

**APPENDIX C:
ENVIRONMENTAL JUSTICE REVIEW**

US 51 STUDY IN CLINTON

DRAFT WORKING PAPER

ENVIRONMENTAL JUSTICE REVIEW

Prepared for

Kentucky Transportation Cabinet (KYTC) – Division of Planning

Kentucky Transportation Cabinet (KYTC) – District 1



Prepared by

Parsons Brinckerhoff Quade & Douglas, Inc.



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1.0 INTRODUCTION

This report presents a review of community characteristics for the US 51 Project Area in the town of Clinton (Hickman County). The data used in the report comes from the U.S. Census Bureau, local officials meetings, stakeholder interviews, and field observations. The information and results are intended 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 on 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...”

This report outlines the portions of the community that may be considered minority or low-income population areas. It also highlights concentrations of elderly residents.

2.0 WHAT IS ENVIRONMENTAL JUSTICE?

The U.S. Department of Transportation (DOT) outlines the 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 low-income 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 populations and low-income populations.

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 ...”

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 ...”

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 a 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.

An Environmental Justice community is therefore an identified minority or low-income population or concentration as defined above. These populations or concentrations are identified in this report as census areas exceeding a specified threshold level as outlined in the analysis section below.

Elderly populations (age 62 or above 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.

3.0 METHODOLOGY

Data for this study was collected from four primary sources: U.S. Census Data, meetings with local leaders, map and aerial photo reviews, and field observations. The U.S. Census Data used in the report includes:

- Census 2000 Population by Race and Hispanic Origin
- 1999 Poverty Status by Age for Census Block Groups
- Census 2000 Population by Age

The data was compiled with maps and tables to present a detailed description of the community conditions for the Clinton project area in Hickman County.

4.0 CENSUS DATA ANALYSIS

U.S. Census data is arranged according to geographic unit. For this study, data is presented at the national, state, county, town, census tract, block group, and census block levels. According to the U.S. Census Bureau, the definitions of census tracts, block groups, and census blocks are as follows:

- **Census Tract** – “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. Census tracts generally contain between 1,000 and 8,000 people. Census tract boundaries are delineated with the intention of being stable over many decades, so they generally follow relatively permanent visible features. However, they may 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 census tract. A BG consists of all tabulation blocks whose numbers begin with the same digit in a census tract. BGs generally contain between 300 and 3,000 people, with an optimum size of 1,500 people.”
- **Census Block** (or referred to as simply block) – “An area bounded on all sides by visible and/or nonvisible features shown on a map prepared by the Census Bureau. A block is the smallest geographic entity for which the Census Bureau tabulates decennial census data.”

Hickman County is composed of one census tract, 9701, and six block groups. The limits of the project study area are shown in Figure 4.1, as well as the limits of the census tract and the location of the surrounding counties and tracts. As shown in Figure 4.1, the project study area is located in block groups 1, 2, 3, and 4 only. Therefore, data is presented for these four blocks along with data for the town, county, state, and nation for comparison. A more detailed view of the block groups is presented in Figure 4.2.

4.1 Minority Population Analysis

The largest minority group in the county is Black / African American alone, with nearly ten percent of the county population and twenty-seven percent of the town population falling into this category as shown in Table 4.1. The remaining minority population is mainly Hispanic, Latino, or two or more races. Overall, the percent minority population in Hickman County and Clinton exceeds the statewide average.

The minority percentages for two of the four block groups exceed both the statewide average (10.7 percent) and the countywide average (12.3 percent). Block Group 2 has the highest minority percentage at 30.1 percent. The next highest is Block Group 1 at 15.4 percent. The Block Group 2 minority percentage is close to the town and national average (30.0 and 30.9 percent respectively), but none of the block groups exceed the national average.

Figure 4.1: Location of Census Tract 9701 in Hickman County

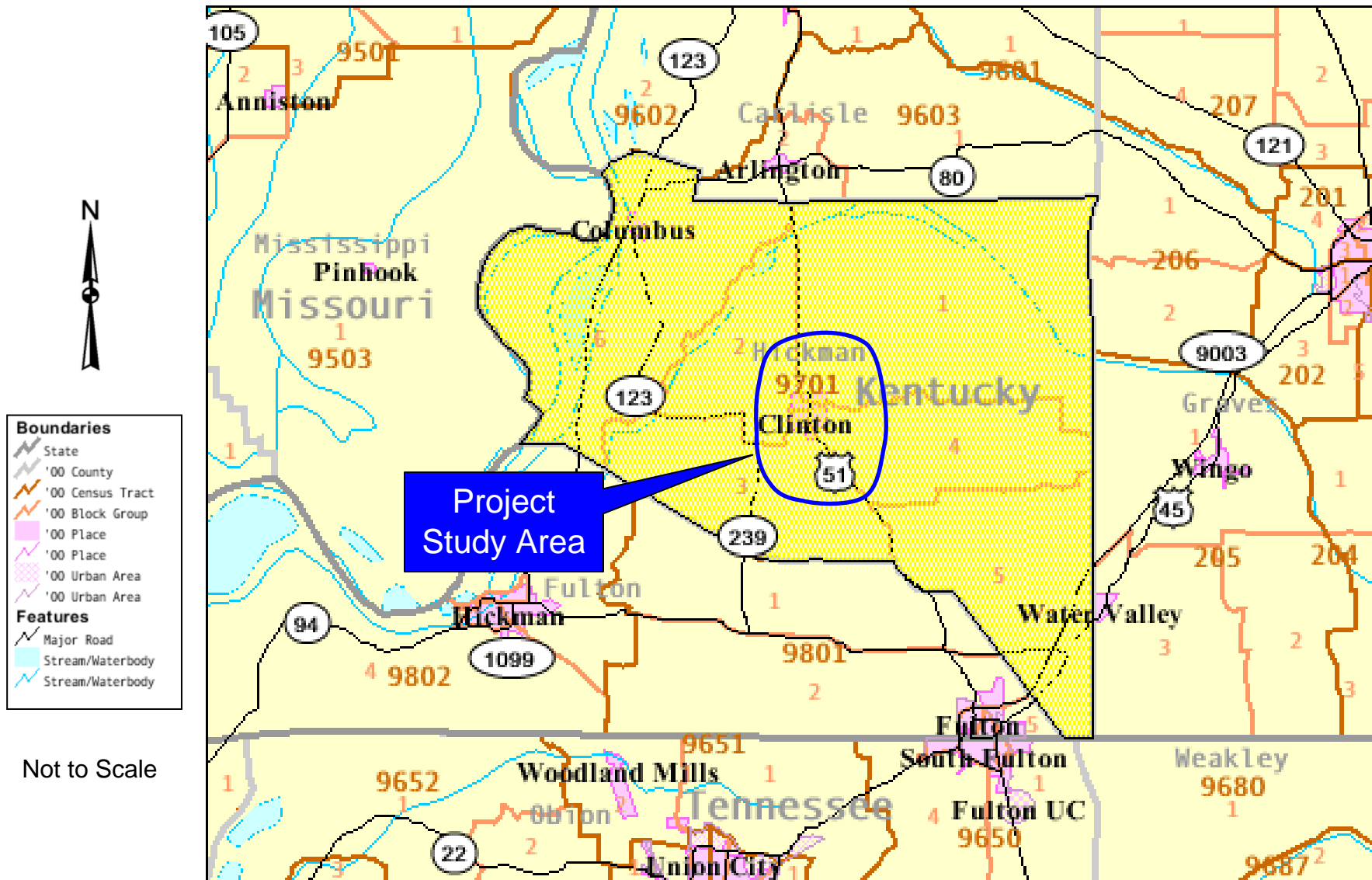


Figure 4.2: Census Tract 9701 Block Group Location

Boundaries

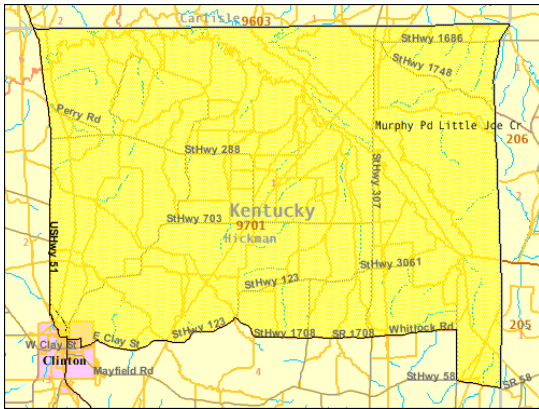
- State
- '00 County
- '00 Census Tract
- '00 Block Group
- '00 Place
- '00 Urban Area



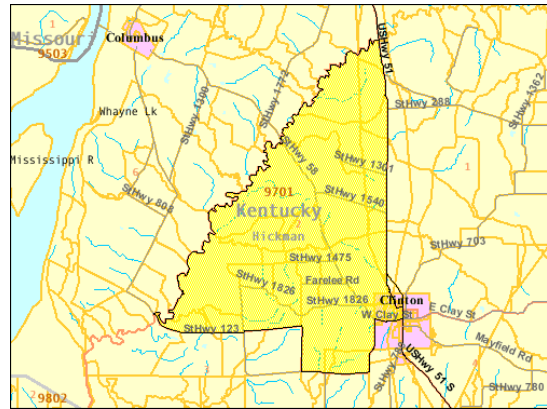
Features

- Major Road
- Stream/Waterbody
- Stream/Waterbody

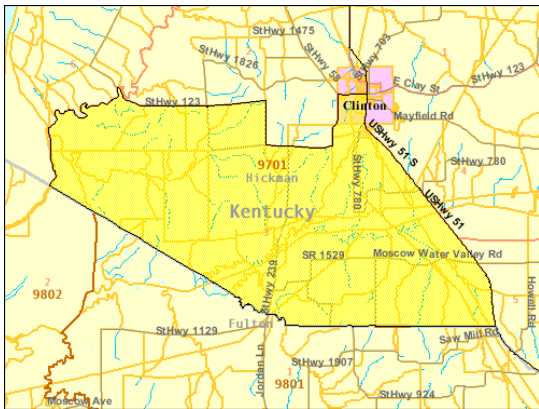
Not to Scale



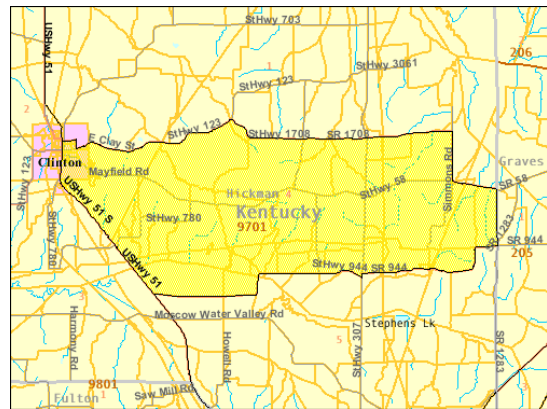
Block Group 1



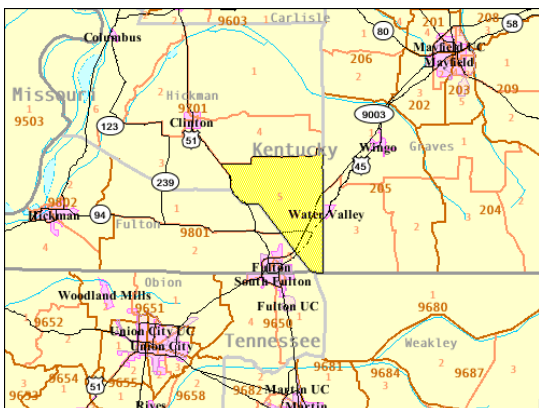
Block Group 2



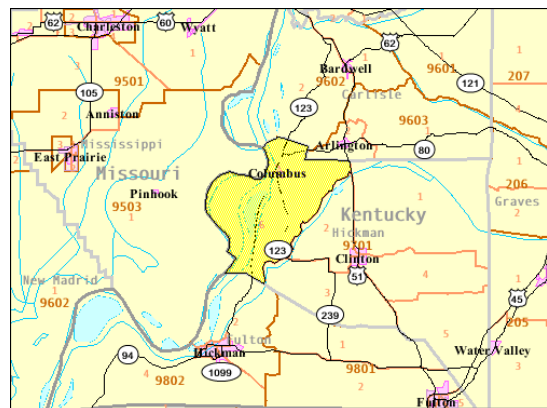
Block Group 3



Block Group 4



Block Group 5



Block Group 6

Table 4.1: 2000 Census Data by Race at Block Group Level

	United States	Kentucky	Hickman County	Clinton	Block Group 1	Block Group 2	Block Group 3	Block Group 4
Total Population	281,421,906	4,041,769	5,262	1,415	1,042	658	753	1,456
White alone	194,552,774	3,608,013	4,614	997	882	460	678	1,359
Black or African American alone	33,947,837	293,639	520	384	143	169	62	60
Hispanic or Latino	35,305,818	59,939	54	22	12	11	3	15
American Indian and Alaska Native alone	2,068,883	7,939	12	7	3	3	0	4
Asian alone	10,123,169	29,368	3	0	0	2	0	1
Native Hawaiian and Other Pacific Islander alone	353,509	1,275	0	0	0	0	0	0
Some other race alone	467,770	3,846	0	0	0	0	0	0
Two or more races	4,602,146	37,750	59	5	2	13	10	17
Total Minority Population	86,869,132	433,756	648	418	160	198	75	97
Percent Minority Population	30.9	10.7	12.3	30.0	15.4	30.1	10.0	6.7

Source: U.S. Census Bureau, Census 2000

Based on the U.S. DOT definition of minority populations it appears that there is a “readily identifiable” group of minority persons living in the north and west portions of the town of Clinton, mainly in Block Groups 1 and 2. Consultations with local officials, stakeholders, and residents along with field observations confirmed the presence of a substantial African-American community in this portion of the study area.

To establish the approximate limits of the minority community, detailed block level census data was examined giving a percent minority for each block. These percentages were evaluated using a threshold analysis, a method that provides a reasonable technique for determining an approximate minority community boundary within the study area.¹

The first step in the threshold analysis is to set the reference threshold. This is based on either the regional or statewide average percentage of the minority population. In this case the countywide average of 12.3 percent was employed as the reference threshold. Then ranges 25 percent above and 25 percent below this reference point are defined as shown in Table 4.2.

Table 4.2: Minority Population Analysis Ranges

Analysis Range	Percent Minority
Significantly Above Threshold	> 15.4%
Just Above Threshold	12.3% – 15.4%
Reference Threshold (County Average)	12.3%
Just Below Threshold	9.2% – 12.3%
Significantly Below Threshold	< 9.2%

¹ Ohio Transportation EJ Guidance, Ohio Department of Transportation, August 2002, Pages 10-11.

Typically, areas with minority percentages significantly above the reference threshold (>15.4%) are included as part of the local minority community. Blocks with percentages just above the reference threshold (between the reference threshold and twenty-five percent above the reference threshold) may or may not be considered part of the target population depending on the number of residents, location, percentage, and size of the area.

For this analysis, all blocks in Block Groups 1 and 2 were compared to the threshold values of 12.3 percent and 15.4 percent. The data analysis revealed several blocks that exceeded the 15.4 percent threshold throughout the north and west portions of the town. A few additional blocks on the edge of or just outside the study area also exceeded the threshold. The blocks exceeding the 15.4% threshold are listed in Tables 4.3 and 4.4 and highlighted in Figures 4.3 and 4.4. To illustrate where the highest concentration of minority blocks are located, three levels of shading are used in Figures 4.3 and 4.4. The lightest (white) indicates no population of any race. The next darker shading indicates those blocks that are higher than the reference threshold, but lower than 50 percent. The darkest shading is used to show the blocks with a minority percentage of 50 or higher. None of the blocks in these two block groups, located within the study area, had minority percentages between the threshold values of 12.3 percent and 15.4 percent.

Table 4.3: Minority Population for Selected Blocks in Block Group 1

	Hickman County	Block 1130	Block 1132	Block 1133	Block 1134	Block 1135	Block 1136	Block 1138	Block 1139	Block 1143	Block 1163
Total Population	5,262	50	6	27	22	39	33	41	12	6	4
Total Minority Population	648	38	6	25	20	14	26	8	4	4	2
Percent Minority Population	12.31	76.0	100.0	92.6	90.9	35.9	78.8	19.5	33.3	66.7	50.0

Source: U.S. Census Bureau, Census 2000

Table 4.4: Minority Population for Selected Blocks in Block Group 2

	Hickman County	Block 2011	Block 2015	Block 2017	Block 2032	Block 2033	Block 2036	Block 2037	Block 2038	Block 2041	Block 2044	Block 2046	Block 2047	Block 2048
Total Population	5,262	9	4	5	39	9	75	84	12	12	30	3	4	10
Total Minority Population	648	2	2	1	35	8	48	43	12	12	16	3	2	4
Percent Minority Population	12.3	22.2	50.0	20.0	89.7	88.9	64.0	51.2	100.0	100.0	53.3	100.0	50.0	40.0

Source: U.S. Census Bureau, Census 2000

According to the analysis, the greatest percentage of minorities lives to the west of US 51 and to the north of KY 58 in Clinton. To ensure that the boundaries of this minority concentration are correct, surrounding blocks in Block Groups 3 and 4 were evaluated to determine if the minority percentages in those blocks exceeded either of the two threshold values (12.3% and 15.4%). Several adjacent blocks were identified as exceeding those thresholds and they are shown in Table 4.5 and on Figure 4.3.

Figure 4.3: Location of Minority Blocks in Clinton

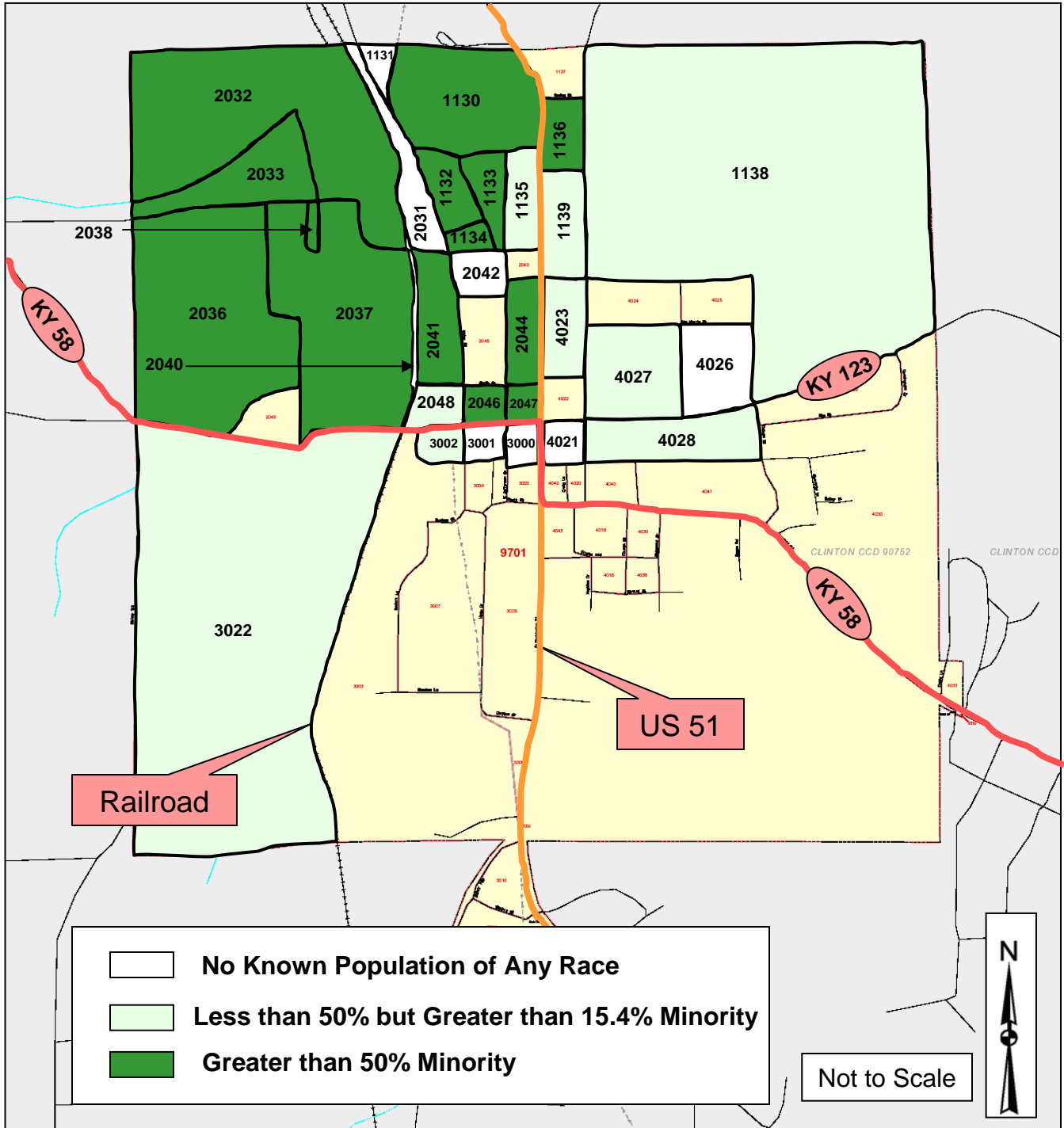


Table 4.5: Minority Population for Blocks Adjacent to Potential EJ Community

	Hickman County	Block 3002	Block 3022	Block 4023	Block 4027	Block 4028
Total Population	5,262	15	82	30	52	52
Total Minority Population	648	3	14	8	14	12
Percent Minority Population	12.3	20.0	17.1	26.7	26.9	23.1

Source: U.S. Census Bureau, Census 2000

The inclusion of these surrounding blocks indicates that the minority community within Clinton is dispersed through approximately three-quarters of the town. While this may seem like a large area, the analysis is reasonable given that some portions of the minority community area have relatively low population densities. There are also clusters of residential development. For example, most of the 39 residents of Block 2032 live in the southeast portion of the block, while the northwest portion is farmland. Also, as has been stated, the town of Clinton does have a relatively high minority percentage (30.0%) compared to the county and state percentages (12.3% and 10.7% respectively).

Overall, there is a clear minority population in the study area that should be considered in project planning and in public participation activities.

4.2 Low-Income Population Analysis

A low-income population analysis was completed for the study area using a methodology similar to that used for the minority population analysis. However, as income data is not published at the block level, the analysis was conducted at the block group level.

As shown in Table 4.6, a higher percentage of Hickman County's population lives below the poverty level (17.4%) than in the state (15.8%) or the nation (12.4%). The town of Clinton has an even higher percentage below the poverty level at 28.3%.

Table 4.6: 1999 Census Data for Poverty Levels

	United States	Kentucky	Hickman County	Clinton	Block Group 1	Block Group 2	Block Group 3	Block Group 4
Total Population	273,882,232	3,927,047	5,095	1,415	1,034	618	639	1,421
Population Below Poverty Level	33,899,812	621,096	887	401	182	200	168	166
% Population Below Poverty Level	12.4	15.8	17.4	28.3	17.6	32.4	26.3	11.7

Source: U.S. Census Bureau, Census 2000

The reference threshold set for this analysis is the county average of 17.4 percent of the population living below the poverty level as shown in table 4.7.² The upper threshold above which the block group would clearly be included as a low-income population is 21.8 percent.

Table 4.7: Low-Income Population Analysis Ranges

Analysis Range	Percent Low Income
Significantly Above Threshold	> 21.8%
Just Above Threshold	17.4% – 21.8%
Reference Threshold (County Average)	17.4%
Just Below Threshold	13.1% – 17.4%
Significantly Below Threshold	< 13.1%

As shown in Table 4.6, Block Groups 2 and 3 both have low-income population percentages in the upper range (i.e. significantly above the reference threshold). Block Group 1 has a low-income percentage just above the reference threshold at 17.6 percent. This is nearly the same as the county average. All three of these values are higher than both the statewide and national averages. Therefore, it is reasonable to assume that portions of all three block groups could include low-income populations. Referring back to Figures 4.1 and 4.2, this would indicate potential low-income populations in the north and west portions of the study area. These areas are similar geographically to some of the areas previously noted as having minority populations. Therefore, the highlighted minority population areas are Environmental Justice communities for reasons of both income and race.

4.3 Population by Age

Both the project study team as well as individuals involved in the project's public involvement program were interested in making sure that the large local elderly population was considered in the study. This was highlighted early on as a key issue. Therefore the extent and location of the elderly population was assessed as part of this analysis. For this analysis elderly is assumed to be anyone over the age of 62.

Table 4.8 shows that Hickman County has an elderly population significantly higher than both the statewide and national averages. The town of Clinton has an elderly population somewhat higher than the county, and higher than the state and nation.

² Note that there the poverty threshold used by the U.S. Census is different from the Health and Human Services poverty guidelines. However, the census data is detailed, readily available, and provides a good indicator for where low-income populations exist.

Table 4.8: 2000 Census Data for Age 62+

	United States	Kentucky	Hickman County	Clinton	Block Group 1	Block Group 2	Block Group 3	Block Group 4
Total Population	281,421,906	4,041,769	5,262	1,415	1,042	658	753	1,456
# Persons 62 Years and Older	41,256,029	601,762	1,159	401	193	107	249	339
% Persons 62 Years and Older	14.7	14.9	22.0	28.3	18.5	16.3	33.1	23.3

Source: U.S. Census Bureau, Census 2000

To determine if there are concentrations of elderly residents in the study area the four block groups making up the study area were examined. Again, the county average (22.0%) was used as the reference threshold as shown in Table 4.9. As shown in Table 4.8, Block Group 3 has an elderly population (33.1 percent) significantly higher than the county Average. Block Group 4 is also above the county average, but only by 1.3 percentage points. Even though Block Group 4 is only slightly above the county average, additional block level analysis was completed for both Block Groups 3 and 4.

Table 4.9: Elderly Population (62+) Analysis Ranges

Analysis Range	Percent Low Income
Significantly Above Threshold	> 27.5%
Just Above Threshold	22.0% – 27.5%
Reference Threshold (County Average)	22.0%
Just Below Threshold	16.5% – 22.0%
Significantly Below Threshold	< 16.5%

For Block Groups 3 and 4, additional data for the block level was obtained to determine where the highest populations occur within the block groups. The block percentages were compared to the threshold values of 22.0 percent and 27.5 percent (twenty-five percent above the reference threshold). All of the blocks that are higher than the thresholds are listed in Tables 4.10 and 4.11 and shown on Figures 4.5 and 4.6.

As shown in Figure 4.5, there is a concentration of residents age 62 or above on the south side of the town. Other blocks can be seen scattered throughout the study area in Figure 4.6, all of which are primarily located in the south. Most of the blocks are not highly populated; therefore, even though there may be a high percentage of residents 62 and older there is not necessarily a concentrated population. Two blocks in the study area that could be considered a concentrated population are Blocks 3006 (along US 51) and 3023. These blocks have elderly populations of 73 (78.5%) and 63 (96.9%) respectively. These high concentration areas should be taken into account in the project planning and any future design.

Table 4.10: 2000 Census Data for Age 62+ by Blocks for Block Group 3

	Total Population	# Persons 62 Years and Older	% Persons 62 Years and Older
Hickman County	5,262	1,159	22.0
Block 3003	15	5	33.3
Block 3004	3	1	33.3
Block 3005	3	2	66.7
Block 3006	93	73	78.5
Block 3007	8	2	25.0
Block 3014	48	11	22.9
Block 3018	8	3	37.5
Block 3021	1	1	100.0
Block 3022	82	19	23.2
Block 3023	65	63	96.9
Block 3032	1	1	100.0
Block 3037	5	3	60.0
Block 3038	11	3	27.3
Block 3043	6	2	33.3
Block 3052	16	5	31.3

Source: U.S. Census Bureau, Census 2000

Table 4.11: 2000 Census Data for Age 62+ by Blocks for Block Group 4

	Total Population	# Persons 62 Years and Older	% Persons 62 Years and Older
Hickman County	5,262	1,159	22.0
Block 4012	22	7	31.8
Block 4013	15	4	26.7
Block 4014	17	6	35.3
Block 4015	9	2	22.2
Block 4017	103	23	22.3
Block 4018	15	5	33.3
Block 4019	11	5	45.5
Block 4025	7	4	57.1
Block 4027	52	16	30.8
Block 4028	52	16	30.8
Block 4029	31	10	32.3
Block 4030	125	45	36.0
Block 4033	70	21	30.0
Block 4034	12	3	25.0
Block 4040	16	5	31.3
Block 4042	1	1	100.0
Block 4093	2	2	100.0
Block 4098	5	4	80.0

Source: U.S. Census Bureau, Census 2000

Figure 4.5: Location of Concentrated Elderly Population Blocks in Clinton

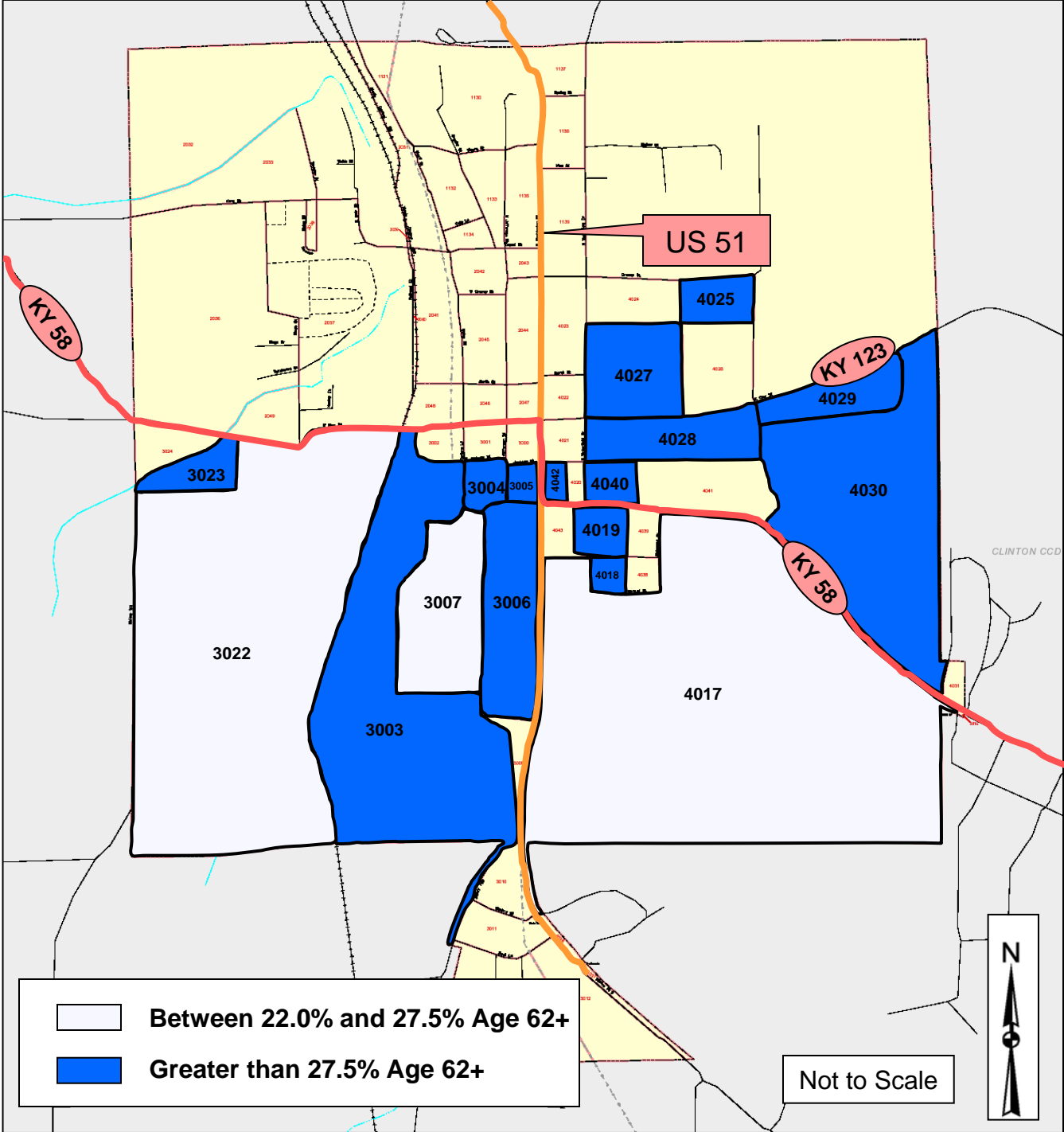
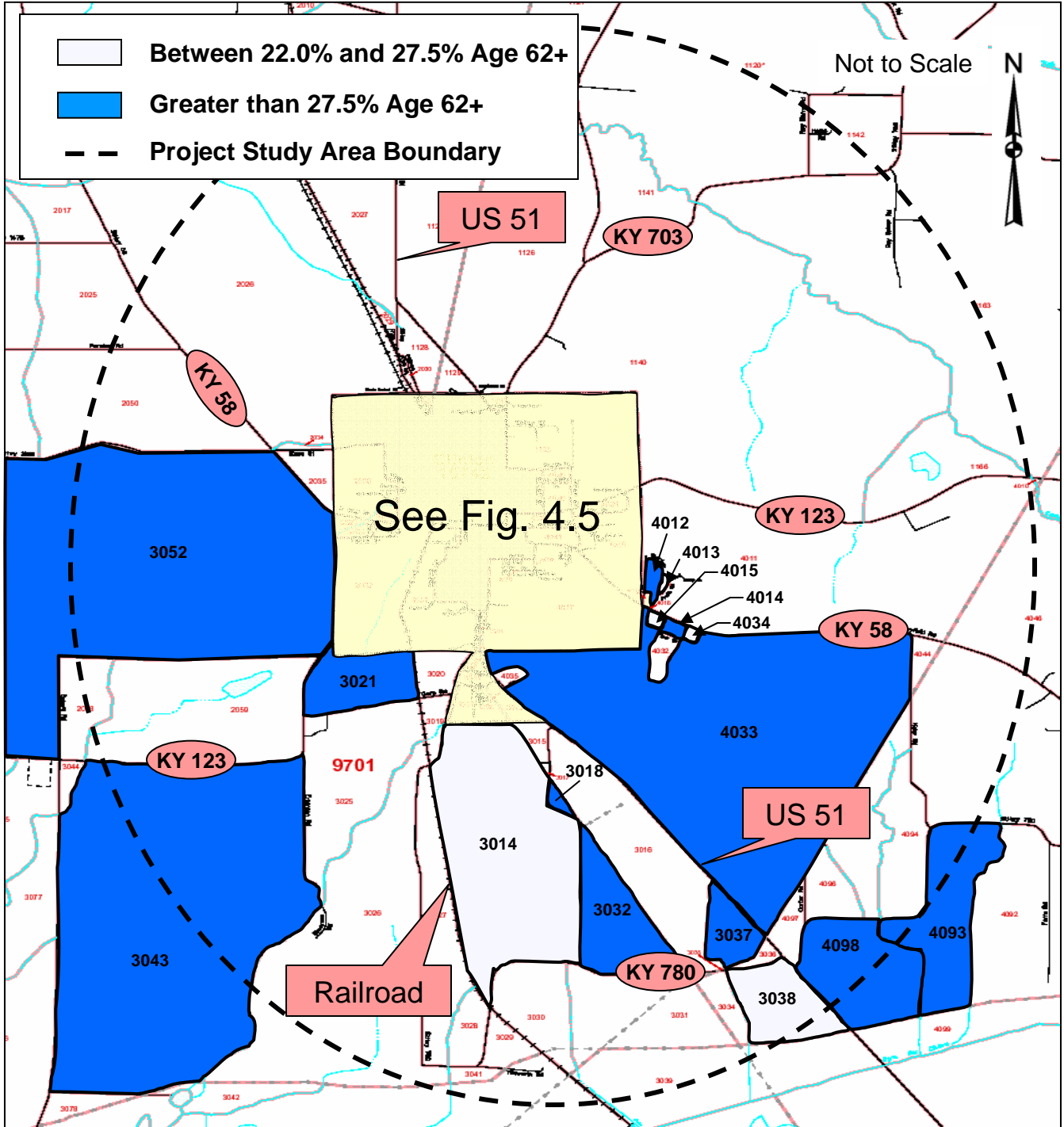


Figure 4.6: Location of Concentrated Elderly Population Blocks in Study Area Surrounding Clinton



5.0 CONCLUSIONS

Based on data obtained from the U.S. Census Bureau and input from the community of Clinton, an Environmental Justice community does exist within the study area. The primary focus of the community is the northwest section of town with portions of the community located just to the east and south. This is based primarily on the minority distribution obtained at the block level for Clinton in Hickman County. Poverty levels are higher than average in Block Groups 2 and 3, indicating an Environmental Justice community west of US 51 based on income. Also, based on the age distribution in the study area, there is a concentration of residents 62 years or older in Block Groups 3 and 4, particularly in the southern portion of the study area.

All three of these populations should be given full consideration in the planning process to achieve the goals put forth by the U.S. Department of Transportation (DOT).

Specifically, the project planning should “avoid, minimize, or mitigate disproportionately high and adverse human health or environmental effects, including social and economic effects” on these populations. This can be accomplished by identifying potential impacts to the populations that would result from a particular project alternative. Then the impacts can be assessed to determine if one of the populations would experience a disproportionate negative impact compared to the rest of the community.

The project planning has and should continue to “ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.” Special meetings and outreach efforts have been included as part of the planning process in Clinton. Efforts have been made to reach out, and will continue to be made to reach out to the minority and low-income communities.

Finally, the project planning effort should “prevent the denial of, reduction in, or significant delay in the receipt of benefits” by the Environmental Justice populations. Again, the potential benefits of the alternatives can be assessed and a determination can be made regarding whether an alternative benefits the community equally or if the benefits fall disproportionately to one portion of the community.

Each of these actions is currently being completed as part of the ongoing study process, with the goal of ensuring Environmental Justice both in the project planning phase as well as in any future project implementation. The alternatives analysis with respect to the presence of Environmental Justice populations is addressed in the alternatives evaluation reports for the project.