# Lawyers Road And I-485 Small Area Plan

## Mint Hill, North Carolina

May, 2011

HNTB

# Table of Contents

# Figure Index



## CHAPTER 1: Introduction



## CHAPTER 2: Public Participation

## CHAPTER 3: Existing Conditions



## CHAPTER 4: Process and Analysis



## CHAPTER 5: Small Area Plan

## CHAPTER 6: Recommendations

# Acknowledgements




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Joseph Earl (Jef) Freeman
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**ETJ Member:**
Thomas (Tom) Gatz
Roger Hendrix

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Robert Brisley
Brenda Frazier Dills
Kenny Draffen
Dixie Helms
Kenneth Horn
Richard Newton
Dwarkadas V. Shah

## Town of Mint Hill – Planning Staff

Brian L. Welch, Town Manager
Lee Bailey, Deputy Town Manager & Planning Director
Dana Clukey, Planner
John Hoard, Planner

## Consultant Team

Padam Singh, HNTB
Donal Simpson
Kevin Walsh, HNTB
Greg Boulanger, HNTB
Susan Paschal, HNTB
Ed Delara, HNTB
Mac Nichols, AECOM
Alisa Cohen, AECOM
Emily Henke

# Chapter 1: Introduction

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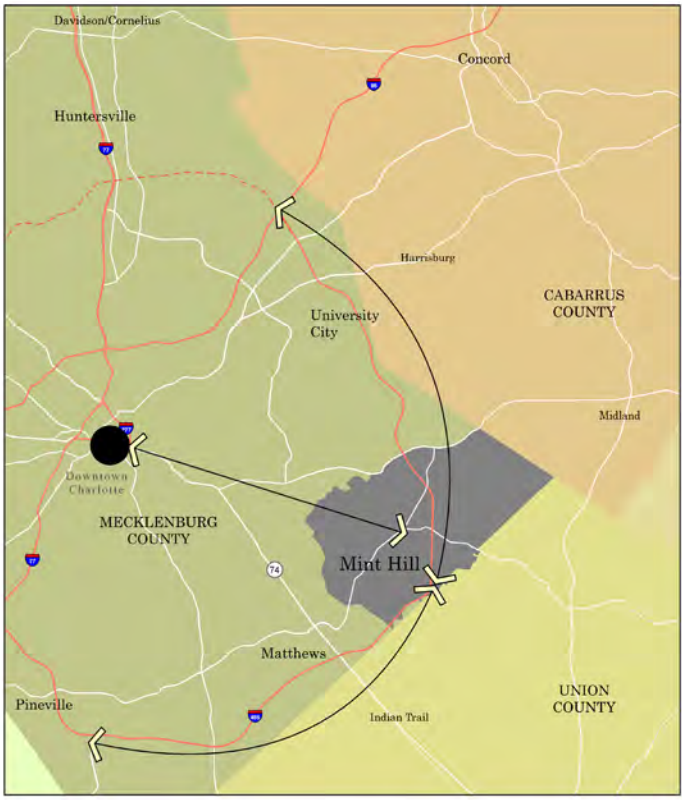
## CONTEXT

The Town of Mint Hill is one of the fastest growing towns in the burgeoning metropolitan area of Charlotte and prides itself on its small town feel. Located in the eastern portion of Mecklenburg County, Mint Hill is roughly 15 miles east of downtown Charlotte. The Lawyers Road and I-485 Interchange Small Area Plan (SAP) study area is located in the southeastern portion of the Town of Mint Hill. This portion of the town is relatively less developed than the northeastern part of Mint Hill, with large portions of the area owned by a few land owners. The study area is conveniently linked to other municipalities in the region via I-485, which is a major interstate facility that connects to the Town of Matthews and Town of Pineville in the south, and the University City Area and City of Concord in the north . With the planned completion of the I-485 loop, which will connect I-85 to I-77 in the north, Mint Hill and the study area will be further connected to the northern Mecklenburg Towns of Cornelius, Huntersville, and Davidson. The study area also borders Union County to the east, which was the seventh (7th) fastest growing county in the United States according to the U.S. Census Bureau News in 2008.

U.S. Census Bureau News, released March 20, 2008 (http://www.census.gov/Press-Release/www/releases/archives/population/011635.html)

## PURPOSE OF THE SMALL AREA PLAN

Due to its attractive location, availability of land, and regional connectivity, the interchange of Lawyers Road with I-485 has long been seen as a potential location for a regional destination. In 2003, General




Map: Mint Hill is located near Charlotte, North Carolina and has excellent regional connections to University City, Concord, Matthews, and Pineville.

Growth Properties (GGP) partnered with Childress Klein Properties to propose a regional mall – The Bridges at Mint Hill - that will cater to the eastern portion of Mecklenburg County, southern Cabarrus County, and the western portion of growing Union County. The mall is expected to also draw shoppers from the University City area in Mecklenburg County and from Lancaster County, South Carolina. Although a good location for a regional shopping center, this development prompted town residents and town leadership to think about the area surrounding the potential mall. They want to be proactive in deciding what development could occur around the mall. The initial timeline for the opening of the mall was in

2009, but with the downturn in the real estate market and overall economy, the plans to build the mall have been shelved until 2013-2014. The commitment from tenants is still strong, and although it is hard to predict the length of this downturn, the need for a regional mall in this area has not disappeared. This delay gives the Town the necessary time to plan the area around the mall, and to maximize the opportunity presented by the development of this scale without letting the area develop with undesirable uses. The Town hired a national urban planning and engineering consulting firm, HNTB, to assist it in developing a Small Area Plan for the study area. HNTB's team is comprised of professionals with various expertise ranging from land use planning, urban design, architecture, natural environment, market analysis, traffic, and transportation.

## GEOGRAPHY AND STUDY AREA

The study area is centered around the Bridges at Mint Hill mall. During the first advisory committee meeting, the project team drafted a study area boundary that extended from Hwy 218 (Fairview Road) in the north, to east of Allen Black Road in the east, to the future Stevens Creek Nature Preserve in the south, and to Stevens Creek Tributary in the west. Please see the study area boundary in Fig 1. The study area is 1,992 acres, of which roughly 300 acres is in transportation right-of-way. This leaves 1,694 acres of land to be planned.

Although most of the study area falls within Mint Hill's town limits, some portion of it is in the unincorporated portion of Mecklenburg County as well. Additionally, a very small portion of the study area falls inside Union County. Downtown Mint Hill is roughly 1.5 miles from the intersection of Lawyers Road and Bain School Road, which is basically the center of the study area. Most of the study area is relatively undeveloped, but there are a few single family residential neighborhoods and a few civic uses such as churches and an elementary school.

For a general understanding of the study area, please see Figure 2: Aerial map on page 6.

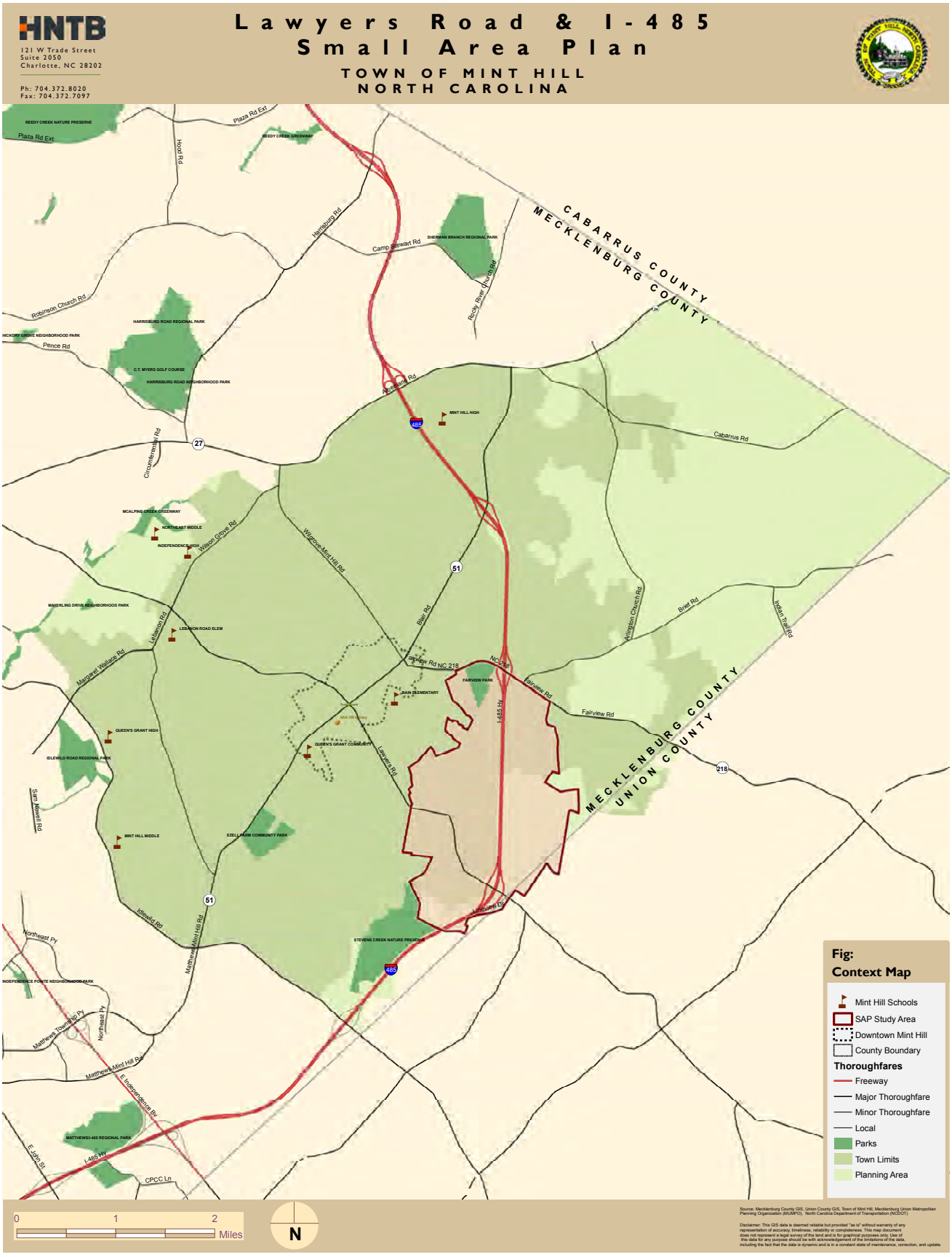



Figure 1: Study Area Boundary.

AERIAL BASE MAP

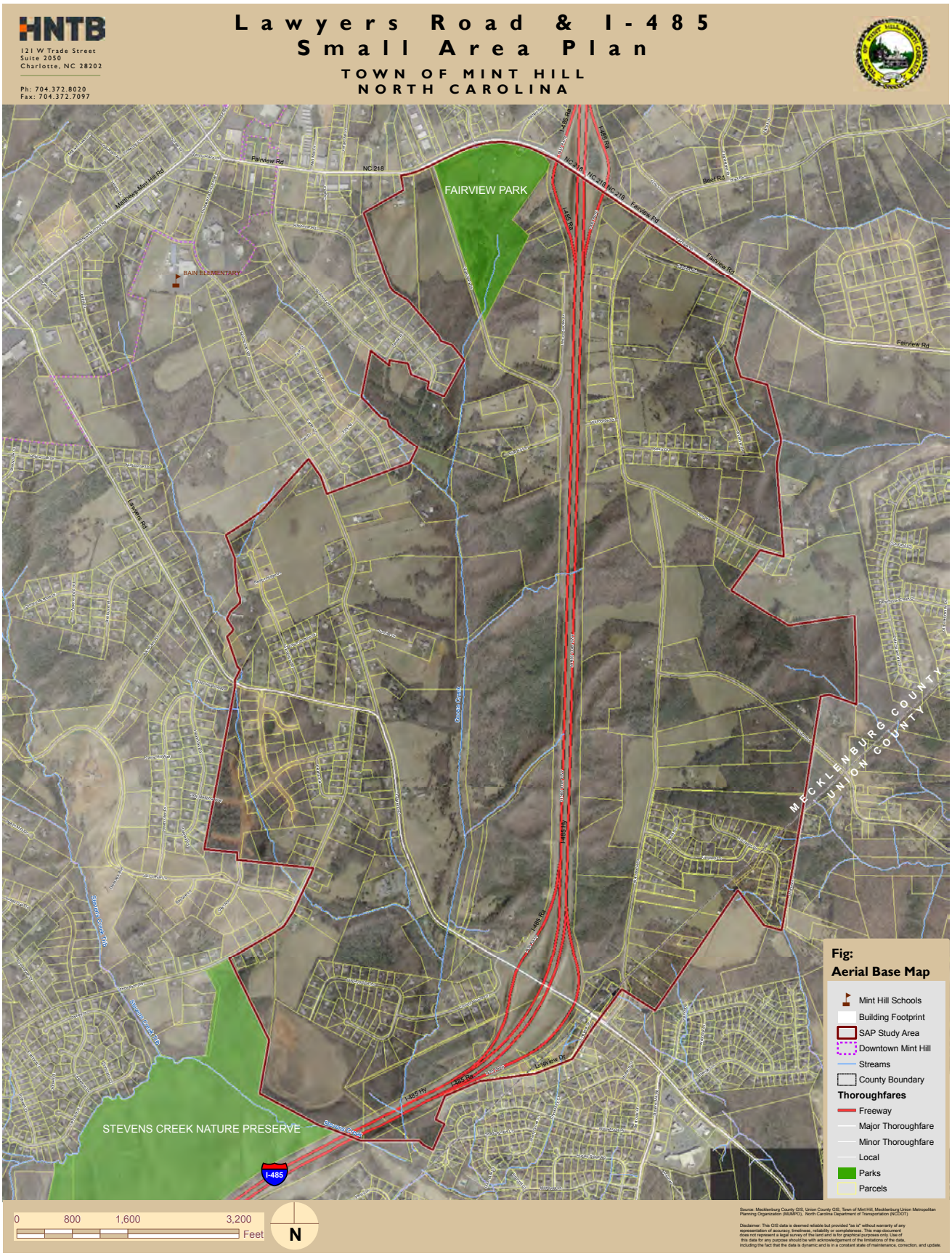



Figure 2: Aerial Map of Study Area.

# Chapter 2: Public Participation

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Photo: Town's elected officials picked seven members from the community to serve on the Advisory Committee and guide the planning process.

Photo: A three-day public charrette was organized in February of 2010, and three additional public meetings were organized to seek community input at various stages of plan development.

## PUBLIC PARTICIPATION

Public involvement is extremely important to ensure that all community members – those who live within the study area, those who live in the town, and those who will be visiting this area – have an opportunity to voice their concerns and opinions during the Small Area Plan development process. The Town appointed seven (7) advisory committee members to provide guidance to the project team and direction for this plan. In addition, elected officials, planning board members, and town staff were an integral part of plan development.

In order to gain wider community support, a three-day design charrette was organized in the Assembly Room of the Town Hall on Feb 2-4, 2010. This all-day three-day event was open to the public on all three days, and there was a public meeting at the end of each day. Many residents, stakeholders, and interested citizens came during the three day event and provided valuable input.

In addition to the three-day public charrette, three public meetings were also organized to seek additional input at various stages as the plan was refined and shaped into a final document.

The Town also created other ways for the public to provide feedback into the process. A Facebook page was created to not only share the progress made on the plan, but also to provide comments and feedback, and engage the community in online dialog regarding the plan. The page was available at www.facebook.com after searching for Lawyers Road and Interstate 485 Small Area Plan (SAP) under groups. The Town also created a link on the Town's website – www.minthill.com – for the Small Area Plan.

Traditional means of public outreach such as newsletters, postcards for meeting invitations, and newspaper announcements were also used to engage the public.

# Chapter 3: Existing Conditions

# Chapter 3: Existing Conditions



## NATURAL ENVIRONMENT

One of the striking aspects of the study area is the presence of an environmentally sensitive system of creeks and streams. Figure 3 on page 14 shows all the environmental features within the study area. Goose Creek, along with its tributaries, is one of the major streams that runs north-south through the entire study area. Stevens Creek is another major creek that flows south of the study area along with its tributaries. Floodplains along Goose Creek and Stevens Creek cover roughly 170 acres of the study area.

The entire study area falls within the Goose Creek watershed, which contains federal, state, and local development restrictions aimed at protecting the environmentally sensitive habitat of the endangered Carolina Heelsplitter mussel. Although there are some restrictions on development in this watershed, development is not entirely prohibited. As long as buffer requirements are maintained (as described previously) and a sufficient amount of a proposed development is preserved as open space, parts of this watershed could be developed. According to

Photo: Site of the planned mall - Bridges at Mint Hill.

Photo: Floodplains along Goose Creek and Stevens Creek cover roughly 170 acres of the study area. Post construction ordinance requires 200 feet un-disturbed buffer on each side of the perrinial streams.

Mecklenburg County Land Use & Environmental Services (LUESA), which oversees the environmental permitting process for the Town of Mint Hill, if the Built- Upon- Area (BUA) is less than 20%, then no open space requirements are necessary. If the BUA is between 20% and 50%, then 15% of open space is required. If the BUA is greater than 50%, then 10% of open space is required.

Post Construction Ordinance buffer requirements limit the area that can be developed. The buffer requirement on perennial streams in the Goose Creek watershed is 200 feet on either side of the stream

ENVIRONMENTAL FEATURES MAP

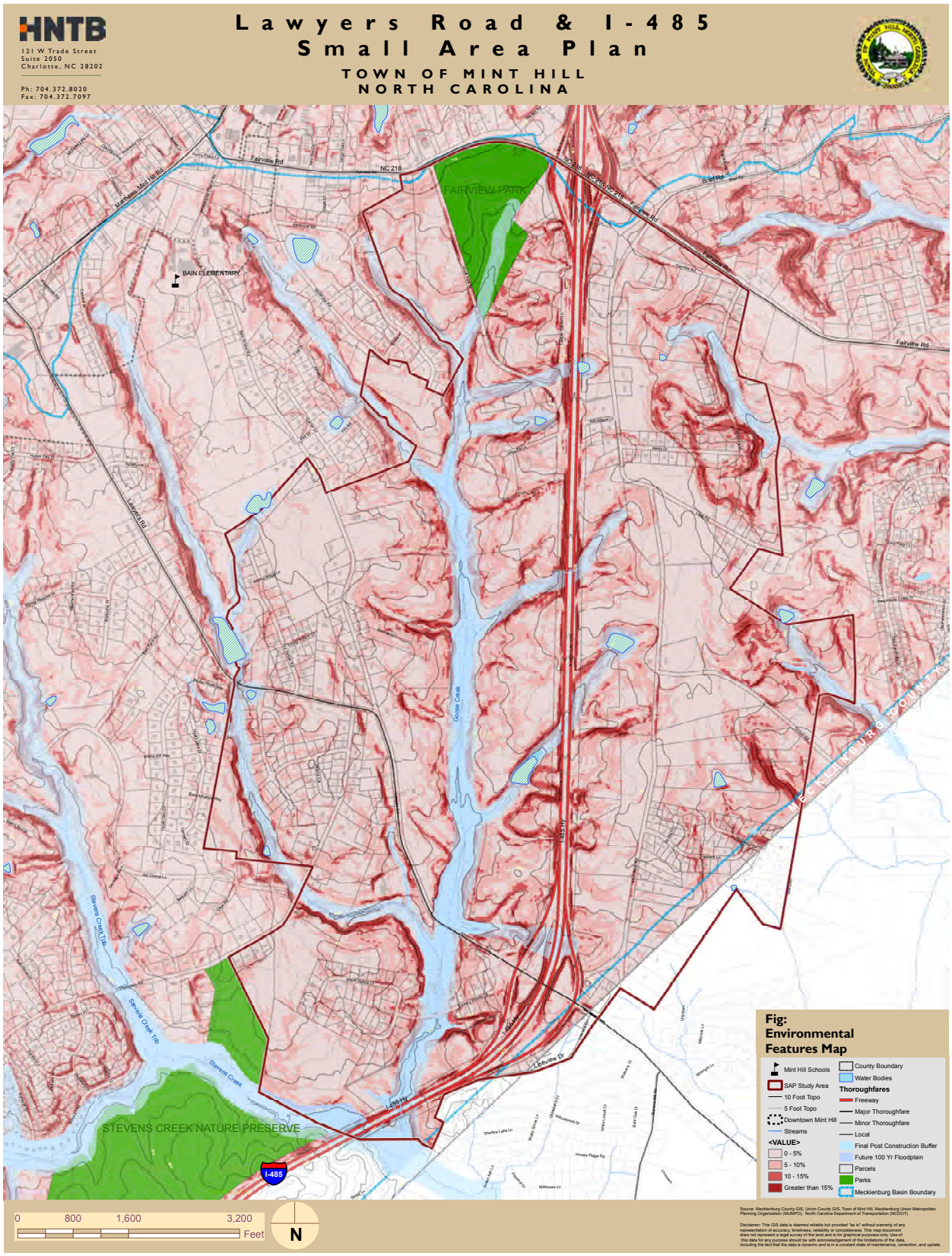



Figure 3: Environmental Features Map.

centerline or 400 feet total. On intermittent streams, these requirements are 100 feet on either side of the stream centerline or 200 feet total. Both Goose Creek and Stevens Creek are perennial streams and therefore are subject to higher buffer requirements. These buffers cover 244 acres of the study area. Since most of the floodplain area falls within the post construction buffer area, the area impacted by the floodplain and the post-construction buffer requirements is still around 250 acres. This means that roughly 12% of the study area is impacted by the floodplain and post-construction buffer requirements combined.

In addition to creeks and streams, there are a few small ponds and wetlands within the study area. Post construction buffer requirements also cover 100 feet of area around these ponds and wetlands, and are included in the area calculations shown on page 19.

The overall landscape of the study area is characterized by gentle rolling hills with some steep slopes along major creeks and streams. Fig 3 shows areas of steep slopes. The area with slopes between 0% and 5% is generally considered very suitable for development. The area with slopes between 5% and 10% is generally considered suitable for development, while the area with slopes between 10% and 15% is considered moderately suitable for development. Even though the area with slopes above 15% can be developed, the cost of development starts to go up with an increase in slope. The distribution of slope acres within the study area is shown below:

| Development Conditions | Slope Percentage | Acres | Percent of Study Area |
|---|---|---|---|
| Very Suitable for Development | Less than 5 Percent | 1007 acres | 52% |
| Suitable for Development | Between 5 – 10 Percent | 700 acres | 36% |
| Moderately Suitable for Development | Between 10-15 Percent | 165 acres | 8.4% |
| Less Suitable for Development | More than 15 Percent | 75 acres | 3.6% |
| | Total | 1947 acres | 100% |

The table suggests that 88% of the study area is within the slope percentage that lends itself for development, and only 3.6% of the study area could be considered constrained for development because of slopes. After reviewing the Environmental Features Map, it is also observed that the vast majority of areas with slopes greater than 15% are adjacent to major creeks and streams, and within floodplains or the post construction buffer limits. Major roads such as Lawyers Road, Bain School Road, Highway 218, and Allen Black Road are along the ridge lines for the most part.

## Summary of Issues and Opportunities:

• The presence of creeks and streams provides opportunities for open space preservation, greenways, and trails.

• The buffer requirements along perennial and intermittent streams provide opportunities to preserve habitat that is unique to this area, but also pose challenges for stream crossings and development potential.

• Floodplains along Goose Creek and Stevens Creek provide opportunities for preservation of open space, but also limit the development potential of the study area.

• The availability of land with relatively gentle topography provides opportunities for a variety of development.

• Open space requirements within the Goose Creek watershed provide opportunities for open space preservation, but also limit the amount of development.

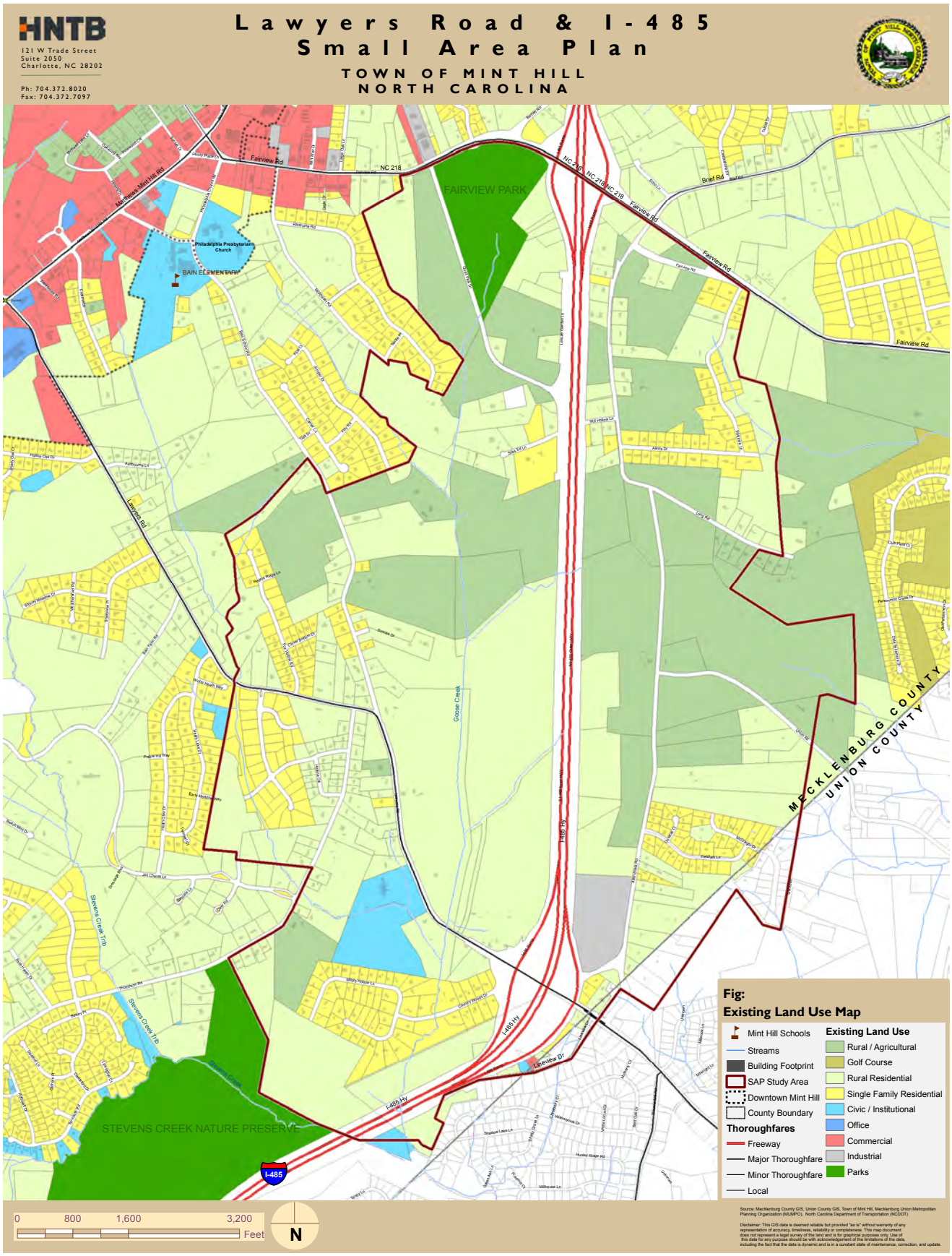



Figure 4: Existing Land Use Map.

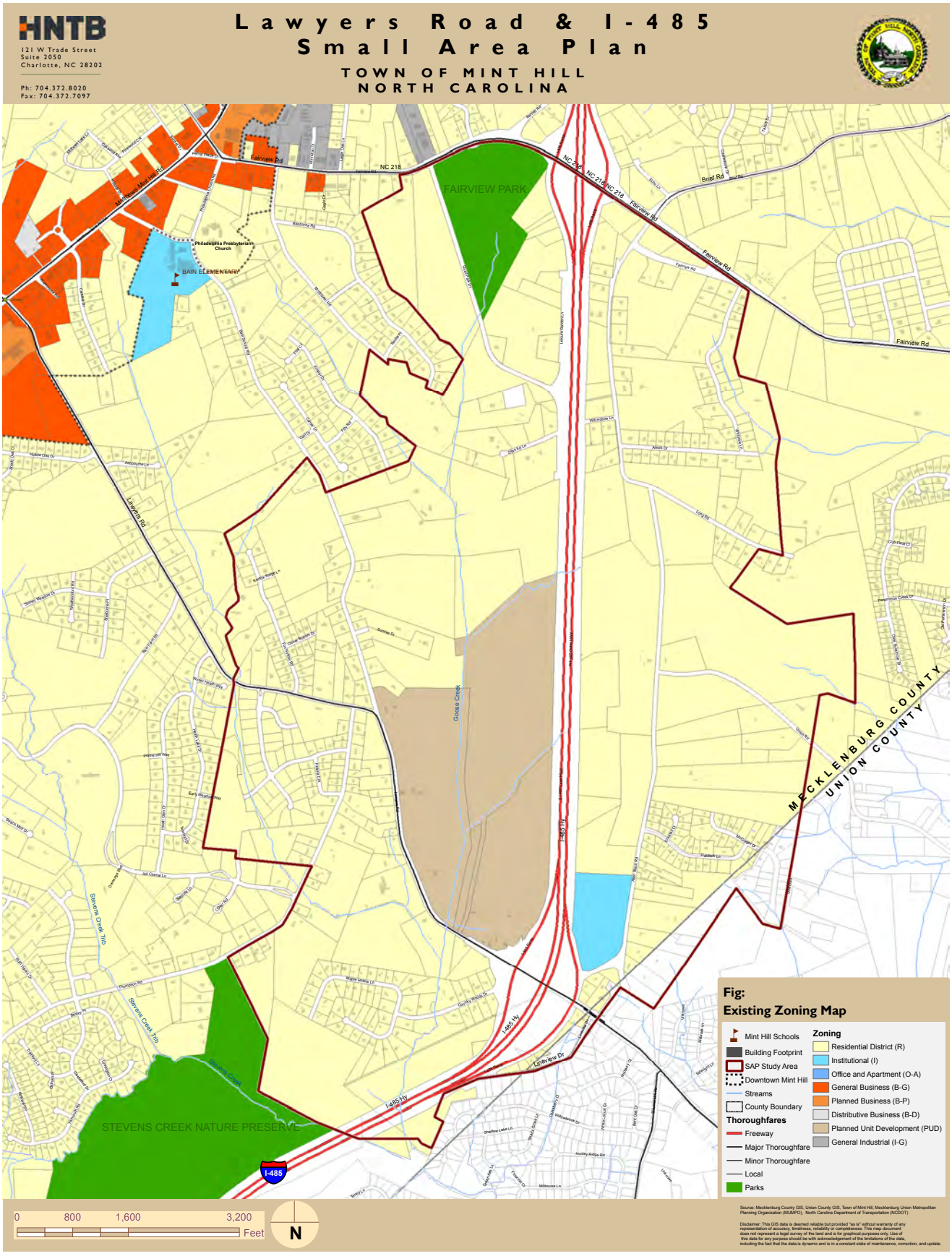



Figure 5: Existing Zoning Map.

## LAND USE

Land use is perhaps the one common element that impacts all other major components - such as transportation, economic development, environmental features, and utilities - of any plan. Land use also addresses some of the larger issues in a community such as quality of life and future vision for growth. With the arrival of the Bridges at Mint Hill mall, there will be substantial pressure on surrounding areas for land use change. The adjoining Fig. 4 details existing land uses.

Currently, a considerable part of the study area is undeveloped, with about 32% being either rural/ agriculture or open space. This is evident along Bain School Road and Allen Black Road, where one can see active farms. Rural residential uses, which make up over 50% of the study area, are predominant. Some large parcels of property are currently used as rural residential; in fact, Mecklenburg County tax data shows all of the Bridges at Mint Hill Mall parcels as rural residential. There are a few single-family residential neighborhoods in the study area; Country Woods subdivision at the southwest corner of Lawyers Road interchange is one of the largest neighborhoods. A few smaller neighborhoods exist along the periphery of the study area – along Thompson Road, Lawyers Road, and Allen Black Road.

There are a few civic uses, such as churches, within the study area. St. Luke's Catholic Church is on Lawyers Road and Church of God is on Bain School Road. Although Bain School Elementary School and Philadelphia Presbyterian Church are two of the oldest civic institutions in the Town, both of them being on the Town's seal, they are just outside the study area. The Park at Fairview, one of the recreational facilities that is owned and maintained by the Town of Mint Hill, is located in the northern

Photo: SAP study area is primarily rural.

Photo: New residential development, such as equestrian themed Cheval, provides variety in the study area.

Photo: Some local landmarks, such as Philadelphia Presbyterian Church, are also in close proximity of the study area .

Photo: New subdivisions, such as Meadows of Mint Hill along Bain School Road, are recent addition to the study area.


Photo: Park on Fairview Road provides numerous recreational opportunities such as nature trails, ball fields, picnic areas, kids' playground area etc.

portion of the study area. A major Mecklenburg County park facility, Stevens Creek Nature Preserve, is being planned on the southern edge of the study area, southwest of Country Woods subdivision. Its planned entrance is on Thompson Road.

Currently, the land uses in the study area are low-density, which does not lend itself for a walkable environment. However, this could change with the arrival of the planned mall. A detailed breakdown of various land uses in the study area is shown in the table below.

| Land Use | Acres | Percent of Study Area |
|---|---|---|
| Rural / Agriculture | 542 acres | 28% |
| Rural Residential | 909 acres | 47% |
| Single Family Residential | 208 acres | 11% |
| Civic / Institutional | 13 acres | 0.67% |
| Commercial | 0.6 acres | 0.03% |
| Industrial | 21.6 acres | 1.11% |
| Right of Way | 252.8 acres | 13% |
| **Total (does not include ROW)** | **1947 acres** | **100%** |

Although the study area is primarily rural with some residential and civic uses, the zoning is mostly Residential (R). The Bridges at Mint Hill Mall site is zoned Planned Unit Development (PUD), which is a type of zoning district "that is established to accommodate, in areas outside of the downtown, commercial projects of innovative design and layout that would not be otherwise be permitted under the Town's ordinance because of the strict application of zoning district or general development standards" . Please see the adjoining zoning map for detail.

Photo:Some older houses on large lots, such as this one on Bain School Road, dot the rural landscape of the study area.


Photo: Bain Elementary School is one of the oldest schools in the CMS system and is a local landmark.

Photo: Rural Area West of Lawyers Road.

## Summary of Land Use Issues and Opportunities:

• The presence of recreational facilities, both existing and planned, provides tremendous opportunities to link the study area with surrounding neighborhoods and destinations.

• The planned mall provides tremendous opportunities to create a destination in the Town of Mint Hill that currently does not exist.

• Existing rural and agricultural uses present opportunities for non-residential uses that are compatible with surrounding neighborhoods.

• The planned mall will create development and redevelopment pressure on neighboring properties. It will also affect some of the low-density residential uses around it.

## TRANSPORTATION

The Small Area Plan (SAP) study area is located within a transportation infrastructure that consists of an interstate freeway, arterials, collectors, and local roadways making up the transportation network. One of the most important elements of the network is the Charlotte Outer Loop (I-485). I-485 is an interstate freeway that provides high speed access around Charlotte's perimeter to neighboring communities and counties, as well as to other interstates. Conveniently, two access points to I-485 are located within the SAP study area. These are the Lawyers Road and Fairview Road (Highway 218) interchanges. These interchanges are also the only locations that bridge the east and west sides of the SAP study area over I-485. As a result, both Lawyers Road and Fairview Road arterials provide east-west regional connectivity for the community. Bain School Road and Thompson Road provide north-south connectivity west of I-485, while Allen Black Road provides north-south connectivity east of I-485. Since Union Road terminates at Allen Black Road, its east-west connection is limited to the east side of I-485 into Union County. For a detailed map of the transportation network please see Fig 6 on page 23.

Traffic operations are generally described by "Level of Service" (LOS) measures. In accordance with the most recent Transportation Research Board Highway Capacity Manual 2000, LOS describes the quality of traffic flow and is defined as a measure describing operational conditions on a given freeway, arterial, or intersection. LOS is a function of delay. LOS measures are reported using letter designations from A through F. As described in the Highway Capacity Manual 2000, LOS A represents the best operating condition (free traffic flow), and LOS F designates the worst operating condition. LOS A through D is considered to be operating at an acceptable condition, while a facility operating at an LOS E or F is considered to be operating at a deficient LOS. The LOS for major roadways in Mint Hill was determined in the Mint Hill Comprehensive Transportation Plan (CTP), developed in 2008. It should be noted that the LOS cited in the CTP represents conditions experienced in the year 2000.

| Roadway Name | 2000 Level of Service |
|---|---|
| Lawyers Road | C - D |
| Fairview Road (Hwy 218) | C - D |
| Allen Black Road | A - B |
| Bain School Road | A - B |
| Thompson Road | A - B |

Table: LOS (Level of service) analysis for SAP area roads.

Photo: Allen Black Road is a two-lane country road that provides north-south access between Hwy 218 and Lawyers Road.

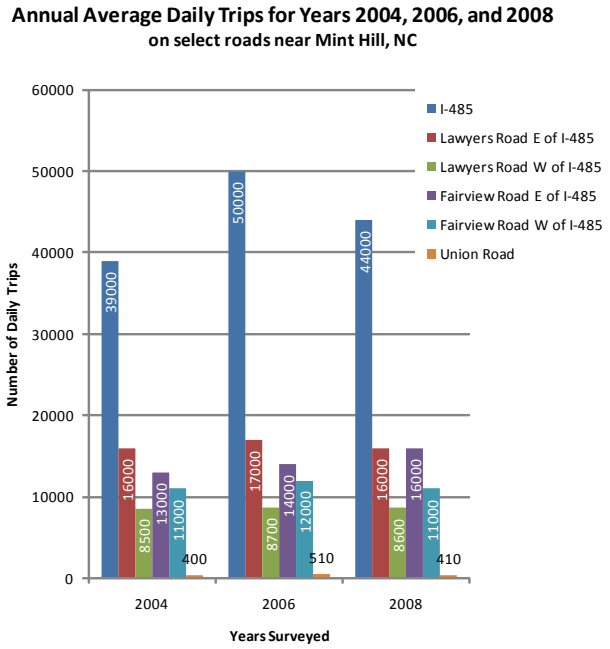
Photo: Intersection of Lawyers Road and Bain School Road is the location of the planned roundabout with the mall.

The CTP illustrated 2000 LOS for all major roadways within the town. However, the LOS for roadways within the SAP study area ranged from A through D, which is considered acceptable, and thus provided sufficient capacity for the traffic demand at that time. It should be noted that I-485 did not exist in the SAP study area in the year 2000. The addition of I-485 had a great effect on the traffic patterns in the area and thus affected the LOS in future years.

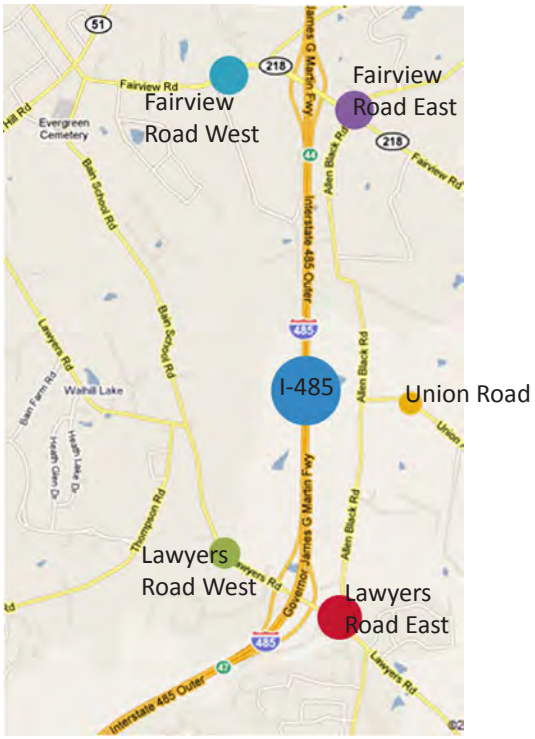
The CTP also summarized the crash data provided by the NCDOT for segments of facilities with a classification higher than a collector street from January 1, 2004 to December 31, 2006. Of the eleven locations analyzed, two were located within the SAP study area. These locations were the intersection of Fairview Road and I-485, which experienced 20 crashes during the three year study, and the intersection of Lawyers Road and Bain School Road, which experienced 10 crashes.

Average Annual Daily Traffic (AADT) volumes determined by the North Carolina Department of Transportation (NCDOT) in 2004, 2006, and 2008 for roadways within the SAP study area are shown below. These years are shown to demonstrate traffic volume trends after the completion of I-485 within the SAP study area.

As is evident from the graph and map to the right, daily traffic has been trending upward despite the peak that occurred in 2006 on all but one of the roadways shown. Therefore, it can be expected that traffic will increase over the next 10 years.




Graph and Map: Graph of Annual Average Daily Trips (AADT) for six locations in the Study Area. Traffic counts show a daily average throughout each year identified. Locations are identified in the map below.



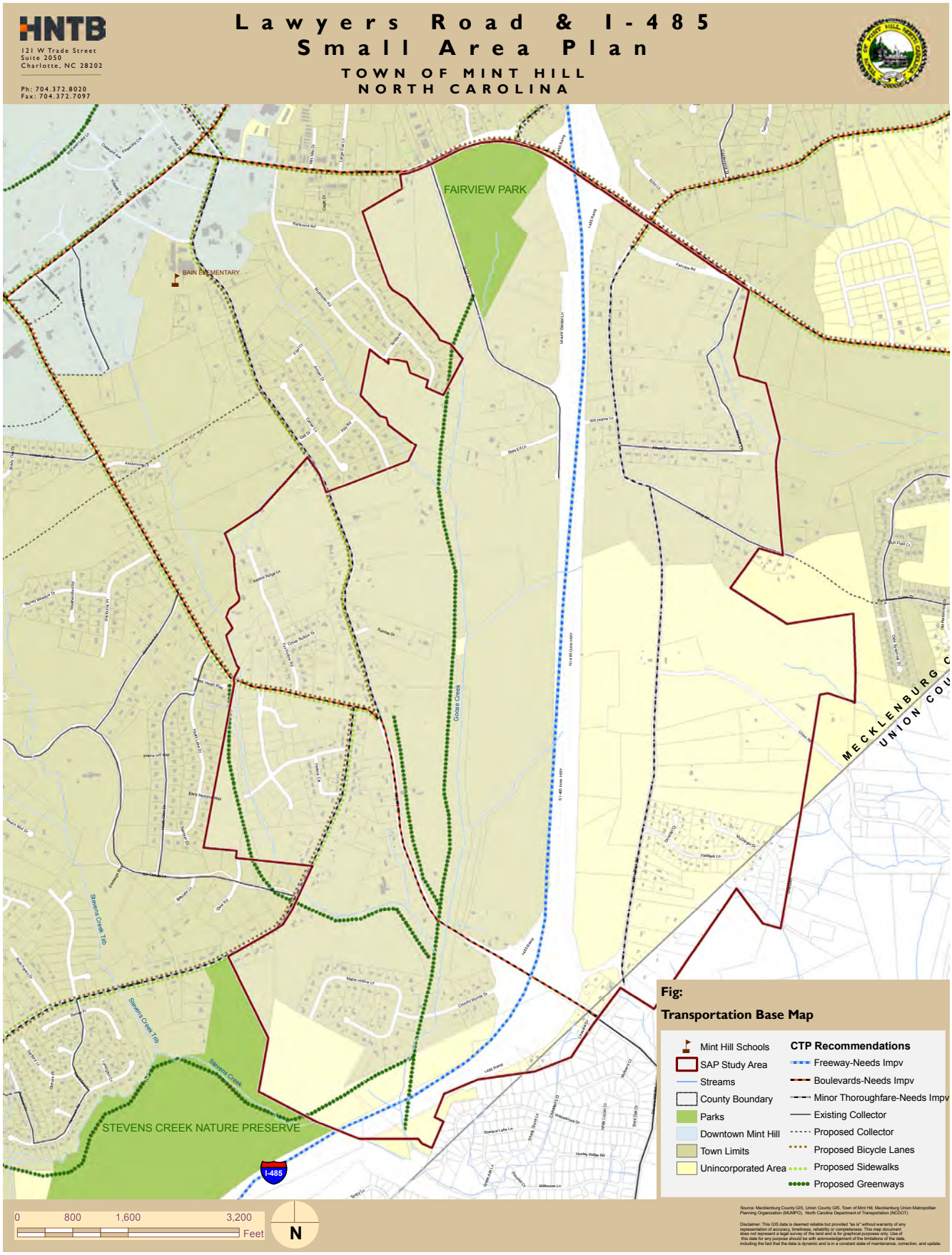



Figure 6: Transportation Base Map.

Further reason to assume that traffic will increase in the SAP study is due to the planned construction of "The Bridges at Mint Hill". A traffic study finalized in 2006, prepared by Kubilins Transportation Group, anticipates that the full build-out of the shopping mall will generate approximately 34,000 additional daily trips to the SAP study area. As a result of the projected increase in traffic, improvements to Lawyers Road are required prior to the shopping mall's planned completion. These improvements consist of roadway widening, adding traffic signals at intersections, constructing a roundabout, and dividing the roadway with a raised center median. This raised center median will control access along the roadway, which will change travel patterns for those who typically use Lawyers Road for access to neighborhoods and developments whose driveways are not controlled by traffic signals or will not have breaks in the median.

Although no transit services are currently available in the SAP study area, Charlotte Area Transit System (CATS) plans for a bus stop at the future shopping mall location. This bus service is expected to marginally reduce the traffic volume in the SAP study area. Similarly, while there are currently no pedestrian and bicycle connections that exist in the study area, the CTP recommends future bike and pedestrian connections throughout the SAP study area. The plan also recommends vehicular improvements to existing roadways such as Lawyers Road, Bain School Road, and Allen Black Road.

Photo: Traffic on Bain School Road becomes congested during school hours.

Photo: Thompson Road near Lawyers Road.

## Summary of Transportation Issues and Opportunities:

• Residents have noted concerns about the increase in traffic that the planned mall is anticipated to generate in the area.

• Residents currently living in neighborhoods and developments along Lawyers Road, such as Country Woods, are concerned about future access to their development.

• The planned mall will provide an opportunity to connect surrounding land uses via a network of bikeways and greenways, allowing for more transportation choices.

• The planned mall will provide additional transit opportunities that will be served by Charlotte Area Transit System.

• The CTP prioritized two intersections that experienced accidents in the study area. There may be opportunities to potentially improve these intersections.

• The planned improvements on Lawyers Road will provide more roadway capacity opportunity for the SAP study area.

• The planned improvements to bike, pedestrian, and transit amenities coinciding with the mall development will provide more opportunities for transportation choices within the SAP study area.

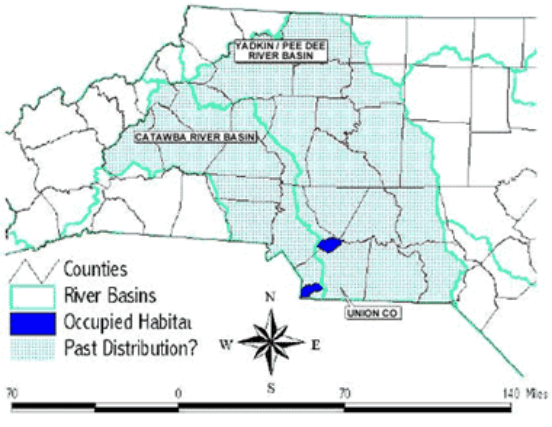
## UTILITIES

The Town of Mint Hill has a unique location related to the major river basins. It is located on the ridgeline of two major river basins – the Catawba River basin and the Yadkin-Pee Dee River basin. The SAP study area falls within the Goose Creek basin, which is part of the Yadkin-Pee Dee River basin. Charlotte-Mecklenburg Utilities Department (CMUD) provides water and sewer services to the Town of Mint Hill, but not all areas in the Town are currently served by CMUD for their water and sewer needs. In fact, in the Goose Creek basin very few areas are served by public water and sewer infrastructure. CMUD can only serve those properties within the Goose Creek basin that were grandfathered before the North Carolina Department of Natural Resources (NCDNR) adopted more stringent rules for this basin. The Bridges at Mint Hill mall site is one of those grandfathered properties that is scheduled to be served by CMUD with water and sewer. The Mall will have to provide its own private lift station to pump sewer into the Catawba River basin. This lift station will be allowed to serve the Mall site only.

Most of the existing low-density development within the SAP study area is currently served by private wells and septic systems. This type of development can continue to be served in future by private wells and septic systems without the extension of water and sanitary sewer lines as long as groundwater levels and water quality remains constant. However, recent development proposals such as The Bridges at Mint Hill mall will put more pressure on this area to become more than low-density development. Moreover, many new residents will desire public water and sewer services because of its reliability, convenience, and reasonable cost. Another benefit of installation of public water mains and fire hydrants would be lower insurance costs due to improved fire protection.

To accommodate the increasing demand for water and sewer in additional areas of the Goose Creek basin, an Inter Basin Transfer (IBT) agreement between the two affected basins is currently under review by the North Carolina Department of Water Quality as part of an Environmental Assessment. Inter Basin Transfer agreements allow the transfer of water from one river basin to another; water that falls as rain on one watershed is transferred to an adjacent watershed to be used or treated. Currently, water transfer from the Yadkin to the Catawba River basin is allowed, but the Goose Creek basin

Photo: Image of endangered native species Carolina Heelsplitter Mussel. Image from Town of Indian Trail website.




Map: Location of endangered native species Carolina Heelsplitter Mussel habitat in dark blue. Past distribution could have been as large as the light blue Catawba and Yadkin Watersheds. Image from www.NCWildlife.org.

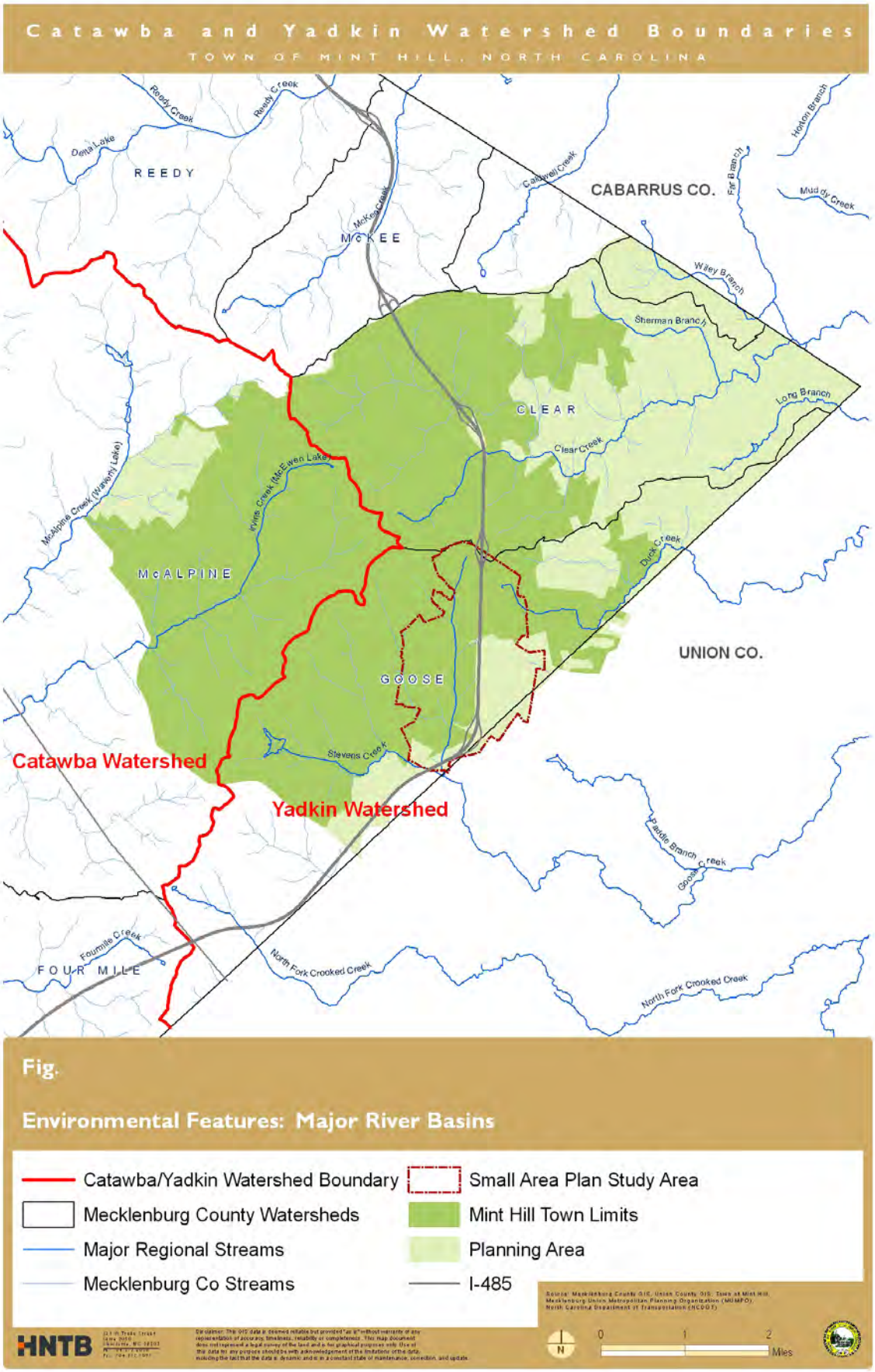



Figure 7: Major River Basins Map.

in excluded from the current IBT ruling due to the presence of the Carolina Heelsplitter Mussel habitat in Union County. This means that CMUD cannot pump any wastewater from the Goose Creek basin into the Catawba basin for its treatment at the McAlpine Wastewater treatment plant near Pineville, NC, nor can they pump any water into the Goose Creek basin from the Catawba basin. If the exclusion of Goose Creek basin from the IBT ruling is lifted, CMUD could serve areas other than just the mall site with water and sewer. This water would be discharged into the Catawba River; ultimately reaching the Atlantic Ocean from the Catawba/Santee River system instead of the Yadkin/Pee Dee River system.

Another issue that may impact future growth and development, not only for the Small Area Plan study area but also for the entire Town, is a bottleneck in the sewer line along Irvin Creek near the US-74 highway. The pipe size of the sewer line through the US-74 highway and north of US-74 is smaller than the pipe size in the southern side. This means that even though McAlpine Creek Waste Water Treatment Plant (WWTP) has sufficient capacity, the pipe size on the northern side could become a restrictive factor. To overcome this, CMUD is planning to upgrade the pipe size through the US-74 highway. This planned improvement is in the Capital Improvement Plan (CIP) of CMUD, and is planned to be completed in the 2013 to 2015 timeframe.

Currently, the mall site is grandfathered from the exclusion of Goose Creek basin from the Inter Basin Transfer agreement. The mall developer, therefore, is allowed to build a lift station to serve the mall development. However, should the Goose Creek basin exclusion be lifted, CMUD would need their own lift station at, or near close vicinity of, Stevens Creek Nature Preserve. To avoid potential redundancy in infrastructure, CMUD's lift station could be built instead of a lift station at the mall site. This new lift station could then serve the Goose Creek basin by connecting to the east side of I-485 along Stevens Creek to the mall site or along an existing sleeve between Allen Black Road and the mall site.

Once the US-74 bottleneck is fixed, and the exclusion of Goose Creek from the IBT process is lifted, the Small Area Plan study area will be open for future development that could be served by public water and sewer.

## Summary of Utilities Issues and Opportunities

• The Bridges at Mint Hill Mall has the water and sewer capacity for its operations; grandfathered in before the adoption of more stringent rules for the Goose Creek watershed by the NCDNR.

• Most of the area surrounding the mall site is not serviced by CMUD water and sewer because the Goose Creek basin is currently excluded from the Inter Basin Transfer (IBT) certificate. It currently handles its water via private wells and septic systems.

• There will be increased desirability for a public water and sewer system due to its convenience, reliability, reasonable cost, and benefits related to lower insurance cost.

• There is a sewer line bottleneck along Irwin Creek; the creek flows north to south and the pipe size on the north side of US-74 is larger than the pipe size on the south side. CMUD has plans to upgrade the south side pipe in its Capital Improvement Plan, and will occur around 2013-2015.

## MARKET ANALYSIS

ERA, a division of AECOM, is part of HNTB team that assisted the Town in analyzing, evaluating, and projecting the economic and market potential for this Small Area Plan. HNTB team, along with ERA, is also assisting the Town of Mint Hill with the development of the Town's Comprehensive Land Use Plan (CLUP) and market analysis for both the projects are done simultaneously. This joint effort has helped in data collection effort, its analysis and understanding key trends that will affect the SAP study area and CLUP study area.

Two levels of analysis are conducted during the Issues and Opportunities phase of the SAP process - Demographic and Economic Analysis, and Real Estate Market Analysis.

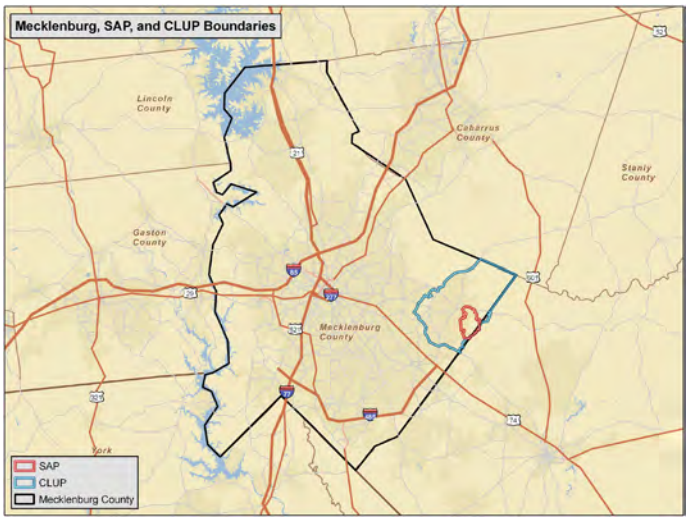
### Demographic and Economic Analysis (Appendix A Tables 1-23 and Figures 1-15)

Demographic and Economic Analysis is conducted to understand the long-term drivers of growth such as population and household projections, current and future employment projections, retail spending and household income, and presence of various industries in Mint Hill. This analysis will partly inform the future demand for various types of uses within the SAP study area. ERA examined demographic and economic conditions across a range of indices, focusing on those factors that fuel demand for real estate. To better understand these demographic and economic conditions, ERA utilized a number of public and private data sources in their research, including the US Census Bureau; the US Bureau of Labor Statistics; Woods and Poole; Claritas; the Employment Security Commission of North Carolina; ESRI Business Analyst; Charlotte Regional Visitors Authority; and Mecklenburg-Union Metropolitan Planning Organization (MUMPO).

The Demographic and Economic Profile analyzes four geographic areas as shown in the graphic below:

- SAP Study Area
- Comprehensive Land Use Plan (CLUP Study Area – Town's jurisdiction and Extra Territorial Jurisdiction (ETJ) combined
- Mecklenburg County
- Charlotte Metropolitan Statistical Area (MSA)

Key findings from the Demographic and Economic market analysis are summarized in the following pages and relevant data is detailed in the tables in Appendix A.




Appendix A Figure 1. Market Sectors analyzed in the Demographic and Economic Market Analysis performed by ERA, a division of AECOM.

*Population & Households*
*(Appendix A Tables 1-5 and Figures 1-10)*

• According to the MPO, the Small Area Plan study area's current population is almost 1,480 residents. ESRI Business Analyst estimates the SAP study area's population to be lower at almost 1,180 residents. Between 2009 and 2030, the MPO estimates that the SAP study area's population will increase by over 2,100 residents, which is a compounded annual growth rate of over four percent. The SAP study area's population is projected to grow at a faster rate than the CLUP study area and the County, with a projected annual growth rate of 3.3 percent and 1.6 percent, respectively, during this same time period.

• The SAP study area's population accounts for 5.4 percent of the CLUP study area's total population; this is considered the "fair share." Notably, the SAP study area's share of CLUP study area's population is projected to increase, and is likely to increase to 6.6 percent by 2030.

• Within the CLUP study area, the number of owner-occupied housing units is expected to increase almost 13 percent over the next five years. Within the SAP study area, owner-occupied housing units are expected to increase much more quickly at over 19 percent during this same time period. The increase in rental-occupied housing units in the CLUP study area is consistent with the rate of increase within the County and the MSA, averaging approximately 14 percent over the next five years.

• Almost 21 percent of residents within the SAP study area are under 14 years old. Demographic forecasts suggest that within the SAP study area, those aged 65-74 years will increase over 44 percent over the next five years, which is consistent with projected demographic forecasts throughout the County.

• Within the SAP study area, almost 26 percent of residents have either a Bachelor's or Graduate/ Professional Degree. Comparatively, 39 percent of residents in the County and 30 percent of residents in the MSA and hold one of these two degrees.

This data indicates that the SAP study area has the potential for more dense development than it currently contains. With appropriate design guidelines and managed through a planned-unit development (PUD) process, the CLUP study area may benefit from the forecasted population increases in the SAP study area by implementing guidelines that urge development in a well-planned manner. With an increase of owner-occupied housing units and large increase in residents age 65-74 years old, these forecasts suggest opportunities for potential market support for new housing oriented to new, high-quality residential development and age-target housing.

*Retail Spending & Household Incomes (Appendix A Tables 6-8)*

• The SAP study area's median household income—a key measure in understanding disposable income available for discretionary retail spending—is expected to increase over the next five years to over $84,500. In the CLUP study area, the median household income is expected to grow almost eight percent over the next five years to over $75,000.

• Within the SAP study area, over the next five years, the number of households earning between $75,000 and $99,999 will increase over 59 percent (51 households). In the CLUP study area, the number of households earning over $100,000 is expected to jump by over 13 percent (368 additional households), which could be expected to enhance retail goods and services spending potentials.

• SAP study area households spend on average over $85,000 per year on household expenditures, which is approximately $10,000 more than annual average household expenditures in the CLUP study area. The highest expenditure category for households is retail goods, which accounts for over 37 percent of total household expenditures.

• Sales among CLUP study area retailers in 2009 totaled $181.5 million across various retail categories. CLUP study area residents spent $214.8 million in 2009 on the same retail categories. This suggests CLUP study area residents are leaving the CLUP study area to shop, indicating a loss of approximately $33.3 million in retail sales.

• The five retail sectors in the CLUP study area that are experiencing leakage (i.e., household spending is being spent at retailers outside the study area) are Apparel & Accessories (i.e., clothing, footwear, jewelry, etc), Furniture and Home Furnishings (i.e., furniture, home furnishings, home centers, etc), Food & Beverage (i.e., eating places, drinking places), Leisure and Entertainment (i.e., books, sporting goods, toys), and General Merchandise (i.e., department stores, etc). This suggests that household spending (demand) by CLUP study area households is greater than sales (supply) in these sectors. CLUP study area residents are underserved in these core retail categories.

This data indicates that per household retail support within the SAP study area is greater than in the CLUP study area, with a forecasted median household income in the SAP study area almost 13 percent greater than within the CLUP study area. Throughout the CLUP study area, household spending patterns indicate that there is a lack of retail establishments, with CLUP study area household spending leaking to neighboring areas. This information implies that there is a demand for additional retail within the CLUP study area.

These data do not include projected retail sales from planned, but not constructed or completed, retail spaces such as the Bridges project.

### *Employment (Appendix A Tables 9-12 and Figures 11-15)*

Another critical factor informing demand for commercial "workplace" real estate such as office buildings, retail centers and industrial parks, is employment growth. Key findings are highlighted below.

• According to the Mecklenburg-Union MPO, the CLUP study area has a current job base of over 6,800. Forecasts suggest that the CLUP study area will add over 2,650 new jobs by 2015 and over 7,800 additional new jobs between 2015 and 2030. The SAP study area is expected to add almost 1,200 new jobs by 2030.

• The CLUP study area jobs-to-household ratio is 0.64. This ratio is expected to increase to 0.68 by 2015. Based on data provided by the Mecklenburg-Union MPO, the jobs-to-household ratios in neighboring areas in 2015 are expected to be significantly higher, with a ratio of 1.78 in Davidson, 1.83 in Matthews, and 3.46 in Pineville.

• Countywide, the largest gains in employment are expected in Services, which includes occupations in lodging/hospitality, education, medical, and professional and business services such as legal and engineering; State and Local Government; and Finance, Insurance, and Real Estate.

• According to ESRI Business Analyst, the unemployment rate in the SAP study area is 10.7 percent, up from 2.3 percent in 2000. This percentage is expected to decrease by 2014 to 7.3 percent. This spike in unemployment from 2000 is consistent with the unemployment increases countrywide.

This data indicates that with an increase in an employment, there is demand for additional office space within the CLUP study area. A portion of this demand may be met in the SAP study area.

### *Location Quotient (Appendix A Tables 13-15)*

A location quotient is an economic indicator that indicates the relative concentration, based on employment, of an "industry cluster" in a particular geography. Location quotients greater than one suggest that the industry is more highly concentrated in the area as compared to national averages. This analysis compares the relative strengths of specific sectors in Mecklenburg County, Charlotte MSA, and the State of North Carolina against the national averages.

• On average, industries in Mecklenburg County vary in their performance versus industries nationwide and statewide, with a low of 0.14 in Natural Resources and Mining to a high of 1.76 in Financial Activities. Mecklenburg County also exhibited strength in Professional and Business Services (1.40), Information (1.38), and Construction (1.06) in 2008.

• Between 2001 and 2008, Mecklenburg County strengthened its competitive position in a number of industries, most notably Financial Activities (+0.40), Leisure and Hospitality (+0.07), and Education and Health Services (+0.05). By contrast, its competitive position declined in Professional and Business Services (-0.15), Manufacturing (-0.08), and Trade, Transportation, and Utilities (-0.06).

*Visitor Trends*
*(Appendix A Tables 16-23)*

The Charlotte Regional Visitors Authority tracks visitor data and behavior/spending patterns for the Charlotte MSA. Relevant findings are summarized below.

• In 2008, the Charlotte MSA welcomed 18.05 million visitors, of which almost 39 percent stayed in a hotel/motel. Though the number of visitors has increased since 2001, the number of visitors declined by almost four percent between 2007 and 2008, with visitor spending during this same time period declining by over nine percent.

• In 2008, almost 6.6 million roomnights were occupied by visitors, of which almost 47 percent were occupied by business travelers and 29 percent were occupied by leisure travelers. However, 53 percent of total visitor spending was from leisure travelers, with only 18 percent from business travelers.

• In 2008, 77 percent of visitors stated "leisure" as the primary purpose of their trip while 18 percent of visitors stated business meeting. An additional five percent of visitors stated "conference/convention" as the purpose of the trip.

• Visitors to the Charlotte MSA in 2008 spent $3.4 billion on expenditures. The average visitor spending was $463. Almost one-third of visitor spending was on lodging and approximately one-quarter was on eating and drinking.

• Almost 23 percent of visitors to the Charlotte MSA are from North Carolina. Approximately 12 percent and nine percent, respectively, are from South Carolina and Florida.

• Visitors to the Charlotte MSA participate in a variety of activities. Most popular are visiting relatives (26 percent of visitors), visiting friends (23 percent of visitors), and shopping (19 percent of visitors).

Visitor data suggests that the CLUP study area may have potential for lodging in the future. Hotel development may be concentrated at interstate interchanges to appeal to highway-oriented business travelers and families.

## Real Estate Market Analysis
## (Appendix B Tables 1-17 and Figures 1-7)

Real Estate Market Analysis includes a review of recent and current market conditions across a range of real estate sectors. This analysis examines market characteristics across for-sale and for-rent housing, office, retail, industrial, and hotel uses to understand recent and current market conditions and trends. This analysis will also inform the future demand for various types of uses within the SAP study area.

ERA analyzed various indices, such as building permit activity, for-sale and for-rent residential comparables, commercial leasing/absorption activity and rents, and other appropriate market characteristics and supply and demand factors as they affect the SAP study area, the Comprehensive Land Use Plan (CLUP) study area, and countywide development potentials for various uses as a means of guiding specific initiatives and strategies for the SAP.

### *Real Estate Market Characteristics*

To estimate the depth of market support for specific sectors in the SAP study area, ERA examined recent and current market conditions, focusing on those factors that fuel demand for real estate.

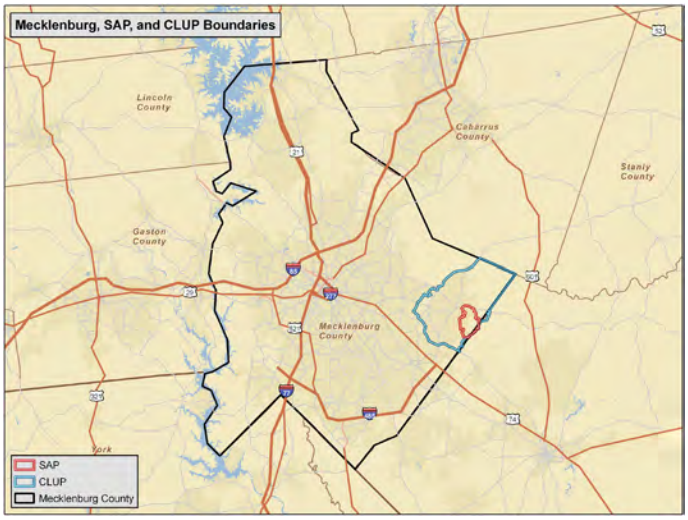
Current real estate conditions may seem to be in conflict with long term demographic and economic trends in the area. The reader should take into account that the data collected reflects recent real estate market conditions and that the demographic and economic trends reflect growth over a longer period of time. Current local, regional and national real estate conditions have been negatively impacted by the economic downturn (which was, in a large part, real estate-driven) and have resulted in reduced absorption of spaces for a variety of land uses. These conditions should be considered short-term. Longer term demographic and economic projections suggest that Mint Hill's real estate surplus will be absorbed early in the planning time horizon as the economic recovery builds. As conditions return to "normal" and local growth patterns resume, Mint Hill should continue to be positioned for real estate development and redevelopment opportunities.

ERA utilized a number of public and private data sources in our research, including the U.S. Department of Housing and Urban Development; ESRI Business Analyst; Town of Mint Hill Planning and Zoning; CoStar Property; and Smith Travel Research. The Real Estate Market Overview analyzes four geographic areas:

- SAP study area
- CLUP study area
- Mecklenburg County
- Charlotte MSA

Note that CoStar Property does not track any reporting office, retail, or industrial uses within the SAP study area. Therefore, the analysis of these land uses will primarily focus on the CLUP study area.

Key findings are summarized in the following pages and relevant data is detailed in Appendix B.




Appendix B Figure 1. Market Sectors analyzed in the Real Estate Market Analysis performed by ERA, a division of AECOM.

*Housing Overview*
*(Appendix B Tables 1-5 and Figures 1-3)*

• Reported building permits indicate that Mecklenburg County issues an average, since 2000, of over 8,550 single-family and almost 4,200 urban-residential permits annually.

• In 2008, 64 percent of Countywide permits were issued for urban-residential units. Between 2000 and 2007 however, only 31 percent of permits in Mecklenburg County were issued for urban-residential units. There has been a general decline in single-family permits issued since 2006.

• The number of building permits issued countywide has decreased almost 50 percent since peaking in 2006.

• In 2000, over 97 percent of housing units in the SAP study area were single-family detached structures. Within the CLUP study area, more than 84 percent of housing units were single-family detached structures.

• Based on 12 selected comparables, the average asking sale prices for single-family units within the CLUP study area is $224,000, with an average cost of $82.20 per square foot.

• Based on seven selected comparables, average asking for-sale prices for urban-residential units within the CLUP study area is $183,000, with an average cost of $102.78 per square foot, over 25 percent more than the single-family per square foot cost. This may be attributed to the fact that several of the urban-residential units in the sample were delivered in 2009, and therefore have a higher per square foot cost than some of the older properties.

Based on selected comparables, the average rent for a one-bedroom unit ranges from $490 per month to $750 per month, resulting in an average of a $0.70 per square foot to $1.05 per square foot rent. Average rent for a two-bedroom ranges from $695 per month to $820 per month, resulting in an average of a $0.70 per square foot to $1.20 per square foot rent. Average rent for a unit larger than two-bedrooms range from $865 per month to $1,030 per month, resulting in an average of $0.65 per square foot to $1.10 per square foot rent. The selected urban-residential rental comparables are located outside the CLUP study area boundaries.

Based on these available data, it may be assumed that there is a shortage of new urban-residential housing units available within the CLUP and SAP study area. With the countywide shift in the increase in urban-residential permits issued, this could indicate a demand for smaller, less expensive units.

Data from the Demographic and Economic Profile indicates that the SAP study area has the potential for more dense development than it currently contains. With appropriate design guidelines and managed through a planned-unit development (PUD) process, the Town of Mint Hill may benefit from the forecasted population increases in the SAP study area by implementing guidelines that urge development in a well-planned manner. With an increase of owner-occupied housing units and large increase in residents age 65-74 years old, these forecasts suggest opportunities for potential market support for new housing oriented to new, high-quality residential development and age-restricted housing.

*Commercial Overview*
*(Appendix B Table 6)*

The Commercial Overview includes office, retail, and industrial/flex uses within the CLUP study area.

• The CLUP study area contains over 370,000 square feet of office space, 847,000 square feet of retail space, and 431,000 square feet of industrial/flex space.

• Within the CLUP study area, absorption has been positive in 2009, with over 16,500 square feet for office space, 8,400 square feet for retail space, and 1,700 square feet for industrial/flex space. Absorption is defined as the integration of space into the market, with space that has been leased or occupied "absorbed." A positive absorption indicates positive leasing activity.

• Current vacancy rates for office, retail, and industrial/flex space within the CLUP study area are 10.3 percent vacancy in office space, 11 percent vacancy in retail space, and a 6.7 percent vacancy in industrial/flex space.

• Current rental rates for office space average $25.56 per square foot, significantly decreasing to $10.52 per square foot for retail space and $8.73 per square foot for industrial/flex space.

Data in the Demographic and Economic Profile indicate that retail support within the SAP study area is greater than within the CLUP study area on a per household basis, with a forecasted median household income in the SAP study area almost 13 percent greater than within the CLUP study area.

Throughout the CLUP study area, household spending patterns indicate that there is a lack of retail establishments, with CLUP study area household spending leaking to neighboring areas. This information implies that there is a demand for additional retail within the SAP study area. Based on the large amount of existing retail space and current high retail vacancy rates within the CLUP study area, this appears that the available space is not being utilized to its highest and best use and may provide a good redevelopment opportunity.

This data does not include projected retail sales from planned, but not constructed or completed, retail spaces such as the Bridges project.

*Office Overview*
*(Appendix B Tables 7-8 and Figures 4-5)*

• The CLUP study area contains 370,000 square feet of office space in 36 office buildings—comprising less than one percent of the county total of 72.9 million square feet of office space.

• CLUP study area office leasing activity ("net absorption")—a barometer of the overall health of an office market—has averaged 11,300 square feet per year since 2004. Leasing activity countywide has averaged 1.4 million square feet per year.

• Average annual office vacancy rates since 2004 in the CLUP study area (13.7 percent) are higher than average annual vacancy rates during this same period countywide and in the MSA, where vacancy rates averaged 11.6 percent and 10.8 percent, respectively.

• Average office rents in the CLUP study area ($22.03 per square foot) are higher than rents countywide and in the MSA, where rental rates averaged $18.80

and $18.54, respectively, since 2004. Office rents in the CLUP study area have increased $6.81 per square foot since 2004.

• Based on seven selected comparables, the average rental price for office space within the CLUP study area is $11 per square foot, with an average vacancy rate of nine percent. The difference in rental prices for the selected comparables and CoStar Property data could be attributed to the class of office space and the year of delivery of the properties surveyed for the comparable properties. Almost 20 percent of properties surveyed by CoStar Property were delivered in the last two years, therefore resulting in a higher rent.

The small amount of office space inventory and the high office vacancy rate within the CLUP study area may indicate that under current conditions there is limited office demand. With an increase in density and development of the areas surrounding the interchanges, there may be an increase in future office demand within the SAP study area.

*Retail Overview*
*(Appendix B Tables 9-10 and Figures 6-7)*

• The CLUP study area contains 847,000 square feet of retail space in 89 properties—comprising 1.4 percent of the county total of 61.4 million square feet of retail space.

• CLUP study area retail leasing activity ("net absorption") has averaged 7,400 square feet per year since 2004. Leasing activity countywide has averaged 1.1 million square feet per year.

• Average annual retail vacancy rates since 2004 in the CLUP study area (9.9 percent) are higher than average annual vacancy rates during this same period countywide and in the MSA, where vacancy rates averaged 6.9 percent and 5.6 percent, respectively.

• Average retail rents in the CLUP study area ($11.33 per square foot) are lower than rents countywide and in the MSA, where rental rates averaged $13.90 and $13.51, respectively, since 2004. Retail rents in the CLUP study area have increased $2.51 per square foot since 2006.

• Based on seven selected comparables, the average rental price for retail space is $15 per square foot. This average includes Mint Hill Village, where retail rents average $20 per square foot.

Based on the large amount of retail space and high retail vacancy rates within the CLUP study area, this appears that the available space is not being utilized to its highest and best use and may provide a good redevelopment opportunity.

### *Industrial/Flex Overview (Appendix B Table 11)*

• The CLUP study area contains 431,000 square feet of industrial/flex space in 22 properties—comprising 0.3 percent of the county total of 144.1 million square feet of industrial/flex space.

• CLUP study area industrial/flex leasing activity ("net absorption") has averaged only 310 square feet per year since 2004. Leasing activity countywide has averaged 1.2 million square feet per year.

• Average annual industrial/flex vacancy rates since 2004 in the CLUP study area (7.4 percent) are lower than average annual vacancy rates during this same period countywide and in the MSA, where vacancy rates averaged 8.8 percent and ten percent, respectively.

• In 2009, the only reported year, industrial/flex rents in the CLUP study area ($8.73 per square foot) are lower than rents countywide and in the MSA, where rental rates averaged $4.68 and $4.27, respectively, since 2004

### *Hotel Overview (Appendix B Tables 12-17)*

ERA examined trends in the hotel/lodging market for selected properties near the CLUP study area in Mecklenburg, York County, and Union County by analyzing market performance data provided by Smith Travel Research (STR), which tracks hotel market trends across the United States.

ERA analyzed market performance for 33 properties containing 3,440 hotel rooms within Mecklenburg, York, and Union County. Note that not all hotel properties within these counties were included in the study, rather just the properties in areas that are comparable to the CLUP study area.

Relevant findings are summarized below.

• Market performance of selected properties has fluctuated over the last six years. While supply (i.e., number of rooms) has increased because of new construction, occupancy has been uneven—ranging from a low of 58 percent in 2003 to a high of 69 percent in 2007.

• Current annual occupancies of 62.7 percent are below the threshold to support new hotel development, as the capital markets seek minimum sustained annual occupancies of 70 to 72 percent before providing financing for new hotel construction. (Financing agreements for recent new construction were secured several years ago when the market was stronger).

• Other key barometers of market performance include average daily rate (ADR) and revenue per available room (REVPAR). ADRs have increased at an average pace of 6.6 percent per year, and revenue per

available room, which is the best measure of year-to-year growth because it considers simultaneous changes in both room rate and annual occupancy levels, has increased 8.4 percent per year since 2003.

As noted previously in the visitor section of the Demographic and Economic Profile, visitor data suggests that Mint Hill may have potential for lodging in the future if tourism increases. Hotel development may be concentrated at interstate interchanges to appeal to highway-oriented business travelers and families. New hotel development financing may be contingent on improved sustained occupancy levels or large-scale development, such as a regional mall or large office development that would serve as a driver of room demand to the hotel market. Area hotel occupancies were rising prior to the recent economic downtown and, upon recovery, may be able to continue to increase. Timing of any new hotel development will likely be influenced by improved business conditions in the area and national hotel trends.

## Summary of Issues and Opportunities:

• Small Area Plan (SAP) study area forecasts suggest opportunities for potential market support for new housing oriented to new, high-quality residential development and age-restricted housing.

• Per household retail support within the SAP study area is greater than the CLUP study area. In the CLUP study area, household spending patterns indicate that there is a lack of retail establishments, with CLUP study area household spending leaking to neighboring areas. This information implies that there is a demand for additional retail within the CLUP study area.

• Among all Mecklenburg County small towns, Mint Hill has the lowest jobs-to-household ratio. However, future demand for employment appears to be strong with an additional 10,450 jobs projected for the CLUP study area. A portion of this demand may be met in the SAP study area.

• Visitor data suggests that the CLUP study area may have potential for lodging in the future. Hotel development may be concentrated at interstate interchanges to appeal to highway-oriented business travelers and families.

## Demand Potential Market Analysis (Appendix C Tables 1-16 and Figure 1)

The Demand Potentials Memo incorporates data gathered in the Demographic and Economic Profile and the Real Estate Market Overview. This section examines demand potentials for for-sale and for-rent housing, office, retail, and industrial uses to understand absorption potential and supportable square footage. The focus of the Demand Potentials analysis is to determine the depth of market support for a mix of additional real estate development in the SAP Study Area.

### *Demand Potentials*

Current real estate conditions may seem to be in conflict with long term demographic and economic trends in the area. The reader should take into account that the data collected reflects recent real estate market conditions and that the demographic and economic trends reflect growth over a longer period of time. Current local, regional and national real estate conditions have been negatively impacted by the economic downturn (which was, in a large part, real estate-driven) and have resulted in reduced absorption of spaces for a variety of land uses. These conditions should be considered short-term. Longer term demographic and economic projections suggest that Mint Hill's real estate surplus will be absorbed early in the planning time horizon as the economic recovery builds. As conditions return to "normal" and local growth patterns resume, Mint Hill should continue to be positioned for real estate development and redevelopment opportunities.

Based on our analysis of demographics and market conditions, these findings and recommendations indicate what may reasonably occur in the SAP Study Area. Demand forecasts are intended as reasonable, third-party estimates of the overall redevelopment potential in light of current and forecast market conditions as well as AECOM's experience in redevelopment projects.

AECOM utilized a number of public and private data sources in our research, including the ESRI Business Analyst; Town of Mint Hill Planning and Zoning; Woods & Poole; Claritas; Mecklenburg-Union MPO; and CoStar Property.

Key findings are summarized in the following pages and relevant data is detailed in Appendix C.

*Residential*
*(Appendix C Tables 1-3)*

The residential analysis presents market potentials for three types of housing—for-sale single-family, for-sale urban residential (condominiums and townhomes), and for-rent urban residential. From a developer's perspective, adding a mix of housing (potentially over multiple phases) serves to distribute investment risks across more than one product type. The planning horizon for the residential analysis is to 2015.

*For-Sale (Single-Family and Urban Residential)*
To calculate for-sale residential demand potentials, three segments were identified: demand from new households, demand from converting renter households, and turnover from existing owner-occupied households. AECOM defines target-market, income-qualified households as those earning more than $75,000 per year for single-family and $50,000 for urban residential, indicating an affordability range of roughly $225,000-$300,000 per unit for single-family and $150,000-$200,000 for urban residential. AECOM measured demand from households in two target trade areas: the CLUP Study Area and remaining areas of Mecklenburg County. This methodology is detailed below:

*1. New Household Demand*
A key source of potential demand for residential is generated by new or relocating households. To determine this factor, annual new households (as forecasted by ESRI Business Analyst for 2009-2014) were qualified by three factors: 1) income; 2) lifestyle characteristics that indicate a preference for this type of housing, and 3) a propensity/preference to purchase a home.

*2. Conversion of Existing Renter Households*
Each year, a certain proportion of renter households will move and, of those, some will decide to purchase. To evaluate demand potentials from converting renter households, a similar approach was used with slight modification. First, total households in the two geographies were qualified by income and renter status. Second, an estimated annual turnover rate of ten percent for single-family and 20 percent for urban-residential was applied to those renter households. Third, a household's propensity to buy (estimated at ten percent) served as an additional qualifier in this analysis.

*3. Turnover of Existing Owner-Occupied HHs*
Similar qualifiers of income, tenure and propensity to purchase an urban-residential or single-family home were applied to this segment. The additional qualifier includes turnover of existing households in the two geographies. An estimated five percent of owner-occupied households will turnover their current home and buy a new home in a given year.

AECOM estimates approximately 6,100 households qualify for single-family for-sale units and approximately 5,000 households qualify for urban-residential for-sale units on an annual basis from these trade areas. The next step in this analysis is to identify the SAP Study Area's capture of these target households. AECOM estimates that the SAP Study Area could capture up to eight percent for single-family and 33 percent for urban-residential of the CLUP Study Area's target market total annual demand and 0.25 percent for single-family and urban-residential for the rest of Mecklenburg County's target market total annual demand, indicating a potential SAP Study Area annual absorption of 30-45 single-family for-sale units and 30-45 urban-residential for-sale units.

*For-Rent (urban-residential)*
Another means of enhancing housing market potentials (and to reduce the risk of participating developers), is to introduce a variety of both for-sale as well as rental product into the development mix. The following examines market potentials for rental housing in the SAP Study Area.

AECOM defines target-market, income-qualified households for rental residential product as those earning more than $35,000 per year. These households include young working professionals as well as households seeking an alternative housing product, including those that are downsizing.

Similar to the for-sale analysis, AECOM measured demand from two trade area geographies—the CLUP Study Area and the remaining area in Mecklenburg County. Two general renter groups were identified to estimate demand potentials: 1) demand generated from new households in each of these geographies and 2) demand generated by existing renter households (i.e., turnover). The following methodology was used to identify potential target demand:

*1. New Household Demand*
A key source of potential demand for rental units is generated by new or relocating households. To determine this demand, annual new households as forecast by ESRI Business Analyst for 2009 to 2014 were qualified by three factors: 1) income; 2) propensity to rent as determined by tenure data from ESRI Business Analyst; and 3) lifestyle preference. In combination, these qualifying factors identified potential market support from new households in both target geographies.

*2. Relocations of Existing Renter Households*
Similar qualifiers of income, tenure, and lifestyle were applied to this segment. The fourth qualifier includes the annual turnover rate of existing households, identified as 20 percent. This would include, for example, empty nester households in the study area considering downsizing and making a conscious decision to rent in a more upscale property.

AECOM estimates almost 13,300 households from these two trade areas would quality on an annual basis. The next step in this analysis is to identify the SAP Study Area's capture of these target households. If the SAP Study Area successfully captures 20 percent of households within the CLUP Study Area and 0.20 percent of households within the rest of Mecklenburg County, AECOM estimates that target households could generate annual absorption in the range of 30 to 45 rental units per year or two to three units per month.

*Retail*
*(Appendix C Tables 4-13 and Figure 1)*

Retail uses require a concentration of disposable income (from nearby residents, employees), strong visibility and extensive frontage, adequate parking, a clear competitive role, and market identity. Moreover, supporting tenants oftentimes require an anchor tenant—such as a grocery store—to generate traffic. The most successful urban lifestyle/ mixed-use retail projects across the U.S. contain a mix of merchandise categories—including apparel & accessories, home furnishings, food & beverage, leisure & entertainment, and general merchandise.

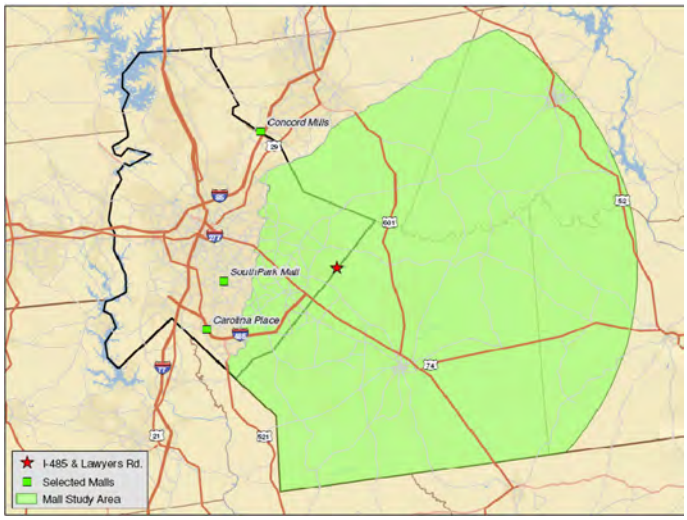
As part of the retail demand potentials, AECOM examined two retail scenarios:

- Retail demand generated from the CLUP Study Area residents and employees

- Retail demand generated by a larger study area that AECOM estimates is in a reasonable drive time from the proposed Mall site and consistent with industry standards for regional retail centers. This study area is referred to as the Mall Study Area.

The CLUP Study Area is experiencing an outflow of retail spending, i.e. current household spending on consumer goods by residents within the CLUP Study Area is greater than sales receipts of these same goods from stores within the CLUP Study Area. This indicates that CLUP Study Area residents are leaving the CLUP Study Area to shop, and that the CLUP Study Area can benefit from additional retail establishments.

Current demand from households in the CLUP Study Area is for almost 846,000 square feet of retail space, but only the equivalent of 480,000 square feet in




Appendix C Figure 1. Mall Study Area analyzed in the Demand Potential Market Analysis performed by ERA, a division of AECOM.

sales is being captured within the CLUP Study Area. As a result, CLUP Study Area residents could support approximately 350,000 square feet of additional retail space if all spending that occurs outside the CLUP Study Area is recaptured. Current CLUP Study Area retail leakage could support the following amounts:

Apparel & Accessories: 36,000 Square Feet
Furniture & Home Furnishings:
169,000 Square Feet
Food & Beverage: 54,000 Square Feet
Leisure and Entertainment:
47,000 Square Feet
General Merchandise (Dept. Stores):
193,000 Square Feet

AECOM estimates that the SAP Study Area could capture five percent of CLUP retail leakage. As a result, SAP Study Area residents could support approximately 18,200 square feet of additional retail space if all spending that occurs outside the SAP Study Area is recaptured.

Based on current household spending patterns and forecasted growth in average household income, AECOM estimates that by 2015, SAP Study Area resident household spending will support over 30,000 square feet of retail space. By 2020, SAP Study Area household spending could support an additional 2,600 square feet of new retail space and by 2030, SAP Study Area household spending could support an additional 2,500 square feet of new retail space. In addition, employees working within the CLUP Study Area provide additional spending to support retail space. In total, between 2009 and 2030, resident and employee spending in the SAP Study Area can support an additional 17,300 square feet of net new retail space. Based on household and employee spending, the SAP Study Area can support approximately a total of 43,000 sq. ft. of retail by 2030.

Current demand from households in the Mall Study Area is for 16.5 million square feet of retail space, but only the equivalent of 13.7 million square feet in sales is being captured within the Mall Study Area. As a result, Mall Study Area residents could support approximately 2.8 million square feet of additional retail space if all spending that occurs outside the Mall Study Area is recaptured. Mall Study Area retail leakage could support the following amounts:

Apparel & Accessories: 315,000 Square Feet
Furniture & Home Furnishings:
647,000 Square Feet
Food & Beverage: 709,000 Square Feet
Groceries: 128,000 Square Feet
Leisure and Entertainment:
398,000 Square Feet
Convenience & Service: 58,000 Square Feet
General Merchandise (Dept. Stores):
543,000 Square Feet

Based on current household spending patterns and forecasted growth in average household income, AECOM estimates that between 2009 and 2030, Mall Study Area household spending will support over 2.2 million square feet of additional retail space.

*Office*
*(Appendix C Table 14)*

Demand for commercial office development is driven by employment patterns and growth in those job sectors that occupy office space. Office workers use a variety of space depending on local market characteristics and the type of business. For example, some office tenants are small and choose to locate in retail centers that command more foot traffic; others telecommute from home or work in industrial settings as part of "flex-tech" buildings that provide front-end office and back-end warehouse or light industrial.

To determine market demand for commercial office development in the SAP Study Area, long-term trends in employment were measured to estimate how growth in office-using jobs is most likely to translate into new office buildings.

AECOM examined two office demand potentials:

- Office demand generated from forecasted employment growth in Mecklenburg County based on the growth of specific industries.
- Office demand growth based on total employment growth forecasted for the CLUP Study Area.

Mecklenburg County is forecast to add 351,200 new jobs between 2009 and 2030. The increase in employment may translate into Countywide demand for over 32.6 million square feet of office space between 2009 and 2030. AECOM notes that this may not necessarily require all new office construction, as some office-using jobs can be accommodated in existing (viable) vacant space across Mecklenburg County (currently estimated at 9.7 million square feet).

Using the CLUP Study Area's fair share of 0.5 percent (the CLUP Study Area's current capture rate), this analysis suggests that demand for new office space in the CLUP Study Area will total approximately 163,000 square feet by 2030. AECOM estimates that the SAP Study Area could capture up to 50 percent of the CLUP office demand, resulting in a total demand of 81,500 square feet of new office space by 2030 in the SAP Study Area.

The Mecklenburg-Union MPO estimates that there will be 10,496 new jobs in the CLUP Study Area between 2009 and 2030. This translates into over 3,300 new office-using employees by 2030, which would require almost 672,000 square feet of additional office space in the CLUP study area. AECOM notes that this may not necessarily require all new office construction, as some office-using jobs can be accommodated in existing (viable) vacant space across the CLUP Study Area (currently estimated at 38,000 square feet).

AECOM estimates that the SAP Study Area could capture up to 33 percent of the CLUP office demand, resulting in a total demand of 222,000 square feet of new office space by 2030 in the SAP Study Area.

Variations on office demand potential occur due to the methodology used and potential capture geographies and percentage of capture applied. In most growth scenarios for the CLUP Study Area, 672,000 is likely to be an over-aggressive projection. Due to land area limitations, current restricted access to sufficient water and sewer capacity, height restrictions and density limitations and traffic circulation needs, it is doubtful that the CLUP Study Area could accommodate, let alone absorb, so much space. To capture a greater amount of square feet, zoning would have to be relaxed, a more complex traffic grid would be needed, and one or more major economic drivers will need to be in place. A major corporate, educational, government or institutional office space user located in Mint Hill could create demand for additional office space than would normally locate in the town. As there are two primary areas that could receive large office campuses, the downtown and SAP Study Area are the likely locations for office expansion. By setting the SAP Study Area capture of total office demand at 33 percent, AECOM has conservatively estimated 222,000 square feet.

The lower numbers of 163,000 square feet by 2030 for the CLUP Study Area and 81,500 square feet of new office space by 2030 in the SAP Study Area should be easily accommodated within a low growth scenario that does not expand office zoning or encourage much additional growth beyond what would naturally occur. These smaller office space amounts should be achieved within current zoning and economic trends.

### *Industrial/Flex (Appendix C Table 16)*

Demand for industrial development is driven by employment patterns and growth in those job sectors that occupy industrial/flex space. To determine market demand for industrial/flex development in the CLUP Study Area, long-term trends in employment were measured to estimate how growth in jobs needing industrial space are most likely to translate into new industrial space.

Mecklenburg County is forecast to add 351,200 new jobs between 2009 and 2030. The increase in employment may translate into Countywide demand for almost 26.2 million square feet of industrial/flex space between 2009 and 2030. AECOM notes that this may not necessarily require all new construction, as some industrial/flex-using jobs can be accommodated in existing (viable) vacant space across Mecklenburg County (currently estimated at 13.2 million square feet).

Using the CLUP Study Area's fair share of 0.3 percent (the CLUP Study Area's current capture rate), this analysis suggests that demand for new industrial/flex space in the CLUP Study Area will total approximately 78,500 square feet by 2030.

AECOM estimates that the SAP Study Area could capture up to one percent of the CLUP industrial/flex demand, resulting in a total demand of almost 1,000 square feet of new industrial/flex space by 2030 in the SAP Study Area.

# Chapter 4: Process and Analysis

# Chapter 4: Process and Analysis



## CHARRETTE

As mentioned in the Public Participation section, an intense three-day design workshop called a "charrette" was organized at the beginning of the planning process after initial data about the study area was collected, analyzed, and mapped. The purpose of this charrette was to engage the public in the planning process and create a plan with them. Getting the buy-in from town-residents, especially those living within the study area, right from the beginning of the process was critical for the overall success of the plan.

To initiate discussions, and to have a meaningful dialog at the start of the design charrette, three distinct framework ideas were deliberated. These framework ideas evolved into three distinct scenarios (see next page for graphics) ranging from –

- Primarily low-density residential development around the planned mall
- Mix of civic and institutional uses, with some residential development, around the planned mall
- Mix of major employment (primarily office), civic, mix of residential (ranging from urban to single family residential) around the planned mall

Over 200 residents, who participated in the three-day charrette, created more scenarios, which were different renditions of those discussed above. They finally settled on the one that had a set of intense uses, in the form of office, civic, institutional, more retail, and mix of residential, around the planned mall. There was an extraordinary level of consensus behind this 'preferred concept', and almost everybody supported it.

Photo: The three day charrette began with the presentation of three different scenarios to the project advisory committee

Photo: These scenarios were then discussed, altered, and refined in a public workshop setting with the Town residents

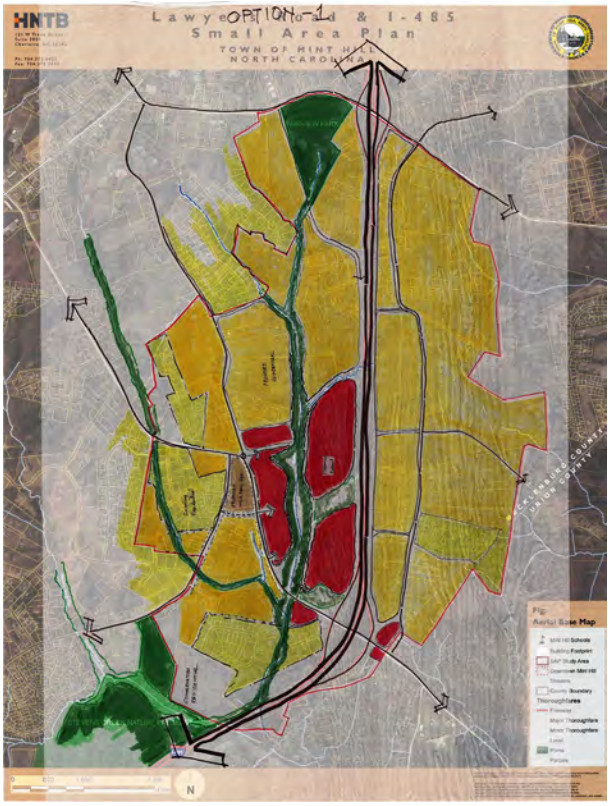



Figure 8: Option 1 Graphic: Primarily low-density residential development around the planned mall

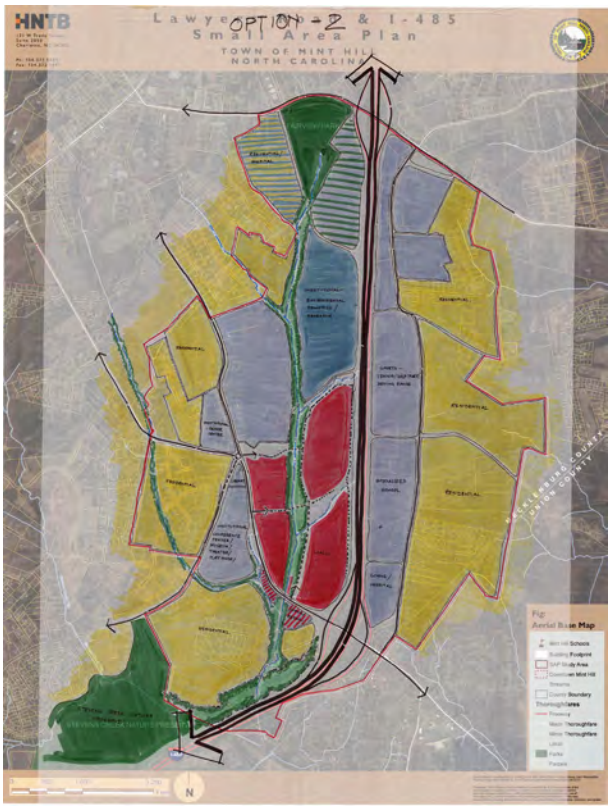



Figure 9: Option 2 Graphic: Mix of civic and institutional uses, with some residential development, around the planned mall

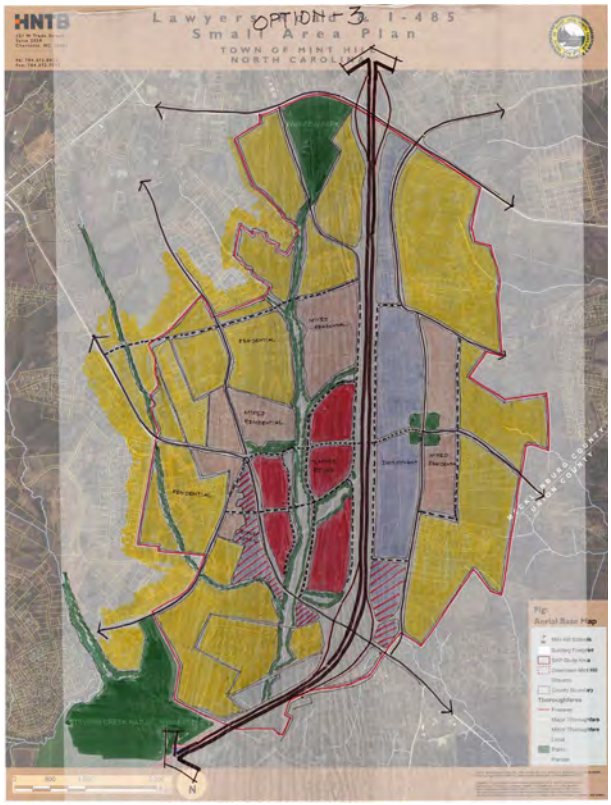



Figure 10: Option 3 Graphic: Mix of major employment (primarily office), civic, mix of residential (ranging from urban to single family residential) around the planned mall

Figure 11 on page 52 shows the preferred concept that came out of the 3-day charrette. Figure 12 on page 53 shows the arrangement of land uses for this concept.

Having a clear and well supported vision is important for any plan, but it needs to be appraised against the reality of market demand and the desire of the community to work towards its realization. To understand the demand over the next 20 years for the various types of uses, a detailed market analysis was conducted. A detailed description of this market demand is located in the preceding section and in Appendix C. The results of this market demand analysis were assessed against the preferred concept plan that emerged from the three-day design charrette. It became clear that the SAP study area can reasonably expect to receive some residential, some additional retail, and some employment based on past trends. However, to realize the vision created in the preferred concept, the Town will need to take a proactive approach in marketing and recruiting a major employer. This choice – to accommodate moderate growth as espoused by the market demand versus proactively recruiting a major employer into the study area - was presented to the Town leadership and the advisory committee.

After getting agreement from the advisory committee and town leadership, and providing a rational basis for decision making, a detailed set of analyses was conducted to understand the impact of the preferred concept on various aspects such as fiscal, traffic, and land use. The preferred concept was also refined to ensure the accuracy of the above mentioned analysis.

Photo: Hands on exercises were conducted where town residents voiced their opinions about nature, scale, and design of growth and development

Photo: Three consecutive public workshops were conducted on the evening each day to discuss progress and seek input from the public


Figure 11: After three public workshops on each day of charrette and constant refinement of initial scenarios, a preferred concept emerged


Figure 12: Land Use distribution of the preferred concept.

Furthermore, in order to compare the fiscal, traffic, and land use impact of the preferred concept on the SAP study area, two other profiles were considered. It is important to note that the public support and consensus was behind the preferred concept, and that use of other profiles was purely to provide rational basis for comparison. All three profiles, including the preferred concept, were –

- Current state – This scenario assumed roughly 770 residential units

- Market Demand - This scenario assumed roughly 1500 residential units, the planned mall, roughly 43,000 sq ft of additional retail, and roughly 82,000 sq ft of office

- Employment Center (Preferred Concept) – This scenario assumed roughly 1500 residential units, planned mall, roughly 200,000 sq ft of additional retail, and 1,250,000 sq ft of office

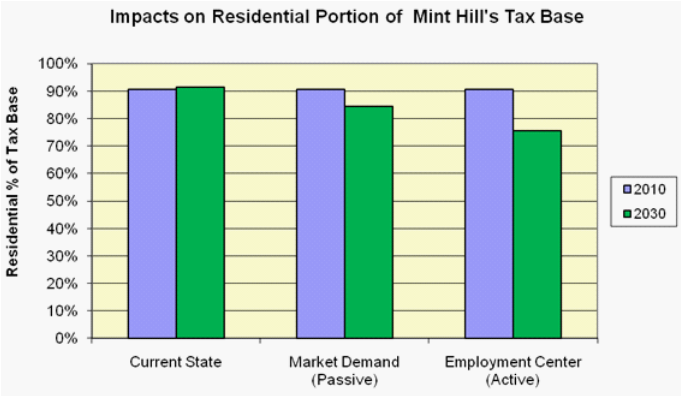



Figure 13: This graph shows expected percentage of residential portion of Mint Hill's tax base for the three scenarios. The green bar shows percent residential tax base of all three profiles in 2030. As per the graph, tax burden on residential uses is least for "employment center" profile.

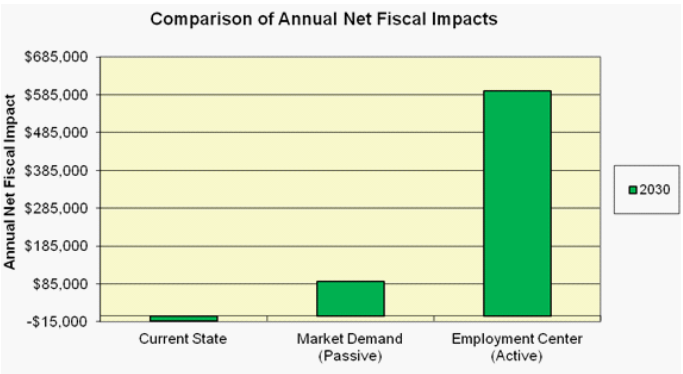



Figure 14: A comparison of annual net fiscal impact for the three profiles. As per the graph, the Town will have slightly negative net fiscal impact for the "current state", and roughly $600,000 of positive net fiscal impact for the "employment center" profile. Net fiscal is the difference between the revenue generated by the proposed uses and the expenses incurred to serve those uses.

## FISCAL IMPACT ANALYSIS

The purpose of conducting a detailed Fiscal Impact Analysis was to understand how much facilities and growth patterns in the preferred concept plan will affect the cost of public facilities and personnel and impact the Town revenues. The fiscal impact assessment addressed the cost of public facilities to serve current and projected demands, analyze costs associated with staffing and operating new facilities, and analyze the revenue generating potential from development of planned uses under a build-out scenario. A detailed description of the Fiscal Impact Analysis can be found in Appendix D. A summary of this analysis is outlined in this section.

In 2010, approximately 91% of the town's real property tax base is residential. Increasing commercial and office properties eases the town's dependence on residential property taxes. As shown in Figure 13, the Employment Center profile (Preferred Concept) provides the greatest diversification of the tax base and decreases the residential portion from 91% to 76%.

The Employment Center (Preferred Concept) also creates the most significant net annual fiscal benefit. Whereas the Current State produces a breakeven net annual impact, the Market Demand profile generates an annual net positive impact of $91,000 while the Employment Center (Preferred Concept) generates an annual net positive impact of $596,000.

## TRAFFIC IMPACT ANALYSIS

The purpose of the traffic impact analysis was to understand the impact on future traffic patterns due to the set of uses proposed in the preferred concept. It is important to keep in mind that growth and development is expected to happen within the SAP study area and beyond. This expectation is supported by the Regional Travel Demand model, which is created and maintained by Mecklenburg Union Metropolitan Planning Organization (MUMPO). This Regional Travel Demand Model assigns future vehicular trips based on recent trends, zoning and land use regulations, upcoming developments that are in the pipeline, modal-splits, and long term growth based on census trends.

Since the SAP study area borders one of the fastest growing counties in the state, and is part of a growing area itself, the traffic through the study area is expected to increase due to the overall growth of the area surrounding the SAP study area. This growth means that the existing roadway system will be burdened with additional trips in the future, even without any significant development around the planned mall site. The preferred concept will add more trips on the existing roads, but these additional trips will be only slightly more than the additional trips on these roadways due to the natural growth in the surrounding areas. This is illustrated in the two graphs for the two major roads in the study area – Lawyers Road and Fairview Road (Hwy 218).

Figure 15 shows the projected traffic on the two roads for different profiles discussed before. Number of vehicles per hour for Current State is shown in blue. Increase in number of vehicles per hour for

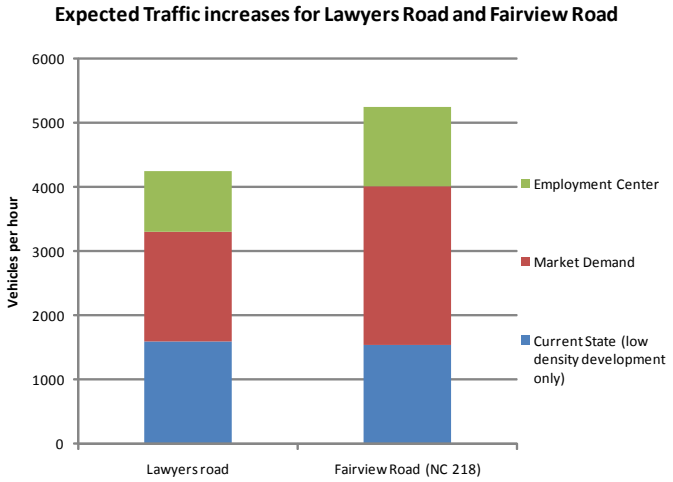



Figure 15. Expected traffic increases at two locations for each of the three scenarios.

Market Demand profile is shown in red, and, increase in vehicles per hour due to Employment Center profile is shown in green. This figure illustrates that even though the Employment Center profile will increase the number of vehicles on both of these major thoroughfares, it is only marginally more than increase in traffic due to the overall growth in the SAP study area.

For a detailed description of the Traffic Impact Analysis, please see Appendix E.

## LAND USE IMPACT ANALYSIS

As discussed before, proposed land uses for all three profiles were markedly different. The Current State profile assumed roughly 770 residential units around the planned mall. The Market Demand profile assumed 1,500 residential units, 43,000 sq ft of retail in addition to the planned mall area, and office space of roughly 82,000 sq ft. The Employment Center profile, which is also the preferred concept, assumed 1,500 residential units, 200,000 sq ft of retail in addition to the planned mall area, and 1.25 million sq ft of office space. Clearly, the intensity of uses will increase from the Current State profile to the Employment Center profile.

This increase in intensity will have an impact on the fiscal make up of the Town and future traffic conditions, as discussed above. However, it will also shape quality of life for current and future town residents. Having primarily residential development around the planned mall, as assumed in the Current State profile, will not provide opportunities for future employment, any mix of uses, civic amenities, nor an ability to live, work, and play in close proximity to each other. On the other hand, a mix of uses, especially employment opportunities close to the mall, as discussed in the Employment Center profile, will provide opportunities to live and work in close proximity and enjoy the shopping experience offered by the planned mall.

One of the concerns expressed by many during the SAP planning process was how the preferred concept (Employment Center profile) will affect the growth and development of downtown Mint Hill. Many viewed downtown Mint Hill as being in its infancy, but growing in the right direction. The Town, during the entitlement process of approving the planned mall, made sure that none of the uses proposed in the mall will directly compete with future uses that could come to the downtown. This was done to protect the vibrancy and viability of downtown Mint Hill. The layout of the Preferred Concept is based on the same premise that downtown Mint Hill should not be adversely affected by any new development in the Town. To ensure such balance is maintained, proposed uses in the Preferred Concept are selected that will typically not come to downtown settings. Office parks, public schools, a conference center, and a YMCA type facility are all suited for the area adjacent to the planned mall and should not affect the growth of downtown Mint Hill. In many ways, having a significant regional destination near downtown Mint Hill can provide more exposure to the town center.

## PROCESS AND ANALYSIS SUMMARY

After analyzing the impacts on fiscal composition, traffic conditions, and land use, the advisory committee and residents of the Town decided to move ahead with the Preferred Concept. The Preferred Concept provided the balance between attracting jobs and employment to the Town without attracting the excessive retail development that typically follows a major retail destination such as a regional mall.

The Preferred Concept also provided an opportunity to diversify the Town's tax base by taking some of the tax burden from residential development and distributing it over proposed office and non-residential development.

The next section will describe the Final Small Area Plan that emerged from the Preferred Concept along with the specific recommendations and implementation strategies to bring the plan to fruition.

# Chapter 5: Small Area Plan

# Chapter 5: Small Area Plan

## GOALS

Based on the input received during stakeholder interviews, advisory committee meetings, the three-day charrette, and a detailed investigation of issues and opportunities following goals were developed for the Lawyers Road & I-485 Small Area Plan:

- Integrate the Mall with surrounding uses - do not let it become an island
- The development in the SAP study area should complement downtown and should not compete with it
- Retail uses in the Small Area Plan study area should not be designed as strip malls, with large parking lots in the front and buildings in the back
- Development along Hwy 218 should be managed to complement the future vision for the Small Area Plan
- Recognize environmental barriers and challenges and work within the framework of existing regulations to protect these resources
- Manage uses around the mall to reduce the impact on the environment
- Connect the Mall to parks via bike trails and greenways, connect to the Carolina Thread Trail (CTT)
- Separate destination traffic from local traffic

## SMALL AREA PLAN DESCRIPTION



The initial premise of the Small Area Plan was to anticipate future development patterns around the proposed mall and to manage this growth so that it does not get out of control. This reaction was understandable. It has happened in many municipalities, especially small towns, that when a big regional attraction such as a retail mall is planned, other retail uses are attracted to the area and flood the landscape.

However, as the planning process went through a series of public involvement steps, including 3-day design workshops, public meetings, and a series of advisory committee meeting, a different vision started to emerge for the study area. The planning process of the plan development, as described in the previous section, was truly collaborative and informed the final outcome of the plan. Many residents started to see the potential of this area beyond just a regional retail center. There was an extraordinary level of consensus about the vision of the SAP study area, which led to the final plan discussed in this section. The following pages describe major components of the SAP in words and pictures.

Photo: Low Density Residential is integrated with the surrounding development through appropriate transition of use and form.

Photo: Greenways are heavily used when they connect destinations - whether residential, retail, or civil land uses - and when they connect to regional networks. They can help reduce habitat fragmentation when designed inside the required environmental buffers and corridors.

Photo: Open Spaces can come in variety of form. These spaces can be a neighborhood park, a urban plaza, a trailhead, etc, and provide a safe gathering spot along car, bike, and pedestrian transportation corridors.

Bird's eye view rendering of the Small Area Plan

HNTB
121 W Trade Street
Suite 2050
Charlotte, NC 28202

Ph: 704.372.8020
Fax: 704.372.7097

# Lawyers Road & I-485 Small Area Plan

## TOWN OF MINT HILL NORTH CAROLINA


Source: Mecklenburg County GIS, Union County GIS, Town of Mint Hill, Mecklenburg Union Metropolitan Planning Organization (MUMPO), North Carolina Department of Transportation (NCDOT)

Disclaimer: This GIS data is deemed reliable but provided "as is" without warranty of any representation of accuracy, timeliness, reliability or completeness. This map document does not represent a legal survey of the land and is for graphical purposes only. Use of this data for any purpose should be with acknowledgement of the limitations of the data, including the fact that the data is dynamic and is in a constant state of maintenance, correction, and update.

The planned mall in the SAP study area could be complemented by a major employment center, which will fill the gap for such use between Ballantyne and the University City area. The SAP study area enjoys good connectivity to the regional interstate system, and has available land resources to accommodate a regional mixed use center. This regional mixed use center will complement downtown Mint Hill, which is transitioning into a Town Center. However, for it to become a true regional center, it demands careful thought about the form and design of future development. Future retail in the form of strip development (parking in the front, with isolated buildings at the back) should be discouraged, and development should be integrated with surrounding uses through continuity of form, scale, and design features.

HNTB
121 W Trade Street
Suite 2050
Charlotte, NC 28202

Ph: 704.372.8020
Fax: 704.372.7097

# Lawyers Road & I-485 Small Area Plan

## TOWN OF MINT HILL NORTH CAROLINA

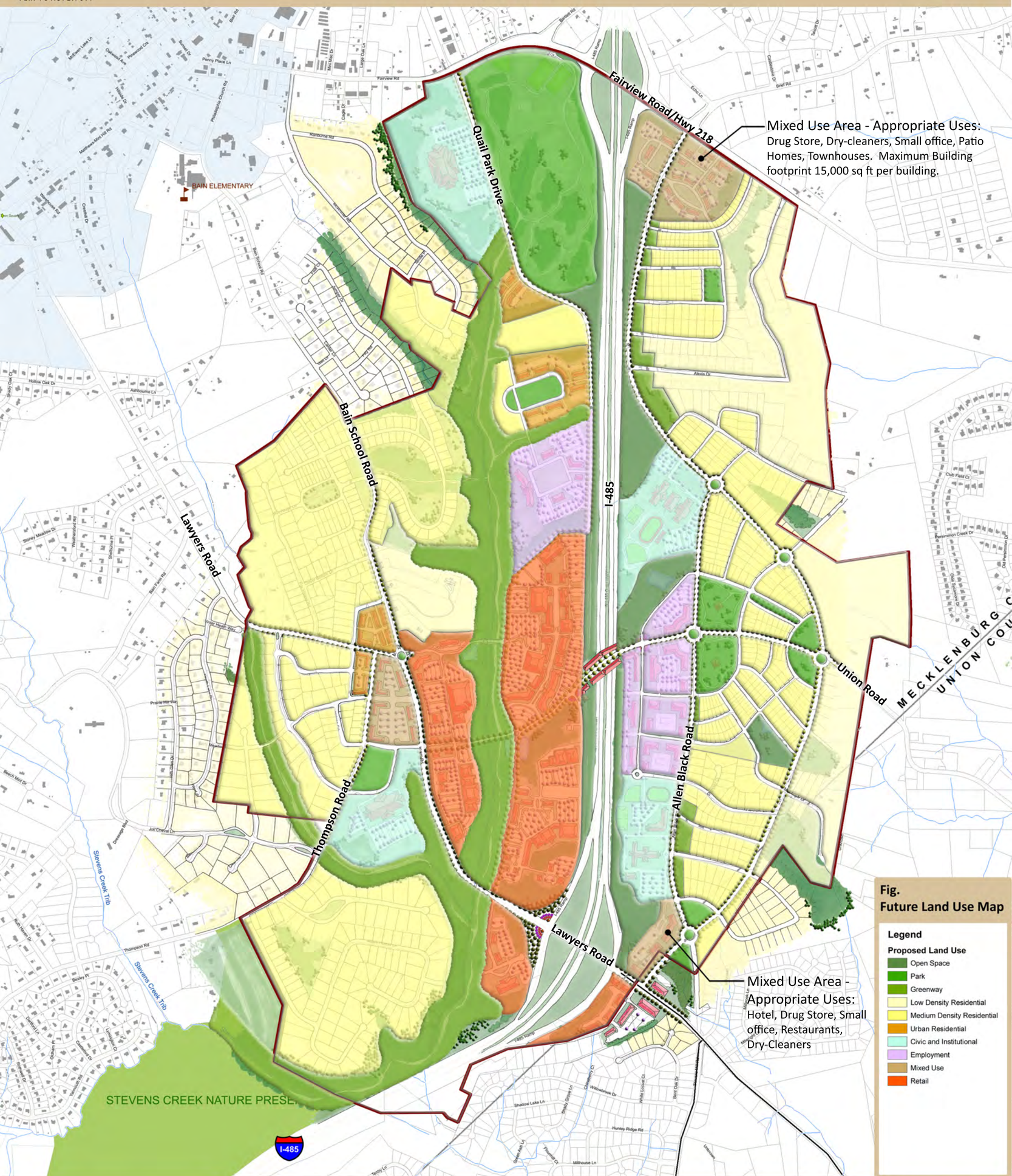



**Fig.**
**Future Land Use Map**

**Legend**

**Proposed Land Use**

- Open Space
- Park
- Greenway
- Low Density Residential
- Medium Density Residential
- Urban Residential
- Civic and Institutional
- Employment
- Mixed Use
- Retail

0 800 1,600 3,200 Feet

N

Source: Mecklenburg County GIS, Union County GIS, Town of Mint Hill, Mecklenburg Union Metropolitan Planning Organization (MUMPO), North Carolina Department of Transportation (NCDOT)

## A STRONG REGIONAL CENTER

Strategically located between two major suburban employment centers – Ballantyne in south Charlotte and University City in northeast Charlotte – the SAP study area also adjoins the fastest growing County in the state – Union County. Most of the residents of Mint Hill and Union County currently commute to one of the many employment centers in Mecklenburg County – Ballantyne, South Park area, University City area, or Charlotte Center City. It is therefore no surprise that a regional retail mall is proposed for this area because an increase in retail opportunities will be the foundation for another employment center for the residents of Mint Hill and Union County to the east.

Good regional access through the I-485 beltway and availability of land, coupled with the arrival of a regional mall and major employment center will position the SAP study area to become a mixed use center that will be unique in the region. It will place Mint Hill as one of the major destinations in the Charlotte region. By creating a regional mixed use center, rather than just a regional retail use center, this plan addresses one of the goals of the study – integrate the planned mall with its surrounding uses, and not let it become an island.

It is therefore envisioned that the SAP study area could complement the future retail mall with a major employment center that fills the gap for such use between Ballantyne and the University City area, enjoys good connectivity to the regional interstate system, and is mindful of available land resources. Since the SAP study area is envisioned as a regional mixed use center, it will complement downtown Mint Hill, which is envisioned as the Town Center. This will address another goal of the study - development in the SAP study area should complement downtown and should not compete with it.

However, for it to become a true regional center, it demands careful thought about the form and design of future development. Future retail in the form of strip development (parking in the front, with isolated buildings at the back) should be discouraged, and development should be integrated with surrounding uses through continuity of form, scale, and design features.

Photo: Employment Center such as Coliseum Center in Charlotte could be appropriate for the location of office use shown east of I-485 and connected to the mall through Union Road extension

Photo: Employment Center such as Morrocroft Village in South Park area of Charlotte could be appropriate for the location of office use shown west of I-485 and north of the Mall

## PRESERVATION OF NATURAL RESOURCES USING STORMWATER UTILITES

The SAP study area falls within one of the most environmentally sensitive basins in the region – Goose Creek basin. Preservation of natural resources that will sustain the life forms within the network of creeks and streams is therefore important. All creeks and streams within the study area are protected with a Mecklenburg County mandated buffer of 200 feet on either side of perennial streams and 100 feet on either side of intermittent streams. Open space is further protected in the form of parks and greenways. One of the goals identified during the plan process was to connect the planned mall to parks, downtown, and other destination uses via a network of greenways and trails. The plan identifies such connections and creates more opportunities for recreational uses by providing for additional neighborhood and community parks.

However, buffers and open space alone may not be enough to control stormwater runoff to the creek. Goose Creek is already a very flashy creek, rising quickly during storm events in the vicinity of 8-9 feet above normal flow (as measured downstream of the study area by the USGS gauging station 02124692 at Fairview - see "Surface Water, Daily Data, Search by Site Number" at http://waterdata.usgs.gov). This sharp rise and fast decline of river levels indicate that most of the stormwater from rain events is running off directly into creeks and streams (instead of filtering into the ground), taking with it pollutants in the form of phosphorus, nitrogen, heavy metals, etc. The addition of impervious area associated with urban development will adversely affect the discharge during storm events, increasing the volume and degrading the quality of stormwater running off from the impervious areas in the study area.

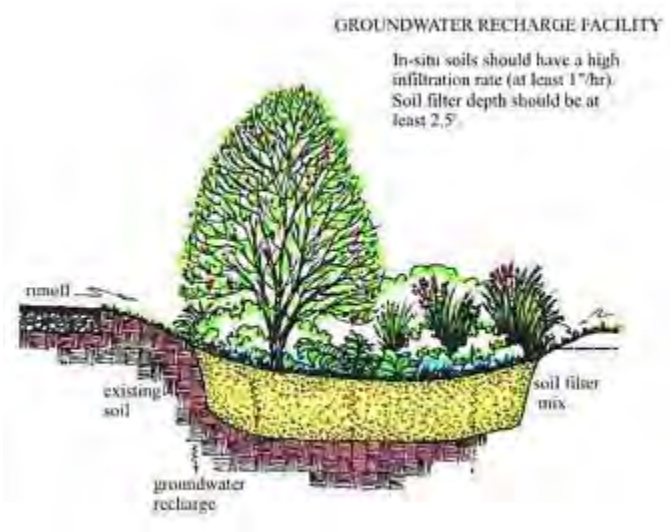
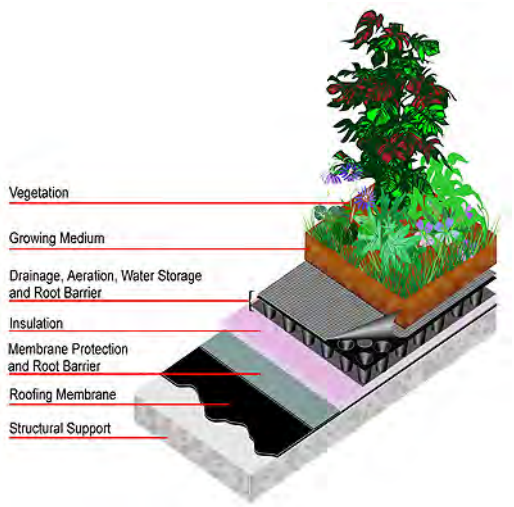



Diagram: Bioretention cells can either filter or filter and capture stormwater runoff. They use plants and layers of porous media to reduce quantity and improve the quality of stormwater runoff; connecting directly to existing stormwater structures. Low Impact Development Center, Inc., Beltsville, MD.

Photo: Bioretention cells look like simple, aesthetically pleasing plantings from the casual observer, however, they are only the visible topping of a 2-3 foot porous medium installed directly below. The exact size and capacity of these structures are engineered based on the intensity and duration of rain events in the study area. Low Impact Development Center, Inc.

To mitigate the effects of urban development, Low-Impact Development should be encouraged. LID is a term used to refer to the use of on-site, small scale natural features to manage stormwater runoff. When water quality or quantity standards are not met, these structures are used in conjunction with traditional Stormwater Best Management Practices (BMPs) like detention ponds. LIDs are engineered to capture and store volumes of water using clusters of water-tolerant plants. The collected water improves infiltration and permeability of the existing soil and augments storage capacity of a rain event. Plants use the water detained in these structures to grow, thereby reducing the volume of stormwater and pre-treating it before it is discharged into traditional stormwater infrastructure. Since plants can be selected in various heights, colors and textures, and additional plantings can be used to disguise necessary concrete structures, the LIDs improve urban design aesthetics when they are integrated into the areas reserved for required shade trees and around streets, sidewalks, bike lanes, and parking lots.

Typical structures include bioretention cells or "rain gardens"; bioswales, green roofs, and pervious concrete. Bioretention cells simply retain water in strategic locations around a building or in low lying areas that would have standing water. Bioswales can be grassed or planted with a variety of shrubs and trees and slow water traveling in a linear direction towards drain inlets. Bioswales can function well along streets, bike lanes, sidewalks, and between rows of parking. Green roofs can capture an enormous amount of stormwater simply because flat roofs take up a lot of area. They can provide additional open space to building occupants and are most successfully accomplished by planning for additional soil weight during building design and construction. Pervious pavement can be used for parking lots to cut down on the high volume of stormwater generated during a rain event.




Green roof diagram: green roofs can capture and treat a large amount of stormwater in an area, especially on flat roofs on commercial buildings that take up a lot of real estate. Green roofs are most successful when they are specified early in a building's construction, to make sure the additional weight from soil and plant material is accounted for in building loads. Square footage in a green roof can be added to open space requirements for LEED certified projects. Low Impact Development Center, Inc.

Photo: Pervious concrete can infiltrate large amounts of water. Parking lot in Charlotte, NC, first of its kind in the Piedmont of North Carolina. Designed by Estes Design, Inc., researched and monitored jointly by Estes Design Inc. and UNC Charlotte.

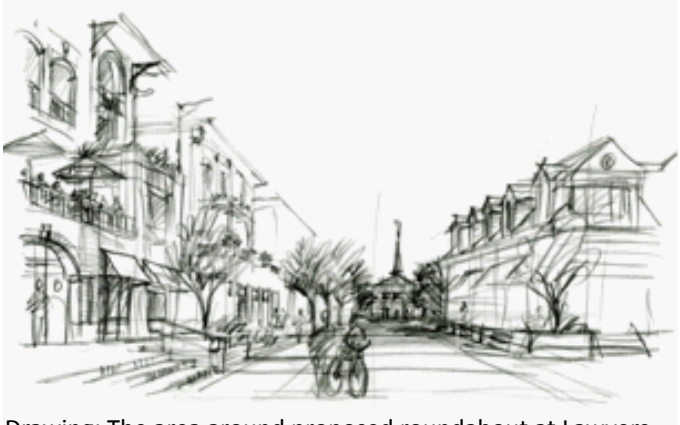
## INTERCONNECTED TRANSPORTATION SYSTEM

The SAP envisions multiple means of study area ingress and egress for all modes of transportation. The plan suggests two major connections to the proposed mall site:

1. Extension of Union Road from Union County to the mall, connecting the two sides of I-485 via a vehicular bridge over I-485

2. Extension of Quail Park Drive, connecting Hwy 218 to the mall and to Lawyers Road

These two major connections, in addition to access from Lawyers Road, will provide alternate regional access to the proposed mall from other directions. Other small connections will help distribute local traffic and provide alternate ways to access future uses in the SAP study area. These include extension of one of the mall entrances from Lawyers Road to Thompson Road, re-alignment of Allen Black Road, and extension of Stevens Mill Road from Lawyers Road to Fairview Road/Hwy 218. Other transportation improvements proposed for the SAP are the interconnected systems of streets that form a grid, and a network of greenways, which will allow travelling through the SAP study area conveniently for non-motorists.



Drawing: The area around proposed roundabout at Lawyers Road and Bain School Road could develop into a mix of residential (townhomes), live work units, and small scale offices

## VIBRANT RESIDENTIAL NEIGHBORHOODS

According to the Demographic and Economic Profile, the SAP study area has the potential for more dense development than it currently contains. These forecasts suggest that an increase in owner-occupied housing units, along with the increase in residents between ages 65-74 years old, will provide opportunities for potential market support for new housing oriented to new, high-quality residential development and age-restricted housing. This mixed housing type will not only provide easy access to amenities such as shopping, parks, and open space for aging and young residents living in close proximity, but also provide great access to employment opportunities for working residents.

This influx of various types of residential households (retired, young, singles, and families with kids) within and surrounding the SAP study area is critical to creating vibrant residential neighborhoods. Such increase in population demands a careful thought about the form and character of new residential neighborhoods. Future residential neighborhoods therefore need to respond to the concept of total livability, where residential units are woven with parks and public spaces; are within walking distance from shopping and employment destinations; are diverse and accommodate various demographic groups; and are connected with each other instead of isolated pods of development.

Drawing: Design of residential uses in the Small Area Plan will be important to reinforce a true mixed-use destination. Mixed residential units should be promoted within residential uses, connected to surrounding uses via a network of sidewalks and greenways.

Photo: Providing variety of housing choices such as townhomes and patio homes at key locations will provide good transition between non-residential uses such as planned mall and low density single-family residential.

Photo: Residential development that provides ample open space create amenities for its residents and preserve environmentally sensitive areas.

## FISCAL DIVERSITY

As discussed under the Process section, one of the considerations in developing a detailed SAP was to understand the fiscal impact of the proposed plan. After a detailed estimate of cost of services (fire, police, schools, etc) and public facilities to serve current and projected demand, and analysis of revenue generation from proposed development, it was observed that the Town will have a net income of roughly $600,000/yr (in 2010 dollars). This diversity in tax base will not only help Town's budget, but also provide employment opportunities to the Town's residents. Many older and younger residents voiced a concern that they have to leave the Town due to lack of opportunities that will allow them to stay close to their families. Creating a regional mixed use center will boost Town's Jobs-to-Housing ratio and bring it more in line with other small towns in Mecklenburg County.

# Chapter 6: Recommendations and Implementation Strategies

# Chapter 6: Recommendations and Implementation Strategies



Creating a plan is the first step towards implementation, but a longer commitment is needed to bring this plan to fruition. Moreover, this plan, like all other plans, needs constant monitoring. Since demographic, economic, and physical conditions are constantly changing, this plan should adapt to such changes and position this area to fulfill the aspirations of the community. This section will outline specific recommendations and associated implementation strategies, which will be the vehicle to move this plan forward.

## BUSINESS RECRUITMENT RECOMMENDATIONS

Recommendation 1: Create an Economic Development department in the Town of Mint Hill to seek a major employer for the SAP study area

Recommendations 2: Partner with regional agencies such as Charlotte Regional Partnership to promote the study area as a future location of a major corporate employer

## NATURAL ENVIRONMENT RECOMMENDATIONS

Recommendation 1: Continue to enforce mandatory buffer requirements along perennial and intermittent creeks and streams

Recommendation 2: Continue to adhere to Mecklenburg County Land Use and Environmental Services (LUESA) requirements of open space based on Built Upon Area (BUA)

Recommendation 3: Encourage private development to adopt Best Management Practices (BMPs) and promote Low Impact Developments (LIDs) to protect the environmentally sensitive Goose Creek watershed. Encourage the integration of these structures with stormwater utilities and also with desirable urban design aesthetics.

## LAND USE RECOMMENDATIONS

Recommendation 1: Use the Small Area Plan's future land use designations to respond to zoning change requests

Recommendation 2: Keep residential zoning around the mall where indicated in the Small Area Plan

Recommendation 3: Promote cluster residential development as an alternate to traditional subdivision development

> Implementation Strategy 1: Provide incentives in the form of density bonuses to promote cluster residential development

Recommendation 4: Promote mixed residential development

> Implementation Strategy 1: Provide flexibility in residential uses by allowing a mix of residential types by varying lot sizes etc.

Recommendation 5: Future land uses should account for public and civic uses, such as parks, churches, schools and other recreational facilities, such as a YMCA

Recommendation 6: Update the plan every five years to respond to changing economic conditions

## URBAN DESIGN RECOMMENDATIONS

Recommendation 1: Identify opportunities for aesthetic enhancements

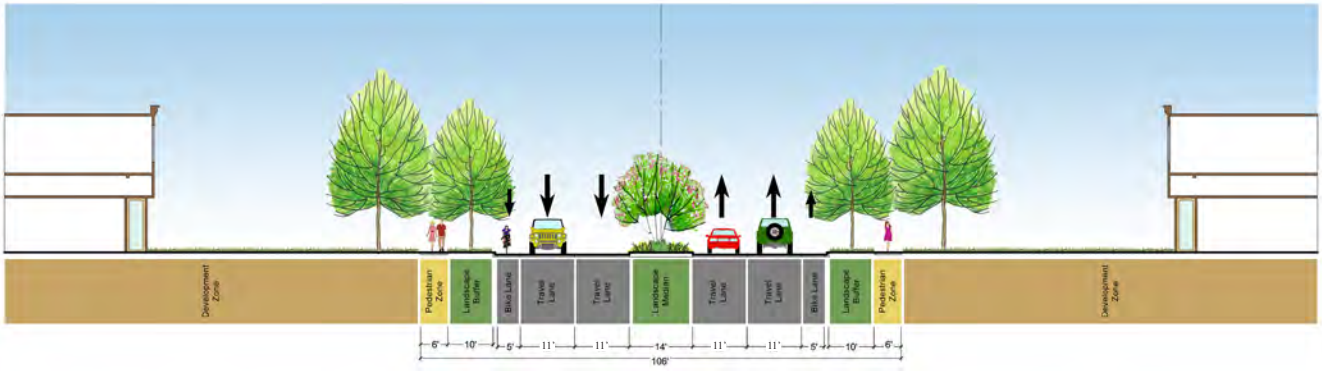
Implementation Strategy 1: The following locations are identified for aesthetic improvements. These locations are either potential gateways into the Small Area Plan study area, or places within the study area that require emphasis on placemaking.

- Lawyers Road interchange with I-485
- Fairview Road interchange with I-485
- Intersection of re-aligned Allen Black Road and Union Road

Drawing: Landscaping improvements, such as shown for Greenville Interchange on I-30, will help define Lawyers Road interchange area as a gateway to the community.

Photo: Architectural improvements to the bridge at Lawyers Road interchange will also help define it as a gateway to the community.

Recommendation 2: Coordinate with private developers, NCDOT, and MUMPO to build roadways with enhanced streetscape (refer to suggested street cross-sections)




A boulevard's primary function is to maintain vehicular movement, connecting to key destinations in an area, and providing access to lower level streets. Development and Land Use along these streets can be mixed and should be set back from the street. There are two lanes in each direction which are 11 feet wide. Bike lanes, medians, bus lanes, and turn lanes are recommended. Sidewalk minimum width is 6 feet. On street parking, sidewalk amenity zone, shoulders, and curb extensions are all inappropriate in this context. Green infrastructure is encouraged in the median and on the roadside.

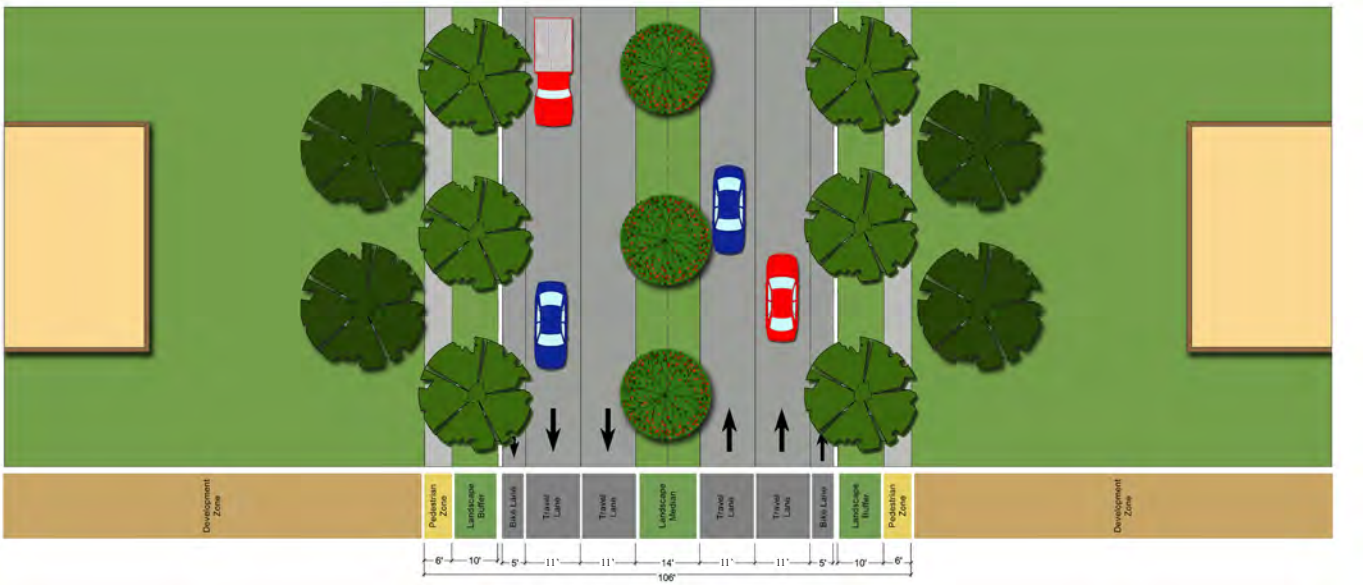
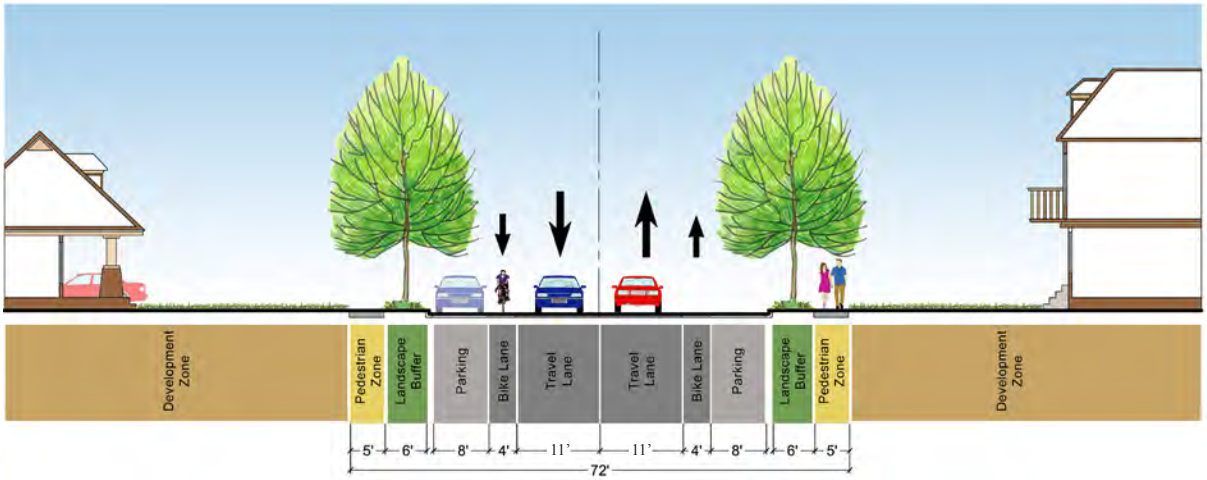



Diagram: Boulevards - typical plan and section.
Example roads: Lawyers Road, Fairview Road




The primary function of a minor collector is to collect residential traffic. These streets are the primary access to neighborhoods. Development is oriented along adjacent street types. Land Use is single or urban residential. These streets post 25 miles per hour speed limits and utilize traffic calming elements. There are typically two 11 foot lanes in a minor collector, one in each direction, and also a minimum four foot wide bike lane on each side. Medians can also be used to separate travel lanes; Colony Road in Charlotte is an example. Outside of the bike lane there can be 8 foot parallel parking lane and a minimum 5 foot sidewalk on at least one side. Transit routes like bus stops are encouraged. Shoulders are inappropriate in this context. Green infrastructure is recommended in the roadside and as pervious pavement in the parallel parking area.

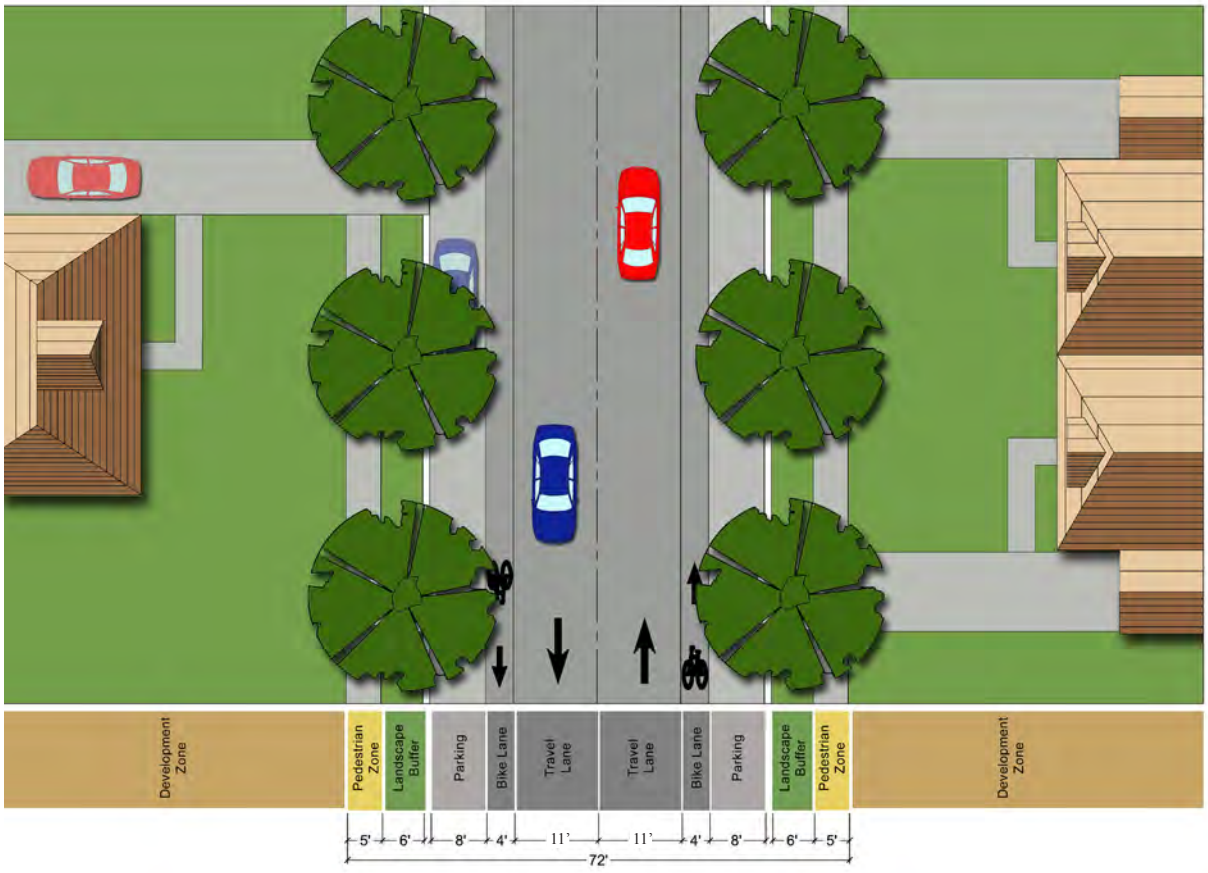
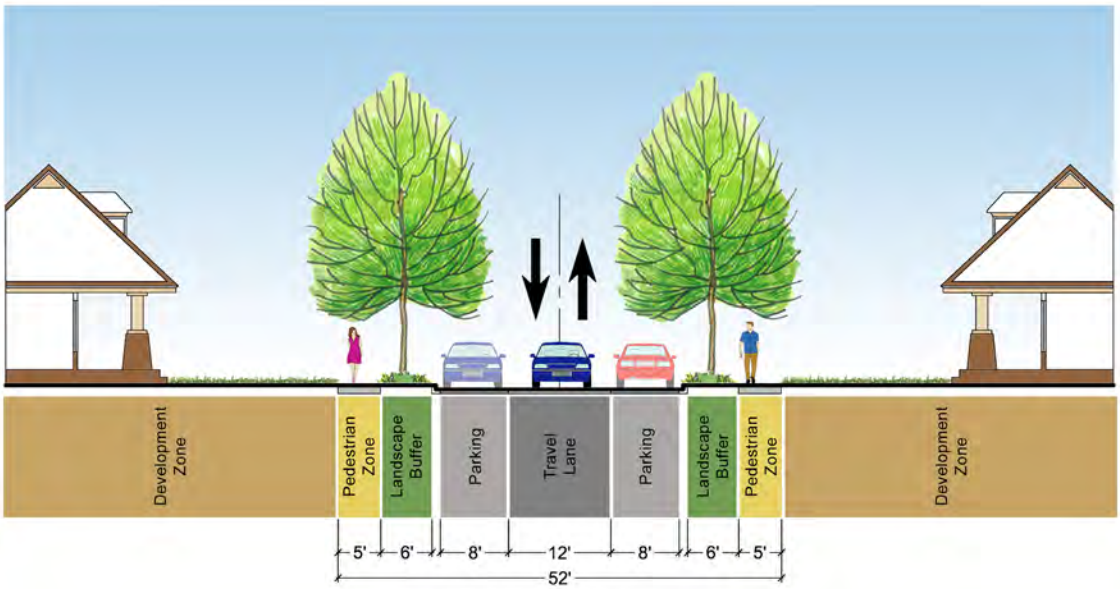



Diagram: Minor Collector - typical plan and section.
Example roads: New Collector Road proposed at east of Allen Black Road




A Neighborhood Yield street is appropriate for local roads within a neighborhood where less than 50 houses front the street. These streets provide neighborhood circulation and are appropriate for subdivision type development. Land Use on a neighborhood yield street is single or urban residential. One lane at 12 feet wide and two 8 foot wide lanes of parallel, on-street parking is recommended. Sidewalks should be a minimum of 5 feet on both sides and a 5 feet minimum landscape buffer. Traffic calming elements such as pedestrian activities spilling over into the street will keep this road at the posted 25 miles per hour. Inappropriate elements include mass transit, pedestrian refuge, curb extensions, shoulders, bicycle lanes, mid block pedestrian crossings, or medians. Green infrastructure can include pervious pavement in the parking zone or sidewalks, private yard or development-wide bioretention cells and landscaping.

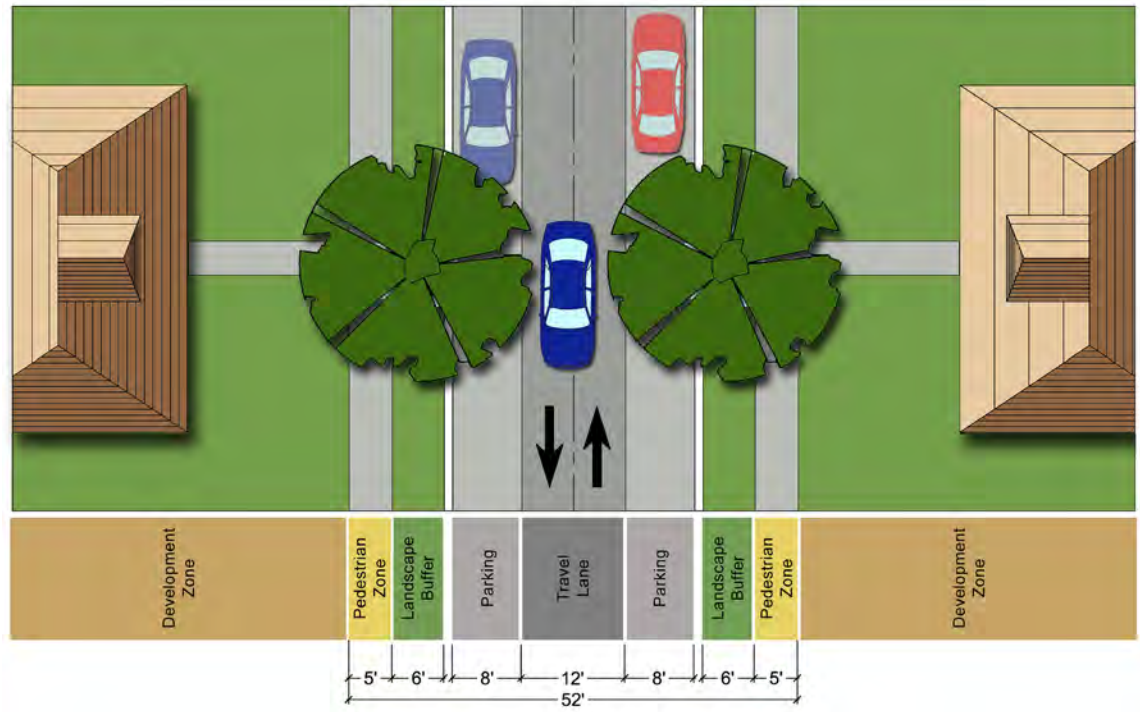
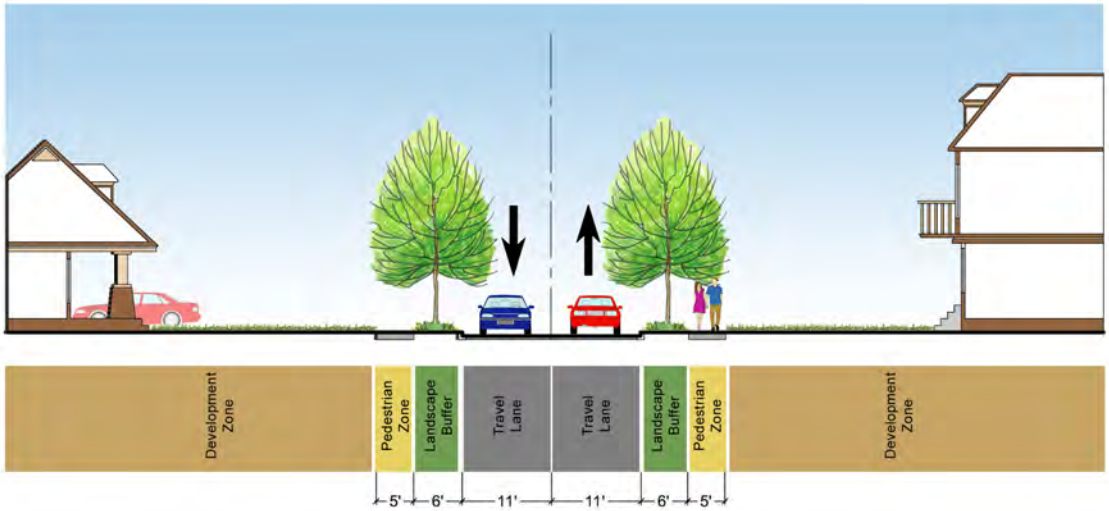



Diagram: Neighborhood Yield Street - typical plan and section.
Example roads: Residential Development east of Allen Black Road.




A Local Road is an alternate for the Neighborhood Yield Street, appropriate for roads within a neighborhood where less than 50 houses front the street. These streets provide neighborhood circulation and are appropriate for subdivision type development. Land Use on a neighborhood yield street is single or urban residential. Two lanes at 11 feet wide is recommended. Sidewalks should be a minimum of 5 feet on both sides and a 5 feet minimum landscape buffer. Traffic calming elements such as pedestrian activities spilling over into the street will keep this road at the posted 25 miles per hour. Inappropriate elements include mass transit, pedestrian refuge, curb extensions, shoulders, bicycle lanes, mid block pedestrian crossings, or medians. Green infrastructure can include pervious pavement in the driveways or sidewalks, private yard or development-wide bioretention cells and landscaping.

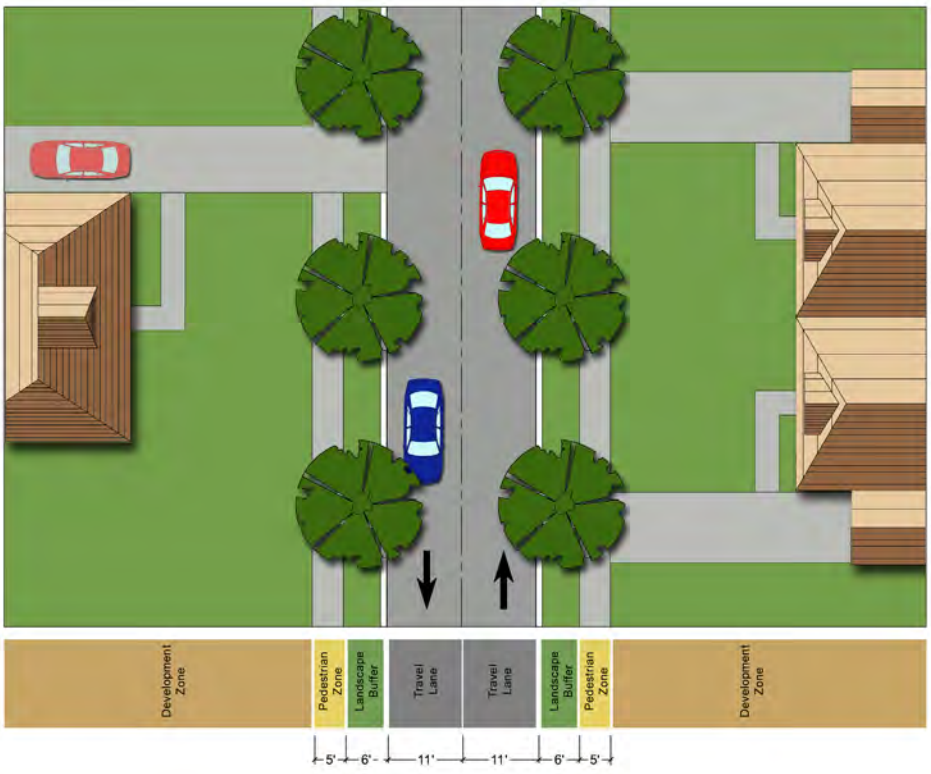



Diagram: Local Road - typical plan and section.
Example roads: Residential Development east of Allen Black Road.

## TRANSPORTATION RECOMMENDATIONS

Recommendation 1: Enhance connectivity by providing multiple points of ingress and egress for the study area.

Implementation Strategy 1: The following roadway connections will assist in regional connectivity to the planned mall:

- An extension of Union Road over I-485 via a bridge into the planned mall will allow traffic from Union County to take an alternate route to Lawyers Road

*o Note: Extension of Union Road over I-485 and into the planned mall will require coordination with MUMPO, NCDOT, FHWA, property owners, and the mall developer.*

- An extension of Quail Park Drive that will connect Hwy 218 to the planned mall will allow traffic from north of Mint Hill and Cabarrus County to take the Fairview Road exit from I-485

Implementation Strategy 2: The following roadway connections will assist local connectivity within the study area:

- Realignment of Allen Black Road will not only create better parcel depth for development, but also allow other local connections, which could be further enhanced through the extension of Stevens Mill Road

- A new road parallel to I-485, east of Allen Black Road, will connect Lawyers Road and Fairview Road and relieve traffic pressure at the intersection of Allen Black Road and 218

- An alternate connection to Countrywood Subdivision from Thompson Road and the subsequent closure of the entrance to the Subdivision from Lawyers Road will provide more convenient access for subdivision traffic.

- A new roadway connection between Thompson Road and Lawyers Road will relieve traffic pressure on the proposed roundabout at Lawyers and Bain School Road, and will provide more convenient access for Thompson Road traffic.

Recommendation 2: Promote alternative modes of transportation

Implementation Strategy 1: Connect Fairview Park to the proposed Stevens Creek Nature Preserve via a greenway along Goose Creek. This greenway will connect parks, residential neighborhoods, offices, mall and shopping destinations, and civic uses.

Implementation Strategy 2: Coordinate with Carolina Thread Trail (CTT) to provide an additional greenway connection - from the mall entrance at Lawyers Road near Goose Creek and along a Goose Creek Tributary to downtown Mint Hill.

Implementation Strategy 3: Provide sidewalks, bike lanes, and multiuse paths along realigned Allen Black Road to promote bike and pedestrian connectivity between employment, residential, civic, and retail uses.

Recommendation 3: Coordinate with MUMPO and NCDOT regarding improvements to some of the key Hwy 218 and Lawyers Road corridors to accommodate additional traffic generated by new uses proposed in the SAP Study area.

## UTILITIES RECOMMENDATIONS

Recommendation 1: Coordinate with Charlotte Mecklenburg Utilities Department (CMUD) on a potential Stevens Creek pump station

Recommendation 2: Encourage the mall developer's participation in a regional solution to the wastewater pump station issue

Recommendation 3: Investigate the location of water/sewer line sleeve under I-485 between Hwy 218 and Lawyers Road to allow for the possibility of a regional lift station at Stevens Creek Nature Preserve instead of a lift station that will service the mall site only; pending the inclusion of Goose Creek basin on the IBT certificate

Recommendation 4: Continue to support the inclusion of the Goose Creek basin in the Inter Basin Transfer (IBT) Act by coordinating with CMUD. This will enable the Town to use McAlpine Wastewater Treatment plant's (WWTP) capacity.

Recommendation 5: Encourage future development and re-development to include Low Impact Development strategies for stormwater management.

# APPENDIX A

## DEMOGRAPHIC MARKET ANALYSIS

*APPENDIX*

AECOM
1101 Connecticut Avenue, NW
Suite 750
Washington, DC 20036
www.aecom.com

202 496 9870 tel
202 496 9877 fax

# Technical Memorandum

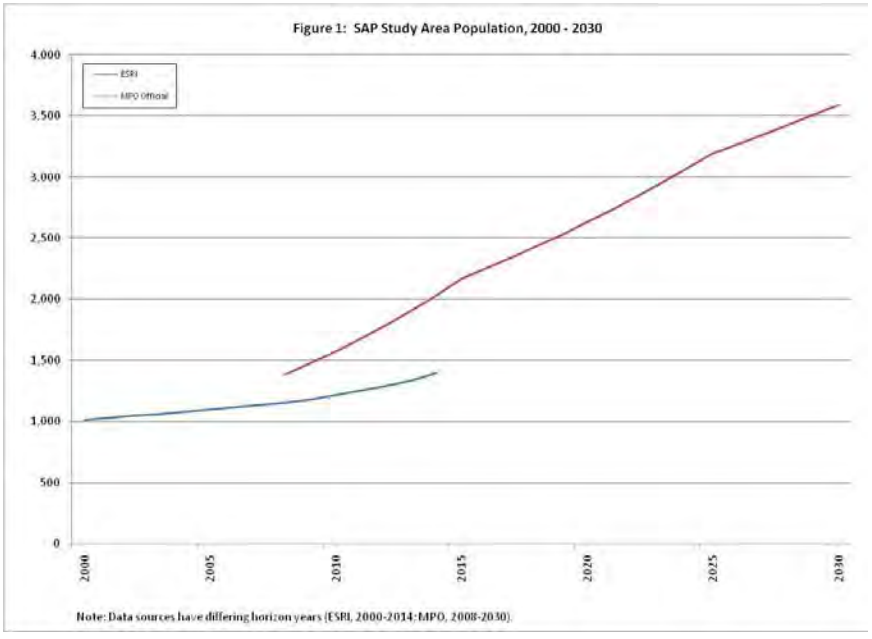
| | |
|---|---|
| To | HNTB |
| Subject | Mint Hill Small Area Plan Demographic and Economic Tables |
| From | AECOM |
| Date | February 16, 2010 |

**Table 1: Regional Population Trends & Projections, 2009 - 2030**

| | | | | | Change: 2009-2030 | | |
|---|---|---|---|---|---|---|---|
| | 2009 | 2015 | 2020 | 2030 | Amount | % | CAGR |
| SAP Study Area | 1,477 | 2,167 | 2,630 | 3,588 | 2,111 | 143.0% | 4.3% |
| CLUP Study Area | 27,603 | 36,414 | 42,440 | 54,548 | 26,945 | 97.6% | 3.3% |
| Mecklenburg County | 913,006 | 1,025,004 | 1,107,668 | 1,268,880 | 355,875 | 39.0% | 1.6% |

CAGR= Compound Annual Growth Rate

Source: Mecklenburg-Union MPO; AECOM, December 2009



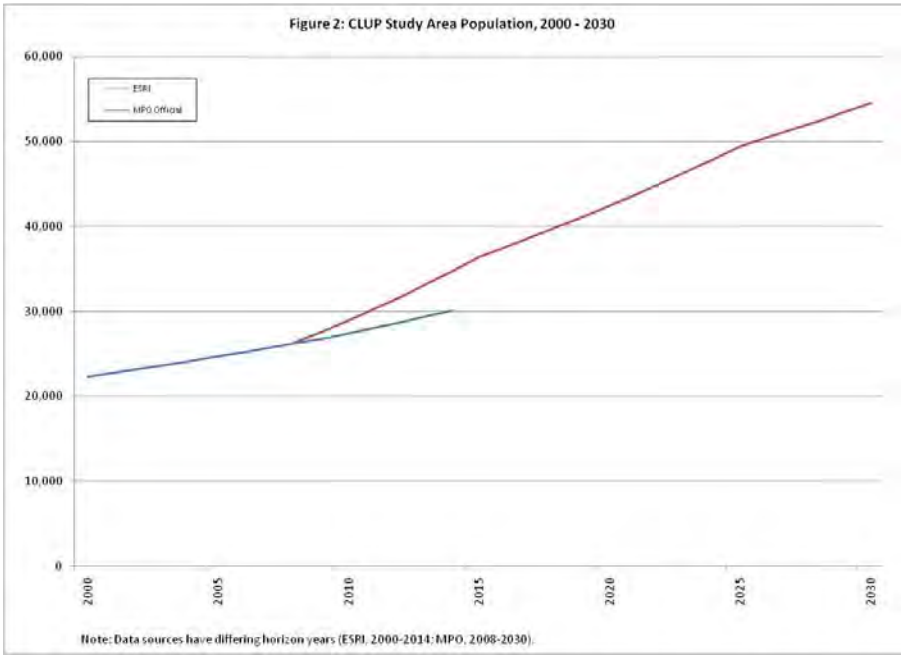


Figure 2: CLUP Study Area Population, 2000 - 2030
60,000
50,000
40,000
30,000
20,000
10,000
0
ESRI
MPO Official
2000
2005
2010
2015
2020
2025
2030
Note: Data sources have differing horizon years (ESRI, 2000-2014; MPO, 2008-2030).

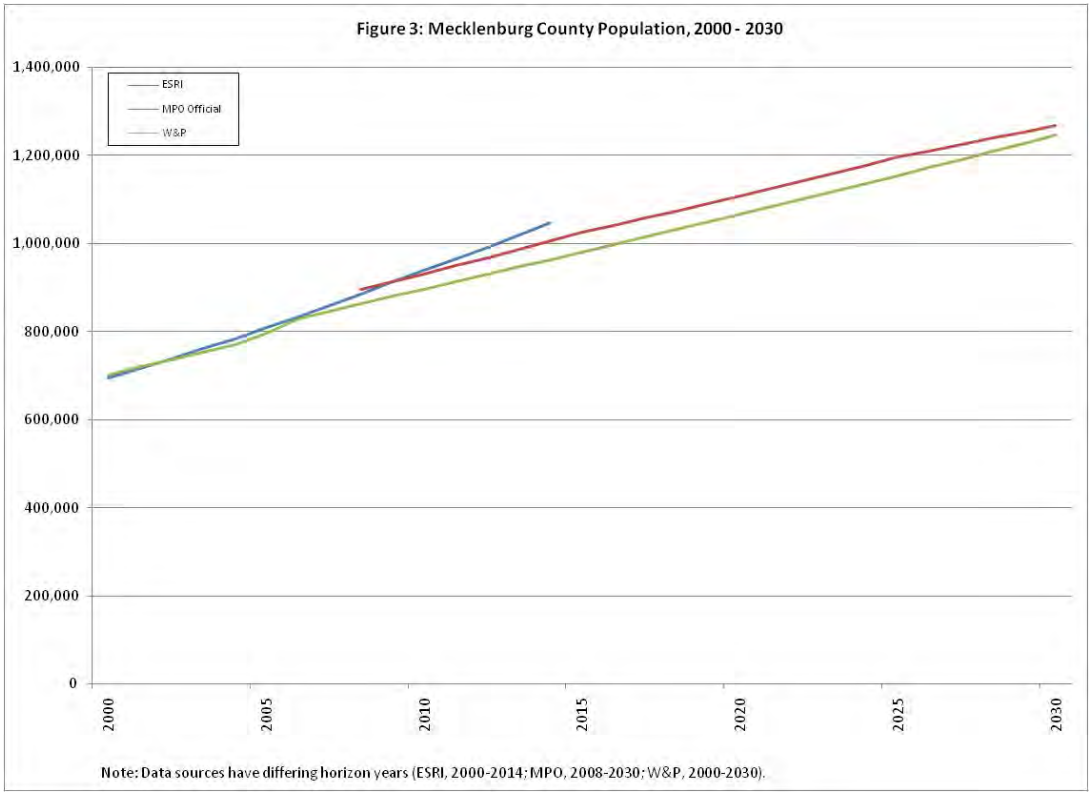
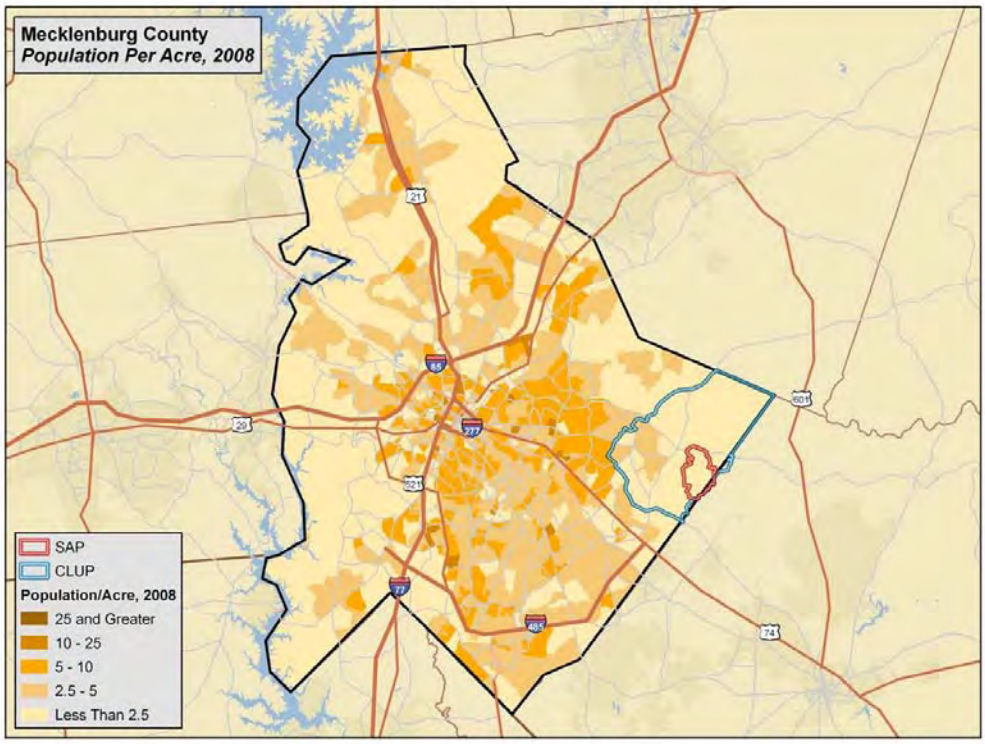


Figure 3: Mecklenburg County Population, 2000 - 2030
1,400,000
1,200,000
1,000,000
800,000
600,000
400,000
200,000
0
ESRI
MPO Official
W&P
2000
2005
2010
2015
2020
2025
2030
Note: Data sources have differing horizon years (ESRI, 2000-2014; MPO, 2008-2030; W&P, 2000-2030).


Mecklenburg County
Population Per Acre, 2008
SAP
CLUP
Population/Acre, 2008
25 and Greater
10 - 25
5 - 10
2.5 - 5
Less Than 2.5

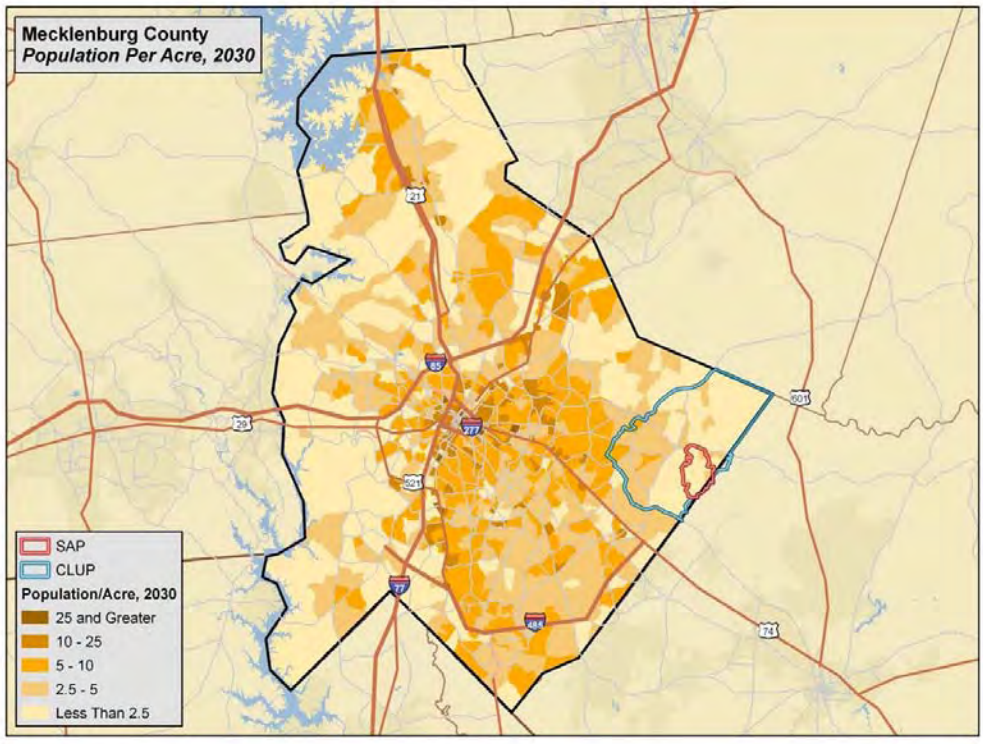
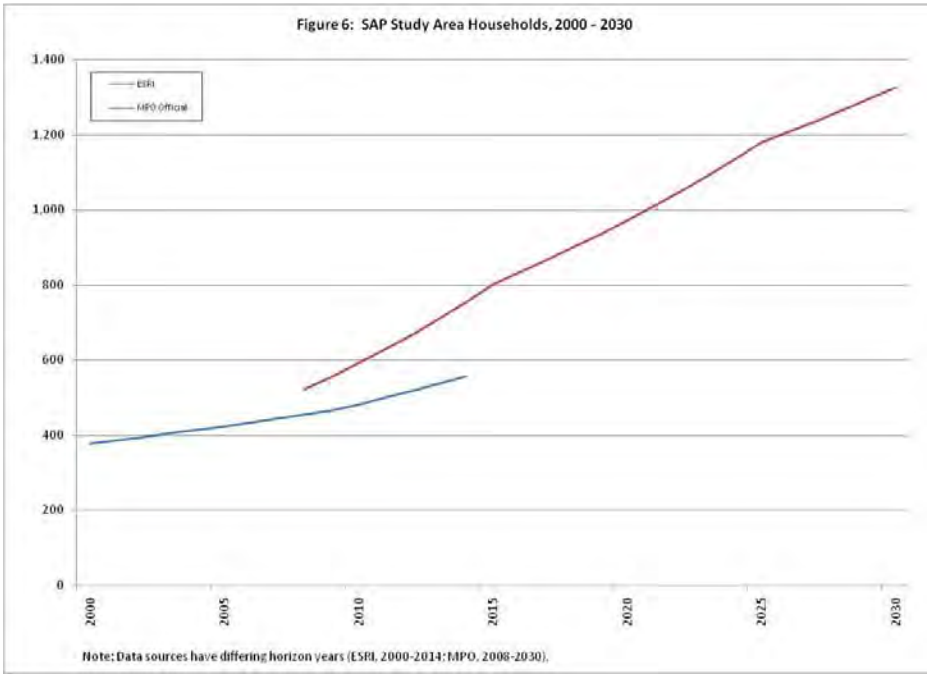

Mecklenburg County
Population Per Acre, 2030
SAP
CLUP
Population/Acre, 2030
25 and Greater
10 - 25
5 - 10
2.5 - 5
Less Than 2.5

**Table 2: Regional Household Trends & Projections, 2009 - 2030**

| | | | | | Change: 2009-2030 | | |
|---|---|---|---|---|---|---|---|
| | 2009 | 2015 | 2020 | 2030 | Amount | % | CAGR |
| SAP Study Area | 556 | 802 | 973 | 1,326 | 771 | 138.7% | 4.2% |
| CLUP Study Area | 10,658 | 13,833 | 16,064 | 20,539 | 9,880 | 92.7% | 3.2% |
| Mecklenburg County | 372,281 | 413,677 | 446,732 | 510,957 | 138,676 | 37.3% | 1.5% |

CAGR= Compound Annual Growth Rate

Source: Mecklenburg-Union MPO; AECOM, December 2009



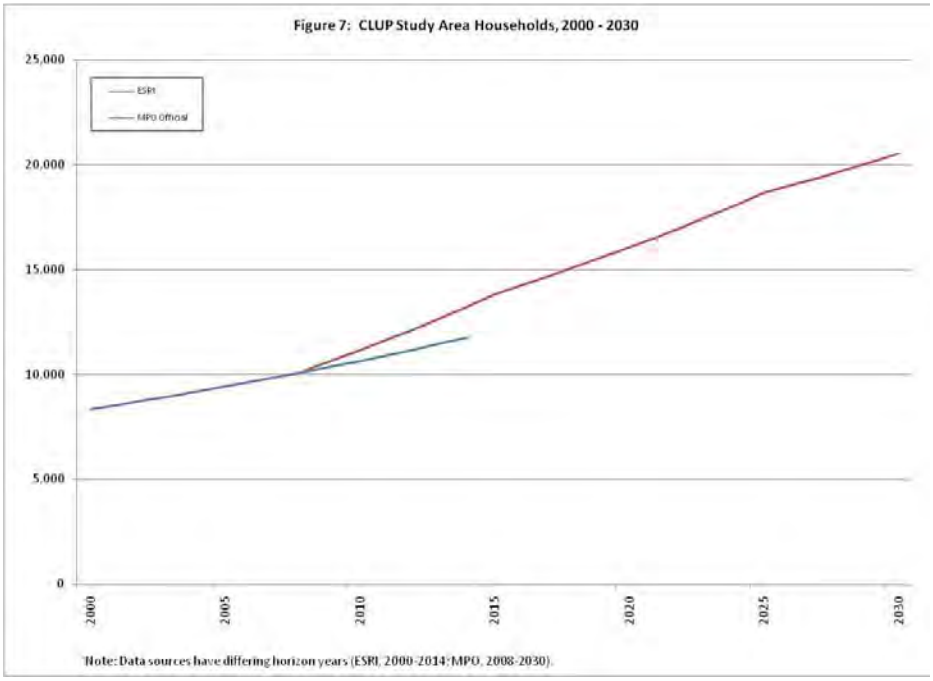


Figure 7: CLUP Study Area Households, 2000 - 2030
25,000
20,000
15,000
10,000
5,000
0
ESRI
MPO Official
2000
2005
2010
2015
2020
2025
2030
Note: Data sources have differing horizon years (ESRI, 2000-2014; MPO, 2008-2030).

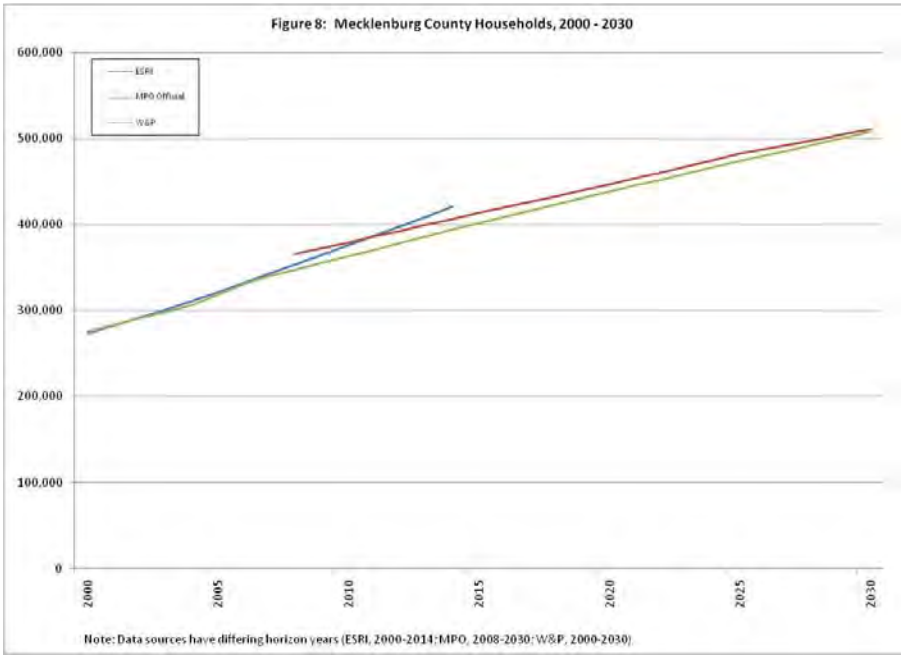
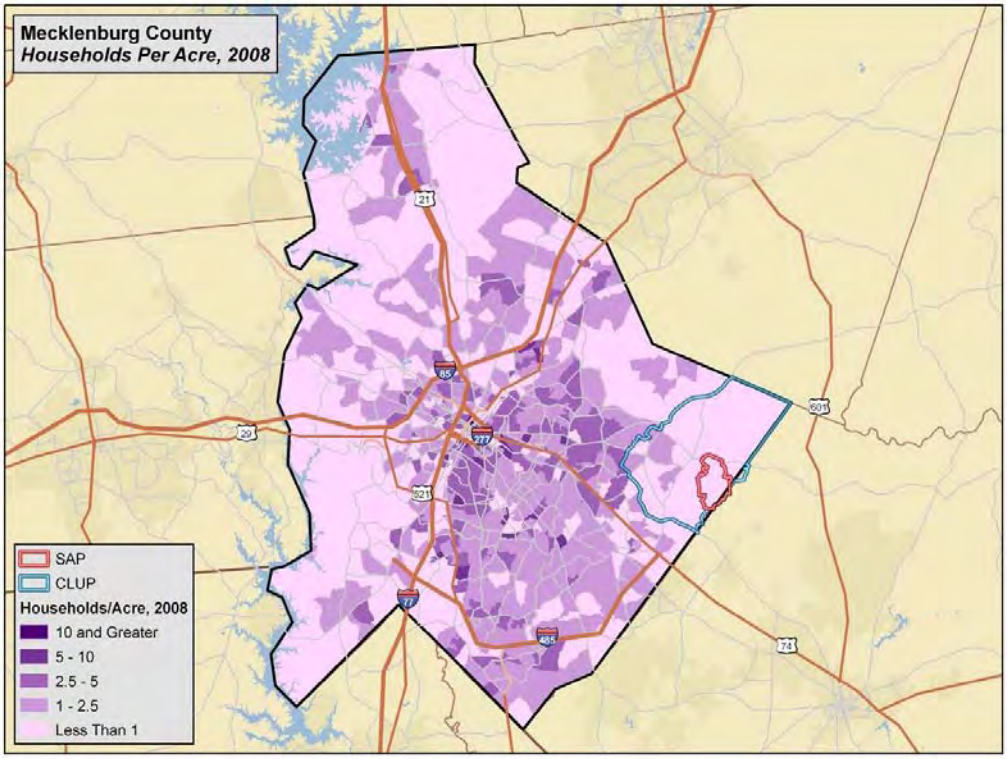
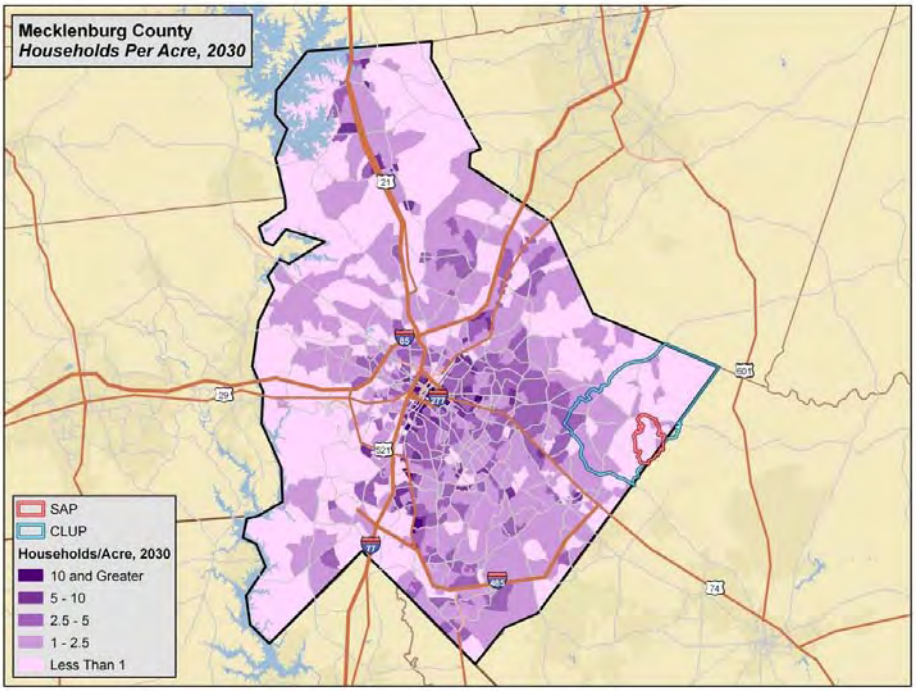


Figure 8: Mecklenburg County Households, 2000 - 2030
600,000
500,000
400,000
300,000
200,000
100,000
0
ESRI
MPO Official
W&P
2000
2005
2010
2015
2020
2025
2030
Note: Data sources have differing horizon years (ESRI, 2000-2014; MPO, 2008-2030; W&P, 2000-2030).


Mecklenburg County
Households Per Acre, 2008
SAP
CLUP
Households/Acre, 2008
10 and Greater
5 - 10
2.5 - 5
1 - 2.5
Less Than 1


Mecklenburg County
Households Per Acre, 2030
SAP
CLUP
Households/Acre, 2030
10 and Greater
5 - 10
2.5 - 5
1 - 2.5
Less Than 1

AECOM

**Table 3: Summary of Demographic Characteristics, 2009 - 2014**

| | SAP Study Area | | | CLUP Study Area | | | Mecklenburg County | | | Charlotte MSA | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2009 | 2014 | % Change | 2009 | 2014 | % Change | 2009 | 2014 | % Change | 2009 | 2014 | % Change |
| **Population** | 1,179 | 1,398 | 18.6% | 26,799 | 30,106 | 12.3% | 912,585 | 1,046,632 | 14.7% | 1,740,257 | 1,995,790 | 14.7% |
| **Households** | 465 | 556 | 19.6% | 10,379 | 11,741 | 13.1% | 365,434 | 420,946 | 15.2% | 676,740 | 778,791 | 15.1% |
| **Avg. HH Size** | 2.5 | 2.5 | -1.2% | 2.6 | 2.6 | -0.4% | 2.45 | 2.45 | 0.0% | 2.53 | 2.52 | -0.4% |
| **Median Age** | 43.2 | 44.2 | 2.3% | 40.6 | 41.2 | 1.5% | 34.7 | 34.4 | -0.9% | 35.9 | 35.9 | 0.0% |
| **Race** | | | | | | | | | | | | |
| White | 1,089 | 1,278 | 17.3% | 22,574 | 25,020 | 10.8% | 556,677 | 626,933 | 12.6% | 1,204,258 | 1,363,125 | 13.2% |
| Black | 42 | 55 | 28.5% | 2,455 | 2,752 | 12.1% | 251,873 | 281,544 | 11.8% | 384,597 | 433,086 | 12.6% |
| American Indian, Eskimo | 6 | 7 | 18.6% | 201 | 238 | 18.4% | 3,650 | 4,187 | 14.7% | 8,701 | 9,979 | 14.7% |
| Asian, Pacific Islander | 25 | 36 | 46.8% | 532 | 694 | 30.5% | 40,154 | 52,332 | 30.3% | 50,467 | 65,861 | 30.5% |
| Other | 15 | 21 | 36.8% | 1,037 | 840 | -19.0% | 61,143 | 81,637 | 33.5% | 92,234 | 123,739 | 34.2% |
| Hispanic 1/ | 19 | 28 | 48.2% | 1,501 | 2,006 | 33.6% | 83,045 | 109,896 | 32.3% | 128,779 | 171,638 | 33.3% |
| **Median HH Income** | $82,573 | $84,515 | 2.4% | $69,921 | $75,372 | 7.8% | $ 67,029 | $ 71,369 | 6.5% | $ 62,855 | $ 65,900 | 4.8% |
| **Average HH Income** | $92,237 | $94,575 | 2.5% | $81,182 | $83,243 | 2.5% | $ 87,503 | $ 91,310 | 4.4% | $ 78,667 | $ 82,037 | 4.3% |
| **Owner-Occupied HUs** | 415 | 495 | 19.2% | 8,482 | 9,575 | 12.9% | 226,793 | 262,608 | 15.8% | 457,583 | 528,971 | 15.6% |
| **Renter-Occupied HUs** | 50 | 61 | 21.3% | 1,897 | 2,166 | 14.2% | 138,308 | 158,115 | 14.3% | 218,812 | 249,627 | 14.1% |

1/ Hispanic origin is a subset of other race categories

Source: ESRI Business Analyst; AECOM, December 2009

**Table 4: Age Cohort Characteristics, 2009 - 2014**

| | SAP Study Area | | | | | CLUP Study Area | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **2009** | **% of Total** | **2014** | **% of Total** | **% Change** | **2009** | **% of Total** | **2014** | **% of Total** | **% Change** |
| 0-14 | 243 | 21% | 285 | 20% | 17.5% | 5,286 | 20% | 5,906 | 20% | 11.7% |
| 15-24 | 121 | 10% | 152 | 11% | 25.6% | 3,103 | 12% | 3,443 | 11% | 11.0% |
| 25-34 | 84 | 7% | 111 | 8% | 32.0% | 2,923 | 11% | 3,260 | 11% | 11.5% |
| 35-44 | 176 | 15% | 166 | 12% | -5.2% | 3,937 | 15% | 4,049 | 13% | 2.8% |
| 45-54 | 213 | 18% | 248 | 18% | 16.0% | 4,477 | 17% | 4,711 | 16% | 5.2% |
| 55-64 | 177 | 15% | 210 | 15% | 18.7% | 3,713 | 14% | 4,254 | 14% | 14.6% |
| 65-74 | 99 | 8% | 143 | 10% | 44.1% | 2,079 | 8% | 2,874 | 10% | 38.2% |
| 75-84 | 51 | 4% | 64 | 5% | 26.9% | 955 | 4% | 1,218 | 4% | 27.5% |
| 85+ | 14 | 1% | 18 | 1% | 28.5% | 325 | 1% | 391 | 1% | 20.3% |
| **TOTAL:** | **1,178** | | **1,398** | | **18.7%** | **26,798** | | **30,106** | | **12.3%** |

| | Mecklenburg County | | | | | Charlotte MSA | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **2009** | **% of Total** | **2014** | **% of Total** | **% Change** | **2009** | **% of Total** | **2014** | **% of Total** | **% Change** |
| 0-14 | 191,643 | 21% | 219,793 | 21% | 14.7% | 367,194 | 21% | 419,116 | 21% | 14.1% |
| 15-24 | 129,587 | 14% | 145,482 | 14% | 12.3% | 234,935 | 14% | 265,440 | 13% | 13.0% |
| 25-34 | 138,713 | 15% | 166,414 | 16% | 20.0% | 245,376 | 14% | 287,394 | 14% | 17.1% |
| 35-44 | 147,839 | 16% | 149,668 | 14% | 1.2% | 273,220 | 16% | 283,402 | 14% | 3.7% |
| 45-54 | 134,150 | 15% | 148,622 | 14% | 10.8% | 261,039 | 15% | 287,394 | 14% | 10.1% |
| 55-64 | 89,433 | 10% | 110,943 | 11% | 24.1% | 184,467 | 11% | 227,520 | 11% | 23.3% |
| 65-74 | 43,804 | 5% | 62,798 | 6% | 43.4% | 95,714 | 6% | 135,714 | 7% | 41.8% |
| 75-84 | 26,465 | 3% | 29,306 | 3% | 10.7% | 55,688 | 3% | 63,865 | 3% | 14.7% |
| 85+ | 10,951 | 1% | 12,560 | 1% | 14.7% | 22,623 | 1% | 25,945 | 1% | 14.7% |
| **TOTAL:** | **912,585** | | **1,045,585** | | **14.6%** | **1,740,257** | | **1,995,790** | | **14.7%** |

Source: ESRI Business Analyst; AECOM, December 2009

AECOM

Table 5: Population 25+ by Educational Attainment, 2009

| Education Level | SAP Study Area | CLUP Study Area | Mecklenburg County | Charlotte MSA |
|---|---|---|---|---|
| Less than 9th Grade | 0.1% | 2.1% | 3.7% | 5.1% |
| 9th - 12th Grade, No Diploma | 8.2% | 7.2% | 7.6% | 10.1% |
| High School Graduate | 29.0% | 25.5% | 20.5% | 25.9% |
| Some College, No Degree | 25.3% | 26.0% | 20.9% | 20.4% |
| Associate Degree | 11.7% | 11.0% | 7.9% | 8.0% |
| Bachelor's Degree | 17.1% | 21.0% | 27.9% | 21.5% |
| Graduate/Professional Degree | 8.6% | 7.2% | 11.5% | 8.8% |

Source: ESRI Business Analyst; AECOM , December 2009

Table 6: Household Expenditures, 2009

| | SAP Study Area | | CLUP Study Area | | Mecklenburg County | | Charlotte MSA | |
|---|---|---|---|---|---|---|---|---|
| Industry | Average Spent per Household | Percent of Total | Average Spent per Household | Percent of Total | Average Spent per Household | Percent of Total | Average Spent per Household | Percent of Total |
| Apparel & Services | $2,237 | 2.6% | $1,991 | 2.6% | $2,226 | 2.7% | $1,976 | 2.7% |
| Computers & Accessories | $295 | 0.3% | $264 | 0.4% | $291 | 0.4% | $258 | 0.4% |
| Education | $1,757 | 2.1% | $1,477 | 2.0% | $1,609 | 2.0% | $1,406 | 1.9% |
| Entertainment/Recreation | $4,285 | 5.0% | $3,761 | 5.0% | $3,992 | 4.9% | $3,630 | 5.0% |
| Food at Home | $5,573 | 6.5% | $5,051 | 6.7% | $5,535 | 6.8% | $5,030 | 6.9% |
| Food Away from Home | $4,190 | 4.9% | $3,779 | 5.0% | $4,176 | 5.2% | $3,743 | 5.1% |
| Health Care | $4,737 | 5.5% | $4,227 | 5.6% | $4,341 | 5.4% | $4,105 | 5.6% |
| HH Furnishings & Equipment | $2,618 | 3.1% | $2,277 | 3.0% | $2,427 | 3.0% | $2,169 | 3.0% |
| Investments | $2,092 | 2.4% | $1,639 | 2.2% | $1,612 | 2.0% | $1,479 | 2.0% |
| Retail Goods | $31,697 | 37.1% | $28,197 | 37.5% | $30,166 | 37.2% | $27,483 | 37.6% |
| Shelter | $20,619 | 24.1% | $17,898 | 23.8% | $19,784 | 24.4% | $17,304 | 23.7% |
| TV/Video/Sound Equipment | $1,495 | 1.7% | $1,361 | 1.8% | $1,509 | 1.9% | $1,362 | 1.9% |
| Travel | $2,624 | 3.1% | $2,193 | 2.9% | $2,260 | 2.8% | $2,017 | 2.8% |
| Vehicle Maintenance & Repairs | $1,193 | 1.4% | $1,063 | 1.4% | $1,143 | 1.4% | $1,037 | 1.4% |
| Total | $85,412 | 100.0% | $75,178 | 100% | $81,071 | 100% | $72,999 | 100.0% |

Source: ESRI Business Analyst; AECOM, December 2009

AECOM

Table 7: Household Income Characteristics, 2009 - 2014

| | SAP Study Area | | | | | CLUP Study Area | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Household Income** | **2009** | **% of Total** | **2014** | **% of Total** | **% Change** | **2009** | **% of Total** | **2014** | **% of Total** | **% Change** |
| < $25,000 | 39 | 8% | 42 | 8% | 8.2% | 1,048 | 10% | 1,115 | 10% | 6.4% |
| $25,000 - $49,999 | 66 | 14% | 71 | 13% | 7.8% | 2,065 | 20% | 2,125 | 18% | 2.9% |
| **Subtotal: Under $50,000:** | **105** | | **113** | | **7.9%** | **3,114** | | **3,241** | | **4.1%** |
| $50,000 - $74,999 | 95 | 20% | 98 | 18% | 3.7% | 2,553 | 25% | 2,571 | 22% | 0.7% |
| $75,000 - $99,999 | 87 | 19% | 138 | 25% | 59.2% | 1,910 | 18% | 2,759 | 24% | 44.5% |
| **Subtotal: $50,000-$99,999:** | **182** | | **237** | | **30.3%** | **4,463** | | **5,330** | | **19.4%** |
| $100,000 - $149,999 | 132 | 28% | 148 | 27% | 12.8% | 1,993 | 19% | 2,243 | 19% | 12.5% |
| $150,000 + | 47 | 10% | 57 | 10% | 21.9% | 810 | 8% | 928 | 8% | 14.6% |
| **Subtotal: $100,000-$150,000+:** | **179** | | **206** | | **15.2%** | **2,802** | | **3,170** | | **13.1%** |
| **TOTAL:** | **465** | | **556** | | **19.5%** | **10,379** | | **11,741** | | **13.1%** |

| | Mecklenburg County | | | | | Charlotte MSA | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Household Income** | **2009** | **% of Total** | **2014** | **% of Total** | **% Change** | **2009** | **% of Total** | **2014** | **% of Total** | **% Change** |
| < $25,000 | 48,603 | 13% | 53,039 | 13% | 9.1% | 105,571 | 16% | 112,925 | 15% | 7.0% |
| $25,000 - $49,999 | 78,203 | 21% | 82,926 | 20% | 6.0% | 153,620 | 23% | 160,431 | 21% | 4.4% |
| **Subtotal: Under $50,000:** | **126,806** | | **135,966** | | **7.2%** | **259,191** | | **273,356** | | **5.5%** |
| $50,000 - $74,999 | 80,030 | 22% | 85,873 | 20% | 7.3% | 148,883 | 22% | 170,555 | 22% | 14.6% |
| $75,000 - $99,999 | 55,181 | 15% | 79,138 | 19% | 43.4% | 115,046 | 17% | 153,422 | 20% | 33.4% |
| **Subtotal: $50,000-$99,999:** | **135,211** | | **165,011** | | **22.0%** | **263,929** | | **323,977** | | **22.8%** |
| $100,000 - $149,999 | 60,662 | 17% | 70,298 | 17% | 15.9% | 93,390 | 14% | 108,252 | 14% | 15.9% |
| $150,000 + | 41,659 | 11% | 50,514 | 12% | 21.3% | 59,553 | 9% | 71,649 | 9% | 20.3% |
| **Subtotal: $100,000-$150,000+:** | **102,322** | | **120,812** | | **18.1%** | **152,943** | | **179,901** | | **17.6%** |
| **TOTAL:** | **364,338** | | **421,788** | | **15.8%** | **676,063** | | **777,233** | | **15.0%** |

Source: ESRI Business Analyst; AECOM, December 2009

AECOM

Table 8: Reported CLUP Study Area (Demand) & Retail Sales (Supply), 2009

| | Demand (Consumer Spdg) | Supply (Retail Sales) | Opportunity Sales Gap/(Surplus) | Result |
|---|---|---|---|---|
| **Apparel & Accessories** | | | | |
| Children's Wear | 798,505 | 880,942 | (82,437) | |
| Footwear | 2,754,178 | - | 2,754,178 | |
| Jewelry | 2,511,539 | 1,044,211 | 1,467,328 | |
| Men's Wear | 856,654 | - | 856,654 | |
| Women's Wear | 3,547,000 | - | 3,547,000 | |
| **Subtotal:** | **10,467,876** | **1,925,153** | **8,542,723** | Gap |
| **Furniture/Home Furnishings** | | | | |
| Furniture | 5,010,003 | 251,380 | 4,758,623 | |
| Home Furnishings | 4,369,179 | 4,490,441 | (121,262) | |
| Household Appliances Stores | 1,902,612 | 754,324 | 1,148,288 | |
| Home Centers | 19,345,118 | - | 19,345,118 | |
| Paint and Wallpaper Stores | 1,072,283 | - | 1,072,283 | |
| Hardware Stores | 4,058,068 | - | 4,058,068 | |
| Lawn, Garden Equipment, Supplies Stores | 3,939,254 | 1,157,118 | 2,782,136 | |
| **Subtotal:** | **39,696,517** | **6,653,263** | **33,043,254** | Gap |
| **Food & Beverage** | | | | |
| Full-Service Restaurants | 19,541,275 | 12,244,836 | 7,296,439 | |
| Limited-Service Eating Places | 9,379,183 | 4,741,821 | 4,637,362 | |
| Drinking Places -Alcoholic Beverages | 8,373,916 | 1,687,413 | 6,686,503 | |
| **Subtotal:** | **37,294,374** | **18,674,070** | **18,620,304** | Gap |
| **Groceries** | | | | |
| Groceries and Other Foods | 50,923,415 | 77,609,502 | (26,686,087) | |
| Convenience Stores | 2,555,834 | 1,123,742 | 1,432,092 | |
| **Subtotal:** | **53,479,249** | **78,733,244** | **(25,253,995)** | Surplus |
| **Leisure & Entertainment** | | | | |
| Musical Instruments and Supplies | 549,171 | - | 549,171 | |
| Books | 1,517,407 | - | 1,517,407 | |
| Florists | 1,904,641 | 533,299 | 1,371,342 | |
| Computer, Software, and Supplies | 2,162,678 | - | 2,162,678 | |
| Camera and Photographic Equipment | 462,177 | - | 462,177 | |
| Sewing, Knitting and Needlework Goods | 418,349 | 553,989 | (135,640) | |
| Sporting Goods | 3,141,707 | - | 3,141,707 | |
| Toys, Hobby Goods and Games | 1,864,463 | 257,790 | 1,606,673 | |
| **Subtotal:** | **12,020,593** | **1,345,078** | **10,675,515** | Gap |
| **Convenience & Service** | | | | |
| Pharmacies and Drug Stores | 21,516,370 | 71,168,558 | (49,652,188) | |
| Office Supplies, Stationery, Gift | 944,113 | 257,718 | 686,395 | |
| Cosmetics, Beauty Supplies, Perfume Stores | 901,642 | 206,428 | 695,214 | |
| **Subtotal:** | **23,362,125** | **71,632,704** | **(48,270,579)** | Surplus |
| **General Merchandise** | | | | |
| Department Stores Excl Leased Depts | 28,350,580 | - | 28,350,580 | |
| Warehouse Clubs and Super Stores | 10,153,254 | 2,534,587 | 7,618,667 | |
| **Subtotal:** | **38,503,834** | **2,534,587** | **35,969,247** | Gap |
| **TOTAL:** | **$ 214,824,568** | **$ 181,498,099** | **$ 33,326,469** | Gap |

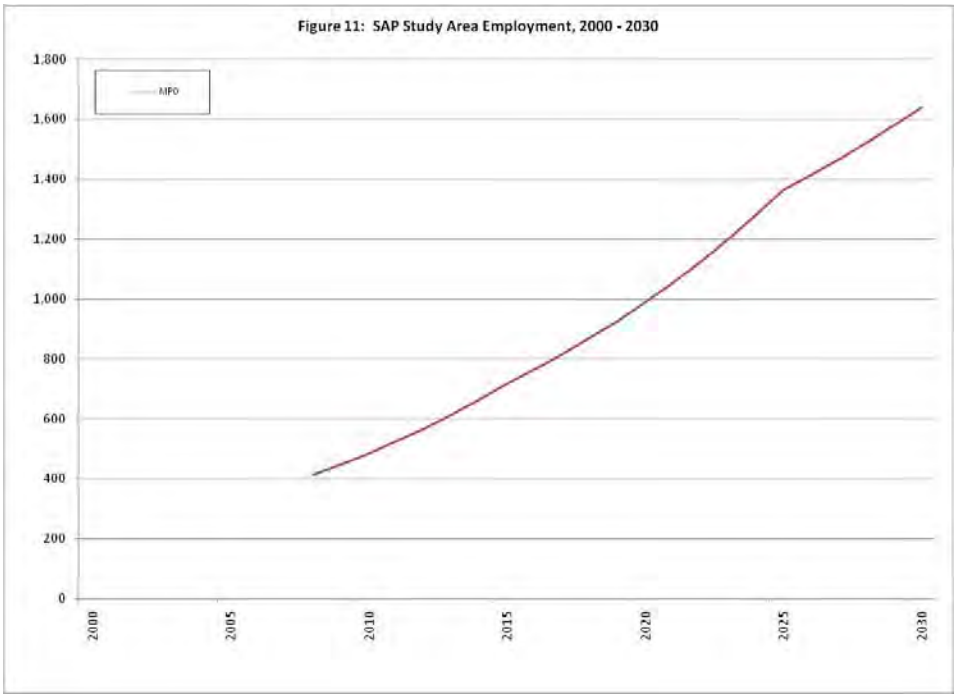
Source: Claritas, Inc.; AECOM, December 2009

Table 9: Employment Trends & Projections, 2009 - 2030

| | | | | | Change, 2009-2030 | | |
|---|---|---|---|---|---|---|---|
| **Jurisdiction** | **2009** | **2015** | **2025** | **2030** | **Amount** | **%** | **CAGR** |
| SAP Study Area | 446 | 717 | 1,363 | 1,640 | 1,194 | 267.5% | 6.4% |
| CLUP Study Area | 6,806 | 9,459 | 14,962 | 17,302 | 10,496 | 154.2% | 4.5% |
| Mecklenburg County | 660,246 | 744,371 | 909,131 | 982,787 | 322,541 | 48.9% | 1.9% |

CAGR= Compound Annual Growth Rate

Source: Mecklenburg-Union MPO; AECOM, December 2009



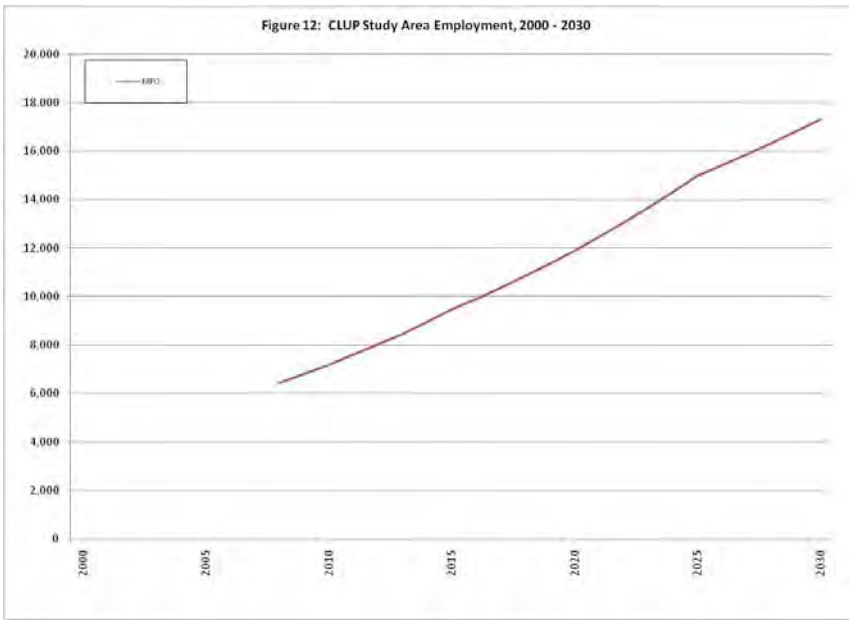
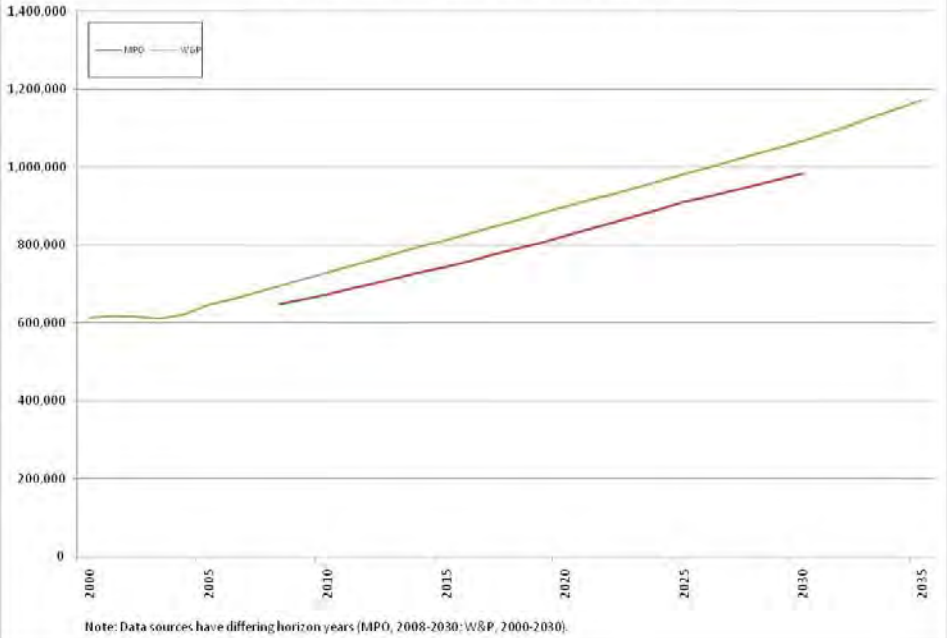
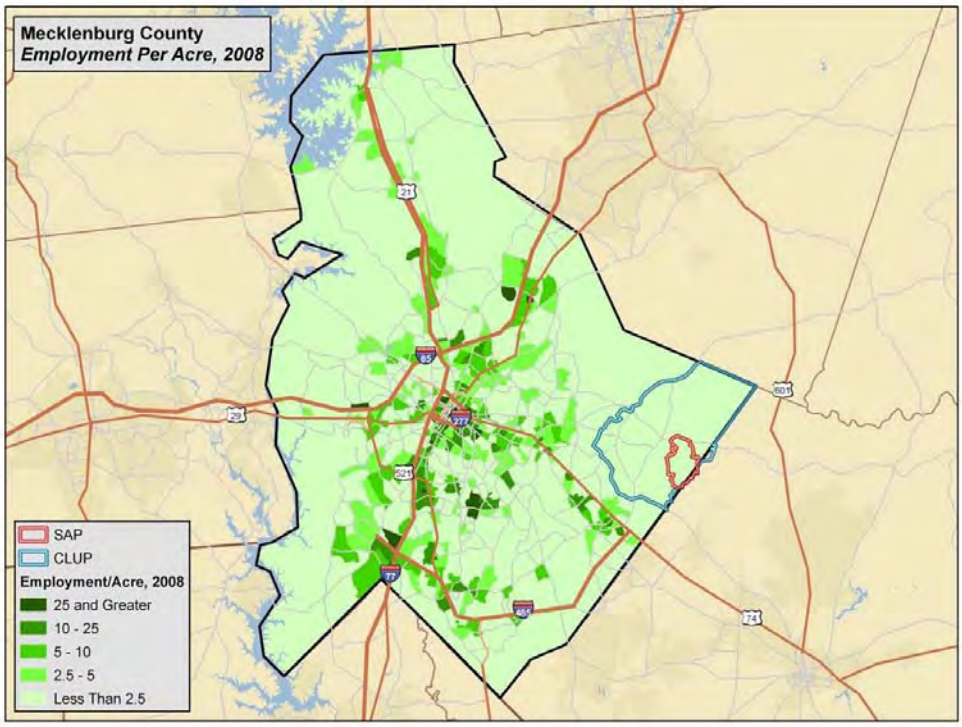



Figure 13: Mecklenburg County Employment, 2000 - 2030




Note: Data sources have differing horizon years (MPO, 2008-2030; W&P, 2000-2030).



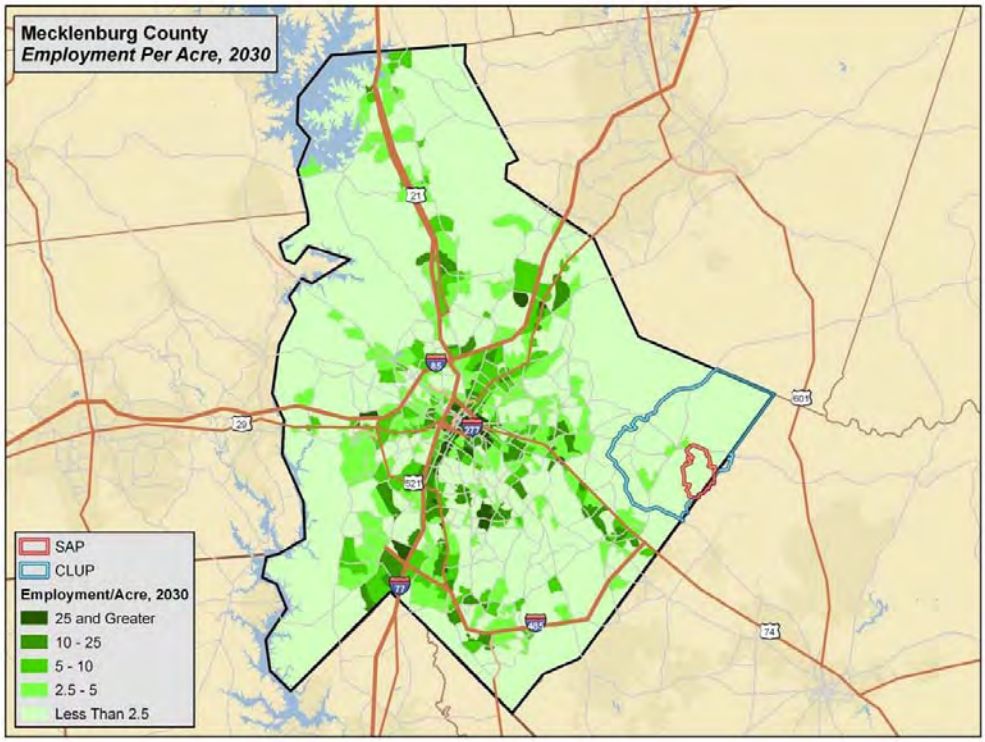



Table 10: State Employment Projections, Mecklenburg County

| Employment Category | 2002 | % Dist. | 2012 | % Dist. | Change: 2002-2012 Amount | CAGR |
|---|---|---|---|---|---|---|
| Construction | 31,231 | 3.1% | 40,655 | 3.1% | 9,424 | 2.7% |
| Education and Health Services | 65,287 | 6.4% | 87,441 | 6.6% | 22,154 | 3.0% |
| Financial Activities | 57,085 | 5.6% | 79,402 | 6.0% | 22,317 | 3.4% |
| Goods Producing | 74,702 | 7.4% | 83,621 | 6.4% | 8,919 | 1.1% |
| Government | 23,726 | 2.3% | 28,337 | 2.2% | 4,611 | 1.8% |
| Information | 20,823 | 2.1% | 26,484 | 2.0% | 5,661 | 2.4% |
| Leisure and Hospitality | 42,901 | 4.2% | 60,611 | 4.6% | 17,710 | 3.5% |
| Manufacturing | 41,220 | 4.1% | 41,014 | 3.1% | (206) | -0.1% |
| Natural Resources and Mining | 2,251 | 0.2% | 1,952 | 0.1% | (299) | -1.4% |
| Other Services (Except Government) | 14,942 | 1.5% | 19,279 | 1.5% | 4,337 | 2.6% |
| Professional and Business Services | 93,019 | 9.2% | 133,286 | 10.1% | 40,267 | 3.7% |
| Services Providing | 432,861 | 42.6% | 574,668 | 43.6% | 141,807 | 2.9% |
| Trade, Transportation, and Utilities | 115,078 | 11.3% | 139,828 | 10.6% | 24,750 | 2.0% |
| **Total** | **1,015,126** | | **1,316,578** | | **301,452** | **2.6%** |

CAGR= Compound Annual Growth Rate

Source: Employment Security Commission of North Carolina; AECOM, December 2009

AECOM

Table 11: Employment, Mecklenburg County, 1970-2030

| | 1970 | 1980 | 1990 | 2000 | 2009 | 2010 | 2015 | 2020 | 2025 | 2030 |
|---|---|---|---|---|---|---|---|---|---|---|
| Farm | 992 | 1,005 | 828 | 769 | 670 | 672 | 679 | 686 | 694 | 703 |
| Agricultural Services, Other | 1,216 | 1,424 | 3,121 | 5,896 | 6,425 | 6,533 | 7,073 | 7,613 | 8,152 | 8,689 |
| Mining | 199 | 295 | 351 | 382 | 346 | 344 | 332 | 321 | 309 | 297 |
| Construction | 16,851 | 18,756 | 27,830 | 39,925 | 43,600 | 44,041 | 46,243 | 48,436 | 50,620 | 52,797 |
| Manufacturing | 38,802 | 43,987 | 53,388 | 50,812 | 41,193 | 41,505 | 43,067 | 44,623 | 46,174 | 47,720 |
| Transport, Comm, and Public Util | 21,612 | 28,080 | 41,718 | 49,059 | 47,818 | 48,147 | 49,767 | 51,362 | 52,944 | 54,520 |
| Wholesale Trade | 25,322 | 31,037 | 42,419 | 49,828 | 49,554 | 50,118 | 52,919 | 55,699 | 58,471 | 61,248 |
| Retail Trade | 29,460 | 46,919 | 71,028 | 94,438 | 112,880 | 115,277 | 127,248 | 139,197 | 151,126 | 163,034 |
| Finance, Ins, Real Estate | 20,836 | 28,635 | 44,846 | 79,852 | 109,838 | 113,197 | 129,999 | 146,807 | 163,616 | 180,422 |
| Services | 39,804 | 62,170 | 110,673 | 188,054 | 229,567 | 236,712 | 272,438 | 308,169 | 343,917 | 379,694 |
| Federal Civilian Govt | 2,522 | 2,616 | 4,409 | 5,516 | 5,568 | 5,645 | 6,029 | 6,413 | 6,796 | 7,180 |
| Federal Military Govt | 1,950 | 1,531 | 2,165 | 1,982 | 2,094 | 2,099 | 2,120 | 2,142 | 2,163 | 2,185 |
| State and Local Govt | 14,454 | 25,461 | 34,212 | 47,097 | 63,416 | 65,527 | 76,104 | 86,712 | 97,341 | 107,987 |
| Total Employment | 214,020 | 291,916 | 436,988 | 613,610 | 712,969 | 729,817 | 814,018 | 898,180 | 982,323 | 1,066,476 |
| | | | | | | | | | | |
| Compound Annual Growth Rate | | | | | | | | | | |
| Farm | | 0.1% | -1.9% | -0.7% | -1.7% | 0.1% | 0.2% | 0.2% | 0.2% | 0.3% |
| Agricultural Services, Other | | 1.6% | 8.2% | 6.6% | 1.1% | 0.8% | 1.6% | 1.5% | 1.4% | 1.3% |
| Mining | | 4.0% | NA | 0.8% | -1.2% | -0.3% | -0.7% | -0.7% | -0.8% | -0.8% |
| Construction | | 1.1% | 4.0% | 3.7% | 1.1% | 0.5% | 1.0% | 0.9% | 0.9% | 0.8% |
| Manufacturing | | 1.3% | 2.0% | -0.5% | -2.6% | 0.4% | 0.7% | 0.7% | 0.7% | 0.7% |
| Transport, Comm, and Public Util | | 2.7% | 4.0% | 1.6% | -0.3% | 0.3% | 0.7% | 0.6% | 0.6% | 0.6% |
| Wholesale Trade | | 2.1% | 3.2% | 1.6% | -0.1% | 0.6% | 1.1% | 1.0% | 1.0% | 0.9% |
| Retail Trade | | 4.8% | 4.2% | 2.9% | 2.3% | 1.1% | 2.0% | 1.8% | 1.7% | 1.5% |
| Finance, Ins, Real Estate | | 3.2% | 4.6% | 5.9% | 4.1% | 1.5% | 2.8% | 2.5% | 2.2% | 2.0% |
| Services | | 4.6% | 5.9% | 5.4% | 2.5% | 1.5% | 2.9% | 2.5% | 2.2% | 2.0% |
| Federal Civilian Govt | | 0.4% | 5.4% | 2.3% | 0.1% | 0.7% | 1.3% | 1.2% | 1.2% | 1.1% |
| Federal Military Govt | | -2.4% | 3.5% | -0.9% | 0.7% | 0.1% | 0.2% | 0.2% | 0.2% | 0.2% |
| State and Local Govt | | 5.8% | 3.0% | 3.2% | 3.8% | 1.7% | 3.0% | 2.6% | 2.3% | 2.1% |
| Total | | 3.2% | 4.1% | 3.5% | 1.9% | 1.2% | 2.2% | 2.0% | 0.4% | 1.7% |

Source: Woods and Poole; AECOM, December 2009

Table 12: Unemployment Rate, 2000-2014

| | 2000 | 2009 | 2014 | Change 2000-14 | CAGR 2000-14 |
|---|---|---|---|---|---|
| SAP Study Area | 2.3% | 10.7% | 7.3% | 5.0% | 8.6% |
| CLUP Study Area | 2.5% | 12.1% | 7.6% | 5.1% | 8.3% |
| Mecklenburg County | 3.7% | 13.3% | 9.0% | 5.3% | 6.6% |
| Charlotte MSA | 3.6% | 13.8% | 9.3% | 5.7% | 7.0% |

CAGR= Compound Annual Growth Rate

Source: ESRI Business Analyst; AECOM, December 2009

AECOM

Table 13: Location Quotient, 2001

| Industry | Mecklenburg County | Charlotte MSA | NC |
|---|---|---|---|
| Base- Total All Industries | 1.00 | 1.00 | 1.00 |
| Natural Resources and Mining | 0.10 | 0.24 | 0.71 |
| Construction | 1.09 | 1.22 | 1.16 |
| Manufacturing | 0.66 | 1.05 | 1.47 |
| Trade, Transportation, and Utilities | 1.11 | 1.08 | 0.99 |
| Information | 1.37 | ND | ND |
| Financial Activities | 1.36 | 1.09 | 0.77 |
| Professional and Business Services | 1.55 | 1.25 | 0.90 |
| Education and Health Services | 0.53 | 0.59 | 0.87 |
| Leisure and Hospitality | 0.88 | 0.91 | 0.94 |
| Other Services | 0.83 | ND | 0.79 |

ND= Not Disclosable

Note= Base is the United States

Source: Bureau of Labor Statistics; AECOM, January 2010

Table 14: Location Quotient, 2008

| Industry | Mecklenburg County | Charlotte MSA | NC |
|---|---|---|---|
| Base- Total All Industries | 1.00 | 1.00 | 1.00 |
| Natural Resources and Mining | 0.14 | 0.25 | 0.59 |
| Construction | 1.06 | 1.16 | 1.12 |
| Manufacturing | 0.58 | 0.92 | 1.30 |
| Trade, Transportation, and Utilities | 1.05 | 1.05 | 0.99 |
| Information | 1.38 | 1.13 | 0.81 |
| Financial Activities | 1.76 | 1.42 | 0.87 |
| Professional and Business Services | 1.40 | 1.19 | 0.96 |
| Education and Health Services | 0.58 | 0.65 | 0.96 |
| Leisure and Hospitality | 0.95 | 0.99 | 1.00 |
| Other Services | 0.82 | 0.80 | 0.77 |

Note= Base is the United States

Source: Bureau of Labor Statistics; AECOM, January 2010

AECOM

Table 15: Location Quotient, Mecklenburg County, 2001 and 2008

| Industry | 2001 | 2008 | Change | Percent |
|---|---|---|---|---|
| Base- Total All Industries | 1.00 | 1.00 | 0.00 | 0.0% |
| Natural Resources and Mining | 0.10 | 0.14 | 0.04 | 40.0% |
| Construction | 1.09 | 1.06 | -0.03 | -2.8% |
| Manufacturing | 0.66 | 0.58 | -0.08 | -12.1% |
| Trade, Transportation, and Utilities | 1.11 | 1.05 | -0.06 | -5.4% |
| Information | 1.37 | 1.38 | 0.01 | 0.7% |
| Financial Activities | 1.36 | 1.76 | 0.40 | 29.4% |
| Professional and Business Services | 1.55 | 1.40 | -0.15 | -9.7% |
| Education and Health Services | 0.53 | 0.58 | 0.05 | 9.4% |
| Leisure and Hospitality | 0.88 | 0.95 | 0.07 | 8.0% |
| Other Services | 0.83 | 0.82 | -0.01 | -1.2% |

ND= Not Disclosable

Note= Base is the United States

Source: Bureau of Labor Statistics; AECOM, January 2010

Table 16: Charlotte MSA Annual Tourism, 1998-2008

| | Visitors (in millions) | Percent Change | Visitor Spending (in millions) | Percent Change |
|---|---|---|---|---|
| 1998 | 13.03 | | $ 2,486 | |
| 1999 | 14.28 | 9.6% | $ 2,820 | 13.4% |
| 2000 | 14.55 | 1.9% | $ 2,897 | 2.7% |
| 2001 | 14.13 | -2.9% | $ 2,870 | -0.9% |
| 2002 | 14.42 | 2.1% | $ 2,932 | 2.2% |
| 2003 | 15.51 | 7.6% | $ 3,000 | 2.3% |
| 2004 | 16.07 | 3.6% | $ 3,214 | 7.1% |
| 2005 | 16.61 | 3.4% | $ 3,248 | 1.1% |
| 2006 | 17.69 | 6.5% | $ 3,512 | 8.1% |
| 2007 | 18.76 | 6.0% | $ 3,776 | 7.5% |
| 2008 | 18.05 | -3.8% | $ 3,431 | -9.1% |

Source: Charlotte Regional Visitors Authority; AECOM, December 2009

AECOM

Table 17: Estimated Visitor Volumes, Charlotte MSA, 2008

| | | |
|---|---|---|
| **Total Visitors** | | **18,000,000** |
| Convention Attendees | | 900,000 |
| Leisure Visitors | | 13,860,000 |
| Other (business) | | 3,240,000 |
| | | |
| **Total Number of Room Nights Used by All Visitors** | | **6,566,407** |
| Room Nights Used by Convention Attendees | | 1,588,235 |
| Room Nights Used by Leisure Visitors | | 1,914,454 |
| Room Nights Used by Other (business) | | 3,063,718 |
| | | |
| **Total Direct Spending by All Visitors** | **$** | **3,431,000,000** |
| Total Direct Spending by Convention Attendees | $ | 989,100,000 |
| Total Direct Spending by Leisure Visitors | $ | 1,824,320,000 |
| Total Direct Spending by Other (business) | $ | 617,580,000 |

Source: Charlotte Regional Visitors Authority; AECOM, December 2009

Table 18: Primary Purpose of Trip, Charlotte MSA, 2008

| | Charlotte MSA | United States |
|---|---|---|
| Leisure | 68.2% | 74.9% |
| Personal Business | 6.6% | 6.2% |
| Business | 22.9% | 16.1% |
| Other | 2.8% | 2.8% |
| Total | 100.0% | 100.0% |
| | | |
| **Leisure** | | |
| Visit Friends/Relatives | 47.2% | 40.4% |
| Outdoor Recreation | 4.8% | 6.9% |
| Entertainment/Sightseeing | 6.7% | 12.0% |
| Other Personal/Pleasure | 9.5% | 15.7% |
| *Leisure Subtotal* | *68.2%* | *74.9%* |
| | | |
| **Business** | | |
| General Business | 18.1% | 12.0% |
| Convention/Conference | 4.8% | 4.1% |
| *Business Subtotal* | *22.9%* | *16.1%* |

Source: Charlotte Regional Visitors Authority; AECOM, December 2009

Table 19: Mode of Travel Transportation, Charlotte MSA, 2008

| | Charlotte MSA | United States |
|---|---|---|
| Own Auto/Truck | 67.1% | 69.8% |
| Airplane | 19.3% | 17.2% |
| Rental Car | 6.6% | 4.4% |
| Camper/RV | 1.8% | 0.9% |
| Motorcoach/Group Tour | 0.2% | 0.4% |
| Bus | 1.1% | 1.1% |
| Other | 3.5% | 3.7% |

Source: Charlotte Regional Visitors Authority; AECOM, December 2009

Table 20: Lodging, Charlotte MSA, 2009

| | Charlotte MSA | | United States | |
|---|---|---|---|---|
| Accommodations | Nights | Percent | Nights | Percent |
| Private Home | 1.9 | 52.8% | 1.5 | 44.1% |
| Hotel | 1.4 | 38.9% | 1.3 | 38.2% |
| Condo | 0.1 | 2.8% | 0.1 | 2.9% |
| RV/Tent | 0.1 | 2.8% | 0.2 | 5.9% |
| Other | 0.1 | 2.8% | 0.3 | 8.8% |
| Total Nights Stayed | 3.6 | 100.0% | 3.4 | 100.0% |

Source: Charlotte Regional Visitors Authority; AECOM, December 2009

Table 21: Visitor Activities, Charlotte MSA, 2008

| | Charlotte MSA | United States |
|---|---|---|
| Visiting Relatives | 25.80% | 27.40% |
| Visiting Friends | 23.2% | 17.4% |
| Shopping | 18.9% | 19.9% |
| Fine Dining | 13.1% | 14.1% |
| Rural Sightseeing | 11.1% | 14.1% |
| Nightclubs/Dancing | 9.0% | 5.2% |
| Urban Sightseeing | 7.4% | 10.3% |
| Historic Sites | 4.5% | 7.6% |
| Museums | 4.0% | 7.2% |
| Theme Parks | 3.5% | 4.9% |
| NASCAR/Motorsports | 0.3% | 0.7% |

Source: Charlotte Regional Visitors Authority; AECOM, December 2009

Table 22: Average Visitor Spending, Charlotte MSA, 2008

| | Charlotte | Percent |
|---|---|---|
| Lodging | $141.00 | 30.50% |
| Food & Beverage | $105.00 | 22.7% |
| Local Transportation, Parking | $103.00 | 22.3% |
| Shopping/Souvenirs | $51.00 | 11.0% |
| Entertainment | $34.00 | 7.3% |
| Groceries | $20.00 | 4.3% |
| Amenities (golf, spa, etc.) | $7.00 | 1.5% |
| Other | $2.00 | 0.4% |
| **Total** | **$463** | **100%** |

Source: Charlotte Regional Visitors Authority; AECOM, December 2009

Table 23: Origin of Visitor, Charlotte MSA, 2008

| | Charlotte MSA | United States |
|---|---|---|
| North Carolina | 22.60% | 3.30% |
| South Carolina | 11.5% | 1.6% |
| Florida | 8.5% | 6.1% |
| Georgia | 7.9% | 3.2% |
| Virginia | 7.0% | 3.0% |
| Ohio | 5.2% | 3.8% |
| New York | 3.9% | 5.5% |
| Tennessee | 3.5% | 1.9% |
| Pennsylvania | 2.7% | 3.8% |
| New Jersey | 1.8% | 2.6% |

Source: Charlotte Regional Visitors Authority; AECOM, December 2009

# APPENDIX B

## REAL ESTATE MARKET ANALYSIS

*APPENDIX*

# Real Estate Market Analysis Tables

Table 1: Building Permits, Mecklenburg County, 2000-2008

| Jurisdiction | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2000-2008 Total | 2000-2008 Avg. Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Single-Family Units** | **8,564** | **8345** | **8,357** | **7,591** | **8,463** | **8,473** | **9,287** | **6,857** | **2,496** | **68,433** | **8,554** |
| **Multi-Family Permits** | **5,396** | **4292** | **2,249** | **2,263** | **3,443** | **2,355** | **4,389** | **4,560** | **4,354** | **33,301** | **4,163** |
| Units in 2-unit Multi-Family Structures | 58 | 62 | 54 | 60 | 84 | 24 | 60 | 26 | 2 | 430 | 54 |
| Units in 3- and 4-unit Multi-Family Structures | 174 | 269 | 100 | 91 | 130 | 66 | 116 | 104 | 71 | 1,121 | 140 |
| Units in 5+ Unit Multi-Family Structures | 5,164 | 3961 | 2,095 | 2,112 | 3,229 | 2,265 | 4,213 | 4,430 | 4,281 | 31,750 | 3,969 |
| **TOTAL PERMIT ACTIVITY** | **13,960** | **12,637** | **10,606** | **9,854** | **11,906** | **10,828** | **13,676** | **11,417** | **6,850** | **101,734** | **12,717** |

Source: U.S. Department of Housing and Urban Development; AECOM, December 2009

Table 2: Housing Distribution by Type, 2000

| | SAP | CLUP | Mecklenburg County | Charlotte MSA |
|---|---|---|---|---|
| Total | 385 | 8,660 | 292,780 | 546,447 |
| 1, Detached | 97.1% | 84.4% | 60.4% | 66.3% |
| 1, Attached | 0.0% | 1.7% | 5.1% | 3.5% |
| 2 | 0.0% | 0.7% | 2.3% | 2.2% |
| 3 or 4 | 0.0% | 0.2% | 5.1% | 3.9% |
| 5 to 9 | 0.0% | 1.0% | 8.9% | 6.4% |
| 10 to 19 | 0.0% | 3.6% | 8.8% | 5.7% |
| 20+ | 0.0% | 2.1% | 7.2% | 4.7% |
| Mobile Home | 2.9% | 6.3% | 2.1% | 7.4% |
| Other | 0.0% | 0.0% | 0.0% | 0.0% |

SAP= Small Area Plan Study Area

CLUP= Comprehensive Land Use Plan Study Area

Source: ESRI Business Analyst; AECOM, December 2009

Table 3: For-Sale Single-Family Housing Comparables, 2010

| Address | Subdivision | Delivery Year | Bed | Bath | Price | Est. Sq. Ft. | Price/Sq. Ft. | Days on Market |
|---|---|---|---|---|---|---|---|---|
| 3408 Coventry Commons Dr | Brighton Park | 2003 | 3 | 3 | $203,000 | 2,543 | $79.83 | - |
| 6932 Evans Rd | Brighton Park | 2003 | 4 | 3 | $204,992 | 2,922 | $70.15 | - |
| 6928 Evans Rd | Brighton Park | 2003 | 5 | 3 | $240,187 | 3,135 | $76.61 | - |
| 15237 Sharpe Rd | Country Hills | 1980 | 3 | 2 | $150,000 | 1,850 | $81.08 | 25 |
| 7435 Pine Lake Ln | Farmwood | - | 4 | 3 | $245,000 | 3,100 | $79.03 | - |
| 7027 Hollow Oak Dr | Farmwood East | 1989 | 3 | 2 | $216,900 | 2,958 | $73.33 | - |
| 6430 Wilson Grove Rd | N/A | - | 3 | 2 | $105,000 | 1,446 | $72.61 | 106 |
| 7605 Happy Hollow Dr | N/A | - | 3 | 2 | $91,000 | 1,478 | $61.57 | 88 |
| 3330 Mintwood Dr | N/A | - | 4 | 2 | $185,000 | 1,770 | $104.52 | - |
| 8606 Rolling Fields Rd | Plantation Falls | 2007 | 5 | 4 | $435,000 | 4,200 | $103.57 | - |
| 10715 Meg Meadow Dr | Summerwood | 2007 | 5 | 4 | $315,000 | 3,456 | $91.15 | - |
| 10840 Meg Meadow Dr | Summerwood | 2007 | 5 | 4 | $296,500 | 3,191 | $92.92 | - |
| **Average** | | | | | **$223,965** | **2,671** | **$82.20** | - |

N/A= Not Applicable. Unit is not in a subdivision.

Source: Town of Mint Hill Planning and Zoning; AECOM, January 2010

Figure 1:For-Sale Single Family Housing Comparables

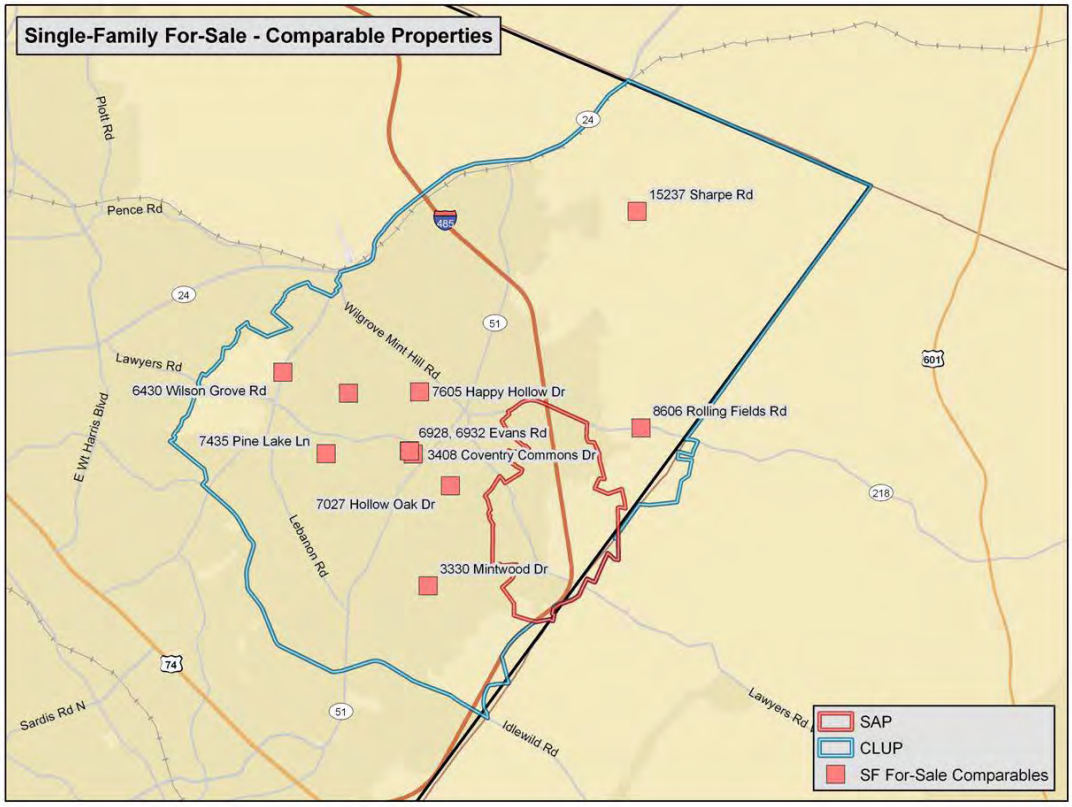



Table 4: For-Sale Multi-Family Housing Comparables, 2010

| Property | Delivery Year | Bed | Bath | Price | Est. Sq. Ft. | Price/Sq. Ft. |
|---|---|---|---|---|---|---|
| 13447 Mint Lake Dr | 1999 | 3 | 2 | $215,000 | 1,738 | $123.71 |
| 13217 Mint Lake Dr | 1999 | 3 | 4 | $226,000 | 1,822 | $124.04 |
| 13209 Mint Lake Dr | 1999 | 3 | 2 | $227,000 | 1,738 | $130.61 |
| 10814 Kempton Sq N | 2009 | 2 | 2.5 | $156,000 | 1,262 | $123.61 |
| 10730 Kemptown Sq | 2009 | 3 | 3 | $155,000 | 2,330 | $66.52 |
| 10742 Kemptown Sq | 2009 | 2 | 3 | $145,000 | 1,865 | $77.75 |
| 3143 Coventry Commons Dr | 2009 | 2 | 3 | $154,000 | 2,103 | $73.23 |
| **Average** | | | | **$182,571** | **1,837** | **$102.78** |

Source: Town of Mint Hill Planning and Zoning; AECOM, January 2010

Figure 2: For-Sale Multifamily Housing Comparables

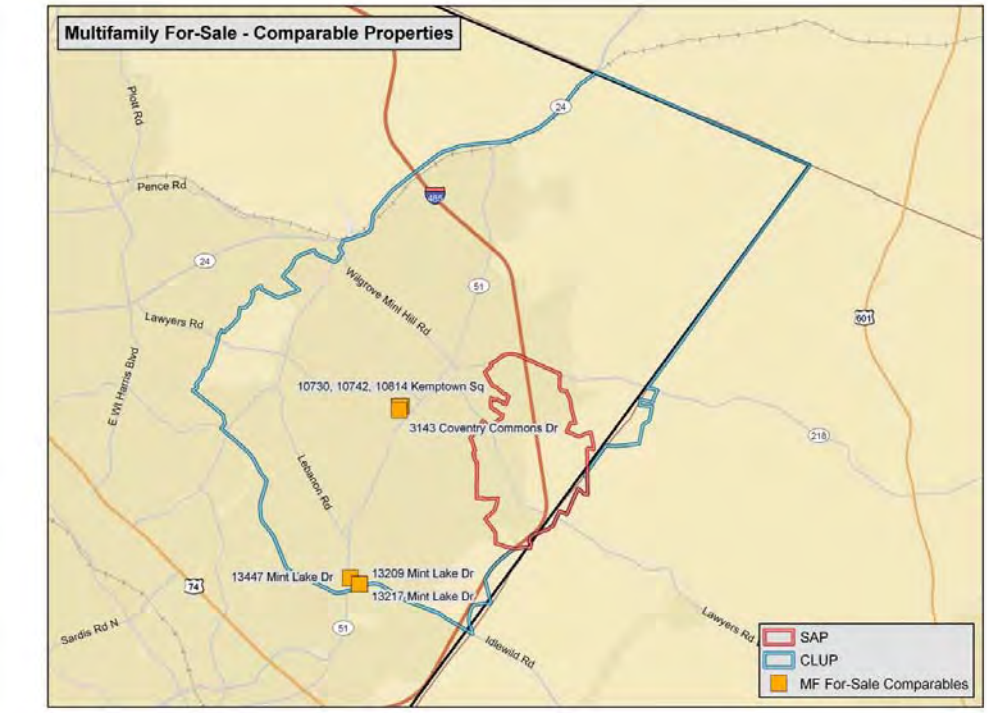



Table 5: Multi-Family For-Rent Housing Comparables, 2010

| Property | Address | Delivery Year | Units Total | Bed | Bath | Avr. Rent | Avr. Sq. Ft. | Avr. $/Sq. Ft. | Vacancy Rate |
|---|---|---|---|---|---|---|---|---|---|
| Colonial Village @ Greystone | 9610 Stoney Glen Dr | 1997 | 408 | | | | | | 16.0% |
| | | | | 1 | 1 | $673 | 720 | $0.93 | |
| | | | | 2 | 2 | $820 | 1,012 | $0.81 | |
| | | | | 2+ | 2+ | $915 | 1,402 | $0.65 | |
| Meadowbrook | 9859 Spring Ridge Ln | 1998 | 177 | 2+ | 2+ | $864 | 1,382 | $0.63 | - |
| McAlpine Ridge | 7900 Krefeld Dr | 1989 | 320 | | | | | | - |
| | | | | 1 | 1 | $489 | 687 | $0.71 | |
| | | | | 2 | 2 | $695 | 995 | $0.70 | |
| Timber Crest | 2025 Timber Oaks Ln | 1999 | 282 | | | | | | 9.0% |
| | | | | 1 | 1 | $628 | 712 | $0.88 | |
| | | | | 2 | 2 | $808 | 1,020 | $0.79 | |
| | | | | 2+ | 2+ | $948 | 853 | $1.11 | |
| Windsor Landing | 1900 Windsor Hill Dr | 1989 | 256 | | | | | | 6.0% |
| | | | | 1 | 1 | $563 | 680 | $0.83 | |
| | | | | 2 | 2 | $700 | 1,027 | $0.68 | |
| | | | | 2+ | 2+ | $885 | 1,275 | $0.69 | |
| Matthews Reserve | 315 Cameron Matthews Dr | 1997 | 212 | | | | | | 7.0% |
| | | | | 1 | 1 | $750 | 719 | $1.04 | |
| | | | | 2 | 2 | $796 | 1,039 | $0.77 | |
| | | | | 2+ | 2+ | $1,029 | 1,266 | $0.81 | |
| The Chase in Monroe | 2163 Commerce Dr | 1986 | 216 | | | | | | 13.0% |
| | | | | 1 | 1 | $640 | 670 | $0.96 | |
| | | | | 2 | 2 | $745 | 870 | $0.86 | |
| | | | | 2+ | 2+ | $865 | 1,127 | $0.77 | |

Source: Town of Mint Hill Planning and Zoning; AECOM; January 2010

Figure 3: For-Rent Multifamily Housing Comparables

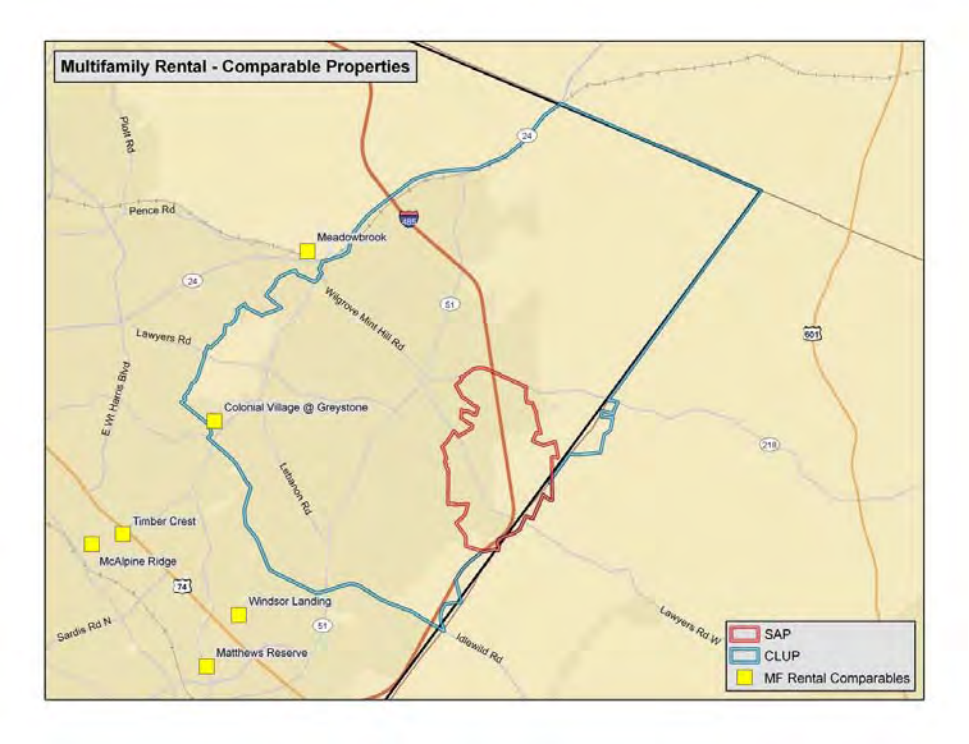



Table 6: Comprehensive Land Use Plan Study Area Market Summary, 2009

| | Number of Buildings | Total Rentable Building Area (SF) | Absorption | Vacancy Rate | Rental Rate |
|---|---|---|---|---|---|
| Office | 36 | 370,057 | 16,538 | 10.3% | $25.56 |
| Retail | 89 | 847,374 | 8,442 | 11.0% | $10.52 |
| Industrial/Flex | 22 | 430,957 | 1,732 | 6.7% | $ 8.73 |

Source: CoStar Property; AECOM, December 2009

Table 7: Office Market Profile, 2004-2009

| City / County | Number of Buildings | Total Rentable Building Area | Share of MSA | Vacancy Rate | Average Rental Rate |
|---|---|---|---|---|---|
| CLUP | 36 | 370,057 | 0.4% | 10.3% | $25.29/fs |
| Mecklenburg County | 2,697 | 72,855,762 | 84.3% | 13.3% | $19.94/fs |
| Charlotte MSA | 4,092 | 86,419,306 | 100.0% | 12.3% | $19.14/fs |

| Direct Net Absorption | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | Total | Avg. Annual |
|---|---|---|---|---|---|---|---|---|
| CLUP | -29,974 | 16,374 | 8,900 | 13,100 | 42,868 | 16,538 | 67,806 | 11,301 |
| Mecklenburg County | 951,378 | 2,257,781 | 2,290,368 | 2,201,722 | 1,106,317 | -635,822 | 8,171,744 | 1,361,957 |
| Charlotte MSA | 1,184,041 | 2,552,424 | 2,113,406 | 2,329,391 | 1,296,863 | -430,990 | 9,045,135 | 1,507,523 |

| End-of-Year Direct Vacancy Rate | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | Avg. Annual |
|---|---|---|---|---|---|---|---|
| CLUP | 21.3% | 15.8% | 12.8% | 8.4% | 13.3% | 10.3% | 13.7% |
| Mecklenburg County | 13.4% | 11.8% | 11.6% | 9.4% | 10.9% | 12.5% | 11.6% |
| Charlotte MSA | 11.8% | 10.5% | 10.6% | 8.8% | 10.8% | 12.3% | 10.8% |

| Average End-of-Year FS Rental Rate | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | Avg. Annual |
|---|---|---|---|---|---|---|---|
| CLUP | $ 18.75 | $ 19.71 | $ 19.71 | $ 19.71 | $ 28.71 | $ 25.56 | $ 22.03 |
| Mecklenburg County | $ 17.94 | $ 18.08 | $ 18.37 | $ 18.77 | $ 19.67 | $ 19.99 | $ 18.80 |
| Charlotte MSA | $ 17.95 | $ 17.99 | $ 18.09 | $ 18.75 | $ 19.15 | $ 19.30 | $ 18.54 |

CLUP= Comprehensive Land Use Plan Study Area

1/ 2009 data is for Q1, Q2, and Q3

Source: CoStar Property; AECOM; December 2009

Figure 4: Office Properties and Concentrations, (Source: CoStar Group, December 2009)

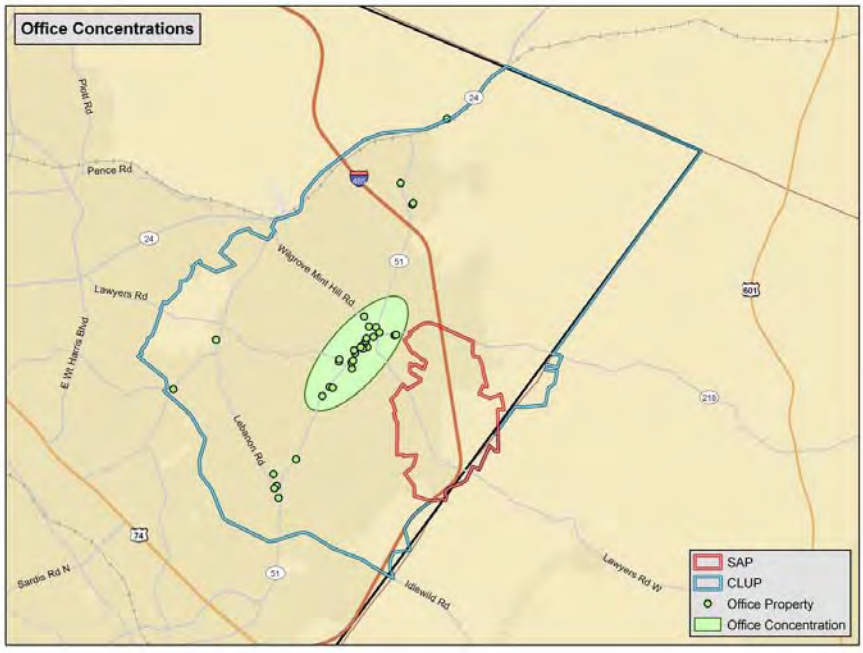


Table 8: Office Comparables, 2010

| Address | Vacancy Rate | Sq. Ft. | Rental Price/Sq. Ft. |
|---|---|---|---|
| 4614 Wilgrove-Mint Hill Rd | 10% | 25,000 | $11 |
| 11205 Lawyers Rd | 16% | 10,000 | $14 |
| 4520 Mint Hill Village Lane | 35% | 24,000 | $18 |
| 7200 Matthews-Mint Hill Rd | 0% | 5,520 | $3 |
| 7314 Matthews-Mint Hill Rd | 0% | 800 | $12 |
| 7316 Matthews-Mint Hill Rd | 0% | 800 | $12 |
| 7320 Matthews-Mint Hill Rd | 0% | 4,900 | $8 |
| **Average** | **9%** | **10,146** | **$11** |

Source: Town of Mint Hill Planning and Zoning; AECOM, January 2010

Figure 5: Office Comparables

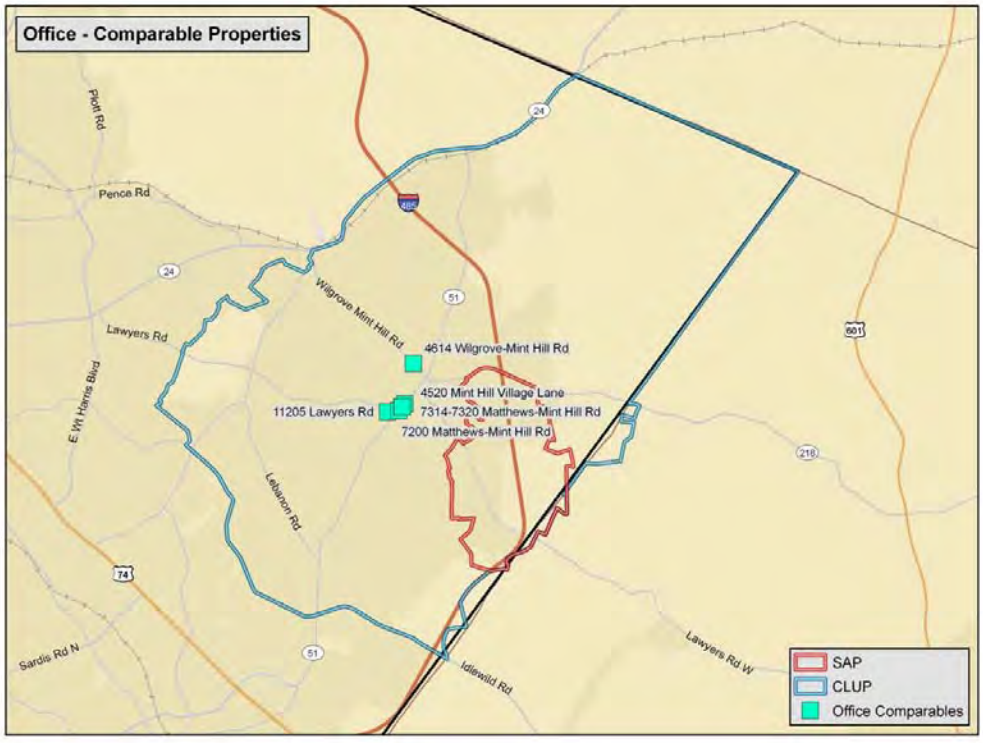


Table 9: Retail Market Profile, 2004-2009

| City / County | Number of Buildings | Total Rentable Building Area | Share of RBA in MSA | Vacancy Rate | Average Rental Rate |
|---|---|---|---|---|---|
| CLUP | 89 | 847,374 | 0.9% | 11.9% | $10.54/nnn |
| Mecklenburg County | 3,271 | 61,368,658 | 62.5% | 7.4% | $16.83/nnn |
| Charlotte MSA | 5,917 | 98,132,464 | 100.0% | 7.5% | $15.30/nnn |

| Direct Net Absorption | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | Total | Avg. Annual |
|---|---|---|---|---|---|---|---|---|
| CLUP | -29,445 | 65,516 | -1,066 | 5,356 | -4,187 | 8,442 | 44,616 | 7,436 |
| Mecklenburg County | 400,106 | 2,294,648 | 928,014 | 1,873,356 | 866,085 | 434,679 | 6,796,888 | 1,132,815 |
| Charlotte MSA | 1,680,357 | 2,664,495 | 2,087,323 | 2,720,231 | 1,153,070 | 498,948 | 10,804,424 | 1,800,737 |

| End-of-Year Direct Vacancy Rate | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | Avg. Annual |
|---|---|---|---|---|---|---|---|
| CLUP | 9.3% | 8.6% | 10.5% | 9.8% | 10.3% | 11.0% | 9.9% |
| Mecklenburg County | 6.1% | 6.6% | 7.7% | 5.9% | 6.7% | 8.2% | 6.9% |
| Charlotte MSA | 4.1% | 5.2% | 6.1% | 5.1% | 6.1% | 7.0% | 5.6% |

| Average End-of-Year NNN Rental Rate | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | Avg. Annual |
|---|---|---|---|---|---|---|---|
| CLUP | - | $ 10.64 | $ 13.03 | $ 12.38 | $ 10.09 | $ 10.52 | $ 11.33 |
| Mecklenburg County | $ 9.22 | $ 11.17 | $ 15.28 | $ 15.48 | $ 15.86 | $ 16.38 | $ 13.90 |
| Charlotte MSA | $ 9.70 | $ 11.00 | $ 13.85 | $ 15.02 | $ 15.87 | $ 15.61 | $ 13.51 |

CLUP= Comprehensive Land Use Plan Study Area

1/ 2009 data is for Q1, Q2, and Q3

Source: CoStar Property; AECOM; December 2009

Figure 6: Retail Properties and Concentrations, (Source: CoStar Group, December 2009)

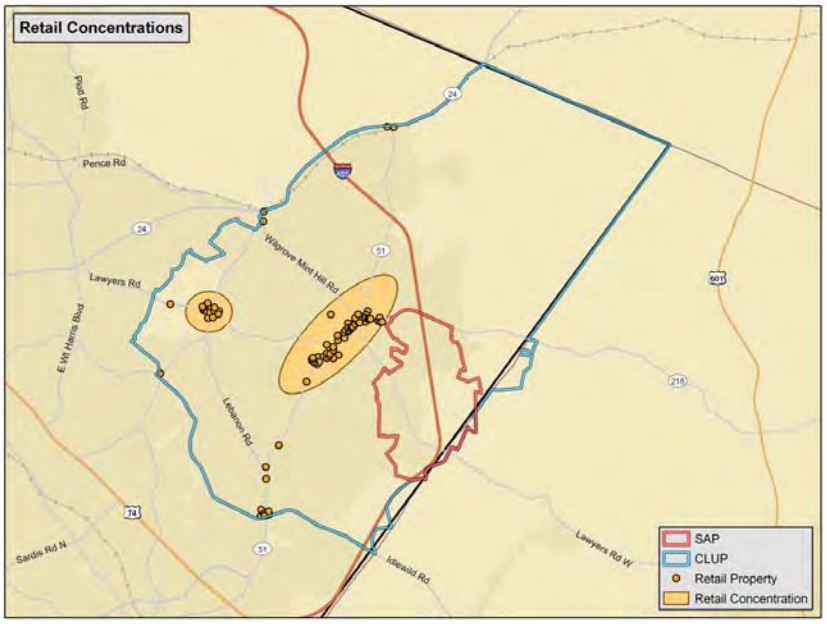


Table 10: Retail Comparables, 2010

| Address | Vacancy Rate | Sq. Ft. | Rental Price/Sq. Ft. |
|---|---|---|---|
| 7427 Matthews-Mint Hill Road & 4410 Mint Hill Village Lane | 50% | 20,000 | $20 |
| 7210 Matthews-Mint Hill Rd | 0% | 1,600 | $12 |
| 5706 Wyalong Dr | - | 1,000 | $23 |
| 2522 N Sardis Rd | - | 7,500 | $14 |
| 9808 Albemarle Rd | - | 1,400 | $8 |
| 6273 Wilson Grove Rd | - | 6,000 | $13 |
| Indepence Blvd and Sardis Rd | - | 12,000 | $13 |
| **Average** | **-** | **7,071** | **$15** |

Source: Town of Mint Hill Planning and Zoning; AECOM, January 2010

Figure 7: Retail Comparables

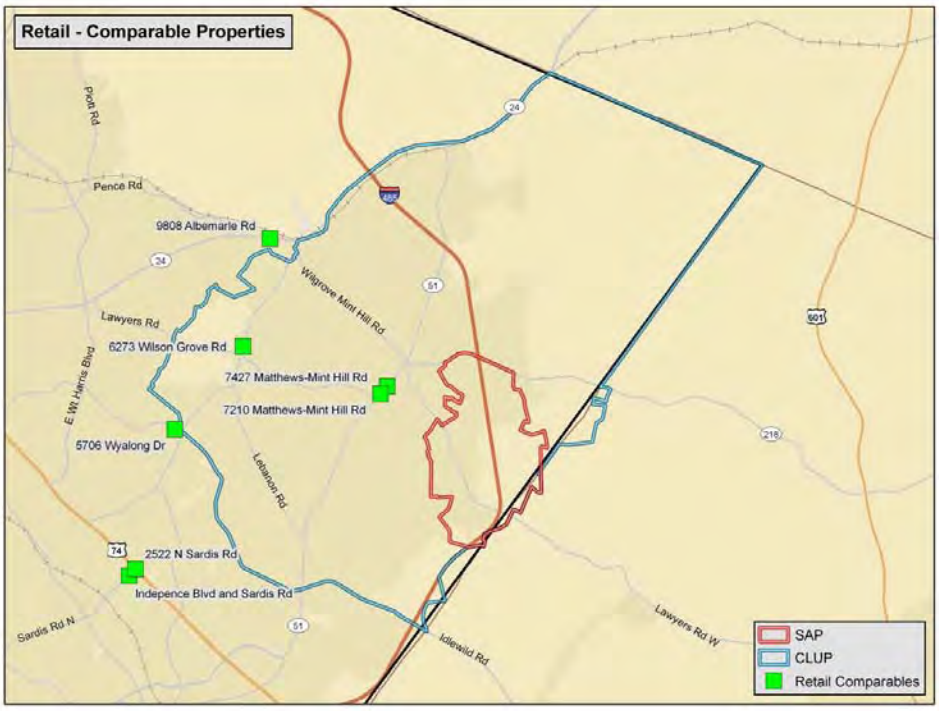


Table 11: Industrial/Flex Market Profile, 2004-2009

| City / County | Number of Buildings | Total Rentable Building Area | Share of RBA in MSA | Vacancy Rate | Average Rental Rate |
|---|---|---|---|---|---|
| CLUP | 22 | 430,957 | 0.2% | 7.7% | $8.76/nnn |
| Mecklenburg County | 3,566 | 144,096,008 | 67.0% | 9.2% | $4.56/nnn |
| Charlotte MSA | 5,164 | 215,095,159 | 100.0% | 9.2% | $4.43/nnn |

| Direct Net Absorption | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | Total | Avg. Annual |
|---|---|---|---|---|---|---|---|---|
| CLUP | -588 | 739 | -11,533 | 14,926 | -3,414 | 1,732 | 1,862 | 310 |
| Mecklenburg County | 954,885 | 2,476,787 | 3,115,521 | 1,210,557 | -7,540 | -621,218 | 7,128,992 | 1,188,165 |
| Charlotte MSA | 126,822 | 2,269,043 | 5,239,475 | 4,050,301 | 1,310,632 | -227,258 | 12,769,015 | 2,128,169 |

| End-of-Year Direct Vacancy Rate | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | Avg. Annual |
|---|---|---|---|---|---|---|---|
| CLUP | 7.3% | 7.1% | 9.8% | 6.3% | 7.1% | 6.7% | 7.4% |
| Mecklenburg County | 10.4% | 9.0% | 7.8% | 8.2% | 8.5% | 9.1% | 8.8% |
| Charlotte MSA | 12.0% | 11.4% | 9.8% | 8.9% | 8.9% | 9.0% | 10.0% |

| Average End-of-Year NNN Rental Rate | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | Avg. Annual |
|---|---|---|---|---|---|---|---|
| CLUP | $ - | - | - | - | - | $ 8.73 | $ 8.73 |
| Mecklenburg County | $ 4.15 | $ 4.67 | $ 4.61 | $ 5.01 | $ 4.96 | $ 4.68 | $ 4.68 |
| Charlotte MSA | $ 3.71 | $ 3.95 | $ 4.09 | $ 4.70 | $ 4.75 | $ 4.43 | $ 4.27 |

CLUP= Comprehensive Land Use Plan Study Area

1/ 2009 data is for Q1, Q2, and Q3

Source: CoStar Property; AECOM; December 2009

Table 12: Annual Performance Indicators for Selected Properties near Mint Hill, 2003 - 2008

| | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | CAGR 2003-2008 |
|---|---|---|---|---|---|---|---|
| **Performance Characteristics** | | | | | | | |
| Available Room Nights (Supply) | 1,246,840 | 1,246,840 | 1,246,840 | 1,246,840 | 1,246,840 | 1,259,998 | 0.2% |
| Occupied Room Nights (Demand) | 718,518 | 733,147 | 825,568 | 851,254 | 864,410 | 790,345 | 1.9% |
| Annual Occupancy (%) | 57.6% | 58.8% | 66.2% | 68.3% | 69.3% | 62.7% | 1.7% |
| Average Daily Rate | $59.37 | $61.16 | $62.80 | $70.82 | $78.10 | $81.76 | 6.6% |
| Revenue/Available Room 1/ | $34.21 | $35.96 | $41.58 | $48.35 | $54.15 | $51.29 | 8.4% |
| **Year-to-Year % Growth** | | | | | | | |
| Annual Occupancy | - | 2.0% | 12.6% | 3.1% | 1.5% | -9.5% | |
| Average Daily Rate | - | 3.0% | 2.7% | 12.8% | 10.3% | 4.7% | |
| Revenue/Available Room | - | 5.1% | 15.6% | 16.3% | 12.0% | -5.3% | |

| Facility | Rooms | % |
|---|---|---|
| Express Inn & Suites | 116 | 3.4% |
| Microtel Inn Matthews | 81 | 2.4% |
| Hampton Inn Charlotte Matthews | 91 | 2.6% |
| InTown Suites Independence | 121 | 3.5% |
| Sleep Inn Matthews | 79 | 2.3% |
| InTown Suites Matthews | 140 | 4.1% |
| Econo Lodge Inn & Suites East Matthews | 62 | 1.8% |
| Comfort Inn Matthews | 93 | 2.7% |
| Courtyard Charlotte Matthews | 121 | 3.5% |
| Super 8 Monroe | 79 | 2.3% |
| Quality Inn & Suites Monroe | 65 | 1.9% |
| Hampton Inn Charlotte Monroe | 122 | 3.5% |
| Comfort Suites Pineville | 116 | 3.4% |
| Four Points Charlotte Pineville | 85 | 2.5% |
| Holiday Inn Express Charlotte South Pineville | 91 | 2.6% |
| Hilton Garden Inn Charlotte Pineville | 112 | 3.3% |
| Quality Suites Pineville | 75 | 2.2% |
| Hampton Inn Suites Charlotte Pineville | 111 | 3.2% |
| Residence Inn Charlotte Southpark | 152 | 4.4% |
| Suburban Extended Stay Southeast Pineville | 114 | 3.3% |
| Courtyard Charlotte South Park | 149 | 4.3% |
| Hampton Inn Suites Charlotte S Park @ Phillips P | 124 | 3.6% |
| Extended Stay Deluxe Charlotte Pineville | 76 | 2.2% |
| Extended Stay America Charlotte Pineville | 107 | 3.1% |
| InTown Suites Albemarle | 121 | 3.5% |
| Best Western Independence Hotel | 93 | 2.7% |
| Courtyard Charlotte Ballantyne Resort | 90 | 2.6% |
| Residence Inn Charlotte Rea Road Piper Glen | 114 | 3.3% |
| Staybridge Suites Charlotte Ballantyne | 118 | 3.4% |
| Comfort Inn @ Carowinds Charlotte | 153 | 4.4% |
| Motel 6 Charlotte Carowinds | 122 | 3.5% |
| Holiday Inn Express Charlotte Carowinds | 68 | 2.0% |
| Sleep Inn @ Carowinds Fort Mill | 80 | 2.3% |
| **Total** | **3,441** | **100%** |

Revenue per available room is the best measure of year-to-year growth because it considers simultaneous changes in both room rate and annual occupancy levels.

CAGR= Compound Annual Growth Rate

Source: Smith Travel Research; AECOM, December 2009

Table 13: Available Roomnights (Supply)

| | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | CAGR 2003-08 |
|---|---|---|---|---|---|---|---|
| January | 105,896 | 105,896 | 105,896 | 105,896 | 105,896 | 105,896 | 0.0% |
| February | 95,648 | 95,648 | 95,648 | 95,648 | 95,648 | 95,648 | 0.0% |
| March | 105,896 | 105,896 | 105,896 | 105,896 | 105,896 | 107,229 | 0.3% |
| April | 102,480 | 102,480 | 102,480 | 102,480 | 102,480 | 103,770 | 0.3% |
| May | 105,896 | 105,896 | 105,896 | 105,896 | 105,896 | 107,229 | 0.3% |
| June | 102,480 | 102,480 | 102,480 | 102,480 | 102,480 | 103,770 | 0.3% |
| July | 105,896 | 105,896 | 105,896 | 105,896 | 105,896 | 107,229 | 0.3% |
| August | 105,896 | 105,896 | 105,896 | 105,896 | 105,896 | 107,229 | 0.3% |
| September | 102,480 | 102,480 | 102,480 | 102,480 | 102,480 | 103,770 | 0.3% |
| October | 105,896 | 105,896 | 105,896 | 105,896 | 105,896 | 107,229 | 0.3% |
| November | 102,480 | 102,480 | 102,480 | 102,480 | 102,480 | 103,770 | 0.3% |
| December | 105,896 | 105,896 | 105,896 | 105,896 | 105,896 | 107,229 | 0.3% |
| **Annual:** | **1,246,840** | **1,246,840** | **1,246,840** | **1,246,840** | **1,246,840** | **1,259,998** | **0.2%** |
| Annual % Change: | - | 0.0% | 0.0% | 0.0% | 0.0% | 1.1% | |

CAGR= Compound Annual Growth Rate

Source: Smith Travel Research; AECOM, December 2009

Table 14: Occupied Roomnights (Demand)

| | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | CAGR 2003-08 |
|---|---|---|---|---|---|---|---|
| January | 49,790 | 49,375 | 56,611 | 61,429 | 60,760 | 60,919 | 4.1% |
| February | 51,538 | 52,153 | 57,613 | 62,964 | 63,403 | 63,023 | 4.1% |
| March | 59,487 | 63,371 | 69,740 | 77,827 | 76,583 | 73,774 | 4.4% |
| April | 62,559 | 62,518 | 68,231 | 75,359 | 76,274 | 72,068 | 2.9% |
| May | 67,861 | 69,154 | 75,126 | 78,342 | 82,646 | 74,903 | 2.0% |
| June | 64,183 | 63,074 | 72,941 | 75,713 | 79,738 | 72,383 | 2.4% |
| July | 68,263 | 67,885 | 76,712 | 72,225 | 76,103 | 70,739 | 0.7% |
| August | 63,483 | 63,049 | 76,333 | 72,694 | 78,718 | 69,198 | 1.7% |
| September | 57,873 | 61,168 | 66,838 | 68,681 | 68,915 | 61,469 | 1.2% |
| October | 65,315 | 68,505 | 77,360 | 76,378 | 78,018 | 68,637 | 1.0% |
| November | 58,789 | 60,293 | 68,327 | 70,069 | 67,328 | 54,169 | -1.6% |
| December | 49,377 | 52,602 | 59,736 | 59,573 | 55,924 | 49,063 | -0.1% |
| **Annual:** | **718,518** | **733,147** | **825,568** | **851,254** | **864,410** | **790,345** | **1.9%** |
| Annual % Change: | - | 2.0% | 12.6% | 3.1% | 1.5% | -8.6% | |

CAGR= Compound Annual Growth Rate

Source: Smith Travel Research; AECOM, December 2009

Table 15: Room Revenue

| | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | CAGR 2003-08 |
|---|---|---|---|---|---|---|---|
| January | $2,816,856 | $2,834,392 | $3,328,209 | $3,958,068 | $4,474,686 | $4,796,080 | 11.2% |
| February | $2,993,435 | $3,094,052 | $3,463,395 | $4,133,091 | $4,741,931 | $5,044,692 | 11.0% |
| March | $3,434,999 | $3,772,847 | $4,254,698 | $5,309,574 | $5,932,068 | $6,088,633 | 12.1% |
| April | $3,757,332 | $3,771,704 | $4,262,573 | $5,199,167 | $5,887,383 | $6,112,374 | 10.2% |
| May | $4,368,215 | $4,516,050 | $5,068,068 | $5,893,561 | $6,866,693 | $6,438,876 | 8.1% |
| June | $3,868,249 | $3,904,736 | $4,656,401 | $5,442,733 | $6,287,844 | $6,004,799 | 9.2% |
| July | $4,187,873 | $4,220,425 | $4,887,523 | $5,182,835 | $5,990,109 | $5,745,550 | 6.5% |
| August | $3,776,238 | $3,928,725 | $4,816,930 | $5,312,919 | $6,227,662 | $5,610,439 | 8.2% |
| September | $3,364,920 | $3,729,698 | $4,144,743 | $4,936,118 | $5,332,489 | $4,990,743 | 8.2% |
| October | $3,921,533 | $4,345,007 | $4,980,058 | $5,786,720 | $6,432,146 | $5,742,171 | 7.9% |
| November | $3,361,499 | $3,651,148 | $4,271,685 | $5,025,734 | $5,228,014 | $4,277,433 | 4.9% |
| December | $2,805,362 | $3,073,114 | $3,708,514 | $4,102,662 | $4,112,742 | $3,770,192 | 6.1% |
| **Annual:** | **$ 42,656,511** | **$ 44,841,898** | **$ 51,842,797** | **$ 60,283,182** | **$ 67,513,767** | **$ 64,621,982** | **8.7%** |
| Annual % Change: | - | 5.1% | 15.6% | 16.3% | 12.0% | -4.3% | |

CAGR= Compound Annual Growth Rate

Source: Smith Travel Research; AECOM, December 2009

Table 16: Annual Occupancies By Month (%)

| | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | CAGR 2003-08 |
|---|---|---|---|---|---|---|---|
| January | 47.0 | 46.6 | 53.5 | 58.0 | 57.4 | 57.5 | 4.1% |
| February | 53.9 | 54.5 | 60.2 | 65.8 | 66.3 | 65.9 | 4.1% |
| March | 56.2 | 59.8 | 65.9 | 73.5 | 72.3 | 68.8 | 4.1% |
| April | 61.0 | 61.0 | 66.6 | 73.5 | 74.4 | 69.4 | 2.6% |
| May | 64.1 | 65.3 | 70.9 | 74.0 | 78.0 | 69.9 | 1.7% |
| June | 62.6 | 61.5 | 71.2 | 73.9 | 77.8 | 69.8 | 2.2% |
| July | 64.5 | 64.1 | 72.4 | 68.2 | 71.9 | 66.0 | 0.5% |
| August | 59.9 | 59.5 | 72.1 | 68.6 | 74.3 | 64.5 | 1.5% |
| September | 56.5 | 59.7 | 65.2 | 67.0 | 67.2 | 59.2 | 1.0% |
| October | 61.7 | 64.7 | 73.1 | 72.1 | 73.7 | 64.0 | 0.7% |
| November | 57.4 | 58.8 | 66.7 | 68.4 | 65.7 | 52.2 | -1.9% |
| December | 46.6 | 49.7 | 56.4 | 56.3 | 52.8 | 45.8 | -0.4% |
| **Annual:** | **57.6** | **58.8** | **66.2** | **68.3** | **69.3** | **62.7** | **1.7%** |
| Annual % Change: | - | 2.0% | 12.6% | 3.1% | 1.5% | -9.5% | |

CAGR= Compound Annual Growth Rate

Source: Smith Travel Research; AECOM, December 2009

Table 17: Average Daily Rate

| | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | CAGR 2003-08 |
|---|---|---|---|---|---|---|---|
| January | $56.57 | $57.41 | $58.79 | $64.43 | $73.65 | $78.73 | 6.8% |
| February | $58.08 | $59.33 | $60.11 | $65.64 | $74.79 | $80.05 | 6.6% |
| March | $57.74 | $59.54 | $61.01 | $68.22 | $77.46 | $82.53 | 7.4% |
| April | $60.06 | $60.33 | $62.47 | $68.99 | $77.19 | $84.81 | 7.1% |
| May | $64.37 | $65.30 | $67.46 | $75.23 | $83.09 | $85.96 | 6.0% |
| June | $60.27 | $61.91 | $63.84 | $71.89 | $78.86 | $82.96 | 6.6% |
| July | $61.35 | $62.17 | $63.71 | $71.76 | $78.71 | $81.22 | 5.8% |
| August | $59.48 | $62.31 | $63.10 | $73.09 | $79.11 | $81.08 | 6.4% |
| September | $58.14 | $60.97 | $62.01 | $71.87 | $77.38 | $81.19 | 6.9% |
| October | $60.04 | $63.43 | $64.38 | $75.76 | $82.44 | $83.66 | 6.9% |
| November | $57.18 | $60.56 | $62.52 | $71.73 | $77.65 | $78.96 | 6.7% |
| December | $56.82 | $58.42 | $62.08 | $68.87 | $73.54 | $76.84 | 6.2% |
| **Annual:** | **$59.37** | **$61.16** | **$62.80** | **$70.82** | **$78.10** | **$81.76** | **6.6%** |
| Annual % Change: | - | 3.0% | 2.7% | 12.8% | 10.3% | 4.7% | |

CAGR= Compound Annual Growth Rate

Source: Smith Travel Research; AECOM, December 2009

# APPENDIX C

## DEMAND POTENTIAL MARKET ANALYSIS

*APPENDIX*

AECOM
1101 Connecticut Avenue, NW
Suite 750
Washington, DC 20036
www.aecom.com

202 496 9870 tel
202 496 9877 fax

# Technical Memorandum

To HNTB

Subject Mint Hill Comprehensive Plan Demand Potentials Tables

From AECOM

Date March 16, 2010

**Table 1: SAP Study Area Annual Demand for Single Family For-Sale Housing, 2009-2014**

| | CLUP Study Area | Mecklenburg County |
|---|---|---|
| **I. Demand from New Households** | | |
| New Households 2009-2014 | 1,362 | 54,150 |
| Annual New Households | 272 | 10,830 |
| Income Qualified /1 | 45% | 43% |
| Estimated Lifestyle Preference /2 | 100% | 70% |
| Propensity to Own | 82% | 62% |
| New Target Market Households | **101** | **2,036** |
| | | |
| **II. Demand from Converting Renter Households** | | |
| Total Households, 2009 | 10,379 | 355,055 |
| Income Qualified | 45% | 43% |
| Existing Renters | 18% | 38% |
| Annual Turnover Rate | 10% | 10% |
| Estimated Lifestyle Preference | 100% | 70% |
| Propensity to Buy | 10% | 10% |
| Conversion Target Market Households | **9** | **407** |
| | | |
| **III. Turnover of Existing Households** | | |
| Total Households, 2009 | 10,379 | 355,055 |
| Income Qualified | 45% | 43% |
| Tenure Qualified | 82% | 62% |
| Estimated Lifestyle Preference | 100% | 70% |
| Estimated Annual Turnover Rate | 5% | 5% |
| Existing Target Market Households | **193** | **3,337** |
| | | |
| **Annual Absorption Potential** | | |
| Total Target Market Annual Demand | 302 | 5,780 |
| SAP Study Area Capture | 8% | 0.25% |
| **Annual SAP Study Area Absorption Potential** | **24** | **14** |
| | | |
| **Total Annual SAP Study Area Absorption Potential** | **39** | |

1/ Target market income range is $75,000+

2/ Estimated Lifestyle Preference is based on segmented demographic data provided by ESRI

Source: ESRI Business Analyst; AECOM, February 2010

AECOM

**Table 2: SAP Study Area Annual Demand for Multi Family For-Sale Housing, 2009- 2014**

| | CLUP Study Area | Mecklenburg County |
|---|---|---|
| **I. Demand from New Households** | | |
| New Households 2009-2014 | 1,362 | 54,150 |
| Annual New Households | 272 | 10,830 |
| Income Qualified /1 | 70% | 65% |
| Estimated Lifestyle Preference /2 | 16% | 37% |
| Propensity to Own | 82% | 62% |
| **New Target Market Households:** | **24** | **1,628** |
| | | |
| **II. Demand from Renter Converting Households** | | |
| Total Households, 2009 | 10,379 | 355,055 |
| Income Qualified | 70% | 65% |
| Existing Renters | 18% | 38% |
| Annual Turnover Rate | 20% | 20% |
| Estimated Lifestyle Preference | 16% | 37% |
| Propensity to Buy | 10% | 10% |
| **Conversion Target Market Households:** | **4** | **651** |
| | | |
| **III. Turnover of Existing Owner-Occupied Households** | | |
| Total Households, 2009 | 10,379 | 355,055 |
| Income Qualified | 70% | 65% |
| Tenure Qualified | 82% | 62% |
| Estimated Lifestyle Preference | 16% | 37% |
| Estimated Annual Turnover Rate | 5% | 5% |
| **Existing Target Market Households:** | **47** | **2,668** |
| | | |
| **Annual Absorption Potentials** | | |
| Total Target Market Annual Demand | 75 | 4,947 |
| SAP Study Area Capture | 33% | 0.25% |
| **Annual SAP Study Area Absorption Potential** | **25** | **12** |
| | | |
| **Total Annual SAP Study Area Absorption Potential** | **37** | |

1/ Target market income range is $50,000

2/ Estimated Lifestyle Preference is based on segmented demographic data provided by ESRI

Source: ESRI Business Analyst; AECOM, February 2010

AECOM

**Table 3: SAP Study Area Annual Demand for Multi-Family Rental Housing, 2009-2014**

| | CLUP Study Area | Mecklenburg County |
|---|---|---|
| **I. Demand from New Households** | | |
| New Households 2009-2014 | 1,362 | 54,150 |
| Annual New Households | 272 | 10,830 |
| Income Qualified /1 | 84% | 79% |
| Tenure Qualified | 18% | 38% |
| Estimated Lifestyle Preference /2 | 16% | 54% |
| **New Target Market Households:** | **6** | **1,747** |
| | | |
| **II. Demand from Existing Renter Households (Turnover)** | | |
| Total Households, 2009 | 10,379 | 355,055 |
| Income Qualified | 84% | 79% |
| Tenure Qualified | 18% | 38% |
| Estimated Lifestyle Preference | 16% | 54% |
| Annual Turnover Rate | 20% | 20% |
| **Existing Target Market Households:** | **49** | **11,455** |
| | | |
| **Annual Absorption Potential** | | |
| Total Target Market Annual Demand | 56 | 13,202 |
| SAP Study Area Capture | 20% | 0.20% |
| **Annual SAP Study Area Absorption Potential** | **11** | **26** |
| | | |
| **Total Annual SAP Study Area Absorption Potential** | **38** | |

1/ Target market income range is $35,000+

2/ Estimated Lifestyle Preference is based on segmented demographic data provided by ESRI

Source: ESRI Business Analyst; AECOM, February 2010

AECOM

**Table 4: SAP Retail Leakage (In Sq. Ft.), 2009**

| | Supportable Space (In Sq. Ft.) | | |
|---|---|---|---|
| | Demand (HH Exp) | Supply (Sales) | 2009 (Surplus)/Gap |
| **CLUP Study Area Apparel & Accessories** | | | |
| Children's Wear | 3,549 | 3,915 | (366) |
| Footwear | 15,738 | - | 15,738 |
| Jewelry | 7,176 | 2,983 | 4,192 |
| Men's Wear | 3,807 | - | 3,807 |
| Women's Wear | 12,446 | - | 12,446 |
| **CLUP Study Area Subtotal** | **42,716** | **6,899** | **35,817** |
| **CLUP Study Area Furniture/Home Furnishings** | | | |
| Furniture | 28,629 | 1,436 | 27,192 |
| Home Furnishings | 19,419 | 19,958 | (539) |
| Household Appliances Stores | 10,872 | 4,310 | 6,562 |
| Home Centers | 96,726 | - | 96,726 |
| Paint and Wallpaper Stores | 4,766 | - | 4,766 |
| Hardware Stores | 20,290 | - | 20,290 |
| Lawn, Garden Equipment, Supplies Stores | 19,696 | 5,786 | 13,911 |
| **CLUP Study Area Subtotal** | **200,397** | **31,490** | **168,907** |
| **CLUP Study Area Food & Beverage** | | | |
| Full-Service Restaurants | 53,304 | 23,217 | 20,847 |
| Limited-Service Eating Places | 57,798 | 42,956 | 15,458 |
| Drinking Places -Alcoholic Beverages | 5,467 | 2,648 | 17,831 |
| **CLUP Study Area Subtotal** | **116,569** | **68,821** | **54,136** |
| **CLUP Study Area Groceries** | | | |
| Groceries and Other Foods | 84,872 | 129,349 | (44,477) |
| Convenience Stores | 8,519 | 3,746 | 4,774 |
| **CLUP Study Area Subtotal** | **93,392** | **133,095** | **(39,703)** |
| **CLUP Study Area Leisure & Entertainment** | | | |
| Musical Instruments and Supplies | 2,746 | - | 2,746 |
| Books | 8,671 | - | 8,671 |
| Florists | 4,242 | 1,609 | 6,857 |
| Computer, Software, and Supplies | 3,729 | - | 3,729 |
| Camera and Photographic Equipment | 1,718 | - | 1,718 |
| Sewing, Knitting and Needlework Goods | 2,092 | 2,770 | (678) |
| Sporting Goods | 15,709 | - | 15,709 |
| Toys, Hobby Goods and Games | 9,322 | 1,289 | 8,033 |
| **CLUP Study Area Subtotal** | **48,228** | **5,668** | **46,784** |
| **CLUP Study Area Convenience & Service** | | | |
| Pharmacies and Drug Stores | 50,627 | 167,455 | (116,829) |
| Office Supplies, Stationery, Gift | 7,553 | 2,062 | 5,491 |
| Cosmetics, Beauty Supplies, Perfume Stores | 3,005 | 688 | 2,317 |
| **CLUP Study Area Subtotal** | **61,185** | **170,205** | **(109,020)** |
| **CLUP Study Area General Merchandise** | | | |
| Department Stores Excl Leased Depts | 162,003 | - | 162,003 |
| Warehouse Clubs and Super Stores | 121,075 | 63,905 | 31,097 |
| **CLUP Study Area Subtotal** | **283,078** | **63,905** | **193,100** |
| **Total CLUP Study Area Retail Leakage (in Sq. Ft.)** | **845,565** | **480,083** | **350,020** |
| SAP Study Area Capture | | | 5.2% |
| **Total SAP Study Area Retail Leakage (in Sq. Ft.)** | | | **18,201** |

Note= Demand is based on current household expenditures and assumes households would spend 100% of retail expenditures in the CLUP study area and the SAP Study Area if the goods were available. The total retail leakage sq. ft. of 18,201 is based on the assumption that households only shopped in the SAP Study Area.
Source: Claritas, Inc.; AECOM, February 2010

AECOM

**Table 5: SAP Study Area Supportable Retail Space (In Sq. Ft.), 2015**

| | As % of Avg. HH Income | Spending Per Household | Total HH Spending | Required Retail Sales Per Sq. Ft. | Supportable Space (Sq. Ft.) |
|---|---|---|---|---|---|
| **Total CLUP Study Area Households-2015** | 13,833 | | | | |
| **Average CLUP Study Area Household Income-2015 (Estimate)** | $83,659 | | | | |
| **Apparel & Accessories** | | | | | |
| Children's Wear | 0.1% | $ 77 | $ 1,067,951 | $ 239 | 4,471 |
| Footwear | 0.3% | 266 | 3,683,543 | $ 186 | 19,829 |
| Jewelry | 0.3% | 243 | 3,359,028 | $ 372 | 9,041 |
| Men's Wear | 0.1% | 83 | 1,145,722 | $ 239 | 4,797 |
| Women's Wear | 0.4% | 343 | 4,743,893 | $ 303 | 15,681 |
| **CLUP Study Area Subtotal** | **1.2%** | **$ 1,012** | **$ 14,000,137** | **$ 268** | **53,819** |
| **Furniture/Home Furnishings** | | | | | |
| Furniture | 0.6% | $ 484 | $ 6,700,569 | $ 186 | 28,054 |
| Home Furnishings | 0.5% | 422 | 5,843,507 | $ 239 | 31,456 |
| Household Appliances Stores | 0.2% | 184 | 2,544,626 | $ 186 | 11,986 |
| Home Centers | 2.2% | 1,870 | 25,872,900 | $ 212 | 108,326 |
| Paint and Wallpaper Stores | 0.1% | 104 | 1,434,112 | $ 239 | 6,755 |
| Hardware Stores | 0.5% | 392 | 5,427,415 | $ 212 | 25,564 |
| Lawn, Garden Equipment, Supplies Stores | 0.5% | 381 | 5,268,509 | $ 212 | 24,816 |
| **CLUP Study Area Subtotal** | **4.6%** | **$ 3,838** | **$ 53,091,638** | **$ 212** | **236,958** |
| **Food & Beverage** | | | | | |
| Full-Service Restaurants | 2.2% | $ 1,804 | $ 24,951,702 | $ 372 | 67,159 |
| Limited-Service Eating Places | 2.0% | 1,676 | 23,190,209 | $ 318 | 72,821 |
| Drinking Places -Alcoholic Beverages | 0.2% | 198 | 2,742,101 | $ 398 | 6,888 |
| **CLUP Study Area Subtotal** | **4.4%** | **$ 3,678** | **$ 50,884,012** | **$ 363** | **146,868** |
| **Groceries** | | | | | |
| Groceries and Other Foods | 5.9% | $ 4,924 | $ 68,106,920 | $ 637 | 106,933 |
| Convenience Stores | 0.3% | $ 247 | $ 3,418,270 | $ 318 | 10,734 |
| **CLUP Study Area Subtotal** | **6.2%** | **$ 5,171** | **$ 71,525,190** | **$ 478** | **117,667** |
| **Leisure & Entertainment** | | | | | |
| Musical Instruments and Supplies | 0.1% | $ 53 | $ 734,482 | $ 212 | 3,460 |
| Books | 0.2% | 147 | 2,029,438 | $ 186 | 10,925 |
| Florists | 0.1% | 82 | 1,134,618 | $ 212 | 5,344 |
| Computer, Software, and Supplies | 0.2% | 209 | 2,892,448 | $ 616 | 4,698 |
| Camera and Photographic Equipment | 0.1% | 45 | 618,133 | $ 286 | 2,165 |
| Sewing, Knitting and Needlework Goods | 0.0% | 40 | 559,516 | $ 212 | 2,635 |
| Sporting Goods | 0.4% | 304 | 4,201,839 | $ 212 | 19,792 |
| Toys, Hobby Goods and Games | 0.2% | 180 | 2,493,604 | $ 212 | 11,745 |
| **CLUP Study Area Subtotal** | **1.3%** | **$ 1,060** | **$ 14,664,079** | **$ 269** | **60,764** |
| **Convenience & Service** | | | | | |
| Pharmacies and Drug Stores | 2.5% | $ 2,080 | $ 28,776,815 | $ 451 | 63,786 |
| Office Supplies, Stationery, Gift | 0.1% | 91 | 1,262,693 | $ 133 | 9,516 |
| Cosmetics, Beauty Supplies, Perfume Stores | 0.1% | 87 | 1,205,890 | $ 318 | 3,787 |
| **CLUP Study Area Subtotal** | **2.7%** | **$ 2,259** | **$ 31,245,398** | **$ 301** | **77,089** |
| **General Merchandise** | | | | | |
| Department Stores Excl Leased Depts. | 3.3% | $ 2,741 | 37,917,148 | $ 186 | 204,112 |
| Warehouse Clubs and Super Stores | 3.4% | 2,868 | 39,672,777 | $ 260 | 152,545 |
| **CLUP Study Area Subtotal** | **6.7%** | **5,609** | **77,589,925** | **$ 223** | **356,657** |
| CLUP Study Area Supportable Space (in sq. ft) Subtotal | 27.0% | $ 22,627 | $ 313,000,379 | $ 302 | 1,049,822 |
| CLUP Study Area Retail Spending Capture | | | | | 50% |
| **Total CLUP Study Area Supportable Space** | | | | | **524,911** |
| SAP Study Area Capture Rate | | | | | 5.8% |
| **SAP Study Area Supportable Space** | | | | | **30,445** |

Note= This analysis assumes that the CLUP Study Area will capture 50% of total household spending.

Source: Claritas, Inc.; AECOM, February 2010

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**Table 6: SAP Study Area Supportable Retail Space (In Sq. Ft.), 2020**

| | As % of Avg. HH Income | Spending Per Household | Total HH Spending | Required Retail Sales Per Sq. Ft. | Supportable Space (Sq. Ft.) |
|---|---|---|---|---|---|
| **Total CLUP Study Area Households-2020** | 16,064 | | | | |
| **Average CLUP Study Area Household Income-2020 (Estimate)** | $85,772 | | | | |
| **Apparel & Accessories** | | | | | |
| Children's Wear | 0.1% | $ 79 | $ 1,271,538 | $ 276 | 4,615 |
| Footwear | 0.3% | 273 | 4,385,750 | $ 214 | 20,464 |
| Jewelry | 0.3% | 249 | 3,999,372 | $ 429 | 9,331 |
| Men's Wear | 0.1% | 85 | 1,364,135 | $ 276 | 4,951 |
| Women's Wear | 0.4% | 352 | 5,648,239 | $ 349 | 16,183 |
| **CLUP Stud Area Subtotal** | **1.2%** | **$ 1,038** | **$ 16,669,034** | **$ 309** | **55,544** |
| **Furniture/Home Furnishings** | | | | | |
| Furniture | 0.6% | $ 497 | $ 7,977,923 | $ 214 | 28,954 |
| Home Furnishings | 0.5% | 433 | 6,957,476 | $ 276 | 32,464 |
| Household Appliances Stores | 0.2% | 189 | 3,029,717 | $ 214 | 12,370 |
| Home Centers | 2.2% | 1,918 | 30,805,144 | $ 245 | 111,798 |
| Paint and Wallpaper Stores | 0.1% | 106 | 1,707,502 | $ 276 | 6,971 |
| Hardware Stores | 0.5% | 402 | 6,462,063 | $ 245 | 26,384 |
| Lawn, Garden Equipment, Supplies Stores | 0.5% | 390 | 6,272,864 | $ 245 | 25,611 |
| **CLUP Study Area Subtotal** | **4.6%** | **$ 3,935** | **$ 63,212,688** | **$ 245** | **244,553** |
| **Food & Beverage** | | | | | |
| Full-Service Restaurants | 2.2% | $ 1,849 | $ 29,708,334 | $ 429 | 69,311 |
| Limited-Service Eating Places | 2.0% | 1,719 | 27,611,042 | $ 367 | 75,155 |
| Drinking Places -Alcoholic Beverages | 0.2% | 203 | 3,264,838 | $ 459 | 7,109 |
| **CLUP Study Area Subtotal** | **4.4%** | **$ 3,771** | **$ 60,584,214** | **$ 418** | **151,575** |
| **Groceries** | | | | | |
| Groceries and Other Foods | 5.9% | $ 5,048 | $ 81,090,388 | $ 735 | 110,360 |
| Convenience Stores | 0.3% | $ 253 | $ 4,069,907 | $ 367 | 11,078 |
| **CLUP Study Area Subtotal** | **6.2%** | **$ 5,301** | **$ 85,160,295** | **$ 551** | **121,438** |
| **Leisure & Entertainment** | | | | | |
| Musical Instruments and Supplies | 0.1% | $ 54 | $ 874,499 | $ 245 | 3,570 |
| Books | 0.2% | 150 | 2,416,317 | $ 214 | 11,275 |
| Florists | 0.1% | 84 | 1,350,915 | $ 245 | 5,516 |
| Computer, Software, and Supplies | 0.2% | 214 | 3,443,846 | $ 710 | 4,849 |
| Camera and Photographic Equipment | 0.1% | 46 | 735,970 | $ 329 | 2,234 |
| Sewing, Knitting and Needlework Goods | 0.0% | 41 | 666,178 | $ 245 | 2,720 |
| Sporting Goods | 0.4% | 311 | 5,002,851 | $ 245 | 20,426 |
| Toys, Hobby Goods and Games | 0.2% | 185 | 2,968,969 | $ 245 | 12,122 |
| **CLUP Study Area Subtotal** | **1.3%** | **$ 1,087** | **$ 17,459,545** | **$ 310** | **62,711** |
| **Convenience & Service** | | | | | |
| Pharmacies and Drug Stores | 2.5% | $ 2,133 | $ 34,262,643 | $ 520 | 65,830 |
| Office Supplies, Stationery, Gift | 0.1% | 94 | 1,503,404 | $ 153 | 9,821 |
| Cosmetics, Beauty Supplies, Perfume Stores | 0.1% | 89 | 1,435,774 | $ 367 | 3,908 |
| **CLUP Study Area Subtotal** | **2.7%** | **$ 2,316** | **$ 37,201,821** | **$ 347** | **79,560** |
| **General Merchandise** | | | | | |
| Department Stores Excl Leased Depts. | 3.3% | $ 2,810 | 45,145,431 | $ 214 | 210,654 |
| Warehouse Clubs and Super Stores | 3.4% | 2,940 | 47,235,741 | $ 300 | 157,434 |
| **CLUP Study Area Subtotal** | **6.7%** | **$ 5,751** | **$ 92,381,172** | **$ 257** | **368,089** |
| CLUP Study Area Supportable Space (in sq. ft) Subtotal | 27.0% | $ 23,199 | $ 372,668,769 | $ 348 | 1,083,470 |
| CLUP Study Area Retail Spending Capture | | | | | 50% |
| **Total CLUP Study Area Supportable Space** | | | | | **541,735** |
| SAP Study Area Capture Rate | | | | | 6.1% |
| **Total SAP Study Area Supportable Space** | | | | | **33,046** |

Note= This analysis assumes that the CLUP Study Area will capture 50% of total household spending.

Source: Claritas, Inc.; AECOM, February 2010

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**Table 7: SAP Study Area Supportable Retail Space (In Sq. Ft.), 2030**

| | As % of Avg. HH Income | Spending Per Household | Total HH Spending | Required Retail Sales Per Sq. Ft. | Supportable Space (Sq. Ft.) |
|---|---|---|---|---|---|
| **Total CLUP Study Area Households-2030** | 20,539 | | | | |
| **Average CLUP Study Area Household Income-2030 (Estimate)** | $90,158 | | | | |
| **Apparel & Accessories** | | | | | |
| Children's Wear | 0.1% | $ 83 | $ 1,708,859 | $ 367 | 4,660 |
| Footwear | 0.3% | 287 | 5,894,141 | $ 285 | 20,664 |
| Jewelry | 0.3% | 262 | 5,374,876 | $ 570 | 9,422 |
| Men's Wear | 0.1% | 89 | 1,833,302 | $ 367 | 4,999 |
| Women's Wear | 0.4% | 370 | 7,590,838 | $ 465 | 16,341 |
| **CLUP Study Area Subtotal** | **1.2%** | **$ 1,091** | **$ 22,402,016** | **$ 411** | **56,087** |
| **Furniture/Home Furnishings** | | | | | |
| Furniture | 0.6% | $ 522 | $ 10,721,771 | $ 285 | 29,236 |
| Home Furnishings | 0.5% | 455 | 9,350,361 | $ 367 | 32,782 |
| Household Appliances Stores | 0.2% | 198 | 4,071,728 | $ 285 | 12,491 |
| Home Centers | 2.2% | 2,016 | 41,399,960 | $ 326 | 112,891 |
| Paint and Wallpaper Stores | 0.1% | 112 | 2,294,764 | $ 367 | 7,040 |
| Hardware Stores | 0.5% | 423 | 8,684,561 | $ 326 | 26,642 |
| Lawn, Garden Equipment, Supplies Stores | 0.5% | 410 | 8,430,290 | $ 326 | 25,861 |
| **CLUP Study Area Subtotal** | **4.6%** | **$ 4,136** | **$ 84,953,434** | **$ 326** | **246,942** |
| **Food & Beverage** | | | | | |
| Full-Service Restaurants | 2.2% | $ 1,944 | $ 39,925,925 | $ 570 | 69,989 |
| Limited-Service Eating Places | 2.0% | 1,807 | 37,107,310 | $ 489 | 75,889 |
| Drinking Places -Alcoholic Beverages | 0.2% | 214 | 4,387,714 | $ 611 | 7,179 |
| **CLUP Study Area Subtotal** | **4.4%** | **$ 3,964** | **$ 81,420,948** | **$ 557** | **153,057** |
| **Groceries** | | | | | |
| Groceries and Other Foods | 5.9% | $ 5,306 | $ 108,979,812 | $ 978 | 111,439 |
| Convenience Stores | 0.3% | $ 266 | $ 5,469,671 | $ 489 | 11,186 |
| **CLUP Study Area Subtotal** | **6.2%** | **$ 5,572** | **$ 114,449,483** | **$ 733** | **122,625** |
| **Leisure & Entertainment** | | | | | |
| Musical Instruments and Supplies | 0.1% | $ 57 | $ 1,175,266 | $ 326 | 3,605 |
| Books | 0.2% | 158 | 3,247,361 | $ 285 | 11,385 |
| Florists | 0.1% | 88 | 1,815,535 | $ 326 | 5,569 |
| Computer, Software, and Supplies | 0.2% | 225 | 4,628,288 | $ 945 | 4,896 |
| Camera and Photographic Equipment | 0.1% | 48 | 989,092 | $ 438 | 2,256 |
| Sewing, Knitting and Needlework Goods | 0.0% | 44 | 895,297 | $ 326 | 2,746 |
| Sporting Goods | 0.4% | 327 | 6,723,481 | $ 326 | 20,626 |
| Toys, Hobby Goods and Games | 0.2% | 194 | 3,990,086 | $ 326 | 12,240 |
| **CLUP Study Area Subtotal** | **1.3%** | **$ 1,142** | **$ 23,464,408** | **$ 412** | **63,324** |
| **Convenience & Service** | | | | | |
| Pharmacies and Drug Stores | 2.5% | $ 2,242 | $ 46,046,597 | $ 693 | 66,474 |
| Office Supplies, Stationery, Gift | 0.1% | 98 | 2,020,470 | $ 204 | 9,917 |
| Cosmetics, Beauty Supplies, Perfume Stores | 0.1% | 94 | 1,929,579 | $ 489 | 3,946 |
| **CLUP Study Area Subtotal** | **2.7%** | **$ 2,434** | **$ 49,996,647** | **$ 462** | **80,337** |
| **General Merchandise** | | | | | |
| Department Stores Excl Leased Depts. | 3.3% | $ 2,954 | 60,672,303 | $ 285 | 212,713 |
| Warehouse Clubs and Super Stores | 3.4% | 3,091 | 63,481,534 | $ 399 | 158,973 |
| **CLUP Study Area Subtotal** | **6.7%** | **$ 6,045** | **$ 124,153,837** | **$ 342** | **371,685** |
| CLUP Study Area Supportable Space (in sq. ft.) Subtotal | 27.0% | $ 24,385 | $ 500,840,773 | $ 463 | 1,094,057 |
| CLUP Study Area Retail Spending Capture | | | | | 50% |
| **Total CLUP Study Area Supportable Space** | | | | | **547,028** |
| SAP Study Area Capture Rate | | | | | 6.5% |
| **SAP Study Area Total Supportable Space** | | | | | **35,557** |

Note= This analysis assumes that the CLUP Study Area will capture 50% of total household spending.

Source: Claritas, Inc.; AECOM, February 2010

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**Table 8: Summary of Retail Potential - SAP Study Area, 2009-2030**

| | Sq. Ft. | | | |
|---|---|---|---|---|
| **Category** | **2009** | **2015** | **2020** | **2030** |
| **CLUP Study Area** | | | | |
| Resident Demand | | | | |
| Apparel & Accessories | 42,716 | 53,819 | 55,544 | 56,087 |
| Furniture/Home Furnishings | 200,397 | 236,958 | 244,553 | 246,942 |
| Food & Beverage | 116,569 | 146,868 | 151,575 | 153,057 |
| Groceries | 93,392 | 117,667 | 121,438 | 122,625 |
| Leisure & Entertainment | 48,228 | 60,764 | 62,711 | 63,324 |
| Convenience & Service | 61,185 | 77,089 | 79,560 | 80,337 |
| General Merchandise | 283,078 | 356,657 | 368,089 | 371,685 |
| Subtotal | 845,565 | 1,049,822 | 1,083,470 | 1,094,057 |
| CLUP Study Area Capture Rate | 50% | 50% | 50% | 50% |
| Subtotal | 422,782 | 524,911 | 541,735 | 547,028 |
| Employee Demand | | | | |
| Food & Beverage | 33,866 | 45,686 | 51,062 | 58,650 |
| Leisure & Entertainment | 13,451 | 18,146 | 20,282 | 23,295 |
| Convenience & Service | 6,006 | 8,102 | 9,055 | 10,401 |
| Subtotal | 53,323 | 71,934 | 80,399 | 92,346 |
| Total Study Area Demand | | | | |
| Apparel & Accessories | 21,358 | 26,909 | 27,772 | 28,043 |
| Furniture/Home Furnishings | 100,199 | 118,479 | 122,276 | 123,471 |
| Food & Beverage | 92,150 | 119,120 | 126,850 | 135,178 |
| Groceries | 46,696 | 58,833 | 60,719 | 61,312 |
| Leisure & Entertainment | 37,565 | 48,528 | 51,637 | 54,957 |
| Convenience & Service | 36,598 | 46,646 | 48,835 | 50,569 |
| General Merchandise | 141,539 | 178,329 | 184,044 | 185,843 |
| Subtotal | 476,100 | 596,800 | 622,100 | 639,400 |
| **Plus Inflow** | 14,300 | 17,900 | 18,700 | 19,200 |
| **Total CLUP Study Area Retail Potential** | **490,400** | **614,700** | **640,800** | **658,600** |
| | | | | |
| **SAP Study Area Capture Rate** | **5.2%** | **5.8%** | **6.1%** | **6.5%** |
| **Total SAP Study Area Retail Potential** | **25,501** | **35,653** | **39,089** | **42,809** |
| Net Gain Versus 2009 | NA | 10,152 | 13,588 | 17,308 |
| 1/ Total Households (HH): | 10,658 | 13,833 | 16,064 | 20,539 |
| 2/ Annual average income growth rate 2009-2014: | 0.5% | | | |
| 3/ Employee spending assumptions: | | | | |
| Total Employees | 6,806 | 9,459 | 11,897 | 17,302 |
| Annual Spending (per employee) | | | | |
| Food & Beverage | $1,700 | $1,752 | $1,796 | $1,888 |
| Leisure & Entertainment | $500 | $515 | $528 | $555 |
| Convenience & Service | $250 | $258 | $264 | $278 |
| Required Sales (per. sq. ft.) | | | | |
| Food & Beverage | $342 | $363 | $418 | $557 |
| Leisure & Entertainment | $253 | $269 | $310 | $412 |
| Convenience & Service | $283 | $301 | $347 | $462 |
| 4/ Inflow Estimate: | 3% | 3% | 3% | 3% |

Note= This analysis assumes that the CLUP Study Area will capture 50% of total resident household spending.

Source: Claritas, Inc.; AECOM, February 2010.

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Figure 1: Mall Study Area, 2009

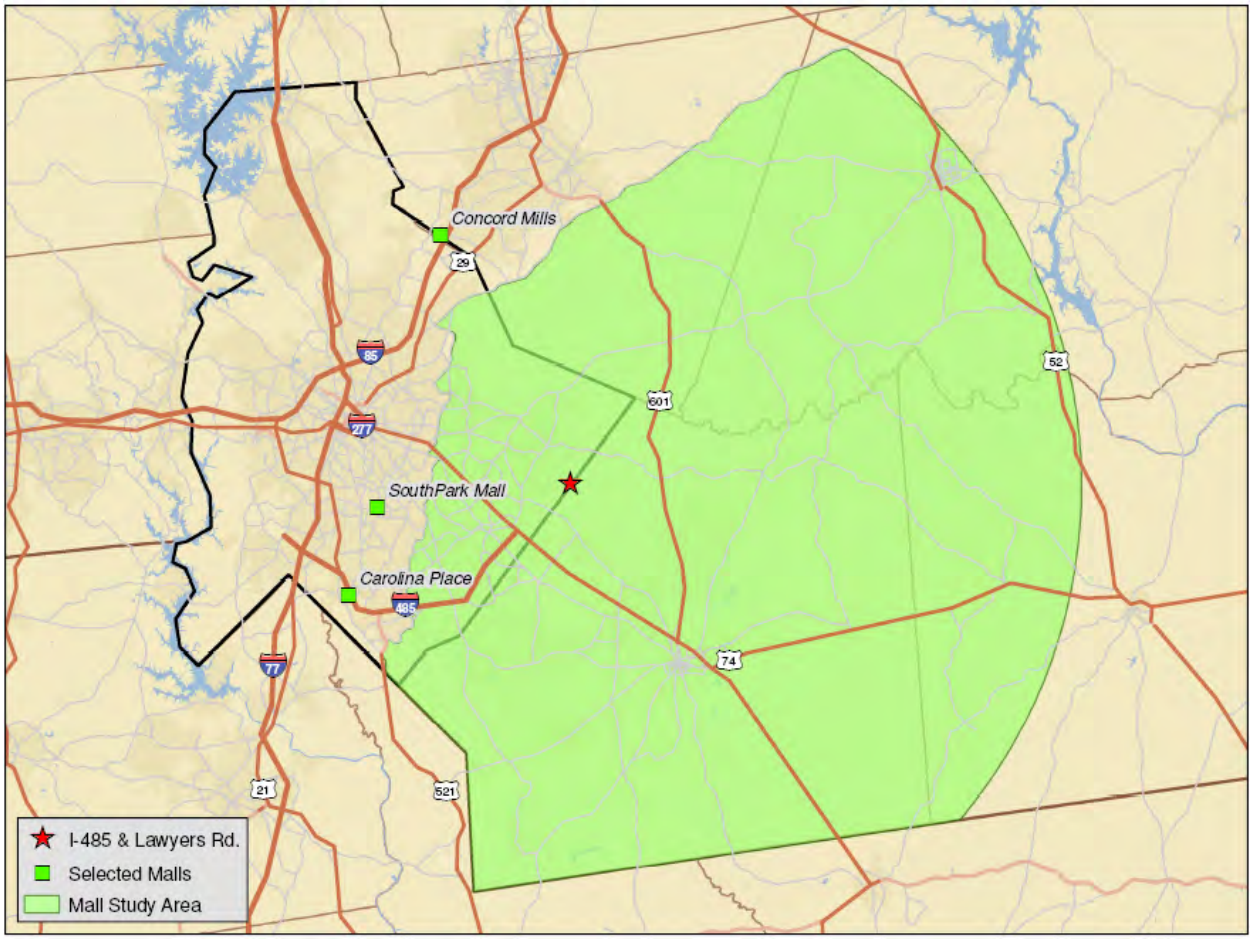

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**Table 9: Mall Study Area Retail Space Leakage (In Sq. Ft.), 2009**

| | Supportable Space (In Sq. Ft.) | | |
|---|---|---|---|
| | Demand (HH Exp) | Supply (Sales) | 2009 (Surplus)/Gap |
| **Apparel & Accessories** | | | |
| Children's Wear | 75,747 | 49,508 | 26,239 |
| Footwear | 325,607 | 252,054 | 73,553 |
| Jewelry | 144,332 | 103,338 | 40,994 |
| Men's Wear | 77,812 | 67,640 | 10,173 |
| Women's Wear | 250,443 | 86,858 | 163,586 |
| **Subtotal** | **873,941** | **559,398** | **314,544** |
| **Furniture/Home Furnishings** | | | |
| Furniture | 566,343 | 206,275 | 360,068 |
| Home Furnishings | 376,947 | 357,736 | 19,210 |
| Household Appliances Stores | 211,316 | 165,115 | 46,201 |
| Home Centers | 1,817,695 | 1,857,451 | (39,756) |
| Paint and Wallpaper Stores | 88,782 | 29,342 | 59,440 |
| Hardware Stores | 383,303 | 222,917 | 160,386 |
| Lawn, Garden Equipment, Supplies Stores | 373,008 | 331,545 | 41,464 |
| **Subtotal** | **3,817,395** | **3,170,381** | **647,014** |
| **Food & Beverage** | | | |
| Full-Service Restaurants | 1,056,461 | 728,661 | 327,800 |
| Limited-Service Eating Places | 1,143,422 | 850,987 | 292,435 |
| Drinking Places -Alcoholic Beverages | 109,012 | 19,787 | 89,225 |
| **Subtotal** | **2,308,896** | **1,599,435** | **709,460** |
| **Groceries** | | | |
| Groceries and Other Foods | 1,652,841 | 1,584,947 | 67,894 |
| Convenience Stores | 165,316 | 105,508 | 59,808 |
| **Subtotal** | **1,818,157** | **1,690,455** | **127,702** |
| **Leisure & Entertainment** | | | |
| Musical Instruments and Supplies | 56,393 | 45,146 | 11,247 |
| Books | 177,648 | 102,414 | 75,234 |
| Florists | 80,193 | 61,893 | 18,300 |
| Computer, Software, and Supplies | 74,438 | 25,024 | 49,414 |
| Camera and Photographic Equipment | 34,188 | 30,579 | 3,609 |
| Sewing, Knitting and Needlework Goods | 40,661 | 25,990 | 14,671 |
| Sporting Goods | 321,809 | 142,313 | 179,496 |
| Toys, Hobby Goods and Games | 186,831 | 141,158 | 45,672 |
| **Subtotal** | **972,160** | **574,516** | **397,644** |
| **Convenience & Service** | | | |
| Pharmacies and Drug Stores | 949,293 | 1,005,975 | (56,683) |
| Office Supplies, Stationery, Gift | 150,342 | 57,017 | 93,324 |
| Cosmetics, Beauty Supplies, Perfume Stores | 55,952 | 34,798 | 21,154 |
| **Subtotal** | **1,155,586** | **1,097,791** | **57,796** |
| **General Merchandise** | | | |
| Department Stores Excl Leased Depts | 3,209,683 | 2,757,560 | 452,123 |
| Warehouse Clubs and Super Stores | 2,370,050 | 2,279,228 | 90,822 |
| **Subtotal** | **5,579,734** | **5,036,789** | **542,945** |
| **Mall Study Area Total Retail Leakage (in Sq. Ft.)** | **16,525,869** | **13,728,764** | **2,797,105** |

Note= Demand is based on current household expenditures and assumes households would spend 100% of retail expenditures in the Study Area if the goods were available. AECOM notes that the demand will likely be lower since households will likely spend some portion of their household spending outside the study area.
Source: Claritas, Inc.; AECOM, March 2010

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**Table 10: Mall Study Area Supportable Retail Space (In Sq. Ft.), 2015**

| | As % of Avg. HH Income | Spending Per Household | Total HH Spending | Required Retail Sales Per Sq. Ft. | Supportable Space (Sq. Ft.) |
|---|---|---|---|---|---|
| **Total Households-2015 (Estimate)** | 247,979 | | | | |
| **Average Household Income-2015 (Estimate)** | $87,107 | | | | |
| **Apparel & Accessories** | | | | | |
| Children's Wear | 0.1% | $ 87 | $ 21,691,415 | $ 239 | 90,819 |
| Footwear | 0.3% | 292 | 72,522,327 | $ 186 | 390,396 |
| Jewelry | 0.3% | 259 | 64,293,879 | $ 372 | 173,051 |
| Men's Wear | 0.1% | 90 | 22,282,818 | $ 239 | 93,295 |
| Women's Wear | 0.4% | 366 | 90,843,484 | $ 303 | 300,276 |
| **Subtotal** | **1.3%** | **$ 1,095** | **$ 271,633,923** | **$ 268** | **1,047,837** |
| **Furniture/Home Furnishings** | | | | | |
| Furniture | 0.6% | $ 509 | $ 126,141,297 | $ 186 | 528,137 |
| Home Furnishings | 0.5% | 435 | 107,944,937 | $ 239 | 581,080 |
| Household Appliances Stores | 0.2% | 190 | 47,066,331 | $ 186 | 221,693 |
| Home Centers | 2.1% | 1,866 | 462,690,630 | $ 212 | 1,937,224 |
| Paint and Wallpaper Stores | 0.1% | 103 | 25,424,307 | $ 239 | 119,754 |
| Hardware Stores | 0.5% | 393 | 97,569,085 | $ 212 | 459,572 |
| Lawn, Garden Equipment, Supplies Stores | 0.4% | 383 | 94,948,496 | $ 212 | 447,229 |
| **Subtotal** | **4.5%** | **$ 3,878** | **$ 961,785,083** | **$ 212** | **4,294,690** |
| **Food & Beverage** | | | | | |
| Full-Service Restaurants | 2.2% | $ 1,898 | $ 470,610,114 | $ 372 | 1,266,674 |
| Limited-Service Eating Places | 2.0% | 1,761 | 436,583,887 | $ 318 | 1,370,939 |
| Drinking Places -Alcoholic Beverages | 0.2% | 210 | 52,029,064 | $ 398 | 130,703 |
| **Subtotal** | **4.4%** | **$ 3,868** | **$ 959,223,066** | **$ 363** | **2,768,317** |
| **Groceries** | | | | | |
| Groceries and Other Foods | 5.8% | $ 5,090 | $ 1,262,182,464 | $ 637 | 1,981,722 |
| Convenience Stores | 0.3% | $ 255 | $ 63,121,230 | $ 318 | 198,210 |
| **Subtotal** | **6.1%** | **$ 5,344** | **$ 1,325,303,693** | **$ 478** | **2,179,932** |
| **Leisure & Entertainment** | | | | | |
| Musical Instruments and Supplies | 0.1% | $ 58 | $ 14,354,715 | $ 212 | 67,614 |
| Books | 0.2% | 160 | 39,567,444 | $ 186 | 212,996 |
| Florists | 0.1% | 82 | 20,412,854 | $ 212 | 96,149 |
| Computer, Software, and Supplies | 0.3% | 222 | 54,949,397 | $ 616 | 89,250 |
| Camera and Photographic Equipment | 0.1% | 47 | 11,704,828 | $ 286 | 40,991 |
| Sewing, Knitting and Needlework Goods | 0.0% | 42 | 10,350,136 | $ 212 | 48,751 |
| Sporting Goods | 0.4% | 330 | 81,915,873 | $ 212 | 385,842 |
| Toys, Hobby Goods and Games | 0.2% | 192 | 47,557,383 | $ 212 | 224,006 |
| **Subtotal** | **1.3%** | **$ 1,132** | **$ 280,812,631** | **$ 269** | **1,165,599** |
| **Convenience & Service** | | | | | |
| Pharmacies and Drug Stores | 2.4% | $ 2,071 | $ 513,486,348 | $ 451 | 1,138,182 |
| Office Supplies, Stationery, Gift | 0.1% | 96 | 23,918,225 | $ 133 | 180,256 |
| Cosmetics, Beauty Supplies, Perfume Stores | 0.1% | 86 | 21,363,654 | $ 318 | 67,085 |
| **Subtotal** | **2.6%** | **$ 2,253** | **$ 558,768,228** | **$ 301** | **1,385,524** |
| **General Merchandise** | | | | | |
| Department Stores Excl Leased Depts. | 3.3% | $ 2,883 | 714,891,190 | $ 186 | 3,848,342 |
| Warehouse Clubs and Super Stores | 3.4% | 2,980 | 739,032,279 | $ 260 | 2,841,640 |
| **Subtotal** | **6.7%** | **5,863** | **1,453,923,470** | **$ 223** | **6,689,982** |
| Mall Study Area Supportable Space (in sq. ft.) Subtotal | 26.9% | $ 23,435 | $ 5,811,450,093 | $ 302 | 19,531,881 |
| Mall Study Area Retail Spending Capture | | | | | 30% |
| **Total Mall Study Area Supportable Space** | | | | | **5,859,564** |

Note= This analysis assumes that the Study Area will capture 30% of total household spending.

Source: Claritas, Inc.; AECOM, March 2010

AECOM

**Table 11: Mall Study Area Supportable Retail Space (In Sq. Ft.), 2020**

| | As % of Avg. HH Income | Spending Per Household | Total HH Spending | Required Retail Sales Per Sq. Ft. | Supportable Space (Sq. Ft.) |
|---|---|---|---|---|---|
| **Total Households-2020 (Estimate)** | 291,882 | | | | |
| **Average Household Income-2020 (Estimate)** | $90,478 | | | | |
| **Apparel & Accessories** | | | | | |
| Children's Wear | 0.1% | $ 91 | $ 26,519,846 | $ 276 | 96,246 |
| Footwear | 0.3% | 304 | 88,665,535 | $ 214 | 413,725 |
| Jewelry | 0.3% | 269 | 78,605,464 | $ 429 | 183,392 |
| Men's Wear | 0.1% | 93 | 27,242,893 | $ 276 | 98,870 |
| Women's Wear | 0.4% | 381 | 111,064,915 | $ 349 | 318,220 |
| **Subtotal** | **1.3%** | **$ 1,138** | **$ 332,098,652** | **$ 309** | **1,110,453** |
| **Furniture/Home Furnishings** | | | | | |
| Furniture | 0.6% | $ 528 | $ 154,219,893 | $ 214 | 559,697 |
| Home Furnishings | 0.5% | 452 | 131,973,089 | $ 276 | 615,804 |
| Household Appliances Stores | 0.2% | 197 | 57,543,126 | $ 214 | 234,941 |
| Home Centers | 2.1% | 1,938 | 565,683,890 | $ 245 | 2,052,987 |
| Paint and Wallpaper Stores | 0.1% | 106 | 31,083,666 | $ 276 | 126,910 |
| Hardware Stores | 0.5% | 409 | 119,287,610 | $ 245 | 487,035 |
| Lawn, Garden Equipment, Supplies Stores | 0.4% | 398 | 116,083,688 | $ 245 | 473,954 |
| **Subtotal** | **4.5%** | **$ 4,029** | **$ 1,175,874,962** | **$ 245** | **4,551,327** |
| **Food & Beverage** | | | | | |
| Full-Service Restaurants | 2.2% | $ 1,971 | $ 575,366,223 | $ 429 | 1,342,367 |
| Limited-Service Eating Places | 2.0% | 1,829 | 533,765,881 | $ 367 | 1,452,862 |
| Drinking Places -Alcoholic Beverages | 0.2% | 218 | 63,610,546 | $ 459 | 138,514 |
| **Subtotal** | **4.4%** | **$ 4,018** | **$ 1,172,742,650** | **$ 418** | **2,933,743** |
| **Groceries** | | | | | |
| Groceries and Other Foods | 5.8% | $ 5,287 | $ 1,543,139,714 | $ 735 | 2,100,143 |
| Convenience Stores | 0.3% | $ 264 | $ 77,171,787 | $ 367 | 210,055 |
| **Subtotal** | **6.1%** | **$ 5,551** | **$ 1,620,311,501** | **$ 551** | **2,310,198** |
| **Leisure & Entertainment** | | | | | |
| Musical Instruments and Supplies | 0.1% | $ 60 | $ 17,550,023 | $ 245 | 71,654 |
| Books | 0.2% | 166 | 48,375,014 | $ 214 | 225,724 |
| Florists | 0.1% | 86 | 24,956,681 | $ 245 | 101,895 |
| Computer, Software, and Supplies | 0.3% | 230 | 67,180,934 | $ 710 | 94,583 |
| Camera and Photographic Equipment | 0.1% | 49 | 14,310,281 | $ 329 | 43,440 |
| Sewing, Knitting and Needlework Goods | 0.0% | 43 | 12,654,039 | $ 245 | 51,665 |
| Sporting Goods | 0.4% | 343 | 100,150,050 | $ 245 | 408,899 |
| Toys, Hobby Goods and Games | 0.2% | 199 | 58,143,485 | $ 245 | 237,392 |
| **Subtotal** | **1.3%** | **$ 1,176** | **$ 343,320,507** | **$ 310** | **1,235,252** |
| **Convenience & Service** | | | | | |
| Pharmacies and Drug Stores | 2.4% | $ 2,151 | $ 627,786,551 | $ 520 | 1,206,196 |
| Office Supplies, Stationery, Gift | 0.1% | 100 | 29,242,336 | $ 153 | 191,028 |
| Cosmetics, Beauty Supplies, Perfume Stores | 0.1% | 89 | 26,119,126 | $ 367 | 71,094 |
| **Subtotal** | **2.6%** | **$ 2,340** | **$ 683,148,013** | **$ 347** | **1,468,318** |
| **General Merchandise** | | | | | |
| Department Stores Excl Leased Depts. | 3.3% | $ 2,994 | 874,023,383 | $ 214 | 4,078,307 |
| Warehouse Clubs and Super Stores | 3.4% | 3,096 | 903,538,191 | $ 300 | 3,011,448 |
| **Subtotal** | **6.7%** | **$ 6,090** | **$ 1,777,561,574** | **$ 257** | **7,089,754** |
| Mall Study Area Supportable Space (in sq. ft.) Subtotal | 26.9% | $ 24,342 | $ 7,105,057,859 | $ 348 | 20,699,045 |
| Mall Study Area Retail Spending Capture | | | | | 30% |
| **Total Mall Study Area Supportable Space** | | | | | **6,209,713** |

Note= This analysis assumes that the Study Area will capture 30% of total household spending.

Source: Claritas, Inc.; AECOM, March 2010

AECOM

**Table 12: Mall Study Area Supportable Retail Space (In Sq. Ft.), 2030**

| | As % of Avg. HH Income | Spending Per Household | Total HH Spending | Required Retail Sales Per Sq. Ft. | Supportable Space (Sq. Ft.) |
|---|---|---|---|---|---|
| **Total Households-2030 (Estimate)** | 404,382 | | | | |
| **Average Household Income-2030 (Estimate)** | $97,617 | | | | |
| **Apparel & Accessories** | | | | | |
| Children's Wear | 0.1% | $ 98 | $ 39,640,325 | $ 367 | 108,093 |
| Footwear | 0.3% | 328 | 132,532,091 | $ 285 | 464,648 |
| Jewelry | 0.3% | 291 | 117,494,881 | $ 570 | 205,964 |
| Men's Wear | 0.1% | 101 | 40,721,094 | $ 367 | 111,040 |
| Women's Wear | 0.4% | 411 | 166,013,384 | $ 465 | 357,388 |
| **Subtotal** | **1.3%** | **$ 1,228** | **$ 496,401,774** | **$ 411** | **1,247,132** |
| **Furniture/Home Furnishings** | | | | | |
| Furniture | 0.6% | $ 570 | $ 230,518,938 | $ 285 | 628,587 |
| Home Furnishings | 0.5% | 488 | 197,265,708 | $ 367 | 691,600 |
| Household Appliances Stores | 0.2% | 213 | 86,012,122 | $ 285 | 263,858 |
| Home Centers | 2.1% | 2,091 | 845,551,421 | $ 326 | 2,305,678 |
| Paint and Wallpaper Stores | 0.1% | 115 | 46,462,058 | $ 367 | 142,531 |
| Hardware Stores | 0.5% | 441 | 178,304,190 | $ 326 | 546,982 |
| Lawn, Garden Equipment, Supplies Stores | 0.4% | 429 | 173,515,154 | $ 326 | 532,290 |
| **Subtotal** | **4.5%** | **$ 4,346** | **$ 1,757,629,592** | **$ 326** | **5,111,525** |
| **Food & Beverage** | | | | | |
| Full-Service Restaurants | 2.2% | $ 2,127 | $ 860,024,009 | $ 570 | 1,507,591 |
| Limited-Service Eating Places | 2.0% | 1,973 | 797,842,235 | $ 489 | 1,631,687 |
| Drinking Places -Alcoholic Beverages | 0.2% | 235 | 95,081,349 | $ 611 | 155,563 |
| **Subtotal** | **4.4%** | **$ 4,335** | **$ 1,752,947,593** | **$ 557** | **3,294,841** |
| **Groceries** | | | | | |
| Groceries and Other Foods | 5.8% | $ 5,704 | $ 2,306,595,609 | $ 978 | 2,358,638 |
| Convenience Stores | 0.3% | $ 285 | $ 115,351,905 | $ 489 | 235,909 |
| **Subtotal** | **6.1%** | **$ 5,989** | **$ 2,421,947,514** | **$ 733** | **2,594,547** |
| **Leisure & Entertainment** | | | | | |
| Musical Instruments and Supplies | 0.1% | $ 65 | $ 26,232,754 | $ 326 | 80,474 |
| Books | 0.2% | 179 | 72,308,162 | $ 285 | 253,507 |
| Florists | 0.1% | 92 | 37,303,797 | $ 326 | 114,436 |
| Computer, Software, and Supplies | 0.3% | 248 | 100,418,158 | $ 945 | 106,225 |
| Camera and Photographic Equipment | 0.1% | 53 | 21,390,176 | $ 438 | 48,787 |
| Sewing, Knitting and Needlework Goods | 0.0% | 47 | 18,914,523 | $ 326 | 58,024 |
| Sporting Goods | 0.4% | 370 | 149,698,477 | $ 326 | 459,228 |
| Toys, Hobby Goods and Games | 0.2% | 215 | 86,909,504 | $ 326 | 266,611 |
| **Subtotal** | **1.3%** | **$ 1,269** | **$ 513,175,551** | **$ 412** | **1,387,292** |
| **Convenience & Service** | | | | | |
| Pharmacies and Drug Stores | 2.4% | $ 2,321 | $ 938,378,871 | $ 693 | 1,354,660 |
| Office Supplies, Stationery, Gift | 0.1% | 108 | 43,709,745 | $ 204 | 214,541 |
| Cosmetics, Beauty Supplies, Perfume Stores | 0.1% | 97 | 39,041,353 | $ 489 | 79,844 |
| **Subtotal** | **2.6%** | **$ 2,525** | **$ 1,021,129,969** | **$ 462** | **1,649,045** |
| **General Merchandise** | | | | | |
| Department Stores Excl Leased Depts. | 3.3% | $ 3,231 | 1,306,439,384 | $ 285 | 4,580,283 |
| Warehouse Clubs and Super Stores | 3.4% | 3,340 | 1,350,556,404 | $ 399 | 3,382,110 |
| **Subtotal** | **6.7%** | **$ 6,571** | **$ 2,656,995,789** | **$ 342** | **7,962,394** |
| Mall Study Area Supportable Space (in sq. ft.) Subtotal | 26.9% | $ 26,263 | $ 10,620,227,781 | $ 463 | 23,246,778 |
| Mall Study Area Retail Spending Capture | | | | | 30% |
| **Total Mall Study Area Supportable Space** | | | | | **6,974,033** |

Note= This analysis assumes that the Study Area will capture 30% of total household spending.

Source: Claritas, Inc.; AECOM, March 2010

AECOM

**Table 13: Summary of Retail Potential - Mall Study Area, 2009-2030**

| Category | Sq. Ft. 2009 | 2015 | 2020 | 2030 |
|---|---|---|---|---|
| **Mall Study Area** | | | | |
| Resident Demand | | | | |
| Apparel & Accessories | 873,941 | 1,047,837 | 1,110,453 | 1,247,132 |
| Furniture/Home Furnishings | 3,817,395 | 4,294,690 | 4,551,327 | 5,111,525 |
| Food & Beverage | 2,308,896 | 2,768,317 | 2,933,743 | 3,294,841 |
| Groceries | 1,818,157 | 2,179,932 | 2,310,198 | 2,594,547 |
| Leisure & Entertainment | 972,160 | 1,165,599 | 1,235,252 | 1,387,292 |
| Convenience & Service | 1,155,586 | 1,385,524 | 1,468,318 | 1,649,045 |
| General Merchandise | 5,579,734 | 6,689,982 | 7,089,754 | 7,962,394 |
| Subtotal | 16,525,869 | 19,531,881 | 20,699,045 | 23,246,778 |
| Mall Study Area Capture Rate | 30% | 30% | 30% | 30% |
| Subtotal | 4,957,761 | 5,859,564 | 6,209,713 | 6,974,033 |
| **Plus Inflow** | 495,800 | 586,000 | 621,000 | 697,400 |
| **Total Mall Study Area Retail Potential** | **5,453,561** | **6,445,564** | **6,830,713** | **7,671,433** |
| Net Gain Versus 2009 | NA | 992,004 | 1,377,153 | 2,217,873 |
| 1/ Inflow Estimate: | 3% | 3% | 3% | 3% |

Note= This analysis assumes that the Mall Study Area will capture 30% of total resident household spending.

Source: Claritas, Inc.; AECOM, March 2010.

**Table 14: SAP Study Area Office Existing Market Potentials, 2009 - 2030**

| Industry Sector | New Jobs 2009-2030 | % Office-Using | SF Occupancy Factor | Potential Countywide Demand (Sq. Ft.) |
|---|---|---|---|---|
| **Mecklenburg County** | | | | |
| Mining & Construction | 9,148 | 20% | 150 | 274,400 |
| Manufacturing | 6,527 | 10% | 175 | 114,200 |
| TCPU | 6,702 | 25% | 175 | 293,200 |
| Wholesale & Retail Trade | 61,848 | 15% | 200 | 1,855,400 |
| Finance/Insurance/Real Estate | 70,584 | 80% | 225 | 12,705,100 |
| Services | 150,127 | 35% | 200 | 10,508,900 |
| Government | 46,274 | 40% | 175 | 3,239,200 |
| **TOTAL:** | **351,210** | | **186** | **28,990,400** |
| + Vacancy Adjustment | *(2)* | 5.0% | | 1,449,500 |
| + Cumulative Replacement Demand | *(3)* | 7.5% | | 2,174,300 |
| **Total County Demand (in Sq. Ft)** | | | | **32,614,200** |
| CLUP Study Area Capture | | | | 0.5% |
| **Total CLUP Study Area Demand (in Sq. Ft.)** | | | | **163,071** |
| SAP Study Area Capture | | | | 50% |
| **Total SAP Study Area Demand (in Sq. Ft.)** | | | | **81,536** |

1/ Reflects office-using employees in each employment sector.

2/ This allows for a 5% frictional vacancy rate in new space delivered to the market.

3/ This represents new space required by existing businesses to replace obsolete or otherwise unusable space. This is assumed to represent 7.5% of total implied demand.

Source: Woods and Poole; AECOM, February 2010

AECOM

**Table 15: SAP Study Area Office Induced Market Potentials, 2009 - 2030**

| | |
|---|---|
| CLUP Study Area New Employees | 10,496 |
| Percent Office Using | 32% |
| Subtotal New Office Using Employees: | 3,359 |
| | |
| Average Sq. Ft. per Office Employee | 200 |
| Subtotal: CLUP Study Area Office Demand (in sq. ft) | 671,714 |
| | |
| SAP Study Area Capture Rate | 33% |
| **Total SAP Study Area Office Demand (in sq. ft.)** | **221,666** |

Source: Mecklenburg-Union MPO; AECOM, March 2010

**Table 16: SAP Study Area Industrial Market Potentials, 2009 - 2030**

| Industry Sector | New Jobs 2009-2030 | % Industrial-Using | SF Occupancy Factor | Potential Countywide Demand (Sq. Ft.) |
|---|---|---|---|---|
| **Mecklenburg County** | | | | |
| Mining & Construction | 9,148 | 60% | 350 | 1,921,100 |
| Manufacturing | 6,527 | 80% | 450 | 2,349,700 |
| TCPU 1/ | 6,702 | 50% | 450 | 1,508,000 |
| Wholesale & Retail Trade | 61,848 | 20% | 500 | 6,184,800 |
| Finance/Insurance/Real Estate | 70,584 | 5% | 300 | 1,058,800 |
| Services | 150,127 | 15% | 350 | 7,881,700 |
| Government | 46,274 | 10% | 400 | 1,851,000 |
| **TOTAL:** | **351,210** | | | **22,755,100** |
| | | | | |
| + Vacancy Adjustment | *(2)* | 5.0% | | 1,137,800 |
| + Cumulative Replacement Demand | *(3)* | 10.0% | | 2,275,500 |
| **Total County Demand (in Sq. Ft.):** | | | | **26,168,400** |
| | | | | |
| CLUP Study Area Capture | | | | 0.3% |
| **Total CLUP Study Area Demand (in Sq. Ft.)** | | | | **78,505** |
| | | | | |
| SAP Study Area Capture | | | | 1% |
| **Total SAP Study Area Demand (in Sq. Ft.)** | | | | **785** |

1/ Reflects industrial-using employees in each employment sector

2/ This allows for a 5% frictional vacancy rate in new space delivered to the market

3/ This represents new space required by existing businesses to replace obsolete or otherwise unusable space. This is assumed to represent 10% of total implied demand

Source: Woods and Poole; AECOM, February 2010

# APPENDIX D

## FISCAL IMPACT ANALYSIS

*APPENDIX*

AECOM
701 Corporate Center Drive
Suite 475
Raleigh, NC 27607
www.aecom.com

919.854.6209 tel
919.854.6259 fax

# Technical Memorandum

| | |
|---|---|
| To | HNTB |
| Subject | Mint Hill Small Area Plan Fiscal Impact Memo |
| From | AECOM Economics |
| Date | May 20, 2010 |

AECOM, acting as a subconsultant to HNTB's development of a Small Area Plan (SAP), prepared this Technical Memorandum of the fiscal impact analysis to inform the planning effort. The SAP will be used by the Town of Mint Hill to guide development in the area surrounding the interchange of Lawyers Road and I-485. This Technical Memorandum, combined with other planning elements and community input leading to the SAP, will form the basis for development strategies, regulations, zoning and decisions going forward.

The Fiscal Impact Memo incorporates data gathered in the Demographic and Economic Profile and the Real Estate Market Overview. This section examines the fiscal characteristics of three development profiles and is designed to help local governments understand the sources and projected amounts or anticipated revenues and expenses. The net fiscal impact of each profile is measured at buildout (2030). The three profiles are as follows:

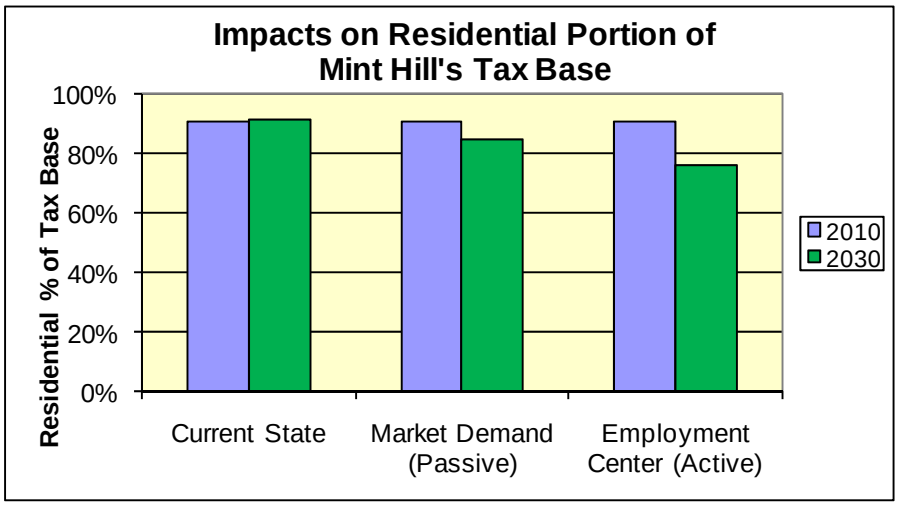
- Current State: Assumes 770 residential units
- Market Demand (Passive Marketing): Assumes 1,466 residential units, an 800,000 square foot mall, 43,000 square feet of other retail, and 82,000 square feet of office
- Employment Center (Active Marketing): Assumes 1,466 residential units, an 800,000 square foot mall, 200,000 square feet of other retail, and 1,250,000 square feet of office

The methodologies and assumptions underlying this analysis are described later in the memo. All amounts are presented in constant dollars (2010). Likewise, the town's existing ad valorem rate of $0.275 per $100 value is assumed constant throughout the study period. Changes to these rates would correspondingly increase or decrease revenues.

## Executive Summary

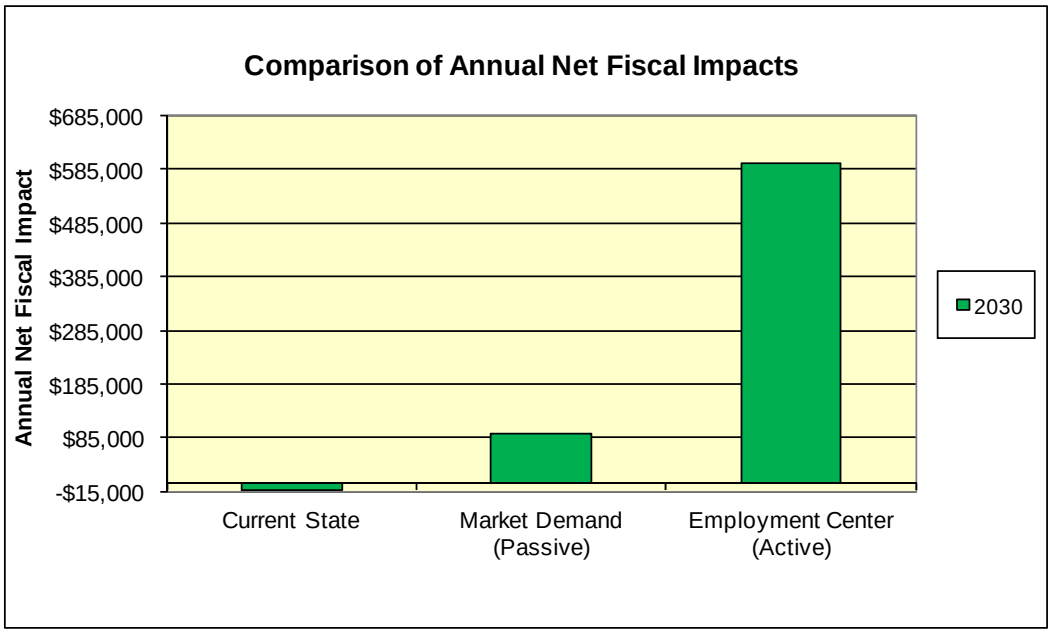
In 2010, approximately 91% of the town's real property tax base is residential. Increasing commercial and office properties eases the town's dependence on residential property taxes. As shown in Figure 1, the Employment Center (Active) profile provides the greatest diversification of the tax base and decreases the residential portion from 91% to 76%.

**Figure 1: Diversification of Tax Base**




The Employment Center (Active) also creates the most significant net annual fiscal benefit. Whereas the Current State produces a breakeven net annual impact, the Market Demand (Passive) generates an annual net impact of $91,000 while the Employment Center (Active) generates an annual net impact of $596,000.

**Figure 2: Annual Net Fiscal Impacts**



## Current State

In the current state, modest growth in low density residential is expected. In total, 770 single-family residential units are assumed.

***Revenues***

**Real Property Taxes**

Based on data collected from the Mecklenburg Tax Assessor, an estimated tax value of $221,000 per unit is assumed. The resulting tax base of $170.2 million is reflected in Table 1.

**Table 1: Current State Real Property Tax Base**

| | Units | SF | Unit Value | Total Value |
|---|---|---|---|---|
| Residential Tax Base: | | | | |
| Low Density | 770 | 2,700 | $221,000 | $170,170,000 |
| Medium Density | 0 | 1,700 | $175,000 | 0 |
| High Density | 0 | 1,100 | $74,000 | 0 |
| Residential Tax Base | 770 | | | $170,170,000 |

Source: Mint Hill, Mecklenburg County, HNTB, AECOM, 2010

As seen in Table 2, applying the town's existing ad valorem rate of $0.275 per $100 value and budgeted collection rate of 95% yields annual real property taxes of $445,000.

**Table 2: Current State Real Property Taxes**

| | Units | SF | Unit Value | Total Value |
|---|---|---|---|---|
| Residential Tax Base: | | | | |
| Low Density | 770 | 2,700 | $221,000 | $170,170,000 |
| Medium Density | 0 | 1,700 | $175,000 | 0 |
| High Density | 0 | 1,100 | $74,000 | 0 |
| Residential Tax Base | 770 | | | $170,170,000 |
| Town of Mint Hill Tax Rate | | | | $0.275 |
| Collection Rate | | | | 95% |
| Annual Residential Real Property Taxes | | | | $445,000 |

Source: Mint Hill, Mecklenburg County, HNTB, AECOM, 2010

**Motor Vehicle Taxes**

Motor vehicles owned by businesses and individuals are taxed on an ad valorem basis. Based on the existing levels and values of vehicle ownership, annual vehicle taxes of $53,000 are assumed.

**Table 3: Current State Vehicle Property Taxes**

| | |
|---|---|
| Estimated Total Value of Vehicles in Mint Hill | $197,402,000 |
| Current Mint Hill Resident Population | 20,748 |
| Motor Vehicle Value per Resident | $10,000 |
| Projected Small Area Plan Residents | 2,040 |

| | |
|---|---|
| Projected Motor Vehicle Tax Base | $20,398,000 |
| Town of Mint Hill Tax Rate | $0.275 |
| Collection Rate | 95% |
| Projected Annual Motor Vehicle Taxes | $53,000 |

Source: Mint Hill, NC OSBM, AECOM, 2010

### Sales Tax Distributions

Mecklenburg County receives three local option sales taxes. Articles 39 and 42 are based on point of origin and distributed to the municipalities within the county on an ad valorem basis. Article 42 taxes are distributed on a per capita basis. Since the Current State consists of residential units, only Article 42 sales taxes are shown in Table 4.

**Table 4: Current State Tax Distributions**

| Distributions FY09 | FY09 Mint Hill | FY09 Subtotals | Per Capita | FY10 Budget | Per Capita |
|---|---|---|---|---|---|
| Article 39 | $599,899 | | | | |
| Article 40 | 189,857 | | $9.15 | | |
| Article 42 | 186,917 | $976,673 | | $1,080,000 | |
| Beer and Wine Excise Tax | 92,150 | 92,150 | $4.44 | $85,000 | $4.10 |
| Electric Franchise/Natural Gas | 474,314 | | $22.86 | | $21.91 |
| Telecommunications Tax | 124,376 | | $5.99 | | $5.75 |
| Video Programming | 235,641 | 834,331 | $11.35 | $800,000 | $10.89 |
| Total | $1,903,154 | $1,903,154 | | $1,965,000 | |
| **Article 40 Sales Tax:** | | | | | |
| Mint Hill Small Area Plan Resident Population | 2,040 | | | | |
| Estimated Annual Per Capita Distribution | $9.15 | | | | |
| Mint Hill Small Area Plan Article 40 Sales Tax | $19,000 | | | | |

Source: Mint Hill, HNTB, NCDOR, *ULI Dollars & Cents of Shopping Centers,* AECOM, 2010

### Other Revenues

Certain other revenues, estimated on a per capita basis, are presented in Table 5. Each of the 770 housing units is assumed to include 2.65 persons for a total SAP population of 2,040 ((770 x 2.65 = 2,040), consistent with the 2000 Census. The per capita amounts are based on the FY10 budget as shown in Table 4.

**Table 5: Current State Other Revenues**

| | |
|---|---|
| **Beer & Wine Tax** | |
| Beer & Wine Tax Revenue FY10 Per Capita | $4.10 |
| Mint Hill Small Area Plan Resident Population | 2,040 |
| Mint Hill Small Area Plan Beer & Wine Tax | $8,000 |
| | |
| **Telecommunications Tax** | |
| Telecommunications Tax Revenue FY10 Per Capita | $5.75 |
| Mint Hill Small Area Plan Resident Population | 2,040 |

| | |
|---|---|
| Mint Hill Small Area Plan Telecommunications Tax | $12,000 |
| | |
| **Electric/Natural Gas Excise Tax** | |
| Natural Gas Excise Tax Revenue FY10 Per Capita | $21.91 |
| Mint Hill Small Area Plan Resident Population | 2,040 |
| Mint Hill Small Area Plan Resident Electric/Natural Gas Tax | $45,000 |
| | |
| **Video Programming Tax** | |
| Video Programming Revenue FY10 Per Capita | $10.89 |
| Mint Hill Small Area Plan Resident Population | 2,040 |
| Mint Hill Small Area Plan Video Programming Tax | $22,000 |

Source: Mint Hill, NCDOR, AECOM, 2010

### Motor Vehicle Fees

Each motor vehicle owned by a resident or business is charged for $10 per year by the Town of Mint Hill. The projection for annual revenue of $17,000 is calculated in Table 6.

**Table 6: Current State Motor Vehicle Fees**

| | |
|---|---|
| FY10 Motor Vehicle Fees | $175,000 |
| Current Resident Population | 20,748 |
| Motor Vehicle Fee per Resident | $8 |
| Projected Small Area Plan Residents | 2,040 |
| Projected Annual Motor Vehicle Fees | $17,000 |

Source: Mint Hill, NC OSBM, AECOM, 2010

### *Expenses*

A functional population methodology, as described in the Appendix, was performed in Tables 7 – 16 to estimate the expense impacts of the Current State on the Town of Mint Hill.

**Table 7: Current State Governing Body**

| **Annual Expenditures** | **Governing Body** |
|---|---|
| FY10 Budgeted Expenditures | $36,894 |
| Town of Mint Hill Functional Population | 18,538 |
| Per Capita - Functional Population | $1.99 |
| Mint Hill Small Area Plan Functional Population | 1,578 |
| Mint Hill Small Area Plan Annual Expenditures | $3,000 |

Source: Mint Hill, AECOM, 2010

**Table 8: Current State Administration**

| **Annual Expenditures** | **Administration** |
|---|---|
| FY10 Budgeted Expenditures | $559,304 |
| Town of Mint Hill Functional Population | 18,538 |

| | |
|---|---|
| Per Capita - Functional Population | $30.17 |
| Mint Hill Small Area Plan Functional Population | 1,578 |
| Mint Hill Small Area Plan Annual Expenditures | $48,000 |
| Current Town of Mint Hill FTEs: | 6 |
| FTEs Per Capita | 0.00032 |
| **Mint Hill Small Area Plan Projected FTEs** | **1** |
| Projected Town of Mint Hill FTEs | 7 |

Source: Mint Hill, AECOM, 2010

**Table 9: Current State Planning**

| **Annual Expenditures** | **Planning** |
|---|---|
| FY10 Budgeted Expenditures | $455,391 |
| Town of Mint Hill Functional Population | 18,538 |
| Per Capita - Functional Population | $24.57 |
| Mint Hill Small Area Plan Functional Population | 1,578 |
| Mint Hill Small Area Plan Annual Expenditures | $39,000 |
| Current Town of Mint Hill FTEs | 4 |
| FTEs Per Capita | 0.00022 |
| **Mint Hill Small Area Plan Projected FTEs** | **0** |
| Projected Town of Mint Hill FTEs | 4 |

Source: Mint Hill, AECOM, 2010

**Table 10: Current State Elections**

| **Annual Expenditures** | **Elections** |
|---|---|
| FY10 Budgeted Expenditures | $6,680 |
| Town of Mint Hill Functional Population | 18,538 |
| Per Capita - Functional Population | $0.36 |
| Mint Hill Small Area Plan Functional Population | 1,578 |
| Mint Hill Small Area Plan Annual Expenditures | $1,000 |

Source: Mint Hill, AECOM, 2010

**Table 11: Current State Police**

| **Functional Population Methodology:** | |
|---|---|
| **Annual Expenditures** | **Police** |
| FY10 Budgeted Expenditures | $2,681,754 |
| Town of Mint Hill Functional Population | 18,538 |
| Per Capita - Functional Population | $144.67 |
| Mint Hill Small Area Plan Functional Population | 1,578 |
| Mint Hill Small Area Plan Annual Expenditures | $228,000 |
| Current Town of Mint Hill FTEs | 26 |
| FTEs Per Capita | 0.00140 |
| **Mint Hill Small Area Plan Projected FTEs** | **2** |
| Projected Town of Mint Hill FTEs | 28 |

Source: Mint Hill, AECOM, 2010

**Table 12: Current State Fire Departments**

| Annual Expenditures | Fire |
|---|---|
| FY10 Budgeted Expenditures | $1,071,678 |
| Town of Mint Hill Functional Population | 18,538 |
| Per Capita - Functional Population | $57.81 |
| Mint Hill Small Area Plan Functional Population | 1,578 |
| Mint Hill Small Area Plan Annual Expenditures | $91,000 |
| Current Town of Mint Hill FTEs | 13 |
| FTEs Per Capita | 0.00070 |
| **Mint Hill Small Area Plan Projected FTEs** | **1** |
| Projected Town of Mint Hill FTEs | 14 |
| | |
| FY10 Budget includes $100,000 debt service on building. Final debt payment due in FY12. | |
| FY10 Budget considers financing plan for new ladder truck. | |
| FY10 Budget includes 4 new positions. | |

Note 1: Approximately 75% of calls are medical-related.

Source: Mint Hill, AECOM, 2010

Solid waste expenses are based on the current cost of service rate of $16 per household per month.

**Table 13: Current State Solid Waste**

| Annual Expenditures | Solid Waste |
|---|---|
| Annual Cost Per Household | $192 |
| Mint Hill Small Area Plan Households | 770 |
| Mint Hill Small Area Plan Annual Expenditures | $148,000 |

Source: Mint Hill, AECOM, 2010

**Table 14: Current State Parks and Recreation**

| Annual Expenditures | Parks & Recreation |
|---|---|
| FY10 Budgeted Expenditures | $241,924 |
| Town of Mint Hill Functional Population | 18,538 |
| Per Capita - Functional Population | $13.05 |
| Mint Hill Small Area Plan Functional Population | 1,578 |
| Mint Hill Small Area Plan Annual Expenditures | $21,000 |
| Current Town of Mint Hill FTEs | 2.5 |
| FTEs Per Capita | 0.00013 |
| **Mint Hill Small Area Plan Projected FTEs** | **0.2** |
| Projected Town of Mint Hill FTEs | 2.7 |

Source: Mint Hill, AECOM, 2010

**Table 15: Current State Debt Service**

| | Debt Service |
|---|---|
| FY10 Budgeted Expenditures | $1,148,815 |
| Annual Reimbursement from Mecklenburg County | (1,148,815) |
| Mint Hill Small Area Plan Annual Expenditures | $0 |

Source: Mint Hill, AECOM, 2010

**Table 16: Current State Non-Departmental**

| | Non-Departmental |
|---|---|
| FY10 Budgeted Expenditures | $1,149,600 |
| Less New Town Hall Pay-Go Funding | ($500,000) |
| Adjusted FY10 Budgeted Expenditures | $649,600 |
| Town of Mint Hill Functional Population | 18,538 |
| Per Capita - Functional Population | $35.04 |
| Mint Hill Small Area Plan Functional Population | 1,578 |
| Mint Hill Small Area Plan Annual Expenditures | $55,000 |

Source: Mint Hill, AECOM, 2010

### Annual Net Fiscal Impact of the Current State

The estimated annual net fiscal impact of the Current State on the Town of Mint Hill is ($13,000), or breakeven, as detailed in Table 17.

**Table 17: Annual Net Fiscal Impact of Current State**

| | General Fund | |
|---|---|---|
| **Annual Revenues:** | | |
| Real Property Taxes | $445,000 | |
| Business Property Taxes | 0 | |
| Motor Vehicle Property Taxes | 53,000 | |
| Sales Taxes - Retail | 19,000 | |
| Beer and Wine Tax | 8,000 | |
| Telecommunications Tax | 12,000 | |
| Natural Gas/Electricity Excise Tax – Residential | 45,000 | |
| Natural Gas/Electricity Excise Tax - Non-Residential | 0 | |
| Video Programming | 22,000 | |
| Motor Vehicle Fees | 17,000 | |
| **Total Annual Revenues** | **$621,000** | 100% |
| **Annual Expenditures:** | | |
| Governing Body | $3,000 | |
| Administration | 48,000 | |
| Elections | 1,000 | |
| Planning | 39,000 | |
| Police | 228,000 | |

| | | |
|---|---|---|
| Fire | 91,000 | |
| Solid Waste | 148,000 | |
| Streets | TBD | |
| Parks and Recreation | 21,000 | |
| Debt Service | 0 | |
| Non-Departmental | 55,000 | |
| **Total Annual Expenditures** | **$634,000** | 102% |
| **Annual Net Fiscal Impact** | **($13,000)** | -2% |

Source: Mint Hill, HNTB, AECOM, 2010

The impact on the real property tax base of Mint Hill is shown in Table 18.

**Table 18: Current State Tax Base Impact**

| Property Valuation 1-1-10 | Mint Hill Tax Base 1-1-10 | % of Total | Mint Hill Small Area Plan | % of Total | Total Tax Base with SAP | % of Total |
|---|---|---|---|---|---|---|
| Taxable Real Property: | | | | | | |
| Residential Real Property | $1,608,997,000 | 90.7% | $170,170,000 | 100.0% | $1,779,167,000 | 91.5% |
| Commercial Real Property | 126,186,000 | 7.1% | 0 | 0.0% | 126,186,000 | 6.5% |
| Industrial Real Property | 13,944,000 | 0.8% | 0 | 0.0% | 13,944,000 | 0.7% |
| Office | 24,404,000 | 1.4% | 0 | 0.0% | 24,404,000 | 1.3% |
| Total Real Property Tax Base | $1,773,531,000 | 100.0% | $170,170,000 | 100.0% | $1,943,701,000 | 100.0% |

Source: Mint Hill, Mecklenburg County, AECOM, 2010

## Market Demand (Passive Marketing)

Assumptions for the Market Demand (Passive) profile are based on results of the Real Estate Market Overview. The program includes 1,466 residential units, an 800,000 square foot mall, additional retail of 43,000 square feet and office uses totaling 82,000 square feet.

***Revenues***

**Real Property Taxes**

The total tax base of the Market Demand (Passive) is $431.7 million as reflected in Table 19. Unit and square footage values are based on data collected in the Real Estate Market Demand Overview. Annual real property taxes of $1.1 million are expected.

**Table 19: Market Demand (Passive) Real Property Tax Base and Annual Taxes**

| | Units | SF | Unit Value | Total Value |
|---|---|---|---|---|
| Residential Tax Base: | | | | |
| Low Density | 26 | 2,700 | $221,000 | $5,746,000 |
| Medium Density | 1,360 | 1,700 | $175,000 | 238,000,000 |
| High Density | 80 | 1,100 | $74,000 | 5,920,000 |
| Residential Tax Base | 1,466 | | | $249,666,000 |
| Town of Mint Hill Tax Rate | | | | $0.275 |
| Collection Rate | | | | 95% |
| Annual Residential Real Property Taxes | | | | $652,000 |
| Non-Residential Tax Base: | | SF | SF Value | Total Value |
| Office | | 82,000 | $200 | $16,400,000 |
| Retail | | 43,000 | $130 | 5,590,000 |
| Mall | | 800,000 | $200 | 160,000,000 |
| | | | | $181,990,000 |
| Town of Mint Hill Tax Rate | | | | $0.275 |
| Collection Rate | | | | 95% |
| Annual Non-Residential Real Property Taxes | | | | $475,000 |
| Total Annual Real Property Taxes | | | | $1,127,000 |

Source: Mint Hill, Mecklenburg County, HNTB, AECOM, 2010

The retail and office properties will contain business personal property which is also subject to ad valorem taxes. Assuming business personal property is equal to10% of the non-residential real property value, annual revenue of $48,000 is projected.

**Table 20: Market Demand (Passive) Business Personal Property**

| | |
|---|---|
| Estimated Value of Non-Residential Real Property | $181,990,000 |
| Estimated Business Personal Property % | 10% |
| Business Personal Property Tax Base | $18,199,000 |
| Town of Mint Hill Tax Rate | $0.275 |
| Collection Rate | 95% |
| Projected Annual Business Property Taxes | $48,000 |

Source: Mint Hill, NC OSBM, AECOM, 2010

As previously described, vehicles owned by businesses and residents are taxed on an ad valorem basis. Annual revenues of $70,000 are expected.

**Table 21: Market Demand (Passive) Vehicle Property Taxes**

| | |
|---|---|
| Estimated Total Value of Vehicles in Mint Hill | $197,402,000 |
| Current Mint Hill Resident Population | 20,748 |
| Motor Vehicle Value per Resident | $10,000 |
| Projected Small Area Plan Residents | 2,692 |
| Projected Motor Vehicle Tax Base | $26,922,000 |
| Town of Mint Hill Tax Rate | $0.275 |
| Collection Rate | 95% |
| Projected Annual Motor Vehicle Taxes | $70,000 |

Source: Mint Hill, NC OSBM, AECOM, 2010

Calculations used to determine the impacts of local option sales tax revenues are shows in Table 22 and are projected to total $45,000 annually.

**Table 22: Market Demand (Passive) Sales Taxes**

| Distributions FY09 | FY09 Mint Hill | FY09 Subtotals | Per Capita | FY10 Budget | Per Capita |
|---|---|---|---|---|---|
| Article 39 | $599,899 | | | | |
| Article 40 | 189,857 | | $9.15 | | |
| Article 42 | 186,917 | $976,673 | | $1,080,000 | |
| Beer and Wine Excise Tax | 92,150 | 92,150 | $4.44 | $85,000 | $4.10 |
| Electric Franchise/Natural Gas | 474,314 | | $22.86 | | $21.91 |
| Telecommunications Tax | 124,376 | | $5.99 | | $5.75 |
| Video Programming | 235,641 | 834,331 | $11.35 | $800,000 | $10.89 |
| Total | $1,903,154 | $1,903,154 | | $1,965,000 | |
| **Article 40 Sales Tax:** | | | | | |
| Mint Hill Small Area Plan Resident Population | 2,692 | | | | |
| Estimated Annual Per Capita Distribution | $9.15 | | | | |
| Mint Hill Small Area Plan Article 40 Sales Tax | $25,000 | | | | |
| **Article 39 and 42 Sales Tax:** | | | | | |
| Mint Hill Small Area Plan Mall SF | 800,000 | | | | |
| Annual Sales Per SF | $295 | | | | |
| Annual Mall Sales | $236,000,000 | | | | |
| | | | | | |
| Mint Hill Small Area Plan Retail SF | 43,000 | | | | |
| Annual Sales Per SF | $326 | | | | |
| Annual Retail Sales | $14,018,000 | | | | |
| | | | | | |
| Annual New Retail Sales | $250,018,000 | | | | |
| Article 39 and 42 Sales Tax Rate | 1.5% | | | | |
| Annual Article 39 and 42 Sales Taxes | $3,750,270 | | | | |
| Mint Hill Allocable Distribution | 0.5% | | | | |

| | |
|---|---|
| Article 39 and 42 Sales Taxes | $20,000 |
| Total Mint Hill Small Area Plan Sales Taxes | $45,000 |

Source: Mint Hill, HNTB, NCDOR, *ULI Dollars & Cents of Shopping Centers,* AECOM, 2010

Per capita rates used to estimate other revenues are shown in Table 23. Annual other revenues are expected to total $114,000. Details of the per capita computations are provided in the Appendix.

**Table 23: Market Demand (Passive) Other Revenues**

| | |
|---|---|
| **Beer & Wine Tax** | |
| Beer & Wine Tax Revenue FY10 Per Capita | $4.10 |
| Mint Hill Small Area Plan Resident Population | 2,692 |
| Mint Hill Small Area Plan Beer & Wine Tax | $11,000 |
| **Telecommunications Tax** | |
| Telecommunications Tax Revenue FY10 Per Capita | $5.75 |
| Mint Hill Small Area Plan Resident Population | 2,692 |
| Mint Hill Small Area Plan Telecommunications Tax | $15,000 |
| **Electric/Natural Gas Excise Tax** | |
| Natural Gas Excise Tax Revenue FY10 Per Capita | $21.91 |
| Mint Hill Small Area Plan Resident Population | 2,692 |
| Mint Hill Small Area Plan Resident Electric/Natural Gas Tax | $59,000 |
| **Video Programming Tax** | |
| Video Programming Revenue FY10 Per Capita | $10.89 |
| Mint Hill Small Area Plan Resident Population | 2,692 |
| Mint Hill Small Area Plan Video Programming Tax | $29,000 |

Source: Mint Hill, NCDOR, AECOM, 2010

Since the majority of the town (over 90%) is residential today, electricity franchise revenue associated with non-residential uses should not be analyzed on a per capita approach. Calculations supporting the electricity usage approach is reflected in Table 24.

**Table 24: Market Demand (Passive) Electricity Franchise Revenue Non-Residential**

| Non-Residential Land Use | SF | Annual Electricity Revenue PSF | Annual Revenue |
|---|---|---|---|
| Office | 82,000 | $1.28 | $104,960 |
| Retail | 43,000 | $1.43 | 61,490 |
| Mall | 800,000 | $1.40 | 1,120,000 |
| Total | 843,000 | | $1,181,490 |
| Municipal Portion of Gross Receipts Tax % | | | 3.09% |
| Small Area Plan Electricity Franchise Tax Revenue | | | $37,000 |

Source: Mint Hill, NCDOR, AECOM, 2010

As previously discussed, the town collects motor vehicle fees from business and residents. For the Market Demand (Passive), annual vehicle fee revenue of $23,000 is expected.

**Table 25: Market Demand (Passive) Motor Vehicle Fee Revenue**

| | |
|---|---|
| FY10 Motor Vehicle Fees | $175,000 |
| Current Resident Population | 20,748 |
| Motor Vehicle Fee per Resident | $8 |
| Projected Small Area Plan Residents | 2,692 |
| Projected Annual Motor Vehicle Fees | $23,000 |

Source: Mint Hill, NC OSBM, AECOM, 2010

***Expenses***

A case study-functional population methodology of the Market Demand (Passive) was performed in Tables 26 – 35 to estimate the expense impacts on the Town of Mint Hill.

**Table 26: Market Demand (Passive) Governing Body**

| **Annual Expenditures** | **Governing Body** |
|---|---|
| FY10 Budgeted Expenditures | $36,894 |
| Town of Mint Hill Functional Population | 18,538 |
| Per Capita - Functional Population | $1.99 |
| Mint Hill Small Area Plan Functional Population | 3,238 |
| Mint Hill Small Area Plan Annual Expenditures | $6,000 |

Source: Mint Hill, AECOM, 2010

**Table 27: Market Demand (Passive) Administration**

| **Annual Expenditures** | **Administration** |
|---|---|
| FY10 Budgeted Expenditures | $559,304 |
| Town of Mint Hill Functional Population | 18,538 |
| Per Capita - Functional Population | $30.17 |
| Mint Hill Small Area Plan Functional Population | 3,238 |
| Mint Hill Small Area Plan Annual Expenditures | $98,000 |
| Current Town of Mint Hill FTEs: | 6 |
| FTEs Per Capita | 0.00032 |
| **Mint Hill Small Area Plan Projected FTEs** | **1** |
| Projected Town of Mint Hill FTEs | 7 |

Source: Mint Hill, AECOM, 2010

**Table 28: Market Demand (Passive) Planning**

| Annual Expenditures | Planning |
|---|---|
| FY10 Budgeted Expenditures | $455,391 |
| Town of Mint Hill Functional Population | 18,538 |
| Per Capita - Functional Population | $24.57 |
| Mint Hill Small Area Plan Functional Population | 3,238 |
| Mint Hill Small Area Plan Annual Expenditures | $80,000 |
| Current Town of Mint Hill FTEs | 4 |
| FTEs Per Capita | 0.00022 |
| **Mint Hill Small Area Plan Projected FTEs** | **1** |
| Projected Town of Mint Hill FTEs | 5 |

Source: Mint Hill, AECOM, 2010

**Table 29: Market Demand (Passive) Elections**

| Annual Expenditures | Elections |
|---|---|
| FY10 Budgeted Expenditures | $6,680 |
| Town of Mint Hill Functional Population | 18,538 |
| Per Capita - Functional Population | $0.36 |
| Mint Hill Small Area Plan Functional Population | 3,238 |
| Mint Hill Small Area Plan Annual Expenditures | $1,000 |

Source: Mint Hill, AECOM, 2010

Since the case study approach, which was based primarily on interviews and data provided by the Mint Hill Police Chief, exceeds the functional population estimate, the larger amount of $565,000 was included in the analysis.

**Table 30: Market Demand (Passive) Police**

| Functional Population Methodology:<br>Annual Expenditures | Police |
|---|---|
| FY10 Budgeted Expenditures | $2,681,754 |
| Town of Mint Hill Functional Population | 18,538 |
| Per Capita - Functional Population | $144.67 |
| Mint Hill Small Area Plan Functional Population | 3,238 |
| Mint Hill Small Area Plan Annual Expenditures | $468,000 |
| Current Town of Mint Hill FTEs | 26 |
| FTEs Per Capita | 0.00140 |
| **Mint Hill Small Area Plan Projected FTEs** | **5** |
| Projected Town of Mint Hill FTEs | 31 |

| Case Study Methodology: | Police |
|---|---|
| **Mint Hill Police Department** | |
| 2009 Annual Calls for Service | 12,927 |

| | |
|---|---|
| Annual Cost Per Call | $207 |
| **Mall:** | |
| Identified Police Needs for the Mall: | |
| 4 Officers | $148,000 |
| 1 Detective | 42,000 |
| 1 Supervisor | 44,000 |
| Benefits @ 30% | 70,000 |
| Total Personnel Costs for Mall Coverage | $304,000 |
| Annual Equipment Costs: | |
| Uniforms, weapons, radios, and laptops per Sworn Officer | $9,500 |
| New Officers | 6 |
| Total uniforms, weapons and laptop costs | $57,000 |
| Replacement cycle in years | 2 |
| Annual Equipment Costs | $29,000 |
| | |
| Annualized Vehicle Costs: | |
| Cost of Vehicle | $35,000 |
| New Officers | 6 |
| Total | $210,000 |
| Replacement cycle | 5 |
| Annual Vehicle Cost | $42,000 |
| | |
| Annual Salary, Equipment and Vehicle Cost Per Officer | $63,000 |
| | |
| Annual Police Costs for Mall | $375,000 |
| | |
| **Office and Retail:** | |
| Annual Shopping Center Calls for Service | 26 |
| Annual Office Calls for Service | 3 |
| Annual Shopping Center and Office Calls | 29 |
| Annual Cost Per Call | $207 |
| Annual Costs for Office and Retail | $6,000 |
| **Residential:** | |
| New Small Area Plan Resident Functional Population | 2,083 |
| FTE's Per Capita | 0.0014 |
| Mint Hill Small Area Plan Projected FTEs - New Residents | 3 |
| Annual Salary, Equipment and Vehicle Cost Per Officer | $63,000 |
| Annual Costs for Residential | $184,000 |
| | |
| Mint Hill Small Area Plan Annual Expenditures | $565,000 |

Source: Mint Hill, AECOM, 2010

**Table 31: Market Demand (Passive) Fire Departments**

| Annual Expenditures | Fire |
|---|---|
| FY10 Budgeted Expenditures | $1,071,678 |
| Town of Mint Hill Functional Population | 18,538 |
| Per Capita - Functional Population | $57.81 |
| Mint Hill Small Area Plan Functional Population | 3,238 |

| | |
|---|---|
| Mint Hill Small Area Plan Annual Expenditures | $187,000 |
| Current Town of Mint Hill FTEs | 13 |
| FTEs Per Capita | 0.00070 |
| **Mint Hill Small Area Plan Projected FTEs** | **2** |
| Projected Town of Mint Hill FTEs | 15 |

FY10 Budget includes $100,000 debt service on building. The final debt payment due in FY12.
FY10 Budget considers financing plan for new ladder truck.
FY10 Budget includes 4 new positions.

Note 1: Approximately 75% of calls are medical-related.
Source: Mint Hill, AECOM, 2010

Solid waste expenses are based on the current cost of service rate of $16 per household per month.

**Table 32: Market Demand (Passive) Solid Waste**

| Annual Expenditures | Solid Waste |
|---|---|
| Annual Cost Per Household | $192 |
| Mint Hill Small Area Plan Households | 1,466 |
| Mint Hill Small Area Plan Annual Expenditures | $281,000 |

Source: Mint Hill, AECOM, 2010

**Table 33: Market Demand (Passive) Parks and Recreation**

| Annual Expenditures | Parks & Recreation |
|---|---|
| FY10 Budgeted Expenditures | $241,924 |
| Town of Mint Hill Functional Population | 18,538 |
| Per Capita - Functional Population | $13.05 |
| Mint Hill Small Area Plan Functional Population | 3,238 |
| Mint Hill Small Area Plan Annual Expenditures | $42,000 |
| Current Town of Mint Hill FTEs | 2.5 |
| FTEs Per Capita | 0.00013 |
| **Mint Hill Small Area Plan Projected FTEs** | **0.4** |
| Projected Town of Mint Hill FTEs | 2.9 |

Source: Mint Hill, AECOM, 2010

**Table 34: Market Demand (Passive) Debt Service**

| Annual Expenditures | Debt Service |
|---|---|
| FY10 Budgeted Expenditures | $1,148,815 |
| Annual Reimbursement from Mecklenburg County | (1,148,815) |
| Mint Hill Small Area Plan Annual Expenditures | $0 |

Source: Mint Hill, AECOM, 2010

**Table 35: Market Demand (Passive) Non-Departmental**

| Annual Expenditures | Non-Departmental |
|---|---|
| FY10 Budgeted Expenditures | $1,149,600 |
| Less New Town Hall Pay-Go Funding | ($500,000) |
| Adjusted FY10 Budgeted Expenditures | $649,600 |
| Town of Mint Hill Functional Population | 18,538 |
| Per Capita - Functional Population | $35.04 |
| Mint Hill Small Area Plan Functional Population | 3,238 |
| Mint Hill Small Area Plan Annual Expenditures | $113,000 |

Source: Mint Hill, AECOM, 2010

### Annual Net Fiscal Impact of the Market Demand (Passive)

The estimated annual net fiscal impact of the Market Demand (Passive) on the Town of Mint Hill is $91,000, as detailed in Table 36.

**Table 36: Market Demand (Passive) Annual Net Fiscal Impact**

| | General Fund | |
|---|---|---|
| **Annual Revenues:** | | |
| Real Property Taxes | $1,127,000 | |
| Business Property Taxes | 48,000 | |
| Motor Vehicle Property Taxes | 70,000 | |
| Sales Taxes - Retail | 45,000 | |
| Beer and Wine Tax | 11,000 | |
| Telecommunications Tax | 15,000 | |
| Natural Gas/Electricity Excise Tax - Residential | 59,000 | |
| Natural Gas/Electricity Excise Tax - Non-Residential | 37,000 | |
| Video Programming | 29,000 | |
| Motor Vehicle Fees | 23,000 | |
| **Total Annual Revenues** | **$1,464,000** | 100% |
| **Annual Expenditures:** | | |
| Governing Body | $6,000 | |
| Administration | 98,000 | |
| Elections | 1,000 | |
| Planning | 80,000 | |
| Police | 565,000 | |
| Fire | 187,000 | |
| Solid Waste | 281,000 | |
| Streets | TBD | |
| Parks and Recreation | 42,000 | |
| Debt Service | 0 | |
| Non-Departmental | 113,000 | |
| **Total Annual Expenditures** | **$1,373,000** | 94% |
| **Annual Net Fiscal Impact** | **$91,000** | 6% |

Source: Mint Hill, HNTB, AECOM, 2010

The impact on the real property tax base of the Town of Mint Hill is shown in Table 37.

**Table 37: Market Demand (Passive) Tax Base Impact**

| Property Valuation 1-1-10 | Mint Hill Tax Base 1-1-10 | % of Total | Mint Hill Small Area Plan | % of Total | Total Tax Base with SAP | % of Total |
|---|---|---|---|---|---|---|
| Taxable Real Property: | | | | | | |
| Residential Real Property | $1,608,997,000 | 90.7% | $249,666,000 | 57.8% | $1,858,663,000 | 84.3% |
| Commercial Real Property | 126,186,000 | 7.1% | 165,590,000 | 38.4% | 291,776,000 | 13.2% |
| Industrial Real Property | 13,944,000 | 0.8% | 0 | 0.0% | 13,944,000 | 0.6% |
| Office | 24,404,000 | 1.4% | 16,400,000 | 3.8% | 40,804,000 | 1.9% |
| Total Real Property Tax Base | $1,773,531,000 | 100.0% | $431,656,000 | 100.0% | $2,205,187,000 | 100.0% |

Source: Mint Hill, Mecklenburg County, AECOM, 2010

## Employment Center (Active Marketing)

Assumptions for the Employment Center (Active) are based on results of the Real Estate Market Overview and potential economic development initiatives. The program includes 1,466 residential units, an 800,000 square foot mall, additional retail of 200,000 square feet and office uses totaling 1.25 million square feet.

***Revenues***

**Real Property Taxes**

The total tax base of Employment Center (Active) is $685.7 million as reflected in Table 38. Annual real property taxes of $1.8 million are expected.

**Table 38: Employment Center (Active) Real Property Tax Base and Annual Taxes**

| | Units | SF | Unit Value | Total Value |
|---|---|---|---|---|
| Residential Tax Base: | | | | |
| Low Density | 26 | 2,700 | $221,000 | $5,746,000 |
| Medium Density | 1,360 | 1,700 | $175,000 | 238,000,000 |
| High Density | 80 | 1,100 | $74,000 | 5,920,000 |
| Residential Tax Base | 1,466 | | | $249,666,000 |
| Town of Mint Hill Tax Rate | | | | $0.275 |
| Collection Rate | | | | 95% |
| Annual Residential Real Property Taxes | | | | $652,000 |
| Non-Residential Tax Base: | | SF | SF Value | Total Value |
| Office | | 1,250,000 | $200 | $250,000,000 |
| Retail | | 200,000 | $130 | 26,000,000 |
| Mall | | 800,000 | $200 | 160,000,000 |
| | | | | $436,000,000 |
| Town of Mint Hill Tax Rate | | | | $0.275 |
| Collection Rate | | | | 95% |
| Annual Non-Residential Real Property Taxes | | | | $1,139,000 |
| Total Annual Real Property Taxes | | | | $1,791,000 |

Source: Mint Hill, Mecklenburg County, HNTB, AECOM, 2010

An analysis of business property taxes is presented in Table 39.

**Table 39: Employment Center (Active) Business Property Taxes**

| | |
|---|---|
| Estimated Value of Non-Residential Real Property | $436,000,000 |
| Estimated Business Personal Property % | 10% |
| Business Personal Property Tax Base | $43,600,000 |
| Town of Mint Hill Tax Rate | $0.275 |
| Collection Rate | 95% |
| Projected Annual Business Property Taxes | $114,000 |

Source: Mint Hill, NC OSBM, AECOM, 2010

Annual vehicle property taxes of $70,000 are the same as the Market Demand (Passive).

**Table 40: Employment Center (Active) Vehicle Property Taxes**

| | |
|---|---|
| Estimated Total Value of Vehicles in Mint Hill | $197,402,000 |
| Current Mint Hill Resident Population | 20,748 |
| Motor Vehicle Value per Resident | $10,000 |
| Projected Small Area Plan Residents | 2,692 |
| Projected Motor Vehicle Tax Base | $26,922,000 |
| Town of Mint Hill Tax Rate | $0.275 |
| Collection Rate | 95% |
| Projected Annual Motor Vehicle Taxes | $70,000 |

Source: Mint Hill, NC OSBM, AECOM, 2010

As calculated in Table 41, annual Employment Center (Active) sales taxes total $51,000.

**Table 41: Employment Center (Active) Sales Taxes**

| Distributions FY09 | FY09 Mint Hill | FY09 Subtotals | Per Capita | FY10 Budget | Per Capita |
|---|---|---|---|---|---|
| Article 39 | $599,899 | | | | |
| Article 40 | 189,857 | | $9.15 | | |
| Article 42 | 186,917 | $976,673 | | $1,080,000 | |
| Beer and Wine Excise Tax | 92,150 | 92,150 | $4.44 | $85,000 | $4.10 |
| Electric Franchise/Natural Gas | 474,314 | | $22.86 | | $21.91 |
| Telecommunications Tax | 124,376 | | $5.99 | | $5.75 |
| Video Programming | 235,641 | 834,331 | $11.35 | $800,000 | $10.89 |
| Total | $1,903,154 | $1,903,154 | | $1,965,000 | |
| **Article 40 Sales Tax:** | | | | | |
| Mint Hill Small Area Plan Resident Population | 2,692 | | | | |
| Estimated Annual Per Capita Distribution | $9.15 | | | | |
| Mint Hill Small Area Plan Article 40 Sales Tax | $25,000 | | | | |
| **Article 39 and 42 Sales Tax:** | | | | | |
| Mint Hill Small Area Plan Mall SF | 800,000 | | | | |
| Annual Sales Per SF | $295 | | | | |
| Annual Mall Sales | $236,000,000 | | | | |
| Mint Hill Small Area Plan Retail SF | 200,000 | | | | |
| Annual Sales Per SF | $286 | | | | |
| Annual Retail Sales | $57,200,000 | | | | |
| Annual New Retail Sales | $293,200,000 | | | | |
| Article 39 and 42 Sales Tax Rate | 1.5% | | | | |
| Annual Article 39 and 42 Sales Taxes | $4,398,000 | | | | |
| Mint Hill Allocable Distribution | 0.6% | | | | |
| Article 39 and 42 Sales Taxes | $26,000 | | | | |
| Total Mint Hill Small Area Plan Sales Taxes | $51,000 | | | | |

Source: Mint Hill, HNTB, NCDOR, *ULI Dollars & Cents of Shopping Centers,* AECOM, 2010

Other revenues, shown in Table 42, total $114,000.

**Table 42: Employment Center (Active) Other Revenue**

| | |
|---|---|
| **Beer & Wine Tax** | |
| Beer & Wine Tax Revenue FY10 Per Capita | $4.10 |
| Mint Hill Small Area Plan Resident Population | 2,692 |
| Mint Hill Small Area Plan Beer & Wine Tax | $11,000 |
| | |
| **Telecommunications Tax** | |
| Telecommunications Tax Revenue FY10 Per Capita | $5.75 |
| Mint Hill Small Area Plan Resident Population | 2,692 |
| Mint Hill Small Area Plan Telecommunications Tax | $15,000 |
| | |
| **Electric/Natural Gas Excise Tax** | |
| Natural Gas Excise Tax Revenue FY10 Per Capita | $21.91 |
| Mint Hill Small Area Plan Resident Population | 2,692 |
| Mint Hill Small Area Plan Resident Electric/Natural Gas Tax | $59,000 |
| | |
| **Video Programming Tax** | |
| Video Programming Revenue FY10 Per Capita | $10.89 |
| Mint Hill Small Area Plan Resident Population | 2,692 |
| Mint Hill Small Area Plan Video Programming Tax | $29,000 |

Source: Mint Hill, NCDOR, AECOM, 2010

Non-Residential electricity franchise tax revenues of $43,000 are shown in Table 43.

**Table 43: Employment Center (Active) Electricity Franchise Tax Revenue – Non-Residential**

| Non-Residential Land Use | SF | Annual Electricity Revenue PSF | Annual Revenue |
|---|---|---|---|
| Office | 1,250,000 | $1.28 | $1,600,000 |
| Retail | 200,000 | $1.43 | 286,000 |
| Mall | 800,000 | $1.40 | 1,120,000 |
| Total | 1,000,000 | | $1,406,000 |
| Municipal Portion of Gross Receipts Tax % | | | 3.09% |
| Small Area Plan Electricity Franchise Tax Revenue | | | $43,000 |

Source: Mint Hill, NCDOR, AECOM, 2010

**Table 44: Employment Center (Active) Motor Vehicle Fees**

| | |
|---|---|
| FY10 Motor Vehicle Fees | $175,000 |
| Current Resident Population | 20,748 |
| Motor Vehicle Fee per Resident | $8 |
| Projected Small Area Plan Residents | 2,692 |
| Projected Annual Motor Vehicle Fees | $23,000 |

Source: Mint Hill, NC OSBM, AECOM, 2010

### *Expenses*

A case study-functional population methodology was performed in Tables 45 to 54 to estimate the impacts of the Employment Center (Active) on the Town of Mint Hill.

**Table 45: Employment Center (Active) Governing Body**

| Annual Expenditures | Governing Body |
|---|---|
| FY10 Budgeted Expenditures | $36,894 |
| Town of Mint Hill Functional Population | 18,538 |
| Per Capita - Functional Population | $1.99 |
| Mint Hill Small Area Plan Functional Population | 4,322 |
| Mint Hill Small Area Plan Annual Expenditures | $9,000 |

Source: Mint Hill, AECOM, 2010

**Table 46: Employment Center (Active) Administration**

| Annual Expenditures | Administration |
|---|---|
| FY10 Budgeted Expenditures | $559,304 |
| Town of Mint Hill Functional Population | 18,538 |
| Per Capita - Functional Population | $30.17 |
| Mint Hill Small Area Plan Functional Population | 4,322 |
| Mint Hill Small Area Plan Annual Expenditures | $130,000 |
| Current Town of Mint Hill FTEs: | 6 |
| FTEs Per Capita | 0.00032 |
| **Mint Hill Small Area Plan Projected FTEs** | **1** |
| Projected Town of Mint Hill FTEs | 7 |

Source: Mint Hill, AECOM, 2010

**Table 47: Employment Center (Active) Planning**

| Annual Expenditures | Planning |
|---|---|
| FY10 Budgeted Expenditures | $455,391 |
| Town of Mint Hill Functional Population | 18,538 |
| Per Capita - Functional Population | $24.57 |
| Mint Hill Small Area Plan Functional Population | 4,322 |
| Mint Hill Small Area Plan Annual Expenditures | $106,000 |
| Current Town of Mint Hill FTEs | 4 |
| FTEs Per Capita | 0.00022 |
| **Mint Hill Small Area Plan Projected FTEs** | **1** |
| Projected Town of Mint Hill FTEs | 5 |

Source: Mint Hill, AECOM, 2010

**Table 48: Employment Center (Active) Elections**

| Annual Expenditures | Elections |
|---|---|
| FY10 Budgeted Expenditures | $6,680 |
| Town of Mint Hill Functional Population | 18,538 |
| Per Capita - Functional Population | $0.36 |
| Mint Hill Small Area Plan Functional Population | 4,322 |
| Mint Hill Small Area Plan Annual Expenditures | $2,000 |

Source: Mint Hill, AECOM, 2010

Since the Functional Population Methodology yields higher estimated annual Police costs than the Case Study approach, the larger amount of $625,000 will be used in the analysis for conservatism.

**Table 49: Employment Center (Active) Police**

| **Functional Population Methodology:** | |
|---|---|
| **Annual Expenditures** | **Police** |
| FY10 Budgeted Expenditures | $2,681,754 |
| Town of Mint Hill Functional Population | 18,538 |
| Per Capita - Functional Population | $144.67 |
| Mint Hill Small Area Plan Functional Population | 4,322 |
| Mint Hill Small Area Plan Annual Expenditures | $625,000 |
| Current Town of Mint Hill FTEs | 26 |
| FTEs Per Capita | 0.00140 |
| **Mint Hill Small Area Plan Projected FTEs** | **6** |
| Projected Town of Mint Hill FTEs | 32 |

| **Case Study Methodology:** | **Police** |
|---|---|
| **Mint Hill Police Department** | |
| 2009 Annual Calls for Service | 12,927 |
| Annual Cost Per Call | $207 |
| **Mall:** | |
| Identified Police Needs for the Mall: | |
| 4 Officers | $148,000 |
| 1 Detective | 42,000 |
| 1 Supervisor | 44,000 |
| Benefits @ 30% | 70,000 |
| Total Personnel Costs for Mall Coverage | $304,000 |
| Annual Equipment Costs: | |
| Uniforms, weapons, radios, and laptops per Sworn Officer | $9,500 |
| New Officers | 6 |
| Total uniforms, weapons and laptop costs | $57,000 |
| Replacement cycle in years | 2 |
| Annual Equipment Costs | $29,000 |

| | |
|---|---|
| Annualized Vehicle Costs: | |
| Cost of Vehicle | $35,000 |
| New Officers | 6 |
| Total | $210,000 |
| Replacement cycle | 5 |
| Annual Vehicle Cost | $42,000 |
| | |
| Annual Salary, Equipment and Vehicle Cost Per Officer | $63,000 |
| | |
| Annual Police Costs for Mall | $375,000 |
| | |
| **Office and Retail:** | |
| Annual Shopping Center Calls for Service | 122 |
| Annual Office Calls for Service | 39 |
| Annual Shopping Center and Office Calls | 161 |
| Annual Cost Per Call | $207 |
| Annual Costs for Office and Retail | $33,000 |
| **Residential:** | |
| New Small Area Plan Resident Functional Population | 2,083 |
| FTE's Per Capita | 0.0014 |
| Mint Hill Small Area Plan Projected FTEs - New Residents | 3 |
| Annual Salary, Equipment and Vehicle Cost Per Officer | $63,000 |
| Annual Costs for Residential | $184,000 |
| | |
| Mint Hill Small Area Plan Annual Expenditures | $592,000 |

Source: Mint Hill, AECOM, 2010

**Table 50: Employment Center (Active) Fire**

| **Annual Expenditures** | **Fire** |
|---|---|
| FY10 Budgeted Expenditures | $1,071,678 |
| Town of Mint Hill Functional Population | 18,538 |
| Per Capita - Functional Population | $57.81 |
| Mint Hill Small Area Plan Functional Population | 4,322 |
| Mint Hill Small Area Plan Annual Expenditures | $250,000 |
| Current Town of Mint Hill FTEs | 13 |
| FTEs Per Capita | 0.00070 |
| **Mint Hill Small Area Plan Projected FTEs** | **3** |
| Projected Town of Mint Hill FTEs | 16 |
| | |
| FY10 Budget includes $100,000 debt service on building. The final debt payment due in FY12. | |
| FY10 Budget considers financing plan for new ladder truck. | |
| FY10 Budget includes 4 new positions. | |

Note 1: Approximately 75% of calls are medical-related.
Source: Mint Hill, AECOM, 2010

Solid waste expenses are based on the current cost of service rate of $16 per household per month.

**Table 51: Employment Center (Active) Solid Waste**

| Annual Expenditures | Solid Waste |
|---|---|
| Annual Cost Per Household | $192 |
| Mint Hill Small Area Plan Households | 1,466 |
| Mint Hill Small Area Plan Annual Expenditures | $281,000 |

Source: Mint Hill, AECOM, 2010

**Table 52: Employment Center (Active) Parks and Recreation**

| Annual Expenditures | Parks & Recreation |
|---|---|
| FY10 Budgeted Expenditures | $241,924 |
| Town of Mint Hill Functional Population | 18,538 |
| Per Capita - Functional Population | $13.05 |
| Mint Hill Small Area Plan Functional Population | 4,322 |
| Mint Hill Small Area Plan Annual Expenditures | $56,000 |
| Current Town of Mint Hill FTEs | 2.5 |
| FTEs Per Capita | 0.00013 |
| **Mint Hill Small Area Plan Projected FTEs** | **0.6** |
| Projected Town of Mint Hill FTEs | 3.1 |

Source: Mint Hill, AECOM, 2010

**Table 53: Employment Center (Active) Debt Service**

| | Debt Service |
|---|---|
| FY10 Budgeted Expenditures | $1,148,815 |
| Annual Reimbursement from Mecklenburg County | (1,148,815) |
| Mint Hill Small Area Plan Annual Expenditures | $0 |

Source: Mint Hill, AECOM, 2010

**Table 54: Employment Center (Active) Non-Departmental**

| | Non-Departmental |
|---|---|
| FY10 Budgeted Expenditures | $1,149,600 |
| Less New Town Hall Pay-Go Funding | ($500,000) |
| Adjusted FY10 Budgeted Expenditures | $649,600 |
| Town of Mint Hill Functional Population | 18,538 |
| Per Capita - Functional Population | $35.04 |
| Mint Hill Small Area Plan Functional Population | 4,322 |
| Mint Hill Small Area Plan Annual Expenditures | $151,000 |

Source: Mint Hill, AECOM, 2010

### Annual Net Fiscal Impact of Employment Center (Active)

The estimated annual net fiscal impact of the Employment Center (Active) on the Town of Mint Hill is $596,000, as detailed in Table 55.

**Table 55: Employment Center (Active) Annual Net Fiscal Impact**

| | General Fund | |
|---|---|---|
| **Annual Revenues:** | | |
| Real Property Taxes | $1,791,000 | |
| Business Property Taxes | 114,000 | |
| Motor Vehicle Property Taxes | 70,000 | |
| Sales Taxes - Retail | 51,000 | |
| Beer and Wine Tax | 11,000 | |
| Telecommunications Tax | 15,000 | |
| Natural Gas/Electricity Excise Tax - Residential | 59,000 | |
| Natural Gas/Electricity Excise Tax - Non-Residential | 43,000 | |
| Video Programming | 29,000 | |
| Motor Vehicle Fees | 23,000 | |
| **Total Annual Revenues** | **$2,206,000** | 100% |
| **Annual Expenditures:** | | |
| Governing Body | $9,000 | |
| Administration | 130,000 | |
| Elections | 2,000 | |
| Planning | 106,000 | |
| Police | 625,000 | |
| Fire | 250,000 | |
| Solid Waste | 281,000 | |
| Streets | TBD | |
| Parks and Recreation | 56,000 | |
| Debt Service | 0 | |
| Non-Departmental | 151,000 | |
| **Total Annual Expenditures** | **$1,610,000** | 73% |
| **Net Annual Fiscal Impact** | **$596,000** | 27% |

Source: Mint Hill, HNTB, AECOM, 2010

The impact on the real property tax base of Mint Hill is shown in Table 56.

**Table 56: Employment Center (Active) Tax Base Impacts**

| Property Valuation 1-1-10 | Mint Hill Tax Base 1-1-10 | % of Total | Mint Hill Small Area Plan | % of Total | Total Tax Base with SAP | % of Total |
|---|---|---|---|---|---|---|
| Taxable Real Property: | | | | | | |
| Residential Real Property | $1,608,997,000 | 90.7% | $249,666,000 | 36.4% | $1,858,663,000 | 75.6% |
| Commercial Real Property | 126,186,000 | 7.1% | 186,000,000 | 27.1% | 312,186,000 | 12.7% |
| Industrial Real Property | 13,944,000 | 0.8% | 0 | 0.0% | 13,944,000 | 0.6% |
| Office | 24,404,000 | 1.4% | 250,000,000 | 36.5% | 274,404,000 | 11.2% |
| Total Real Property Tax Base | $1,773,531,000 | 100.0% | $685,666,000 | 100.0% | $2,459,197,000 | 100.0% |

Source: Mint Hill, Mecklenburg County, AECOM, 2010

## Appendix

### Functional Population Methodology

There are several acceptable methods for conducting fiscal impact analysis. The simplest and most often used is the pure per capita technique. The most complex and most costly is a case study oriented approach that relies exclusively on interviews with local government officials and staff. Furthermore, there are two basic approaches used to project the costs of local government services related to new development – average costing and marginal costing. Average costing is more straightforward, less expensive and tends to be the more common approach for smaller government units. When applying average costing, local government costs attributable to new development are allocated according to the average cost per unit of service in the current population times the number of units related to the proposed development. This approach does not take into account excess or deficient capacity. Moreover, it assumes stable costs of future municipal services. In comparison, marginal costing requires an in-depth analysis of capacities present in the services currently provided by local government. In many cases, analysts use a combination of the various approaches in order to more accurately evaluate the impacts on local government.

*Full- Time Equivalent Functional Population*

Incorporating full-time equivalent functional population methodology into per capita calculations provides a framework for more reasonable and equitable projections. According to the *Fiscal Impact Analysis Model Training Manual (FIAM)*, "Local city/county governments receive revenues from land, development and the activities of their populations of residents, workers, and visitors. Local city/county governments also render services to all residents, to all who are working in the city/county and to all visitors to the city/county. Therefore, on the cost side of the equation, counties incur costs to provide services to residents, those employed in the city/county, and to visitors. At various times during a 24-hour period, a resident may become a person employed in the city/county, and then later in the day may be a resident again. To such an individual, the city/county has rendered services for a full 24 hours. Other residents may leave the city/county to work in another city/county. In this case, the city/county only provides services to that person when they are physically in the city/county. Some who work in the city/county may not live in the city/county. City/county services are only provided to those workers when they are in the city/county. Finally, visitors receive service during the whole period of their visit, but obviously not when they leave the city/county.

To properly measure the services provided to each of these groups, a weighting procedure is needed that reflects the duration of time each group is resident in the city/county. This calculation provides us with the full-time equivalent (FTE) population, employees and visitors. For residents and workers, the model assumes a working period of 2,000 hours per year. In this way, the fiscal impact of the FTE residents, employees and visitors can be properly identified."[1]

However, simply assigning the employment population a factor of 0.2679 [(9*5)/(7*24) = 0.2679] does not take into consideration the significant variation in demand for public services by type of land use. To address this limitation in the FIAM model, guidance contained in the *Planner's Estimating Guide:*

[4] Fishkind & Associates, Inc., *Fiscal Impact Analysis Model Training Manual.* Florida Department of Community Affairs, 2005, p.22.

*Projecting Land-Use and Facility Needs*[2] (the Guide) was applied to the development of the FTE functional population estimates. As the Guide explains, trip generation data provided by the Institute of Transportation Engineers (ITE) can be used to estimate the functional population for land uses with employees. Also, the *2000 Nationwide Household Transportation Survey* (Federal Highway Administration 2001) provides vehicle trip statistics for the type of trip. These data sources can be used to produce information on total trips, total people including visitors, and total workers by major nonresidential employment-based land-use category.

The Guide estimates functional populations in three tables. The first set of calculations establishes the baseline parameters for computing the two functional population variations described above. The table combines data from the ITE's *Trip Generation* (1997) handbook with the Federal Highway Administration's *2000 Nationwide Household Transportation Survey* (2001). The second table uses these baseline assumptions to establish functional population coefficients. The third table multiplies the current or projected population by the coefficients for both of the functional population variations to estimate total functional population.

The coefficients are calculated as follows:

{[(in-place occupant ratio) x (hours in place)] + [(visitors per employee) x (visitor hours per trip)] x (days per week)} / (hours per week)

For the permanent population, the Guide suggests a functional coefficient of 0.670. In this study, an additional calculation was performed to arrive at a more precise estimate of the permanent population coefficient. The lesser of the town's employment population or permanent population was multiplied by the difference between the standard employment coefficient of 0.2679 and the computed employment coefficient. This difference balances the model to ensure the permanent and employment populations are properly accounted for and appropriately weighted in the application of the functional population approach to assigning allocable shares of certain operating and capital costs.

[2] Arthur C. Nelson, *Planner's Estimating Guide: Projecting Land-Use and Facility Needs*. American Planning Association, 2004.

**Town of Mint Hill**
**Functional Population Coefficients**

Source: Planner's Estimating Guide: Projecting Land-Use and Facility Needs
24/7 FUNCTIONAL POPULATION COEFFICIENTS

| Land Use Category | ITE Code | 24/7 Week | In-Place Occupant Ratio | Hours In Place | Trips Per Employee* | One Way Trips Per Employee | Journey-To-Work Occupants Per Trip** | Daily Occupants Per Trip** | Visitors Per Employee | Visitor Hours Per Trip | 24/7 Coefficient |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Permanent Population | | | | | | | | | | | |
| Group Care Population | | | | | | | | | | | |
| Hotel/Motel Population | | | | | | | | | | | |
| Construction | 110 | 5 | 1.00 | 9.00 | 3.020 | 1.510 | 1.300 | 2.020 | 1.0872 | 1.00 | 0.3002 |
| Manufacturing | 140 | 5 | 1.00 | 9.00 | 2.100 | 1.050 | 1.300 | 2.020 | 0.7560 | 1.00 | 0.2904 |
| Transportation, Commun. & Utilities | 110 | 5 | 1.00 | 9.00 | 3.020 | 1.510 | 1.300 | 2.020 | 1.0872 | 1.00 | 0.3002 |
| Wholesale Trade | 150 | 5 | 1.00 | 9.00 | 3.890 | 1.945 | 1.300 | 2.020 | 1.4004 | 1.00 | 0.3095 |
| Retail | 820 | 7 | 1.00 | 9.00 | 39.433 | 19.717 | 1.190 | 1.930 | 14.5903 | 1.00 | 0.9829 |
| Finance, Insurance and Real Estate | 710 | 5 | 1.00 | 9.00 | 3.320 | 1.660 | 1.135 | 1.915 | 1.2948 | 1.00 | 0.3064 |
| Office and Services | 710 | 5 | 1.00 | 9.00 | 3.320 | 1.660 | 1.135 | 1.915 | 1.2948 | 1.00 | 0.3064 |
| Group Care Employees | 252 | | | | 2.610 | | | | | | |
| Group Care Employees | 253 | 7 | 1.00 | 9.00 | 3.480 | 1.740 | 1.135 | 1.915 | 1.3572 | 2.00 | 0.4881 |
| Hotel/Motel Employees | 310 | 5 | 1.00 | 9.00 | 8.920 | 4.460 | 1.135 | 1.915 | 3.4788 | 1.00 | 0.3714 |
| Government | 730 | 5 | 1.00 | 9.00 | 11.950 | 5.975 | 1.135 | 1.915 | 4.6605 | 1.00 | 0.4066 |
| Medical Offices/Clinics | 720 | 5 | 1.00 | 9.00 | 8.910 | 4.455 | 1.135 | 1.915 | 3.4749 | 2.00 | 0.4747 |
| Hospital - Day Shift | 610 | 5 | 1.00 | 9.00 | 5.170 | 2.585 | 1.135 | 1.915 | 2.0163 | 2.00 | 0.3879 |
| Hospital - Evening/Night Shift | 610 | 5 | 1.00 | 9.00 | 2.585 | 1.293 | 1.135 | 1.915 | 1.0082 | 1.00 | 0.2979 |
| Nursing Home | 620 | 5 | 1.00 | 9.00 | 0.200 | 0.100 | 1.135 | 1.915 | 0.0780 | 1.00 | 0.2702 |
| Church | | 5 | 1.00 | 9.00 | 3.320 | 1.660 | 1.135 | 1.915 | 1.2948 | 1.00 | 0.3064 |
| Civic/Art | | 5 | 1.00 | 9.00 | 3.320 | 1.660 | 1.135 | 1.915 | 1.2948 | 1.00 | 0.3064 |
| Ag-Other | | 5 | 1.00 | 9.00 | 3.020 | 1.510 | 1.300 | 2.020 | 1.0872 | 1.00 | 0.3002 |
| Education | | 5 | 1.00 | 9.00 | 2.000 | 1.000 | 1.000 | 1.000 | 0.0000 | 0.00 | 0.2679 |
| Students - included in permanent pop. | na | | 1.00 | 9.00 | na | na | na | na | na | na | |

| Trips per Retail Employee: / Retail Scale: | Existing Retail Employees | Trip Rate | Share | Weighted Trips | Existing Retail 24/7 Coefficient | New Retail Employees | Trip Rate | Share | Weighted Trips | Retail 24/7 Coefficient | New Mall Employees | Trip Rate | Share | Weighted Trips | Retail 24/7 Coefficient |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Neighborhood < 50k Sq Ft | 972 | 87.31 | 100% | 87.31 | | | 87.31 | 0% | | | - | 87.31 | 0% | - | |
| Community 50k Sq Ft- 250k Sq Ft | | 49.15 | 0% | 0.00 | 1.00 | 268 | 49.15 | 100% | 49.15 | 1.00 | - | 49.15 | 0% | - | 1.00 |
| Regional 250k Sq Ft - 500k Sq Ft | | 38.37 | 0% | 0.00 | x | | 38.37 | 0% | 0 | x | - | 38.37 | 0% | - | x |
| Super Regional 500k - 1000k Sq Ft | | 29.96 | 0% | 0.00 | 9.00 | | 29.96 | 0% | | 9.00 | 939 | 29.96 | 100% | 29.96 | 9.00 |
| Sum of Weighted Trips Per 1k Sq Ft | 972 | | 100% | 87.31 | x | 268 | | 100% | 49.15 | x | 939 | | 100% | 29.96 | x |
| | Estimated Retail Space | | | 439,000 | 7.00 | | Projected Retail Space | | 180,000 | 7.00 | | Projected Retail Space | | 720,000 | 7.00 |
| | Retail Employees | | | 972 | 63.00 | | Projected Retail Employees | | 268 | 63.00 | | Projected Retail Employees | | 939 | 63.00 |
| | Employees Per 1,000 sf | | | 2.21 | + | | Employees Per 1,000 sf | | 1.49 | + | | Employees Per 1,000 sf | | 1.30 | + |
| | Trips Per Employee | | | 39.4332 | 14.59 | | Trips Per Employee | | 32.9797 | 12.20 | | Trips Per Employee | | 22.9793 | 8.50 |
| | 1-Way Trips Per Employee | | | 19.72 | x | | 1-Way Trips Per Employee | | 16.49 | x | | 1-Way Trips Per Employee | | 11.49 | x |
| | Visitors Per Employee | | | 14.59 | 1.00 | | Visitors Per Employee | | 12.20 | 1.00 | | Visitors Per Employee | | 8.50 | 2.00 |
| | | | | | x | | | | | x | | | | | x |
| | | | | | 7.00 | | | | | 7.00 | | | | | 7.00 |
| | | | | | 102.13 | | | | | 85.42 | | | | | 119.03 |
| | | | | | 165.13 | | | | | 148.42 | | | | | 182.03 |
| | | | | | divided by | | | | | divided by | | | | | divided by |
| | | | 24/7 Hours | | 168.00 | | | 24/7 Hours | | 168.00 | | | 24/7 Hours | | 168.00 |
| | | | 24/7 Coefficient | | 0.9829 | | | 24/7 Coefficient | | 0.8834 | | | 24/7 Coefficient | | 1.0835 |

*Trip Generation Manual* (Institute of Transportion Engineers)
***2000 Nationwide Household Transportation Survey* (Federal Highway Administration 2001)
**** Formula adjusted to accommodate actual employment totals*

Source: Planners Estimating Guide, HNTB, ESRI, AECOM, 2010

**Mint Hill Small Area Plan**
**Current State**
**Functional Population**

| Town of Mint Hill Existing Residential Population | Town of Mint Hill | 24/7 Functional Population Coefficient | 24/7 Functional Population |
|---|---|---|---|
| Working [{(24*7)-(9*5)}/(24*7)] | 13,025 | 0.7321 | 9,536 |
| Non-Working [24/24] | 7,723 | 1.0000 | 7,723 |
| Permanent Population | 20,748 | 0.8318 | 17,259 |
| | | | |
| Functional Residential Population Coefficient Adjustment: | | | |
| Permanent Population - 24/7 Coefficient: [(9*5)/(24*7)] | | *0.2679* | |
| Employment Population - Weighted Average 24/7 Coefficient | | *(0.5212)* | |
| Functional Consumer Coefficient Adjustment | | (0.2533) | |
| Functional Consumer Coefficient Adjustment Times Lesser of Employment Population or Permanent Population | | | (1,209) |
| | | | |
| Town of Mint Hill Functional Residential Population | 20,748 | 0.7736 | 16,050 |
| | | | |
| Town of Mint Hill Existing Employment Population By Sector: | | | |
| Agriculture | - | 0.3002 | - |
| Manufacturing | 49 | 0.2904 | 14 |
| Health Services and social assistance | 811 | 0.4747 | 385 |
| Construction | 595 | 0.3002 | 179 |
| Financial, Insurance, Real Estate | 372 | 0.3064 | 114 |
| Other Services | 378 | 0.3064 | 116 |
| Retail | 972 | 0.9829 | 955 |
| Food services | 349 | 0.9829 | 343 |
| Educational | 281 | 0.3002 | 84 |
| Government | 152 | 0.4066 | 62 |
| Wholesale Trade | 271 | 0.3095 | 84 |
| Information | 42 | 0.3064 | 13 |
| Professional, Scientific & Technical Services | 253 | 0.3064 | 78 |
| Transportation, Communications, Utilities | 68 | 0.3002 | 20 |
| Administrative & Support & Waste Mgt & Remediation | 150 | 0.3064 | 46 |
| Other | 30 | 0.3002 | 9 |
| | 4,773 | 0.5212 | 2,488 |
| | | Functional Population | 18,538 |

| Mint Hill Small Area Plan Functional Population | Units/SF | SF Per Employee Or PPU | Vacancy | Employees Or Residents | 24/7 Functional Population Coefficient | 24/7 Functional Population |
|---|---|---|---|---|---|---|
| Projected Residents: | | | | | | |
| Low Density Residential | 770 | 2.65 | - | 2,040 | 0.7736 | 1,578 |
| Medium Density Residential | 0 | 1.84 | - | - | 0.7736 | - |
| High Density Residential | 0 | 1.47 | - | - | 0.7736 | - |
| Total Residential | 770 | | | 2,040 | | 1,578 |
| | | | | | | |
| Projected Employees: | | | | | | |
| Retail | 0 | 671 | 10% | - | - | - |
| Mall | 0 | 767 | 10% | - | - | - |
| Office | 0 | 350 | 10% | - | - | - |
| Total Employees | | | | - | - | - |
| | | | | | | |
| Total Population | | | | 2,040 | | 1,578 |

Source: Mint Hill, ESRI, HNTB, AECOM 2010

**Mint Hill Small Area Plan**
**Market Demand (Passive)**
**Functional Population**

| | Town of Mint Hill | 24/7 Functional Population Coefficient | 24/7 Functional Population |
|---|---|---|---|
| Town of Mint Hill Existing Residential Population | | | |
| Working [{(24*7)-(9*5)}/(24*7)] | 13,025 | 0.7321 | 9,536 |
| Non-Working [24/24] | 7,723 | 1.0000 | 7,723 |
| Permanent Population | 20,748 | 0.8318 | 17,259 |
| | | | |
| Functional Residential Population Coefficient Adjustment: | | | |
| Permanent Population - 24/7 Coefficient: [(9*5)/(24*7)] | | *0.2679* | |
| Employment Population - Weighted Average 24/7 Coefficient | | *(0.5212)* | |
| Functional Consumer Coefficient Adjustment | | (0.2533) | |
| Functional Consumer Coefficient Adjustment Times Lesser of Employment Population or Permanent Population | | | (1,209) |
| | | | |
| Town of Mint Hill Functional Residential Population | 20,748 | 0.7736 | 16,050 |
| | | | |
| Town of Mint Hill Existing Employment Population By Sector: | | | |
| Agriculture | - | 0.3002 | - |
| Manufacturing | 49 | 0.2904 | 14 |
| Health Services and social assistance | 811 | 0.4747 | 385 |
| Construction | 595 | 0.3002 | 179 |
| Financial, Insurance, Real Estate | 372 | 0.3064 | 114 |
| Other Services | 378 | 0.3064 | 116 |
| Retail | 972 | 0.9829 | 955 |
| Food services | 349 | 0.9829 | 343 |
| Educational | 281 | 0.3002 | 84 |
| Government | 152 | 0.4066 | 62 |
| Wholesale Trade | 271 | 0.3095 | 84 |
| Information | 42 | 0.3064 | 13 |
| Professional, Scientific & Technical Services | 253 | 0.3064 | 78 |
| Transportation, Communications, Utilities | 68 | 0.3002 | 20 |
| Administrative & Support & Waste Mgt & Remediation | 150 | 0.3064 | 46 |
| Other | 30 | 0.3002 | 9 |
| | | | |
| | 4,773 | 0.5212 | 2,488 |
| | | | |
| | Functional Population | | 18,538 |

| Mint Hill Small Area Plan Functional Population | Units/SF | SF Per Employee Or PPU | Vacancy | Employees Or Residents | 24/7 Functional Population Coefficient | 24/7 Functional Population |
|---|---|---|---|---|---|---|
| Projected Residents: | | | | | | |
| Low Density Residential | 26 | 2.65 | - | 69 | 0.7736 | 53 |
| Medium Density Residential | 1,360 | 1.84 | - | 2,506 | 0.7736 | 1,938 |
| High Density Residential | 80 | 1.47 | - | 118 | 0.7736 | 91 |
| Total Residential | 1,466 | | | 2,692 | | 2,083 |
| | | | | | | |
| Projected Employees: | | | | | | |
| Retail | 43,000 | 671 | 10% | 58 | 1.2782 | 74 |
| Mall | 800,000 | 767 | 10% | 939 | 1.0835 | 1,017 |
| Office | 82,000 | 350 | 10% | 211 | 0.3064 | 65 |
| Total Employees | | | | 1,207 | 0.9571 | 1,155 |
| | | | | | | |
| Total Population | | | | 3,899 | | 3,238 |

Source: Mint Hill, ESRI, HNTB, AECOM 2010

**Mint Hill Small Area Plan**
**Employment Center (Active)**
**Functional Population**

| | Town of Mint Hill | 24/7 Functional Population Coefficient | 24/7 Functional Population |
|---|---|---|---|
| Town of Mint Hill Existing Residential Population | | | |
| Working [{(24*7)-(9*5)}/(24*7)] | 13,025 | 0.7321 | 9,536 |
| Non-Working [24/24] | 7,723 | 1.0000 | 7,723 |
| Permanent Population | 20,748 | 0.8318 | 17,259 |
| | | | |
| Functional Residential Population Coefficient Adjustment: | | | |
| Permanent Population - 24/7 Coefficient: [(9*5)/(24*7)] | | *0.2679* | |
| Employment Population - Weighted Average 24/7 Coefficient | | *(0.5212)* | |
| Functional Consumer Coefficient Adjustment | | (0.2533) | |
| Functional Consumer Coefficient Adjustment Times Lesser of Employment Population or Permanent Population | | | (1,209) |
| | | | |
| Town of Mint Hill Functional Residential Population | 20,748 | 0.7736 | 16,050 |
| | | | |
| Town of Mint Hill Existing Employment Population By Sector: | | | |
| Agriculture | - | 0.3002 | - |
| Manufacturing | 49 | 0.2904 | 14 |
| Health Services and social assistance | 811 | 0.4747 | 385 |
| Construction | 595 | 0.3002 | 179 |
| Financial, Insurance, Real Estate | 372 | 0.3064 | 114 |
| Other Services | 378 | 0.3064 | 116 |
| Retail | 972 | 0.9829 | 955 |
| Food services | 349 | 0.9829 | 343 |
| Educational | 281 | 0.3002 | 84 |
| Government | 152 | 0.4066 | 62 |
| Wholesale Trade | 271 | 0.3095 | 84 |
| Information | 42 | 0.3064 | 13 |
| Professional, Scientific & Technical Services | 253 | 0.3064 | 78 |
| Transportation, Communications, Utilities | 68 | 0.3002 | 20 |
| Administrative & Support & Waste Mgt & Remediation | 150 | 0.3064 | 46 |
| Other | 30 | 0.3002 | 9 |
| | | | |
| | 4,773 | 0.5212 | 2,488 |
| | | | |
| | Functional Population | | 18,538 |

| Mint Hill Small Area Plan Functional Population | Units/SF | SF Per Employee Or PPU | Vacancy | Employees Or Residents | 24/7 Functional Population Coefficient | 24/7 Functional Population |
|---|---|---|---|---|---|---|
| Projected Residents: | | | | | | |
| Low Density Residential | 26 | 2.65 | - | 69 | 0.7736 | 53 |
| Medium Density Residential | 1,360 | 1.84 | - | 2,506 | 0.7736 | 1,938 |
| High Density Residential | 80 | 1.47 | - | 118 | 0.7736 | 91 |
| Total Residential | 1,466 | | | 2,692 | | 2,083 |
| | | | | | | |
| Projected Employees: | | | | | | |
| Retail | 200,000 | 671 | 10% | 268 | 0.8834 | 237 |
| Mall | 800,000 | 767 | 10% | 939 | 1.0835 | 1,017 |
| Office | 1,250,000 | 350 | 10% | 3,214 | 0.3064 | 985 |
| Total Employees | | | | 4,421 | 0.5064 | 2,239 |
| | | | | | | |
| Total Population | | | | 7,113 | | 4,322 |

Source: Mint Hill, ESRI, HNTB, AECOM 2010

*APPENDIX*

# APPENDIX E

## TRAFFIC IMPACT ANALYSIS

# SMALL AREA PLAN TRAFFIC IMPACT ASSESSMENT

## Introduction

The purpose of the traffic impact assessment was to examine the impact of various scenarios on future traffic conditions in the study area.

## Assumptions

The traffic impact assessment relied on various sources, first to gather the data and then to project future trips for the SAP study area. These sources include:

- MUMPO/NCDOT 2030 travel demand model
- NCDOT annual Average Annual Daily Traffic (AADTs) counts
- Traffic Impact Analysis conducted by Kubilins Transportation Group for the planned mall site

For the purpose of traffic assessment, and to use above mentioned sources, a build out period of 20 years was set, even though the actual build out of the proposed development could take longer than 20 years.

Level of Service (LOS) was used to compare traffic conditions on different roads for both existing conditions and future conditions. According to the Transportation Research Board's Highway Capacity manual 2000, LOS is described as the quality of traffic flow and is defined as a measure describing operational conditions on a given freeway, arterial, or intersection. LOS is a function of delay and is reported using letter designations from A through F. As described in the Highway Capacity Manual 2000, LOS A represents the best operating condition (free traffic flow), and LOS F designates the worst operating condition. LOS A through D is considered to be operating at an acceptable condition, while a facility operating at an LOS E or F is considered to be operating at a deficient LOS.

## Methodology

Based on the assumptions outlined above, the following methodology was used to assess future traffic impacts of various scenarios -

- First, the number of trips projected on major and minor roads by the 2030 regional travel demand model within the SAP study area was extracted. These trips include traffic that will be generated due to the development that is expected to happen based on the current zoning and future land use plans of municipalities and jurisdictions around the Small Area Plan study area. It was observed that this background traffic, which will be generated due to the growth of the SAP study area and its surrounding, is expected to increase even without any planned improvements around the mall.

- Then, the number of trips generated by each development scenario was calculated based on the Institute of Transportation Engineers' Trip Generation Manual.

- Finally, the future road network was used to distribute the trips from both background traffic and traffic generated by the various scenarios. SimTraffic software, a widely used and accepted tool for traffic analysis, was used to analyze the impact of various scenarios on future traffic conditions. This tool allows for visual simulation of traffic based on future trips. A detailed 3-dimensional visual simulation of future traffic assessment was created for each scenario. This tool was used to quickly show the impact of different scenarios on future traffic conditions, thereby providing a rational basis for decision making. Small video clips of these simulations can be obtained from the Town of Mint Hill Planning Staff.

## Process

• Three different scenarios were evaluated to provide a complete picture of future traffic conditions

### *Current State Condition*

This condition portrays 2010 traffic volumes on major roads. It assumes the planned mall and a small amount of low density residential development in the SAP study area. It is important to understand that even though the plan was done in 2010, no traffic counts were conducted in 2010. For the purposes of the traffic impact assessment, traffic volumes from the 2030 regional travel demand model were taken for 2010. Based on traffic volumes, which are measured in AADT and peak hour trips (evening trips between 4pm-5pm etc), a LOS service map was created (please see Diagram 1). Based on this figure the LOS of A to C is observed in the SAP study area. It means that traffic will generally move smoothly through the study area. Detailed LOS for the I-485 and Fairview Road interchange is shown in Diagram 2, and detailed LOS for I-485 and Lawyers Road interchange is shown in Diagram 3.

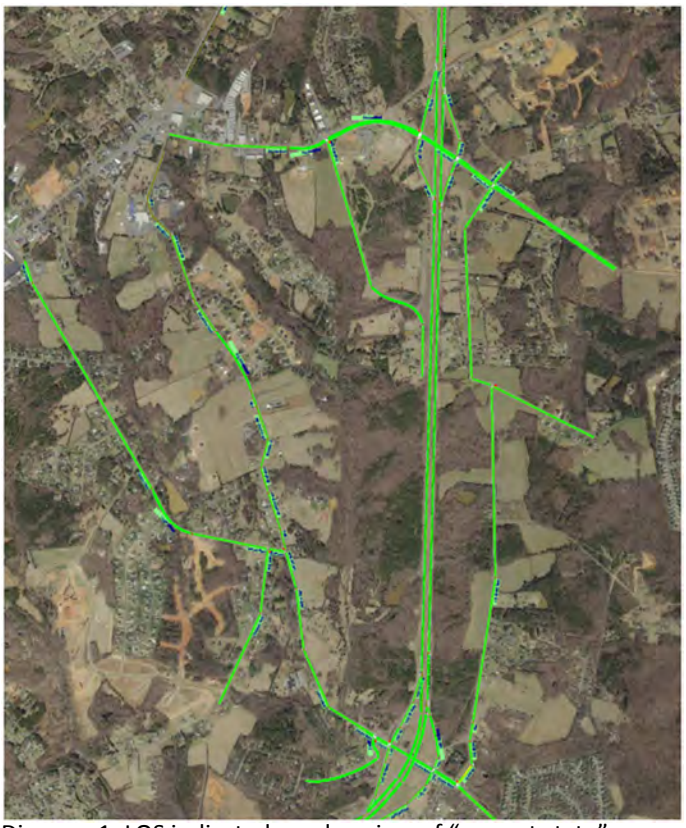
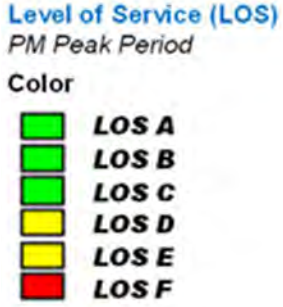


Diagram 1: LOS indicated on plan view of “current state” scenario.

Diagram 2: LOS for Hwy 218 and I-485 interchange area indicated on plan view for “current state” scenario.


Diagram 3: LOS for Lawyers Road and I-485 interchange area indicated on plan view for “current state” scenario.



*Demand Scenario*

As explained in Chapter 4 of the main plan, this scenario assumed roughly 1500 residential units, the planned mall, roughly 43,000 sqft of additional retail, and roughly 82,000 sqft of additional office. Diagram 1 for this scenario shows a degraded LOS on some roads. Detailed LOS for I-485 and Fairview Road interchange is shown in Diagram 2, and detailed LOS for I-485 and Lawyers Road interchange is shown in Diagram 3.


Diagram 2: LOS for Hwy 218 and I-485 interchange area indicated on plan view for “market demand” scenario.


Diagram 3: LOS for Lawyers Road and I-485 interchange area indicated on plan view for “market demand” scenario.

Diagram 1: LOS indicated on plan view of “market demand” scenario.

**Level of Service (LOS)**
*PM Peak Period*
**Color**

- **LOS A**
- **LOS B**
- **LOS C**
- **LOS D**
- **LOS E**
- **LOS F**

*Employment Center Scenario*

As explained in Chapter 4 of the main plan, this scenario assumed roughly 1500 residential units, the planned mall, roughly 200,000 sqft of additional retail, and 1,250,000 sqft of additional office. Diagram 1 shows the LOS on all major roads of the SAP study area for this scenario. It shows a degraded LOS on some roads. Detailed LOS for I-485 and Fairview Road interchange is shown in Diagram 2, detailed LOS for I-485 and Lawyers Road interchange is shown in Diagram 3, and detailed LOS for the proposed Union Road bridge over I-485 is shown in Diagram 4.


Diagram 2: LOS for Hwy 218 and I-485 interchange area indicated on plan view for “employment center” scenario.

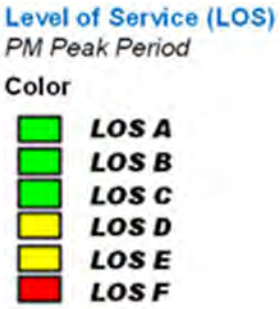




Diagram 4: LOS for Union Rd extention over I-485 indicated on plan view of “employment center” scenario.


Diagram 3: LOS for Lawyers Road and I-485 interchange area indicated on plan view for “employment center” scenario.

Diagram 1: LOS indicated on plan view of “employment center” scenario.

## Traffic Impact Assessment Summary

Since the SAP study area borders one of the fastest growing counties in the state, and is part of a growing area itself, the traffic through the study area is expected to increase due to the overall growth of the area surrounding the SAP study area. This growth means that the existing roadway system will be burdened with additional trips in the future, even without any significant development around the planned mall site. The employment center scenario will add more trips on the existing roads, but these additional trips will be only slightly more than the additional trips on these roadways due to the natural growth in the surrounding areas.