



# ***COMMUNITY CHARACTERISTICS REPORT - ENVIRONMENTAL JUSTICE ADDENDUM***



## ***INDEPENDENCE BOULEVARD EXTENSION***

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CITY OF WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA  
STATE TRANSPORTATION IMPROVEMENT PROGRAM PROJECT NO. U-4434*



**JULY 2014**

PREPARED FOR:  
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS  
PREPARED BY:  
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**FINAL**





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## 1. Overview

### 1.1. Purpose of Addendum

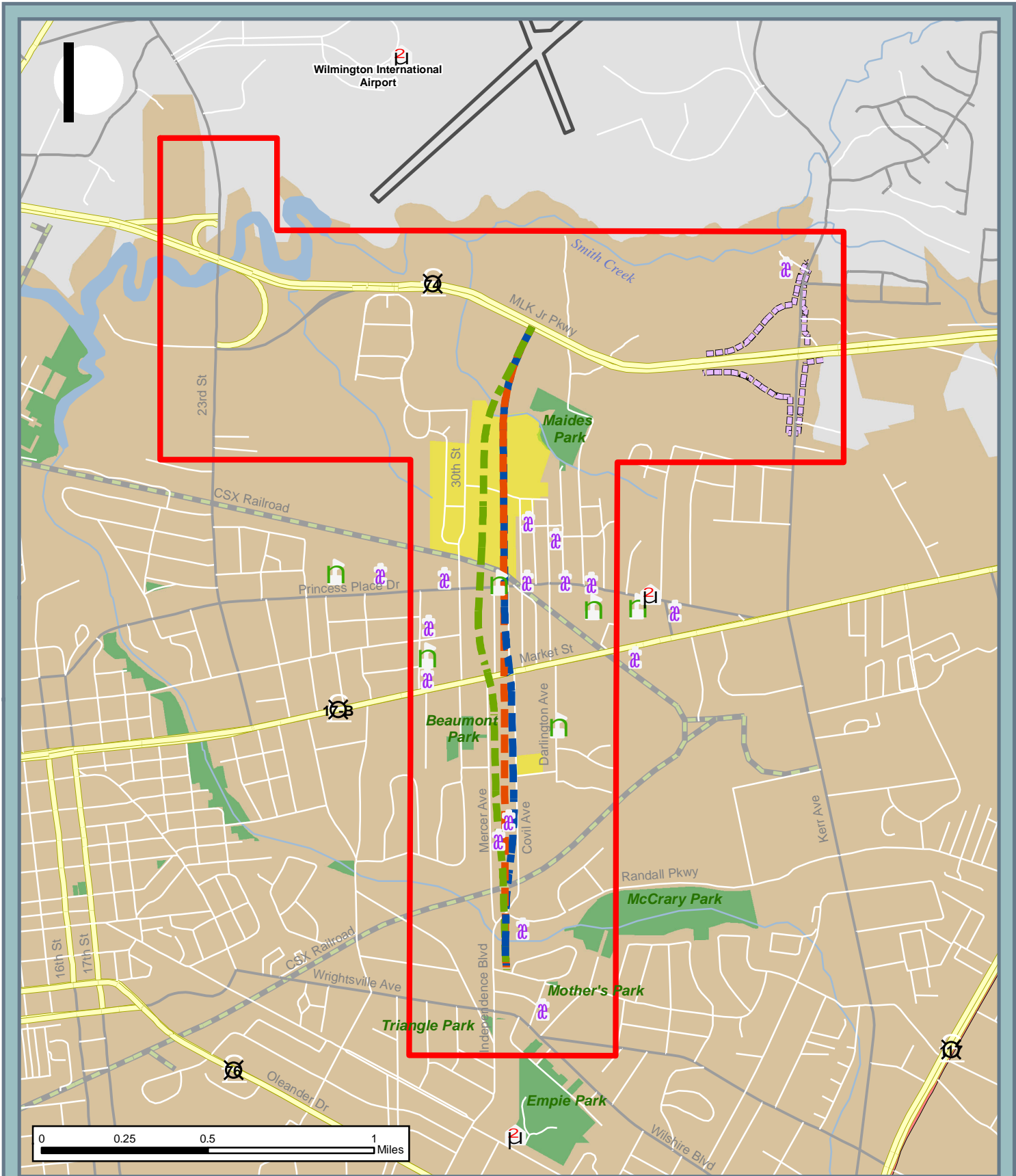
The purpose of this addendum is to provide an overview of the setting and demographics of the study area, and to summarize the environmental justice analysis and conclusions conducted for the North Carolina Department of Transportation (NCDOT) State Transportation Improvement Project (STIP) U-4434, Independence Boulevard Extension (“the project”). This memorandum also serves as an addendum to Section 7.7 of the *Independence Boulevard Extension Community Characteristics Report (CCR)* (NCDOT, 2011). The information herein is intended to focus on the socio-economic composition of the Demographic Study Area (DSA) identified in the CCR for the specific purpose of identifying the potential presence of protected environmental justice populations, as designated in *Presidential Executive Order 12898 – Federal Actions to Address Environmental Justice in Minority and Low-Income Populations* (Executive Order 12898) Issued by President Clinton on February 11, 1994.

### 1.2. Project Context

The NCDOT is proposing to construct a multi-lane facility with portions being on new location in New Hanover County, North Carolina. Located within the urban core of the City of Wilmington, the proposed 1.7-mile long project would be an extension of existing Independence Boulevard (SR 1209) from the intersection with Randall Parkway and Mercer Avenue to Martin Luther King Jr. Parkway (US 74). The project is designated in the 2012-2020 NCDOT STIP as STIP Number U-4434 and described as “Independence Boulevard Extension, Randall Parkway to Martin Luther King Jr. Parkway; multi-lanes on new location,” (North Carolina Department of Transportation 2013). Figure 1 illustrates the geographic context for the proposed project, the associated Direct Community Impact Area (DCIA), and the three alternatives proposed for consideration (Alternatives 2, 7, and 8). Additional project details, including the project Purpose and Need, are presented in the *Independence Boulevard Extension CCR* (North Carolina Department of Transportation 2011).

### 1.3. Project Setting

The project is located on the northern edge of the urban core of the City of Wilmington, and is a transition point to the rapidly developing area in northern New Hanover County. The project is centrally located to the east of Wilmington’s Central Business District, south of the Wilmington International Airport, and west of the University of North Carolina at Wilmington (UNCW). The project is adjacent to several land use types, including commercial, residential, and industrial properties. The commercial and industrial uses are primarily located off the major roads that are near the project, including the Market Street and Randall Parkway corridors. North of the project, along Martin Luther King Jr. Parkway, is largely undeveloped. Several residential neighborhoods and open space exist near the project. The *Independence Boulevard Extension CCR* identified the following community elements within the DCIA: twenty-four neighborhoods (as defined by the City of Wilmington), two Wilmington Housing Authority complexes, six parks, three schools, thirteen churches, and an assisted living facility (North Carolina Department of Transportation 2011). The locations of these community facilities are depicted on Figure 1.



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Date: April 2014

DCIA	Local Roads	Stream (non-delineated)	Church
<b>Project Alternatives</b>	Interstate Highway	Water	Fire Station
Alternative 2	US Highway	Park	School
Alternative 7	NC Highway	Housing Authority	
Alternative 8	State Route	Wilmington Municipal Boundary	
	Railroad		
	Proposed Kerr Ave Interchange (U-3338)		

**Independence Boulevard  
Extension Project  
New Hanover County, NC  
STIP U-4434**

**Figure 1**  
**Direct Community Impact  
Area (DCIA)**



## 2. Environmental Justice Considerations

On February 11, 1994, President Clinton signed Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations* (59 FR 7629). The EO was designed to supplement Title VI of the *Civil Rights Act of 1964*, EO 12250 and the resulting promulgated regulations for the United States Department of Transportation (USDOT) implementing this act (49 CFR Part 21). The EO and the resulting regulations prohibit discriminatory practices in programs receiving Federal financial support. The thrust of EO 12898 is to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of each agency's programs, policies, and activities on minority populations and low-income populations. Specifically, this EO mandates that all Federal agencies provide a strategy for implementation and charges each Federal agency with responsibility of:

conduct[ing] its programs, policies, and activities that substantially affect human health or the environment, in a manner that ensures that such programs, policies, and activities do not have the effect of excluding persons (including populations) from participation in, denying persons (including populations) the benefits of, or subjecting persons (including populations) to discrimination under, such programs, policies, and activities, because of their race, color, or national origin (59 FR 7629, Section 2-2).

This order also requires each agency to:

whenever practicable and appropriate, . . . collect, maintain and analyze information on the race, national origin, income level, and other readily accessible and appropriate information for areas surrounding facilities or sites expected to have a substantial environmental, human health, or economic effect on the surrounding populations, when such facilities or sites become the subject of a substantial Federal environmental administrative or judicial action. Such information shall be made available to the public, unless prohibited by law; and (c) Each Federal agency, whenever practicable and appropriate, shall collect, maintain, and analyze information on the race, national origin, income level, and other readily accessible and appropriate information for areas surrounding Federal facilities that are . . . (2) expected to have a substantial environmental, human health, or economic effect on surrounding populations. Such information shall be made available to the public, unless prohibited by law. . . (59 FR 7629, Section 2-3(b)).

This EO also states that, "each Federal agency, whenever practicable and appropriate, shall share information and eliminate unnecessary duplication of efforts through the use of existing data systems and cooperative agreements among Federal agencies and with State, local, and tribal governments" (59 FR 7629, Section 2-3(d)).

In response to the mandates of EO 12898, the USDOT developed a *Final Environmental Justice Strategy* (60 FR 125: 33896) on June 29, 1995, and a proposed USDOT Order titled, *Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*. The President's Council on Environment Quality (CEQ) issued *Environmental Justice: Guidance under the National Policy Act*, December 10, 1997. Nearly one year later FHWA issued *FHWA Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (6640.23), December 8, 1998.



The analysis contained in this assessment is consistent with that outlined in the above orders and guidance. In addition to the above, the assessment provided in this document was conducted using the methods provided in several other guidance documents including two National Cooperative Highway Research Program documents, *Effective Methods for Environmental Justice Assessment, Report 532 (NCHRP Report 532)* and *Guidebook for Assessing the Social and Economic Effects of Transportation Projects, Report 456 (NCHRP Report 456)*.

### 3. Identifying Environmental Justice Populations

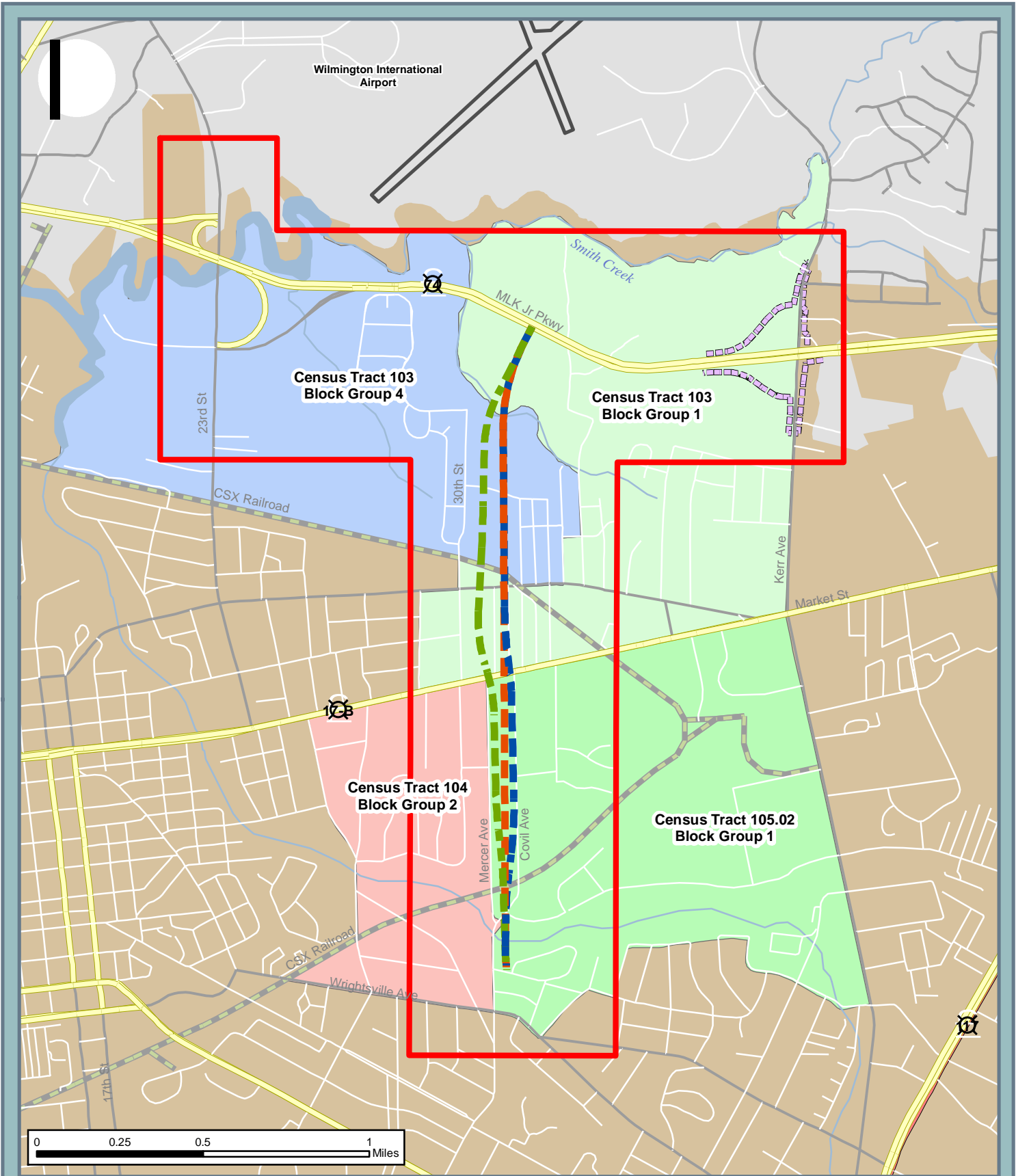
#### 3.1. Methodology

The first step of the environmental justice assessment is to identify protected populations in the study area. Protected populations, for purposes of this assessment, are identified as low-income and/or minority populations. According to the USDOT *Order on Environmental Justice (62FR18377)*, an individual is considered to be low-income if their median household income is at or below the poverty level, as set by the Department of Health and Human Services. “Minority” means a person who is Black, Hispanic, Asian American, American Indian, or Alaskan Native.

Guidance from the NCDOT dictates that a presence of an environmental justice population is noted whenever the non-white population is either 10 percentage points higher than the county average and/or when the low-income population is 5 percentage points higher than the county average. In addition, an environmental justice population is noted whenever either the non-white or low-income population exceeds 50 percentage points. Based on this methodology, the thresholds for this project are 33.1 percent for minority populations and 20.9 percent for low-income populations (populations living below the poverty line).

Data quantifying minority and low-income populations was used from the 2007-2011 American Community Survey (ACS) that was released by the U.S. Census Bureau. Minority and low-income data was gathered for each census block group located in the DCIA. For block groups that were partially located within the DCIA, they were only included if they contained residential land uses within the portion that fell inside the DCIA and/or if it was determined that the population would likely be subjected to direct impacts. Collectively, these census block groups form the Demographic Study Area (DSA), which is depicted in Figure 2.





**North Carolina  
Department of Transportation**



Date: April 2014

**Legend**

DCIA	Local Roads	Railroad
Project Alternative 2	Interstate Highway	Proposed Kerr Ave Interchange (U-3338)
Project Alternative 7	US Highway	Stream (non-delineated)
Project Alternative 8	NC Highway	Water
	State Route	Wilmington Municipal Boundary

**Independence Boulevard  
Extension Project  
New Hanover County, NC  
STIP U-4434**

**Figure 2**  
**Demographic Study Area (DSA)**



### 3.2. Minority Populations

Table 1 provides a breakdown of minority populations by census block group for the DSA. Three of the four census block groups surpass the threshold of 33.1 percent.

**Table 1: Minority Population by Census Block Group**

Geography	Total Population	White, Non-Hispanic		Minority Population*	
		#	%	#	%
CT 103, BG 1	2,214	990	44.7%	1,224	55.3%
CT 103, BG 4	940	0	0.0%	940	100.0%
CT 104, BG 2	684	588	86.0%	96	14.0%
CT 105.02, BG 1	3,628	2,213	61.0%	1,415	39.0%
<b>DSA</b>	<b>7,466</b>	<b>3,791</b>	<b>50.8%</b>	<b>3,675</b>	<b>49.2%</b>
<b>New Hanover County</b>	<b>200,336</b>	<b>154,022</b>	<b>76.9%</b>	<b>46,314</b>	<b>23.1%</b>

\* Minority population includes all races that are non-white and Hispanic populations that are also White.

Source: US Census Bureau, American Community Survey 5-year Estimates (2007-2011), Table B03002, "Hispanic or Latino Origin by Race."

### 3.3. Low Income Populations

Table 2 provides a breakdown of populations living below poverty by census block group for the DSA. Three of the four census block groups surpass the threshold of 20.9 percent.

**Table 2: Populations Living Below Poverty by Census Block Group**

Poverty	Total Population for whom Poverty Status is Determined	Below Poverty Level		Very Poor: Under 50% of Poverty Level		Near Poor: Between 100% and 149% of Poverty Level	
		#	%	#	%	#	%
CT 103, BG 1	2,214	816	36.9%	476	21.5%	373	16.8%
CT 103, BG 4	940	463	49.3%	225	23.9%	264	28.1%
CT 104, BG 2	684	67	9.8%	67	9.8%	6	0.9%
CT 105.02, BG 1	3,576	2386	66.7%	1613	45.1%	457	12.8%
<b>DSA</b>	<b>7,414</b>	<b>3,732</b>	<b>50.3%</b>	<b>2,381</b>	<b>32.1%</b>	<b>1,100</b>	<b>14.8%</b>
<b>New Hanover County</b>	<b>196,095</b>	<b>31,119</b>	<b>15.9%</b>	<b>15,887</b>	<b>8.1%</b>	<b>16,596</b>	<b>8.5%</b>

Source: US Census Bureau, American Community Survey 5-year Estimates (2007-2011), Table C17002, "Ratio of Income to Poverty Level in the Past 12 Months."

### 3.4. Results

Census data indicate a notable presence of minority and low-income populations meeting the criteria for environmental justice within the DSA. In addition, minority and low-income communities have been observed within the DCIA during previous field work completed for this project. The highest concentrations of minorities and low-income populations were observed north of Market Street. Local



planners from the City of Wilmington have also confirmed the presence of minority and low-income populations within the DCIA. Further discussions on the locations of these populations are found in Section 4.

## 4. Further Analysis

### 4.1. Minorities at the Census Block Level

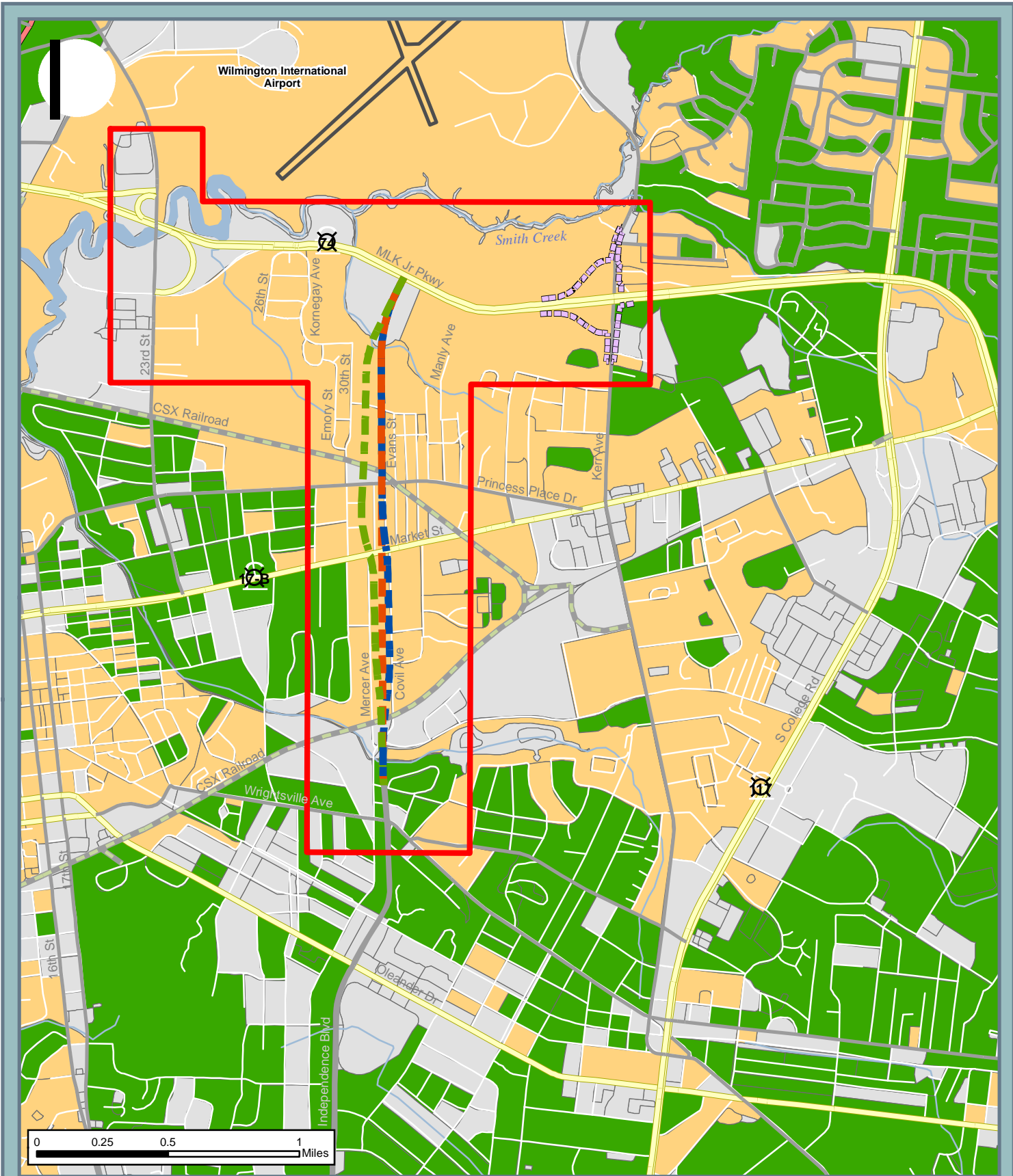
In the CCR that was prepared in 2011, a more granular analysis of minorities was completed using Census data that was released as a part of the 2000 Decennial Census, which provides data on minority populations down to the census block level (North Carolina Department of Transportation 2011). Since the completion of this analysis, the U.S. Census Bureau has released 2010 data at the census block level as a part of the 2010 Decennial Census. For this analysis, the same threshold of 33.1 percent was also used to identify the presence of minority populations. Figure 3 depicts the locations of minorities by census blocks.

A spatial review shows that minorities are generally concentrated in the central and northern portion of the DCIA. High concentrations of minorities exist between Evans Street and Manly Avenue; between Market Street and Princess Place Drive (east of 30th Street); between 30th Street and Emory Street (north of the railroad tracks); and between Kornegay Avenue and 26th Street. In addition, this review also shows areas of the DCIA which are non-residential.

### 4.2. Economic

Based on the 2007-2011 ACS data, the unemployment rate for the DSA is 13.2 percent, while it was 6.0 percent for New Hanover County. The median household income for each census block group varied from \$16,168 to \$105,750. Census Tract 103 Block Groups 1 and 3 and Census Tract 105.02 Block Group 1 had median household incomes of \$23,475, \$16,934, and \$16,168, respectively. Census Tract 104, Block Group 2 had a median household income of \$105,750. This drastic difference in median household income highlights the income inequality within the DCIA. Comparatively, the median household income for New Hanover County for the same time period was \$48,893.

Two public housing complexes are located within the study area, Creekwood and Creekwood South. In addition, local planners have also indicated that there are several scattered section 8 housing properties located in the study area.



**North Carolina Department of Transportation**



Date: April 2014

**Legend**

DCIA	Local Road	Proposed Kerr Ave Interchange (U-3338)
<b>Project Alternatives</b>	Interstate Highway	Stream (non-delineated)
Alternative 2	US Highway	Water
Alternative 7	NC Highway	<b>2010 US Census Blocks</b>
Alternative 8	State Route	No Population
	Railroad	Below Threshold (<33.1%)
		Above Threshold (33.1 - 100%)

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 New Hanover County, NC  
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**Figure 3**  
 Minority Populations by Census Blocks (2010)



### 4.3. Title VI Considerations

According to the 2007-2011 ACS data, 23.4 percent of the population in the DSA is under 18 years of age and 7.1 percent of the population is 65 years or older. Comparatively, in New Hanover County, 20.0 percent of the population is under 18 years of age and 13.6 percent of the population is 65 years or older. Table 3 shows the breakdown by census block group.

Several Title VI resources can be found within the Direct Community Impact Area. These resources include three schools, four daycares, and an assisted living facility.

**Table 3: Title VI Populations**

Geography	Total Population	Under 18 Years		65 Years or Older	
		#	%	#	%
CT 103, BG 1	2,214	432	19.5%	132	6.0%
CT 103, BG 4	940	344	36.6%	109	11.6%
CT 104, BG 2	684	127	18.6%	95	13.9%
CT 105.02, BG 1	3,628	846	23.3%	197	5.4%
<b>DSA</b>	<b>7,466</b>	<b>1,749</b>	<b>23.4%</b>	<b>533</b>	<b>7.1%</b>
<b>New Hanover County</b>	<b>200,336</b>	<b>40,041</b>	<b>20.0%</b>	<b>27,271</b>	<b>13.6%</b>

Source: US Census Bureau, American Community Survey 5-year Estimates (2007-2011), Table B01001, "Sex by Age."

### 4.4. Ethnic Makeup

Based on the 2007-2011 ACS Census data, 1.9 percent of the residents in the DSA identified themselves as Hispanic or Latino. Table 4 provides details on the breakdown of Hispanic or Latino populations within the DSA. The highest concentration of Hispanics is in Census Tract 104, Block Group 2 that has 3.8 percent. Census Tract 104, Block 2 is located west of Mercer Avenue and south of Market Street.

**Table 4: Hispanic or Latino Populations**

Hispanic or Latino Origin	Total Population	Hispanic		Not Hispanic	
		#	%	#	%
CT 103, BG 1	2,214	35	1.6%	2,179	98.4%
CT 103, BG 4	940	0	0.0%	940	100.0%
CT 104, BG 2	684	26	3.8%	658	96.2%
CT 105.02, BG 1	3,628	83	2.3%	3,545	97.7%
<b>DSA</b>	<b>7,466</b>	<b>144</b>	<b>1.9%</b>	<b>7,322</b>	<b>98.1%</b>
<b>New Hanover County</b>	<b>200,336</b>	<b>10,023</b>	<b>5.0%</b>	<b>190,313</b>	<b>95.0%</b>

Source: US Census Bureau, American Community Survey 5-year Estimates (2007-2011), Table B03002, "Hispanic or Latino Origin by Race."



#### 4.5. Limited English Proficiency (LEP) Populations

Executive Order 13166 “Improving Access to Services for Persons with Limited English Proficiency” requires all recipients of federal funds to provide meaningful access to persons who are limited in their English proficiency (LEP). The U.S. Department of Justice defines LEP individuals as those “who do not speak English as their primary language and who have a limited ability to read, write, speak, or understand English,” (67 FR 41459). Data about LEP populations was gathered from the 2007 to 2011 ACS and is presented in Table 5.

**Table 5: LEP Populations in the DSA**

Geography	Total Adult Population, 18 years and older	Primary Language Group of Persons Who Speak English Less than Very Well							
		Spanish		Other Indo-Euro		Asian/Pacific		Other	
		#	%	#	%	#	%	#	%
CT 103, BG 1	1,782	9	0.5%	0	0.0%	0	0.0%	0	0.0%
CT 103, BG 4	596	0	0.0%	0	0.0%	0	0.0%	0	0.0%
CT 104, BG 2	557	0	0.0%	14	2.5%	0	0.0%	0	0.0%
CT 105.02, BG 1	2,782	12	0.4%	0	0.0%	0	0.0%	0	0.0%
<b>DSA Aggregate</b>	<b>5,717</b>	<b>21</b>	<b>0.4%</b>	<b>14</b>	<b>0.2%</b>	<b>0</b>	<b>0.0%</b>	<b>0</b>	<b>0.0%</b>

Source: US Census Bureau, American Community Survey 5-year Estimates (2007-2011), Table B16004, "Age by Language Spoken at Home by Ability to Speak English for the Population 5 Years and Over."

The data indicates that there are no language groups within the DSA in which more than 5 percent of the population or 1,000 persons speak English less than “Very Well.” Therefore, demographic assessment does not indicate the presence of LEP language groups that exceed the Department of Justice’s Safe Harbor threshold. However, NCDOT will include notice of Right of Language Access for future meetings for this project. Thus, the requirements of Executive Order 13166 appear to be satisfied.

#### 4.6. Relocation Report Results

The Relocation Report identifies the number of residential, business, and nonprofit displacees for each alternative (North Carolina Department of Transportation 2014). The report also indicates the income level of the residential displacees. Minority status of residences, business owners, and non-profits displacees are also noted. Table 6 summarizes the results of the analysis for the three alternatives that are still in consideration (Alternatives 2, 7, and 8). Each alternative will have between roughly 40 to 60 percent displacees that are a minority. In addition, each alternative will have roughly between 10 to 18 percent displacees with incomes that are below \$25,000. Based on the U.S. Department of Health and Human Services, the poverty level for 2011 for a family of four was \$22,350. Therefore, the displacees with incomes that are below \$25,000 are near or below the federal poverty level.



**Table 6: Summary of Displaces by Alternative**

Alternative #	Total	Residential	Businesses	Non Profit	Minorities (Residential, Buisness and Non Profit)	Residents with Income between 15-25K
2	205	156	47	2	86	37
7	170	136	39	5	108	17
8	174	128	41	5	100	33

Source: NCDOT EIS Relocation Report for U-4434. 2014

#### 4.7. Zero Car Households

Zero car households are considered socially-vulnerable, as they are dependent on being able to walk, bike, or ride public transportation to nearby facilities for access to schools, jobs, groceries, medical services etc. Therefore, any change in access that may limit their mobility needs to be considered.

The percentage of households with no vehicles available within the DSA is 13.7 percent. This is more than double the percentage for New Hanover County (6.3 percent). Census Tract 103, Block Group 4 had the highest concentration with 47 percent of the households having no vehicles available. This block group is located in the northwest section of the DSA, north of Princess Place Drive. Details on the vehicles available are presented in Table 7.

**Table 7: Zero Car Households**

Geography	Total Households	No Vehicle Available		One Vehicle Available		Two or More Vehicles Available	
		#	%	#	%	#	%
CT 103, BG 1	853	166	19.5%	332	38.9%	355	41.6%
CT 103, BG 4	334	157	47.0%	101	30.2%	76	22.8%
CT 104, BG 2	299	0	0.0%	85	28.4%	214	71.6%
CT 105.02, BG 1	1,410	75	5.3%	548	38.9%	787	55.8%
<b>DSA</b>	<b>2,896</b>	<b>398</b>	<b>13.7%</b>	<b>1,066</b>	<b>36.8%</b>	<b>1,432</b>	<b>49.4%</b>
<b>New Hanover County</b>	<b>84,825</b>	<b>5,316</b>	<b>6.3%</b>	<b>30,887</b>	<b>36.4%</b>	<b>48,622</b>	<b>57.3%</b>

Source: US Census Bureau, American Community Survey 5-year Estimates (2007-2011), Table B08201, "Household Size by Vehicles Available."

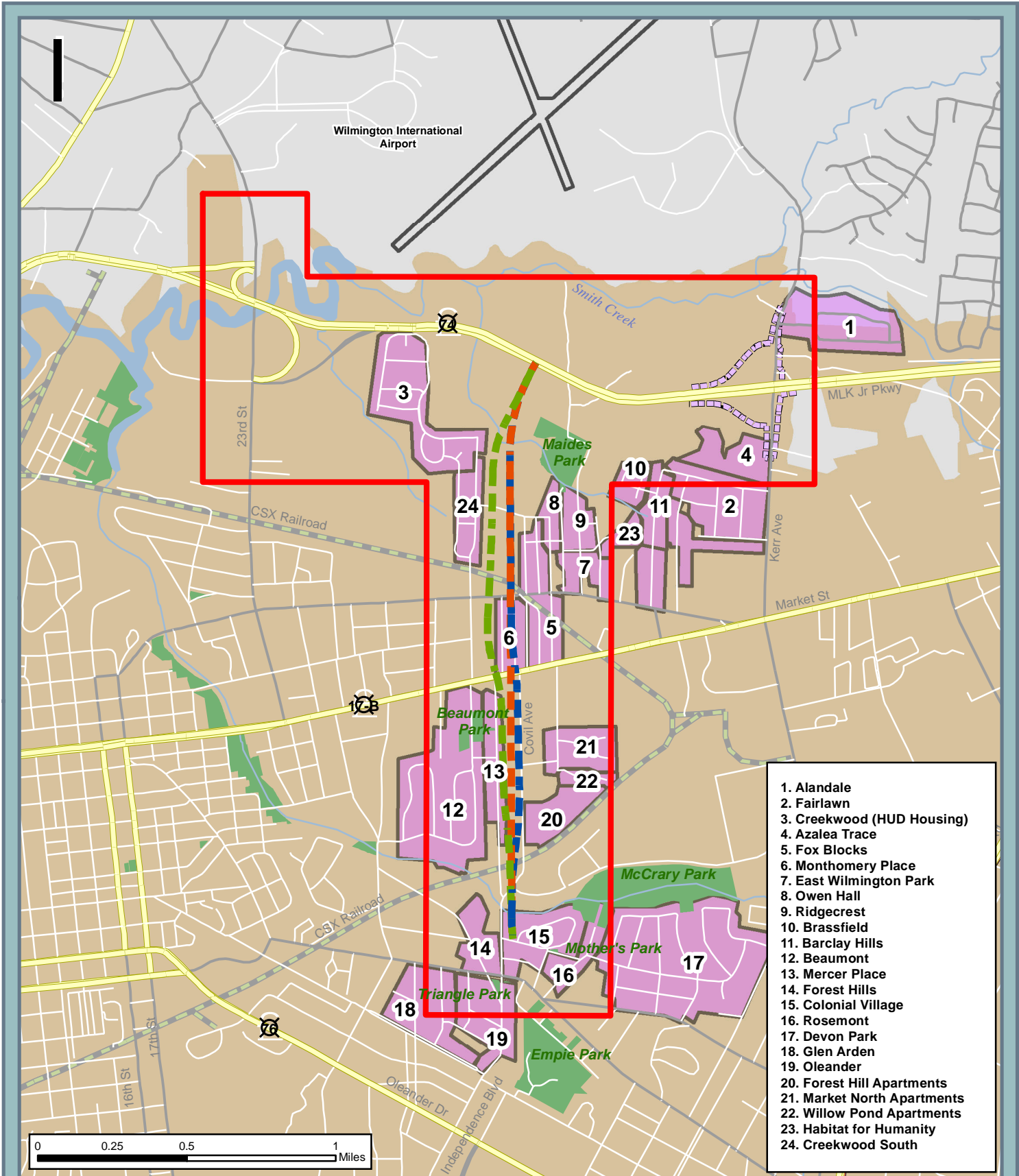
#### 4.8. Neighborhood Identification

A spatial review of the identified environmental justice populations compared to the locations of neighborhoods found that the following neighborhoods likely contain environmental justice populations. Locations of these neighborhoods are depicted on Figure 4.



- Fairlawn
- Azalea Trace
- Fox Blocks
- Montgomery Place
- East Wilmington Park
- Ridgecrest
- Brassfield
- Barclay Hills
- Habitat for Humanity
- Creekwood
- Creekwood South
- Owen Hall
- Forest Hill Apartments
- Market North Apartments
- Willow Pond Apartments
- Colonial Village
- Rosemont





1. Alandale
2. Fairlawn
3. Creekwood (HUD Housing)
4. Azalea Trace
5. Fox Blocks
6. Monthomery Place
7. East Wilmington Park
8. Owen Hall
9. Ridgecrest
10. Brassfield
11. Barclay Hills
12. Beaumont
13. Mercer Place
14. Forest Hills
15. Colonial Village
16. Rosemont
17. Devon Park
18. Glen Arden
19. Oleander
20. Forest Hill Apartments
21. Market North Apartments
22. Willow Pond Apartments
23. Habitat for Humanity
24. Creekwood South

**North Carolina Department of Transportation**



Date: April 2014

**Legend**

DCIA	Local Roads	Stream (non-delineated)
Alternative 2	Interstate Highway	Water
Alternative 7	US Highway	Park
Alternative 8	NC Highway	Wilmington Municipal Boundary
	State Route	
	Railroad	
	Proposed Kerr Ave Interchange (U-3338)	

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**Figure 4**  
 Neighborhoods in the DCIA



## 5. Findings/Next Steps

Census data indicates a notable presence of minority and low-income populations meeting the criteria for environmental justice within the DSA and minority and low-income communities have been observed within the DCIA during previous field work completed for this project. This reaffirms the information presented in the CCR that was completed in 2011. In addition, local planners from the City of Wilmington have also confirmed the presence of minority and low-income populations within the DCIA.

Aside from these protected populations, there are several community facilities within the study area that may serve environmental justice populations, including several schools, churches, parks, and an assisted living facility.

As a result, a Community Impact Assessment (CIA) should be completed that incorporates a detailed Environmental Justice Analysis. This assessment should include an assessment of potential impacts to community facilities that are used by the environmental justice populations such as the schools, parks and recreation facilities, fire and EMS, and the assisted living facility. Impacts to Title VI resources should also be evaluated.

Public Involvement should include specific outreach to the identified environmental justice communities and neighborhoods located north of Market Street and surrounding Princess Place Drive, as well as community representatives of the Wilmington Housing Authority and WAVE Transit.



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# COMMUNITY CHARACTERISTICS REPORT



## INDEPENDENCE BOULEVARD EXTENSION

RANDALL PARKWAY TO US 74 (MARTIN LUTHER KING JR. PARKWAY)  
CITY OF WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA  
STATE TRANSPORTATION IMPROVEMENT PROGRAM PROJECT NO. U-4434



DECEMBER 2011

PREPARED FOR:  
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS

PREPARED BY:  
URS CORPORATION—NORTH CAROLINA







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## Executive Summary

The North Carolina Department of Transportation (NCDOT) is proposing to construct a multi-lane facility with portions being on new location in New Hanover County, North Carolina as STIP # U-4434. Located within the urban core of the City of Wilmington, the proposed 1.7-mile long project would be an extension of existing Independence Boulevard (SR 1209) from the intersection with Randall Parkway and Mercer Avenue to Martin Luther King Jr. Parkway (US 74). Project alternatives have not yet been determined.

### PROJECT PURPOSE AND NEED

The adopted purpose for the project is to improve regional mobility, system traffic capacity, north-south connectivity, and transportation system (intrastate/intermodal) linkage from Randall Parkway, in the vicinity of Independence Boulevard, to Martin Luther King Jr. Parkway that is consistent with local and state transportation plans.

The proposed action would address the following needs:

- **Deficient North-South Regional Roadway Connectivity:** The City of Wilmington’s regional routes consist primarily of continuous east-west roadways and offers only two continuous north-south routes: 3rd Street and College Road (US 117 / NC 132). The distance between the two routes varies from 3 to 4 miles. All remaining north-south roadways offer short, discontinuous segments that force commuters to redirect from one north-south route onto east-west roadway segments that connect to the next north-south route. This weaving or “stair-step movement” north or southward places considerable pressure on already-full east-west routes, as well as signalized intersections in the network. Improving north-south connectivity would reduce the stair-step travel pattern, reduce turning movements, and increase capacity by promoting increased signal green-time to east-west and north-south through movements.
- **Deficient North-South System Capacity:** Traffic modeling and capacity analysis for the transportation network show that additional traffic capacity is needed within central Wilmington (Purpose and Need Report, June 2011). System modeling confirms a high demand for north-south travel within central Wilmington, from Independence Boulevard to College Road, which exceeds the capacity of existing and planned improvements for the area. There are numerous traffic generators, both to the north, south and within the project DCIA, that utilize the north-south routes in central Wilmington.
- **Deficient Linkage Within and Through New Hanover County:** The proposed project has consistently been identified in local planning efforts as a high priority for developing an integrated regional transportation system in the Wilmington Area. The project would provide a facility that addresses the desired outcomes prescribed in the Wilmington Urban Area Transportation Plan, Cape Fear Commutes 2035 Transportation Plan, and provide an important link in the Wilmington Urban Loop.

### COMMUNITY CONTEXT

The City of Wilmington has experienced notable growth in regards to its population, traffic, and development. Populations in New Hanover County grew by approximately 2.4 percent annually between 2000 and 2010 while the City of Wilmington experienced a growth rate of 3.5 percent annually.



The City's population of 106,476 in 2010 was about half that of New Hanover County and slightly less than one-third of the population in the Metropolitan Statistical Area (MSA). According to North Carolina State Demographics Unit, New Hanover County is expected to grow less rapidly over the next two decades than it did between 2000 and 2010. An annual growth rate of approximately 1.4 percent for New Hanover County is forecasted between 2010 and 2020, and the rate is expected to decrease to approximately 1.2% for the 2020 to 2030 time frame.<sup>1</sup> The trend in population growth in North Carolina mirrors that of New Hanover County in that annual growth rates are expected to slow down over the next few decades.

The Direct Community Impact Area (DCIA) is centrally located within Wilmington, east of the Central Business District (CBD), west of the University of North Carolina at Wilmington (UNCW), and south of the Wilmington International Airport. The project vicinity contains a mix of commercial and residential development.

A considerable amount of undeveloped land can be found near the DCIA. Based on the City of Wilmington's Composite Future Land Use Map (WMPO, 2008), there is a group of undeveloped or underutilized parcels along Randall Parkway between Covil Avenue and South Kerr Avenue. Wilmington's Future Land Use Plan, has identified this area for multi-story offices, multi-family residential, and supporting commercial businesses.

The southern portion of the DCIA is dominated by Burnt Mill Business Park. Small pockets of commercial development are present throughout the DCIA, but are concentrated along Market Street. The remainder of the DCIA consists of a variety of residential developments that include both low and high income areas. Residential development varies from moderately-priced single-family homes, to lower-income single-family homes and multifamily housing.

The central portion of the DCIA contains a middle-class single-family neighborhood built in the 1960s. An apartment complex is also present in the area. At Market Street, the DCIA is dominated by commercial development that includes a mix of retail, strip malls, offices, fast food restaurants, and motels.

North of Market Street, there are several residential developments of mixed style and income level that include apartment buildings, townhouses, and detached single-family homes. The more mid-priced areas contain single-family homes with sidewalks and crosswalks for pedestrians. Many of the lower-priced developments lack sidewalks and other pedestrian amenities. The Wilmington Housing Authority operates Creekwood South, which consists of apartment-style/multi-family housing, in the northwest portion of the DCIA. The housing facility contains a number of units that are vacant and boarded up, but it is currently undergoing a \$13 million renovation project.

The northern terminus of the project, south of Martin Luther King Jr. Parkway, consists of undeveloped forest and wetlands. To the north of Martin Luther King Jr. Parkway is the Wilmington International Airport.

Based upon 2000 U.S. Census data at the Block level, the majority of the Blocks within the DSA have a minority population that is greater than the minority threshold of 31.1 percent, which was set to identify Environmental Justice populations. High concentrations of African Americans exist between Evans Street and Manly Avenue; between Market Street and Princess Place Drive (east of 30th Street); between 30th Street and Emory Street (north of the railroad tracks); and between Komegay Avenue and 28th Street.

The majority of Block Groups within the DSA have a high percentage of the population living in poverty relative to New Hanover County which has a low-income rate of 13.1 percent. The highest



concentration of population living below poverty is in the area between Market Street and Princess Place Drive, with the three Block Groups in this area having similar rates of 34, 37 and 39 percent of the population living below poverty (U.S. Census, 2000).

Indicators of community cohesion vary among the neighborhoods within the DCIA. There are several well-established neighborhoods present in the DCIA. Indicators observed during site visits included neighbors helping unload groceries, yard work, and vehicle repair. Other indicators included neighbors interacting, walking together, and children playing in yards.

Streams found within the DCIA include Burnt Mill Creek and an unnamed tributary to Smith Creek. Both waters are classified as C; Sw. The project watershed lies within a Targeted Local Watershed by the North Carolina Ecosystem Enhancement Program (NCEEP). Both streams are listed on the state’s 303(d) list of impaired waters. There are no Outstanding Resource Waters (ORW) or High Quality Waters (HQW) within the DCIA; however, there are three water bodies, 2.5 miles or more outside of the DCIA that are listed as HQW and ORW.

Streams outside of the DCIA, listed as HQW and ORW include the Northeast Cape Fear River, Hewlett Creek, and Howes Creek.

NOTABLE FEATURES

- According to the 2010 U.S. Census, 27.7 percent of the residents in the Demographic Study Area (DSA) identified themselves as Black or African American, compared to 14.8 percent of New Hanover County. Approximately 6.8 percent of the residents in the DSA identified themselves as Hispanic or Latino compared to 5.3 percent of New Hanover County.
- Based on the 2009 ACS Census data, 35.6 percent of the households in the DSA were living below the poverty level, which is triple the poverty level in New Hanover County for the same time period. Within the DSA, Census Tract 103 Block Groups 1 and 2 have particularly high poverty levels.
- Populations meeting the criteria for Environmental Justice (EJ) were documented within the DSA based on the presence of minorities and upon the number of residents living below poverty.
- The DSA data indicates that there are no language groups within the DSA in which more than 5 percent of the population or 1,000 persons speak English less than “Very Well.” Therefore demographic assessment does not indicate the presence of LEP language groups that exceed the Department of Justice’s Safe Harbor threshold. However, NCDOT will include notice of Right of Language Access for future meetings for this project.
- Maides, Beaumont, McCrary, Mother’s, Triangle, and Empie parks are located within the project DCIA and are publicly owned resources and are considered Section 4(f) resources. There are no Section 6(f) resources located within the DCIA.
- Wave Transit provides bus service in the DCIA.
- Existing bicycle lanes exists in the DCIA along Randall Parkway, near the southern terminus of the proposed project, and along Princess Place Drive. Bicycle facilities are planned for the existing portion of Independence Boulevard (south of the proposed project). Several bicyclists were noted during the site visit held on the 20<sup>th</sup> of May 2009.
- The CSX Transportation ‘ACB’ line (Wilmington Belt Line) runs in a circular direction around Wilmington from the North Carolina Port to downtown, crossing through the DCIA in two



locations. The first crossing is along Covil Avenue slightly north of Randall Parkway. The second crossing location within the DCIA is adjacent to Princess Place slightly north of Market Street.

- Wilmington and the community are aware of the proposed project and it has been included in multiple community plans for a number of years. However, there are dissenters in the community, particularly those that stand to be negatively impacted by the project.

### POTENTIAL COMMUNITY IMPACTS

- Acquisition of property will be required for the proposed project. This right-of-way acquisition would be determined once the final corridor is selected. In general, based on the make-up of the DCIA, it is likely to include a combination of residential and commercial properties, as well as areas that are currently undeveloped. The portion of the proposed project from Randall Parkway to just north of Princess Place Drive to the CSX Railroad is mostly developed with single-family residential homes and the number of relocations in this area is expected to be considerable. If these relocations were to involve residents which had been previously relocated due to changes with the Wilmington Housing Authority, this could be considered a recurring community impact.
- Maides Park, Beaumont Park, McCrary Park, Empie Park, Mother's Park, and Triangle Park are all publicly-owned resources, and if the final alignment would require taking land from either park, the project has the potential to have Section 4(f) impacts.
- The proposed project is likely to impact community cohesion and stability. It is highly likely that the proposed project will involve the taking of residential properties. Community facilities (e.g. churches, schools, day cares, etc.) that are located in the DCIA also have the potential to be impacted from either a direct taking or indirect changes in access or loss of clientele. Specific impacts will not be known until a final location and design of the roadway is completed.
- The residents and businesses that remain in the area will be impacted from the loss of neighbors, changes in traffic patterns, change of access to businesses and points of interest, and the construction of a new barrier. This could alter and impede pedestrian mobility and safety dependent upon the final design of the project.
- The construction of a new roadway facility will bring an increase in noise and vibrations from an increase in traffic, as well as an increase in traffic traveling at higher speeds. The increased noise and vibrations may have impacts on residences and users of community facilities.
- The proposed project is included in the Wilmington Urban Area Metropolitan Planning Organization (WMPO) *Cape Fear Commutes 2035 Transportation Plan* and the *Greater Wilmington Urban Area Thoroughfare Plan* (WMPO, 2010 and WMPO, 2005). Additionally, the City of Wilmington included the project in the *Choices: The Wilmington Future Land Use Plan* and the *Market Street Corridor Plan* (City of Wilmington, 2004a and City of Wilmington, 2004b). Therefore, the project is consistent with both local and regional transportation plans.
- The proposed project will involve the creation of a new roadway facility that will bring increased traffic and be a physical and psychological barrier in the community. Roadways that carry increased traffic volumes become more difficult for pedestrians and local traffic to cross which make jobs, schools, shopping areas, churches, and recreational areas less accessible to residents, (NCHRP 221, 1996). In addition, the final design is likely to include grade-separated crossings at the CSX rail crossings, which could introduce a physical barrier, visual impacts, and safety concerns.



- The proposed project would change the overall appearance of the existing neighborhoods in the DCIA and bring more through-traffic.
- The DSA contains high concentrations of minorities and low-income residents. These Environmental Justice populations may be subject to adverse impacts related to construction, noise/vibration, traffic, aesthetics, relocations, and community cohesion from the new roadway.
- The DSA data indicate there are no language groups within the DSA in which more than 5 percent of the population or 1,000 persons speak English less than “Very Well.” Therefore, demographic assessment does not indicate the presence of LEP language groups that exceed the Department of Justice’s Safe Harbor threshold.

### FINDINGS/NEXT STEPS

- Local planners indicated the need for improved bicycle and pedestrian facilities in the project DCIA. Examine inclusion of bicycle and pedestrian accommodations, especially at Randall Parkway, Market Street, and Princess Place Drive. Carefully study the pedestrian crossing locations, and address these locations in the design of the new roadway. Gather local information at subsequent workshops. Consider pedestrian median refuges and crosswalks.
- Provisions for pedestrians and bicyclists to cross over or under the proposed facility may offer opportunities for community interaction, promote a pedestrian-friendly community, and reduce the impacts from a roadway barrier.
- Develop an analysis based on NCDOT procedure, “Evaluating Temporary Accommodations for Pedestrians during Construction.”
- The NCDOT Project Planning Engineer should coordinate with the Wilmington Housing Authority regarding the proposed project and how it relates to the properties they manage/oversee within the project DCIA. The historical issues between the residents of the Wilmington Housing Authority and the local governing bodies have been tense at times.
- The NCDOT Project Planning Engineer should design the public involvement plan to educate, inform, and get input from locals about the proposed changes and specifically reaching out to the identified environmental justice communities and the neighborhoods located north of Market Street and surrounding Princess Place Drive due to likely impacts from relocations and barrier effects from the proposed project.
- The NCDOT Project Planning Engineer should coordinate with businesses along Market Street and Princess Place Drive that would be directly affected to minimize potential impacts.
- The NCDOT Project Planning Engineer should coordinate with NCDOT Public Involvement to develop a public involvement plan that focuses on stakeholders, including officials from Wilmington, New Hanover County, Wave Transit, the Wilmington Housing Authority, the CSX Railroad, and the environmental agencies, among others.
- The NCDOT Project Planning Engineer should coordinate with FHWA to evaluate impacts to potential 4(f) properties (i.e. Maides, Beaumont, McCrary, Mother’s, Triangle, and Empie Parks).
- Develop a Community Impact Assessment (CIA) that incorporates a detailed Environmental Justice Analysis.



## 1. Project Description

The North Carolina Department of Transportation (NCDOT) is proposing to construct a multi-lane facility with portions being on new location in New Hanover County, North Carolina. Located within the urban core of the City of Wilmington, the proposed 1.7-mile long project would be an extension of existing Independence Boulevard (SR 1209) from the intersection with Randall Parkway and Mercer Avenue to Martin Luther King Jr. Parkway (US 74). The proposed action (or proposed project) is designated in the Draft 2012-2018 NCDOT State Transportation Improvement Program (STIP) as STIP Number U-4434 and described as “Independence Boulevard Extension, Randall Parkway to Martin Luther King Jr. Parkway; multi-lanes on new location.”<sup>2</sup> Figure 1 illustrates the geographic context for the proposed project. Project alternatives have not yet been determined.

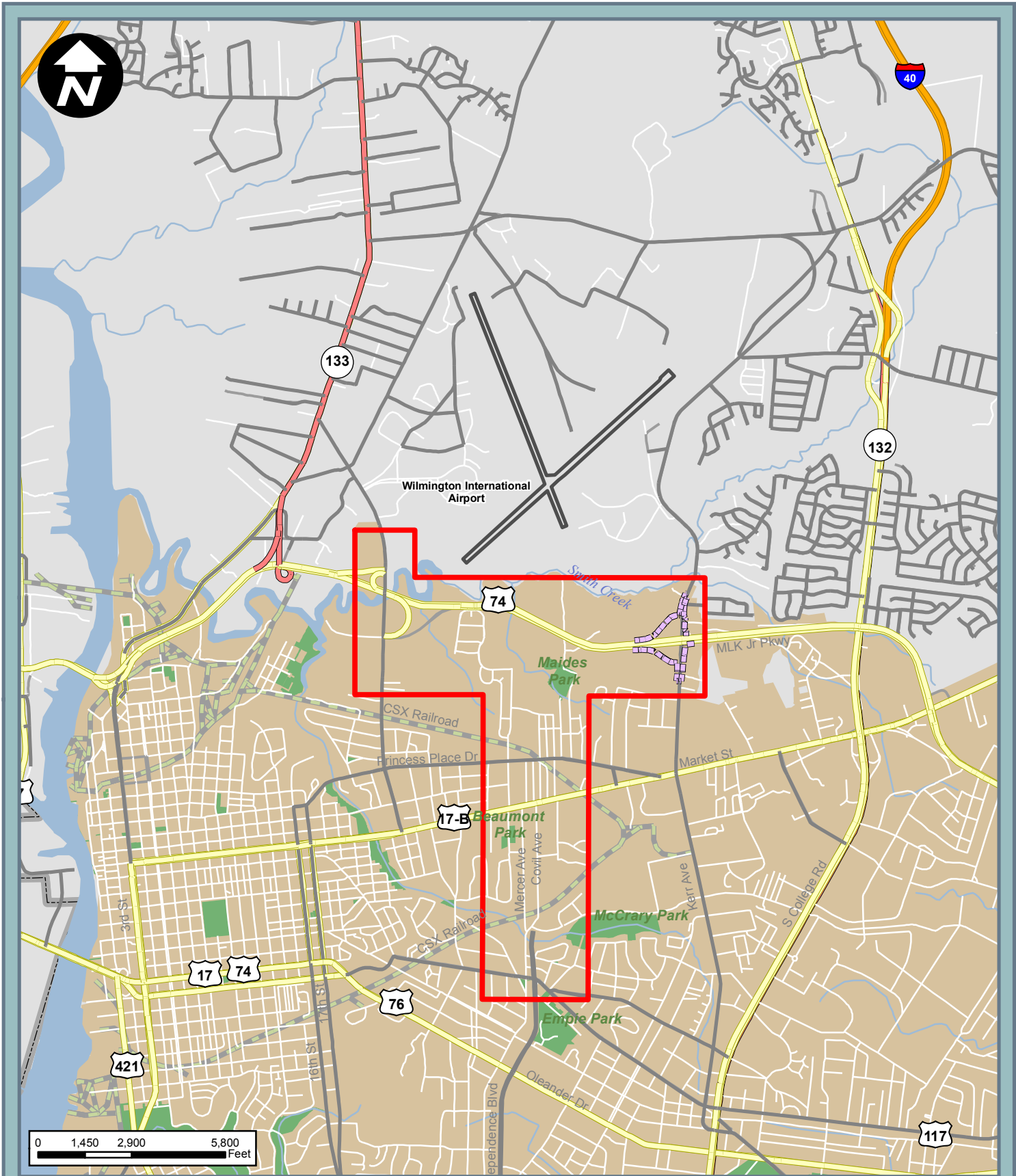
### 1.1. Purpose and Need

The adopted purpose for the project is to:

- Improve regional mobility, system traffic capacity, north-south connectivity, and transportation system (intrastate/intermodal) linkage from Randall Parkway, in the vicinity of Independence Boulevard, to Martin Luther King Jr. Parkway that is consistent with local and state transportation plans.

The proposed action would address the following needs:

- **Deficient North-South Regional Roadway Connectivity:** The City of Wilmington’s regional routes consist primarily of continuous east-west roadways and offers only two continuous north-south routes: 3rd Street and College Road (US 117 / NC 132). The distance between the two routes varies from 3 to 4 miles. All remaining north-south roadways offer short, discontinuous segments that force commuters to redirect from one north-south route onto east-west roadway segments that connect to the next north-south route. This weaving or “stair-step movement” north or southward places considerable pressure on already-full east-west routes, as well as signalized intersections in the network. Improving north-south connectivity would reduce the stair-step travel pattern, reduce turning movements, and increase capacity by promoting increased signal green-time to east-west and north-south through movements.
- **Deficient North-South System Capacity:** Traffic modeling and capacity analysis for the transportation network show that additional traffic capacity is needed within central Wilmington (Purpose and Need Report, June 2011). System modeling confirms a high demand for north-south travel within central Wilmington, from Independence Boulevard to College Road, which exceeds the capacity of existing and planned improvements for the area. There are numerous traffic generators, both to the north, south and within the project DCIA, that utilize the north-south routes in central Wilmington.
- **Deficient Linkage Within and Through New Hanover County:** The proposed project has consistently been identified in local planning efforts as a high priority for developing an integrated regional transportation system in the Wilmington Area. The project would provide a facility that addresses the desired outcomes prescribed in the Wilmington Urban Area Transportation Plan, Cape Fear Commutes 2035 Transportation Plan, and provide an important link in the Wilmington Urban Loop.















**North Carolina  
Department of Transportation**



Date: September 2011

**Legend**

 DCIA	 Proposed Kerr Ave Interchange (U-3338)
 Local Roads	 Railroad
 Interstate Highway	 Streams (non-delineated)
 US Highway	 Water
 NC Highway	 Parks
 State Route	 Wilmington Municipal Boundary

Independence Boulevard  
Extension Project  
New Hanover County, NC  
STIP U-4434

**Figure 1**  
**Project Vicinity Map**





## 1.2. Existing Conditions

The roadway network in the vicinity of the project study area consists of primary US and NC routes and secondary and local streets. Roadways vary from 2-lane to 6-lane segments and carry both local and regional traffic. As noted in the adopted Purpose and Need for the project and shown in Figure 2, the north-south routes in the project vicinity consist of short, discontinuous segments and do not provide connectivity between the east-west routes. The east-west roadways are largely congested and forecasted to have high demand through 2035.

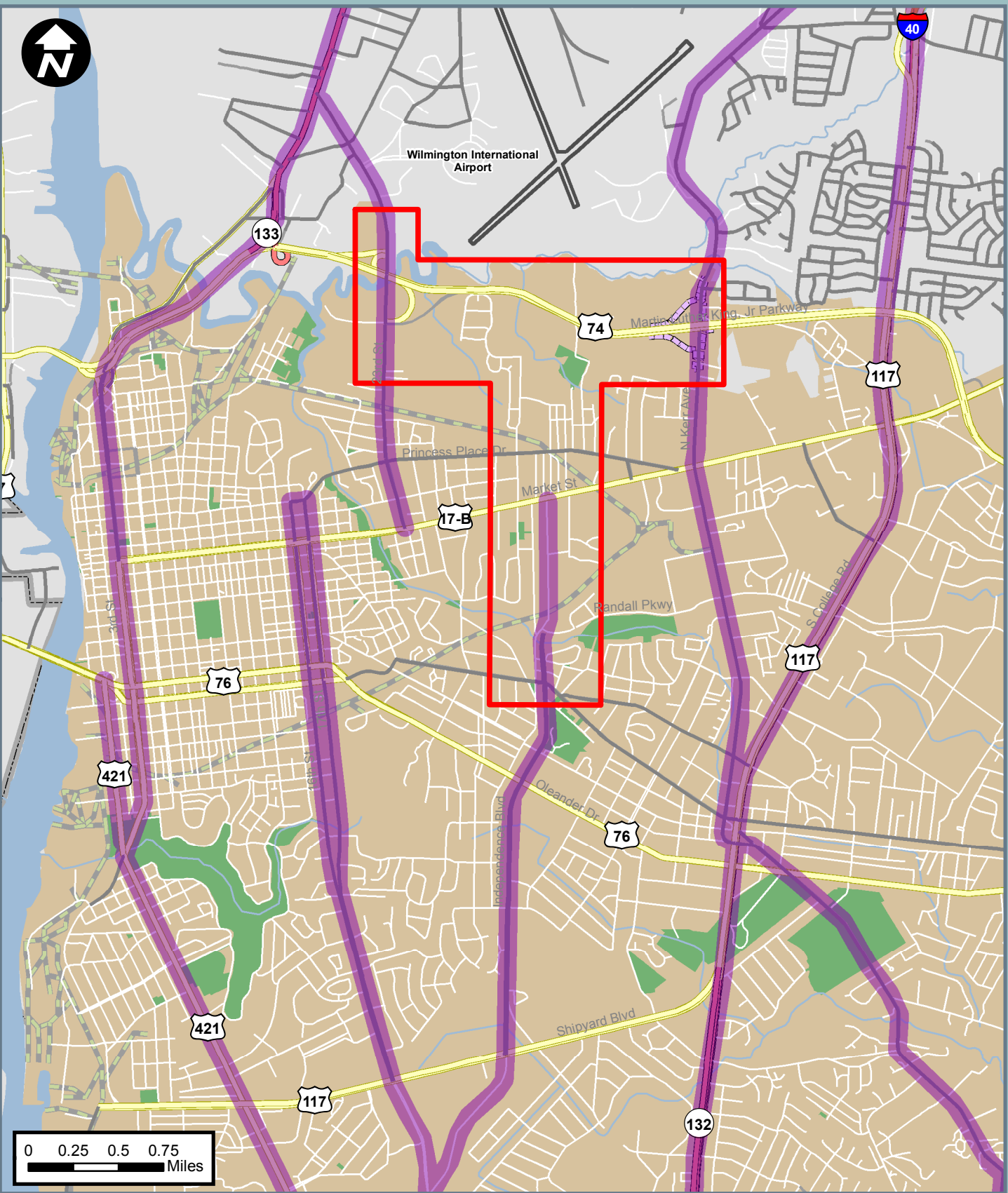
Land uses vary along the roadways and, with the exception of Martin Luther King Jr. Parkway, the roadways do not have access controls. At the southern terminus of the proposed project where the existing Independence Boulevard segment intersects Randall Parkway and Mercer Avenue, the land uses consist of an office park and a small manufacturing facility. Moving north, the dominant land uses are residential, commercial, and office. The northern terminus of the proposed project at Martin Luther King Jr. Parkway is mostly undeveloped open space, some of which are wetlands. Limited sidewalks exist and the only bicycle facilities are bike lanes along Princess Place Drive and Randall Parkway.

In addition to the roadways summarized in this section, the CSX Transportation ‘ACB’ line (Wilmington Belt Line) runs in a circular direction around Wilmington from the North Carolina Port to downtown, crossing through the study area in two locations. The first crossing is along Covil Avenue slightly north of Randall Parkway. The second crossing location within the study area is adjacent to Princess Place slightly north of Market Street. Section 5.6 Railroads provides additional information on the railroad crossings.

Table 1 summarizes the typical sections and the presence of sidewalks along the roadways in the study area and is followed by a narrative description each roadway.

**Table 1: Summary of Roadway Network in Project Vicinity**

Roadway Name	Typical Section	Sidewalks
<b>NORTH-SOUTH</b>		
<b>Independence Boulevard (SR 1209)</b>	4-lane Divided	No
<b>Covil Avenue</b>	2-lane Undivided	Yes, partial
<b>Mercer Avenue</b>	2-lane Undivided	No
<b>Montgomery Street</b>	2-lane Undivided	No
<b>Kerr Avenue (SR 1175)</b>	2-lane Undivided	Yes, partial
<b>College Road (US 117/NC 132)</b>	4/6-lane Divided	No
<b>23<sup>rd</sup> Street</b>	2-lane Undivided	Yes, partial
<b>EAST-WEST</b>		
<b>Martin Luther King Jr. Parkway (US 74)</b>	6-lane Divided	No
<b>Market Street (US 17 Business)</b>	5-lane w/ Center Turn Lane	Yes
<b>Randall Parkway</b>	2-lane Divided	No
<b>Oleander Drive (US 76)</b>	4/6-lane Divided	Yes, partial
<b>Princess Place Drive</b>	2-lane w/ Center Turn Lane	Yes, partial

















**North Carolina Department of Transportation**



Date: September 2011

**Legend**

 DCIA	 Railroad
 North/South Arterial Roads	 Streams (non-delineated)
 Local Roads	 Water
 Interstate Highway	 Parks
 US Highway	 Wilmington Municipal Boundary
 NC Highway	 County Boundary
 State Route	
 Proposed Kerr Ave Interchange (U-3338)	

**Independence Boulevard Extension  
New Hanover County, NC  
STIP U-4434**

**Figure 2**  
**North-South Arterial Roads**



### Primary US Routes and NC Routes

#### Market Street (US 17 / US 17 Business)

US 17 is a north-south route that extends along the Atlantic Coast from Winchester, Virginia to Ft. Myers, Florida, and traverses New Hanover County. The roadway travels east-west across the project study area as Market Street and is one of the most congested corridors in the City. US 17 Business follows Market Street in the east-west direction through the project study area before turning to the northeast and ending at the interchange with I-140/US 17. Within the vicinity of the project the roadway is a multi-lane facility with no control of access.

#### Martin Luther King Jr. Parkway (US 74)

US 74 is an east-west route that runs from Chattanooga, Tennessee to Wrightsville Beach in New Hanover County, North Carolina. This is a major route for travelers coming from the Charlotte metropolitan region to the beaches of southeastern North Carolina. US 74 traverses the project study area as Martin Luther King Jr. Parkway. The roadway is a multi-lane facility with controlled access west of the proposed project and partially controlled access east of the proposed project.

#### Oleander Drive (US 76)

US 76 is an east-west route that runs from Chattanooga, Tennessee through the foothills of Georgia and South Carolina to Wilmington, North Carolina. US 76 is identified as Oleander Drive through much of the City of Wilmington and through the entire project study area. The roadway is a multi-lane facility with no control of access within the vicinity of the proposed project.

#### College Road (US 117/NC 132)

US 117 is a north-south route that begins at the Port of Wilmington and ends at US 301 near Wilson, North Carolina. NC 132 is a north-south route that runs from US 117 to the eastern terminus of I-40, entirely within New Hanover County. US 117 combines with NC 132 as College Road through the project study area. The combined US 117/NC 132 (College Road) is a major route that serves as the terminus point for Interstate 40, provides access to the urban core of Wilmington and the University of North Carolina at Wilmington. The roadway is a multi-lane facility with no control of access within the vicinity of the proposed project.

### Secondary Routes and Local Roads

#### Independence Boulevard (SR 1209)

SR 1209 is a north-south route known as Independence Boulevard that runs from River Road to Randall Parkway. The proposed project will extend this roadway north to Martin Luther King Jr. Parkway. The roadway is a two-lane roadway with no control of access south of Shipyard Boulevard and transitions to a multi-lane facility at Shipyard Boulevard with partial control of access on the segment from Oleander Drive to Randall Parkway. The City of Wilmington currently has plans to widen the segment from US 421 (Carolina Beach Road) to Shipyard Boulevard to a four-lane divided highway. The proposed Cape Fear Skyway project is proposed to connect into Independence Boulevard in the vicinity of Carolina Beach Road. The proposed Cape Fear Skyway project is being studied by the North Carolina Turnpike Authority.



### Kerr Avenue (SR 1175)

SR 1175 is a north-south route known as Kerr Avenue that runs from College Road to Blue Clay Road. The roadway is a three-lane roadway south of Market Street and a two-lane roadway to the north of Market Street with no control of access. NCDOT is in the design stages to widen Kerr Avenue to a four-lane divided highway from Randall Parkway to Martin Luther King Jr. Parkway and provide an interchange at the intersection of Martin Luther King Jr. Parkway.

### Randall Parkway

Randall Parkway is an east-west route that runs from Independence Boulevard to Reynolds Drive and is maintained by the City of Wilmington as a Major Thoroughfare. The roadway is currently a two-lane divided roadway with no control of access. The City of Wilmington currently has plans to widen the roadway to a four-lane divided facility from Independence Boulevard to College Road.

### Covil Avenue

Covil Avenue is a north-south route that runs from the Randall Parkway/Independence Boulevard intersection to Market Street. The roadway is a two-lane local road with no control of access.

### Mercer Avenue

Mercer Avenue is a north-south route that parallels Covil Avenue to the west and turns eastward to intersect opposite Randall Parkway at the Independence Boulevard/Covil Avenue intersection. The roadway is a two-lane divided roadway with no control of access which utilizes speed humps to calm traffic.

### Montgomery Avenue

Montgomery Avenue is a north-south route that runs from Market Street to Princess Place Drive. The roadway is a two-lane local road with no control of access.

### Princess Place Drive

Princess Place Drive is an east-west route entirely within the project study area that runs from 17th Street to Market Street. It is a three-lane road with a center turn lane, and has no control of access.

### 23rd Street

23rd Street is a north-south route that begins at Market Street and ends at NC 133 just north of the study area. The roadway is a two-lane local road with no control of access and includes an interchange at Martin Luther King Jr. Parkway.

## 2. Methodology

This report outlines the existing conditions and trends of the area around the proposed project. It inventories community resources, issues, and concerns that the project may affect or impact. The report includes data gathered from the U.S. Census merged with data from local plans, policies, maps, and regulations. It further includes observations from field visits and interviews with NCDOT Staff, local planners, leaders, and citizens in an effort to document resources as well as community vision, values, and goals. The report maps community attributes and geographic areas to assist in project decision-making.



### 3. Community Study Areas

#### 3.1. Direct Community Impact Area

The Direct Community Impact Area (DCIA) is the area surrounding the project that is likely to be directly affected by the project in any way during, throughout, and after project completion. The project study area was drawn in a manner that would allow for the evaluation of a full range of alternatives that connect the logical termini for the project. Since an alignment has not yet been identified, the project study area, as defined in the Purpose and Need, was used as the DCIA. The area runs generally north and south, with an expanded area running east and west near the northern termini at Martin Luther King Jr. Parkway. The DCIA boundaries are approximately Martin Luther King Jr. Parkway to the north, Randall Parkway to the south, Barclay Hill Drive to the east and 30th Street to the west. The DCIA is shown on Figure 3.

#### 3.2. Demographic Study Area

The Demographic Study Area (DSA) is defined to provide demographic characteristics for the community surrounding the project. The DSA was created by including all Census Block Groups that have all or a portion of its geography located within the DCIA. The exception to this is three Block Groups that are north of Smith Creek which were left out of the DSA because the portions of these Block Groups within the DCIA are contained within the boundaries of the Wilmington International Airport and do not contain any populations.

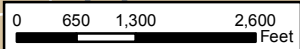
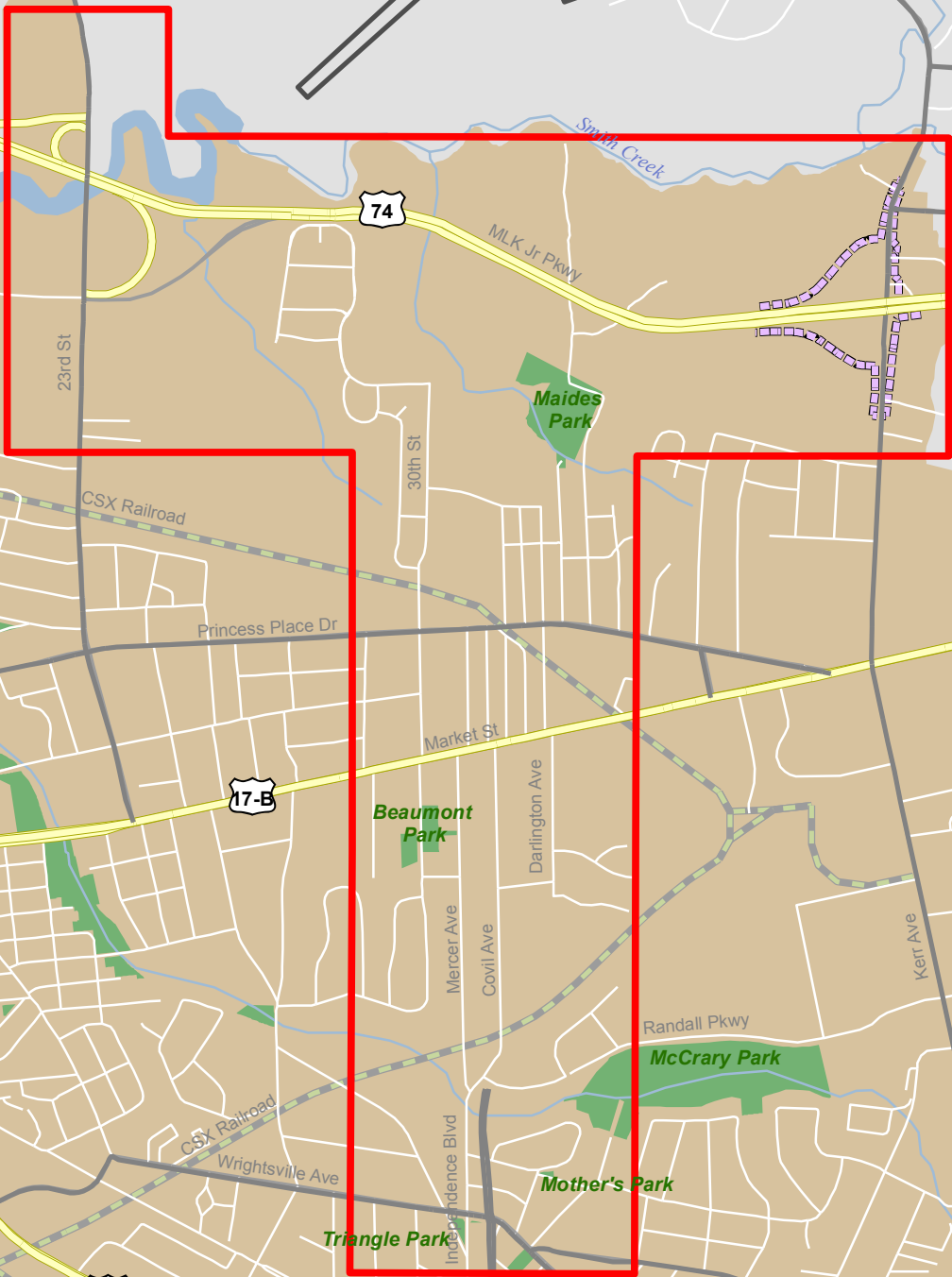
The demographic data presented in this report based on US Census decennial census data for 2000 and 2010 and the 2005-2009 Five Year American Community Survey (ACS) data. The 2000 decennial data and the 2005-2009 ACS data were both released based upon the 2000 Census Block Groups. The 2010 decennial data is based upon 2010 Census Block Groups. Therefore, two separate DSAs are used and referenced in this report. The 2000 DSA is shown in Figure 4 and the 2010 DSA is shown in Figure 5.

Table 2: DSA Block Groups

2000 Block Groups	2010 Block Groups
Census Tract 103, Block Group 1	Census Tract 103, Block Group 1
Census Tract 103, Block Group 2	Census Tract 103, Block Group 3
Census Tract 103, Block Group 4	Census Tract 103, Block Group 4
Census Tract 104, Block Group 1	Census Tract 104, Block Group 2
Census Tract 105.02, Block Group 1	Census Tract 104, Block Group 3
Census Tract 105.02, Block Group 2	Census Tract 105.02, Block Group 1
Census Tract 105.02, Block Group 3	Census Tract 105.02, Block Group 2
Census Tract 116.01,Block Group 3	Census Tract 105.02, Block Group 3
	Census Tract 116.05, Block Group 2



Wilmington International Airport



**North Carolina Department of Transportation**



Date: September 2011

**Legend**

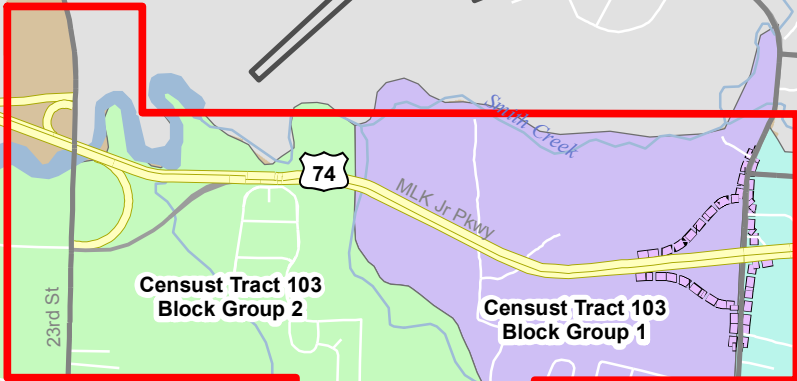
DCIA	Proposed Kerr Ave Interchange (U-3338)
Local Roads	Railroad
Interstate Highway	Streams (non-delineated)
US Highway	Water
NC Highway	Parks
State Route	Wilmington Municipal Boundary

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**Figure 3**  
Direct Community Impact Area (DCIA)



Wilmington International Airport



Censust Tract 103  
Block Group 2

Censust Tract 103  
Block Group 1

Censust Tract 116.01  
Block Group 3

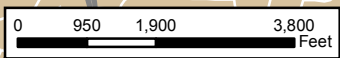
Censust Tract 103  
Block Group 4

Censust Tract 105.02  
Block Group 1

Censust Tract 104  
Block Group 1

Censust Tract 105.02  
Block Group 2

Censust Tract 105.02  
Block Group 3















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**Legend**

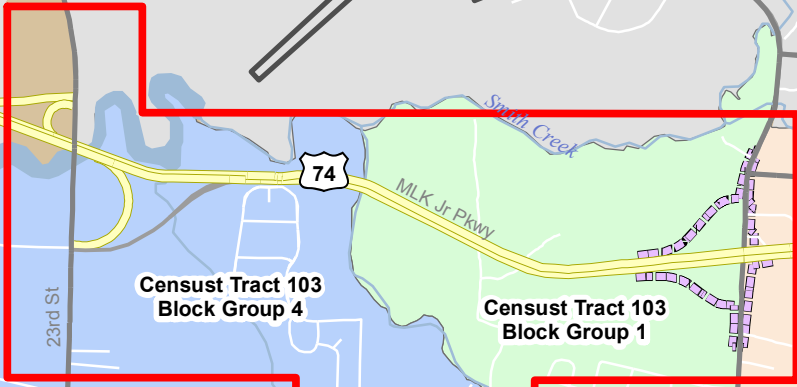
-  DCIA
-  Local Roads
-  Interstate Highway
-  US Highway
-  NC Highway
-  State Route
-  Proposed Kerr Ave Interchange (U-3338)
-  Railroad
-  Streams (non-delineated)
-  Water
-  Airport
-  Wilmington Municipal Boundary

Independence Boulevard  
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**Figure 4**  
Demographic Study Area (DSA)  
2000 Census Block Groups



Wilmington International Airport



Censust Tract 103  
Block Group 4

Censust Tract 103  
Block Group 1

Censust Tract 103  
Block Group 3

Censust Tract 104  
Block Group 2

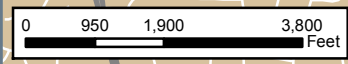
Censust Tract 104  
Block Group 3

Censust Tract 105.02  
Block Group 1

Censust Tract 105.02  
Block Group 2

Censust Tract 105.02  
Block Group 3

Censust Tract 116.05  
Block Group 2















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**Legend**

-  DCIA
-  Local Roads
-  Interstate Highway
-  US Highway
-  NC Highway
-  State Route
-  Proposed Kerr Ave Interchange (U-3338)
-  Railroad
-  Streams (non-delineated)
-  Water
-  Airport
-  Wilmington Municipal Boundary

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**Figure 5**  
Demographic Study Area (DSA)  
2010 Census Block Groups





## 4. Regional/Community Context

The City of Wilmington is located in New Hanover County along the coast in southeastern North Carolina. The coastal plain physiographic province is characterized by flat land to gently rolling hills and valleys, with elevations ranging from sea-level near the coast to 600 feet in the sand hills.<sup>3</sup> The Cape Fear River forms the western border of the county while the east is bordered by the Atlantic Ocean. Major municipalities in New Hanover County include Wilmington, Carolina Beach, Kure Beach, and Wrightsville Beach.

The City of Wilmington is the most populated municipality in New Hanover County and the largest city in eastern North Carolina. Populations in New Hanover County grew by approximately 2.4 percent annually between 2000 and 2010 while the City of Wilmington experienced a growth rate of 3.5 percent annually. The City’s population of 106,476 in 2010 was about half that of New Hanover County and slightly less than one-third of the population in the Metropolitan Statistical Area (MSA) (Table 3).

**Table 3: Population Growth**

Area	Population			Percent Growth	
	1990	2000	2010	1990-2000	2000-2010
<b>City of Wilmington</b>	55,530	75,838	106,476	36.6%	40.4%
<b>New Hanover County</b>	120,284	160,307	202,667	33.3%	26.4%
<b>Wilmington MSA</b>	171,269	233,450	362,315	36.3%	55.2%
<b>North Carolina</b>	6,628,637	8,049,313	9,535,483	21.4%	18.5%

Source: US Census Bureau

The growth of the metropolitan area spurred a substantial increase in the construction of residential and commercial properties in the metropolitan area. The region is expected to see continued growth. According to North Carolina State Demographics Unit, New Hanover County is expected to grow less rapidly over the next two decades than it did between 2000 and 2010. An annual growth rate of approximately 1.4 percent for New Hanover County is forecasted between 2010 and 2020, and the rate is expected to decrease to approximately 1.2 percent for the 2020 to 2030 time frame.<sup>4</sup> The trend in population growth in North Carolina mirrors that of New Hanover County in that annual growth rates are decreasing over the next few decades (Table 4).

**Table 4: Population Forecasts**

Area	Population		Percent Growth	
	2020	2030	2010-2020	2020-2030
<b>New Hanover County</b>	233,583	263,727	15.3%	12.9%
<b>North Carolina</b>	11,039,342	12,463,244	15.8%	12.9%

Source: North Carolina Office of State Budget and Management, May 2011



Potential reasons for past and forecast growth include relatively inexpensive undeveloped land with the availability of water service, close proximity to golf courses and beaches, and the construction of the Wilmington Bypass and Martin Luther King Jr. Parkway.

The project DCIA, as shown in Figure 3, is located on the northern edge of the urban core of the City, and is a transition point to the rapidly developing area in northern New Hanover County. The DCIA is mostly located within the City of Wilmington, with the northern portions, north of Smith Creek, located within New Hanover County. In addition, the DCIA is centrally located just outside of the Central Business District (CBD), south of the airport, east of the campus of the University of North Carolina at Wilmington (UNCW), and in close proximity to I-40.

The DCIA is made of several land use types, including commercial, residential, and industrial properties. These land use types occur along major routes including the Market Street and Randall Parkway corridors. The western portion of the DCIA is along the outskirts of the City of Wilmington's downtown business district. The northern portion of the project DCIA along Martin Luther King Jr. Parkway is largely undeveloped with the remainder of the project DCIA including a mix of residential and open space. More details on the existing community context are described in the following section.



## 5. Community Context, Direction, and Notable Features Inventory

### 5.1. Community Context

In general, the land uses within the DCIA are comprised of a mixture of single-family residential communities, multi-family complexes, commercial and office centers, small stand-alone retail establishments, auto service shops and vacant, undeveloped land. The southern portion of the DCIA contains office parks and small neighborhoods. The dominant land uses as you move north along the proposed project corridor are residential, commercial, and office; with the commercial and office development primarily occurring along Market Street (US 17 Business). The DCIA includes all or a portion of 23 subdivisions, shown in Figure 6. The residential developments consist of both modest single-family and multifamily housing with a low to moderate price range.

This section describes the existing land uses and primary community features within the DCIA in five segments: (1) the area between the southern terminus of the proposed project at the intersection of Independence Boulevard and Randall Parkway and the CSX railroad; (2) the area north of the CSX rail corridor and south of Market Street, primarily focusing on the Mercer Avenue and Covil Avenue corridors; (3) the Market Street corridor; (4) the area north of Market Street up to Martin Luther King Jr. Parkway; and (5) the Martin Luther King Jr. Parkway area. The summaries identify subdivisions, business areas, community facilities, and residential areas. Applicable land use plans are introduced in this section.

#### DCIA from Independence Boulevard & Randall Parkway to the CSX Railroad

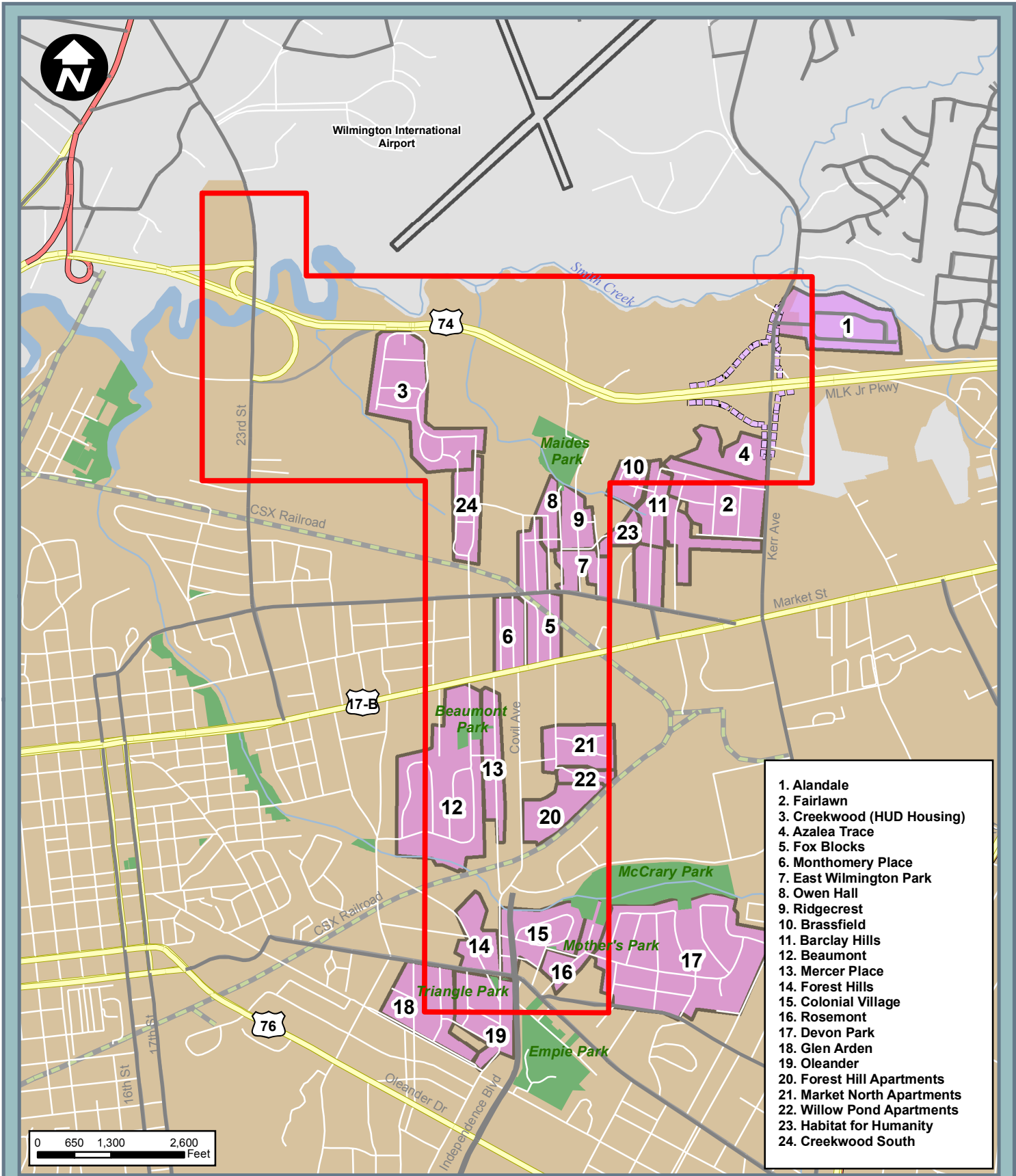
The parcels surrounding the southern terminus of the project at the intersection of Independence Boulevard and Randall Parkway contain the Burnt Mill Business Park and a small industrial building. The Rosemont and Devon Park subdivisions, located to the east of Independence Boulevard, contain modest one-story structures on small lots on a street network that lacks curbs and sidewalks. In contrast, the Forest Hills subdivision to the west of Independence Boulevard is higher-income with mostly large two and three-story structures with significant setbacks from a street network that contains curbs and sidewalks. Two churches, Unity Christ Church and Glad Tidings Community Church, are located in this portion of the DCIA. Several parks are also located here that include McCrary Park and Empie Park, both which are larger city-wide parks and two neighborhood parks - Mother's Park and Triangle Park.



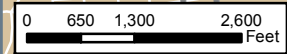
*A modest single-family home found in the Rosemont subdivision to the east of Independence Boulevard.*



*A home located west of Independence Boulevard in the Forest Hills subdivision on a large lot with sidewalks.*



1. Alandale
2. Fairlawn
3. Creekwood (HUD Housing)
4. Azalea Trace
5. Fox Blocks
6. Monthomery Place
7. East Wilmington Park
8. Owen Hall
9. Ridgecrest
10. Brassfield
11. Barclay Hills
12. Beaumont
13. Mercer Place
14. Forest Hills
15. Colonial Village
16. Rosemont
17. Devon Park
18. Glen Arden
19. Oleander
20. Forest Hill Apartments
21. Market North Apartments
22. Willow Pond Apartments
23. Habitat for Humanity
24. Creekwood South



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**Legend**

DCIA	Railroad
Local Roads	Neighborhoods
Interstate Highway	Streams (non-delineated)
US Highway	Water
NC Highway	Parks
State Route	County Boundary
Proposed Kerr Ave Interchange (U-3338)	Wilmington Municipal Boundary

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**Figure 6**  
Subdivisions in the DCIA

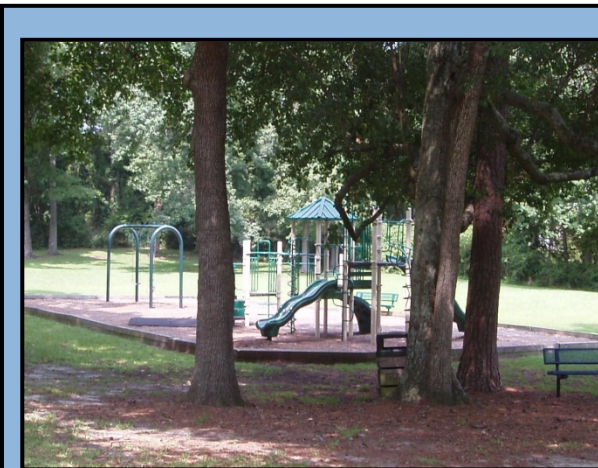


*An example of modest single-family housing found near the southern terminus of the proposed project. This neighborhood is well-established with homes and yards kept in good condition.*

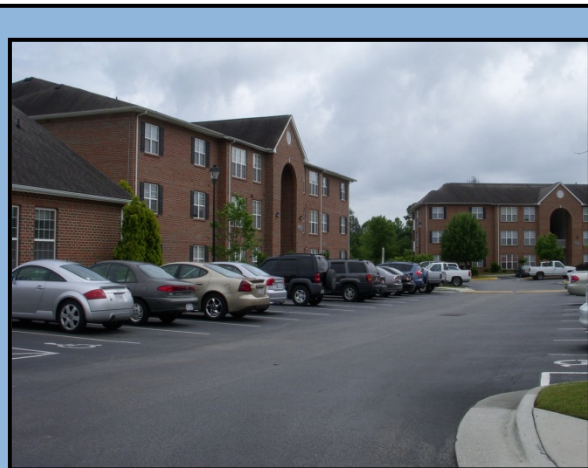
DCIA from the CSX Railroad to Market Street

North of the CSX Railroad and south of Market Street, there are five subdivisions within the DCIA. The first, Beaumont, is located west of Mercer Avenue. Most of the neighborhood is within the DCIA. Moving east, between Mercer Avenue and Covil Avenue is Mercer Place. This subdivision is completely contained within the DCIA and contains single-family residential in the moderate-income range. The houses were constructed in the 1960's and are a mix of one and two-story units on medium sized lots. The street network has curbs and some sidewalks. East of Covil Avenue there are several multi-family residences, duplexes, and townhomes within the three subdivisions. Most notably, there are there large apartment complexes including the Reserve at Forest Hills Apartments, Market North Apartments, and Willow Pond Apartments.

In addition to these residential areas, moving north along Covil Avenue towards Market Street, there is a cluster of small businesses and building suppliers. This portion of the DCIA also contains the Children's Learning Center of Wilmington, Beaumont Park, Port South Village Assisted Living Facility, a group living facility for women, Crossroads Baptist Church, and Iglesia Vision Trinidad Divina Pentecostal Church.



*The open space and playground equipment shown here are located in Beaumont Park.*



*These multi-story apartments have recently been constructed just east of Covil Avenue.*



DCIA within the Market Street (US 17 Business) Corridor

The Market Street Corridor includes commercial businesses located in a mixture of typical strip developments, modern stand-alone structures, and several adaptive re-uses of former residential structures. Nearly all of the businesses have parking located between the structures and the street. Sidewalks are found intermittently along the corridor. Commercial uses include a motel, fast food establishments, a furniture store, automobile repair shop, and a car dealer. Several vacancies can be found along the corridor, including both boarded up businesses as well as newly constructed facilities. A private school and church, the Wilmington Seventh Day Adventists is located near 29<sup>th</sup> Street.



The site of a former Wendy's Restaurant along Market Street sits vacant.

A newly constructed office building awaits its first tenants on Market Street.

DCIA North of Market Street and South of Martin Luther King Jr. Parkway (Princess Place Drive, Montgomery, and Barclay Hills)

There are several residential areas located north of Market Street and south of Martin Luther King Jr. Parkway within the DCIA. The residential community immediately north of Market Street near Montgomery Avenue and Clay Street consists of modest single-story houses on small lots. The street network generally lacks sidewalks or other pedestrian crossings or signage. In the northwestern portion of the DCIA along 30th Street is Creekwood South, which is a U.S. Department of Housing and Urban Development (HUD) housing development operated by the Wilmington Housing Authority. This development consists of one and two-story apartment-style units, many which are currently vacant and boarded up. However, the complex is currently undergoing a \$13 million renovation project. On the eastern side of the DCIA along Barclay Hills is a residential area that has a mix of housing constructed from the 1970's to the present. These homes are modest in size, but are located on larger sized lots and have moderate setbacks from the roadway. Sidewalks are not present throughout this subdivision. Along Princess Place Drive is a former school (William H. Blount Elementary) which is now vacant. Smart Creations Educational Center Day Care is located off of Princess Place Drive. Six churches are also located in this area: Wilmington First Pentecostal Holiness Church, Ebenezer Missionary Baptist Church, Mount Herman Baptist Church, House of God, Praise and Deliverance AME Church, and Macedonia Missionary Baptist Church.



A HUD Housing Development along 30<sup>th</sup> Street where some of the units have been abandoned.



A vacant house with no trespassing signs located north of Princess Place Drive.



A single-family home located north of Princess Place Drive that is well-maintained.



*Modest residences that have been recently constructed near Princess Place Drive.*

### DCIA along Martin Luther King Jr. Parkway

The proposed project will terminate at the proposed interchange with Martin Luther King Jr. Parkway, which traverses through the northern section of the DCIA. The land adjacent to Martin Luther King Jr. Parkway is undeveloped open space that consists of a mix of forests and wetlands. Maides Park is located north of the residential development along Manly Avenue and south of the open space and wetlands. Maides Park contains a community center and a mix of recreational facilities, including a baseball diamond and tennis courts. The western side of the DCIA along Martin Luther King Jr. Parkway is Creekwood North, a single-family residential subdivision, which accesses Martin Luther King Jr. Parkway via Kornegay Avenue. On the eastern side of the DCIA, Kerr Avenue crosses Martin Luther King Jr. Parkway and there are several residential areas along Kerr Avenue. The Wilmington International Airport is located to the north of Martin Luther King Jr. Parkway.



*In this picture is a section of Martin Luther King, Jr. Parkway near the area of the northern terminus of the proposed project.*

## 5.2. Planned Land Use

In September of 2004 the City of Wilmington developed a future land use plan called “Choices, The Wilmington Future Land Use Plan 2004-2025”.<sup>5</sup> While many aspects of the future land use plan are relevant to the proposed project and will be analyzed in further detail throughout the preparation of the environmental document, the portions dedicated to infill, redevelopment and transition are the focus of this section.

### Infill

The portion of “Choices, The Wilmington Future Land Use Plan 2004-2025,” that is focused on infill-development of vacant land is largely applicable to the area surrounding the project. Larger infill tracts are concentrated in five areas of the city, two of which are near the project. The first is located along Randall Parkway west of South Kerr Avenue and the second is along Martin Luther King Jr. Parkway in the northwest corner of the city. A third concentration of large infill tracts is located along an existing portion of Independence Boulevard, south of the project. According to the plan, “These larger vacant areas present an excellent opportunity to create efficient, sustainable, and quality development that would maximize the positive impacts on the City’s tax base and minimize demands on existing infrastructure.” The preferred development patterns and strategies for implementing preferences for the two areas near the project are summarized in the next paragraphs.

The preferred development along Randall Parkway generally between Covil Avenue and South Kerr Avenue includes a commerce center and a varied use area. The commerce center would preferably consist of multi-story office development with supporting ground-floor retail and services. This type of development would be located along thoroughfares and concentrated at intersections. The varied use area would be primarily multi-family residential uses with some office uses. Offices would be located along thoroughfares and concentrated at intersections. Included in the strategies for implementing these preferences are the support of rezoning for office and office/multi-family residential uses, the provision of interconnectivity among and between adjacent non-residential development, and the preservation of wetlands as open space amenities to the extent possible.

In the future land use plan, preferences for the area around Martin Luther King Jr. Parkway between North 23rd Street and North Kerr Avenue were broken into three sub-areas. Preferred development patterns in sub-area A, the North 23rd Street industrial area, include an industrial center (with uses such





as storage, distribution and research and development), and varied density residential use with density ranging from single family to low/moderate multi-family. Strategies outlined for implementing these development preferences include supporting airport-related and other industrial uses in the area, promoting industrial development in the area through coordination with Wilmington Industrial Development and Wilmington International Airport, providing access for industrial sites, and several measures to promote the preservation of trees and water quality such as use of porous surface materials and vegetative buffers near surface water.

Preferred development in sub-area B, which is the area around the potential future intersection of Independence Boulevard and Martin Luther King Jr. Parkway, includes a commerce center consisting of multi-story development with a mix of office, research and development uses and retail/service uses at the ground floor. Strategies for implementing the preferred development pattern include supporting rezoning to commercial districts only for the preferred types of commercial use, encouraging greater height and intensity of building to efficiently use land, providing shared access and interconnectivity for surrounding developments and out-parcels, and using measures to protect sensitive natural resources such as riparian buffers near Smith Creek and wetlands, and use of porous pavement materials.

In sub-area C, which is along Martin Luther King Jr. Parkway between the Creekwood subdivision (near Komegay Avenue) and New Centre Drive, the preferred development pattern is for varied density residential use, ranging from single-family to moderate-density multi-family. Strategies identified in the plan to support this development pattern include encouraging adjacent multifamily development and commercial uses near New Centre Drive to transition from single family development, providing shared access and interconnectivity and using environmentally sensitive land such as buffers and wetlands as open space amenities.

### Redevelopment

Areas targeted for redevelopment according to the Wilmington Future Land Use Plan are primarily outdated or underutilized. These areas have been identified both along Market Street and Princess Place Drive in the vicinity of the project.

### Transition

There are also areas identified for transition from residential use in the plan. One of these areas, where a transition to duplex, triplex, quadraplex and low-density multi-family use is recommended is along Kerr Avenue both north and south of MLK Parkway. Another area, where a similar residential pattern as well as non-residential use is recommended is at the northwest corner of Kerr Avenue and Randall Parkway.

### Wilmington – Market Street Corridor Study

In 2010, the City of Wilmington created the *Market Street Corridor Study*; which combines the results and recommendations of previous land use and transportation plans, including the 2004 *Market Street Corridor Plan* and the *Choices, The Wilmington Future Land Use Plan 2004-2025*. In this plan, it targets the segment of Market Street in the DCIA for redevelopment that includes mixed-use office and retail commercial buildings along Market Street with connected parking areas in the rear.<sup>6</sup> The *Market Street Corridor Study* identified the segment of Market Street within the DCIA as a sidewalk priority area. The goal of the plan is to ensure sidewalks are provided at major commercial nodes, specifically near transit



stops. The city plans to target this area for upgrades to infrastructure (e.g. sidewalks) and landscaping on an opportunistic basis when land use changes occur.<sup>7</sup>

### Wilmington – New Hanover County 2006 Coastal Area Management Act Plan Update

The Land Classification Map from the New Hanover County Land Use Plan 2006 Update shows the DCIA for the proposed project crossing mostly urban land uses, with Conservation Areas along Burnt Mill Creek and Smith Creek and its tributaries.<sup>8</sup> As indicated in this plan update, substantial annexations during the 1990s led to high population growth rates for the City of Wilmington and misleadingly decreased growth rates for New Hanover County. Local planning staff estimated future population growth based on slow, medium and rapid growth rates, which was used to evaluate the City's development capacity. They estimated that the City of Wilmington would grow anywhere from 0.5 percent to 1.5 percent annually between 2000 and 2020. The 1.5% rapid growth rate would lead to a population of 120,727 in 2020. The population of New Hanover County (excluding the City of Wilmington) would grow anywhere from 1.0 percent to 2.25 percent annually in the same time period, with a population of up to 110,917 in 2020.

### 5.3. Other Nearby Features/Influences

The DCIA is centrally located being to the east of the CBD, west of UNCW, and south of the Wilmington International Airport. The proximity of the land within the DCIA to these points of interest has influenced development patterns. Additionally, access to I-40 and the northern section of the Wilmington Bypass (I-140) can be found north of the DCIA.

A considerable amount of undeveloped lands can be found near the DCIA. Based on the City of Wilmington's Composite Future Land Use Map (WMPO, 2008), there is a group of undeveloped or underutilized parcels along Randall Parkway between Covil Avenue and South Kerr Avenue. Wilmington's Future Land Use Plan has identified this area for multi-story offices, multi-family residential, and supporting commercial businesses.

Maides Park, located north of Princess Place Drive along Manley Avenue, is a neighborhood park owned and operated by the City of Wilmington. The park recently went through extensive renovations and had a grand re-opening in May 2009. Park amenities include picnic shelters, grills, basketball courts, athletic fields with lights, walking trails, and a community center that includes a full-service kitchen, multi-purpose rooms, space for arts and crafts, and a computer lab. Other notable features within Maides Park include a small cemetery and a stream (City of Wilmington, 2009a). In addition to Maides Park, the City of Wilmington operates Beaumont Park that is located between Wayne Drive and Mercer Avenue just south of Market Street. Beaumont Park is a neighborhood park that is approximately 3 acres in size and contains a playground, picnic areas, and basketball courts (City of Wilmington, 2009a).

The vacant land along Martin Luther King Jr. Parkway is identified as "airport office"; however, recent inquiries by the property owners and the NCDOT have raised concerns from the airport authority and the Federal Aviation Authority (FAA) and the City has decided to complete further analysis on the best land use for this land in the update of the Future Land Use Plan.

### 5.4. Pedestrian Activity

Pedestrian facilities within the DCIA and the City of Wilmington vary, as described by the *Walk Wilmington: A Comprehensive Pedestrian Plan*. The plan divides the City into four character zones: the Central Business District Zone, the Urban Core Zone, Traditional Suburban Zone, and the Automobile-



Oriented Suburban Zone. In general, the Central Business District Zone and the Urban Core Zone provide the best pedestrian facilities in the City. The DCIA falls within the Traditional Suburban Zone. Sidewalk coverage and intersection crossings do not provide the same consistent level of accommodations as the Central Business District and Urban Core Zones but offers a slight improvement over the Automobile-Oriented Suburban Zone. Major arterials within this zone include Carolina Beach Road, Independence Boulevard, and Market Street.

Table 5 summarizes the characteristics of major arterials and non-arterials in the Automobile-Oriented Suburban Zones as described in the Pedestrian Plan as presented in *Walk Wilmington: A Comprehensive Pedestrian Plan*.

Pedestrian safety was identified as an issue throughout the DCIA by the City of Wilmington (Christine Hughes, City Planner), particularly in the southern portion. Safety measures for pedestrians (e.g. sidewalks, crosswalks, and signage) are either inconsistent or not present.

Pedestrian activity was prevalent throughout the DCIA during the site visit conducted on the 20th of May 2009. In areas where sidewalks were not present, the pedestrians were observed walking in the streets amongst vehicular traffic in residential and commercial areas.



A pedestrian walks down 30<sup>th</sup> Street, north of Princess Place Drive, where there are no sidewalks. Traffic along 30<sup>th</sup> Street is heavy at times from school buses and city buses.



**Table 5: Pedestrian Conditions in Traditional and Automobile-Oriented Suburban Zones**

	Connectivity	Crossing Operation	Street Crossings Amenities	Sidewalk Quality	Accessibility	Streetscape Design
<b>Traditional Suburban Zone</b>						
<b>Arterial roadways*</b>	Fair/Poor- Sidewalk sections along several arterials, however some arterials provide limited crossing options for pedestrians or relatively short crossing times for the user given the road width. Several arterials provide sidewalks on only one side for relatively short lengths. Generally, poor connections from neighborhoods to arterials.	Fair- Drivers observed failing to yield to motorists. High volumes of turning traffic can make road crossings difficult. Long distances between intersections. Even longer distances between signalized intersections in some cases.	Fair- Generally, long crossing distances. Very few median pedestrian refuges. Relatively few pedestrian signals and almost no intersections with crosswalks on all four legs of intersection.	Good- Where present, sidewalks are in serviceable condition. Good- Greenfield Lake Trail (part of the East Coast Greenway).	Fair- Sidewalks are in good repair. Curb ramps at some intersections (including some where no sidewalk is present). Most ramps meet ADA requirements for slope. Pedestrian push buttons may not be easily accessible by users in wheelchairs. Allotted crossing times may not be sufficient for some users given the crossing distance.	Poor- Many curb cuts and driveways to contend with. Many sidewalks directly abut the back of road curb. Many sidewalks directly abut surface parking lots. Few street trees or other landscaping.
<b>Non-arterial**</b>	Good/Fair- Sidewalks on many roadways. Many incomplete sidewalks-extend for two or three blocks and then end. Poor connections from neighborhoods to arterials and between nearby neighborhoods	Good/Very Good- Relatively low traffic volumes and speeds, combined with neighborhood layouts that deter cut-through traffic create many crossing opportunities inside neighborhoods	Very Good- Generally, crosswalks not provided, nor are they warranted. However, average road widths within neighborhoods allow comfortable crossing for most pedestrians.	Very Good- In some neighborhoods, sidewalks are found on one side of street only. Overall, sidewalks are in good repair and provide adequate width to accommodate the volume of users.	Good/Fair- Generally, curb ramps are in good repair. However, some older neighborhoods (e.g. Audubon and Sunset Park) have missing curb ramps at intersections.	Very Good- Within neighborhoods, moderate building setbacks and presence of buffer strips contributes to comfortable pedestrian environment.

Source: *Walk Wilmington: A Comprehensive Pedestrian Plan, City of Wilmington, August 2009*

\* *Arterial Roadways*: 6- to 8- lanes. Higher speed traffic and heavy volumes (e.g. Independence Street and Market Street in Traditional Suburban zones and Oleander Drive, College Road, Market Street in Automobile-Oriented Suburban Zones)

\*\**Non-Arterial Roadways*: 2-lanes. Lower traffic volumes and speeds. Stoplights stop signs, and traffic calming slow traffic.

### 5.5. Bicycle Facilities

Currently, within the Wilmington urban area, there are 35.8 miles of bicycle facilities, and 9.1 miles of bicycle facilities planned to be constructed in the next five years, according to the Cape Fear Commutes 2035 Transportation Plan. According to the Bicycle Facility Map, Randall Parkway, Independence Boulevard (from Shipyard Boulevard to Carolina Beach Road), and Princess Place Drive all have existing bicycle lanes. According to the *Universe of Bicycle Projects* master list, on-road bicycle lanes are planned along Mercer Avenue from Randall Parkway to Market Street. An off-road multi-use path is planned to run just south of Martin Luther King Jr. Parkway through Maides Park.

Several bicyclists were noted during the site visit held on the 20th of May 2009. In particular, one bicyclist was noted having difficulty crossing a street amongst traffic in an area without crosswalks, signage, or other safety measures.

### 5.6. Transit

Public transportation is provided through Wave Transit. Wave Transit provides fixed-route bus services. Wave Transit also provides paratransit services and ride-sharing is coordinated through Cape Fear Breeze Regional Transportation Demand Management Program.



Six fixed bus routes provide service within the project DCIA. Routes 105 (Medical Center) and 106 (West) serve Independence Boulevard and Covil Avenue to Market Street. Route 104 (East) serves Independence Boulevard north of Independence Mall, College Road, the shopping centers off of New Centre Drive (between Market Street and College Road), and UNCW. Route 202 (Independence) serves downtown Wilmington. Route 101 (Brooklyn/Princess Place) serves the HUD housing project just north of Prince Place Drive and the shopping centers off New Centre Drive (between Market Street and College Road). Route 207 (Castle Hayne) serves the area north of Martin Luther King Jr. Parkway and connects south to downtown Wilmington. All bus routes run between 6:30 am and 9:30 pm from Monday through Saturday with altered schedules on Sunday. Most routes operate at 30-minute headways during peak periods (6:30am - 6:00pm) and hourly at all other times. Table 6 summarizes the service headways for the Wave Transit routes that serve the DCIA. Figure 7 depicts the transit routes serving the DCIA.

**Table 6 Wave Transit Routes within the DCIA**

Route	Peak Headway (minutes)	Off-Peak Headway (minutes)
<b>101 – Brooklyn/Princess Place</b>	30	60
<b>104 – East</b>	60	60
<b>105 – Medical Center</b>	30	60
<b>106 - West</b>	30	60
<b>202 – Independence</b>	30	60
<b>207 – Castle Hayne</b>	60	60

Source: *Wave Transit Bus Routes & Schedules*.

<http://www.wavetransit.com/routes/bus.aspx> accessed 18 July 2011.

The NCDOT, City of Wilmington, and the WMPO are planning a multi-modal transportation center in downtown Wilmington that would serve Wave, Greyhound, the downtown trolley, taxis, and a future rail station. This station would replace current downtown transfer stop for the Wave.



Wilmington International Airport

Smith Creek

74

Maides Park

MLK Jr Pkwy

CSX Railroad

Market St

17-B

Beaumont Park

McCrary Park

Mercer Ave  
Cecil Ave

Kett Ave

CSX Railroad

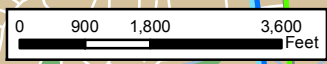
74

76

Empie Park

Oleander Dr

117



**North Carolina Department of Transportation**



Date: September 2011

**Legend**

DCIA	Railroad	Brooklyn-Princess Place
Local Roads	Proposed Kerr Ave Interchange (U-3338)	Castle Hayne
Interstate Highway	Streams (non-delineated)	East
US Highway	Water	Independence
NC Highway	Parks	Medical Center
State Route	Wilmington Municipal Boundary	West
		Major Transit Hub

Independence Boulevard Extension Project  
New Hanover County, NC  
STIP U-4434

**Figure 7**  
**WAVE Transit Routes Serving the DCIA**



### 5.7. Railroads

Freight rail service is provided to and from Wilmington by CSX Transportation. CSX has an interchange line with the Wilmington Terminal Railroad, L.P., which serves the Port of Wilmington south of the proposed project DCIA. The CSX 'ACB' line (Wilmington Belt Line) runs in a circular direction around Wilmington from the North Carolina Port to downtown, crossing through the DCIA in two locations. The first crossing is along Covil Avenue slightly north of Randall Parkway. The second crossing location within the DCIA is adjacent to Princess Place slightly north of Market Street. The freight line currently carries an average of two trains per day at an average speed of 10 miles per hour.<sup>9</sup>

The number of trains using this rail line is subject to increase in the future and is dependent on freight demands associated with the port. As indicated in the *Cape Fear Commutes 2035 Transportation Plan*, CSX plans to upgrade the rail line between Wilmington and Charlotte for double-stack containers as part of a plan to create a more efficient rail route linking Mid-Atlantic ports with Midwestern markets.

Currently there is no passenger rail service serving the Wilmington Metropolitan area or southeastern North Carolina. In 2005, a study was completed by the NCDOT Rail Division that evaluated the possibility of restoring passenger rail service to the Wilmington area.<sup>10</sup> The study recommended implementing passenger rail service from Raleigh to Wilmington via Fayetteville and Goldsboro in phases as funding becomes available.



In this picture a bus waits on 30th Street as the freight train passes on the CSX rail line, just north of Princess Place Drive.

### 5.8. Airports

The Wilmington International Airport (ILM) is located just northeast of the City of Wilmington and north of the proposed project DCIA. The Wilmington International Airport can be accessed from NC 133 (via 23rd Street and Airport Boulevard). The airport is operated by the New Hanover County Airport Authority, which provides available non-stop flights to Atlanta, New York, Charlotte, Philadelphia, and Orlando-Sanford. In addition, the airport has international charter, corporate and recreational flights.<sup>11</sup>

According to the *Cape Fear Commutes 2035 Transportation Plan*, this airport is classified as a primary commercial service airport by the Federal Aviation Administration (FAA) in the National Plan of Integrated Airport Systems (NPIAS). The airport has one 7,004-foot runway and one 8,016-foot runway. The airports intermediate planning period projects include that the 8,016-foot runway will be extended and call for the acquisition of land for runway protection zones for each runway. General aviation



services are also available at the airport, with three fixed based operations housing over 100 private aircraft.

### 5.9. Port of Wilmington

In the 1950s, two North Carolina Ports were constructed to handle oceangoing vessels. These Ports were located in Wilmington and Morehead City. The Port of Wilmington is situated on the eastern bank of the Cape Fear River, southwest of the proposed project, and the navigational channel was recently deepened to 42 feet to accommodate larger vessels. Existing Independence Boulevard intersects with Shipyard Boulevard, which is the primary access to the Port.

The Port of Wilmington is equipped to handle containerized, bulk and breakbulk cargo. According to the *2030 Long Range Transportation Plan*, the wharf frontage is approximately 6,800 feet long. The open storage dry bulk facility has the capacity for more than 800 tons of outload per hour with 70,000 tons of storage capacity. The covered dry bulk facility has 2.5 million cubic feet of storage space with an import conveyor system for grain and fertilizers.

The North Carolina Port Authority proposed building the NC International Terminal in Southport to expand the Port of Wilmington's container facilities. This proposed port would aid with the anticipated rise in freight traffic on the east coast due to capacity constraints in the west coast ports.

### 5.10. Community Cohesion

Community cohesion varies among the neighborhoods within the DCIA. There are several well-established communities throughout the DCIA that range from modest developments found in East Wilmington and Creekwood subdivisions to the more affluent Forest Hills subdivision (See Figure 5). Indicators of strong community cohesion were noted during the site visit on the 20th of May 2009 and included observations of neighbors assisting each other with tasks, such as unloading groceries from the car, yard work, and repairing a vehicle. Other indicators of community cohesion included neighbors chatting on front porches, children playing in the yard, and residents walking to the park.

Planners with the City of Wilmington indicated that the community has a high occupancy rate partially due to a mix of housing price points, varied densities, and proximity to goods and services. A large residential community is currently being developed at North 30th Street and Princess Place Drive that has enhanced the mix of housing types and the community character. It is highly likely that construction of the proposed project will impact the character of the neighborhoods in the DCIA. Displacements and barriers from the new roadway will alter the community fabric and how neighbors interact with each other on a daily basis.

### 5.11. Local Area Plans/Goals

The proposed project is consistent with several local plans including the *Cape Fear Commutes 2035 Transportation Plan*, *US 17 Business Corridor Study* (3rd Street to Covil Avenue), *Walk Wilmington: A Comprehensive Pedestrian Plan*, *Market Street Corridor Study*, and the *North Carolina State Transportation Improvement Program*. These plans are summarized in this section. In addition to these plans, the Wilmington Housing Authority has plans to develop a housing project north of Princess Place between 30th Street and Evans Street. Additionally, Maides Park is located within the DCIA and was reopened in 2009 with the addition of the 1,300-foot expansion. The City of Wilmington is planning a Cross-City Trail that will run through the proposed project area, as part of the city-wide Trails and Greenways system.





### Choices: The Wilmington Future Land Use Plan

The City of Wilmington adopted Choices: The Wilmington Future Land Use Plan in 2004 (Wilmington, 2004a). The vision for Wilmington as established in this plan is as follows: “Wilmington will be an attractive, safe place to live, work, raise a family, and retire. The City will be known for historic character and culture, a vibrant downtown and beautiful waterfront, environmental assets, thriving neighborhoods with convenient access to amenities, quality educational and health care institutions and its strong economy with exceptional employment opportunities, shopping and services.” The six “pillars of a strong community” identified in the plan are historic assets, environment, public spaces, neighborhoods, infrastructure, and commerce. The three purposes served by the plan are to: (1) serve as the primary policy guide for evaluating all future rezoning proposals, (2) serve as a policy guide for preparing capital improvement programs and budgets, and (3) act as a guide for future revisions to development regulations necessary to implement the strategies of the plan. The Plan identifies several areas of land within the DCIA for infill development and strategic areas for redevelopment, which are described in Section 5.2.

### Market Street Corridor Study (2010)

The City of Wilmington, New Hanover County, WMPO, and NCDOT collaboratively developed a corridor study for the portion of Market Street between Colonial Drive and Porters Neck Road that was completed in 2010.<sup>12</sup> The study was an integrated study that evaluated both land use and transportation for the corridor and outlines a vision for the Market Street Corridor that bisects the DCIA (Wilmington, 2004b). The plan supports and enhances *Choices: The Wilmington Future Land Use Plan*. One of the main goals of the Plan is to strengthen the economic and fiscal impact of commercial development along the Market Street Corridor.

The corridor study recommends a grade separated interchange with connections between Market Street and Independence Boulevard using collector-distributor roads on the existing Wayne Drive and Darling Avenue alignments. The report states that the entry points onto Independence Boulevard are proposed to operate with right-in/right-out operations, with the provision of adequate acceleration and deceleration lanes onto the freeway facility. The area along Market Street, adjacent to the proposed project, from a land use perspective is identified as a location that may include significant redevelopment. The Market Street corridor is identified as having a substantial opportunity to inject mixed-use office and commercial buildings.

### Wilmington Metropolitan Planning Organization – Cape Fear Commutes 2035 Transportation Plan (2010)

The Wilmington Urban Area Metropolitan Planning Organization (WMPO) Cape Fear Commutes 2035 Transportation Plan (2035 Transportation Plan) was adopted in December 2010. The vision presented in the 2035 Transportation Plan calls for a safe, efficient, appropriate, responsible, integrated, multimodal transportation system. The proposed Independence Boulevard Extension is listed as one of the highest priority Congestion Mitigation projects along with the completion of the Wilmington Bypass (STIP R-2633B), Kerr Avenue improvements (STIP U-3338), US 17-74-76-NC 133 improvements (STIP R-3601), and the extension of Military Cutoff Road (STIP U-4751). The plan also notes that the Independence Boulevard Extension, along with the Cape Fear Skyway are important connectors for freight movement and important in promoting intermodal connections between the ports, highways and rail networks.



The plan classifies Martin Luther King Jr. Parkway, Market Street, Oleander Drive and College Road as primary arterials. Covil Avenue, Independence Boulevard, Kerr Avenue, and Randall Parkway are functionally classified as minor arterials. The plan also included the evaluation of a project that would reduce congestion by converting Independence Boulevard to an expressway between Market Street and River Road. The project would replace the traffic signals at major intersections with overpasses and convert other cross street to right-in/right-out intersections. The Independence Boulevard Expressway Upgrade was ranked the 12<sup>th</sup> best project out of 40 projects evaluated; however due to the high construction cost the project was not able to be included in the fiscally constrained plan.

The proposed project is also noted as a portion of a larger comprehensive transportation network connecting Brunswick County and New Hanover County that will significantly alter travel patterns in the region. The network includes an expressway and freeway link between I-40 in New Hanover County and US 17 (Ocean Highway) in Brunswick County including North College Road, Martin Luther King Jr. Parkway, Independence Boulevard and the proposed Cape Fear Skyway.

Other projects listed in the plan that are located within the DCIA are listed in Table 7 and shown on Figure 8.

**Table 7: Projects in the Long Range Transportation Plan**

Project #	Description	Schedule (Fiscal Years)
<b>T-16</b>	Market Street between Downtown Station and Central Station has been identified as the highest priority as a Bus Rapid Transit (BRT) project.	Not specified
<b>R-11</b>	Market Street from 17 <sup>th</sup> Street and Covil Avenue. Complete a Roadway Diet.	2016 to 2025
<b>B-109</b>	Mercer Avenue from Randall Parkway to Market Street. Construct a bicycle boulevard. Restriping of on-road bicycle lanes.	2016 to 2020
<b>B-111</b>	Mercer Avenue from Market Street to Randall Parkway. On road bicycle lanes new pavement.	2016 to 2020
<b>B-233</b>	Market Street from Covil Avenue to Cinema Drive. On road bicycle lanes new pavement.	2021 to 2025
<b>B-88</b>	Mark Street from S 17 <sup>th</sup> Street to Covil Avenue. Restriping of on-road bicycle lanes.	2010 to 2015
<b>B-268</b>	Maides Park from Maides Park to N. Kerr Avenue. Construct off-road multi-use path.	2031 to 2035
<b>B-269</b>	Scientific Park from N. 23 <sup>rd</sup> Street to N. 26 <sup>th</sup> Street. Construct	2031 to 2035



	off-road multi-use path.	
<b>B-270</b>	Maides Park from Maides Park to N. 26 <sup>th</sup> Street. Construct off-road multi-use path.	2031 to 2035
<b>B-196</b>	Princess Place Drive/Chestnut Street from N 5 <sup>th</sup> Street to N 23 <sup>rd</sup> Street. Construct a bicycle boulevard.	2010 to 2015
<b>B-179</b>	N. 23 <sup>rd</sup> Street from Blue Clay to Market Street. Construct on road bicycle lanes, new pavement.	2010 to 2015
Notes: T – Transit Projects, R – Roadway Projects, and B – Bicycle Projects		
Source: Cape Fear Commutes 2035 Transportation Plan. Wilmington Urban Area Metropolitan Planning Organization. December 2010.		

North Carolina State Transportation Improvement Program

The proposed Independence Boulevard Extension is included as Project U-4434 in the NCDOT’s Draft 2012-2018 STIP. The STIP describes the project as a 1.7-mile new location route from Randall Parkway to Martin Luther King Jr. Parkway. Right-of-way acquisition is schedule for fiscal year 2020 and construction is currently not funded. It is also identified as an intrastate project and a Strategic Highway Corridor Project. STIP projects in and around the vicinity of this project are listed in Table 8. The general locations of the STIP projects within the vicinity of the project are shown on Figure 8.

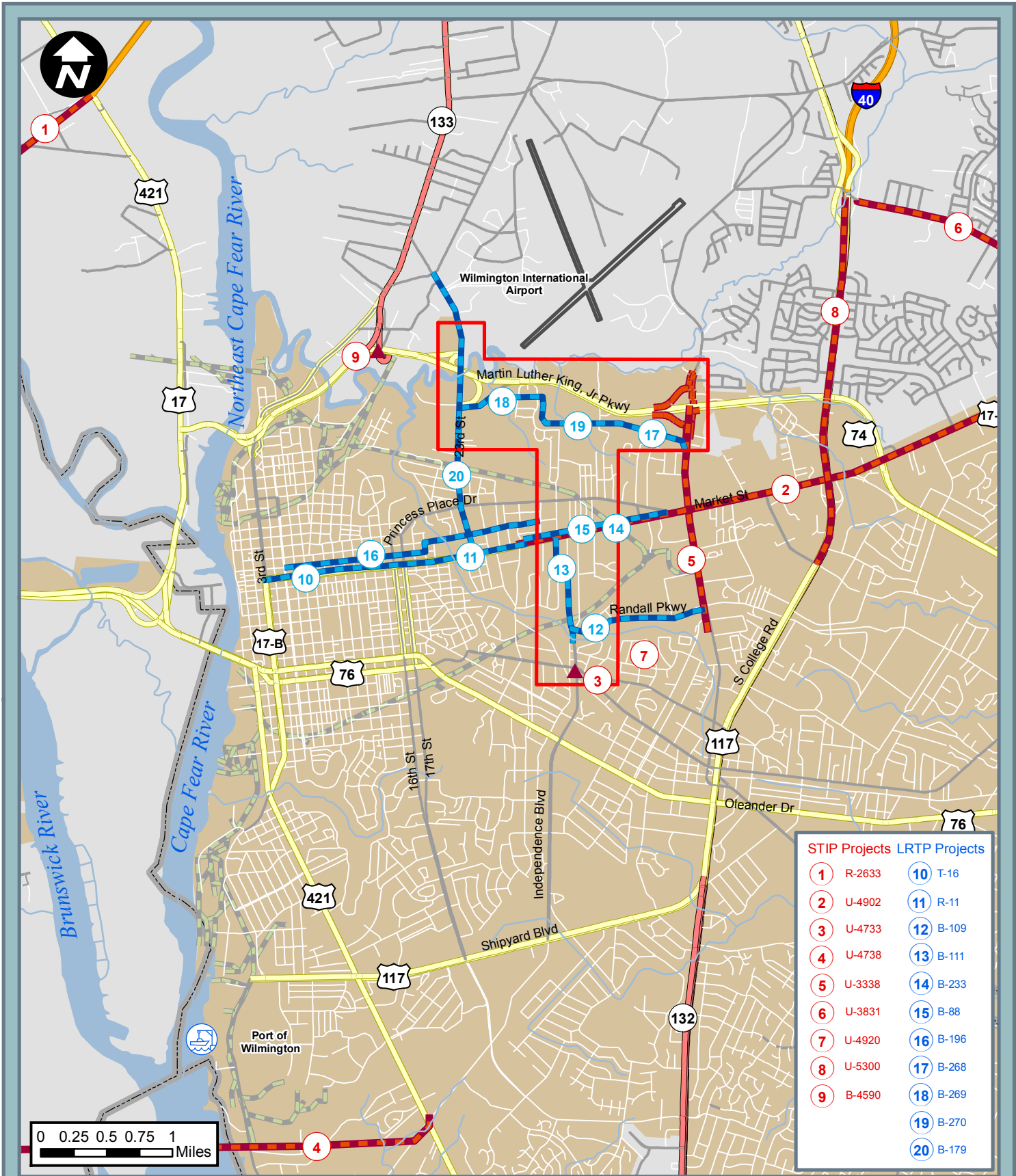
**Table 8: Other STIP Projects in the Vicinity of the DCIA**

STIP No.	Description	Schedule (Fiscal Years)
<b>R-2633</b>	I-140/US 17 Wilmington Bypass, US 17 south of NC 87 in Brunswick County to I-40 in New Hanover County. Four lane divided freeway on new location.	AA – Under Construction AB – Under Construction BA – Right of Way in progress BB – Right of Way in progress BC – Paving - 2019
<b>U-4902</b>	US 17 Business (Market Street), Colonial Drive to SR 1402 (Porters Neck Road). Access Management Improvements.	A – Under Construction B - Construction 2019 C – Construction 2012 D – Construction 2017
<b>U-4733</b>	SR 1411 (Wrightsville Avenue), SR 2313 (Wilshire Boulevard) to Forest Hills Drive. Intersection improvements.	Under Construction
<b>U-4738</b>	US 17 to Independence Boulevard-Carolina Beach Road intersection. Construct a new facility with structure over	Right of Way – Unfunded Construction - Unfunded

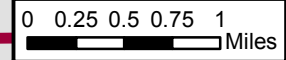


Table 8: Other STIP Projects in the Vicinity of the DCIA

STIP No.	Description	Schedule (Fiscal Years)
	the Cape Fear River	
<b>U-3338</b>	SR 1175 (Kerr Avenue), Randall Parkway to SR 2649 (Martin Luther King Jr. Parkway). Widen to multi-lanes.	B – Construction – 2013 C- Right of Way - 2020 C – Construction - Unfunded
<b>U-3831</b>	SR 2048 (Gordon Road), NC 132 interchange ramp to west of US 17 Business (Market Street). Widen to multi-lanes.	A – Right of Way & Construction – 2012 B – Right of Way & Construction - Unfunded
<b>U-4920</b>	Randall Parkway, Independence Boulevard-Covil Avenue to south College Road.	Under Construction by City
<b>U-5300</b>	NC 132 (College Road), SR 1272 (New Centre Drive) to SR 1327 (Gordon Road). Widen to multi-lanes.	Right of Way – Unfunded Construction - Unfunded
<b>B-4590</b>	NC 133, Smith Creek. Replace Bridge No. 29.	Right of Way – 2019 Construction - 2020
Notes: R – Rural Projects. U – Urban Projects. B – Bridge Projects “unfunded” denotes projects that are not currently funded in the Draft 2012-2018 STIP Source: North Carolina Department of Transportation Draft 2012-2018 State Transportation Improvement Program, Division 3. Available: <a href="http://www.ncdot.gov/performance/reform/">http://www.ncdot.gov/performance/reform/</a> .		



STIP Projects	L RTP Projects
1 R-2633	10 T-16
2 U-4902	11 R-11
3 U-4733	12 B-109
4 U-4738	13 B-111
5 U-3338	14 B-233
6 U-3831	15 B-88
7 U-4920	16 B-196
8 U-5300	17 B-268
9 B-4590	18 B-269
	19 B-270
	20 B-179



**North Carolina Department of Transportation**

Date: September 2011

**Legend**

- DCIA
- Local Roads
- Interstate Highway
- US Highway
- NC Highway
- State Route
- Railroad
- STIP Project
- L RTP Projects
- STIP Reference #
- L RTP Reference #
- Streams (non-delineated)
- Wilmington Municipal Boundary
- County Boundary
- Water
- TIP Project Point

Independence Boulevard Extension  
 New Hanover County, NC  
 STIP U-4434

**Figure 8**  
 STIP and L RTP Projects in the Project Vicinity



Wilmington Metropolitan Planning Organization - US 17 Business Corridor Study; 3<sup>rd</sup> Street to Covil Avenue (2007)

The WMPO completed a corridor study in 2007 to evaluate the Market Street corridor based on changes in travel patterns due to the completion of Martin Luther King Jr. Parkway and a portion of I-140.<sup>13</sup> The studies preferred alternative recommended reducing Market Street from four lanes of traffic down to one lane in either direction with a landscaped median, bike lanes and limited on-street parking. Additionally, the study recommended reducing the number of intersections with full access down to only the major intersections and to maintain 16<sup>th</sup> and 17<sup>th</sup> Streets as a one-way pair.

Walk Wilmington: A Comprehensive Pedestrian Plan

The City of Wilmington and the WMPO, in collaboration with the NCDOT, developed *Walk Wilmington: A Comprehensive Pedestrian Plan* to serve as a framework for the implementation of new city policies, guidelines, and design standards that ensure adequate and safe transportation facilities for pedestrians throughout Wilmington. The plan also focuses on expanding education, encouragement, and awareness campaigns and programs to enhance safety and enforcement initiatives.

Existing conditions as summarized in this report are provided in Section 5.4 (Pedestrian Activity) of this report. The *Walk Wilmington: A Comprehensive Pedestrian Plan* outlines a plan to improve existing and install new pedestrian facilities in order to upgrade the safety, quality, and connectivity. In the next 5 years, 26 miles of projects are planned to be constructed along with 90 signal improvement projects.<sup>14</sup> Over 400 miles of sidewalk projects and over 70 signal improvements are planned to be in place by 2030. There are also plans to improve the sidewalks and pedestrian safety along Dawson and Wooster Streets and construct sidewalks along the soon to be widened section of Independence Boulevard (between Shipyard Boulevard and Carolina Beach Road) and along Randall Parkway between Independence Boulevard and Kerr Avenue.

## 5.12. Water and Sewer Infrastructure

The entire DCIA currently has both water and sewer infrastructure served by the City of Wilmington. Just north of the DCIA, across Smiths Creek, sewer infrastructure is served by New Hanover County, while water infrastructure is served by New Hanover County, the New Hanover County Airport, and Kings Grant Water Corporation. Because all of the DCIA and surrounding area are already serviced by water, the only future plans for expansion of water service are for areas west of the Cape Fear River. Sewer, however, is not currently planned for expansion in these areas. The James A. Loughlin Wastewater Treatment Plant is located within the DCIA, north of Martin Luther King Jr. Parkway near the interchange with N. 23<sup>rd</sup> St. No other water or sewer pumps lay within the DCIA. The nearest pumps are west across the Cape Fear River. No public water supply sources (wells) are located within the DCIA. The nearest two wells are located 0.6 miles northeast of the DCIA, serving Town and Country Mobile Home Park.

The DCIA falls within the City of Wilmington's Public Storm Sewer System, which is governed by an NPDES Phase II Stormwater Permit. All activities within the Storm Sewer System must comply with this permit and Wilmington's associated Stormwater Management Plan.

## 5.13. Area/Community Controversy

Overall, Wilmington and the community are aware of the proposed project and it has been included in multiple community plans going back to the 1970's. However, there are dissenters in the community, particularly those that stand to be negatively impacted by the project.



Through the years, the Wilmington Housing Authority has faced strong opposition from local residents to changes with its housing developments – especially when it first proposed the demolition and reconstruction of the Robert S. Jervay Place. Given the presence of several of the Wilmington Housing Authority’s Housing Developments in the DCIA, it will be important to coordinate with the Wilmington Housing Authority, as well as conduct an appropriate level of public outreach with the affected residents and citizens.

The first Citizen Informational Workshop was held on June 13, 2011 at Rachel B. Freeman Elementary School. The informational meeting was held to provide the general public with information about the project including the history, purpose and need, study process, and schedule. Residents and property owners within the project study area were informed about the project and citizens informational workshop through a newsletter.

The following general themes were discussed between the project team and members of the public during the informal session:

- Many of the attendees confirmed that there are transportation problems in the study area and that traveling in the north-south direction is difficult, especially between Oleander Drive and Market Street.
- There were extensive discussions relating to the grade separation of the two existing railroad crossings. A majority of the public agreed that a grade separated crossing would be preferable to an at-grade crossing.
- Some members of the public noted that many of the residents in the area may not be aware that the project would include grade separated railroad crossings and that many of the people in the area assumed that the project would just add a lane in each direction along Covil Avenue.
- Many individuals noted the need for other projects in the vicinity of the proposed project, especially the widening of Randall Parkway and Kerr Avenue. Several individuals felt that the Kerr Avenue interchange should be completed before Independence is extended because it would cause a major bottleneck if it remained an at-grade intersection with Martin Luther King Jr. Parkway.
- The need for an interchange at Market Street was a frequent subject of conversation with a majority of the public feeling that an at-grade intersection would not work and an interchange would be the better option. Additionally, a slight majority of individuals felt that a roadway with a greater level of control of access would be preferable to a non-controlled access roadway with driveways.
- The scale and magnitude of the project were noteworthy items to the public. Several individuals were concerned with the elevation of the proposed project due to the grade separations and potential interchanges. The associated noise, aesthetics and potential for large retaining walls were also concerns noted by the public in regard to an elevated roadway.
- Several citizens felt that the design of the Randall Parkway intersection would create problems in the future due to the heavy turn volumes from Randall Parkway to Independence Boulevard. Several individuals said that an interchange or grade separation would be beneficial at this location, but also stressed that the connection to Mercer Avenue was also important.



As the project moves forward, it will be important to learn more about the concerns of residents and local leaders through the public involvement process so that their concerns with the project can be addressed in the project development and implementation.

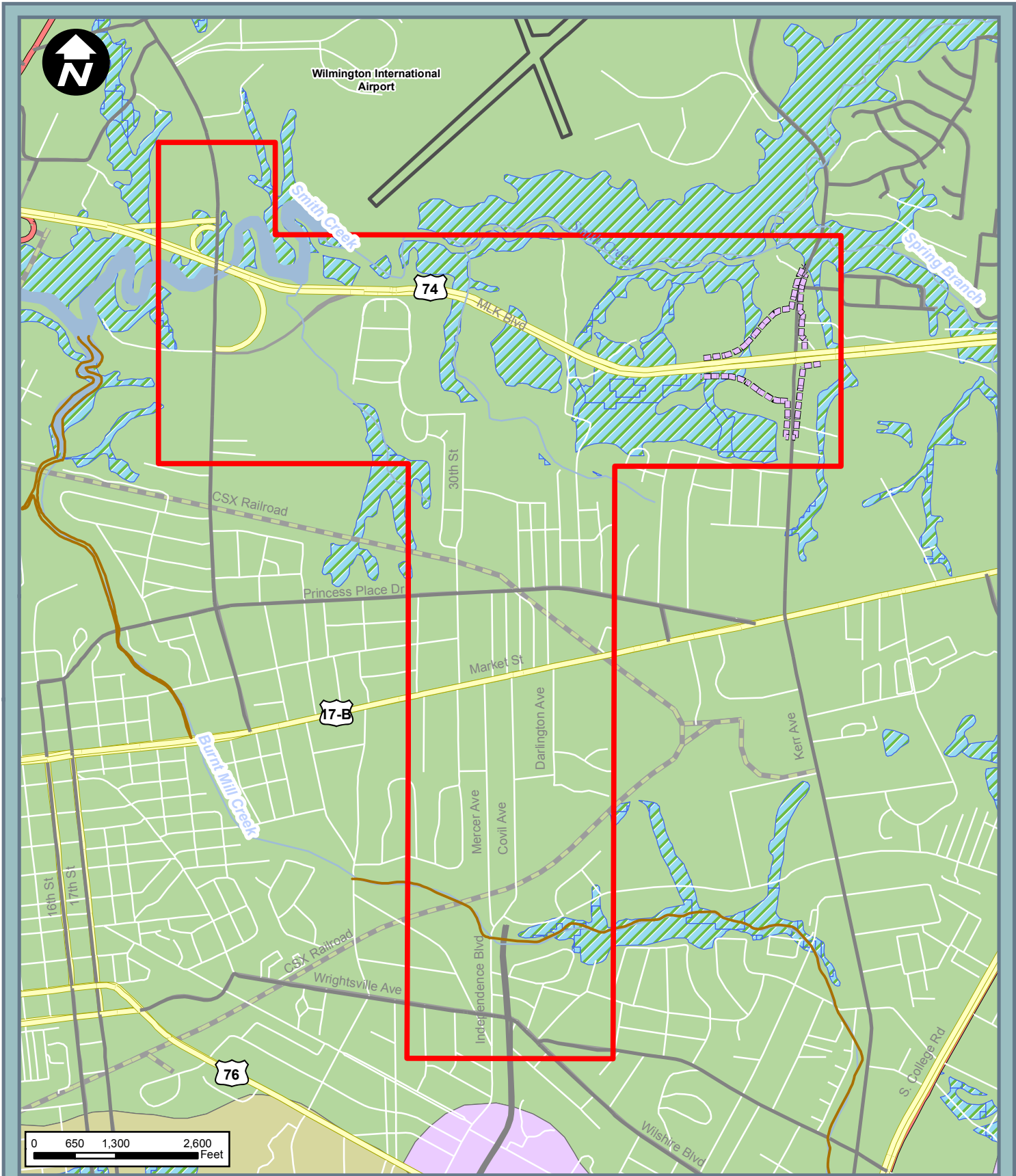
#### 5.14. Water Supply/Watershed

The project lies in the southeast portion of the Cape Fear River Basin. The DCIA is contained entirely within the North Carolina Department of Environment and Natural Resources, Division of Water Quality (NCDWQ) sub-basin 03-06-23 (Figure 9), which also corresponds to the 14-digit hydrologic unit code 03030007140010 (NCDWQ, 2004). This 14-digit watershed has been designated as a “Targeted Local Watershed” by the North Carolina Ecosystem Enhancement Program (NCEEP). Targeted Local Watersheds are those that have a high need for improvement and a high potential to benefit from restoration efforts, many of which occur in the form of mitigation by the NCDOT. In 2002, a Local Watershed Plan (LWP) for this watershed was developed, termed the New Hanover County LWP (NCEEP, 2002).

Streams within the DCIA include Burnt Mill Creek and an unnamed tributary to Smith Creek (Figure 9). Both streams are designated as C; Sw and are not located in a water supply watershed. Class C waters are suitable for aquatic life propagation and survival, fishing, wildlife, secondary recreation, and agriculture. The supplemental classification “Sw” refers to “swamp waters” which are characterized by low velocities and other natural characteristics which make them different from adjacent streams. One goal of the New Hanover County LWP is to reduce nutrient (nitrogen and phosphorus) loading into Burnt Mill Creek by ten percent from 1998 to 2010. The plan identifies and prioritizes multiple restoration opportunities in the Burnt Mill Creek watershed. About 0.6 mile of Burnt Mill’s 3.2 miles of stream lie within the DCIA. Both streams in the DCIA are listed on the 303(d) list of impaired waters (NCDWQ, 2007). They are listed due to impaired biological integrity for aquatic life.

The Northeast Cape Fear River is located approximately 2.5 miles west of the DCIA. The Northeast Cape Fear River is designated as B; Sw. Class B waters are suitable for aquatic life propagation and survival, fishing, wildlife, primary recreation (swimming), and agriculture. The Northeast Cape Fear River was also listed on the 2006 303(d) list as impaired for fish consumption due to mercury. About 2.5 miles south of the DCIA is Hewlett Creek, a designated High Quality Water (HQW), Outstanding Resource Water (ORW), SA water. The SA designation refers to “Shellfish Area,” meaning the water is used and protected for commercial shellfishing. About 2.75 miles east of the DCIA is Howes Creek, also a HQW, ORW, SA water. No ORWs or HQWs exist within the DCIA.





**North Carolina  
Department of Transportation**



Date: December 2011

**Legend**

DCIA	Impaired Streams on 303(d) List
Proposed Kerr Ave Interchange (U-3338)	Streams (non-delineated)
Local Roads	Water
Interstate Highway	DCM Wetlands
US Highway	Sub-Basin 03-06-17
NC Highway	Sub-Basin 03-06-23
State Route	Sub-Basin 03-06-24
Railroad	

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**Figure 9**  
**Environmental  
Features**



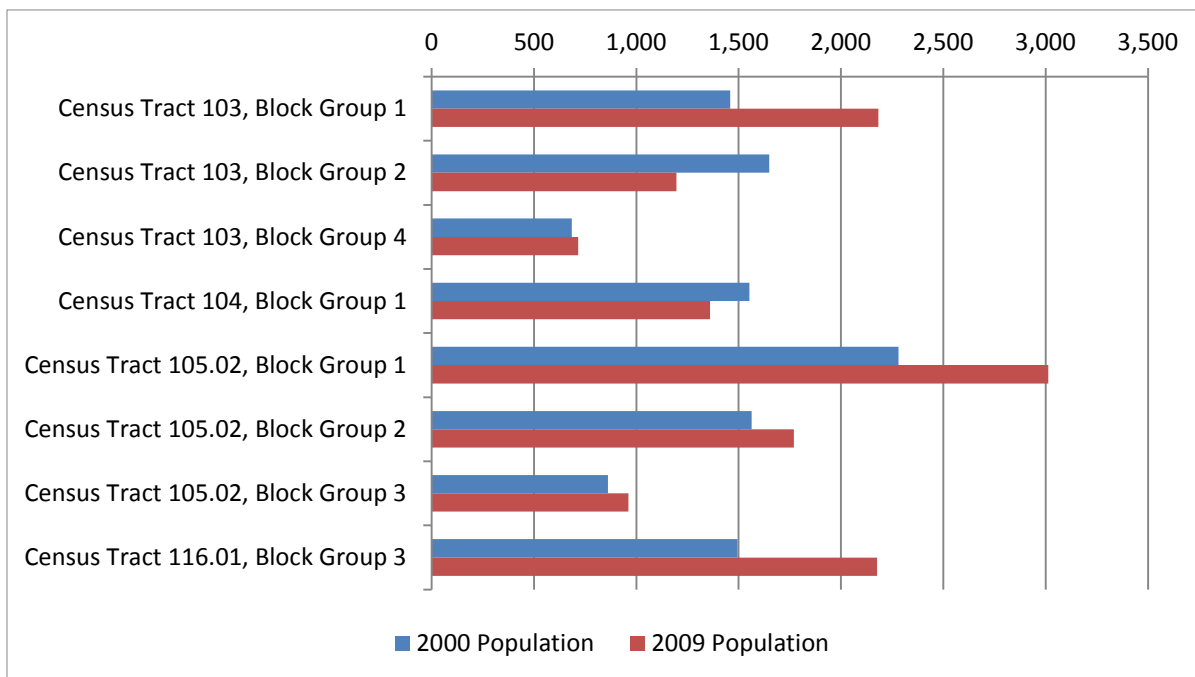
### 5.15. Community Demographics

The demographic data presented in this section is based on US Census decennial Census data for 2000 and 2010 and the 2005-2009 Five Year American Community Survey (ACS) data. The most recent data available was used.

#### 5.15.1. Population—Trends and Composition

Total population within the DSA increased from 11,546 in 2000 to 13,376 in 2009, equaling an average annual growth rate of 1.8 percent. When looking at the DSA Census Block Groups individually, there were shifts in population between the Block Groups. Table 9 shows the population changes for each Block Group from 2000 to 2009 and Table 10 shows population trends for the DSA, county, and state. Population increased in six of the eight Block Groups. The two Census Block Groups which experienced a population decrease were Census Tract 103 Block Group 2 that decreased by 28 percent and Census Tract 104 Block Group 1 that decreased by 12 percent. Some of the shifts in population can be attributed to temporary relocations at the Wilmington Housing Authority’s housing developments as they have relocated some residents during renovation projects at the Creekwood South development (located in Census Tract 103, Block Group 2) to dispersed scattered-site developments.

**Table 9: Population Trends by Census Block Group from 2000 to 2009**



Source: US Census Bureau, 2005-2009 ACS Data and 2000 Decennial Census.



Table 10: Population Trends

Geography	2000 Population	2009 Population	Percent Change
<b>DSA</b>	11,546	13,376	15.8 %
<b>New Hanover County</b>	160,307	189,463	18.1 %
<b>North Carolina</b>	8,049,313	9,045,705	12.4 %

Source: US Census Bureau, 2005-2009 ACS Data and 2000 Decennial Census.

**5.15.2. Racial Makeup**

According to the 2010 Census, 66 percent of residents in the DSA identified themselves as White and 28 percent identified themselves as Black. The DSA showed a lower percentage of Whites and a higher percentage of non-Whites than both Wilmington and New Hanover County. In Wilmington, approximately 74 percent were identified as White and 20 percent as Black; while in New Hanover approximately 79 percent were identified as White and 15 percent as Black.

Census Tract 103- Block Group 4 has a particularly high percentage of Blacks, at 94 percent. Conversely, Census Tract 104- Block Group 3 and Census Tract 104- Block Group 2 have particularly high percentages of Whites, at 95 percent and 89 percent, respectively. Table 11 shows the racial makeup by Block Group for the DSA.



**Table 11: 2010 Racial Makeup by Block Group**

	Population	White	Black	Asian	Alaskan Native /American Indian	Pacific Islander	2 or More Races	Other
<b>CT 103, BG 1</b>	2,401	869	1,348	28	24	5	87	40
<b>CT 103, BG 2</b>	732	571	131	1	2	0	9	18
<b>CT 103, BG 4</b>	1,386	49	1,306	0	3	0	21	7
<b>CT 104, BG 1</b>	902	799	62	12	4	0	18	7
<b>CT 105.02, BG 1</b>	990	940	11	1	5	0	12	21
<b>CT 105.02, BG 2</b>	3,431	2,183	990	46	19	2	93	98
<b>CT 105.02, BG 3</b>	1,565	1,133	290	19	14	1	53	55
<b>CT 116.01, BG 3</b>	1,101	886	126	16	16	13	22	22
<b>DSA Aggregate</b>	12,672	8,319	3,504	125	79	16	308	321

Source: US Census Bureau, 2010 Decennial Census

The high differences in populations of racial groups in these areas could be due to the placement and location of the Wilmington Housing Authority’s housing developments and the historical neighborhood enclaves associated with the businesses and development patterns of post-World War II development.

**5.15.3. Ethnic Makeup**

Based on the 2010 Census data, 6.8 percent of the residents in the DSA identified themselves as Hispanic or Latino. This compares to Wilmington and New Hanover that have percentages of 6 and 5, respectively. The highest concentration of Hispanics is in Census Tract 105.02 in Block Groups 2 and 3 that have 9.8 percent and 9.4 percent, respectively. Both of these Block Groups are located in the southern portion of the DSA near existing Independence Boulevard and Wrightsville Avenue.

Executive Order 13166 “Improving Access to Services for Persons with Limited English Proficiency” requires all recipients of federal funds to provide meaningful access to persons who are limited in their English proficiency (LEP). The U.S. Department of Justice defines LEP individuals as those “who do not speak English as their primary language and who have a limited ability to read, write, speak, or understand English,” (67 FR 41459). Data about LEP populations was gathered from the 2005 to 2009 ACS.



Table 12: LEP Populations in the DSA

Geography	Total Adult Population	Primary Language Group of Persons Who Speak English Less than Very Well								Total LEP	
		Spanish		Other Indo-Euro		Asian/Pacific		Other			
		#	%	#	%	#	%	#	%	#	%
CT 103, BG 1	1,930	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
CT 103, BG 2	628	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
CT 103, BG 4	567	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
CT 104, BG 1	1,002	16	1.6%	0	0.0%	0	0.0%	0	0.0%	16	1.6%
CT 105.02, BG 1	2,231	5	0.2%	0	0.0%	0	0.0%	0	0.0%	5	0.2%
CT 105.02, BG 2	1,541	54	3.5%	0	0.0%	0	0.0%	0	0.0%	54	3.5%
CT 105.02, BG 3	804	19	2.4%	0	0.0%	12	1.5%	10	1.2%	22	2.7%
CT 116.01, BG 3	1,993	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
DSA Aggregate	10,696	94	0.9%	0	0.0%	12	0.1%	10	0.1%	97	0.9%

Source: US Census Bureau, 2005-2009 ACS Data

The DSA data indicate there are no language groups within the DSA in which more than 5 percent of the population or 1,000 persons speak English less than “Very Well.” Therefore, demographic assessment does not indicate the presence of LEP language groups that exceed the Department of Justice’s Safe Harbor threshold. However, NCDOT will include notice of Right of Language Access for future meetings for this project. Thus, the requirements of Executive Order 13166 appear to be satisfied.

**5.15.4. Economics**

According to the 2009 ACS data, the median household income for the DSA was approximately \$35,394; which is lower than that for New Hanover County (\$41,994). Approximately 35.6 percent of the households in the DSA were living below the poverty level; this is compared to 9.9 percent in New Hanover County. The highest concentration of people living below the poverty level is in the areas north of Market Street and east of Mercer Avenue, with the Block Groups covering these areas having over 40 percent of households living below the poverty level (US Census, 2009).



Table 13: Populations Living Below Poverty

	Households Below Poverty	Total Households	Percent of Households Below Poverty
CT 103, BG 1	1046	465	44.5%
CT 103, BG 2	525	271	51.6%
CT 103, BG 4	352	26	7.4%
CT 104, BG 1	610	25	4.1%
CT 105.02, BG 1	1309	686	52.4%
CT 105.02, BG 2	910	206	22.6%
CT 105.02, BG 3	588	111	18.9%
CT 116.01, BG 3	1228	546	44.5%
DSA Aggregate	6568	2336	35.6%
Source: US Census Bureau, 2005-2009 ACS Data			

The unemployment rate of Wilmington was 4.0 percent in June 2000 and 10.4 percent in June 2011, according to the North Carolina Employment and Security Commission (ESC). New Hanover County's unemployment rate was slightly lower in June 2000 at 3.8 percent and in June 2011 at 10.1 percent. The census measures employment based upon whether a person that is 16 years and older and had not worked in the past 12 months. Based on this, in 2000 the unemployment rate for the DSA was 7.7 percent and 24.1 percent in 2009; while percentages from the Census for New Hanover County for the same periods were 5.7 percent and 6.5 percent. This shows that the DSA has a substantially higher unemployment rate than New Hanover County.

According to the Cape Fear Workforce Development Board (WDB), the top four fastest growing industries between 2006 and 2016 are projected to be: Financial Services, Professional and Business Services, Education and Health Services, and Leisure and Hospitality (WDB, 2009). The only industry in the region projected to have negative growth is Natural Resources and Mining. According to the Greater Wilmington Chamber of Commerce, the top five non-governmental employers are the New Hanover Regional Medical Center/Cape Fear Hospital; General Electric; University of North Carolina at Wilmington; PPD, Inc.; and Verizon Wireless (Greater Wilmington Chamber of Commerce, 2009).

#### 5.15.5. Commuting

According to the 2009 ACS estimates, 71 percent of workers in the DSA spent less than 20 minutes commuting to work. This is higher than that of Wilmington (66 percent) and New Hanover County (57 percent), indicating that those in the DSA reside closer to their places of work. This reflects the central



location of the DSA to the Central Business District, UNCW, and the businesses and industries located near I-40. The percentages for 2009 are higher than 2000 for all three geographic areas: the DSA saw a 4 percent increase, the City of Wilmington had an 8 percent increase, and New Hanover experienced a 1 percent increase. This indicates a potential spread of employment centers within the City of Wilmington.

The 2009 ACS estimates also indicated a high number of transit-dependent populations living within the DSA. Approximately 11 percent of households do not have any motorized vehicles compared to about 7 percent in New Hanover County. Most notably, Census Tract 103, Block Group 2 has 46.9 percent of households do not have a vehicle. This Block Group contains Creekwood South, the Wilmington Housing Authority development.

#### 5.15.6. Housing

According to the US Census Bureau, the number of housing units in the DSA increased 23 percent from 2000 to 2009, compared to a growth of 32 percent for Wilmington and 22 percent for New Hanover County in the same time period. The number of housing units in most of the Block Groups in the DSA increased from 2000 to 2009, with the highest increase occurring in Census Tract 103, Block Group 1, which increased by 84 percent. The intense growth in housing in Census Tract 103, Block Group 1 is likely due to infill development of vacant parcels and the construction of multi-family housing. The remaining Block Groups experienced between 2 and 27 percent growth. Only one Block Group saw a decrease in housing units—Census Tract 104, Block Group 1 decreased by 8 percent from 2000 to 2009. The low and even negative growth rate in housing for the rest of the Block Groups in the DSA is likely due to changes with the Wilmington Housing Authority and the closing of some of the older concentrated developments and the construction of new scattered-site developments.

A pocket of high-value residential parcels exists in the southwest portion of the DSA, west of Independence Boulevard and south of Market Street. Pockets of low-value (representing low-income) parcels exist primarily north of Market Street, in areas that roughly correspond to the areas of minority populations previously described. The area between 28th Street and Komegay Avenue is subsidized government housing (New Hanover County, 2009).

The 2009 median home value in the DSA was \$164,590. This number was lower than the median home value in Wilmington and New Hanover County, which are both around \$218,000. However, there was a very large amount of variation within the DSA. Census tract 103, Block Group 2 had a median home value of around just \$78,900, the lowest of the Block Groups, while Census Tract 104, Block Group 1 had a median home value of \$383,200, the highest of the Block Groups. Remaining Block Groups had median home values ranging from approximately \$97,000 to nearly \$180,000.

The 2009 ACS estimates indicate that 46.7 percent of the households in the DSA have moved into their place of residence since 2005; this is compared to 36.7 percent for New Hanover. Nearly a quarter (23.4 percent) of the households have lived in the same residence since before the year 2000 while in New Hanover County 33.8 percent of households have lived in the same residence since before 2000. The DSA has a much lower owner occupancy rate than the county, with the DSA housing units being 35.3 percent owner occupied, while New Hanover County has an owner occupancy rate of 61.5 percent.

#### 5.15.7. Education

The 2009 ACS estimates indicate that 16.9 percent of the population in the DSA and 10.9 percent of the population of New Hanover County that is over the age of 25 has not completed high school or a high

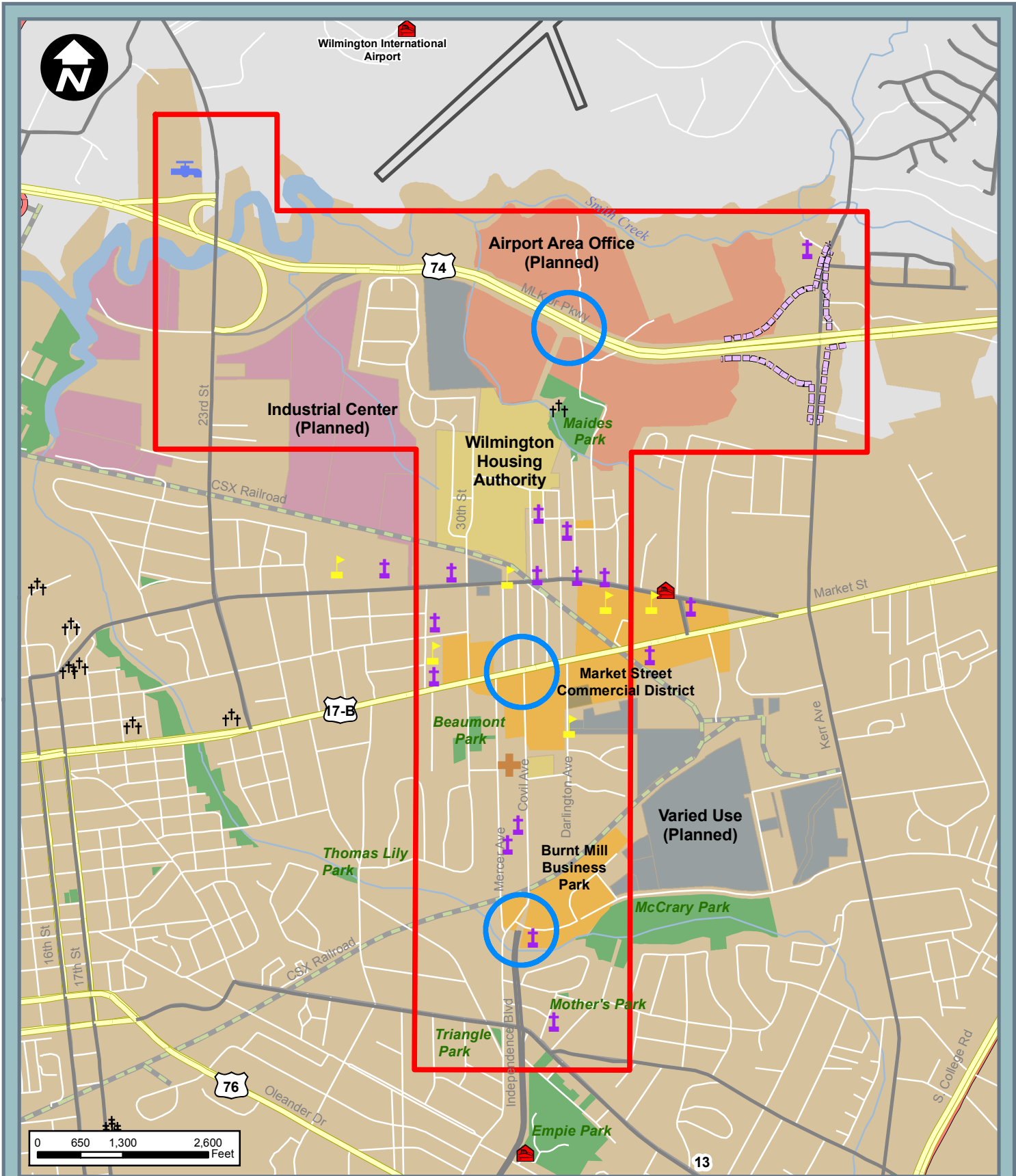


school equivalent program (i.e. GED). The highest concentrations of people that have not completed high school were found in Census Tract 103, Block Group 2 where 35 percent of the population had not completed high school.

## 6. Community Context Diagram

The community context diagram is included in this report as Figure 10. It includes the businesses, office complexes, churches, school, fire station, parks, and other notable community features.





**North Carolina Department of Transportation**



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**Legend**

DCIA	Proposed Kerr Ave Interchange (U-3338)	Cemetery
Local Roads	Streams (non-delineated)	Church
Interstate Highway	Water	Fire Station
US Highway	Parks	School
NC Highway	Wilmington Municipal Boundary	Traffic Node
State Route	Assisted Living Facility	
Railroad	Waste Water Treatment Plant	

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**Figure 10**  
 Community Context Diagram



## 7. Potential Community Impacts

### 7.1. Physical

Acquisition of property will be required for the proposed project. Specific right-of-way acquisition would be determined once the final corridor is selected. In general, based on the makeup of the DCIA, it is likely to include a combination of residential and commercial properties, as well as areas that are currently undeveloped. The portion of the proposed project from Randall Parkway to just north of Princess Place Drive to the CSX Railroad is mostly developed with single-family residential homes and the number of relocations in this area is expected to be considerable.

The proposed project would cross the two CSX rail lines that traverse the DCIA and both crossings are expected to be elevated. The elevation of the roadway in this area would present a visual barrier to nearby businesses and residents.

The construction of a new roadway facility will bring an increase in noise and vibrations from an increase in traffic, as well as an increase in traffic traveling at higher speeds. This is because the proposed project will be a principal arterial that will have higher traffic speeds than existing roadways in the DCIA that are designed as lower-capacity roadways. The increased noise and vibrations may have impacts to residences, businesses, and/or community facilities.

A bridge may be required to traverse the stream and wetland areas south of Martin Luther King Jr. Parkway. Clearing for the bridge and road through this area would result in the temporary loss of wildlife habitat potentially requiring mitigation.

### 7.2. Community/Neighborhood Cohesion and Stability

The construction of a thoroughfare on a new location through a residential area that is well-established is likely to impact community cohesion and stability. It is highly likely that the proposed project will involve considerable takings of residential properties, especially in the section that will traverse from Randall Parkway to the CSX Railroad that is just north of Princess Place Drive. While the property owners that will have direct impacts from acquisitions from partial or complete takings are protected under the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, there will also be secondary impacts to community cohesion that come from the considerable residential relocations and land use changes.

Community facilities (e.g. churches, schools, day cares, etc.) that are located in the DCIA also have the potential of being impacted from either a direct taking or indirect changes in access or loss of clientele. Specific impacts will not be known until a final location and design of the roadway is completed. The residents and businesses that remain in the area will be indirectly impacted from the loss of neighbors, changes in traffic patterns, and the construction of a new physical and psychological barrier. This could alter and impede pedestrian mobility and safety dependent upon the final design of the project.

### 7.3. Economic and Business Resources

This project is likely to displace several businesses, but specific relocation impacts will not be known until the project reaches the design stage. Those which end up being displaced would see a short-term loss in sales revenue while they are being relocated. If their new location is less accessible or desirable to customers, this may also reduce their sales.



Most businesses within the DCIA would see a positive economic benefit, as the proposed project would improve the local transportation system. This would improve customer accessibility to businesses in the DCIA and result in greater visibility. It would also improve the efficiency of transporting goods/services through reduced congestion. Areas that would particularly benefit are those along Market Street and along Martin Luther King Jr. Parkway through increased accessibility around Wilmington.

#### 7.4. Local Land Use, Character, and Development Plans

The proposed project will provide a critical north-south thoroughfare for the City of Wilmington that will connect with other existing and planned thoroughfares. The proposed project is included in the *Cape Fear Commutes 2035 Transportation Plan* and the *Greater Wilmington Urban Area Thoroughfare Plan*. Additionally, the City of Wilmington included it in the *Choices: The Wilmington Future Land Use Plan* (Future Land Use Plan) and the *Market Street Corridor Plan*. Therefore, the project is consistent with both local and regional transportation plans.

The Future Land Use Plan identified several areas in the DCIA targeted for infill development and redevelopment. The area generally between Covil Avenue and Kerr Avenue along Randall Parkway and the CSX Railroad contains several tracts of undeveloped parcels that have been identified for multi-story office development and multi-family residential with supporting retail.

The Market Street Corridor has been targeted for redevelopment in both the *Future Land Use Plan* and the *Market Street Corridor Study*. A section of Market Street between the area where the proposed project would intersect and the CSX Railroad has been targeted as Tier 1 Redevelopment in the Future Land Use Plan. Tier 1 Redevelopment areas are characterized by declining economic value, high turnover rates, unattractive buildings, and deteriorating buildings. These areas are also often found in higher crime areas or in areas with a higher concentration of poverty. The City plans to support and pursue redevelopment opportunities in this section. The remainder of the Market Street Corridor within the DCIA has been categorized as Tier 2 Redevelopment. The Future Land Use Plan states that Tier 2 areas are generally characterized by declining or marginal commercial enterprises with little landscaping and few pedestrian amenities. The City plans to target this area for upgrade on an opportunistic basis when land use changes occur.

In the northern section of the DCIA, Wilmington has identified several infill opportunities in the *Future Land Use Plan*. Several tracts of land near 30th Street and the CSX Railroad have been identified for Varied Residential Density. The plan highlights the importance of preserving the character of the surrounding residential development. West of this area, between the CSX Railroad and Martin Luther King Jr. Parkway, an area has been identified as an Industrial Center. This site contains over 200 acres that the city has envisioned for research and development, marine industries, warehousing and distribution, and light manufacturing.

#### 7.5. Mobility and Access

The proposed project would likely result in direct changes in traffic patterns for those living and traveling within the DCIA. Commuting patterns and access to businesses around Market Street would be particularly affected. Actual impacts may change, depending on how the project is designed and what elements related to pedestrian access and safety are incorporated into the design of the proposed project. Emergency response could be impacted by the project and should be assessed once final design alternatives are defined.



The proposed project will involve the creation of a new roadway facility that is likely to be a physical and psychological barrier in the community. Roadways that carry increased traffic volumes become more difficult to cross which make jobs, schools, shopping areas, churches, and recreational areas less accessible to residents, (NCHRP 221, 1996).

The proposed project would meet several important transportation needs for the City of Wilmington, as described in Section 1.0. It would:

- Increase system traffic capacity and reduce projected traffic volumes on existing congested roadway segments.
- Improve north/south transportation connectivity in Wilmington.
- Improve transportation system (intrastate/intermodal) linkage.

During construction, access to businesses and residences along Market Street would be temporarily impacted by lane and/or road closures and detours. These disruptions are possible to all modes of transportation, including automobiles, pedestrians, bicyclists, and transit. Alternative routes of access to these areas would be maintained throughout construction to ensure access.

#### 7.6. Community Safety and Emergency Response

According to interviews with a local planner, the DCIA currently lacks adequate pedestrian and bicycle facilities (Wilmington, 2009b). The new project will create a thoroughfare on new location. It will be important for the new roadway to include adequate pedestrian safety measures, such as crosswalks and signage. It will also be important for the new roadway to accommodate pedestrians and bicyclists crossing the road so that movement from one side of the street to the other is not impeded.

The project would likely have an overall positive effect on police, fire, and other safety operations in the area due to increased mobility. It is anticipated that congestion would be reduced by providing additional north/south capacity. One fire station is located outside the DCIA on Princess Place Drive. This station would have better north/south access via the proposed project, and would be able to reach areas north of the DCIA.

Construction-related closures and detours could temporarily impact emergency response. Coordination with the City of Wilmington Police Department and Fire Department will ensure minimal disruption to emergency services

#### 7.7. Environmental Justice

Title VI of the Civil Rights Act of 1964, protects individuals from discrimination on the grounds of race, age, color, religion, disability, sex, and national origin. Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations" provides that each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects on minority and low-income populations. Special populations may include the elderly, children, the disabled, low-income areas, American Indians and other minority groups. Executive Order 12898 requires that Environmental Justice principles be incorporated into all transportation studies, programs, policies and activities. The three environmental principles are: 1) to ensure the full and fair participation of all potentially affected communities in the transportation decision-making process, 2) to avoid, minimize or mitigate disproportionately high and adverse human health or environmental effects,



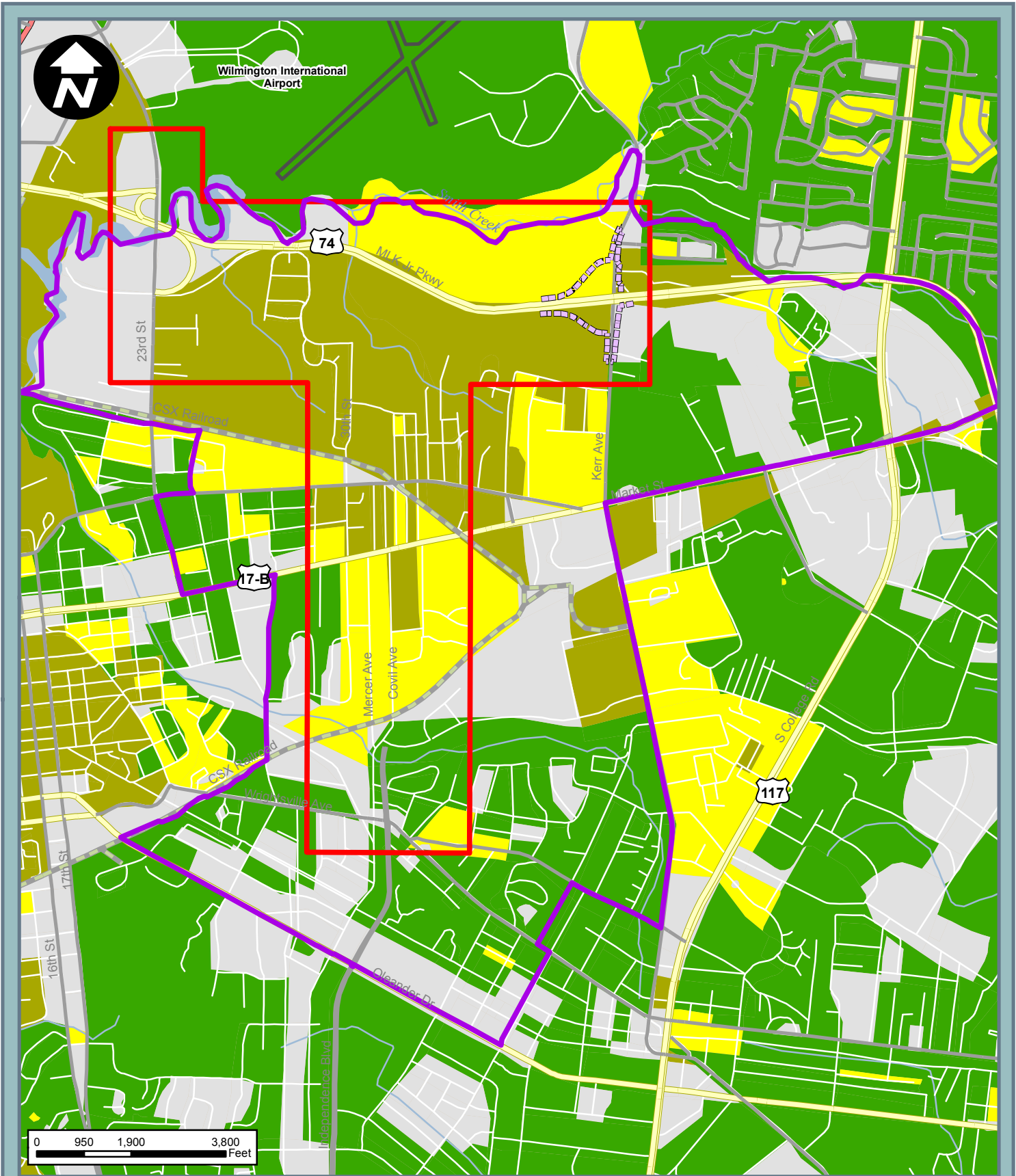
including social and economic effects, on minority or low-income populations, 3) to fully evaluate the benefits and burdens of transportation programs, policies, and activities, upon low-income and minority populations.

The U.S. Department of Transportation defines “Low-Income” as a person whose median household income is at or below the poverty level as determined by U.S. Department of Health and Human Services guidelines. “Minority” means a person who is Black, Hispanic, Asian American, American Indian, or Alaskan Native. Given these definitions and availability of data that matches these definitions, the most recent data set that encompasses all of this information is 2000 Census data; therefore the Environmental Justice analysis was completed using 2000 U.S. Census data.

#### **7.7.1. Minority Populations in the DSA**

Race and ethnicity are discussed at the Block Group level using 2010 data in Sections 5.12.2 and 5.12.3. Based upon 2000 U.S. Census data at the Block level, the majority of the Blocks within the DSA have a minority population that is greater than the minority threshold of 31.1 percent. The minority threshold was calculated by adding 10 percent to the overall county minority level (21.1 percent). Figure 11 illustrates the Census Blocks that have a minority population higher than the threshold.

A spatial review shows that Whites are generally concentrated in the southern half of the DSA whereas Blacks are generally concentrated in the northern half. High concentrations of Blacks exist between Evans Street and Manly Avenue; between Market Street and Princess Place Drive (east of 30th Street); between 30th Street and Emory Street (north of the railroad tracks); and between Komegay Avenue and 28th Street. In the middle of the DSA, around Covil and Darlington Avenues, is an area that is more mixed.



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**Legend**

- DCIA
- 2000 DSA
- Interstate Highway
- US Highway
- NC Highway
- State Route
- Local Road
- Proposed Kerr Ave Interchange (U-3338)
- Streams (non-delineated)
- Water

**2000 US Census Blocks**

- No Population
- Below Threshold (<31%)
- Above Threshold (31.1 - 62.1%)
- Double Threshold (62.2 - 100%)

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**Figure 11**  
Minority Populations by Census Blocks (2000)



**7.7.2. Low-Income Populations in the DSA**

Income data for the DSA is discussed in Section 5.12.4. Based upon 2000 U.S. Census data at the Block Group level, the majority of the Block Groups within the DSA have a population living below poverty that is greater than the poverty threshold of 13.1 percent. Figure 12 illustrates the census Block Groups that have a population below poverty that is higher than the threshold. The majority of Block Groups within the DSA have a high percentage of the poverty relative to New Hanover County that has 13.1 percent. The highest concentration of population living below poverty is in the area between Market Street and Princess Place Drive, with the three Block Groups in this area having similar poverty rates of 34, 37 and 39 percent of the population (U.S. Census, 2000).

**7.8. Recurring Community/Neighborhood Impacts**

Few recurring community/neighborhood impacts are anticipated as few transportation projects have been initiated in the area. The Wilmington Housing Authority’s renovation project at Creekwood South has involved relocations. If the relocations from the proposed roadway were to impact the same residents that had been previously relocated, there could be a recurring community impact.

**7.9. Important Natural Features, Open Space and Parkland**

Six city-owned and operated parks are located within the DCIA: Beaumont, Empie, Maides, McCrary, Mother’s, and Triangle (See Figure 1). Table 14 lists the tables and provides a description of the size and facilities. All of these parks are publicly-owned resources, owned by the City of Wilmington, and are potential Section 4(f) resources. There are no Section 6(f) resources located within the DCIA.

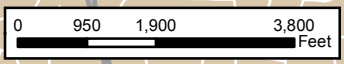
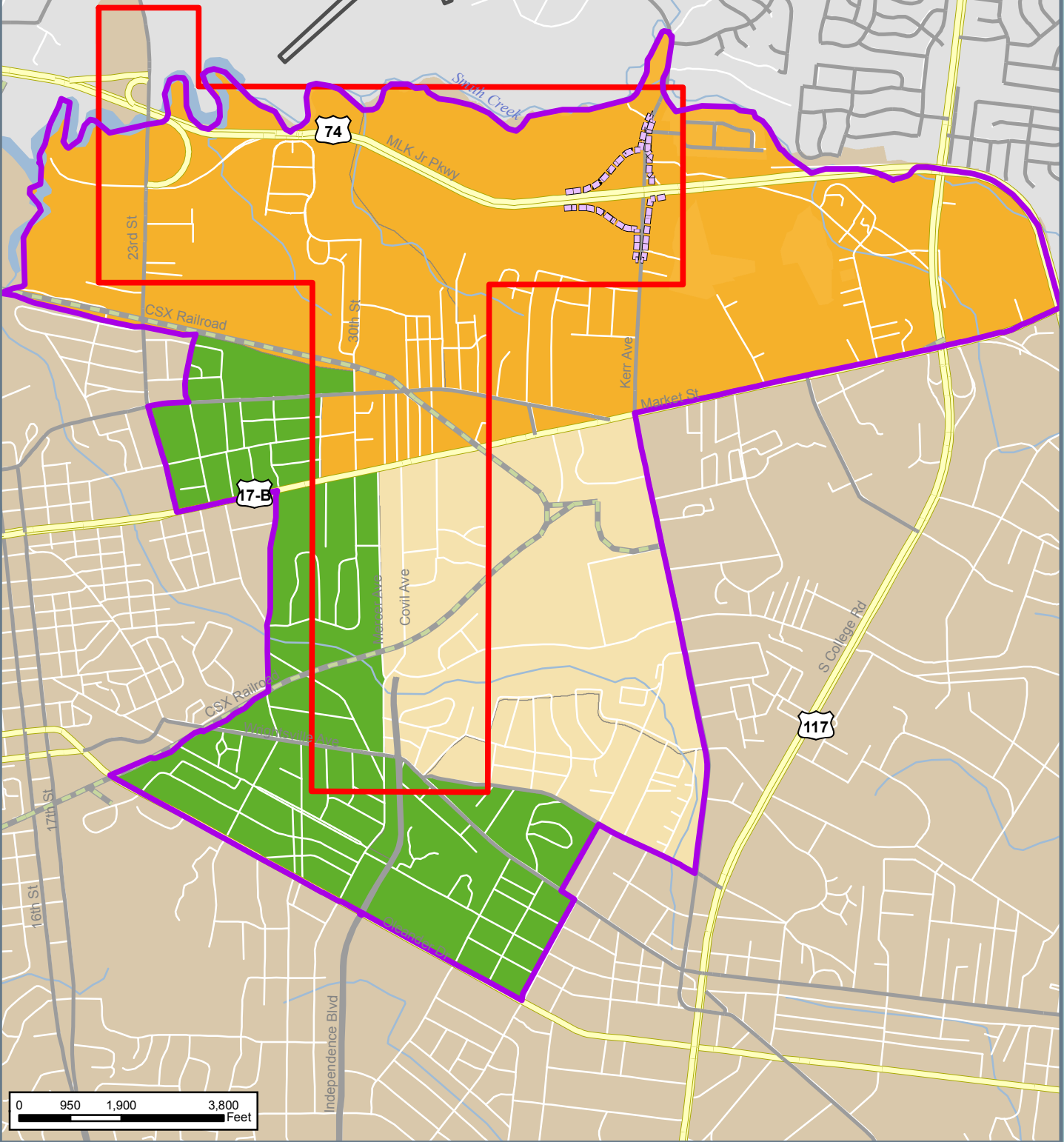
**Table 14: Park Information**

Park Name	Classification	Facilities	Acres
Beaumont	Neighborhood	Playgrounds, open space, picnic areas, basketball courts	3 acres
Empie	Citywide	Playgrounds, tennis courts, open space, picnic shelters, concession stand, basketball courts, athletic fields, lighted facilities	33 acres
Maides	Neighborhood	Playgrounds, open space, shelters, picnic areas, grills, basketball courts, athletic fields, lighted facilities, and recreation center	15 acres
McCrary	Citywide	Open space, shelters, picnic areas, grills, passive area, planting beds	42 acres
Mother’s	Neighborhood	Playgrounds and picnic areas	.10 acre
Triangle	Neighborhood	Open space	1 acre

Source: City of Wilmington.  
[http://www.wilmingtonnc.gov/community\\_services/parks\\_landscaping/parks/city\\_parks.aspx](http://www.wilmingtonnc.gov/community_services/parks_landscaping/parks/city_parks.aspx)



Wilmington International Airport



**North Carolina Department of Transportation**

Date: December 2011

**Legend**

- DCIA
- 2000 DSA
- Interstate Highway
- US Highway
- NC Highway
- State Route
- Local Road
- Proposed Kerr Ave Interchange (U-3338)
- Streams (non-delineated)
- Water

**2000 US Census Block Groups**

- Below Threshold (< 13.1%)
- Above Threshold (13.2 - 26.1%)
- Double Threshold (26.2 - 100%)

Independence Boulevard Extension Project  
New Hanover County, NC  
STIP U-4434

**Figure 12**  
Low Income Populations by Census Block Groups (2000)





## 8. Findings/Next Steps

- Consider inclusion of bicycle and pedestrian accommodations, especially at Randall Parkway, Market Street, and Princess Place Drive. Carefully study the pedestrian crossing locations, and address these locations in the design of the new roadway. Consider gathering local information at subsequent workshops. Consider pedestrian havens and crosswalks. Local planners indicated the need for improved bicycle and pedestrian facilities in the project DCIA.
- Provisions for pedestrians to cross over or under the proposed facility may offer opportunities for community interaction, promote a pedestrian-friendly community, and reduce the impacts from a roadway barrier.
- Develop an analysis based on NCDOT procedure, “Evaluating Temporary Accommodations for Pedestrians during Construction.”
- The NCDOT Project Planning Engineer should coordinate with the Wilmington Housing Authority regarding the proposed project and how it relates to the properties they manage/oversee within the project DCIA. The historical issues between the residents of the Wilmington Housing Authority and the local governing bodies have been tense at times.
- The NCDOT Project Planning Engineer should design the public involvement plan to educate, inform, and get input from locals about the proposed changes and specifically reaching out to the identified environmental justice communities and the neighborhoods located north of Market Street and surrounding Princess Place Drive due to likely impacts from relocations and barrier effects from the proposed project.
- The NCDOT Project Planning Engineer should coordinate with businesses along Market Street and Princess Place Drive that would be directly affected to minimize potential impacts.
- The NCDOT Project Planning Engineer should coordinate with NCDOT Public Involvement to develop a public involvement plan that focuses on stakeholders, including officials from Wilmington, New Hanover County, Wave Transit, the Wilmington Housing Authority, the CSX Railroad, and the environmental agencies, among others.
- The NCDOT Project Planning Engineer should coordinate with FHWA to evaluate impacts to potential 4(f) properties (i.e. Maides, Beaumont, McCrary, Mother’s, Triangle, and Empie Parks).
- The proposed project would change the overall appearance of the existing neighborhoods and adjacent areas bringing more through-traffic into the area. This change will be further evaluated in the Community Impact Assessment.
- The NCDOT Project Planning Engineer should coordinate with the City of Wilmington to ensure that all construction related activities comply with the National Pollutant Discharge Elimination System (NPDES) Phase II Stormwater Permit and Wilmington’s associated Stormwater Management Plan.
- The NCDOT Project Planning Engineer should coordinate with the NCEEP regarding the proposed project’s location within a Targeted Local Watershed and potential mitigation measures that may be required by the NCDOT.



- Develop a Community Impact Assessment (CIA) that incorporates a detailed Environmental Justice Analysis.
- The DSA data indicates that there are no language groups within the DSA in which more than 5 percent of the population or 1,000 persons speak English less than “Very Well.” Therefore demographic assessment does not indicate the presence of LEP language groups that exceed the Department of Justice’s Safe Harbor threshold. However, NCDOT will include notice of Right to Language Access for future meetings for this project.



## Endnotes

<sup>1</sup> North Carolina Office of State Budget and Management. "Population Estimates and Projections". Available: [http://www.osbm.state.nc.us/ncosbm/facts\\_and\\_figures/socioeconomic\\_data/population\\_estimates.shtm](http://www.osbm.state.nc.us/ncosbm/facts_and_figures/socioeconomic_data/population_estimates.shtm). Accessed May 13, 2011.

<sup>2</sup> North Carolina Department of Transportation. *Draft 2012-2018 State Transportation Improvement Program*. 2009.

<sup>3</sup> North Carolina Department of Environment and Natural Resources, Division of Water Quality, Groundwater Section. *Physiographic Provinces*.

<sup>4</sup> North Carolina Office of State Budget and Management. "Population Estimates and Projections". Available: [http://www.osbm.state.nc.us/ncosbm/facts\\_and\\_figures/socioeconomic\\_data/population\\_estimates.shtm](http://www.osbm.state.nc.us/ncosbm/facts_and_figures/socioeconomic_data/population_estimates.shtm). Accessed May 13, 2011.

<sup>5</sup> City of Wilmington. *Choices, The Wilmington Future Land Use Plan 2004-2025*. September 2004.

<sup>6</sup> City of Wilmington. *Market Street Corridor Study*. July 2010.

<sup>7</sup> City of Wilmington. *Market Street Corridor Study*. July 2010.

<sup>8</sup> City of Wilmington. *Joint Wilmington – New Hanover County CAMA (Coastal Area Management Act) Plan, Land Classification Map*. May 2006.

<sup>9</sup> North Carolina Department of Transportation. Memorandum to Ms. Gail Grimes, Assistant Manager PD&EA Branch from James B. Harris, Engineering Manager Rail Division. December 1, 2004.

<sup>10</sup> North Carolina Department of Transportation, Rail Division. *Southeastern North Carolina Passenger Rail Study*. July 2005.

<sup>11</sup> "ILM – Wilmington International Airport." Available: <http://www.flyilm.com/>

<sup>12</sup> City of Wilmington, New Hanover County, Wilmington MPO and North Carolina Department of Transportation. *Market Street Corridor Study*. July 2010.

<sup>13</sup> Wilmington Urban Area Metropolitan Planning Organization, *US 17 Business Corridor Study, 3<sup>rd</sup> Street to Covil Avenue*. April 2007.

<sup>14</sup> City of Wilmington. *Walk Wilmington: A Comprehensive Pedestrian Plan*. August 2009.



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