# Appendix C

# Detailed Land Use and Economic Development Analysis

**CONNECT COBB**

**Northwest Transit Corridor Alternatives Analysis**

**December 2012**

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# LAND USE & MARKET - EXISTING CONDITIONS ASSESSMENT

**NORTHWEST CORRIDOR ALTERNATIVES ANALYSIS STUDY**

**Prepared by Urban Collage, Inc. and BAE Urban Economics**
**for Cobb County Department of Transportation**

**Revised May 15, 2012**

# INTRODUCTION

Many long-term planning factors were investigated as part of the Northwest Corridor Alternatives Analysis in parallel with the transportation and transit options being considered. This memorandum is a summary of the land use and market assessment findings within the larger analysis. Although later phases of the study will analyze specific market areas, activity centers, potential station locations, transit modes and transit alignments, this narrative is intended to describe existing development patterns, demographic traits and market observations within the aforementioned study area as a whole. These findings will inform the following key topics as the project moves forward:

- How much and what types of growth are possible in the short, medium and long term in the study area?
- How might transit improvements, and the transit alternatives developed, influence development patterns within and outside of the Study Area?
- How can the transit alternatives enhance opportunities for development and redevelopment in the study area?
- How do various transit alternatives enhance the economic competitiveness of Cobb and Fulton County and the Atlanta region as whole by providing greater worker mobility and attractiveness as a business location?

# THE STUDY AREA CONTEXT

The study area comprises roughly **120 square miles** of northwestern metro Atlanta as measured about 1 mile on either side of the combined U.S. 41/I-75 corridor. Within this area are **five cities** (Atlanta, Smyrna, Marietta, Kennesaw, and Acworth), **five colleges/universities** (Savannah College of Art and Design – Atlanta, Georgia Institute of Technology, Southern Polytechnic State University, Life University, and Kennesaw State University) and **three community improvement districts – or CIDs** (Midtown, Cumberland and Town Center) - spread across **two counties** (Cobb and Fulton). The corridor measures roughly 30 miles from the south end in Midtown Atlanta to the north end near Acworth.

# EXISTING LAND USE FRAMEWORK

It is important to understand how land is currently used throughout the study area in order to make informed decisions on where future growth is possible/ likely, where development/redevelopment opportunities exist - both large and small - and if there are areas that could transition to other uses (particularly as they relate to transit). Because each city and county along the corridor has its own unique land use categories (as contained within each municipality's Comprehensive Plan), the Existing Land Use Framework Diagram (Figure 1) was created by consolidating existing city/county policy documents, team corridor surveying, aerial photography and property tax information in order to convey a general (non-parcel-specific) framework for the way land is used.

The Existing Land Use Framework diagram (Figure 1) depicts eight generalized land use categories including single-family residential, multifamily residential, mixed-use, commercial, office, industrial, institutional, open space and utility. A very high level observation o fthe study area reveals generally three large clusters of land use diversity – one at Midtown/Atlantic Station on the southern end; another encompassing the Cumberland/Marietta/Dobbins area in the middle; and a third another around Town Center/Kennesaw State University at the convergence of I-75 and I-575 to the north.

The U.S. 41 corridor is largely flanked by commercial uses in Cobb County and a mix of residential and non-residential uses in the Fulton County portion of the study area. Lands along I-75 include a broad diversity of land uses ranging from Kennesaw State University and Town Center commercial uses in the north, to industrial and multifamily areas between Town Center and Cumberland, to numerous single-family neighborhoods throughout.

As a whole, single-family is the predominant land use and more plentiful on the periphery of the study area away from the major roadways. Single-family land is present in all portions of the corridor from north to south, east to west.

In addition to single-family, the Existing Land Use Framework diagram clearly shows a linear pattern of strip retail development (shown in red/commercial) along the U.S. 41/Cobb Parkway, South Cobb Drive and Atlanta Road corridors. Additional retail corridors include North Marietta Parkway, Roswell Road, Windy Hill Parkway, Delk Road, Spring Road and Marietta Boulevard (in Fulton County).

There are several "mixed-use" activity center nodes that contain a diversity of residential, retail and office space within close proximity. These range from large regional centers such as Cumberland, Atlantic Station and Midtown/Midtown West to smaller scale "downtowns" such as Kennesaw, Marietta and Vinings.

In addition to the previously-mentioned colleges and universities, there are several additional large institutions that have a sizable impact within the study area. These include large employment nodes at Wellstar Kennestone Hospital, Piedmont Hospital and the Lockheed-Martin/Dobbins Air Force complex. Dobbins Air Reserve Base is the largest multi-service reserve training base in the world and covers well over 6,000 acres (almost 8% of the overall study area). Other important large civic anchors include the area's various public and private high schools such as Lovett and Westminster in Fulton County and North Cobb, Kennesaw Mountain and Mount Paran Christian in Cobb County.

Open space within the study area varies greatly in size, program and location. However, there are three major open space amenities that dominate their respective regions within the study area. This includes

the Chattahoochee National Recreation Area (along the Cobb and Fulton County border), Kennesaw Mountain National Battlefield Park and Lake Acworth on the north end of the study area.

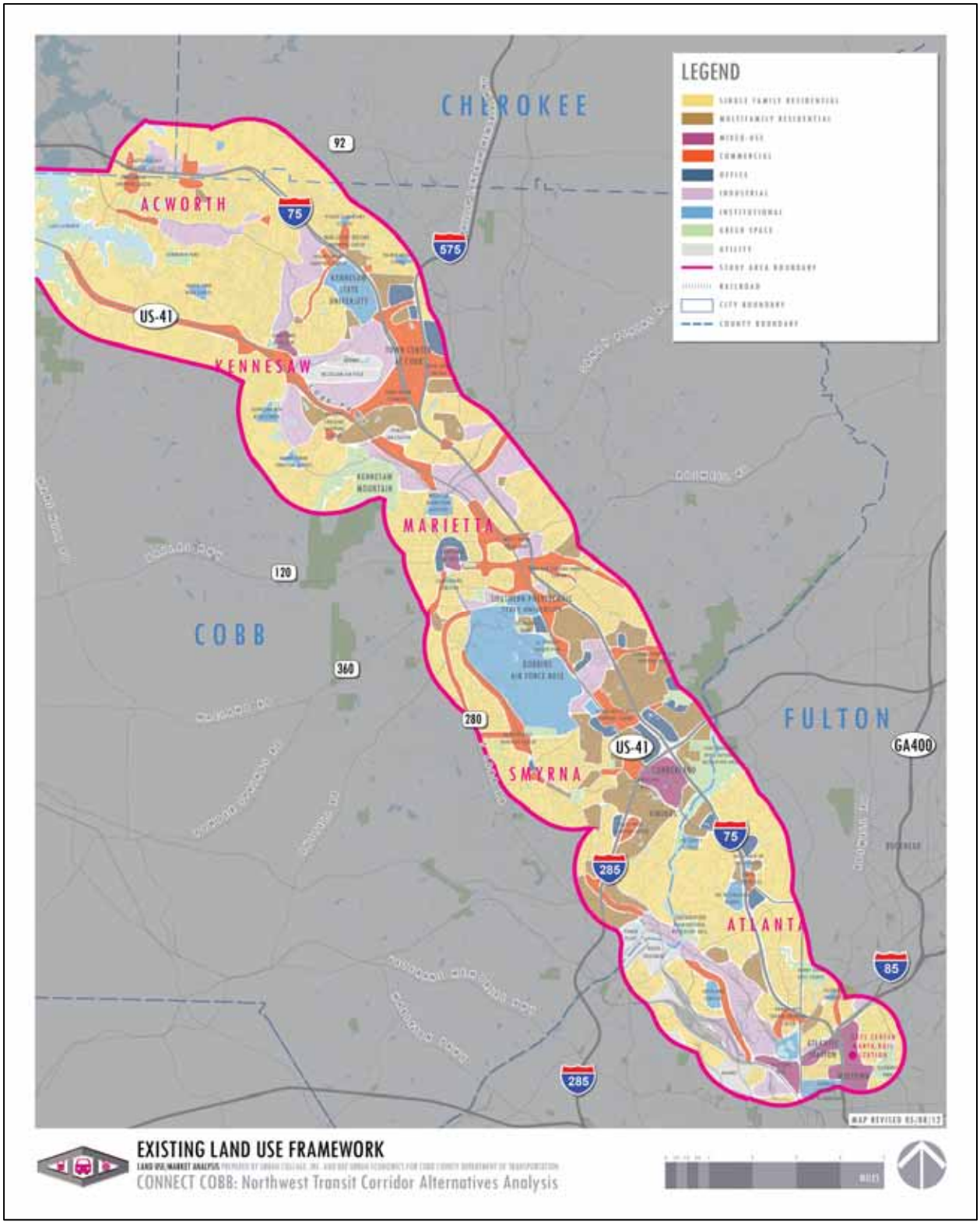



**FIGURE 1** : **EXISTING LAND USE FRAMEWORK**

# CONSOLIDATED ZONING FRAMEWORK / DEVELOPMENT PATTERNS

Another way of assessing existing development patterns and potential future growth is to look at how parcels of land are currently zoned. Although individual parcels of land are not always used the way they are currently zoned, the Consolidated Zoning Framework Diagram (Figure 2: CONSOLIDATED ZONING FRAMEWORKFigure 2) does provide an overview of current development patterns and general development policies. The diagram was created by analyzing over 150 individual zoning categories from each of the six municipalities within the study area and collapsing them into 7 generalized categories. Of those categories, the vast majority of parcels (almost 51%) are currently zoned for single-family residential development. Approximately 26% are generally zoned for commercial business use (16% are industrial and about 10% commercial). 8% of the study area is zoned for multifamily residential use. Office, Institutional, Mixed-Use and "Other" make up the remaining 7% of parcel zoning. See Table 1 below for more detailed breakdown of the distribution of zoning within the study area.

It should be noted that the vast majority of single-family zoned property represents viable, stable and in some cases historic neighborhoods. Therefore, in all likelihood most of these places are not going to redevelop or convert land uses even with the advent of transit. At over 50% of the land, that is a very large portion of the study area that is likely "off the table" when considering possibilities for future transit-oriented development – or T.O.D. Similarly, industrial-zoned land - which is the second highest proportion in the study area – is also largely resistant to future change (albeit to a lesser extent). Most notably, Dobbins Air Base and the railroad uses in Northwest Atlanta (in and around Tilford Yard/CSX and Inman Yard/Norfolk Southern) are unlikely to change for the foreseeable future.

| Consolidated Zoning Categories | Area (Acres) | Percentage |
|---|---|---|
| Commercial | 8,504 | 10% |
| Single Family | 45,112 | 55% |
| Multifamily | 5,815 | 7% |
| Industrial | 12,877 | 16% |
| Office Institutional | 2,862 | 3% |
| Office | 840 | 1% |
| Mixed Use | 1,447 | 2% |
| SUBTOTAL - PARCELS | 77,456 | 94% |
| Roads | 5,219 | 6% |
| TOTAL STUDY AREA | 82,675 | 100% |

**TABLE 1: BREAKDOWN OF ZONED LANDS IN STUDY AREA**

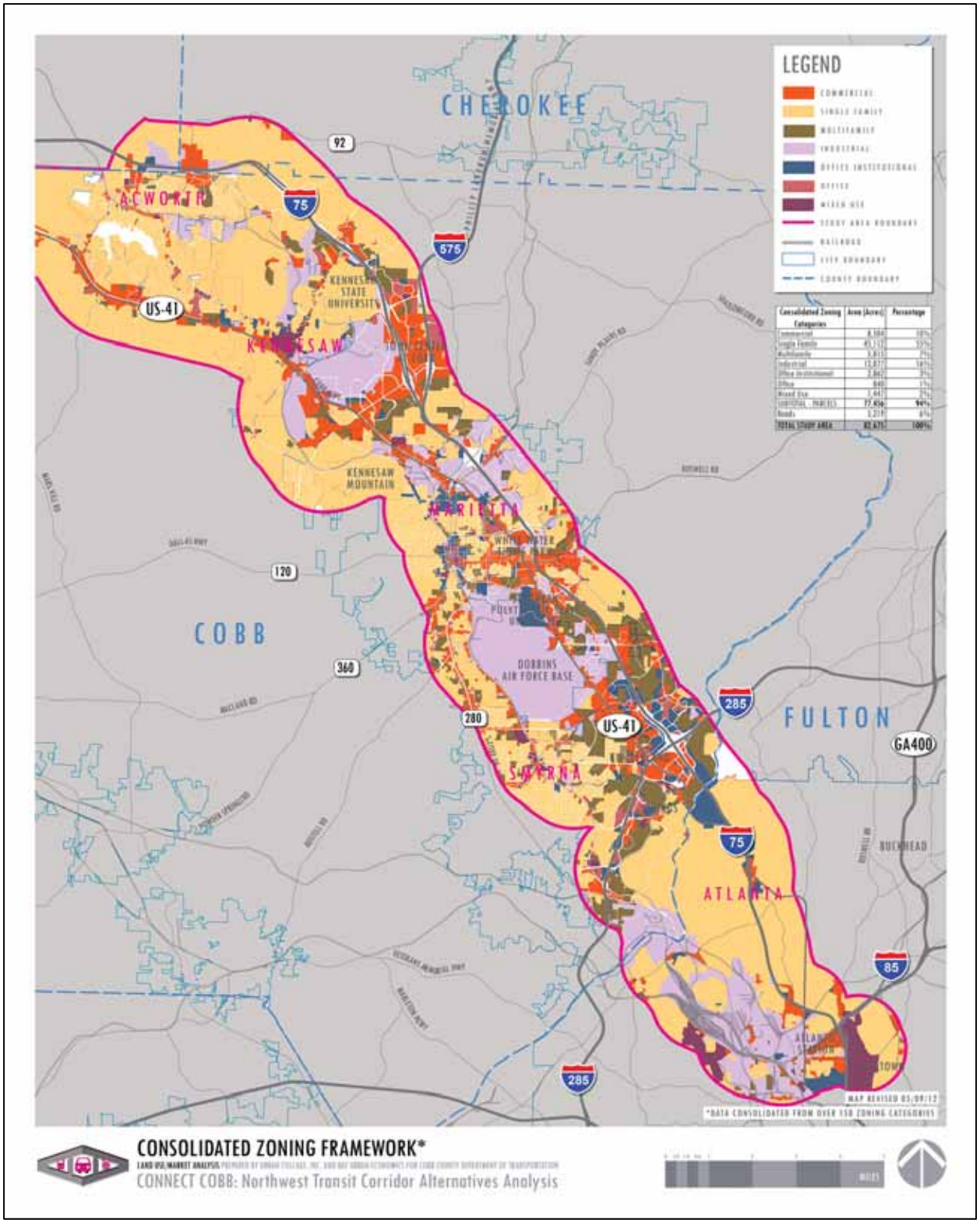



**FIGURE 2: CONSOLIDATED ZONING FRAMEWORK**

## EXISTING DEVELOPMENT CHARACTER

The development character of the study area changes significantly from one end of to the other. The southern end of the corridor within the City of Atlanta's Midtown and Atlantic Station Districts includes predominantly medium to high-density, mixed-use development. Moving northwest, the corridor passes through low-density residential areas west of Buckhead and over the Chattahoochee River en route to the multiuse Cumberland/Vinings area near the convergence of I-75, I-285, and U.S. 41. This area, at the southern end of Cobb County, has been described as an "Edge City" (one of Atlanta's first) and is characterized by multistory office buildings, large shopping centers and multifamily housing. In addition, the Cumberland District is home to Cumberland Mall, the Cobb Galleria Conference Center and the Cobb Energy Performing Arts Centre. Immediately southwest of Cumberland lies Vinings, a smaller-scale "village" that includes boutique shops and restaurants, the Vinings Jubilee and single-family homes.

North of this point, the U.S. 41 corridor stretches north from Smyrna to Acworth. Originally built as a suburban/rural highway in the late 1950's, U.S. 41 witnessed a first wave of commercial strip development that paralleled Cobb County's rapid growth in the 1950's, 60's, 70's and 80's (particularly in the stretch from Cumberland to Marrietta). Subsequent waves of retail development in the 90's and 00's (particularly in the northern stretch near Kennesaw, Town Center and up to Acworth) have left U.S 41 as a nearly continuous commercial "strip" over 20 miles long with a wide yet uneven range of "new" and "old" retail. In the northern end of the study area around Lake Acworth, U.S. 41 transitions rapidly to a semirural or exurban condition,

The development character along the I-75 corridor, which generally parallels U.S. 41 to the east, also changes greatly as it traverses northwest metro Atlanta. The area between the Howell Mill exit and the Chattahoochee River generally has a residential character, although few actual residences can be seen from the interstate due to vegetated buffers. The area north of I-285 up to the 120 Loop has more of a "commercial" character with clear views of Cumberland office towers, and tangential views down the various commercial cross-corridors (e.g., Windy Hill, Delk Road, etc.). The segment of I-75 generally between the 120 Loop and Town Center exhibits a lower density/less intense development character with several single family neighborhoods, light industrial and office parks visible from the interstate. North of Marietta, the Town Center and Kennesaw State University area once again become more commercial in nature. North of KSU, the development character along I-75 quickly becomes residential and/or rural in character with long stretches of "greenfield" areas flanking the interstate.

## DEMOGRAPHIC AND ECONOMIC TRENDS

The Study Area encompasses land in the City of Atlanta, Cobb County, and a very small portion of unincorporated Fulton County near the Atlanta/Cobb County border. A transit connection will reinforce the relationship of the corridor's activity centers to each other as places that offer housing, jobs, education, shopping and recreational attractions. However, the primary focus of the demographic, economic and real estate analysis is on Cobb County and the Cobb County portion of the study area. Most of the study area land and proposed transit stations are within Cobb County. Cobb County land use patterns are more susceptible to change than the more urbanized, more transit accessible area that already exists in the Atlanta portion of the study area.

More detailed information, including market analysis of specific station areas and Atlanta and Cobb County, will follow in a subsequent phase, when more specifically defined alternatives are analyzed for their comparative economic and market impacts.

## General Demographic Patterns in Cobb County and the Study Area

Within the Study area lie four Cobb County municipalities as well as unincorporated county land and land within the boundaries of the City of Atlanta. Table 2 summarizes basic demographic statistics for Cobb County, the four Cobb County municipalities – Marietta, Smyrna, Kennesaw and Acworth – and the City of Atlanta in 2000 and 2010. Statistics for a benchmark geography, the 10-county Atlanta region, are also presented.

In terms of household size and composition, Cobb County demographics overall closely mirror those of the larger region. Cobb County, with over 607,000 residents in 260,000 households in 2010, represents about 17 percent of the 10-county region's population. However, Cobb County's share of the region's population and households is declining, with slower growth in the past decade compared to the region. Cobb County is more populated than the City of Atlanta and grew at a faster pace between 2000 and 2010, despite Atlanta's strongest growth in decades.

The residential population in Cobb is mostly dispersed in a low density, single family development pattern in the county's incorporated and unincorporated areas. Cobb County's population primarily resides outside the four Study Area municipalities. As shown in Table 2, Marietta, Smyrna, Kennesaw and Acworth represent less than one quarter of the County's population and households[1]. Figure 3 depicts household density in Cobb County by Census tract, showing that household densities are one household per acre and lower in much of the county, with densities averaging up to five households per acre in Census Tracts on the southern and eastern end of the county.

[1] Two other Cobb County municipalities – Austell, with a 2010 population of 6,581, and Powder Springs, with a 2010 population 13,940 - lie outside the Study Area and are not included in this analysis.

**TABLE 2: DEMOGRAPHIC OVERVIEW, STUDY AREA MUNICIPALITIES, 2000 AND 2010**

| Acworth | 2000 | 2010 | Avg. Annual % Change 2000-2010 |
|---|---|---|---|
| **Population** | **13,422** | **20,425** | **4.3%** |
| **Households** | **5,194** | **7,656** | **4.0%** |
| **Average Household Size** | **2.58** | **2.67** | |
| **Household Type (a)** | | | |
| Families | 69.1% | 68.4% | |
| Non-Families | 30.9% | 31.6% | |
| **Tenure** | | | |
| Owner | 73.7% | 69.0% | |
| Renter | 26.3% | 31.0% | |
| **Kennesaw** | | | |
| **Population** | **21,675** | **29,783** | **3.2%** |
| **Households** | **8,099** | **11,413** | **3.5%** |
| **Average Household Size** | **2.30** | **2.59** | |
| **Household Type (a)** | | | |
| Families | 71.4% | 64.6% | |
| Non-Families | 28.6% | 35.4% | |
| **Tenure** | | | |
| Owner | 80.6% | 64.4% | |
| Renter | 19.4% | 35.6% | |
| **Smyrna** | | | |
| **Population** | **40,999** | **51,271** | **2.3%** |
| **Households** | **18,372** | **23,002** | **2.3%** |
| **Average Household Size** | **2.21** | **2.22** | |
| **Household Type (a)** | | | |
| Families | 51.7% | 52.6% | |
| Non-Families | 48.3% | 47.4% | |
| **Tenure** | | | |
| Owner | 50.1% | 52.5% | |
| Renter | 49.9% | 47.5% | |
| **Marietta** | | | |
| **Population** | **58,748** | **56,579** | **-0.4%** |
| **Households** | **23,895** | **23,065** | **-0.4%** |
| **Average Household Size** | **2.39** | **2.38** | |
| **Household Type (a)** | | | |
| Families | 54.5% | 56.3% | |
| Non-Families | 45.5% | 43.7% | |
| **Tenure** | | | |
| Owner | 37.6% | 42.3% | |
| Renter | 62.4% | 57.7% | |

| Atlanta | 2000 | 2010 | Avg. Annual % Change 2000-2010 |
|---|---|---|---|
| **Population** | **416,474** | **420,003** | **0.1%** |
| **Households** | **168,147** | **185,142** | **1.0%** |
| **Average Household Size** | **2.30** | **2.11** | |
| **Household Type (a)** | | | |
| Families | 49.5% | 43.4% | |
| Non-Families | 50.5% | 56.6% | |
| **Tenure** | | | |
| Owner | 43.7% | 44.9% | |
| Renter | 56.3% | 55.1% | |
| **Cobb County** | | | |
| **Population** | **607,751** | **688,078** | **1.2%** |
| **Households** | **227,487** | **260,056** | **1.3%** |
| **Average Household Size** | **2.64** | **2.61** | |
| **Household Type (a)** | | | |
| Families | 68.8% | 67.4% | |
| Non-Families | 31.2% | 32.6% | |
| **Tenure** | | | |
| Owner | 68.2% | 66.9% | |
| Renter | 31.8% | 33.1% | |
| **Ten-County Metro Region** | | | |
| **Population** | **3,429,379** | **4,107,750** | **1.8%** |
| **Households** | **1,261,894** | **1,528,403** | **1.9%** |
| **Average Household Size** | **2.67** | **2.64** | |
| **Household Type (a)** | | | |
| Families | 67.6% | 66.2% | |
| Non-Families | 32.4% | 33.8% | |
| **Tenure** | | | |
| Owner | 64.3% | 63.6% | |
| Renter | 35.7% | 36.4% | |

Notes:
(a) A family is a group of two people or more related by birth, marriage, or adoption and residing together.
(b) The ten-county metro region includes Cherokee, Clayton, Cobb, DeKalb, Douglas, Fayette, Fulton, Gwinnett, Henry, and Rockdale counties.

**Sources: US Census, 2000 & 2010; BAE, 2011.**

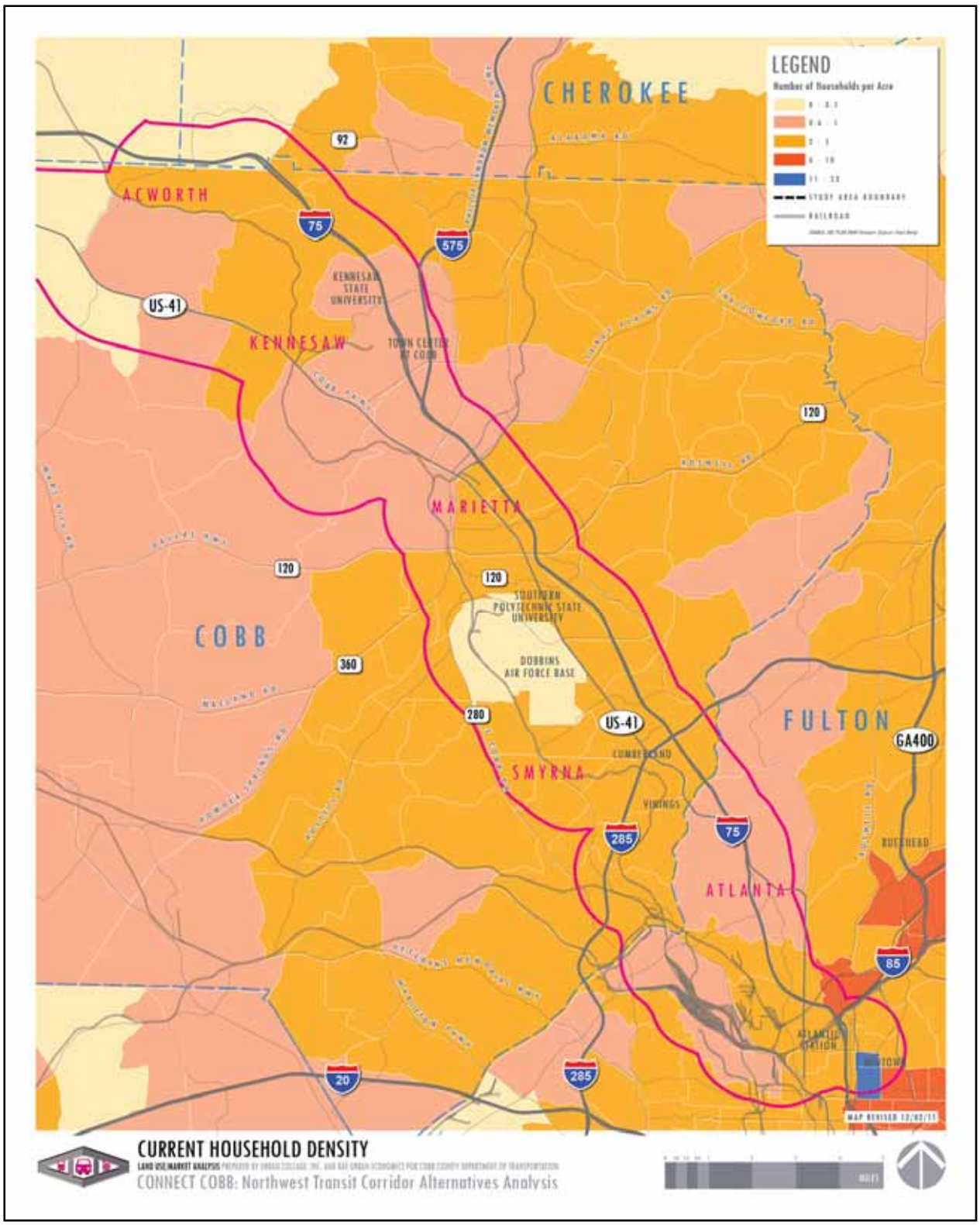



**FIGURE 3: POPULATION DENSITY IN THE STUDY AREA AND COBB COUNTY, 2010**

The proportion of Cobb County's population in the four Study Area municipalities overall remained relatively stable between 2000 and 2010 even as population shifts occurred within the county. The two more northern municipalities in the Study Area – Acworth and Kennesaw – grew at a more rapid pace than the two larger, more southern cities of Smyrna and Marietta. Acworth and Kennesaw households include mostly families, as opposed to single persons or households of unrelated persons; both communities saw household sizes increase, reflecting a net gain in larger households. Both communities also saw a shift to towards an increasing share of renter occupied households. This trend is particularly strong in Kennesaw, which also saw a greater diversification of its household composition to include more non-family households between 2000 and 2010, likely reflecting the strong enrollment growth at Kennesaw State University, just outside Kennesaw's municipal borders, and its continued shift from a commuter to a residential university.

Cobb County's two southern municipalities in the Study Area (Smyrna and Marietta) saw a different set of trends in the past decade. Larger and more built out, these cities have smaller households on average than in the northern cities and county as a whole, and a more even mix of household type and tenure. However, both cities saw increasing proportions of households owning their own homes, a slight trend towards more family households (as opposed to single person on roommate households), and stable household sizes. Smyrna also saw growth higher than the county-wide average, adding more than 10,000 residents in the past decade, while Marietta saw a slight net decline in its population during the same time period.

The City of Atlanta reflects trends seen in urban areas across the country, growing in population with smaller, younger households in the first decade of the century. In adding about 17,000 net new households but only netting 4,000 new residents between 2000 and 2010, Atlanta's average household size decreased to just above two persons, much lower than in suburban Cobb County. With that growth, the proportion of the City's single person and roommate households increased, although homeownership levels on balance remained about the same.

Study area demographics provide a finer grain understanding of recent trends within the transportation corridor. Table 3 compiles data for U.S. Census tracts that fall within the study area, and also disaggregates that data to show differences between the Cobb County and Atlanta portions of the study area.

In the last decade, the Cobb County portion of the study area grew at about the same rate as the county as a whole. Reflecting the demographics of the southern Cobb County municipalities to a large degree, the Cobb portion of the corridor has a smaller median household size and a higher proportion of single/non-family households than the county-wide profile. The Atlanta portion of the study area is less than a third of the Cobb County population,[2] however, it grew at a faster rate between 2000 and 2010. Gains in the number of households in the Atlanta portion of the corridor's Census tracts accounted for about half of Atlanta's net household growth in that decade. An increase of nearly 22,000 residents in the Atlanta portion highlights the exodus of population from other parts of the city, as the citywide gain in population was only about about 3,500 residents. The large increase in the Atlanta study area population suggests that a large group of non-household residents (such as students living in a dormitory) were added to the area.

**TABLE 3: STUDY AREA DEMOGRAPHICS, 2000 AND 2010**

| | 2000 | 2010 | Avg. Annual % Change 2000-2010 |
|---|---|---|---|
| ***City of Atlanta Study Area*** | | | |
| **Population** | **86,749** | **108,612** | **2.3%** |
| **Households** | **42,862** | **51,278** | **1.8%** |
| **Average Household Size** | **1.95** | **1.90** | **-0.3%** |
| **Median Age** | **32.08** | **38.32** | |
| **Household Type** | | | |
| Families | 37% | 35% | |
| Non-Families | 63% | 65% | |
| **Tenure** | | | |
| Owner | 46% | 46% | |
| Renter | 54% | 54% | |
| ***Cobb County Study Area*** | | | |
| **Population** | **313,472** | **358,819** | **1.4%** |
| **Households** | **126,711** | **145,064** | **1.4%** |
| **Average Household Size** | **2.45** | **2.44** | **-0.1%** |
| **Median Age** | **31.60** | **33.01** | |
| **Household Type** | | | |
| Families | 59% | 59% | |
| Non-Families | 41% | 41% | |
| **Tenure** | | | |
| Owner | 53% | 54% | |
| Renter | 47% | 46% | |
| ***NW Corridor Study Area*** | | | |
| **Population** | **400,221** | **467,431** | **1.6%** |
| **Households** | **169,573** | **196,342** | **1.5%** |
| **Average Household Size** | **2.33** | **1.82** | **-2.4%** |
| **Median Age** | **31.90** | **37.83** | |
| **Household Type** | | | |
| Families | 54% | 53% | |
| Non-Families | 46% | 47% | |
| **Tenure** | | | |
| Owner | 52% | 52% | |
| Renter | 48% | 48% | |

Notes:

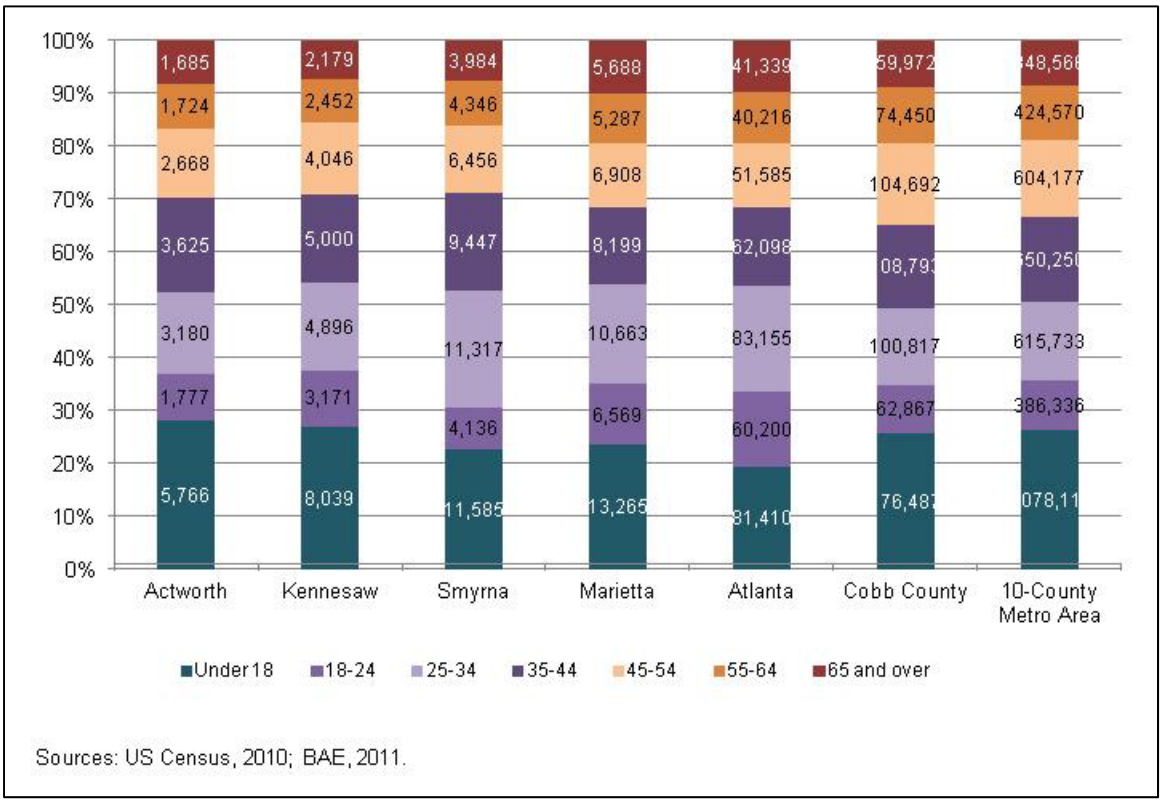
(a) A family is a group of two people or more related by birth, marriage, or adoption and residing together.

**Source: U.S. Census 2000 & 2010; Claritas 2012.1; BAE, 2012.**

[2] I t is important to note that the Census tract boundaries used to create the study area profile extend beyond the defined study area boundary and theref ore include land outside the study area.

The population makeup by age varies considerably by geography as well. See Figure 4. The southern municipalities of Smyrna and Marietta have a smaller proportion of residents under the age of 18 than the northern municipalities or Cobb County overall; by comparison Atlanta has the smallest proportion of children, representing less than 20 percent of the population. About 35 percent of Cobb County's population overall consists of residents over the age of 45. This population includes residents in their peak earning years as well as retirees and residents close to retirement. The municipalities within Cobb County have a higher share of residents between the ages of 18 and 44 than the County overall and its unincorporated areas. The Competitive Assessment completed for the Cobb Chamber of Commerce[3] notes that the county has a sustainable proportion of residents between the ages of 25 and 44 as a backbone of the county's workforce, greater than the proportion of residents between 45 and 64 years of age that will be retiring. However, it may be losing that advantage as the share of the county's population in the 25 to 44 age cohort declined between 2000 and 2010, compared to substantial growth in older cohorts.

**FIGURE 4: AGE OF RESIDENTS, STUDY AREA MUNICIPALITIES**




[3] Competitive Assessment: Cobb's Competitive EDGE , by Market Street Services, July 2011.

Cobb County has households at a diversity of income levels. As shown in Table 4, the median household income is nearly $65,000 (in 2010 dollars), and about 48 percent of Cobb County households earn between $50,000 and 150,000.

**TABLE 4: COBB COUNTY HOUSEHOLDS BY INCOME**

| Income Category | Percent |
|---|---|
| Less than $15,000 | 8.2% |
| $15,000-$24,999 | 8.2% |
| $25,000-$34,999 | 9.4% |
| $35,000-$49,999 | 12.9% |
| $50,000-$74,999 | 17.9% |
| $75,000-$99,999 | 13.5% |
| $100,000-$149,999 | 16.2% |
| $150,000-$199,999 | 7.2% |
| $200,000 or more | 6.6% |
| **Total** | **100.0%** |
| **Median Household Income (b)** | **$64,970** |

Notes:
(a) The American Community Survey (ACS) publishes demographic estimates based on statistical sampling conducted between 2008-2010.
(b) Adjusted to 2010 dollars.

Sources: ACS, 2008-2010; BAE, 2011.

## Economic Profile: Cobb County's Workforce and Employment Base

Cobb County has a well-educated, professional workforce. As shown in Table 5, over 43 percent of Cobb County's workforce population has obtained a bachelors or graduate/professional degree, higher than the overall U.S. average of 28 percent of the population with the same level of educational attainment. Nearly 42 percent of the workforce works in a management or professional occupation, and an additional 25 percent work in sales and office positions. See Table 6. Only a third work in the other occupational categories found in Table 6 that generally require a lower level of education.

**TABLE 5: HIGHEST LEVEL OF EDUCATIONAL ATTAINMENT, COBB COUNTY RESIDENTS 25 YEARS OF AGE AND OLDER**

| Educational Attainment | Cobb County |
|---|---|
| Less than 9th Grade | 4.4% |
| 9th to 12th Grade, No Diploma | 5.0% |
| High School Graduate (incl. Equivalency) | 19.8% |
| Some College, No Degree | 20.1% |
| Associate Degree | 6.4% |
| Bachelor's Degree | 29.3% |
| Graduate/Professional Degree | 14.9% |
| **Total** | **100.0%** |
| **Population with College Degree** | **50.6%** |

Note:
(a) The American Community Survey (ACS) publishes demographic estimates based on statistical sampling conducted between 2008-2010.
Sources: ACS, 2008-2010; BAE, 2011.

**TABLE 6: OCCUPATIONAL PROFILE OF COBB COUNTY RESIDENTS 16 YEARS OF AGE AND OLDER**

| | Cobb County | |
|---|---|---|
| **Occupation** | **Number** | **Percent** |
| Management, Professional & Related | 156,011 | 41.8% |
| Service | 49,203 | 13.2% |
| Sales & Office | 94,853 | 25.4% |
| Farming, Fishing & Forestry | 26,762 | 7.2% |
| Construction, Extraction & Maintenance | 18,263 | 4.9% |
| Production, Transportation & Material Moving | 27,804 | 7.5% |
| **Total** | **372,896** | **100.0%** |

Note:
(a) The American Community Survey (ACS) publishes demographic estimates based on statistical sampling conducted between 2008-2010.
Sources: ACS, 2008-2010; BAE, 2011.

According to Table 7Table 7, about eight percent of Georgia's covered employment[4] is found in Cobb County. The County's employment base is diverse mix of industries found in metropolitan areas. Compared to the state, it includes a high proportion of professional and technical jobs and jobs in wholesaling; although the number of jobs is small, the relative share of employment in management/headquarter operations is also more concentrated in Cobb County than the state. The Strategic Assessment prepared by the Cobb Chamber of Commerce notes that the professional and technical services sector is substantially more concentrated in Cobb County than the national average, and it is an industry sector that has grown over the past five years. Compared to national employment, Cobb County jobs are concentrated in wholesale trade and management/headquarter operations as well, but these industry sectors experienced job loss over the past five years. The largest portion of the county's covered jobs are in retail trade, in roughly the same proportion as found in the state.

**TABLE 7: MIX OF INDUSTRIES IN COBB COUNTY AND GEORGIA, FIRST QUARTER 2011**

| | Cobb County | | Georgia | |
|---|---|---|---|---|
| **Industry** | **Number** | **Percent of Total** | **Number** | **Percent of Total** |
| Agriculture, Forestry, Fishing, and Hunting | 29 | 0.0% | 21,190 | 0.6% |
| Mining | 79 | 0.0% | 4,784 | 0.1% |
| Utilities | 1,051 | 0.4% | 20,289 | 0.5% |
| Construction | 16,534 | 5.9% | 141,712 | 3.8% |
| Manufacturing | 19,175 | 6.8% | 345,918 | 9.3% |
| Wholesale Trade | 20,925 | 7.4% | 194,277 | 5.2% |
| Retail Trade | 34,060 | 12.1% | 432,128 | 11.6% |
| Transportation and Warehousing | 9,657 | 3.4% | 183,873 | 4.9% |
| Information | 6,918 | 2.5% | 100,129 | 2.7% |
| Finance and Insurance | 11,022 | 3.9% | 148,905 | 4.0% |
| Real Estate and Rental and Leasing | 5,145 | 1.8% | 54,877 | 1.5% |
| Professional and Technical Services | 24,582 | 8.7% | 222,439 | 6.0% |
| Management of Companies and Enterprises | 5,654 | 2.0% | 54,191 | 1.5% |
| Administrative and Waste Services | 26,861 | 9.5% | 254,434 | 6.8% |
| Educational Services | 25,966 | 9.2% | 386,127 | 10.4% |
| Health Care and Social Assistance | 30,131 | 10.7% | 459,316 | 12.3% |
| Arts, Entertainment, and Recreation | 2,374 | 0.8% | 36,459 | 1.0% |
| Accommodation and Food Services | 25,346 | 9.0% | 331,054 | 8.9% |
| Other Services, except Public Administration | 7,476 | 2.6% | 92,882 | 2.5% |
| Public Administration | 9,138 | 3.2% | 239,321 | 6.4% |
| **Total** | **282,123** | **100%** | **3,724,305** | **100%** |

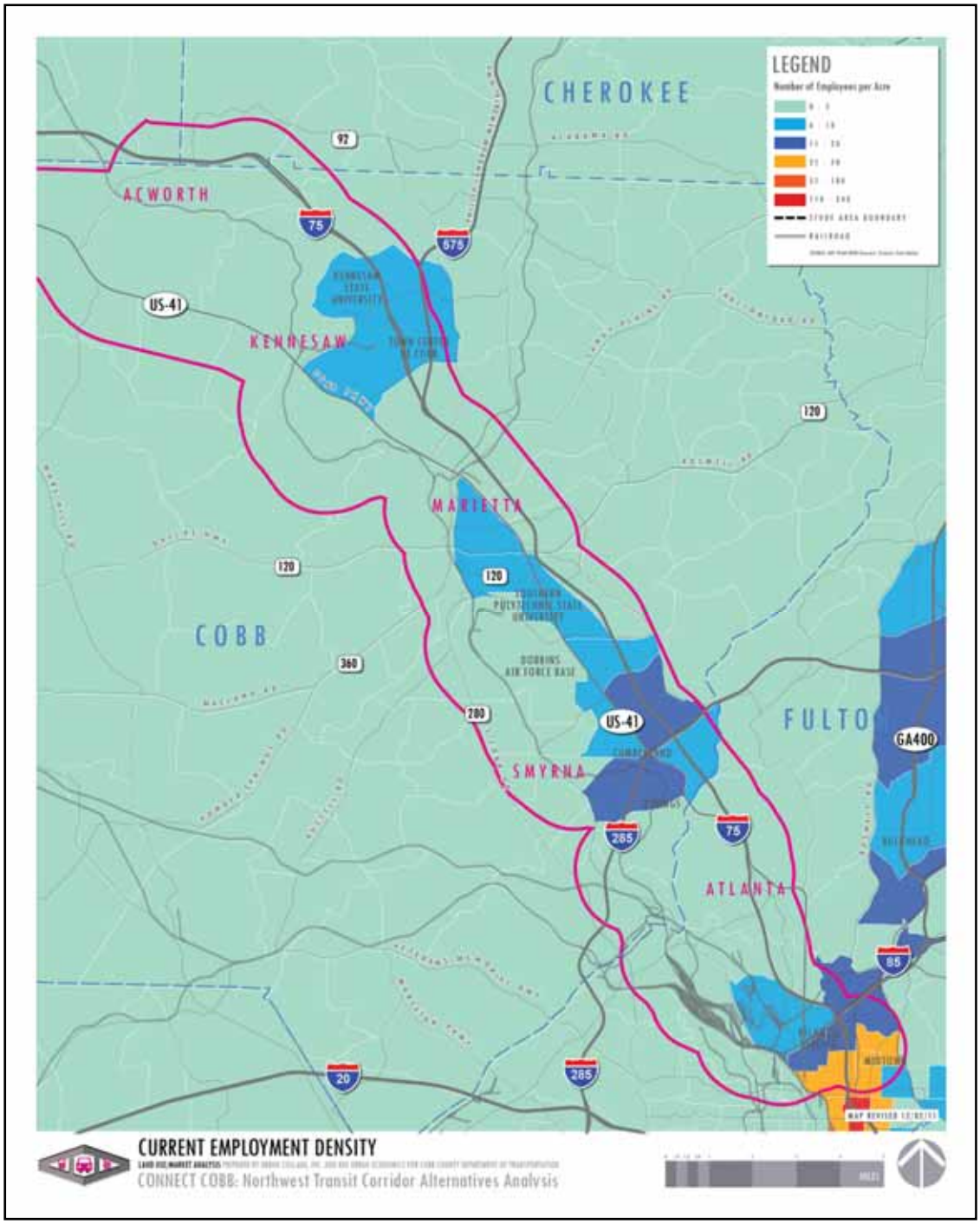
Note:
Sources: Georgia Department of Labor, Workforce Statistics & Economic Research; Quarterly Census of Employment and Wages; BAE, 2011.

Jobs in and around the Study Area are concentrated around the area's transportation corridors, including U.S. 41 and Interstate 75. See Figure 5. Within Cobb County, the highest density of jobs is found in Cumberland, but employment centers are also found along the U.S. 41/Interstate 75

[4] The source for jobs data is the Quarterly Census of Employment and Wages (QCEW), collected from employer reporting for the nation's unemployment insurance system. Employment statistics from QCEW therefore do not include jobs not covered by unemployment insurance, such as self-employed persons and some public sector and military employment.

transportation corridor, associated with KSU, Town Center, and the City of Marietta. Job densities compare to the GA-400 corridor to the east, representing the other large concentration of suburban employment in the region. Figure 5 also demonstrates the relative density of Cobb County employment to employment near the Arts Center terminus of the alignments, where densities are the highest in the Study Area.

**FIGURE 5: EMPLOYMENT DENSITY IN COBB COUNTY AND STUDY AREA**



The largest employers in the county represent a mix of consumer products, retailers, health care, government and education. See Table 8. According to the Cobb County Office of Economic Development, there are 439 international companies with a presence in the county. Four Fortune 500 companies are headquartered in Cobb County, representing a diversity of businesses: Home Depot, Coca-Cola Enterprises, Genuine Parts (NAPA), and First Data Enterprises.

**TABLE 8: COBB COUNTY'S LARGEST EMPLOYERS**

| Employer | Jobs |
|---|---|
| Cobb County Schools | 19,123 |
| WellStar | 11,840 |
| The Home Depot | 11,784 |
| Lockheed Martin | 7,568 |
| Ryla Teleservices Inc | 6,011 |
| Cobb County Government | 5,103 |
| Kennesaw State University | 3,400 |
| Publix Super Markets Inc | 2,905 |
| Wal-Mart | 2,750 |
| Dobbins Air Force Base | 2,547 |
| Six Flags Over GA | 2,226 |
| Genuine Parts Auto Parts | 1,998 |
| The Kroger Company | 1,974 |
| Marietta City Schools | 1,157 |
| YKK USA, Inc. | 815 |
| City of Marietta | 755 |
| Quintiles Labs | 732 |
| Travelport GDS/Worldspan Travel | 671 |
| Heidelberg USA | 646 |
| Southern Polytechnic University | 596 |
| Cobb EMC | 548 |
| BlueLinx Building Materials | 541 |
| Emory Adventist Hospital | 512 |
| Caraustar Industries, Inc. | 511 |
| Ed Voyles Automotive Group | 500 |
| Tip Top Poultry, Inc | 500 |

Sources: Cobb County Office of Economic Development, Cobb Chamber of Commerce; BAE, 2011.

## Commuting Patterns and Workforce/Jobs Balance

Cobb County is an integral part of a mature regional economy with an extensive transportation network that fosters growth of specialized economic activity and high paying employment opportunities. This transportation connectivity allows Cobb County residents and employers access to a large base of highly skilled jobs and workers, respectively, from throughout the metropolitan area. Nevertheless, workers often tend to live in relatively close proximity to their place of work. Table 9, summarizing commuter flows for Cobb County's residents and jobs, indicates that over two thirds of Cobb County's workforce is employed in either Cobb County (41 percent) or Fulton County (29 percent). About 40 percent of Cobb County's jobs are held by Cobb County residents, with the remaining 60 percent of jobs held by workers living in a diversity of places around the region.

On balance, the data suggest that Cobb County has slightly fewer jobs than workers. Table 10 displays the balance of jobs and workers in Cobb County, with a net surplus of residents leaving the county every work day to work in other locations around the region. There are 100 workers for every 94 jobs in the county.

**TABLE 9: COMMUTING PATTERNS**

| Where Cobb County Residents Work | | |
|---|---|---|
| **Place of Work** | **Number of Workers** | **% Total** |
| Cobb County | 132,053 | 40.7% |
| Fulton County | 94,827 | 29.2% |
| DeKalb County | 24,022 | 7.4% |
| Gwinnett County | 16,604 | 5.1% |
| Clayton County | 8,038 | 2.5% |
| Cherokee County | 6,964 | 2.1% |
| Douglas County | 5,569 | 1.7% |
| Paulding County | 3,753 | 1.2% |
| Forsyth County | 3,082 | 1.0% |
| Bartow County | 2,599 | 0.8% |
| All Other Locations | 26,749 | 8.2% |
| **Total** | **324,260** | **100.0%** |
| **Where Cobb County Workers Reside** | | |
| **Place of Residence** | **Number of Workers** | **% Total** |
| Cobb County | 132,053 | 39.5% |
| Fulton County | 38,438 | 11.5% |
| Cherokee County | 21,657 | 6.5% |
| DeKalb County | 21,005 | 6.3% |
| Gwinnett County | 19,520 | 5.8% |
| Paulding County | 14,392 | 4.3% |
| Douglas County | 10,547 | 3.2% |
| Bartow County | 8,234 | 2.5% |
| Clayton County | 7,012 | 2.1% |
| Forsyth County | 4,725 | 1.4% |
| All Other Locations | 56,720 | 17.0% |
| **Total** | **334,303** | **100.0%** |

Notes:

Sources: ARC, 2009; BAE, 2011.

**TABLE 10: WORKFORCE/JOBS BALANCE, COBB COUNTY AND GEORGIA**

| Workers 16 and Over | Cobb County | Georgia |
|---|---|---|
| Work in Cobb County | 328,364 | 4,250,695 |
| Live in Cobb County | 348,103 | 4,251,441 |
| ***Jobs/Employed Residents Ratio*** | **0.94** | **1.00** |

Note:
(a) The American Community Survey (ACS) publishes demographic estimates based on statistical sampling conducted between 2008-2010.
Sources: ACS, 2008-2010; BAE, 2011.

## Projected Future Household and Employment Growth

Following the trends of the past 10 years, the Atlanta Regional Commission (ARC) projects that Cobb County and Fulton County population and household growth will continue, but at a slower pace than the region overall. As displayed in Table 11, Cobb County is expected to add about 33,000 residents and

52,000 households between 2010 and 2030. Outpaced by regional growth, the county's share of the region's population is anticipated to decline slightly under a "no build" scenario, from 16 percent in 2010 to 14 percent in 2040. Similarly, Fulton County will add over 373,000 people in nearly 157,000 households in the same 30 year period. Although it is projected to grow at a faster pace than Cobb County, it will still grow at a slower pace than the region overall, and will also see its share of the region's households decline slightly.

**TABLE 11: COBB COUNTY PROJECTED GROWTH (UNDER "NO BUILD")**

| | | | | | Change, 2010-2040 | |
|---|---|---|---|---|---|---|
| **Population** | **2010 (a)** | **2020** | **2030** | **2040** | **Number** | **Percent** |
| Cobb County | 672,076 | 751,094 | 805,297 | 855,475 | 183,399 | 27.3% |
| Fulton County | 965,593 | 1,148,576 | 1,244,333 | 1,338,891 | 373,298 | 38.7% |
| 10-County Metro Region (b) | 4,135,493 | 4,925,037 | 5,492,530 | 6,036,285 | 1,900,792 | 46.0% |
| Cobb County Share of Metro | 16% | 15% | 15% | 14% | | |
| Fulton County Share of Metro | 23% | 23% | 23% | 22% | | |
| **Households** | | | | | | |
| Cobb County | 255,229 | 282,327 | 307,560 | 333,190 | 77,961 | 30.5% |
| Fulton County | 390,647 | 445,446 | 495,818 | 547,594 | 156,947 | 40.2% |
| 10-County Metro Region (b) | 1,551,271 | 1,819,635 | 2,067,171 | 2,313,104 | 761,833 | 49.1% |
| Cobb County Share of Metro | 16% | 16% | 15% | 14% | | |
| Fulton County Share of Metro | 25% | 24% | 24% | 24% | | |
| **Employment** | | | | | | |
| Cobb County | 304,696 | 364,538 | 407,283 | 458,382 | 153,686 | 50.4% |
| Fulton County | 671,998 | 814,009 | 914,302 | 1,032,717 | 360,719 | 53.7% |
| 10-County Metro Region (b) | 1,860,067 | 2,303,663 | 2,622,610 | 3,003,671 | 1,143,604 | 61.5% |
| Cobb County Share of Metro | 16% | 16% | 16% | 15% | | |
| Fulton County Share of Metro | 36% | 35% | 35% | 34% | | |

Notes:
(a) ARC estimates were prepared before the 2010 Census and therefore may diverge from actual population counts.
(b) The ten-county metro region includes Cherokee, Clayton, Cobb, DeKalb, Douglas, Fayette, Fulton, Gwinnett, Henry, Rockdale counties.
Sources: ARC REMI Forecasts, May 2009; BAE, 2011.

Based on formulas used by ARC in developing its long term projections, household and employment growth is generally expected to be stronger in the northern portion of Cobb County in the next 20 years, as shown in Figure 6, although the projections also take into account opportunities closer to the region's core, where land has been made available for redevelopment both in Cobb County and the portions of the Study Area in Atlanta. Projections are aligned with the regional Unified Growth Policy, which supports existing employment and residential centers with planned transportation improvements that complement these existing land uses, corridors and regional centers.

The rate of employment growth is anticipated to surpass household growth in both Cobb and Fulton Counties. ARC projects the Cobb County will add over 100,000 jobs and increase its job base by 50 percent between 2010 and 2040. Fulton County is also projected to increase its employment base by more than half in the 30 year period, adding over 360,000 jobs. Regional job growth is expected to be slightly stronger, resulting in a slight loss of both counties' share of the region's jobs, from 52 percent in 2010 to 49 percent by 2040. Although employment is expected to continue to be concentrated in the same job centers, ARC projects employment growth to be more dispersed than the current pattern of job centers, as shown in Figure 7.

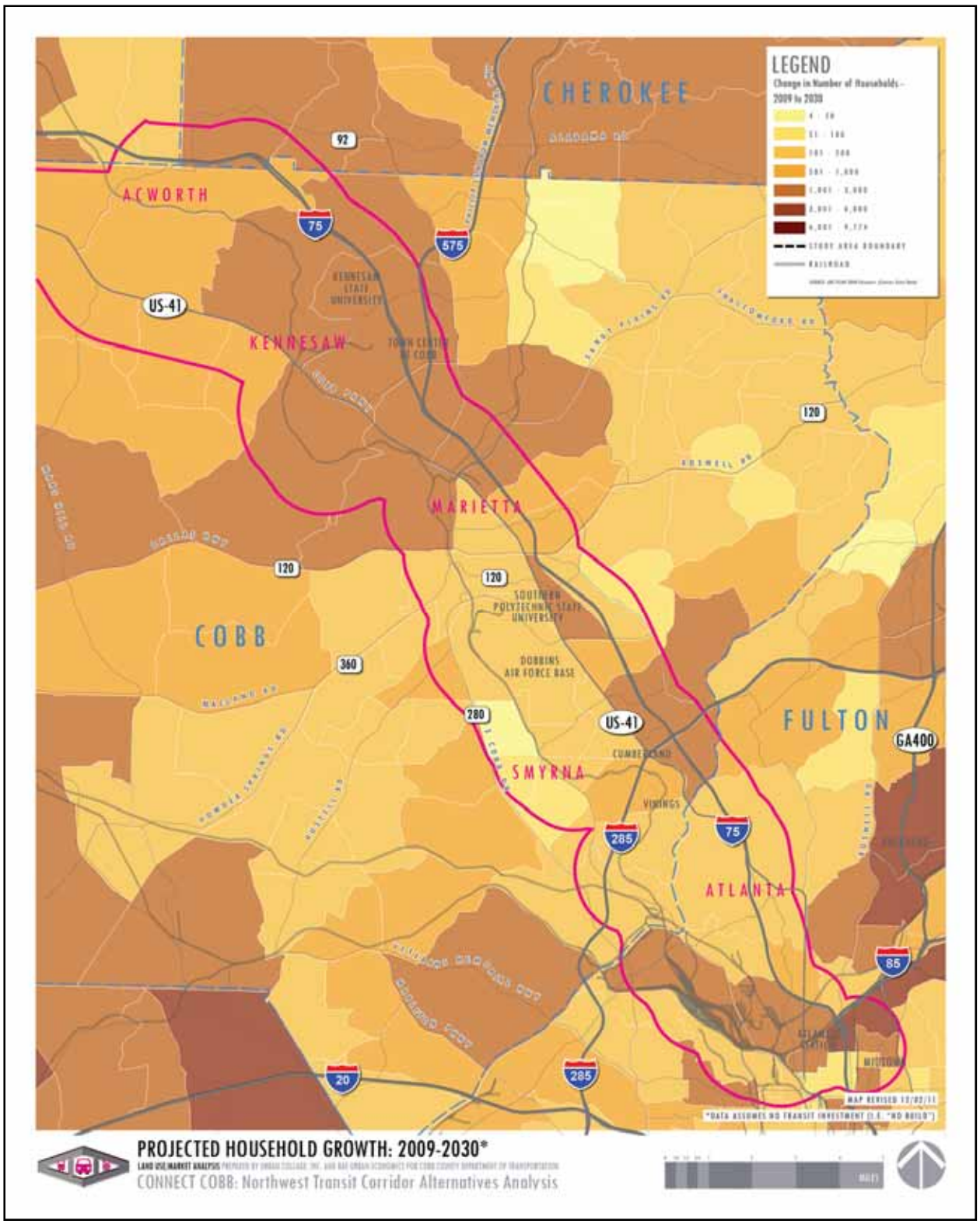
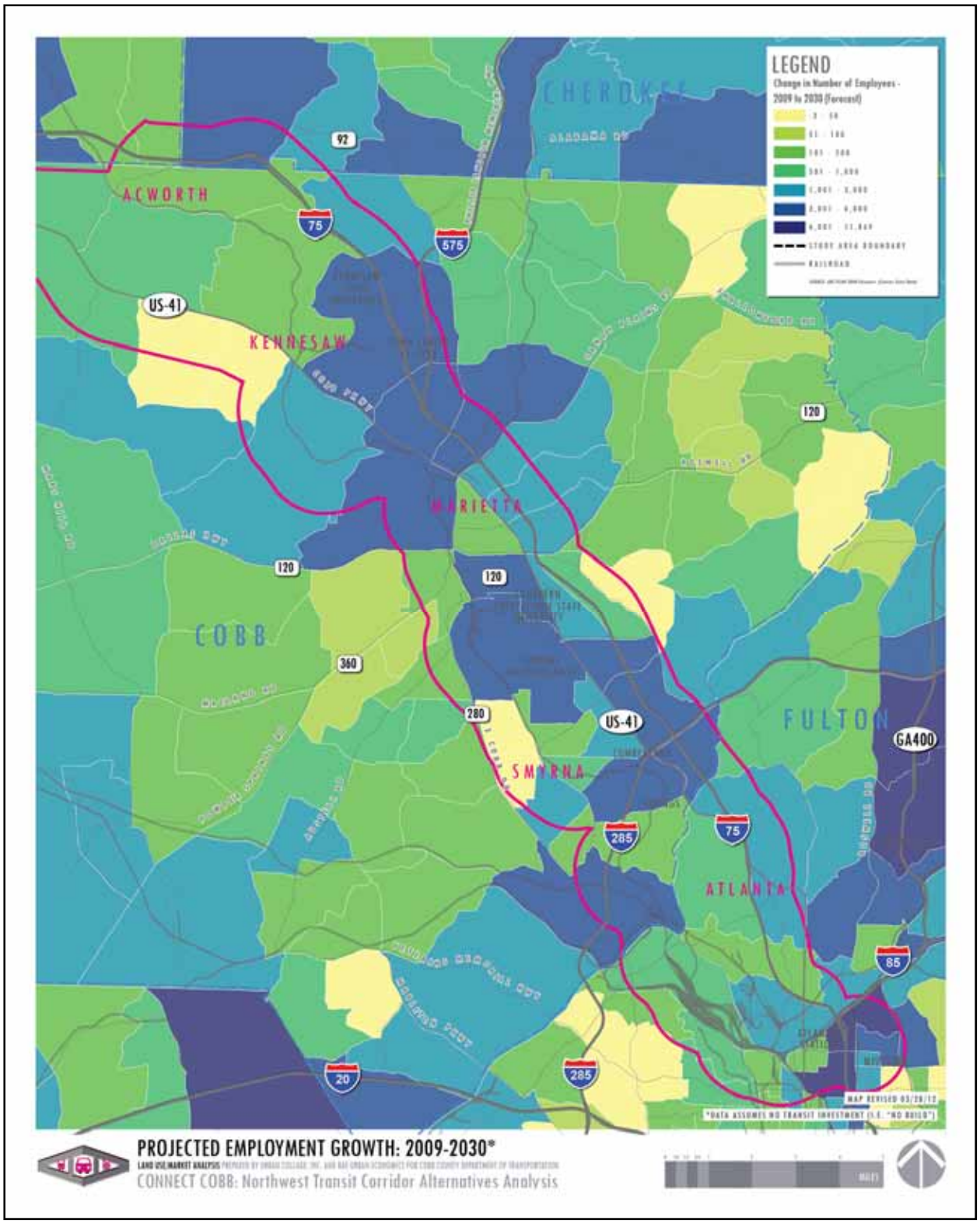



**FIGURE 6: RATE OF HOUSEHOLD GROWTH PROJECTED FOR COBB COUNTY UNDER "NO BUILD" SCENARIO, 2009 TO 2030**

**FIGURE 7: RATE OF EMPLOYMENT GROWTH PROJECTED FOR COBB COUNTY UNDER "NO BUILD" SCENARIO, 2009 TO 2030**



# REAL ESTATE TRENDS

## The Housing Market

As mentioned in the land use analysis, single family housing predominates in Cobb County. Single family detached residences housed 88 percent of owner households and 25 percent of renter households in 2010 (Table 12). Nevertheless, there is a growing diversity of housing types in the county: single family detached housing in 2010 shows a loss in share among all housing types compared to 2000, while townhouse units (single family attached) shows a nearly three percent gain in share, equal to an increase of 6,218 occupied units. Multifamily rental housing in projects of five or more units claim the largest number of county households after single family, owner-occupied detached housing, and the number of units in this category increased in number and overall share between 2000 and 2010. The number of occupied units grew from new construction and the addition of new households to the county, but there was also a sharp increase in vacant units at the end of the decade compared to the start. This sharp increase is not surprising given housing market conditions in the county and nationwide.

**TABLE 12: COMPOSITION OF COBB COUNTY'S HOUSING STOCK, 2000 AND 2010**

| | 2000 | | 2008-2010 (a) | | Change |
|---|---|---|---|---|---|
| **Units Occupied by Owner** | **Number of Units** | **% Total** | **Number of Units** | **%Total** | **2000-2010** |
| Single Family Detached | 140,125 | 90.4% | 156,456 | 88.2% | 16,331 |
| Single Family Attached | 8,200 | 5.3% | 14,418 | 8.1% | 6,218 |
| Multifamily 2 to 4 Units | 1,038 | 0.7% | 1,514 | 0.9% | 476 |
| Multifamily 5 or More Units | 2,170 | 1.4% | 2,895 | 1.6% | 725 |
| Mobile Home, Boat, RV, Other | 3,542 | 2.3% | 2,042 | 1.2% | (1,500) |
| **Total** | **155,075** | **100.0%** | **177,325** | **100.0%** | **22,250** |
| **Units Occupied by Renter** | | | | | |
| Single Family Detached | 13,427 | 18.5% | 20,232 | 25.4% | 6,805 |
| Single Family Attached | 3,345 | 4.6% | 3,981 | 5.0% | 636 |
| Multifamily 2 to 4 Units | 8,832 | 12.2% | 7,006 | 8.8% | (1,826) |
| Multifamily 5 or More Units | 45,582 | 62.9% | 47,003 | 59.1% | 1,421 |
| Mobile Home, Boat, RV, Other | 1,226 | 1.7% | 1,366 | 1.7% | 140 |
| **Total** | **72,412** | **100.0%** | **79,588** | **100.0%** | **7,176** |
| **Total Occupied Units** | **227,487** | 95.8% | **256,913** | 89.9% | |
| **Total Vacant Units** | **10,035** | 4.2% | **28,778** | 10.1% | |

**Note:**
(a) The American Community Survey (ACS) publishes demographic estimates based on statistical sampling conducted between 2008-2010.
Sources: US Census SF3, 2000; ACS, 2008-2010; BAE, 2012.

The production of new housing in Cobb County since 2000 also demonstrates that single family detached homes continue to be prevalent, representing nearly 90 percent of the units permitted. See Table 13. Since 2000 the county averaged 488 units permitted each year, with the number of permits peaking in 2006 and in subsequent years falling far short of the number of units permitted annually

before 2006. Multifamily permits fluctuate more widely by year, since the permitting of larger multifamily projects will impact the number of unit permits issued. Overall, Cobb averaged 55 units a year annually permitted in multifamily projects of five units or more, and six average units permitted in project of two to four units annually since 2000.

**TABLE 13: COBB COUNTY RESIDENTIAL BUILDING PERMITS, 2000-2011**

| Building Type | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Single Family | 342 | 289 | 372 | 480 | 391 | 402 | 609 | 105 | 48 | 23 | 46 | 62 | **3,169** |
| 2 Units | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 10 | **14** |
| 3 & 4 Units | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 4 | 4 | 0 | 0 | **23** |
| 5 or More Units | 0 | 0 | 172 | 108 | 12 | 0 | 0 | 49 | 7 | 5 | 0 | 5 | **358** |
| **Total** | **342** | **291** | **544** | **588** | **403** | **402** | **609** | **169** | **59** | **32** | **48** | **77** | **3,564** |

Notes:

Sources: U.S. Census Building Permit Data, 2011; BAE, 2011.

### *Housing For Sale*

Sales of new and existing housing in Cobb County have shown a similarly dramatic fluctuation and follow a pattern found across the country. See **Error! Reference source not found.**. The number of property sales in the County peaked in 2006 at nearly 14,000. Despite declining home closings, sales prices remained high before the willingness of sellers to accept lower offers and/or the transfer of distressed properties began to impact the median sales price. As shown in Figure 9, the median sales price for a single family home reached a peak of $233,000 in 2008, while the median price for a condominium peaked in 2007 at $177,000. Housing sales have not yet shown signs of stabilization. Sales volume in Cobb County has fallen every year since 2006. The median for single family sale housing has subsequently fallen 11 percent since its peak, and condominium prices have fallen 29 percent.

**FIGURE 8: COBB COUNTY RESIDENTIAL SALES, 2001-2011**

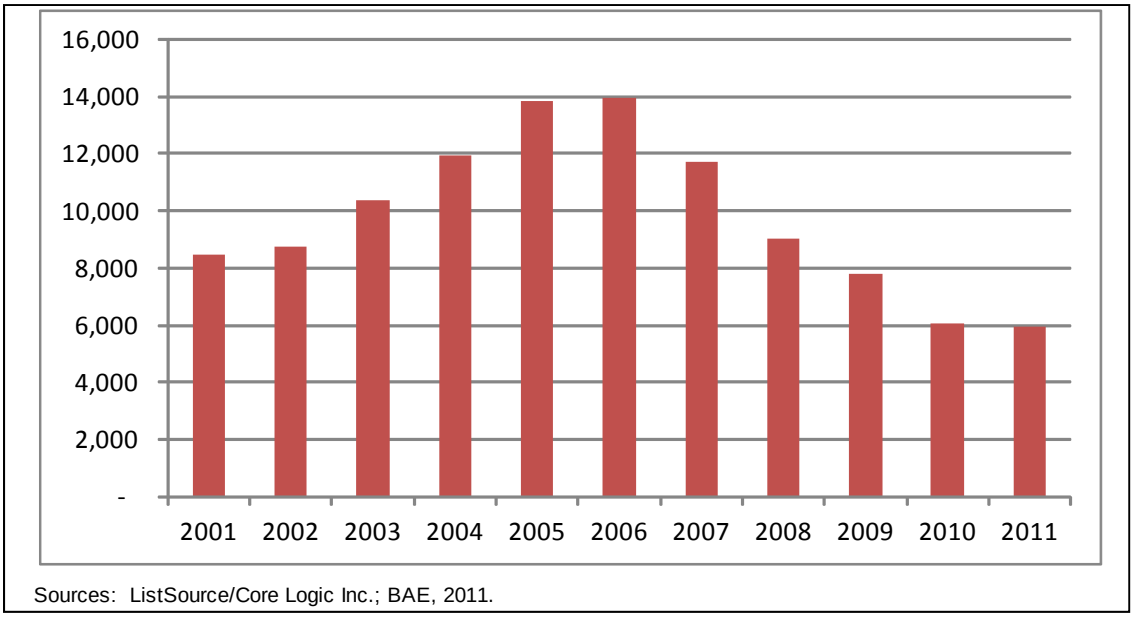
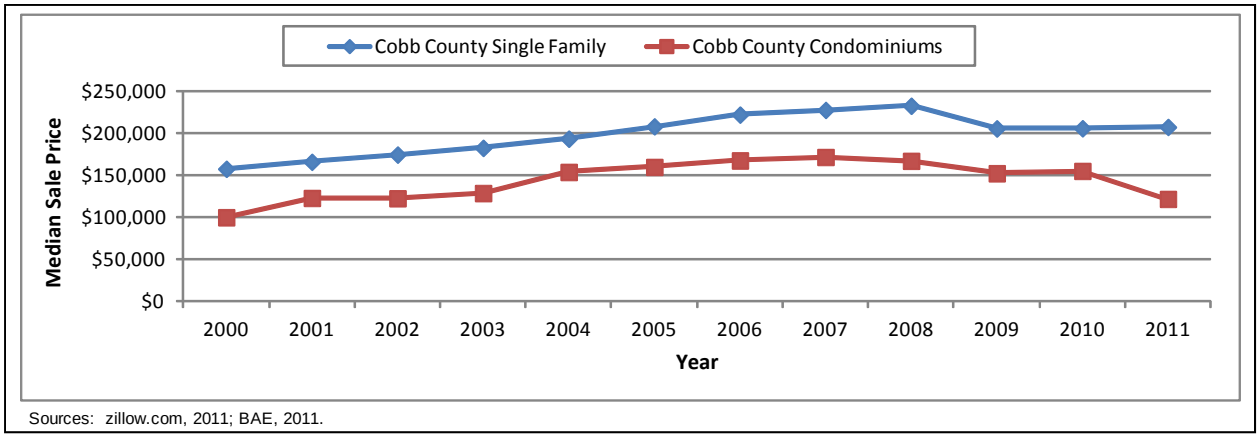



**FIGURE 9: MEDIAN SINGLE FAMILY AND CONDOMINIUM SALES VALUE, COBB COUNTY, 2000-2011**




### *Rental Housing*

Statistics for Cobb County suggest there is an aging stock of multifamily rental buildings. Of an inventory of 22 large rental properties in the County tracked by RealFacts, a private data provider, only two are categorized as Class A – the newest buildings with the most attractive amenities. The average age of the buildings in the inventory is 25 years. Rents have declined in recent years following increasing vacancy, with an average 2010 rent of $760 for all apartment sizes, down from a peak of $847 in 2008. See Table 14. The number of occupied units within the inventory fluctuated from 2004 to 2010, with positive net absorption seen each year since 2008. The tracked inventory averaged a net absorption level of 52 units per year and included an increase in the units tracked in 2008. Rents per square foot average $0.81 for all units in the inventory, with Class A buildings receiving an average of $1.08 per square foot.

**TABLE 14: RENTAL TRENDS, COBB COUNTY**

| Year | Average Monthly Rent | Average Occupancy Rate | Occupied Units | Total Units | Total Units Absorbed |
|---|---|---|---|---|---|
| 2004 | $719 | 93.2% | 7,205 | 7,731 | N/A |
| 2005 | $774 | 91.9% | 7,104 | 7,731 | -101 |
| 2006 | $781 | 93.2% | 7,205 | 7,731 | 101 |
| 2007 | $811 | 91.4% | 7,066 | 7,731 | -139 |
| 2008 | $847 | 88.9% | 7,188 | 8,086 | 122 |
| 2009 | $814 | 91.0% | 7,358 | 8,086 | 170 |
| 2010 | $760 | 93.0% | 7,519 | 8,086 | 161 |

Notes:
a) Rental properties consist of 22 complexes each with 100 or more units.
Sources: RealFacts, 2011; BAE, 2011.

## The Office Market

The Study Area runs through urban and suburban office markets that hold an important segment of the region's office space. At the southern end of the Study Area is Midtown, which is one of Atlanta's three urban submarkets, along with Downtown and Buckhead. Cobb County contains a large suburban office market called Northwest, centered along I-75[5]. The bulk of the office space in the Northwest market is found around the convergence of I-75 and I-285 in Cumberland. Of the 35 million square feet of office space in the Northwest market, about 27 million square feet is located in Cumberland and an additional 8 million square feet is located further north along the corridor, in Marietta, Kennesaw and Cherokee County. The Northwest market and the office markets to its east (the approximately 57 million square feet clustered around GA-400 in the Central Perimeter and North Fulton markets) establish the northern suburbs as the center of gravity for suburban Atlanta's office space.

Table 15 highlights the significance of the Northwest and Midtown markets in comparison to Atlanta's overall office market. The Atlanta region contains over 200 million square feet of office space in total. The Northwest submarket contains about a quarter of suburban Atlanta's office space, and currently has slightly higher rents per square foot than the suburban average for all classes of office space. Close to half of the Northwest submarket's inventory is Class A space - the newest and highest amenity space that the market offers. Midtown comprises about a third of Atlanta's urban office space, including a smaller share of Atlanta's Class C office space and higher average rents than Atlanta's urban office space overall. Although current vacancy rates are generally highest among the Class A office stock in the region, cumulative net absorption of office space for 2011 suggests that tenants are trading in lower quality spaces for leases in Class A buildings. This "flight to quality" is seen in positive absorption for Class A space and generally negative absorption for Class B and Class C space in the region.

[5] Definitions and boundaries of submarkets vary by the source of market information, and variations in the geography used result in reporting differences in submarket characteristics such as the office space inventory, vacancy and rental rate averages. Information used in this analysis derives from office market reports from Colliers International, based on a property data set and submarket delineation available from CoStar properties.

**TABLE 15: ATLANTA OFFICE MARKET SNAPSHOT, THIRD QUARTER 2011**

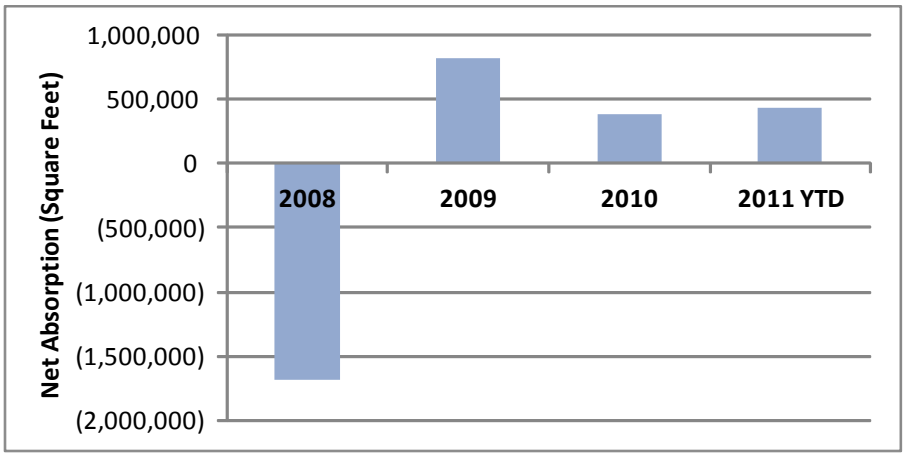
| | Total S.F. | Total Vacancy Rate | Net Absorption Y.T.D | Average Rent P.S.F. |
|---|---|---|---|---|
| **Midtown** | **22,200,659** | **19.4%** | **(239,871)** | **$23.07** |
| Class A | 15,195,101 | 21.2% | 54,981 | $24.89 |
| Class B | 6,106,807 | 17.6% | (288,815) | $17.96 |
| Class C | 898,751 | 9.3% | (6,037) | $11.51 |
| **Nortwest Atlanta** | **35,843,945** | **17.2%** | **118,358** | **$18.12** |
| Class A | 17,450,997 | 15.1% | 188,978 | $21.34 |
| Class B | 15,972,884 | 19.9% | (47,537) | $15.29 |
| Class C | 2,420,064 | 14.0% | (23,083) | $14.46 |
| **Urban Submarkets Total** | **69,910,874** | **18.1%** | **228,644** | **$21.58** |
| Class A | 45,064,132 | 19.6% | 996,305 | $23.05 |
| Class B | 19,308,597 | 14.8% | (644,411) | $17.06 |
| Class C | 5,538,145 | 17.2% | (123,250) | $14.72 |
| **Suburban Submarkets Total** | **148,778,478** | **17.7%** | **199,050** | **$17.01** |
| Class A | 63,593,770 | 16.5% | 286,590 | $20.63 |
| Class B | 70,349,022 | 18.6% | (158,631) | $14.86 |
| Class C | 14,835,686 | 18.5% | 71,091 | $13.73 |
| **Atlanta Market Totals** | **218,689,352** | **17.8%** | **427,694** | **$18.84** |
| Class A | 108,657,902 | 17.8% | 1,282,895 | $21.79 |
| Class B | 89,657,619 | 17.8% | (803,042) | $15.69 |
| Class C | 20,373,831 | 18.1% | (52,159) | $13.98 |

Note: data set contains all office properties in the CoStar database 10,000 square feet and larger, including owner-occupied properties and excluding medical office and government-owned and occupied properties.

Sources: Colliers International 2011; BAE, 2011.

Overall, the region has been absorbing a modest amount of the vacant office space that is available as the economy shows a slow recovery from the Great Recession. Throughout the region, annual net absorption from 2009 through the third quarter of 2011 averaged over 500,000 square feet per year, after 2008 brought a net increase of 1.7 million square feet of vacant office space. See **Error! Reference source not found.**. The region has seen positive net absorption of office space for five of the past six quarters. As indicated in Table 15, Northwest Atlanta absorbed more office space than was vacated in 2011; the 118,000 square feet of additional space occupied in 2011 through the third quarter is equivalent to more than a quarter of Atlanta's total urban and suburban office space absorption for the year. Although the Atlanta region is likely to see the strongest gain in office space occupancy in 2011 since the Great Recession, the outlook for future demand for office space within Midtown, the Northwest and the Atlanta office market overall remains restrained and uncertain in the short to medium term. Nevertheless, Cobb County continues to attract investment, as evidenced by The Home Depot's decision to locate a new call center and 700 jobs in Cobb County by late 2012.

FIGURE 10: NET ABSORPTION, ATLANTA OFFICE MARKET




Source: Colliers International, 2010-2011; BAE, 2011.

## The Retail Market

Cobb County has approximately 38 million square feet of existing retail space[6], much of it along the U.S. 41 corridor and retail centers clustered around major I-75 interchanges. Data from Nielsen, a proprietary provider of consumer and retail sales statistics, shows that overall the current supply of retail stores, restaurants and entertainment in Cobb County compared to the county's overall consumer demand is roughly equivalent (see Table 16). The slight surplus in the county's supply of retailers compared to the total demand may correspond to Cobb County serving as a retail destination for consumers outside the County. Although more specific analyses of a retail trade area would be needed to understand the unique opportunities for specific locations in the County or within the Study Area, Table 16 suggests that opportunities generally exist within the County to serve some convenience and entertainment needs currently not well served by existing malls and retail centers. For example, the data indicate that an opportunity gap currently exists between County-wide demand for and supply of pharmacies and eating and drinking establishments.

[6] According to the market analysis for the Powers Ferry Master Plan, adopted by the Cobb County Board of Commissioners in March 2010.

**TABLE 16: ESTIMATED RETAIL DEMAND AND SUPPLY, COBB COUNTY, 2011**

| | Demand (Expenditures) [b] | Supply (Retail Sales) [b] | Opportunity Gap/Surplus [c] |
|---|---|---|---|
| **Total** | **$11,229,599,724** | **$11,643,689,388** | **-$414,089,664** |
| **By Category (NAICS Code) [a]:** | | | |
| Motor Vehicle and Parts Dealers (441) | 1,964,414,690 | 2,392,352,482 | -427,937,792 |
| Furniture and Home Furnishings Stores (442) | 240,496,767 | 296,136,283 | -55,639,516 |
| Electronics and Appliance Stores (443) | 256,023,543 | 168,144,941 | 87,878,602 |
| Building Material, Garden Equip Stores (444) | 1,035,708,641 | 942,105,065 | 93,603,576 |
| Food and Beverage Stores (445) | 1,393,820,086 | 1,561,586,014 | -167,765,928 |
| *Supermarkets and Grocery Stores (44511)* | 1,205,633,552 | 1,434,034,462 | -228,400,910 |
| *Convenience Stores (44512)* | *60,962,477* | *21,075,757* | *39,886,720* |
| *Specialty Food Stores (4452)* | *39,651,931* | *14,344,899* | *25,307,032* |
| *Beer, Wine and Liquor Stores (4453)* | *87,572,126* | *92,130,896* | *-4,558,770* |
| Health and Personal Care Stores (446) | 647,219,559 | 600,387,683 | 46,831,876 |
| *Pharmancies and Drug Stores (44611)* | *558,364,627* | *482,279,144* | *76,085,483* |
| *Cosmetics, Beauty Supplies, Perfume Stores (44612)* | *23,364,591* | *33,235,437* | *-9,870,846* |
| *Optical Goods Stores (44613)* | *23,994,927* | *35,919,281* | *-11,924,354* |
| *Other Health and Personal Care Stores (44619)* | *41,495,414* | *48,953,821* | *-7,458,407* |
| Gasoline Stations (447) | 1,048,309,152 | 1,331,767,026 | -283,457,874 |
| Clothing and Clothing Accessories Stores (448) | 570,080,879 | 564,989,149 | 5,091,730 |
| Sporting Goods, Hobby, Book, Music Stores (451) | 226,733,246 | 312,033,681 | -85,300,435 |
| General Merchandise Stores (452) | 1,490,057,779 | 1,608,510,006 | -118,452,227 |
| Miscellaneous Store Retailers (453) | 284,621,276 | 249,893,703 | 34,727,573 |
| Non-Store Retailers (454) | 857,058,624 | 630,647,850 | 226,410,774 |
| Foodservice and Drinking Places (722) | 1,215,055,482 | 985,135,505 | 229,919,977 |
| *Full-Service Restaurants (7221)* | *551,659,475* | *503,271,166* | *48,388,309* |
| *Limited-Service Eating Places (7222)* | *510,833,716* | *427,573,133* | *83,260,583* |
| *Special Foodservices (7223)* | *100,025,952* | *38,698,501* | *61,327,451* |
| *Drinking Places -Alcoholic Beverages (7224)* | *52,536,339* | *15,592,705* | *36,943,634* |

Notes:

a. Table includes major industry categories and selected subcategories using the North American Information Classification System (NAICS) codes

b. Nielsen' RMP data is derived from two major sources of information. The demand data is derived from the Consumer Expenditure Survey (CE Survey), which is fielded by the U.S. Bureau of Labor Statistics (BLS). The supply data is derived from the Census of Retail Trade (CRT), which is made available by the U.S. Census.Additional data sources are incorporated to create both supply and demand estimates. The numbers presented are estimates and may differ from actual expenditures and sales.

c. The difference between demand and supply represents the opportunity gap or surplus available for each category within the defined geography. A positive value signifies an opportunity gap where demand exceeds supply, while a negative value signifies a surplus where supply exceeds demand.

**Sources: Nielsen, 2011; BAE, 2012.**

By other measures, Cobb County may have a surplus of retail space overall. Thirty eight million square feet of retail space equates to approximately 55 square feet of retail space per capita for Cobb County's more than 688,000 residents. By comparison, the International Council of Shopping Centers (ICSC) measures approximately 47 square feet of retail space per capita for the U.S. as a whole.[7] Regionally, the metro area has seen falling rental rates and negative net absorption of retail space associated with the economic decline and recovery of the past five years. Although the region saw modest positive net absorption of retail space in 2010, according to Colliers International and CoStar, it has not recovered from the net increase of two million square feet of vacant space in 2009. Vacancy rates have correspondingly increased from around seven percent in 2007 to a rate of over 10 percent in early 2011. Nevertheless, opportunities for retail development within the Study Area will correspond to future population growth, opportunities associated with the redevelopment/replacement of aging retail space along U.S. 41, as well as specific opportunities to meet consumer needs for convenience goods and entertainment/dining within a close proximity to their residences.

## The Industrial Properties Market

With approximately 600 million square feet of industrial property in its inventory, the Atlanta region is the largest industrial property market in the southeast and the fourth largest market in the country after Chicago, Los Angeles and Dallas/Fort Worth. Although the bulk of industrial space in Atlanta is south of I-20 and in northeast Atlanta along I-85 and I-985, the Northwest industrial market, flanking I-75 and extending northward from I-285 to I-575 and into Cherokee County, contains nearly 60 million square feet of industrial space, or about 10 percent of the region's total. Other industrial markets within the Study Area are at the southern end, within the urban core: Chattahoochee is on the west side of I-75 and extending from I-285 to the north and west and I-20 to the south; Central Atlanta on the east side of I-75 and with boundaries roughly following the City of Atlanta.

The Northwest industrial market currently compares favorably with Atlanta's industrial market as a whole, as depicted in Table 17. The Northwest market has slightly higher rents and slightly lower vacancy rates in all office categories. The Chattahoochee and Central Atlanta markets are smaller and generally have lower vacancy rates and higher rents, suggesting high demand for the limited amount of space that meets the needs of certain production, distribution and repair operations that desire to be close to the urban core. Demand for industrial space in Northwest in the first half of 2011 increased the amount of occupied space by over 537,000 square feet, or a quarter of the region's total industrial space absorption. The outlook for continued growth in the Northwest market and Atlanta overall will depend upon whether the regional and national economy continue to recover, the short term outlook appears positive: by the end of 2011, Atlanta is expected to absorb an additional 2 million square feet of office space and will have the highest net absorption of space in any year since 2011, according to Colliers International. For the three markets in the Study Area, no significant deliveries or new construction

[7] Based on 14.2 billion square feet gross leasable area of retail space nationally divided by a population of approximately 304 million (icsc.org, accessed January 13, 2012).

entering the market as of the middle of the year, the regional market as a whole has seen only build-to-suit properties enter the market, and no speculative development is on the horizon.

**TABLE 17: ATLANTA INDUSTRIAL MARKET SNAPSHOT, THIRD QUARTER 2011**

| | Total S.F. | Total Vacancy Rate | Net Absorption Y.T.D | Average Rent P.S.F. |
|---|---|---|---|---|
| **Northwest Atlanta** | **59,846,662** | **13.8%** | **539,341** | **$3.92** |
| Flex [a] | 9,543,395 | 13.5% | 87,640 | $9.00 |
| Shallow-Bay [b] | 9,330,333 | 11.7% | 243,637 | $4.09 |
| Warehouse [c] | 40,972,934 | 14.3% | 208,064 | $3.53 |
| **Chattahoochie** | **21,454,439** | **8.9%** | **(283,429)** | **$5.07** |
| Flex | 2,738,047 | 9.4% | (13,153) | $7.57 |
| Shallow-Bay | 915,204 | 14.7% | (11,356) | $3.42 |
| Warehouse | 17,801,188 | 8.5% | (258,920) | $4.74 |
| **Central Atlanta** | **16,026,570** | **8.3%** | **38,958** | **$4.23** |
| Flex | 2,972,804 | 7.7% | (27,528) | $9.51 |
| Shallow-Bay | 1,617,147 | 4.4% | (8,000) | $2.42 |
| Warehouse | 11,436,619 | 9.1% | 74,486 | $3.85 |
| **Atlanta Industrial Market Total** | **598,005,501** | **14.1%** | **2,137,899** | **$3.42** |
| Flex | 54,749,993 | 15.5% | (168,968) | $7.29 |
| Shallow-Bay | 79,714,656 | 15.0% | 108,356 | $3.56 |
| Warehouse | 463,540,852 | 13.8% | 2,198,511 | $3.17 |

Notes: data set contains all industrial properties tracked by the CoStar Group that are 10,000 square feet and larger, except for heavy manufacturing properties.

a. Flex space suits a variety of uses including office, R&D and sales as well as traditional warehouse and distributionuses. Typically at least half of a flex space is office, and ceiling heights are less than 80 feet.

b. Shallow-bay distribution buildings are typically 10% to 30% office space, ceiling heits of 18 to 24 feet, and bay depts of 120 to 190 feet.

c. Warehouse space typically has a small amount of office space, ceiling heights of 24 feet and bay depths greater than 190 feet.

Sources: Colliers International 2011; BAE, 2011.

# SUMMARY OF MARKET AND ECONOMIC OPPORTUNITIES

Cobb County and the region are expected to grow at a healthy pace in the next 20 years, providing a need for new homes and businesses that can be met within the Study Area. Much of Cobb County's growth has been in a dispersed pattern of single family development, and Cobb County continues to be an attractive choice for many households by offering quiet suburban neighborhoods with low taxes, excellent schools, and within close proximity to major professional employment centers such as Cumberland and north Fulton County. The Study Area offers development and redevelopment opportunities for some of the most accessible land within northwest Atlanta given the current road network and the public transportation investments currently under consideration.

Current economic conditions have dampened development opportunities in the short term, but the outlook for future development could include a diversified set of land use types. The following development types could be supportive of, and be supported by, improved transit options in close proximity.

## Residential

Market success of single family homes on larger lots in Cobb County has been proven over decades, and in many areas, other types of residential development would be considered pioneering. However, thousands of units of townhomes and multifamily residential products have been built in the county in the past decade. Certain portions of the Study Area could support a diversified set of residential uses that meet the needs of a wider variety of household types. Well designed, higher density residential uses in close proximity to transit stops can bolster support for transit, gain market acceptance and obtain higher values than would be possible without transit. General opportunities include:

- Smaller homes, including townhomes and multifamily buildings, can suit the population of older residents in Cobb County who would find residential downsizing attractive, but are seeking to stay in the area.
- Townhomes and multifamily buildings in the Cumberland area can attract working age individuals and households with good access to high skill employment opportunities in Cumberland, Perimeter and Midtown in particular. Increased residential development will offer a more diverse mix of uses in the Cumberland area and support Cumberland's vision to become a more vibrant, love-work-play community.
- New developments in a Traditional Neighborhood Design style, including zero lot line homes, could be used to create new residential villages for families interested in trading a large yard for better accessibility to retail and other amenities, and enhanced options for commuting that include both automobiles and transit.

Given current economic conditions, the rental market is much stronger for new development than the residential sales market. Therefore, in the short term, areas appropriate for higher density development – such as areas around transit stations - will be able to take advantage of the strong rental market to capture demand, and will provide higher quality rental options than generally exist in the County, which has an excess of older, lower value rental buildings. Opportunities for mixed use and higher density residential development may be pioneering in certain parts of the Study Area, and should be considered only after more detailed planning and analysis. The suitability of higher density

housing will also need to consider the type of transit and station area contemplated. However, demographic shifts are changing demand for housing: growing older Baby Boom and the children of the baby boom (called Generation Y) households without children are popularizing higher amenity, higher density neighborhoods both in the Atlanta region and nationally.

## Commercial

The area in and around the Study Area holds significant amounts of the office and retail space that supports the northwest suburbs of Atlanta. Continued strength in commercial real estate will be enhanced by stronger transit links to the region's core. General opportunities include:

### *Office Development*

Despite current weakness in the office market associated with the economic downturn, strong job growth projected for Cobb County will support continued development of office space in the medium to long term. Cumberland in particular is well positioned to attract new office development at a location in close proximity to Atlanta's core office markets but with lower taxes and greater accessibility to suburban workers. It is a mature office market that has not seen strong growth in office space in the past 15 years; nevertheless, 50 percent of the land outside the core area remains undeveloped. Introduction of high quality transit through Cumberland could greatly enhance its competitiveness in capturing new office demand by making it more accessible to workers both closer in to the core and further out in the northwest suburbs, and providing a link to Hartsfield International Airport and the business services and amenities found in Downtown Atlanta.

### *Retail Development*

As discussed previously, Cobb County overall does not appear to have substantial unmet demand for retail space. A new transit investment is not as likely to bolster new, large scale retail development as much as well planned office and residential development. However, successful new development supported by transit will contain a mix of uses, including retail that provides amenities and convenience to neighboring workers and residents. Retail development opportunities will therefore emerge in step with new residential and office development nearby, and will generally correspond to the demand for smaller, convenience-oriented goods and services. Opportunities may also exist for redevelopment or retrofitting of older retail centers to more pedestrian-friendly, mixed use places that can incorporate transit stops.

# LAND USE & ECONOMIC DEVELOPMENT/REDEVELOPMENT

# TIER 1 SCREENING

**NORTHWEST CORRIDOR ALTERNATIVES ANALYSIS STUDY**

**Prepared by Urban Collage, Inc.**

**for Cobb County Department of Transportation**

**DRAFT FOR REVIEW**

**May 16, 2012**

# INTRODUCTION

For the purposes of Tier 1 Screening within the Northwest Corridor Alternatives Analysis, several alignments/scenarios were analyzed - both quantitatively and qualitatively - with respect to land use, market, and development/redevelopment impact. Six discrete alignment scenarios were evaluated including:

- Alignment 1: I-75 corridor from Acworth to Midtown
- Alignment 2a: US 41 corridor from Acworth to Midtown (with more station locations)
- Alignment 2b: US 41 corridor from Acworth to Midtown (with fewer station locations)
- Alignment 3: I-75 corridor from KSU to Midtown
- Alignment 4a: US 41 corridor from KSU to Midtown (with more station locations)
- Alignment 4b: US 41 corridor from KSU to Midtown (with fewer station locations)

Each corridor was evaluated with respect to three Goals/Objectives each with their own Performance Measures as follows:

Land Use Goal: **More Efficient Use of land**. Measures include Reduced Parking Needs and Improved Bicycle & Pedestrian Infrastructure.

Land Use Goal: **Increased Housing Choices**. Measures include Increased Transit-Oriented Development.

Economic Development/Redevelopment Goal: **Stimulate Local Economy**. Measures include Increased Commercial/Retail Spaces and Creation of More Mixed-Use Complexes within Walking Distance of Transit.

In order to effectively evaluate these Goals and their associated Measures a variety of subjective and objective land use and economic development factors were looked at including:

**Potential Transit Stations**: the location/quantity/type of potential transit stations;

**Susceptibility to Change**: the underutilization of existing land;

**Availability of Commercially Zoned Land**: locations where new commercial development is easiest;

**Ped and Bike Facilities**: locations where existing facilities exist or are easiest to install;

**Market Preferences**: locations for redevelopment generally preferred by market forces.

# POTENTIAL TRANSIT STATIONS

The opportunity to develop transit stations associated with a new high-capacity transit line is fundamental in the effort to change and enhance land use and development patterns in the corridor commensurate with the overall stated Need and Purpose of this project. Once developed, Transit Stations will forever impact their immediate environs including land use and development but also nearby vehicular, pedestrian and bicycle circulation patterns. In addition, the location, spacing and design of transit stations will have a large impact on ridership patterns. Transit stations, therefore, must be carefully considered both within their impact on the immediate context as well as within the broader context of the system as a whole. In general, future transit stations were considered for location, their timing/phasing and their typological characteristics as described below.

## STATION LOCATIONS

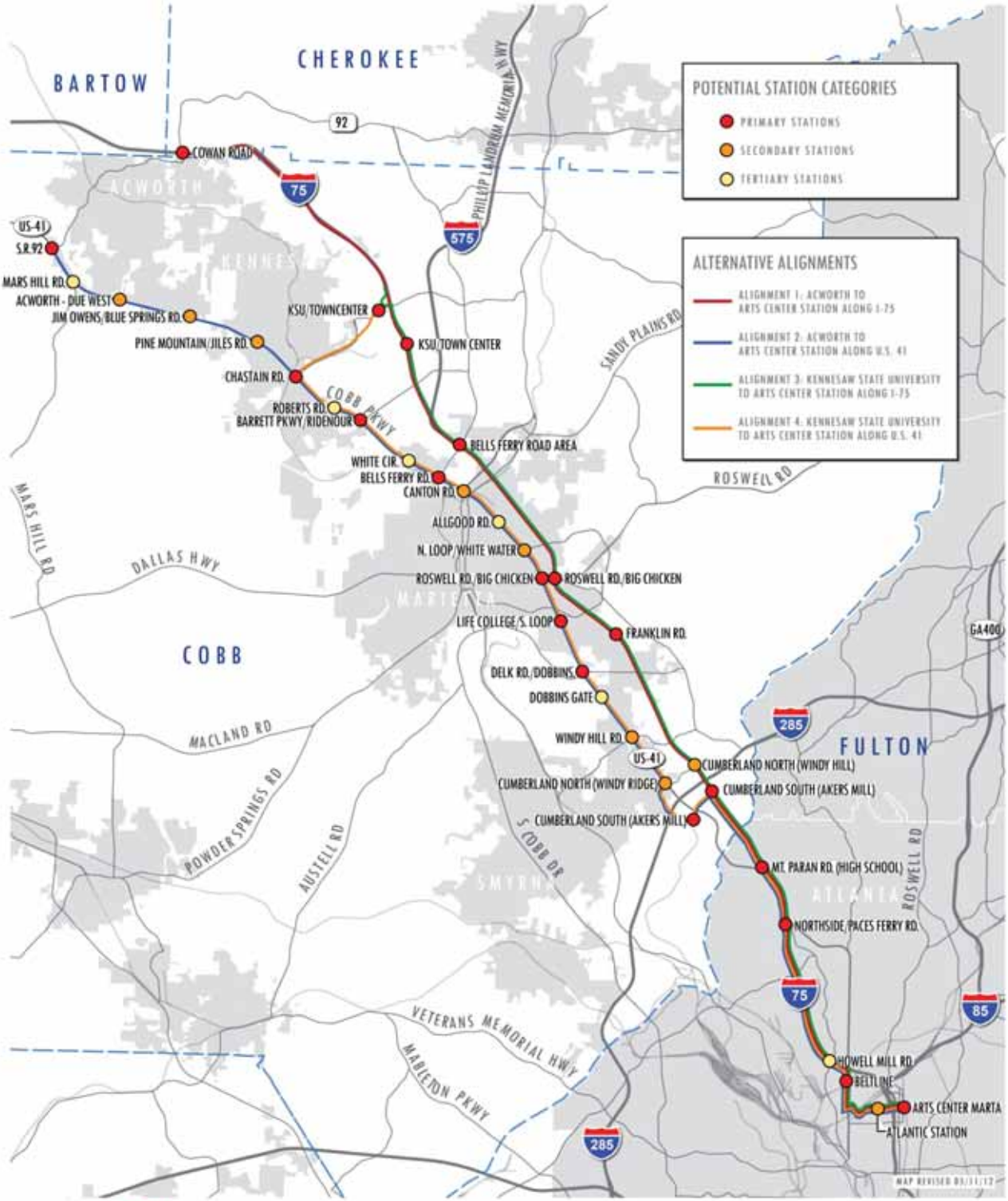
As shown in the map on the following page, the planning team has identified a total of 34 potential station locations for consideration within the 22-mile study area (e.g., from Acworth to Midtown). This includes 20 stations located along US 41 and 14 stations located along the I-75 corridor. It should be noted that at this level of study in Tier 1, hyper-specific locations (e.g., down to the exact parcel or side of the street/interstate) have not yet been identified.

Potential station locations were determined based on balancing a number of factors including:

Existing Roadway Network: Stations should be located in places that provide relatively easy vehicular access, ideally from multiple locations. This is especially important for locations along the interstate that are likely to have a focus on commuters (e.g., riders will be driving to the station). Locations with major cross roads/intersections present the most obvious opportunities.

Ability to Incent Redevelopment: Locations that are near aging and/or underutilized properties – especially with respect to real estate market strengths - present a unique opportunity to create economic development and new mixed-use developments.

Existing Destinations: There are numerous existing destinations that are highly likely to generate large volumes of ridership. This can include large employment centers (e.g., Cumberland, Atlantic Station, Dobbins Air Base), institutions (e.g., Life College, KSU, etc.), shopping districts (e.g., Howell Mill, Barrett Parkway) and connections to other forms of transit (e.g., the BeltLine, CCT, etc).


BARTOW
CHEROKEE
COBB
FULTON
POTENTIAL STATION CATEGORIES
PRIMARY STATIONS
SECONDARY STATIONS
TERTIARY STATIONS
ALTERNATIVE ALIGNMENTS
ALIGNMENT 1: ACWORTH TO ARTS CENTER STATION ALONG I-75
ALIGNMENT 2: ACWORTH TO ARTS CENTER STATION ALONG U.S. 41
ALIGNMENT 3: KENNESAW STATE UNIVERSITY TO ARTS CENTER STATION ALONG I-75
ALIGNMENT 4: KENNESAW STATE UNIVERSITY TO ARTS CENTER STATION ALONG U.S. 41
COWAN ROAD
ACWORTH
KENNESAW
MARTA
SMYRNA
ATLANTA
US-41
S.R.92
MARS HILL RD.
ACWORTH - DUE WEST
JIM OWENS/BLUE SPRINGS RD.
PINE MOUNTAIN/JILES RD.
CHASTAIN RD.
ROBERTS RD.
BARRETT PKWY/RIDENOUR
KSU/TOWNCENTER
KSU/TOWN CENTER
BELLS FERRY ROAD AREA
WHITE CIR.
BELLS FERRY RD.
CANTON RD.
ALLGOOD RD.
N. LOOP/WHITE WATER
ROSWELL RD./BIG CHICKEN
ROSWELL RD./BIG CHICKEN
LIFE COLLEGE/S. LOOP
FRANKLIN RD.
DELK RD./DOBBINS
DOBBINS GATE
WINDY HILL RD.
CUMBERLAND NORTH (WINDY HILL)
CUMBERLAND NORTH (WINDY RIDGE)
CUMBERLAND SOUTH (AKERS MILL)
CUMBERLAND SOUTH (AKERS MILL)
MT. PARAN RD. (HIGH SCHOOL)
NORTHSIDE/PACES FERRY RD.
HOWELL MILL RD.
BELTLINE
ARTS CENTER MARTA
ATLANTIC STATION
75
575
92
285
85
GA400
PHILLIP LANDRUM MEMORIAL HWY
SANDY PLAINS RD.
ROSWELL RD
COBB PKWY
MARS HILL RD
DALLAS HWY
MACLAND RD
POWDER SPRINGS RD
AUSTELL RD
S COBB DR
VETERANS MEMORIAL HWY
MABLETON PKWY
MAP REVISED 05/31/12
DRAFT TIER 1 POTENTIAL STATION LOCATIONS
LAND USE/MARKET ANALYSIS PREPARED BY URBAN COLLAGE, INC. AND BAE URBAN ECONOMICS FOR COBB COUNTY DEPARTMENT OF TRANSPORTATION
CONNECT COBB: Northwest Transit Corridor Alternatives Analysis
MILES

Spacing: The spacing of potential stations is important in that it has a very large impact on the times of trips and, therefore, the desirability to potential riders. Closer spacing means more stations and access to more riders, but also means longer trip times for trips involving longer distances. In general, identified potential stations are spaced no closer than a half-mile and in several cases farther apart (particularly along the I-75 alignment which is more likely targeted to commuters).

**STATION TIMING / PHASING**

From an overall Tier 1 perspective for this project, there are still multiple scenarios to be tested including alignment and mode. In addition, and with respect to transit stations, there are still multiple variations possible in terms of the ultimate number and spacing of stations utilized. As mentioned previously, the relationship between station spacing and ridership is critical. There is also an equally important relationship between the number of stations and the ability to impact future land use and development/redevelopment; each station area is likely to create incentives for redevelopment (to various degrees) and therefore the number of new stations will be directly proportional to the amount of economic development. Conversely, increasing the number of stations increases costs to the system (construction and operations) and may ultimately lead to reduced ridership (e.g., longer trip times). Weighing the above factors, each of the 34 potential stations were divided into three categories based on their perceived need and likelihood for coming to fruition.

Primary Stations: These potential station locations are highly likely in that they serve major destinations and/or have a high potential for ridership. This should be considered the minimum recommended amount of stations utilized and/or would be in the first phase of system development. This would represent a system of 11 (I-75 alignment) to 12 (US 41 alignment) stations.

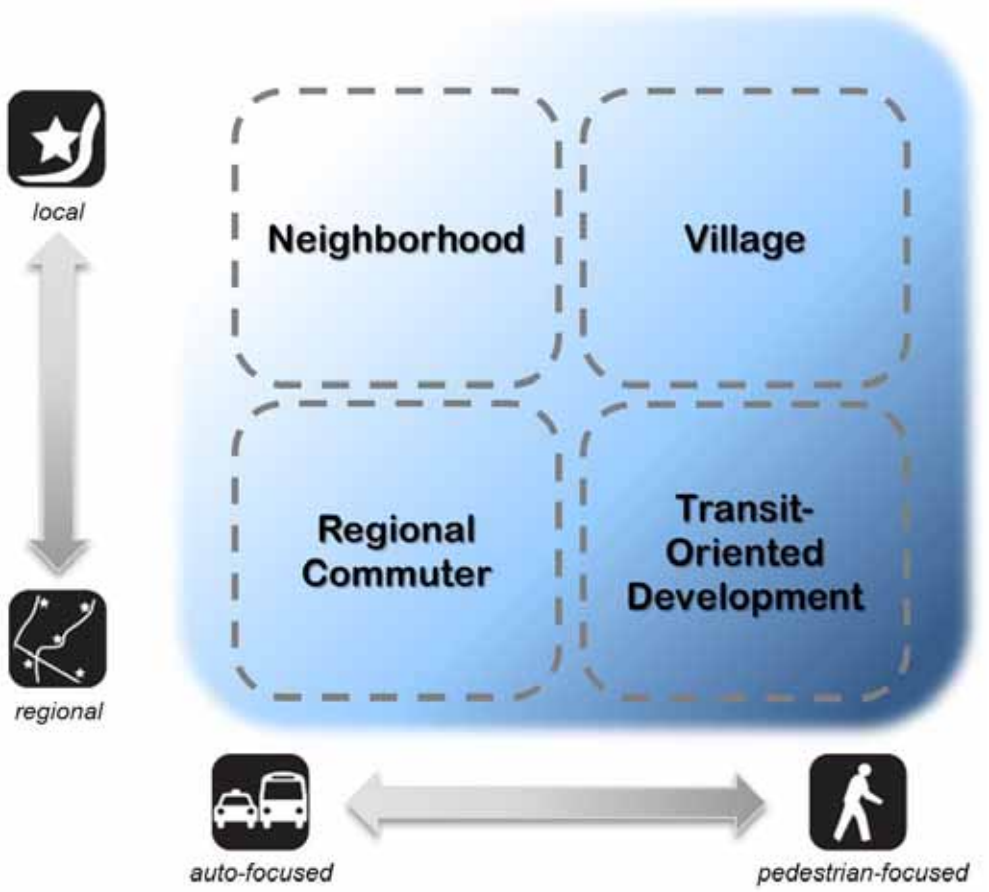
Secondary Stations: These potential station locations generally provide access to secondary destinations with a moderate to high potential for ridership. While these station locations are desirable to create a fuller system, they are not absolutely required (at least from a land use and economic development standpoint). These locations could be included in the first phase of system development but could also be added at a later date as ridership matures. Using both Primary and Secondary stations would represent a system of 13 (I-75 alignment) to 20 (US 41 alignment) stations.

Tertiary Stations: These potential station locations provide good access and visibility but most likely do not have immediate needs from a ridership perspective. On the other hand, these station locations may have a high potential for longer term redevelopment (e.g., more available land) and eventual ridership and present an opportunity to someday build-out the system (e.g., adding in stations at a later date when warranted). Using Primary, Secondary and Tertiary stations would represent a robust system build-out of 14 (I-75 alignment) to 26 (US 41 alignment) stations.

**STATION TYPES**

The needs of future riders will vary greatly depending upon station location and rider points of origination and destination. Some riders will use transit as a means of commuting long distances to employment centers throughout the region (i.e., along this corridor and throughout the MARTA rail footprint) and will be seeking transit stations with accommodations for commuter parking or new housing within walking distance. Other riders will be using transit to go very short distances for shopping, entertainment and/or commuting.

While each station should and could provide a level of "transit-oriented development" (e.g., walkable, a mix of uses, etc.) stations will vary depending upon context by levels of intensity, density of development, walkability and the number of anticipated parking spaces needed for commuters. In that light, it should be noted that no two stations will be exactly alike. Rather, they will fall within a continuum of typologies. To help understand this, the planning team has created the following diagram depicting four types of stations (although there are variations in between).



Neighborhood Stations: These stations will be more "local" in nature and will tend to serve nearby lower density neighborhoods. In most cases they will not be a destination unto themselves but rather a portal for nearby residents to access the greater system. In this regard, the actual station design is likely to be simple and may be more focused on commuters and parking needs, albeit at a small scale. These stations would be more likely in the US 41 corridor than along I-75. Examples of similar stations within the existing MARTA rail network: Inman Park/Reynoldstown, Oakland City.

Village Stations: These stations are also more "local" in nature and will tend to serve nearby neighborhoods and commercial districts. However, they will typically include a modest amount of mixed-use development and will function as small to medium walkable activity nodes unto themselves. The actual station design is likely to be simple and while there may be a small amount of parking for commuters, it will cater more towards pedestrian access. These stations would be more likely in the US 41 corridor than along I-75. Examples of similar stations within the existing MARTA rail network: Decatur, Ashby.

Regional Commuter Stations: These stations will be more "regional" in nature and will tend to serve a broad audience of commuters – i.e., people who will drive to the station to be dropped off or park for the day. In this regard, the actual station design will be fairly large with a heavy focus on parking - either in surface lots or decks. Typically, they will include very little associated mixed-use development and they will generally not be activity nodes unto themselves. These stations would be more likely in the I-75 corridor than along US 41. Examples of similar stations within the existing MARTA rail network: North Springs, Doraville.

Transit Oriented Development (TOD) Stations: These stations will be "regional" in nature and will serve as higher density destinations unto themselves. TOD stations are very walkable and typically contain a diverse mix of uses including residential, retail, office and institutions. In this regard, the actual station design will be fairly complex and in some instances appear iconic. These stations would be more likely in the US 41 corridor than along I-75, particularly in higher density environs such as Cumberland and Atlantic Station. Examples of similar stations within the existing MARTA rail network: Lindbergh Center, Buckhead.

In order to provide a measure for evaluating parking needs and impacts, all of the potential stations within the Northwest Corridor were assigned an estimated range of commuter parking spaces that may be required. These ranges are not intended to be a specific recommendation on a station-by-station basis (which would require a much greater level of study). Rather, they are intended as an order of magnitude to compare across stations and ascertain which stations are more or less likely to serve commuter needs.

**Estimated Commuter Parking Stations by Location & Alignment**

| | RANGE OF PARK & RIDE PARKING SPACES | | | | | ANTICIPATED NUMBER OF PARK & RIDE PARKING SPACES | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | No Parking | < 100 | 100 - 500 | 500 - 1500 | > 1500 | Alignment 1 | Alignment 2A | Alignment 2B | Alignment 3 | Alignment 4A | Alignment 4B |
| **I-75 Potential Stations** | | | | | | | | | | | |
| Arts Center | X | | | | | 0 | | | 0 | | |
| Atlantic Station | | X | | | | 50 | | | 50 | | |
| Northside/Beltline | X | | | | | 0 | | | 0 | | |
| Howell Mill Rd | | X | | | | 50 | | | 50 | | |
| Northside/Paces | | X | | | | 50 | | | 50 | | |
| Mt. Paran Rd | | X | | | | 50 | | | 50 | | |
| Cumberland south (Akers Mill) | | | | | X | 1500 | | | 1500 | | |
| Cumberland north (Windy Ridge) | | | X | | | 300 | | | 300 | | |
| Franklin Road | | | | | X | 1500 | | | 1500 | | |
| Roswell Road (Big Chicken station) | | | X | | | 300 | | | 300 | | |
| Bells Ferry Road area | | | | | X | 1500 | | | 1500 | | |
| KSU/Town Center | | | | X | | 1000 | | | 1000 | 1000 | 1000 |
| Cowan Road | | | X | | | 300 | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| **US 41 Potential Stations** | | | | | | | | | | | |
| Arts Center | X | | | | | | 0 | 0 | | 0 | 0 |
| Atlantic Station | | X | | | | | 50 | 50 | | 50 | 50 |
| Northside/Beltline | X | | | | | | 0 | 0 | | 0 | 0 |
| Howell Mill Rd | | X | | | | | 50 | 50 | | 50 | 50 |
| Northside/Paces | | X | | | | | 50 | 50 | | 50 | 50 |
| Mt. Paran Rd | | X | | | | | 50 | 50 | | 50 | 50 |
| Cumberland south (Akers Mill) | | | | | X | | 1500 | 1500 | | 1500 | 1500 |
| Cumberland north (Windy Ridge) | | | X | | | | 300 | 300 | | 300 | 300 |
| Windy Hill | | | X | | | | 300 | | | 300 | |
| Dobbins Gate | X | | | | | | 0 | | | 0 | |
| Delk Road / Dobbins area | | | X | | | | 300 | 300 | | 300 | 300 |
| Life College/S. Loop | | | X | | | | 300 | 300 | | 300 | 300 |
| Roswell Road (Big Chicken station) | X | | | | | | 0 | 0 | | 0 | 0 |
| N. Loop/Whitewater | | | X | | | | 300 | | | 300 | |
| Allgood Rd | X | | | | | | 0 | | | 0 | |
| Canton Road area | | | X | | | | 300 | | | 300 | |
| Bells Ferry Road area | | X | | | | | 50 | 50 | | 50 | 50 |
| White Cir | | X | | | | | 50 | | | 50 | |
| Barrett Pkwy/Ridenhour | | | | X | | | 1000 | 1000 | | 1000 | 1000 |
| Roberts Rd | | X | | | | | 50 | | | 50 | |
| Chastain Road | | X | | | | | 50 | 50 | | 50 | 50 |
| Pine Mntn/Jiles Road | | X | | | | | 50 | | | | |
| Jim Owens/Blue Springs | | X | | | | | 50 | | | | |
| Acworth-Due West | X | | | | | | 0 | | | | |
| Mars Hill Rd | | X | | | | | 50 | | | | |
| SR 92 | | X | | | | | 50 | 50 | | | |
| | | | | | | | | | | | |
| | | | | | **Total Estimated Spaces Per Alignment:** | **6600** | **4900** | **3750** | **6300** | **5700** | **4700** |

It should be further noted that this study (particularly at the level of Tier 1 analysis) is not intended to be final answer on transit stations. Ultimately, more detailed planning and engineering studies will very likely result in refinements to the location, number and design/function of transit stations.

## SUSCEPTIBILITY TO CHANGE

As embodied within the overall Statement of Purpose and Need, the ability to incentivize economic development is one of several fundamental drivers of this Alternatives Analysis. As demonstrated successfully in numerous locations across the United States, public investment in transit and associated infrastructure often leads to private investment in new construction, new housing, and new jobs. In

order to help understand the impacts and possibilities for new transit-oriented development, the planning team conducted a conceptual analysis of existing development patterns relative to their "susceptibility to change" or underutilization. This assessment is intended to show locations where future development/redevelopment is most likely to occur over time.

## SURVEY METHODOLOGY

Given the large size of the study area and the conceptual nature of this portion of the Alternatives Analysis (e.g. Tier 1 Screening), it is important to note that the "susceptibility to change" survey was not conducted on a detailed parcel-by-parcel basis in the field. Rather, a more generalized survey was completed using a combination of online aerial photography (Bing and Google) and local knowledge of the geographic area. Additionally, at this point in time surveying and analysis were limited only to the primary corridors/alignments still up for consideration – more specifically US 41 and Interstate-75 (and major intersecting east-west corridors where appropriate). It should be noted that there are limitations to assessing "susceptibility to change" using aerial photography as a primary resource. For instance, it is difficult to ascertain steep slopes, watershed impacts, public utilities and other potential factors which may limit the . Therefore, the results of this Tier 1 overall susceptibility analysis should be seen as somewhat subjective, representing a high-level snapshot that is useful in comparing various areas of the corridors in question. Results do not include detailed analysis of property values and should not be interpreted as an exact prediction of specific redevelopment quantities.

## LEVELS OF SUSCEPTIBILITY TO CHANGE

For the purposes of this effort, the planning team identified four basic levels of "susceptibility" as described below.

Greenfield Sites: These are areas that appear to be largely undeveloped and in a natural state. In most cases these properties represent areas that have never been developed and are therefore considered to be highly susceptible to future change (e.g., limited to no demolition of structures required).

High Susceptibility Sites: These areas exhibit a high degree of underutilization relative to their location, access and level of development. Many of these sites were originally developed in the 1980s or earlier and represent a relatively low level of ongoing investment (e.g., low density). These include older gas stations, aging strip commercial centers, motels, discount stores, older outparcel developments, underused industrial sites, sites dedicated to storage, and large underused parking lots. In addition, High Susceptibility Sites could include large lots that are only partially built-out. While not as

susceptible as Greenfield Sites, High Susceptibility Sites can be relatively easy to redevelop under the right economic conditions.

Low Susceptibility Sites: These areas are generally not currently underutilized, but may be likely to change in the future, particularly with a nearby investment in transit. Typically (but not always) these include sites that were originally developed in the 1990s or later and represent only a moderate level of investment relative to their assumed land value. These include somewhat newer (10-20 years old) gas stations and strip commercial centers, hotels (2-4 stories), outparcel developments, storage sites, and low density office developments (1-2 stories). These sites can be redeveloped under the right economic conditions but typically require some level of effort and reinvestment.

Not Susceptible: These areas represent properties that are generally resistant to redevelopment (other than renovations/upgrades) and are unlikely to change for quite some time. These locations often include recent or underway construction, stable residential areas, areas with high levels of investment/density (e.g., buildings +/-6 stories or greater), developments with parking decks or other high levels of developed infrastructure.

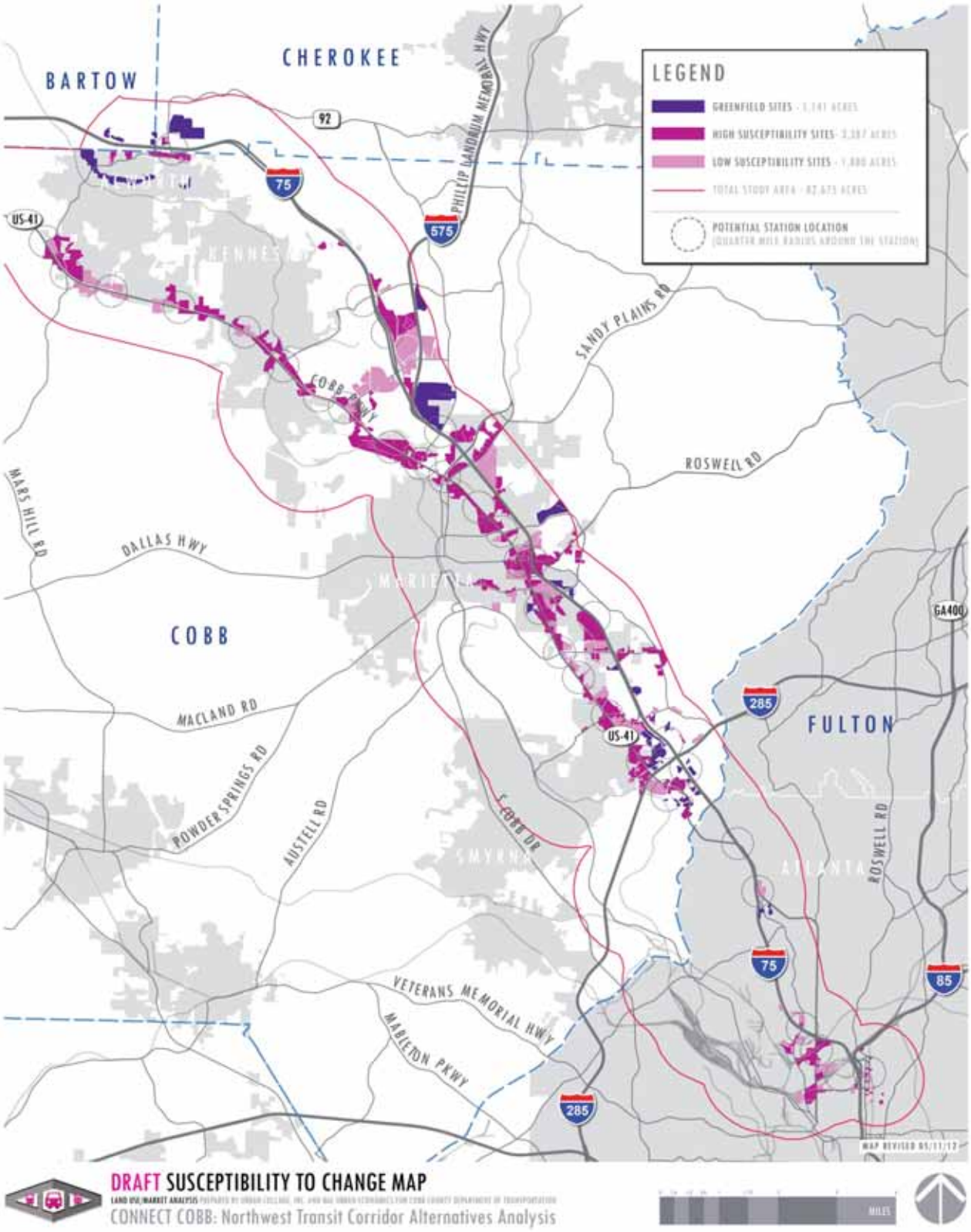
**SURVEY RESULTS**

Based on the survey methodology and categories outlined above, there are over 6,400 acres of land that could be available for redevelopment over time. While real estate market fundamentals and physical/environmental conditions will not support development/redevelopment of all 6,400 acres in the short term, this large amount of developable area does point out the significant opportunity for investment in transit that would likely incentivize economic development over time.

Of the +/-6,400 acres susceptible to change, approximately 1,100 acres (over 17%) are in the "Greenfield Sites" category, thus demonstrating that most new construction in the corridor will be of the "redevelopment" variety, and therefore more challenging. Furthermore, even though many of the Greenfield Sites are in locations near the Interstate, some are not located at interchanges and are therefore less likely to be prime targets for developers (e.g., having poor access).

"High Susceptibility Sites" represent approximately 3,400 acres (over 52% of the properties that are susceptible to change). While these opportunities all along US 41, there are notable concentrations of high suspceptibility lands around Roswell Road, just north of Kennesaw Mountain (aging industrial), just north of Town Center Mall, and around Northside Drive at the BeltLine.

Areas deemed to be "Low Susceptibility Sites" (albeit a challenge for redevelopment) are still prevalent within the study area at around 1,900 acres or. This includes areas such as Cumberland and Town Center Malls, portions of Barrett Parkway and areas along Windy Hill Road between US 41 and I-75.




**DRAFT SUSCEPTIBILITY TO CHANGE MAP**

LAND USE/MARKET ANALYSIS PREPARED BY URBAN LEGUME, INC. AND RAE URBAN ECONOMICS FOR COBB COUNTY DEPARTMENT OF TRANSPORTATION

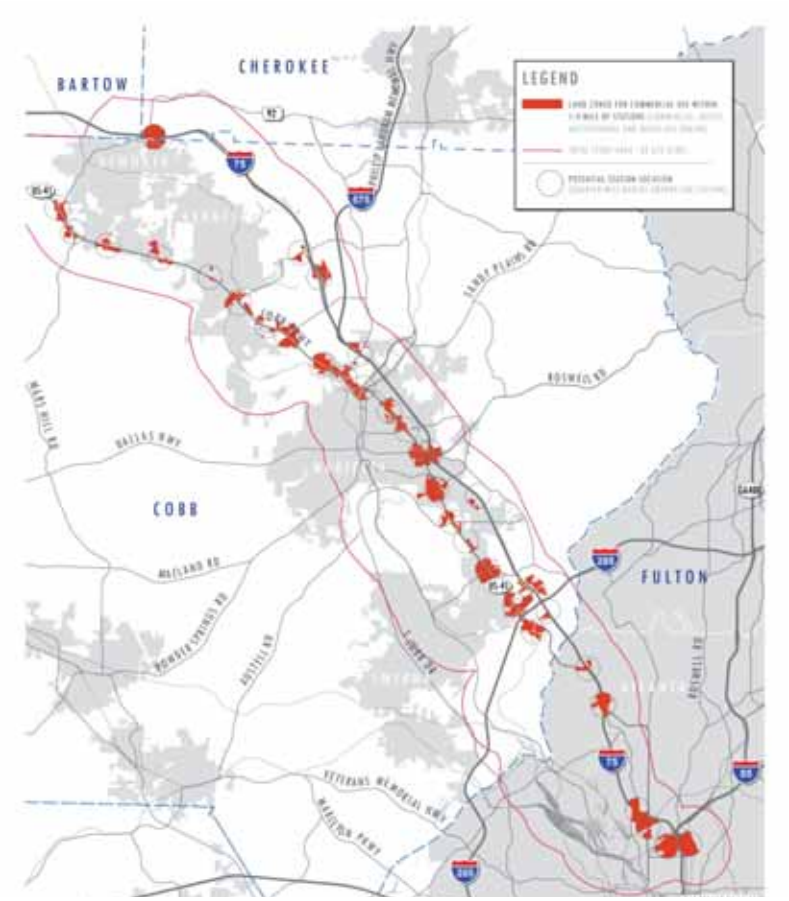
CONNECT COBB: Northwest Transit Corridor Alternatives Analysis

MILES

# AVAILABILITY OF COMMERCIALLY ZONED LAND

In addition to surveying lands that are susceptible to change, another way of ascertaining the likelihood of future commercial and mixed-use development is to understand existing zoning. Although zoning can and sometimes is changed in response to specific development proposals, it can often be difficult, particularly adjacent to or within existing stable residential areas. Therefore, areas currently zoned for commercial purposes (e.g., Retail, Office, Mixed-Use, O&I) typically represent a path of least resistance for new mixed-use, transit supportive development. The planning team analyzed over 150 individual zoning categories from each of the nine municipalities within the overall study area (counties of Cobb, Bartow and Cherokee; cities of Acworth, Atlanta, Kennesaw, Marietta, Smyrna and Sandy Springs). For ease of comparison, zoning was generalized and collapsed into 7 categories (See separate *Land Use & Market – Existing Conditions Assessment* report). Of the almost 77,000 acres of property in the study area, just over 13,600 acres were zoned in some form of "commercial" category (Commercial, Office – Institutional, Mixed-Use or Office). Not surprisingly, the majority of commercial properties are located within or very near the US 41 corridor, along Barrett Parkway, in the Cumberland Area and in Midtown Atlanta.

**Commercial Zoned Property Generally Within ¼ of Station Locations**



# LOCATION OF PED AND BIKE FACILITIES

The stated performance measure for "improved bicycle and pedestrian infrastructure" is difficult to assess without first understanding what facilities currently exist and where opportunities for improvement exist that might be associated with future transit infrastructure.

**EXISTING BICYCLE & PEDESTRIAN SERVICE**

In spring of 2011, Cobb County completed a 15-month planning effort to create the Cobb County Bicycle and Pedestrian Improvement Plan. As demonstrated within that plan, the current Cobb County bike and ped system is generally not adequate (with a few notable exceptions such as the renowned Silver Comet Trail) – particularly along the corridors being considered for new transit service (e.g., US 41 and Interstate 75). The plan includes a street-by-street assessment of "level of service" or L.O.S. for both bicycle and pedestrian facilities. The L.O.S. assessment provides an A-F letter grading system with "A" being the highest/best grade and "F" being the worst.

An overview of the L.O.S. grading results can be seen here (one each for bicycle and pedestrian):

http://dot.cobbcountyga.gov/bikeped/maps_final2010/bicycle%20LOS_final_p%2011x17.pdf

(http://dot.cobbcountyga.gov/bikeped/maps_final2010/pedestrian%20LOS_final_p%2011x17.pdf)

From a pedestrian standpoint, the results clearly show that the US 41 corridor in Cobb County varies between level of service (L.O.S.) "D", "E" and "F" with the vast majority in LOS "E.". From a bicycle facilities perspective, the Cobb County portion of US 41 fares better, albeit still below an acceptable level. The majority of US 41 in Cobb County grades out at L.O.S. "D" with some areas also in "C" and "E."

The southern portion of the corridor in City of Atlanta is primarily along Interstate 75 and therefore does not have sidewalks, trails or any bike facilities to speak of. However, the corridor disengages from I-75 at Northside Drive and proceeds south intersecting with the BeltLine and eventually across Atlantic Station to Midtown. As a more developed urban center, this portion of the corridor has a much higher level of pedestrian and bicycle service. Several years ago, The Atlanta Bicycle Coalition (www.atlantabike.org) assessed and ranked the Midtown/Downtown area with regards to "suitability" for biking (three levels, Red, Yellow, Green). Northside Drive comes in at "Red" for the most difficulty in biking whereas 17th Street through Atlantic Station ranks as "Green" for the least difficulty in biking. From a pedestrian standpoint, Midtown and Atlantic Station have numerous sidewalks and well-landscaped streetscaped areas that facilitate walking and cycling within this "intown" stretch of the

corridor whereas Northside Drive has intermittent sidewalk service varying from one side of the street to the other.

### OPPORTUNITIES FOR IMPROVEMENT / ENHANCEMENTS

Equally important to the location and efficacy of existing facilities is the opportunity to create new and enhanced facilities associated with a new transit system. A good way to assess opportunities for bicycle and pedestrian improvements are to compare the number of cross streets/intersections in the US 41 versus the Interstate 75 corridors. Presumably, the design of any new transit station will include the development of sidewalks and bike facilities within close proximity. However, nearby cross streets/intersections provide the best opportunity to expand walkability and bike-ability beyond the station area and connect to a broader system (particularly for bikes).

In this regard, the US 41 corridor far exceeds I-75 in the potential to create extended walking and biking systems. Within the overall study area the I-75 corridor/alignment crosses approximately 30 major cross streets – albeit most have severe grade differentials which will inhibit walking and biking. In contrast, the US 41 corridor/alignment has almost 50 intersections with major cross roads (almost all of which are at grade) plus numerous additional small cross roads, thus the potential for a far greater built-out network of sidewalks and bike routes.

## MARKET PREFERENCES

While many of the above factors rely on an assessment of existing and future quantifiable ***physical*** features (e.g, potential station locations, susceptibility, etc.), another important factor in determining the effectiveness of transit alternatives is the degree to which various alignments will be more or less receptive to the private development market (e.g., a ***non-physical*** assessment). From a Tier 1 perspective, this assessment is somewhat more subjective and based on the planning team's involvement in similar planning efforts and contexts along with years of experience in studying real estate development markets, trends and fundamentals. Given that all transit alternatives being considered in Tier 1 involve fixed-guideway systems (e.g. regardless of BRT or LRT), the following real estate preferences will only focus on the comparative strengths and weaknesses of the two primary corridors (e.g., US 41 versus I-75) in terms of delivering new mixed-use, transit-oriented development in and around potential transit stations.

### INTERSTATE-75 CORRIDOR

In locations where developable (or redevelopable) land corresponds to potential transit station locations, the I-75 corridor will have a few advantages over a US 41 alignment. First and foremost, the creation of new mixed-use activity centers will have great access to the interstate without having to

navigate through local streets. In this regard, I-75 TODs will be attractive for high-density development, particularly for Class A office space that seeks to attract workers from across the region along with corporate relocations that desire high visibility. In addition, high-density rental residential development may find these locations somewhat attractive in that potential renters will have good access to employment centers along the Northwest Transit line and perhaps throughout the region (depending on how and where this transit line ties into the broader network). However, the market for potential TOD development along I-75 has several weaknesses compared to the US 41 corridor. Developments here will tend to be somewhat isolated "on an island." While having good access to the region via the interstate, these locations are likely to be situated on busy cross streets near interchanges and thus will miss out on finer grain connections to the surrounding communities and their associated quality of life amenities (e.g., parks, schools, recreation, cultural facilities, unique/local goods and services, etc.). Although I-75 locations can be somewhat developed as self-contained TOD's, they will tend to lack an authenticity and richness of experiences – two elements that are becoming increasingly important in real estate marketability. These TODs may be attractive to some consumers including commuters traveling far distances and major employers, however they will be far less attractive to most home-buyers, retailers and institutions.

**US 41 CORRIDOR**

Inherently, the US 41 corridor will contain many more locations for TOD development than the I-75 corridor which is a strength unto itself. Having a greater inventory of potential locations to draw from will create greater opportunities and flexibility to match developer needs with suitable sites. Additionally TOD developments along US 41 will be able to take advantage of a finer grain of connectivity, visibility and, therefore, access to a wide array of area amenities including schools, existing neighborhoods, parks and recreation, social services, civic and cultural facilities and local shopping and dining. These locations will be attractive to specialty retailers that seek highly walkable locations along with smaller-scale local offices, for-sale residential and walkable mixed-use buildings. True mixed-use developments in Atlanta were becoming more popular and "main stream" prior to the economic downturn. In fact one of metro Atlanta's earliest and most well-known examples of mixed-use development is Smyrna's Market Village and Village Green. Other built examples in or near the Northwest Corridor include Riverside, Ivy Walk and several developments in Vinings. Mixed-Use developments such as these are generally located near, but not on the interstate, thus giving them the advantage of regional access (e.g., as a destination), along with proximity to nearby local goods, services and other quality of life amenities (e.g., as a housing choice). In this regard, the US 41 corridor is a more advantageous location for mixed-use development.

Despite the advantages of connectivity and proximity to local goods and services, the US 41 corridor does have two fundamental market weaknesses with regard to new TOD development. First, the increased connectivity comes at a price in that local roads can become congested at certain times, thus inhibiting the ability to attract a regional audience. Second, the visual appearance of existing development along US 41 is hit and miss and can be a deterrent to TOD developers in some locations (i.e., as opposed to a more blank slate approach in some I-75 locations).

# TIER 1 SCREENING METRICS

Based on the analyses provided on the preceding pages regarding potential transit stations, susceptibility to change, commercially zoned land, ped/bike infrastructure and market preferences, several specific "metrics" have been developed in order to assess the performance of several land use and economic development measures.

The **MEASURES** being screened are:

- Reduced Parking Needs
- Improved Bicycle & Pedestrian Infrastructure.
- Increased Transit-Oriented Development.
- Increased Commercial/Retail Spaces
- Creation of More Mixed-Use Complexes within Walking Distance of Transit.

The **METRICS** being utilized to assess the Measures are:

Metric: Number of New Transit Stations: The relative number of potential new transit stations (and therefore the number of new Transit-Oriented Development nodes) has a direct correlation to increasing ped/bike infrastructure, increasing housing choices, increasing commercial /retail spaces and creating more mixed-use development.

Metric: Anticipated Number of New Commuter Parking Spaces: The relative anticipated quantity of commuter parking spaces needed has a direct correlation to reducing parking needs in the corridor as a whole – fewer stations focused on commuters will lead to a greater degree of walkable, transit-oriented development.

Metric: Acres of Land Susceptible to Change Within ¼ Mile of Station Locations: The overall quantity of Greenfield Sites and High Susceptibility Sites within walking distance of Station Locations will be directly proportional to the ability to create transit-oriented development, increase commercial / retail spaces, and develop more mixed-use complexes. For the purposes of this preliminary analysis (and given that precise station locations have yet to be studied) "Station Locations" include a +/-500' radius buffer zone within which stations are likely to occur.

Metric: Acres of Land Zoned for Commercial Use Within ¼ Mile of Station Locations: While land can be rezoned to support new TOD development, existing commercial zoning will be the easiest and least controversial to develop. Furthermore, existing commercial property in new TOD locations will result in

reduced parking needs (more workers taking transit) and will increase opportunities for new commercial / retail spaces.

Metric: Proximity / Ability to Connect to and/or Improve Existing Ped/Bike Facilities: Potential TOD locations near existing ped and bike facilities and/or closer to the local street network will provide the greatest opportunities for improving and expanding the overall ped/bike network.

Metric: Attractiveness to Private Development Market: Locations that are more attractive to the private development market will result in more commercial/retail spaces and more mixed-use complexes.

## TIER 1 SCREENING RESULTS

The results of Tier 1 Screening for Land Use and Economic Development/Redevelopment are presented in the table at the end of this report. Analyzing the performance Measures using the above Metrics leads to the following overall conclusions:

- On the whole, alignments that include more potential transit stations, and therefore contain more potential TODs, generally provide a greater opportunity for more efficient use of land, increased housing choices and stimulating the local economy.
- Alignments 2a and 4a (both in the US 41 corridor) include the greatest number of stations and the largest cumulative physical inventory of land likely to redevelop (by a significant margin). Therefore, these alignments have the greatest potential for increasing housing choices and creation of new TODs/mixed-use complexes.
- Alignments utilizing the I-75 corridor (1 and 3) are more amenable to commuter parking given their interstate access. Therefore, these two alignments have the greatest adverse impact on the ability to reduce parking needs.
- Two US 41 alignments have a large number of stations (2a and 4a) and therefore also generate high commuter parking counts. However, these stations also have high quantities of commercially zoned land near stations that equates to potential parking reductions (existing drivers becoming transit riders).
- Alignments utilizing the US 41 corridor (2a, 2b, 4a and 4b) generally have significantly more opportunity to improve and expand walking and biking facilities due to their greater level of connectivity with existing roadways. I-75 alignments can create internalized bike and ped options but will be more limited in terms of connecting to and/or expanding existing facilities.
- Overall, Alignment 2a appears to perform best across all measures.

## Summary of Land Use Results for Tier 1 Alternatives

| | Alignment 1 | Alignment 2A | Alignment 2B | Alignment 3 | Alignment 4A | Alignment 4B |
|---|---|---|---|---|---|---|
| *CORRIDOR* | I-75 | US 41 | US 41 | I-75 | US 41 | US 41 |
| *EXTENT* | Acworth to Midtown | Acworth to Midtown | Acworth to Midtown | KSU to Midtown | KSU to Midtown | KSU to Midtown |
| *# STATIONS* | 13 | 26 | 15 | 12 | 22 | 15 |
| **GOAL / OBJECTIVE: More Efficient Use of Land** | | | | | | |
| **MEASURE: Reduced Parking Needs** | | | | | | |
| **METRIC 1: Anticipated Number of New Commuter Parking Spaces** | 6600 | 4900 | 3750 | 6300 | 5700 | 4700 |
| **METRIC 2: Acres of Land Zoned for Commercial Use within 1/4 mile of Station Locations** | 1440 | 2580 | 1840 | 1250 | 2380 | 1810 |
| ***Overall Measure Grade*** | **2** | **4** | **3** | **2** | **3** | **3** |
| ***Alignment Ranking*** | **Fifth** | **First** | **Second** | **Sixth** | **Third** | **Fourth** |
| **MEASURE: Improved Bicycle and Pedestrian Infrastructure** | | | | | | |
| **METRIC 1: Proximity / Ability to Connect to and/or Improve Existing Facilities** | Medium | High | Medium High | Low | High | Medium High |
| **METRIC 2: Number of New Stations to Bike/Walk to** | 13 | 26 | 15 | 12 | 22 | 15 |
| ***Overall Measure Grade*** | **2** | **5** | **3** | **1** | **4** | **3** |
| ***Alignment Ranking*** | **Fifth** | **First** | **Fourth** | **Sixth** | **Second** | **Third** |
| **GOAL / OBJECTIVE: Increase Housing Choices** | | | | | | |
| **MEASURE: Increased Transit-Oriented Development** | | | | | | |
| **METRIC 1: Acres of Land Susceptible to Change within 1/4 mile of Station Locations** | 580 | 1530 | 850 | 540 | 1290 | 800 |
| **METRIC 2: Number of New Transit Stations** | 13 | 26 | 15 | 12 | 22 | 15 |
| ***Overall Measure Grade*** | **1** | **5** | **2** | **1** | **4** | **2** |
| ***Alignment Ranking*** | **Fifth** | **First** | **Third** | **Sixth** | **Second** | **Fourth** |

## Summary of Economic Development / Redevelopment Results for Tier 1 Alternatives

| | Alignment 1 | Alignment 2A | Alignment 2B | Alignment 3 | Alignment 4A | Alignment 4B |
|---|---|---|---|---|---|---|
| *CORRIDOR* | I-75 | US 41 | US 41 | I-75 | US 41 | US 41 |
| *EXTENT* | Acworth to Midtown | Acworth to Midtown | Acworth to Midtown | KSU to Midtown | KSU to Midtown | KSU to Midtown |
| *# STATIONS* | 13 | 26 | 15 | 12 | 22 | 15 |
| **GOAL / OBJECTIVE: Stimulate Local Economy** | | | | | | |
| **MEASURE: Increased Commercial / Retail Spaces** | | | | | | |
| **METRIC 1: Acres of Land Susceptible to Change within 1/4 mile of Station Locations** | 580 | 1530 | 850 | 540 | 1290 | 800 |
| **METRIC 2: Number of New Stations** | 13 | 26 | 15 | 12 | 22 | 15 |
| **METRIC 3: Acres of Land Zoned for Commercial Use within 1/4 mile of Station Locations** | 1440 | 2580 | 1840 | 1250 | 2380 | 1810 |
| **METRIC 4: Attractiveness to Private Development Market** | Medium Low | High | Medium High | Low | High | Medium High |
| ***Overall Measure Grade*** | **2** | **5** | **3** | **1** | **4** | **3** |
| ***Alignment Ranking*** | **Fifth** | **First** | **Third** | **Sixth** | **Second** | **Fourth** |
| **MEASURE: Creation of More Mixed-Use Complexes Within Walking Distance of Transit** | | | | | | |
| **METRIC 1: Acres of Land Susceptible to Change within 1/4 mile of Station Locations** | 580 | 1530 | 850 | 540 | 1290 | 800 |
| **METRIC 2: Number of New Stations** | 13 | 26 | 15 | 12 | 22 | 15 |
| **METRIC 3: Attractiveness to Private Development Market** | Medium Low | High | Medium High | Low | High | Medium High |
| ***Overall Measure Grade*** | **2** | **5** | **3** | **1** | **4** | **3** |
| ***Alignment Ranking*** | **5** | **First** | **Third** | **Sixth** | **Second** | **Fourth** |
| ***Average Grade Across All Land Use and Economic Development Measures*** | **2** | **5** | **3** | **1** | **4** | **3** |
| ***Alignment Ranking*** | **Fifth** | **First** | **Third** | **Sixth** | **Second** | **Fourth** |

**NOTES:**

1. Exact station locations are yet to be determined. Therefore, 500 foot radii buffers have been established to determine a "zone" in which the station is likely to occur.
2. Measure Grading System:
   - 5 = Measure fully supports the overall goal
   - 4 = Measure largely supports the overall goal
   - 3 = Measure partially supports the overall goal
   - 2 = Measure largely does not support the overall goal
   - 1 = Measure does no support the overall goal
3. "Commercially Zoned Property" includes: Mixed-Use, Office, O&I and Commercial/Retail

# LAND USE & ECONOMIC DEVELOPMENT/REDEVELOPMENT

# TIER 2 SCREENING

**NORTHWEST CORRIDOR ALTERNATIVES ANALYSIS STUDY**

**Prepared by Urban Collage, Inc.**

**for Cobb County Department of Transportation**

**DRAFT FOR REVIEW**

**September 12, 2012**

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# INTRODUCTION

This Tier 2 Screening analysis builds on a series of previous Land Use and Economic Development efforts within the overall Northwest Corridor Alternatives Analysis project including: an existing conditions analysis, a fatal flaws analysis and a Tier 1 Screening effort. As such, this Tier 2 Screening should not be viewed in isolation but rather as a continuation and refinement of those earlier efforts. In addition, the methodology used herein relies on various engineering inputs / constraints generated by other team members particularly with regard to transit alignment and geometry.

For the purposes of Tier 2 Screening within the Northwest Corridor Alternatives Analysis, several alignments / scenarios were carried forward from Tier 1 and were analyzed - both quantitatively and qualitatively - with respect to land use and economic development / redevelopment impacts. Seven discrete scenarios were evaluated including:

- No Build
- Transportation System Management (TSM) / Enhanced Bus
- Alignment 1: I-75 corridor from Acworth to Midtown (LRT Technology)
- Alignment 2a: US 41 corridor from Acworth to Midtown (LRT Technology)
- Alignment 2a: US 41 corridor from Acworth to Midtown (BRT Technology)
- Alignment 4a: US 41 corridor from KSU to Midtown (LRT Technology)
- Alignment 4a: US 41 corridor from KSU to Midtown (BRT Technology)

Each option was evaluated with respect to five Goals / Objectives each with their own Performance Measures as follows:

Land Use Goal: **More Efficient Use of land**. Measures include Reduced Parking Needs and Improved Bicycle & Pedestrian Infrastructure.

Land Use Goal: **Increased Housing Choices**. Measures include Diversity of Housing & Income Levels, Better Jobs / Housing Balance, Increased Station Area Development and Increased Location Efficient Housing.

Land Use Goal: **Promote Active, Healthy Lifestyles**. Measures include Increased Public Facilities Such as Parks, Green Space, Health & Education.

Economic Development / Redevelopment Goal: **Stimulate Local Economy**. Measures include Increased Employment & Income Levels, Net Economic Growth, Increased Commercial / Retail Spaces and Creation of More Mixed-Use Complexes within Walking Distance of Transit.

Economic Development / Redevelopment Goal: **Leverage Public & Private Investment**. Measures include Revenue Generated From Land Development and Encourage Public Private Partnerships At Stations.

In order to effectively evaluate these Goals, three overarching and driving elements were taken into account as the basis for making detailed and informed projections on the impact of potential transit investment.

**Transit Geometry / Alignment:** the assumed physical arrangement of transit lines and stations;

**Station Areas:** the presumed locations, extent and physical capacity of transit station areas to support new development / redevelopment; and

**Future Development & Land Value:** the anticipated scale, mix and impact of new development in station areas that is incentivized by new transit service.

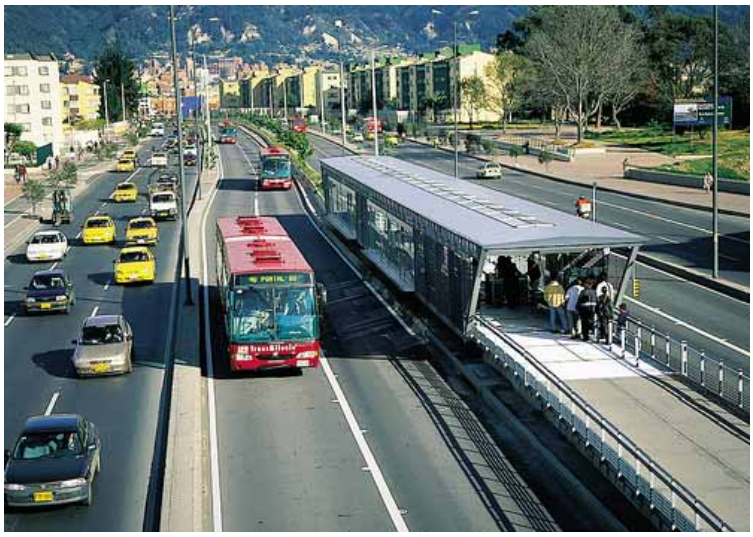
Each of these factors has their own methodologies, assumptions and limitations as described in more detail below.

## TRANSIT GEOMETRY / ALIGNMENT

The professional analysis conducted by the engineering portion of the consulting team (e.g. by others – see associated analyses) outlined specific physical horizontal and vertical positions for dedicated transit lines along each of the U.S. 41 and I-75 alignments. The positioning of these lines were based on various topographical, vehicular level of service, right-of-way and other constraints as well as the ability of each corridor to accommodate light rail and bus rapid transit vehicle operations such as turning radii and max/min. slopes. The general Tier II station areas were carried forward from Tier I, then cross-referenced with aforementioned engineering constraints and development opportunities in order to suggest more specific physical station locations and arrangements. The resulting configurations of transit operations and station locations have a direct result on the viability and scale of associated new development. The following factors have been taken into account as they relate to the projected quantities of new development associated with each corridor alignment.

### TRANSIT ALIGNMENT: US 41 CORRIDOR OUTSIDE THE PERIMETER

While various configurations were examined, it was determined that the most feasible alignment for transit along the US-41 corridor was in the median or center of the existing right-of-way (for the most part – not in all locations). From an operations perspective, this minimizes the need for purchasing additional rights-of-way (in most locations) and limits conflicts with existing curb cuts and vehicular turning movements.



TRANSIT STATION IN THE CENTER OF A RIGHT-OF-WAY

However, from a land use and development perspective, it is important to note that a center location for stations somewhat reduces the impact on and incentive for associated private development. Center locations are somewhat more challenging for riders / pedestrians to access and are typically farther away from the front door of adjacent development. While the presence of transit is still fundamentally an incentivizing factor, the anticipated development quantities – as outlined later in this report – are accordingly conservative based on a somewhat reduced accessibility for pedestrians.

## TRANSIT ALIGNMENT: INTERSTATE 75 OUTSIDE THE PERIMETER

Due largely to the planned managed lane system proposed along the west side of I-75, it was determined that the most feasible alignment for dedicated transit along I-75 outside of the perimeter would be in existing or expanded right-of-way along the east side of the interstate. From a land use and economic development perspective, this has both positive and negative impacts. On the positive side,

OFF-SET TRANSIT ALONG ONE SIDE OF AN INTERSTATE

this allows for station locations away from heavy interstate traffic and in some cases, this may involve

"swinging" the transit alignment further east to converge with potential areas of redevelopment and / or existing high volume ridership nodes. In this regard, potential new development will be more highly incentivized than in a center right-of-way location, particularly given the enormous width of the interstate (e.g. station locations not out on an island). However, this off-set arrangement of transit generally confines the system's catalyzing impact on economic development to only one side of the interstate.

## TRANSIT ALIGNMENT: INTERSTATE 75 INSIDE THE PERIMETER

Similar to the portion of I-75 outside the perimeter, large portions of the alignment inside the perimeter were determined to be most feasible along the east side of the interstate. This includes a significant shift farther east at the West Paces Ferry node (off the interstate), which also facilities more significant redevelopment opportunities. Of particular note is that the engineer's recommended alignment veers off I-75 and transitions underground north of Howell Mill Road until it reaches is southern terminus at Arts Center Station in Midtown. As such, stations at Howell Mill Road, BeltLine and Atlantic Station are accessed via above-ground pedestrian entrances. This shift enables the capture of significant redevelopment opportunities associated with the intersection of the BeltLine and numerous high-density development pads in Atlantic Station. As shown later in this report (and in the detailed appendix worksheets), the corresponding quantities of new housing, jobs and economic impact are comparatively large within this "intown" section where it deviates from Interstate-75. It is critical to note, however, that from a comparative standpoint (e.g., comparing the various overall options) the alignment inside the perimeter was considered to be the same in all build scenarios and therefore results in the exact same future development impact (e.g., no difference between the various options).

## FIXED GUIDEWAY TRANSIT: BRT VERSUS LRT

For the purposes of Tier 2 Screening, all consultant teams assumed that transit – regardless of mode or location - would be incorporated entirely within a fixed guideway system. In other words, transit vehicles would operate in non-shared, dedicated lanes or routes of travel thus largely avoiding delays and conflicts with automobile traffic. In practice, this requires numerous grade-separated crossings (e.g. in steep slope conditions or heavily congested intersections) and in some places necessitates underground or elevated service. While this fixed guideway construct can create adverse issues of cost and engineering, it generally has a positive and catalytic impact on land use and economic development. Numerous national studies have demonstrated that fixed guideway transit systems are perceived to be "locked in place" and generally "immovable" and therefore generate significantly more associated development and investor certainty (e.g., "transit will always be at my front door"). In addition, fixed guideway systems generally operate at higher average speeds (and therefore lower overall average trip times) which leads to an increase in ridership thus adding to the perceived benefit of investment in and around fixed guideway station areas.

In this regard, the catalytic difference between Bus Rapid Transit (BRT) and Light Rail Transit (LRT) becomes largely indistinguishable in that the incentive for development is mostly based on the perceived permanence of the transit system rather than the actual transit technology used. In addition, if designed carefully, a fixed guideway system can be easily converted from BRT to LRT technology

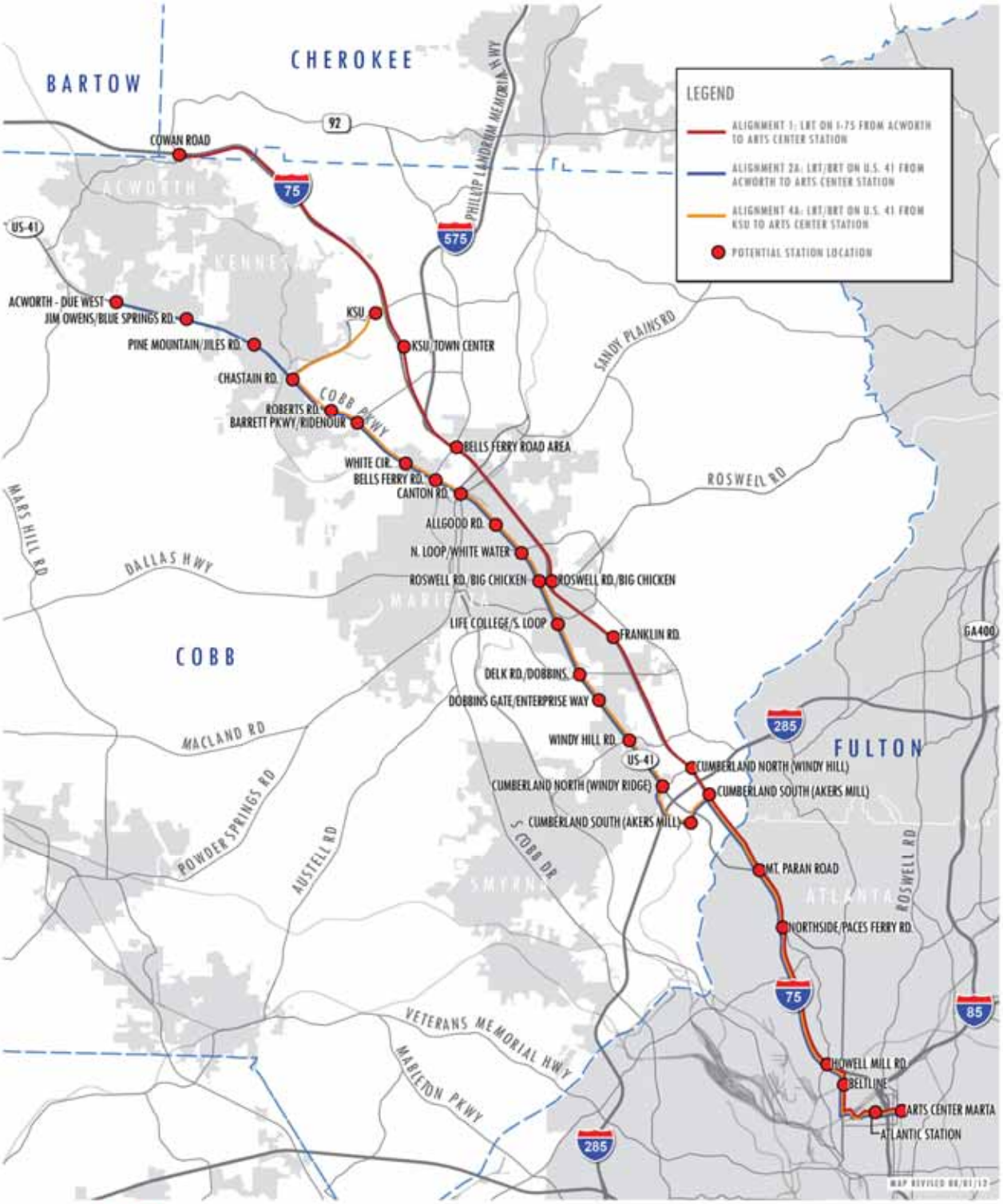
over time as funding allows. Therefore, this Tier 2 Screening Analysis (for Land Use and Economic Development / Redevelopment) does not differentiate between BRT and LRT options.

## REFINED STATION AREAS

The opportunity to develop transit stations associated with a new high-capacity transit line is fundamental in the effort to change and enhance land use and development patterns in the corridor commensurate with the overall stated Need and Purpose of this project. Once developed, Transit Stations will forever impact their immediate environs including land use and development but also nearby vehicular, pedestrian and bicycle circulation patterns. In addition, the location, spacing and design of transit stations will have a large impact on ridership patterns. Transit stations, therefore, must be carefully considered both in their impact on the immediate context as well as within the broader context of the system as a whole. Following on the more generalized work in Tier 1, Tier 2 Station locations and impacts were refined on a station-by-station basis.

### STATION LOCATIONS

As shown in the map on the following page, the planning team has identified a total of 32 potential station locations for consideration within the 22-mile study area (e.g., from Acworth to Midtown). This includes 19 stations located along or close to US-41 and 13 stations located along the I-75 corridor. Compared with generalized locations in Tier 1, more specific locations for each station were determined and analyzed based on several considerations.


BARTOW
CHEROKEE
COBB
FULTON
LEGEND
ALIGNMENT 1: LRT ON I-75 FROM ACWORTH TO ARTS CENTER STATION
ALIGNMENT 2A: LRT/BRT ON U.S. 41 FROM ACWORTH TO ARTS CENTER STATION
ALIGNMENT 4A: LRT/BRT ON U.S. 41 FROM KSU TO ARTS CENTER STATION
POTENTIAL STATION LOCATION
COWAN ROAD
ACWORTH
KENNESAW
ACWORTH - DUE WEST
JIM OWENS/BLUE SPRINGS RD.
PINE MOUNTAIN/JILES RD.
CHASTAIN RD.
ROBERTS RD.
BARRETT PKWY/RIDENOUR
KSU
KSU TOWN CENTER
BELLS FERRY ROAD AREA
WHITE CIR.
BELLS FERRY RD.
CANTON RD.
ALLGOOD RD.
N. LOOP/WHITE WATER
ROSWELL RD./BIG CHICKEN
ROSWELL RD./BIG CHICKEN
LIFE COLLEGE/S. LOOP
FRANKLIN RD.
DELK RD./DOBBINS
DOBBINS GATE/ENTERPRISE WAY
WINDY HILL RD.
CUMBERLAND NORTH (WINDY HILL)
CUMBERLAND NORTH (WINDY RIDGE)
CUMBERLAND SOUTH (AKERS MILL)
CUMBERLAND SOUTH (AKERS MILL)
MT. PARAN ROAD
NORTHSIDE/PACES FERRY RD.
HOWELL MILL RD.
BELTLINE
ARTS CENTER MARTA
ATLANTIC STATION
MARIETTA
SMYRNA
ATLANTA
PHILLIP LANDRUM MEMORIAL HWY
SANDY PLAINS RD
ROSWELL RD
COBB PKWY
MARS HILL RD
DALLAS HWY
MACLAND RD
POWDER SPRINGS RD
AUSTELL RD
S COBB DR
VETERANS MEMORIAL HWY
MABLETON PKWY
92
US-41
75
575
285
85
GA400
DRAFT TIER 2 POTENTIAL STATION LOCATIONS
LAND USE/MARKET ANALYSIS
CONNECT COBB: Northwest Transit Corridor Alternatives Analysis

Relationship to Intersections: US-41: In order to help eliminate potential conflicts between transit vehicles, on-street traffic (both routine traffic and commuters driving to transit stations), turning movements, bicyclists and pedestrians, stations were generally sited away from major east-west cross roads – generally a minimum of 300 feet back. While this seems somewhat counterintuitive in terms of requiring riders to cross US-41 in mid-block locations rather than at signalized intersections, it does provide an opportunity for dedicated, safe pedestrian paths of travel utilizing either pedestrian bridges or tunnels with escalators and / or elevators. This is particularly important in sections of US-41 that contain numerous lanes (over 8 lanes in some areas) and large volumes of turning movements – e.g., situations that typically lead to very short and stressful crossing cycles for pedestrians to navigate signalized intersections.

Relationship to Intersections & Interchanges on I-75: In the case of Interstate 75, the need to avoid interchange locations is even more apparent as highway ramps, overpasses and underpasses create significant physical barriers. In these locations, stations were moved north or south considerably in order to alleviate potential conflicts. Conversely, in station areas at major crossroads without an interchange (e.g., Roswell Road, Bells Ferry) stations were located very close to the crossroad in order to facilitate ease of access.

Topography / Slope: Station locations were located using approximated vertical alignments provided by the engineering team. Within these general locations, station platforms were specifically sited within areas of the designed alignment that did not exceed a 2% vertical cross slope, which is consistent with both BRT and LRT engineering specifications. While some areas of the future transit alignment would be somewhat flat, a significant portion of it (particularly along US-41) is anticipated to include grades exceeding 2%, thus creating challenges in finding acceptable platform locations. Furthermore, engineering requirements anticipate that many sections of the lines would be both elevated and below existing grades, resulting in station platforms that are above or below grade in many areas (see station tear sheets in appendix for specifics).

Proximity to Destinations / Redevelopment: As mentioned above, topography and operational requirements around intersections and interchanges were generally the controlling factor in determining station locations. However, within the context of those limitations were flexibility was allowed, the final determining factor was the context of adjacent properties. In general, existing destinations desirable to riders and / or locations with a large amount of land susceptible to redevelopment were given preference.

## CAPACITY FOR REDEVELOPMENT AT STATION AREAS

Once individual station locations were defined using the methodology above, each station was analyzed for its existing development patterns and its physical capacity for redevelopment.

Development Impact Area: Using the defined platform / station location as a center point, each Station Area was assigned a geographic "Development Impact Area" representing a ¼ mile radius in all directions. While not absolute, fixed guideway transit has generally been found to have a catalytic

effect on any properties within walking distance of a station. National planning and development advocacy organizations (ULI, CNU, APA, etc.) overwhelmingly agree that "walking distance" correlates to approximately a 5-minute walk for the average person which equates to a roughly ¼ mile distance. In higher density, urban locations it has been demonstrated that new development incented by the infusion of transit can sometimes extend beyond a five-minute walk. However, for the purposes of this analysis, all Station Areas were limited to a ¼ mile Development Impact Area.

Land Susceptible to Redevelopment: Understanding where new development and / or redevelopment can physically occur is fundamental in trying to understand the impact of building transit. In this regard, a complete analysis of land susceptibility was conducted for the entire US-41 and I-75 corridors during Tier 1 Screening (see previous report for methodology). Land was generally evaluated for underutilization and current level of investment to determine areas that are likely to redevelop immediately (e.g., currently undeveloped), are susceptible to redevelop in the short and longer term, and areas that are unlikely to redevelop at all, even if transit were constructed. For Tier 2, those initial determinations were validated on a parcel-by-parcel based on closer inspection within each Station Area's Development Impact Area. Parcels that straddled the boundary of the ¼ mile Development Impact Area were included for consideration if at least 50% of the parcel area was inside the boundary. As with Tier 1, the Tier 2 determinations of susceptibility should be considered approximate and somewhat subjective as they were based only on cursory visual inspection and not detailed data sources.

Existing Development: For areas identified as "susceptible to change" it is important to understand what land uses and development quantities are on the ground currently (e.g., how many square feet of office, retail, housing and industrial space are likely to be redeveloped). In order to evaluate the true impact of potential new development in Station Areas, growth and development projections (as described later in this report) required enumerating gross quantities (e.g., how much new construction will occur) and net quantities (e.g., accounting for the loss of existing buildings / jobs during redevelopment). Building-by-building data (floor area and existing jobs) was not readily available to conduct a hyper-accurate assessment of existing conditions so a more generalized approach was taken in order to arrive at a conceptual order of magnitude. In this regard, the overall net growth projections contained in this report are less important as individual values as they are for use in making relative comparisons among various transit options.

In order to arrive at a typical, generalized density by parcel, several sample properties in the study were analyzed more closely to generate a prototypical Floor-Area-Ratio (FAR) multiplier. This multiplier was then applied across all the land susceptible to redevelopment in each Station Area in order to arrive at a quantification for the jobs, housing units and building square footage likely to be redeveloped (e.g., Land Area times FAR). Based on these sample case studies, the following FARs were used to represent an approximation for existing development quantities:

- Retail = 0.2
- Industrial / Warehousing = 0.3
- Office / Industrial = 0.18 (outside the perimeter)

- Office / Industrial = 0.2 (inside the perimeter)
- Residential = 0.1

It is important to understand that there are numerous properties throughout the study area that exhibit a higher level of density (particularly inside the perimeter). However, by definition, higher density properties are typically resistant to change and are therefore not included in this calculation. Therefore, the resulting quantifications of existing development are solely for somewhat underutilized properties that are presumed to be redeveloping due to the introduction of transit in the corridor.

For overview summaries of each Station Area, see the attached appendix for detailed one-page "tear sheets" of each Station Area showing anticipated locations of each station / platform and an overview of the associated level of gross new development that could be catalyzed. For more details on development, land values, job creation and housing growth in each Station Area, see the detailed Microsoft Excel worksheets in the attached appendix.

# FUTURE DEVELOPMENT POTENTIAL & LAND VALUE

### PURPOSE OF ANALYSIS

The purpose of the Tier 2 analysis is to compare differences between the transit alternatives in terms of the amount of new development catalyzed, number of new jobs created, increases in land value and potential property tax revenue impacts associated with the station areas. The Tier 2 economic development/redevelopment analysis expands upon the Tier 1 screening for three corridors, (further described below) that emerged from the Tier 1 screening. The analysis considers in more detail the build out potential in areas within a quarter mile of stations along each of the three alternative alignments. The Tier 2 analysis employs market-based development programs envisioned for each station area's build-out, applying generalized, transit-appropriate development typologies to land likely to redevelop at each of the station areas (as described in the previous section of this report).

### ALTERNATIVE ALIGNMENTS & STATION AREAS

While there are 7 scenarios being evaluated in Tier 2, from a future development perspective only three variations are described herein based solely on alignment. By definition, the "No Build" option assumes no investment in transit and therefore has zero impact on future development (e.g., outside of what would have occurred organically). Similarly, for the "TSM/Express Bus" alternative, the lack of a fixed-guideway system and general lack of new "station areas" precludes this option from incentivizing much, if any, new development beyond what would naturally occur. As mentioned previously, for the purpose of this analysis and commensurate with this preliminary nature of planning, each remaining alternative alignment is assumed to operate solely within a fixed guideway. Based on other national studies, the reliance on a fixed guideway system presumes that both light rail (LRT) and bus rapid transit (BRT) technologies will offer an equal level of service sufficiently attractive to riders to influence decision-making on housing and business location around transit stations. So again, no distinction is made on the impact to future development due to BRT versus LRT technology.

## METHODOLOGY

The contemplated transit improvements are in a preliminary stage of planning. Accordingly, the Tier 2 analysis follows a methodology appropriate for the preliminary level of detail currently available on the location of station platforms, access to the station, and relationship to the existing infrastructure and buildings that are or will be surrounding it.

Creation of Development Templates: Outside the Perimeter: The analysis categorizes Station Areas in Cobb County by the type of development likely to occur around them, and utilizes a set of generalized development concepts for 5 Station Area typologies (see chart below). Each development concept, or template, has a density and mix of uses appropriate for development associated with fixed-guideway transit. The templates employ station area planning guidance from the Center for Transit-Oriented Development (CTOD)[8] and the experience of the consulting team, based on similar projects across the U.S. The templates recognize the suburban nature of the existing land use pattern for much of the alignment area, and that the Station Areas already have a diverse mix of land uses. In particular, the templates acknowledge that the U.S. 41 corridor provides a substantial amount of Cobb County's retail, that the I-75 station areas are proximate to highway interchanges, and that the Cumberland and Town Center Community Improvement Districts (CIDs) have potential for focusing development with a denser mix of uses.

[8] Center for Transit Oriented Development and Reconnecting America (2008). *Station Area Planning: How To Make Great Transit Oriented Places.*

**OUTSIDE PERIMETER - Station Area Development Typologies**

| Suburban/New Town Center | | Land % | Average Density (net) | Comments |
|---|---|---|---|---|
| For stations in Cumberland, reflecting the vision for a vibrant, mixed use area and serving as both an origin and destination for commuters. | **New Office** | 50% | 4.0 FAR | Envisions structured parking with some shared use. |
| | **New Retail/Service** | 100% | 0.25 FAR | Assumes ground floor retail about 25-50% of building footprint. On street and structured/shared use parking. |
| | **New Residential** | 50% | 60 du/acre | Envisions mid rise buildings, structured parking with some shared use. |
| **Transit Corridor - Medium Intensity** | | **Land %** | **Average Density (net)** | **Comments** |
| These station areas will predominantly support increased residential use of a variety of types, including townhouses and low rise multifamily units, for commuters traveling further in. Some net additional retail for local residents, transit riders and through traffic. | **New Office** | 5% | 1.5 FAR | Minimal office space envisioned as community-serving, professional services. 1-3 story buildings, potentially with ground floor retail, and surface parking. CTOD low rise office/commercial building type. |
| | **New Retail/Service** | 25% | 0.5 FAR | Intended to replace existing retail and accommodate some new growth. Accommodates around 3 surface parking spaces per 1,000 s.f. Could include some ground floor retail in multifamily buildings and some shared parking. |
| | **New Residential** | 70% | 20 du/acre | Envisioned as a mix of TH (around 15 du/ac) and low rise (30 du/ac). Low end of CTOD residential types. |
| **Transit Center - Medium Intensity** | | **Land %** | **Average Density (net)** | **Comments** |
| These station areas will predominantly support increased residential to house commuters traveling further in. Transit is anticipated to support predominantly low rise multifamily new construction within a 1/4 mile radius of the station. Development will include some net additional retail for local residents, transit riders and through traffic, and a small amount of commercial/professional space. Parking will be a mixture of shared structures and some surface/street parking. | **New Office** | 5% | 2 FAR | Minimal office space envisioned as community-serving, professional services. Potentially shared structured parking with retail and residential. |
| | **New Retail/Service** | 10% | 0.5 FAR | Intended to add a small amount of additional retail. Potentially shared structured parking with office and residential, as well as street parking. |
| | **New Residential** | 85% | 50 du/acre | Envisioned as mostly low rise (up to 4 stories) multifamily, with tuck under or structured parking. |
| **University Center** | | **Land %** | **Average Density (net)** | **Comments** |
| Station areas at KSU and Life U/SPSU will attract both incoming and outgoing transit users to support a mix of medium intensity uses. | **New Office** | 20% | 1.5 FAR | Envisioned as 2-3 story buildings with GF retail, surface parking in back. CTOD low rise office/commercial type |
| | **New Retail/Service** | 100% | 0.2 FAR | Envisioned as GF retail in about 20-25% of building floorplate |
| | **New Residential** | 80% | 30 du/acre | Envisioned as low rise multifamily, with some GF retail. Structured pkg. Low end of CTOD types. |

Creation of Development Templates: Inside the Perimeter: Station Areas inside the Perimeter within the City of Atlanta represent a slightly different – and in some cases drastically different – context with respect to market, infrastructure and socio economics. For the Howell Mill and Paces Ferry Station Areas, an "Urban Center" template was created that recognized that these areas are somewhat more urban in nature and therefore attractive to higher density housing but also very residential in nature and therefore less viable for high density office development. In addition, three Station Areas (Northside / BeltLine, Atlantic Station, and Arts Center) already have fairly specific small-area plans in place with a high level of site-based planning and programming. Therefore, specific development programs (i.e, not generalized templates) were interpreted for each of those Station Areas. While the 6 Station Areas within the City of Atlanta contribute a significant amount of development to the study area corridor, it should be noted that the variations in alignment overall are the same in this stretch. Therefore, the resultant development quantities are identical in all scenarios that incorporate transit.

Application of Development Templates to Station Areas: In order to calculate the estimated build out potential along each alignment, each Station Area was assigned one of the development typologies (or specific development programs in the case of BeltLine, Atlantic Station and Arts Center) to apply to land susceptible to change (within one quarter mile radius of the station). The Tier 1 analysis classified and quantified likely station area property that is susceptible to change and was refined in Tier 2. Land susceptibility was divided into three categories: 1) land where no development currently exists (greenfield sites), 2) short term redevelopment potential, and 3) long term redevelopment potential. The current analysis assumes all land susceptible to change is available and will be built out according to the generalized development program over time.

**INSIDE PERIMETER - Station Area Development Typologies**

| Urban Center | | Land % | Average Density (net) | Comments |
|---|---|---|---|---|
| These station areas predominantly support retail land uses generated by the close proximity of I-75 and the demand of adjacent residential areas. | **New Office** | 20% | 0.3 FAR | Small amount, mid-rise. |
| | **New Retail/Service** | 60% | 0.75 FAR | Relatively high amount due to retail market and proximity to I-75. |
| | **New Residential** | 20% | 36 du/acre | Small amount, mid-rise. |

| BeltLine | | | Comments |
|---|---|---|---|
| This node accommodates both BeltLine transit AND NW Corridor transit. **BeltLine development projections were not calculated using FARs. Planning team used current available data from BeltLine Subarea 8 Masterplan to calculate numbers.** | **New Office** | ----------> | Allowed between 5-9 stories, with structured parking |
| | **New Retail/Service** | ----------> | Envisioned as GF retail in about 20-25% of building floorplate |
| | **New Residential** | ----------> | Mid- to High-Rise buildings with shared uses. |

| Atlantic Station | | | Comments |
|---|---|---|---|
| An already-established district with its own specific density regulations and buildout projections. Planning team used current available data specific to this area to calculate numbers. | **New Office** | ----------> | High-rise development ranging from 20-30 stories. |
| | **New Retail/Service** | ----------> | Retail required on first two floors of mixed use building. |
| | **New Residential** | ----------> | High-rise development ranging from 20-30 stories. |

| Arts Center | | | Comments |
|---|---|---|---|
| An already-established district with its own specific density regulations based on City of Atlanta SPI-16 zoning overlay district. Planning team used current available data and studies specific to this area to calculate numbers. | **New Office** | ----------> | Mid- and High-rise development ranging from 10 to 30 stories. |
| | **New Retail/Service** | ----------> | Envisioned as GF retail in about 20-25% of building floorplate |
| | **New Residential** | ----------> | Mid- and High-rise development ranging from 10 to 30 stories. |

After netting out the anticipated land to be assigned for commuter parking (from the Tier 1 screening) and using a percentage factor to net out the land area to be reserved for circulation, infrastructure and other public improvements (85% net to gross factor), the land use templates were applied to the land available for development within a ¼-mile radius of each station.

Some important assumptions must be noted regarding the conceptual Station Area land use programs. The land use programs represent the build out potential for land susceptible to change within the Station Area, including greenfields and lands considered to be redevelopable in the short and long terms. Although in most cases the development program is generalized and doesn't incorporate site specific conditions and station location considerations in detail (with the noted exceptions stated

above), the program is considered realistic in the long term given market trends and projected levels of growth. However, the build out potential assumes that the development program assigned to each station area is economically feasible and that there are no extraordinary financial or physical impediments to their construction during a reasonable build out period. Furthermore, the generalized nature of the development programs only considers broad land use categories such as Retail, Office and Residential. It is recognized that other types of specific development might occur, such as hotels and various entertainment/cultural uses that cannot be contemplated with any specificity at this level of analysis.

Characterization of Existing Development on Land Susceptible to Change: The majority of the land programmed for new development in Station Areas is currently already developed and the analysis must account for the repositioning[9] or redevelopment of property that currently contains buildings, housing units, and jobs. The analysis presumes that the introduction of high quality, fixed guideway transit will have the potential to change development patterns in the Station Areas. As mentioned earlier, the current analysis includes all of three categories of properties susceptible to change in considering the eventual build out potential.

Calculation of Net Jobs Impact of Station Area Development: In order to estimate the direct jobs impact of Station Area development, the analysis applied a generalized ratio of jobs per square foot of building area. This formula was applied to the square footage associated with BOTH the existing building stock available for repositioning / redevelopment, and new construction / build out. The jobs per square foot factor varies by land use type, and was also modified to reflect likely differences in the occupancy of existing space in versus newly constructed or repositioned space. Jobs per square foot ratios were estimated using an existing resource from a region with similar land use patterns, as well as the project team's past experience.[10] The jobs associated with existing occupancy of Station Area buildings were subtracted from the job figures generated due to new / redevelopment so as not to double count the impact of existing employment (i.e, net impact to employment).

It is important to note that the substantial building stock within the Station Areas that is susceptible to change contains numerous jobs. A portion of these jobs will remain or will be replaced with similar employment; however, build out of Station Areas will very likely lead to a substantial net loss of industrial jobs, including manufacturing, warehousing, construction and transportation-related industries that are generally not consistent with new development typically found in transit station locations. However, the analysis does not quantify the net impact of this shift in land use on Cobb County and the region. The impact of station area redevelopment on industrial employment depends upon the remaining supply of industrial property outside the station areas and the long term viability of industries that use industrial space. Industrial jobs may relocate within other industrial zones in Cobb

[9] Repositioned property in this analysis refers to the possibility that existing buildings may remain as part of a new development project that improves existing buildings and builds on underutilized property (such as parking lots) surrounding them.

[10] The analysis relied in part upon the *Employment Density Study Report,* prepared for the Southern California Association of Governments (SCAG) by the Natelson Company, Inc., 2001.

County or the northwest Atlanta suburbs; some industrial jobs may be lost when businesses close, or if those businesses relocate to lower cost areas as station areas build out with uses more typically associated with transit-friendly locations.

Below is the net result of jobs creation, by alignment. For more details please see Appendix.

Estimated impact of transit improvements on land values:

More intensive use of land around transit stations can contribute to increased property values associated with new development. Additionally, the accessibility to land surrounding station areas can make development in those locations more attractive to potential users of the property (residents, businesses and shoppers) than similar properties without good transit access, thereby increasing the value of land and existing buildings, even without increased zoning densities.

A body of research has evaluated the impact of fixed guideway transit systems on land values, also

**Summary of Jobs Impact**

| | Existing Conditions: Land Susceptible to Change | | | Buildout Condition | | | Net Impact | | |
|---|---|---|---|---|---|---|---|---|---|
| | I-75 | US.41 | | I-75 | US.41 | | I-75 | US.41 | |
| | Alignment 1 | Alignment 2 | Alignment 4 | Alignment 1 | Alignment 2 | Alignment 4 | Alignment 1 | Alignment 2 | Alignment 4 |
| **Estimated Building Area (S.F.)** | | | | | | | | | |
| Retail | 1,715,393 | 4,774,612 | 5,026,388 | 3,833,495 | 7,571,266 | 7,011,266 | 2,118,102 | 2,796,654 | 1,984,878 |
| Industrial/Warehouse | 856,390 | 3,443,854 | 3,761,406 | - | - | - | -856,390 | -3,443,854 | -3,761,406 |
| Office | 789,830 | 886,272 | 984,282 | 10,205,293 | 15,768,367 | 15,532,367 | 9,415,464 | 14,882,096 | 14,548,086 |
| **Estimated Jobs** | | | | | | | | | |
| Retail | 2,573 | 7,162 | 7,540 | 6,402 | 12,644 | 11,709 | 3,829 | 5,482 | 4,169 |
| Industrial/Warehouse | 1,036 | 4,167 | 4,551 | - | - | - | -1,036 | -4,167 | -4,551 |
| Office | 2,362 | 2,650 | 2,943 | 47,455 | 73,323 | 72,226 | 45,093 | 70,673 | 69,283 |
| Total Jobs | 5,971 | 13,979 | 15,034 | 53,857 | 85,967 | 83,934 | 47,886 | 71,988 | 68,900 |

| Assumptions: Jobs per 1,000 S.F. of Space | Existing Building | Buildout |
|---|---|---|
| Retail [a] | 1.50 | 1.67 |
| Industrial/Warehouse [b] | 1.21 | N/A |
| Office [c] | 2.99 | 4.65 |

Source for assumptions: *Employment Density Study Report*, prepared for the Southern California Association of Governments (SCAG) by the Natelson Company, Inc., 2001.

a. Derived from an even weighting of the average number of square feet per worker, region-wide, for regional retail (857 sf per worker) and other retail/services (344 sf per worker). Existing building number reduced by 10 percent to account for building vacancy.

b. Derived from the average number of square feet per worker, region-wide, for light manufacturing (439 sf per worker, 25% of weighting) and warehouse space (814 sf per worker, 75% weighting); existing building figure reduced by 13 percent to reflect vacancy. Industrial/warehouse space not included in new construction development program.

c. Existing building figure based on the average square feet per employee for low-rise office space (288 sf per worker), reduced by 14 percent to reflect building vacancy. New construction reflects BAE estimate of employment density (215 sf per worker) based on recent trends.

Sources: Urban Collage; SCAG; BAE, 2012.

known as the "value premium." The results of these studies vary widely, but one literature review summarizes the value premium as a range from minimal positive impact to a 45 percent increase on residential properties, 120 percent increase for office properties, and a 167 percent increase on retail properties[11]. This literature review also identified a study that found negative impacts of transit stations on property immediately surrounding it. Value premium studies often control for the impacts of development policies that allow denser development around transit stations, and variation in value impacts often can be attributed to a variety of factors, including differences in local market conditions, traffic conditions, and the real estate cycle. Because BRT is a relatively new type of transit in the United States, extensive research on its land values impacts does not yet exist. However, as mentioned earlier,

[11] Center for Transit Oriented Development, 2008. *Capturing Value from Transit.*

the defining feature of BRT that will likely impact land value is a fixed guideway system that assures property owners and users of the permanence of the improvements.

The extent to which station proximity will impact land values is difficult to evaluate given the conceptual nature of this screening exercise, without consideration of the specific characteristics of each station area. However, given the similarity alternatives proposed, the value premium will likely be similar for all fixed guideway alternatives, assuming that changes in development intensity are the same for each of the fixed guideway alternatives.

## TIER 2 SCREENING METRICS

In order to fully assess the impacts of transit (or lack thereof) on Land Use and Economic Development, a wide variety of numeric metrics were used, documented and compared among the 7 transit scenarios. Numeric inputs were largely based on the calculations and methodologies described in previous sections of this report and are summarized below and in more detail in the appendix.

The **MEASURES** being screened are:

- Reduced Parking Needs
- Improved Bicycle and Pedestrian Infrastructure
- Diversity of Housing & Income Levels
- Better Jobs / Housing Balance
- Increased Development Associated with Transit
- Increased Location Efficient Housing
- Increased Public Facilities Such As Parks, Green Space, Health & Education
- Increased Employment & Income Levels
- Net Economic Growth
- Increased Commercial / Retail Spaces
- Creation of More Mixed-Use Complexes Within Walking Distance of Transit
- Revenue Generated From Land Development
- Encourage Public / Private Partnerships At Stations

These Measures are assessed through the use of a variety of objective and subjective numeric Metrics and are summarized in an overall Screening Chart at the end of this report. It should be noted that some Metrics represent a clear indication of multiple facets of Land Use and / or Economic Development and are therefore not always mutually exclusive to a particular Measure. Conversely, some Measures are difficult to ascertain directly and require multiple Metrics to adequately assess their performance.

The **METRICS** being utilized to assess the Measures can be described as follows:

**METRIC: COMMUTER PARKING SPACES**

The relative anticipated quantity of commuter parking spaces needed has a direct correlation to assessing ***reduced parking needs*** in the corridor as a whole. Alignments with more commuter parking spaces may serve to ultimately reduce parking needs at end-line destinations (e.g., in some cases beyond the terminus of this system) but they serve to increase parking needs within the corridor and take up land that could be otherwise used to support redevelopment. An estimate of commuter parking spaces by Station was conducted in Tier 1 and is carried forward here. For this particular metric, the No Build and TSM/Enhanced Bus scenarios compare very favorably given that they have a very small amount of anticipated new commuter parking spaces.

**METRIC: CHANGING LAND USE SCORE:**

Numerous national studies and current best practices have shown that development within walking distance of transit – particularly mixed use - requires noticeably less parking to support private development uses. With access to transit, some ***workers*** in Station Areas (particularly office workers) will opt for a car-less ride to work thus reducing the demand for on-site parking associated with new development. Similarly, some ***residents*** within walking distance of transit will opt for a lower level of auto ownership. Having a robust mix of living, shopping and working options within the same area significantly reduces vehicle trips per day, creates opportunities for shared parking arrangements and cumulatively has the effect of effectuating ***reduced parking needs***. Therefore, the opportunity to create new mixed-use development in station areas that are currently typically single-use and automobile dependent represents a large opportunity to impact overall parking needs. Station Areas with a large amount of land use change will lead to higher levels of reduced parking demand. In order to assess this aspect, each Station Area were given a relative score based on their projected quantity of single-use land changing to mixed-use development. Scores were assigned as follows:

- +0 = at build out, Station Area will exhibit minimal changes in land use patterns
- +1 = at build out, Station Area will see a moderate level of land use changes including some new mixed use development that will incent lower parking needs
- +2 = at build out, Station Area will include a substantial shift in land use towards mixed-use, transit friendly development and away from single-use, auto-oriented development

For each alignment, all Station Scores were summed to arrive at an overall "Changing Land Use Score." The higher the cumulative score, the greater opportunity to reduce overall parking needs through fundamental changes in land use patterns. In this regard, the No Build and TSM/Enhanced Bus have very little impact in that they do not fundamentally incent a change in land use development patterns.

**METRIC: CHANGING COMMUTING PATTERNS SCORE:**

While the "changing land use" metric above pertains to areas near stations that are redeveloping, this metric pertains to the properties that are remaining relatively unchanged in terms of land use and development. These properties are fairly stable, represent a high level of current investment and are generally newly developed (e.g., within the past +/-5 years). Although these areas are unlikely to redevelop anytime soon, in some cases they can still benefit from adjacency to transit thus having an impact on ***reduced parking needs.*** For instance, existing areas with a high level of office use will generally see a percentage of workers begin to take advantage of transit thus lowering the demand for parking on-site. Conversely, areas with low density housing and industrial / warehousing space are far less likely to change commuting patterns due to the introduction of transit.

Land Uses generally considered to have a high transit compatibility: High-density housing / apartments, businesses, hotels, schools, higher-education institutions, healthcare facilities, offices, shopping centers (depending on goods and services sold), etc..

Land Uses generally considered to have a low transit compatibility: Heavy industry, truck terminals, warehousing, utilities, resort hotels, recreation areas / golf courses, day care centers, building materials and lumber, hardware / paint stores, nursery / garden centers, car dealerships / rentals, service stations / auto repair, "big box" retail, etc.

With these factors in mind, each Station Area was scored based on the quantity and type of existing land uses that will still be present at build out and their compatibility with transit. Scores were assigned as follows:

- +0 = existing land uses that will remain at build out are low in quantity and/or not transit compatible and therefore will not impact future parking demand
- +1 = existing land uses that will remain at build out are moderate in quantity and/or are a mix of compatible and not transit compatible uses and therefore will a moderate impact on future parking demand
- +2 = existing land uses that will remain at build out are high in quantity and/or are mostly transit compatible uses and therefore will have a high impact on future parking demand

For each alignment, all Station Scores were summed to arrive at an overall "Changing Commuting Patterns Score." The higher the cumulative score, the greater opportunity to reduce overall parking needs through fundamental changes in commuting of existing development. In this regard, the No Build has no impact in that there is no catalyzing event to change commuting patterns. The TSM/Enhanced Bus option gains / enhances several bus stations within the system and therefore does

have a minor impact on ridership. However, the limited volume of station upgrades inhibits the overall option's impact compared with a robust transit system as is present in the other options.

### METRIC: QUANTITY OF NEW BICYCLE / PEDESTRIAN INFRASTRUCTURE

Without doing detailed Station Area plans and specific assessments and take-offs of each and every sidewalk and bike route, it is difficult to arrive at a precise measure for ***improved bicycle and pedestrian infrastructure***. However, more generalized analysis is possible based on the assumption that new bike / ped enhancements in Station Areas are likely to be directly proportional to the amount of new development, and therefore proportional to the acreage of land susceptible to new development; the more land that is redeveloped, the greater the opportunity to construct new bicycle and pedestrian facilities within Station Areas. With this in mind each Station Area was scored based on the relative quantity of land susceptible to redevelopment. Scores were assigned as follows:

- +0 = 0 to 50 acres of land susceptible to redevelopment
- +1 = 51 to 75 acres of land susceptible to redevelopment
- +2 = 75 or greater acres of land susceptible to redevelopment

For each alignment, all Station Scores were summed to arrive at an overall "Quantity of New Bicycle / Pedestrian Infrastructure Score." The higher the cumulative score, the greater the opportunity to build new sidewalks, trails and bike lanes. In this regard, the No Build and TSM/Enhanced Bus options have very little impact in that they are not catalyzing new development. While there may be small amounts of new infrastructure using limited public resources in these options, they will be dwarfed by the opportunities generated through public-private partnerships associated with new development.

### METRIC: BIKE CONNECTIVITY SCORE

While the metric above assessed the possibility for constructing new infrastructure, this metric assesses the opportunity for ***improved bicycle infrastructure*** by looking at existing bike facilities and understanding the opportunity for new / expanded connections. This may occur within Station Areas of just outside of Station Areas and presents opportunities to tie into a broader district or regional network. With this in mind each Station Area was scored based on the availability of existing nearby bike facilities and the potential to expand their scope and connectivity:

- +0 = new bike facilities constructed at Station Areas does not have the ability to connect to existing adjacent or nearby facilities
- +1 = new bike facilities constructed at Station Areas may has the opportunity to tie into existing nearby bike routes / lanes thereby improving the performance and connectivity of existing bike facilities

For each alignment, all Station Scores were summed to arrive at an overall "Bike Connectivity Score." The higher the cumulative score, the greater the opportunity to expand existing bike systems. In this regard, the No Build and TSM/Enhanced Bus options have very little impact in that they are not catalyzing new infrastructure associated with new development.

**METRIC: PEDESTRIAN CONNECTIVITY SCORE**

Similar to the bike connectivity metric above, this metric assess the opportunity for ***improved pedestrian infrastructure*** by looking at existing pedestrian facilities and understanding the opportunity for new / expanded connections. This may occur within Station Areas of just outside of Station Areas and presents opportunities to tie into a broader district or regional network. With this in mind each Station Area was scored based on the availability of existing nearby pedestrian facilities and the potential to expand their scope and connectivity:

- +0 = new pedestrian facilities constructed at Station Areas does not have the ability to connect to existing adjacent or nearby facilities
- +1 = new pedestrian facilities constructed at Station Areas may has the opportunity to tie into existing nearby sidewalks / trails thereby improving the performance and connectivity of existing pedestrian facilities

For each alignment, all Station Scores were summed to arrive at an overall "Pedestrian Connectivity Score." The higher the cumulative score, the greater the opportunity to expand existing pedestrian systems. In this regard, the No Build and TSM/Enhanced Bus options have very little impact in that they are not catalyzing new infrastructure associated with new development.

**METRIC: NUMBER OF NEW (NET) HOUSING UNITS CREATED**

Using the methodology to project new development described earlier in this report, the quantity of new housing developed within each Station Area was documented and compared across transit options. The opportunity to develop new transit-supportive housing has positive impact on numerous performance measures / goals including:

***Diversity of Housing & Income Levels:*** Higher quantities of housing units developed will lead to a greater diversity of housing products, price points and associated income levels of residents that will be attracted to transit-friendly locations.

***Better Jobs to Housing Balance:*** Higher quantities of new housing developed relative to jobs created equates to lower overall jobs to housing ratios (see description in the next section).

***Increased Development Associated with Transit:*** While not the only component, increased housing development will increase the overall quantity of new development in Station Areas and thus have a positive impact on this performance measure.

***Increased Location Efficient Housing:*** Location efficient housing consists of residential development that is located and designed to maximize accessibility and overall affordability. This typically means it is close to good transit and public services, has good walking and cycling conditions and other features that reduce automobile dependency. In this way, housing that is closer to transit is generally accessible to a wider array of jobs centers and is oftentimes is more cost effective for residents including lower vehicle expenses (e.g., opting to own fewer or no automobiles), corresponding lower gasoline and maintenance expenditures, and a higher immunity to fluctuation in gas prices. Several studies have also found the probability for mortgage foreclosures decreases as neighborhood vehicle ownership decreases[12].

***Increased Public Facilities Such as Parks, Green Space, Health & Education:*** It is difficult to adequately assess the increase in public facilities in Station Areas without conducting a more detailed station-by-station planning effort beyond the scope of this study. However, based on years of community planning in a wide variety of settings, it is considered a current best practice to site new parks, green space and health and education facilities in areas that are the most underserved. While not the only consideration (land availability, land price, etc.), areas with increasing resident population will be more likely to receive new public facilities. This may be within Station Areas or near Station Areas but will in general be in direct proportion to the number of new housing units developed.

## METRIC: JOBS / HOUSING RATIO IN NEW DEVELOPMENT RELATED TO TRANSIT

Understanding the ratio of jobs to housing units in a region is fundamental in understanding commuting patterns. The Atlanta Regional Commission tracks and encourages lower jobs / housing ratios in the effort to create more options for residents to live within close proximity of available jobs thereby lowering average commute times and reducing vehicle trips (e.g., getting more cars off the road). Historically, major employment centers in Atlanta such as Cumberland and Perimeter Center have developed high quantities of office and retail space thus leading to ratios upwards of 6 or 7 to 1. In

[12] Location Efficient Development and Mortgages, Victoria Transport Policy Institute: www.vtpi.org/tdm/tdm22.htm

recent years however, housing development has begun to catch up as these regional activity centers seek to become more diverse, mixed-use environments.

With regard to this study, it is difficult to determine existing precise jobs to housing ratios without a higher level of detailed analysis beyond the scope of this study. However, we can look at the jobs to housing ratios that will be present within new developments in Station Areas at build out and compare them across options. Options with lower ratios are deemed to have a more beneficial impact. Given that the vast majority of land that is susceptible to redevelopment is currently non-residential and that new development is anticipated to be significantly more balanced from a land use perspective, the end impact on overall jobs to housing ratios will be significantly more beneficial in new transit options (e.g., versus the No Build and the TSM/Enhanced Bus options).

**METRIC: TOTAL SQUARE FOOTAGE OF NEW DEVELOPMENT ASSOCIATED WITH TRANSIT**

This metric is fairly straight forward and has a direct correlation to the Measure of ***increased development associated with transit*** and an indirect correlation to ***revenue generated from land development.*** Using the methodology described previously in this report for projecting future development in Station Areas (e.g., land susceptible to change multiplied by station typology FARs), it is possible to determine the total square footage of new retail, office and housing development in each Station Area. In this regard, the US-41 Alignments (2A and 4A) have clear advantages over the I-75 Alignment (Option 1) to the tune of about 10 million additional square feet. Further, while the No-Build and TSM / Enhanced Bus Service options will still see a moderate amount of routine development (e.g., through natural market forces over time), by definition, none of it will be directly associated or incented by the introduction of new transit.

**METRIC: NUMBER OF NEW (NET) JOBS CREATED WITHIN WALKING DISTANCE OF TRANSIT**

The number of new jobs created (both gross and net) was determined using the methodology described earlier in this report (e.g., the quantity of new development multiplied by typical jobs per square foot ratios - then minus existing jobs lost due to redevelopment for net quantities) and was aggregated by alignment option. Understanding the impact on job creation (both gross and net) is fundamental in gauging the relative performance of several Measures including better jobs / housing balance, increased location efficient housing and increased employment and income levels.

***Better Jobs / Housing Balance:*** Along with the creation of new housing units, the proportion of gross new jobs created is an important factor in determining the impact on improving the jobs / housing balance at build out of Station Areas.

***Increased Location Efficient Housing:*** Location efficient housing consists of residential development that is located and designed to maximize accessibility and overall affordability. While creating net new jobs within Station Areas does not directly lead to an increase in Location Efficient Housing, it indirectly improves existing housing in or near Station Areas by providing access to a larger array of jobs via transit and / or walking for those residents.

***Increased Employment & Income Levels:*** It stands to reason that understanding the quantity of net new jobs created due to the introduction of transit will aid in assessing the relative performance on increased employment opportunities. In addition to the sheer number of net new jobs created, it is worthwhile to understand that new development within Station Areas is likely to yield a more diverse mix of land uses, leading to a greater diversity of employment types at a variety of levels (e.g., an increase in both blue-collar and white-collar jobs).

### METRIC: ACRES OF NEW OPEN SPACE DEVELOPED IN STATION AREAS

While it is difficult to project precise quantities of new open space that would be developed in each Station Area without doing a detailed planning and design effort (i.e., beyond the scope of this study), it is possible to make generalized assumptions as to the likely quantity of new open space in each Station Area associated with new, mixed-use development. In keeping with national best practices for development around transit stations, a portion of the land available for redevelopment was presumed to be set aside for new open space. Each station was allocated a set aside percentage (4, 6, 8, 10 or 12%) based on surrounding density, quantity of likely new development and projected mix of new housing to commercial uses. Each Station Area's percentage was applied to the land susceptible to change to arrive at an overall estimated acreage for new open space.

In conjunction with other metrics, this metric is useful in understanding the relative performance of ***increased public facilities such as parks, green space, health and education*** (at least in part).

### METRIC: ESTIMATED INCREASE IN AVERAGE SALARIES DUE TO REDISTRIBUTION OF JOB TYPES

One key factor in evaluating ***increased employment & income levels*** is to understand what types of new jobs are created within each Station Area. While it is difficult to estimate actual salaries achieved for new jobs (or lost due to redevelopment), it is possible to estimate a generalized split of job types among retail, office and industrial jobs in order to understand their corresponding impact on income

levels. Utilizing online research[13] each generalized job type (e.g. retail, industrial, office) was assigned an income factor multiplier to represent an approximate value of average salary per job as follows.

- Retail Jobs = 35,000
- Industrial Jobs = 42,500
- Office Jobs = 50,000

Income factors were multiplied by the projected quantities of jobs within each job type (for both new development and jobs lost due to redevelopment) in order to arrive at an overall comparison of income levels and projected income growth (utilizing a +/-2% margin of error to arrive at an impact range). It is important to note that these income factors are highly generalized and do not account for the wide variety of actual jobs types and salaries present or created in the study area. However, the income factors are useful in comparing the relative impact on salaries across all transit options / alignments and Station Areas. In this regard, Station Areas and alignments that incorporate more office development have a greater positive impact on overall incomes, as compared to those with a heavy concentration of retail jobs.

**METRIC: PERCENT OF 2040 PROJECTED HOUSEHOLD / EMPLOYMENT GROWTH**

The Atlanta Regional Commission (ARC) projects anticipated growth in various sectors and subsectors across the metro Atlanta region in ten year increments. For the purposes of this study, estimating the amount of growth that will be captured within Station Areas is determined to be a good measure of gauging ***net economic growth*** across the transit alternatives. Reference points for comparison include capture rates of household growth and employment growth within Cobb County and North Atlanta[14]. Overall projected quantities of new Station Area development (households and jobs) were divided by ARC's estimated growth numbers to arrive at corresponding capture rates.

**METRIC: NEW (NET) SQUARE FEET OF OFFICE DEVELOPMENT IN STATION AREAS**

**METRIC: NEW (NET) SQUARE FEET OF RETAIL DEVELOPMENT IN STATION AREAS**

These two metrics follow directly from the methodology for projecting new development as outlined earlier in this report. Understanding the projected amounts of new office and retail development is fundamental in assessing the performance of ***increased commercial / retail spaces***.

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[13] Comparative analysis using various job categories on www.salary.com

[14] ARC Defines three "super districts" in North Atlanta including: NE Atlanta, NW Atlanta and Buckhead

### METRIC: NUMBER OF NEW TRANSIT STATION AREAS

The number of new Station Areas is directly proportional to the opportunity for the ***creation of more mixed-use complexes within walking distance of transit***. Transit options / alignments with more station areas will yield more new mixed-use complexes.

### METRIC: INCREASE IN RESIDUAL LAND VALUES

Understanding the impact on residual land value (e.g., not including the value associated with new development) created through investment in transit is one way to determine which alignment options will ***encourage public / private partnerships at stations***. Areas with increases in land values will generally translate to increased interest in investment from the private sector particularly in early stages of redevelopment (e.g., when land speculation is still cost effective).

### METRIC: STATION AREA ATTRACTIVENESS TO PRIVATE DEVELOPMENT – SCORE

In addition to increasing residual land values, another way to ***encourage public / private partnerships at stations*** is to understand the natural real estate advantages and disadvantages that are already present in and around Station Areas. This includes access, visibility, nearby amenities, and socio-economic factors such as spending power. While it is difficult to fully assess these individual variables within each Station Area within the scope of this study, it is possible to provide an overall generalized assessment of each Station Area based on the apparent level of recent investment coming from the private sector. Each station was provided with an attractiveness score as follows:

- +0 = little to no recent private sector investment in and around Station Area
- +1 = moderate recent private sector investment in and around Station Area
- +2 = significant recent private sector investment in and around Station Area

For each alignment, all Station Scores were summed to arrive at an overall approximation of "Attractiveness to Private Development Score." The higher the cumulative score, the more likely an option will create opportunities for public / private partnerships. In this regard, the No Build and TSM/Enhanced Bus options have very little impact in that they are not catalyzing new development.

## TIER 2 SCREENING RESULTS

The results of Tier 2 screening for Land Use and Economic / Redevelopment are presented in the tables on the following pages. Analyzing the Performance Measures using various combinations of the Metrics described above leads to the overall following conclusions:

- On the whole, alignments that include more potential transit stations, and therefore contain more potential land available for redevelopment, generally provide a greater opportunity for more efficient use of land, increased housing choices and stimulating the local economy.
- Alignments 2a and 4a (both in the US 41 corridor) include the greatest number of stations and the largest cumulative physical inventory of land likely to redevelop (by a significant margin). Therefore, these alignments have the greatest potential for increasing housing choices, creating new jobs and creating new mixed-use complexes.
- Alignment 1 utilizing the I-75 corridor results in the best overall balance of new jobs to new housing ratio.
- Alignments utilizing new high-capacity transit could result in anywhere from 47,800 (Alignment 1) to 71,900 (Alignment 2a) net new jobs in the study area.
- Overall, Alignments 2a and 4a appear to perform best across all measures.

## Summary of Land Use Results for Tier 2 Alternatives

| | No-Build | TSM | Alignment 1 | Alignment 2A | Alignment 2A | Alignment 4A | Alignment 4A |
|---|---|---|---|---|---|---|---|
| *CORRIDOR* | na | na | I-75 | US 41 | US 41 | US 41 | US 41 |
| *MODE* | na | na | LRT | LRT | BRT | LRT | BRT |
| *EXTENT* | Acworth to Midtown | Acworth to Midtown | Acworth to Midtown | Acworth to Midtown | Acworth to Midtown | KSU to Midtown | KSU to Midtown |
| *# STATIONS* | 0 | 0 | 13 | 25 | 25 | 23 | 23 |
| **GOAL / OBJECTIVE: More Efficient Use of Land** | | | | | | | |
| **MEASURE: Reduced Parking Needs** | | | | | | | |
| METRIC 1: Commuter Parking Spaces | 0 | 200 | 6600 | 6300 | 6300 | 7200 | 7200 |
| METRIC 2: Changing Land Use Score (potential redevelopment areas) | 0 | 0 | 17 | 30 | 30 | 29 | 29 |
| METRIC 2: Changing Commuting Patterns Score (non-redevelopment areas) | 0 | 6 | 6 | 11 | 11 | 13 | 13 |
| *Overall Measure Grade* | 2 | 3 | 2 | 4 | 4 | 4 | 4 |
| **MEASURE: Improved Bicycle and Pedestrian Infrastructure** | | | | | | | |
| METRIC 1: Quantity of New Bicycle/Ped Infrastructure - Score | 0 | 0 | 6 | 16 | 16 | 15 | 15 |
| METRIC 2: Bicycle Connectivity - Score | 0 | 0 | 9 | 14 | 14 | 15 | 15 |
| METRIC 3: Pedestrian Connectivty - Score | 0 | 0 | 7 | 11 | 11 | 12 | 12 |
| *Overall Measure Grade* | 1 | 1 | 3 | 4 | 4 | 5 | 5 |
| **GOAL / OBJECTIVE: Increase Housing Choices** | | | | | | | |
| **MEASURE: Diversity of Housing & Income Levels** | | | | | | | |
| METRIC 1: Number of New (Net) Housing Units Created | - | - | 15,100 | 17,700 | 17,700 | 16,200 | 16,200 |
| *Overall Measure Grade* | 1 | 1 | 3 | 5 | 5 | 4 | 4 |
| **MEASURE: Better Jobs / Housing Balance** | | | | | | | |
| METRIC 1: Jobs / Housing ratio in new TOD development (Gross/Gross) | na | na | 3.5 | 4.8 | 4.8 | 5.1 | 5.1 |
| *Overall Measure Grade* | 1 | 1 | 5 | 3 | 3 | 3 | 3 |
| **MEASURE: Increased Transit-Oriented Development** | | | | | | | |
| METRIC 1: Total Square Footage of New TOD Development (Gross New Development) | - | - | 31,536,600 | 43,829,900 | 43,829,900 | 41,397,400 | 41,397,400 |
| *Overall Measure Grade* | 1 | 1 | 3 | 5 | 5 | 5 | 5 |
| **MEASURE: Increased Location Efficient Housing** | | | | | | | |
| METRIC 1: Number of New (Net) Housing Units Created Within Walking Distance of Transi | - | - | 15,100 | 17,700 | 17,700 | 16,200 | 16,200 |
| METRIC 2: Number of New (Net) Jobs Created Within Walking Distance of Transit | - | - | 47,900 | 72,000 | 72,000 | 68,900 | 68,900 |
| *Overall Measure Grade* | 1 | 1 | 3 | 5 | 5 | 5 | 5 |
| **GOAL / OBJECTIVE: Promote Active, Healthy Lifestyles** | | | | | | | |
| **MEASURE: Increased Public Facilities Such As Parks, Green Space, Health & Education** | | | | | | | |
| METRIC 1: Acres of New Open Space Developed in New TODs | - | - | 34 | 79 | 79 | 71 | 71 |
| METRIC 2: Number of New (Net) Housing Units Created | - | - | 15,100 | 17,700 | 17,700 | 16,200 | 16,200 |
| *Overall Measure Grade* | 1 | 1 | 3 | 5 | 5 | 4 | 4 |

## Summary of Economic Development / Redevelopment Results for Tier 2 Alternatives

| | No-Build | TSM | Alignment 1 | Alignment 2A | Alignment 2A | Alignment 4A | Alignment 4A |
|---|---|---|---|---|---|---|---|
| *CORRIDOR* | na | na | I-75 | US 41 | US 41 | US 41 | US 41 |
| *MODE* | na | na | LRT | LRT | BRT | LRT | BRT |
| *EXTENT* | Acworth to Midtown | Acworth to Midtown | Acworth to Midtown | Acworth to Midtown | Acworth to Midtown | KSU to Midtown | KSU to Midtown |
| *# STATIONS* | 0 | 0 | 13 | 25 | 25 | 23 | 23 |
| **GOAL / OBJECTIVE: Stimulate Local Economy** | | | | | | | |
| **MEASURE: Increased Employment & Income Levels** | | | | | | | |
| **METRIC 1: Number of New (Net) Jobs Created** | - | - | 47,900 | 72,000 | 72,000 | 68,900 | 68,900 |
| **METRIC 2: Estimated Increase in Average Salaries Due to Redistribution of Job Types** | 0% | 0% | 13-17% | 21-25% | 21-25% | 21-25% | 21-25% |
| ***Overall Measure Grade*** | **1** | **1** | **3** | **5** | **5** | **5** | **5** |
| **MEASURE: Net Economic Growth** | | | | | | | |
| **METRIC 1: Percent of 2040 Projected Househould Growth (Cobb County)** | | | 15% | 18% | 18% | 16% | 16% |
| **METRIC 2: Percent of 2040 Projectect Employment Growth (Cobb County)** | | | 20% | 36% | 36% | 35% | 35% |
| **METRIC 3: Percent of 2040 Projected Househould Growth (NW Atlanta)** | | | 6% | 6% | 6% | 6% | 6% |
| **METRIC 4: Percent of 2040 Projectect Employment Growth (NW Atlanta)** | | | 14% | 14% | 14% | 14% | 14% |
| ***Overall Measure Grade*** | **1** | **1** | **4** | **5** | **5** | **5** | **5** |
| **MEASURE: Increased Commercial / Retail Spaces** | | | | | | | |
| **METRIC 1: New (Net) Square Feet of Office Development in New TODs** | 0 | 0 | 9,415,500 | 14,882,100 | 14,882,100 | 14,548,100 | 14,548,100 |
| **METRIC 1: New (Net) New Square Feet of Retail Development in New TODs** | 0 | 0 | 2,118,100 | 2,796,700 | 2,796,700 | 1,984,900 | 1,984,900 |
| ***Overall Measure Grade*** | **1** | **1** | **3** | **5** | **5** | **4** | **4** |
| **MEASURE: Creation of More Mixed-Use Complexes Within Walking Distance of Transit** | | | | | | | |
| **METRIC 1: Number of New TOD Station Areas** | 0 | 0 | 13 | 25 | 25 | 23 | 23 |
| ***Overall Measure Grade*** | **1** | **1** | **2** | **5** | **5** | **4** | **4** |
| **GOAL / OBJECTIVE: Leverage Public & Private Investment** | | | | | | | |
| **MEASURE: Revenue Generated From Land Development** | | | | | | | |
| **METRIC 1: Total Square Footage of New TOD Development (Gross New Development)** | 0 | 0 | 31,536,600 | 43,829,900 | 43,829,900 | 41,397,400 | 41,397,400 |
| ***Overall Measure Grade*** | **1** | **1** | **3** | **5** | **5** | **5** | **5** |
| **MEASURE: Encourage Public / Private Partnerships At Stations** | | | | | | | |
| **METRIC 1: Increase in Residual Land Values (pre TOD development)[in millions]** | $ - | $ - | $ 313.6 | $ 382.4 | $ 382.4 | $ 371.5 | $ 371.5 |
| **METRIC 2: Station Area Attractiveness to Private Development - Score** | 0 | 0 | 20 | 29 | 29 | 31 | 31 |
| ***Overall Measure Grade*** | **1** | **1** | **3** | **5** | **5** | **5** | **5** |
| ***Average Grade Across All Land Use and Economic Development Measures*** | **1.1** | **1.1** | **3.0** | **4.7** | **4.7** | **4.4** | **4.4** |
| ***Alignment Preference*** | **Seventh** | **Sixth** | **Fifth** | **T-First** | **T-First** | **T-Third** | **T-Third** |

**NOTES:**

1. Quantitative metrics are based on presumed station locations. Station Areas include 1/4-mile radius from station location.
2. Station locations were determined based on a variety of factors including: ability to incent redevelopment, potential ridership/destinations, and engineering limitations (e.g., topography, conflicts with traffic, etc.
3. See accompanying memo/report for a more detailed definition of each metric and how they were arrived at. See memo appendix for detailed charts and station by station analyses.

# LOCALLY-PREFERRED ALTERNATIVE :: LAND USE & ECONOMIC DEVELOPMENT SUMMARY

The locally-preferred alternative (LPA) represents a refinement of Alignment 4a – Bus Rapid Transit (BRT) on the US 41 Corridor from KSU to Midtown, which was the highest ranked alternative as part of the collective study team's Tier 2 screening results. One facet that fed into those results was the *Tier 2 Land Use and Economic Development Analysis*, which studied a wide range of impacts that each of the seven (7) alternatives might have on new economic development, job creation, increases in land values and various other attributes. This summary highlights these same impacts for the LPA using the same assumptions and methodology as the Tier 2 analysis unless otherwise noted below.

## FIXED-GUIDEWAY VS. SHARED

For the purposes of the Tier 2 Screening, the five (5) Light Rail Transit (LRT) and Bus Rapid Transit (BRT) alternatives were assumed to be incorporated entirely within a fixed guideway system. Through the LPA screening process, however, a fixed guideway alternative for the entire length of the project posed significant engineering and financial challenges. Therefore, the final LPA includes a hybrid of both fixed-guideway segments (run in dedicated bus lane) and "shared" segments (run in mixed traffic). This is an important distinction as it relates to economic development, changing land uses, job creation and property values. Numerous national studies have demonstrated that fixed guideway transit systems are perceived to be "locked in place" and generally "immovable" and therefore generate significantly more associated development and investor certainty (e.g., "transit will always be at my front door"). Although studies and data relating to "shared" systems are not as widely available, it can generally be assumed that the economic and land use impacts along "shared" segment are less than fixed-guideway segments of the alternative. Therefore, the economic and lane use impacts noted in this summary are generally less than those in Tier 2.

## LPA SEGMENT (ALT 1): BARRETT LAKES BLVD./BUSBEE DR. TO KSU

This segment of the LPA utilizes a shared BRT/automobile alignment connecting the fixed-guideway segment on U.S. 41 to the northern endpoint of the alignment at KSU. There are three potential transit stations proposed along this segment: 1) near existing multifamily and commercial areas on Barrett Lakes Blvd., 2) at the park-and-ride lot north of Town Center Mall, and 3) near the intersection of Frey and Chastain Roads at the KSU campus (i.e. end-of-line station).

Based on the Tier 2 methodology of creating Station Area Development Typologies to estimate economic impacts, a new "bus stop" typology was created for new stations at Barrett Lakes and Town Center. The station area analysis for both areas reflects the assumption that shared/non-fixed transit facilities have a lower economic impact than fixed facilities. The location of the KSU station, on the other hand, is not likely to change based on a shared vs. fixed system. Therefore, the station locations, development typologies, analysis and economic impacts for the KSU station are the same as Tier 2 Alternative 4a. Similar to Tier 2, development typologies also assume a different development and job market than similar stations/stops located within Fulton and the City of Atlanta.

## LPA SEGMENT (ALT 2): U.S. 41/CHASTAIN ROAD TO KSU

This segment of the LPA includes a fixed-guideway BRT alignment at the northern end of the corridor representing an alternative to the Barrett Lakes/Busbee "shared" alignment. Because this alternative alignment is identical to Tier 2 Alternative 4a, the station locations, development typologies, analysis and economic impacts for this segment are carried forward from Tier 2.

### LPA SEGMENT: U.S. 41 FROM BARRETT LAKES BLVD.TO CUMBERLAND

This segment of the LPA includes a fixed-guideway BRT alignment along U.S. 41 between the two northern alternative alignments near Barrett Lakes and the corridor's intersection with I-75 at Cumberland. The only change from Tier 2 Alternative 4a is that BRT would now turn eastbound onto Akers Mill Road from southbound Cumberland Blvd. rather than turning southbound onto Cobb Parkway from eastbound Cumberland Blvd. per Tier 2. Due to this change, only one station location different from Tier 2 occurs on this segment at Cumberland South (Akers Mill), where a new transit-oriented development opportunity was identified around the Akers Mill Shopping Center (NW parcel at U.S. 41 and Akers Mill Road intersection). Because of the larger development opportunity, the economic impacts of the new Cumberland South station are higher than Tier 2. Otherwise, this alignment is identical to Alternative 4a, and thus the rest of the station locations, development typologies, analysis and economic impacts for this segment are carried forward from Tier 2.

### LPA SEGMENT: I-75 FROM CUMBERLAND TO ARTS CENTER/MIDTOWN

This segment of the LPA between Cumberland and Arts Center/Midtown utilizes a shared BRT/automobile facility using existing I-75 HOV lanes. At the segment's north end, fixed-guideway BRT on U.S. 41 would transition out of the dedicated lane and into the I-75 HOV access ramp at Akers Mill. This segment includes 6 proposed stations.

Based on the Tier 2 methodology of creating Station Area Development Typologies to estimate economic impacts, a new "urban bus stop" typology was created for new stations at Northside/Paces Ferry and Howell Mill Road within the City of Atlanta. Similar to the "bus stop" typology noted above, these include the assumption that shared/non-fixed transit facilities have a lower economic impact than fixed facilities. The analysis also assumes a different development and job market than those located with Cobb County, hence the different typology name. As per Tier 2, the Mt. Paran Road has no development opportunity due to limited available land and built-out existing single-family land areas; thus, the same results are carried forward from Tier 2.

The analysis for station areas at Northside/BeltLine, Atlantic Station, and Arts Center conform to the same general methodology as the Tier 2 analysis. These areas already have fairly specific small-area plans in place with a high level of site-based planning and programming. Therefore, specific development programs (i.e, not generalized templates) were interpreted for each of those Station Areas as part of the Tier 2 Analysis. For the LPA, those development programs were then applied a multiplier specific to each area's market conditions in order to estimate the change in economic impact due to the shared facility.

## LPA LAND USE & ECONOMIC DEVELOPMENT HIGHLIGHTS [i]

| LOCALLY-PREFERRED ALTERNATIVE :: SUMMARY OF ECONOMIC IMPACTS | | | |
|---|---|---|---|
| | COBB | FULTON | TOTAL LPA |
| NUMBER OF NEW (NET) HOUSING UNITS CREATED IN STATION AREAS | 10,800 | 1,600 | 12,400 |
| NEW (NET) SQUARE FEET OF OFFICE DEVELOPMENT IN STATION AREAS | 10,890,000 | 590,000 | 11,480,000 |
| NEW (NET) SQUARE FEET OF RETAIL DEVELOPMENT IN STATION AREAS | 1,201,000 | 527,000 | 1,728,000 |
| NUMBER OF NEW (NET) JOBS CREATED WITHIN WALKING DISTANCE OF TRANSIT | 50,700 | 4,200 | 54,900 |
| PERCENT OF 2040 PROJECTED HOUSEHOLD GROWTH ACCOMMODATED IN STATION AREAS | 14% | 3% | n/a |
| PERCENT OF 2040 PROJECTED EMPLOYMENT GROWTH ACCOMMODATED IN STATION AREAS | 33% | 3% | n/a |
| INCREASE IN RESIDUAL LAND VALUES AROUND STATIONS DUE TO TRANSIT INVESTMENT | $97,263,965 | $53,923,246 | $151,187,211 |

[i] See associated LPA analysis workbook for more detail