

WILMAPCO

2013

Transportation Equity Report

*Environmental
Justice &
Title VI*

Prepared by the staff of the
Wilmington Area Planning Council

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**2013 Transportation Equity Report:
An Environmental Justice Study &
Title VI Plan
for the WILMAPCO Region**

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RESOLUTION

BY THE WILMINGTON AREA PLANNING COUNCIL (WILMAPCO) TO ENDORSE THE 2013 TRANSPORTATION EQUITY REPORT: AN ENVIRONMENTAL JUSTICE STUDY & TITLE VI PLAN

WHEREAS, the Wilmington Area Planning Council (WILMAPCO) has been designated the Metropolitan Planning Organization (MPO) for Cecil County, Maryland and New Castle County, Delaware by the Governors of Maryland and Delaware, respectively; and

WHEREAS, federal regulations require MPOs to address Environmental Justice and Title VI of the Civil Rights Act in the planning process; and

WHEREAS, low-income and minority communities have been shown to carry undue burdens of the transportation system and face inequities in the planning process; and

WHEREAS, limited English-speaking, low-literacy, low-income and minority individuals face difficulties participating in the planning process; and

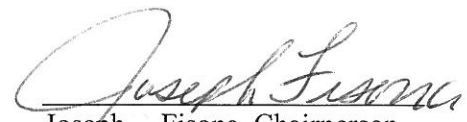
WHEREAS, the *2013 Transportation Equity Report: An Environmental Justice Study and Title VI Plan* helps to implement the goals and objectives of the WILMAPCO Regional Transportation Plan (RTP); and

WHEREAS, the *2013 Transportation Equity Report: An Environmental Justice Study and Title VI Plan* continues a process to analyze the present and future transportation needs of these constrained populations; and

WHEREAS, the *2013 Transportation Equity Report: An Environmental Justice Study and Title VI Plan* provides recommendations to enhance the mobility, the equity and, generally, the quality of life of these constrained populations;

NOW, THEREFORE, BE IT RESOLVED that the Wilmington Area Planning Council does hereby endorse the *2013 Transportation Equity Report: An Environmental Justice Study and Title VI Plan*.

July 11, 2013
Date


Joseph Fisona, Chairperson
Wilmington Area Planning Council



Partners with you in transportation planning

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Who is WILMAPCO?

The Wilmington Area Planning Council (WILMAPCO) is the Metropolitan Planning Organization (MPO) for Cecil County, Maryland and New Castle County, Delaware. We are charged with planning and coordinating transportation investments for the Wilmington region.



The Wilmington region is home to nearly 640,000 residents, most of whom (84%) live in New Castle County. Wilmington, a financial hub supporting a population of more than 70,000, serves as the principal city. Urbanized development stretches outside of Wilmington along the I-95 corridor, from the Town of Elkton to the Pennsylvania border. Natural and rural landscapes, sprawling suburbs, and small towns blanket the rest of the region.

WILMAPCO's mission is to create the best transportation Plan for the region, one that meets all the requirements mandated by the Federal Clean Air Act and its Amendments (CAAA) and Moving Ahead for Progress in the 21st Century (MAP-21).

Executive Summary

This study examines social equity in the context of the Wilmington, Delaware region's transportation network and WILMAPCO's transportation planning process. It meets all WILMAPCO federal requirements and commitments to Environmental Justice and Title VI.

Today, on the eve of the Civil Rights Act's Golden Jubilee, the United States remains sharply divided by race and class. In the transportation sector, low-income and minority communities carry more than their fair share of the transportation network's burdens. WILMAPCO has long been cognizant of these concerns, far exceeding federal commitments to weave equity into our planning process. Yet most of these concerns remain unaddressed.

The present study provides a fresh, comprehensive analysis of the inequities low-income and minority communities (or EJ communities) face. It makes (often repeating from past studies) recommendations to break policy barriers and lighten infrastructural burdens.

Most fundamentally, we should reduce transportation costs for EJ communities and ensure EJ communities receive their fair share of transportation dollars. Breaking the typical cycle of suburban sprawl and highway dominant transportation investments is a necessary starting point. Doing so would reduce today's mismatches between EJ communities and healthy, affordable food access, EJ communities and employment access, and overall, reduce (our costly and growing) private automobile dependency and free more dollars for the urban core.

The study begins with the identification of our EJ areas – or concentrations of low-income and minority groups – based on fresh census data. We provide a demographic profile of the areas (Chapter 3), conduct a public opinion survey specific to them (Chapter 4), and then use the EJ areas as the basis of a variety of technical analyses (Chapter 5).

We show with the technical analyses that our low-income and minority neighborhoods:

- Do not receive their fair share of planned transportation spending
- Are home to high pedestrian crash rates
- Have lower than expected overall (including vehicle) crash rates
- Experience higher near-road emissions exposure rates
- Enjoy better bus access overall than the average neighborhood
- Have numerous bus connectivity issues related to employment and food access
- Have generally good non-motorized connectivity
- Are more likely to be impacted by sea-level rise

Following our technical analyses we turned to Public Participation (Chapter 6). While WILMAPCO has made great strides to incorporate and strengthen equity in the public participation process, problems persist. Most importantly, subscription rates to our quarterly newsletter are significantly lower in EJ areas than the average neighborhood, we remain tied to traditional venues for important outreach, and more work is needed to better engage our limited English proficient (Spanish and Chinese) populations.

The remaining chapters (7 and 8) summarize our work. Chapter 7 provides an overview of our Title VI commitments, and how and where they have been (or will be) met. Chapter 8 lists all the key recommendations – totaling nearly two dozen – made throughout the study.

Chapter 1

Background

What is Environmental Justice?

Environmental Justice (EJ) entails the *fair treatment* and *meaningful involvement* of people from all races, cultures, and incomes regarding the development of environmental laws, regulations, and policies. An outgrowth of Title VI of the Civil Rights Act of 1964, EJ is policy to ensure the non-discriminatory distribution of federal funds in the United States.

Federal statutes work to ensure the needs of EJ communities are considered. During his terms, President Clinton issued a pair of Executive Orders (EO) which detailed the responsibilities of federal agencies. EO 12898, signed in 1994, requires agencies to identify and avoid disproportionately high and adverse effects on low-income and minority populations. Six years later, EO 13166 called for outreach and involvement of persons with Limited English Proficiency (LEP). A decade later, President Obama reinvigorated the federal government's commitment to EJ. Strategies across federal agencies were revamped, with weight added to the following areas: public engagement, implementation of the National Environmental Policy Act (NEPA) and Title VI, the relationship of climate change to EJ, and the impacts of freight movement.

In response to these federal statutes, WILMAPCO incorporates EJ into all relevant aspects of our transportation planning process. Our policy is based around the three core principles of EJ set forth by the Federal Highway Administration and Federal Transit Administration:

- 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.
- Ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.

- Prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority populations and low-income populations.

As an MPO we have a few specific responsibilities within these principal areas:

- Enhance analytical capabilities to ensure the Transportation Improvement Program (TIP) and Regional Transportation Plan (RTP) complies with Title VI.
- Identify residential, employment, and transportation patterns of low-income and minority populations so that their needs can be addressed, and the benefits and burdens of transportation investments can be fairly distributed.
- Evaluate and, where necessary, improve the public involvement process to eliminate participation barriers, and engage minority and low-income populations in transportation decision-making.

What is Title VI?

Title VI of the **1964 Civil Rights Act** is a non-discrimination statute. As amended, it states:

No person in the United States shall, on the ground of race, color, national origin, sex, age, or disability, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.

As WILMAPCO is a recipient of federal funding, we must take care to ensure that both our operations and planning process are non-discriminatory. Our contracts with third-party firms and hiring and personnel policies comply with all federally-required non-discriminatory clauses and DBE¹ assurances. Samples of these assurances can be found in the appendix.

¹ Disadvantaged Business Enterprises (DBEs) are state-certified for-profit small business concerns where socially and economically disadvantaged individuals own at least a 51% interest and control management and daily business operations. African Americans, Hispanics, Native Americans, Asian-Pacific and Subcontinent Asian Americans, and women are presumed to be socially and economically disadvantaged. Other individuals can be characterized as socially and economically disadvantaged on a case-by-case basis.

As will be detailed in Chapter 5, our analyses show our region's low-income and minority communities do not benefit from transportation investments as much as they should, and bear a greater share of our system's burden. We must begin to address this inequity through our TIP and RTP.

The continued underrepresentation of EJ communities in the planning process is also a major concern. We must proactively engage low-income and minority groups in the planning process through both traditional and non-traditional methods to prevent the persistence of transportation inequities. And when conducting sub-regional plans in EJ areas, a special effort is required to ensure participation. As will be detailed in Chapter 6, WILMAPCO has combined technical analysis with targeted, grassroots efforts to forward this initiative.

History of EJ/Title VI at WILMAPCO

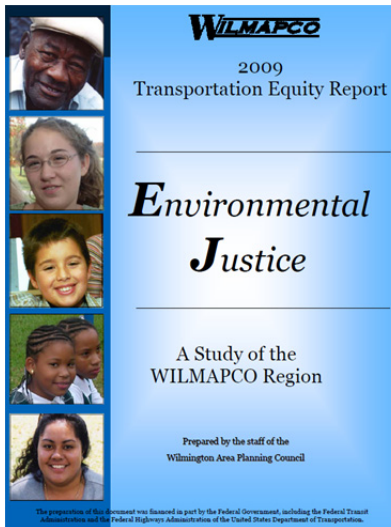
WILMAPCO produced its first EJ report, "Environmental Justice: Transportation Equity Analysis for the WILMAPCO Region" in 2003. Delineating concentrations of minority and low-income populations in our region, the report evaluated our plans and programs against EJ principles. It then provided an overview of public participation activities and described the monitoring tools to be used to measure implementation.

A second EJ report, "2007 Accessibility and Mobility Report: A Transportation Justice Study of the WILMAPCO Region," broadened the spectrum of communities considered "transportation constrained" from just those required by federal mandate. Separate from EJ populations, these **Transportation Justice (TJ)** communities were defined as: the elderly, the disabled, and households without an automobile. The report explored new analytical methodologies and argued that practical, cost-effective measures such as greater transit frequencies and improved pedestrian access to bus stops, retail outlets and parks will work best to improve mobility and combat the isolation of TJ populations.

Environmental Justice (EJ) – Low-income and racial and ethnic minorities

Transportation Justice (TJ) – Elderly, disabled and zero-car households

A third EJ report, “2009 Transportation Equity Report: An Environmental Justice Study of the WILMAPCO Region” revisited the needs of our low-income and minority communities. Updating the 2003 study, it featured more nuanced technical analyses and set concrete strategies to better engage our EJ communities, including those with LEP and low-literacy.



The cover of our 2009 Environmental Justice Study is shown above.

Beyond specific EJ and TJ studies, equity informs and has colored many other plans and initiatives at WILMAPCO. These efforts are highlighted in Table 1.

Table 1: Other Plans and Projects which Feature Equity Considerations

Project	Year	Equity Description
Dirty Roads Data Report	2010	Near-road emissions within low-income and minority areas were considered.
Project Prioritization	Ongoing	Beneficial projects in EJ/TJ areas receive better technical scores. Harmful projects in EJ areas receive weaker scores.
Public Participation Plan	2008	Challenges staff to meet several public outreach equity objectives.
Regional Progress Report	Every two years	Refinement and introduction of new equity measures, between EJ/TJ studies.
Regional Transportation Plan	2010	Key equity objectives within the "Improve Quality of Life" goal.
Sea-level Rise Assessment	2011	Sea-level rise impacts to EJ communities were considered.
Southbridge Community Planning	Ongoing	Intensive community transportation work in an EJ area. Includes a Safe Routes to School and Transportation Enhancement project.
Transportation Improvement Program	Ongoing	Listing of projects in EJ/TJ areas.

The Present Study

This study has been completed in response to the release of fresh data from the U.S. Census. Our EJ neighborhoods are redefined using these new demographics. A series of analyses, old and new, are run using the new EJ neighborhoods. The 2013 Environmental Justice Study also features policy-level discussions and recommendations relating to transportation equity, our MPO policy concerning Title VI and DBE, a public opinion survey of EJ communities, and a review and update of our public outreach procedures relating to equity.



New demographic figures from the 2010 Census allowed us to redefine our EJ neighborhoods.

Unfortunately, updated data related to disability were not included in the recent surge of Census data. After these data become available at geographies fine enough for neighborhood-level analyses, we will complete an update of the 2007 Transportation Justice Study.

Chapter 2

Transportation Inequities and EJ Policies

This chapter provides an overview of the unfair burdens low-income and racial/ethnic minority communities carry across the United States, with respect to transportation infrastructure and services, and transportation planning.

Benefits and Burdens

The United States is sharply divided along class and racial/ethnic lines. Persistent spatial segregation by class and race perpetuates these divisions, and their consequences.

According to a recent assessment from Hayward and Swanson²:

Poor people who live in high poverty neighborhoods suffer higher rates of disease. . . . They are more likely to be victims of crime; they pay more for groceries and for other retail items; and they receive inferior public services. Place differentially distributes life chances [through the] spatial mismatch of jobs and housing. . . . And there is a distinct racial component to the job – housing mismatch: more minorities, especially African-Americans, live in places that are more distant from jobs than otherwise similar whites do.

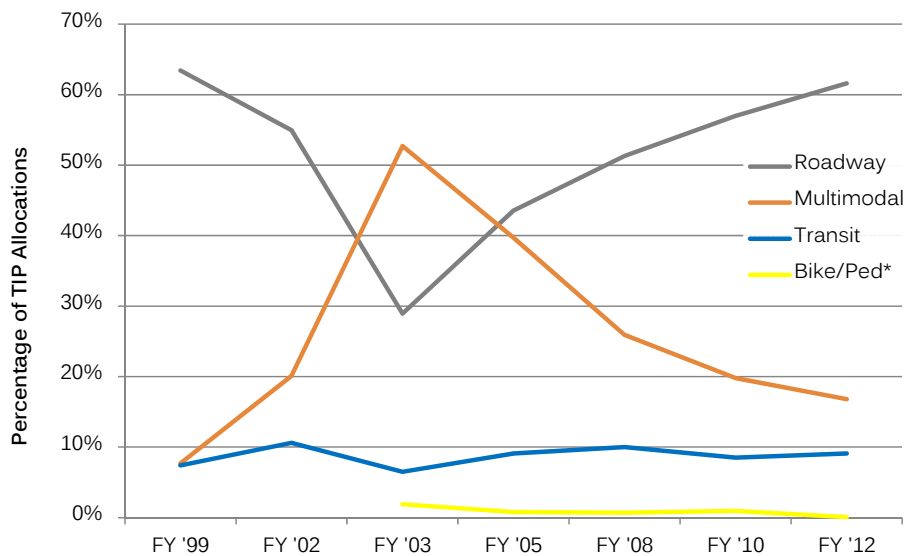
In America's transportation sector, low-income and minority communities do not receive the full *benefits* of investments, and often carry more than their fair share of the system's *burdens*³. Transportation inequity is most clearly illustrated by the underfunding of mass transit and non-motorized transportation, modes of travel in which low-income and

² Hayward, Clarissa Rile and Todd Swanson (Eds). *Justice and the American Metropolis*. University of Minnesota Press. 2011.

³ Bullard, Robert D. and Glenn S. Johnson (Eds). *Just Transportation: Dismantling Race and Class Barriers to Mobility*. New Society Publishers. 1997.

minority persons are more reliant. Due partially to our current transportation tax structure⁴, states expend about 80% of their federal transportation funds on highway projects, leaving about 20% for mass transit and less than 1% for non-motorized projects. As shown in Figure 1, capital funding for mass transit has hovered around 10%, and about 1% for non-motorized projects, during the past decade in the WILMAPCO region⁵. Further, within the transit budget, an increasing share has been dedicated to a costly Paratransit system that far exceeds federal requirements.

Figure 1: WILMAPCO TIP Allocations by Mode, Selected Years, FY 1999 – FY 2012



*Bicycle and pedestrian allocation figures prior to FY 2003 are not available.

Poorly funded, our bus frequencies, destinations and times served are often limited. This isolates the transit-dependent from employment opportunities and activities. Many low-income residents are forced into private car ownership, at huge personal expense. Nationally, according to the Federal Highway Administration, transportation costs can

⁴ Transportation revenues are generated via gasoline taxes. Motorists then, in practice, subsidize other modes. This makes answering calls to increase funding for mass transit and non-motorized projects difficult. Moving beyond the gasoline tax to alternative revenue approaches may begin to solve this issue. Alternative approaches, such as road pricing, themselves raise transportation equity flags as we will see later.

⁵ These figures can be found in the Transportation Improvement Program (TIP), an annual listing of projects to be funded over a four-year period.

comprise 55% of low-income household budgets, and only 9% of high-income household budgets.

Reducing transportation costs for our EJ communities will directly tackle poverty by freeing household funding for improved housing, food, healthcare and education. Supporting more efficient and effective mass transit and non-motorized systems is the cornerstone to realize this end. Within mass transit specifically, Paratransit must be reformed with saved funding directed to better fixed-route service.

Widespread private car ownership also negatively impacts air quality. Accounting for about 30% of the primary smog-forming pollutants and fine particulates, high rates of transportation-related emissions are the outcome of suburban sprawl and our consumer culture⁶. With higher rates of health problems, such as asthma, low-income and minority communities bear the brunt of pollution's impacts⁷. A recent WILMAPCO Data Report found housing in low-income and minority neighborhoods was two to three times more likely to show high near-road emission exposure than housing outside such concentrations⁸.

The heavy share of our transportation capital spending dedicated to roadways is, at its heart, a result of our region's sprawling land development pattern. While home to more than 76% of our population, population growth in the cities, towns and suburbs along the I-95 corridor (home to all of our EJ neighborhoods) has not kept pace with sprawling development beyond the corridor, especially in New Castle County. Beyond entrenching urban poverty during the past century, this residential sprawl has stressed our highway network, triggering major expansion and capacity projects which encourage more sprawl. Costly expansion projects have siphoned billions of transportation dollars away from our

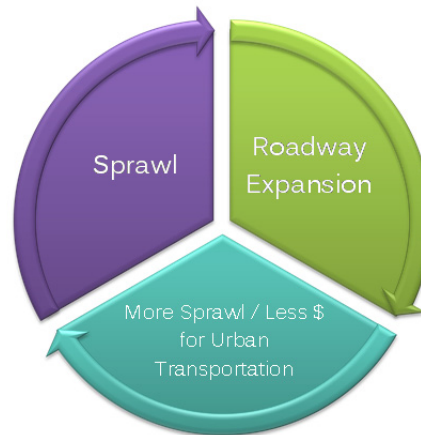
⁶ Bullard, Robert D. and Glenn S. Johnson (Eds). *Just Transportation: Dismantling Race and Class Barriers to Mobility*. New Society Publishers. 1997.

⁷ Forkenbrock, David J. and Lisa A. Schweitzer. *Environmental Justice and Transportation Investment Policy*. University of Iowa Press. 1997.

⁸ WILMAPCO Data Report 10: Dirty Roads. <http://www.wilmapco.org/data-reports>. June 2010.

urban belt, and (as we will explore in detail later) from our EJ communities. Figure 2 illustrates this cycle.

Figure 2: The Cycle of Sprawl and Transportation Investments



Ensuring EJ communities receive their fair share of transportation dollars is a necessary starting-point to alleviate the transportation burdens the groups carry, and ensuring a fair distribution of transportation benefits.

Breaking the cycle of sprawl is the best way to help bring this about. Sprawl should be checked, and then reversed, through development incentive programs and/or restrictions. We should aim for increasing population density along the I-95 corridor, and the contraction of today's sprawl into centers and open spaces. This more sustainable and *livable* growth pattern would free transportation funding for the urban core, and foster a modal shift from today's heavy reliance on personal vehicles to a future where mass transit, walking and bicycling begin to outpace car use.

Livability – tying the quality and location of transportation facilities to broader opportunities such as access to good jobs, affordable housing, quality schools, and safe streets. (FHWA)

Much planning work at WILMAPCO reflects this vision. Numerous Transit-Oriented Development (TOD), transit station, non-motorized and community plans have recently been completed, or are underway⁹.

These efforts alone, however, have been unable to break the cycle of sprawl. Some 18,700 new residents settled into rural housing between 2000 and 2011, with weak concurrent commercial growth. It is not surprising that the American Community Survey found a higher percentage of workers in New Castle County drive alone today than did 10 or 20 years ago. Further, these trends are expected to continue. Regionally, we expect Vehicle Miles Traveled (VMT) to increase by 38%, while our population is only expected to grow by 17% by 2040. New initiatives must be identified in our RTP and subsequently implemented through planning work to finally tackle sprawl.



Sprawling residential growth is seen here nearby the C & D Canal in Delaware. (Source: Bing Maps)

⁹ Such plans work to increase transportation choice and improve livability. Though promoting livability broadly, such planning also has equity pitfalls. Implemented TODs, for example, can significantly raise land values around a station, displacing low-income families and/or blocking future low-income housing near the station. Thus those who stand to benefit most from the station do not. We must promote the construction and maintenance of mixed-income housing near transit centers to address this issue.

More specifically relating to low-income and minority communities, WILMAPCO has a transparent, open and technical-based transportation project prioritization process. We should encourage the adoption of a similar prioritization process at the state level, and work to highlight the value of projects in constituencies with weaker political voice.

Summary of Recommendations

This chapter outlined several broad objectives we should strive to meet:

- **Reducing transportation costs** – our low-income residents spend too great a percentage of their earnings on transportation. Endeavoring to reduce this will free personal income to help pull families out of poverty.
- **Ensuring EJ communities receive their fair share of transportation dollars** – politics plays too great of a role in project selection, to the detriment of those with weaker political voices. Breaking the cycle of sprawl and pushing for the institution of a transparent project selection process will result in a more equitable project distribution.



Supporting mass transit and bicycling initiatives will help reduce transportation costs for EJ residents.

Chapter 3

Identification of EJ Neighborhoods

To begin addressing the needs of our region's low-income and minority communities, it is first necessary to identify where concentrations of these groups exist. This is accomplished through an examination of 2006-2010 American Community Survey census data via our Geographic Information Systems (GIS) software. Identified concentrations (EJ "areas" or "neighborhoods") were classified as "moderate" or "significant" to detail the degree to which low-income and minority populations were present. These EJ areas form the basis of our regional analyses.

Environmental Justice Groups and a Scoring Methodology

As an initial step, a population profile of WILMAPCO's EJ groups was completed. See Table 2 below.

While comprised of roughly the same percentage of non-Hispanic whites (67% versus 64.7% nationally), the WILMAPCO region is home to more non-Hispanic blacks than the US average (20.2% versus 12.2% nationally), a lower than average percentage of Hispanics (7.3% versus 15.7% nationally), and fewer households in poverty (9.4% versus 13% nationally). Non-Hispanic Asians comprise 3.7% of the region's population, which is close to their national percentage of 4.6%. Further, compared to figures from 2000 census, the WILMAPCO region is now both poorer and home to a larger percentage of minorities across the board.

Table 2: WILMAPCO EJ Profile, 2006-10 American Community Survey

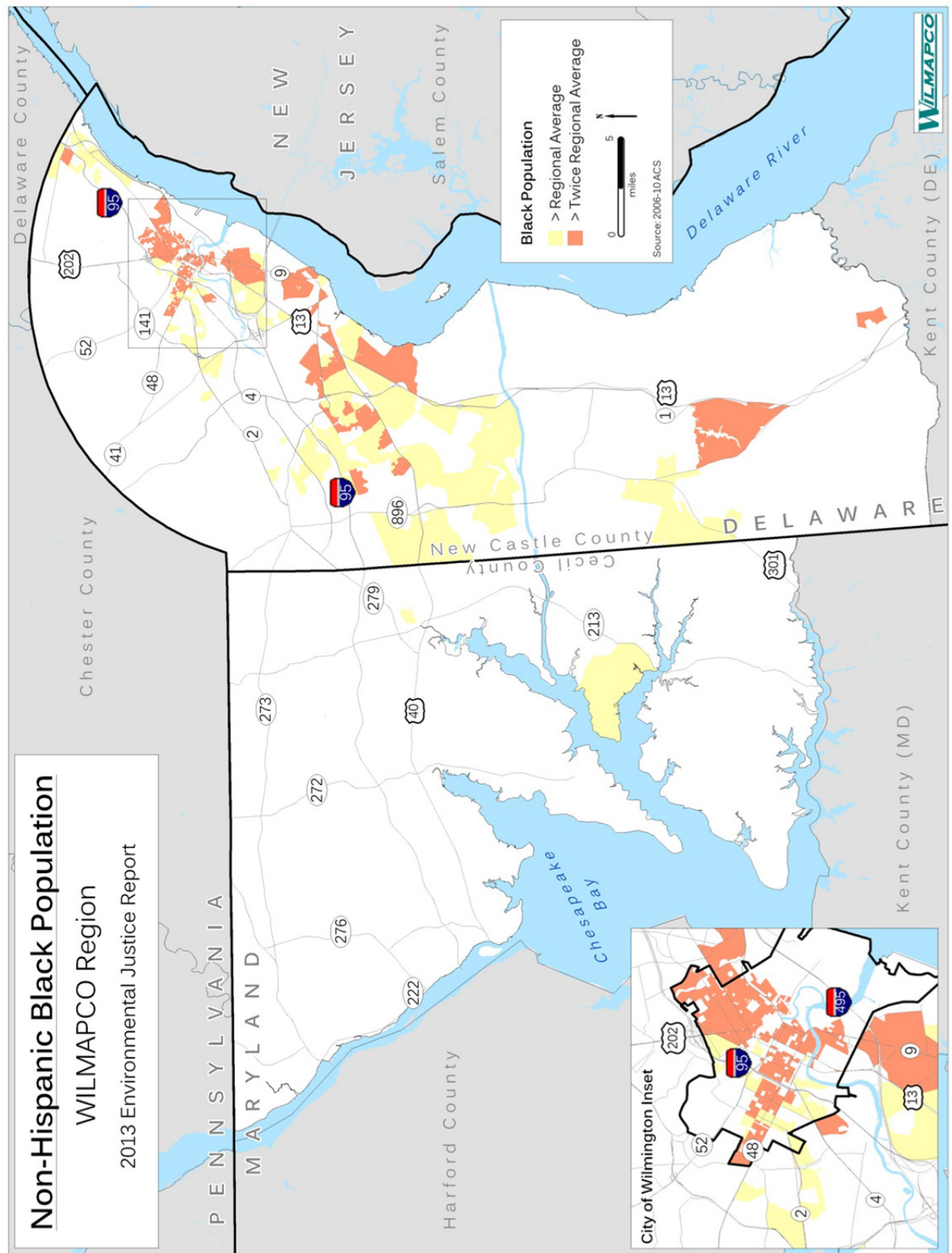
	New Castle County	Cecil County	WILMAPCO Region	United States
Population	533,514	-	100,139	-
Non-Hispanics (NH)	490,178	91.9%	97,050	96.9%
NH Whites	336,039	63.0%	88,288	88.2%
NH Blacks	122,219	22.9%	5,515	5.5%
NH Amer Indians	1,005	0.2%	235	0.2%
NH Asians	22,191	4.2%	1,086	1.1%
NH Pacific Islanders	96	0.0%	26	0.0%
NH Other	715	0.1%	165	0.2%
NH Two + Races	7,913	1.5%	1,735	1.7%
Hispanics	43,336	8.1%	3,089	3.1%
Households (HH)	198,499	-	36,182	-
HH Below Poverty	18,779	9.5%	3,216	8.9%
			21,995	9.4%
			14,865,322	13.0%

Though poverty levels are about the same in New Castle and Cecil counties (9.5% versus 8.9%) New Castle County is far more racially and ethnically diverse. The majority non-Hispanic white population accounts for only 63% of its population versus 88.2% in Cecil County.

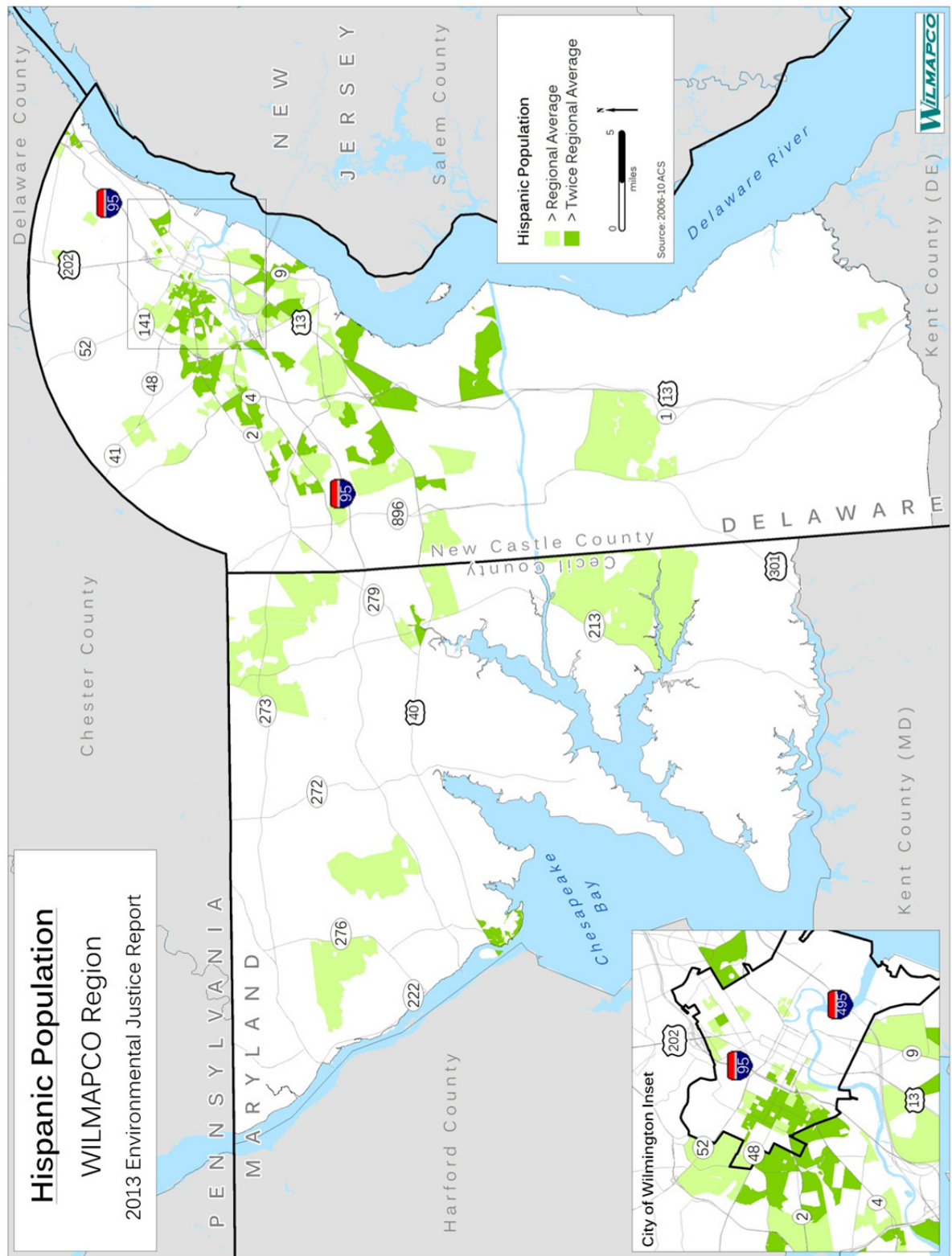
Using the 2006-2010 regional percentages of blacks (20.2%), Hispanics (7.3%), and Asian (3.7%), and households below poverty (low-income) (9.4%) as a base, maps 1-4 illustrate the distribution of the four EJ groups in the WILMAPCO region. In a refinement of the 2009 analysis, unpopulated portions of EJ areas (such as parks, industrial sites, etc.) were masked. Note that minority groups such as the American Indians and Pacific Islanders are not included due to their extremely small size. Some observations from the map series can be found below:

- **Blacks** are heavily concentrated within the City of Wilmington and in growing pockets along the US 40 and US 13 corridors, north of Chesapeake and Delaware (C&D) Canal in New Castle County.
- **Hispanics**, mostly Puerto Rican and Mexican, are clustered in the City of Wilmington's Westside, and neighborhoods along SR 2, SR 4, and US 13 corridors.
- **Asians**, mostly Asian Indian and Chinese, are concentrated in the northwestern section of New Castle County, north of US 40 and the Pennsylvania line. Pockets of Asians can also be found east of US 202, north of Wilmington.
- **Low income neighborhoods** can be found throughout the region, primarily along the I-95 corridor. Significant poverty rates occur in parts of Wilmington, Newark, Elkton, North East, and Perryville.

Map 1: Non-Hispanic Blacks in the WILMAPCO Region



Map 2: Hispanics in the WILMAPCO Region



Non-Hispanic Asian Population
WILMAPCO Region
 2013 Environmental Justice Report

Asian Population

- > Regional Average
- > Twice Regional Average

Source: 2006-10 ACS

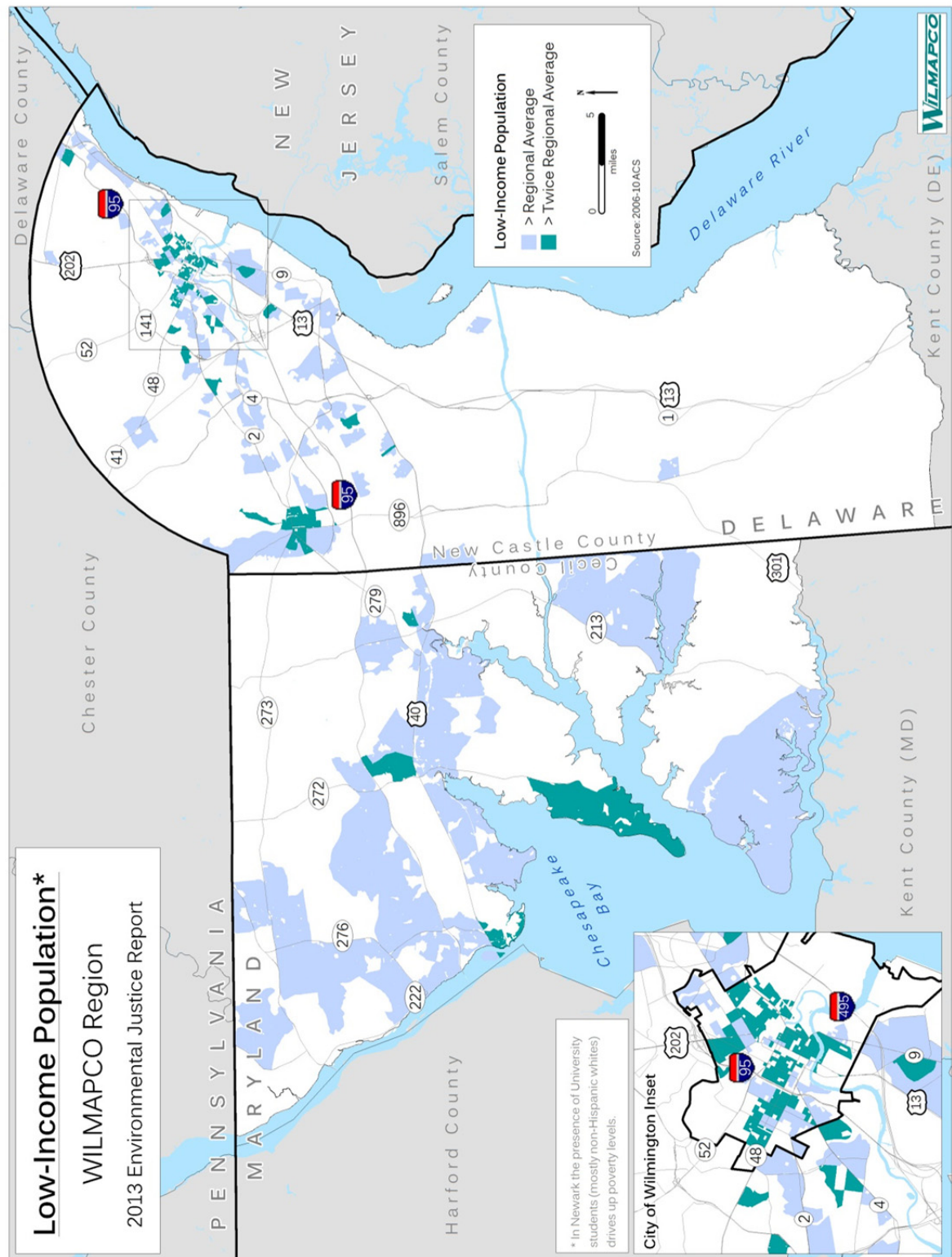
Delaware County
 Chester County
 New Castle County
 Cecil County
 Kent County (DE)
 Kent County (MD)
 Harford County
 Delaware River
 Chesapeake Bay

0 5 miles

City of Wilmington Inset

WILMAPCO

Map 4: Low-income Neighborhoods in the WILMAPCO Region



A scoring system, similar to the one used in the 2009 EJ Report, defines EJ concentrations from the above data. Due to data availability households are used instead of population to identify low income neighborhoods. A table below illustrates the new system.

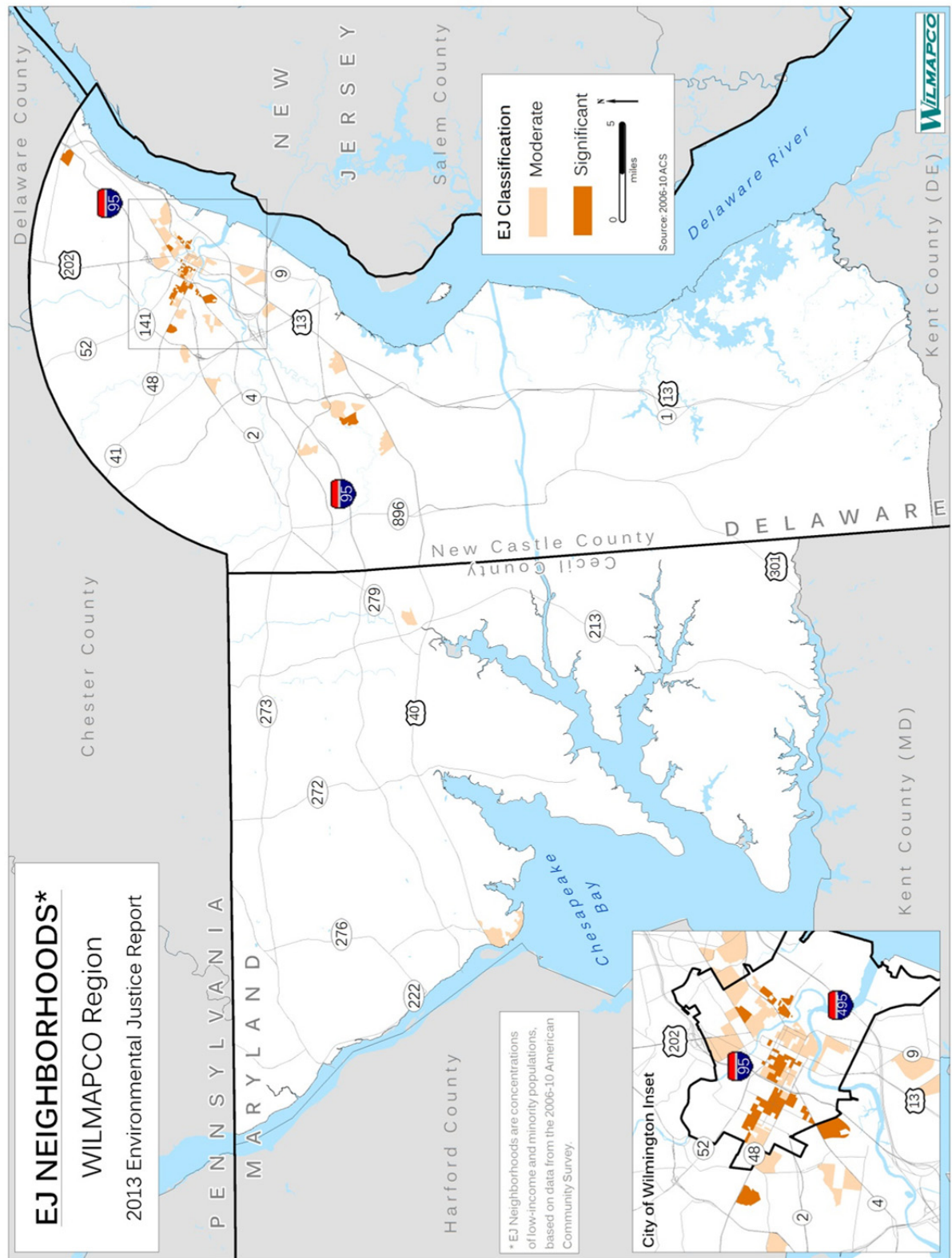
Table 3: EJ Scoring System for Census Blocks Groups

	> Average	Double Average
NH Black	1	2
Hispanic	1	2
NH Asian	1	2
Households < Poverty	3	6
Total		12
0 to 6	No EJ	
7 to 8	Moderate EJ	
9 to 10	Significant EJ	

The scoring system is quite simple. Block groups (the smallest geographic unit for these data) where the percentage of low-income or minority residents exceeds the regional average receive three and one points, respectively. Those where the percentage is more than double the regional average receive six and two, respectively. If a block group shows a percentage less than the regional average it receives no points. Low-income areas are weighted more heavily in this system to provide balance against the three minority groups.

Using this system, each of our region's 424 block groups were given points based on the percentage of low-income, black, Hispanic, and Asian groups found within them. Once completed, the scores were tallied. Block groups which scored 7-8 points were determined to be a "moderate" concentration. Those with 9 or more points displayed a "significant" concentration. EJ areas are found primarily within the City of Wilmington. A scattering of suburban block groups were also identified throughout the region. A map of EJ neighborhoods follows.

Map 5: Environmental Justice Neighborhoods in the WILMAPCO Region



Regional Demographic and Socio-Economic Survey

About 70,000 people live within an EJ area, some 11% of the region's population. General demographic and socioeconomic comparisons can be made between moderate and significant EJ neighborhoods, and places outside. Table 4 below provides some comparisons.

Table 4: Statistical Profile of EJ Areas

	Significant EJ	Moderate EJ	Non-EJ
Total Block Groups	18	41	365
Population	20,811	48,829	564,013
Households	7,028	18,942	208,711
EJ Demographics			
Percent Non-Hispanic Black	53%	53%	16%
Percent Hispanic	25%	15%	6%
Percent Non-Hispanic Asian	2%	2%	4%
Percent Low-Income	30%	27%	7%
Economic Indicators			
Median Household Income (in dollars)	27,380	35,575	71,089
Percent Zero Car Households	26%	22%	5%
Average Automobiles per Household	1.1	1.2	1.9

EJ areas are home to a *majority minority* population, many of whom are low income. In the average significant EJ area, about 53% of the population are black, 25% are Hispanic and 2% are Asian. Thirty percent of households fall below the poverty line, and are thus considered low-income. Compare these figures to the average non-EJ area: 16% black, 6% Hispanic, 4% Asian and 7% low-income.

Economic indicators dip significantly within EJ areas. The median household income in significant EJ areas is about \$27,000/year, compared to \$71,000/year in non-EJ areas. Car ownership rates also differ significantly. More than a quarter of households (26%) in significant EJ neighborhoods have no car, compared to only 5% in non-EJ areas.

Significant EJ Area Demographic and Socio-Economic Survey

This section isolates the 18 significant EJ neighborhoods, home to the highest concentrations of both minorities and poverty regionally, and provides a more detailed demographic and socioeconomic survey.

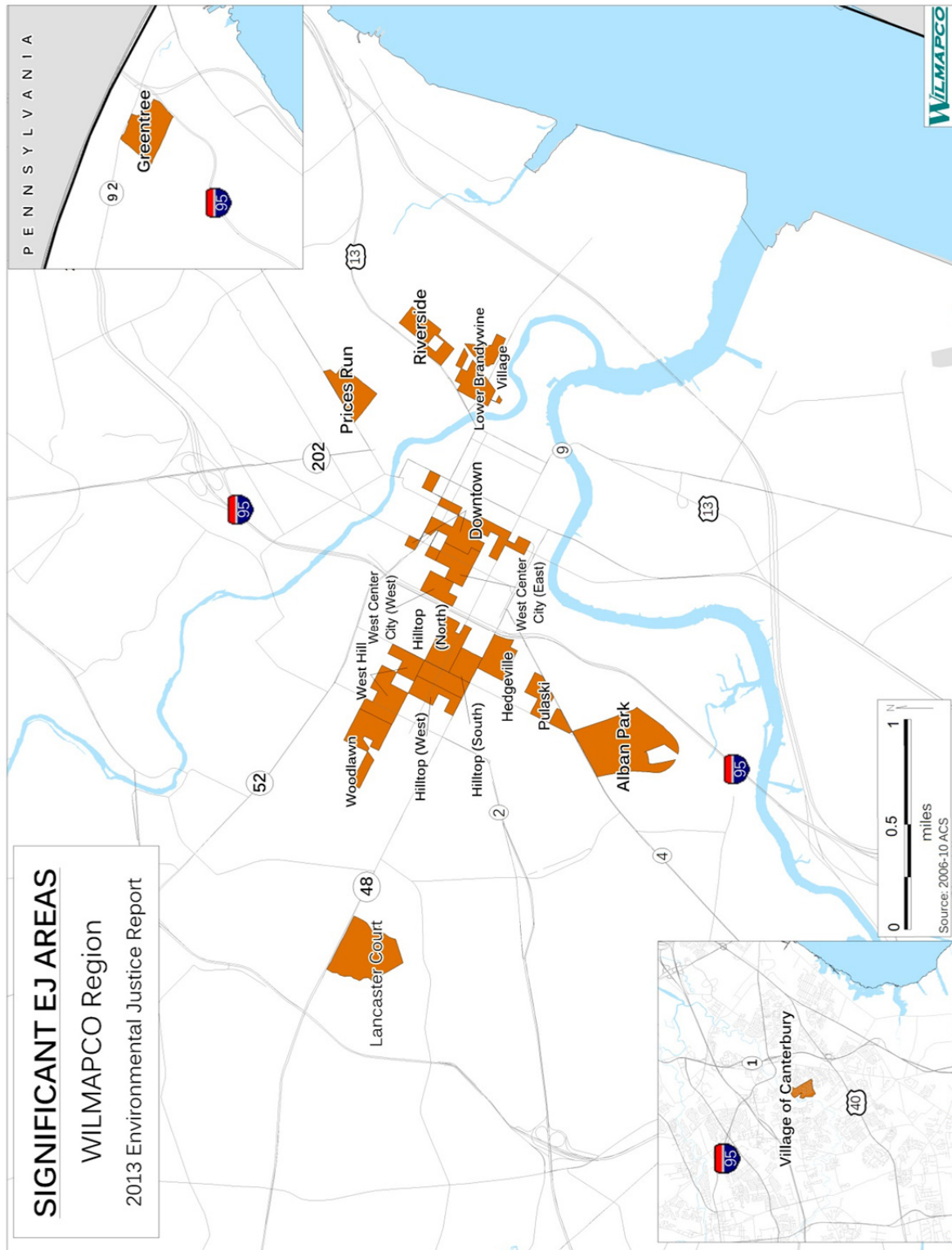
Map 6 identifies the significant neighborhoods. All but three were found in the City of Wilmington. As illustrated in Tables A1 and A2 in the appendix, each is unique in terms of its ethnic and racial makeup and socioeconomic characteristics.

Non-Hispanic blacks and Hispanics account for the bulk of EJ residents, but their concentration varies neighborhood to neighborhood. Blacks comprise anywhere from 21% (Lancaster Court) to 95% (Riverside) of residents. Hispanics range from 0% (Riverside) to 70% (Lancaster Court). In most cases, however, the two groups live side-by-side in EJ neighborhoods. Hilltop (North) is home to about 675 blacks and about 575 Hispanics, for example. Asians, the smallest of the racial/ethnic groups considered, are rarely found in EJ areas. The exceptions are Downtown and Greentree, where they make up 9% and 14% of the population, respectively.

Large numbers of low-income households were found across the significant EJ areas. Households in poverty range from 23% (Lower Brandywine Village) to 56% (Riverside). Median household income, which averaged about \$27,000 across significant EJ areas, also varies considerably between the neighborhoods. Prices Run had the lowest median household income at about \$14,500/year and Hilltop (Central) posted the highest at just over \$41,000/year.

Car ownership rates within significant EJ neighborhoods are also low, averaging 1.1/household, compared to 1.9/household in non-EJ areas. The generally high percentage of zero car households (averaging about 26%) within EJ areas fuels this rate. Zero car household rates range from 2% (Village of Canterbury) to 41% (Hedgeville).

Map 6: Significant Environmental Justice Neighborhoods in the WILMAPCO Region



Poverty, Race and Ethnicity by Place

Adjacent to our EJ area analysis, this section provides an overview of poverty and minority presence within our region's towns, cities and census designated places. Sometimes these places are of a finer geography than census block groups.

As shown in Table 5, demographic characteristics range significantly between our region's towns, cities and places. While Wilmington is home to the highest total number of impoverished households (more than 6,100), Newark has a higher poverty rate (23%)¹⁰. Hilly North Star, meanwhile, enjoys a poverty rate of just 1%. Blacks comprise over half of the population in Wilmington (55%) and about one-third of the population in Edgemoor (39%), Bear (33%) and Clayton (33%). Hispanics boast concentrations in Wilmington Manor (25%) and Elsmere (22%), while Asians are prominent in Greenville and Hockessin (both 11%). On the other hand, minorities comprise just 2% of Odessa and Arden's populations.



Arden is the least racially diverse place in our region.

We must be cognizant of high poverty places, particularly those underserved by the transportation system. Fixed-route bus service does not link into the towns of Rising Sun and Port Deposit, for example, potentially isolating about 160 impoverished households in Cecil County. We should endeavor to connect these communities to the bus network, and explore alternatives (such as subsidized, rural taxi services) in the meantime.

¹⁰ The high poverty rate in Newark is driven by the presence of many university students.

Table 5: Demographic Characteristics by Place, Sorted by Poverty

ID	Place	County	Population	Households	Poverty	NH Whites	NH Blacks	Hispanics	NH Asians
1	Newark	NCC	31,293	10,058	23%	79%	7%	4%	8%
2	Wilmington	NCC	71,292	29,293	21%	30%	55%	12%	1%
3	Perryville	Cecil	4,345	1,592	16%	79%	4%	14%	1%
4	Delaware City	NCC	1,822	657	15%	85%	7%	6%	0%
5	North East	Cecil	3,567	1,438	15%	92%	4%	3%	0%
6	Port Deposit	Cecil	632	270	14%	82%	7%	2%	3%
7	Wilmington Manor	NCC	8,185	2,890	14%	60%	14%	25%	0%
8	Claymont	NCC	7,805	3,246	12%	69%	24%	2%	4%
9	Rising Sun	Cecil	2,712	1,122	11%	90%	2%	6%	0%
10	Smyrna	NCC	9,639	3,560	11%	61%	29%	7%	1%
11	Elkton	Cecil	15,240	5,195	11%	73%	15%	6%	4%
12	Elsmere	NCC	6,119	2,413	11%	62%	15%	22%	0%
13	Edgemoor	NCC	5,870	2,482	10%	49%	39%	10%	0%
14	Chesapeake City	Cecil	750	367	10%	90%	10%	0%	0%
15	Bear	NCC	19,110	6,370	9%	46%	33%	16%	4%
16	New Castle	NCC	5,270	2,357	8%	63%	29%	4%	0%
17	Cecilton	Cecil	464	186	8%	88%	11%	2%	0%
18	Newport	NCC	1,139	477	7%	68%	19%	11%	0%
19	Ardentown	NCC	290	136	7%	86%	6%	0%	6%
20	Middletown	NCC	17,608	6,005	7%	58%	27%	7%	5%
21	Brookside	NCC	14,479	5,328	6%	67%	19%	10%	2%
22	Greenville	NCC	2,645	1,207	6%	84%	2%	2%	11%
23	Odessa	NCC	296	114	5%	98%	2%	0%	0%
24	Bellefonte	NCC	1,193	556	4%	92%	3%	2%	2%
25	Hockessin	NCC	13,109	4,617	4%	81%	3%	3%	11%
26	Glasgow	NCC	15,112	5,214	4%	56%	31%	5%	6%
27	Clayton	NCC	2,775	878	3%	59%	33%	4%	1%
28	Pike Creek	NCC	7,611	3,052	3%	83%	3%	4%	9%
29	Pike Creek Valley	NCC	11,287	5,202	3%	80%	7%	3%	7%
30	Charlestown	Cecil	1,040	387	3%	92%	8%	0%	0%
31	Townsend	NCC	1,950	546	2%	71%	22%	1%	1%
32	Ardencroft	NCC	244	91	2%	84%	11%	4%	0%
33	Arden	NCC	538	274	1%	98%	0%	1%	1%
34	North Star	NCC	7,975	2,789	1%	88%	2%	2%	7%

Chapter 4

EJ Public Opinion Survey

Since 2006 we have employed exhaustive telephone surveys to gather public feedback and provide direction for our Regional Transportation Plan (RTP). During the summer of 2012, we conducted a telephone survey of 200 EJ neighborhood-only residents to gather their thoughts on the transportation system and long-range priorities. The 2012 EJ survey featured a scaled-down version of our normal interview script, due to financial constraints. The questions asked, however, were identical.

The EJ survey reached 116 residents in moderate EJ areas, and 84 within significant EJ areas. All resided in New Castle County. This chapter compares how EJ residents answered our survey against how the average New Castle County resident did in a 2010 survey. Full results of the survey are available online at: wilmapco.org/ej.

Demographic and Socio-economic Comparisons

EJ survey respondents were markedly older than the average respondent in our New Castle County survey, and they were only slightly more racially/ethnically diverse. Considering figures from the census for reference, our EJ survey did not achieve a representative sample of the population in EJ areas. Upon closer examination, our 2010 County survey also did not achieve a representative racial/ethnic population sample.

Table 6 compares the demographic characteristics from our 2012 EJ and 2010 County surveys with figures from the 2006 to 2010 American Community Survey. Sixty-three percent of respondents in the EJ survey were over 55 years old, compared to 31% in the County survey. This is troubling, as we would expect the average age of our EJ survey respondents to fall below that of the County based on census figures: less than a quarter (23%) of the EJ area population is over 50 years old, against 30% throughout the County.

Table 6: Selected Demographic Characteristics of Survey Respondents versus Census¹¹

	EJ Survey	EJ Census	NCC Survey	NCC Census
Seniors	63% (>55 years)	23% (>50 years)	31% (>55 years)	30% (>50 years)
Whites	71%	23%	78%	63%
Blacks	24%	54%	13%	23%
Hispanics/Latinos	2%	18%	1%	8%
Asians	1%	2%	6%	4%

Equally problematic is the racial/ethnic makeup of our survey takers. Most respondents in the EJ survey (71%) were white; yet whites comprise only 23% of the average EJ area population. Blacks and, even more so, Hispanics were underrepresented. This racial/ethnic underrepresentation appears to have its roots in our survey methodology itself, as blacks and Hispanics were underrepresented there too.

We should *re-examine how we conduct the surveys in an effort to achieve a more representative sample of our region's population* in the future. We may achieve better success if we include mobile telephone numbers in our sample, have bilingual surveyors, or simply use paper-based, mail in surveys. The remainder of this chapter, however, will push forward with our survey results as they stand.

The older age of our EJ survey takers likely influenced factors such as employment, income, household size and educational attainment. Less than half (49%) of EJ interviewees were employed at the time of the survey, compared to 65% in the County survey. Thirty-nine percent of EJ respondents were members of families that earned under \$40,000, versus the 25% of those from the broader survey. Sixty-eight percent of EJ survey takers lived in households with two or fewer people, compared to 48%. More than a quarter (27%) of EJ respondents had not proceeded beyond high school education against the 21% average in the 2010 survey.

¹¹ There is an important methodological difference between these estimates which must be acknowledged. The WILMAPCO surveys ask only one question of ethnicity/race, while the census asks two – separating out Hispanics from their question of race. This makes comparing these estimates awkward. But we do so here with confidence given the gaping discrepancies between the figures.

Status of the Transportation System

Our EJ respondents lived in households with fewer motor vehicles at their disposal and relied more heavily on public transit than respondents in the county survey. About half (46%) of EJ interviewees lived in a household with zero or one motor vehicle present. This can be contrasted with the 29% of respondents who did so from the wider survey.

With fewer cars, EJ respondents relied more heavily on buses and trains. Thirty-two percent rode a DART bus, and 20% a SEPTA train during the previous year, compared to 24% and 14% of countywide respondents. EJ transit users were more likely than their counterparts to use the service for shopping, personal appointments, and visiting. And of our working EJ respondents, a higher percentage faced commutes over one hour – 11% versus 7%.

EJ interviewees viewed the safety of the pedestrian environment differently from the average County respondent. Over half (52%) felt that the walking environment was safe, and its infrastructure sufficient, compared to 46% of County respondents. More (13% versus 9%) felt unsafe in their neighborhood for reasons beyond infrastructure, which reduced walking trips. Fewer (18% versus 25%) said it was insufficient pedestrian infrastructure which kept them from walking more frequently.



Walking is popular in our EJ neighborhoods. Safety issues beyond what can be fixed by improved pedestrian infrastructure, however, keeps some residents from walking more.

Overall, fewer EJ respondents (24% versus 30%) said that the transportation system did not meet their travel needs.

Critical Issues, Priorities and Strategies

EJ respondents felt revitalizing communities, along with preserving and properly funding the existing transportation system, were more important than countywide respondents. They also differed with County respondents on strategies to manage growth and development, and had a different take on the region's air quality. Forty-two percent of EJ survey takers felt that revitalizing existing communities and downtowns was a "critical" issue, compared to 36% of interviewees across the County. Thirty-five percent viewed transportation as the most critical issue facing the region during the next five to ten years, as compared to only 27%.

While it was their top transportation concern, fewer EJ respondents (30% versus 42%) viewed congestion as a key issue. Limited public transportation (18% versus 13%) and the condition of roads (15% versus 9%) were bigger concerns among EJ survey takers than their countywide counterparts.

Maintaining and repairing the existing transportation system was considered a higher priority for EJ respondents. Thirty-six percent said that this should be the top transportation priority, compared to only 27% in the county survey. EJ respondents also differed regarding strategies to reduce congestion. Eighty-two percent of EJ respondents felt improving expanding bus services would be effective compared to 77%. Improving freight rail to take trucks off the road was seen as effective by 88% of EJ respondents versus 82%.



EJ respondents are more likely to support investing in revitalization efforts, and are more likely to list preserving existing roadways as a key transportation priority.

Though EJ respondents were more in favor of revitalizing communities and improving transit service, they were curiously less inclined to support some strategies to better manage growth and development. More respondents disagreed that mixing appropriate businesses with new residential development should be encouraged (26% versus 22%), revisiting zoning codes to support alternative transportation (17% versus 10%), and supporting farmland and open space preservation through incentives or subsidies to direct development elsewhere (18% versus 13%).

EJ respondents were more likely to rate air quality as "fair" than countywide respondents (41% versus 34%). County survey takers were more likely to rate it as "very good," "poor," or "very poor." Fewer EJ respondents were familiar with fine particulate matter (PM 2.5) or Ozone Action days than their counterparts. Eighty-two percent had not heard of PM 2.5, compared to 68%. Forty-five percent were unaware of Ozone Action days, compared to 41%. On the flip side, more EJ respondents said they were willing to take alternative transportation to improve air quality. For example, 62% said they would be willing to walk or bike compared to only 43% in the countywide survey.

Transportation Planning and Familiarity with WILMAPCO

Like the countywide survey takers, most EJ respondents (71%) felt that there was not enough development and transportation planning. More EJ respondents were familiar with WILMAPCO – 38% versus 33% – and more were interested in receiving communications from the agency – 48% versus 44%.

Key Findings

It must be said that the older age of our EJ respondents, compared to those in the county survey, likely accounts for much of the divergence discussed above. This ranges from employment to family income to views on traffic congestion. With 51% of EJ survey takers not employed (in part due to age), for example, many are probably not impacted by high volume, weekday rush hours.

EJ respondents place a higher priority on revitalizing existing communities, repairing existing roads and improving the mass transit system. They were more likely to use (and be willing to expand their use of) alternative transportation, and were, overall, more

satisfied with the existing transportation system than countywide respondents. This is probably reflective of the urban setting of most EJ areas, where decent bus service and pedestrian connectivity are present. Personal safety, however, was a chief concern for some EJ walkers.



Our EJ respondents were less familiar with air quality issues than expected.

Though EJ survey-takers showed a slightly higher familiarity with WILMAPCO, they were less familiar with a few key planning areas. These include knowledge of strategies to better manage growth and issues related to our air quality problems. Future educational outreach should target these areas.

Chapter 5

Analyzing Transportation Investments and the System

As detailed in Chapter 2, low-income and minority communities often bear greater than their fair share of transportation's burdens, while not benefiting as much as they should from various investments. We explore our region's trends in project funding within EJ neighborhoods, measure the accessibility and connectivity of bus transit to those neighborhoods, and analyze a host of other equity factors in the present chapter. While both moderate and significant EJ areas are considered here, only significant EJ neighborhoods receive the highest level of analysis.

TIP Project Locations and Funding

The Transportation Improvement Program (TIP) is a four year listing of transportation projects and their funding. In order for a transportation project to receive federal funding in our region, it must be listed in the TIP.

To analyze equity regarding TIP locations and funding, we used an *equity benchmark*.

Equity benchmark – a performance measure which helps us to gauge equity. The benchmark is currently set at 11%. This reflects the percentage of our population living in an EJ area.

The benchmark is used here to compare trends in the percentage of TIP projects and the percentage of TIP funding found within EJ areas in the following graphs.

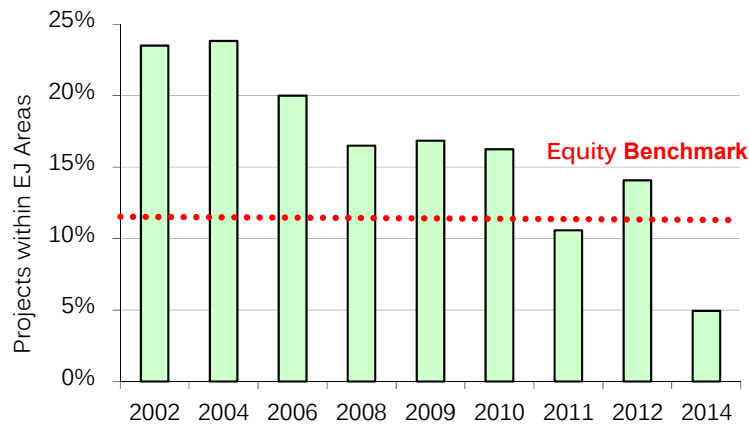
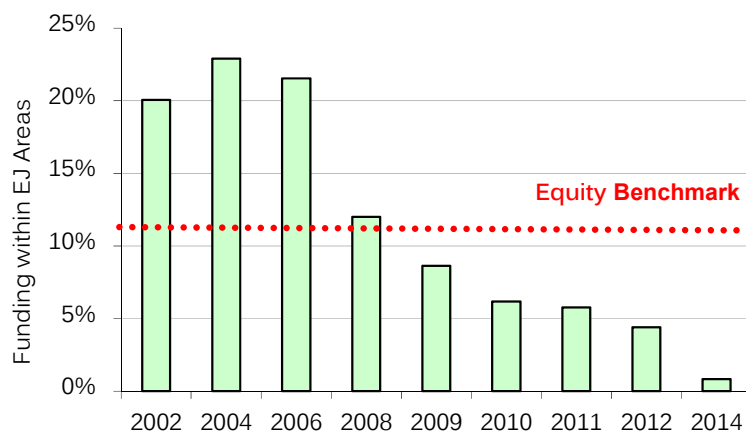
Figure 3: Percentage of TIP Projects¹² within EJ Neighborhoods

Figure 4: Percentage of TIP Project Funding within EJ Neighborhoods



While TIP project locations are more often than not equitably distributed across the region (Figure 3), their associated funding (Figure 4) is not. Since the FY 2008 TIP, EJ areas have not received their fair share of planned transportation project spending.

Map 7 illustrates the distribution of the most costly projects in the current FY 2014 – 2017 TIP against our EJ areas. Totalling some \$591 million during the four-year period, these ten projects represent over one-third (35%) of the TIP's planned spending. A handful of these projects pass through or skirt EJ areas – the \$13.9 million set aside for interstate

¹² Only TIP projects with specific spatial geometry were included in this analysis. Additionally, TIP projects within EJ neighborhoods were not counted if they fell on an expressway, such as I-95. A repaving project on a raised section of I-95, for example, represents little direct benefit to the surrounding neighborhoods.

maintenance, \$18.1 million for a new I-95/US 202 interchange, \$36.1 million for expansion of rail track, and \$37.5 million to widen SR 1 (a major north/south expressway). None of those projects, however, provides a *direct* improvement to an EJ neighborhood. Maps (A1-A4) displaying concentrations of the individual EJ groups versus high cost TIP projects can be found in the appendix.

WILMAPCO must *more strongly advocate for the equitable distribution of project funding*.

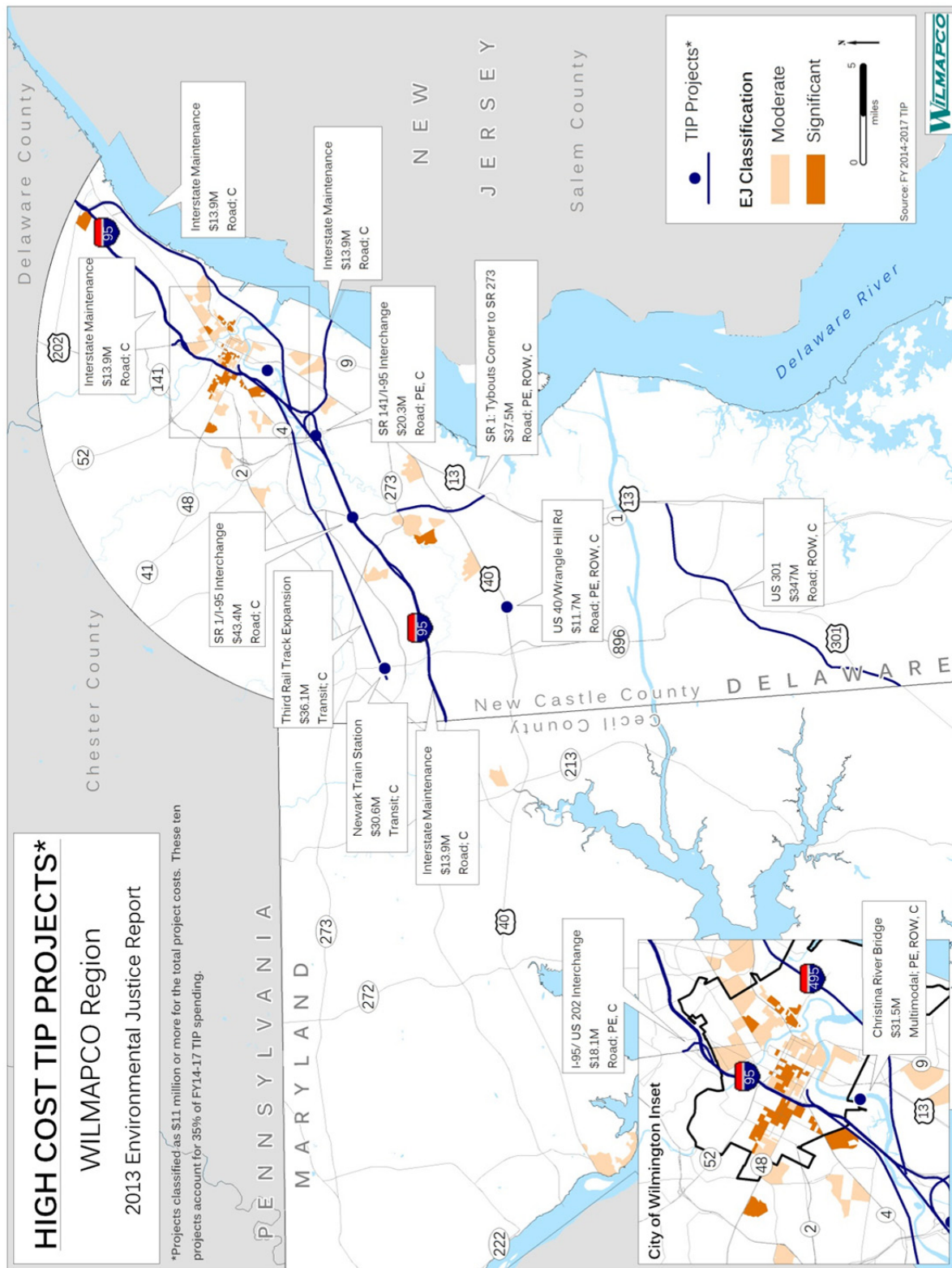
Safety: Crashes

Ensuring the development and maintenance of a safe transportation network is a top priority. We can gauge safety conditions along the network by considering past crash data. This analysis explores whether significant EJ areas are more, or less, safe than we would expect based on their population size.



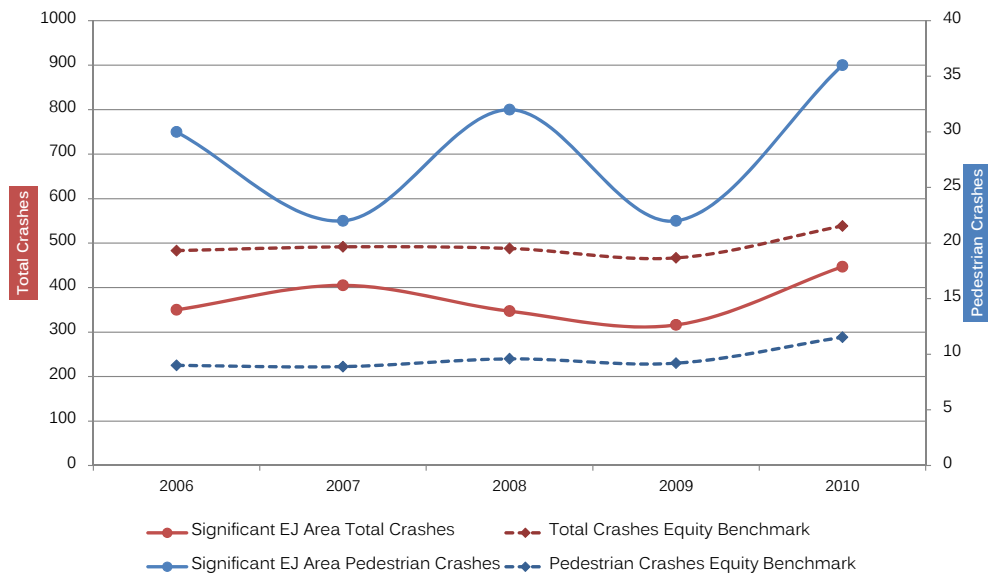
Overall crash rates are low in EJ neighborhoods. (Photo: Denis Hehman)

Map 7: Most Expensive FY 2014 – 2017 TIP Projects versus EJ Areas



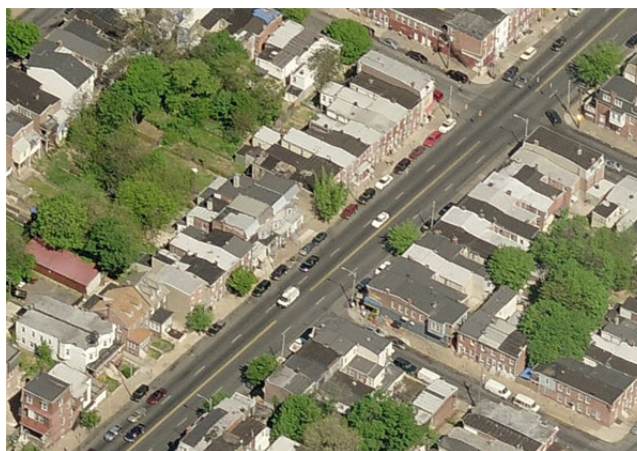
As shown in Figure 5, significant EJ neighborhoods met the equity benchmark for total crashes. That is, they were home to less total crashes than expected.

Figure 5: Crashes in Significant EJ Neighborhoods, New Castle County



However, when pedestrian crashes are considered by themselves, significant EJ areas are home to many more collisions than we would expect. This follows national trends in pedestrian fatalities, attributable to the higher proportion of walkers in EJ communities.

Projects which improve nonmotorized safety in EJ areas should receive priority.



According to DelDOT, about a quarter of the state's pedestrian crashes occur on Wilmington's 4th Street.

(Air photo source: Bing)

Bus Stop Access

As underlined in Chapter 2, ensuring that our EJ communities have solid access to the fixed-route bus system is important. And, for the most part, they do. Regionally, half (50%) of households are within walking distance (a quarter-mile) of a bus stop – 57% in New Castle County, and 8% in Cecil County. Within EJ areas, these percentages are much higher overall. Eighty-nine percent of housing in significant EJ neighborhoods lies within an easy walk of a bus stop. The same can be said for 93% of housing in moderate EJ neighborhoods, including 74% of moderate EJ housing in Cecil County.

One key trouble spot, however, is the significant EJ community of Alban Park on the southwestern outskirts of Wilmington. There only 31% of housing is within walking distance to the bus stops along SR 4-- forcing residents of work than 640 units to walk farther than reasonable to reach a stop. DART should explore *adding stops along Alban Drive or Robinson Lane*.

Figure 6: Walking Distance to a Bus Stop, Alban Park



About 69% of Alban Park's housing units are outside walking distance (depicted in green) to a bus stop.

(Air photo source: Google.)

Employment Connectivity on Fixed-route Buses

Beyond simply accessing the fixed-route system, patrons ought to be able to easily reach key destinations on it. This analysis measures the direct, weekday bus connectivity between significant EJ neighborhoods and low-wage employment centers¹³.

Map 8 reveals the spatial mismatch between these places, and the inability of our weekday bus system to adequately connect them. The employment centers we identified are outside the City of Wilmington, while most of our EJ areas are nestled within it. Many of our fixed-route bus lines congregate in the downtown, before spreading like a thin web into the suburbs. The end result is that significant EJ neighborhoods around the downtown have direct bus connections to many low-wage centers, but significant EJ areas on the city's edge show few if any direct connections. Residents of these communities would be forced onto two or more buses to reach the employment center, adding time and expense.

Figure 7 provides a detailed breakdown of the connectivity. Cells in green represent a direct fixed route bus connection between a given employment hub and a significant EJ neighborhood. Seven (almost 39%) of our significant EJ areas have no direct bus connection to an identified low wage employment center. DART should explore *strengthening existing connections from EJ areas to low-wage employment centers, and making connections where they do not currently exist.*

¹³ These employment centers were identified in the 2009 Transportation Equity Report. They represent major generators of employment in the Leisure and Hospitality and the Trade, Transportation and Utility sectors. According to the Bureau of Labor Statistics, workers and those two sectors earned the lowest average hourly wage in our region.

Map 8: Direct Bus Connectivity between Significant EJ Areas and Low Wage Centers

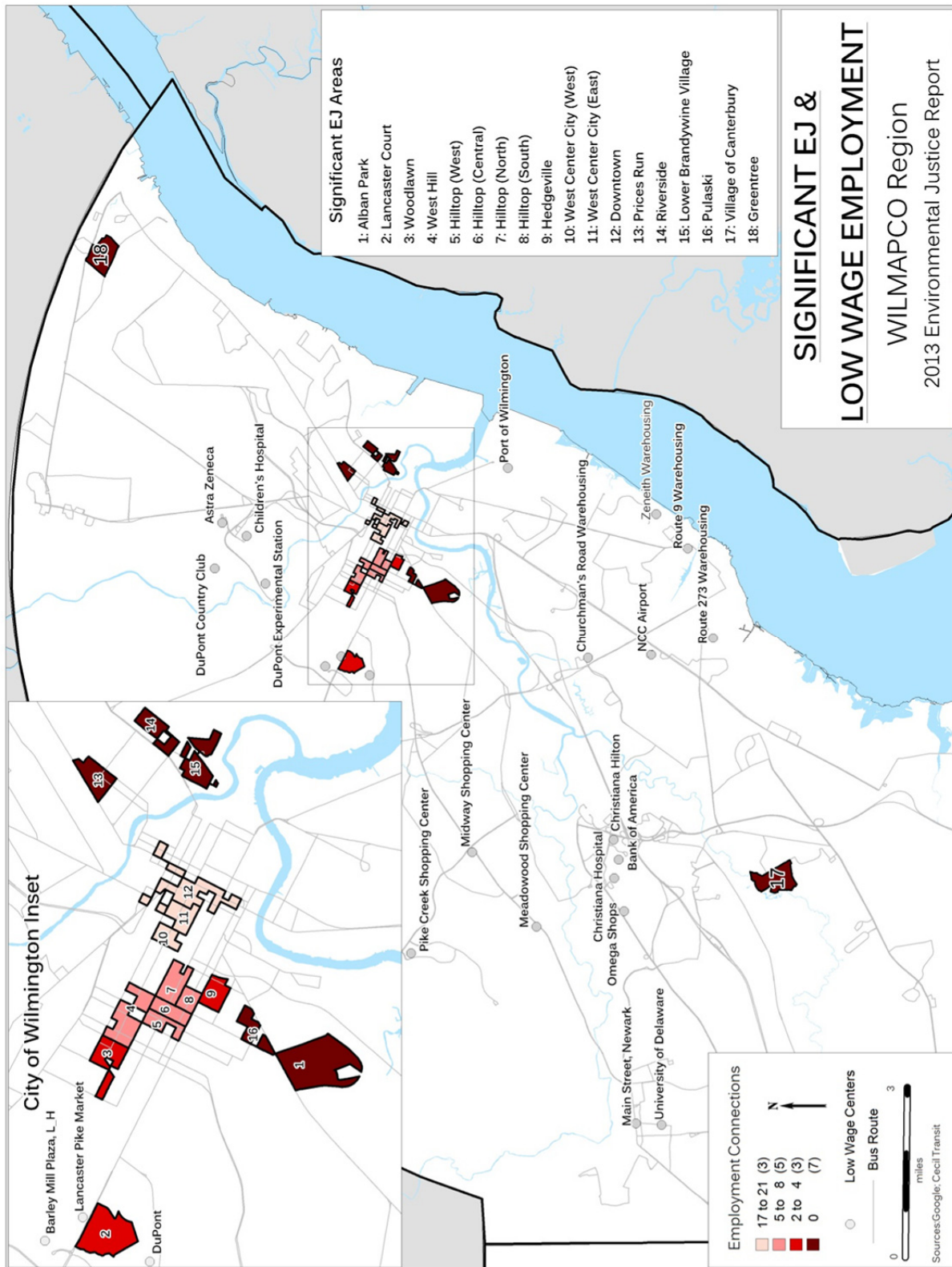


Figure 7: Direct Fixed-route Bus Connectivity Matrix,
Low Wage Employment Centers vs. Significant EJ Areas

	Alban Park	Downtown	Greentree	Hedgeville	Hilltop(Central)	Hilltop(North)	Hilltop(South)	Hilltop(West)	Lancaster Court	Lower Brandywine Village	Prices Run	Pulaski	Riverside	West Center City(East)	West Center City(West)	West Hill	Woodlawn	Village of Canterbury
Astra Zeneca																		
Bank of America																		
Barley Mill Plaza																		
Children's Hospital																		
Christiana Hilton																		
Christiana Hospital																		
Churchman's Road Warehousing																		
DuPont																		
DuPont Country Club																		
DuPont Experimental Station																		
Lancaster Pike Market																		
Main Street, Newark																		
Meadowood Shopping Center																		
Midway Shopping Center																		
NCC Airport																		
Omega Shops																		
Pike Creek Shopping Center																		
Port of Wilmington																		
Route 9 Warehousing																		
Route 273 Warehousing																		
University of Delaware																		
Zeneith Warehousing																		
Total	0	21	0	4	6	6	6	6	2	0	0	0	0	18	18	6	4	0

Section 8 Housing Accessibility on Fixed-route Buses

A valid criticism of our EJ area identification process (see Chapter 3) is that it often does not reveal pockets of poverty, particularly in rural areas¹⁴. To help mitigate this, we introduce an analysis of government subsidized (or Section 8) housing locations¹⁵ versus our fixed-route bus system. Maps A5 and A6 in the appendix identify these housing complexes.

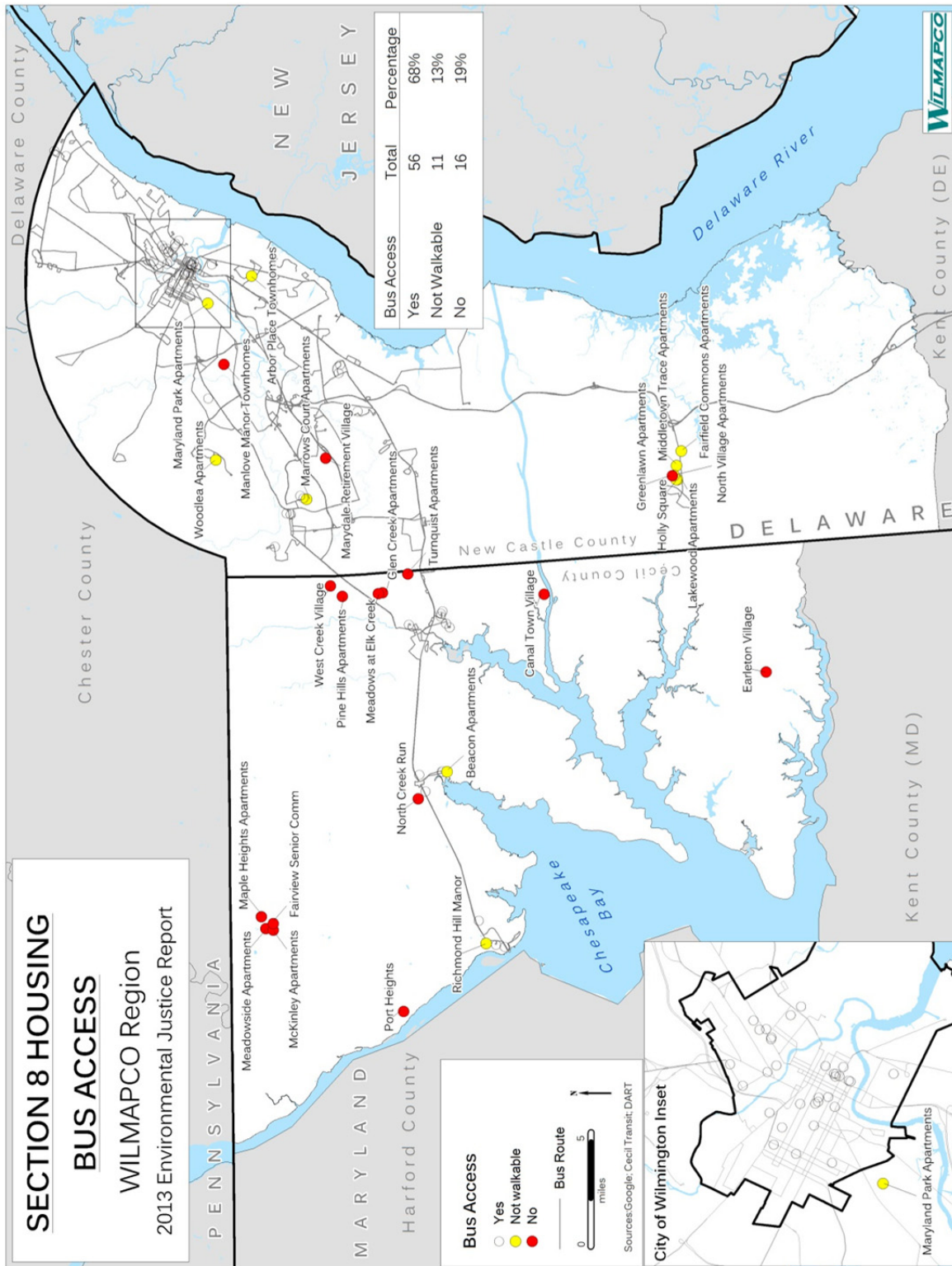
As shown in Map 9 much (68%) of our region's subsidized housing is within walking distance (0.25 mile) of a fixed route bus stop. For the most part, subsidized housing in Wilmington, Newark, Elkton, North East and Perryville show good access. Subsidized housing outside of those cities and towns, however, often has poor bus access. Eleven (13%) of our region's subsidized housing complexes are nearby a bus line, but not quite within reasonable walking distance of it. A cluster of these types exists in Middletown. Meanwhile, 16 (19%) of the subsidized housing complexes were further from bus stops, sometimes many miles away. Most of these places can be found north and south of US 40 in Cecil County.

More thought should go into where government housing is situated. *Placing subsidized housing along existing bus lines* would enable these low-income residents to reduce their transportation costs. In the meantime DART and Cecil County should explore *better connections to existing subsidized housing complexes*.

¹⁴ This happens when an impoverished neighborhood shares a census block group with a wealthier neighborhood. The wealth of the higher-income neighborhood can, in effect, "mask" the poverty of its lower-income neighbor in our data.

¹⁵ The federal program provides assistance to low-income families, the elderly and the disabled. These data were obtained through New Castle County and Cecil County's planning departments, and web searches. They does not include housing choice voucher data.

Map 9: Subsidized Housing (Section 8) Access to the Fixed-route Bus Stops

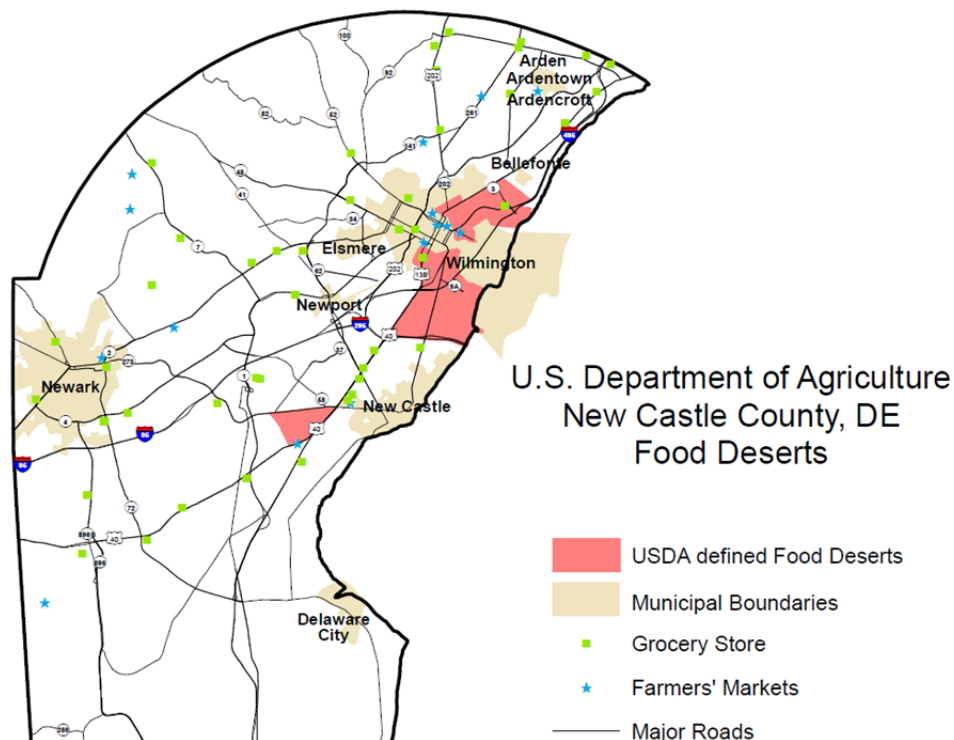


Food Desert Analysis

Providing access to healthy and affordable food ought to be a top transportation priority. Similar to low-wage employment opportunities, suburbanization has resulted in the geographic dispersion of major supermarkets. Left behind in urban communities are small markets, with more limited selection and often higher prices. In this analysis we refine the United States Department of Agriculture (USDA) definition of a food desert, before examining their fixed-route bus accessibility/connectivity to supermarkets.

Food deserts are defined by the USDA as a census tract where the poverty rate is at least 20%, and 33% of its residents are more than one mile from a grocery store. The Institute of Public Administration (IPA) at the University of Delaware recently applied this methodology in an analysis of New Castle County. Vast swathes of Wilmington and points north and south were designated deserts – see Map 10.

Map 10: USDA-defined Food Deserts in New Castle County (Source: IPA 2011)



The trouble with the USDA methodology is threefold. First, census tracts are an overly coarse baseline geography when the finer census block groups and blocks could be utilized. Second, unpopulated areas within the identified census tracts are also flagged, such as industries and landfills. And third, the existence of mass transit as a transportation option is overlooked.

In our analysis below, we take care of the first two problems by redefining our region's food deserts before turning our attention to food desert connectivity to supermarkets on fixed-route buses. The result is a more precise look at our region's food deserts, which will help to speed mitigation efforts on the ground.



Good bus connections to this bustling Save-a-lot grocery in Wilmington may blunt access concerns in some food deserts (see map 11).

Map 11 and Table 7 display the WILMAPCO defined food deserts¹⁶. The Northeast and Eastside sections of Wilmington are primary trouble spots, while isolated food deserts appear along the I-95 corridor from Perryville to North East to Newark to Bear and beyond.

Over 13,700 people live in our region's food deserts. High poverty rates are common across these communities (indeed it is a defining factor), and blacks are usually the predominant racial/ethnic group. All but two of the 22 food deserts are also EJ areas. Many food deserts are also home to a high percentage of zero car households.

¹⁶ Census block groups were used as the baseline geography, and unpopulated areas were removed.

Map 11: WILMAPCO-defined Food Deserts

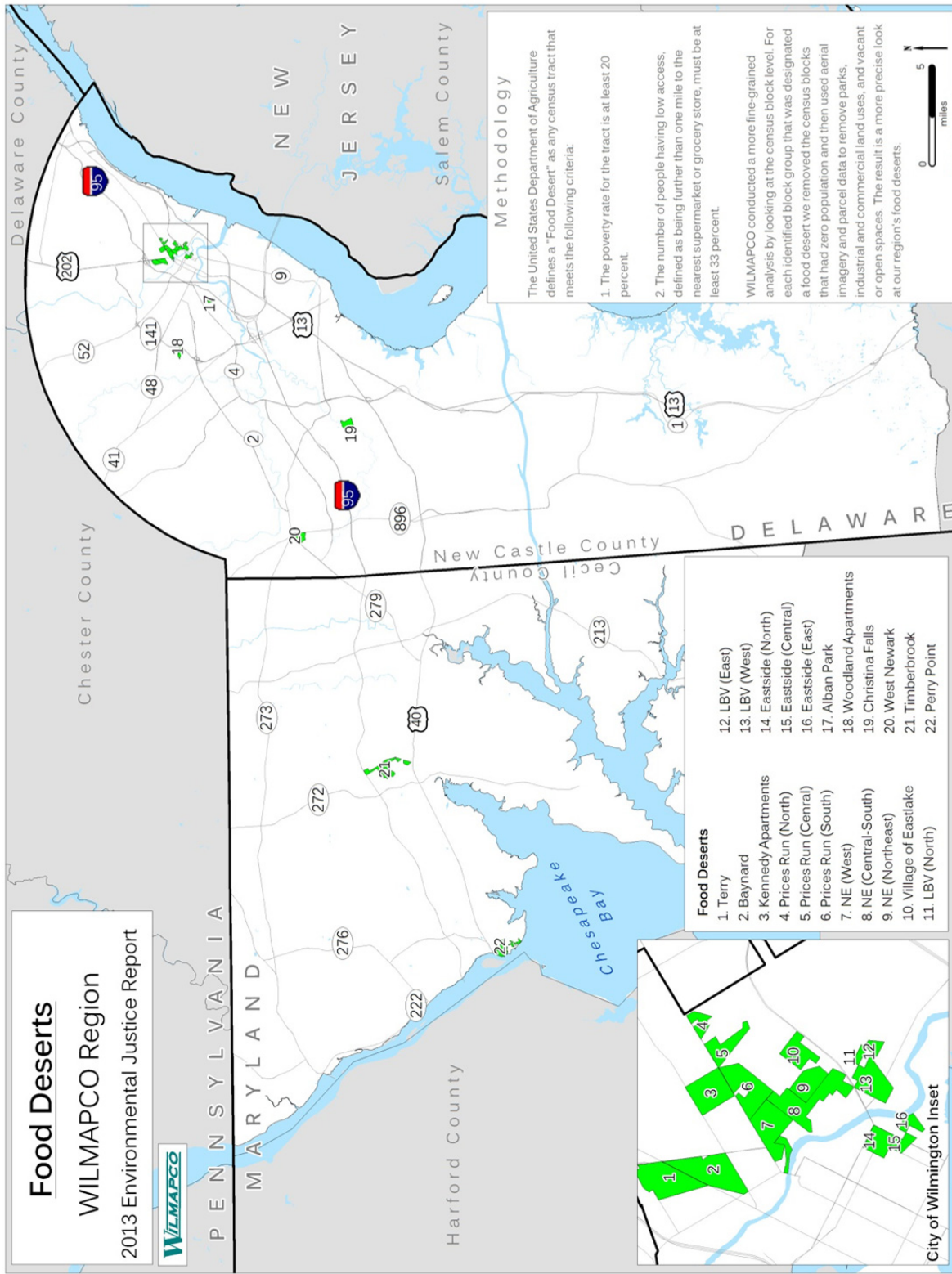


Table 7: Food Deserts, Selected Demographics¹⁷

ID	Food Desert	EJ Designation	Population	Households	% NH Black	% NH Asian	% Hispanic	% Zero Car	% Poverty
1	Terry	Moderate	819	468	32%	1%	2%	33%	24%
2	Baynard	Moderate	1,319	650	68%	0%	6%	21%	40%
3	Kennedy Apartments	Moderate	991	368	92%	1%	2%	48%	25%
4, 5	Prices Run (North & Central)	Moderate	550	276	78%	0%	4%	0%	27%
6	Prices Run (South)	Significant	935	328	92%	1%	2%	38%	52%
7	Northeast (NE) (West)	Moderate	517	429	87%	1%	6%	26%	26%
8	Northeast (NE) (Central-South)	Moderate	978	263	93%	0%	3%	53%	30%
9, 10	Northeast (NE) (NE) & Village of Eastlake	Moderate	869	425	91%	1%	5%	17%	46%
11, 12, 13	Lower Brandywine Village (LBV) (North, East & West)	Significant	671	322	83%	1%	9%	16%	23%
14	Eastside (North)	Moderate	780	210	92%	0%	4%	73%	52%
15, 16	Eastside (Central & East)	Moderate	290	151	94%	0%	2%	11%	46%
17	Alban Park	Significant	642	602	54%	0%	33%	31%	34%
18	Woodland Apartments	Moderate	1,011	498	13%	0%	31%	14%	23%
19	Christina Falls	Significant	1,071	705	25%	0%	20%	2%	28%
20	West Newark	Non-EJ	608	384	3%	11%	3%	15%	47%
21	Timberbrook	Non-EJ	205	547	1%	1%	0%	3%	21%
22	Perry Point	Moderate	1489	770	18%	1%	5%	11%	28%

¹⁷ Nearby food deserts were sometimes grouped to match census boundaries. These figures should be considered rough estimates, especially zero car household (zero car) and poverty (percentage of households) figures.

Map 12 illustrates both government subsidized housing and food desert's direct, weekday bus access/connectivity to supermarkets. Deciding where healthy, fresh and affordable food options exist is tricky. So we opted for a conservative approach, only considering major supermarkets¹⁸.

Subsidized housing and food deserts were categorized by their direct, weekday, fixed-route bus access/connectivity to supermarkets as follows:

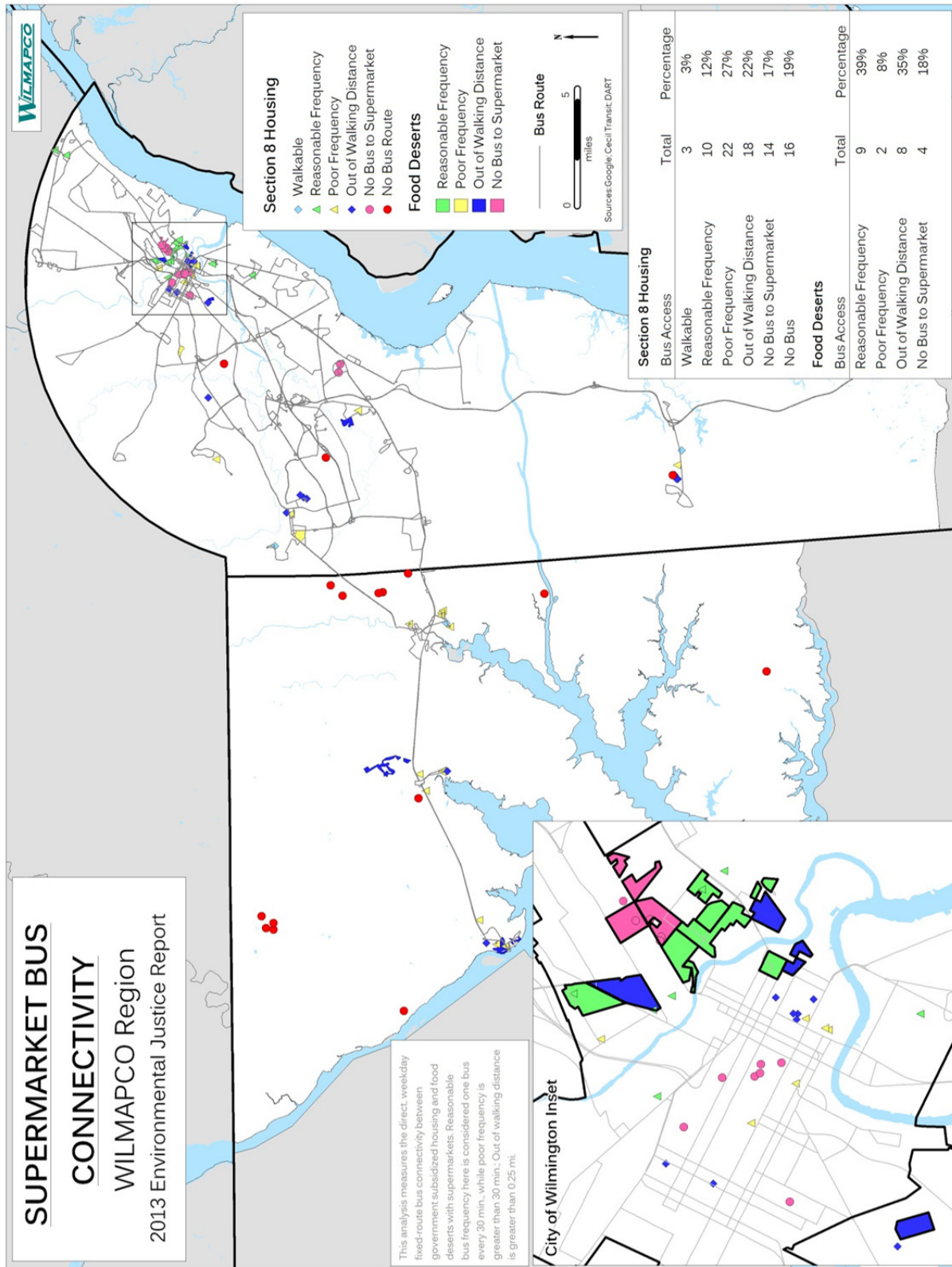
- **Walkable:** housing/food desert is within walking distance (0.25 mile) to a supermarket.
- **Reasonable frequency:** a bus travels between housing/food desert and a supermarket <30 minutes.
- **Poor frequency:** a bus travels between housing/food desert and a supermarket >30 minutes.
- **Out of walking distance:** a bus traveling to a supermarket is nearby, but outside walking distance (0.25 mile) for some units in the housing complex or food desert.
- **No bus to supermarket:** bus routes operate near the housing/food desert, but none provide direct access to a supermarket.
- **No bus route:** there are no bus routes near the housing/food desert.

We uncovered some major concerns. Over a third (36%) of our subsidized housing complexes were either not served by a bus, or if they were, not by one that traveled directly to a supermarket. Primary trouble spots included all subsidized housing north of US 40 in Cecil County, and Wilmington's West Center City and Prices Run sections. Only 15% of the housing was found to be within walking distance of a supermarket itself, or alongside a bus line operating with reasonable frequency to a supermarket.

All identified deserts were served by bus. However, four deserts (18%) in the Prices Run area of Wilmington had no direct supermarket access by bus. A further ten deserts (43%) suffered poor bus frequencies, or walkability issues. Nine deserts (39%) boasted direct supermarket access by bus, with reasonable frequencies.

¹⁸ Smaller markets often do not have healthy food options, or reasonable prices. Others are seasonal in nature.

Map 12: Supermarket Bus Connectivity





This supermarket in Wilmington was recently designed and approved without regard to buses. Subsequent public outcry, however, resulted in the construction of a bus stop (foreground)¹⁹.

Supermarkets and other food distribution points should be encouraged to locate within urban areas. Further, these places should always be ***designed to accommodate and prioritize the use of bus transportation***. In the short-term planners at DART and Cecil County should ***examine revisions to the bus network to better connect low-income housing and food deserts with supermarkets***.

Pathway and Bike Route Access

Like mass transit, more low-income and minority residents use walking as a primary mode of transportation. In this analysis, we measure the number of housing units outside reasonable walking distance (0.25 mile) of pathway and bike routes.²⁰ This infrastructure represents non-motorized routes with cross-regional connections.

Overall, our EJ areas have better access to our region's pathway and bikeway networks. About 63% of housing units are outside walking distance to a pathway, compared to 48%

¹⁹ Unfortunately, the stop was placed at the far end of the parking lot – reflecting the unimportant position of bus transportation.

²⁰ Pathways are identified by WILMAPCO in the New Castle County Greenway Plan and, in Cecil County, as defined by the East Coast Greenway Plan and the county's municipal comprehensive plans. Bike routes in New Castle County are as identified by DelDOT. In Cecil County, they are as defined in the Cecil County Bicycle Plan.

of housing units within EJ neighborhoods. Regionally, 48% of units are outside walking distance to a bikeway, versus 28% of EJ housing units.

As with our analysis of bus stop accessibility, however, differences emerge when EJ neighborhoods are explored individually. Tables 8 through 10 list EJ areas of a higher than average percentage of housing units outside the distance to a pathway or bike route. The locations listed below should be examined for *connections to our pathway and bikeway networks*.

**Table 8: Significant EJ Areas with a High Percentage of Housing Units
Outside Walking Distance to a Pathway**

Area	Tract	BG	Outside 1/4 mile of a pathway
Greentree	10003001600	2	100.0%
Hilltop (West)	10003002300	2	100.0%
Hilltop (Central)	10003014906	1	100.0%
Hilltop (South)	10003002200	3	100.0%
Hilltop (North)	10003002200	1	100.0%
Lancaster Court	10003012200	2	100.0%
Prices Run	10003000602	1	100.0%
West Center City (West)	10003001600	3	100.0%
West Center City (East)	10003001600	2	66.0%
Hedgeville	10003002600	3	99.6%
West Hill	10003001400	2	90.0%

**Table 9: Moderate EJ Areas with a High Percentage of Housing Units
Outside Walking Distance to a Pathway**

Area	Tract	BG	Outside 1/4 mile of a pathway
Colonial Heights	10003012100	1	100.0%
Dunleith	10003015400	2	100.0%
Garfield Park	10003015600	2	100.0%
Lancaster Ave	10003002200	2	100.0%
Rambleton	10003014909	4	100.0%
Triangle (North)	10003000400	1	100.0%
Trinity	10003001600	1	100.0%
9th Ward	10003000300	4	100.0%
9th Ward (East)	10003000500	1	100.0%
Adams/ Monroe	10003002100	1	98.8%
Dunsmore	10003013901	2	73.8%
Southeast 9th Ward	10003000400	2	70.1%

**Table 10: Significant EJ Areas with a High Percentage of Housing Units
Outside Walking Distance to a Bike Route**

EJ Area	Tract	BG	Outside 1/4 mile of a bike route
Village of Canterbury	10003014906	1	100.0%
Greentree	10003001600	2	61.2%
Woodlawn	10003002400	1	44.6%
Alban Park	10003012900	1	58.9%

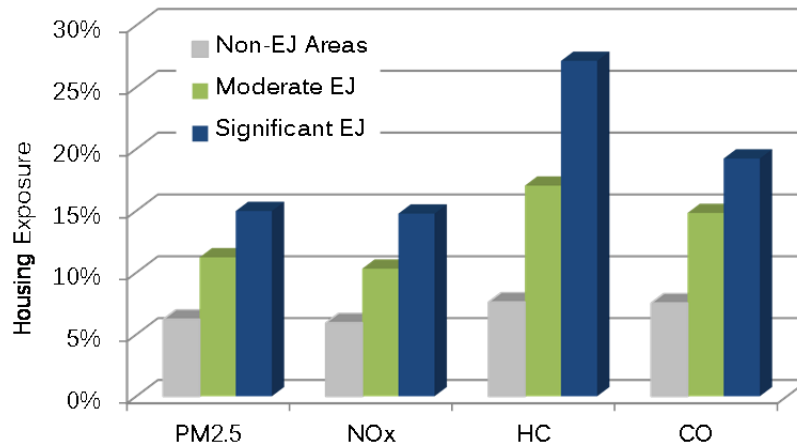
Near-road Emissions Exposure

In the summer of 2010, WILMAPCO conducted an analysis of highway traffic emissions²¹. Part of the work involved considering housing exposure to high near-road (within 300 feet) emissions. We freshen that analysis here with the newly designated EJ areas.

²¹ See Data Report 10: Dirty Roads. <http://www.wilmapco.org/data-reports>. June 2010.

Housing within moderate and significant EJ areas is much more likely to face exposure to heavy emissions²² from nearby highways than non-EJ housing. As shown in Figure 8, the greater the concentration of low-income and minority residents, the higher the percentage of homes exposed to our most polluting highways. For example, about 5% of housing in non-EJ areas is in close proximity to a highway with remarkable PM2.5 emissions. The same is true for more than 10% of housing in moderate EJ areas and nearly 15% of housing in significant EJ areas. In Data Report 10 we found households in Hispanic and low-income concentrations experience the highest exposure levels to heavy near-road emissions.

Figure 8: Housing Exposure to High Near-road Emissions by EJ Classification



Urban freeway routing and incompatible land uses contribute to this disparity. I-95 rumbles above and below Wilmington's Hilltop and West Center City EJ neighborhoods, our region's densest concentration of population. With over 62,000 trips a day the interstate effectively moves cars and trucks in, out and around Wilmington. For nearby residents, however, it creates serious social, environmental and health concerns. About 380 households around I-95 are exposed to more than triple the county roadway's average PM2.5 – a pollutant tied to respiratory ailments (notably asthma) and cancer.

²² These emissions are related to four pollutants: 1.) Fine particulate matter (PM2.5), 2.) Nitrogen oxides (NOx), 3.) Hydrocarbons (HC), 4.) Carbon monoxide (CO). Pounds per mile of highway were determined.



I-95 (foreground) swings through the most densely populated communities in our region. (Source: Bing)

Residents of industrial South Wilmington have long voiced concern regarding nearby polluting uses (such as the Port of Wilmington and businesses) which also generate a lot of of polluting truck traffic. Diesel emissions from these trucks have helped crystallize asthma clusters in South Wilmington and Eastside.

There are both short- and long-term solutions to these problems. Directing more traffic onto I-495, exploring physical adjustments to I-95, and moving more traffic onto bus and rail would help *mitigate I-95's problems. Investing in diesel engine retrofits and replacements, supporting anti-idling policies*, and ultimately *separating incompatible land uses* would work to mitigate the industrial/housing mix dilemma.

Sea-level Rise Exposure

In the summer of 2011, WILMAPCO investigated the vulnerability of our transportation network to sea-level rise (SLR)²³. We overlaid inundation scenarios (and one surge scenario for Cecil County) developed by Delaware and Maryland with transportation infrastructure to identify impacts under different scenarios. The six scenarios can be found in the table below.

²³ See Sea-level Rise: A Transportation Vulnerability Assessment of the Wilmington, Delaware Region. <http://www.wilmapco.org/slr>.

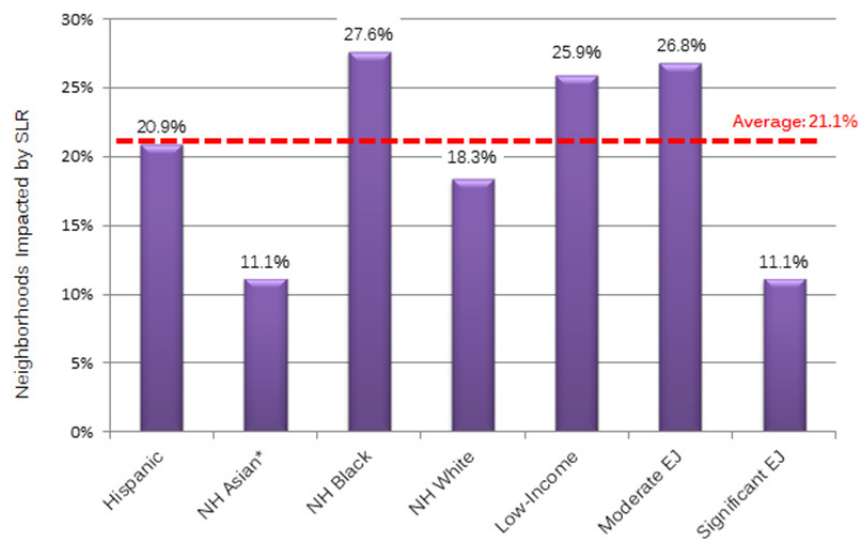
Table 11: SLR Scenarios

Cecil Co.	New Castle Co.
2 feet	0.5 m (1.6 feet)
5 feet	1.0 m (3.3 feet)
10 feet (surge)	1.5 m (4.9 feet)

Also included in the report was a look at the likelihood of SLR impacts to low-income and minority neighborhoods. We update that analysis here with our new EJ designations, and 2006-2010 American Community Survey figures.

Shown in Figure 9 below, neighborhoods (census block groups) home to an above average percentage of non-Hispanic Blacks (NH Blacks) and households below poverty (Low-Income) were more likely than the average neighborhood to be impacted by SLR. The same was true for moderate EJ areas²⁴. ***Planners should be cognizant of these disparate impacts of SLR***, as we move forward with climate change mitigation planning.

Figure 9: SLR Impacts upon Racial and Ethnic Concentrations



*NH=Non-Hispanic

²⁴ Maps of SLR impacts to our EJ neighborhoods can be found in the appendix.

Summary of Recommendations

This chapter outlined several broad objectives we should strive to meet:

- **Advocate for the equitable distribution of project spending**—as noted in Chapter 2 politics play too great of a role in project selection, to the detriment of those with weaker political voices. Breaking the cycle of sprawl and pushing for the institution of a transparent project selection process will result in a more equitable project distribution. Project funding in the TIP should be more evenly distributed; we must uncover new avenues to realize the equity goals in the RTP.
- **Projects which improve nonmotorized safety in EJ areas should receive priority**—significant EJ neighborhoods are home to more than their fair share of pedestrian crashes. Investing in infrastructure improvements where the crashes are makes the most sense.
- **Explore adding bus stops along Alban Drive**—over 640 housing units in the significant EJ neighborhood of Alban Park are outside walking distance to SR 4's bus lines.
- **Strengthen existing bus connections from EJ areas to low-wage employment; make connections where they do not currently exist**—our region's fixed-route bus system is too often unable to connect significant EJ neighborhoods with low-wage employment centers. Sprawl is the basis for this mismatch.
- **Place government subsidized housing along bus lines; explore better bus connections to existing subsidized housing**—some 32% of the subsidized housing complexes in our region do not have an adequate bus connection.

- **Supermarkets and other food distribution points should be designed to accommodate and prioritize bus transportation; DART and Cecil County should more carefully examine food access from low-income areas, especially food deserts**—the majority of government subsidized housing complexes and food deserts do not have optimal bus connections to supermarkets.
- **EJ neighborhoods without connections to our region's bikeway and pathway networks should be examined for links**—several moderate and significant EJ neighborhoods cannot easily access our nonmotorized networks.
- **Work to mitigate near-road emissions**—EJ neighborhoods are more likely to be impacted by high near-road emissions. Explore adjustments to our urban expressways to reduce their pollution impact. Further, invest in diesel engine retrofit and replacement projects, and support anti-idling policies and efforts to separate incompatible land uses.
- **Remain cognizant of the disparate impact of sea-level rise**—non-Hispanic black neighborhoods and low-income communities are more likely to be impacted by sea-level rise. Planners should bear this in mind as we plan for climate change.

Chapter 6

Public Participation

WILMAPCO's strong commitment to transportation equity in the public participation process was confirmed in our *2008 Public Participation Plan*. The Plan challenged staff to actively engage our EJ communities in the decision-making process, and invite these underrepresented groups in from the shadows of participation. This chapter reviews the strategies employed during the past five years, some of our successes and failures with these strategies, and recommendations for adjustments.

Public Participation and EJ: An Overview of Current WILMAPCO Efforts

Our 2008 Public Participation Plan and 2009 Transportation Equity Report asked planners to better incorporate transportation equity into our planning process. The Public Participation Plan includes seven key objectives related to EJ participation:

1. Make extra efforts to involve residents convenient to work schedules and at locations that are transit accessible.
2. Participate in a festival from one of the following large minority groups each year: African-American, Hispanic and Asian.
3. Track newsletter distribution vis-à-vis EJ (and TJ) areas.
4. Seek out and utilize news media organizations related to EJ (and TJ) communities.
5. Build relationships with organizations, such as the Latin American Community Center (LACC), that assist underserved populations.
6. Make liberal use of maps, graphics, presentations and documents to assist limited English and low-literacy communities.
7. Translate surveys and documents into Spanish (the region's dominant second language) when appropriate or when requested.

The 2009 Transportation Equity Report made seven additional recommendations to further strengthen EJ outreach:

8. Form an EJ workgroup.
9. Attend as many ethnic festivals/events as possible.
10. Work with more EJ communities (such as Southbridge) on neighborhood level planning issues.
11. Work to address air quality and associated health-related concerns in EJ areas.
12. Work with DART to translate materials into Spanish.
13. Conduct outreach in limited English proficient and low literacy areas.
14. Do not limit outreach to traditional venues.

Effectiveness of WILMAPCO Efforts

Our targeted EJ outreach campaign has been measurably effective. In our 2009 Transportation Equity Report, we found that only 19% of EJ residents were familiar with WILMAPCO. As detailed in chapter 4, 38% of EJ residents heard of the agency, outpacing the 33% New Castle County average. Additionally, we found that EJ residents were more interested in learning about WILMAPCO than the average resident.

While non-Hispanic whites are still overrepresented on WILMAPCO's committees, we have increased their racial and ethnic diversity. As shown in Table 12 our Public Advisory Committee (PAC) in 2006 had only one minority representative of 24 (4%) members. Six years later, it boasted five (three blacks and two Hispanics) out of 27 (18%) members.

Table 12: Racial/Ethnic Composition of WILMAPCO Committees

Committee	White	Black	Latino	Asian	Total	% White
<i>2006</i>						
Public Advisory Committee	23	1	0	0	24	96%
Technical Advisory Committee	18	0	0	0	18	100%
WILMAPCO Council	7	1	0	1	9	77%
<i>2012</i>						
Public Advisory Committee	23	3	2	0	28	82%
Technical Advisory Committee	18	2	0	2	22	82%
WILMAPCO Council	7	1	0	1	9	78%

Each quarter WILMAPCO produces a newsletter (the *Transporter*) with the latest information about our projects and plans. We have made an effort in recent years to increase our newsletter subscription rates within EJ neighborhoods through targeted outreach. Our work has paid dividends. As shown in Table 13, in 2008 only 0.07% of EJ households received our newsletter. This figure more than tripled by 2012 to 0.23%, easily outpacing average growth. Still, this figure is far below the regional average (0.67%) – underlining the need for continued public outreach in EJ communities.

Table 13: Percentage of Households Subscribing to WILMAPCO's Newsletter²⁵

Subscribers	2008	2010	2012
Regional	0.40%	0.59%	0.67%
All EJ	0.07%	0.17%	0.23%
Moderate EJ	0.08%	0.19%	0.21%
Significant EJ	0.03%	0.14%	0.29%

Intensive community planning efforts in South Wilmington have also borne rich fruit. After participating in the 2006 South Wilmington Neighborhood Plan, we conducted a Walkable Community Workshop, and a subsequent Southbridge Circulation Study. From there, WILMAPCO took a leading role in building the South Wilmington Planning Network

²⁵ This analysis has some important caveats. First, it includes only subscribers with a residential street address. PO boxes are excluded. Second, because this was a late addition to the present report, we did not have time to fine-tune the address matching, correcting clerical errors in street addresses. Subsequently a further 5% of subscribers, across the board, are left out. These drawbacks will be corrected in future analysis.

(SWPN). Today the Network is a model coalition of 40 government, nonprofit, and private agencies who work with residents to improve quality of life in Southbridge. Along with our Network partners, WILMAPCO helped the community secure funding to begin a streetscape program, initiated a Safe Routes to School (SRTS) Program at the neighborhood elementary school, linked Southbridge to a nearby supermarket by bus, supported a street tree replacement initiative, and initiated a project to provide better nonmotorized connections to the Riverfront. Beyond transportation, the SWPN has been instrumental in developing Southbridge Weekend (an annual community festival), securing various health and environmental grants, beginning a Main Street Affiliate Program, establishing a community garden, organizing youth trips and mentoring programs and enhancing coordination between agencies. Poverty in Southbridge has sunk in step with these efforts²⁶.



Members of the South Wilmington Planning Network's *Health Action Team* get down to business.

WILMAPCO has also partnered with the Urban Bike Project (a grassroots initiative to support bicycling) to increase bicycling rates among EJ residents in Southbridge and throughout the City of Wilmington. Bicycle use in Wilmington is staggeringly low. Only

²⁶ The neighborhood is comprised of two census block groups--one covering land east of New Castle Ave. and another to the west, which also incorporates emerging middle-class development (Christina Landing) separate from the working-class Southbridge core. The number of impoverished households in eastern Southbridge plummeted from 140 (39.1% of households) to 39 (17.6% of households) during the last decade²⁶. A portion of this shift may be attributable to the closure of government housing in parts of Southbridge during the past decade, and the subsequent relocation of poor households to other parts of the region.

about 0.2% of city residents use a bicycle to commute to work, and figures for low-income and minority neighborhoods in the city are even lower²⁷.

The *Earn-a-Bike* and *Trip-for-Kids* project promotes bicycle travel as an affordable and sustainable form of transportation for the next generation. Children become proficient in the use, identification and maintenance of bicycle parts and tools and learn safe riding skills. They build their own bicycle from old bike parts, and, at the end of the program, are tested on the skills they acquired in the program, and take their new bike home. Since the fall of 2010 dozens of children from three elementary schools in the city (Palmer, Stubbs, Edison), two community centers (One Village Alliance, Neighborhood House) and from across the city have participated in the program.

Areas in Need of Improvement

Despite our progress, there are gaps. Two of the above 14 recommendations (13 & 14) have not fully progressed. We have yet to conduct specific outreach in limited English proficient areas, shown in Map 13, and continue to limit important outreach to traditional venues. We should continue to move beyond conducting outreach in our offices (notably for the annually-updated Transportation Improvement Program). Some minorities are historically reluctant to attend meetings in government buildings. Neutral environments, such as libraries, work better, but, culturally-specific environments, such as churches and community centers, work best.

²⁷ Based on data from the 2000 Census. See the *2009 Transportation Equity Report* for more details.

Tied to this last point, we are still not reaching nearly enough Hispanic residents. We have conducted bilingual outreach at the annual Hispanic Festival, but found the event not suited to our needs. The festive atmosphere prohibited the intensive interactions with attendees we strive to have. We must uncover a new venue to reach Hispanics. Participating in neighborhood-specific festivals (which have proven successful in engaging more African-Americans) is likely the solution.

In addition, while we have included Spanish-language local media²⁸ in our press releases, our stories have not been published. In following up with this, we were told that stories have to be specifically targeted to Hispanics for them to be published. More engagement with these news outlets is required, so that they understand that the transportation planning process is intrinsically linked and relevant to all residents.

Beyond the thousands of Spanish speakers, our region is home to over 5,000 Chinese speakers—about 2,300 of whom speak English less than very well (see Table 14). This second figure brings FTA's "Safe Harbor" language policy into effect for our Chinese residents. WILMAPCO has begun efforts to engage the Chinese community, including providing translations of vital literature and outreach materials as required.

More and more of our outreach is being conducted online, in step with the internet revolution and popular demand. We must be aware, however, that many in the low-literacy and low-income populations do not have internet access. According to the Pew Research Center, 81% of adult Americans access the internet. As shown in Table 15, however, internet use is substantially lower among persons with less than a high school diploma (51% with access), or those making less than \$30,000/year (67% with access). Moreover, internet use diminishes with age. Among those over 65, for example, only 54% use the internet. This is an important factor to consider as, often times, community leaders are more advanced in age.

²⁸ These media include: Hoy en Delaware; El Tiempo Hispano; WYUS (930AM)

Table 14: English Proficiency in the WILMAPCO Region²⁹

Language	Speakers	Speak English <"Very Well"
Spanish or Spanish Creole	38,866	16,037
Chinese	5,112	2,369
Gujarati	1,797	752
Other Asian languages	3,614	603
French (incl. Patois, Cajun)	3,146	583
Korean	1,047	532
Italian	2,294	491
Other Indic languages	1,734	430
Urdu	1,472	428
African languages	3,503	392
German	2,456	328
Hindi	1,652	285
Polish	1,105	250
Tagalog	1,728	250
Greek	1,005	131

Table 15: Demographics of Adult American Internet Users (percentages of adults)

All adults ages 18+		81%
a	Men (n=1,054)	80
b	Women (n=1,207)	82
Race/ethnicity		
a	White, Non-Hispanic (n=1,632)	84 ^b
b	Black, Non-Hispanic (n=249)	73
c	Hispanic (n=211)	74
Age		
a	18-29 (n=335)	94 ^{bcd}
b	30-49 (n=585)	89 ^{cd}
c	50-64 (n=689)	77 ^d
d	65+ (n=610)	54
Education attainment		
a	No high school diploma (n=209)	51
b	High school grad (n=662)	74 ^a
c	Some College (n=598)	89 ^{ab}
d	College + (n=770)	95 ^{abc}
Household income		
a	Less than \$30,000/yr (n=645)	67
b	\$30,000-\$49,999 (n=396)	86 ^a
c	\$50,000-\$74,999 (n=316)	90 ^a
d	\$75,000+ (n=515)	98 ^{abc}

Source: Pew Internet Post-Election Survey, November 14 – December 09, 2012. N=2,261 adults ages 18+. Interviews were conducted in English and Spanish and on landline and cell phones. Margin of error is +/- 2.3 percentage points for results based on all adults.

Note: Columns marked with a superscript letter (^a) or another letter indicate a statistically significant difference between that row and the row designated by that superscript letter. Statistical significance is determined inside the specific section covering each demographic trait.

²⁹ Source: 2007 – 2011 American Community Survey, five year estimates, population > 5 years.

Fully reaching our low-income and minority population, at least for the near future, demands both paper based, and face-to-face interactions. And though we do offer an "on-the-fly" Spanish translation service on our website, we should be aware that the quality of these translations is dubious at best.

As recommended in Chapter 4, we must revisit the methodology of our Public Opinion Survey. As it stands, racial and ethnic minorities are *severely underrepresented* in our samples. This softens their voices in a key facet of our public involvement process.

Our EJ Public Opinion Survey found that although EJ survey-takers showed a slightly higher familiarity with WILMAPCO, they were less familiar with two key planning areas. These include knowledge of strategies to better manage growth and issues related to our air quality problems. Future educational outreach should target these areas.

Finally, our planners should receive continuous training in progressive planning practice – including the need to incorporate the voice of underserved communities in our region. Title VI and EJ should continue to be incorporated into all relevant studies and plans, and all planners should be sensitive to and advocate for the needs of EJ groups. When we do conduct outreach in EJ and low literacy/LEP areas, planners should endeavor to follow the strategies in the box below:

- Work closely with community and spiritual leaders
- Avoid government settings for meetings
- Target discount stores and places of worship for outreach
- Hold meetings at community centers and places of worship
- Serve culturally-appropriate food at meetings
- Seek oral-based feedback
- Always avoid detailed written surveys
- Use graphics and renderings liberally
- Have childcare available
- Have language interpreters available, if needed
- Use bilingual/literature, if needed

Summary of Recommendations

Based on the above review of areas in need of improvement, WILMAPCO should make every effort to meet the following challenges to improve Title VI and EJ outreach:

1. Conduct specific outreach to LEP areas.
2. Do not limit outreach to traditional venues.
3. Reach more Hispanics. Participate in community festivals.
4. Engage Spanish media in an effort to cover our stories.
5. Reach out to the Chinese community. Identify an event to participate in and offer Chinese translation as required.
6. Do not rely on internet outreach. Strive for face to face, oral communications in EJ areas. Be wary of internet-based, on-the-fly, translation services.
7. Revisit the methodology for the public opinion survey.
8. Target air quality and growth management educational outreach to EJ areas.
9. All WILMAPCO planners should receive EJ awareness training, in step with other progressive planning practice.



The Urban Bike Project is cultivating a new generation of bicyclists.

Chapter 7

Title VI Plan

Title VI of the 1964 Civil Rights Act prohibits federal agencies and sub-recipients of federal funds from discriminating on the basis of race, color or national origin. WILMAPCO is considered a sub-recipient of federal dollars, and subsequently we report our Title VI Plan to Delaware and Maryland. This chapter lists our Title VI requirements and how each is addressed.

Our Title VI Commitments

MPO sub-recipients, like WILMAPCO, must meet a number of federal requirements. These range from posting a Title VI policy statement to maps showing where federal transportation projects are located versus minority neighborhoods. Most of the requirements have been addressed in this and previous chapters, but a few are still left untied. The table below tackles each of our Title VI requirements individually.

Table 16: Title VI Planning Requirements

ID	Type	Requirement	How Addressed	Page
1	General	Title VI Notice	This notice is posted at the WILMAPCO office and on the WILMAPCO website. The notice is also available in Spanish and Chinese.	84
2	General	Title VI Complaint Procedures	The complaint procedures are available on the WILMAPCO website and at the WILMAPCO office. The procedures are also available in Spanish and Chinese.	87
3	General	Title VI Complaint Form	The complaint form is available on the WILMAPCO website and at the WILMAPCO office. The form is also available in Spanish and Chinese.	85
4	General	List of Title VI	WILMAPCO currently has no Title VI-related	N/A

ID	Type	Requirement	How Addressed	Page
		complaints	investigations, complaints or lawsuits.	
5	General	Public Participation Plan	WILMAPCO's Public Participation Plan is available in the appendix.	57
6	General	LEP Plan	Assistance for LEP persons will be provided on an as needed basis. Special outreach to LEP communities, especially Spanish and Chinese speakers is detailed in Chapter 6.	65
7	General	Diversity Encouragement	A table depicting membership on WILMAPCO committees can be found in Chapter 6. WILMAPCO has and will continue to engage agencies and organizations representing minority interests, and encourage their participation on the Public Advisory Committee.	58
8	General	Council Resolution	A resolution approving the present study and Title VI Plan is found in the front matter of the present document.	Front Matter
9	MPO	Demographic profile	A table profiling the WILMAPCO region's demographics can be found in Chapter 3.	15
10	MPO	Needs of minority residents	This is addressed and evident throughout the present document. Chapter 1 and 4 specifically address the understanding of our minority communities' mobility needs, Chapter 5 provides an analysis of how those needs are met.	55
11	MPO	Equitable distribution of funding	Funding equity analyses are provided in Chapter 5.	32
12	MPO	Disparate transportation impacts	Chapter 5 provides a detailed analysis of transportation equity in the WILMAPCO region. Recommendations are made there (and more generally in Chapter 1) to address these inequitable impacts.	34
13	Other	Nondiscrimination and equal opportunity employment assurances	The appendix contains WILMAPCO's relevant nondiscrimination and equal opportunity employment assurances.	89

Chapter 8

Summary of Recommendations

This study highlighted the transportation burdens our region's low-income and minority groups carry. Many recommendations were made throughout to lighten those burdens. The present chapter summarizes those recommendations, and provides a path forward to realize their implementation.

Final Summary of Recommendations

Table 17 below lists the recommendations found in the preceding chapters. We identify appropriate agency(ies) to tackle the suggestion and provide some funding options/suggestions where necessary.

Table 17: Final Summary of Recommendations

ID	Recommendation	Description	Agency	Funding	Page
1	Reduce transportation costs	Transportation expenses should be minimized for EJ residents.	WILMAPCO, states, counties	n/a	8
2	Fair transportation project distribution	Project funding should be more equitably distributed.	WILMAPCO, states, counties	n/a	9
3	Be cognizant of rural poverty	Rural places with higher than average poverty rates should be fully served by transportation networks.	WILMAPCO, states, counties	TIP, CMAQ, CIAC	24
4	Prioritize nonmotorized safety projects in EJ areas	EJ areas are home to a higher than expected amount of pedestrian crashes.	WILMAPCO, states, local government	TAP, community transportation fund	34
5	Alban Drive bus stops	The significant EJ neighborhood of Alban Park cannot easily access the bus network.	DTC	TIP, CMAQ, CIAC	37

ID	Recommendation	Description	Agency	Funding	Page
6	Improve bus connections to low-wage employment	Address the spatial mismatch between employment and EJ housing.	State of Delaware, DTC	TIP, CMAQ, CIAC	38
7	Place government subsidized housing near bus lines	Avoid spatial mismatches and reduce transportation costs for low-income residents by providing bus options.	States	n/a	41
8	Explore better bus connections to government subsidized housing	Reduce transportation costs for low-income residents by providing bus options.	DTC, Cecil County	TIP, CMAQ, CIAC	41
9	Design supermarkets to accommodate and promote bus transportation	Provide better food access for EJ residents.	Local government, DTC, Cecil County, New Castle County	n/a	49
10	Carefully examine food access from low-income areas and deserts	Our analyses suggest a spatial mismatch between poor housing and affordable food that is not fully covered by mass transit.	DTC, Cecil County	TIP, CMAQ, CIAC	49
11	Provide EJ connections to our regional and bikeway and pathway networks, where possible.	A handful of EJ areas have poor access to bikeway and pathway networks.	WILMAPCO, states, local government	TIP, TAP, CMAQ	50
12	Mitigate the disparity of near-road emission rates in EJ areas	Explore adjustments to urban freeways; invest in emission reduction technologies and policies; promote separation of incompatible land uses.	WILMAPCO, DNREC, DelDOT, local government	TIP, CMAQ	53
13	Remain cognizant of sea-level rise impact disparities	Planning for sea-level rise mitigation must consider its inequitable impacts to non-Hispanic black and low-income communities.	WILMAPCO, DNREC, DelDOT, local government	n/a	54
14	Conduct specific outreach to LEP	Target our Limited English Proficient (LEP), and the Spanish	WILMAPCO	n/a	61

ID	Recommendation	Description	Agency	Funding	Page
	areas	and Chinese speaking communities for outreach.			
15	Do not limit outreach to traditional venues	Endeavor to hold all outreach events outside of government settings.	WILMAPCO	n/a	61
16	Reach more Hispanics	Participate in community festivals/activities popular with Hispanics.	WILMAPCO	n/a	63
17	Engage Hispanic media	Help these news outlets understand the value/importance of the transportation planning process, so they may cover our stories.	WILMAPCO	n/a	63
18	Engage the Chinese community	There are over 2,000 Chinese speakers in our region that speak English less than very well. Targeted outreach is warranted.	WILMAPCO	n/a	63
19	Do not rely on internet outreach only	Strive for face to face, oral communications in EJ areas.	WILMAPCO	n/a	63
20	Revisit the methodology for the public opinion survey	Flaws with our methodology were exposed, skewing results.	WILMAPCO	n/a	65
21	Target air quality and growth management educational outreach to EJ residents.	Our Public Opinion Survey found EJ residents were less familiar than average with these key planning areas.	WILMAPCO	n/a	65
22	Conduct Title VI/EJ awareness training	Planners should receive training on Title VI and EJ, as required.	WILMAPCO	n/a	65
23	Meet all Title VI requirements	As a sub-recipient of federal funding, we must meet various Title VI requirements.	WILMAPCO	n/a	67

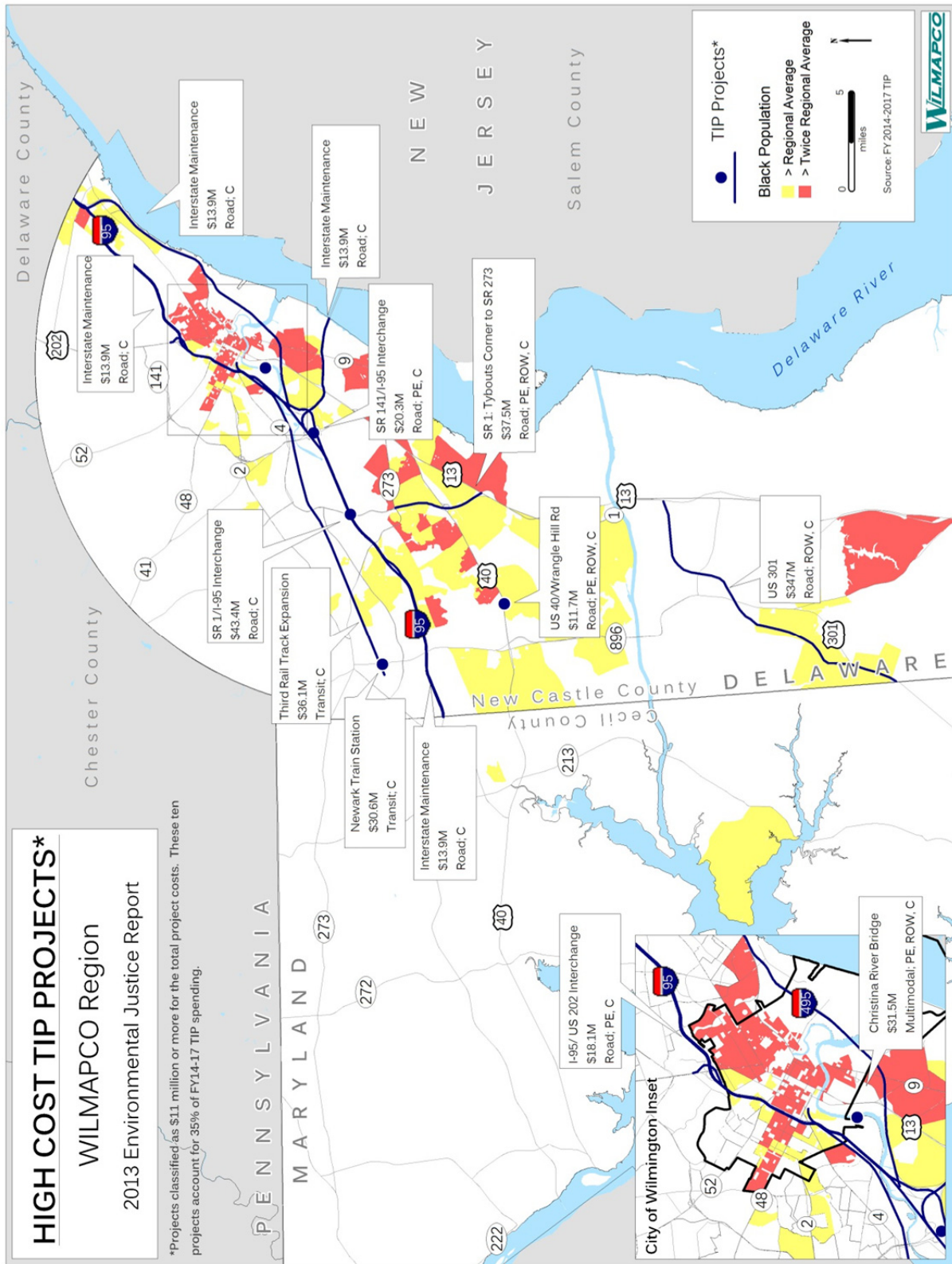
Appendix

Tables A1 and A2: Significant EJ Areas, Selected Characteristics

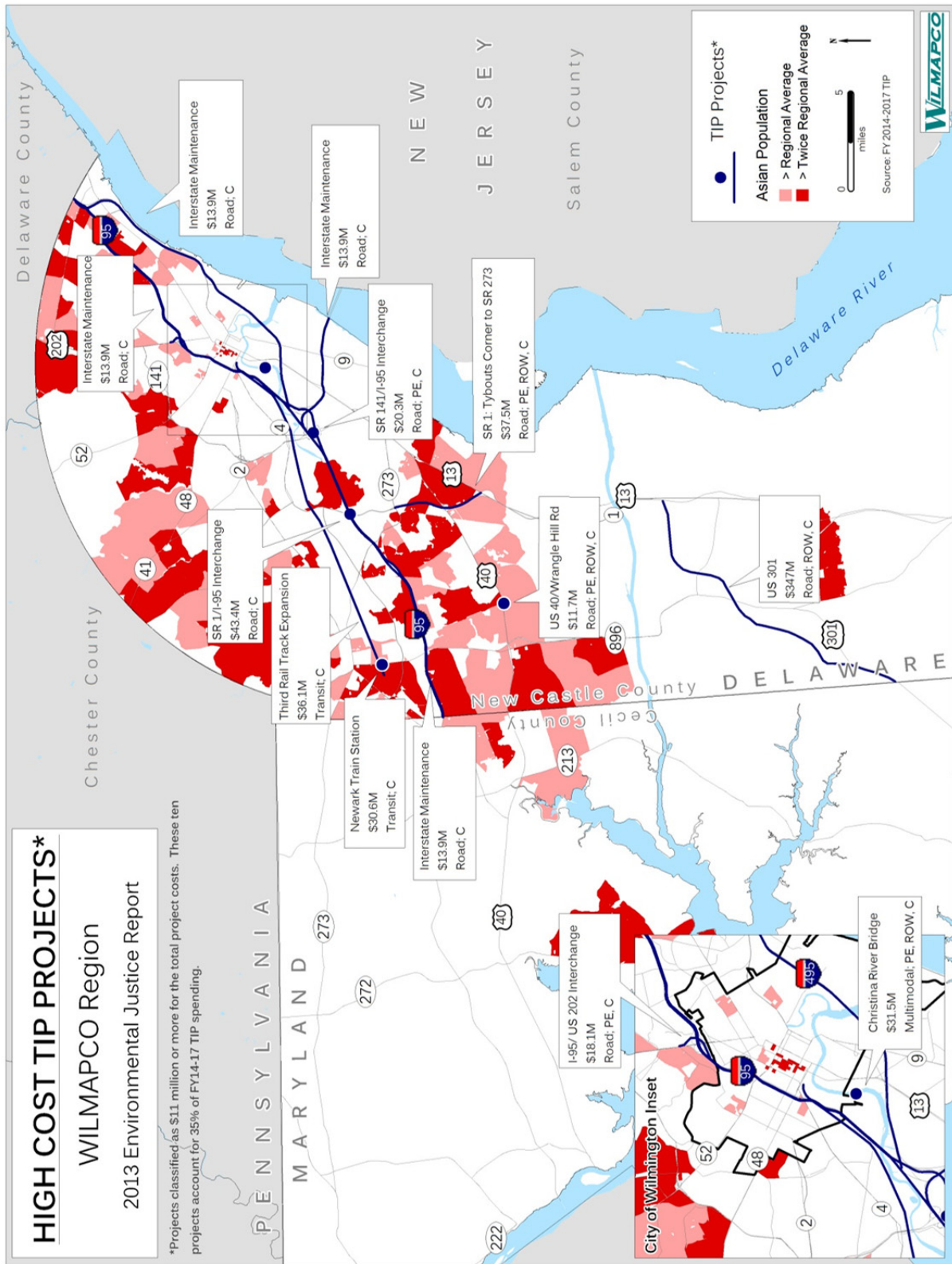
Place Name	Census ID	Population	Population >5 years	Households (HHs)	NH Blacks	%	NH Asians	%	Hispanics	%	Low-income	%
West Hill	Block Group 2, Census Tract 14	870	851	413	372	43%	0	0%	184	21%	106	26%
West Center City (East)	Block Group 2, Census Tract 16	990	954	373	824	83%	0	0%	125	13%	96	26%
West Center City (West)	Block Group 3, Census Tract 16	836	792	284	609	73%	0	0%	192	23%	70	25%
Hilltop (North)	Block Group 1, Census Tract 22	1425	1264	416	676	47%	0	0%	579	41%	186	45%
Hilltop (South)	Block Group 3, Census Tract 22	979	886	254	509	52%	0	0%	461	47%	103	41%
Hilltop (Central)	Block Group 1, Census Tract 23	1100	1017	296	597	54%	0	0%	454	41%	74	25%
Hilltop (West)	Block Group 2, Census Tract 23	1119	1014	291	492	44%	0	0%	455	41%	94	32%
Woodlawn	Block Group 1, Census Tract 24	604	539	338	180	30%	0	0%	181	30%	119	35%
Hedgeville	Block Group 3, Census Tract 26	1229	945	345	982	80%	0	0%	145	12%	86	25%
Pulaski	Block Group 4, Census Tract 26	1070	951	367	266	25%	19	2%	467	44%	96	28%
Downtown	Block Group 1, Census Tract 28	1231	1231	523	581	47%	110	9%	9	1%	126	24%
Riverside	Block Group 2, Census Tract 30.02	570	420	160	540	95%	30	5%	0	0%	89	56%
Lower Brandywine Village	Block Group 3, Census Tract 30.02	1713	1635	322	1323	77%	10	1%	130	8%	73	23%
Greentree	Block Group 2, Census Tract 101.01	2021	1649	674	1103	55%	287	14%	66	3%	132	20%
Lancaster Court	Block Group 2, Census Tract 122	979	813	337	206	21%	0	0%	682	70%	97	29%
Alban Park	Block Group 1, Census Tract 129	1603	1446	602	751	47%	11	1%	626	39%	202	34%
Village of Canterbury	Block Group 1, Census Tract 149.06	1766	1658	705	436	25%	44	2%	397	22%	196	28%
Prices Run	Block Group 1, Census Tract 6.02	706	685	328	566	80%	0	0%	61	9%	169	52%

Place Name	Census ID	Median HH Income	Average HH Size	Average Vehicles/HH	Zero Car HH	%	Limited English	%
West Hill	Block Group 2, Census Tract 14	28542	1.76	1.08	102	25%	30	4%
West Center City (East)	Block Group 2, Census Tract 16	25433	2.62	0.77	148	40%	61	6%
West Center City (West)	Block Group 3, Census Tract 16	23537	2.13	0.88	106	37%	179	23%
Hilltop (North)	Block Group 1, Census Tract 22	16302	3.43	0.99	122	29%	164	13%
Hilltop (South)	Block Group 3, Census Tract 22	25909	3.85	1.03	88	35%	110	12%
Hilltop (Central)	Block Group 1, Census Tract 23	41111	3.89	1.54	17	6%	220	22%
Hilltop (West)	Block Group 2, Census Tract 23	29250	3.85	0.93	98	34%	231	23%
Woodlawn	Block Group 1, Census Tract 24	29868	1.79	0.82	136	40%	80	15%
Hedgeville	Block Group 3, Census Tract 26	32284	3.41	0.82	140	41%	60	6%
Pulaski	Block Group 4, Census Tract 26	27933	2.4	1.03	77	21%	23	2%
Downtown	Block Group 1, Census Tract 28	21913	1.39	0.87	152	29%	0	0%
Riverside	Block Group 2, Census Tract 30.02	16591	3.56	1.25	36	23%	30	7%
Lower Brandywine Village	Block Group 3, Census Tract 30.02	31250	2.88	1.17	51	16%	51	3%
Greentree	Block Group 2, Census Tract 101.01	40183	3	1.34	76	11%	263	16%
Lancaster Court	Block Group 2, Census Tract 122	23007	2.91	0.8	134	40%	320	39%
Alban Park	Block Group 1, Census Tract 129	24393	2.66	0.92	188	31%	174	12%
Village of Canterbury	Block Group 1, Census Tract 149.06	40819	2.5	1.73	14	2%	151	9%
Prices Run	Block Group 1, Census Tract 6.02	14519	2.15	0.91	124	38%	36	5%

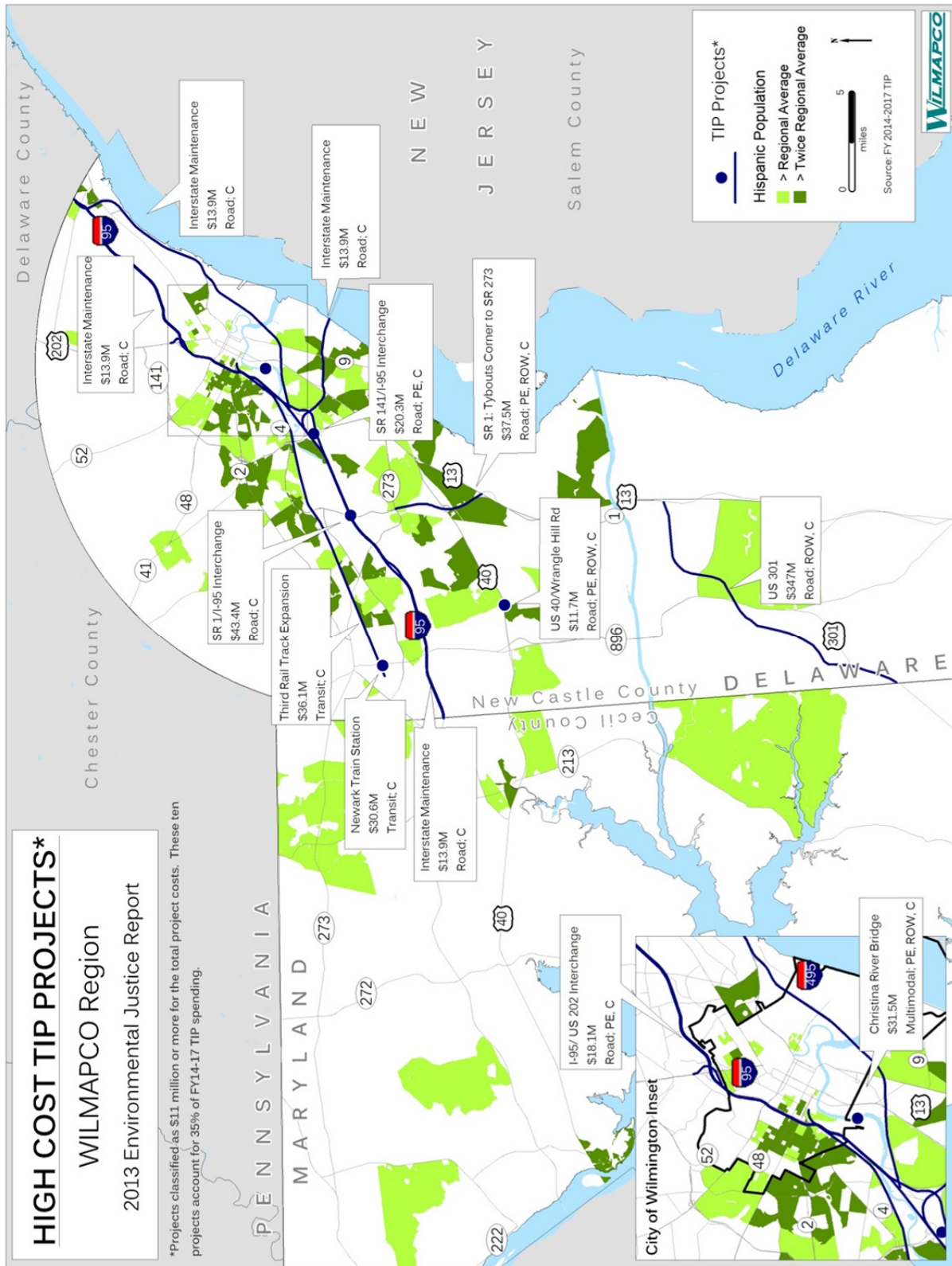
Map A1: High Cost FY 14 TIP Projects versus Non-Hispanic Black Areas



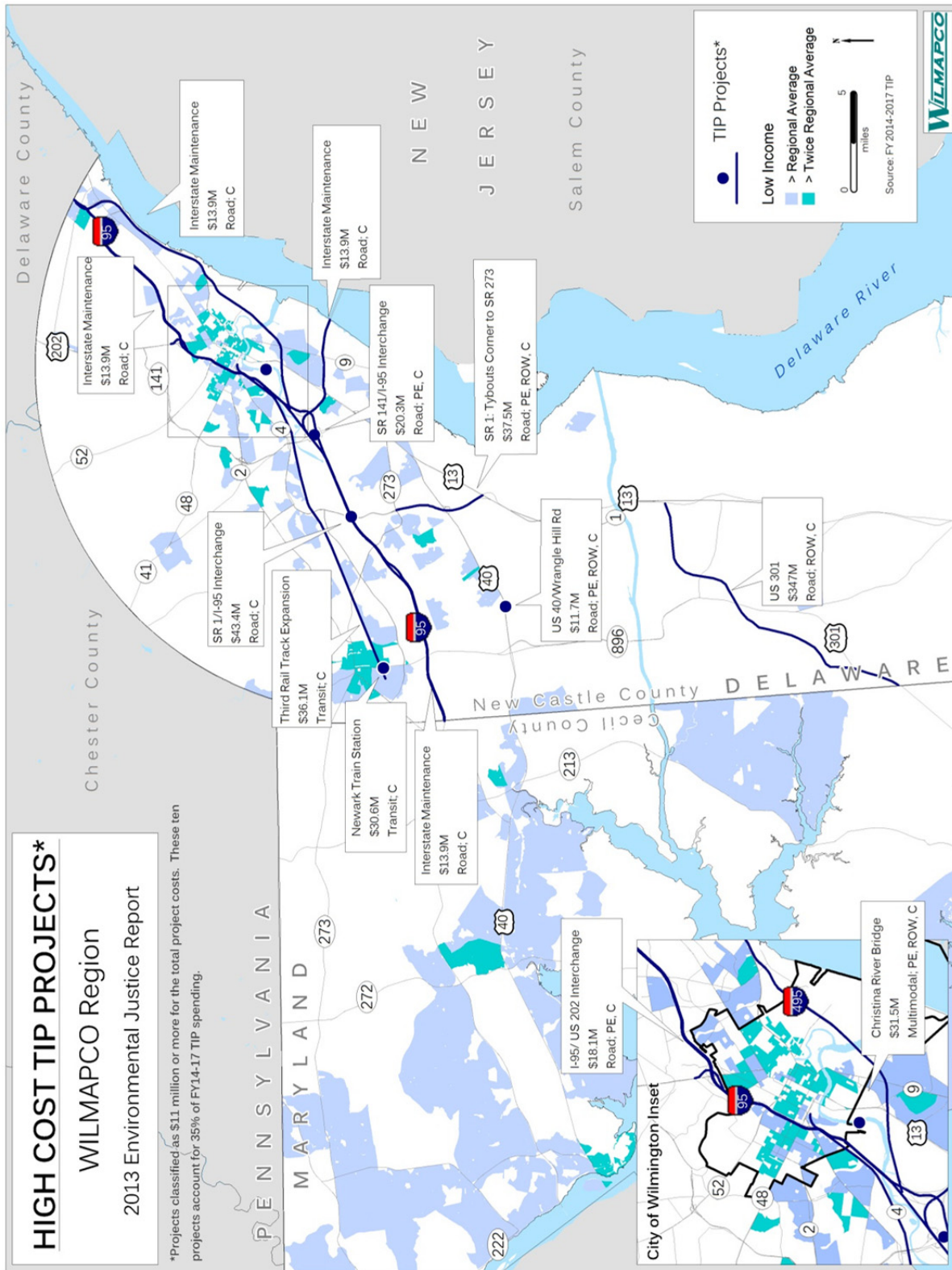
Map A2: High Cost FY 14 TIP Projects versus Non-Hispanic Asian Areas



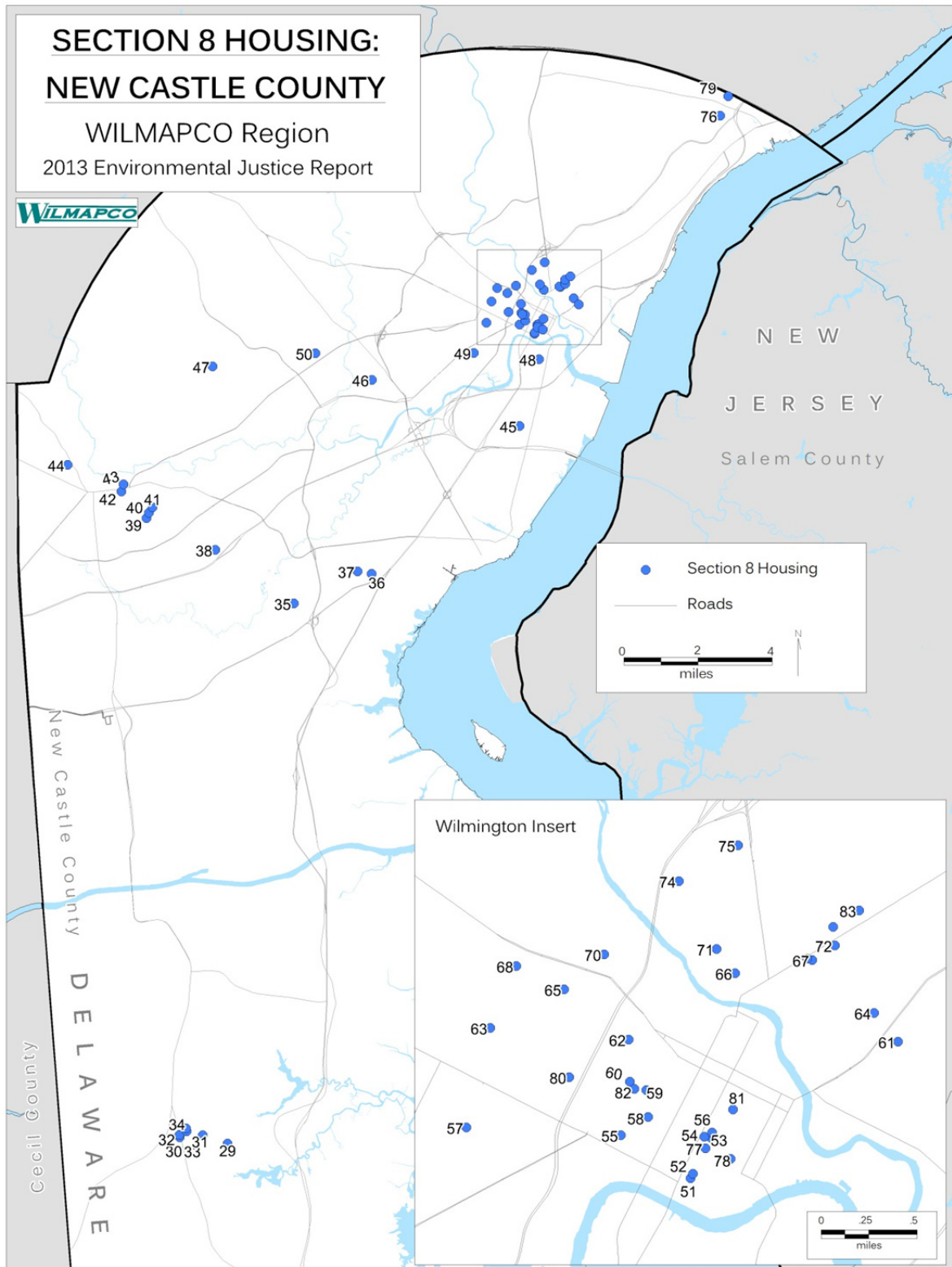
Map A3: High Cost FY 14 TIP Projects versus Hispanic Areas



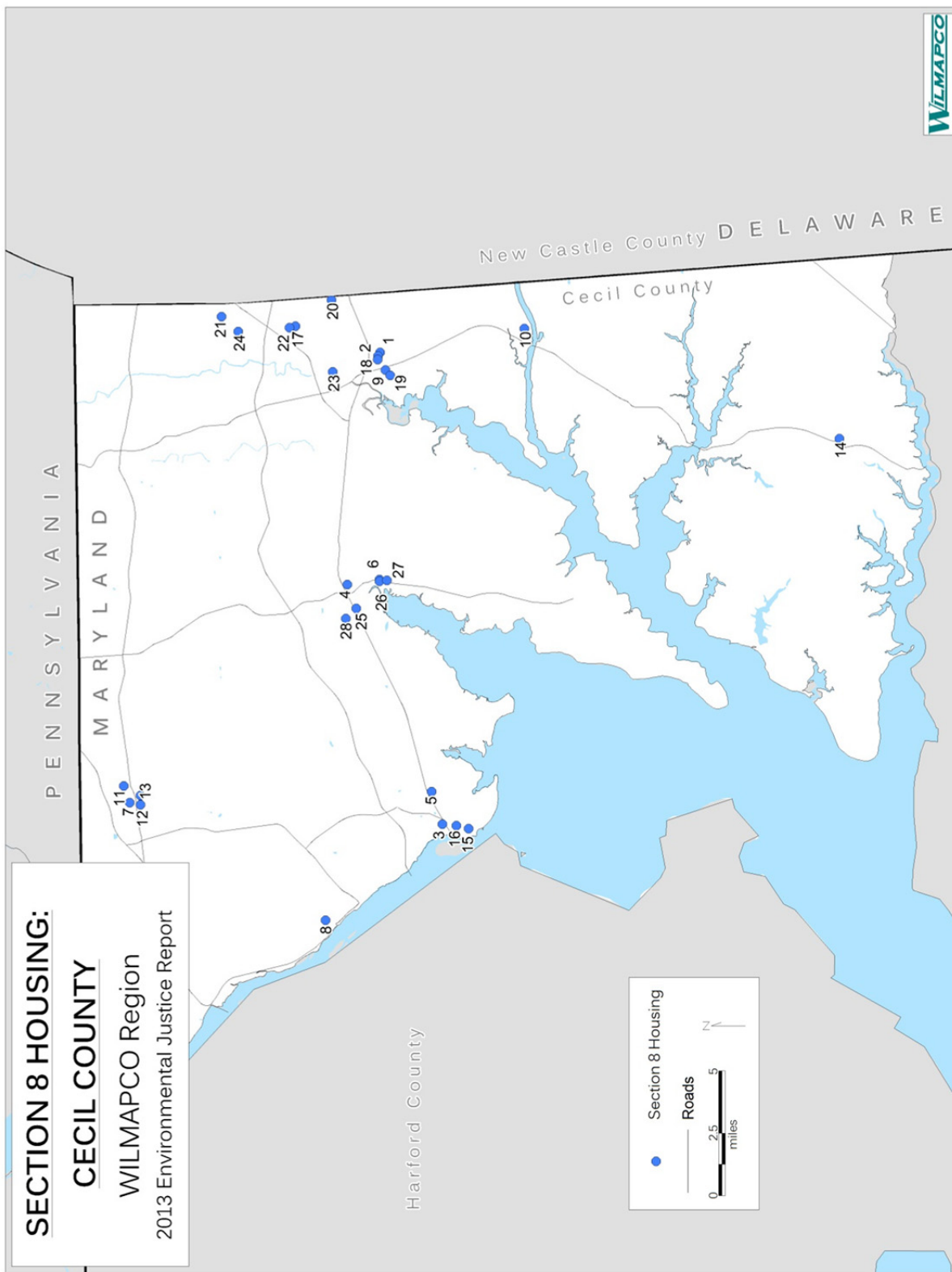
Map A4: High Cost FY 14 TIP Projects versus Low-income Areas



Map A5: Government Subsidized Housing in New Castle County



Map A6: Government Subsidized Housing in Cecil County



Tables A3: Listing of Government Subsidized Housing

ID	Community	Place	County
1	Elk Chase Apartments	Elkton	Cecil
2	Fox Ridge Manor	Elkton	Cecil
3	Richmond Hill Manor	Perryville	Cecil
4	North Bay Apts	North East	Cecil
5	Concord Apartments	Perryville	Cecil
6	Elk River Manor	North East	Cecil
7	Meadowside Apartments	Rising Sun	Cecil
8	Port Heights	Port Deposit	Cecil
9	Springford Gardens	Elkton	Cecil
10	Canal Town Village	Chesapeake City	Cecil
11	Maple Heights Apartments	Rising Sun	Cecil
12	McKinley Apartments	Rising Sun	Cecil
13	Fairview Senior Comm	Rising Sun	Cecil
14	Earleton Village	Cecilton	Cecil
15	Perryvilla	Perryville	Cecil
16	Fairgreen Senior Comm	Perryville	Cecil
17	Glen Creek Apartments	Elkton	Cecil
18	Chesapeake Apartments	Elkton	Cecil
19	Villas at Whitehall	Elkton	Cecil
20	Turnquist Apartments	Elkton	Cecil
21	West Creek Village	Elkton	Cecil
22	Meadows at Elk Creek	Elkton	Cecil
23	Elkton Manor Apartments	Elkton	Cecil
24	Pine Hills Apartments	Elkton	Cecil
25	Stony Run Apartments	North East	Cecil
26	Victoria Park	North East	Cecil
27	Beacon Apartments	North East	Cecil
28	North Creek Run	North East	Cecil
29	Fairfield Commons Apartments	Middletown	NCC
30	Lakewood Apartments	Middletown	NCC
31	Middletown Trace Apartments	Middletown	NCC
32	Holly Square	Middletown	NCC
33	North Village Apartments	Middletown	NCC
34	Greenlawn Apartments	Middletown	NCC
35	Liberty Terrace Apartments	Newark	NCC
36	Cheltenham Apartments	New Castle	NCC
37	Spencer Apartments	New Castle	NCC
38	Marydale Retirement Village	Newark	NCC

Tables A4: Listing of Government Subsidized Housing, Continued

ID	Community	Place	County
39	Marrows Court Apartments	Newark	NCC
40	Carrington Way Apartments	Newark	NCC
41	Carleton Court Apartments	Newark	NCC
42	George Read Village/Independence Cir	Newark	NCC
43	Main Towers Apartments	Newark	NCC
44	Woodmont Garden	Newark	NCC
45	Arbor Place Townhomes	New Castle	NCC
46	Manlove Manor Townhomes	Wilmington	NCC
47	Woodlea Apartments	Wilmington	NCC
48	Southbridge	Wilmington	NCC
49	Maryland Park Apartments	Wilmington	NCC
50	Farrand Village Apartments	Wilmington	NCC
51	Gateway House	Wilmington	NCC
52	Asbury Gardens	Wilmington	NCC
53	Compton Towers	Wilmington	NCC
54	Windsor Apartments	Wilmington	NCC
55	Quaker Hill Place	Wilmington	NCC
56	Compton Apartments	Wilmington	NCC
57	Maplewood Housing for the Elderly	Wilmington	NCC
58	Christiana Village/Monroe Terrace	Wilmington	NCC
59	West Street Commons	Wilmington	NCC
60	West Center Place	Wilmington	NCC
61	Northeast	Wilmington	NCC
62	Sacred Heart Village	Wilmington	NCC
63	Clayton Court Apartments	Wilmington	NCC
64	Village of Eastlake	Wilmington	NCC
65	Ingleside Reirement Apartments	Wilmington	NCC
66		Wilmington	NCC
67	King Plaza	Wilmington	NCC
68	Antonian	Wilmington	NCC
69	Herring Manor Apartments	Wilmington	NCC
70	Luther Towers	Wilmington	NCC
71	Baynard Apartments	Wilmington	NCC
72	Crestview Apartments	Wilmington	NCC
73	Kennedy Apartments	Wilmington	NCC
74	The Park View	Wilmington	NCC
75	Terry Apartments	Wilmington	NCC
76	Stoneybrook Apartments	Claymont	NCC
77	Herlihy Apartments	Wilmington	NCC
78	Bethel Villa Apartments	Wilmington	NCC
79	Bnai Brith House	Claymont	NCC
80	Los Jardines	Wilmington	NCC
81	Compton Towne House Apartments	Wilmington	NCC
82	Garret House	Wilmington	NCC
83	Evans House Apartments	Wilmington	NCC

Map A7: Projected Sea-level Rise Scenarios versus EJ Areas, Cecil County

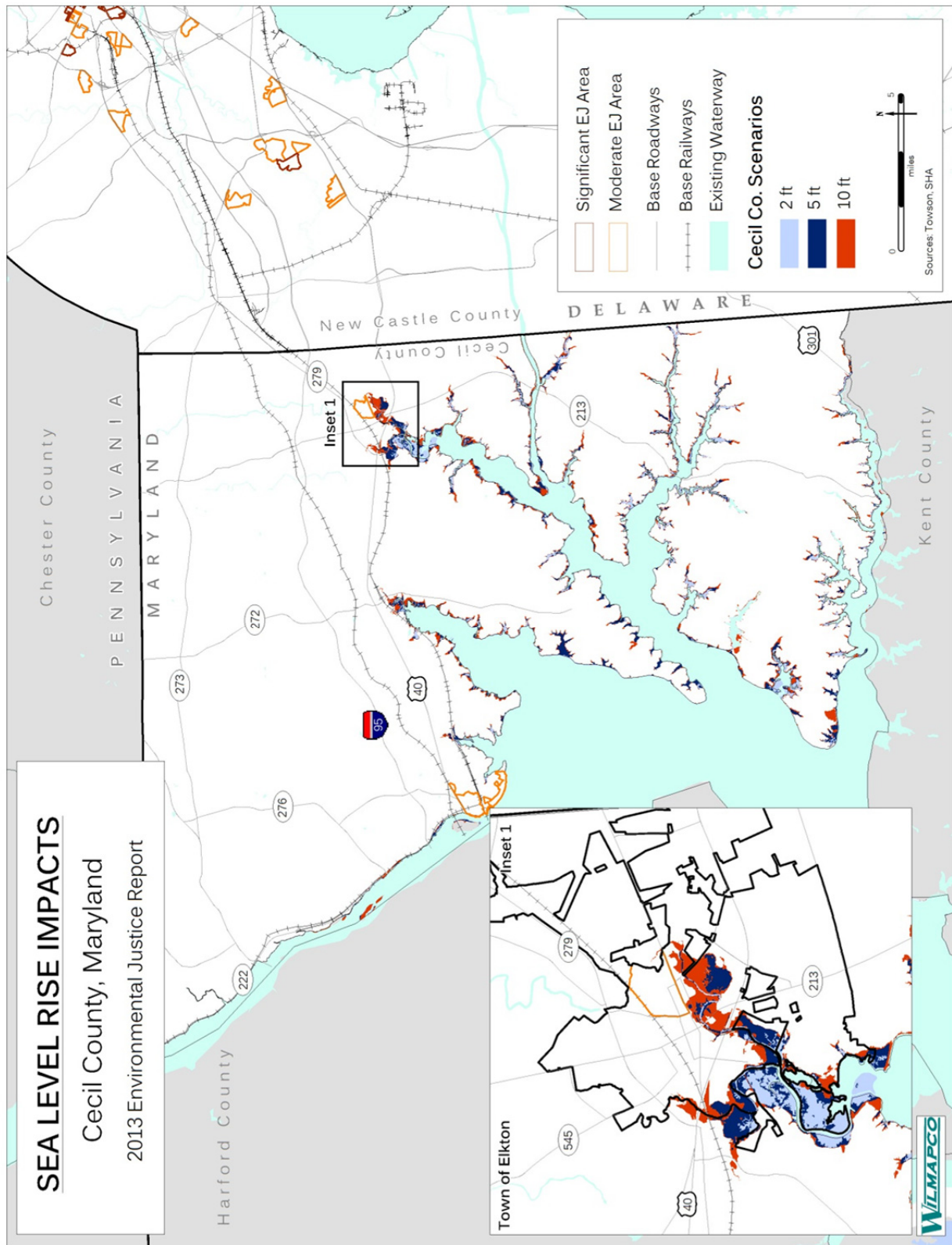


Figure A1: WILMAPCO Title VI Notice



TITLE VI PUBLIC NOTICE

- The Wilmington Area Planning Council (WILMAPCO) operates without regard to *race, color* and *national origin* in accordance with Title VI of the Civil Rights Act. Anyone who believes they have been aggrieved by any unlawful discriminatory practice under Title VI may file a complaint with WILMAPCO.
- To learn about WILMAPCO's civil rights program, and our procedures to file a complaint, contact us by telephone at: 302 – 737 – 6205 or toll-free from Cecil County, Maryland: 888 – 808 – 7088; by e-mail at: wilmapco@wilmapco.org; or visit us at: 850 Library Avenue (Suite 100), Newark, DE 19711. For more information go to: www.wilmapco.org.
- A complaint may also be filed directly with the Federal Transit Administration's Office of Civil Rights, Attention: Civil Rights Program Coordinator, East Building, 5th Floor – TCR, 1200 New Jersey Ave., SE, Washington DC 20590
- If information is needed in another language, contact us at: 302 – 737 – 6205 or toll-free from Cecil County, Maryland: 888 – 808 – 7088.
- Si requiere información en otro idioma, contáctenos al: 302 – 737 – 6205 o llame gratis desde el Condado de Cecil, Maryland: 888 – 808 – 7088.
- 如果还需要更多的中文或其他语言信息，请拨打302-737-6205或者马里兰Cecil County地区的免费电话888-808-7088.

Figure A2: WILMAPCO Title VI Complaint Form

WILMAPCO Title VI Complaint Form

Section I				
Name:				
Address:				
Telephone (Home):			Telephone (Work):	
E-mail Address:				
Accessible Format Requirements?	Large Print		Audio Tape	
	TDD		Other	
Section II				
Are you filing this complaint on your own behalf?			Yes*	No
*If you answered "yes" to this question, go to Section III.				
If not, please supply the name and relationship of the person for whom you are complaining:				
Please explain why you have filed for a third party:				
Please confirm that you have obtained the permission of the aggrieved party if you are filing on behalf of a third party.			Yes	No
Section III				
I believe the discrimination I experienced was based on (check all that apply):				
<input type="checkbox"/> Race <input type="checkbox"/> Color <input type="checkbox"/> National Origin				
Date of Alleged Discrimination (Month, Day, Year): _____				
<p>Explain as clearly as possible what happened and why you believe you were discriminated against. Describe all persons who were involved. Include the name and contact information of the person(s) who discriminated against you (if known) as well as names and contact information of any witnesses. If more space is needed, please use the back of this form.</p>				
Section IV				
Have you previously filed a Title VI complaint with this agency?			Yes	No

li

WILMAPCO Title VI Complaint Form

Section V	
Have you filed this complaint with any other Federal, State, or local agency, or with any Federal or State court?	
<input type="checkbox"/> Yes <input type="checkbox"/> No	
If yes, check all that apply:	
<input type="checkbox"/> Federal Agency: _____	
<input type="checkbox"/> Federal Court: _____	<input type="checkbox"/> State Agency: _____
<input type="checkbox"/> State Court: _____	<input type="checkbox"/> Local Agency: _____
Please provide information about a contact person at the agency/court where the complaint was filed.	
Name: _____	
Title: _____	
Agency: _____	
Address: _____	
Telephone: _____	
Section VI (office use only – do not fill in)	
Name of agency complaint is against: Wilmington Area Planning Council	
Contact person: _____	
Title: Title VI Coordinator	
Telephone number: _____	

You may attach any written materials or other information that you think is relevant to your complaint.

Signature and date required below:

Signature

Date

Please submit this form in person at the address below, or mail this form to:

Wilmington Area Planning Council
850 Library Avenue, Suite 100
Newark, Delaware 19711

Figure A3: Title VI Complaint Procedures

WILMAPCO Title VI Complaint Procedure

Any person who believes he has been discriminated against on the basis of race, color, or national origin by the Wilmington Area Planning Council (WILMAPCO) may file a Title VI complaint by completing and submitting the WILMAPCO Title VI Complaint Form. WILMAPCO investigates complaints received no more than 180 days after the alleged incident. WILMAPCO will process complaints that are complete.

Once a complaint is received, WILMAPCO will review it to determine if our office has jurisdiction. The complainant will receive an acknowledgment letter informing him whether the complaint will be investigated by our office.

WILMAPCO has 60 days to investigate the complaint. If more information is needed to resolve the case, WILMAPCO may contact the complainant. The complaint has 10 business days from the date of the letter to send requested information to the WILMAPCO investigator assigned to the case. If the investigator is not contacted by the complainant or does not receive the additional information within 10 business days, WILMAPCO can administratively close the case. A case can be administratively closed also if the complainant no longer wishes to pursue their case.

After the investigator reviews the complaint, he will issue one of two letters to the complainant: a closure letter or a letter of finding (LOF). A closure letter summarizes the allegations and states that there was not a Title VI violation and that the case will be closed. An LOF summarizes the allegations and interviews regarding the alleged incident, and explains whether any disciplinary action, additional training of the staff member, or other action will occur. If the complainant wishes to appeal the decision, he has 60 days after the date of the letter or the LOF to do so.

A person may also file a complaint directly with the Federal Transit Administration at:

FTA Office of Civil Rights
1200 New Jersey Ave. SE
Washington, DC 20590

Figure A4: MPO Self-Certification

**METROPOLITAN TRANSPORTATION PLANNING PROCESS
SELF-CERTIFICATION**

(To be submitted with each Metropolitan Transportation Improvement Program)

The Maryland Department of Transportation and the Delaware Department of Transportation and the Wilmington Area Planning Council (WILMAPCO), the metropolitan planning organization for the Wilmington urbanized area, hereby certify that the transportation planning process is addressing the major issues in the metropolitan planning area and is being conducted in accordance with all applicable requirements of:

- (1) 23 U.S.C. 134, 49 U.S.C. 5303, and this subpart;
- (2) In nonattainment and maintenance areas, sections 174 and 176 (c) and (d) of the Clean Air Act, as amended (42 U.S.C. 7504, 7506 (c) and (d)) and 40 CFR part 93;
- (3) Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d-1), 49 CFR part 21;
- (4) 49 U.S.C. 5332, prohibiting discrimination on the basis of race, color, creed, national origin, sex or age in employment or business opportunity;
- (5) Section 1101(b) of the SAFETEA-LU (Pub. L. 109-59) and 49 CFR part 26 regarding the involvement of disadvantaged business enterprises in USDOT funded projects;
- (6) 23 CFR part 230, regarding the implementation of an equal employment opportunity program on Federal and Federal-aid highway construction contracts;
- (7) The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 *et seq.*) and 49 CFR parts 27, 37, and 38;
- (8) The Older Americans Act, as amended (42 U.S.C. 6101), prohibiting discrimination on the basis of age in programs or activities receiving Federal financial assistance;
- (9) Section 324 of title 23, U.S.C., regarding the prohibition of discrimination based on gender; and
- (10) Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794) and 49 CFR part 35 regarding discrimination against individuals with disabilities.

Wilmington Area Planning Council	Maryland Department of Transportation	Delaware Department of Transportation
 Signature	 Signature	 Signature
Tigist Zegeye Printed Name	Darell B. Mobley Printed Name	Shailen P. Bhatt Printed Name
Executive Director Title	Acting Secretary Title	Secretary Title
4/10/13 Date	4/25/13 Date	5/15/13 Date

WILMAPCO

Figure A5: Equal Employment Opportunity

Wilmington Area Planning Council

Personnel Manual

EQUAL EMPLOYMENT OPPORTUNITY

It is the policy of WILMAPCO to afford equal opportunity for employment. All employment decisions are made without regard to race, color, age, sex, religion, national origin, ancestry, marital status, physical or mental handicap which can reasonably be accommodated, or status as a military veteran. An affirmative action program for equal employment opportunity has been and hereafter shall be in effect, as follows:

1. The Executive Director will assure non-discriminatory recruiting of the WILMAPCO staff by:
 - a. Placing employment advertisements in newspapers which serve the largest number of minority people in the region;
 - b. Uniformly including, when recruiting by contact with schools and universities, those schools having high proportions of minority students;
 - c. Contacting relevant minority and human relations organizations to encourage the referral of qualified minority applicants;
 - d. Encouraging present employees to refer minority applicants; and
 - e. Making known to all recruiting sources that qualified minority applicants are being sought for consideration for all available positions whenever WILMAPCO hires.
2. The Executive Director will sponsor and assist minority youths in programs that provide entry to sub-professional and professional training to the maximum extent feasible and he will encourage all employees, including minority employees, to increase their skills and job potential through participation in available training and educational programs.
3. The Executive Director will make placement and promotion decisions based on the fact that minority employees are to be considered without discrimination and will promote minority employees who have increased their skills and job potential in accordance with the policies outlined in this resolution.
4. The Executive Director will assure non-discriminatory pay and other working conditions in WILMAPCO by periodically examining pay rates and fringe benefits of all WILMAPCO employees having comparable duties and taking the necessary actions to adjust any inequities found.
5. The Executive Director will encourage non-discriminatory contracting by taking appropriate steps, such as including Disadvantaged Business Enterprise (DBE) contractors in solicitations for proposals, to encourage minority group contractors and contractors with minority group representation among their employees to submit proposals for contract work.
6. The Executive Director will periodically review and revise WILMAPCO's equal employment opportunity program in order to maintain its current effectiveness.

11/20/2006

1-3

Figure A6: Agreement for the Allocation and Administration of Metropolitan Planning Funds

AGREEMENT NO. 13-1

FOR ALLOCATION AND ADMINISTRATION

OF METROPOLITAN PLANNING FUNDS

FISCAL YEAR 2013 - FHWA AND FTA

This agreement is made by and between the State of Delaware, Department of Transportation, acting by and through Shailen P. Bhatt, Secretary of the Delaware Department of Transportation, hereinafter referred to as the "DEPARTMENT", and the Wilmington Area Planning Council, acting by and through Tigist Zegeye, Executive Director of the Wilmington Area Planning Council, hereinafter referred to as "WILMAPCO", and entered into this 2nd day of February, 2012.

WHEREAS, this Agreement, executed between the DEPARTMENT and WILMAPCO, is necessary to comply with the United States Government's procedures established for funding of metropolitan planning organizations under section 112 of the 1973 Highway Act (as amended), and

WHEREAS, the Governor of the State of Delaware, in accordance with Federal law, has designated WILMAPCO as a Metropolitan Planning Organization (MPO) to execute the provisions of 23 U.S. C. Section 134 in the Wilmington Metropolitan Area, and

WHEREAS, WILMAPCO has prepared a Fiscal Year 2013 Unified Planning Work Program (UPWP) covering the period July 1, 2012 through June 30, 2013 for the Wilmington Metropolitan Statistical Area (MSA) which has been approved by the DEPARTMENT, and

WHEREAS, said period of performance for WILMAPCO Fiscal Year 2013 is from July 1, 2012 to June 30, 2013, and

WHEREAS, the total cost estimates of the new tasks for FY 2013 are Two Million One Hundred Seventy Four Thousand Eight Hundred Twelve Dollars (\$2,174,812); of this amount, Delaware's (FHWA and FTA) Federal share shall be a sum of up to One Million Seven Hundred Thirty Nine Thousand Eight Hundred Fifty Dollars (\$1,739,850) in Federal (FHWA-PL and FTA Section 5303) Planning funds, which will be matched with a sum of Four Hundred Thirty Four Thousand Nine Hundred Sixty Two Dollars (\$434,962) in State/Local funds and services,

NOW, THEREFORE, in consideration of the mutual benefits accruing to each, the DEPARTMENT and WILMAPCO agree and covenant as follows:

1. Under this Agreement the DEPARTMENT shall authorize and make available to WILMAPCO One Million Seven Hundred Thirty Nine Thousand Eight Hundred Fifty Dollars (\$1,739,850) in Federal (FHWA-PL and FTA Section 5303) Planning funds, which is comprised of One Million Four Hundred Forty Eight Thousand Three Hundred Forty Five Dollars (\$1,448,345) FHWA PL and Two Hundred Ninety One Thousand Five Hundred Five Dollars (\$291,505) FTA Section 5303 funds to cover the Federal share of program costs, and Fifty-Five Thousand Dollars (\$55,000) in State of Delaware Funds to cover the State share of program costs from July 1, 2012, to June 30, 2013.
2. The Scope of Work under this Agreement shall be the same as detailed in WILMAPCO's FY2013 UPWP, as approved by Council May 10, 2012, for the four quarters of fiscal year 2013 and is incorporated by reference. The UPWP may be amended during the course of the year upon written request by WILMAPCO and subject to (1) the written approval of the DEPARTMENT and affected Federal Agencies, and (2) the availability of funding, if applicable.

3. Where the approval of the DEPARTMENT is indicated, the concurrence of the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) shall also be deemed to be required. All approvals shall be documented in writing. WILMAPCO shall confer with the DEPARTMENT and with the representatives of the Federal Highway Administration and the Federal Transit Administration when and where requested by the DEPARTMENT. The close cooperation and liaison between the DEPARTMENT, the Federal Highway Administration, the Federal Transit Administration, and WILMAPCO is to be maintained in order that all questions may be resolved and the needed approvals may be obtained, so as to permit an uninterrupted work effort by WILMAPCO.
4. The DEPARTMENT shall follow Delaware law and procedures when awarding and administering subgrants to WILMAPCO and local governments. The DEPARTMENT shall have primary responsibility for administering the FHWA and FTA planning funds passed through to subrecipients covered by this agreement and for ensuring that such funds are expended for eligible activities and are administered in accordance with 23 CFR Part 420, 49 CFR Part 18 and applicable cost principles.
5. The DEPARTMENT shall review and approve any contract entered into with approval of WILMAPCO Council that involves FHWA (PL) and FTA (Section 5303) funding and all multi-party contracts.
6. WILMAPCO shall proceed with the work and services contemplated by this Agreement immediately after written notice to proceed by the DEPARTMENT.
7. WILMAPCO shall submit monthly expenditure and performance reports and shall submit a final expenditure and performance report no later than 90 days after the end of the reporting period.

GENERAL PROVISIONS

- A. **RETENTION OF RECORDS** - All Records, including books, documents, papers, data, accounting records and any other evidence pertaining to costs incurred relating to or arising out of this Agreement, hereinafter referred to as "records", shall be kept by the DEPARTMENT, WILMAPCO and any of their subcontractors, consultants or the like. Such records, and any necessary copies for such records, shall be made available at any reasonable time and place to any authorized representative of the Federal government for inspection, examination or audit during the time of this Agreement and for three years after the final voucher payment has been made by the Federal government for this Agreement.
- B. **ACCESS TO RECORDS** - The DEPARTMENT and Federal Government are herein authorized to review and inspect all work and services, including all papers, books, documents, maps, accounts, source data, photographs or the like relating to this Agreement and in particular to WILMAPCO's Fiscal Year 2013 Unified Planning Work Program for Transportation and Comprehensive Planning for a period of seven years or until such time as any audit of the FY 2013 UPWP is completed, whichever occurs later. Such review and inspection may be made at any reasonable time and place and any copies for any books, maps, documents, papers, accounts, photographs, source data or the like shall be provided by WILMAPCO.
- C. **AGREEMENT TERMINATION** - this Agreement may be terminated at any time for any reason by either of the parties upon thirty (30) days written notice. Upon termination, reimbursement shall be made by the DEPARTMENT to WILMAPCO with federally allocated money for lawfully incurred costs by WILMAPCO up to and including the date of termination.
- D. **COPYRIGHT** - WILMAPCO shall be free to copyright any material created, or developed under or because of this Agreement with the provision that the DEPARTMENT, Federal Highway

Administration and Federal Transit Administration reserve a royalty-free, non-exclusive and irrevocable license to reproduce, publish or otherwise use and to authorize others to use the material for approved purpose.

E. PUBLISHED MATERIAL - All material published by the DEPARTMENT or WILMAPCO, created by, developed under, or because of, this Agreement shall contain a credit reference to the Federal Highway Administration and the Federal Transit Administration such as "prepared in cooperation with the United States Department of Transportation, Federal Highway Administration."

F. SUBCONTRACTING - WILMAPCO shall not subcontract or transfer any work or services covered by this agreement without prior approval of the DEPARTMENT. If WILMAPCO should hire a subcontractor, consultant or transfer any work or services covered by this agreement, the terms and conditions of this agreement shall also apply to the party or parties to whom such work is subcontracted or transferred.

G. FEDERAL AND STATE LAWS - WILMAPCO shall comply with all Federal and State laws applicable to the work and services to be done under this Agreement.

H. RESOLVING DISPUTES - WILMAPCO shall meet with the DEPARTMENT and others in the event that any matter arising out of this Agreement cannot be resolved in a mutually satisfactory manner. At such meetings all interested parties shall be present with the Secretary of the DEPARTMENT who shall hear all arguments and render a final decision on the controversy that shall be binding on all parties concerned.

I. NONDISCRIMINATION - WILMAPCO agrees that, as a condition of receiving any Federal financial assistance from the U.S. Department of Transportation, it will comply with Title VI of the Civil Rights Act of 1964, related nondiscrimination statutes, and applicable regulatory requirements to the end that no person in the United States shall, on the grounds of race, color, national origin, sex, disability or age, be excluded from participation in, be denied the benefits of, or otherwise be subjected to discrimination under any program or activity for which WILMAPCO receives Federal financial assistance. The specific requirements of the U.S. Department of Transportation 49 CFR Part 21 are incorporated by reference and made part of this Agreement.

J. EQUAL EMPLOYMENT OPPORTUNITY - WILMAPCO agrees to take affirmative action to ensure that applicants for employment, and employees during employment, are treated without regard to their race, creed, color, sex, age, disability or national origin. Such actions shall include, but not be limited to, employment upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training.

K. DISADVANTAGED BUSINESS ENTERPRISE (DBE) - WILMAPCO agrees to comply with current U.S. Department of Transportation regulations on DBE participation in accordance with 49 CFR Part 23. WILMAPCO also agrees to take all necessary and reasonable steps required by the U.S. Department of Transportation regulations to ensure that eligible DBEs have the maximum feasible opportunity to participate in third party contracts financed with Federal financial assistance. Third party grantees who meet the threshold for DBE programs shall comply with FTA regulations surrounding prompt payment and return of retainage for subcontractors.

L. DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS - WILMAPCO shall comply with Federal Transit Administration regulations surrounding Lower Tier Covered Transactions (third party contracts over \$100,000). For contracts over \$25,000 WILMAPCO will complete a search of the excluded parties listing system to ensure that the organization is not debarred or suspended from federally assisted contracts.

M. **LOBBYING**—WILMAPCO shall comply with Federal Transit Administration regulations regarding lobbying restrictions. WILMAPCO will obtain a signed "Certification of Restrictions on Lobbying" form for third party contracts over \$100,000.

N. **PROGRAM FRAUD AND FALSE OR FRAUDULENT STATEMENTS AND RELATED ACTS**— WILMAPCO shall comply with Federal Transit Administration regulations surrounding program fraud and false or fraudulent statements and related acts for all third party contracts.

O. **INCORPORATION OF FEDERAL TRANSIT ADMINISTRATION (FTA) TERMS** — WILMAPCO shall comply with Federal Transit Administration regulations surrounding the incorporation of FTA terms in all its third party contracts. Contractors shall not perform any act, fail to perform any act, or refuse to comply with any DTC requests, which would cause DTC to be in violation of the FTA terms and conditions.

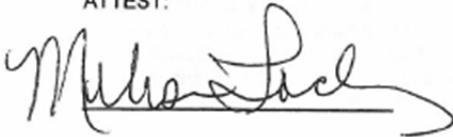
P. **CLEAN WATER AND AIR REQUIREMENTS**— WILMAPCO shall comply with Federal Transit Administration regulations surrounding the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq. and the Clean Air Act, as amended, 42 U.S.C. §§ 7401 et seq for all third party contracts over \$100,000.

Q. **CONSERVATION**— WILMAPCO shall comply with Federal Transit Administration regulations surrounding energy efficiency in the State Energy Conservation Plan issued in compliance with the Energy Policy and Conservation Act (42 US Section 321 et seq.), for all third party contracts.

R. **SCOPE OF AGREEMENT** - This Agreement represents the complete and total Agreement between the DEPARTMENT and WILMAPCO and shall only be amended by a written supplemental agreement in accordance with Delaware Law.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed on the date entered on the first page hereof by their duly authorized officers.

ATTEST:

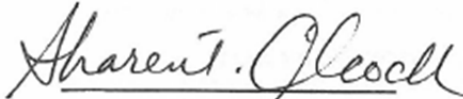


DELAWARE DEPARTMENT
OF TRANSPORTATION



Shailen P. Bhatt
Secretary
Department of Transportation

ATTEST:



WILMINGTON AREA PLANNING
COUNCIL (WILMAPCO)



Tigist Zegeye
Executive Director, WILMAPCO

APPROVED AS TO FORM:



Figure A7: Sample Third-party Contract

WILMINGTON AREA PLANNING COUNCIL**AGREEMENT FOR PERFORMANCE OF WORK****IN SUPPORT OF TASK # MPO 10.11.10 ENTITLED****NORTH EAST, MARYLAND REVISIONS TO THE ROAD CODE****AND SUBDIVISION REGULATIONS OF THE NORTH EAST ZONING ORDINANCE****IN THE FY 2010 UPWP**

This agreement is made by and between the Wilmington Area Planning Council, acting by and through Stephen Kingsberry, Chairperson, with the management assistance of Tigist Zegeye, Executive Director, hereinafter referred to as "WILMAPCO", and the Mayor and Commissioners of the Town of North East, with the management assistance of Betsy Vennell, Director of Planning, as their agent, hereinafter referred to as the "Contractor".

WHEREAS, WILMAPCO, as designated by the Governors of the States of Delaware and Maryland, is the Metropolitan Planning Organization (MPO) for the Wilmington Metropolitan Area, which includes Cecil County, Maryland and New Castle County, Delaware; and

WHEREAS, the federal regulations for Metropolitan Planning require that the MPO, in cooperation with participants in the planning process, develop an annual Unified Planning Work Program (UPWP); and

WHEREAS, the work and services mutually agreed to in this Agreement are necessary for the development and updating of the regional transportation plans and programs, as mandated under provisions of 23 U.S.C., Section 134, found in the current UPWP,

NOW, THEREFORE, in consideration of the mutual benefits accruing to each, WILMAPCO and the Contractor agree and covenant as follows:

The Contractor has agreed, and by these presents does agree with WILMAPCO, for consideration hereinafter mentioned, to work for WILMAPCO as hereinafter set forth.

SECTION 1 - GENERAL PROVISIONS

A. During the performance of this Agreement, all appropriate Federal and State laws, especially including all Civil Rights laws, shall be complied with by the Contractor. The provisions of Title 49 of the Code of Federal Regulations, Part 21.7, with respect to Title VI of the Civil Rights Act of 1964, are incorporated by reference and made a part of this Agreement.

B. Where the approval of WILMAPCO is indicated, the concurrence of the Federal Highway Administration and/or the Federal Transit Administration may also be deemed to be required if the Federal agencies so request.

C. All materials published, created by, or developed under or because of this agreement by WILMAPCO and the Contractor shall contain a credit reference such as "Prepared in cooperation with the United States Department of Transportation, Federal Highway Administration and Federal Transit Administration".

D. All records, including books, documents, papers, maps, data accounting records and other evidence pertaining to costs incurred relating to or arising out of this agreement, hereinafter referred to as "Records", shall be made available at any reasonable time and place for inspection, examination, or audit during the time of this Agreement and for three years after the final voucher payment has been made by WILMAPCO for this Agreement.

E. WILMAPCO and authorized representatives of the Federal government are herein authorized to review and to inspect all work and services, including all papers, books, documents, maps, accounts, source data, or the like, which shall be provided by the Contractor.

F. The Contractor shall be free to copyright any material created or developed under or because of this Agreement, with the provision that WILMAPCO, the Federal Transit Administration and the Federal Highway Administration reserve a royalty-free, non-exclusive and irrevocable license to reproduce, publish or otherwise use and to authorize others to use the material for approved purposes.

G. WILMAPCO is responsible for monitoring compliance of this agreement and the Contractor will provide monthly status reports (or other mutually agreed upon intervals) and other information and access for this purpose. The Contractor will invite WILMAPCO to participate in appropriate orientation, steering and operational meetings and committee memberships. The contractor will provide to WILMAPCO copies of pertinent concepts, drafts and other working documents in order to better involve and acquaint WILMAPCO with the operation, performance and substance of the Task.

H. Final products and results of the Task will be provided by the Contractor to WILMAPCO for integration with and support of WILMAPCO's plans and programs.

I. This Agreement may be terminated at any time for non-performance by any of the parties upon thirty (30) days written notice.

J. By initialing below, the Contractor accepts all applicable Federal Transit Administration (FTA) Requirements which govern this Agreement. These requirements are available electronically at: http://fta.dot.gov/12831_6195.html.

CONTRACTOR INITIALS

SECTION 2 - SCOPE OF WORK

A. This Agreement constitutes the sole understanding by and between the Contractor and WILMAPCO, and nothing outside of this Agreement shall be construed as an alteration, modification, and/or revision hereof. This Agreement shall not be modified except in writing subscribed to by all parties.

B. The scope of work to be performed by the Contractor is attached hereto.

SECTION 3 - SCHEDULES

A. Contractor's Schedule of Work and Services Compliance Dates:

Starting Date:	Upon execution of contract
Completion Date:	6/30/2010 (unless extension is requested in writing)

B. "Status of Work" written reports are due to WILMAPCO at the end of each month following the starting date as well as upon completion, unless other mutually agreed upon intervals are stated in the Scope of Work.

C. Schedule of Payment

WILMAPCO will pay the Contractor periodically, subject to the following conditions:

- 1) The Contractor shall bill monthly the amount legitimately incurred by the Contractor to WILMAPCO. This invoice shall contain, at a minimum, a report on the work completed, a project status report indicating percent completion of project, and a budget status report indicating total budget, billings to date and remaining balance.
- 2) WILMAPCO shall have final approval over payment to the Contractor, based upon receipt of the work product(s) or component(s) thereof, as defined under Section 2 of this Agreement and as stipulated in the foregoing item #1.
- 3) Total compensation paid to the Contractor for the work and services as agreed to in this Agreement shall not exceed \$15,000. All authorized out-of-pocket expenses will be borne by WILMAPCO.

IN WITNESS THEREOF, this Agreement made and entered into this 26th day of October, 2009 shall be executed in quadruplicate.

FOR WILMAPCO

ATTEST: _____
Tigist Zegeye,
Executive Director

DATE: _____

FOR THE CONTRACTOR

ATTEST: _____
Betsy Vennell
Director of Planning

DATE: _____