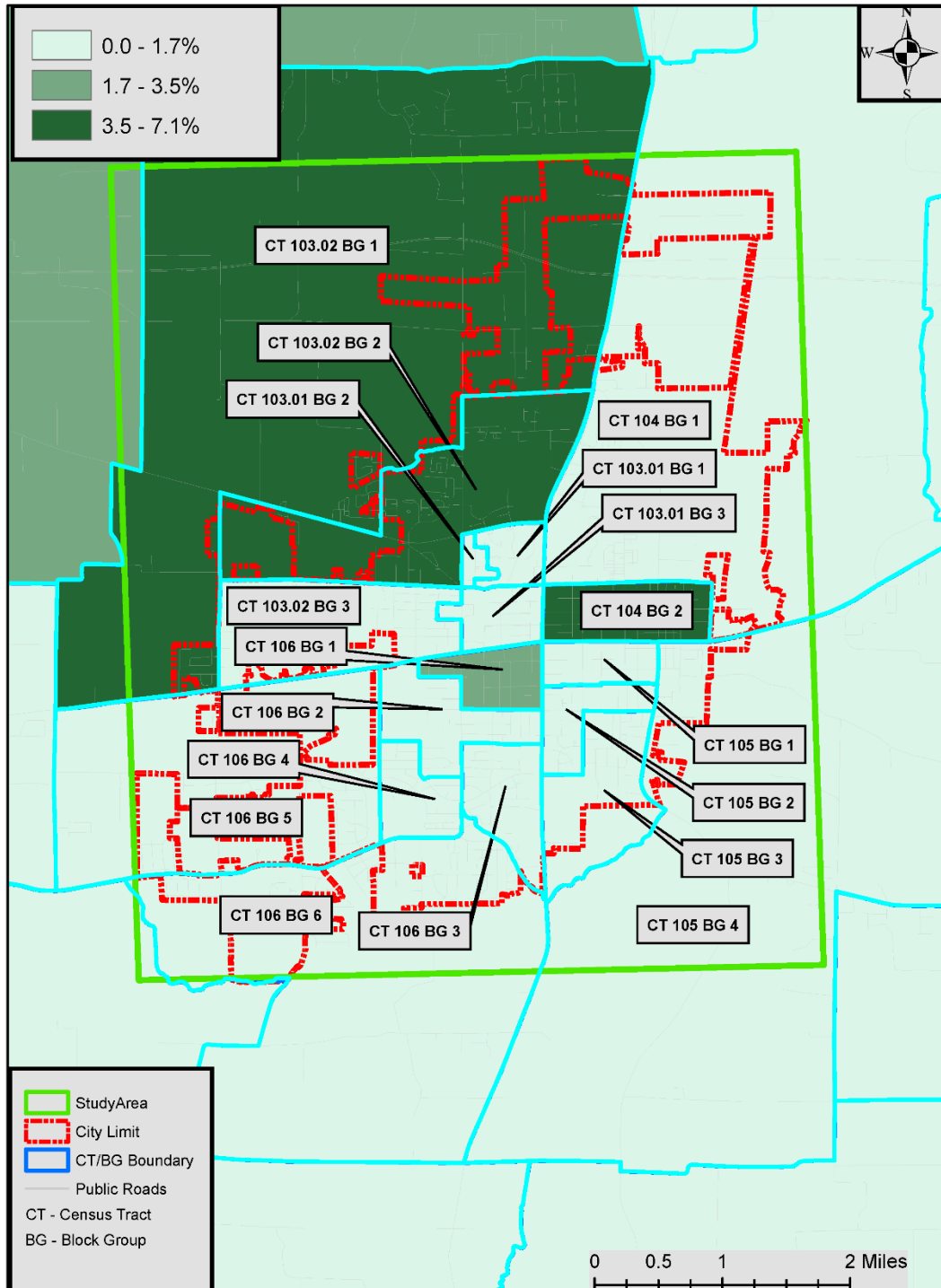
Population by Persons with Limited English Proficiency

Calloway County has a total population of 1.7% with Limited English Proficiency. There are 4 of 18 block groups with higher percentages located in the study area. The percentages for the block groups are identified in the chart below. Block groups above 1.7% are labeled in Figure 6.



Murray Small Urban Area Study

Figure 6: Limited English Proficiency Block Groups above 1.7%



Conclusion

Summary of Census data by category is as follows:

Population by Persons of Racial Minority Origin

Census Tract 103.01 Block Group 1, Census Tract 103.01 Block Group 2, Census Tract 103.02 Block Group 1, and Census Tract 106 Block Group 2 percentages: Greater than Calloway County and Purchase Region's percentages

Census Tract 103.02 Block Group 2, Census Tract 103.02 Block Group 3, Census Tract 104 Block Group 1, Census Tract 104 Block Group 2, Census Tract 105 Block Group 3, and Census Tract 106 Block Group 1 percentages: Greater than Calloway County, Purchase Region and State's percentages

Population by Persons Below Poverty Level

Census Tract 106 Block Group 5 percentage: Greater than Purchase Region and State's percentages

Census Tract 103.01 Block Group 1, Census Tract 103.01 Block Group 2, Census Tract 103.01 Block Group 3, Census Tract 103.02 Block Group 1, Census Tract 103.02 Block Group 2, Census Tract 103.02 Block Group 3, Census Tract 104 Block Group 1, Census Tract 104 Block Group 2, Census Tract 105 Block Group 3, and Census Tract 106 Block Group 1 percentages: Greater than Calloway County, Purchase Region, State, and Nation's percentages

Population by Persons Age 65 Years and Older

Census Tract 103.02 Block Group 1 percentage: Greater than Calloway County and State's percentages

Census Tract 105 Block Group 2, Census Tract 105 Block Group 4, Census Tract 106 Block Group 3, Census Tract 106 Block Group 4, Census Tract 106 Block Group 5, and Census Tract 106 Block Group 6 percentages: Greater than Calloway County, Purchase Region, State, and Nation's percentages

Population by Disability Status

Census Tract 104 Block Group 1 percentage: Greater than Calloway County, Purchase Region, and Nation's percentages

Census Tract 103.01 Block Group 1, Census Tract 103.01 Block Group 3, Census Tract 103.02 Block Group 1, Census Tract 104 Block Group 2, Census Tract 105 Block Group 1, Census Tract 105 Block Group 2, Census Tract 105 Block Group 3, Census Tract 105 Block Group 4, Census Tract 106 Block Group 5, and Census Tract 106 Block Group 6 percentages: Greater than Calloway County, Purchase Region, State, and Nation's percentages

Population by Limited English Proficiency

Census Tract 103.02 Block Group 1, Census Tract 103.02 Block Group 2, Census Tract 104 Block Group 2, and Census Tract 106 Block Group 1 percentages: Greater than Calloway County, Purchase Region and State's percentages

Table indicating Census Tracts (CT)/Block Groups greater than United States, Kentucky, Purchase Region, and Calloway County averages:

	Minority (%)	Poverty (%)	65 and Over (%)	Disability (%)	LEP (%)															
United States	38.9	13.1	15.2	15.2	8.5															
Kentucky	15.2	16.9	15.6	21.1	2.3															
Purchase Region	12.3	17.3	18.9	20.4	1.6															
Calloway County	10.4	21.5	16.8	20.5	1.7															
Census Tract (CT)/Block Group (BG) in Study Area	United States=U, Kentucky=K, Purchase Region=P, Calloway County=C • symbol indicates CT/BG percentage greater than U, K, P, or C percentage																			
	U	K	P	C	U	K	P	C	U	K	P	C	U	K	P	C	U	K	P	C
CT 103.01 BG 1			•	•	•	•	•							•	•	•	•			
CT 103.01 BG 2			•	•	•	•	•													
CT 103.01 BG 3					•	•	•	•						•	•	•	•			
CT 103.02 BG 1			•	•	•	•	•	•		•		•	•	•	•	•		•	•	•
CT 103.02 BG 2		•	•	•	•	•	•	•										•	•	•
CT 103.02 BG 3		•	•	•	•	•	•	•												
CT 104 BG 1		•	•	•	•	•	•	•						•		•	•			
CT 104 BG 2		•	•	•	•	•	•	•						•	•	•	•		•	•
CT 105 BG 1														•	•	•	•			
CT 105 BG 2									•	•	•	•	•	•	•	•	•			
CT 105 BG 3		•	•	•	•	•	•	•						•	•	•	•			
CT 105 BG 4									•	•	•	•	•	•	•	•	•			
CT 106 BG 1		•	•	•	•	•	•	•										•	•	•
CT 106 BG 2			•	•																
CT 106 BG 3									•	•	•	•								
CT 106 BG 4									•	•	•	•								
CT 106 BG 5					•	•			•	•	•	•	•	•	•	•	•			
CT 106 BG 6									•	•	•	•	•	•	•	•	•			

This report of population statistics is to be used as a planning component by the KYTC Division of Planning for the Murray Small Urban Area study. The purpose of the study is to provide a thorough examination of the area’s transportation network. It includes an analysis of existing and future traffic conditions with the goal of identifying lower cost short-term alternatives, long-term alternatives, and bicycle/pedestrian improvement concepts that address safety and congestion needs of the transportation system and can be used for further project development and implementation.

At this planning stage level, there are no proposed alignments, therefore no assumptions regarding adverse impacts or mitigation efforts can be made toward any populations. This report’s analysis is meant to be an overview of population statistics for the study area that can serve as an early

identification tool of potential Environmental Justice communities. These areas may or may not be considered part of the target population depending on the number of residents, location, percentage and size. Although there may be a high percentage, there is not necessarily a concentrated population. These areas should be noted in the future project planning and design phases; and if necessary, field visits, discussions with local officials, and/or other sources of information should be consulted.

Appendix A: Census Category Percentages for the US, Kentucky, Purchase Region and Calloway County Compared to Census Tract Block Groups

	Total Pop	Minority (%)	Poverty (%)	65 and Over (%)	Disability (%)	LEP (%)
United States	324,697,795	38.9	13.1	15.2	15.2	8.5
Kentucky	4,449,052	15.2	16.9	15.6	21.1	2.3
Purchase Region	196,370	12.3	17.3	18.9	20.4	1.6
Calloway County	38,837	10.4	21.5	16.8	20.5	1.7
Census Tract (CT)/ Block Group (BG)						
CT 101 BG 1*	1,908	0.0	13.7	20.3	28.2	0.0
CT 101 BG 2*	1,148	3.0	8.2	25.1	29.1	0.0
CT 101 BG 3*	1,293	3.8	13.2	13.6	23.8	2.0
CT 102 BG 1*	1,114	9.1	4.7	18.5	20.2	3.0
CT 102 BG 2*	2,084	5.8	13.5	16.0	15.8	3.4
CT 102 BG 3*	984	9.5	4.7	20.8	40.0	0.9
CT 103.01 BG 1	1,221	12.5	100.0	0.0	88.9	0.7
CT 103.01 BG 2	1,263	13.1	80.4	0.0	6.3	0.0
CT 103.01 BG 3	933	9.5	51.4	7.3	22.5	0.0
CT 103.02 BG 1	2,049	13.9	29.4	17.7	23.5	5.8
CT 103.02 BG 2	3,267	16.4	66.0	2.8	10.2	7.0
CT 103.02 BG 3	1,484	20.9	29.8	10.2	15.9	0.0
CT 104 BG 1	1,288	20.7	41.3	9.2	21.1	0.0
CT 104 BG 2	1,220	28.3	35.3	8.9	27.1	6.3
CT 105 BG 1	511	0.0	7.8	12.1	22.3	0.0
CT 105 BG 2	673	3.7	13.1	20.7	26.2	0.0
CT 105 BG 3	999	22.5	31.7	10.0	26.3	0.6
CT 105 BG 4	1,268	7.5	1.3	20.6	26.4	0.0
CT 106 BG 1	1,074	16.0	28.7	4.0	14.8	3.3
CT 106 BG 2	848	14.4	8.6	16.5	10.1	0.0
CT 106 BG 3	364	0.0	5.2	54.7	13.5	0.0
CT 106 BG 4	1,157	0.0	2.9	21.7	18.9	0.0
CT 106 BG 5	1,995	8.5	21.5	28.0	21.7	1.5
CT 106 BG 6	2,228	10.3	10.1	36.6	22.7	1.0
CT 107 BG 1*	712	14.6	9.6	20.8	21.1	1.2
CT 107 BG 2*	1,206	3.1	7.9	21.3	16.4	0.0
CT 107 BG 3*	1,255	11.4	16.1	17.8	16.1	0.4
CT 108 BG 1*	820	10.7	20.1	30.7	26.8	0.0
CT 108 BG 2*	577	0.0	5.9	28.9	11.1	0.0
CT 108 BG 3*	719	2.9	6.8	30.7	18.2	0.0
CT 108 BG 4*	1,175	3.7	26.0	17.4	17.3	0.0

*These CT/BGs are not in study area. Information provided is for reference only.

Appendix B: KYTC METHODOLOGY

Updated: September 2014

Methodology for Assessing Underserved Populations including Environmental Justice, Title VI, Age and Disability considerations in conjunction with KYTC Planning Studies

Cover Page

Title: Insert specific study type/area

Subtitle: Socioeconomic Study

Date:

Author:

Analysis

Environmental Justice (EJ) 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. EJ 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

AC with potential EJ impacts are determined by locating populations of minority, low-income, disabled or elderly 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

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 Transportation
- Limited English Proficiency

Sample Analysis:

The percentage of persons living below the poverty level in Kentucky (18.60%) is significantly higher than that of the United States (14.90%). Poverty levels in Metcalfe County are slightly lower than that of the state with 16.10% of Metcalfe County residents living below the poverty level. CT 9601 has greater levels of poverty than does the county, state and U.S. with 17.90% of persons living below the poverty level. CT 9603 however has a lower level of poverty than Metcalfe County as a whole and the state, with 13.40% of residents living below the poverty.

******The following disclaimer should be included in the document in the Socioeconomic Study Methodologies Section.******

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.

Maps

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 should be symbolized utilizing an appropriate range dependent on the relevant data being studied.

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.
- One-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.

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.