



CHAPEL HILL TRANSIT  
Town of Chapel Hill  
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**CHAPEL HILL TRANSIT PUBLIC TRANSIT COMMITTEE**

**NOTICE OF COMMITTEE MEETING AND AGENDA**

**MAY 20, 2014 – 11:00 A.M.**

**CHAPEL HILL TRANSIT – FIRST FLOOR CONFERENCE ROOM**

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12. Adjourn	

**MEETING SUMMARY OF A REGULAR MEETING OF THE PUBLIC TRANSIT COMMITTEE  
1<sup>ST</sup> FLOOR TRAINING ROOM, CHAPEL HILL TRANSIT**

**Tuesday, April 29, 2014 at 11:00 AM**

Present: Jim Ward, Chapel Hill Town Council  
Ed Harrison, Chapel Hill Town Council  
Damon Seils, Carrboro Alderman  
Cheryl Stout, UNC Public Safety  
Than Austin, UNC Transportation Planner

Absent: Matt Czajkowski, Chapel Hill Town Council, Jeff McCracken, UNC Public Safety

Staff present: Flo Miller, Deputy Town Manager, Brian Litchfield, Transit Director, Rick Shreve, Administrative Analyst, Mila Vega, Transportation Planner, Nick Pittman, Interim Operations Manager, Matt Cecil, GIS Coordinator, Bruce Heflin, Special Projects, Jeff Brubaker, Carrboro Transportation Planner

Guests: John Tallmadge, Triangle Transit, Michael Parker

1. The Meeting Summary of March 25, 2014 was received and approved.
2. Employee Recognition – Brian reported that Javius Newman, Transit Operator II took third place in the NCPTA Roadeo held April 4-6, in Charlotte. Lafayette Poteat, Ricky Hunter and Tyffany Tapp also did a great job representing Chapel Hill Transit as they competed in the Roadeo as well. Both the Fixed Route and Demand Response divisions were presented with statewide safety awards at the NCPTA conference which was held in Charlotte April 7-9<sup>th</sup>.

Brian announced that Matt Cecil will be leaving CHT on May 9<sup>th</sup> to pursue other opportunities. He thanked him for his contribution to Chapel Hill Transit during his time here.

3. Consent Items

- A. March Financial Report – Rick reviewed the report for the Partners.

4. Discussion Items

- A. FY 15 Budget Development – Brian reviewed the schedule for the FY 15 budget development and adoption. The Managers Recommended Budget will be presented to the Town Council on May 12.

Brian reviewed the Transit Recommended Budget for FY15 which includes 3 new buses, 3 transit operators, 3 mechanics and 1 electronic technician. The Partners requested that, if

possible, up to 6 buses be purchased using financing and monies from the Orange County Bus and Rail Investment Plan.

Brian reported that \$1.1 million is expected from the Orange County Bus and Rail Investment Plan for FY 15. This money will be used to fund existing services, purchase of buses, peak hour improvements to relieve overcrowding and to increase Saturday service. UNC expressed interest in reestablishing express service on the NU route on weekends. It would be possible to use some of the Orange County Bus and Rail Investment money for this which would decrease the Partners contribution, but limit other uses of the dollars. Carrboro expressed concerns regarding this money being used for routes that are not shared, but wholly supported by UNC. Brian suggested using OCBRIP money to increase service on the CM/CW route and additional Saturday service as an alternative as these are shared routes with all the Partners. Brian will bring a recommendation to the next meeting.

The Town of Pittsboro has included \$12,000 in their budget for funding for the Pittsboro Express bus route for FY 15. Ridership has increased due to the pay for park/ride program. The cost to run this service is \$140,713.79. There is no grant money available at this time to cover any part of the cost, but an application has been submitted for JARC funds to help pay for the route. Representatives from Carrboro and UNC expressed concerns about continuing the Pittsboro route and the lack of sufficient financial support from Chatham County. The Partners agreed to fund the Pittsboro Route through FY 15. The Partners would like staff to contact Chatham County to begin conversations related to the continuation and funding of the Pittsboro Express beyond FY 15.

- B. Orange County Bus & Rail Investment Plan – Mila reviewed the updated draft plan which is scheduled for approval in May.

## **5. Information Items**

- A. March Performance Report – This report was provided for the Partners information.
- B. North South Corridor Alternatives Analysis Update – This report was provided for the Partners information.
- C. Long Range Financial Sustainability Plan Update – This report was provided for the Partners information.

## **6. Departmental Monthly Reports**

- A. Operations – Provided for the Partners information.
- B. Maintenance – Provided for the Partners information

C. Director – Brian reviewed his report to the Partners.

7. **Future Meeting Items**

8. **Partner Items**

9. **Next meeting** – May 20, 2014

The Partners set a next meeting date for May 20, 2014
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## 4A. April Financial Report

Staff Resource: Rick Shreve, Budget Manager

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**April 2014**

- Expenses for the month of April were \$1,230,149. Along with the encumbrances, approximately 70.61% of our budget has been expended or reserved for designated purchase (e.g. purchase orders created for vehicle maintenance inventory supplies encumber those funds, and show them as unavailable for other uses).

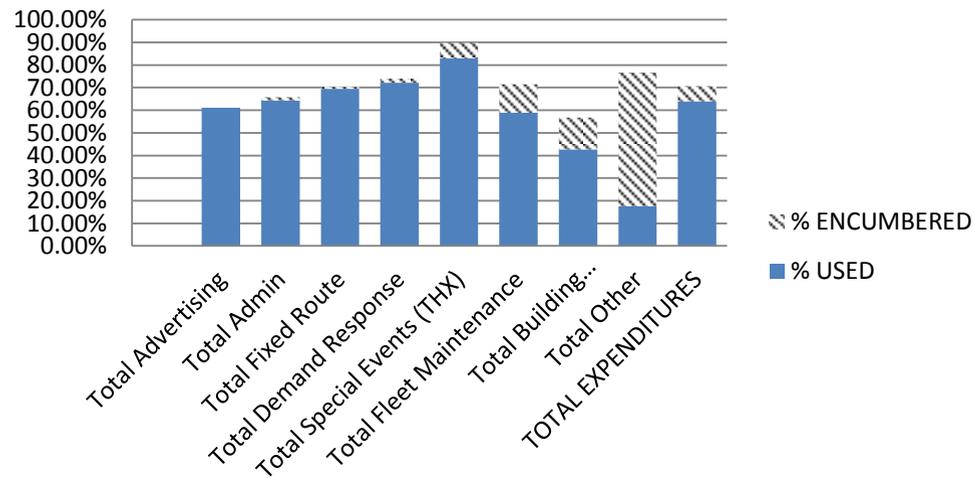
***Highlights***

- Staff are monitoring and analyzing the data that comprise this summary, and adjusting projections for subsequent years accordingly. This aggregation of expenses and encumbrances is consistent with years past, and is perfectly in line with what we would expect at this point in the year.
- The attached data exhibit the financial information by division within CHT, which should be a useful tool in monitoring our patterns as the year progresses, and is a high-level representation of the data used by our division heads.
  - It is worth noting that the “Special Events” line is mostly comprised of Tar Heel Express expenses, and the line labeled “Other” is comprised primarily of special grant-funded expense lines that are not permanent fixtures in the division budgets.

**Transit 640 Fund Budget to Actual at end of April 2014**

	ORIGINAL BUDGET	REVISED BUDGET	ACTUAL MONTH EXPENSES	ACTUAL YTD EXPENSES	CURRENT ENCUMBRANCES	BALANCE AVAILABLE	% USED OR ENCUMBERED APRIL = 75.00%
Total Advertising	\$ 117,207	\$ 117,207	\$ 8,244	\$ 71,664	\$ -	\$ 45,543	61.14%
Total Admin	918,701	1,025,856	56,517	660,197	14,761	350,898	65.79%
Total Fixed Route	11,029,432	11,039,714	730,411	7,678,078	90,339	3,271,297	70.37%
Total Demand Response	1,861,387	1,921,973	137,893	1,386,261	36,249	499,463	74.01%
Total Special Events (THX)	305,351	305,351	1,911	253,765	20,314	31,272	89.76%
Total Fleet Maintenance	3,766,187	4,137,014	225,720	2,436,069	522,512	1,178,433	71.51%
Total Building Maintenance	616,279	939,172	39,101	401,384	130,757	407,030	56.66%
Total Other	1,148,360	943,808	30,353	165,285	558,637	219,886	76.70%
<b>TOTAL EXPENDITURES</b>	<b>\$ 19,762,904</b>	<b>\$ 20,430,095</b>	<b>\$ 1,230,149</b>	<b>\$ 13,052,703</b>	<b>\$ 1,373,569</b>	<b>\$ 6,003,823</b>	<b>70.61%</b>

**CHT April 2014 YTD Expenses as % of Budget**



**5. FY2014-15 Program of Projects**

Staff Resource: Carmen Cole, Grants Manager  
Brian Litchfield, Director

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**Background**

The Federal Transit Administration (FTA) requires recipients of urbanized area formula funds (5307) to publish a Program of Projects and hold a public forum on the proposed program. The notice for the FY2014-15 CHT Program of Projects was published on May 11, 2014 and no comments have been received.

**Proposed Program of Projects**

The following is a summary of the anticipated projects that CHT will undertake in FY2014-15 utilizing FTA funding:

- Preventive Maintenance Funds (5307) - \$1,900,000
- State Maintenance Assistance Program funds - \$2,400,000
- Continuation of the HS Route to the Rogers Road community; Continuation of the Pittsboro Express Route; and Continue evening service on the NS and G routes (Job Access and Reverse Commute) - \$240,000
- Purchase 6 replacement vehicles for the Demand Response Service (Elderly and Disabled) - \$283,000
- Complete the North South Corridor Alternatives Analysis (AA) study along Martin Luther King Jr. Boulevard (Bus and Bus Livability Program) - \$337,000
- Completion of a 10-year strategic and financial plan (5307)- \$297,000
- Funds will be used to purchase maintenance shop lifts and replacement support vehicles (Bus and Bus Facilities Program) - \$463,000
- Funds will be used to offset costs incurred by CHT staff while performing planning activities (5307) - \$95,000.

**Public Forum Procedures**

- Any participant(s) wishing to speak on the proposed subject should sign up in advance on the appropriate speakers list.
- If necessary, CHT staff will make a brief presentation regarding the subject of the hearing prior to receiving comment.
- Speakers will be asked to state their:
  - Name
  - Address
  - Affiliation (if any)
- Speakers will be asked to limit their remarks to 3 minutes.
- Written comments/emails received to date will be made available to anyone wishing to review them.

**DISCUSSION ITEM**

May 20, 2014

6A. FY2014-15 Budget Development

Action: 1. Receive information and provide staff with feedback.

Staff Resource: Rick Shreve, Budget Manager  
Brian Litchfield, Director

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**Presentation**

- A presentation updating the Partners on the development of the FY2014-15 budget will be made at the Partners meeting on May 21, 2014.

**DISCUSSION ITEM**

May 20, 2014

6B. Orange County Bus and Rail Investment Plan

Action: 1. Receive information and provide staff with feedback.

Staff Resource: Brian Litchfield, Director

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- A presentation regarding the use of Orange County Bus and Rail Investment Plan Funds for FY2014-15 will be made at the May 20, 2014 meeting.

## 7A. North-South Corridor Alternatives Analysis Study

Staff Resource: Mila Vega, Service Planner

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**Background**

The Project Management Team (PMT) met on May 8<sup>th</sup> to discuss alignment and mode alternatives for the project. The meeting resulted in identification of several alternatives that were presented later in the day to the Technical Committee at their first meeting. The Technical Committee also received a presentation that summarized the work completed as of today as well as the draft of the Purpose and Need Statement to review and comment on.

The Technical Committee discussed presented alternatives and provided additional points of consideration. The next step for the consultant team is to take a closer look at the alternatives and evaluate them based on the preliminary selection criteria. That work will be completed and presented to the Technical Committee on July 2, 2014.

**Next Steps**

- Tier 1 Alternatives Analysis

**Attachments**

- Draft Purpose and Need Statement
- Technical Committee Presentation



**Purpose and Need Statement  
DRAFT April 14, 2014**



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## 1. Introduction

### 1.1 Project Description

The North-South Corridor Study (NSCS) is an 18-month project that is being led by Chapel Hill Transit (CHT) in coordination with the Chapel Hill Transit Partners, which includes the Town of Chapel Hill (ToCH), the Town of Carrboro (ToC) and the University of North Carolina - Chapel Hill (UNC).

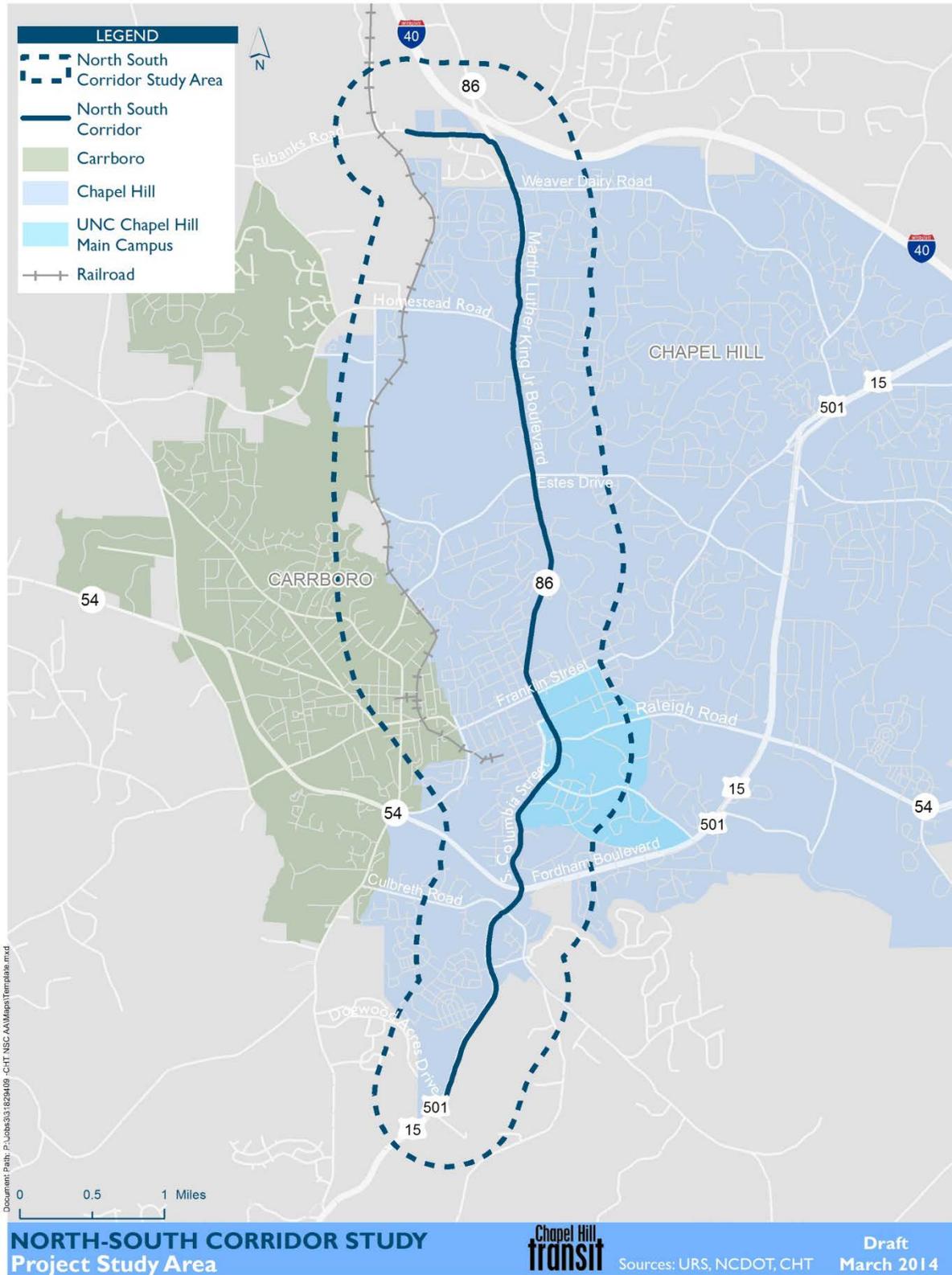
The project, which is being funded through a combination of federal (Federal Transit Administration [FTA]) and local funds, will identify and evaluate a series of transit investment alternatives for implementation within the study corridor (see Figure 1), which runs along the Martin Luther King, Jr. Boulevard (Historic Airport Road/NC Hwy 86), South Columbia Street, and US 15-501 South. This corridor, which is approximately 7.3 miles long, has its northern terminus at Eubanks Road and Martin Luther King, Jr. Boulevard and its southern terminus at US 15-501 near the Southern Village mixed-use development.

The study will expand on previous planning work to identify a locally-preferred transit investment alternative that facilitates safe, efficient and expanded levels of mobility within the increasingly busy study corridor, and to improve connectivity between the corridor and the Research Triangle region. Additional reasons for this study include improving connections with other local and regional transit routes (including the planned Durham-Orange Light Rail line), supporting future development within the corridor, increasing transit mode share and ridership to the UNC campus/hospital, and improving multi-modal connectivity options between the new Carolina North campus on the northern end of the study corridor, Southern Village at the southern end of the corridor, and the rest of the study corridor.

Following a multi-phase, iterative alternative development and evaluation process that is supported by extensive public engagement activities, the Chapel Hill Transit Partners will recommend the Locally Preferred Alternative (LPA) to the Chapel Hill Town Council for adoption. The LPA will be the transit investment alternative that best meets the purpose and need for the project (as defined in this report) and is competitive for funding through the FTA's New/Small Starts capital funding program. The Town Council will submit the LPA to the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (DCHC MPO) for adoption and integration into its *2040 Metropolitan Transportation Plan*.

The study is scheduled for completion in September 2015.

Figure 1: NSCS Area



## 1.2 Summary of Project Purpose and Need

The **purpose of the North-South Corridor Study** is to identify and implement the transit investment strategy that will accommodate anticipated growth in travel demand within the corridor, support mobility options that match emerging demographic trends and preferences within the corridor, leverage the existing transportation infrastructure to improve connectivity within the corridor, and encourage sustainable development patterns that reduce reliance on single-occupant vehicles.

**Project needs** are summarized below and are defined in further detail in sections 2 through 6 of this report.

- **Project Need #1: Chapel Hill Transit ridership has increased by more than 20 percent between 2005 and 2012, and buses often operate at capacity during weekday peak hours on multiple routes.** Demand is straining capacity, which is reducing operational efficiency and resulting in schedule slippage and bus stacking. Investment in transit system capacity will ensure that existing rider demand is accommodated and future rider demand is supported.
- **Project Need #2: Chapel Hill is comparatively young, but its fastest-growing demographic is over age 65.** In 2010, the median age of Chapel Hill residents was 25.6; the median age of US residents was 37.2. From 1970 to 2012, the over-65 age group increased the most relative to all other age groups (from 4.5 percent to 9.4 percent). Academic research and industry experience has found that both of these demographic groups are increasingly choosing transit for either lifestyle/environmental/economic reasons (Millennials) or mobility reasons (senior citizens).
- **Project Need #3: Major development opportunities at the northern and southern ends of the corridor will fundamentally reshape mobility patterns and needs within the corridor.** The adopted 2020 Chapel Hill Comprehensive Plan designates several development focus areas along the corridor. The Town has approved several new developments within the corridor, including Carolina North, and is reviewing several others for approval. This level of development will expand the number of key activity generators within the study corridor and result in increased travel demand as more people seek to access them.
- **Project Need #4: Multi-modal transportation investments are necessary to accommodate anticipated increases in travel demand resulting from planned development within the corridor.** Recent technical analyses completed as part of the Carolina North development have forecast that – in the absence of mitigation measures - corridor roadways will reach unacceptable levels of congestion by 2030. The scale of roadway expansion required to mitigate this congestion is unlikely to be financially feasible, environmentally sensitive, or aligned with Chapel Hill’s vision for growth.
- **Project Need #5: Chapel Hill – and the surrounding region – has demonstrated a commitment to sustainable growth strategies in their adopted plans and policies.** Chapel Hill’s 2020 Comprehensive Plan calls for a transportation system that accommodates transportation needs and demands while mitigating congestion, promoting air quality, supporting affordable housing goals, sustainability and energy conservation. Transit service also plays a critical role in increasing access to services. High-capacity transit system investment that leverages existing transportation facilities while reducing reliance on single-occupant vehicles will be necessary to achieve these goals.



## 2. Project Need #1

Chapel Hill Transit ridership has increased by more than 20 percent between 2005 and 2012, and buses often operate at capacity during weekday peak hours on multiple routes. Demand is straining capacity, which is reducing operational efficiency and resulting in schedule slippage and bus stacking. Investment in transit system capacity will ensure that existing rider demand is accommodated and future rider demand is supported.

### 2.1 The corridor has a robust transportation network

As shown in Figure 2, the North-South Study Corridor has a robust, multimodal transportation network. A description of the key network elements is included below.

#### Bridges

The corridor traverses two bridges along NC 86; a five-lane overpass of NC 54 along US 15-501 (constructed 1957) and the six-lane James Taylor Bridge, the crossing of US 15-501 over Morgan Creek (constructed 1987). Both of these bridges are located in the southern portion of the study area and both bridges have an approximate six-foot shoulder. As both of these structures are overpasses, there is minimal concern for vertical clearance constraints. Neither bridge has been classified as functionally obsolete or structurally deficient; the five-lane overpass of NC 54 along US 15-501 has a sufficiency rating of 85 and the crossing of US 15-501 over Morgan Creek (James Taylor Bridge) has a sufficiency rating of 96.7. According to NCDOT, neither of these bridges is on the upcoming forecast for replacement or rehabilitation.<sup>1</sup> As a result, the cost of any expansion or additional capacity being added to these bridges as a result the NSCS will likely need to be included as part of the project costs.

#### Roadway Network

There are several major roadways within the study area.

##### Interstates

I-40 anchors the northern section of the study corridor and serves as the primary means of access from points north and west such as Hillsborough and Greensboro. As I-40 is the primary means of access, the existing interchange, including south to Eubanks Road, at I-40 and NC 86 often operates with a Level of Service (LOS) C or less. According to a *Transportation Impact Analysis*<sup>2</sup>, the LOS on this section of the corridor is expected to decrease in future years.

##### US Routes

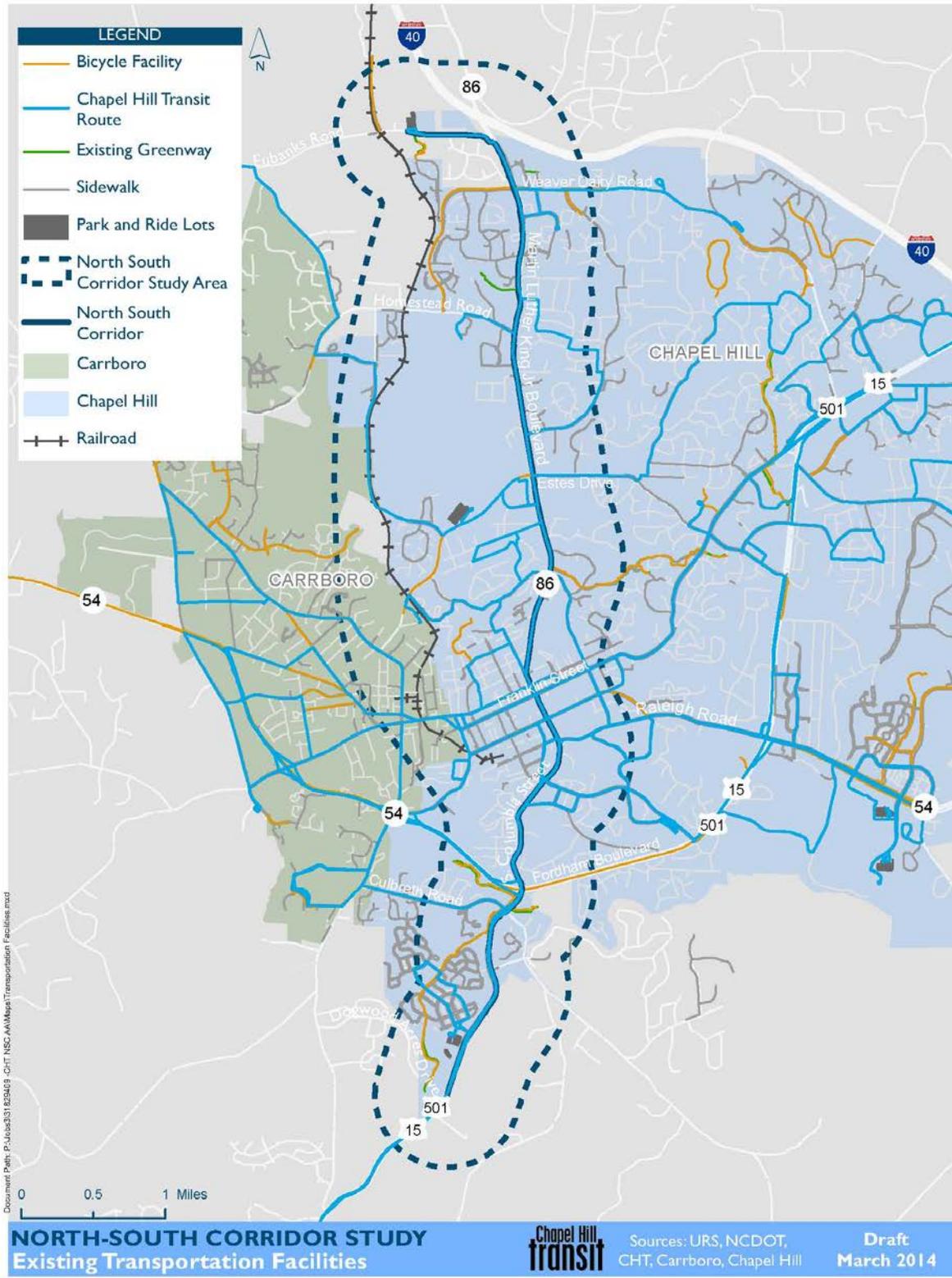
US 15-501 anchors the southern section of the study corridor and provides one of the main access points for NC 86 (Columbia Street) from Durham, Raleigh and other points to the northeast. This facility shares designation with NC 54 as it approaches NC 86, before turning south towards Southern Village and Pittsboro.

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<sup>1</sup> North Carolina Bridge Improvement Program. <http://www.ncdot.gov/projects/ncbridges/improvement.html>. Accessed March 11<sup>th</sup>, 2014

<sup>2</sup> VHB, Inc. *Transportation Impact Analysis*. December 31<sup>st</sup>, 2009.

Figure 2: NSCS Existing Transportation Facilities



NC Routes

There are two major NC routes in the project study area: NC 54 and NC 86. NC 54 connects Carrboro on the west and Durham and Raleigh on the east, sharing designation with US 15-501 east of NC 86. NC 86 (Martin Luther King Jr. Parkway and Columbia Street) provides access to both the Town and University from Pittsboro to the south and Hillsborough and I-40 to the north. NC 86 terminates at the US 15-501/NC 54 interchange.

Secondary Routes

There are a number of secondary routes along the project study area including; SR 1913 (Bennett Road), SR 1008 (Mt Carmel Church Road), SR 1750 (Estes Drive), SR 1733 (Weaver Dairy Road), and SR 1727 (Eubanks and Homestead Roads). These are all east-west roadways within the project study area.

The ToC and ToCH are well-served by east-west routes, however NC 86 is the only north-south passenger transportation corridor in the vicinity. The lack of viable alternative routes and concentration of employment and population within the Town/University center contributes to increasing travel demand along NC 86.

There are several roadway projects along NC 86 planned by NCDOT. They are listed below:

**Table 1: NCDOT Current STIP, February 2014<sup>3</sup>**

County	Route/City	Number	Location	Length
Orange	I-40	I-3306	I-85 in Orange County to NC 147 in Durham County – Widen to Six Lanes	20.7 miles
Orange	US 15-501	U-5304	US 15-501, NC 86 (South Columbia Street) to SR 1742 (Ephesus Church Road) in Chapel Hill. Sidewalks, Wide Outside Lanes and Transit Accommodations.	4.0 miles
Orange	NC 86 (MLK Jr. Blvd)	C-5177	MLK Jr. Blvd shared pathway in Chapel Hill. Construct pathway along MLK Jr. Blvd, SR 1777 (Homestead Road) to Piney Mountain Road.	N/A
Orange	Chapel Hill	EL-4601	Morgan Creek Greenway (East). US 15-501/Culbeth Road to Smith Level Road. Ten foot multi-use asphalt path.	N/A

**Traffic**

Traffic along the corridor is relatively heavy; 2011 AADT volumes show the heaviest daily counts being in both the northern and southern sections of the project. Martin Luther King, Jr. Boulevard has daily traffic counts generally ranging from 18,000 nearer to the Town center to 28,000 further away from the Town center. Traffic counts range from 9,000 to 18,000 along Columbia and Pittsboro Streets through the University and Town areas, while daily traffic counts increase, ranging from 18,000 to 32,000,

<sup>3</sup> NCDOT 2012-2020 State Transportation Improvement Program. <http://www.ncdot.gov/download/performance/STIP.pdf>

towards the Southern Village area. According to the Triangle Regional Model v5, traffic volume in the NC 86 corridor is expected to grow 17.7 percent by 2040 (0.59 percent per year between 2010 and 2040). The highest growth rates (1.6 percent and 3.3 percent per year) are located at I-40 to the north and US 15-501 to the south.

**Table 2: NCDOT AADT 2011<sup>4</sup>**

Route	Location	Count
SR 1727 (Eubanks Road)	West of NC 86	8,000
NC 86	South of I-40	28,000
NC 86	North of SR 1865 (Northwood Drive)	26,000
NC 86	North of SR 1777	24,000
NC 86	North of SR 1750 (Estes Drive)	28,000
NC 86	South of SR 1750 (Estes Drive)	21,000
SR 1750 (Estes Drive)	West of NC 86	12,000
SR 1750 (Estes Drive)	East of NC 86	15,000
NC 86	South of Stephen Street	17,000
NC 86	North of SR 1010 Franklin Street	18,000
NC 86	South of SR 1010 Franklin Street	15,000
SR 1010 (Franklin Street)	West of NC 86	13,000
SR 1010 (Franklin Street)	East of NC 86	14,000
NC 86 (Cameron Avenue)	West of NC 86 (Columbia Street)	16,000
NC 86	South of Cameron Avenue	9,700
NC 86	South of SR 2048 (South Road)	8,500
NC 86 (Pittsboro Street)	North of University Drive	9,100
SR 1902 (Manning Drive)	East of NC 86	11,000
NC 86	North of Mason Farm Road	13,000
NC 86	South of Mason Farm Road	13,000
NC 54	West of NC 86	30,000
US 15-501	North of SR 1008 (Mt. Carmel Church Road)	32,000
US 15-501	South of SR 1994 (Culbreth Road)	22,000 (2009 data)

The DCHC MPO *Master Transportation Plan* projects that traffic within the corridor (particularly at the northern and southern ends) will exceed capacity in 2040.

**Transit**

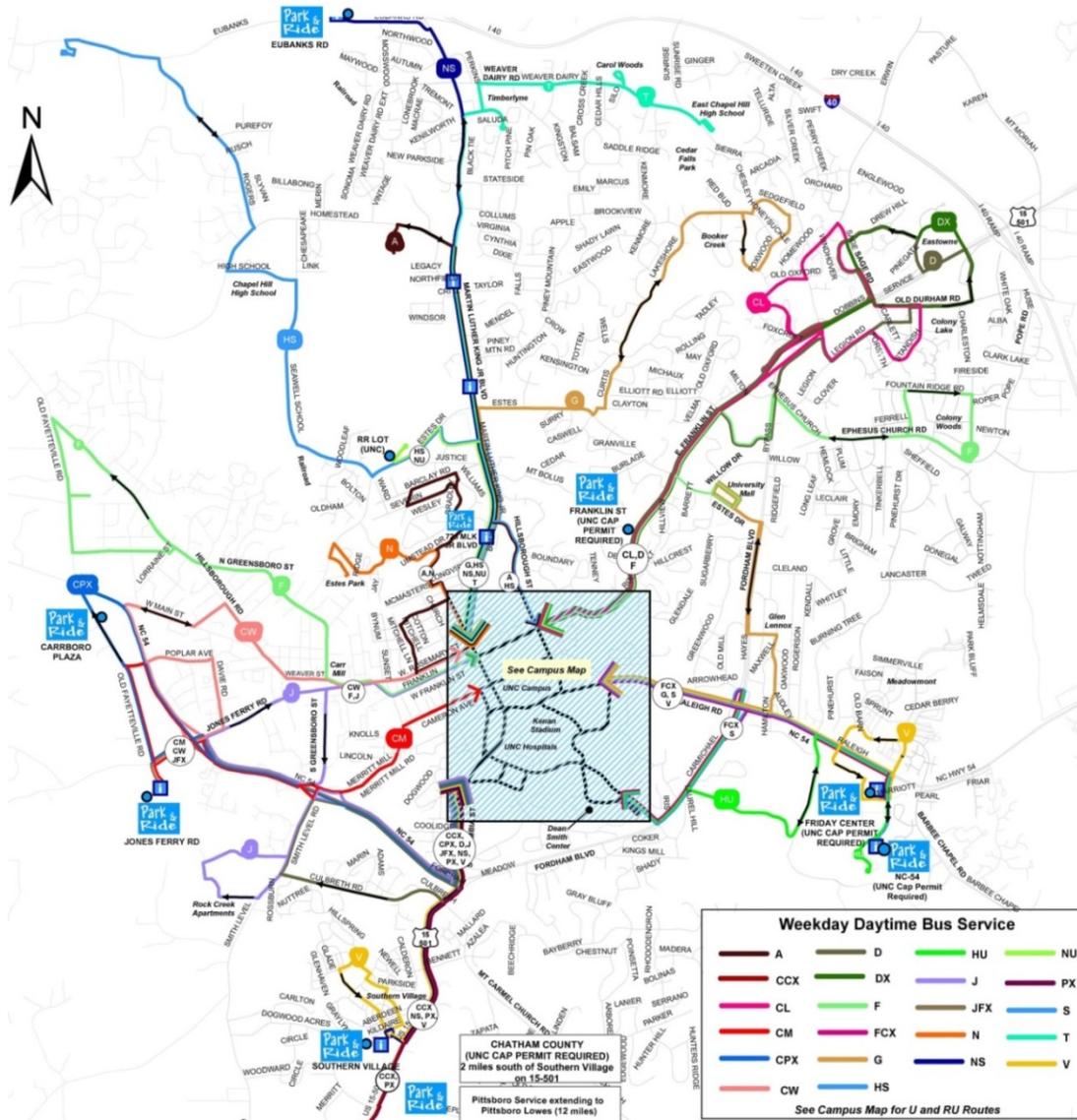
As the second largest transit system in North Carolina, CHT currently provides nearly seven million rides per year. Operating fare-free, the 31 weekday and weekend routes and EZ Rider demand response service currently serve ToC, ToCH and UNC. CHT currently has a total fleet of 121 vehicles (98 fixed-route and 22 demand response).<sup>5</sup>

<sup>4</sup> Traffic Volume Maps. <http://www.ncdot.gov/travel/statemapping/trafficvolumemaps/> Accessed March 7<sup>th</sup>, 2014.

<sup>5</sup> "About Chapel Hill Transit". <http://www.townofchapelhill.org/index.aspx?page=700> Accessed: March 6<sup>th</sup>, 2014.

Each of CHT's 31 routes (Figure 3) either travels within or across the study corridor. The NS Route is the only route that traverses the entire corridor from the Eubanks Road park-and-ride to Southern Village park-and-ride. For the purposes of analysis, however, six of the 31 routes that CHT operates were selected as corridor routes: Routes A, G, N, NS, NU, and T because they provide service through a substantial portion of the study corridor (Figure 4)<sup>6</sup>.

Figure 3: Chapel Hill Transit Routes<sup>7</sup>

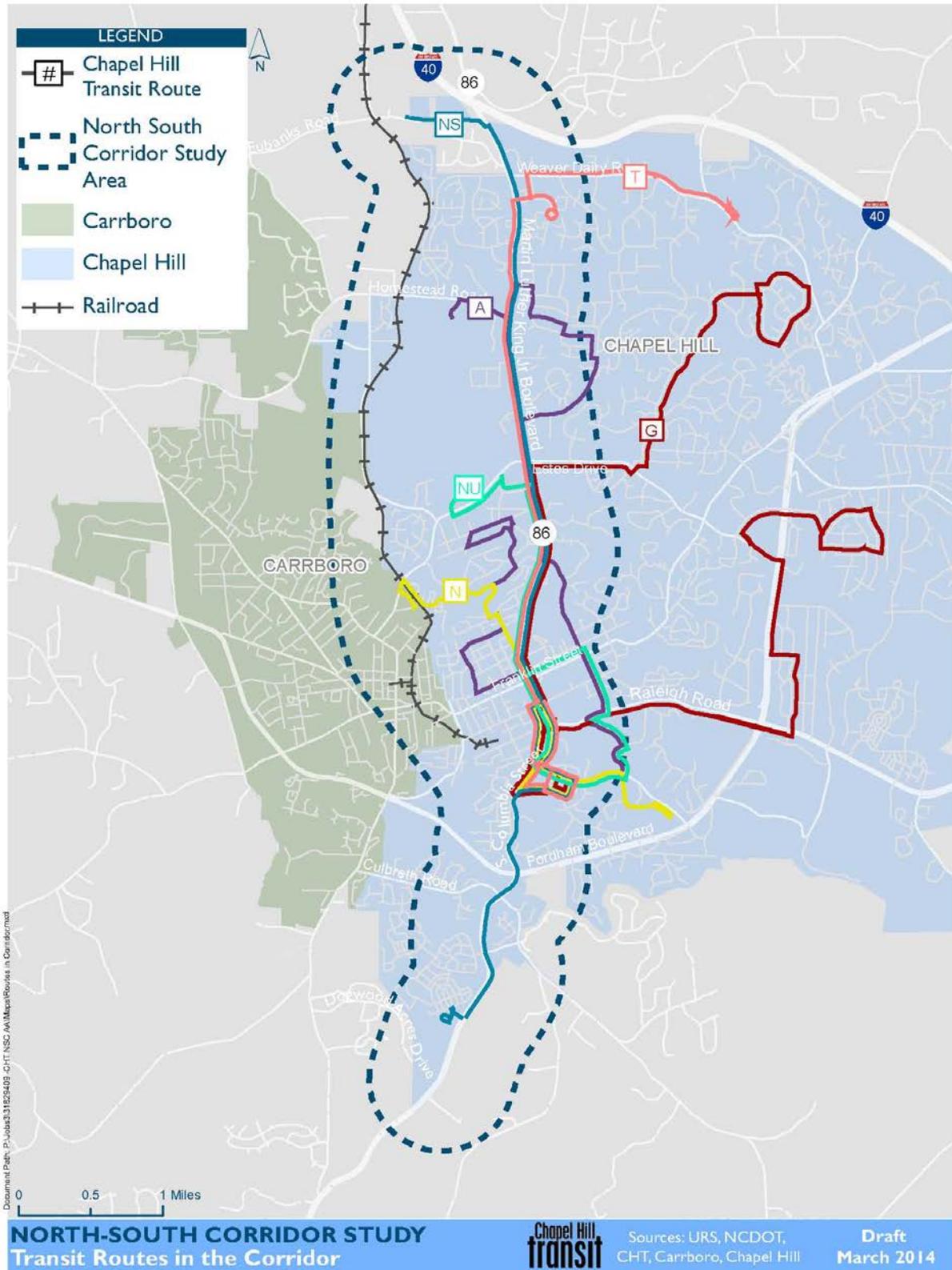


<sup>6</sup> In order to be considered a corridor route, southbound routes must pass through Martin Luther King Jr., Boulevard and Hillsborough Street and continue to at least South Columbia Street (NC 86) and Manning Drive (1.6 miles). Northbound routes must pass through South Columbia Street (NC 86) and NC 54 and continue to at least North Columbia Street and Martin Luther King Jr., Boulevard (1.7 miles).

<sup>7</sup> Chapel Hill Transit Weekday System Map.

<http://www.townofchapelhill.org/Modules/ShowDocument.aspx?documentid=14653> Accessed March 5<sup>th</sup>, 2014.

Figure 4: Transit Routes in Corridor



In addition to CHT service, Triangle Transit also operates six routes along some portion of the corridor: Chapel Hill-Raleigh Express (CRX), routes 400, 405, 420, 800 and 805<sup>8</sup>. The 400 and 405 provide connections between Chapel Hill to Durham, the 420 provides service to Hillsborough, and the 800 and 805 provide a connection to the Regional Transit Center, near Research Triangle Park (RTP). The CRX and 420 routes utilize NC 86 from I-40 south utilizing Martin Luther King Jr. Boulevard, Columbia and Pittsboro Streets. The remaining routes (400, 405, 800, and 805) only utilize Columbia and Pittsboro Streets along the corridor.

Furthermore, Triangle Transit is currently in New Starts Project Development for the Durham-Orange Light Rail Transit (LRT), which will travel from the UNC Hospitals to east Durham. The proposed terminal station at UNC Hospitals would be located within the study corridor and would provide a greater regional connection for transit riders. The proposed Durham-Orange LRT is expected to open for revenue service in 2026.

### **Pedestrian and Bicycle Facilities**

The corridor has a robust pedestrian and bicycle network with sidewalks, bicycle lanes, and greenways, as shown in Figure 5. There are sidewalks on most roads from the corridor's southern terminus at Southern Village to the northern terminus at Eubanks Road and Martin Luther King, Jr. Boulevard. However, there are gaps in this sidewalk network on South Columbia Street (NC 86) from Purefoy Road north to Chase Avenue and on Martin Luther King, Jr. Boulevard between Piney Mountain Road and Homestead Road. NCDOT is currently adding sidewalks and bicycle lanes along both sides of South Columbia Street (NC 86) from Purefoy Road north to Manning Drive. Bicycle lanes currently exist on parts of the corridor south of Columbia Street (NC 86), Pittsboro Street and South Columbia Street on campus, and north of Homestead Road. There are bicycle sharrows on a portion of Martin Luther King, Jr. Boulevard from North Columbia Street to Estes Drive. In addition to sidewalks and bicycle lanes, there are several off-road greenways in the corridor: Fan Branch Trail, Morgan Creek Trail, Bolin Creek Trail, and the Upper Booker Creek Trail.

*Chapel Hill 2020*, the ToCH comprehensive plan, is inspired by the five "Big Ideas," the first of which is to "implement a bikeable, walkable, green communities plan by 2020." The plan's themes complement the vision for a sustainable, walkable, and bikeable community. Recommendations for expanding the bicycle and pedestrian network are made throughout the comprehensive plan and include the focus areas around the study corridor. *Chapel Hill 2020* supports the recommendations for extended and new greenways made in the *Greenways Master Plan* (2013), several of which are within the corridor:

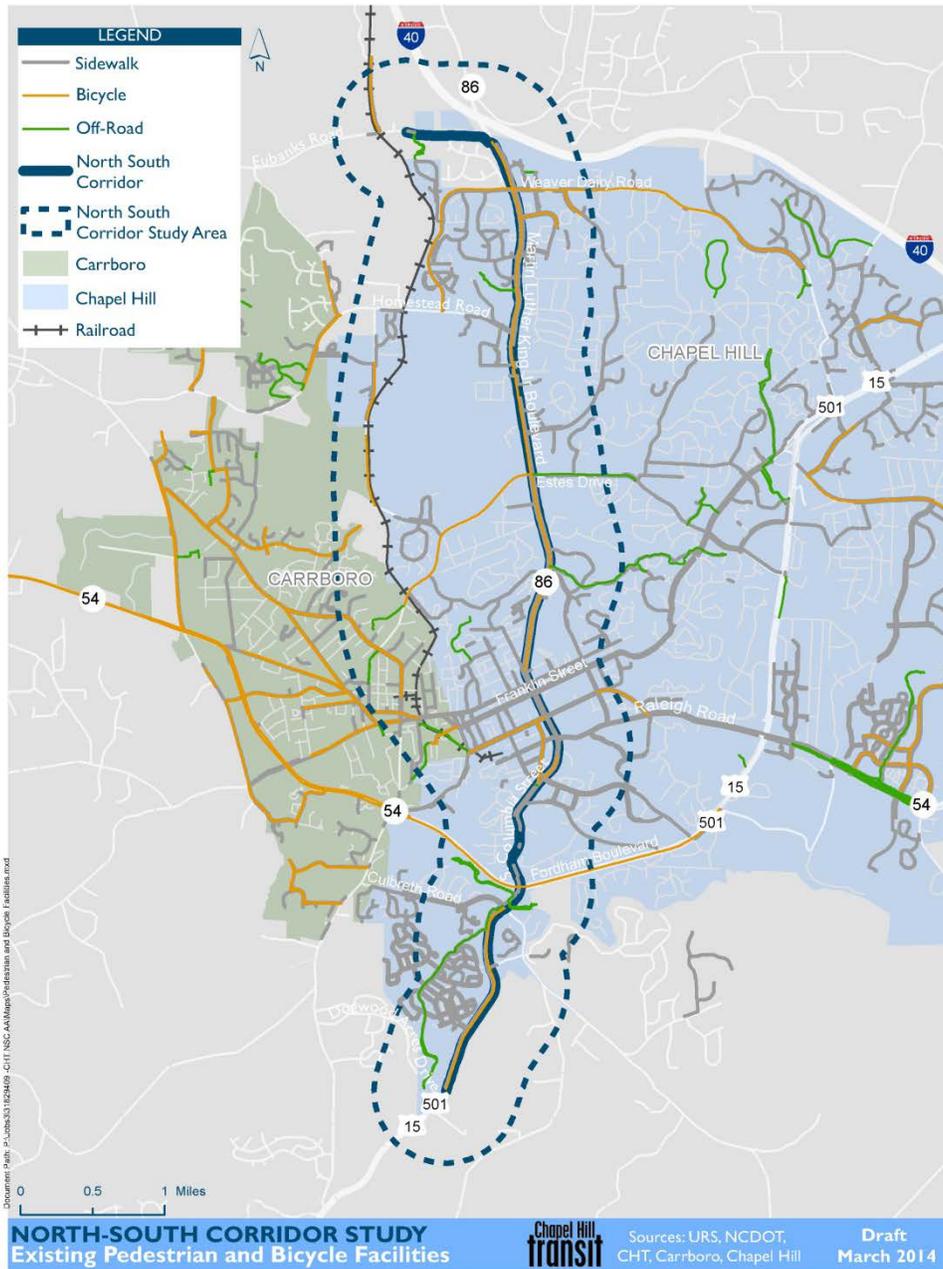
- Wilson Creek – vicinity of US 15-501
- Mill Race Branch – vicinity of Martin Luther King Jr., Boulevard and North Columbia Street
- Umstead Park to Martin Luther King Jr., Boulevard
- Homestead Road Connector Trails
- Martin Luther King Jr., Boulevard to Eastwood Lake
- Upper Booker Creek Trail
- Old Field Trail – vicinity of Eubanks Road and Martin Luther King Jr., Boulevard

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<sup>8</sup> Triangle Transit System Map. [http://www.triangletransit.org/sites/default/files/maps-and-schedules/RoutesAndSchedules-system\\_map.pdf](http://www.triangletransit.org/sites/default/files/maps-and-schedules/RoutesAndSchedules-system_map.pdf) Accessed March 6th, 2014.

In addition to the *Greenways Master Plan*, the *Town's Bike and Pedestrian Action Plan* (2004) and the draft *Chapel Hill Bike Plan* (draft March 6, 2014) propose closing the gaps in the sidewalk and bicycle lane networks on Martin Luther King Jr., Boulevard. The ToCH has already attempted to coordinate transit services with bicycle options by equipping the buses with bike racks. While expanding bicycle facilities can support transit ridership, loading bikes into these racks can increase dwell times and reduce schedule adherence. Additional operator and bike rider education may help to minimize any negative impacts to operations. UNC is also in the process of drafting a *Bicycle Master Plan*, which is scheduled for completion in 2014.

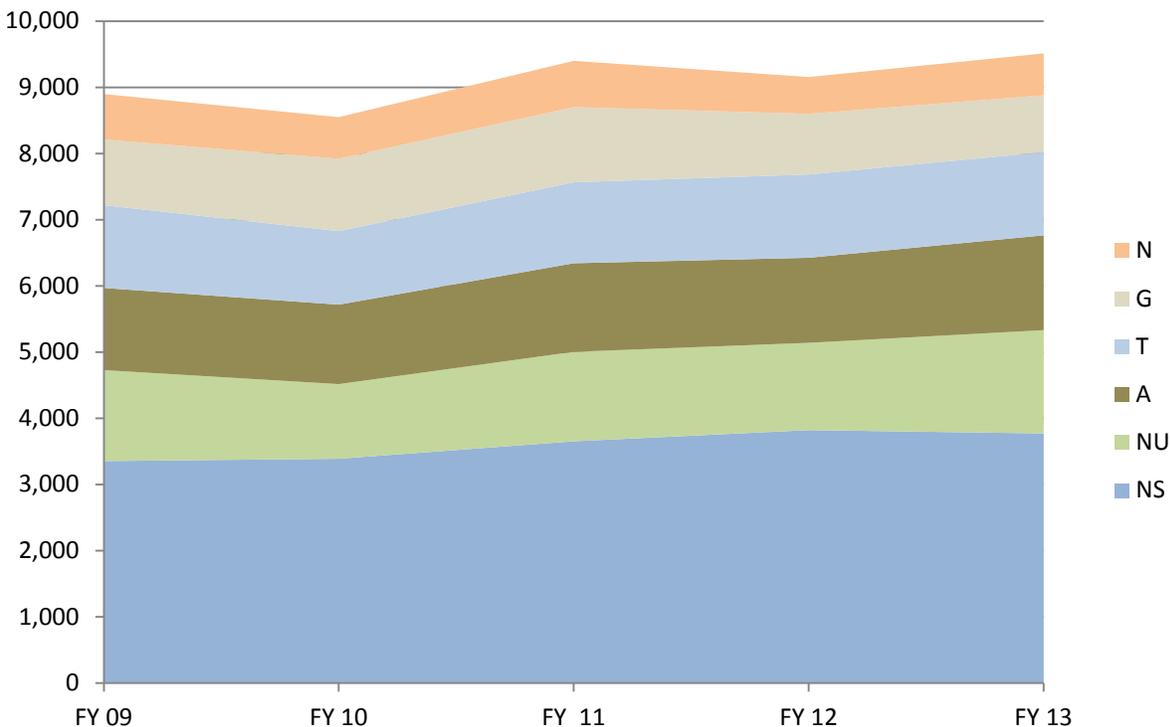
**Figure 5: Existing Pedestrian and Bicycle Facilities within the Study Corridor**



**2.2 Transit ridership is growing**

Average weekday transit ridership on corridor routes (Routes A, G, N, NS, NU, and T) grew by 6.9 percent between FY 2009 and FY 2013<sup>9</sup>. Ridership on the NS route, the only route that travels the entire length of the corridor, grew by 12.5 percent during this period. Figure 6 below shows average weekday ridership on the corridor routes over this five-year period.

**Figure 6: Average Weekday Ridership on Corridor Routes when UNC is in Session<sup>10</sup>**



**2.3 Transit ridership growth is straining capacity**

Ridership for Fall 2013, the most recent data available, was examined for the CHT corridor routes: Routes A, G, N, NS, NU, and T. The analysis determined that the southbound peak hour for existing service in the corridor is on buses starting their trip between 8:00 to 8:59 am (Figure 7). The northbound peak was slightly lower as trips are generally spread over a longer period of time. Ridership during the peak hour was analyzed to identify the peak load, which is from approximately Martin Luther King Jr., Boulevard and Airport Garden Apartments to North Columbia Street and Franklin Street. Because the peak demand is approximately one mile, rather than one or two stops, CHT needs to plan to accommodate the peak demand through the use of either frequent service or high capacity vehicles. During the peak hour CHT operates these six corridor routes with a combined average frequency of four minutes in order to meet this demand. While Tripper service provides supplemental fixed route service

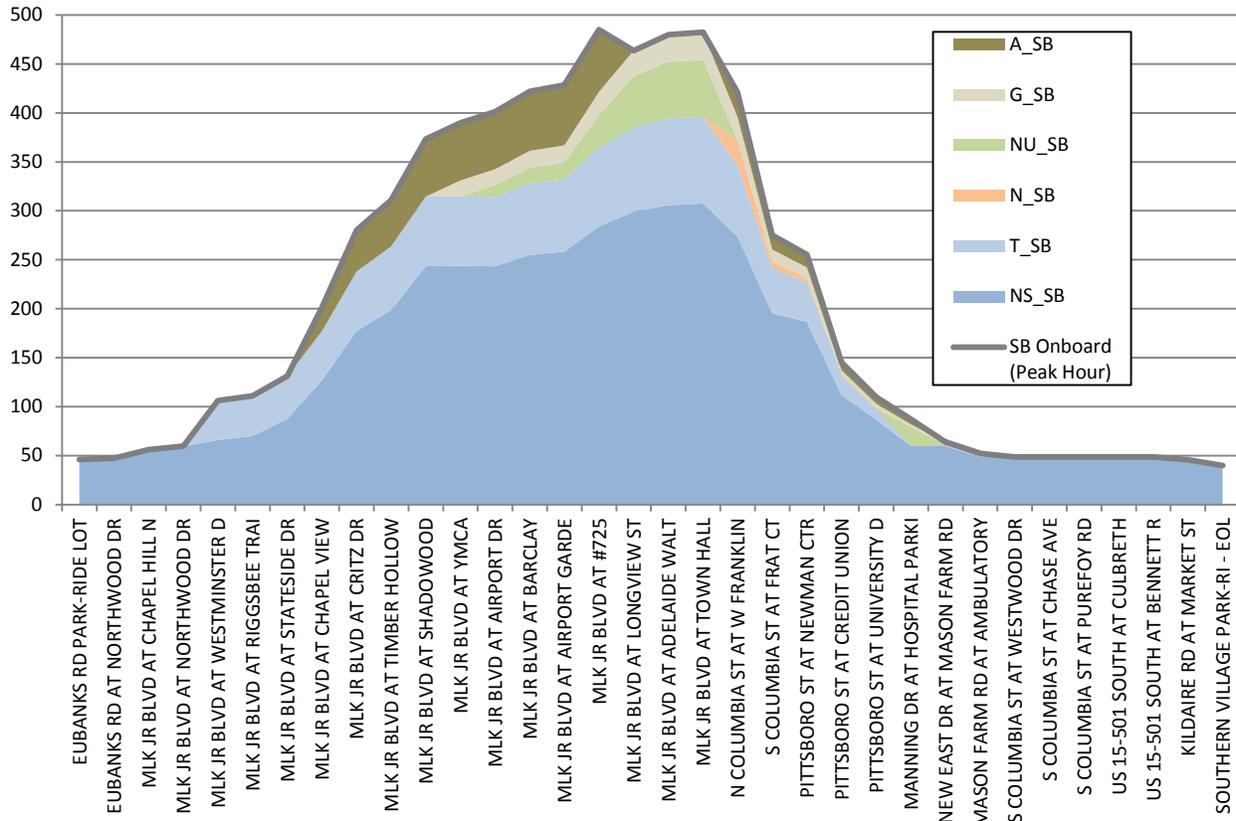
<sup>9</sup> Based on monthly ridership reports provided by CHT from FY 2009-2013.

<sup>10</sup> Average weekday ridership was compared during months when UNC was in session: September, October, November, February, March, and April.

during regularly scheduled times of operation, it is unlikely that this service could sustainably meet increased demand throughout the corridor.

**Figure 7: Peak Hour Load Analysis of Existing Service**

**North-South Corridor: Southbound (8:00 - 9:00 AM)**



### 3. Project Need #2

**Chapel Hill is comparatively young, but its fastest-growing demographic is over age 65.** In 2010, the median age of Chapel Hill residents was 25.6; the median age of US residents was 37.2. From 1970 to 2012, the over-65 age group increased the most relative to all other age groups (from 4.5 percent to 9.4 percent). Academic research and industry experience has found that both of these demographic groups are increasingly choosing transit for either lifestyle/environmental/economic reasons (Millennials) or mobility reasons (senior citizens).

#### 3.1 Population within the corridor is forecast to increase

The total existing (2010) population in the study corridor is approximately 31,200 and it is projected to grow to just over 44,000 by 2040, an increase of 41 percent. This projected population growth will place an increased demand on the existing transportation network and transit system, necessitating more and higher-capacity transit services provided by a transit system that is currently reaching or exceeding capacity on several routes. Investment in high-capacity transit alternatives will allow CHT to more efficiently accommodate existing riders and leverage population growth to increase system ridership.

As shown in Figure 8, the highest population density is currently found near and on the UNC campus. Future population density, shown in Figure 9, indicates that the population will significantly increase in the northern section of the corridor, near the Carolina North development, and at the southern end, near the proposed Obey Creek development area by 2040. High-capacity transit connections between these comparatively dense population centers will be necessary to mitigate traffic congestion resulting from population growth.

##### 3.1.1 Chapel Hill is young, but its senior population is growing

While Chapel Hill is home to UNC and its student population, it is also home to longtime residents and families who have chosen to live in Chapel Hill and have no direct affiliation with the university. Figure 12 shows the age distribution of the population of Chapel Hill, the region, North Carolina, and the U.S. for both 2000 and 2012. This figure shows that the 18- to 34-year age group comprises a near-majority of the town's population, which is high when compared to regional, state and national statistics and reflects the presence of UNC.

While UNC's student population skews the median age of the town downward, Baby Boomers and senior citizens are a fast-growing age cohort. As shown in Figure 11, the existing pockets of the senior population (over 65 years) are focused at the northern, central and southern edges of the corridor. This is a population that would be greatly served by access to convenience and efficient transit, as their interest and ability to drive may decline with their age. Additionally, university clusters, such as the Triangle region, have been emerging as desirable retirement destinations, particularly for retired academics and active adults who enjoy the cultural amenities found in such environments.

Figure 8: Existing (2010) Study Corridor Population Density

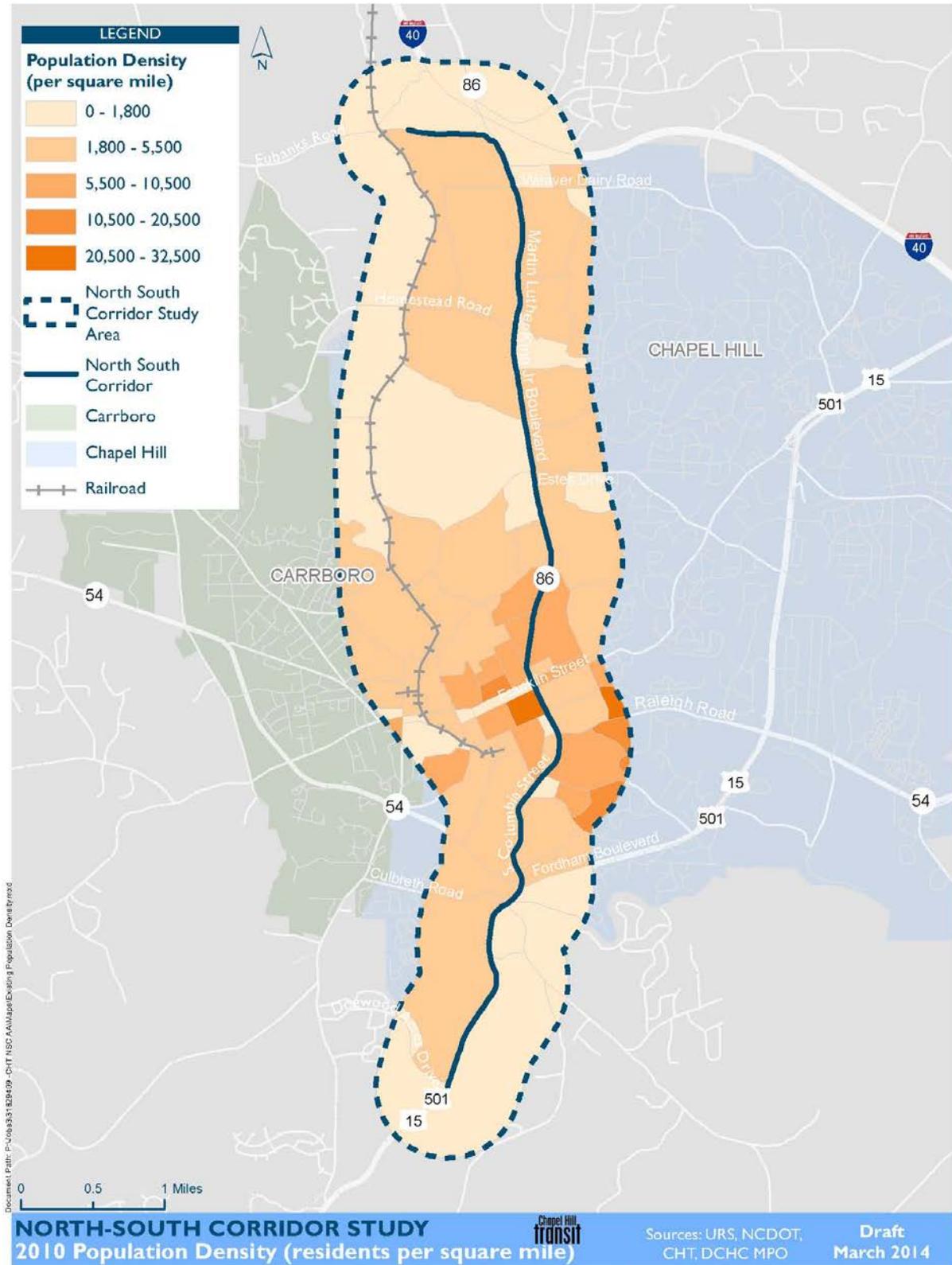


Figure 9: Forecast (2040) Study Corridor Population Density

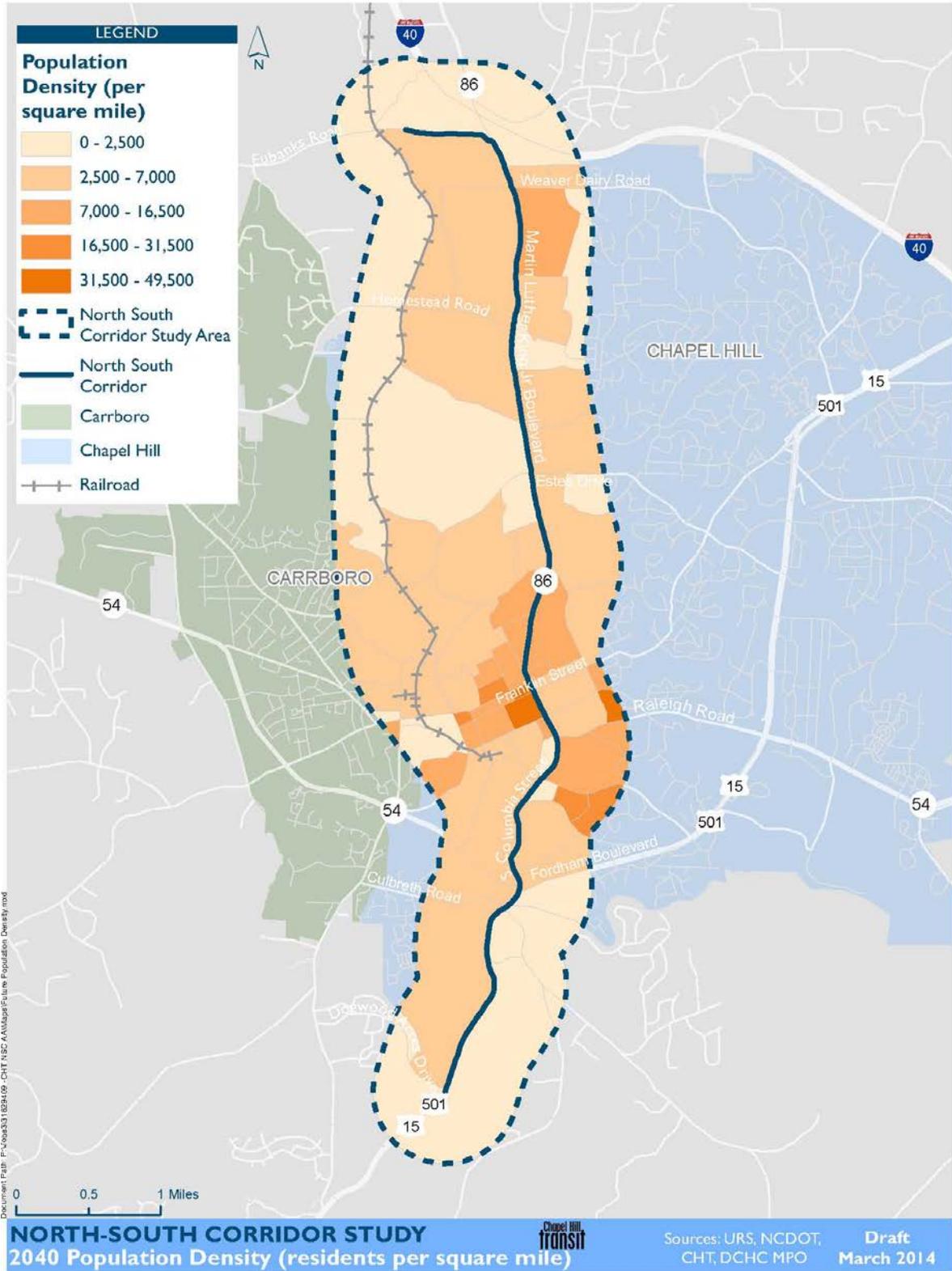


Figure 10: Percent Change in Study Corridor Population Density (2010 to 2040)

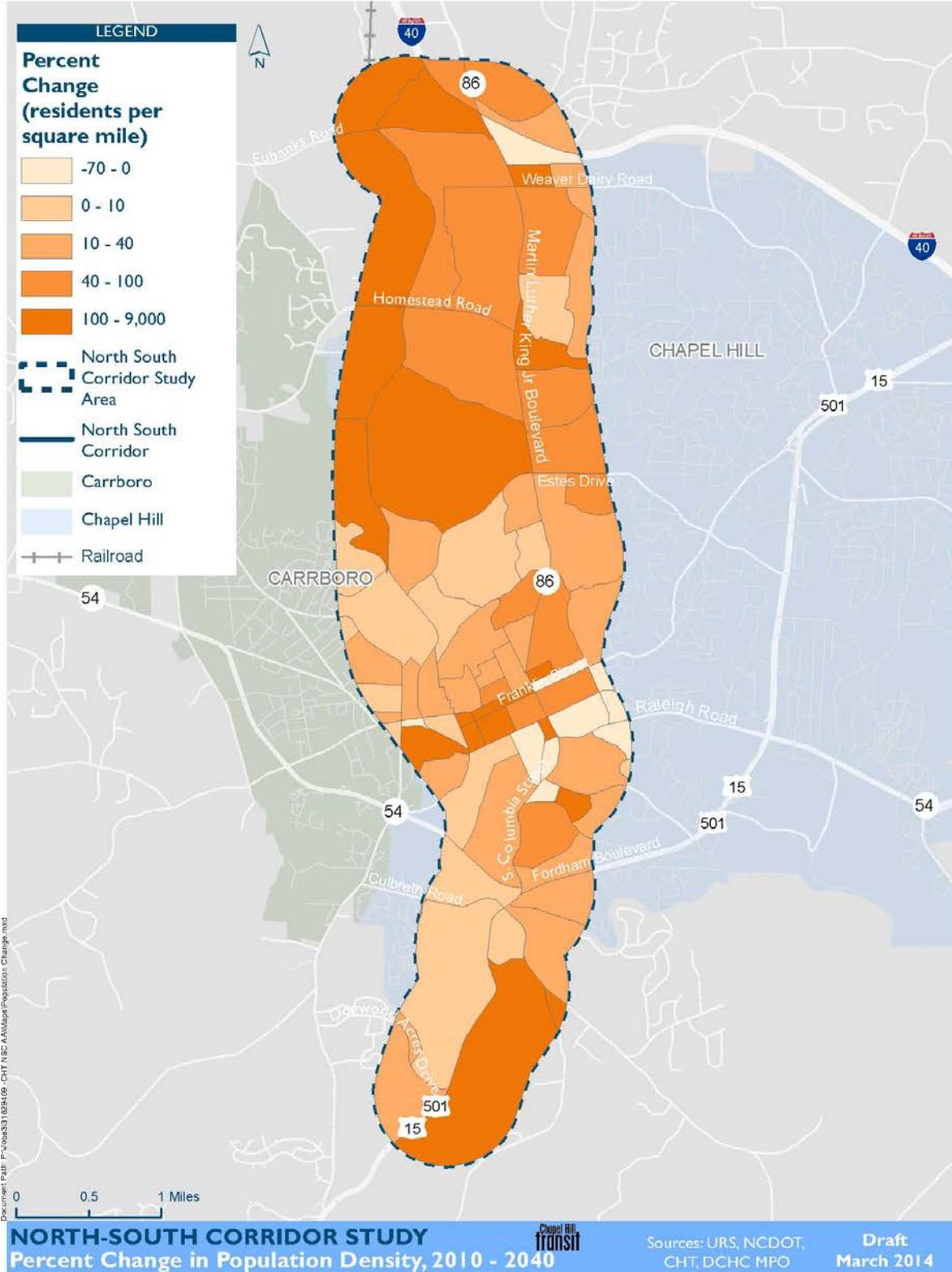
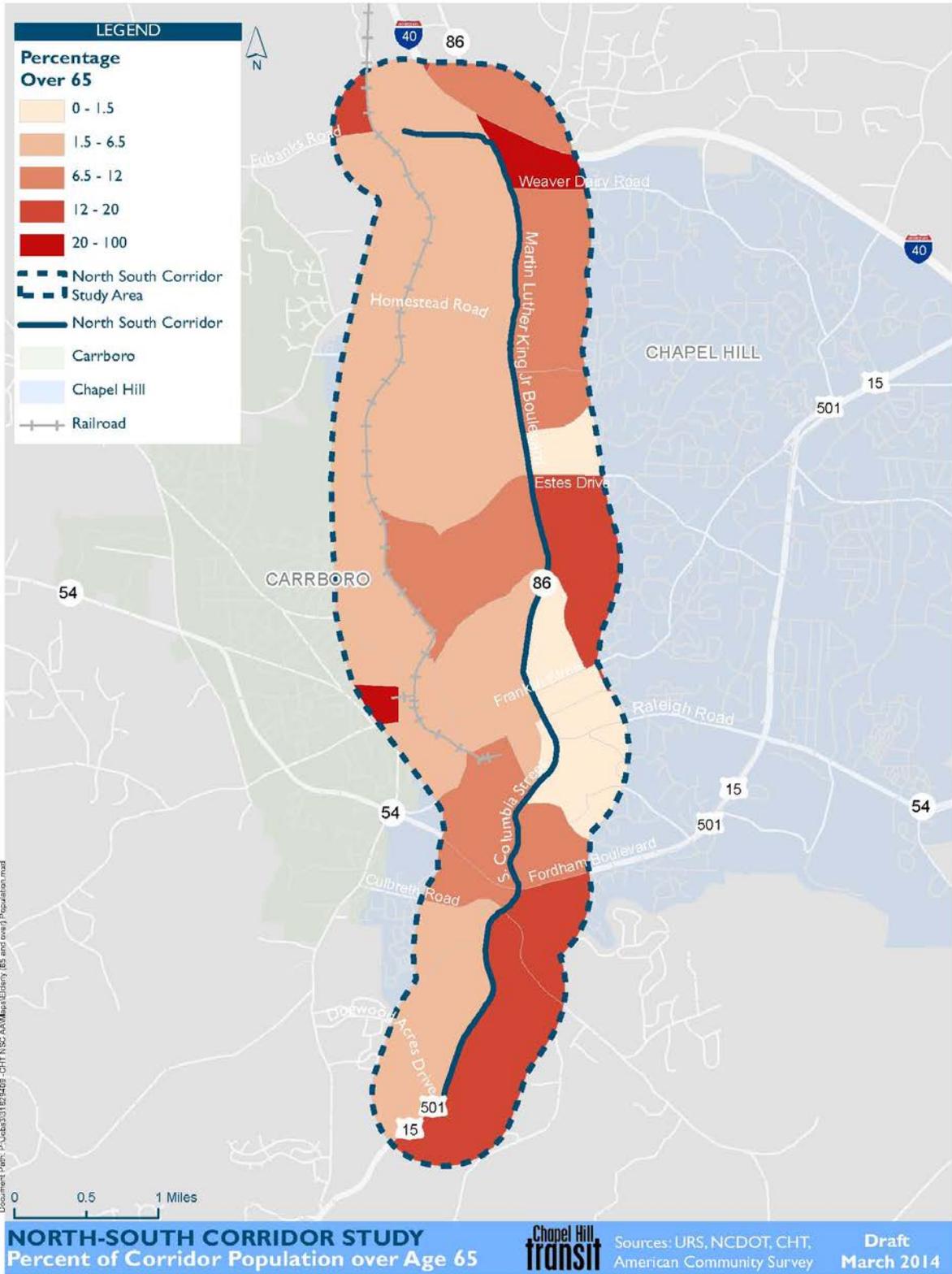
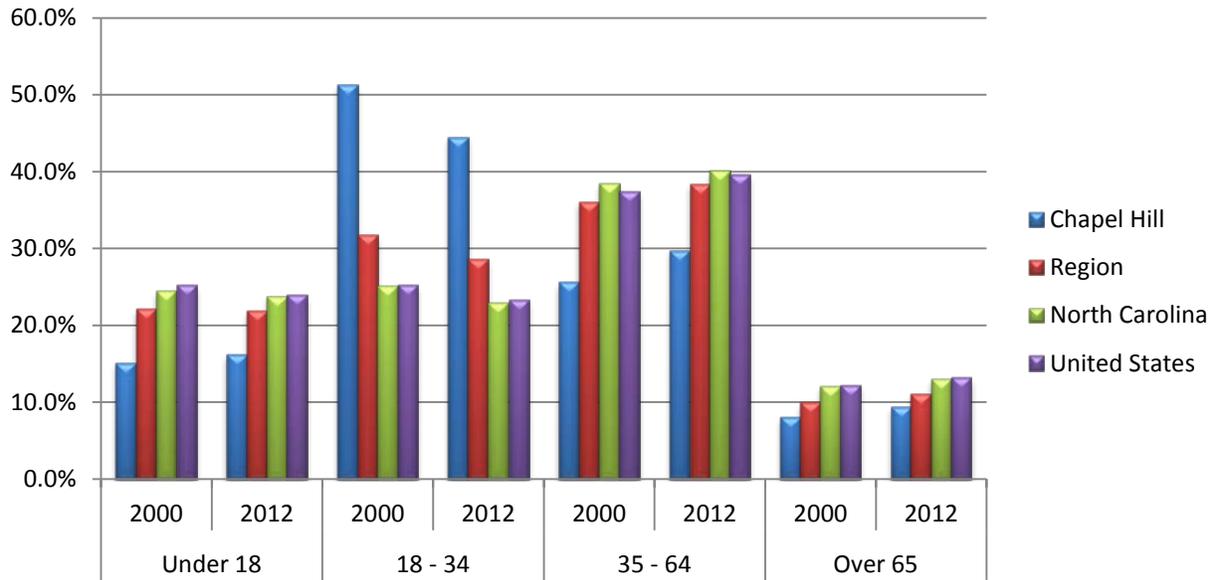


Figure 11: Percent of Study Corridor Population over Age 65



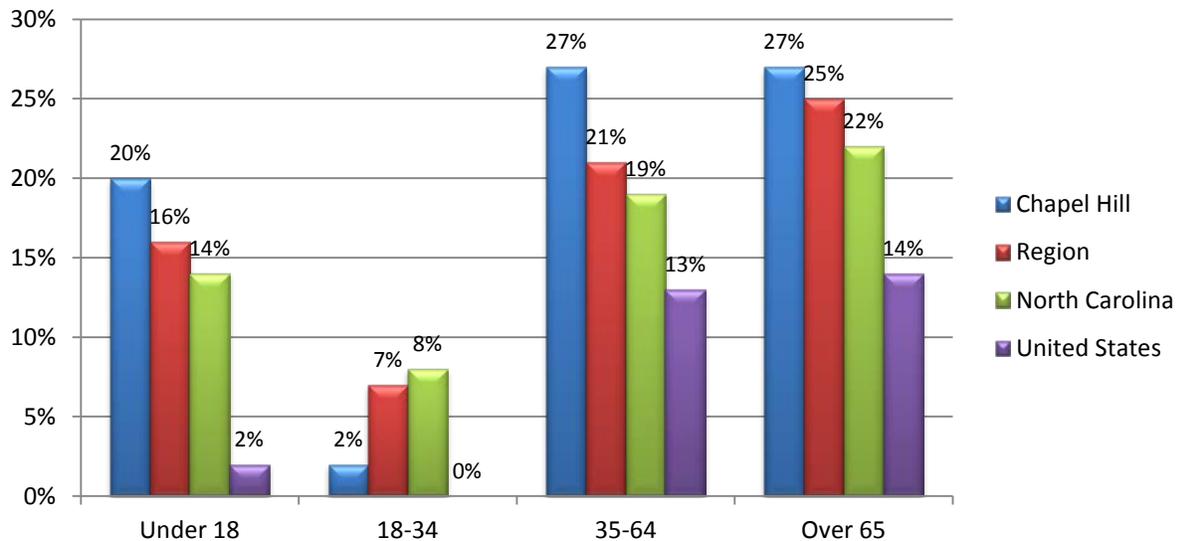
**Figure 12: Population Distribution by Age Group, 2000 to 2012**



Source: U.S. Census, American Community Survey, 2008-2012

Figure 13 shows a 27 percent increase in Chapel Hill’s 35 to 64 and over 65 age cohorts. This is higher rate of growth than for the same age groups in the region, state and U.S. The growth rate for the 18- to 34-year old age cohort during this same time period (2000 to 2012) was relatively stable. This data indicates that while growth of the 18- to 24-year old cohort is relatively flat, the older generations are making up a growing proportion of the Town’s population. It is necessary to plan for this demographic shift in terms of transit and mobility.

**Figure 13: Change in Population by Age Group, 2000 to 2012**



Source: U.S. Census, American Community Survey, 2008-2012

Both the younger and the older generations are inclined to use transit. As recent research demonstrates, the Millennial generation is driving less than previous generations. This generation is more likely to want to live in urban and walkable neighborhoods.<sup>11</sup> Millennials consider public transportation options the most likely to connect the user with their communities. Transit also allows Millennials to work and play on mobile devices as they travel.<sup>12</sup> The older generation will become less reliant on cars either by choice or because they are unable to continue to drive themselves. Having transit options readily available to all age groups will ensure a well-utilized system and continued mobility through all stages of life.

## 3.2 The corridor's demographic profile indicates reliance on transit service

In addition to understanding population shifts and patterns, it is important to ensure that the specific needs of transit-dependent populations are taken into consideration when developing and evaluating transit investment strategies. These households rely on transit as a means to access employment, education, medical care, goods and services and recreational opportunities. Maximizing benefits to these populations while minimizing adverse impacts is important to the overall project success.

### 3.2.1 Poverty

The greatest concentration of people living below the poverty line is found on the UNC campus and near the planned Carolina North development (Figure 16). This reflects the fact that most students are in school full-time and are not earning an income, and therefore would statistically appear to be living below the poverty line.

As shown in Figure 14, 29 percent of the study corridor population and 22 percent of the ToCH's population is living below poverty line. These are higher percentages than the region, state and U.S., but likely reflect the large student population living in the study corridor. Approximately 15 percent of the region is living below poverty. Likewise, about 16 percent of North Carolina's population lives below the poverty line. About 14 percent of the U.S. population lives below the poverty line.

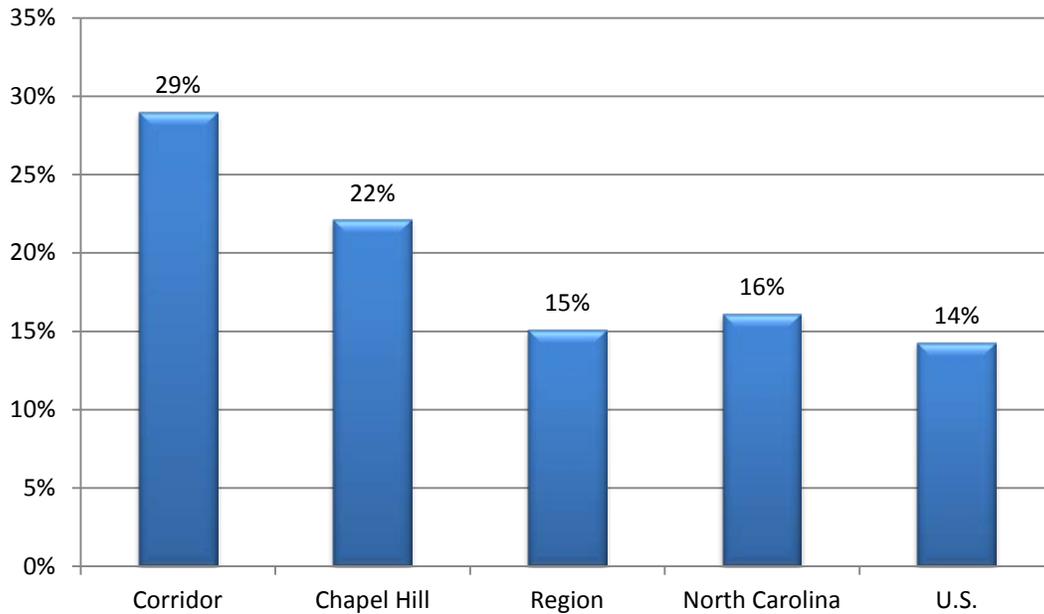
Access to transit is important for low-income households in order to access school, work and other destinations. As total household incomes decline, the share of discretionary household budget declines as housing, food and transportation costs remain relatively consistent. Increasing the number and type of transportation and mobility options (including increased investment in transit, bicycle and pedestrian facilities) may alleviate some pressure on these reduced household incomes by offering lower-cost alternatives to car ownership.

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<sup>11</sup> U.S. PIRG Education Fund and Frontier Group, *A New Direction: Our Changing Relationship with Driving and the Implications for America's Future*, spring 2013.

<sup>12</sup> American Public Transportation Association, *Millennials & Mobility: Understanding the Millennial Mindset*, October 2013.

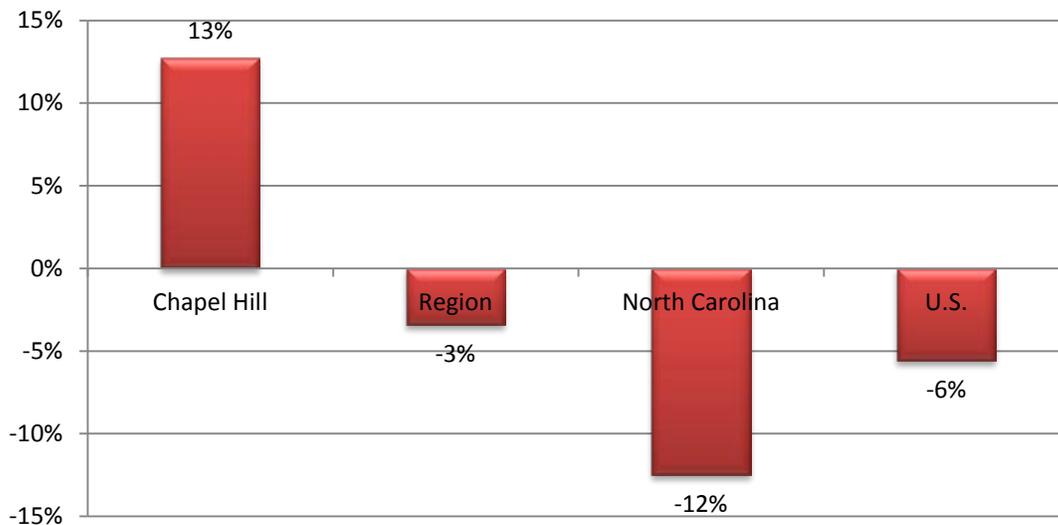
**Figure 14: Percent of Population Living below the Poverty Line**



Source: U.S. Census, American Community Survey

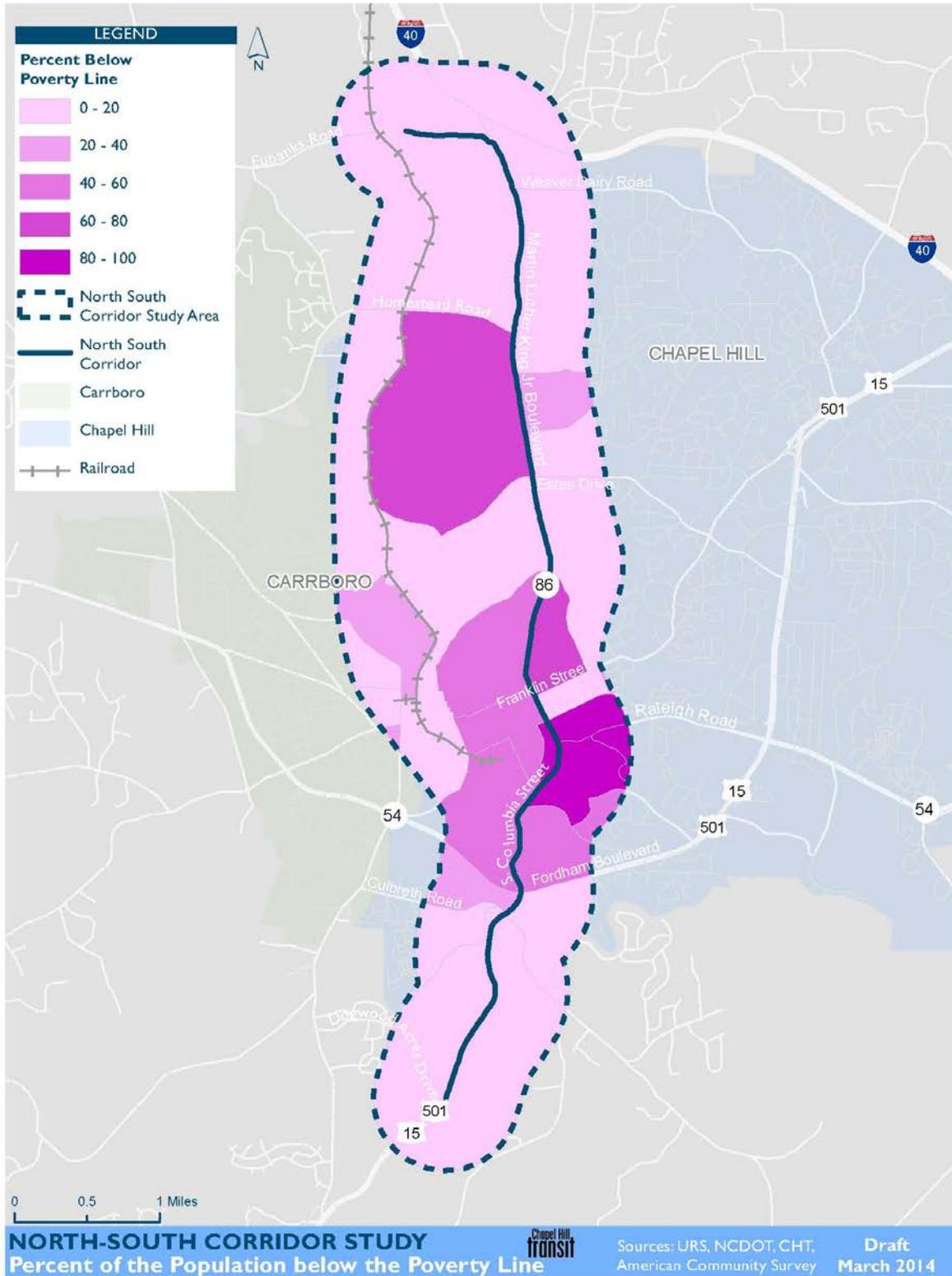
Figure 15 shows the change in median income from 2000 to 2012 in 2012 dollars. The median income in Chapel Hill has increased approximately 13 percent. This is in contrast to the region, North Carolina and the U.S., where the median income for these other geographies has declined. The comparatively high rates of poverty in combination with positive growth in median income likely reflects the large student population (who skew poverty numbers) and recession-resistant, comparatively high-paying positions at educational and medical institutions within the corridor.

**Figure 15: Percent Change in Median Income, 2000 to 2012 in \$2012**



Source: U.S. Census, American Community Survey, 2008-2012

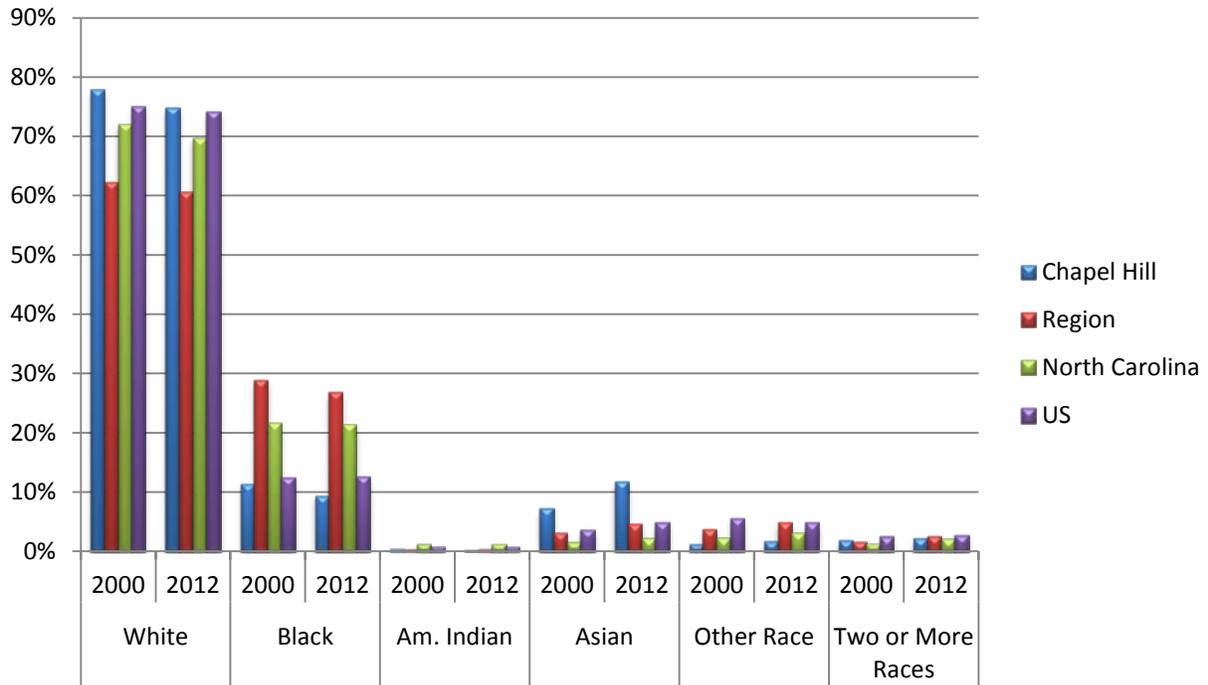
**Figure 16: Percent of Study Corridor Population Living Below the Poverty Line**



**3.2.2 Non-White Population**

As shown in Figure 17, the population of Chapel Hill is predominately white, with a comparatively smaller percentage of black and Asian residents. This differs slightly from the region where there is a smaller white population and a larger black population. However, Chapel Hill's racial distribution is similar to North Carolina and the U.S.

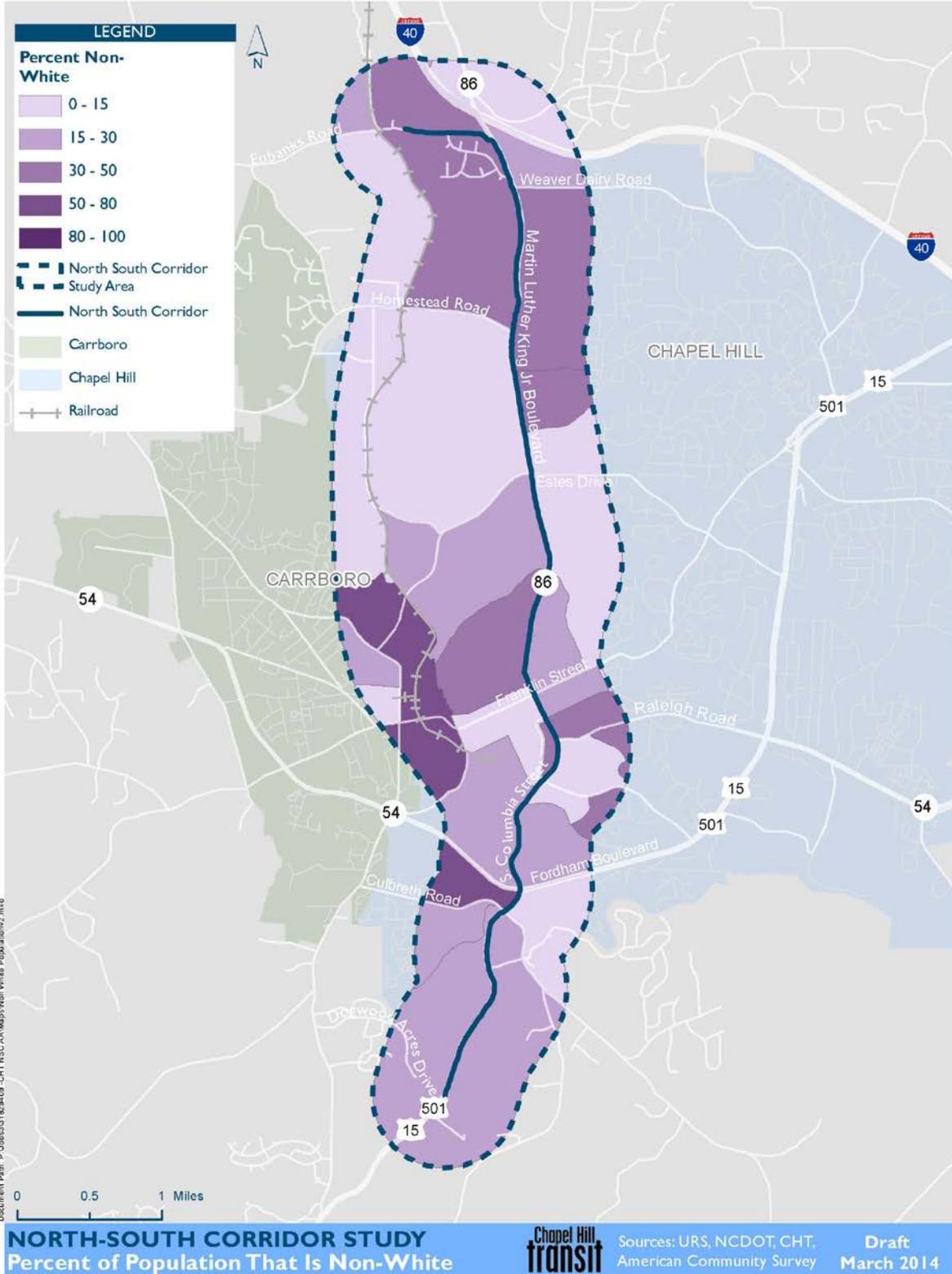
**Figure 17: Racial Distribution**



Source: U.S. Census, American Community Survey, 2008-2012

As shown in Figure 18, the greatest concentration of non-white population is found toward the center of the corridor near the UNC campus and the downtown area. Densities are also comparatively higher at the northern and southern ends of the corridor. In compliance with federal guidelines and regulations, it will be important to ensure that communities of color are not adversely impacted by any high-capacity transit investments within the corridor, and to ensure that communities that have been historically excluded from public processes are targeted for inclusion in NSCS public planning components.

Figure 18: Percent of Non-White Study Corridor Population

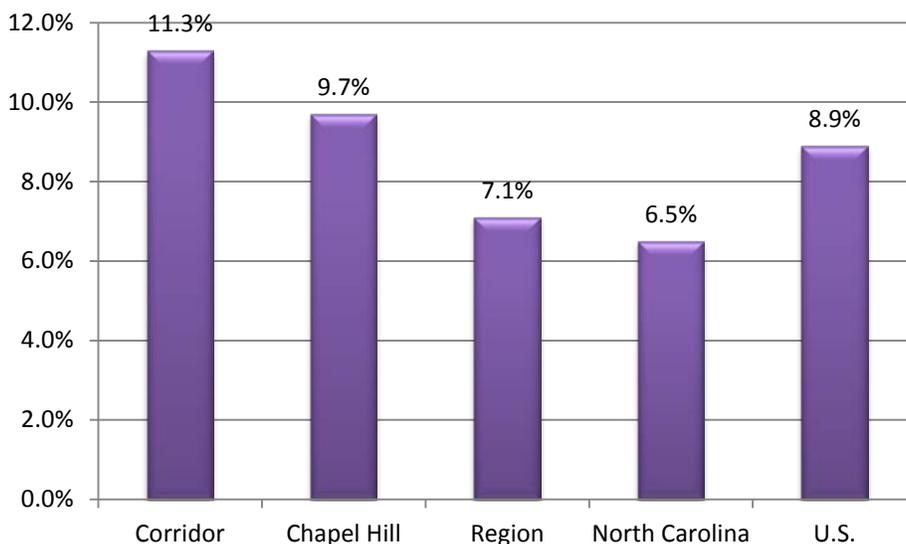


**3.2.3 Zero-Car Households**

As shown in Figure 20, most of the zero-car households in the corridor are located on or near the UNC campus. This reflects the tendency for students not to have personal vehicles. Other concentrations of zero-car households include the areas surrounding the campus, with pockets at both the north and south ends of the corridor.

Households that do not have a car are typically dependent on transit for their day-to-day mobility needs. Access to fast and efficient transit is essential for traveling to work and school as well as other errands and travel.

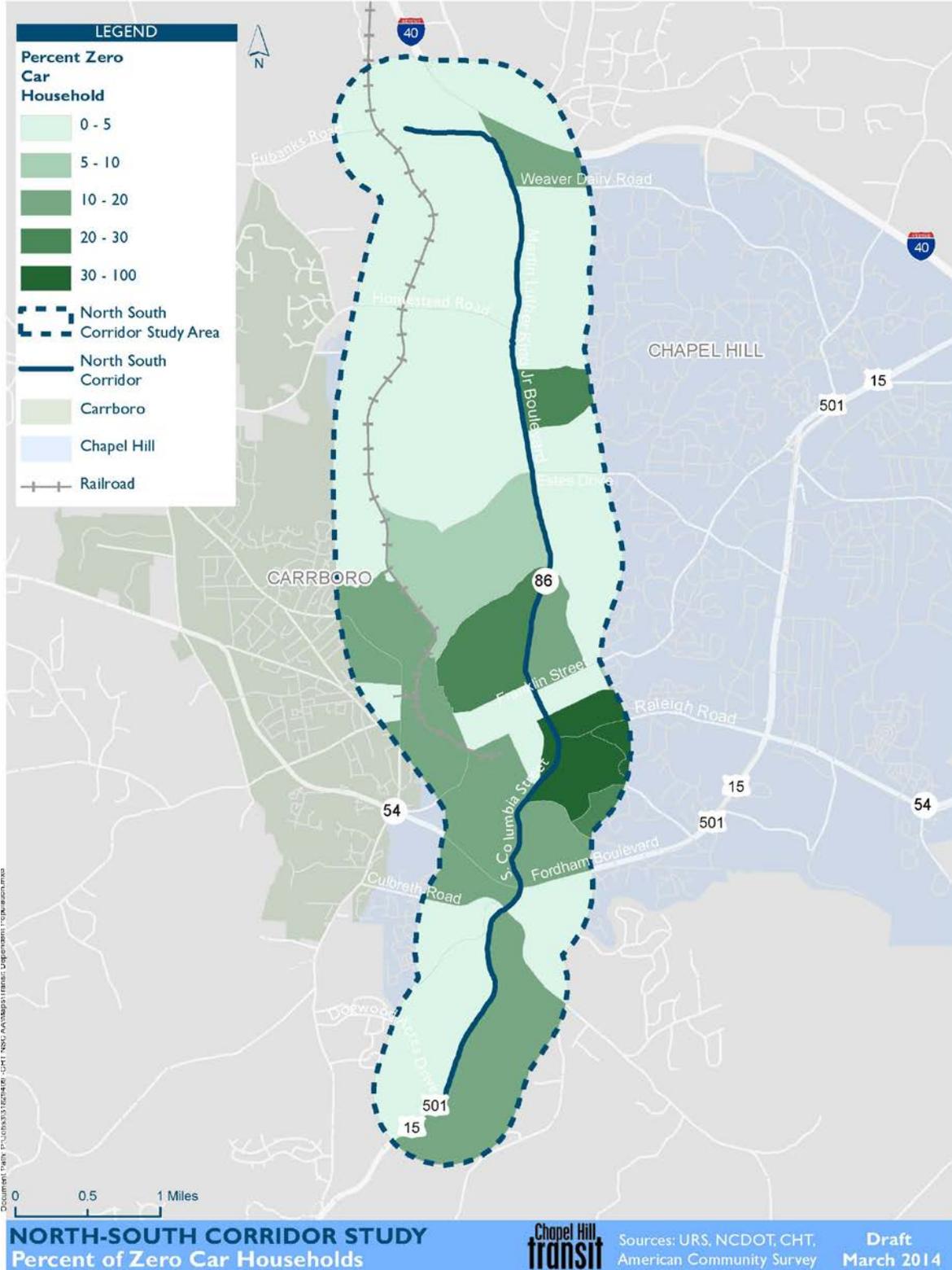
**Figure 19: Zero-Car Households**



*Source: U.S. Census, American Community Survey*

As shown in Figure 19, zero-car households in Chapel Hill are fairly consistent when compared to the region, state and the U.S. It is slightly higher than these other geographies; this is likely due to the large student population without a car.

Figure 20: Percent of Zero-Car Households in the Study Corridor





#### 4. Project Need #3

Major development opportunities at the northern and southern ends of the corridor will fundamentally reshape mobility patterns and needs within the corridor. The adopted 2020 Chapel Hill Comprehensive Plan designates several development focus areas along the corridor; the Town has approved several new developments within the corridor, including Carolina North, and is reviewing several others for approval. This level of development will expand the number of key activity generators within the study corridor and result in increased travel demand as more people seek to access them.

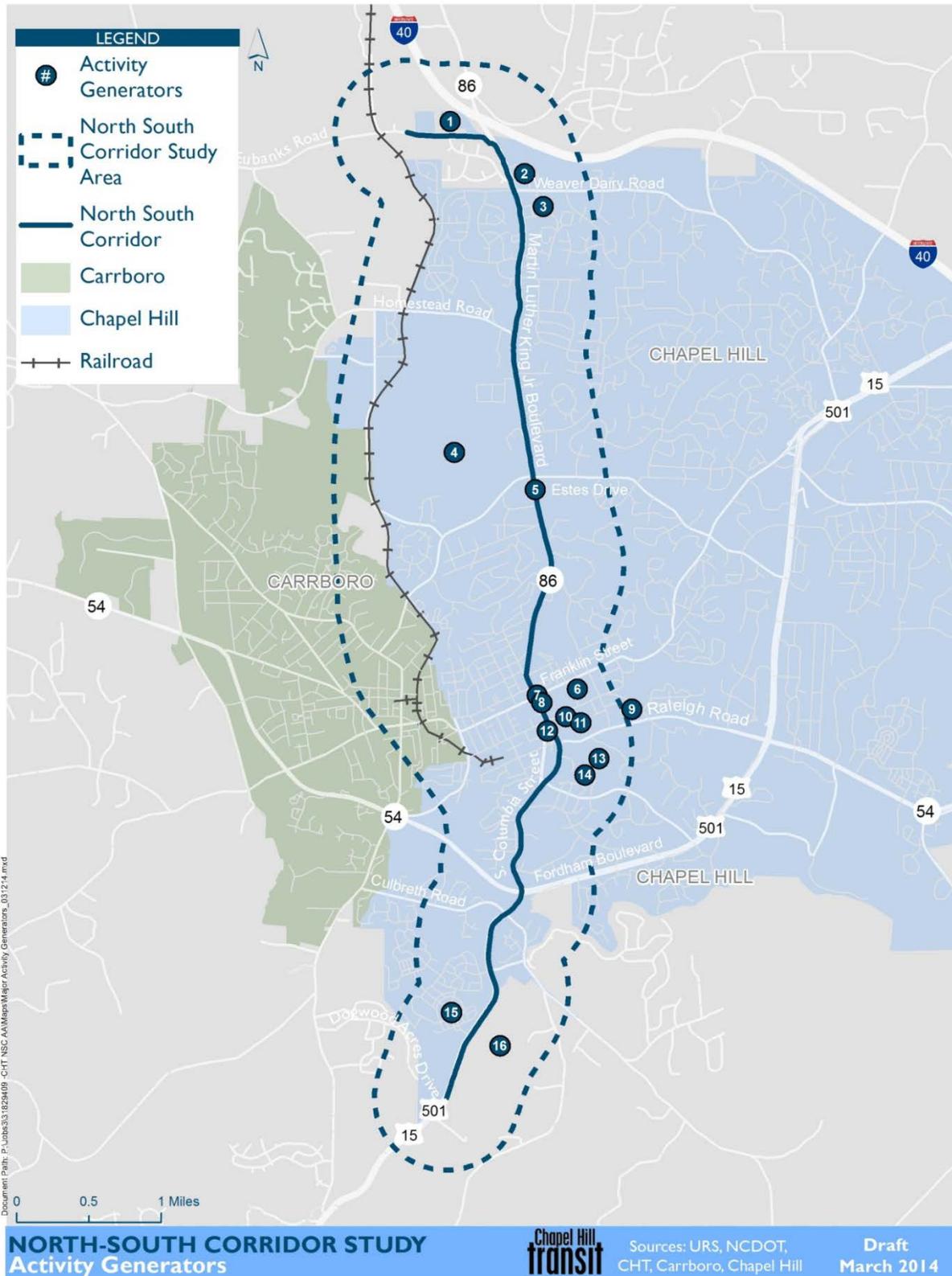
##### 4.1 A variety of key activity generators are located along the corridor

As shown in Figure 21 and described in Table 3, a variety of activity generators can be found within the study corridor, including educational, cultural and civic institutions, recreational resources, and health care facilities, as well as planned developments. These destinations attract local, regional and national visitors, and their presence and distribution throughout the study corridor influence travel demand and travel patterns. As shown in Figure 21, the majority of these activity generators are located within or near the UNC campus, but these are also activity generators towards the northern and southern ends of the study corridor.

**Table 3: Key Activity Generators within the Study Corridor**

Map Key	Key Activity Generator	Status
1	The EDGE Mixed-Use Development	Proposed
2	Chapel Hill North Shopping Center	Existing
3	Timberlyne Shopping Center	Existing
4	Carolina North	Planned
5	Chapel Hill – Carrboro YWCA	Existing
6	Morehead Planetarium and Science Center	Existing
7	Franklin Street	Existing
8	Ackland Art Museum	Existing
9	PlayMakers Repertory Company	Existing
10	Memorial Hall	Existing
11	University of North Carolina – Chapel Hill	Existing
12	Carolina Inn	Existing
13	Kenan Stadium	Existing
14	University of North Carolina Hospitals	Existing
15	Southern Village	Existing
16	Obey Creek Development	Proposed

Figure 21: Key Activity Generators within the Study Corridor



**4.2 Approved and in-process development plans will shift existing mobility patterns**

Historically, the densest development within the study corridor was found near the UNC campus and downtown Chapel Hill. As the population, economy and institutions have grown, development pressure within that core has caused the ToCH and developers to consider the rural and open spaces at the northern and southern edges of the town as development opportunities.

The Town has sought to carefully plan and stage this growth as a means to encourage a density and pattern of uses that is consistent with the Town’s vision for growth, as most recently described in the *Chapel Hill 2020 Comprehensive Plan* and the *Central West Small Area Plan*. Chapel Hill’s Land Use Plan (May 30, 2012) identifies a series of Development Opportunity Area throughout the town; five of the nine designated sites are along Martin Luther King, Jr. Boulevard north of Estes Drive (Figure 22). These Development Opportunity Areas are in addition to major development sites that have already been completed (Southern Village) or are in the process of completing the Development Agreement process (Carolina North, Obey Creek and The EDGE).

These four developments, in addition to the areas designated as Development Opportunity Areas, will shift travel patterns and increase travel demand within the study corridor as more people seek to access residential uses, jobs, and services outside of the downtown core. The details of the four major developments are described below.

**Carolina North**

UNC owns approximately 947 acres of land, located on the north side of Estes Road Extension and the west side of Martin Luther King, Jr. Boulevard, that is known as Carolina North. The University has developed and approved a 50-year Carolina North development plan for approximately 250 acres of the Carolina North tract. The long-range development plan anticipates some eight to nine million square feet of floor space over a 50-year period. This plan is based on an extensive ecological assessment of the site, a detailed infrastructure analysis, and a series of public workshops.

Per a development agreement that UNC signed with the ToCH in 2009, the initial phase of the Carolina North project involves the construction of approximately three million square feet of building space on approximately 133 acres in the southeast corner of the site over a 20-year period. This phase of the development proposed that the site’s predominant uses be public or private development for college/university, research activity, civic, hospital, clinics, cultural, and/or related or support functions with integrated supporting housing, general business, convenience business, office-type business, recreation, utility and/or open space uses. The mix of uses approved for the first 800,000 square feet of development are shown in Table 4 below.

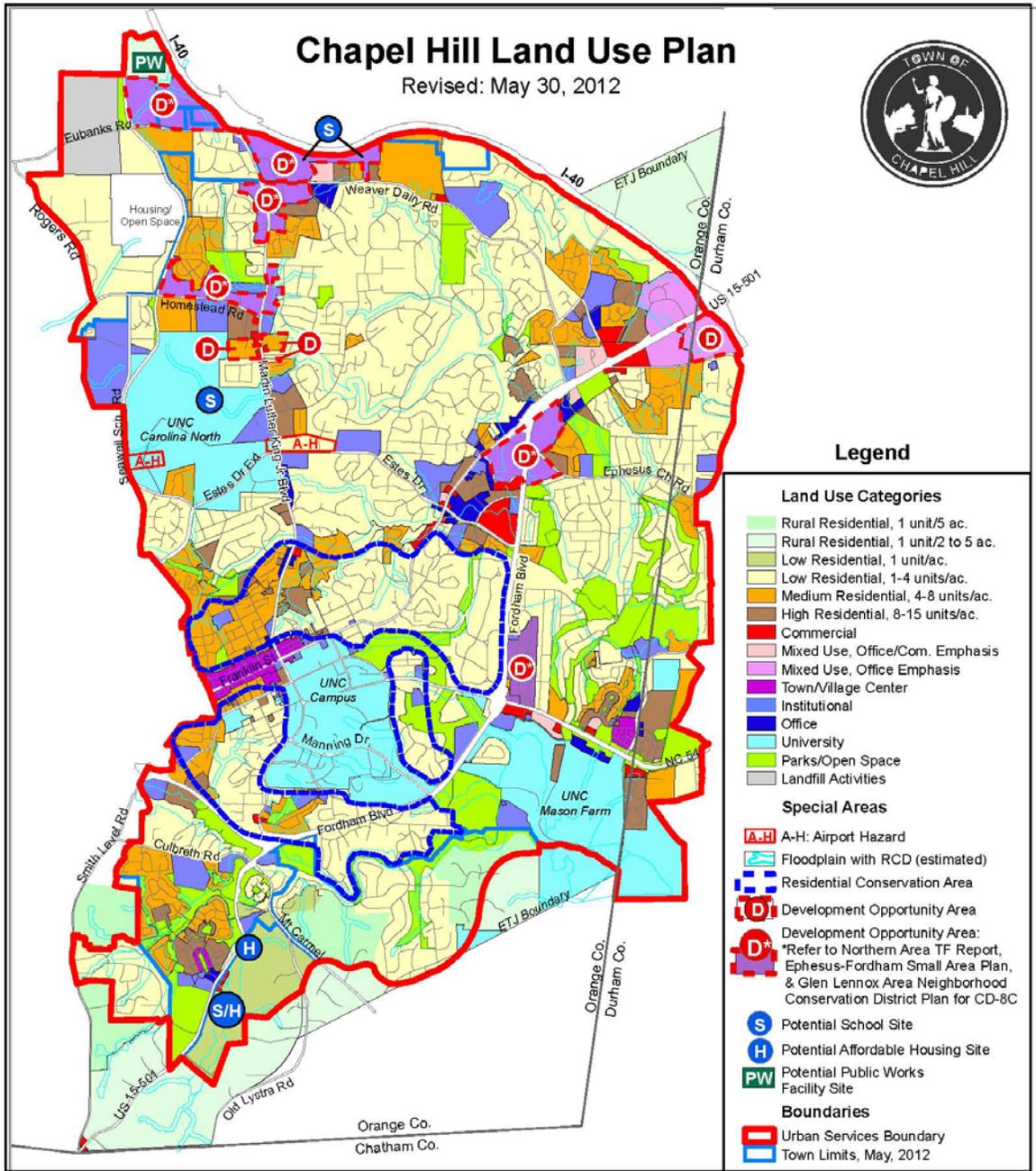
**Table 4: Mix of Uses in First Phase of Carolina North Development**

Land Use	Amount
Academic	410,000 square feet
Private Research and Development	180,000 square feet
Civic/Retail	10,000 square feet
Recreation Fields	n/a
Housing	200,000 square feet
Health Care	0 square feet
<b>TOTAL</b>	<b>800,000 square feet</b>

Source: Development Agreement between UNC Chapel Hill and the ToCH, July 1, 2009

The orientation of these land uses is shown in Figure 23, which is included in UNC's draft *Carolina North Design Guidelines* (October 30, 2008).

Figure 22: Chapel Hill Land Use Plan, May 30, 2012



**REVISIONS:**  
Adopted: May 8, 2000  
Revised: 11/13/2000 \* 3/04/2002  
9/07/2004 \* 5/09/2005 \* 1/14/2008  
6/13/2011 \* 5/30/2012

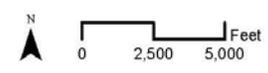
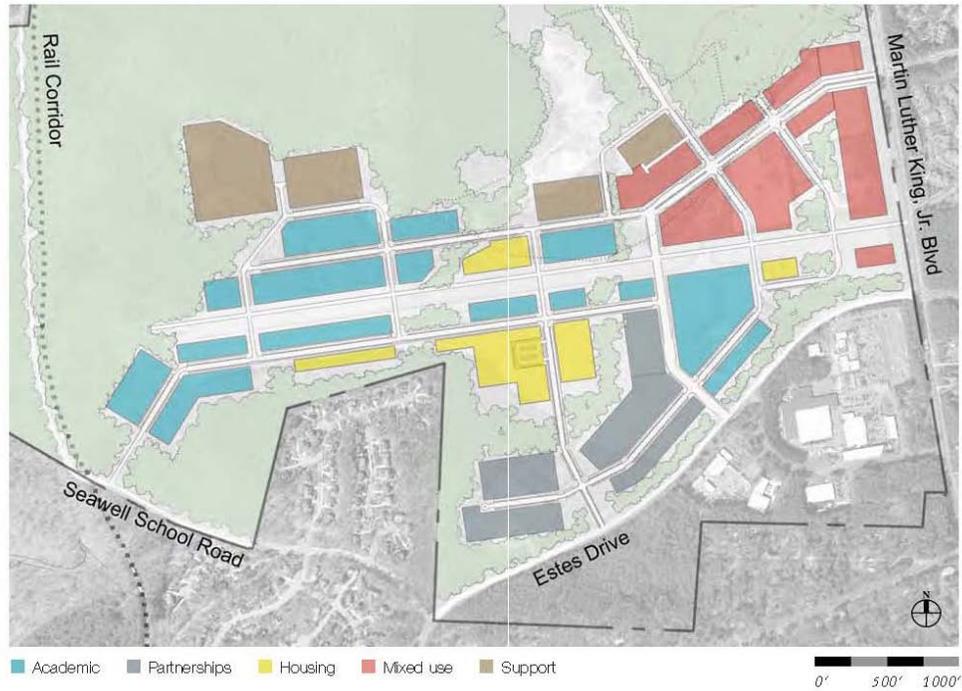


Figure 11

**The Land Use Plan**  
**Comprehensive Plan**  
Chapel Hill, North Carolina  
Revised May 30, 2012

**Figure 23: Land Use Plan for First Phase of Carolina North**



Source: UNC, draft Carolina North Design Guidelines 2008; October 30, 2008

**Southern Village**

The Town of Chapel Hill adopted the Small Area Plan for Southern Village, located in the southern quadrant of the town on the west side of US 15-501, in 1992. The plan covered a more than 3,000 acre parcel of mostly rural land and recommended that 300 acres be used to develop a mixed-used village. This development template was different from contemporary, auto-centric development patterns that were more common throughout the region, and instead was more similar to traditional, pre-automobile development patterns. Between 1994 and 2005, a new community was built that now includes:

- 92 acres of open space, greenway and park land
- 1,150 residential units (single-family, apartments, condominiums, and townhomes)
- 252,500 square feet of retail and office space
- Mary Scroggs Elementary School
- Chapel Hill Daycare
- Christ United Methodist Church
- Town of Chapel Hill park-and-ride lot

In August 2012, developers applied for a special use permit for construction of a hotel and apartments on a parcel of undeveloped Southern Village property. The application is currently under consideration by the ToCH.

**Obey Creek**

The 120-acre Obey Creek development site is located directly across US 15-501 from Southern Village. In January 2014, the Chapel Hill Town Council voted to move into the next phase of a multi-phase development review process, which will include data collection, a traffic impact study, economic impact analysis, and a school impact analysis. While the details of the development are likely to change as it moves through the development agreement process, the developer proposes a mixed-use development that is modeled on Southern Village and will include connections (including a grade-separated bike and pedestrian crossing) between the two developments. Proposed land uses for the development are shown in Table 5 below.

**Table 5: Proposed Land Uses in the Obey Creek Development**

Land Use	Amount
Retail	350,000 square feet
Office/Commercial and Civic	375,000 square feet
Hotel	100,000 square feet (130 rooms)
Residential – Multi-Family	600 dwelling units (for sale and for rent/market rate and affordable)

*Source: Obey Creek Concept Plan Submittal, Developer’s Program; July 17, 2012*

The developer, in its July 2012 Concept Plan Submittal, describes the planned development as a “mixed-use, transit oriented community designed to provide a lively, pedestrian and family friendly and sustainable living environment” that will “concentrate uses as a density that will support transit use.”

**The EDGE**

In February 2014, developers filed a special use permit application with the ToCH for a mixed-use development called The EDGE. The 55-acre site is located at the north end of the study corridor, adjacent to I-40, the Town’s park-and-ride lot, across from the Northwood Subdivision. The proposed development would include 18 to 24 buildings, 350,000 to 651,000 square feet of multi-family residential (400 to 700 units), commercial and office uses in a walkable, mixed-use community.

The combination of existing major activity generators in the corridor with the large-scale, mixed-use developments at the northern and southern ends of the corridor (Carolina North and Obey Creek) will result in a growth in traffic volume and a shift in mobility patterns within the corridor as people seek to access these new developments. In the absence of multi-modal investment, this growth in traffic volume and shift in travel patterns will likely result in increased traffic congestion and decreased quality of life for Chapel Hill residents and their regional neighbors.

## 5. Project Need #4

**Multi-modal transportation investments are necessary to accommodate anticipated increases in travel demand resulting from planned development within the corridor.** Recent technical analyses completed as part of the Carolina North development have forecast that – in the absence of mitigation measures - corridor roadways will reach unacceptable levels of congestion by 2030. The scale of roadway expansion required to mitigate this congestion is unlikely to be financially feasible, environmentally sensitive, or aligned with Chapel Hill’s vision for growth.

### 5.1 Without mitigation, planned development within the corridor is likely to increase congestion

The ToCH requires that proposed developments going through the Development Agreement process conduct a variety of impact assessments, including traffic impact analyses (TIA). In these analyses, existing traffic levels are measured, and then the impact of the proposed development on future roadway levels of service (LOS) are forecast.

LOS was introduced by the Highway Capacity Manual (HCM) to describe the operational quality of a roadway. The six levels of service are defined as letters A through F, where A indicates the best operational conditions and F represents the worst. HCM also defines the methodology to calculate LOS using factors such as speed, travel time, density, delay, and various other quality measures. It is standard industry practice to consider LOS A through D as acceptable in urban areas, and LOS E and F as unacceptable.

A TIA for the first phase of Carolina North was completed in 2009 (*Transportation Impact Analysis Fall 2009 Update for the Carolina North Development*); 52 intersections centered along Martin Luther King, Jr. Boulevard and stretching as far east as I-40 and Old Chapel Hill/Hillsborough Road were measured and assessed. The analysis found that – of the intersections along Martin Luther King, Jr. Boulevard/South Columbia Street – only one intersection is currently experiencing a “failing” (LOS E or F) LOS. The construction of Carolina North would cause additional intersections to experience a LOS E or F by 2015, and LOS is significantly degraded to failing at multiple intersections by 2030.

A TIA was also conducted in conjunction with the proposed hotel/apartment/office development on the Southern Village site. This analysis, published in draft form in 2012 (*Southern Village Hotel & Apartment/Office Development Draft Traffic Impact Study Executive Summary*) evaluated impacts at four intersections along US 15-501 between Culbreth Road/Mt. Carmel Church Road and Market Street. 2012 LOS at the four intersections performed at D or better; one intersection (at US 15-501 and Culbreth Road/Mt. Carmel Church Road) was forecast to degrade to a LOS E by 2016 following project construction.

A TIA for the proposed Obey Creek development has not yet been completed, but it can be anticipated that a development of that scale would increase travel demand (and levels of congestion) along US 15-501.

A TIA for The EDGE development (*The EDGE Development Traffic Impact Study – 2013 Update Final Executive Summary*) was completed in August 2013. The development’s improvements to Eubanks Road, which have been vetted through both the Chapel Hill Transportation Division and NCDOT Region 5, will not only support existing daily traffic volumes, but will incorporate through lanes, turn lanes and storage volumes to improve existing traffic. 14 intersections were analyzed (including intersections

created as part of the development); the Build scenarios are forecast to improve congestion levels at two intersections (Martin Luther King, Jr. Boulevard and the I-40 eastbound ramp; Martin Luther King, Jr. Boulevard and Eubanks Road), and are forecast to degrade one intersection to a “failing” LOS E (Eubanks Road and Old N.C. 86).

The TIAs for Carolina North and Southern Village found that traffic congestion along Martin Luther King, Jr. Boulevard will increase to the point that roadway LOS starts to reach unacceptable levels (as defined by the HCM) by 2030. High-capacity transit investment will be necessary to provide alternatives to single-car travel through the corridor; mode shift from cars to transit will mitigate congestion within the corridor and support efficient mobility for all transportation network users.

## 5.2 Employment within the corridor is forecast to increase

In 2010, just under 34,000 people worked within the study corridor; Table 6 shows that top five public and top five private employees in Orange County. The three largest employers within Orange County are headquartered in the study corridor.

**Table 6: Top Public and Private Employers in Orange County**

Employer	Number of Employees	Public or Private	HQ Located in the Study Corridor?
<b>UNC at Chapel Hill</b>	<b>16,217</b>	<b>Public</b>	<b>Yes</b>
<b>UNC Health Care System</b>	<b>7,964</b>	<b>Public</b>	<b>Yes</b>
<b>Chapel Hill-Carrboro City Schools</b>	<b>2,138</b>	<b>Public</b>	<b>Yes</b>
Blue Cross Blue Shield of NC	1,239	Private	No
Orange County Schools	1,157	Public	No
<b>Town of Chapel Hill</b>	<b>912</b>	<b>Public</b>	<b>Yes</b>
Sports Endeavors/Eurosport	676	Private	No
Harris Teeter, Inc.	489	Private	No
PHE, Inc.	316	Private	No
A Southern Season	314	Private	No

Source: “Snapshot of the Town of Chapel Hill,” Town of Chapel Hill, February 2012

The DCHC MPO estimates that nearly 52,000 people will work within the study corridor in 2040, an increase of 54 percent. Figures 24 through 26 provide detail about the existing and forecast density of employment within the corridor and show the forecast percent change in employment density between 2010 and 2040. While the highest employment density can be found in the downtown – and this area is expected to see high rates of employment growth through 2040 – high rates of employment growth are also projected for the northern portion of the Corridor, particularly in the Carolina North area, and in the southern portion of the corridor near the Obey Creek development area.

Investment in high-capacity transit within the corridor would be an effective way to mitigate congestion that could result from increased travel demand resulting from a greater number of employees accessing jobs within the study corridor.

Figure 24: Existing (2010) Study Corridor Employment Density

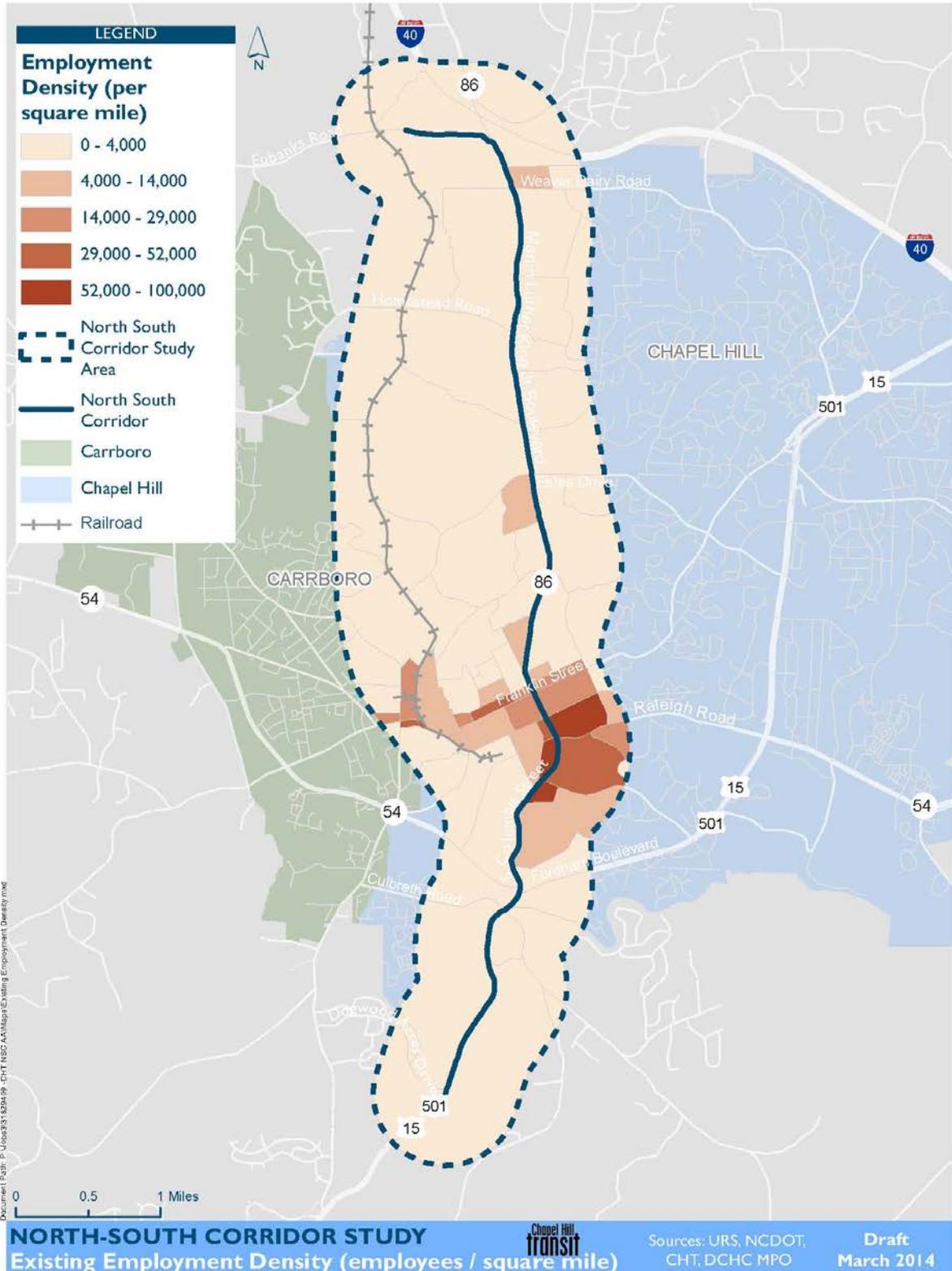
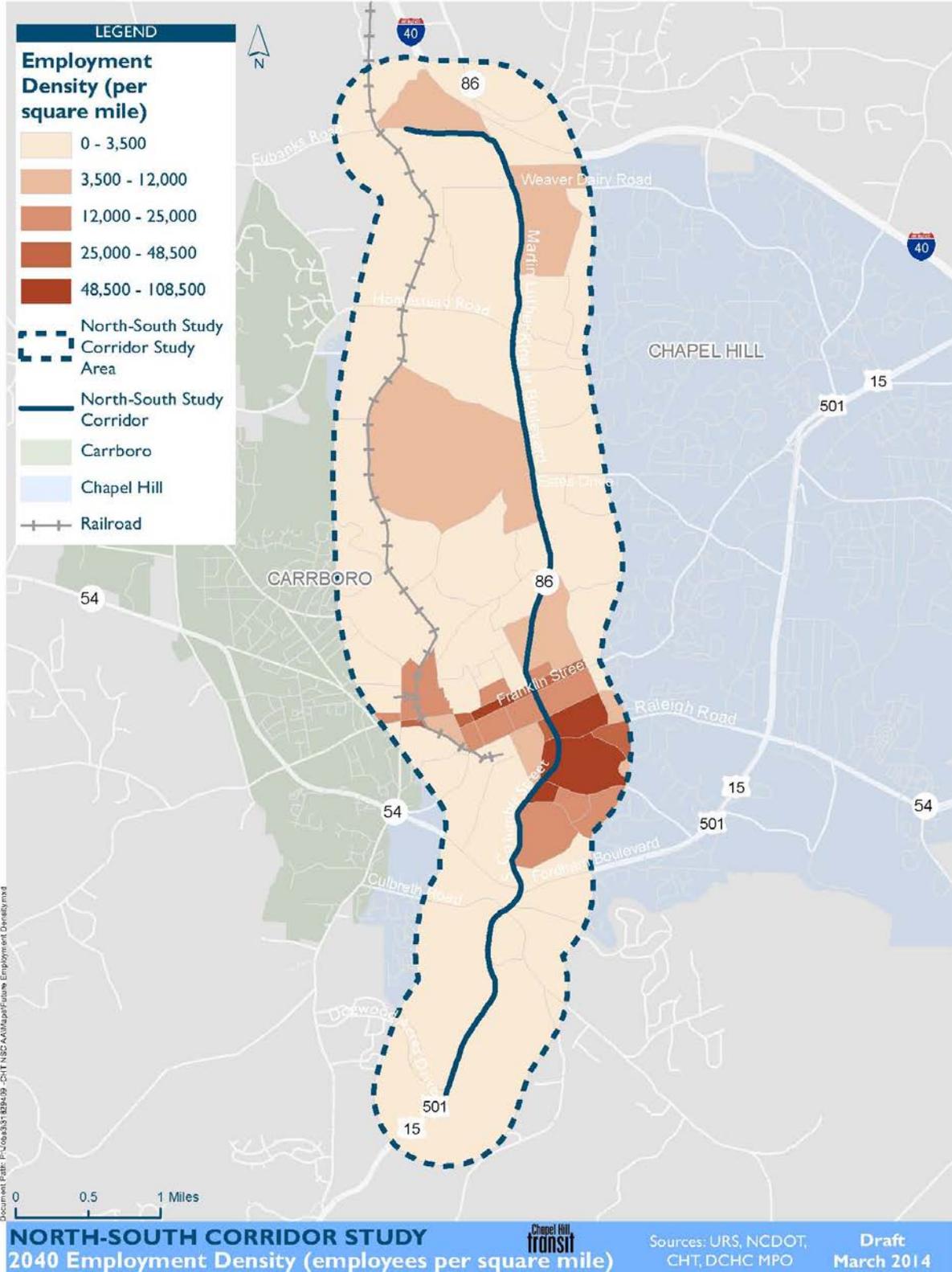
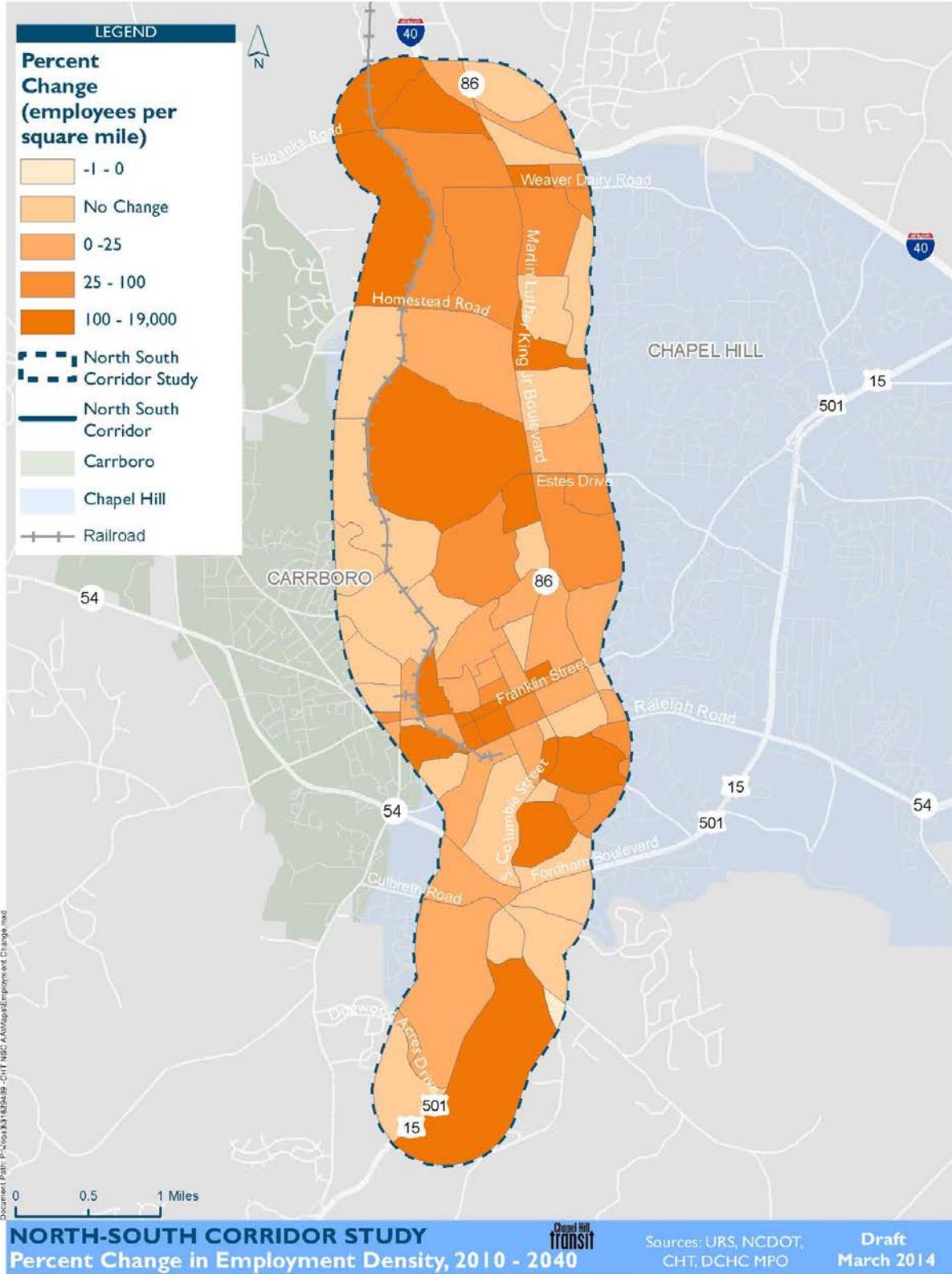


Figure 25: Forecast (2040) Study Corridor Employment Density



**Figure 26: Percent Change in Existing and Forecast Study Corridor Employment Density**



**5.3 Chapel Hill – and employment centers within the corridor – attract commuters from around the region**

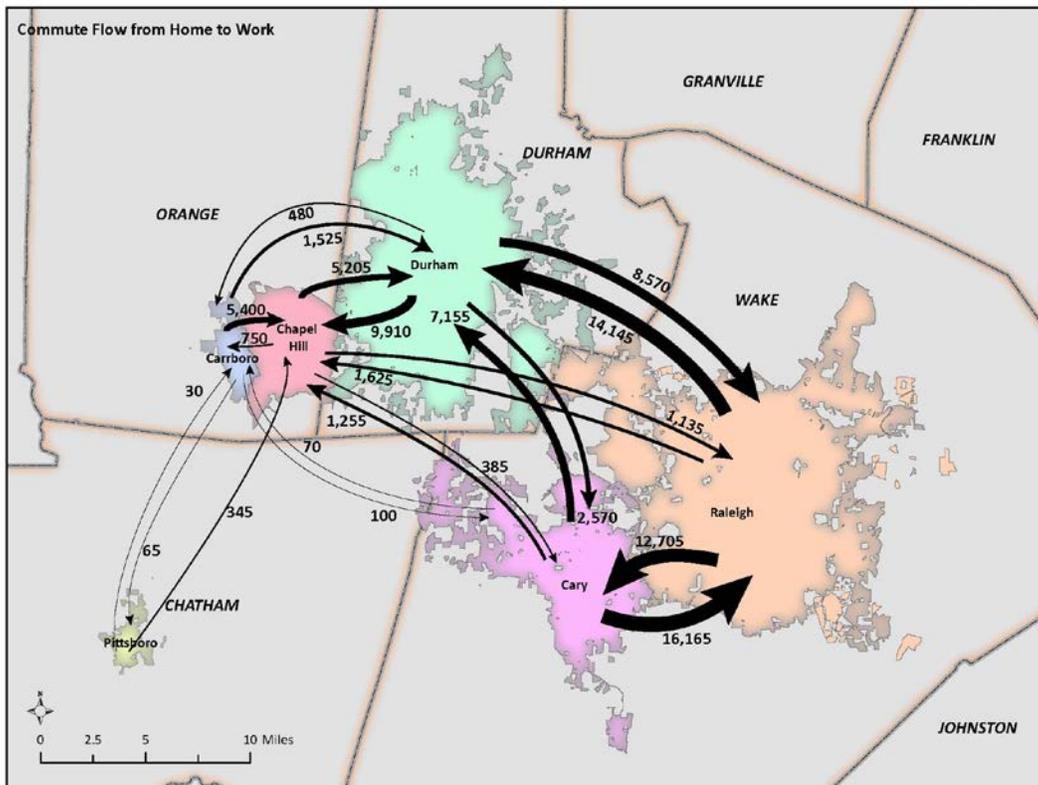
Table 7 and Figure 27 show commute flows between communities within the region. Chapel Hill and Durham both experience a positive net inflow of commuters (more people work than live in the respective municipalities), driven by the presence of major private and public employers and educational/healthcare institutions. This flow can be expected to increase as development within the corridor – particularly at the Carolina North site – intensifies.

**Table 7: Residence-to-Workplace Flows in the Region**

		Work						Total
		Carrboro	Cary	Chapel Hill	Durham	Raleigh	Pittsboro	
LIVE	Carrboro	1,630	100	5,400	1,525	525	65	<b>9,245</b>
	Cary	70	24,375	1,255	7,155	16,165	4	<b>49,024</b>
	Chapel Hill	750	385	14,285	5,205	1,135	45	<b>21,805</b>
	Durham	480	2,570	9,910	68,525	8,570	35	<b>90,090</b>
	Raleigh	120	12,705	1,625	14,145	128,260	10	<b>156,865</b>
	Pittsboro	30	65	345	70	80	495	<b>1,085</b>
TOTAL		<b>3,080</b>	<b>40,200</b>	<b>32,820</b>	<b>96,625</b>	<b>154,735</b>	<b>654</b>	

Source: US Census ACS 2006-2010 Five-Year Data, Census Transportation Planning; URS

**Figure 27: Residence-to-Workplace Flows in the Region**

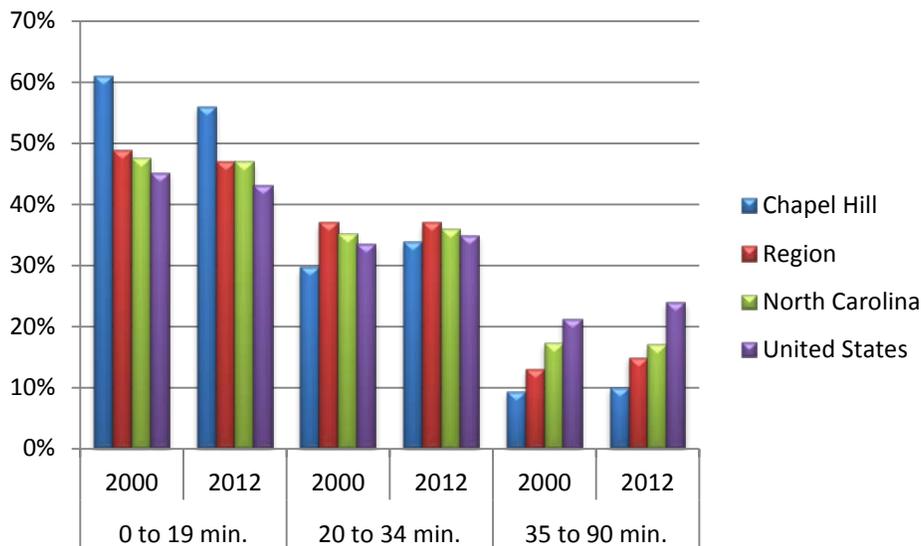


Source: US Census ACS 2006-2010 Five-Year Data, Census Transportation Planning; URS

**5.4 Commute times within Chapel Hill are low, but growing**

As shown in Figure 28, commute times for Chapel Hill residents are low when compared to regional, state and national averages. A majority of Chapel Hill residents that commute (56 percent) travel fewer than 20 minutes to work. While this is a shorter commute time than experienced across the region, state and country, overall commute times for Chapel Hill residents have grown between 2000 and 2012.

**Figure 28: Commute Times**



Source: U.S. Census, American Community Survey, 2008-2012

As forecast population and employment growth occurs within the study corridor, it can be anticipated that the existing transportation network will be unable to support the increased demand (particularly given current levels of service, as discussed in Section 5.1 of this report) and commute times will continue to grow.

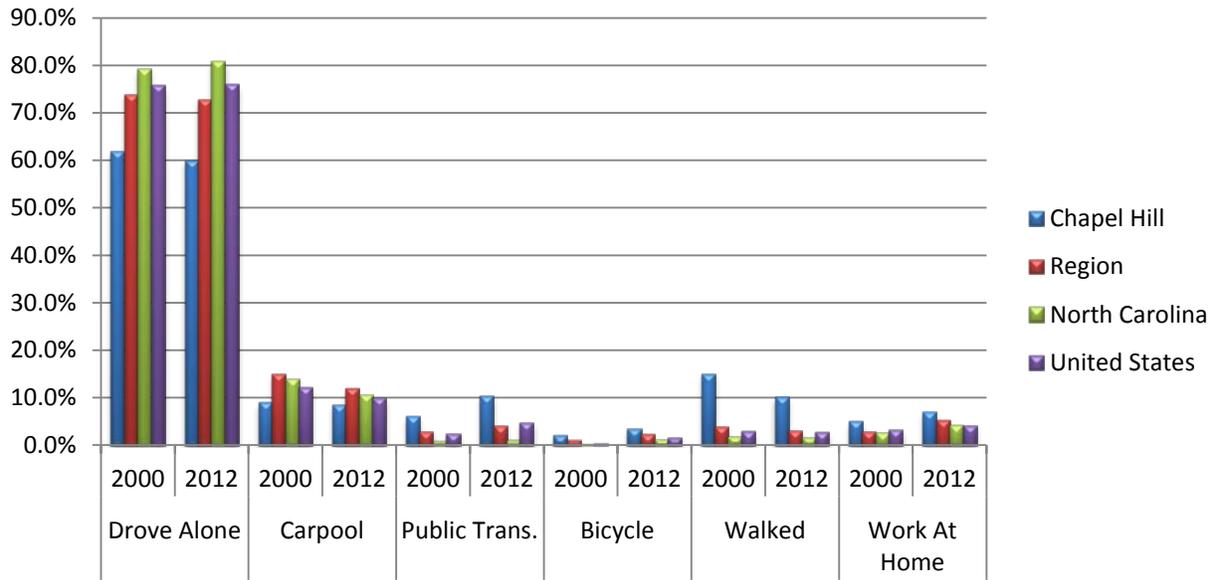
**5.5 Chapel Hill commuters already rely on transit and bikes to commute**

As shown in Figure 29, a comparatively low share of Chapel Hill commuters drove to work alone in 2000, and that share dropped by 2012. Chapel Hill residents use public transportation to commute at a higher rate than residents of the region, state or country, and the mode share for transit increased between 2000 and 2012.

A significantly higher percentage of Chapel Hill residents walked and biked to work than commuters throughout the region, state or country, which indicates proximity of housing to places of employment and the presence of robust pedestrian and bicycle facilities within the Town. These characteristics are typically supportive of transit usage.

Investment in high-capacity transit can leverage existing travel behaviors and patterns to encourage additional mode shift towards transit as a means to reduce vehicular congestion within the corridor and support efficient, sustainable mobility within and throughout the study corridor.

**Figure 29: Commute Mode Share**



Source: U.S. Census, American Community Survey, 2008-2012

## 6. Project Need #5

**Chapel Hill – and the surrounding region – has demonstrated a commitment to sustainable growth strategies in their adopted plans and policies.** Chapel Hill's *2020 Comprehensive Plan* calls for a transportation system that accommodates transportation needs and demands while mitigating congestion, promoting air quality, supporting affordable housing goals, sustainability and energy conservation. Transit service also plays a critical role in increasing access to services. High-capacity transit system investment that leverages existing transportation facilities while reducing reliance on single-occupant vehicles will be necessary to achieve these goals.

### 6.1 Approved development will intensify corridor land use patterns

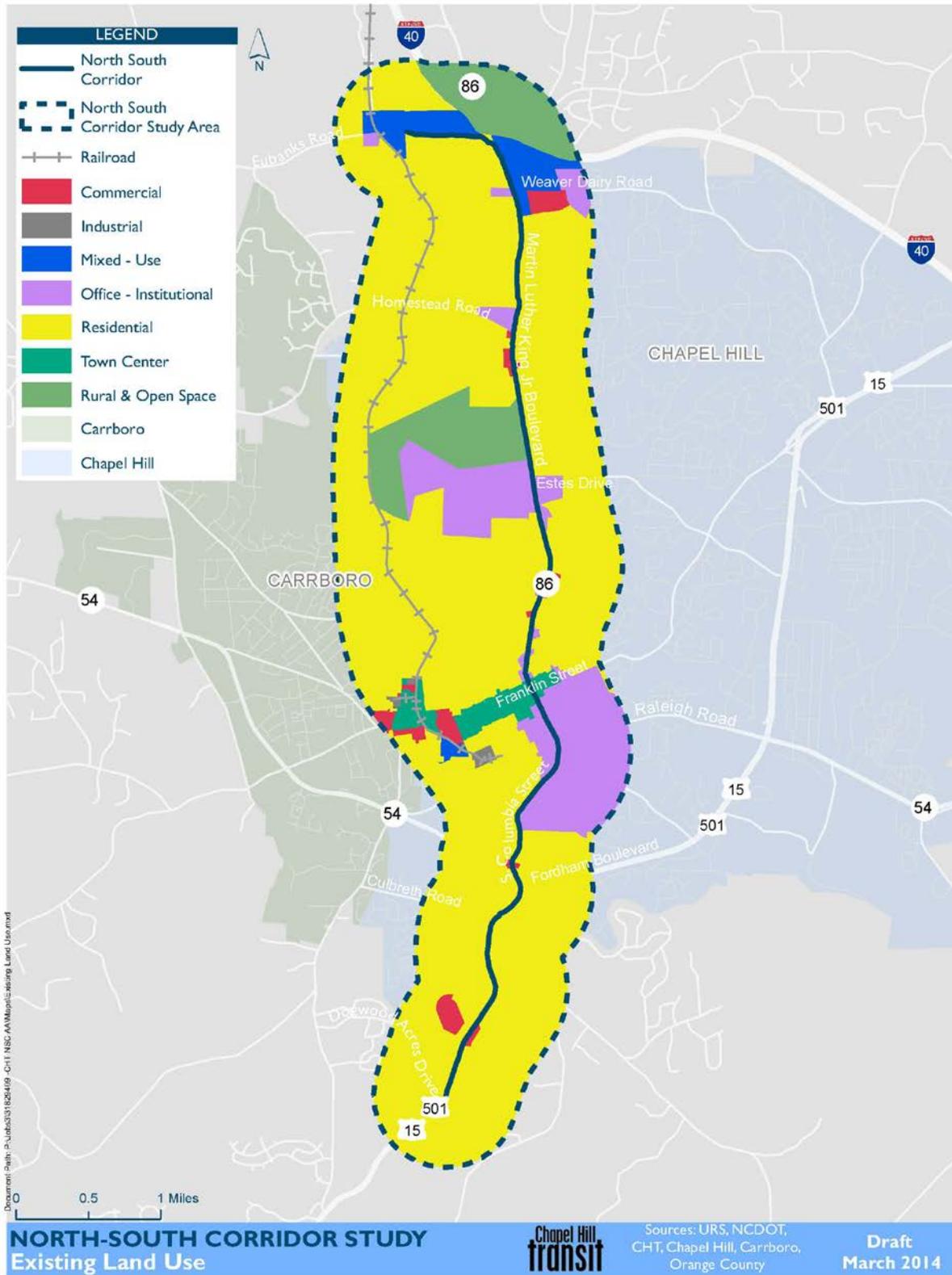
As shown in Figure 30, the existing land use throughout the corridor is predominately residential. However, there are two large areas of institutional land uses – the UNC campus and the new Carolina North development. The northern end of the corridor at Eubanks Road has a combination of mixed-use, rural/open space, commercial and residential. Moving south down the corridor, the areas to the west and east of Martin Luther King Jr. Boulevard are mostly residential, until the Carolina North development. At Carolina North, the land use is institutional. However, as it is part of a campus environment, there will be a significant number of housing units at this site. Between the Carolina North development and the downtown, it is again mostly residential land use. The downtown has a mix of uses, including residential, commercial and civic. To the southeast of the downtown is the UNC campus where the land use is entirely institutional, but again, several residential units are part of the campus environment. South of UNC to the end of the corridor is almost entirely residential, with a few pockets of commercial use.

Development patterns vary significantly throughout the corridor. The northern end of the corridor has a more suburban style of development, with curvilinear streets, larger lots and more open space. The downtown has a grid pattern of street development with smaller residential lots. Between the downtown and the southern end of the corridor is primarily lower-density, suburban style of development again. The Southern Village, anchoring the south end of the corridor, is a New Urbanist-style development. It has its own small town center surrounded by dense residential uses and interspersed with open space.

As described in Section 4.2 of this report, the planned Carolina North, The EDGE and Obey Creek developments will significantly intensify the character and density of land uses at the northern and southern ends of the corridor. The first phase of Carolina North will result in more than three million square feet of mixed-use development on what is currently open land (with the exception of some existing small-scale uses), and The EDGE and the Obey Creek developments could bring hundreds of new dwelling units and hundreds of thousands of square feet of retail/commercial/office uses to the land adjacent to Carolina North and Southern Village (respectively).

While these projects are currently working through the Town's review, approval and construction processes, five Development Opportunity Areas have been designated by the Town within the study corridor. The cumulative impact of these developments will result in a fundamental shift in the type and intensity of land uses at specific locations throughout the length of the corridor, which will alter both travel demand and mobility patterns.

Figure 30: Existing Land Use within the Study Corridor



## 6.2 Corridor, municipal and regional plans call for sustainable growth

Local governments, regional planning authorities and major institutions within the corridor have each made a commitment to sustainable development principles, as demonstrated in adopted plans and policies. High-capacity transit investment is an effective tool to achieve the goals and visions for growth that are contained in these documents. A summary of the relevant plans is included below.

### 6.2.1 Transportation Plans

- The 2040 Capital Area MPO and DCHC MPO *Metropolitan Transportation Plan* recommend Bus Rapid Transit (BRT) on the Chapel Hill Martin Luther King, Jr. Boulevard Corridor. The types of improvements discussed in the plan include more frequent service/improved headways, additional service hours during evenings and weekdays, realigned bus routes to connect with rail routes, new technology, such as satellite tracking of buses, and circulator service to provide connections for the “last mile” for transit riders.
- The *NC 86 / Martin Luther King Jr. Boulevard Corridor and Town-Wide Pedestrian Safety Evaluation Study* makes several recommendations that seek to improve conditions for pedestrian, bicyclists and transit users in the corridor. Some of the specific recommendations include filling in gaps in sidewalk coverage, stripe crosswalks, constructing bus pullouts, and creating raised medians and narrow vehicular lanes.

### 6.2.2 Municipal Plans

- One of the themes of the *Chapel Hill 2020 Comprehensive Plan* is “Getting Around.” There are several goals related to this theme. Overall, this plan advocates a well-conceived and -planned, carefully thought-out, integrated and balanced transportation system that recognizes the importance of automobiles, but encourages and facilitates the growth and usage of other means of transportation such as bicycle, pedestrian and public transportation options.
- The Central West Focus Area was identified as a priority during the Chapel Hill 2020 comprehensive planning process because of development pressures in the area. The *Central West Small Area Plan*, which was adopted by the Town Council on November 26, 2013, included a concept plan, transportation network recommendations, environmental considerations, and streetscaping recommendations. The Plan strongly recommends improvements to transit, sidewalk, and bicycle facilities.
- The draft *Chapel Hill Bike Plan* (March 2014) identified and prioritized the Town’s top 10 bike facilities improvement projects; three of the ten projects are along some portion of Martin Luther King, Jr. Boulevard or Columbia Street, and most of the remaining projects will improve multimodal connectivity between the study corridor and the surrounding area.
- The Carrboro *Vision 2020* policy document (Objective 4.21) recommends that the Chapel Hill Transit system should enhance access to employment activities, youth activities, special events, and educational opportunities at UNC-CH, while building additional park-and-ride lots for easier transit access.
- The goals of the ToCH’s *Greenways Master Plan* are to provide specific recommendations for developing greenway segments and facilities, exploring neighboring greenway connectivity with other jurisdictions, and integrating relevant planning efforts, such as adopted bicycle,

pedestrian, and parks and recreation plans, including the *Chapel Hill 2020 Comprehensive Plan* to encourage a more active, bicycle and pedestrian-friendly community.

- These are several elements and recommendations in *Orange County's Comprehensive Plan* that support high-capacity transit investment within the corridor:
  - There is a strong desire to provide more multi-modal opportunities for commuting.
  - Reducing carbon emissions and increasing energy efficiency of the County's transportation system is paramount.
  - The regional MPO's have concluded that providing well-planned and timely major transit investments is a very important part of maintaining the Triangle region's current levels of transportation mobility, high quality of life and economic prosperity.
  - Development of the new UNC Carolina North campus will be a high priority for transportation planning in the coming years.
  - The County's aging population is increasing; there is a need to provide additional transportation service for seniors.

### 6.2.3 Institutional Plans

- The *UNC Campus Master Plan Update* is an update to the University's 2001 master plan and builds on the objectives of the previous plan. Objectives of the update include:
  - Build carefully – there is limited space for development on the main campus.
  - Strategic Renovation – renewing existing facilities.
  - South Access Road – growth is concentrated in the south end of campus and access to this area needs to be improved.
  - Carolina North – The development of this site is critical for the expansion of the UNC campus.

## 6.3 Transit investment supports the community-approved vision for growth

As shown in Figure 22 and discussed in Section 4.2 of this report, the ToCH has identified nine locations as Development Opportunity Areas. There are several plans for Chapel Hill and the surrounding region that identify sustainable growth as an important goal. Investing in transit is one way for a community to continue to grow while fostering sustainable principles.

Transit is an efficient means of transporting people, contributing to improved air quality, conserving energy resources and reducing automobile infrastructure, such as parking lots and garages. Transit is also an equitable mode of transportation; it is often cost effective and serves communities that may not have access to personal vehicles by providing convenient transit options, access to services increases, improving overall quality of life.

## 7. Public and Stakeholder Involvement

Public involvement is a critical component of the NSCS. Two project open houses were held to introduce the project to corridor stakeholder and members of the general public, and to solicit feedback on the draft Purpose and Need Report. Additionally, participants were asked to provide high-level input regarding existing corridor conditions and potential mode and alignment preferences.

Wednesday, March 26, 2014  
 11:30 am - 1:30 pm  
 Stone Cultural Center  
 UNC Chapel Hill Main Campus  
 150 South Road  
 Chapel Hill, NC

Wednesday, March 26, 2014  
 4:30pm – 7:00 pm  
 Chapel Hill Public Library  
 100 Library Drive  
 Chapel Hill, NC

The meetings were advertised through an announcement on the project website (<http://nscstudy.org/>) beginning February 24<sup>th</sup>, ads onboard 50 CHT buses between March 10<sup>th</sup> and 26<sup>th</sup>, posting of the public meeting on Facebook between March 12<sup>th</sup> and 26<sup>th</sup>, tweets on Twitter every two days between March 12<sup>th</sup> and 26<sup>th</sup>, and emails from the Town of Chapel Hill to more than 3,000 recipients on March 10<sup>th</sup> and 24<sup>th</sup>. A total of 20 attendees came to the two open houses.

The open house format consisted of a series of stations with descriptive boards, which included a project introduction, summary of each of the five project need statements, an overview of the transit modes that will be under consideration, and information related to project next steps.

Attendees were provided with a one-page handout that requested input on existing corridor conditions and potential alignments, preferred modes, and general comments.

### Corridor conditions and potential alignments

Attendees were given the opportunity to comment on existing conditions within the study corridor on a large scroll map, and asked to draw preferred alignments on their individual comment sheets. None of the attendees chose to provide this feedback.

### Potential modes

Attendees were asked to rank their top three preferred modes on their individual comment sheets. Moderate BRT was ranked in the top three most frequently and received the greatest number of “most preferred” rankings. Five of the six remaining modes (No Build, BRT Light, BRT Comprehensive, Streetcar, and Light Rail) received multiple rankings within the top three preferred modes; Commuter Rail was not ranked as a preferred mode by any of the attendees.

### General comments

Attendees provided comments related to:

- Improved connections to the northern and southern edges of the corridor and UNC’s main campus,
- Complementary improvements to east-west transit routes,
- Use of dedicated lanes/right-of-way, and
- Integration of bicycles.

No attendees provided feedback on the project purpose statements.



## 8. Goals and Objectives

The following six goals and related objectives have been established for the NSCS. These will be utilized for the development of evaluation criteria used in comparing the alternatives for the corridor.

**Table 8: NSCS Goals and Objectives**

Goal	Objectives
Increase the efficiency, attractiveness and utilization of transit for all users	<ul style="list-style-type: none"> <li>• Provide reliable, frequent service that improves the experience of existing customers</li> <li>• Provide capacity for future growth</li> <li>• Provide improved passenger amenities and infrastructure</li> <li>• Ensure safe and comfortable transit services and facilities for all users</li> </ul>
Improve multi-modal connectivity between the northern and southern portions of the study corridor	<ul style="list-style-type: none"> <li>• Provide frequent, high-capacity, one-seat transit connections between key study corridor activity generators</li> <li>• Improve pedestrian and non-motorized access to corridor stations</li> <li>• Ensure sufficient park-and-ride access to the system</li> </ul>
Enhance connectivity of the corridor to the regional transportation network	<ul style="list-style-type: none"> <li>• Support regional planning efforts for a more balanced, multi-modal transportation network in the region</li> <li>• Coordinate with existing and planned transit services</li> <li>• Ensure connectivity to services connecting travelers to destinations within and beyond the study corridor</li> <li>• Provide for acceptable traffic operations and parking options in the corridor</li> <li>• Enhance connections to non-motorized transportation</li> </ul>
Support land use and development patterns that reflect the vision for growth contained in local and regional plans and policies	<ul style="list-style-type: none"> <li>• Support the economic development and revitalization efforts of local communities</li> <li>• Support regional economic development through enhanced access to employment concentrations</li> <li>• Support institutional and key stakeholder planning efforts, particularly strategic growth planning for UNC Chapel Hill</li> <li>• Support local and regional goals for compact, mixed-use development along the corridor</li> </ul>
Contribute to regional equity, sustainability and quality of life	<ul style="list-style-type: none"> <li>• Promote a more efficient and sustainable transportation system that reduces energy usage, pollution and costs of living</li> <li>• Increase mobility and accessibility for transit-dependent populations</li> <li>• Provide opportunities for place making and enhanced character in corridor communities</li> </ul>
Develop and select an implementable and community-supported project	<ul style="list-style-type: none"> <li>• Define and select transit improvements with strong public, stakeholder and agency support</li> <li>• Define and select transit improvements that are cost-effective and financially feasible, both in the short- and long-term</li> <li>• Define and select transit improvements that are competitive for Federal Transit Administration funding</li> </ul>



## 9. Evaluation Criteria

In order to evaluate the different transit modes and alignment options and identify the appropriate mode-alignment pairings that will define the detailed alternatives, the NSCS will follow a three-step method.

- The first step (“Fatal Flaw Analysis”) will entail the assessment of each mode and alignment relative to overall implementation viability.
- The second step (“Detailed Evaluation”) will assess the mode/alignment pairing that passed the Fatal Flaw Analysis.
- The alternative(s) that fare(s) best against the detailed criteria in this second step will be identified as Preferred Alternative(s) and further refined in the third step (“Refine LPA”). The Locally Preferred Alternative will be identified at the conclusion of the third step.

The evaluation criteria associated with each step are a combination of quantitative and qualitative performance measures. The Fatal Flaw phase will apply fewer and broader measures, including information from previous corridor/area studies. The Detailed Evaluation phase will apply more and finer performance measures, and the third step will evaluate the Preferred Alternative(s) against federal criteria to determine the Locally Preferred Alternative. This three-step process will result in the identification of an LPA that not only meets locally-identified project purpose and needs, but is also competitive for federal funding.

Table 9 on the following page presents the evaluation criteria that are likely to be used during the three steps of alternative evaluation. Note that each successive step builds upon the criteria from the previous step, ensuring a consistent rating throughout.

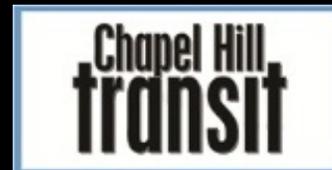
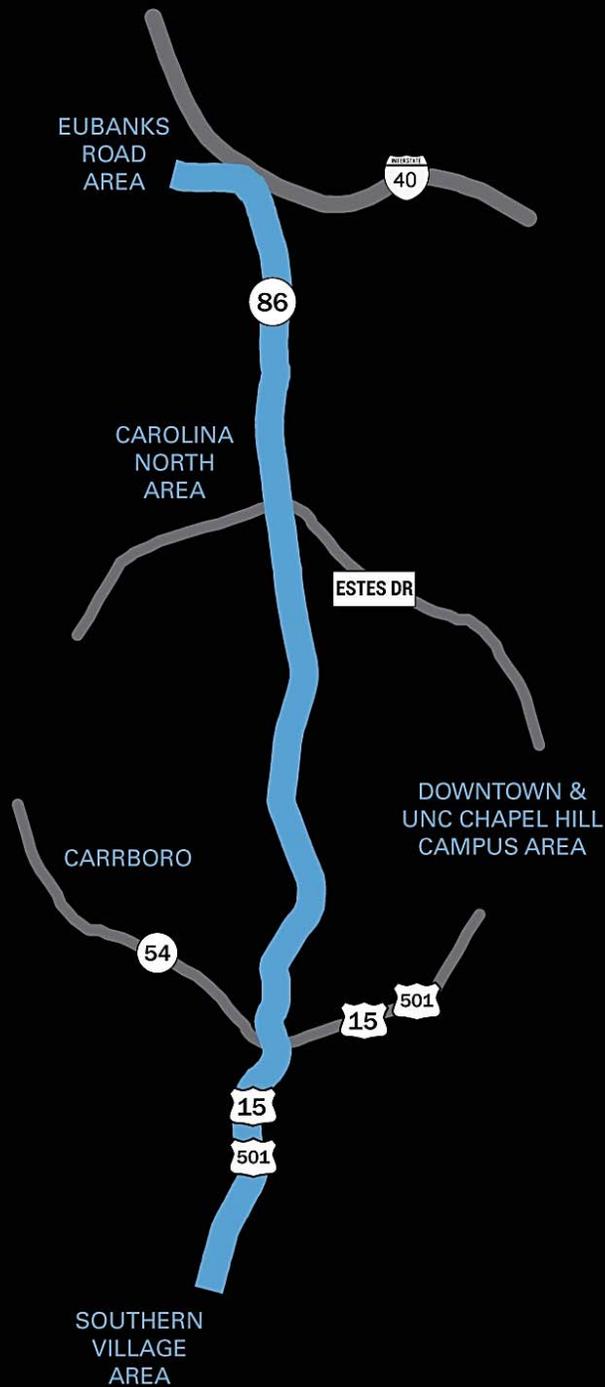
**Table 9: NSCS Potential Evaluation Criteria**

Project Goals	Evaluation Phases		
	Fatal Flaw (qualitative analysis)	Detailed Evaluation (qualitative and quantitative)	Refine LPA (quantitative and qualitative)
Increase the efficiency, attractiveness and utilization of transit for all users	Ridership capacity	Ridership Number of passengers per service-hour Estimated vehicle hours travelled (VHT) Ability to provide appropriate transit capacity	Mobility improvements*
Improve multi-modal connectivity between the northern and southern portions of the study corridor	Multi-modal connectivity	Connections between activity centers Access provided to the community	Mobility improvements* Congestion relief*
Enhance connectivity of the corridor to the regional transportation network	Multi-modal connectivity	Potential right-of-way impacts Bicycle and pedestrian safety Parking and traffic impacts	Congestion relief*
Support land use and development patterns that reflect the vision for growth contained in local and regional plans and policies	Land use / economic development	Compatibility with local and regional plans Land use and economic development opportunities	Economic development* Land use*
Contribute to regional equity, sustainability and quality of life	Environmental impacts	Consistent with existing community character Environmental impacts/benefits	Environmental benefits*
Develop and select an implementable and community-supported project	Capital cost Community support	Capital and operating and maintenance costs Cost effectiveness Community support	Financial capacity analysis* Cost effectiveness*

*\*consistent with FTA New Starts/Small Starts criteria*

# The North-South Corridor Study

Technical Committee  
Meeting #1  
May 8, 2014

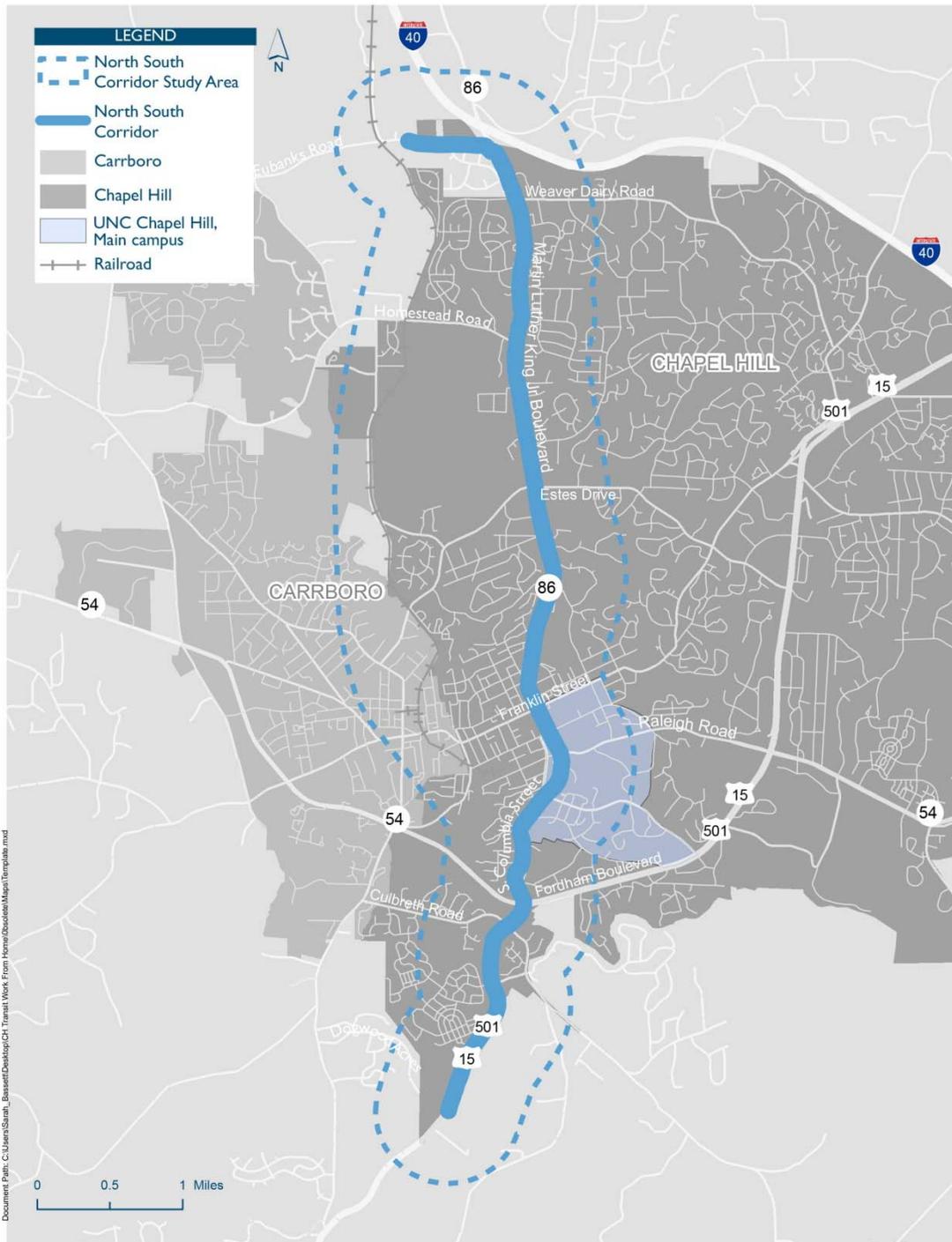


# Agenda

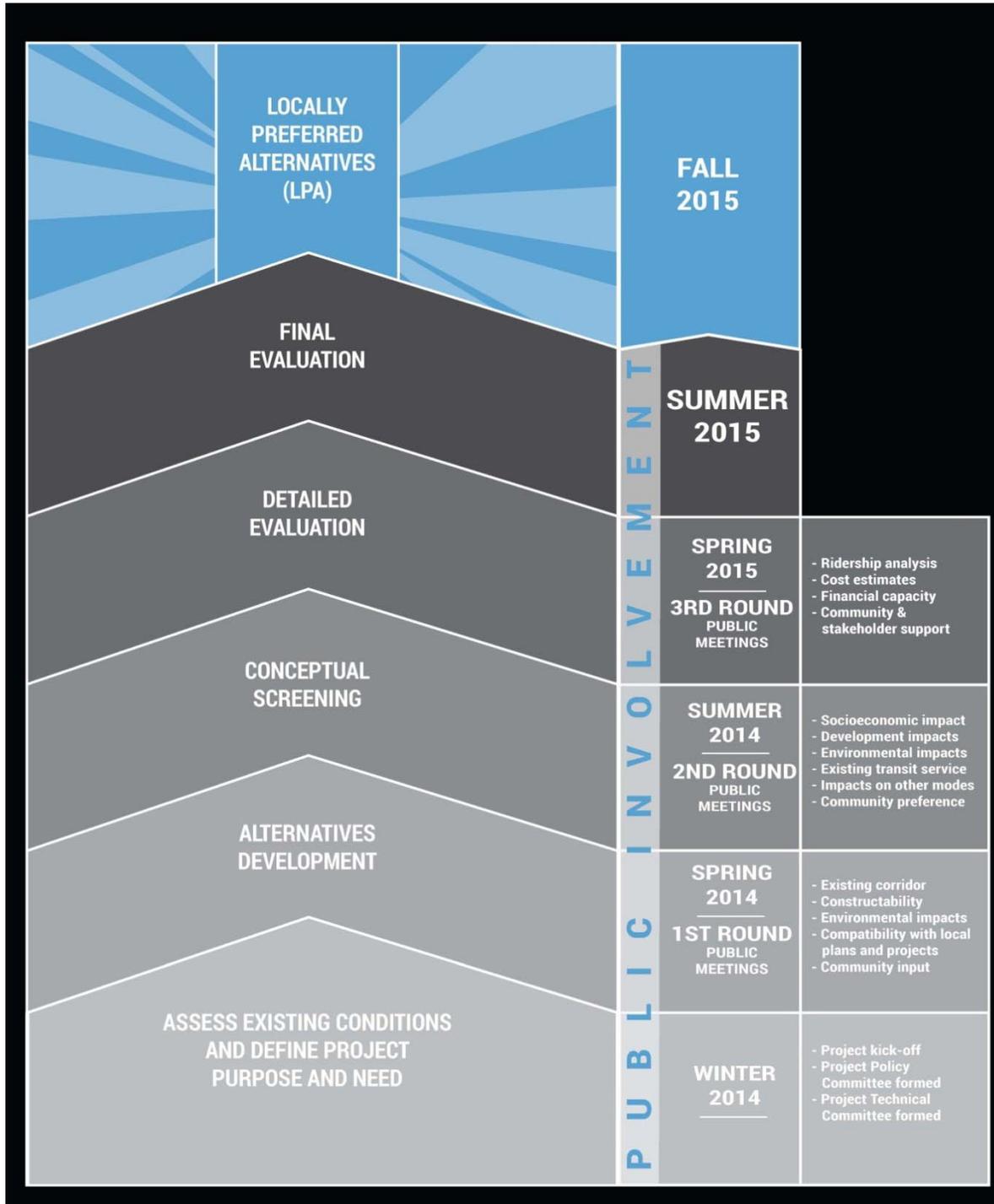
- Project overview
- Project process
- Project committee overview
- Schedule
- Purpose and Need Statements
- Goals and objectives
- Evaluation criteria
- Public involvement
- Next steps

# Project Overview

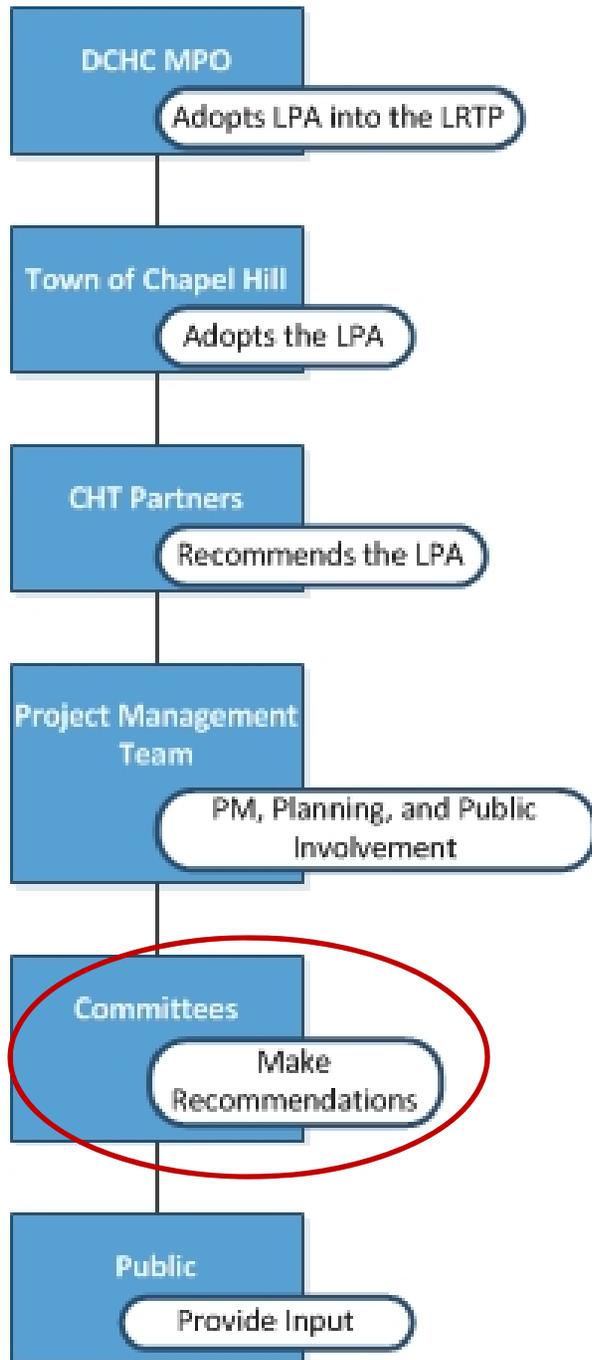
- 15-month study
- Develop and evaluate transit investment alternatives along the MLK Boulevard and 15-501 South corridor from the Eubanks Road P&R lot to the Southern Village P&R lot



# Project Process



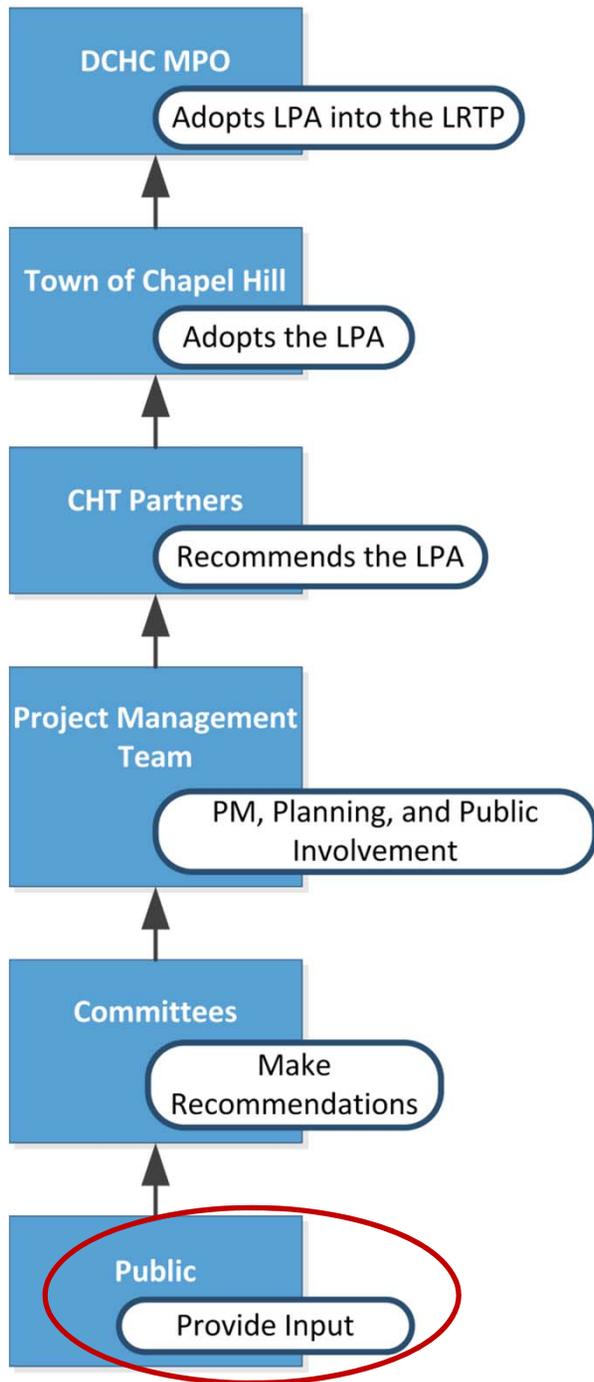
# Decision Making Process



PMT = CHT, Town of Chapel Hill, Town of Carrboro, UNC Chapel Hill, URS  
Role = management of analysis and outreach

TC Role = advisory; monthly meetings to review deliverables, provide observations

PC = reps from elected officials, government, organizational offices  
Role = meets quarterly to review major project milestones and provide policy guidance; formulates project recommendations



# Public Involvement

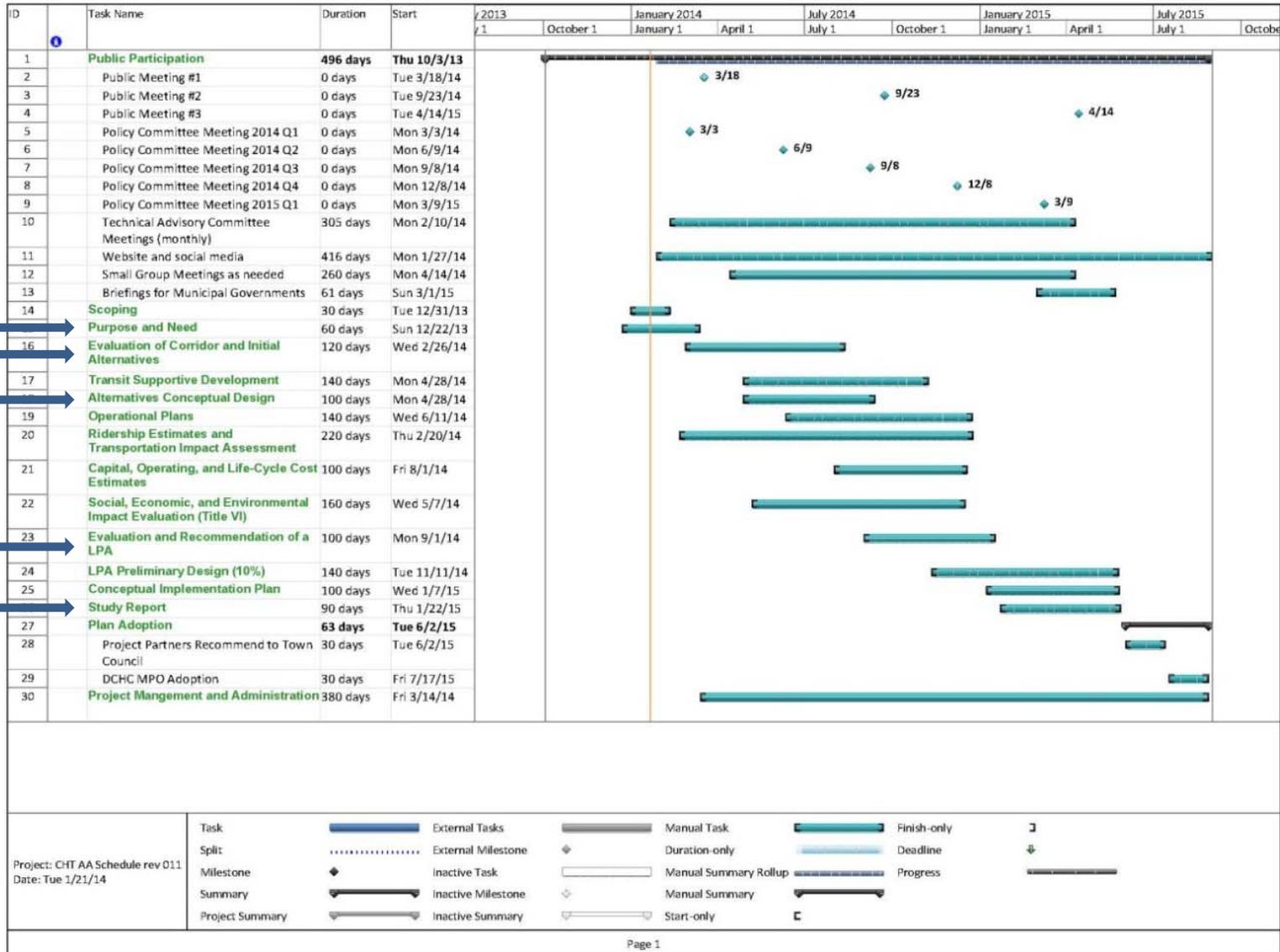
- Foundation of the project decision-making process



# Public Involvement is Multi-Platform

- Two open houses (March 26, 2014)
- Project website ([www.NSCstudy.org](http://www.NSCstudy.org))
- MindMixer ([www.NSCStudy.Mindmixer.com](http://www.NSCStudy.Mindmixer.com))
- Twitter ([www.twitter.com/chtransit](http://www.twitter.com/chtransit))
- Facebook ([www.facebook.com/chtransit](http://www.facebook.com/chtransit))
- YouTube  
([www.youtube.com/user/TownofChapelHill](http://www.youtube.com/user/TownofChapelHill))
- Email

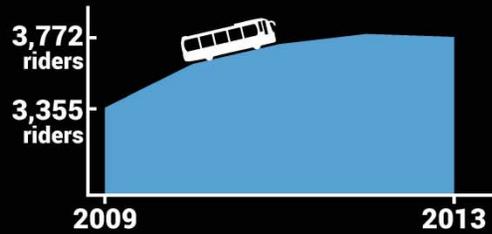
# Project Schedule



# Purpose and Need Statements

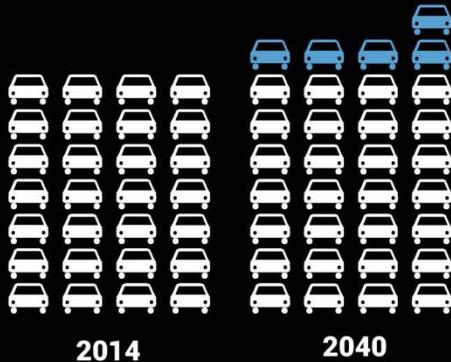
- Framework of the project
- Defines transportation need that requires transit investment
- Identifies project goals and objectives
- Shapes development of evaluation criteria
- Draft – seeking comments from TC

# Corridor Need 1



**Ridership along the NS route grew by 12.5%**

**Chapel Hill Transit ridership has increased by more than 20 percent between 2005 and 2012, and buses often operate at capacity during weekday peak hours on multiple routes.**



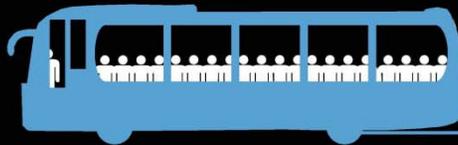
**Traffic volume in the study corridor is expected to grow 17.7%**

Demand is straining capacity, which is reducing operational efficiency and resulting in schedule slippage and bus stacking.

Investment in transit system capacity will ensure that existing rider demand is accommodated and future rider demand is supported.

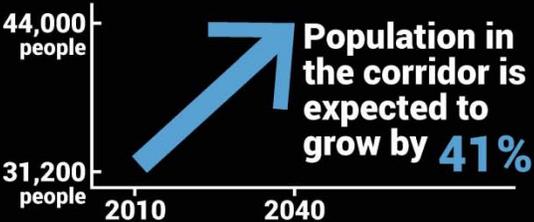


**Buses operate every 4 minutes and have standing room only**



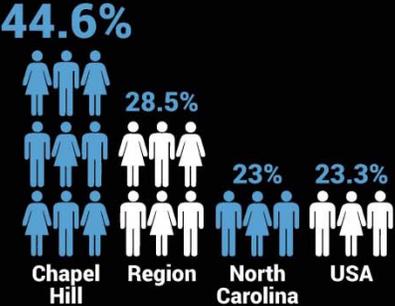
**Exceeding seated capacity by 12%**

# Corridor Need 2



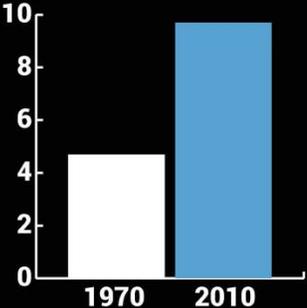
**Chapel Hill is comparatively young, but its fastest-growing demographic is over age 65.**

In 2010, the median age of Chapel Hill residents was 25.6; the median age of US residents was 37.2. From 1970 to 2012, the over-65 age group increased the most relative to all other age groups (from 4.5 percent to 9.4 percent).

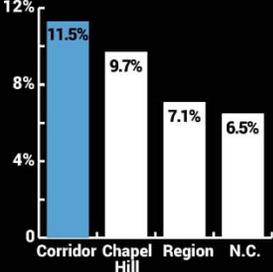


**2012 population between ages 18-34**

Academic research and industry experience has found that both of these demographic groups are increasingly choosing transit for either lifestyle/environmental/economic reasons (Millennials) or mobility reasons (senior citizens).

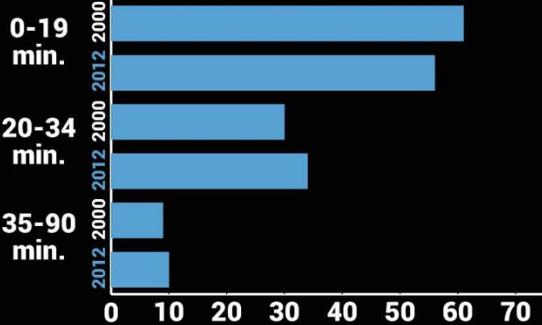


**Percent of Chapel Hill's population over 65 years of age**



**Percent of zero-car households in the corridor**

# Corridor Need 3



**Commute times in Chapel Hill are increasing**

**Major development opportunities at the northern and southern ends of the corridor will fundamentally reshape mobility patterns and needs within the corridor.**

The adopted Chapel Hill 2020 Comprehensive Plan designates several development focus areas along the corridor.

The Town has approved several new developments within the corridor, including Carolina North, and is reviewing several others for approval.

This level of development will expand the number of key activity generators within the study corridor and result in increased travel demand as more people seek to access them.

**The number of people working in the corridor is projected to increase**

**54% by**



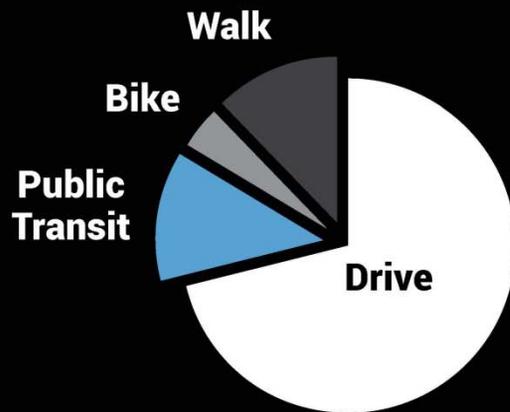
**In 2010, 34,000 people worked in the study corridor**  
**In 2040, 54,000 people may work in the study corridor**

# Corridor Need 3

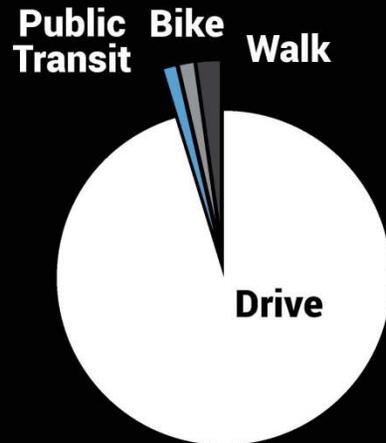


## Key activity centers along the corridor

- |                                     |   |   |   |
|-------------------------------------|---|---|---|
| 1 The Edge                          | 5 Chapel Hill - Carrboro YMCA             | 9 Play Makers Repertory Company               | 13 Kenan Stadium                          |
| 2 Chapel Hill North Shopping Center | 6 Morehead Planetarium and Science Center | 10 Memorial Hall                              | 14 University of North Carolina Hospitals |
| 3 Timberlyne Shopping Center        | 7 Franklin Street                         | 11 University of North Carolina - Chapel Hill | 15 Southern Village                       |
| 4 Carolina North                    | 8 Ackland Art Museum                      | 12 Carolina Inn                               | 16 Obey Creek                             |



**Chapel Hill**



**North Carolina**

**How Chapel Hill and NC residents get to work**

## Corridor Need 4

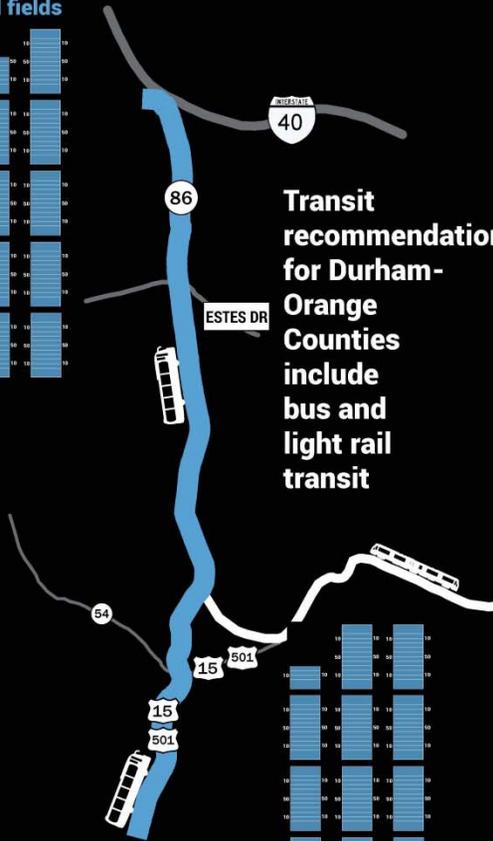
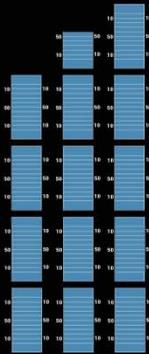
**Multi-modal transportation investments are necessary to accommodate anticipated increases in travel demand resulting from planned development within the corridor.**

Recent technical analyses completed as part of the Carolina North development have forecast that – in the absence of mitigation measures - corridor roadways will reach unacceptable levels of congestion by 2030.

The scale of roadway expansion required to mitigate this congestion is unlikely to be financially feasible, environmentally sensitive, or aligned with Chapel Hill’s vision for growth.

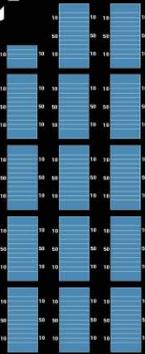
Development at the northern end of the corridor may grow by the size of

**13.6**  
football fields



Development at the southern end of the corridor may grow by the size of

**14.3**  
football fields



## Corridor Need 5

Chapel Hill – and the surrounding region – has demonstrated a commitment to sustainable growth strategies in their adopted plans and policies.

The Chapel Hill 2020 Comprehensive Plan calls for a transportation system that accommodates transportation needs and demands while mitigating congestion, promoting air quality, supporting affordable housing goals, sustainability and energy conservation.

Transit service also plays a critical role in increasing access to services.

High-capacity transit system investment that leverages existing transportation facilities while reducing reliance on single-occupant vehicles will be necessary to achieve these goals.

Goal	Objectives
Increase the efficiency, attractiveness and utilization of transit for all users	<ul style="list-style-type: none"> <li>• Provide reliable, frequent service that improves the experience of existing customers</li> <li>• Provide capacity for future growth</li> <li>• Provide improved passenger amenities and infrastructure</li> <li>• Ensure safe and comfortable transit services and facilities for all users</li> </ul>
Improve multi-modal connectivity between the northern and southern portions of the study corridor	<ul style="list-style-type: none"> <li>• Provide frequent, high-capacity, one-seat transit connections between key study corridor activity generators</li> <li>• Improve pedestrian and non-motorized access to corridor stations</li> <li>• Ensure sufficient park-and-ride access to the system</li> </ul>
Enhance connectivity of the corridor to the regional transportation network	<ul style="list-style-type: none"> <li>• Support regional planning efforts for a more balanced, multi-modal transportation network in the region</li> <li>• Coordinate with existing and planned transit services</li> <li>• Ensure connectivity to services connecting travelers to destinations within and beyond the study corridor</li> <li>• Provide for acceptable traffic operations and parking options in the corridor</li> <li>• Enhance connections to non-motorized transportation</li> </ul>
Support land use and development patterns that reflect the vision for growth contained in local and regional plans and policies	<ul style="list-style-type: none"> <li>• Support the economic development and revitalization efforts of local communities</li> <li>• Support regional economic development through enhanced access to employment concentrations</li> <li>• Support institutional and key stakeholder planning efforts, particularly strategic growth planning for UNC Chapel Hill</li> <li>• Support local and regional goals for compact, mixed-use development along the corridor</li> </ul>
Contribute to regional equity, sustainability and quality of life	<ul style="list-style-type: none"> <li>• Promote a more efficient and sustainable transportation system that reduces energy usage, pollution and costs of living</li> <li>• Increase mobility and accessibility for transit-dependent populations</li> <li>• Provide opportunities for place making and enhanced character in corridor communities</li> </ul>
Develop and select an implementable and community-supported project	<ul style="list-style-type: none"> <li>• Define and select transit improvements with strong public, stakeholder and agency support</li> <li>• Define and select transit improvements that are cost-effective and financially feasible, both in the short- and long-term</li> <li>• Define and select transit improvements that are competitive for Federal Transit Administration funding</li> </ul>

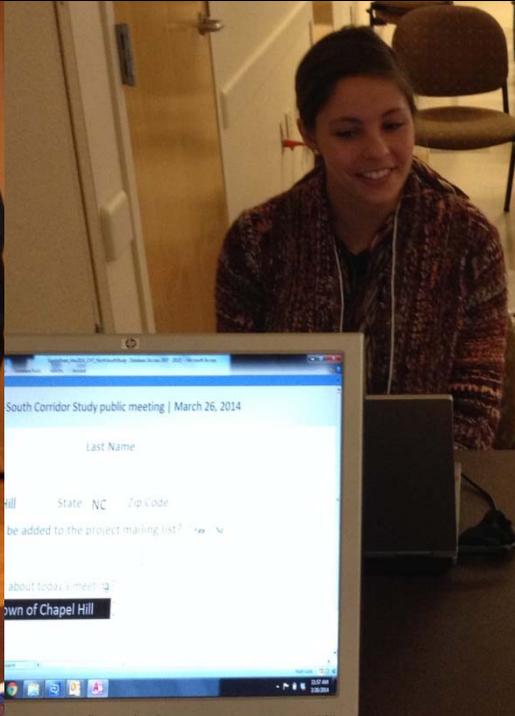
Project Goals	Evaluation Phases		
	Fatal Flaw (qualitative analysis)	Detailed Evaluation (qualitative and quantitative)	Refine LPA (quantitative and qualitative)
Increase the efficiency, attractiveness and utilization of transit for all users	Ridership capacity	Ridership Number of passengers per service-hour Estimated vehicle hours travelled (VHT) Ability to provide appropriate transit capacity	Mobility improvements*
Improve multi-modal connectivity between the northern and southern portions of the study corridor	Multi-modal connectivity	Connections between activity centers Access provided to the community	Mobility improvements* Congestion relief*
Enhance connectivity of the corridor to the regional transportation network	Multi-modal connectivity	Potential right-of-way impacts Bicycle and pedestrian safety Parking and traffic impacts	Congestion relief*
Support land use and development patterns that reflect the vision for growth contained in local and regional plans and policies	Land use / economic development	Compatibility with local and regional plans Land use and economic development opportunities	Economic development* Land use*
Contribute to regional equity, sustainability and quality of life	Environmental impacts	Consistent with existing community character Environmental impacts/benefits	Environmental benefits*
Develop and select an implementable and community-supported project	Capital cost Community support	Capital and operating and maintenance costs Cost effectiveness Community support	Financial capacity analysis* Cost effectiveness*

# Public Involvement through Phase I

- Publicity for the Public Meetings included:
  - Ads aboard 50 CHT buses from March 10 - 26.
  - Announcement of the public meetings on NSCstudy.org starting Feb. 24
  - Posting of the public meetings on Facebook from March 12 - 26
  - Tweets on Twitter every two days from March 12-26
  - email from the Town of Chapel Hill to 3000+ addresses on March 10, 2014
  - email from the Town of Chapel Hill to 3000+ addresses on March 24, 2014
- People signed in to March 26, 2014 public meetings (two meetings): 22
- New emails acquired via the signup on the NSCstudy.org website: 28
- Website visits in the month of March 2014: 2,247, up 140% from the month of February
- Active participants on MindMixer: 6
- Ideas offered on MindMixer: 16



# Public Meeting at UNC Stone Center



# Public Meeting at the CH Public Library



# North-South Corridor Study



## Navigation

-  Home
-  Study Documents
-  FAQ
-  Your Feedback
-  News Articles
-  Chapel Hill Transit

**New!** Give us feedback on the project using our online community forum at [www.NSCStudy.Mindmixer.com](http://www.NSCStudy.Mindmixer.com) Start now!



Chapel Hill Transit is conducting the North-South Corridor Alternatives Analysis, "North-South Corridor Study" for short, to evaluate the best methods for moving more residents and commuters from the North-South Corridor (between 15th Avenue and 15-501 South corridor) to the University of all

[Project Website](#)

## Social Media



## Latest News

- > Miss the public meeting?
- > North-South Corridor Study public meetings March 26
- > Two Public Meetings on March 26

# Welcome to North-South Corridor Study, Chapel Hill.

The North-South Corridor Study will help identify transit alignment and mode for a travel corridor along MLK Jr. Blvd. whose northern terminus is: Eubanks Road & Martin Luther King, Jr. Boulevard and southern terminus is Southern Village.

 Connect with Facebook

or Sign Up with Email

## Activity

Sort by: **Newest** ▾



**Paul Humberger** added an idea in **Challenges in the Corridor!**

UPDATED Apr 21

### I think this is the perfect corridor!

The Martin Luther King Jr. Corridor is so heavily congested at peak hour that having a dedicated, reliable transit network would be fantastic.

Share 

Flag



**Terry M.** added an idea in **Improving Our Community's Transportation!**

Mar 28

### More data

## Who's Listening



**Brian Litchfield**  
Director, Chapel Hill Trans



**Mila Vega**  
Transit Service Planner/P  
Manager



**David Bonk**  
Long Range and Transpor  
Mgr.

MindMixer online community forum

BjrlU5ICEAA9H...jpg-large

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Chapel Hill Transit Timeline Recent

✓ Liked



Chapel Hill Transit

March 31

Enhanced transit to MLK Jr. Blvd and 15-501 South. If you missed our meeting, check out our online community forum at <http://t.co/ixLAZ3NmV>



NSC Study

NSCStudy.org

Chapel Hill Transit is conducting the North-South Corridor Alternatives Analysis, "North-South Corridor Study" for short, to evaluate the best methods for

Like · Comment · @chtransit on Twitter · Share



Chapel Hill Transit

March 26

The UNC Stone Center public meeting is under way. Stop by and share your thoughts about the #NSCStudy <http://t.co/xuoR3Lrxti>



Chapel Hill Transit (@chtransit) posted a photo on Twitter

pic.twitter.com

Get the whole picture - and other photos from Chapel Hill Transit

Like · Comment · @chtransit on Twitter · Share

Like · Comment · @chtransit on Twitter · Share



Chapel Hill Transit

March 26

The #NSCStudy public meeting at the Chapel Hill Public Library has started. We'll be here until 7:00 so come on by. <http://t.co/fynx9ut9Aa>



Chapel Hill Transit (@chtransit) posted a photo on Twitter

pic.twitter.com

Get the whole picture - and other photos from Chapel Hill Transit

Like · Comment · @chtransit on Twitter · Share



Chapel Hill Transit

March 26

Come meet CHTransit Director Litchfield #NSCStudy public meeting 11:30 at Stone Center on UNC campus, 4:30 – 7:00 at the CH Public Library.

Like · Comment · @chtransit on Twitter · Share

Social Media posts: Facebook and Twitter

# Alternatives Development Workshop

- PMT work session
- Defined potential modes
- Drafted potential alignments
- What does the TC think?
- Next step: Fatal Flaw Analysis

# Next Steps

- Finalize Project Purpose and Need
  - Take to CHT for adoption at end of May
- Develop conceptual alternatives
- Identify initial evaluation criteria
- Tier 1 evaluation (Fatal Flaw Analysis)

**7B. Long Range Financial Sustainability Plan Update**

Staff Resource: Rick Shreve, Budget Manager  
Brian Litchfield, Director

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**Overview**

The consultant team is at work on a number of parallel tracks all ultimately converging towards a long range strategic and financial plan for CHT.

The foundational elements underway include:

- Organizational analysis (Partners were presented with the early work on this).
  - Developing plan to “step in” to staffing levels consistent with the size and ridership of CHT.
- Capital planning (Partners were presented with the early work on this).
  - Vehicle replacement strategy – The consultants are working on several scenarios that will ultimately inform us as we create a strategic vehicle replacement plan.

A detailed update on these critical elements will be provided to the Partners during the August meeting.

**Presentations**

All of the consultant’s previous presentations for the Partners are available on the project website (<http://chtstrategicplan.com/index.html>) under documents.

**Public Outreach**

The first public workshops were held in early March, at Carrboro Town Hall, and the Chapel Hill Public Library. The consultants are working on several public outreach efforts with focus groups, and interviews with stakeholders, to better inform the study.

The team is also nearing the implementation stage for the “Build a Transit System” online tool.

**Next Steps**

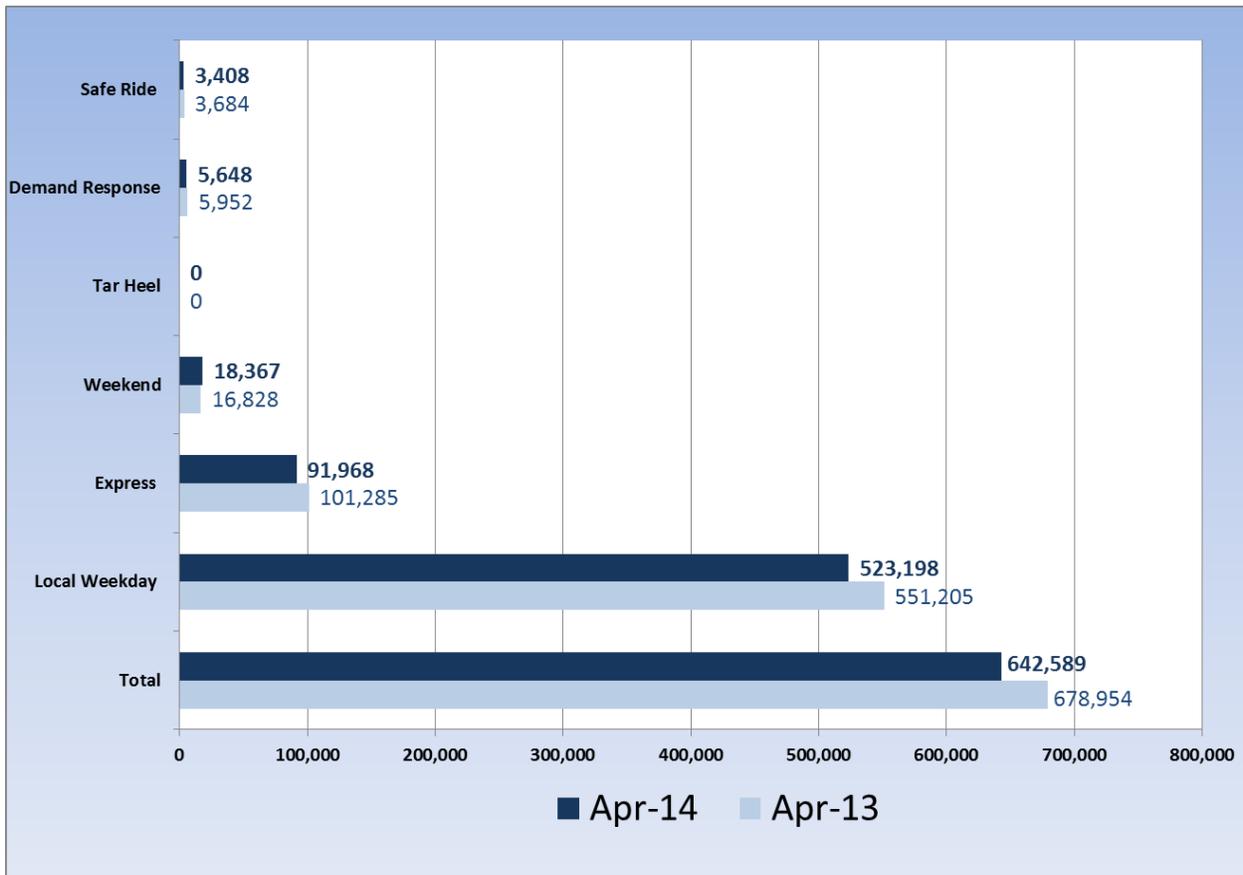
Staff will continue to work with the consultant team on the developments of the tracks mentioned above, and will provide regular updates to the Partners.

CHT staff will work with the Partners individually to present updates in the fall to the Town of Chapel Hill Council, the Town of Carrboro Aldermen, and appropriate staff and administrators at UNC.

7C. April Performance Report

Staff Resource: Mila Vega, Service Planner

- In April 2013 there were 22 Weekday Service Days and in April 2014 there were 21. Due to the difference in service days, the ridership is lower in April 2014 compared to April 2013. The fluctuation of ridership due to the number of service days is a typical trend.
- Overall, as of April 2014, FY13-14 is on track to maintain comparatively similar ridership to FY12-13. There is 1% increase in cumulative ridership from FY12-13 to FY13-14.



	Apr-13	Apr-14	FY12-13	FY13-14
Weekday Service Days	22	21	207	208
Safe Ride Service Days	12	12	88	91
Saturday Service Days	4	5	48	47
Sunday Service Days	4	4	34	32
Tarheel Express Service Days	0	0	25	28
FCX	40,370	43,491	361,183	430,606
HU	11,486	8,568	113,136	98,447
JFX	17,468	10,941	174,972	112,776
CPX	15,133	11,865	132,672	117,041
CCX	13,068	11,613	114,213	102,266
DX	2,134	1,974	26,667	21,938
PX	1,626	3,516	21,050	35,156
A	33,110	30,768	255,059	277,522
CL	4,246	3,423	37,518	39,162
CM	15,048	15,582	129,982	135,624
CW	15,048	18,816	165,833	190,761
D	41,676	37,752	380,855	396,947
F	21,296	18,774	192,876	192,719
G	19,844	21,440	164,391	198,641
HS	3,256	3,843	28,489	35,635
J	87,384	82,614	782,937	777,790
N	14,146	14,238	114,466	129,166
NS	77,552	71,185	705,983	706,725
NU	37,092	37,023	274,572	288,857
RU	45,147	41,278	302,251	320,205
S	45,518	36,561	413,588	336,226
T	26,426	24,045	231,985	220,829
U	50,798	53,613	405,298	439,452
V	13,618	12,243	121,781	120,717
SAFE G	396	348	3,055	4,366
SAFE J	1,032	972	7,793	8,378
SAFE T	2,256	2,088	12,377	17,134
<b>Weekday Fixed Route Total</b>	<b>656,174</b>	<b>618,574</b>	<b>5,674,983</b>	<b>5,755,085</b>
Change from previous year (%) weekday		-6%		1%
CM	268	694	3,699	5,855
CW	732	1,328	8,924	11,171
D	1,324	1,741	15,483	14,076
NU (sat)	2,676	2,343	20,223	14,890
T	1,340	2,007	14,683	15,610
U (sat)	3,284	4,508	25,940	27,220
FG	800	885	8,812	7,924
JN	908	1,068	9,869	9,582
NU (sun)	2,752	2,505	20,441	15,995
U (sun)	2,744	1,290	21,015	15,524
<b>Weekend Fixed Route Total</b>	<b>16,828</b>	<b>18,367</b>	<b>149,091</b>	<b>137,845</b>
Change from previous year (%) weekend		9%		-8%
<b>Total Fixed Route Passenger Trips</b>	<b>673,002</b>	<b>636,941</b>	<b>5,824,074</b>	<b>5,892,931</b>
<b>Change from previous year (%)</b>		<b>-5%</b>		<b>1%</b>
Demand Response	5,952	5,648	48,420	53,562
Tar Heel Express/Special Service	0	0	142,339	143,949
<b>All Service Categories Ridership</b>	<b>678,954</b>	<b>642,589</b>	<b>6,014,833</b>	<b>6,090,442</b>
<b>Change from previous year (%)</b>		<b>-5%</b>		<b>1%</b>

## 8A. Operations

Staff Resource: Tyffany Neal, Operations Manager - Demand Response  
Nick Pittman, Fixed Route Operations Manager

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**Memorial Day Holiday**

- CHT services will not operate on Monday, May 26, 2014, in observance of the Memorial Day holiday. CHT services will resume on Tuesday, May 27, 2014.
- Notices have been posted on vehicles, along with a press release and social media messages.

**UNC Commencement Shuttles**

- CHT staff worked with UNC's Department of Public Safety to provide shuttle service for the Commencement Ceremony at Kenan Stadium on Sunday, May 11, 2014. Shuttles operated from University Mall and the Friday Center Park and Ride, providing over 7,000 rides.

**Demand Response – Tyffany Neal**

- Demand Response's On-Time Performance (OTP) for the month of April 2014 – 93.06%
- Demand Response's Total Cancellations for the month of April 2014 – 24.7%.
- Demand Response had one (1) Missed Trip in April 2014.
- Demand Response has recently graduated two (2) out of the four (4) trainees into revenue service. The remaining two (2) trainees are expected to complete training by the end of May 2014.
- The EZ Rider Advisory Committee (EZRAC) will meet in June 2014 to finalize discussions and review the final draft of the EZ Rider Application. EZRAC has been working diligently to modify the current application to simplify the understanding of information required within the current eligibility process. Staff will provide the draft to the Partners sometime in July 2014 for review.

**Fixed Route – Nick Pittman**

- Fixed Route will graduate three (3) new hire Operators to service on May 22nd. Job offers are currently being made to potential new hires and we will begin a training class in early June.
- Fixed Route's On-Time Performance (OTP) for the month of April 2014 – 84%;
- Operations/ Safety Meetings were held on April 23, 2014. During these meetings Town Manager Roger Stancil presented his "Open Book Tour" and we also reminded our operators of the uniform policies and the expectations that are associated with how we present ourselves to the public.

## 8B. Maintenance

Staff Resource: Carl Rokos, Fleet and Facilities Manager

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**Preventive Maintenance Inspections**

- Currently Fixed Route Preventive Maintenance on time performance for the month of April is 89.2% on time. A total of 37 inspections were performed. FY 13-14 PM on time performance for Fixed Route is 95% on time. Currently Demand Response Preventive Maintenance on time performance for the month of April is 90% on time. A total of 10 inspections were performed with 9 on time and one late. FY 13-14 PM on time performance for Demand Response is 93% on time.

**Training**

- Three mechanics attended Cummins Insite Familiarization Class in Charlotte NC at the Cummins Training Center. All mechanics attended a tire mounting and dismounting class held at CHT, other local transit agencies also attended this class. Upcoming training covering Cummins engine tune up and injector replacement and after treatment systems is planned in May at CHT and will be attended by CHT Mechanics and Mechanics from DATA and TTA. This training is the culmination of collaboration between these agencies and the Cummins training center in Charlotte.

**Maintenance Activities**

- Annual HVAC campaign is on target to meet the goal of completion by the end of May.
- Relining of the shop bay floors is scheduled for May.

8C. Director

Staff Resource: Brian Litchfield

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- The Director's Report will be provided to the Partners at the May 20, 2014 meeting.



CHAPEL HILL TRANSIT  
 Town of Chapel Hill  
 6900 Millhouse Road  
 Chapel Hill, NC 27514-2401

phone (919) 969-4900 fax (919) 968-2840  
[www.townofchapelhill.org/transit](http://www.townofchapelhill.org/transit)

**CHAPEL HILL TRANSIT PUBLIC TRANSIT COMMITTEE  
 FUTURE MEETING ITEMS**

**April 29, 2014**

<b>June 24, 2014 11:00 a.m.</b>	
Action Items	Informational Items
	AA Study Update Financial Sustainability Study Update FY 14/15 Budget Process
<b>July, 2014 11:00 a.m. No Meeting</b>	
Action Items	Informational Items
<b>August 26, 2014, 2014 11:00 a.m.</b>	
Actions Items	Informational Items

<b><u>Key Meetings/Dates</u></b>
APTA International Practicum on Innovative Transit Funding & Financing-June 12-13, 2014, Hotel Omni Mont-Royal, Montreal, QC
APTA Sustainability & Public Transportation Workshop-August 3-5, 2014, Omni Parker House Hotel, Boston, MA
APTA State Public Transportation Partnerships Conference-August 13-15, 2014, Philadelphia, PA