DCHC

DURHAM-CHAPEL HILL-CARRBORO METROPOLITAN PLANNING ORGANIZATION

Member Governments
Town of Carrboro
Town of Chapel Hill
County of Chatham
City of Durham
County of Durham
Town of Hillsborough
NC Department of Transportation
County of Orange

DURHAM – CHAPEL HILL - CARRBORO METROPOLITAN PLANNING ORGANIZATION TRANSPORTATION ADVISORY COMMITTEE (TAC)

May 9, 2012 **Committee Room**
9:00 am **2nd Floor Durham City Hall**

1. **Roll Call**
2. **Adjustments to the Agenda**
3. **Public Comments**
4. **Directives to Staff (Attachment 4)**

ACTION ITEMS

5. **April 11, 2012 TAC Meeting Minutes (9:00-9:05)**
Attachment 5

A copy of the April 11, 2012 TAC meeting minutes is enclosed as Attachment 5.

TAC Action: Approve minutes of the April 11, 2012 TAC meeting.

6. **FY 2013 UPWP (9:05-9:15)**
Attachment 6
Maricia Brown, LPA Staff

Annually, the DCHC MPO is required by federal regulations to prepare a Unified Planning Work Program (UPWP) that details and guides the urban area transportation planning activities. Funding for the UPWP is provided on an annual basis by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA). Essentially, the UPWP provides yearly funding allocations to support the ongoing transportation planning activities of the DCHC MPO. The UPWP must identify MPO planning tasks to be undertaken with the use of federal transportation funds, including highway and transit programs. Tasks are identified by an alphanumeric task code and description.

TCC Recommendation: That the TAC approve the resolution "Approving the FY 2012-2013 Unified Planning Work Program," the FTA resolution "Approving the FY 2012-2013 Unified Planning Work Program (UPWP) of the DCHC Urban Area/Metropolitan Planning Organization," and the "Resolution Certifying the Durham-Chapel Hill-Carrboro (DCHC MPO) Metropolitan Planning Organization's Transportation Planning Process for FY 2012-2013 (FY 2013)."

TAC Action: Approve the resolution "Approving the FY 2012-2013 Unified Planning Work Program," the FTA resolution "Approving the FY 2012-2013 Unified Planning Work Program

(UPWP) of the DCHC Urban Area/Metropolitan Planning Organization," and the "Resolution Certifying the Durham-Chapel Hill-Carrboro (DCHC MPO) Metropolitan Planning Organization's Transportation Planning Process for FY 2012-2013 (FY 2013)."

7. NC 54/I-40 Corridor Study (9:15-9:45)
Attachment 7, 7A, 7B
Leta Huntsinger, LPA Staff

The TAC released the draft NC 54/I-40 Corridor Study report for public comment in December 2011. The draft report was previously distributed to TAC members and is posted on the NC 54 Corridor Study website: http://www.nc54-i40corridorstudy.com/DraftReport.html. Please bring your copy of this report to the meeting for reference purposes.

The public review period extended from December 2011 to March 16, 2012. Attachment 7 summarizes citizen and agency comments on the study along with a staff response to each comment. The feedback received from citizens, citizen advisory boards, resource agencies, and elected officials guided the development of a final set of report modifications and edits. These modifications and edits are included in a report addendum. Attachment 7A is the updated Executive Summary with the Addendum included, and Attachment 7B is the updated Final Report Addendum. This addendum is included in the electronic PDF file of the final report; this file includes active links that allow the reader to navigate easily the changes. In an effort to save printing costs, a final hard copy of the report will be provided to TAC members following adoption of the final report.

TCC Recommendation: That the TAC approve the NC 54/I-40 Corridor Study.

TAC Action: Approve the NC 54/I-40 Corridor Study

8. FY 2013-2015 Congestion Mitigation Air Quality Projects (9:45-9:55)
Attachment 8, 8A, 8B
Ellen Beckmann, LPA Staff

DATA and the Town of Hillsborough have requested changes to the FY 2013-2015 CMAQ funding approved by the TAC in August 2010. Attachment 8 is a memo describing the requested changes. A new CMAQ application must be submitted to NCDOT for the Hillsborough project and the revised DATA project. These applications are provided as Attachments 8A and 8B.

TCC Recommendation: That the TAC approve the requested changes from the Town of Hillsborough and DATA through a MTIP amendment.

TAC Action: Approve the requested changes from the Town of Hillsborough and DATA. Recommend approval of these changes through a MTIP amendment.

9. FY 2012-2018 MTIP – Amendment #4 (9:55-10:05)
Attachment 9, 9A
Ellen Beckmann, LPA Staff

Amendment #4 to the FY 2012-2018 MTIP is requested to modify the description of two Triangle Transit projects, including the Durham-Orange rail corridor project, incorporate the changes to the FY 2013-2015 CMAQ program, and match recent STIP amendments. Attachment 9 is a memo describing these actions. Attachment 9A is the resolution and tables amending the MTIP.

TCC Recommendation: That the TAC adopt the Resolution to Modify the 2012-2018 Transportation Improvement Program for the Durham-Chapel Hill-Carrboro Urban Area Amendment #4.

TAC Action: Adopt the Resolution to Modify the 2012-2018 Transportation Improvement Program for the Durham-Chapel Hill-Carrboro Urban Area Amendment #4.

10. **Triangle Regional Transit Program – Scoping and Orange County Transit Plan (10:05-10:25)**
Attachment 10, 10A
Andy Henry, LPA Staff
Patrick McDonough, Triangle Transit

The DCHC MPO approved the Locally Preferred Alternative for the Durham-Orange and Durham-Wake rail corridors in February 2012. The next steps for the projects are Scoping and PE/DEIS. Triangle Transit provided an overview of these steps at the last meeting. An update on the scoping meetings held on May 2-3 will be provided at the meeting.

Orange County is in the process of finalizing the Orange County Transit Plan. This plan will need to be adopted by the county, MPO, and Triangle Transit. Orange County's schedule is as follows:

- 5/3/2012: Discussion at Board of Commissioners Work Session
- 5/15/2012: Approval of plan at Board of Commissioners Meeting
- 6/5/2012: Approval of referendum at Board of Commissioners Meeting

LPA staff recommend that the TAC consider adoption of the Orange County plan at the June 13, 2012 TAC meeting. Orange County held two public hearings and two public workshops on the plan in April. Handouts from the public workshops are provided as Attachment 10 (the Chapel Hill Transit projects listed in this handout includes both funded and unfunded projects). LPA staff expect to receive a draft of the entire plan the week of May 7 and will distribute it to TAC members by email as soon as it is available. A comparison of the regional Durham-Orange transit services in the draft Orange Plan and adopted Durham Plan is provided as Attachment 10A. For reference, the adopted Durham County plan can be found here http://www.dchcmpo.org/dmdocuments/FinalDurhamBusRailInvestmentPlan.pdf.

TAC Action: Receive update.

11. **Hillsborough Downtown Access Study (10:25-10:45)**
Attachment 11

Margaret Hauth, Town of Hillsborough

The DCHC MPO and Town of Hillsborough jointly funded the Hillsborough Downtown Access Study. The purpose of the study was to identify cost effective ways to improve traffic through downtown such as intersection improvements, traffic calming, parking, bicycle and pedestrian facilities, and streetscaping. A final report was adopted by the Town Board on February 27, 2012. The recommendations of the study may affect the 2040 LRTP and future federal funding decisions by the MPO. The study materials are available on the Town's website http://www.ci.hillsborough.nc.us/content/downtown-study-fall-2011.

TAC Action: Receive presentation on the Hillsborough Downtown Access Study.

12. **2040 Long Range Transportation Plan and Comprehensive Transportation Plan**
Attachment 12
Andy Henry, LPA Staff

The TAC will receive an update on development of the 2040 Long Range Transportation Plan (2040 LRTP), Comprehensive Transportation Plan (CTP) and MPO Collector Street Plan (CSP), including:

- Schedule -- Attachment 12 is a current schedule for these projects. Given the delays in producing the Socioeconomic Data (SE Data), the Alternatives will be released in August 2012.
- Goals and Objectives -- At the March 2012 TAC meeting, the TAC released the Goals, Objectives and Targets and the Public Involvement Plan for public comment.
- SE Data – The TAC also released the 2010 and 2040 SE Data for public comment.
- Public Hearing – All four public workshops have been completed. The TAC will conduct a public hearing at their June 2012 TAC meeting. The TAC will receive a summary and compilation of the comments for that meeting. The public comment period ends on May 31, 2012.
- Survey – As of mid-April, over 200 people have completed the online survey related to the Goals and Objectives.
- Adoption – The TAC is to adopt the three items at their June 2012 meeting.
- Deficiency Analysis -- The TAC will receive the Deficiency Analysis at their June 2012 meeting for review.

TAC Action: Receive update on development of the 2040 Long Range Transportation Plan.

REPORTS:

13. **Report from the TAC Chair**
Lydia Lavelle, TAC Chair

TAC Action: Receive Report from TAC Chair

14. **Report from the TCC Chair**

Mark Ahrendsen, TCC Chair

TAC Action: Receive Report from TCC Chair

15. **Report from Staff**
Attachment 15
Felix Nwoko, LPA Staff

16. **NCDOT Report**
Attachment 16
Wally Bowman, Division 5 – NCDOT
Mike Mills, Division 7 – NCDOT
Julie Bollinger, Transportation Planning Branch – NCDOT
David Bender, Public Transportation Division – NCDOT
Kelly Becker, Traffic Operations – NCDOT

TAC Action: Receive report of NCDOT

INFORMATIONAL ITEMS

17. **Recent News Articles and Updates**
Attachment 17

Adjourn

Next meeting: June 13, 2012

DCHC MPO and CAMPO staff have agreed to cancel the tentatively scheduled Joint TAC meeting on May 30, 2012. In lieu of this meeting, a Joint TAC meeting may be scheduled on August 29, 2012, from 9 am to noon. Please reserve this date on your calendar.

Dates of Upcoming Transportation-Related Meetings:

5/1/2012	Pickett Road Public Meeting, 5-7 pm, Trinity School
5/2/2012	Regulatory Agency Meeting for Durham-Orange LRT, Extraordinary Ventures Center, Chapel Hill, 1-3 pm
5/2/2012	Public Scoping Meeting for Durham-Orange LRT, Extraordinary Ventures Center, Chapel Hill, 4-7 pm
5/3/2012	Elected Officials and Partners Meeting for Durham-Orange LRT, Durham Armory, 10 am-12 pm
5/3/2012	Public Scoping Meeting for Durham-Orange LRT, Durham Armory, 4-7 pm
5/2-4/2012	NC Association of MPOs Annual Conference, Asheville, NC http://www.fbrmpo.org/ncampo_2012_conference

Various activities are scheduled for Bike Month in May. Event schedules are posted here http://www.gotriangle.org/bike-walk/BTWW?/btww.

You can now follow the DCHC MPO on Twitter www.twitter.com/dchcmpo

TAC Directives to Staff

06/11/03 – 12/31/10 (Pending/In Progress/On Going)
01/01/11 – Present (Completed/Pending/In Progress)

Meeting Date	Directive	Status
11/11/09	Provide the TAC a summary of the Regional Transit Leadership Group meetings and status of the county transit plans.	In Progress: Status provided to TAC, TAC Chair and elected officials on an ongoing basis
3/10/10	Address the issues raised regarding the Farrington Road Corridor Study.	In Progress
2/9/11	Expedite the contract amendment for the NC 54 Corridor Study and direct the consultant to review the land use assumptions.	Completed
3/9/11	Provide a presentation on the NCDOT tier system and funding levels in the TIP.	Completed: See 5/11/11 TAC Agenda.
3/9/11	Improve public outreach and add links to other transportation organizations to the MPO website	In Progress: DCHC MPO is now on Twitter. Website enhancements are in progress.
3/9/11	Provide an update on the implementation of the Greenhouse Gas Plan.	In Progress
3/9/11	Provide an update on the implementation of the Travel Demand Management program.	Completed: See 8/10/11 TAC Agenda
3/9/11 8/10/11	Provide a report on the proposed closing on Pickett Road and prepare a letter/resolution for the TAC's review. Gather more information from park planning staff and meet with citizens regarding their concerns.	In Progress: See 8/10/11 TAC Agenda Public meeting held 5/1/12, 5-7 pm, Trinity School
4/13/11	Send a letter to the State Board of Education requesting that bicycle and pedestrian safety be added to the driver's education program	Completed: Bicycle and pedestrian education has been added.
4/13/11	Send a letter to the General Assembly regarding the proposed state budget	Completed: See 5/11/11 TAC Agenda.
4/13/11 8/10/11	Send a letter to the DCHC MPO federal legislative delegation regarding the federal budget.	Completed: See 9/14/11 TAC Agenda.
8/10/11	Send letters to members of the DCHC MPO state legislative delegation and other state legislators regarding the 2011 session	Completed: See 9/14/11 TAC Agenda.
8/10/11	Develop an approval schedule for the Locally Preferred Alternative that takes into consideration review by local boards and commissions and public involvement.	Completed: See 11/9/11 TAC Agenda.

9/14/11	Send a letter to NCDOT requesting an extension of the deadline for submitting MPO rankings.	Completed: Deadline has been extended to 12/16/2011
10/12/11	Send a letter requesting the free use of the toll road by public buses.	In Progress: MPO and transit staffs have reviewed the relevant state legislation and are considering the legal issues related to allowing free use by transit vehicles.
11/9/11	Schedule a presentation on the state gas tax	Completed: See 12/14/11 TAC Agenda
11/9/11	Invite Paul Morris to a TAC meeting to discuss transit	Completed: See 1/11/12 TAC Agenda
12/14/11	Follow-up with Chatham County regarding participation on the TAC	Completed: A letter was sent on 1/25/12. Chatham County's TAC member has been in contact with LPA staff.

TRANSPORTATION ADVISORY COMMITTEE

April 11, 2012

MINUTES OF MEETING

The Transportation Advisory Committee met on April 11, 2012, at 9:00 a.m. in the Council Committee Room on the second floor of Durham City Hall. The following attended:

**William V. "Bill" Bell	City of Durham
*Diane Catotti	City of Durham
**Alice Gordon	Orange County
**Eric Hallman	Town of Hillsborough
**Ed Harrison	Town of Chapel Hill
**Lydia Lavelle	Town of Carrboro
*Michael Page	Durham County
*Bernadette Pelissier	Orange County
**Ellen Reckhow	Durham County
**Mike Woodard	City of Durham
Mark Ahrendsen	City of Durham – Transportation
Ellen Beckmann	City of Durham – Transportation
David Bonk	Town of Chapel Hill
Tyler Bray	NCDOT – PM
Jeff Brubaker	Town of Carrboro
Andy Henry	City of Durham – Transportation
John Hodges-Copple	Triangle J COG
Leta Huntsinger	City of Durham – Transportation
Mike Kneis	NCDOT – Division 5
Patrick McDonough	Triangle Transit
Dale McKeel	City of Durham – Transportation
Ryan Mickles	Town of Chapel Hill
Felix Nwoko	City of Durham – Transportation
Brian Rhodes	City of Durham – Transportation
Meg Scully	Durham County
Patrick Wilson	NCDOT – Division 7
Darcy Zorio	Orange County

**Voting Member
*Alternate or No-Voting Member

Lydia Lavelle, TAC Chair, called the meeting to order at 9:06 a.m. and the Roll Call was conducted.

PRELIMINARIES:

Adjustments to the Agenda

There were no adjustments to the agenda.

Public Comments

There were no public comments.

ACTION ITEMS:

March 14, 2012 TAC Meeting Minutes (Attachment 5)

A motion was made by Ellen Reckhow and seconded by Mike Woodard to approve the March 14, 2012 TAC Meeting Minutes. The motion carried unanimously.

NCDOT 2040 Plan (Attachment 6 and 6A)

Tyler Bray, NCDOT, provided a PowerPoint presentation on the NCDOT 2040 Plan. An actual draft NCDOT 2040 plan is being formally released today. It is scheduled for adoption the summer of 2012. The schedule is that it will be released for 45 days for public comment, staff will bring comments and/or changes back to the Board in May, staff will bring a final draft document to the Board in July, and the Board will vote on adoption in August 2012.

Diane Catotti asked if the state match for our transit project are included and Mr. Bray stated he didn't know, but will get an answer.

Ed Harrison asked what is the percentage of funding for bike and pedestrian projects, and Mr. Bray stated he didn't know the actual percent, but will get an answer.

Ellen Reckhow asked how the needs were identified, and Mr. Bray stated they are generated by identifying statewide needs and then using the LRTP for the local needs.

Mr. Bray stated the current funding model is unsustainable. He reviewed the various revenue options that have been considered.

Diane Catotti asked how the VMT fee would be implemented. Mr. Bray stated that is a difficult question. It needs to be a national program. There are several options; at a gas pump or GPS. There

are questions regarding varying the cost by the time of day and vehicle weight, and there are privacy concerns with GPS.

Ellen Reckhow asked if they have considered the possibility of varying tolling by time of day and HOV lanes. Ms. Reckhow stated if we reduce travel in single occupancy vehicles, it would be cost effective.

Bernadette Pelissier asked how and when decisions will be made on the revenue sources. Mr. Bray stated it is up to the General Assembly and the Board. It is up to them to consider the options in the future. By 2019-2020, the decline in revenue from the gas tax won't be able to maintain the system. We will need to implement options by then.

Alice Gordon asked if there was any consideration being given to the use of local revenue sources to fund statewide projects. Ms. Gordon and Ms. Reckhow oppose using local property taxes fund the state system. Mr. Bray stated the Board of Transportation has not made a decision on this issue.

Ed Harrison asked how NCDOT defines safety projects and Mr. Bray stated they are projects that directly improve safety. Mr. Bray stated that there is an emphasis on statewide tier due to 45% of traffic being on this tier.

Mr. Bray stated the statement "Diversify opportunity and participation for subregional transportation systems" does not mean that NCDOT will be turning over the maintenance to a local government. It means that some communities have asked to be able to pay for and accelerate projects with local funding. There is nothing in the 2040 Plan that recommends turning over the state system to counties.

Mike Woodard asked how the NCDOT sees their role in Land Use Planning. Mr. Bray stated the intent is to make sure there is coordination on CTPs with the local Land Use Plans, not dictating the Land

Use. Mr. Woodard stated there is a case in southern Durham County where NCDOT wasn't aware of the proposed development.

Bernadette Pelissier asked about the MPO/RPO relationship. Mr. Bray stated not all MPOs/RPOs are efficient and effective. We need to implement successes across the state.

Ellen Reckhow stated the State could encourage smarter growth. Smart growth and TDM could reduce the needs substantially. We are seeing the results of years of bad planning. Mr. Reckhow wants smart growth included in the letter.

Mark Ahrendsen suggested in addition to adding smart growth that perhaps there needs to be financial incentives for rewarding good behavior.

Mr. Bray suggested that everyone review the plan and let NCDOT know if more should be considered.

Lydia Lavelle agrees with the additions to the letter.

A motion was made by Diane Catotti and seconded by Mike Woodard to endorse the letter including the addition of smart growth and TDM. The motion carried unanimously.

Alice Gordon asked that a copy of the signed letter from the TAC Chair be sent to all TAC members.

Local Match Cost-Sharing for MPO Planning Activities (Attachment 10)

Mark Ahrendsen provided an introduction for the Local Match Cost-Sharing for MPO Planning Activities along with the attachment.

Mr. Ahrendsen stated the City of Durham has provided the non-federal match for MPO planning and the City Manager has asked the MPO to consider sharing the local match among members. We are asking for endorsement of the concept for the next year and will work out the details over the next year.

Diane Catotti asked why the City of Durham has been providing 100% of the match and Mr. Ahrendsen stated that the MPO was set up that way and has just continued.

Ed Harrison stated that the population figures need to be examined and corrected. Mr. Harrison stated they need a strong TAC role in developing structure for oversight of the LPA. Mr. Harrison stated the TAC doesn't know about smaller projects. A TAC committee needs to be set up for the LPA oversight.

Lydia Lavelle has a concern about Chatham County. Mark Ahrendsen stated that staff will reach out to Chatham County. The Chatham County member attends the TCC meetings regularly.

Ellen Reckhow stated she is surprised that the City of Durham has tolerated it for this long. Ms. Reckhow wants staff to look at the Durham County population as well.

Alice Gordon understands the issue, but is hesitant to vote without the oversight piece. If we have a year to work it out (i.e. the population, difference in treatment of Durham County), we need to figure out the oversight piece before we endorse the cost-sharing concept.

Diane Catotti asked why isn't it going to be effective July 2012 instead of FY 2014, and Mark Ahrendsen stated it is up to the TAC. There is concern over where the local governments are in their budget processes. Lydia Lavelle shared the same concern over the budget process. Ellen Reckhow stated we should have started earlier. Diane Catotti suggested a January 1, 2013 date as a compromise. Alice Gordon stated everyone is hurting budget-wise right now.

Lydia Lavelle stated the members will take this item back to their boards and bring back a decision at a later meeting. Mark Ahrendsen stated the MPO will send a memo to all managers of member jurisdictions.

A motion was made by Diane Catotti and seconded by Lydia Lavelle to endorse the cost sharing concept with the addition of a study on LPA oversight and refining population including the January 1, 2013 deadline. The motion carried with Alice Gordon opposing the motion.

Alice Gordon stated mid-year corrections are usually just for emergency issues. Bernadette Pelissier stated members need to direct managers to put a placeholder in their budget. It is up to the

TAC to vote on oversight. Ms. Pelissier stated asking the board members to comment on oversight is asking too much as most are not aware of how the MPO functions.

FY 2012 UPWP – Amendment #4 (Attachments 7 and 7A)

Felix Nwoko provided an introduction for the FY 2012 UPWP – Amendment #4, along with the attachments.

A motion was made by Alice Gordon and seconded by Ellen Reckhow to approve the resolution adopting Amendment #4 to the FY 2011-2012 Unified Planning Work Program. The motion carried unanimously.

FY 2012-2018 MTIP – Amendment #3 (Attachments 8 and 8A)

Ellen Beckmann provided an introduction for the FY 2012-2018 MTIP – Amendment #3, along with the attachments.

A motion was made by Mike Woodard and seconded by Ellen Reckhow to adopt the Resolution to Modify the 2012-2018 Transportation Improvement Program for the Durham-Chapel Hill-Carrboro Urban Area Amendment #3. The motion carried unanimously.

FY 2013 UPWP – Draft (Attachment 9)

Felix Nwoko provided an introduction for the FY 2013 UPWP – Draft, along with the attachment.

A motion was made by Diane Catotti and seconded by Eric Hallman to release the draft FY 2013 UPWP for public comment. The motion carried unanimously.

NC 54/I-40 Corridor Study (No attachment)

Leta Huntsinger provided an introduction for the NC 54/I-40 Corridor Study. Staff realized they needed more than one month to address public comments. Staff is doing the work in-house to edit the report with the intent to bring it back next month.

Ellen Reckhow stated there are a lot of concerns from the public. Ms. Huntsinger stated staff has tried to communicate to the public that the problem is not going to go away and we need to look at creative ways to address the problem.

Triangle Regional Transit Program – Scoping and Orange County Transit Plan (No attachment)

Patrick McDonough provided an update on the Triangle Regional Transit Program – Scoping and Orange County Transit Plan. The project has been posted in the Federal Register. The purpose of the May 3, 2012 meeting is to get comments from the elected officials. Alice Gordon stated the agenda material needs to be provided prior to the meeting.

Bernadette Pelissier described the Orange County Transit Plan approval schedule which was distributed at the meeting.

Patrick McDonough stated the scoping meetings may help inform local officials that haven't been involved. We expect to hear from the public.

Ed Harrison stated that the Town of Chapel Hill says UNC should not be a member of the local elected officials meeting. Patrick McDonough will check on this with Juanita Shearer-Swink.

Mark Ahrendsen stated there are two schedules on the agenda; one for the scoping and one for the Orange County Transit Plan. The target is to bring the draft Orange Plan at the May meeting with approval at the June meeting.

Mark Ahrendsen stated that the Burlington-Graham MPO also has to approve the plan.

FY 2013-2015 Congestion Mitigation Air Quality Projects (Attachment 13)

Ellen Beckmann provided an introduction for the FY 2013-2015 Congestion Mitigation Air Quality Projects, along with the attachment. There were several questions about the scope of the Town of Hillsborough project. Ms. Beckmann will get clarification and bring back the item with the additional information.

REPORTS:

Report from the TAC Chair

Lydia Lavelle reminded members of the RTA breakfast on April 27, 2012.

Report from the TCC Chair

Mark Ahrendsen stated he will be attending the RTA tour to Cleveland and Pittsburg to look at light rail transit in April 2012.

Report from Staff (Attachment 16)

The report from staff is attached for review.

NCDOT Report (Attachment 17)

Patrick Wilson, Division 7, provided an update on projects. There are working on repairing projects. April 14th through April 28, 2012 NCDOT will hold their Spring Litter Sweep. Ed Harrison wants a list of repaving projects. There is no news on the Mobility Fund.

Mike Kneis, Division 5, provided an update on projects. There is a traffic shift on Hillandale Road. Two projects that have been approved but aren't on the list are: Lawson/NC-55 safety project and permission to award the ATT bid.

Ed Harrison stated the I-40 ramps at Miami Boulevard have failing pavement. Ellen Reckhow stated there is no east-bound right-turn lane on Hillandale from Carver to Hillandale. Ms. Reckhow would like it to be striped to allow right turns. We need a smarter light to adjust for traffic flows throughout the day.

INFORMATIONAL ITEMS:

Recent News Articles and Updates (Attachment 18)

The recent news articles and updates are attached for review.

Adjournment

There being no further business before the Transportation Advisory Committee, a motion was made by Alice Gordon and seconded by Diane Catotti to adjourn the meeting at 11:05 a.m. The motion carried unanimously.

DCHC- MPO

Durham-Chapel Hill-Carrboro Metropolitan Planning Organization

Unified Planning Work Program

FY 2012-13

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Durham-Chapel Hill-Carrboro
Metropolitan Planning Organization
FY 2012-2013 Unified Planning Work Program

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Durham-Chapel Hill-Carrboro
Metropolitan Planning Organization (DCHC MPO)

RESOLUTION

Approving the FY 2012-2013 Unified Planning Work Program

--------, 2012

A motion was made by TAC Member _____ and seconded by TAC Member _____ for the adoption of the following resolution, and upon being put to a vote was duly adopted.

Whereas, a comprehensive and continuing transportation planning program must be carried out cooperatively in order to ensure that funds for transportation projects are effectively allocated to the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization; and

Whereas, the City of Durham Department of Transportation has been designated as the recipient of Section 104(f) Planning and Technical Studies Planning grant funds; and

Whereas, members of the Transportation Advisory Committee agree that the Unified Planning Work Program will effectively advance transportation planning for FY 2012-2013.

Now, therefore, be it resolved that the Transportation Advisory Committee hereby endorses the *Durham-Chapel Hill-Carrboro Metropolitan Planning Organization FY 2012-2013 Unified Planning Work Program*.

I, Lydia E. Lavelle, TAC Chair, do hereby certify that the above is a true and correct copy of an excerpt from the minutes of a meeting of the Durham-Chapel Hill-Carrboro Transportation Advisory Committee, duly held on the ___ day of _____, 2012

_____
Lydia E. Lavelle, TAC Chair

Durham County, North Carolina

I certify that Lydia E. Lavelle personally appeared before me this day acknowledging to me that she signed the forgoing document.

Date: _____, 2012

_____
Frederick Brian Rhodes, Notary Public
My commission expires: May 10, 2015

Durham-Chapel Hill-Carrboro (DCHC)
Metropolitan Planning Organization (MPO)

RESOLUTION (PTD-FTA)

Approving the FY 2012-2013 Unified Planning Work Program (UPWP) of the DCHC Urban Area/Metropolitan Planning Organization

---------, 2012

A motion was made by TAC Member _____ and seconded by TAC Member _____ for the adoption of the following resolution, and upon being put to a vote was duly adopted.

Whereas, a comprehensive and continuing transportation planning program must be carried out cooperatively in order to ensure that funds for transportation projects are effectively allocated to the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization; and

Whereas, the City of Durham Department of Transportation has been designated as the recipient of Federal Transit Administration (FTA) Metropolitan Planning Program funds; and

Whereas, members of the Transportation Advisory Committee agree that the Unified Planning Work Program will effectively advance transportation planning for FY 2012-2013.

Now therefore, be it resolved that the Transportation Advisory Committee hereby endorses the *FY 2012-2013 Unified Planning Work Program for the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization*.

I, Lydia E. Lavelle, Chair of the DCHC MPO Transportation Advisory Committee (TAC) do hereby certify that the above is a true and correct copy of an excerpt from the minutes of a meeting of the Durham-Chapel Hill-Carrboro Transportation Advisory Committee, duly held on the ____ day of _____, 2012.

_____
Lydia E. Lavelle, TAC Chair

Durham County, North Carolina

I certify that Lydia E. Lavelle personally appeared before me this day acknowledging to me that she signed the forgoing document.

Date: _____, 2012

_____
Frederick Brian Rhodes, Notary Public
My commission expires: May 10, 2015

RESOLUTION CONFIRMING TRANSPORTATION PLANNING PROCESS

RESOLUTION CERTIFYING THE DURHAM-CHAPEL HILL-CARRBORO (DCHC MPO) METROPOLITAN PLANNING ORGANIZATION'S TRANSPORTATION PLANNING PROCESS FOR FY 2012-2013 (FY 2013)

WHEREAS, the Transportation Advisory Committee has found that the Metropolitan Planning Organization is conducting transportation planning in a continuous, cooperative, and comprehensive manner in accordance with 23 U.S.C. 134 and 49 U.S.C. 1607;

WHEREAS, the Transportation Advisory Committee has found the transportation planning process to be in compliance with Sections 174 and 176 (c) and (d) of the Clean Air Act (42 U.S.C. 7504, 7506 (c);

WHEREAS, the Transportation Advisory Committee has found the Transportation Planning Process to be in full compliance with Title VI of the Civil Rights Act of 1964 and the Title VI Assurance executed by each State under 23 U.S.C. 324 and 29 U.S.C. 794;

WHEREAS, the Transportation Advisory Committee has considered how the Transportation Planning Process will affect the involvement of Disadvantaged Business Enterprises in the FHWA and the FTA funded planning projects (Section 1003(b) of ISTEA of 1991 (Pub. L. 102-240), Sec. 105(f), Pub. L. 97-424, 96 Stat. 2100, 49 CFR part 23);

WHEREAS, the Transportation Advisory Committee has considered how the Transportation Planning Process will affect the elderly and the disabled per the provision of the Americans With Disabilities Act of 1990 (Pub. L. 101-336, 104 Stat. 327, as amended) and the U.S. DOT implementing regulations (49 CFR parts 27, 37, and 38);

WHEREAS, the DCHC MPO Metropolitan Transportation Improvement Program is a subset of the currently conforming 2030 Long Range Transportation Plan;

WHEREAS, the Transportation Plan has a planning horizon year of 2035, and meets all the requirements for an adequate Transportation Plan,

NOW THEREFORE, be it resolved that the DCHC Urban Area Transportation Advisory Committee certifies the transportation planning process for the DCHC Metropolitan Planning Organization on this the ____ day of ____, 2012

_____

Lydia E. Lavelle, TAC Chair

_____

Clerk/Secretary/Planner

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Metropolitan Planning
Self-Certification Process

CFR 450.334
The State and the MPO shall annual certify to the FHWA and the FTA that the planning process is addressing the major issues facing the area and is being conducted in accordance with all applicable requirements of:

- Section 134 of title 23 U.S.C., section 8 of the Federal Transit Act (49 U.S.C. app. 1607) and;
- Section 174 and 176 (c) and (d) of the Clean Air Act (42 U.S.C. 7504, 7506 (c) and (d);
- Title VI of the Civil Rights Act of 1964 and Title VI assurance executed by each state under 23 U.S.C. 324 and 29 U.S.C. 794;
- Section 103 (b) of the Intermodal Surface Transportation Efficiency Act of 1991 (Public Law 102-240) regarding the involvement of disadvantaged business enterprises in the FHWA and the FTA funded planning projects…; and
- The provisions of the Americans with Disabilities Act of 1990 (Public Law 101-336, 104 Stat. 327, as amended) and U.S. DOT regulations "Transportation for Individuals with Disabilities" (49 CFR parts 27, 37, and 38).

In addition, the following checklist should help guide the MPOs as they review their processes and programs for self-certification.

Metropolitan Planning
Self-Certification Process

Self-Certification Checklist

1. Is the MPO properly designated by agreement between the Governor and 75% of the urbanized area, including the central city, and in accordance in procedures set forth in state and local law (if applicable)? [23 U.S.C. 134 (b); 49 U.S.C. 5303 (c); 23 CFR 450.306 (a)]

2. Does the policy board include elected officials, major modes of transportation providers and appropriate state officials? [23 U.S.C. 134 (b); 49 U.S.C. 5303 (c); 23 CF R 450.306 (i)]

3. Does the MPO boundary encompass the existing urbanized area and the contiguous area expected to become urbanized within the 20-yr forecast period? [23 U.S.C. 134 (c), 49 U.S.C. 5303 (d); 23 CFR 450.308 (a)]

4. Is there a currently adopted Unified Planning Work Program (UPWP)? 23 CFR 450.314
    a. Is there an adopted prospectus
    b. Are tasks and products clearly outlined
    c. Is the UPWP consistent with the LRTP
    d. Is the work identified in the UPWP completed in a timely fashion

5. Does the area have a valid transportation planning process?
   23 U.S.C. 134; 23 CFR 450
    a. Is the transportation planning process continuous, cooperative and comprehensive
    b. Is there a valid LRTP
    c. Did the LRTP have at least a 20-year horizon at the time of adoption
    d. Does it address the 8-planning factors
    e. Does it cover all modes applicable to the area
    f. Is it financially constrained
    g. Does it include funding for the maintenance and operation of the system
    h. Does it conform to the State Implementation Plan (SIP) (if applicable)
    i. Is it updated/reevaluated in a timely fashion (at least every 4 or 5 years

6. Is there a valid TIP? 23 CFR 450.324, 326, 328, 330, 332
    a. Is it consistent with the LRTP
    b. Is it fiscally constrained
    c. Is it developed cooperatively with the state and local transit operators
    d. Is it updated at least every 4-yrs and adopted by the MPO and the Governor

7. Does the area have a valid CMP? (TMA only) 23 CFR 450.320
    a. Is it consistent with the LRTP
    b. Was it used for the development of the TIP
    c. Is it monitored and reevaluated to meet the needs of the area

8. Does the area have a process for including environmental mitigation discussions in the planning process?
    a. How _____
    b. Why not_____

Metropolitan Planning
Self-Certification Process

Self-Certification Checklist

9. Does the planning process meet the following requirements:
    a. 23 U.S.C. 134, 49 U.S.C. 5303, and this subpart;
    b. In nonattainment and maintenance areas, sections 174 and 176 (c) and (d) of the Clean Air Act, as amended (42 U.S.C. 7504, 7506 (c) and (d)) and 40 CFR part 93;
    c. Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d-1) and 49 CFR part 21;
    d. 49 U.S.C. 5332, prohibiting discrimination on the basis of race, color, creed, national origin, sex, or age in employment or business opportunity;
    e. Section 1101(b) of the SAFETEA-LU (Pub. L. 109-59) and 49 CFR part 26 regarding the involvement of disadvantaged business enterprises in USDOT funded projects;
    f. 23 CFR part 230, regarding the implementation of an equal employment opportunity program on Federal and Federal-aid highway construction contracts;
    g. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) and 49 CFR parts 27, 37, and 38;
    h. The Older Americans Act, as amended (42 U.S.C. 6101), prohibiting discrimination on the basis of age in programs or activities receiving Federal financial assistance;
    i. Section 324 of title 23 U.S.C. regarding the prohibition of discrimination based on gender; and
    j. Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794) and 49 CFR part 27 regarding discrimination against individuals with disabilities.
    k. All other applicable provisions of Federal law. (i.e. Executive Order 12898)

10. Does the area have an adopted PIP/Public Participation Plan? 23 CRR 450.316 (b)(1)
    a. Did the public participate in the development of the PIP?
    b. Was the PIP made available for public review for at least 45-days prior to adoption?
    c. Is adequate notice provided for public meetings?
    d. Are meetings held at convenient times and at accessible locations?
    e. Is the public given an opportunity to provide oral and/or written comments on the planning process?
    f. Is the PIP periodically reviewed and updated to ensure its effectiveness?
    g. Are plans/program documents available in an electronic accessible format, i.e. MPO website?

11. Does the area have a process for including environmental, state, other transportation, historical, local land use and economic development agencies in the planning process? SAFETEA-LU
    a. How_____
    b. Why not_____

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INTRODUCTION

The DCHC MPO is required by federal regulations to prepare an annually Unified Planning Work Program (UPWP) that details and guides the urban area transportation planning activities. Funding for the UPWP is provided on an annual basis by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA). Essentially, the UPWP provides yearly funding allocations to support the ongoing transportation planning activities of the DCHC MPO. The UPWP must identify MPO planning tasks to be undertaken with the use of federal transportation funds, including highway and transit programs. Tasks are identified by an alphanumeric task code and description. A complete narrative description for each task is more completely described in the *Prospectus for Continuing Transportation Planning for the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization*, approved by the TAC on February 13, 2002. The *Prospectus* was developed by NCDOT in cooperation with MPOs throughout the state.

The UPWP also contains supplemental project descriptions for Federal Transit Administration (FTA) projects. FTA project descriptions are provided for transit providers (Chapel Hill Transit, Durham Area Transit, & Triangle Transit Authority). FTA planning project task descriptions, FTA Disadvantaged Businesses Contracting Opportunities forms, and FTA funding source tables are also part of the UPWP document.

The funding source tables reflect available federal planning fund sources and the amounts of non-federal matching funds. The match is provided through either local or state funds or both. Statewide Planning and Research Funds (SPR) are designated for State use only and reflect the amount of those funds to be expended by the N.C. Department of Transportation Statewide Planning Division on DCHC MPO activities. Section 104(f) funds are designated for MPO planning and are sub-allocated to the City of Durham, Town of Carrboro and Town of Chapel Hill. Section 133(b)(3)(7) funds are the portion of STP-DA funds used in MPO planning. The City of Durham uses these funds to support the LPA planning functions. These funds are also used for MPO special projects, such as the congestion Management Systems, Collector Street Plan, Land use model, GIS/Data integration and automation, Regional model update and enhancement, Travel behavior surveys and update of the ITS deployment plan and regional architecture, support of the Regional Model Service Bureau, NC 54 Corridor Study, Parking Survey/Study,etc.

The main source of funds for transit planning for Chapel Hill Transit (CHT), the Durham Area Transit Authority (DATA), and the Triangle Transit Authority (TTA), is the Federal Transit Administration's Section 5303 funds. These funds are allocated by NCDOT's Public Transportation Division (PTD). Transit agencies can also use portions of their Section 5307 capital and operating funds for planning. These funds must be approved by the TAC as part of the UPWP approval process.

FY 2012-13 STP-DA Funds will cover special projects and continuation major emphasis projects. These are summarized as follows:

Special Projects

- Regional Transit Studies New Start Analyses
- Commercial vehicle survey and counts for the Triangle Regional Model (TRM)
- Parking survey, inventory and study for the TRM
- Development of the 2040 LRTP
- MPO Freight planning
- MPO Safety and security Plan
- Model data collection
- Community VIZ Update
- Geo-coder Update
- GIS enterprise update
- MPO Congestion Management Plan and process

- Climate Change adaptation and planning

Continuation of Major Projects

- MPO Integrated Land-use/Transportation Model
- Non-Motorized trip model
- GIS Warehouse/Integration and Automation
- MPO-wide Collector Street Plan

FY 2012-13 UPWP funding levels as well as the descriptions of funding sources is summarized below.

Planning (PL) Section 104(f) – These funds are FHWA funds for urbanized areas, administered by NCDOT. These funds require a 20% match. The PL funding apportionment to the state is distributed to the MPOs through a population-based formula. The proposed Section 104(f) funding level is based on the SAFETEA-LU Section 104(f) allocation as well as new PL distribution approved by NCDOT Board of Transportation in June 2005. The statewide section 104(f) funds are distributed among the 17 MPOs based on a formula. The DCHC MPO PL fund allocation for FY 2012-13 is as follows:

Federal (PL funds)	$	507,387
Local (20% match)	$	126,847
Total PL Funds	$	634,234

STP-DA – These funds are the Direct Attributable Allocation portion of the federal Surface Transportation Program (STP) funds provided to Transportation Management Areas (TMAs are MPOs over 200,000 population). By agreement with the DCHC MPO and NCDOT, a portion of these funds are used for MPO transportation planning activities. STP-DA funds earmarked for programming in the FY 2012-13 UPWP are shown below; including re-obligated or carried over to FY 2013-14:

Federal (STP-DA)	$	1,989,851
Local (20% match)	$	497,463
Total	$	2,487,314

FTA Funds -Two types of funds are used for transit planning purposes by the DCHC MPO; Section 5303 and Section 5307 funds of the Federal Transit Act Amendments of 1991.

Section 5303 funds are grant monies from FTA that provide assistance to urbanized areas for transit planning. Essentially, the funds are earmarked for use in planning and technical studies related to urban public transportation. They are provided from the Federal Transit Administration through the NCDOT-PTD to the MPO transit operators (80% from FTA, 10% from NCDOT-PTD, and 10% local match).

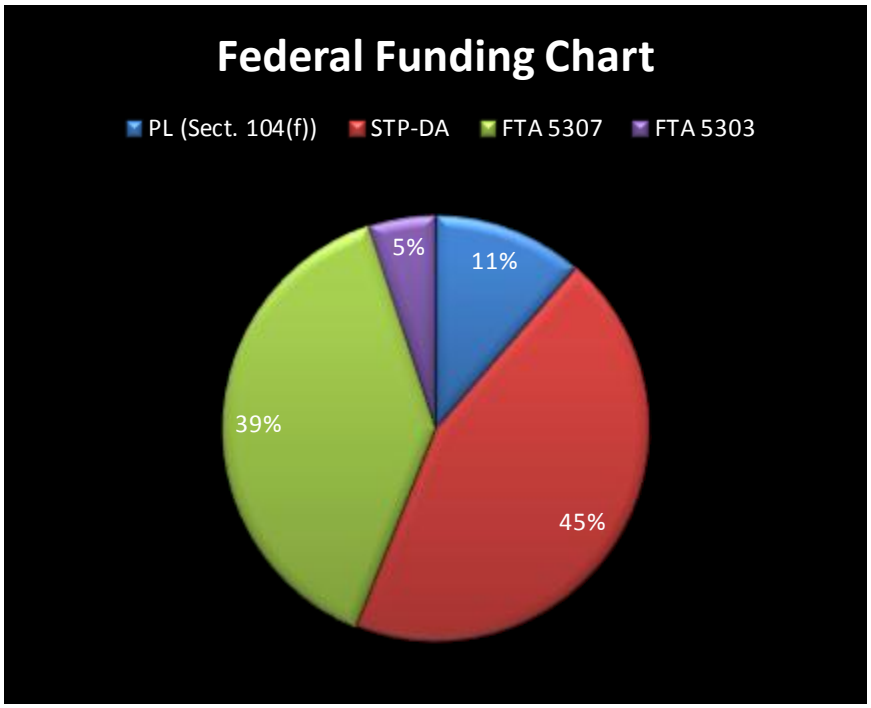
	CHT	DATA	TTA	MPO Total
Federal	$111,359	$115,897	$0	$227,256
State	$13,920	$14,487	$0	$28,407
Local	$13,920	$14,487	$0	$28,407
Total Sect. 5303	$139,199	$144,871	$0	$284,070

Section 5307 funds can be used for planning as well as other purposes, and are distributed by the formula by FTA. The DATA, CHT, and TTA use Section 5307 funds from the FTA for assistance on a wide range of planning activities. These funds require a 10% local match, which is provided by the City of Durham, the Town of Chapel Hill, and TTA; and 10% State match which is provided by the Public Transportation Division of NCDOT.

	CHT	DATA	TTA	MPO Total
Federal	$360,000	$511,056	$684,000	$1,555,056
State	$45,000	$63,882	$85,500	$194,382
Local	$45,000	$63,882	$85,500	$194,382
Total Sect. 5307	$450,000	$638,820	$855,000	$1,943,820

SUMMARY OF ALL FUNDING SOURCES

Funding Type	Federal	State	Local	Total
PL (Sect. 104(f))	$507,387	$0	$126,847	$634,234
STP-DA	$1,989,851	$0	$497,463	$2,487,314
FTA 5307	$1,555,056	$194,382	$194,382	$1,943,820
FTA 5303	$227,256	$28,407	$28,407	$284,070
Totals	$4,279,550	$222,789	$847,099	$5,349,438



Special-Major Project Summary

Introduction

The Main emphases of the current (FY 2011-12) Unified Planning Work Program (UPWP) were the development of the 2035 Long Range Transportation Plan and Air Quality Conformity Determination, model, enhancement, calibration and validation of the Tranplan update of the Triangle Regional Model, the development of the MPO GIS Warehouse/Integration and Automation, the development of the Non-motorized Trip Model, the development of the MPO integrated land-use/transportation model, Intelligent Transportation Systems (ITS) Strategic Deployment Plan, Farrington/ Stagecoach Road Corridor Study, MPO Collector Street Plan, Greenhouse Gas Emission Study, development of the regional transit plan, Chapel Hill Transit Master Plan study, and amendment of the 2035 Long Range Transportation Plan (LRTP). The MPO continued to fulfill State and federal transportation mandates and requirements, mainly the 3-C transportation process. The MPO made significant progress in these areas. Major milestones and accomplishments are summarized as follows:

The accomplishments for the 2011-12 UPWP are summarized as follows:

1. Greenhouse Gas (GHG) Emission Study Implementation: The MPO continues to work on the implementation of the GHG Emissions study, completed the formation of an energy Team and continues to provide for the Energy Team. There is on-going implementation in the focus areas of reducing transportation demand mainly SOV and encouraging alternative transportation modes.

2. NC 54/I-40 Corridor Study: The MPO conducted a consultant study for an integrated land use/transportation corridor study for the NC 54 corridor between the I-40 interchange in Durham and the US 15/501 inter-change in Chapel Hill. The purpose of the study is to analyze short-term and long-term land use issues and multi-modal transportation problems, evaluate opportunities and challenges, and recommend short and long-range solutions and strategies along the corridor. Phase I has been completed and Phase 2 is begun.

3. 2012-2015 Metropolitan Transportation Improvement Program (MTIP) and air quality conformity analysis: The MPO finalized the development of the 2009-15 MTIP. The DCHC MPO's Transportation Advisory Committee (TAC) approved the Fiscal Year 2009-2015 Metropolitan Transportation Improvement Program (MTIP) at their August 2008 meeting.

4. Administrative Modifications of the 2009-15 MTIP: The MPO processed several administrative modifications to the 2009-15 MTIP and forwarded to NCDOT to be included in the STIP for BOT approval.

5. Revision and enhancement of the MTIP Project Prioritization and Ranking Methodology for the 2011-2017 MTIP. The Lead Planning Agency continued work on the refinements and revision of the 20011-2017 MTIP project prioritization and ranking methodology. Draft methodology was made available to the public and local MPO agencies for review and comments. The project prioritization and ranking methodology was approved by the TAC in September 2008.
6. Development of the SPOT and the 5-year let plan (TIP fiscal constrained plan) and the 10-year SPOT priorities.
7. Stimulus Program (ARRA) Project Selection, monitoring and Reporting: The Lead Planning Agency worked on project selection, monitoring and reporting of the Economic Recovery Stimulus projects (ARRA). Staff coordinating with NCDOT in project selection consistent with the federal guidelines.

8. Triangle Regional Model (TRM) Update and Enhancement: The MPO continues to participate in the update and enhancement of the TRM at ITRE. The MPO is one of the funding partners of the modeling service bureau and continues to provide .5 FTE to ITRE Model Service Bureau.

9. The MPO continued work on several special and major emphasis projects: MPO Land-use model, MPO Non-Motorized Trip model, MPO GIS-T warehouse & Automation, Farrington Road/Stagecoach Road Corridor Study. Significant progress was made during the 2010-11 fiscal year.

10. The MPO continued work on several special and major emphasis projects: MPO Land-use model, MPO Non-Motorized Trip model, MPO TELUDE, Community VIZ integration, MPO Twitter account, Preparation of CMAQ applications, MPO Collector Street Plan, etc. Significant progress was made during the 2010-11 fiscal year.

11. Certification Review: USDOT conducted Certification Review of the DCHCMPO. The MPO received several commendations and one corrective action; evaluation of the effectiveness of the MPO Involvement, including addressing how Civil Rights public outreach. The MPO is working on addressing the corrective action.

12. Carrboro Main Street Study and Road Diet: Consulting firm of Martin-Alexio-Bryson selected to undertake this study. Data collection and analysis effort was completed and work continued on the evaluation of road diet.

13. Hillsborough Downtown Study: Data collection and analysis task was completed. Kimley Horn & Associates was selected for this study. Work began on the evaluation of traffic circulation and congestion

14. Alston Avenue Widening & East-End Connector: The LPA worked on the project planning and NEPA for the Alston Avenue and the East End Connector projects. The LPA continued work in helping NCDOT in the public involvement and outreach for the East-End Connector planning and environmental (NEPA) study.

15. Other Project Development Planning and NEPA: the LPA continued to participate on several on-going NCDOT project planning and NEPA for projects within the MPO. These projects are summarized as follows: South Miami, Blvd widening, NC 98, Holloway Street widening, Alexander Drive widening project, Hopson Road grade separation, Alston Avenue, East End Connector, Hillandale widening, NC 98 (Holloway Street) widening, Weaver Dairy Road widening/improvement, South Columbia, Elizabeth Brady Rd, several bridge replacement projects, resurfacing projects, etc.

16. ITS Strategic Deployment Plan (SDP). Work continues on the implementation of the Triangle Regional ITS SDP. This included linkages of ITP to travel model.

17. Farrington/Stagecoach Road study has been completed. Public involvement and recommendations are anticipated to be folded into the Comprehensive Transportation Plan (CTP).

18. The MPO Collector Street Plan (CSP) development is being done in parallel with the Comprehensive Transportation Plan. The MPO continued work on the refinement of the draft Collector Street Plan. The public involvement and adoption of the CSP will be streamlined with the CTP.

2012-2013 Proposed Work Program (Work Plan)

The development of the 2040 LRTP, update, improvement and refinement of the Triangle Regional Model and the MPO Congestion Management Process (CMP) will continue to be a top priority for the 2011-2012 UPWP. The MPO will continue to work with the Model Service Bureau in addressing TAC model concerns such as parking, the incorporation of non-motorized trips, link level calibration, better route-level transit ridership forecasts, integration of land-use and transportation,. Other top priorities include the development of the Comprehensive Transportation Plan, the development of the MPO climate change plan, regional transit initiatives, implementation of SAFETEA-LU requirements. The following summarizes proposed new initiatives and special areas for 2011-12 work programs.

	FY 2013 Transportation Planning Work Plan and Unified Planning Work Program (UPWP) Emphasis Transportation Planning Projects/Products
1	2040 LRTP
2	CTP
3	Development of the MPO CMP
4	Maintenance and update of ITS-SDP
5	Maintenance and update of the IDAS and Dynasmart
6	MPO Data collection and Surveillance of Change
7	TRM Modeling improvements, calibration and validation
8	Environmental Justice Plan for the DCHC MPO
9	MPO Safety and Security Plan/Integration
10	Freight Plan and integration of freight (urban Goods Movement planning
11	MPO Climate Change Plan/ integration of climate change and Greenhouse gas emission into MPO Planning
12	Bicycle friendly designation for Durham (and Chapel Hill?)
13	Spatial mapping and analysis of bike and pedestrian access to schools - sidewalks/bike access
14	Rail Traffic separation Study
15	Purpose and Need Statements/Indirect & Cumulative Impacts (ICI)
16	Bicycle map for Durham
17	TDM Plan update
18	MPO Policy /Process document - CAMPO organization Study - Charlotte study
19	MPO expansion, MAB expansion - ground for post 2010 analysis
20	Regional transit planning and local revenue option
	Continuation of Special Projects
1	TELUDE - GIS Warehouse/Enterprise & automation
2	NC 54 Corridor Study
3	UrbanSim _Land use Model
4	Non-Motorized trip modeling
	On-Going/Core/Routine 3-C Planning Process
1	UPWP development/amendment/maintenance and invoicing
2	TIP development/amendments
3	ARRA-Stimulus projects reporting and audit compliance
4	TAC/TCC Meetings/agenda preparation/directives to staff/follow-ups
5	GIS mappings and geo-database administration/maintenance
6	bicycle -pedestrian planning
7	JARC/New Freedom
8	STP-DA
9	CMAQ
10	Financial management and auditing
11	Public involvement/engagement/outreach
12	MPO website update/maintenance/content management -visualization & interactive capabilities
13	State & Regional Planning and Coordination
14	Civil rights and Title VI compliance and planning
15	CMP monitoring
16	Data inventory monitoring
17	Project planning-NEPA

DURHAM-CHAPEL HILL-CARRBORO METROPOLITAN PLANNING ORGANIZATION
2012-2013 UNIFIED PLANNING WORK PROGRAM (UPWP) DEVELOPMENT SCHEDULE

The tentative development schedule for the 2012-13 UPWP is presented below. The work program will contain new initiative for FY2013 and a continuation of the FY2012 initiatives and emphasis areas. The schedule reflects in an earlier shift in the development of the FY12-13 work plan comparative to FY11-12. In addition, the schedule provides for opportunity for linking the UPWP development with the local member governments' budget process.

DATES	DCHC MPO ACTIVITY DESCRIPTION
26-Oct-11	TCC receives the schedule for the development of the 2012-2013 UPWP.
31-Oct-11	MPO funding request sent out to member agencies
9-Nov-11	TAC receives schedule for the development of the 2012-2013 UPWP
2-Dec-11	Deadline for funding request to be submitted to MPO by member agencies.
December 2011 - February 2012	Development of Draft 2012-2013 UPWP and coordinating with local agencies continues.
22-Feb-12	TCC receives Draft 2012-2013 UPWP.
14-Mar-12	TAC receives Draft 2012-2013 UPWP
February - March 2012	TCC coordinates with member jurisdictions budget process for local matching funds.
28-Mar-12	TCC recommends Draft 2012-2013 UPWP to be released for Public Comment
30-Mar-12	NCDOT PTD receives draft copy of FY2013 UPWP
11-Apr-12	TAC reviews Draft 2012-2013 UPWP & releases for public comments
25-Apr-12	TCC hold public hearing & recommends that TAC adopt FINAL FY2012-2013 UPWP and self certifies MPO planning process
9-May-12	TAC adopts FINAL 2012-2013 UPWP and self certifies MPO planning process; FTA & NCDOT to receive final FY2013 UPWP.
10-May-12	Final FY2012-2103 UPWP submitted to NCDOT/FHWA for approval.

Durham-Chapel Hill-Carrboro Urban Area
FY 2012-2013 Unified Planning Work Program
Funding Distribution by Agency Funding Sources

MPO Funding Table - Distribution by Agency

Receiving Agency	STP-DA Sec. 133(b)(3)(7)		Section 104(f) PL		Section 5303 Highway/Transit			Section 5307 Transit			Funding Summary			
	Local	FHWA	Local	FHWA	Local	NCDOT	FTA	Local	NCDOT	FTA				
	20%	80%	20%	80%	10%	10%	80%	10%	10%	80%	Local	NCDOT	Federal	Total
Durham/DATA	$459,463	$1,837,851	$102,861	$411,445	$14,486	$14,486	$115,897	$63,882	$63,882	$511,056	$640,692	$78,368	$2,876,249	$3,595,309
Carrboro	$0	$0	$6,635	$26,538	$0	$0	$0	$0	$0	$0	$6,635	$0	$26,538	$33,173
Chapel Hill/CHT	$25,000	$100,000	$17,351	$69,404	$13,920	$13,920	$111,359	$45,000	$45,000	$360,000	$101,271	$58,920	$640,763	$800,953
Orange County	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TJCOG	$13,000	$52,000	$0	$0	$0	$0	$0	$0	$0	$0	$13,000	$0	$52,000	$65,000
TTA	$0	$0	$0	$0	$0	$0	$0	$85,500	$85,500	$684,000	$85,500	$85,500	$684,000	$855,000
NCDOT	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Totals	$497,463	$1,989,851	$126,847	$507,387	$28,406	$28,406	$227,256	$194,382	$194,382	$1,555,056	$847,098	$222,788	$4,279,550	$5,349,435

Footnote: All program of activities have been developed with the knowledge that there is no approved Federal Indirect Cost Plan in place at this time of the approval of the FY2013 work program.

MPO Wide - Detail Funding Tables - All Funding Sources

Durham-Chapel Hill-Carrboro Urban Area
FY 2012-2013 Unified Planning Work Program
Funding Distribution by Agency Funding Sources

	Task Description	STP-DA 133(b)(3)(7)		Sec. 104(f) PL		Section 5303 Highway/Transit			Section 5307 Transit			Task Funding Summary			
		Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 10%	NCDOT 10%	FTA 80%	Local 10%	NCDOT 10%	FTA 80%	Local	NCDOT	Federal	Total
II A	Surveillance of Change														
1	Traffic Volume Counts	13,130	52,520	746	2,984	0	0	0	0	0	0	13,876	-	55,504	69,380
2	Vehicle Miles of Travel	1,600	6,400	1,000	4,000	0	0	0	0	0	0	2,600	-	10,400	13,000
3	Street System Changes	1,000	4,000	1,000	4,000	0	0	0	0	0	0	2,000	-	8,000	10,000
4	Traffic Accidents	800	3,200	72	288	0	0	0	0	0	0	872	-	3,488	4,360
5	Transit System Data	800	3,200	0	0	6,599	6,599	52,790	11,867	11,867	94,938	19,266	18,466	150,929	188,661
6	Dwelling Unit, Pop. & Emp. Change	4,400	17,600	7,150	28,600	400	400	3,200	0	0	0	11,950	400	49,400	61,750
7	Air Travel	400	1,600	0	0	0	0	0	0	0	0	400	-	1,600	2,000
8	Vehicle Occupancy Rates	0	0	0	0	0	0	0	0	0	0	-	-	-	-
9	Travel Time Studies	5,740	22,960	0	0	0	0	0	0	0	0	5,740	-	22,960	28,700
10	Mapping	4,400	17,600	9,674	38,696	3,000	3,000	24,000	0	0	0	17,074	3,000	80,296	100,370
11	Central Area Parking Inventory	0	0	488	1,952	0	0	0	0	0	0	488	-	1,952	2,440
12	Bike & Ped. Facilities Inventory	1,200	4,800	636	2,544	0	0	0	0	0	0	1,836	-	7,344	9,180
13	Bike & Ped. Counts	3,600	14,400	639	2,555	0	0	0	0	0	0	4,239	-	16,955	21,194
II-B	**Long Range Transp. Plan**														
1	Collection of Base Year Data	320	1,280	0	0	0	0	0	0	0	0	320	-	1,280	1,600
2	Collection of Network Data	576	2,304	72	288	0	0	0	0	0	0	648	-	2,592	3,240
3	Travel Model Updates	63,340	253,360	0	0	150	150	1,197	9,000	9,000	72,000	72,490	9,150	326,557	408,196
4	Travel Surveys	0	0	0	0	0	0	0	0	0	0	-	-	-	-
5	Forecast of Data to Horizon year	5,680	22,720	0	0	0	0	0	0	0	0	5,680	-	22,720	28,400
6	Community Goals & Objectives	400	1,600	544	2,176	0	0	0	0	0	0	944	-	3,776	4,720
7	Forecast of Futurel Travel Patterns	3,000	12,000	6,800	27,200	0	0	0	0	0	0	9,800	-	39,200	49,000
8	Capacity Deficiency Analysis	6,000	24,000	15,000	60,000	1,000	1,000	8,000	0	0	0	22,000	1,000	92,000	115,000
9	Highway Element of th LRTP	1,000	4,000	1,546	6,184	0	0	0	0	0	0	2,546	-	10,184	12,730
10	Transit Element of the LRTP	2,000	8,000	1,546	6,184	400	400	3,200	2,750	2,750	22,000	6,696	3,150	39,384	49,230
11	Bicycle & Ped. Element of the LRTP	12,400	49,600	908	3,632	200	200	1,600	0	0	0	13,508	200	54,832	68,540
12	Airport/Air Travel Element of LRTP	0	0	400	1,600	0	0	0	0	0	0	400	-	1,600	2,000
13	Collector Street Element of LRTP	1,000	4,000	1,308	5,232	100	100	800	0	0	0	2,408	100	10,032	12,540
14	Rail, Water or other mode of LRTP	25,000	100,000	0	0	0	0	0	0	0	0	25,000	-	100,000	125,000
15	Freight Movement/Mobility Planning	400	1,600	800	3,200	0	0	0	0	0	0	1,200	-	4,800	6,000
16	Financial Planning	1,000	4,000	2,200	8,800	500	500	4,000	4,544	4,544	36,350	8,244	5,044	53,150	66,438
17	Congestion Management Strategies	57,000	228,000	890	3,560	500	500	4,000	0	0	0	58,390	500	235,560	294,450
18	Air Qual. Planning/Conformity Anal.	1,600	6,400	3,778	15,112	0	0	0	0	0	0	5,378	-	21,512	26,890
II-C	**Short Range Transit Planning**														
	Short Range Transit Planning	0	0	254	1,016	1,000	1,000	8,000	36,000	36,000	288,000	37,254	37,000	297,016	371,270
III-A	**Planning Work Program**														
	Planning Work Program	2,000	8,000	11,624	46,496	0	0	0	500	500	4,000	14,124	500	58,496	73,120
III-B	**Transp. Improvement Plan**														
	TIP	2,400	9,600	14,582	58,328	0	0	0	500	500	4,000	17,482	500	71,928	89,910
III-C	**Cvl Rgts. Cmp./Otr .Reg. Reqs.**														
1	Title VI	1,800	7,200	4,948	19,792	0	0	0	500	500	4,000	7,248	500	30,992	38,740
2	Environmental Justice	800	3,200	2,528	10,112	0	0	0	0	0	0	3,328	-	13,312	16,640
3	Minority Business Enterprise	800	3,200	0	0	0	0	0	50	50	400	850	50	3,600	4,500
4	Planning for the Elderly & Disabled	800	3,200	72	288	0	0	0	1,000	1,000	8,000	1,872	1,000	11,488	14,360
5	Safety/Drug Control Planning	0	0	0	0	0	0	0	1,500	1,500	12,000	1,500	1,500	12,000	15,000
6	Public Involvement	13,400	53,600	3,676	14,704	0	0	0	500	500	4,000	17,576	500	72,304	90,380
7	Private Sector Participation	0	0	0	0	0	0	0	0	0	0	-	-	-	-
III-D	**Incidental Plng./Project Dev.**														
1	Transportation Enhancement Plng.	0	0	0	0	0	0	0	34,000	34,000	272,000	34,000	34,000	272,000	340,000
2	Enviro. Analysis & Pre-TIP Plng.	9,800	39,200	3,608	14,432	0	0	0	0	0	0	13,408	-	53,632	67,040
3	Special Studies	181,200	724,800	486	1,944	0	0	0	6,000	6,000	48,000	187,686	6,000	774,744	968,431
4	Regional or Statewide Planning	17,400	69,600	3,000	12,000	3,000	3,000	24,000	5,300	5,300	42,400	28,700	8,300	148,000	185,000
III-E	**Management & Operations**														
1	Management & Operations	49,277	197,107	24,872	99,486	11,558	11,558	92,470	80,371	80,371	642,966	166,077	91,928	1,032,030	1,290,035
	Totals	$497,463	$1,989,851	$126,847	$507,386	$28,406	$28,406	$227,257	$194,382	$194,382	$1,555,055	$847,097	$222,788	$4,279,550	$5,349,435

Durham-Chapel Hill-Carrboro Urban Area
FY 2012-2013 Unified Planning Work Program
Funding Distribution by Agency Funding Sources

Composite Agency Tables -PL & STPDA Funding ONLY.

		Task Description	Chapel Hill			Carrboro			TJCOG			Durham			MPO		
			Local 20%	FHWA 80%	Total 100%	Local 20%	FHWA 80%	Total 100%	Local 20%	FHWA 80%	Total 100%	Local 20%	FHWA 80%	Total 100%	Local 20%	FHWA 80%	Total 100%
II A		**Surveillance of Change**															
	1	Traffic Volume Counts	$600	$2,400	$3,000	$146	$584	$730	$0	$0	$0	$13,130	$52,520	$65,650	$13,876	$55,504	$69,380
	2	Vehicle Miles of Travel	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,600	$10,400	$13,000	$2,600	$10,400	$13,000
	3	Street System Changes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,000	$8,000	$10,000	$2,000	$8,000	$10,000
	4	Traffic Accidents	$0	$0	$0	$72	$288	$360	$0	$0	$0	$800	$3,200	$4,000	$872	$3,488	$4,360
	5	Transit System Data	$0	$0	$0	$0	$0	$0	$0	$0	$0	$800	$3,200	$4,000	$800	$3,200	$4,000
	6	Dwelling Unit, Pop. & Emp. Change	$400	$1,600	$2,000	$102	$408	$510	$0	$0	$0	$11,048	$44,192	$55,240	$11,550	$46,200	$57,750
	7	Air Travel	$0	$0	$0	$0	$0	$0	$0	$0	$0	$400	$1,600	$2,000	$400	$1,600	$2,000
	8	Vehicle Occupancy Rates	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	9	Travel Time Studies	$0	$0	$0	$0	$0	$0	$0	$0	$0	$5,740	$22,960	$28,700	$5,740	$22,960	$28,700
	10	Mapping	$4,000	$16,000	$20,000	$418	$1,672	$2,090	$0	$0	$0	$9,656	$38,624	$48,280	$14,074	$56,296	$70,370
	11	Central Area Parking Inventory	$0	$0	$0	$88	$352	$440	$0	$0	$0	$400	$1,600	$2,000	$488	$1,952	$2,440
	12	Bike & Ped. Facilities Inventory	$600	$2,400	$3,000	$36	$144	$180	$0	$0	$0	$1,200	$4,800	$6,000	$1,836	$7,344	$9,180
	13	Bike & Ped. Counts	$551	$2,203	$2,754	$88	$352	$440	$0	$0	$0	$3,600	$14,400	$18,000	$4,239	$16,955	$21,194
II-B		**Long Range Transp. Plan**															
	1	Collection of Base Year Data	$0	$0	$0	$0	$0	$0	$0	$0	$0	$320	$1,280	$1,600	$320	$1,280	$1,600
	2	Collection of Network Data	$0	$0	$0	$72	$288	$360	$0	$0	$0	$576	$2,304	$2,880	$648	$2,592	$3,240
	3	Travel Model Updates	$0	$0	$0	$0	$0	$0	$0	$0	$0	$63,340	$253,360	$316,700	$63,340	$253,360	$316,700
	4	Travel Surveys	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	5	Forecast of Data to Horizon year	$0	$0	$0	$0	$0	$0	$3,000	$12,000	$15,000	$2,680	$10,720	$13,400	$5,680	$22,720	$28,400
	6	Community Goals & Objectives	$0	$0	$0	$144	$576	$720	$0	$0	$0	$800	$3,200	$4,000	$944	$3,776	$4,720
	7	Forecast of Futurel Travel Patterns	$0	$0	$0	$0	$0	$0	$0	$0	$0	$9,800	$39,200	$49,000	$9,800	$39,200	$49,000
	8	Capacity Deficiency Analysis	$2,000	$8,000	$10,000	$0	$0	$0	$0	$0	$0	$19,000	$76,000	$95,000	$21,000	$84,000	$105,000
	9	Highway Element of th LRTP	$400	$1,600	$2,000	$146	$584	$730	$0	$0	$0	$2,000	$8,000	$10,000	$2,546	$10,184	$12,730
	10	Transit Element of the LRTP	$1,400	$5,600	$7,000	$146	$584	$730	$0	$0	$0	$2,000	$8,000	$10,000	$3,546	$14,184	$17,730
	11	Bicycle & Ped. Element of the LRTP	$400	$1,600	$2,000	$108	$432	$540	$0	$0	$0	$12,800	$51,200	$64,000	$13,308	$53,232	$66,540
	12	Airport/Air Travel Element of LRTP	$0	$0	$0	$0	$0	$0	$0	$0	$0	$400	$1,600	$2,000	$400	$1,600	$2,000
	13	Collector Street Element of LRTP	$200	$800	$1,000	$108	$432	$540	$0	$0	$0	$2,000	$8,000	$10,000	$2,308	$9,232	$11,540
	14	Rail, Water or other mode of LRTP	$0	$0	$0	$0	$0	$0	$0	$0	$0	$25,000	$100,000	$125,000	$25,000	$100,000	$125,000
	15	Freight Movement/Mobility Plannin	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,200	$4,800	$6,000	$1,200	$4,800	$6,000
	16	Financial Planning	$1,400	$5,600	$7,000	$0	$0	$0	$0	$0	$0	$1,800	$7,200	$9,000	$3,200	$12,800	$16,000
	17	Congestion Management Strategies	$1,600	$6,400	$8,000	$290	$1,160	$1,450	$0	$0	$0	$56,000	$224,000	$280,000	$57,890	$231,560	$289,450
	18	Air Qual. Planning/Conformity Anal.	$400	$1,600	$2,000	$0	$0	$0	$0	$0	$0	$4,978	$19,912	$24,890	$5,378	$21,512	$26,890
II-C		**Short Range Transit Planning**															
		Short Range Transit Planning	$0	$0	$0	$254	$1,016	$1,270	$0	$0	$0	$0	$0	$0	$254	$1,016	$1,270
																	$0
III-A		**Planning Work Program**															
		Planning Work Program	$400	$1,600	$2,000	$324	$1,296	$1,620	$0	$0	$0	$12,900	$51,600	$64,500	$13,624	$54,496	$68,120
III-B		**Transp. Improvement Plan**															$0
		TIP	$400	$1,600	$2,000	$582	$2,328	$2,910	$0	$0	$0	$16,000	$64,000	$80,000	$16,982	$67,928	$84,910
																	$0
III-C		**Cvl Rgts. Cmp./Otr .Reg. Reqs.**															$0
	1	Title VI	$0	$0	$0	$36	$144	$180	$0	$0	$0	$6,712	$26,848	$33,560	$6,748	$26,992	$33,740
	2	Environmental Justice	$0	$0	$0	$108	$432	$540	$0	$0	$0	$3,220	$12,880	$16,100	$3,328	$13,312	$16,640
	3	Minority Business Enterprise	$0	$0	$0	$0	$0	$0	$0	$0	$0	$800	$3,200	$4,000	$800	$3,200	$4,000
	4	Planning for the Elderly & Disabled	$0	$0	$0	$72	$288	$360	$0	$0	$0	$800	$3,200	$4,000	$872	$3,488	$4,360
	5	Safety/Drug Control Planning	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	6	Public Involvement	$0	$0	$0	$402	$1,608	$2,010	$0	$0	$0	$16,674	$66,696	$83,370	$17,076	$68,304	$85,380
	7	Private Sector Participation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
																	$0
III-D		**Incidental Plng./Project Dev.**															$0
	1	Transportation Enhancement Plng.	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	2	Enviro. Analysis & Pre-TIP Plng.	$600	$2,400	$3,000	$108	$432	$540	$0	$0	$0	$12,700	$50,800	$63,500	$13,408	$53,632	$67,040
	3	Special Studies	$20,000	$80,000	$100,000	$486	$1,944	$2,431	$2,000	$8,000	$10,000	$159,200	$636,800	$796,000	$181,686	$726,744	$908,431
	4	Regional or Statewide Planning	$3,000	$12,000	$15,000	$0	$0	$0	$8,000	$32,000	$40,000	$9,400	$37,600	$47,000	$20,400	$81,600	$102,000
III-E		**Management & Operations**															
	1	Management & Operations	$4,000	$16,000	$20,000	$2,298	$9,194	$11,492	$0	$0	$0	$67,850	$271,400	$339,250	$74,148	$296,594	$370,742
		Totals	**$42,351**	**$169,403**	**$211,754**	**$6,635**	**$26,538**	**$33,173**	**$13,000**	**$52,000**	**$65,000**	**$562,324**	**$2,249,296**	**$2,811,620**	**$624,309**	**$2,497,237**	**$3,121,547**

Durham-Chapel Hill-Carrboro Urban Area
FY 2012-2013 Unified Planning Work Program
Funding Distribution by Agency Funding Sources

FHWA Planning Funds
MPO PL & STP-DA Total

		Task Description	STP-DA Section 133(b)(3)(7)			PL Section 104(f)			TOTAL PL & STP-DA		
			Local	FHWA	Total	Local	FHWA	Total	Local	FHWA	Total
			20%	80%	100%	20%	80%	100%	20%	80%	100%
II-A		**Surveillance of Change**									
	1	Traffic Volume Counts	13,130	52,520	65,650	746	2,984	3,730	13,876	55,504	69,380
	2	Vehicle Miles of Travel	1,600	6,400	8,000	1,000	4,000	5,000	2,600	10,400	13,000
	3	Street System Changes	1,000	4,000	5,000	1,000	4,000	5,000	2,000	8,000	10,000
	4	Traffic Accidents	800	3,200	4,000	72	288	360	872	3,488	4,360
	5	Transit System Data	800	3,200	4,000	0	0	0	800	3,200	4,000
	6	Dwelling Unit, Pop. & Emp. Change	4,400	17,600	22,000	7,150	28,600	35,750	11,550	46,200	57,750
	7	Air Travel	400	1,600	2,000	0	0	0	400	1,600	2,000
	8	Vehicle Occupancy Rates	0	0	0	0	0	0	0	0	0
	9	Travel Time Studies	5,740	22,960	28,700	0	0	0	5,740	22,960	28,700
	10	Mapping	4,400	17,600	22,000	9,674	38,696	48,370	14,074	56,296	70,370
	11	Central Area Parking Inventory	0	0	0	488	1,952	2,440	488	1,952	2,440
	12	Bike & Ped. Facilities Inventory	1,200	4,800	6,000	636	2,544	3,180	1,836	7,344	9,180
	13	Bike & Ped. Counts	3,600	14,400	18,000	639	2,555	3,194	4,239	16,955	21,194
II-B		**Long Range Transp. Plan**									
	1	Collection of Base Year Data	320	1,280	1,600	0	0	0	320	1,280	1,600
	2	Collection of Network Data	576	2,304	2,880	72	288	360	648	2,592	3,240
	3	Travel Model Updates	63,340	253,360	316,700	0	0	0	63,340	253,360	316,700
	4	Travel Surveys	0	0	0	0	0	0	0	0	0
	5	Forecast of Data to Horizon year	5,680	22,720	28,400	0	0	0	5,680	22,720	28,400
	6	Community Goals & Objectives	400	1,600	2,000	544	2,176	2,720	944	3,776	4,720
	7	Forecast of Futurel Travel Patterns	3,000	12,000	15,000	6,800	27,200	34,000	9,800	39,200	49,000
	8	Capacity Deficiency Analysis	6,000	24,000	30,000	15,000	60,000	75,000	21,000	84,000	105,000
	9	Highway Element of th LRTP	1,000	4,000	5,000	1,546	6,184	7,730	2,546	10,184	12,730
	10	Transit Element of the LRTP	2,000	8,000	10,000	1,546	6,184	7,730	3,546	14,184	17,730
	11	Bicycle & Ped. Element of the LRTP	12,400	49,600	62,000	908	3,632	4,540	13,308	53,232	66,540
	12	Airport/Air Travel Element of LRTP	0	0	0	400	1,600	2,000	400	1,600	2,000
	13	Collector Street Element of LRTP	1,000	4,000	5,000	1,308	5,232	6,540	2,308	9,232	11,540
	14	Rail, Water or other mode of LRTP	25,000	100,000	125,000	0	0	0	25,000	100,000	125,000
	15	Freight Movement/Mobility Planning	400	1,600	2,000	800	3,200	4,000	1,200	4,800	6,000
	16	Financial Planning	1,000	4,000	5,000	2,200	8,800	11,000	3,200	12,800	16,000
	17	Congestion Management Strategies	57,000	228,000	285,000	890	3,560	4,450	57,890	231,560	289,450
	18	Air Qual. Planning/Conformity Anal.	1,600	6,400	8,000	3,778	15,112	18,890	5,378	21,512	26,890
II-C		**Short Range Transit Planning**									
	1	Short Range Transit Planning	0	0	0	254	1,016	1,270	254	1,016	1,270
III-A		**Planning Work Program**									
		Planning Work Program	2,000	8,000	10,000	11,624	46,496	58,120	13,624	54,496	68,120
III-B		**Transp. Improvement Plan**									
		TIP	2,400	9,600	12,000	14,582	58,328	72,910	16,982	67,928	84,910
III-C		**Cvl Rgts. Cmp./Otr .Reg. Reqs.**									
	1	Title VI	1,800	7,200	9,000	4,948	19,792	24,740	6,748	26,992	33,740
	2	Environmental Justice	800	3,200	4,000	2,528	10,112	12,640	3,328	13,312	16,640
	3	Minority Business Enterprise	800	3,200	4,000	0	0	0	800	3,200	4,000
	4	Planning for the Elderly & Disabled	800	3,200	4,000	72	288	360	872	3,488	4,360
	5	Safety/Drug Control Planning	0	0	0	0	0	0	0	0	0
	6	Public Involvement	13,400	53,600	67,000	3,676	14,704	18,380	17,076	68,304	85,380
	7	Private Sector Participation	0	0	0	0	0	0	0	0	0
III-D		**Incidental Plng./Project Dev.**									
	1	Transportation Enhancement Plng.	0	0	0	0	0	0	0	0	0
	2	Enviro. Analysis & Pre-TIP Plng.	9,800	39,200	49,000	3,608	14,432	18,040	13,408	53,632	67,040
	3	Special Studies	181,200	724,800	906,000	486	1,944	2,431	181,686	726,744	908,431
	4	Regional or Statewide Planning	17,400	69,600	87,000	3,000	12,000	15,000	20,400	81,600	102,000
III-E		**Management & Operations**									
	1	Management & Operations	49,277	197,107	246,384	24,872	99,486	124,358	74,148	296,594	370,742
		Totals	**497,463**	**1,989,851**	**2,487,314**	**126,847**	**507,386**	**634,233**	**624,309**	**2,497,237**	**3,121,547**

Durham-Chapel Hill-Carrboro
Metropolitan Planning Organization
FY 2012-2013 Unified Planning Work Program

II-A: Surveillance of Change

The MPO is required by federal regulations and the 3C process to perform continuous data monitoring and maintenance. A number of transportation and socio-economic/demographic conditions will be continuously surveyed and compiled annually to determine whether previous projections are still valid or whether plan assumptions need to be changed. Surveillance of Change tasks are described in the following sections and agency responsibilities are summarized. Also, expected work products/deliverables and proposed schedule/accomplishment dates are provided as well.

Task II-A-1: Traffic Volume Counts

Perform routine automatic traffic counts and turning movement counts at specified locations. Maintain ADT counts and database for model calibration on arterial, minor arterial, and collector streets. The MPO will continue routine traffic counts data collection at specific locations. These counts will augment triennial traffic counts collected by NCDOT. Traffic counts will include daily, hourly, vehicle classification, or turning movements. The MPO agencies will be responsible for obtaining counts at specified locations within their jurisdiction and for furnishing the raw daily traffic counts, count information, and location maps to the Lead Planning Agency (LPA). The Traffic count data will feed into the MPO Congestion Management Process (CMP), Triangle Regional Model (TRM) maintenance and update, MPO TELUDE GIS warehouse and Safety and Freight planning.

Task II-A-4: Traffic Accidents

The DCHC MPO will collect route traffic accident data from TEES and prepare summary and analysis of high accident locations. Compare data analysis to previous years' results. Build off of and support the safety work of the NCDOT and MPO municipal governments. The task will feed into the MPO Congestion Management Process (CMP) and the Mobility Report Card, MPO MTIP ranking and project prioritization, SPOT, Mobility funds and Urban Lop funds prioritization, etc.

Task II-A-5: Transit System Data

Transit system data efforts will be conducted by the MPO transit providers, the Durham Area Transit Authority (DATA), Chapel Hill Transit (CHT), and the Triangle Transit Authority (TTA). This will include APC data to evaluate transit service performance, development of cross-town route(s), develop universities/college route(s) and consolidate and develop bus stop standards. Transit operators will identify strengths and weaknesses of service by route in order to assess service barriers and future options. Information will be used to monitor service and meet FTA NTD (Section 15) reporting requirements.

Task II-A-6: Dwelling Unit / Population and Employment Changes

Maintain inventory of dwelling units and population to determine needed changes in transportation services to meet current and projected demands. Continue to review developments to assess impacts to the 2035 LRTP, the SE data for the 2035 LRTP update, land-use model update, and transportation project development. Changes in dwelling units and employment within the MPO will be identified and evaluated to determine accuracy and consistency with the socio-economic forecast. The MPO will review and tabulate Census data, local parcel, zoning, tax data

records, InfoUSA, and Employment Security Commission data as part of this monitoring task. The MPO will continue work on the GIS enterprise and the Geocoder.

Task II-A-7: Air Travel

The MPO will continue routine collection of travel and passenger data at the Raleigh-Durham International Airport (RDU): Data to be collected and analyzed include but not limited to number of daily flights, number of daily enplaned passengers, and number of deplaned passengers, ground transportation, and tons of cargo activities. This purpose of the data collection and monitoring is to determine the influence of Raleigh-Durham International Airport (RDU), as a special generator, on the regional transportation system as well as to identify needs for additional services.

Task II-A-9: Travel Time Studies

The MPO will continue routine travel-time runs on selected links during peak period to provide accurate inputs for applications such as the travel model update and the CMP.

Task II-A-10: Mapping

This task will include but not limited to mapping of and updates to UPWP transportation planning activities such as the CMP, traffic counts, bicycle and pedestrian counts and inventory, transit routes, land use, traffic analysis zones, socio-economic and demographic trends, and environmental factors. The proposed data and GIS automation/integration will serve as a platform for maintaining and updating of data in GIS format.

Task II-A-11: Central Area Parking Inventory

The MPO will collect, inventory of on- and off- street parking facilities in the Central Business Districts (CBD), major generators and universities. Parking data to be collected include, number of spaces, parking fee rates (hourly daily, and monthly), average weekday costs and demand. Parking information collected will help in the calibration and maintenance of the travel model.

Task II-A-12: Bike & Pedestrian. Facilities Inventory

The MPO will conduct inventory of bicycle and pedestrian facilities as part of the CMP. The proposed inventory will to provide accurate inputs for the travel model update as well as help identify future sidewalk project needs, guide pedestrian improvement planning, and to support specific projects, such as the Comprehensive Bicycle Plan and Comprehensive Pedestrian Plan.

Task II-A-13: Bicycle and Pedestrian Counts

An inventory of bicycle and pedestrian counts will be conducted as part of the CMS/Mobility Report Card. The proposed inventory will guide pedestrian improvement planning, and to support specific projects, such as the Comprehensive Bicycle Plan and Comprehensive Pedestrian Plan

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II-B: Long Range Transportation Plan Activities

Federal Law (as updated by SAFETEA_LU) and USDOT's Metropolitan Planning Regulations, require the MPO to have a Long-Range Transportation Plan (LRTP) that is: multi-modal, financially constrained, has a minimum 20 year horizon, adhere to the MPO's adopted Public Involvement Policy (PIP), have growth forecasts consistent with latest planning assumptions and local land use plan, meet air quality conformity and be approved by the Transportation Advisory Committee. The LRTP must be updated and reaffirmed every 4 years. The DCHC will continue tasks associated with the development of the 2040 LRTP air quality and the Comprehensive Transportation Plan as well as commence data collection for the 2010 model base year.

Task II-B-2: Collection of Network Data

The MPO will collect transportation network data necessary to build the 2011 base year TRM network. The proposed work activities will include collection of the following transportation network variables and attributes:

A-Highways: 1) posted speed limit; 2) number of lanes; 3) segment length; 4) turn pockets; 5) parking conditions; 6) traffic signal locations and stop conditions; 7) signal density; 8). access control and driveway conditions; 9) land use and area type; and 10) facility type and functional classification.

B-Transit: 1) headways; 2) speed; 3) hours of operation; 4) services miles; 5) fare structure; 6) transfer information; 7) schedule information; and 8) route information and service characteristics for each route.

C-Bicycle and Pedestrian: 1) mileage; 2) activity density; 3) neighborhood characteristics; 4) environment/friendliness factors/indices; and 5) connectivity

Task II-B-3: Travel Model Updates

This task essentially involves the update and calibration and validation for the model to support the development of the 2040 LRTP. Update of the Triangle Regional Model (TRM) including improvements, enhancements and major updates. Proposed tasks include model sub-area enhancement, other improvements identified during the development of the 2035 LRTP, such capacities revision, parking enhancement, performance measures automation, peak hour highway and transit demand forecasts, non-motorized trip incorporation, etc. The MPO will continue work on the development of the Land-use/transportation model integration and the non-motorized trip model. The MPO will carry out other tasks needed to support the Triangle Regional Model updates, including providing the MPO's share of the Service Bureau funding and 50% FTE.

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Task II-B-5: Forecast of Data to Horizon Year

The LPA will project base year demographic and socio-economic data-1 into plan horizon year and air quality intermediate years (LRTP horizon year is 2040 and intermediate years for air quality analyses are 2020 2030, 2035 and 2040). Forecasts will be generated for County control totals and traffic analysis zones. Forecasts will be made consistent with local land use plans and in corporation with local Planning departments.

Task II-B-6: Community Goals and Objectives

The MPO will re-evaluate community goals and objectives for the 2040 Long range Transportation Plan (LRTP) and the Comprehensive Transportation Plan (CTP). The process of formulating and re-evaluating goals will begin with visioning exercise. The MPO will conduct public meetings to assess community vision in terms of transportation, land use, growth, quality of life, etc. The expected work products will be adopted goals and objectives, and targets and policy framework for achieving goals.

Task II-B-7: Forecast of Future Travel Patterns

MPO will generate travel demand forecasts for future years including the LRTP horizon and air quality intermediate years. The forecast of travel patterns will include a review of these factors and comparison to community goals and objectives to determine if changes in assumptions are warranted.

Task II-B-8: Capacity Deficiency Analysis

The MPO will conduct a capacity deficiency analysis as part of the 2040 LRTP and CMP. The analysis will be made to determine existing and existing-plus-committed deficiencies. Volume-to-capacity ration maps will be produced for the 2010 base year, E+C year, and other LRTP and CTP years. Essentially this task encompasses application of the Triangle Regional Model and other modeling tools to analyze deficiencies in the existing transportation system relative to anticipated future travel demand

Task II-B-9: Highway Element of the LRTP

The MPO will continue with the evaluation of highway elements of the Comprehensive Transportation Plan and the 2035 LRTP. Performance measures will be established for evaluating highway alternatives.

Task II-B-10: Transit Element of the LRTP

The MPO will continue with the evaluation of transit elements of the Comprehensive Transportation Plan and the 2035 LRTP. Transit evaluate will include fixed-route bus service, fixed-guideway transit, highway capacity transit and demand responsive transit. Using travel behavior, ridership forecasts and other analysis, evaluation of transit element will look at

unmet needs, new services areas and potential markets. Performance measures will be established for evaluating transit alternatives.

The MPO will continue the work of the Special Transit Advisory Commission related to the development of the regional transit plan. Specifically, the MPO will conduct planning and studies for highway capacity transit and circulator transit and other planning work necessary for the preparation of the FTA Small-Smart project. It is anticipated that this work will be accomplished with the help of consulting services.

Task II-B-11: Bicycle & Pedestrian Element of the LRTP

The MPO will continue with the evaluation of bicycle and pedestrian elements of the Comprehensive Transportation Plan and the 2035 LRTP. The MPO will continue work on the Durham Comprehensive pedestrian Plan and the Old Durham-Chapel Hill Road bicycle and pedestrian feasibility study. Work will commence on the development of the Durham Comprehensive Bicycle Plan. The MPO will solicit consulting help in the development of the MPO bicycle and pedestrian educational brochures and pamphlets as well as Durham County bike map.

Task II-B-12: Airport/Air Travel Element of LRTP

The MPO will continue with the evaluation of Airport/air travel element of the 2035 LRTP, including inter-modal connection and access/ground transportation.

Task II-B-13: Collector Street Element of LRTP

The MPO will continuation of the development of an MPO wide Collector Street Plan and circulation study. This is envisioned to involve the identification of future collector street connectivity needs, provisions for local street connectivity, development ordinance implementation provisions, additional local government consultation, and public involvement.

Task II-B-15: Freight Movement/Mobility Planning

MPO will undertake tasks associated with urban goods movement, specifically freight accessibility and mobility. Tasks to be undertaken include survey of freight carriers, recommendations for improving truck mobility or train/truck intermodal movements, and identifying acceptable truck routes.

Task II-B-16: Financial Planning

The MPO, on an as-needed basis, will examine financial options for funding proposed transportation projects and programs, including review the financial planning assumptions/ projections in the 2030 LRTP and refinement of cost estimates as necessary. The Lead Planning Agency (LPA) will participate in regional efforts geared toward identifying new and

alternative funding sources, including new taxing strategies, impact fees, and public-private partnerships.

Task II-B-17: Congestion Management Systems Strategies

The MPO will work to implement and monitor the Congestion Management Process (CMP) in accordance with the provisions of 23 U.S.C. and 23 CFR. Specifically, the MPO will continue on the update and monitoring of CMP strategies and State of the Systems Report.

Task II-B-18: Air Quality Planning/Conformity Analysis

The DCHC MPO (the Transportation Advisory Committee) is responsible in making a determination as to whether or not transportation plans, programs, and projects (LRTP and TIP) conform to air quality standards and the intent of the SIP. The LPA will continue to provide technical support to the TAC and TCC regarding air quality planning. In addition the LPA will continue participation in the development and application of State Implementation Plans for air quality, participation in the statewide interagency consultation, and providing assistance to NCDENR in developing and maintaining mobile source emission inventories.

Task II-C: Short Range Transit Planning

The MPO transit operators will continue activities related to short range transit planning. This includes continuous evaluation of their respective transit development plans and service performance.

Task III-A: Planning Work Program

Administer the FY 2009-2010 UPWP and prepare and process amendments as needed. Evaluate transportation planning work needs and emphasis areas and prepare the FY 2010-2011 UPWP. To prepare and continually maintain a Unified Planning Work Program (UPWP) that describes all transportation and transportation-related planning activities anticipated within the DCHC MPO planning area for the FY 2009-2010. To develop, maintain, and complete the UPWP in conformance with applicable federal, state, and regional guidelines. To prepare UPWP amendments as necessary and requested by member agencies, to reflect any change in programming or focus for the current fiscal year.

Task III-B: Transportation Improvement Program (TIP)

Amend FY 2009-2015 MTIP as needed. Commence work on the development of the 2011 – 2017 TIP Regional Priority List. This includes the refinement of the MPO Priority Needs and the identification of the transportation projects, programs, and services towards which the MPO will direct STP DA funds. As the Lead Planning Agency (LPA) of the DCHC MPO, the City of Durham, Transportation

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Division is responsible for annually developing, amending, adjusting and maintaining the Transportation Improvement Program (TIP) for the metropolitan area. Under this activity, the LPA will update and amend the current, seven-year program of transportation improvement projects (MTIP) that is consistent with the 2030 Long-Range Transportation Plan, STIP, the State Implementation Plan (SIP), EPA Air Quality Conformity Regulations and FHWA/FTA Planning Regulations.

Task III-C: Civil Rights Compliance/Other Regulations and Requirements

Task III-C-2: Environmental Justice (EJ)

In accordance with Federal Action (Executive Order 12898), the will develop an Environmental Justice Plan which will focus on complying with the Executive Order and the three basic principles of Environmental Justice: 1) Ensure adequate public involvement of low-income and minority groups in decision-making; 2) Prevent disproportionately high and adverse impacts to low-income and minority groups resulting from transportation and environmental decisions made by the MPO; and 3) Assure that low-income and minority groups receive a proportionate share of benefits resulting from transportation decisions made by the MPO. Tasks include:

1. Develop MPO Environmental Justice Plan, including establishment of Environmental Justice Advisory Board
2. Update demographic profiles based on Census CTPP and PUMS as well as MPO SE data forecasts - maps to identify areas of low-income, minority and elderly populations, job accessibility, and overlay of major employers, fixed route transit systems, and major shopping areas.
3. Provide increased opportunities for under-served populations to be represented in the transportation planning process.
4. Define target areas through the use of Census Block Group data from the 2000 Census.
5. Analyze the mobility of target area populations to jobs, childcare, and transit routes.
6. Review existing public outreach and involvement plan.
7. Develop a protocol for responding to issues and concerns regarding Environmental Justices in general and Hispanic population in particular.
8. Conduct analysis as needed regarding equitable distribution of transportation system benefits and costs among all socio-economic groups throughout the MPO area

Task III-C-3: Minority Business Enterprise

The MPO will continue to address and monitor the Minority Business Enterprise (MBE) program as a part of the planning and programming phases of project development. The MPO will monitor transportation projects and programs to ensure that meaningful and full

consideration are given to MBEs. The LPA will review and summarize transit operators MBE program and utilization.

Task III-C-4: Planning for the Elderly & Disabled

The MPO will continue to emphasize planning and provision of transportation facilities and services for the elderly and disabled. Specifically, the MPO will update inventory of locations and needs of elderly and disabled persons. The MPO will work with transit operators in the planning and evaluation of para-transit services.

Task III-C-6: Public Involvement

The MPO will continue to provide an early, proactive and a meaningful public participation and input throughout the transportation planning process, including providing for open exchange of information and ideas between the public and transportation decision-makers. To provide the public with complete information, timely notice, full access to key decisions and opportunities for early and continuing involvement in the 3C process. To assess the effectiveness of the current Public Involvement Process as required by the federal Certification Team, and to develop and enhance the process of public dissemination of information.

Task III-D: Incidental Planning/Project Development

Task III-D-2: Environmental Analysis & Pre-TIP Planning

The LPA will continue to participate regularly and consistently in the TIP project planning & development process, including submission of comments, attending public meetings, attending scoping meetings, attending NEPA 404 merger meetings, and participating in field inspections. The LPA will be involved in the East End Connector NEPA process including taking the lead in the public involvement process. The MPO will continue to support and be involved in NCDOT efforts to link NEPA process in the MPO systems planning process.

Task III-D-3 Special Studies

The MPO will continue with wide range of studies which are being conducted to meet the transportation planning needs of the area. These studies include NC 54/I40 corridor and sub-area study, ITS deployment plan update and the continuation of the Farrington/Stagecoach Road study, MPO collector street plan, GIS warehouse and automation, MPO parking study, etc.

Task III-D-4: Regional or Statewide Planning

The MPO will continue to coordinate with CAMPO, TTA, NCDOT, DENR, FHWA, FTA, EPA, and other State and regional agencies in regional transportation. This includes participation in the DCHC-CAMPO joint TAC meetings, TTA Board Meetings, Durham-Chapel Hill-Orange County

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Work Group, and a wide range of regional transportation planning working groups and committees. Examples include the Model Team, the Executive Committee, and the regional transit planning/operation coordination.
Statewide planning includes participation in various statewide planning initiatives such as CMAQ Committee, Indirect and Cumulative Impacts of Transportation Projects in North Carolina, the State Transportation Plan process, and the Comprehensive Transportation Plan.

Task III-E: Management and Operations

This work element encompasses the administration and support of the3-C transportation planning process as mandated and required by federal regulations. The continuing transportation planning process requires considerable administrative time for attending monthly committee meetings, preparing agendas and minutes to these meetings, training, preparing quarterly progress reports, documenting expenditures for the various planning work items, and filing for reimbursement of expenditures from the PL and STP-DA funds account and other Federal Funds. To assist, support, and facilitate an open Comprehensive, Cooperative, and Continuing (3C) transportation planning and programming process at all levels of government in conformance with applicable federal and state requirements and guidelines as described in the 3C Memorandum of Understanding. Proposed tasks include but not limited to:

1. Provide liaisons between DCHC MPO member agencies, transit providers, CAMPO, NCDOT, DENR, TJCOG, and other organizations at the local, regional, state, and federal levels on transportation related matters, issues and actions.

2. Work with the Capital Area Metropolitan Planning Organization (CAMPO) on regional issues. Prepare Regional Priority lists and MTIP and amend as necessary, Update transportation plans, travel demand model, and monitor data changes. Evaluate transportation planning programs developed through the 3C public participation process for appropriate MPO action.

3. Provide technical assistance to the Transportation Advisory Committee (TAC) and other member jurisdictions policy bodies.

4. Participate in Joint CAMPO/DCHC TCC and TAC meetings as a means to continually improve the quality and operation of the transportation planning process and decision making in the Triangle Region.

5. Review and comment on federal and state transportation-related plans, programs, regulations and guidelines.

6. Prepare and distribute TAC and TCC meeting agendas Attend TAC, TCC and other meetings associated with MPO planning activities.

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	1	2	3	4	5
FY	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**
Period	**2012-13**	**2013-14**	**2014-15**	**2015-16**	**2016-17**
	July 1, 2012-June 30, 2013	**July 1, 2013-June 30, 2014**	**July 1, 2014-June 30, 2015**	**July 1, 2015-June 30, 2016**	**July 1, 2016-June 30, 2017**
1	**Surveillance of Change/ Data monitoring**	**Surveillance of Change/ Data monitoring**	**Surveillance of Change/ Data monitoring**	**Surveillance of Change/ Data monitoring**	**Surveillance of Change/ Data monitoring**
1.1	ADT count and TMC annual and seasonal	ADT count and TMC annual and seasonal	ADT count and TMC annual and seasonal	ADT count and TMC annual and seasonal	ADT count and TMC annual and seasonal
1.2	VMT update and monitoring	VMT update and monitoring	VMT update and monitoring	VMT update and monitoring	VMT update and monitoring
1.3	Street System Changes update	Street System Changes update	Street System Changes update	Street System Changes update	Street System Changes update
1.4	Traffic accidents data	Traffic accidents data	Traffic accidents data	Traffic accidents data	Traffic accidents data
1.5	Transit system data	Transit system data	Transit system data	Transit system data	Transit system data
1.6	Housing, POP, Emp. data	Housing, POP, Emp. data	Housing, POP, Emp. data	Housing, POP, Emp. data	Housing, POP, Emp. data
1.7	Air travel	Air travel	Air travel	Air travel	Air travel
1.8		VOC	VOC	VOC	VOC
1.9	Travel Time	Travel Time	Travel Time	Travel Time	Travel Time
1.10	Mapping	Mapping	Mapping	Mapping	Mapping
1.11	Parking inventory	Parking inventory		Parking inventory	Parking inventory
1.12	Bike/Pedestrian. Facilities Inv	Bike/Pedestrian. Facilities Inv	Bike/Pedestrian. Facilities Inv	Bike/Pedestrian. Facilities Inv	Bike/Pedestrian. Facilities Inv
1.13	Bike/Pedestrian. Facilities Counts	Bike/Pedestrian. Facilities Counts	Bike/Pedestrian. Facilities Counts	Bike/Pedestrian. Facilities Counts	Bike/Pedestrian. Facilities Counts
2	**Unified Planning Work Program (UPWP)**	**Unified Planning Work Program (UPWP)**	**Unified Planning Work Program (UPWP)**	**Unified Planning Work Program (UPWP)**	**Unified Planning Work Program (UPWP)**
2.1	Amend UPWP as necessary	Amend UPWP as necessary	Amend UPWP as necessary	Amend UPWP as necessary	Amend UPWP as necessary
2.2	Process quarterly invoices and reports	Process quarterly invoices and reports	Process quarterly invoices and reports	Process quarterly invoices and reports	Process quarterly invoices and reports
2.3	Prepare annual UPWP progress report and performance evaluation	Prepare annual UPWP progress report and performance evaluation	Prepare annual UPWP progress report and performance evaluation	Prepare annual UPWP progress report and performance evaluation	Prepare annual UPWP progress report and performance evaluation
2.4	Develop FY 2014 UPWP	Develop FY 2015 UPWP	Develop FY 2016 UPWP	Develop FY 2017 UPWP	Develop FY 2018 UPWP
2.5	UPWP financial management	UPWP financial management	UPWP financial management	UPWP financial management	UPWP financial management
	Grant monitoring and audit	Grant monitoring and audit	Grant monitoring and audit	Grant monitoring and audit	Grant monitoring and audit
2.6	Perform annual self-certification & On-Going Process-Development	Perform annual self-certification & On-Going Process-Development	Perform annual self-certification & On-Going Process-Development	Perform annual self-certification & On-Going Process-Development	Perform annual self-certification & On-Going Process-Development
3	**Long-Range Transportation Plan (LRTP)**	**Long-Range Transportation Plan (LRTP)**	**Long-Range Transportation Plan (LRTP)**	**Long-Range Transportation Plan (LRTP)**	**Long-Range Transportation Plan (LRTP)**
3.1	Land-use Scenario analysis	Approval of the 2040 LRTP for AQ analysis and conformity	Amendment of the 2040 LRTP for AQ analysis and conformity as necessary	Goals, Objectives and targets for 2045 LRTP	Approval of the 2045 LRTP for AQ analysis and conformity
3.2	Deficiency Analysis	CTP components- Highway, transit, bicycle and pedestrian vision plans	Model Update for 2045 LRTP analysis	SE data collection and Forecasts for 2045 LRTP	CTP components- Highway, transit, bicycle and pedestrian vision plans
3.3	Alternative analysis	AQ analysis and conformity determination process	Inter-Agency Consultation process	Deficiency analysis and need assessment	AQ analysis and conformity determination process
3.4	Development of Preferred Option	Inter-Agency Consultation process	CTP update	Generation of alternatives and evalautionof alternatives	Inter-Agency Consultation process
3.5		Draft LRTP AQ Conformity Jan 2013 & approval in March 2013	Land-use Scenario analysis	Land-use Scenario analysis	

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FY	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**
Period	**2012-13**	**2013-14**	**2014-15**	**2015-16**	**2016-17**
	July 1, 2012-June 30, 2013	**July 1, 2013-June 30, 2014**	**July 1, 2014-June 30, 2015**	**July 1, 2015-June 30, 2016**	**July 1, 2016-June 30, 2017**
3.6			2045 LRTP Visioning process	Financial analysis	
3.7		2040 LRTP conformity deadline June 15 2013		Selection of Prefered options	
4	**Travel Demand Model Development and Update**	**Travel Demand Model Development and Update**	**Travel Demand Model Development and Update**	**Travel Demand Model Development and Update**	**Travel Demand Model Development and Update**
4.1	On-going model maintenance and enhancement activities	On-going model maintenance and enhancement activities	On-going model maintenance and enhancement activities	On-going model maintenance and enhancement activities	On-going model maintenance and enhancement activities
4.2	Collection of 2010 base year survey data, Census, ACS augment, onboard transit, commercial vehicle, etc	Collection of 2013 base year data-traffic counts, transit, etc	Model Update for 2045 LRTP analysis	Model Update for 2045 LRTP analysis	Model Update for 2045 LRTP analysis
4.3	2010 Census TAZ Delineation	Collection & development of 2013 networks			
4.4	Re-specification of the the model TRM V6	Socio-economic and demographic data collection and forecasts			
4.7		2013 base year model calibration and validation			
5	**Bicycle & Pedestrian Planning**	**Bicycle & Pedestrian Planning**	**Bicycle & Pedestrian Planning**	**Bicycle & Pedestrian Planning**	**Bicycle & Pedestrian Planning**
5.1	On-going bike and pedestrian advocacy	On-going bike and pedestrian advocacy	On-going bike and pedestrian advocacy	On-going bike and pedestrian advocacy	
5.2	Update of the Comprehensive Bicycle Plan. Update of the Regional Bike Plan		Update of the Comprehensive Pedestrian Plan	Update of the Comprehensive Bicycle Plan. Update of the Regional Bike Plan	on-going implementation of the bike and pedestria plans
5.3			On-going bike-pedstrian programs monitoring of strategies & effectiveness	On-going bike-pedstrian programs monitoring of strategies & effectiveness	On-going bike-pedstrian programs monitoring of strategies & effectiveness
6	**Short-Range Transit Plan**	**Short-Range Transit Plan**	**Short-Range Transit Plan**	**Short-Range Transit Plan**	**Short-Range Transit Plan**
6.1	On-going transit planning process	On-going transit planning process	On-going transit planning process	On-going transit planning process	On-going transit planning process
6.2	Transit Development Plan (TDP) DATA	Transit Development Plan (TDP) TTA		Transit Development Plan (TDP) CHT & TTA	Transit survey
7	**Congestion Management Process (CMS/CMP)**	**Congestion Management Process (CMS/CMP)**	**Congestion Management Process (CMS/CMP)**	**Congestion Management Process (CMS/CMP)**	**Congestion Management Process (CMS/CMP)**
7.1					
7.2	On-going CMP monitoring of strategies & effectiveness	On-going CMP monitoring of strategies & effectiveness	On-going CMP monitoring of strategies & effectiveness	On-going CMP monitoring of strategies & effectiveness	On-going CMP monitoring of strategies & effectiveness
7.3	Establishment of Area of application & reevaluation of definition of congestion		Establishment of Area of application & reevaluation of definition of congestion		Establishment of Area of application & reevaluation of definition of congestion

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FY	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**
Period	**2012-13**	**2013-14**	**2014-15**	**2015-16**	**2016-17**
	July 1, 2012-June 30, 2013	**July 1, 2013-June 30, 2014**	**July 1, 2014-June 30, 2015**	**July 1, 2015-June 30, 2016**	**July 1, 2016-June 30, 2017**
7.4	Transportation system definition (modes & networks)		Transportation system definition (modes & networks)		Transportation system definition (modes & networks)
7.5	Transportation system definition (modes & networks)		Transportation system definition (modes & networks)		Transportation system definition (modes & networks)
7.6	Data collection & analysis for MPO CMS Update		Data collection & analysis for MPO CMS Update		Data collection & analysis for MPO CMS Update
7.7	Develop Performance monitoring Plan		Develop Performance monitoring Plan		Develop Performance monitoring Plan
7.8	Identification and evaluation of strategies.		Identification and evaluation of strategies.		Identification and evaluation of strategies.
7.9	Action plan for monitoring effectiveness of strategies		Action plan for monitoring effectiveness of strategies		Action plan for monitoring effectiveness of strategies
7.10	Public comment and adoption of the MPO CMS		Public comment and adoption of the MPO CMS		Public comment and adoption of the MPO CMS
8	**TIP**	**TIP**	**TIP**	**TIP**	**TIP**
			Develop final draft 2013-2019 MTIP. TIP conformity determination		Develop final draft 2015-2021 MTIP. TIP conformity determination
	Reconcile 2011-17 MTIP and STIP		TAC Approves 2013-2019 MTIP		TAC Approves 2015-2021 MTIP
	TAC Approves 2011-2017 MTIP	Update TIP ranking & project prioritization methodology as necessary	BOT Approves 2013-2019 STIP	Update TIP ranking & project prioritization methodology as necessary	BOT Approves 2015-2021 STIP
	BOT Approves 2011-2017 STIP	Develop & submit TIP Project Priority List for 2013-2019 TIP		Develop & submit TIP Project Priority List for 2015-2021 TIP	
		Review draft STIP and prepare analysis comparison. Generate financial & revenue information for MTIP		Review draft STIP and prepare analysis comparison. Generate financial & revenue information for MTIP	
		One-on-one discussion between the MPO and NCDOT		One-on-one discussion between the MPO and NCDOT	
		Development 2013-2019 MTIP . Public input and comment process.		Development 2015-2021 MTIP . Public input and comment process.	
	Process MTIP amendments as needed	Process MTIP amendments as needed	Process MTIP amendments as needed	Process MTIP amendments as needed	
	Annual TIP project Listing	Annual TIP project Listing	Annual TIP project Listing	Annual TIP project Listing	
9	**Title VI/Civil Rights/EJ**	**Title VI/Civil Rights/EJ**	**Title VI/Civil Rights/EJ**	**Title VI/Civil Rights/EJ**	**Title VI/Civil Rights/EJ**
	Update EJ Plan and LEP program, and evaluate effectiveness of program and outreach efforts		Update EJ Plan and LEP program, and evaluate effectiveness of program and outreach efforts		Update EJ Plan and LEP program, and evaluate effectiveness of program and outreach efforts
	Update EJ and LEP outreach mailing list	Update EJ and LEP outreach mailing list	Update EJ and LEP outreach mailing list	Update EJ and LEP outreach mailing list	Update EJ and LEP outreach mailing list

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FY	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**
Period	**2012-13**	**2013-14**	**2014-15**	**2015-16**	**2016-17**
	July 1, 2012-June 30, 2013	**July 1, 2013-June 30, 2014**	**July 1, 2014-June 30, 2015**	**July 1, 2015-June 30, 2016**	**July 1, 2016-June 30, 2017**
	Administer and monitor MPO EJ/LEP program	Administer and monitor MPO EJ/LEP program	Administer and monitor MPO EJ/LEP program	Administer and monitor MPO EJ/LEP program	Administer and monitor MPO EJ/LEP program
	Evaluate and Perform EJ analysis, impacts as needed	Evaluate and Perform EJ analysis, impacts as needed	Evaluate and Perform EJ analysis, impacts as needed	Evaluate and Perform EJ analysis, impacts as needed	Evaluate and Perform EJ analysis, impacts as needed
	Update EL/LEP demographic profile and database	Update EL/LEP demographic profile and database	Update EL/LEP demographic profile and database	Update EL/LEP demographic profile and database	Update EL/LEP demographic profile and database
10	**Public Involvement/Participation Plan (PIP/PPP)**	**Public Involvement/Participation Plan (PIP/PPP)**	**Public Involvement/Participation Plan (PIP/PPP)**	**Public Involvement/Participation Plan (PIP/PPP)**	**Public Involvement/Participation Plan (PIP/PPP)**
	Review and evaluate effectiveness of MPO Public Involvement Process	Review and evaluate effectiveness of MPO Public Involvement Process	Review and evaluate effectiveness of MPO Public Involvement Process	Review and evaluate effectiveness of MPO Public Involvement Process	Review and evaluate effectiveness of MPO Public Involvement Process
		Social media in mpo public outreach and imput process	Social media in mpo public outreach and imput process	Social media in mpo public outreach and imput process	Social media in mpo public outreach and imput process
	On-going MPO website update and content management	On-going MPO website update and content management	On-going MPO website update and content management	On-going MPO website update and content management	On-going MPO website update and content management
11	**Project Development & Incidental Planning**	**Project Development & Incidental Planning**	**Project Development & Incidental Planning**	**Project Development & Incidental Planning**	**Project Development & Incidental Planning**
	Participation in project development, environmental analysis, NEAP process	Participation in project development, environmental analysis, NEAP process	Participation in project development, environmental analysis, NEAP process	Participation in project development, environmental analysis, NEAP process	Participation in project development, environmental analysis, NEAP process
	Northern Durham Parkway/US 70 NEAP study	Northern Durham Parkway/US 70 NEAP study	Pre-TIP project planning and cordination	Pre-TIP project planning and cordination	Pre-TIP project planning and cordination
12	**Land-use & Transportation integration**	**Land-use & Transportation integration**	**Land-use & Transportation integration**	**Land-use & Transportation integration**	**Land-use & Transportation integration**
	Community Viz and UrbanSim implementaion and update	Community Viz and UrbanSim implementaion and update	Community Viz and UrbanSim implementaion and update	Community Viz and UrbanSim implementaion and update	Community Viz and UrbanSim implementaion and update
	Monitoring of land use development and consistency check with SE forecasts	Monitoring of land use development and consistency check with SE forecasts	Monitoring of land use development and consistency check with SE forecasts	Monitoring of land use development and consistency check with SE forecasts	
13	**Intelligent Transportation System Planning**	**Intelligent Transportation System Planning**	**Intelligent Transportation System Planning**	**Intelligent Transportation System Planning**	**Intelligent Transportation System Planning**
	Turbo Architecture, IDAS and DynaSmart enhancement, update and maintenance	Turbo Architecture, IDAS and DynaSmart enhancement, update and maintenance	Turbo Architecture, IDAS and DynaSmart enhancement, update and maintenance	Turbo Architecture, IDAS and DynaSmart enhancement, update and maintenance	Turbo Architecture, IDAS and DynaSmart enhancement, update and maintenance
	ITS planning, operation and monitoring	ITS planning, operation and monitoring	ITS planning, operation and monitoring	ITS planning, operation and monitoring	ITS planning, operation and monitoring
14	**Safety Planning**	**Safety Planning**	**Safety Planning**	**Safety Planning**	**Safety Planning**
	Safety data collection and analysis, and coordination with other agencies.	Safety data collection and analysis, and coordination with other agencies.	Safety data collection and analysis, and coordination with other agencies.	Safety data collection and analysis, and coordination with other agencies.	Safety data collection and analysis, and coordination with other agencies.

DCHC MPO 5-Year Unified Planning Work Program
July 1, 2012 to June 30, 2017

	1	2	3	4	5
FY	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**
Period	**2012-13**	**2013-14**	**2014-15**	**2015-16**	**2016-17**
	July 1, 2012-June 30, 2013	**July 1, 2013-June 30, 2014**	**July 1, 2014-June 30, 2015**	**July 1, 2015-June 30, 2016**	**July 1, 2016-June 30, 2017**
	Ongoing integration of safety in the MPO transportation planning process	Ongoing integration of safety in the MPO transportation planning process	Ongoing integration of safety in the MPO transportation planning process	Ongoing integration of safety in the MPO transportation planning process	Ongoing integration of safety in the MPO transportation planning process
15	**Freight Planning**	**Freight Planning**	**Freight Planning**	**Freight Planning**	**Freight Planning**
	on-going freight planning and coordination	on-going freight planning and coordination	on-going freight planning and coordination	on-going freight planning and coordination	on-going freight planning and coordination
	Outreach with freight and logistic companies	Outreach with freight and logistic companies	Outreach with freight and logistic companies	Outreach with freight and logistic companies	Outreach with freight and logistic companies
	Continuous update of truck circulation maps	Continuous update of truck circulation maps	Continuous update of truck circulation maps	Continuous update of truck circulation maps	Continuous update of truck circulation maps
16	**Transportation System Preservation**	**Transportation System Preservation**	**Transportation System Preservation**	**Transportation System Preservation**	**Transportation System Preservation**
	Transportation System Preservation planning and operation	Transportation System Preservation planning and operation	Transportation System Preservation planning and operation	Transportation System Preservation planning and operation	Transportation System Preservation planning and operation
	TDM and TSM (ITS) planning, programming, implementation, monitoring and evaluation	TDM and TSM (ITS) planning, programming, implementation, monitoring and evaluation	TDM and TSM (ITS) planning, programming, implementation, monitoring and evaluation	TDM and TSM (ITS) planning, programming, implementation, monitoring and evaluation	TDM and TSM (ITS) planning, programming, implementation, monitoring and evaluation
17	**GIS Development**	**GIS Development**	**GIS Development**	**GIS Development**	**GIS Development**
	Maintain Databases	*Maintain Databases*	*Maintain Databases*	*Maintain Databases*	*Maintain Databases*
	Maintain Databases	Maintain Databases	Acquire and Maintain Data; maintain hardware and software	Acquire and Maintain Data; maintain hardware and software	Acquire and Maintain Data; maintain hardware and software
	Maintenance of MPO GIS and data layers	Maintenance of MPO GIS and data layers	Maintenance of MPO GIS and data layers	Maintenance of MPO GIS and data layers	Maintenance of MPO GIS and data layers
	Coordination with resource agencies and linkages of transportation data with environmental data	Coordination with resource agencies and linkages of transportation data with environmental data	Coordination with resource agencies and linkages of transportation data with environmental data	Coordination with resource agencies and linkages of transportation data with environmental data	Coordination with resource agencies and linkages of transportation data with environmental data
	Update green print maps	*Update green print maps*	*Update green print maps*	*Update green print maps*	*Update green print maps*
	Data development and update. Maintenace and update of TELUDE and applications	Data development and update. Maintenace and update of TELUDE and applications	Data development and update. Maintenace and update of TELUDE and applications	Data development and update. Maintenace and update of TELUDE and applications	Data development and update. Maintenace and update of TELUDE and applications
18	**Management and Operations**	**Management and Operations**	**Management and Operations**	**Management and Operations**	**Management and Operations**
	Management and Operations of the MPO 3-C process	Management and Operations of the MPO 3-C process	Management and Operations of the MPO 3-C process	Management and Operations of the MPO 3-C process	Management and Operations of the MPO 3-C process
	TAC directives	TAC directives	TAC directives	TAC directives	TAC directives
19	**Special Studies/State & Regional Planning**	**Special Studies/State & Regional Planning**	**Special Studies/State & Regional Planning**	**Special Studies/State & Regional Planning**	**Special Studies/State & Regional Planning**
	NC 54 Studies	Parking survey/Study	As Needed	As Needed	As needed

Appendices A

Federal Highway Administration (FHWA) & Federal Transit Administration (FTA) Agency Funding Tables

Durham-Chapel Hill-Carrboro Urban Area
FY 2012-2013 Unified Planning Work Program
Funding Distribution by Agency Funding Sources

City of Durham / LPA

		Task Description	STP-DA 133(b)(3)(7)		Sec. 104(f) PL		Section 5303 Highway/Transit			Section 5307 Transit			Task Funding Summary			
			Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 10%	NCDOT 10%	FTA 80%	Local 10%	NCDOT 10%	FTA 80%	Local	NCDOT	Federal	Total
II A		**Surveillance of Change**														
	1	Traffic Volume Counts	$13,130	$52,520	$0	$0	$0	$0	$0	$0	$0	$0	$13,130	$0	$52,520	$65,650
	2	Vehicle Miles of Travel	$1,600	$6,400	$1,000	$4,000	$0	$0	$0	$0	$0	$0	$2,600	$0	$10,400	$13,000
	3	Street System Changes	$1,000	$4,000	$1,000	$4,000	$0	$0	$0	$0	$0	$0	$2,000	$0	$8,000	$10,000
	4	Traffic Accidents	$800	$3,200	$0	$0	$0	$0	$0	$0	$0	$0	$800	$0	$3,200	$4,000
	5	Transit System Data	$800	$3,200	$0	$0	$6,399	$6,399	$51,190	$2,742	$2,742	$21,938	$9,941	$9,141	$76,329	$95,411
	6	Dwelling Unit, Pop. & Emp. Change	$4,400	$17,600	$6,648	$26,592	$0	$0	$0	$0	$0	$0	$11,048	$0	$44,192	$55,240
	7	Air Travel	$400	$1,600	$0	$0	$0	$0	$0	$0	$0	$0	$400	$0	$1,600	$2,000
	8	Vehicle Occupancy Rates	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	9	Travel Time Studies	$5,740	$22,960	$0	$0	$0	$0	$0	$0	$0	$0	$5,740	$0	$22,960	$28,700
	10	Mapping	$2,400	$9,600	$7,256	$29,024	$0	$0	$0	$0	$0	$0	$9,656	$0	$38,624	$48,280
	11	Central Area Parking Inventory	$0	$0	$400	$1,600	$0	$0	$0	$0	$0	$0	$400	$0	$1,600	$2,000
	12	Bike & Ped. Facilities Inventory	$1,200	$4,800	$0	$0	$0	$0	$0	$0	$0	$0	$1,200	$0	$4,800	$6,000
	13	Bike & Ped. Counts	$3,600	$14,400	$0	$0	$0	$0	$0	$0	$0	$0	$3,600	$0	$14,400	$18,000
II B		**Long Range Transp. Plan**														
	1	Collection of Base Year Data	$320	$1,280	$0	$0	$0	$0	$0	$0	$0	$0	$320	$0	$1,280	$1,600
	2	Collection of Network Data	$576	$2,304	$0	$0	$0	$0	$0	$0	$0	$0	$576	$0	$2,304	$2,880
	3	Travel Model Updates	$63,340	$253,360	$0	$0	$0	$0	$0	$0	$0	$0	$63,340	$0	$253,360	$316,700
	4	Travel Surveys	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	5	Forecast of Data to Horizon year	$2,680	$10,720	$0	$0	$0	$0	$0	$0	$0	$0	$2,680	$0	$10,720	$13,400
	6	Community Goals & Objectives	$400	$1,600	$400	$1,600	$0	$0	$0	$0	$0	$0	$800	$0	$3,200	$4,000
	7	Forecast of Futurel Travel Patterns	$3,000	$12,000	$6,800	$27,200	$0	$0	$0	$0	$0	$0	$9,800	$0	$39,200	$49,000
	8	Capacity Deficiency Analysis	$6,000	$24,000	$13,000	$52,000	$0	$0	$0	$0	$0	$0	$19,000	$0	$76,000	$95,000
	9	Highway Element of th LRTP	$1,000	$4,000	$1,000	$4,000	$0	$0	$0	$0	$0	$0	$2,000	$0	$8,000	$10,000
	10	Transit Element of the LRTP	$1,000	$4,000	$1,000	$4,000	$0	$0	$0	$0	$0	$0	$2,000	$0	$8,000	$10,000
	11	Bicycle & Ped. Element of the LRTP	$12,400	$49,600	$400	$1,600	$0	$0	$0	$0	$0	$0	$12,800	$0	$51,200	$64,000
	12	Airport/Air Travel Element of LRTP	$0	$0	$400	$1,600	$0	$0	$0	$0	$0	$0	$400	$0	$1,600	$2,000
	13	Collector Street Element of LRTP	$1,000	$4,000	$1,000	$4,000	$0	$0	$0	$0	$0	$0	$2,000	$0	$8,000	$10,000
	14	Rail, Water or other mode of LRTP	$25,000	$100,000	$0	$0	$0	$0	$0	$0	$0	$0	$25,000	$0	$100,000	$125,000
	15	Freight Movement/Mobility Planning	$400	$1,600	$800	$3,200	$0	$0	$0	$0	$0	$0	$1,200	$0	$4,800	$6,000
	16	Financial Planning	$0	$0	$1,800	$7,200	$0	$0	$0	$4,544	$4,544	$36,350	$6,344	$4,544	$43,550	$54,438
	17	Congestion Management Strategies	$56,000	$224,000	$0	$0	$0	$0	$0	$0	$0	$0	$56,000	$0	$224,000	$280,000
	18	Air Qual. Planning/Conformity Anal.	$1,600	$6,400	$3,378	$13,512	$0	$0	$0	$0	$0	$0	$4,978	$0	$19,912	$24,890
II C		**Short Range Transit Planning**														
	1	Short Range Transit Planning	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
III-A		**Planning Work Program**														
		Planning Work Program	$2,000	$8,000	$10,900	$43,600	$0	$0	$0	$0	$0	$0	$12,900	$0	$51,600	$64,500
III-B		**Transp. Improvement Plan**														
		TIP	$2,400	$9,600	$13,600	$54,400	$0	$0	$0	$0	$0	$0	$16,000	$0	$64,000	$80,000
III-C		**Cvl Rgts. Cmp./Otr .Reg. Reqs.**														
	1	Title VI	$1,800	$7,200	$4,912	$19,648	$0	$0	$0	$0	$0	$0	$6,712	$0	$26,848	$33,560
	2	Environmental Justice	$800	$3,200	$2,420	$9,680	$0	$0	$0	$0	$0	$0	$3,220	$0	$12,880	$16,100
	3	Minority Business Enterprise	$800	$3,200	$0	$0	$0	$0	$0	$0	$0	$0	$800	$0	$3,200	$4,000
	4	Planning for the Elderly & Disabled	$800	$3,200	$0	$0	$0	$0	$0	$0	$0	$0	$800	$0	$3,200	$4,000
	5	Safety/Drug Control Planning	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	6	Public Involvement	$13,400	$53,600	$3,274	$13,096	$0	$0	$0	$0	$0	$0	$16,674	$0	$66,696	$83,370
	7	Private Sector Participation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
III-D		**Incidental Plng./Project Dev.**														
	1	Transportation Enhancement Plng.	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	2	Enviro. Analysis & Pre-TIP Plng.	$9,800	$39,200	$2,900	$11,600	$0	$0	$0	$0	$0	$0	$12,700	$0	$50,800	$63,500
	3	Special Studies	$159,200	$636,800	$0	$0	$0	$0	$0	$0	$0	$0	$159,200	$0	$636,800	$796,000
	4	Regional or Statewide Planning	$9,400	$37,600	$0	$0	$0	$0	$0	$0	$0	$0	$9,400	$0	$37,600	$47,000
III-E		**Management & Operations**														
	1	Management & Operations	$49,277	$197,107	$18,573	$74,293	$8,088	$8,088	$64,707	$56,596	$56,596	$452,766	$132,533	$64,683	$788,873	$986,090
		Totals	$459,463	$1,837,851	$102,861	$411,445	$14,486	$14,486	$115,897	$63,882	$63,882	$511,055	$640,692	$78,368	$2,876,249	$3,595,309

Durham-Chapel Hill-Carrboro Urban Area
FY 2012-2013 Unified Planning Work Program
Funding Distribution by Agency Funding Sources

Town of Chapel Hill

	Task Description	STP-DA 133(b)(3)(7)		Sec. 104(f) PL		Section 5303 Highway/Transit			Section 5307 Transit			Task Funding Summary			
		Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 10%	NCDOT 10%	FTA 80%	Local 10%	NCDOT 10%	FTA 80%	Local	NCDOT	Federal	Total
II-A	**Surveillance of Change**														
1	Traffic Volume Counts	$0	$0	$600	$2,400	$0	$0	$0	$0	$0	$0	$600	$0	$2,400	$3,000
2	Vehicle Miles of Travel	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
3	Street System Changes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
4	Traffic Accidents	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
5	Transit System Data	$0	$0	$0	$0	$200	$200	$1,600	$3,125	$3,125	$25,000	$3,325	$3,325	$26,600	$33,250
6	Dwelling Unit, Pop. & Emp. Change	$0	$0	$400	$1,600	$400	$400	$3,200	$0	$0	$0	$800	$400	$4,800	$6,000
7	Air Travel	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
8	Vehicle Occupancy Rates	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
9	Travel Time Studies	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
10	Mapping	$2,000	$8,000	$2,000	$8,000	$3,000	$3,000	$24,000	$0	$0	$0	$7,000	$3,000	$40,000	$50,000
11	Central Area Parking Inventory	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
12	Bike & Ped. Facilities Inventory	$0	$0	$600	$2,400	$0	$0	$0	$0	$0	$0	$600	$0	$2,400	$3,000
13	Bike & Ped. Counts	$0	$0	$551	$2,203	$0	$0	$0	$0	$0	$0	$551	$0	$2,203	$2,754
II-B	**Long Range Transp. Plan**														
1	Collection of Base Year Data	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2	Collection of Network Data	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
3	Travel Model Updates	$0	$0	$0	$0	$150	$150	$1,197	$0	$0	$0	$150	$150	$1,197	$1,496
4	Travel Surveys	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
5	Forecast of Data to Horizon year	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
6	Community Goals & Objectives	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7	Forecast of Futurel Travel Patterns	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
8	Capacity Deficiency Analysis	$0	$0	$2,000	$8,000	$1,000	$1,000	$8,000	$0	$0	$0	$3,000	$1,000	$16,000	$20,000
9	Highway Element of th LRTP	$0	$0	$400	$1,600	$0	$0	$0	$0	$0	$0	$400	$0	$1,600	$2,000
10	Transit Element of the LRTP	$1,000	$4,000	$400	$1,600	$400	$400	$3,200	$1,000	$1,000	$8,000	$2,800	$1,400	$16,800	$21,000
11	Bicycle & Ped. Element of the LRTI	$0	$0	$400	$1,600	$200	$200	$1,600	$0	$0	$0	$600	$200	$3,200	$4,000
12	Airport/Air Travel Element of LRTI	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
13	Collector Street Element of LRTP	$0	$0	$200	$800	$100	$100	$800	$0	$0	$0	$300	$100	$1,600	$2,000
14	Rail, Water or other mode of LRTP	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
15	Freight Movement/Mobility Plannin	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
16	Financial Planning	$1,000	$4,000	$400	$1,600	$500	$500	$4,000	$0	$0	$0	$1,900	$500	$9,600	$12,000
17	Congestion Management Strategies	$1,000	$4,000	$600	$2,400	$500	$500	$4,000	$0	$0	$0	$2,100	$500	$10,400	$13,000
18	Air Qual. Planning/Conformity Ana	$0	$0	$400	$1,600	$0	$0	$0	$0	$0	$0	$400	$0	$1,600	$2,000
II-C	**Short Range Transit Planning**														
	Short Range Transit Planning	$0	$0	$0	$0	$1,000	$1,000	$8,000	$1,250	$1,250	$10,000	$2,250	$2,250	$18,000	$22,500
III-A	**Planning Work Program**														
	Planning Work Program	$0	$0	$400	$1,600	$0	$0	$0	$500	$500	$4,000	$900	$500	$5,600	$7,000
III-B	**Transp. Improvement Plan**														
	TIP	$0	$0	$400	$1,600	$0	$0	$0	$500	$500	$4,000	$900	$500	$5,600	$7,000
III-C	**Cvl Rgts. Cmp./Otr .Reg. Reqs.**														
1	Title VI	$0	$0	$0	$0	$0	$0	$0	$500	$500	$4,000	$500	$500	$4,000	$5,000
2	Environmental Justice	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
3	Minority Business Enterprise	$0	$0	$0	$0	$0	$0	$0	$50	$50	$400	$50	$50	$400	$500
4	Planning for the Elderly & Disabled	$0	$0	$0	$0	$0	$0	$0	$1,000	$1,000	$8,000	$1,000	$1,000	$8,000	$10,000
5	Safety/Drug Control Planning	$0	$0	$0	$0	$0	$0	$0	$1,500	$1,500	$12,000	$1,500	$1,500	$12,000	$15,000
6	Public Involvement	$0	$0	$0	$0	$0	$0	$0	$500	$500	$4,000	$500	$500	$4,000	$5,000
7	Private Sector Participation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
III-D	**Incidental Plng./Project Dev.**														
1	Transportation Enhancement Plng.	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2	Enviro. Analysis & Pre-TIP Plng.	$0	$0	$600	$2,400	$0	$0	$0	$0	$0	$0	$600	$0	$2,400	$3,000
3	Special Studies	$20,000	$80,000	$0	$0	$0	$0	$0	$6,000	$6,000	$48,000	$26,000	$6,000	$128,000	$160,000
4	Regional or Statewide Planning	$0	$0	$3,000	$12,000	$3,000	$3,000	$24,000	$5,300	$5,300	$42,400	$11,300	$8,300	$78,400	$98,000
III-E	**Management & Operations**														
1	Management & Operations	$0	$0	$4,000	$16,000	$3,470	$3,470	$27,763	$23,775	$23,775	$190,200	$31,245	$27,245	$233,963	$292,453
	Totals	$25,000	$100,000	$17,351	$69,404	$13,920	$13,920	$111,359	$45,000	$45,000	$360,000	$101,271	$58,920	$640,763	$800,953

Durham-Chapel Hill-Carrboro Urban Area
FY 2012-2013 Unified Planning Work Program
Funding Distribution by Agency Funding Sources

Town of Carrboro

	Task Description	STP-DA 133(b)(3)(7)		Sec. 104(f) PL		Section 5303 Highway/Transit			Section 5307 Transit			Task Funding Summary			
		Local	FHWA	Local	FHWA	Local	NCDOT	FTA	Local	NCDOT	FTA	Local	NCDOT	Federal	Total
		20%	80%	20%	80%	10%	10%	80%	10%	10%	80%				
II-A	**Surveillance of Change**														
1	Traffic Volume Counts	$0	$0	$146	$584	$0	$0	$0	$0	$0	$0	$146	$0	$584	$730
2	Vehicle Miles of Travel	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
3	Street System Changes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
4	Traffic Accidents	$0	$0	$72	$288	$0	$0	$0	$0	$0	$0	$72	$0	$288	$360
5	Transit System Data	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
6	Dwelling Unit, Pop. & Emp. Change	$0	$0	$102	$408	$0	$0	$0	$0	$0	$0	$102	$0	$408	$510
7	Air Travel	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
8	Vehicle Occupancy Rates	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
9	Travel Time Studies	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
10	Mapping	$0	$0	$418	$1,672	$0	$0	$0	$0	$0	$0	$418	$0	$1,672	$2,090
11	Central Area Parking Inventory	$0	$0	$88	$352	$0	$0	$0	$0	$0	$0	$88	$0	$352	$440
12	Bike & Ped. Facilities Inventory	$0	$0	$36	$144	$0	$0	$0	$0	$0	$0	$36	$0	$144	$180
13	Bike & Ped. Counts	$0	$0	$88	$352	$0	$0	$0	$0	$0	$0	$88	$0	$352	$440
II-B	**Long Range Transp. Plan**														
1	Collection of Base Year Data	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2	Collection of Network Data	$0	$0	$72	$288	$0	$0	$0	$0	$0	$0	$72	$0	$288	$360
3	Travel Model Updates	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
4	Travel Surveys	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
5	Forecast of Data to Horizon year	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
6	Community Goals & Objectives	$0	$0	$144	$576	$0	$0	$0	$0	$0	$0	$144	$0	$576	$720
7	Forecast of Futurel Travel Patterns	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
8	Capacity Deficiency Analysis	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
9	Highway Element of th LRTP	$0	$0	$146	$584	$0	$0	$0	$0	$0	$0	$146	$0	$584	$730
10	Transit Element of the LRTP	$0	$0	$146	$584	$0	$0	$0	$0	$0	$0	$146	$0	$584	$730
11	Bicycle & Ped. Element of the LRTP	$0	$0	$108	$432	$0	$0	$0	$0	$0	$0	$108	$0	$432	$540
12	Airport/Air Travel Element of LRTP	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
13	Collector Street Element of LRTP	$0	$0	$108	$432	$0	$0	$0	$0	$0	$0	$108	$0	$432	$540
14	Rail, Water or other mode of LRTP	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
15	Freight Movement/Mobility Planning	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
16	Financial Planning	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
17	Congestion Management Strategies	$0	$0	$290	$1,160	$0	$0	$0	$0	$0	$0	$290	$0	$1,160	$1,450
18	Air Qual. Planning/Conformity Anal.	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
II-C	**Short Range Transit Planning**														
1	Short Range Transit Planning	$0	$0	$254	$1,016	$0	$0	$0	$0	$0	$0	$254	$0	$1,016	$1,270
												$0	$0	$0	$0
III-A	**Planning Work Program**														
	Planning Work Program	$0	$0	$324	$1,296	$0	$0	$0	$0	$0	$0	$324	$0	$1,296	$1,620
												$0	$0	$0	$0
III-B	**Transp. Improvement Plan**														
	TIP	$0	$0	$582	$2,328	$0	$0	$0	$0	$0	$0	$582	$0	$2,328	$2,910
												$0	$0		
III-C	**Cvl Rgts. Cmp./Otr .Reg. Reqs.**														
1	Title VI	$0	$0	$36	$144	$0	$0	$0	$0	$0	$0	$36	$0	$144	$180
2	Environmental Justice	$0	$0	$108	$432	$0	$0	$0	$0	$0	$0	$108	$0	$432	$540
3	Minority Business Enterprise	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
4	Planning for the Elderly & Disabled	$0	$0	$72	$288	$0	$0	$0	$0	$0	$0	$72	$0	$288	$360
5	Safety/Drug Control Planning	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
6	Public Involvement	$0	$0	$402	$1,608	$0	$0	$0	$0	$0	$0	$402	$0	$1,608	$2,010
7	Private Sector Participation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
III-D	**Incidental Plng./Project Dev.**														
1	Transportation Enhancement Plng.	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2	Enviro. Analysis & Pre-TIP Plng.	$0	$0	$108	$432	$0	$0	$0	$0	$0	$0	$108	$0	$432	$540
3	Special Studies	$0	$0	$486	$1,944	$0	$0	$0	$0	$0	$0	$486	$0	$1,944	$2,431
4	Regional or Statewide Planning	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
III-E	**Management & Operations**														
1	Management & Operations	$0	$0	$2,298	$9,194	$0	$0	$0	$0	$0	$0	$2,298	$0	$9,194	$11,492
Totals		$0	$0	$6,635	$26,538	$0	$0	$0	$0	$0	$0	$6,635	$0	$26,538	$33,173

Durham-Chapel Hill-Carrboro Urban Area
FY 2012-2013 Unified Planning Work Program
Funding Distribution by Agency Funding Sources

Triangle J COG

		Task Description	STP-DA 133(b)(3)(7)		Sec. 104(f) PL		Section 5303 Highway/Transit			Section 5307 Transit			Task Funding Summary			
			Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 10%	NCDOT 10%	FTA 80%	Local 10%	NCDOT 10%	FTA 80%	Local	NCDOT	Federal	Total
II	A	**Surveillance of Change**														
	1	Traffic Volume Counts	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	2	Vehicle Miles of Travel	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	3	Street System Changes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	4	Traffic Accidents	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	5	Transit System Data	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	6	Dwelling Unit, Pop. & Emp. Change	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	7	Air Travel	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	8	Vehicle Occupancy Rates	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	9	Travel Time Studies	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	10	Mapping	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	11	Central Area Parking Inventory	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	12	Bike & Ped. Facilities Inventory	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	13	Bike & Ped. Counts	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
II	B	**Long Range Transp. Plan**														
	1	Collection of Base Year Data	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	2	Collection of Network Data	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	3	Travel Model Updates	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	4	Travel Surveys	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	5	Forecast of Data to Horizon year	$3,000	$12,000	$0	$0	$0	$0	$0	$0	$0	$0	$3,000	$0	$12,000	$15,000
	6	Community Goals & Objectives	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	7	Forecast of Futurel Travel Patterns	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	8	Capacity Deficiency Analysis	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	9	Highway Element of th LRTP	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	10	Transit Element of the LRTP	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	11	Bicycle & Ped. Element of the LRTP	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	12	Airport/Air Travel Element of LRTP	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	13	Collector Street Element of LRTP	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	14	Rail, Water or other mode of LRTP	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	15	Freight Movement/Mobility Planning	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	16	Financial Planning	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	17	Congestion Management Strategies	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	18	Air Qual. Planning/Conformity Anal	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
II	C	**Short Range Transit Planning**														
	1	Short Range Transit Planning	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
III-A		**Planning Work Program**														
	1	Planning Work Program	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
III-B		**Transp. Improvement Plan**														
	1	TIP	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
III-C		**Cvl Rgts. Cmp./Otr .Reg. Reqs.**														
	1	Title VI	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	2	Environmental Justice	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	3	Minority Business Enterprise	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	4	Planning for the Elderly & Disabled	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	5	Safety/Drug Control Planning	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	6	Public Involvement	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	7	Private Sector Participation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
III-D		**Incidental Plng./Project Dev.**														
	1	Transportation Enhancement Plng.	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	2	Enviro. Analysis & Pre-TIP Plng.	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	3	Special Studies	$2,000	$8,000	$0	$0	$0	$0	$0	$0	$0	$0	$2,000	$0	$8,000	$10,000
	4	Regional or Statewide Planning	$8,000	$32,000	$0	$0	$0	$0	$0	$0	$0	$0	$8,000	$0	$32,000	$40,000
III· E		**Management & Operations**														
	1	Management & Operations	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Totals			$13,000	$52,000	$0	$0	$0	$0	$0	$0	$0	$0	$13,000	$0	$52,000	$65,000

Durham-Chapel Hill-Carrboro Urban Area
FY 2012-2013 Unified Planning Work Program
Funding Distribution by Agency Funding Sources

Triangle Transit Authority (TTA)

	Task Description	Section 5303 Highway/Transit			Section 5307 Transit			Task Funding Summary			
		Local 10%	NCDOT 10%	FTA 80%	Local 10%	NCDOT 10%	FTA 80%	Local	NCDOT	Federal	Total
II A	**Surveillance of Change**										
1	Traffic Volume Counts	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2	Vehicle Miles of Travel	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
3	Street System Changes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
4	Traffic Accidents	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
5	Transit System Data	$0	$0	$0	$6,000	$6,000	$48,000	$6,000	$6,000	$48,000	$60,000
6	Dwelling Unit, Pop. & Emp. Change	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7	Air Travel	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
8	Vehicle Occupancy Rates	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
9	Travel Time Studies	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
10	Mapping	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
11	Central Area Parking Inventory	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
12	Bike & Ped. Facilities Inventory	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
13	Bike & Ped. Counts	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
II B	**Long Range Transp. Plan**										
1	Collection of Base Year Data	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2	Collection of Network Data	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
3	Travel Model Updates	$0	$0	$0	$9,000	$9,000	$72,000	$9,000	$9,000	$72,000	$90,000
4	Travel Surveys	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
5	Forecast of Data to Horizon year	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
6	Community Goals & Objectives	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7	Forecast of Futurel Travel Patterns	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
8	Capacity Deficiency Analysis	$0	$0	$0	$0	$0	$0	$0		$0	
9	Highway Element of th LRTP	$0	$0	$0	$0	$0	$0	$0		$0	
10	Transit Element of the LRTP	$0	$0	$0	$1,750	$1,750	$14,000	$1,750	$1,750	$14,000	$17,500
11	Bicycle & Ped. Element of the LRTP	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
12	Airport/Air Travel Element of LRTP	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
13	Collector Street Element of LRTP	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
14	Rail, Water or other mode of LRTP	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
15	Freight Movement/Mobility Planning	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
16	Financial Planning	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
17	Congestion Management Strategies	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
18	Air Qual. Planning/Conformity Anal.	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
II C	**Short Range Transit Planning**										
1	Short Range Transit Planning	$0	$0	$0	$34,750	$34,750	$278,000	$34,750	$34,750	$278,000	$347,500
III-A	**Planning Work Program**										
	Planning Work Program	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
III-B	**Transp. Improvement Plan**										
	TIP	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
III-C	**Cvl Rgts. Cmp./Otr .Reg. Reqs.**										
1	Title VI	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2	Environmental Justice	$0	$0	$0	$0	$0	$0				
3	Minority Business Enterprise	$0	$0	$0	$0	$0	$0				
4	Planning for the Elderly & Disabled	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
5	Safety/Drug Control Planning	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
6	Public Involvement	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7	Private Sector Participation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
III-D	**Incidental Plng./Project Dev.**										
1	Transportation Enhancement Plng.	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2	Enviro. Analysis & Pre-TIP Plng.	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
3	Special Studies	$0	$0	$0	$34,000	$34,000	$272,000	$34,000	$34,000	$272,000	$340,000
4	Regional or Statewide Planning	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
III E	**Management & Operations**										
1	Management & Operations	$0	$0	$0	$0	$0	$0				
Totals		**$0**	**$0**	**$0**	**$85,500**	**$85,500**	**$684,000**	**$85,500**	**$85,500**	**$684,000**	**$855,000**

Appendices B

Federal Transit Administration (FTA) Agency Funding Tables & DBE forms

DURHAM AREA TRANSIT
FTA TASK NARRATIVE TABLE
FY2012-2013 (FY13) UPWP

1-	MPO	**DCHC-MPO (DATA)**	**DCHC-MPO (DATA)**	**DCHC-MPO (DATA)**	
2-	FTA Code	*442400*	*442300*	*442100*	
3-	Task Code	*II-A-5*	*II-B-16*	*III-E*	
4-	Title of Planning Task	*Transit System Data*	*Financial Planning*	*Management and Operations*	*TOTALS*
5-	Task Objective	To conduct FTA required passenger counts through system wide surveys and studies, daily ridership counts.	Prepare and monitor fiscal programs for the City, FTA, and the State of North Carolina	To provide systemwide management oversight including report prepartion, council briefing, transportation board meeting, etc.	
6-	Tangible Product Expected	Daily ridership counts, by route, by peak, GIS data, AVL data formats	Quarterly and annual financial reports.	FTA reports, compliance issue resolution, annual certifications and compliance issues, assurances. Transit planning, public involvement, and transportation improvement.	
7-	Expected Completion Date of Product(s)	6/30/2013	6/30/2013	6/30/2013	
8-	Previous Work	NTD passenger counts, required every 3 years.	Provide on-going financial monitoring for the transit system.	FTA reports, compliance issue resolution, annual certifications and compliance issues, assurances. Transit planning, public involvement, and transportation improvement.	
9-	Prior FTA Funds	$88,186	$50,674	$273,902	
10-	Relationship To Other Activities	Data collected is used in service performance evaluation	none	none	
11-	Agency Responsible for Task Completion	Durham Area Transit	Durham Area Transit	Durham Area Transit	
12-	HPR - Highway - NCDOT 20%				
13-	HPR - Highway - FHWA 80%				
14-	Section 104 (f) PL Local 20%				
15-	Section 104 (f) PL FHWA 80%				
16-	Section 5303 Local 10%	$6,399		$8,089	$14,488
17-	Section 5303 NCDOT 10%	$6,399		$8,089	$14,488
18-	Section 5303 FTA 80%	$51,190		$64,708	$115,898
19-	Section 5307 Transit - Local 10%	$2,742	$4,544	$56,596	$63,882
20-	Section 5307 Transit - NCDOT 10%	$2,742	$4,544	$56,596	$63,882
21-	Section 5307 Transit - FTA 80%	$21,938	$36,350	$452,766	$511,054

CHAPEL HILL TRANSIT
FTA TASK NARRATIVE TABLE
FY2012-2013 (FY13) UPWP

1-	MPO	**DCHC-MPO (Chapel Hill Transit)**	**DCHC-MPO (Chapel Hill Transit)**	**DCHC-MPO (Chapel Hill Transit)**	**DCHC-MPO (Chapel Hill Transit)**	**DCHC-MPO (Chapel Hill Transit)**	**DCHC-MPO (Chapel Hill Transit)**
2-	FTA Code	*442400*	*442400*	*442301*	*442302*	*442302*	*442302*
3-	Task Code	*II-A-5*	*II-A-6*	*II-A-10*	*II-B-3*	*II-B-8*	*II-B-10*
4-	Title of Planning Task	*Transit System Data*	*Dwelling Unit, Pop. & Emp. Change*	*Mapping*	*Travel Model Updates*	*Capacity Deficiency Analysis*	*Transit Element of the LRTP*
5-	Task Objective	Review and analyze transit system data to monitor changes in travel behavior	Compare projected 2040 population and employment with results of revised 2020 Comprehensive Plan Land Use	Participate with MPO in further development of regional GIS database; prepare mapping to support regional activties	Monitor the use of the TRM in the development of Triangle LPA.	Analyze results of 2040 LRTP future land use and transportation networks scenarios.	To prepare the transit element of the 2040 MPO LRTP
6-	Tangible Product Expected	Chapel Hill Data Book Update	Revised population and employment projections	Geo spatial database	Modifications to TRM consistent with Triangle Transit light rail ridership analysis.	2040 LRTP	2040 LRTP
7-	Expected Completion Date of Product(s)	6/30/2013	6/30/2013	6/30/2013	6/30/2013	6/30/2013	6/30/2013
8-	Previous Work	2012 Data Book Updatae	Development of 2035 population and employment projections	Provided support for development of geo spatial database architecture.	Participation in refinements to TRM.	2035 LRTP.	Continued work on the 2040 LRTP
9-	Prior FTA Funds	$60,000	$3,000	$40,000	$3,000	$3,000	$10,000
10-	Relationship To Other Activities	Supports implementation of LRTP	Support development of LRTP	Supports developemnt of LRTP and related MPO activities	Support development of LRTP	Support development of LRTP	Supports development of the 2040 LRTP
11-	Agency Responsible for Task Completion	Town of Chapel Hill	Town of Chapel Hill	Town of Chapel Hill	Town of Chapel Hill	Town of Chapel Hill	Town of Chapel Hill
12-	HPR - Highway - NCDOT 20%						
13-	HPR - Highway - FHWA 80%						
14-	Section 104 (f) PL Local 20%						
15-	Section 104 (f) PL FHWA 80%						
16-	Section 5303 Local 10%	$200	$400	$3,000	$150	$1,000	$400
17-	Section 5303 NCDOT 10%	$200	$400	$3,000	$150	$1,000	$400
18-	Section 5303 FTA 80%	$1,600	$3,200	$24,000	$1,197	$8,000	$3,200
19-	Section 5307 Transit - Local 10%	$3,125					$1,000
20-	Section 5307 Transit - NCDOT 10%	$3,125					$1,000
21-	Section 5307 Transit - FTA 80%	$25,000					$8,000

CHAPEL HILL TRANSIT
FTA TASK NARRATIVE TABLE
FY2012-2013 (FY13) UPWP

1-	MPO	**DCHC-MPO (Chapel Hill Transit)**	**DCHC-MPO (Chapel Hill Transit)**	**DCHC-MPO (Chapel Hill Transit)**	**DCHC-MPO (Chapel Hill Transit)**	**DCHC-MPO (Chapel Hill Transit)**	**DCHC-MPO (Chapel Hill Transit)**
2-	FTA Code	*442302*	*442302*	*442302*	*442302*	*442302*	*442100*
3-	Task Code	*II-B-11*	*II-B-13*	*II-B-16*	*II-B-17*	*II-C-1*	*III-A-1*
4-	Title of Planning Task	*Bicycle Element of the LRTP*	*Collector Street Element of LRTP*	*Financial Plan*	*Congestion Management Strategies*	*Short Range Transit Planning*	*Planning Work Program*
5-	Task Objective	Prepare bike and pedestrian element of 2040 LRTP	Revise Collector Street Element of the 2040 LRTP.	Prepare Financial Plan for 2040 LRTP.	Coordinate wth Triangle Regional TDM program to implement regionwide TDM program.	Develop elements of Chapel Hill Transit Short Range Transit Plan.	To prepare the Chapel Hill element of the FY2014 UPWP
6-	Tangible Product Expected	2040 LRTP	2040 LRTP	2040 Financial Plan	Development of TDM program for incorporation into 2040 LRTP	Refinements to the previously completed comprehensive route analysis.	FY2014 PWP
7-	Expected Completion Date of Product(s)	6/30/2013	6/30/2013	6/30/2013	6/30/2013	6/30/2013	6/30/2013
8-	Previous Work	2035 LRTP Bike and Pedestrian element	Development of Southwest Durham/Chapel Hill Collector Street Plan.	2035 Financial Plan	TDM element of 2035 LRTP.	Development of comprehensive route analysis.	Development and management of FY12 & FY13 UPWP
9-	Prior FTA Funds	$7,000	$0	$28,000	$10,000	$50,000	$10,000
10-	Relationship To Other Activities	Supports development of the 2040 LRTP	Supports development of the 2040 LRTP	Supports development of the 2040 LRTP	Supports development of the 2040 LRTP	Supports implementation of the MPO LRTP	Supports implemenation of annual work program
11-	Agency Responsible for Task Completion	Town of Chapel Hill	Town of Chapel Hill	Town of Chapel Hill	Town of Chapel Hill	Town of Chapel Hill	Town of Chapel Hill
12-	HPR - Highway - NCDOT 20%						
13-	HPR - Highway - FHWA 80%						
14-	Section 104 (f) PL Local 20%						
15-	Section 104 (f) PL FHWA 80%						
16-	Section 5303 Local 10%	$200	$100	$500	$500	$1,000	
17-	Section 5303 NCDOT 10%	$200	$100	$500	$500	$1,000	
18-	Section 5303 FTA 80%	$1,600	$800	$4,000	$4,000	$8,000	
19-	Section 5307 Transit - Local 10%					$1,250	$500
20-	Section 5307 Transit - NCDOT 10%					$1,250	$500
21-	Section 5307 Transit - FTA 80%					$10,000	$4,000

CHAPEL HILL TRANSIT
FTA TASK NARRATIVE TABLE
FY2012-2013 (FY13) UPWP

1-	MPO	**DCHC-MPO (Chapel Hill Transit)**	**DCHC-MPO (Chapel Hill Transit)**	**DCHC-MPO (Chapel Hill Transit)**	**DCHC-MPO (Chapel Hill Transit)**	**DCHC-MPO (Chapel Hill Transit)**	**DCHC-MPO (Chapel Hill Transit)**
2-	FTA Code	*442500*	*442700*	*442700*	*442400*	*442400*	*442100*
3-	Task Code	*III-B-1*	*III-C-1*	*III-C-3*	*III-C-4*	*III-C-5*	*III-C-6*
4-	Title of Planning Task	*Transportation Improvement Program*	*Title VI*	*Minority Business Enterprise*	*Planning for the Elderly and Disabled*	*Safety/Drug Control Planning*	*Public Involvement*
5-	Task Objective	To monitor the adopted TIP and prepare information for amendments to TIP.	To prepare the FY2013 Title VI program/plan	To assess compliance with minority business enterprise regulations	To assess impact of transit service on elderly and handicapped populations	To implement and monitor federal safety and drug control plannning	To establish public outreach efforts to engage public involvement.
6-	Tangible Product Expected	Updated TIP	Updated Title VI program	Annual assessment	Annual assessment	Annual Assessments	Annual transit forums
7-	Expected Completion Date of Product(s)	On-going	10/15/2012	6/30/2013	6/30/2013	6/30/2013	6/30/2013
8-	Previous Work	Adjustments to existing TIP; Development of new TIP	Monitoring of the Title VI program	Annual assessment	Ongoing monitoring	Ongoing monitoring	Annual transit forums
9-	Prior FTA Funds	$18,000	$1,250	$1,000	$31,250	$20,000	$10,000
10-	Relationship To Other Activities	Supports implementaiton of adopted LRTP	State/Federal Civil rights requirements	State/Federal MBE requirements	This project supports the development of the 2035 Regional Plan	This project supports the development of the 2035 Regional Plan	This project supports the development of the 2035 Regional Plan
11-	Agency Responsible for Task Completion	Town of Chapel Hill	Town of Chapel Hill	Town of Chapel Hill	Town of Chapel Hill	Town of Chapel Hill	Town of Chapel Hill
12-	HPR - Highway - NCDOT 20%						
13-	HPR - Highway - FHWA 80%						
14-	Section 104 (f) PL Local 20%						
15-	Section 104 (f) PL FHWA 80%						
16-	Section 5303 Local 10%						
17-	Section 5303 NCDOT 10%						
18-	Section 5303 FTA 80%						
19-	Section 5307 Transit - Local 10%	$500	$500	$50	$1,000	$1,500	$500
20-	Section 5307 Transit - NCDOT 10%	$500	$500	$50	$1,000	$1,500	$500
21-	Section 5307 Transit - FTA 80%	$4,000	$4,000	$400	$8,000	$12,000	$4,000

CHAPEL HILL TRANSIT
FTA TASK NARRATIVE TABLE
FY2012-2013 (FY13) UPWP

1-	MPO	**DCHC-MPO (Chapel Hill Transit)**	**DCHC-MPO (Chapel Hill Transit)**	**DCHC-MPO (Chapel Hill Transit)**	
2-	FTA Code	*442700*	*442200*	*442100*	
3-	Task Code	*III-D-3*	*III-D-4*	*III-E*	
4-	Title of Planning Task	*Special Studies*	*Regional or Statewide Planning*	*Management and Operations*	*TOTALS*
5-	Task Objective	To prepare special studies to support ongoing transit operations.	To support regional and statewide planning projects	To support various transit planning activities	
6-	Tangible Product Expected	Transit oriented development land use guidelines	Chapel Hill long range transit plan	Ongoing transit activities and reporting requirements.	
7-	Expected Completion Date of Product(s)	6/30/2013	6/30/2013	6/30/2013	
8-	Previous Work	Chapel Hill Long Range Transit Plan	Chapel Hill Long Range Transit Plan	Management of transit planning activities	
9-	Prior FTA Funds	$72,000	$18,250	$156,000	
10-	Relationship To Other Activities	This project supports the development of the 2035 Regional Plan	Supports the implementation of the 2035 Regional Plan and the Chapel Hill Long Range Transit Plan.	Supports all other transit planning activities MPO-wide.	
11-	Agency Responsible for Task Completion	Town of Chapel Hill	Town of Chapel Hill	Town of Chapel Hill	
12-	HPR - Highway - NCDOT 20%				
13-	HPR - Highway - FHWA 80%				
14-	Section 104 (f) PL Local 20%				
15-	Section 104 (f) PL FHWA 80%				
16-	Section 5303 Local 10%		$3,000	$3,470	$13,920
17-	Section 5303 NCDOT 10%		$3,000	$3,470	$13,920
18-	Section 5303 FTA 80%		$24,000	$27,762	$111,359
19-	Section 5307 Transit - Local 10%	$6,000	$5,300	$23,775	$45,000
20-	Section 5307 Transit - NCDOT 10%	$6,000	$5,300	$23,775	$45,000
21-	Section 5307 Transit - FTA 80%	$48,000	$42,400	$190,200	$360,000

TRIANGLE TRANSIT
FTA TASK NARRATIVE TABLE
FY2012-2013 (FY13) UPWP

1-	MPO	**DCHC-MPO (Triangle Transit)**	**DCHC-MPO (Triangle Transit)**	**DCHC-MPO (Triangle Transit)**	**DCHC-MPO (Triangle Transit)**	**DCHC-MPO (Triangle Transit)**	
2-	FTA Code	*442400*	*442301*	*442301*	*442400*	*442302*	
3-	Task Code	*II-A-5*	*II-B-3*	*II-B-10*	*II-C-1*	*III-D-3*	
4-	Title of Planning Task	*Transit System Data*	*Travel Model Updates*	*Transit Element of the LRTP*	*Short Range Transit Planning*	*Special Studies*	*TOTALS*
5-	Task Objective	To collect route patronage, on-time performance data, passenger amenity data and customer preferences for service improvements	Support for Triangle Regional Model Service Bureau	To provide travel market analysis and cost information for development of transit investments for the LRTP; and to acquire GIS support services from TJCOG	This covers a portion of staff salaries in the Departments of Commuter Resources and Capital Development related to Triangle Transit's short-range transit service and facility planning; also planning and engineering to improve accessibility of Bus stops and facilities	Studies may be conducted for corridors that show promise during the course of the development of the transit element of the LRTP, including alternatives analysis activities, capital cost estimation, operating cost estimations, financial planning, and transit expert studies for corridors, alignments, and bus and rail service plans	
6-	Tangible Product Expected	Route planning recommendations from both staff/consultants, onboard surveys for bus, vanpool	Updated Triangle Regional Model	Technical planning report provided to regional leaders and the MPO; other GIS service needs as required.	On-going staff salaries	RFP and/or Technical Report	
7-	Expected Completion Date of Product(s)	6/30/2013	6/30/2013	6/30/2013	6/30/2013	6/30/2013	
8-	Previous Work	Regional APC data work already undertaken/TTA Service Change Recs	Ongoing support of TRM service bureau	Continued and ongoing regional corridor analysis for LRTP and other projects	Ongoing staff salaries	URS Reports, MAB Analyses, Jeff Parker Financial Analysis	
9-	Prior FTA Funds	$32,000	$160,000	$45,000	$600,000	$57,000	
10-	Relationship To Other Activities	APC data can be used to calibrate the travel times in the regional model. Data will inform route planning decisions.	Supports the regional travel model utilized for the LRTP and other transit and highway planning purposes.	This supports regional transit planning for capital investments.	Provides staff support to carry out Triangle Transit planning activities related to service planning and capital development.	This task will follow from the transit infrastructure planning conducted for the LRTP.	
11-	Agency Responsible for Task Completion	Triangle Transit	Service Bureau at ITRE responsible for task - Triangle Transit is a funding partner	Triangle Transit (with joint sponsorship by TJCOG and MPOs, NCDOT)	Triangle Transit	Triangle Transit	
12-	HPR - Highway - NCDOT 20%						
13-	HPR - Highway - FHWA 80%						
14-	Section 104 (f) PL Local 20%						
15-	Section 104 (f) PL FHWA 80%						
16-	Section 5303 Local 10%						
17-	Section 5303 NCDOT 10%						
18-	Section 5303 FTA 80%						
19-	Section 5307 Transit - Local 10%	$6,000	$9,000	$1,750	$34,750	$34,000	$85,500
20-	Section 5307 Transit - NCDOT 10%	$6,000	$9,000	$1,750	$34,750	$34,000	$85,500
21-	Section 5307 Transit - FTA 80%	$48,000	$72,000	$14,000	$278,000	$272,000	$684,000

CITY OF DURHAM
Anticipated DBE Contracting Opportunities for FY12

Name of MPO: CITY OF DURHAM (DATA)

Person Completing Form: Pierre Owusu Telephone Number: 919-560-5343 ext. 36214

Prospectus Task Code	Prospectus Description	Name of Agency Contracting Out	Type of Contracting Opportunity (Consultant, etc.)	Federal Funds to be Contracted Out	Total Funds to be Contracted Out
THERE ARE CURRENTLY NO PLANNED DBE CONTRACTING OPPORTUNITIES ASSOCIATED WITH THIS GRANT				$0.00	$0.00

Note: This form must be submitted to NCDOT-PTD even if you anticipate no DBE Contracting Opportunities. Note "No contracting opportunities" on the table if you do not anticipate having any contracting opportunities.

CHAPEL HILL
Anticipated DBE Contracting Opportunities for FY13

Name of MPO: Town of Chapel Hill

Person Completing Form: Carmen Cole Telephone Number: 919-969-4911

Prospectus Task Code	Prospectus Description	Name of Agency Contracting Out	Type of Contracting Opportunity (Consultant, etc.)	Federal Funds to be Contracted Out	Total Funds to be Contracted Out
THERE ARE CURRENTLY NO ANTICIPATED DBE CONTRACTING OPPORTUNITIES.				$0	$0

Note: This form must be submitted to NCDOT-PTD even if you anticipate no DBE Contracting Opportunities. Note "No contracting opportunities" on the table if you do not anticipate having any contracting opportunities.

TRIANGLE TRANSIT
Anticipated DBE Contracting Opportunities for FY13

Name of MPO/Member Agency: Durham-Chapel Hill-Carrboro MPO

Person Completing Form: Patrick McDonough, Triangle Transit Telephone Number (919) 485-7455

Prospectus Task Code	Prospectus Description	Name of Agency Contracting Out	Type of Contracting Opportunity (Consultant, etc.)	Federal Funds to be Contracted Out	Total Funds to be Contracted Out
III-D-3	Special Studies	Triangle Transit	Consultant	$544,000	$680,000
II-A-5	Transit System Data	Triangle Transit	Consultant	Zero to $96,000	Zero to $120,000

Note: This form must be submitted to NCDOT-PTD even if you anticipate no DBE Contracting Opportunities. Note "No contracting opportunities" on the table if you do not anticipate having any contracting opportunities.

Citizen Comments with Responses – NC 54 Phase II Draft Final Report – April 2012

Response	Comment	Response
C-1 Marie Pauwels Email Rc'vd 1/4/12	Why has DOT not acted on the obvious solution to congested inbound traffic on 54 by relieving the tie-up caused at the junction with southbound 15/501 Bypass at Glen Lennox in east Chapel Hill? The cloverleaf for the right turn for 54 traffic onto 15/501 Bypass heading south (towards the intersection with Manning drive) was widened years ago from one lane to two. However, permitting two lanes of traffic coming from the east (coming from I-40) to make a right turn ONTO the cloverleaf has NEVER BEEN FINISHED. The middle lane of 54, as it goes under the 15/501 bridge to that cloverleaf, needs to be made an optional right-turn-or-go-straight-lane. Similar lanes have been converted for such use in other parts of town. Why not here? It seems as if DOT intentionally wants to create a bottleneck at this point by ignoring the obvious solution. Of COURSE, traffic comes to a bumper-to-bumper standstill!	This investigation is outside the scope of the NC 54 Corridor Study and deals specifically with an existing operations issue. This comment has been forwarded to the NCDOT Division Office for further consideration.
	BTW: The intersection of Manning Drive and 15/501 Bypass has recently been extensively reworked, and a second, optional right turn lane from Bypass onto Manning should have been done there, as well. DOT is not putting existing resources to their best use.	See previous comment response.
	Furthermore: my brother-in-law Leo is a railroad executive in the Chicago area. He is in charge of having the right freight cars available in the right places across the U.S. for the use of shippers. He laughs and shakes his head whenever the subject of a light rail corridor coming into Chapel Hill along 54 to the University comes up. Does no one acknowledge that the train cannot go up the hill to the University? Trains need level ground and very gradual uphill grades. Rail would have to terminate at 54 and Hamilton Road, and what then? There would need to be a large transportation center where travelers would have to change from rail to bus to proceed up to the University. Where is there space for THAT in THIS location? Even if Glenwood School were torn down, that land area is not large enough, nor is there space	Different rail technologies have different requirements regarding grade, with freight cars having more stringent requirements than light rail vehicles. The preliminary design of the light rail alignment from Hamilton Rd up to UNC Hospital uses elevated segments and gradual changes in grade to enable the train to reach UNC Hospital, well within the performance standards of other already-operating US light rail systems.

	for bus access in and out of that location. If light rail is brought into this area, it needs to terminate somewhere out along Barbee Chapel Road, where it would connect with Chapel Hill buses, as is presently done with the park-and-ride arrangement from the Friday Center to the University, where there is still space for such an endeavor.	
	Frankly, I think TTA buses have the out-of-town commute under control. They are convenient. They pick us up and let us off at any bus stop along the streets -- many more stops than light rail could make, and on routes that can be altered whenever there is a new need. Light rail would be a horrible waste of money, and retrofitting tracks through the middle of the Meadowmont community and shopping area at this late date would be a years-long traffic headache of its own. I was in Frankfurt, Germany, last fall, staying on a residential street where about a mile of a tram line extension was laid down the middle of the street in about four months, WITHOUT closing off the street or tying up major intersections. I don't think we have either the subsoil foundation -- especially in the swampy areas the line is projected to pass through -- nor the efficiency of manpower that the Germans do -- to do a similar thing here. Furthermore, rail is noisy at every curve.	Comment shared with Triangle Transit representatives.
C-2 Eric Teagarden Email Rc'vd 1/2/12	I am writing to express my concern over the Hwy 54 corridor study conclusion that SouthWest Durham Parkway should be constructed and traverse the DENR natural heritage area of Little Creek bottomlands. It will also impinge on the perimeter of the USACE wetlands. Here are important decisions that have been made recently to preserve this bottomland SNHP and USACE wetland area. 1. The Aydan Court development proposed in the NCDENR Natural Heritage Program Little Creek bottom land (SNHP) was voted down by the Chapel Hill Town Council and the land was sold to UNC Chapel Hill.	Southwest Durham Parkway is part of the adopted 2035 Long Range Transportation Plan (LRTP) for the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (DCHC MPO) region. The NC 54 Corridor Study reaffirmed the need for such a connection, but did not include a full systems level analysis for how to address this transportation need given the status of this project as a part of the 2035 LRTP. An update of the LRTP is currently underway. This update will include a more in-depth systems level analysis of options for addressing this particular transportation need and for solving related

	2. The Rizzo Center expansion of the UNC Business school was moved from the DENR SNHP bottomlands when Holden Thorp, Chancellor of UNC, reaffirmed the university's mission statements that it would not encroach on environmentally sensitive land. 3. The C1 LRT alternative analysis has met with strong resistance from multiple environmental groups, including DENR and the natural heritage program advocates. This C1 right of way encroaches on the same SNHP bottomland area as does the proposed route of the SW Durham Parkway. 4. The SW Durham Parkway route also traverses the Durham County inventoried heritage land in the Little Creek bottomland wetlands and violates Durham's stated environmental conservation policies. If the C1 alternative fails to be recommended by the Environmental Impact Study and NEPA analysis, then there would be overwhelming arguments to NOT build the SW Durham Parkway over the same corridor swath, ie SNHP and DENR bottomland area. I am also formally requesting by copy of this letter that DENR representatives, Linda Pearsall and Allison Schwarz Weakley, be requested to comment on the proposed SW Durham Parkway route in the Hwy 54 corridor study. I emphatically urge that the Hwy 54 corridor study report be updated to include these developing concerns about its recommendation that the SW Durham parkway be built on the Little Creek bottom lands proposed right of way. This route is currently the ONLY construction proposed that will pierce this fragile environmentally sensitive and protected bottomland over Little Creek.	connectivity and congestion problems. The NC 54 Corridor Study report will be updated to note the intent of the DCHC MPO to include this analysis and an investigation of alternatives for the Southwest Durham Drive during the LRTP update. The NC 54 report will also include a more comprehensive discussion of the potential environmental impacts of Southwest Durham Drive.
C-3 Lesley Marson Email Rc'vd 1/6/12	I was surprised that one obvious alternative of having a ring road from RTP to chapel hill that would alleviate much of the commuter traffic on 54 to 40 was not anywhere to be seen in the plans? Much of the problem of congestion that exists now is created by commuters and not local traffic …. adding more housing and offices to this region even if transit is increased is not going to reduce the congestion of this	The possibility of an alternative facility to reduce congestion on NC 54 was considered and discussed at the very early stages of the study. However, the concept was ruled out for the NC 54 study due to the need to conduct a more comprehensive systems level analysis to

	corridor? Transportation should not be the only solution alternative road routes is a must!	investigate alternative strategies, which were deemed outside the scope of the NC 54 Corridor Study. This matter will be investigated more fully during the update of the LRTP.
C-4 Dan Dickinson Email Rc'vd 1/4/12	I am new to the triangle area and saw the article about the NC-54/I-40 decongestion plan in yesterday's Durham News. I can't make it to the open house next week, but I would like to advocate strongly in favor of increased bicycle access along this corridor. Currently, there is no safe and usable bike route from south-central Durham to Chapel Hill. A continuous bike path (or at least a bike lane) from Woodcroft to the UNC campus would fill a major gap in Durham's transportation network, and I suspect it would be highly used and would reduce traffic congestion. Personally, I currently drive the NC-54 corridor every day, but would prefer to bike if given the choice.	Comments noted, please see Chapter 5 of the final report for a summary of pedestrian and bicycle recommendations.
C-5 Citizen Letter to Aaron Cain Rc'vd 1/4/12 (attached)	(Traffic on NC 54) can be improved immeasurably and at a minimal cost in a very short time frame by adding one lane to NC 54 for only ½ mile from the Little Creek bottomlands to Farrington Road. The "inside turn lane" from near Farrington Road to I-40 is too short to be effective. If this could be increased by ½ mile, then the two lanes exiting to i_40 would eliminate much of the traffic backup.	This comment has been forwarded to the NCDOT Division Office for further consideration.
C-6 Chris Selby Email Rc'vd 1/22/12	I read with interest the Corridor Study Master Plan and associated materials, which were recently released. Could you please answer three related questions for me? An enormously important aspect of the plan to our community of Eastwood Park is the landscaping/hardscaping that will be employed as a barrier between us and NC54 and between us and the new road expected on our northeast border. The barrier would also be of benefit to pedestrians and bicyclists who travel on the Service Road, and would be of benefit to commuters, especially if the barrier turns out to be inadequate in which case the commuters may be exposed to a decaying community and unsightly corridor.	The widening of NC 54 is currently unfunded. Once funded, the project will move from a recommendation in a planning document into project planning and design. The details of the landscaping/hardscaping will be developed at that time. While there is a danger in being too prescriptive in a planning document as much can change between now and when the project is actually funded and designed, the NC 54 report has been modified to better capture the importance of landscaping/hardscaping for communities impacted by the widening of NC 54.

	The Master Plan document does not describe landscaping/hardscaping in much detail other than, for example, its function to provide a sense of security to pedestrians. In one place the landscaping is described as a grassy area that provides space. Is there any more precise language and could it be employed to characterize landscaping appropriate to our community, that is, a continuous barrier of a given height that completely blocks the view and reduces sound? I wonder if there is a 'scale' or some way of 'grading' or are there 'levels' of landscaping that are recognized by landscaping architects, planners, and the DOT. For example, is there a technical term to describe the barrier erected alongside parts of I-85 when it was widened in Durham? Currently there is landscaping along our side of NC54, consisting of occasional clumps of hollies and small trees. However it is inadequate as a barrier and would fail if it were replanted this way after widening of NC54. The materials themselves, especially the hollies, are good. However, they are far too sparse (not at all continuous), and at the west end of Eastwood Park, they are not tall enough. Something such as magnolias seem to be needed there.	
	On a second topic, the Plan includes many superstreet style intersections where traffic seeking to turn left onto NC54 must turn right and then make a U-turn. One such intersection is planned at Crossland/George King such that Leigh Village and Eastwood Park residents planning to travel to the interstate turn right onto NC54 and then make a U-turn. At the point of this U-turn why is there no light? I ask because I am concerned about safety. The possible safety issue occurred to me for three reasons. For one, before the light was installed at Huntingridge Road, residents had to turn left without a light and it was precarious (though at the time we had to deal with traffic from both directions). Also, at the location where the U-turn is proposed, unless there is congestion, traffic in the corridor usually is travelling at a relatively high speed. This high speed can be expected to persist in the future since, from what I have read, few changes are planned to	Analysis shows that the majority of the drivers desiring to head east on NC 54 will utilize the collector street system and the (initially) intersection, (ultimately) interchange at Falconbridge Road. Analysis also shows that the number of drivers using the superstreet design to turn right and then making a u-turn at this location is low and can be accommodated without a signal. Prior to implementation additional traffic studies will be completed to capture new traffic volumes and traffic patterns. If the new data shows the need for a signal at that particular location, then one will be installed during construction of the system.

	slow down traffic in that section of NC54. Finally, I noticed that there are two locations in Chapel Hill (Meadowmont Lane traffic "turning left" onto NC54, and The Exchange at Meadowmont traffic also "turning left") where it will be necessary to turn right and then make a U-turn. However, in the case of the two locations noted in Chapel Hill, a light is present where the U-turn is made. I am curious about the reasoning behind the lack of a light for the Crossland Drive/George King Road U-turn, so as to be assured about the safety issue. In fact, it would be more desirable not to have a light if it is not needed.	
C-7 Geoffrey Daniel Email Rc'vd 2/14/12	Some of you might get a sense of déjà vu all over again, a sort of variation on an old theme from what I'm about to share, and in many ways it is. The proposed SW Durham Drive, not unlike the C1 route and all its issues, concerns and problems, should be coupled along with it. Because C1 and SWDD cut thru a pristine and unique habitat, they should both hew to the pending environmental assessment and study; in other words, they should not be de-coupled. The Little Creek Bottomlands and Slopes is a designated "Significant Natural Heritage Area"; it's not an "insignificant" natural heritage area and should be afforded the same respect and process that the C1 proposal is thankfully currently undergoing. To do otherwise would be to not only undermine the entire process surrounding both the LRT proposal and most certainly the SWDD plan, but it would also undercut the public's faith in the plan for the future in addition to how it was implemented, not to mention those planning it. In short, when it comes to the SWDD, the community respectfully asks the Council to support the following: · Delay any and all decisions on construction/implementation until the thorough environmental impact study and assessment comes back on the light rail proposal; · Take into account the effects on Rachkis Elementary with possibly thousands of cars passing by it regularly and all the safety concerns for Chapel Hill's children;	Please see response to comment C-2 above.

	· Work with other decision-making bodies in the area to source and identify alternative routes for the SWDD, not unlike the C2 route down George King Road, the new Farrington Road extension and the like which eventually bisect with Hwy 54; · Since George King and the Farrington Road extension would be new roads, they could be appropriately engineered to accommodate future traffic; · The message and movement is clear: SWDD should continue to hew to the underlying C2 meaning in doing the least amount of environmental damage to unique and irreplaceable natural areas : Along these lines, UNC Rizzo is not expanding to preserve the natural habitat surrounding it; Aydan Court did not move forward; C2 is the preferred alternative with a shift east to avoid the Little Creek Bottomlands and Slopes and so too should the SWDD shift east away from the SNHA. In the end, the community asks that the plan for SWDD not be de-coupled from CI, that a Significant Natural Heritage area not be rendered insignificant-essentially destroyed- and that the plan take into account all of the essential stakeholders, that until now, have not been given their just and necessary place at the table.	
C-8 Chris Selby Email Rc'vd 2/22/12	I am writing to provide feedback about the NC 54/I-40 Corridor Study Report that came out earlier this year. This feedback is separate from lansdscaping/hardscaping issues. I appreciate your efforts in this work and in trying to get the consultants to address the serious and difficult problems that the Corridor presents. Overall, it is disappointing that with the recommended infrastructure changes, traffic is not expected to improve substantially in the Corridor in the foreseeable future. The only option considered that would have improved traffic flow seems to have been determined to be out of character for the area and perhaps too costly. Another option to improve traffic flow would be to limit new housing and commercial development in the Corridor. The idea of limiting development to limit	Different land development patterns were considered at the early stages of the project. The land development pattern selected is the one that complements the overall vision for the corridor, which includes opportunities for location efficient decisions, a jobs/housing balance, targe growth areas to reduce sprawl, and land use patterns that support transit, walking, and biking.

	increased traffic seems to have never been seriously considered.	
	An interesting thing happened on the way to recommending the widening of NC 54 to six lanes. Early in the Study, participants were asked to consider three or four scenarios in which different levels of residential and commercial development were coupled with different levels of transportation infrastructure. Unexpectedly, in the lower levels of transportation service, NC 54 was recommended to be widened to six lanes, but in the plan for the highest level of service, which would accommodate the most vehicles, the recommendation was for NC 54 to remain four lane. It was only at the end of the Study that the six-lane highway with roundabouts was decided upon, and it is not clear why (or even if) six lanes now would be expected to accommodate more vehicles than two when early in the Study the reverse was the case.	Subsequent analysis showed that the full range of strategies was necessary to accommodate the growth in traffic while avoiding bottleneck conditions.
	Overall, the pedestrian and bicycle facilities that are recommended I expect will be highly beneficial.	Comment noted.
	Another highly beneficial aspect is the park and ride component consisting of lots outside of the Corridor. These lots will reduce the number of cars entering the congested Corridor. On the other hand, the lot in Leigh Village will not contribute and will in fact likely worsen congestion in the Corridor since it will draw vehicular traffic (including buses) not only into the Corridor but through the most precarious and heavily travelled routes/intersections.	Comment noted.
	The use of buses as an intermediate mass transit option prior to light rail seems to be a good idea.	Comment noted.
	The Report recommends the completion of Southwest Durham Drive through Meadowmont Lane and describes the historical aspect of this plan which was put in place long before Meadowmont was developed.	Comment noted, see also the response to comment C-2 above.

	Completion of this collector street will be beneficial because it will increase connectivity. This connectivity will allow commuters from the north (e.g., Durham) to visit the facilities at the Friday Center and Meadowmont without travelling on NC 54, and it will allow Meadowmont residents and Friday Center workers/visitors to travel to the north, again, without having to travel on a major arterial. This will help relieve some of the congestion on NC 54. It will also provide valuable connectivity for bicyclists and probably also pedestrians (depending on the route of the light rail line which would have a greenway through Meadowmont).	
	Reducing the speed limit seems to have been not considered during the project. It seems like a higher speed limit may be detrimental not only regarding safety. A hurry up and wait traffic pattern wastes gas.	Comment noted.
	Closer to home, I am concerned about the safety of an intersection. When vehicles exit Leigh Village/Eastwood Park from Crossland Drive to travel east on NC54, they must turn right and then make a U-turn on NC54. There is no light where this U-turn is to be made, although there are lights at comparable U-turns in Chapel Hill. I believe a light is not present because of anticipated low traffic volume and the State will provide a light if there is a safety problem. Unfortunately, a safety problem at this U-turn is likely to be of the kind in which a turning vehicle is 'T-boned' by a vehicle travelling at a nominal 45 mph. This is an extremely dangerous type of collision. This is an intersection that I would likely use. I am not enthusiastic about sitting at a light if it is not necessary. On the other hand, I am less enthusiastic about a neighbor being 'T-boned' in order to learn that a light is needed. It seems like it should be possible to make a determination about anticipated safety in the planning phase or err on the side of safety.	Please see the response to comment C-8 above.
	Close to the site of this planned U-turn is George King Road. The Report states that many residents expressed an interest in an intersection of George King Road with NC 54 as an alternative to an intersection of	Comment noted.

	Crossland Drive with NC 54. This I am certain includes residents of my neighborhood, Eastwood Park. In the past, during the Collector Street Plan, there was also a great deal of interest among local residents, including many non-Eastwood Park residents, in creating an intersection of George King Road with NC 54. Despite all of the interest expressed by us locals, the Study recommends an intersection at Crossland Drive. While some reasoned arguments were made for the recommendation, I think there remains some negative sentiment left over from the handling of this issue during the Collector Street Plan Meetings. It will take more than the Corridor Study for some folks to gain confidence in the system, if they ever do.	
	Even closer to home, the Study suggests mechanisms to prevent cut-through traffic in Eastwood Park. These include preventing access/egress viia the north end of the neighborhood, and a connection of Celeste Circle to the Service Road at the north end of the neighborhood (Figure 6-10). I expect that a mechanism of this type would be beneficial. Surprisingly, the connection of Celeste to the Service Road is described in the report as a 'preliminary concept'. Eastwood Park residents have been represented among Study participants throughout the course of the Study which began over two years ago. Issues related to our neighborhood have been made known to the Study. It seems the consultants have had sufficient time to come up with a serious and complete road plan. Instead, they find that "a more in-depth study is needed to determine the best way to address access for this small subdivision (i.e., Eastwood Park)" (p. 6-17). The way I read this, the consultants did not complete their job. I suggest that if the consultants have not yet been paid, that their payment be reduced by the fraction of the land area that Eastwood Park represents to the Study area.	Comment noted.
	The best recommendation made by the Study is that the future land use for Eastwood Park should be single family residential. I have lived in Eastwood Park for over 14 years. I believe most Eastwood Park	Comment noted.

	homeowners have owned their homes longer than I. It is a pleasant place to live. There remains at least one issue for the Study to address to preserve and protect our neighborhood. Otherwise I think that we will do well in the future in the context of the plans recommended by the Study.	
C-9 Phil Purcell, Chair, Members Association of The Cedars of Chapel Hill Email Rc'vd 3/7/12	On behalf of the nearly 400 residents of The Cedars, the licensed continuing care retirement community in Meadowmont, I am writing to express our grave concern over and opposition to the proposed extension of Meadowmont Lane through the ecologically sensitive wetlands to Southwest Durham Drive. The NC 54 / I-40 Corridor study is premised upon the construction of this extension as is apparent from page 6-37 of the Study. Safety and the environment would suffer greatly if the proposed extension were ever built. As you know, Meadowmont Lane traverses an upscale built-out residential community with an elementary school at one end and a continuing care retirement community at the other. To take traffic off the 6 lanes of NC54 and funnel it down a residential street that becomes 2 lanes is irresponsible, particularly when traffic estimates we have heard range from 8,000 to 12,000 vehicles per day. The safety concerns for everyone, and especially grade school children and senior citizens, are huge. The irreversible damage caused by penetration of the Little Creek Bottomlands and Slopes Significant Natural Heritage Area has already been recognized by the MPO in its selection of light rail route C2 as the locally preferred alternative. The Meadowmont Lane extension if built would cause the same kind of severe damage. We request that the MPO protect its constituents and the environment by opposing the extension of Meadowmont Lane to Southwest Durham Drive.	Please see response to comment C-2 above.

C-10 Wayne Pein Email Rc'vd 3/7/12	Why is there no mention of the R4-11 BICYCLES MAY USE FULL LANE sign that has been in the MUTCD since 2009? Given that any of the proposed "improvements" in the report will not happen anytime soon and are quite expensive, it seems that a simple immediate intervention would be widespread use of the R4-11. Attached is a comparison I've made of the R4-11 with the "Share the Road" sign. You might also be interested in a paper I wrote about the "Share the Road" sign here: http://bicyclingmatters.wordpress.com/infrastructure/critique-of-the-share-the-road-sign/	Revisions made to final report to include a statement regarding the consideration of R4-11 signing where warranted.
C-11 Chris Selby Email to Councilman Mike Woodard Rc'vd 3/11/12	I write in regard to the TAC Public Hearing on the NC 54/I-40 Corridor Study which will be held this Wednesday March 14. I live in the Eastwood Park neighborhood which is in the Study area and which is also in the part of the City that you represent. We are fortunate that you have been involved in the Study and are familiar with the issues. You probably recall that my neighbors and I have participated substantially in the Study. There are two items in the Study Report that many of us advocated. I write this email to emphasize that there is great interest in this Study and we wish that these two items be retained in the Study Report. These items are: 1. The Study recommends that the long-term land use for Eastwood Park (called Celeste Circle in the Report) be single family residential. (See page 2-15 in the Land Use section.) Happily, this recommendation is stated unambiguously.	Comment noted.
	2. The Study recommends that landscaping and/or hardscaping be located between NC 54 and our neighborhood. (See page 5-15 in the Pedestrian and Bicycle section.)	Please see response to comment C-6 above.

	The recommendation for landscaping/hardscaping is a weak statement directed towards pedestrians and bicyclists using the Service Road. It is felt that a stronger statement about landscaping/hardscaping should be written in the paragraphs about Eastwood Park (Celeste Circle) in the Land Use section. This issue has been communicated to the Study and the response was that the wording may be addressed in some way. I have no additional issues to bring to the Study and do not plan to attend the Public Hearing. I would like to note that the management of the Study during the two and a half years of my participation has been commendable. I appreciate your involvement in these issues of great importance to us.	
C-12 Glenn Cassidy Email Rc'vd 3/7/12	Thank you for the opportunity to discuss the NC 54 Study with you at the open house at Chapel Hill City Hall in February. I live in Carrboro and drive through this corridor several times per week. I am quite impressed with the design proposal and strongly endorse it. Some elements I specifically favor: ▪ Overpasses at Fearrington and Falconbridge, with the attending realignments and connections between those two roads. ▪ Ramp reconfigurations at I40/NC54, including the slip ramp. ▪ Widening NC54 to 6 through lanes from Barbee Chapel to I40. ▪ Realignment of the ramps at 15-501/NC54, including the closure of the entrance into the Glenwood Square Shopping Center from NC54 and diversion of the shopping center traffic to the entrance off Hamilton Road.	Comments noted.

	I'd like to add three short-term recommendations: ▪ Extend the three-lane section of NC54 East from Fearrington all the way to Falconbridge. I've observed traffic here, and noted that the third(right) lane of 54E carries through the Fearrington intersection only as many cars as are queued in the right line while the signal is red. If this lane were extended another 10 (or more) car lengths, then that many additional cars would pass through the Fearrington intersection on each green cycle. ▪ Improve the signage on NC54 East approaching Fearrington. I frequently see vehicles changing between the two rightmost lanes while moving through the Fearrington intersection or immediately at thee head of the ramp to I40 East. It seems that many people doter not understand that they can use either lane to cross Fearrington and enter I40 East. An overhead sign with arrows showing the movement options for both lanes might help with this. I've actually seen vehicles stop between Fearrington and the I40 ramp in order to change lanes. We have many out-of-town visitors who get confused here. ▪ Close the entrance to Glenwood Shopping Center from NC54 immediately. The entrance off Hamilton Road should be able to handle all the traffic into and out of the shopping center. At the very least, convert the driveway from NC54 to entrance-only and block the exit (to NC54) option. I frequently see vehicles exit to NC54 East and immediately cross all lanes of NC54 to get into the left turn lane at the Hamilton Road intersection to make a U-turn. It would be much safer if they exited directly to Hamilton and then turned left to 54W. This is the route I take whenever I exit the shopping center, and I don't see that requiring others to do so would cause any significant inconvenience, while greatly improving safety.	Comments noted and forwarded to the NCDOT Division Office for further consideration.

	I'd like to add a long-term suggestion: ▪ Encourage the homeowners in the Celeste Circle neighborhood to form a corporation and sell their land as a group. It looks to me like there is disinvestment going on here already. This site is less attractive for detached housing, given the growing traffic and future road development, but it would be attractive for office development. The City of Durham should make it clear that higher density office development would be given as a zoning bonus if the properties were combined into one parcel for redevelopment. This would allow the owners a windfall profit on the sale of their properties and could encourage a more timely transition rather than a long, slow degradation. It appears from the map that the proposed Falconbridge extension through here will require condemnation of a few of the houses. Kudos on a well-crafted plan.	Comment noted, please see comment C-8 and C-11 above.
C-13 Hank Rodenburg Email Rc'vd 3/13/12	I live in Meadowmont and our community will be significantly affected by the increase traffic and the future changes made in the Hwy 54 corridor. I am concerned with and opposed to the proposed "super highway crossings" at Meadowmont Lane and East Barbee Chapel Road. I do not believe they will speed up traffic on Hwy 54 in particular if traffic lights have to be added to accommodate U-turns. I also have safety concerns when drivers have to cross 3 lanes of traffic, especially during rush hour when traffic often backs up thru traffic lights that are too close together. We have the example of the crossing on 15/501 at Erwin Road and I have met very few people who consider this an improvement.	Comments noted.

	However I also believe that the "above grade" crossing at East Barbee Chapel Road will be a huge improvement and will alleviate many of the above mentioned problems as the majority of traffic thru Meadowmont will take that venue in order to go East on Hwy 54. In fact my guess would be that very few motorists traveling On Meadowmont Lane with the intention of going East on HWY 54 would use the Meadowmont Lane super street crossing. They would go on East Barbee Road. Therefore I would like to suggest that the stoplight in between Meadowmont Lane and west Barbee proposed for that U turn can be eliminated. The few people that would go that way could travel a little further to the next U turn.	
	Congestion is caused not by the number of traffic lanes but by the number of stoplights. I have always been puzzled why a cheap solution which have been successful in many communities has not been tried on Hwy 54. I believe it has been called the "green zone" in some cases. Traffic lights on 54 would be programmed in such a way that once you have hit one green light and are traveling at a predetermined speed all subsequent lights will be green. It really moves the traffic on a main artery (at the expense of some longer wait at the feeder roads). The beauty of this solution is that all it takes is reprograming of lights at very low cost.	Comments noted and forwarded to NCDOT Division Office and the Town of Chapel Hill to check the current timing and progression of traffic signals within the NC 54 corridor.
C-14 Janet Liegl Email Rc'vd 3/18/12	I own a home and live in a development called Blenheim Woods. Please know that I am opposed to the alternative light rail route that I understand would come down Farrington Road from Highway 54. I am especially opposed to changes to George King Road that would make it a busy road as is Farrington now. These spaces were not designed for the kind of traffic volume that would generate. It would be unfair to impose such conditions on development such as ours. George King Road is not a wide enough road to handle any meaningful increase in traffic.	Comments noted.

C-15 Joe Liegl Email Rc'vd 3/18/12	I live in a development called Blenheim Woods. Please know that I am opposed to the alternative light rail route that I understand would come down Farrington Road from Highway 54. I am especially opposed to changes to George King Road that would make it a busy road as is Farrington now. These spaces were not designed for the kind of traffic volume that would generate. It would be unfair to impose such conditions on a development such as ours. George King Road is not a wide enough road to handle any meaningful increase in traffic.	Comments noted.
C-16 Eric Teagarden Email Rc'vd 3/14/12	In light of the comments concerning the alignment and routing of South West Durham Drive that were raised at the MPO Meeting on March 14, which were echoed and reinforced by Councilman Harrison's statements, I would request that you: 1. Please direct your staff to soften the language on pages 6-37 and 38 to state that the SWDD alignment traversing the Little Creek Bottom Lands is in the process of being re-examined in light of environmental and public/community concerns with its current routing.	Please see response to comment C-2 above.
	2. Please direct your staff to emphasize that there are multiple alternative North/South "drains" for traffic flow between 15-501 and 54 to the East of Little Creek that can be constructed according to minor arterial standards, i.e. George King Road and the new Farrington Road extension, both of which are part of the current Collector Street Plan. I understand the future need for "Traffic Load Balancing" across more than one North South route between 15-501 and 54. As you know, the neighborhoods to the West of Little Creek are already at maximum buildout (Meadowmont and the Oaks as well as Rogerson, Oakwood, etc) and that the traffic generated by build out will be on the East side of Little Creek. It seems possible and viable to channel this traffic to enter 54 on the East side of the wetlands.	Please see response to comment C-2 above.

	Finally, the MPO charter specifically calls out NOT running arterial streets through neighborhoods. Please see the following statement for the DCHC MPO Goals and Objectives under Section 2 point D, d) Preserve and enhance the traffic carrying capacity of arterial street systems, while minimizing traffic intrusion in residential neighborhoods. The URL link to see the DCHC MPO document cited above is: http://www.dchcmpo.org/index.php?option=com_wrapper&Itemid=41 Therefore, please do not release a 54 Corridor study that proscriptively recommends a routing alignment for SWDD that puts Rashkis elementary school and the Cedars retirement community in the arterial traffic crosshairs when there are compelling and viable alternative routes that circumvent this inherently flawed and environmentally destructive route selection.	Please see response to comment C-2 above.
C-17 Geoffrey Geist. prepared notes from March 14 Public Hearing	For the record: Greetings and many thanks to members of the MPO-TAC for this opportunity to share community concerns about the 54-40 study, its recommendations and proposals. In regards to the 54/I-40 study and its proposed SW Durham Drive and Meadowmont Lane extention, the situation is about process, place and people. The LRT routing process, community support for C2 and the decisions of the Orange County Board of Commissioners, the Chapel Hill Town Council and the MPO-TAC in support of C2 as the preferred alternative should not be de-coupled from the routing of the SW Durham Parkway	Please see response to comment C-2 above.

	within the 54-40 study. Namely, with C2 the preferred alternative, not to mention the Environmental study yet to be concluded on the LRT routing, the 54-40 study should mirror the ongoing course of the LRT routing. Therefore, the routing for the SWDD thru Meadowmont Lane should not be de-coupled from the LRT study. Since they both follow similar routes thru the Little Creek Natural Heritage site-and Meadowmont, they should remain, essentially, coupled. To do otherwise would be to undermine community trust in the process, not to mention the proposals and votes of support from local government. In terms of place, the 54-40 study proposes rather clearly that the SWDD cut thru and degrade, not unlike C1, the Little Creek Bottomlands and Slopes, a key Significant Natural Heritage Area. Significant voices of support within the community have spoken rather clearly on the need to preserve and leave whole this unique and irreplaceable place. Furthermore, UNC actions in avoiding a Rizzo Center expansion, not to mention the votes of support for C2 from the Chapel Hill Town Council, MPO-TAC and the Orange County Board of Commissioners would be undermined if SWDD and it's plans were not informed by and updated by these important decisions. In essence, sauce for the goose is sauce for the gander and, therefore, it's of utmost importance that these two projects, seemingly coupled in their original planning, not be de-coupled. Both would do inalterable damage to a unique and protected environmental resource and both should therefore be joined. To do otherwise, would make a mockery, not only of the process but of the place. And, finally, making Meadowmont Lane an extension of the SWDD would create unacceptable harm to the people of the neighborhood that straddles Meadowmont Lane, namely, the children and their families of Ratchiss Elementary, local homeowners and residents of the Cedars Community who would be adversely affected by such a massive project. In the end, to de-couple the SWDD extension from the course of the LRT	

	routing would do irreparable harm to people, place and process and we respectfully submit to the TAC today that the 54-40 study be informed and updated by the course of the LRT process, with C2 the preferred alternative, not only for the LRT but also for the extension of the SWDD thru Meadowmont Lane as proposed in the 54-40.	
C-18 John Wilson, prepared notes from March 14 Public Hearing	Dear DCHC-MPO Transportation Advisory Committee members: Page 6-37 of the 54/40 corridor study mentions two options for connecting Southwest Durham Drive to NC 54, namely Meadowmont Lane and George King Road. The study concludes that "both connections are necessary to maintain mobility within this corridor." The Meadowmont Lane route would essentially follow the flawed and overwhelmingly unpopular C1 light rail alignment, raising similar environmental and safety issues. It would require building an expensive bridge through a state-designated Significant Natural Heritage Area (SNHA), which includes wetlands managed by ownership or easement by the U.S. Army Corps of Engineers (USACE). The N.C. Natural Heritage Program documented that the Little Creek Bottomlands and Slopes SNHA "contains one of the last remnants in the state of the large bottomland forests that once dominated the Triassic Basins and still supports a high diversity of the wildlife typical of this region…The upland buffers surrounding the wildlife impoundments…are particularly important…This buffer could be completely eliminated, drastically affecting the entire ecosystem associated with the floodplain forest." i I asked USACE last week if it would be commenting on the 54/40 corridor study and got the following response: "Thanks for the heads up on this project. We had not received an official notification. We do provide comments on corridor studies and will be preparing a letter on	Please see response to comment C-2 above.

	this one." Following are excerpts from the ensuing (3/13/12) USACE letter, which I just saw this morning. (Full letter attached to this message). "Routes not impacting government property should be utilized first. Routes crossing government property must avoid and minimize adverse impacts to these resources. Mitigation would be required for unavoidable adverse impacts including loss of flood storage capacity…It also appears that the proposed routes may include wetlands and waters of the United States under the jurisdiction of the U.S. Army Corps of Engineers Regulatory Division, pursuant to Section 404 of the Clean Water Act." Transportation Advisory Committee members, please do whatever you can to prevent the building of a bridge that will drastically affect a critical natural area and perhaps an entire ecosystem. George King Road is an already disturbed transportation corridor that avoids these sensitive lands. Farrington Road is another arterial option connecting Southwest Durham Drive.	
	Finally, I would like to express serious concern that we have had two large, expensive transportation planning studies in a row – Triangle Transit's Durham-Orange corridor alternatives analysis and now the 54/40 corridor study – that recommended cutting through the Little Creek Bottomlands and Slopes SNHA without even mentioning the SNHA's existence, much less its significance. Given that this SNHA comprises a major portion of the 54/40 study area, this is a glaring omission. I respectfully request that the Transportation Advisory Committee attempt to ensure that future such studies under its auspices acknowledge any impacted SNHAs. Please see that these critical natural areas are taken as seriously in transportation planning studies as they	Comment noted. The DCHC MPO is taking steps to improve the communication and coordination with Resource Agencies during the update of the LRTP and for future planning studies. The Resource Agencies will be provided ample opportunity to comment on the projects, including highway and rail transit projects, proposed for the updated Long Range Transportation Plan.

	are by Durham and Orange county citizens and the municipal and county governments they elect. Also, please try to ensure that input and information from state and federal resource agencies is more effectively obtained and made available to the public and local decision makers as part of these important studies and the planning processes they inform.	
C-19 Tom Stark Letter Rc'vd 03/16/12 (see attached for details)	Comment 1 - ... the zoning desingation of the parcel currently occupied by Farrington Road Baptist as R-20 versus Office on the Comprehensive Plan	It is the vision for this study that new office and retail development be directed into a nodal development pattern around future transit light rail stations. While the recommended land use for the NC 54 corridor study is conceptual in nature and not directed towards specific parcels, it is envisioned that the development intensity decrease and development type become more residential in nature the further away the area is from the light rail station.
	Comment 2 - ... limited access for Farrington Road from NC 54	Forecast congestion and gridlock conditions for this intersection will lead to an increased number and severity of crashes at this location. Additionally, high levels of unmitigated congestion will have an economic cost, not only to adjoining properties, but also to the community at large. These conditions necessitate limiting direct access to Farrington Road from NC 54. Traffic analysis shows that as this area approaches gridlock conditions, the required travel time for accessing the properties along Farrington Road in the vicinity of NC 54 will actually improve with the grade separation of Farrington Road with access provided by a collector street system accessing NC 54 at Falconbridge Road. Please see Tables 6-1 and 6-2.

	Comment 3 – ... the importance of the Farrington Road/NC 54 intersection to Durham, the preservation of safe and easy movement to Farrington Road from NC 54, and the preservation of property values	Please see response to C-19 Comment 2 above.
	Comment 4 – ... the planned transit station at Leigh Village and the optimal location for the light rail corridor	Comments noted and shared with Triangle Transit.
C-20 Geoffrey Geist Letter to Chapel Hill Town Council Rc'vd 3/7/12 (see attached for details)	... the recommendation for Southwest Durham Drive in the NC 54 Corridor Study recommendations	Please see response to comment C-2 above.
	... inclusion of the Chapel Hill Town Council support for C-2 in the NC 54 Corridor Study	Please see response to comment C-2 above.

Agency Comments – NC 54 Phase II Draft Final Report – March 2012

Source	Comment	Response
A-1 Letter from UNC and UNC Health Care Rc'vd 3/16/12 (see attached for details)	Comment 1 – … inclusion of the C-2 alignment on all study maps and the need to re-design the Barbee Chapel/NC 54 solution if C-2 is selected	Please see page 2-17 and page 6-25 in the December 2011 draft final report. The C-2 alignment has been added to all relevant maps and figures in the report.
	Comment 2 – … the superstreet concept and the reconfiguration of the NC 54/I-40 interchange impeding access to services and businesses along the route and confusing the public	The report has been revised to include a discussion on the importance of wayfinding signage to assist the public in navigating the superstreet design.
	Comment 3 – … the interference of the superstreet design on bus operations to and from the Park and Ride lots at the Friday Center	Comments noted. Additional traffic analysis indicates that in the future bus operations will be improved with the implementation of the superstreet design as compared to doing nothing to address the forecast traffic and associated congestion.
	Comment 4 – … the transit costs reflected in the plan	Transit costs have been modified where necessary; however, the costs provided in the report are estimates based on the best available information. A detailed cost analysis will be conducted prior to implementation.
	Comment 5 – … the expansion of transit service within the corridor	Comments noted. This recommendation would require an additional investment in transit service.
	Comment 6 – … the feasibility of the proposed park-and-ride solution	Comments noted.
A-2 Letter from Army Corps of Engineers Rc'vd 3/13/12 (see attached for details)	… depiction of routes that require widening of NC 54 along government property	The NC 54 report has been revised to better reflect the impact of roadway projects on environmental resources within the corridor.
	… other routes that impact wildlife lands and lands designated as a Significant Natural Heritage Area	See response to comment A-2 above.
	… impacts on wetland properties	See response to comment A-2 above.

A-3 Letter from NCDENR Rc'vd 3/16/12 (see attached for details)	... the C-1 Alternative for the LRT	The NC 54 report has been revised to better document natural resources in this corridor and to capture the potential impact of roadway improvement on these resources.
	... collector street extensions and improvements	See response to comment A-3 above.
	... the widening of NC 54 to six lanes	See response to comment A-3 above.
	... the effects of high density development	The NC 54 report has been revised to address the tradeoffs between high density development, the benefits that such a development pattern has on reducing the effects automobile travel, and the potential impacts to natural resources.
A-4 Letter from Orange County BOCC to TAC Chair Rc'vd 3/13/12 (see attached for details)	Comment 1 - Chapel Hill Transit operates 30 buses in the 54 corridor. The study should include a discussion about how the transit elements of the plan address this issue;	This is an operations issue and beyond the scope of this study.
	Comment 2 - Orange County supports the recommendation that Bus Rapid Transit (BRT) be included in the 54 corridor. However, it is suggested that BRT service include dedicated bus lanes to further alleviate high traffic volumes. This could be possible by redesigning some or all of the new lanes built or suggested in the Orange/Durham County portion of the corridor to accommodate BRT or a combination of BRT and High-Occupancy Vehicles (HOV);	Comment noted.
	Comment 3 - A more detailed explanation of how the recommendations accommodate the high commuter volume to Orange County from southern Durham and western Wake County would be beneficial;	Comment noted, please see Appendix C – Travel Demand Modeling Methodology and Appendix E – Synchro Traffic Analysis for additional details.
	Comment 4 - Orange County further suggests that the study explore incorporating dedicated bus lanes and/or HOV on the 6-lane section of NC 54 in Orange County (from the Durham County line west) to complement the previous suggestion of including BRT/HOV lanes in the Durham	Comment noted.

	County portion of NC 54;	
	Comment 5 - Orange County supports the recommendation for a park and ride facility at NC 751 and Southpoint Auto Park Blvd and agrees that park and ride accommodations east of the 54/I-40 intersection is a good strategy for increasing mobility in the corridor;	Comment noted.
	Comment 6 - There are questions about the total number of parking and ride spaces available in the 54 corridor and at locations adjacent to the proposed LRT stations in this larger Durham-Orange County sub-region. Will these park and ride facilities be adequate to support demand to support projected ridership. In addition, a reconciliation of the number of spaces at Leigh Village since it has decreased from the original 2000 estimate;	Recent analysis by Triangle Transit during the light rail alternatives analysis has suggested that over 1000 parking spaces will be needed at the proposed Leigh Village transit station. While the details of this analysis will be decided during the final analysis for the LRT, the NC 54 report has been modified to reflect the possible change in the number of required spaces.
	Comment 7 - Orange County suggests that the study further accent the travel patterns and note how many trips are taken traveling west (from Durham County) and east (from Orange County) in both the a.m. and p.m. peak periods;	Please see response to A-4 Comment 3 above.
	Comment 8 - The Board is concerned about how the density of development recommended in the plan and the densities necessary to support Light Rail Transit do not seem to match;	Recommended densities support Light Rail Transit, please see page 2-17 in the December 2011 draft final report.
	Comment 9 - Light Rail Transit may not be enough to alleviate the congestion in the study area, so other modes of public transit should be considered and coordinated;	Comment noted, please see discussion in Chapter 4 Transit Recommendations
	Comment 10 - The Board would like to see how the recommendations in the plan may be funded including which projects could be funded through the proposed ½ cent sales tax and what additional funding sources have	These details will be determined a project implementation and are beyond the scope of this study.

	been identified;	
	Comment 11 - The Board expressed concerns that the transit portion of the plan is becoming too complex and that citizens may not utilize transit in this corridor because they may have to make multiple transfers;	Comment noted.
	Comment 12 - Orange County suggests that the study ensure that transportation monies are spent efficiently and transportation improvements are not overlapped or duplicated by widening roads, building Light Rail Transit and recommending Bus Rapid Transit in the same corridor;	Comment noted.
	Comment 13 - Orange County would like the study to make certain that most recent socioeconomic and demographic information is used;	The most recent officially adopted socioeconomic and demographic data available at the start of the study was used to inform the land use element of the plan.
A-5 Letter from Durham Bicycle & Pedestrian Advisory Commission Rc'vd 2/21/12 (see attached for details)	... bicycle/pedestrian crossings at ramps	Comments noted.
	... multi-use side path between the I-40 interchange and Garrett Road	These recommendations are beyond the scope of this study.
	... grade separated facilities	Report has been modified to include a recommendation for considering bicycle lanes on grade separated roadway crossings. The comment related to the grade separated transit crossing is noted and forwarded to Triangle Transit.
	... remaining clarifications and enhancements to maps and phasing	Comments noted.
A-6 Chapel Hill Transit Email Rc'vd 3/16/12	Comment 1 - Review and clarification of the park and ride recommendations is needed. For example in Table 3.1: ▪ Overall comment – capital costs, related to buses seem to be geared to the short-term recommendations and there doesn't appear to be a bus cost associated with the long-term solution. Similar thought on O&M – (e.g. 751/54 -	Comments noted, many reference detailed operational issues that will be addressed more fully during operations planning.

	is it $565K for the short-term cost, seems expensive if this is the cost to provide service for 50 spaces, or long-term cost?) Shouldn't there be a range of costs or a cost for both? ▪ NC 751/54 – mentions a CHT express route if needed (although page 4-6 says CHT will provide this service) and an enhancement to TTA's 805 to provide 15 minute peak hour service, with a capital need of 2 buses: o Seems that Table 3-1 and Page 4-6 should say the same thing o Not sure that capital needs are adequate – it takes 3 buses to provide 10 minute service, during peak hours, from Friday Center area and believe it would be difficult to provide 15 minute service from a location 3 miles further away with only 2 buses. ▪ Gateway Center – suggests we modify the D/DX route and provide 15-minute service, but doesn't show the need for additional buses. The D is currently at capacity during peak hours and operates at a 20-minute frequency - additional buses would be needed to provide 15-minute service and extend the route past Eastowne. The D would also need to be significantly reconfigured to provide this service and would suggest that an express service from the park and ride would be needed (Note - we're looking at some options for providing a park & ride service from the Eastowne area and our preliminary plans show the need for 4 buses to provide 15 minute service from this area). ▪ Patterson Place – not sure that 2 buses could provide 15 minute peak hour service to this area for 300 spaces, let alone a 1,000 spaces ▪ Leigh Village – not sure that 2 buses could provide 15 minute peak hour service to this area for 500 spaces ▪ Governors - not sure that 2 buses could provide 15 minute peak hour service to this area, we currently	

	operate 3 buses from the Chatham P&R to provide 15 minute service. Also, the cost per ride would be very high for a service like this (assuming 100% occupancy and that users would ride the bus each way: 200 rides per day * 250 weekdays = 50,000/$565K = $11.30/ride)	
	Comment 2 - The cost per bus differs between tables 3-1 and 4-1 ($527K v. $350k)	This difference is intentional. The costs in Table 3-1 assume a mix of hybrid and non-hybrid buses. Whereas the costs of the buses in the transit chapter do no assume hybrids and were simply taken from the 2011 Transportation Improvement Program costs for consistency.
	Comment 3 - Table 4-1 shows express bus service from the 54/751 park and ride and from Gateway. It seems that these services are also mentioned in Table 3-1, is this a duplication or separate services?	This is the same service, shown in both places to clarify the need for supportive transit service for the park-and-ride.
	Comment 4 - Table 4-1 BRT: seems that the O&M and Capital Costs amounts could be transposed? Also, is it assumed that BRT will replace existing transit services in the corridor? If so, 6 peak hour buses is likely not adequate (assuming no change in parking) – we're currently operating 16 peak hour buses and additional trippers in this corridor.	The numbers in the table are not transposed. BRT is not assumed to replace existing transit services in the corridor, but to supplement existing service; especially until the LRT is operational.
	Comment 5 - BRT on page 4-9: seems like it should mention that in order to obtain fed $'s for these projects, additional study is necessary (show study steps in the recommendations).	The level of BRT anticipated within this corridor would not require Federal funds. The BRT referenced in this study refers to express buses with signal prioritization and possible queue jump lanes.
	Comment 6 - Superstreet (page 6-31) – we are very concerned that the proposed design will negatively impact CHT services, causing increased travel time and costs. Can Marriott Way handle the vehicle and bus traffic?	Comment noted. Analysis shows that the recommended superstreet design will greatly improve travel time within the NC 54 corridor in the future and that Marriott Way can be designed to handle the anticipated demand. Please see Appendix E – Synchro Traffic Analysis for additional details.

A-7 Chapel Hill Town Council Resolution (attached)	Resolution 1 - The recommendations of the NC54/I-40 Corridor Study should be considered for incorporation into the Durham-Chapel Hill-Carrboro 2040 Long Range Transportation Plan. Implementation of the Corridor Study recommendations should be phased and revised to reflect changing conditions within the NC54 corridor.	Comment noted.
	Resolution 2 - The recommendations of the NC54 Corridor Study should be revised as necessary to reflect the C2 light rail alignment. Maps and related text should be revised to include the C2 rail alignment. If the C2 alignment is selected for implementation the Study should be revised to address the need for a grade separated crossing of Barbee Chapel Road and provision for a grade separated pedestrian crossing between the Hillmont light rail station and the University property on the north side of NC54. Selection of the C2 alignment should also require revisions to the adopted Southwest Durham/Southeast Chapel Hill Collector Street Plan.	The NC 54 has been revised to reflect these concerns and modifications.
	Resolution 3 - The land use assumptions and transportation improvements recommended in the NC54/I-40 Corridor Study should be revised to reflect elements of the adopted Chapel Hill 2020 Comprehensive Plan.	The Chapel Hill 2020 Comprehensive Plan land use assumptions were not available to the study team in time to include in the final report. Subsequent studies and revisions will consider these assumptions.
	Resolution 4 - The proposed transit and park and ride facility recommendations and estimated costs should be revised to reflect current operating conditions and financial information.	Costs captured in the report are based on the best available information at the time of the study. Current costs will be considered at project planning and implementation.

NC 54/I-40 CORRIDOR STUDY

TRANSPORTATION-LAND USE MASTER PLAN

EXECUTIVE SUMMARY

DECEMBER 2011

Durham-Chapel Hill-Carrboro Metropolitan Planning Organization

Edited by the DCHC MPO in April 2012 to capture feedback from the public during the public comment period.
All edits to the Executive Summary are referenced in the text and included in the Executive Summary Addendum at the end of this document.

RENAISSANCE PLANNING GROUP
Baker
ICF INTERNATIONAL

Executive Summary

Overview

A primary route connecting much of southern Orange, Durham and Wake Counties, as well as new growth occurring in Chatham County, with the academic and medical destinations at the University of North Carolina at Chapel Hill (UNC) and other destinations in Research Triangle Park, the NC 54/I-40 corridor is facing pressures unlike many others in the region. In addition to the regional access that NC 54 provides for UNC and its medical facilities for commuters, patients and visitors from across the state and region, the corridor is experiencing adjacent land development changes that require careful planning with transportation improvements to serve the long-term vitality of the corridor and its surrounding neighborhoods. With environmental, physical and policy constraints limiting expansion of portions of the roadway and the development of parallel roadway connections, the corridor requires a multimodal solution to meet future demand while improving safety for all users and traffic operations.

"NC 54 is an extremely complex corridor, involving multiple travel markets with each having unique characteristics and needs."

The NC 54/I-40 corridor is extremely important to the communities in both Durham and Chapel Hill, where it serves residential, commercial and institutional land uses, creating an eclectic mix of local and regional traffic competing for limited space. The corridor is fast becoming the most congested in the region, and has begun a transition from low-density suburban development with a semi-rural feel to a more urban pattern, with approved and pending development proposals expected to accelerate that transition as the economy rebounds. With more than 600 acres of vacant developable land surrounding it and likely development and infill of the future light rail station areas, NC 54 is poised for dramatic changes. As a result, the corridor is rising in statewide importance and regional prominence.

However, rising congestion levels threaten property values and economic growth for both jurisdictions, as well as the ability for UNC to compete for jobs and patients. There are policies in place in Chapel Hill and on the UNC campus that restrict the amount of available parking, and encourage the use of transit in reaching destinations served by this corridor. Yet the heavy traffic, high speeds and lack of multimodal facilities along the corridor create barriers that limit the usefulness and safety of walking and bicycling for transportation. This also influences transit usage, where heavy demand exists due to the parking constraints, but better pedestrian access is needed to make transit more effective as a travel option. As a result of those existing and anticipated future demands, NC 54 is an extremely complex corridor, serving multiple travel markets and a diverse array of stakeholder and community interests focused on the success of different transportation modes, protection of neighborhoods and the economic viability of their land.

Study Objectives

In that context, the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (DCHC MPO) initiated the NC 54/I-40 Corridor Study to develop a land use – transportation blueprint for this regionally significant corridor. With its development potential and the plan to construct a regional light rail system that would serve this corridor, the goal of the study is to define complementary land use and transportation strategies that will guide public and private actions, investments and capital project priorities to improve mobility, safety and access for all modes. The dynamic nature of this critical corridor requires a bold vision supported by practical, achievable strategies in the near term and set the right foundation for longer term improvements through the 2035 horizon year.

Through a planning process that examined future land use-transportation scenarios, the NC 54/I-40 Corridor Study seeks to build upon various transportation and land use plans and engage corridor stakeholders and the public in finding solutions that are effective and find the right balance between mobility and accessibility for all users. Study recommendations in the final report offer a multimodal approach to meeting existing and future transportation needs. They address the functional design for specific geometric improvements at intersections along NC 54 and at the interchanges with I-40 and US 15-501, the expansion and integration of various types of transit services to help more people reach their destinations as an alternative to driving, an interconnected network of bicycle and pedestrian facilities to provide a more comfortable environment with safe access along the corridor for walking and cycling, and a phased implementation plan for capital projects and service improvements.

These transportation recommendations support a land use strategy designed to create more opportunities for location-efficient housing and transportation in the corridor to improve livability and regional mobility. The corridor is becoming increasingly employment-oriented, and more proximate housing choices – particularly for a range of income levels – will create shorter trip distances and help make the use of non-auto travel options more viable. The report includes design guidelines to provide further support for implementing the recommended land use and transportation strategies.

Study Partners and Process

The DCHC MPO led the study, serving as the project manager in partnership with the consultant team hired for the project, Renaissance Planning Group, in association with ICF International and Michael Baker Corporation. The MPO coordinated the active involvement of a broad group of study partners that include the North Carolina Department of Transportation (NCDOT), Triangle Transit Authority (TTA), the City of Durham, Durham County, the Town of Chapel Hill, the University of North Carolina at Chapel Hill (UNC), Chapel Hill Transit (CHT) and the Durham Area Transit Authority (DATA). The MPO, the City of Durham, Durham County, and the Town of Chapel Hill funded the study. The study partners formed a steering committee that met monthly to guide the process, provide input at key milestones, and review study work products.

While the NC 54 corridor study limits are from I-40 to US 15-501, the study did not just focus on the linear right-of-way along NC 54. It captured a regional context, including growth patterns, transportation plans and the planned regional light rail system anticipated to connect this corridor to other points in the Triangle Region. The study area boundaries encompass surrounding neighborhoods and the existing and planned street networks, including Ephesus Church Road, Barbee Chapel Road, Farrington Road, NC 751 and others providing parallel routes or interconnecting with NC 54.

Public engagement is critically important to the study. A part of the corridor's complexity is the multitude of interested stakeholders with diverse expectations about the future of the NC 54 corridor. These include landowners, institutions, businesses, neighborhood

residents, students and, of course, the commuting public. A vigorous public participation process was employed to guide the development of study recommendations. This entailed a series of in-depth focus group discussions with each of the key stakeholder groups (residents and non-residents alike) early in the project and again once initial recommendations were nearing completion. In addition, a series of three public workshops at key milestones defined priority issues and opportunities, provided the basis for creation and evaluation of scenarios, and enabled participants to react and suggest refinements to draft land use and transportation master plan recommendations.

These outreach activities were augmented through use of a project web site (http://www.nc54-i40corridorstudy.com/) to share information and provide additional opportunities for the community to review materials and weigh in with ideas or issues of concern. The DCHC MPO staff and consultant team also met informally with various individuals and groups throughout the study. The recommendations contained in this report are a direct reflection of the input provided over the entire public engagement process.

Vision for the Corridor

Through the study process, analysis and broad-based feedback, a vision emerged for a regionally significant multimodal corridor that serves both regional and local travel through an expanded and more efficient network of streets, bus routes, bicycle facilities and pedestrian enhancements. The integrated land use and transportation vision is to promote community livability by guiding future development into targeted mixed-use areas to reduce trip lengths, enable greater use of non-auto travel options and provide location-efficient choices for housing and transportation. These areas are within ¼ to ½ mile of the four planned light rail stations in the corridor. This will effectively support the investment in rail passenger service that will strengthen regional and local travel options between the UNC campus, Orange County, Durham County and elsewhere in the Triangle Region. Over time, the centers help transform the corridor from a drive-by strip into highly accessible, well-connected places that function as vibrant focal points serving local and regional needs.

The NC 54 Corridor Master Plan promotes location-efficient decisions to help lower combined housing and transportation costs per household. It puts people together, served by a more efficient transportation system that enables more trips to be made by walking, bicycling and transit. The plan defines target growth areas that help reduce sprawl in outlying areas.

Land Use Strategy

Figure ES-1 presents the recommended nodal development vision for the corridor. This land use-transportation blueprint embraces livability principles that provide more transportation choices, promote equitable, affordable housing through location and energy-efficiency, enhance economic competitiveness through reliable and timely access to employment, educational opportunities and services, and by supporting existing communities through transit-oriented, mixed-use development that will help safeguard existing neighborhoods and preserve rural landscapes.

Table ES-1 shows the proposed height and density targets for the nodal development plan, which provides the compact, mixed-use framework necessary to create a series of vibrant walking districts that enables reliance primarily on non-auto travel modes as they approach build-out of the development program.

The creation of highly developed mixed-use centers can help mitigate automobile travel demand by creating an environment where walking and access to transit are priorities. It also provides a mechanism to advance transportation funding opportunities that are unlikely to be available with the status quo or trend development pattern. For instance, more intense development at the planned Leigh Village station and other "nodes" along the corridor can provide incentive to obtain mitigation funding from future development to offset transportation costs for the roadway improvements that eventually will

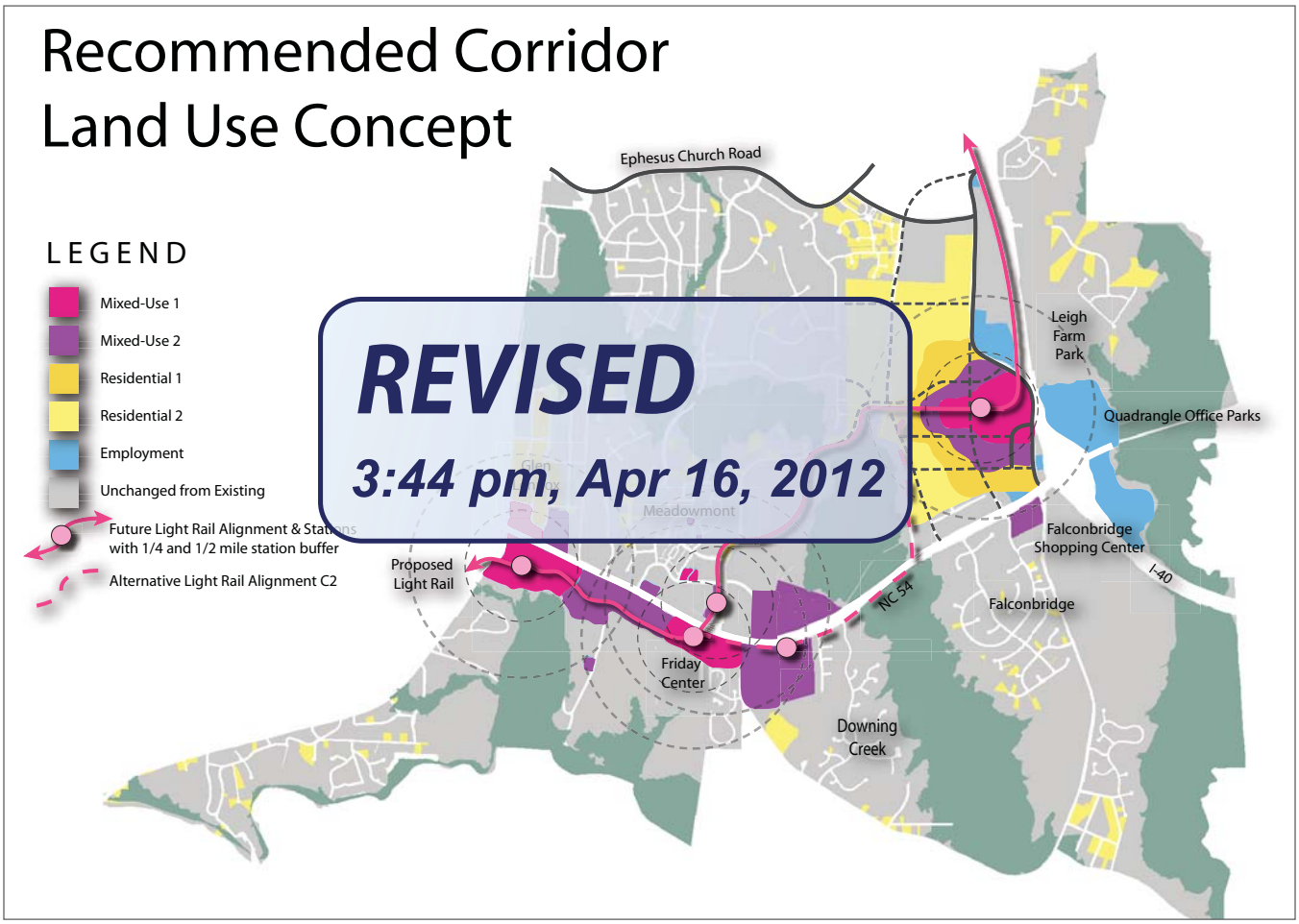

Figure ES-1: Recommended Corridor Land Use Concept

See Addendum #1 for revised figure

Table ES-1: Concept Land Uses

	Mixed Use 1	Mixed Use 2	Residential 1	Residential 2	Employment
No. of Stories	3 - 8	2 - 4	2 - 4	1 - 3	4 - 12
Floor-to-area ratios (non-residential)	1.25 - 2.25	1.0 - 1.5	-	-	0.5 - 1.0
Dwelling Units per Acre	35 - 60	20 - 35	12 - 35	6 - 12	-
Employees per Acre	45 - 90	25 - 50	9 - 15	6 - 12	35 - 175

be needed in the corridor even without the development. The traffic projections for the MPO's adopted 2035 Long Range Transportation Plan – without the nodal development plan in the NC 54 corridor – show that major capacity improvements to NC 54 and I-40 will be needed. Higher densities also enable developers to incorporate a greater percentage of workforce housing into the development program, helping to shorten trip lengths and creating more purchasing power for those residents who can effectively lower both housing and transportation costs.

See Addendum #2 for inserted text

Transportation has a profound influence to shape growth in a region and along a corridor. The parking constraints on the UNC campus and elsewhere in the Town of Chapel Hill have certainly influenced the use of transit, and, at least to a certain extent, where people choose to live. Developers and their clients (businesses, residents) respond to transportation conditions when they decide where to build, live, or locate their business. A new or improved roadway or transit project can make access to a location easier – making it more attractive to develop. A transportation improvement can also improve visibility – an important consideration for commercial developers. Many businesses rely on being seen by "pass-by" traffic and want to locate where there is a lot of vehicle and/or pedestrian traffic. This has been the case at the NC 54/Farrington Road intersection, where development depends on highway visibility. Conversely, rail transit is likely to result in more compact development clustered within walking distance of the station, and opens up new opportunities for how people choose to live and travel.

The response is also strongly influenced by the land use policy and planning context – for example, when the predominant mode of travel is the automobile, rail transit needs to be accompanied by strong land use policies in order to concentrate development in station areas. This type of strategy in the NC 54 corridor is necessary to avoid a future scenario where rising levels of congestion will occur due to regional growth forecasts, and the demands placed on the NC 54 corridor and its interchange with I-40 will lack any financial support from planned development.

The timing of the nodal development plan is dependent on the schedule for light rail in the corridor. If the funding mechanism is approved and the light rail plan moves forward, detailed station area plans would guide the development for the areas around each station in the corridor. Due to the roadway capacity constraints of this corridor, only relatively modest increases in development intensity can be supported until the light rail system is operational.

Transportation Strategy

Table ES-2 presents the phased multimodal transportation recommendations associated with the recommended nodal development plan. The recommendations are divided into short-term, mid-term and long-term strategies. These are described in detail in the full report, with supporting data in a series of appendices. In general, the short-term roadway strategies consist of a series of local street connections including the collector streets to provide alternate routes for local trips and improve traffic flow and operational efficiency.

The interim components include reconstruction of the I-40 interchange, where the critical intersection of Farrington Road and NC 54 causes significant congestion due to its proximity to the I-40 interchange, grade separation to eliminate traffic signals at the most critical intersections, and unconventional intersection designs commonly referred to as "superstreets." Together these strategies will reduce delay and support anticipated traffic growth in the corridor.

Longer term, with the recommended nodal development, a redesign of the US 15-501 interchange at NC 54 will be needed, and can enhance bicycle and pedestrian safety in the future Hamilton Road light rail station area.

Transit is an integral part of this overall strategy. In addition to the planned light rail system, a network of premium Bus Rapid Transit lines, expanded local bus service, and additional park-and-ride lots are recommended for the corridor. The key park-and-ride strategy is the implementation of multiple facilities north and east of the NC 54/I-40 interchange to capture trips

before they enter the corridor. The package of facilities will together serve regional commuters, latent demand for satellite parking, and future parking for light rail transit, and could provide an alternative to the Friday Center lot should it redevelop in the future.

From a bicycle and pedestrian network standpoint, the recommended plan fills in gaps and improves safety and access along NC 54 through geometric modifications and the creation of a 15' shared use path adjacent to the roadway between Barbee Chapel Road and the I-40 interchange. This is a critical gap in the corridor, and high speed traffic precludes an on-road solution for the section east of the Friday Center. Additional non-motorized transportation recommendations are identified throughout the corridor, including along Barbee Chapel Road and at US 15-501.

The roadway improvements, especially the superstreet intersection design and partial cloverleaf interchange design at US 15-501, take advantage of existing infrastructure and will provide maximum capacity for the cost of construction. The transportation recommendations for other modes will help to manage demand in the corridor, further extending the life of the roadway improvements. The recommendations for each mode are linked to others, to support a well-balanced and inter-connected mobility network. Each improvement is an investment in another, and together will build a stronger system for mobility than optimizing the network for one particular mode.

The Durham-Orange County Corridor Alternatives Analysis (AA) was conducted concurrently with the NC 54/I-40 Corridor Study. The AA recommends two light rail alignments be carried forward to the PE/NEPA phase within the NC 54/I-40 study area. Both alignments, shown in **Figure ES-1**, recommend elevated crossings over NC 54. Alignment C1 will have no adverse impacts along the NC 54 corridor. Alignment C2 may cause complications at the Barbee Chapel Road intersection with NC 54, where the proposed C2 alignment crosses Barbee Chapel Road just south of NC 54. With the current intersection configuration, an at-grade light rail crossing will likely not result in significant traffic impacts beyond the congestion that already exists or will exist in the future without substantial intersection capacity improvements. Constructing a grade-separated interchange at Barbee Chapel Road will ease congestion and lessen delays as traffic grows in the future. A grade-separated interchange at Barbee Chapel Road could likely be designed to accommodate the C-2 light rail alignment, but may entail significantly higher costs for extending the elevated segment of the light rail and a potential tri-level structure. Another option for the C2 alignment would be to move the alignment further to the south to avoid conflicts with the proposed ramp. These additional costs will need to be considered in the next phase of the Light Rail development process.

The potential construction of the C2 alignment and the potential development of the Lloyd property on the north side of NC 54 would likely generate high pedestrian demand across NC 54. This would be located just slightly east of the future elevated crossing that would be constructed at Barbee Chapel Road. While crossing at Barbee Chapel Road would still provide access to the Hillmont light rail station within a half-mile walk of the Lloyd property, a more substantial direct pedestrian crossing may be needed. This is another cost implication that should be considered in the EIS process.

See Addendum #3 for clarification

Conclusion

The analysis of growth and transportation indicates that substantial capacity improvements will be needed by 2035 with or without new development anticipated to occur in the corridor. The I-40 interchange at NC 54 is fast approaching its capacity, and the proximity of the Farrington Road intersection creates operational challenges that affect much of the corridor. Heavy through traffic volumes projected along the corridor require intersection modifications that will help reduce delay. While the planned light rail transit system will help when it becomes operational sometime around 2025, it will not eliminate congestion. Rather, the light rail network provides a sound basis to guide future growth into the planned station areas as part of a nodal development strategy that will help reduce trip lengths, lower vehicle miles traveled per capita, and provide for more location-efficient housing choices to increase the financial flexibility of those residents.

While the recommended land use plan increases growth in the corridor beyond the levels assumed for the adopted Long Range Transportation Plan, most of that additional growth is expected to occur in Orange County because the LRTP assumptions appear low relative to development potential and future plans.

The recommended phasing plan for the transportation network creates better mobility for the next 25 years through a series of improvements to enhance local street connectivity for alternate routes, relieve bottlenecks at key interchanges and intersections through grade separation, and increase operational efficiency through "superstreet" intersection treatments.

As indicated, due to traffic impacts, much of the potential future growth will need to wait until the light rail system is operational and can help moderate auto travel demand. However, the plan calls for expanded park-and-ride opportunities north and east of the NC 54/I-40 interchange to serve regional commuters, satellite parking for nearby employment centers, and future light rail transit station by capturing a reasonable share of single occupancy vehicles before they enter the corridor. Expanded local bus, Bus Rapid Transit, and commuter express routes are planned to meet the corridor's growing needs in the interim to light rail, and these services will complement the rail system when it is built.

A network of non-motorized transportation facilities, along with signage/markings for shared on-road use where appropriate, is needed to create a more accessible corridor and study area. This addresses travel along the NC 54 corridor by bicyclists and pedestrians, as well as crossing the corridor safely and efficiently. Elsewhere in the study area, the network provides additional connections between residential areas, commercial destinations and regional facilities, such as the American Tobacco Trail.

Establishing benchmarks and targets is an effective way to measure progress toward plan implementation. The NC 54/I-40 Corridor Study is a multi-year, multi-phase master plan aimed at improving overall mobility and accessibility, consistent with plans to create development focal points as places that become multipurpose destinations. Given the concerns of some residents and many stakeholders about traffic conditions and future development plans, it makes sense to take an approach in partnership with NCDOT and the local governments that addresses various aspects of this report to track progress toward achieving outcomes of this planning effort, not merely the programming and construction of capital projects.

The recommended approach is for the MPO to prepare a biannual monitoring report every two years to document progress toward achieving the mobility goals outlined in this study. This monitoring report would document transportation system conditions over time using the performance measures defined through this study and expanded to address specific implementation activities and accomplishments on the part of each study partner or jurisdiction. The report would fit within the MPO's established Congestion Management Process, and should document actions from a land development, transportation and urban design framework to implement the recommendations for improved livability, mobility, safety and access.

Table ES-2: List of Transportation Recommendations

PARK-AND-RIDE					
Description	**Location**	**Jurisdiction**	**Phase**	**O&M**	**Capital**
Coordinate with retailers to designate 50 shared park-and-ride spaces. Enhance TTA 805 service through Woodcroft.	Retail Center at NC 751/ NC 54 Intersection[1]	Durham	Short Term (2012-2020)	$565,000[2]	n/a
Construct surface lot with 500 spaces. Implement a new CHT express route (or modify CHT Routes D and DX to serve facility. Extend Danziger Drive over I-40 for additional access.	Gateway Center Future Light Rail Station	Chapel Hill	Short Term (2012-2020)	$565,000[2]	$3,555,000 [3,4]
Coordinate with retailers to designate 300 shared park-and-ride spaces. Extend existing CHT DX route to serve facility.	Patterson Place	Durham	Short Term (2012-2020)	$565,000[2]	n/a
Coordinate with retailers to designate 100 park-and-ride spaces for carpool and vanpool.	Retail Center at Governors Village	Durham	Short Term (2012-2020)	n/a	n/a
Coordinate with retailers to designate 160 park-and-ride spaces. Add a stop along TTA Route 405 to serve facility.	Oak Creek Village	Durham	Mid Term (2020-2025)	$565,000[2]	n/a
Coordinate with retailer to replace or expand existing facilities in Southpoint Mall. Modify TTA and DATA routes as necessary.	Renaissance Parkway Target Store	Durham	Mid Term (2020-2025)	$565,000[2]	n/a
Construct small facility with up to 500 spaces after construction of I-40 interchange improvements. Provide express bus service if constructed before light rail.	Leigh Village Future Light Rail Station	Durham	Long Term (2025-2035)	$565,000[2]	$10,000,000[5]
Convert surface lot into structured facility with 1,000 spaces.	Gateway Center Future Light Rail Station	Chapel Hill	Long Term (2025-2035)	n/a	$20,000,000[5]
Construct structured parking facility with 1,000 spaces to service light rail station.	Patterson Place	Durham	Long Term (2025-2035)	n/a	$20,000,000[5]
Implement CHT express route	Retail Center at Governors Village	Durham	Long Term (2025-2035)	$565,000[2]	n/a

See Addendum #4 for updated information

1 The pursuit of several locations for a park-and-ride facility along NC 751 is recommended, including Southpoint Auto Park Boulevard and the Renaissance Parkway Target Store. The retail center at the NC 751/NC 54 intersection represents an ideal location, but all three locations should be pursued.

2 Operating costs based on additional total annual hours multiplied by $86, with 15 minute frequency during peak hours and 30 minute frequency during off-peak hours

3 Assumes $5,000 per space, the average surface parking construction cost from the National Parking Association's 2009 study Parking in America: Annual Review of Parking Rates in the United States and Canada

4 Includes cost of two new buses based on a 50/50 split of $400,000 non-hybrid buses and $655,000 hybrid buses for an average of $527,500 per bus

5 Includes cost of multi-level parking structure at $20,000 per space.

TRANSIT					
Description	**Location**	**Jurisdiction**	**Phase**	**O&M**	**Capital**
Expanded Local Bus service with 30 minute frequency	Southeast along Barbee Chapel Rd and returning north back to NC 54 along Farrington Rd with transfer to regional service	Durham	Short Term (2012-2020)	$1,355,400[1]	$700,000 (2 buses at $350,000 each)[2]
Express Bus service along NC 54 from the NC 751 park-and-ride facilities	From NC 751 park-and-ride facilities to downtown Chapel Hill along NC 751 and NC 54	Durham & Chapel Hill	Short Term (2012-2020)	$1,355,400[3]	$700,000 (2 buses at $350,000 each)[2]
Express bus service us service along US 15-501 or Franklin St from the Gateway Center park-and-ride.	From Gateway Center at the I-40/US 15-501 interchange to downtown Chapel Hill along US 15-501 or Franklin St	Chapel Hill	Short Term (2012-2020)	$1,355,400[3]	$700,000 (2 buses at $350,000 each)[2]
Light Rail Transit Preliminary Engineering and Design	Durham to Chapel Hill	Durham & Chapel Hill	Mid-Term (2020-2025)	n/a	n/a
Expanded Local Bus service with 30 minute frequency	North of NC 54 along Farrington Rd & SW Durham Dr to US 15-501 (Durham- Chapel Hill Blvd)	Durham	Mid-Term (2020-2025)	$1,355,400[1]	$700,000 (2 buses at $350,000 each)[2]
Bus Rapid Transit - Phase 1. Five minute frequency with daily peak vehicle need of six buses	From Meadowmont along NC 54 to downtown Chapel Hill	Chapel Hill	Mid-Term (2020-2025)	$11,566,080[4]	$3,400,000
Bus Rapid Transit - Phase 2. Five minute frequency with daily peak vehicle need of six buses.	From NC 751 park-and-ride facilities along NC 54 towards Chapel Hill, aligning with Bus Rapid Transit - Phase 1	Durham	Mid-Term (2020-2025)	$11,566,080[4]	$3,400,000
Flex Route service	General service north and south of study area along Barbee Chapel Rd, Pinehurst Dr, Farrington Rd, Ephesus Church Rd, serving the Falconbridge Community, Downing Creek community, and Glen Lennox	Chapel Hill	Mid-Term (2020-2025)	$4,066,200[5]	$307,200 (4 buses at $76,800 each)[2]
Light Rail Transit (Final Design and Construction)	Durham to Chapel Hill	Durham & Chapel Hill	Long Term (2025-2035)	TBD[6]	$2,750,000[2]

1 Operating cost for normal fixed route service with 30 minute frequency is based on Long Range Transportation Plan.

2 Source of vehicle cost is 2011 Transportation Improvement Program.

3 Operating cost for express bus service is based on the operation of a fixed route service, but at a higher frequency.

4 Bus Rapid Transit costs are based on the 2009 Long Range Transit Plan study conducted by the Town of Chapel Hill. They include the cost of roadway improvements.

5 Flex Route costs are based on the normal operations of a fixed route service. Flex service is essentially the same type of service, only different in the method of delivery.

6 Operating cost estimates for the light rail project cannot be provided. The project has a more complete analysis and cost estimated being conducted by Triangle Transit. The current cost for this project is limited to an estimate of preliminary engineering and design.

PEDESTRIAN AND BICYCLE				
Description	**Location**	**Jurisdiction**	**Phase**	**Cost[1]**
Install crosswalks and pedestrian signals at signalized intersections with pedestrian refuge islands and street lighting for crossing NC 54.[2]	Burning Tree Dr/ Finley Golf Course Rd & NC 54	Chapel Hill	Short Term (2012-2020)	$80,000
	W Barbee Chapel Rd & NC 54	Chapel Hill	Short Term (2012-2020)	
	Meadowmont Ln/ Friday Center Dr & NC 54	Chapel Hill	Short Term (2012-2020)	
	E Barbee Chapel Rd & NC 54	Chapel Hill	Short Term (2012-2020)	
	Huntingridge Rd & NC 54	Durham	Short Term (2012-2020)	
	Farrington Road (northern, southern and eastern approaches) & NC 54	Durham	Short Term (2012-2020)	
	Leigh Farm Rd/ Quadrangle Dr & NC 54	Durham	Short Term (2012-2020)	
Install crosswalks with pedestrian-activated flashers and expand refuge islands.	US 15-501 on/off ramps	Chapel Hill	Short Term (2012-2020)	$40,000
Extend the solid marking designating the westbound exclusive right turn lane for US 15-501 on–ramps to minimize weaving movements at interchange and increase safety for on-road bicyclists.	From SB US 15-501 on ramp to 500 feet to the east	Chapel Hill	Short Term (2012-2020)	$2,700,000
Provide a minimum 5-foot wide on-road bicycle lane by restriping travel lanes to be 11 feet wide and making minor median modifications.	NC 54 from Burning Tree Dr/ Finley Golf Course Rd to the west	Chapel Hill	Short Term (2012-2020)	
Modify sloped abutment wall to provide 8-foot wide sidewalk behind overpass structural piers.	NC 54 underneath US 15-501 overpass	Chapel Hill	Short Term (2012-2020)	
Pave road shoulders to accommodate bicyclists on select roads to provide connections to the American Tobacco Trail.	From NC 54 to the American Tobacco Trail via Barbee Chapel Rd, Farrington Rd, Stagecoach Rd, NC 751, and Massey Chapel Rd	Durham	Short Term (2012-2020)	$4,000,000

PEDESTRIAN AND BICYCLE				
Description	**Location**	**Jurisdiction**	**Phase**	**Cost[1]**
Ensure adequate facilities for pedestrians and cyclists are available. Provide a 5-foot wide bicycle lane where possible, or provide "share the road" signage and a paved shoulder or sharrow markings for on-road bicycle travel. Many of the collector streets are designed with for low vehicular speeds with the intent for bicycles to share the travel lane. Fill in sidewalk gaps. [3]	Farrington Road through the study area (Old Chapel Hill Rd to Stagecoach Rd)	Durham	Short Term (2012-2020)	Variable cost. Paving five-foot wide bike lanes on both sides of the roadway would cost approximately $1,200,000 per lane assuming medium duty pavement. Striping a bike lane without paving would cost approximately $5,000 per mile. Installing signage would cost about $1,500 per sign. Installing sidewalks would cost about $265,000 per mile.
	Ephesus Church Rd from Farrington Rd to E Franklin St	Durham & Chapel Hill	Short Term (2012-2020)	
	George King Rd & Crossland Dr (proposed collector street) from Ephesus Church Rd to NC 54	Durham	Short Term (2012-2020)	
	SW Durham Dr from Ephesus Church Rd to NC 54	Durham & Chapel Hill	Short Term (2012-2020)	
	Lancaster Dr and E/W collector street from Farrington Rd to Pinehurst Dr	Durham & Chapel Hill	Short Term (2012-2020)	
	Pinehurst Dr from Ephesus Church Rd to Burning Tree Dr	Chapel Hill	Short Term (2012-2020)	
	Burning Tree Dr from Pinehurst Dr to NC 54	Chapel Hill	Short Term (2012-2020)	
	Hamilton Rd from NC 54 to Cleland Dr	Chapel Hill	Short Term (2012-2020)	
	Cleland Dr from Burning Tree Dr to US 15-501	Chapel Hill	Short Term (2012-2020)	
Construct Little Creek Trail to connect Meadowmont Trail to Lancaster Drive.	Meadowmont Trail at Rashkis Elementary School	Chapel Hill	Short Term (2012-2020)	TBD
Widen the existing bicycle path to a 15-foot wide shared use path.	Along the east side of US 15-501 from Cleland Rd to S Estes Dr	Chapel Hill	Short Term (2012-2020)	TBD
Construct the Bolin Creek Greenway connection to Pinehurst Dr.	Bolin Creek Greenway	Chapel Hill	Short Term (2012-2020)	TBD

PEDESTRIAN AND BICYCLE				
Description	**Location**	**Jurisdiction**	**Phase**	**Cost[1]**
Construct an off-road shared-use path, with a boardwalk bridge as an alternative solution in environmentally sensitive areas. Path should have minimum 10-foot width; ideally 15 feet if possible.	Along NC 54 from E Barbee Chapel Rd to I-40 overpass	Durham & Chapel Hill	Mid-Term (2020-2025)	The cost for these improvements is included in the roadway projects list under the item "Widen NC 54 to six lanes in the Durham section. Construct the multi-use path concurrent with the road project."
	Along the NC 54 frontage to connect to the existing multi-use path at Burning Tree Dr	Chapel Hill	Mid-Term (2020-2025)	
Construct pedestrian facilities with ramps at Falconbridge Rd and Farrington Rd bridges over NC 54	Falconbridge Rd & Farrington Rd	Durham	Mid-Term (2020-2025)	
Construct sidewalk on south side of NC 54 to connect to I-40 overpass.	South side of NC 54 from Huntingridge Rd east to I-40 overpass	Durham	Mid-Term (2020-2025)	
Construct a 10-foot wide shared use path on south side of overpass.	NC 54 bridge over I-40	Durham	Mid-Term (2020-2025)	
Implement crosswalks and landscaped median refuges at superstreet intersections.	Huntingridge Rd & NC 54	Chapel Hill	Mid-Term (2020-2025)	The cost for these improvements is included in the roadway projects list under the item "Construct EB NC 54 to EB I-40 flyover from Farrington Road to I-40 EB on-ramp."
	Meadowmont Ln/ Friday Center Dr & NC 54	Durham	Mid-Term (2020-2025)	
Design and construct light rail bridge over NC 54 to serve as an elevated pedestrian crossing.	Across NC 54 connecting Meadowmont and Friday Center	Chapel Hill	Long Term (2025-2035)	TBD
Construct Southwest Rail Trail along light rail alignment during light rail construction.	Along future light rail corridor	Durham & Chapel Hill	Long Term (2025-2035)	TBD
Construct US 15-501 underpass to connect Bolin Creek Greenway.	S Estes Dr & US 15-501	Chapel Hill	Long Term (2025-2035)	TBD
Continue to make regional connections with greenways	where possible	Durham & Chapel Hill	Long Term (2025-2035)	variable cost

1 Cost estimates do not include right-of-way, utilities or escalation.

2 Crosswalks, refuge islands, pedestrian signals and street lighting can be installed with developer mitigation funds. They may also be implemented concurrently with road maintenance projects such as resurfacing, or as part of more substantial road improvements (i.e., construction of the superstreet intersections)

3 Although it may not be feasible to provide bike lanes or paved shoulders and construct sidewalks on all of these roads within the next five years, these recommendations should remain a priority and should be constructed as soon as funds are available.

ROADWAY				
Description	**Location**	**Jurisdiction**	**Phase**	**Cost[1]**
Construct Farrington Rd slip ramp for northbound traffic on Farrington Rd to access eastbound I-40 directly. Modify on-ramp to allow for transition.	Farrington Rd	Durham	Short Term (2012-2020)	$3,400,000
Construct collector street system including turn lanes on NC 54.	As specified in the adopted Southwest Durham – Southeast Chapel Hill Collector Street Plan	Durham	Short Term (2012-2020)	$31,400,000
Construct access road behind the Farrington Road shopping center for connection between Farrington Rd and Falconbridge Rd.	Between Farrington Rd and Falconbridge Rd	Durham	Short Term (2012-2020)	$400,000
Obtain Marriot Way, then upgrade to NCDOT standards and extend to Barbee Chapel Rd.	Between Friday Center Dr and E Barbee Chapel Rd	Chapel Hill	Short Term (2012-2020)	$800,000
Construct other connections as opportunities arise through development proposals.	Through study area	Durham & Chapel Hill	Short to Long Term	Variable cost
Close Glenwood Square shopping center driveways along NC 54 and provide access via Hamilton Rd	Glenwood Square Shopping Center at US 15-501 interchange	Chapel Hill	Short Term (2012-2020)	$100,000[3]
Construct dual exit lanes for I-40 WB to NC 54 WB loop ramp plus two thru lanes on NC 54 WB. Widen bridge for four EB lanes, three WB lanes, and 10-foot sidewalk on south side.	I-40 Interchange with NC 54	Durham	Mid-Term (2020-2025)	$6,100,000[4]
Add new partial cloverleaf ramp for I-40 EB to NC 54 EB, remove existing signal and install yield sign at the I-40 EB to NC 54 WB ramp. Reconfigure EB approach at I-40 EB on-ramps for two free-flow lanes to EB I-40.	I-40 Interchange with NC 54	Durham	Mid-Term (2020-2025)	$2,100,000
Widen NC 54 to six lanes east of Barbee Chapel Rd to match six lane section to the west. Construct the multiuse path concurrent with the road project.	Barbee Chapel Rd to I-40 Interchange	Durham	Mid-Term (2020-2025)	$22,700,000
Implement superstreet configuration at Crossland Drive.	Future western collector street[5] & NC 54	Durham	Mid-Term (2020-2025)	$3,900,000
Convert Farrington Rd intersection to an overpass over NC 54 with pedestrian facilities.	Farrington Rd at NC 54	Durham	Mid-Term (2020-2025)	$6,500,000
Convert Falconbridge Rd intersection to a grade separated interchange with pedestrian facilities.	Falconbridge Rd at NC 54	Durham	Mid-Term (2020-2025)	$9,800,000

ROADWAY				
Description	**Location**	**Jurisdiction**	**Phase**	**Cost[1]**
Implement superstreet configuration at Meadowmont Ln/ Friday Center Dr.	Meadowmont Ln/ Friday Center Dr & NC 54	Chapel Hill	Mid-Term (2020-2025)	$4,300,000
Construct Barbee Chapel RdgGrade separation.	Barbee Chapel Rd & NC 54	Chapel Hill	Mid-Term (2020-2025)	$9,200,000
Construct partial cloverleaf redesign of US 15-501 interchange.	US 15-501& NC 54 interchange	Chapel Hill	Long Term (2025-2035)	$17,300,000
Implement superstreet configurations at W Barbee Chapel Rd and Burning Tree Dr/ Finley Golf Course Rd.	NC 54 intersections with W Barbee Chapel Rd and Burning Tree Dr/ Finley Golf Course Rd	Chapel Hill	Long Term (2025-2035)	$4,900,000

1 Cost estimates do not include right-of-way, utilities or escalation.

2 Cost estimates include fourth travel lane on eastbound I-40 to bridge across creek prior to NC 751 interchange. Recommended to extend travel lane to NC 751 interchange.

3 Cost estimates do not include right-of-way damages.

4 Cost estimate extends from I-40 ramps to Leigh Farm Rd/Quadrangle Dr.

5 Crossland Drive refers to the future western collector street. Throughout the study process, public citizens raised concerns over the Crossland Drive alignment and proposed George King as a future collector street. The superstreet configuration is recommended for whichever road alignment becomes the collector street.

RENAISSANCE PLANNING GROUP

Baker

ICF INTERNATIONAL

Executive Summary Addendum

Addendum #1

Figure ES-1 revised to label light rail alignments as C-1 and C-2. See revised figure on following page.

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Addendum #2

Page 5-5, insert the following paragraph after the first paragraph:

Mixed-use centers that include higher intensity and density of uses than is typically seen in a suburban pattern can help mitigate automobile travel by enhancing opportunities for walking, biking, and transit. However, any new development that incorporates large amounts of impervious surface and automobile traffic can also have negative impacts on the Little Creek Significant Natural Heritage Area (SNHA) and the wildlife supported by this natural area. To mitigate the environmental impacts of new development, every effort should be made to provide a buffer between the newly developed area and the SNHA, including the preservation of large, continuous areas of open space and the preservation of wetlands, floodplains, and riparian corridors.

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Addendum #3

Page E-6, fourth paragraph, the following provided for clarification:

At the February 8, 2012 meeting, the DCHC Transportation Advisory Committee (TAC) voted to approve the Locally Preferred Alternative (LPA) for the Durham-Orange Transit Corridor indicating that both C-1 and C-2 will be carried forward for further study, with a preference for option C-2.

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Addendum #4

Table ES-2, Leigh Village Future Light Rail Station, the following updated information is provided:

Recent analysis by Triangle Transit during the light rail alternatives analysis has suggested a need for over 1000 parking spaces at the proposed Leigh Village transit station. The final analysis for the LRT will include details on the sizing requirements for all LRT park-and-ride facilities.

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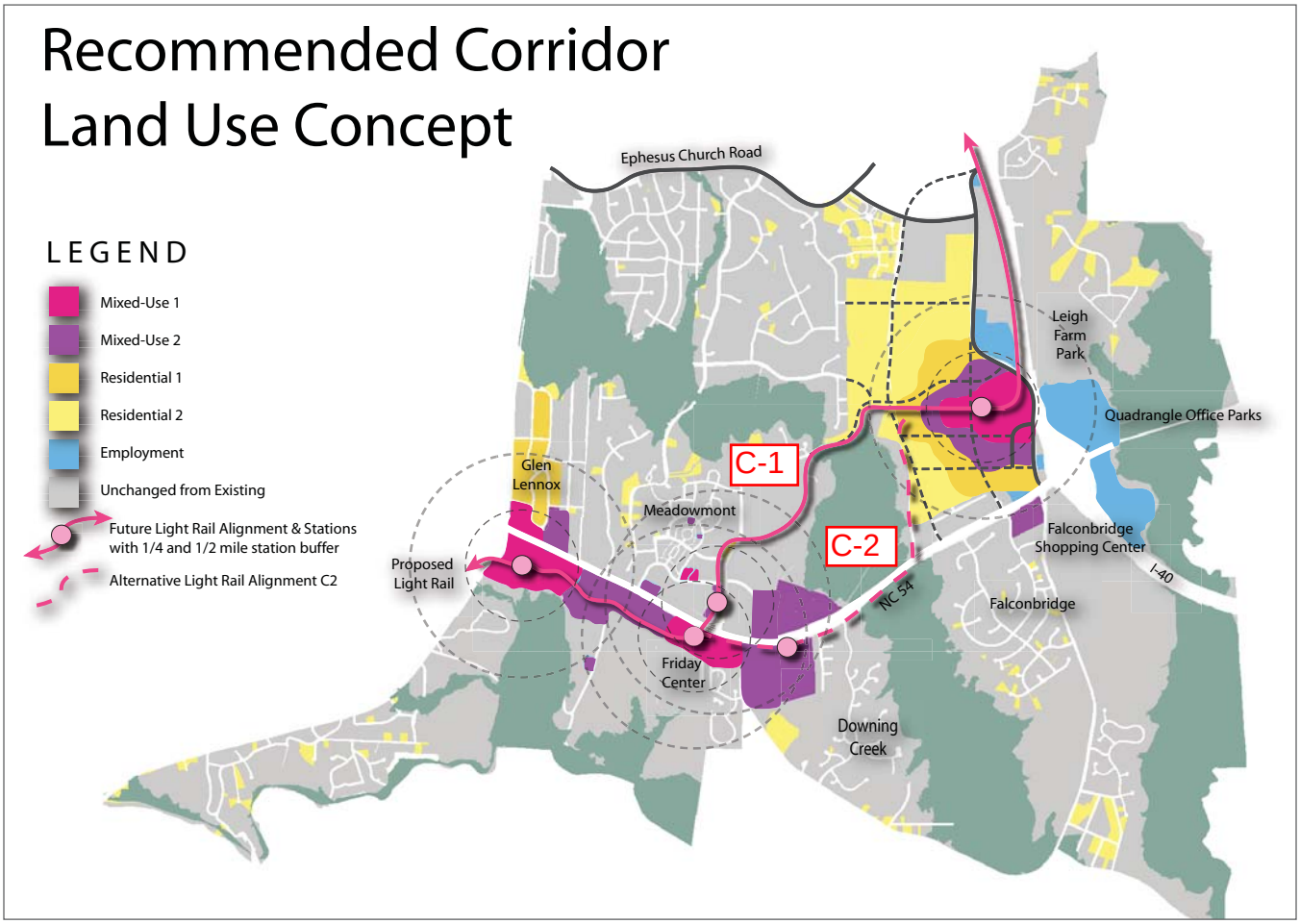

Figure ES-1: Recommended Corridor Land Use Concept Revised April 16, 12

Table ES-1: Concept Land Uses

	Mixed Use 1	Mixed Use 2	Residential 1	Residential 2	Employment
No. of Stories	3 - 8	2 - 4	2 - 4	1 - 3	4 - 12
Floor-to-area ratios (non-residential)	1.25 - 2.25	1.0 - 1.5	-	-	0.5 - 1.0
Dwelling Units per Acre	35 - 60	20 - 35	12 - 35	6 - 12	-
Employees per Acre	45 - 90	25 - 50	9 - 15	6 - 12	35 - 175

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NC 54 / I-40 Corridor Study Final Report Addendum

Addendum #1

Figure 1-1 revised to label light rail alignments as C-1 and C-2. See revised figure below.

Addendum #2

Figure 1-2 revised to label light rail alignments as C-1 and C-2. See revised figure below.

Addendum #3

Table 1-1: Recent analysis by Triangle Transit during the light rail alternatives analysis has suggested a need for over 1000 parking spaces at the proposed Leigh Village transit station. The final analysis for the LRT will include details on the sizing requirements for all LRT park-and-ride facilities.

Addendum #4

Figure 2-5 revised to add light rail alignment C-2 and to label alignments as C-1 and C-2. See revised figure below.

Addendum #5

Figure 2-6 revised label light rail alignments as C-1 and C-2. See revised figure below.

Addendum #6

Page 2-11, Station Areas: The discussion of station areas considers the C-1 alignment as proposed in the 2035 Long Range Transportation Plan (LRTP). At the February 8, 2012 meeting, the DCHC Transportation Advisory Committee (TAC) voted to approve the Locally Preferred Alternative (LPA) for the Durham-Orange Transit Corridor indicating that both C-1 and C-2 will be carried forward for further study, with a preference for option C-2. Consideration of the C-2 alignment results in the removal of the Meadowmont Station Area and the addition of a new station area referred to as the Woodmont Station Area. This new station area is not discussed in detail in this report as the decision to include the C-2 alignment was made following the station area analysis for the NC 54 Corridor Study.

Addendum #7

Page 2-12, Meadowmont Station Area: The Meadowmont Station Area does not exist for the C-2 LRT alignment.

Addendum #8

Page 2-16, following the description of land use types: Mixed-use centers that include higher intensity and density of uses than is typically seen in a suburban pattern can help mitigate automobile travel by enhancing opportunities for walking, biking, and transit. However, any new development that incorporates large amounts of impervious surface and automobile traffic can also have negative impacts

on the Little Creek Significant Natural Heritage Area (SNHA) and the wildlife supported by this natural area. To mitigate the environmental impacts of new development, every effort should be made to provide a buffer between the newly developed area and the SNHA, including the preservation of large, continuous areas of open space and the preservation of wetlands, floodplains, and riparian corridors.

Addendum #9

Figure 2-8 revised to label light rail alignments as C-1 and C-2. See revised figure below.

Addendum #10

Figure 2-11 does not include the C-2 alignment because Scenario 1 reflects the LRTP Policy Scenario and the C-2 alignment, at the time, was not a part of the officially adopted LRTP.

Addendum #11

Figure 2-12 does not include the C-2 alignment because Scenario 2 reflects the light rail alignment as recommended in the officially adopted LRTP. At the time of this analysis, the C-2 alignment was not under consideration.

Addendum #12

Page 2-25, clarification provided on recommended Leigh Village park-and-ride spaces: Recent analysis by Triangle Transit during the light rail alternatives analysis has suggested a need for over 1000 parking spaces at the proposed Leigh Village transit station. The final analysis for the LRT will include details on the sizing requirements for all LRT park-and-ride facilities.

Addendum #13

Figure 3-1 revised to add light rail alignment C-2 and to label alignments as C-1 and C-2. See revised figure below.

Addendum #14

Figure 3-2 revised to add light rail alignment C-2 and to label alignments as C-1 and C-2. See revised figure below.

Addendum #15

Page 3-13, insert as first paragraph under Recommendations: The discussion of park-and-ride facilities considers the C-1 alignment as proposed in the 2035 Long Range Transportation Plan (LRTP). At the February 8, 2012 meeting, the DCHC Transportation Advisory Committee (TAC) voted to approve the Locally Preferred Alternative (LPA) for the Durham-Orange Transit Corridor indicating that both C-1 and C-2 will be carried forward for further study, with a preference for option C-2. Consideration of the C-2 alignment may result in an additional park-and-ride facility at the proposed C-2 Woodmont Station Area.

Addendum #16

Figure 3-5 revised to add light rail alignment C-2 and to label alignments as C-1 and C-2. See revised figure below.

Addendum #17

Table 3-1: Recent analysis by Triangle Transit during the light rail alternatives analysis has suggested a need for over 1000 parking spaces at the proposed Leigh Village transit station. The final analysis for the LRT will include details on the sizing requirements for all LRT park-and-ride facilities.

Addendum #18

Figure 4-2 revised to add light rail alignment C-2 and to label alignments as C-1 and C-2. See revised figure below.

Addendum #19

Page 4-11, insert following existing text: The potential construction of the C-2 alignment and the potential development of the Lloyd property on the north side of NC 54 would likely generate high pedestrian demand across NC 54. This would be located just slightly east of the future elevated crossing that would be constructed at Barbee Chapel Road. While cross at Barbee Chapel Road would still provide access to the Woodmont light rail station within a half-mile walk of the Lloyd property, a more substantial direct pedestrian crossing may be needed.

Addendum #20

Page 4-11, insert following existing text: During the alternatives analysis for the light rail project, the C-1 alignment was identified as having a greater potential for impacts to the Little Creek Significant Natural Heritage Area (SNHA) and to property under the stewardship of the U.S. Army Corps of Engineers, as compared to the proposed C-2 alignment. At the February 8, 2012 meeting, the DCHC Transportation Advisory Committee (TAC) voted to approve the Locally Preferred Alternative (LPA) for the Durham-Orange Transit Corridor indicating that both C-1 and C-2 will be carried forward for further study, with a preference for option C-2. During the next phase of analysis for the light rail, Triangle Transit will conduct a detailed environmental analysis to better identify impacts to the natural areas and to inform the final decision on the LRT alignment.

Addendum #21

Figure 4-4 revised to add light rail alignment C-2 and to label alignments as C-1 and C-2. See revised figure below.

Addendum #22

Figure 5-5 revised to add light rail alignment C-2 and to label alignments as C-1 and C-2. See revised figure below.

Addendum #23

Page 5-21, insert section: Other Improvements - The implementation of R4-11 signing (BICYCLES MAY USE FULL LANE) should be considered where warranted.

Addendum #24

Page 5-26, clarification for section Elevated Pedestrian Bridge at Light Rail Crossing: The section discussing the elevated pedestrian bridge crossing at the light rail crossing pertains to the C-1 alignment. The potential construction of the C-2 alignment and the potential development of the Lloyd property on the north side of NC 54 would likely generate high pedestrian demand across NC 54. This would be located just slightly east of the future elevated crossing that would be constructed at Barbee Chapel Road. While cross at Barbee Chapel Road would still provide access to the Woodmont light rail station within a half-mile walk of the Lloyd property, a more substantial direct pedestrian crossing may be needed.

In addition to this location, pedestrian and bicycle facilities should also be considered at all grade separated crossing within the corridor.

Addendum #25

Page 6-5, clarification provided for Park-and-Ride Locations: Recent analysis by Triangle Transit during the light rail alternatives analysis has suggested a need for over 1000 parking spaces at the proposed Leigh Village transit station. The final analysis for the LRT will include details on the sizing requirements for all LRT park-and-ride facilities.

Addendum #26

Page 6-9, insert text at the end of section Widen NC 54 to Six Lanes: The widening of NC 54 to six lanes will affect adjacent natural areas and neighborhoods. During project planning, design, and construction action should be taken to minimize these impacts including widening into the existing median where possible and providing opaque landscaping and buffering for adjacent residential areas.

Addendum #27

Page 6-17, insert at the end of the second paragraph where landscaping is discussed: The details for the landscaping plan will be determined during project planning, design, and construction and should include the provision of an opaque buffer or adjacent residential areas.

Addendum #28

Page 6-29, insert new section: Superstreet Way Finding - The NC 54 corridor serves local, regional, and statewide travelers, some whom may be unfamiliar with superstreet intersections and how to utilize these intersections to access nearby businesses and activities. To minimize driver confusion and to facilitate navigation, way finding is recommended as a key component of the superstreet implementation.

Addendum #29

Figure 6-22 revised to add light rail alignment C-2 and to label alignments as C-1 and C-2. See revised figure below.

Addendum #30

Page 6-34, insert at end of section Light Rail Alignment Alternatives: At the February 8, 2012 meeting, the DCHC Transportation Advisory Committee (TAC) voted to approve the Locally Preferred Alternative (LPA) for the Durham-Orange Transit Corridor indicating that both C-1 and C-2 will be carried forward for further study, with a preference for option C-2.

Addendum #31

Page 6-37, insert at end of section Southwest Durham Drive: During the public review for the NC 54 Corridor Study, much concern was raised over the proposed Southwest Durham Drive. Key concerns include impacts to environmental resources, impacts to the U.S. Army Corps of Engineers (USACE) property, and impacts to the Meadowmont community, specifically Rashkis elementary school and the Cedars retirement community.

NC 54 runs through a Significant Natural Heritage Area (SNHA) referred to as the Little Creek Bottomlands and Slopes, as well as USACE wetlands. The proposed Southwest Durham Drive also runs adjacent to these important environmental resources. While proposed to be entirely on private lands, this proposed facility does have the potential to fragment wildlife habitats.

Southwest Durham Drive is part of the adopted 2035 Long Range Transportation Plan (LRTP) for Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (DCHC MPO) region. The NC 54 Corridor Study reaffirmed the need for such a connection, but did not include a full systems level analysis for how to address this transportation need given the status of this project as a part of the 2035 LRTP. An update of the LRTP is currently underway. This update will include a more in-depth systems level analysis of options for addressing this particular transportation need and for solving related connectivity and congestion problems. Environmental Resource Agencies will be provided many opportunities to comment on the projects, including highway and rail transit projects, proposed for the updated LRTP.

Addendum #32

Page 6-38, insert below figure: The figure above showing a concept from the 1991 Thoroughfare Plan and the adopted Collector Street Plan shows that while details have changed, there has been a long-term vision for better connectivity for this area.

Addendum #33

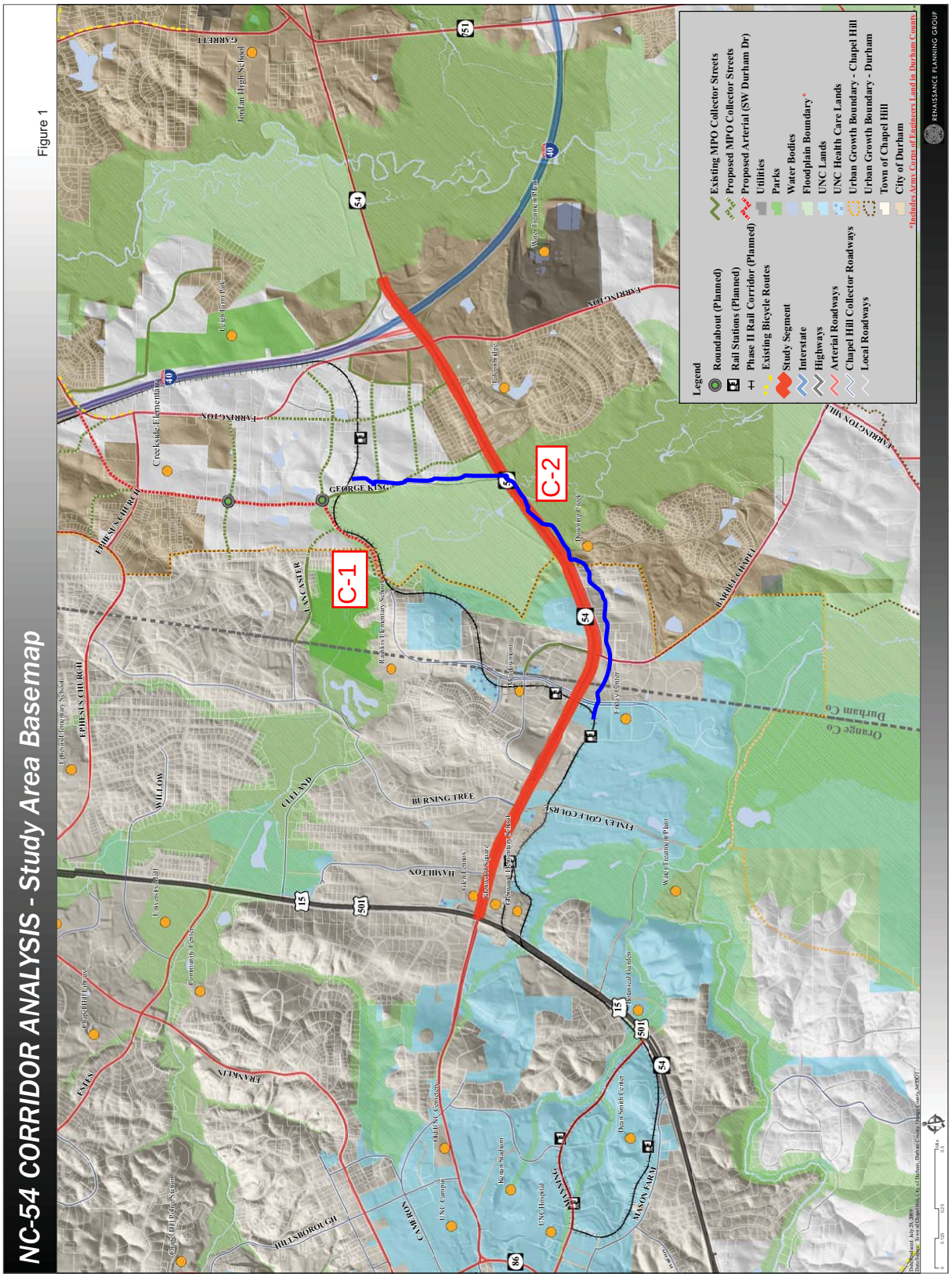
Figure 6-27 revised to add light rail alignment C-2 and to label alignments as C-1 and C-2. See revised figure below.

Addendum #34

Figure 6-28 revised to add light rail alignment C-2 and to label C-1 and C-2. See revised figure below.

Addendum #35

Figure 6-29 revised to add and label light rail alignment C-2. See revised figure below.



12/16/2009

Figure 1-1: Study Area

Revised April 16, 12

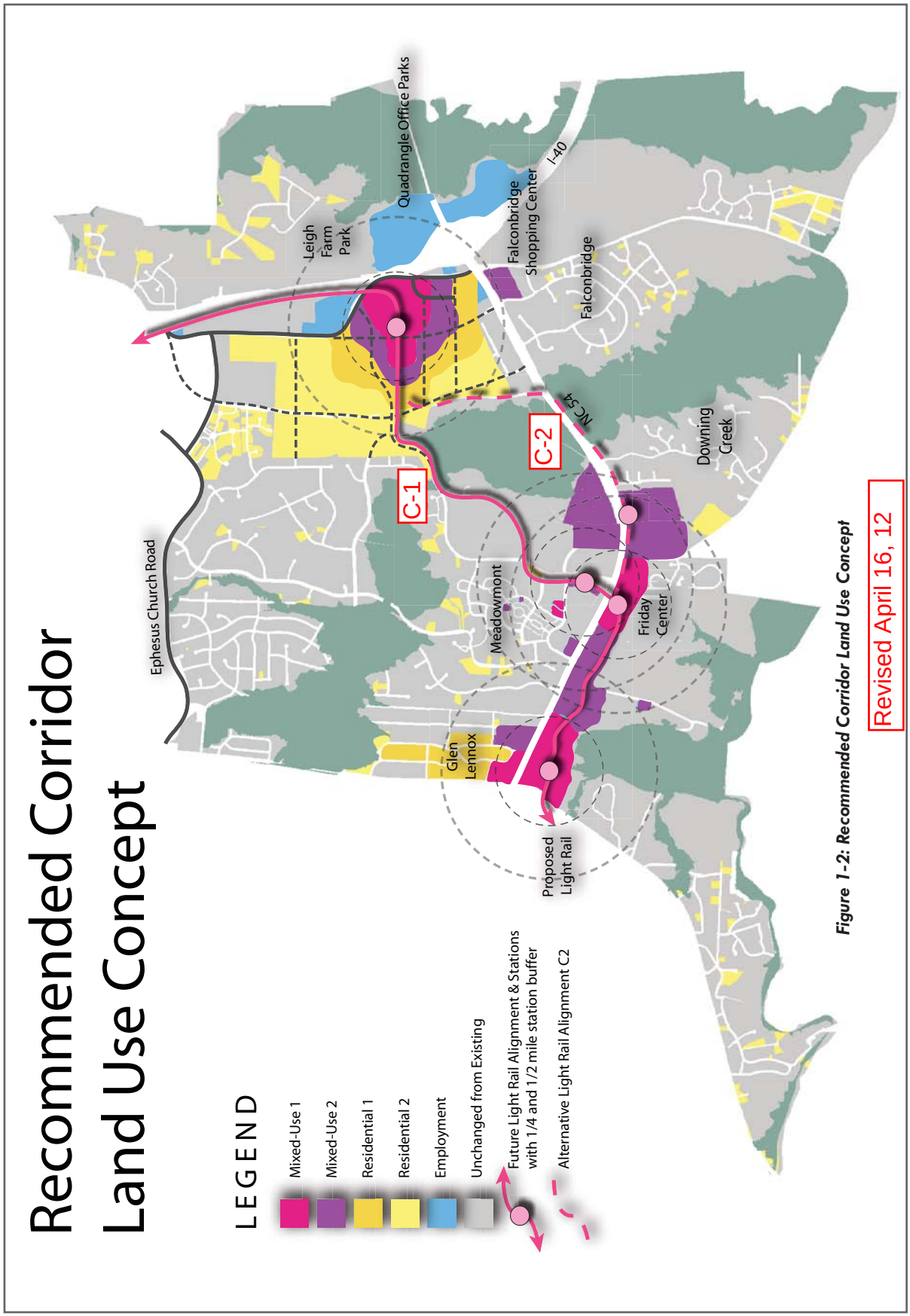


Figure 1-2: Recommended Corridor Land Use Concept

As indicated in the series of charts, the increase in Orange County over the LRTP projection is primarily due to anticipated redevelopment of the Friday Center park-and-ride facility, as well as the likely build-out of the Woodmont and Lloyd properties, which are located east of the Friday Center on the south and north sides of the roadway, respectively. **Figure 2-5** indicates the locations of these potential development sites. Each of these locations is within a ¼ to ½ mile of a planned transit station, and the LRT alignment could be adjusted slightly to more directly serve these potential land uses. Based on the input of the relevant stakeholders and analysis of the capacity for future development, this projection appears to be quite reasonable and appropriate for a corridor that is clearly becoming more urban in character, with the close proximity to significant regional destinations.

The following sections describe the specific changes in the recommended plan.

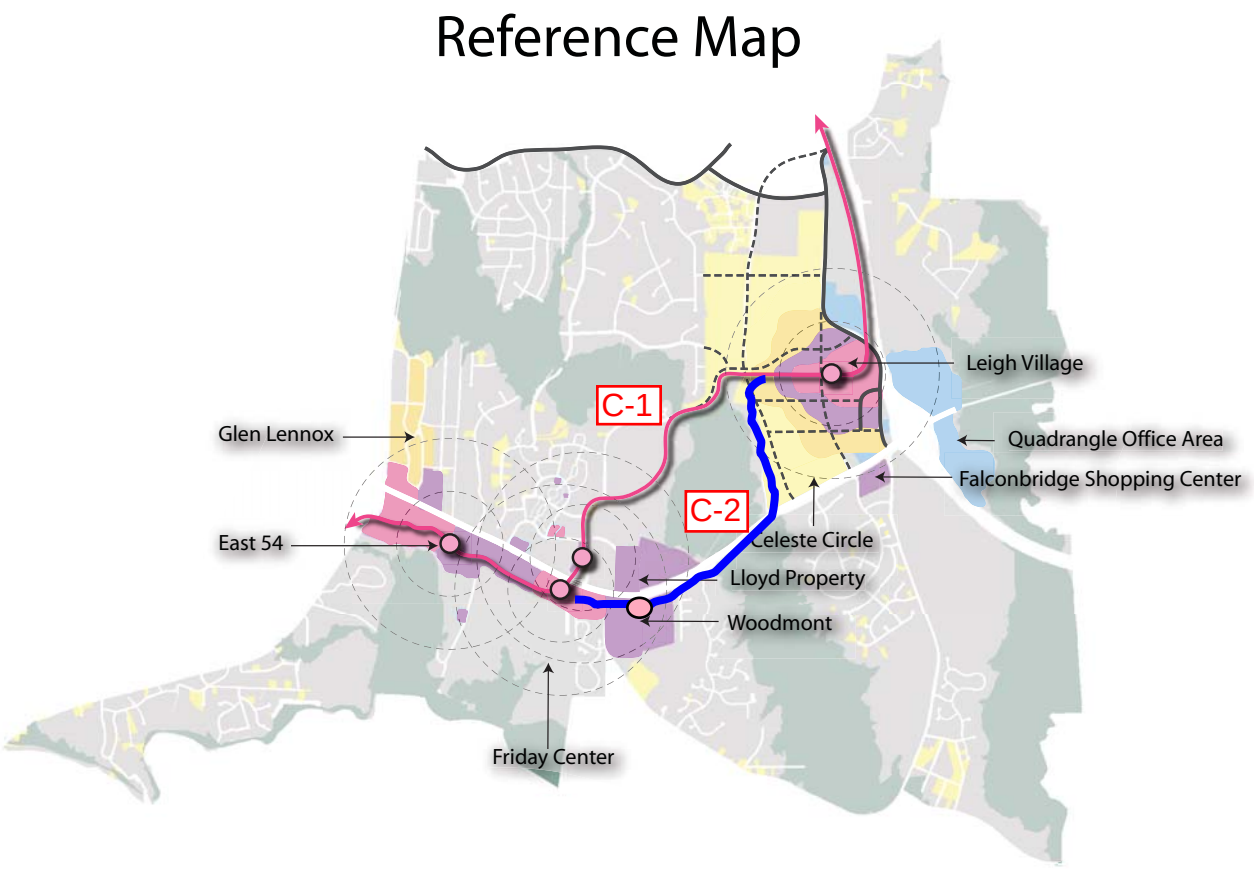


Figure 2-5: Locations of Potential Development Sites
Note: The potential development site labeled as Woodmont has been renamed to Hillmont. Revised Mar 28, 12

Nodal Development

The recommended land use plan for the NC 54/I-40 study area is a nodal development pattern that guides future growth into existing and emerging centers. A nodal development pattern, as opposed to the linear or strip development pattern, creates more opportunities to capture shorter trips by walking, bicycling and transit, and by creating centers of relatively dense and diverse land use types, the nodes provide a focal point for longer trips by transit, as well as the convenient interchange between modes. The nodal pattern primarily follows the planned future light rail station locations, with the understanding that it is likely these exact locations may change during more detailed transit alignment planning to be undertaken by the Triangle Transit through 2011. These locations have been defined at a planning level through the DCHC MPO's Long Range Transportation Plan, and there is a reasonable expectation that these will be the final locations.

The NC 54/I-40 corridor land use blueprint needs to be considered in a regional context of growth expected to occur throughout the Triangle Region. The nodal development plan assumes more growth in the study area than the adopted 2035 Long Range Transportation Plan, particularly in the Orange County portion of the study area, where employment and population projections were very low. For the most part, on the Durham side of the corridor, the growth totals in the recommended plan are consistent with the adopted LRTP. The regional context is an important consideration, because the growth identified in this plan is likely to happen elsewhere in the region if it does not occur within the study corridor, yet the trips will continue to be made by automobile into the study corridor.

According to the relatively modest growth projections in the adopted LRTP, by 2035, the NC 54 corridor will become a severely congested roadway, even with an investment in light rail transit. Widening the road to six lanes is needed, but only makes it easier for long distance trips to navigate through the corridor to their ultimate destination. By creating a nodal, mixed use development plan that provides opportunities for shorter distance trips through walking and bicycling, changes in the NC 54 corridor can contribute to lower levels of VMT and resulting lower energy demands and air pollution.

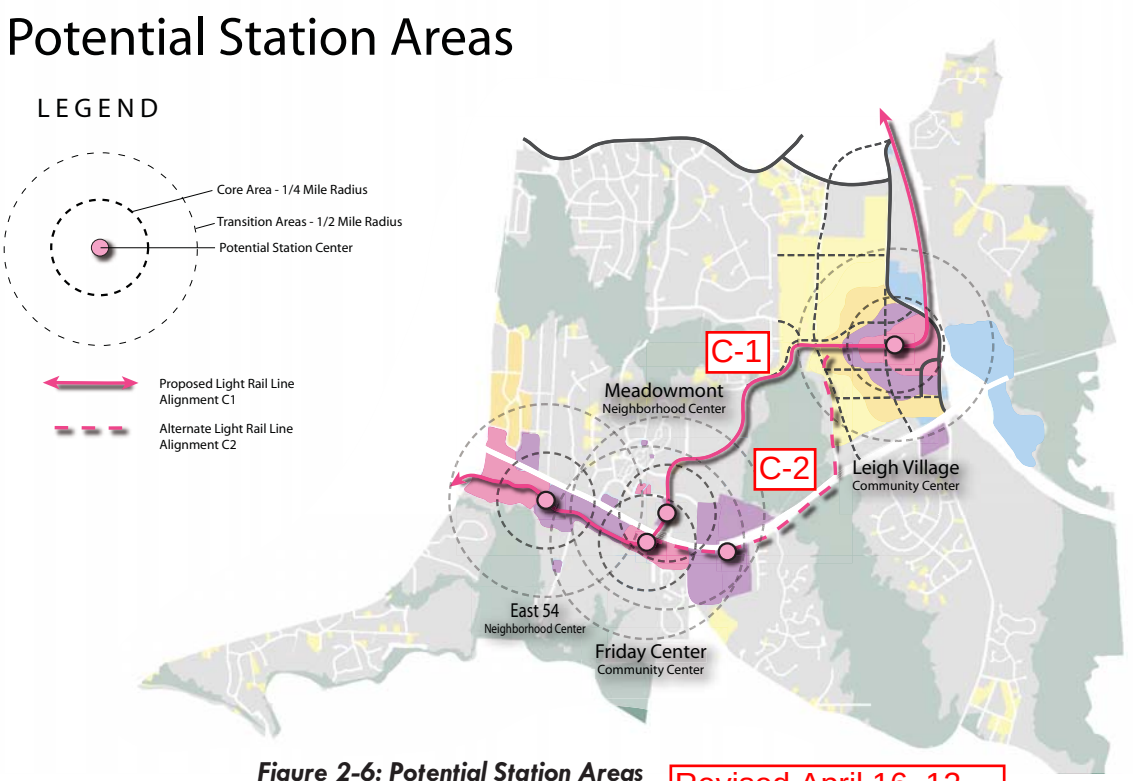


Figure 2-6: Potential Station Areas Revised April 16, 12

Land Use Blueprint

Figure 2-8 presents the recommended corridor land use plan for development potential within the next 25 years. The plan leaves much of the study area as it is today – established residential neighborhoods and supporting retail and office uses – but focuses future growth in the corridor around planned light rail transit station areas. As shown in the figure, areas in various colors represent changes from existing land use, either filling in vacant parcels or redeveloping specific land areas. Individual parcels outside of planned station areas and shown in grey are intended to build out at the current planned development intensity as specified in the future land use designations already adopted by Durham and Chapel Hill. This land use blueprint is intended to guide each of the local governments in modifying their adopted Comprehensive Plans and development regulations to implement the plan.

There are five conceptual land use categories defined for the land use blueprint:

- **Mixed Use 1** – highest density core station area mixed use, with primarily retail and office uses
- **Mixed Use 2** – retail on the ground floor with residential land uses above
- **Residential 1** – mostly multi-family uses with neighborhood supporting uses (e.g., retail, schools, etc.) as appropriate
- **Residential 2** – mostly single-family homes with neighborhood uses as appropriate
- **Employment** – may include office, institutional or health care facilities. This includes some mix of land uses and will be transit oriented to the maximum extent possible. Higher density workforce or student housing may be included in this category.

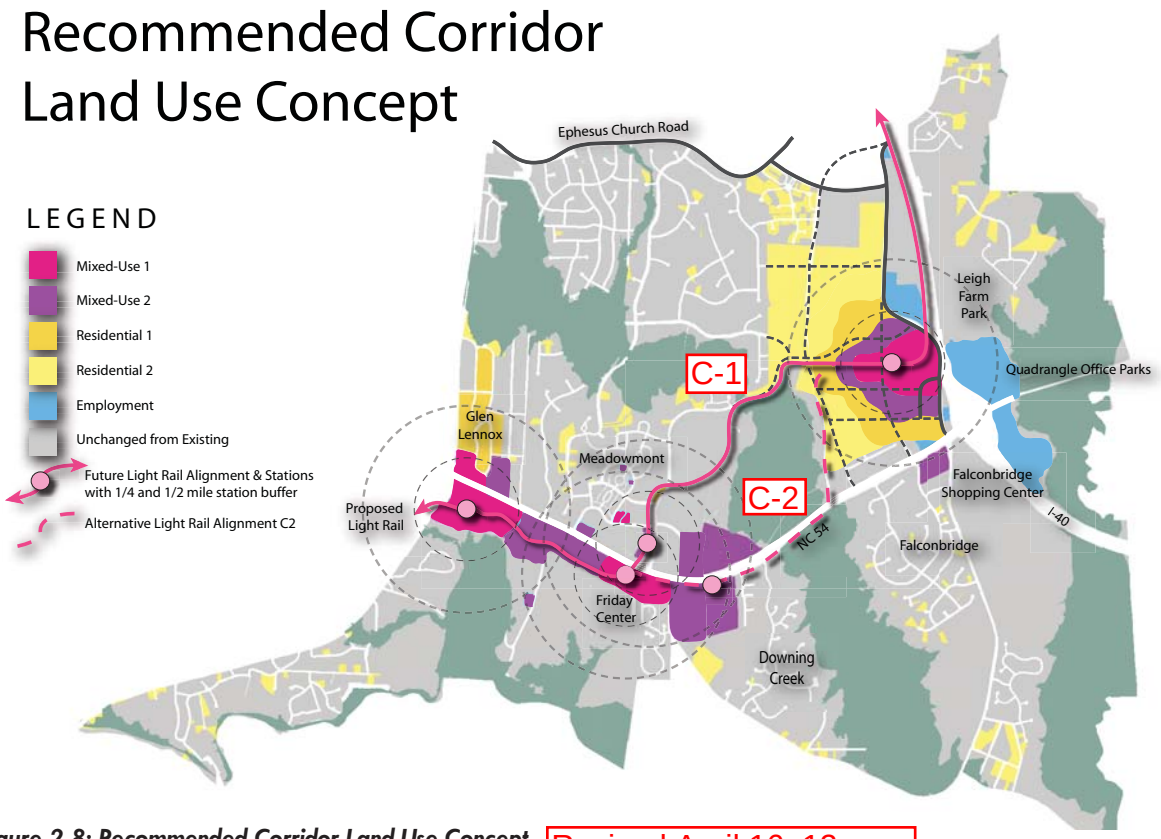


Figure 2-8: Recommended Corridor Land Use Concept Revised April 16, 12

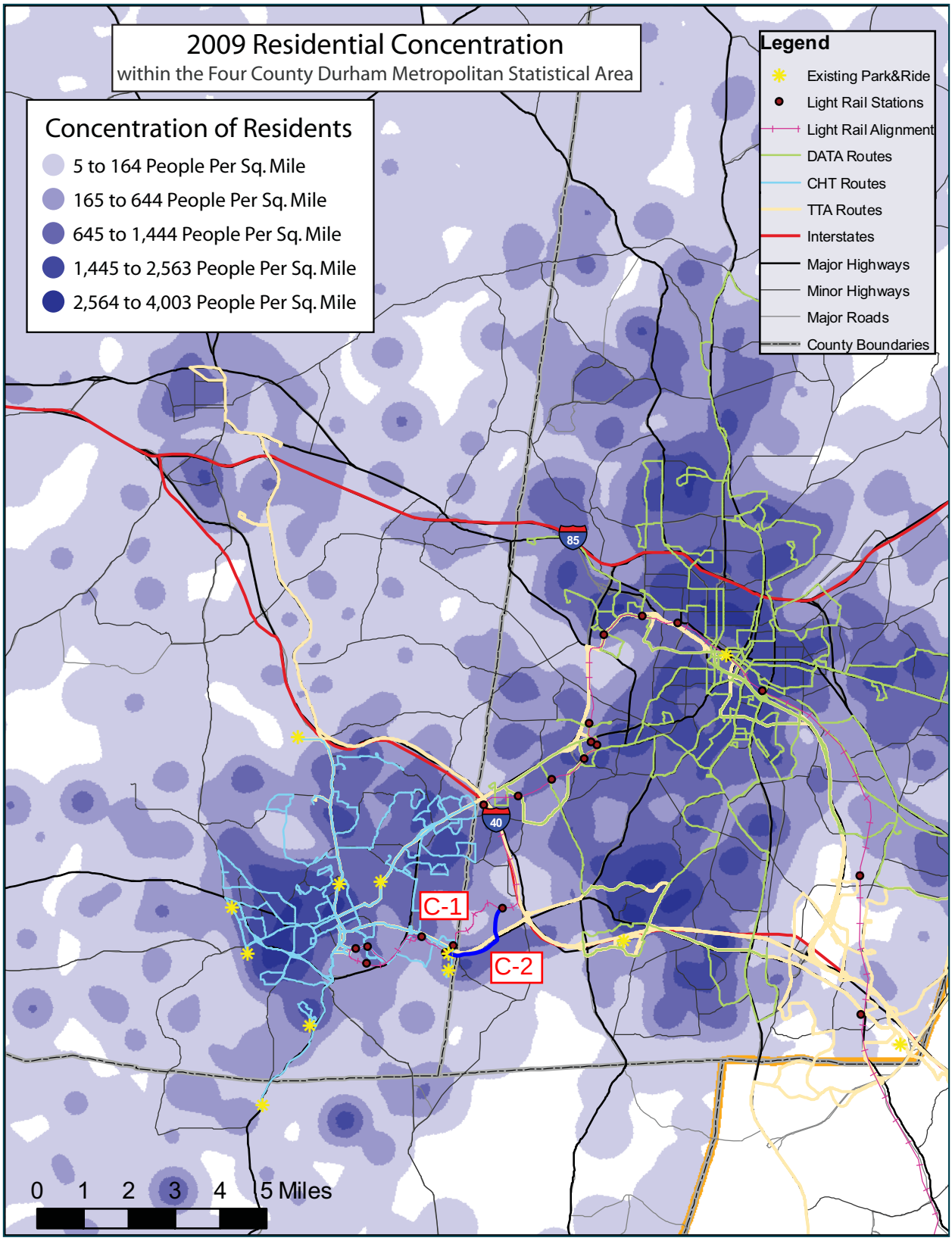


Figure 3-1: Concentration of Residents within Durham County Metropolitan Statistical Area

Revised Mar 28, 12

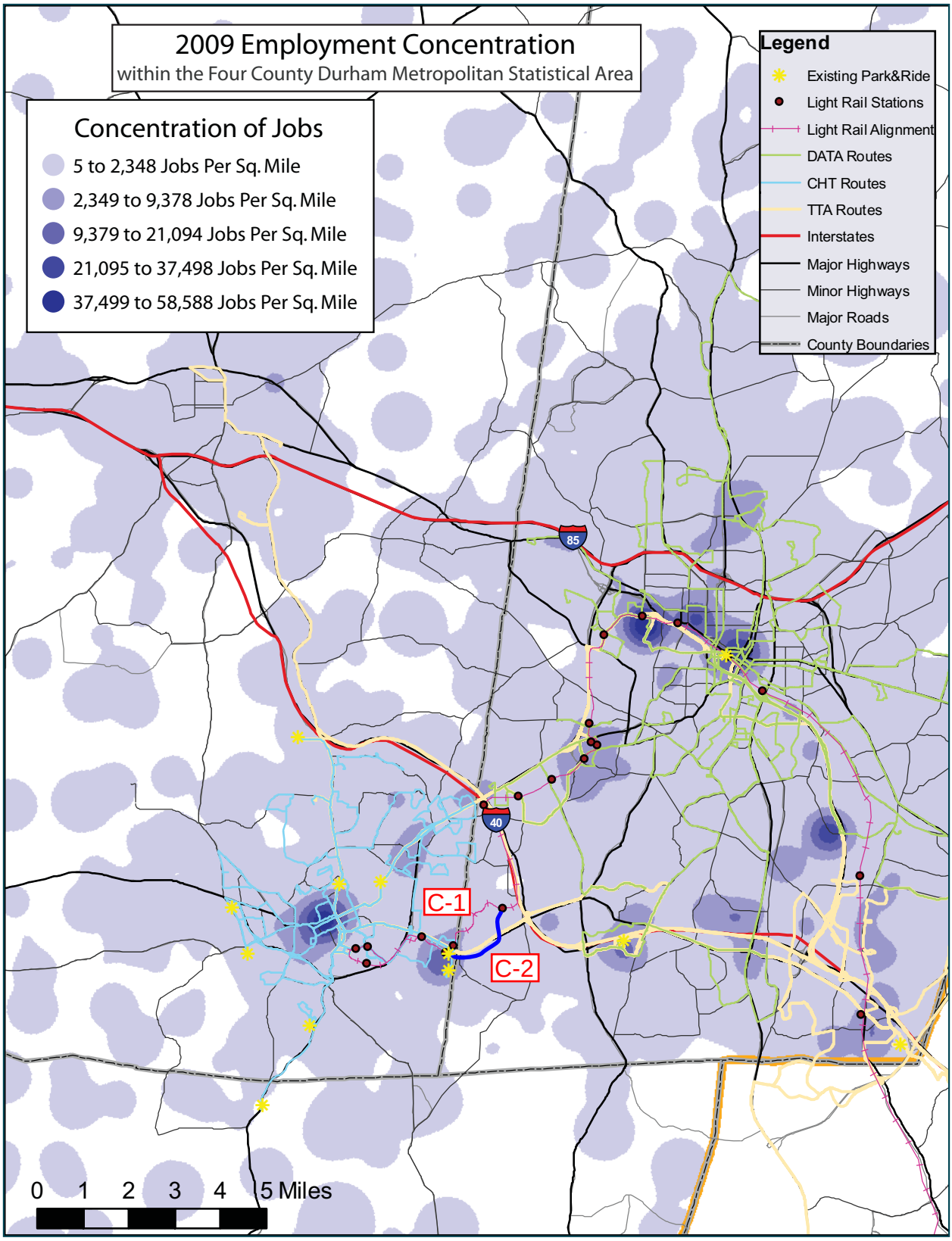


Figure 3-2: Concentration of Employment within Durham County Metropolitan Statistical Area

Revised Mar 28, 12

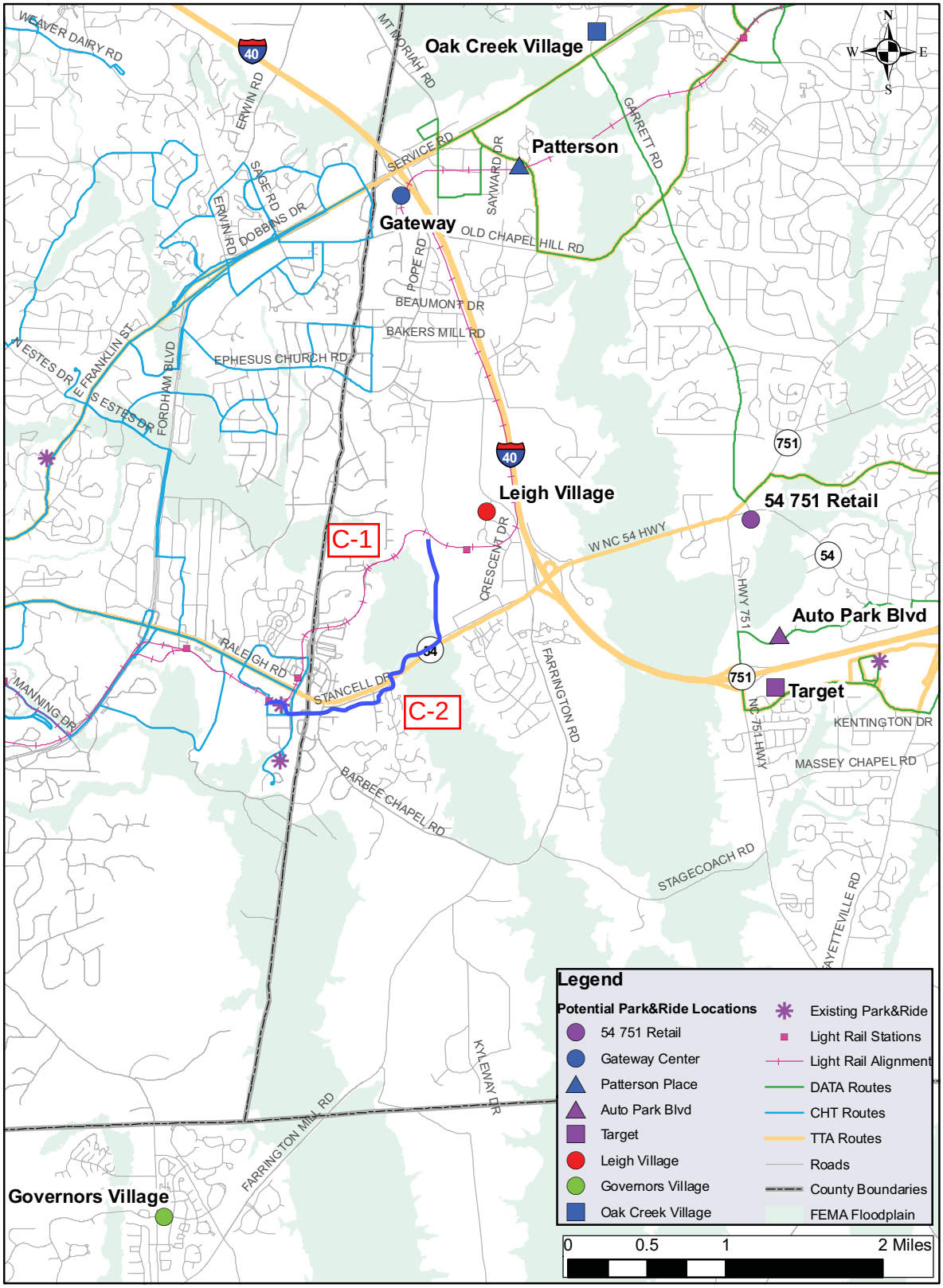
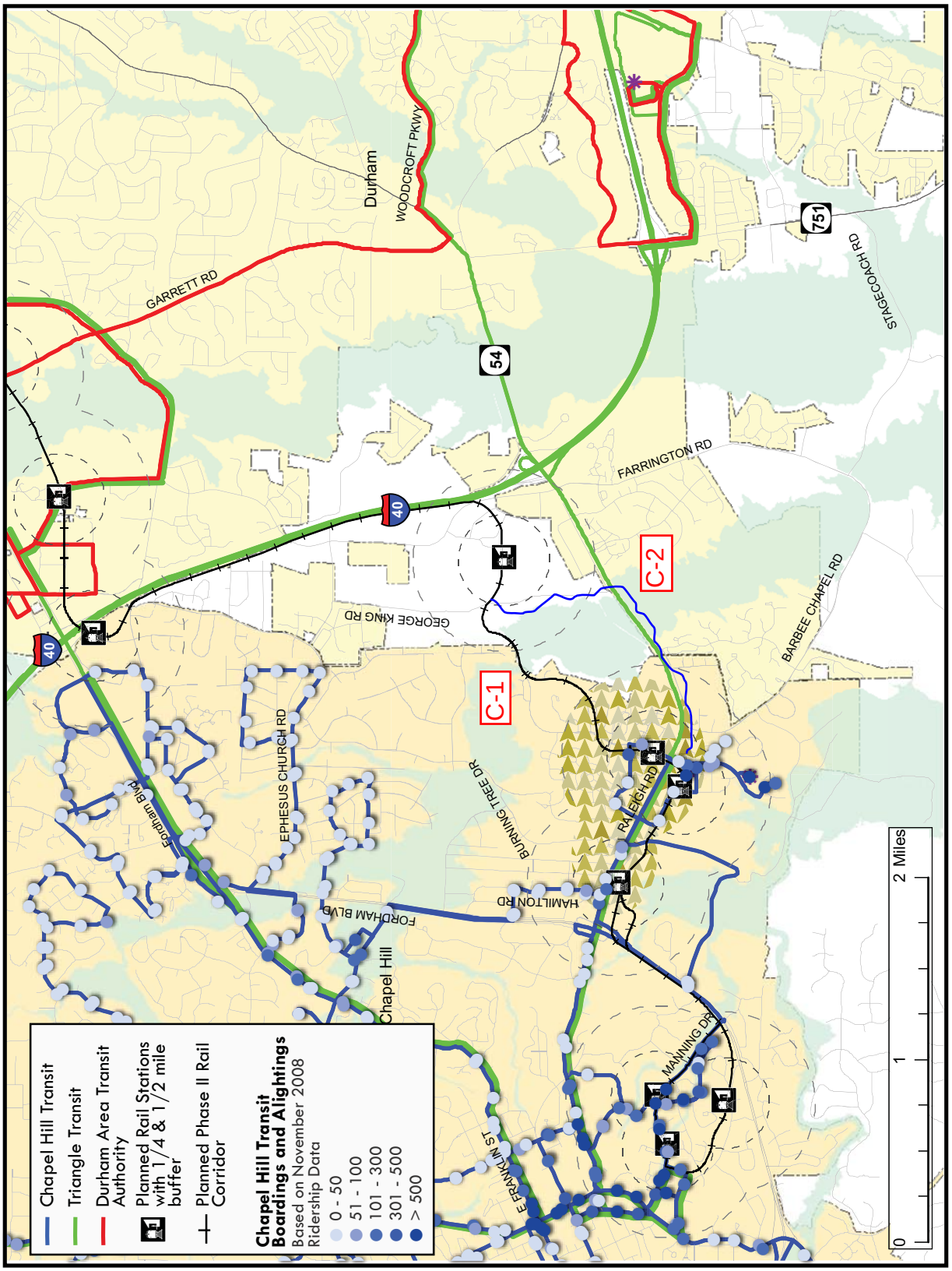


Figure 3-5: Recommended Park-and-Ride Facility Locations Revised Mar 28, 12



Revised Mar 28, 12

Figure 4-2: Chapel Hill Transit Daily Boardings by Bus Stop within the NC 54 Corridor

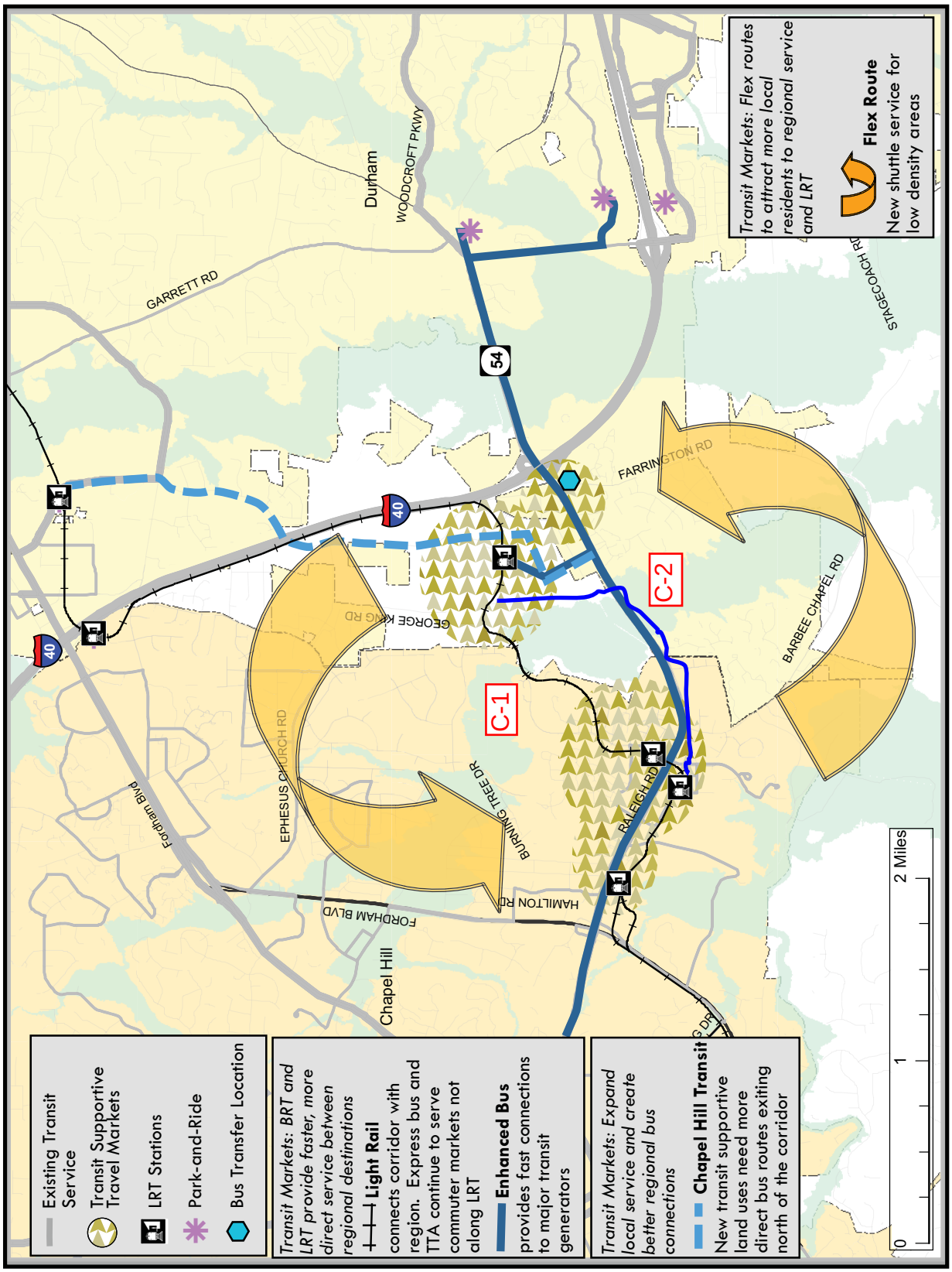
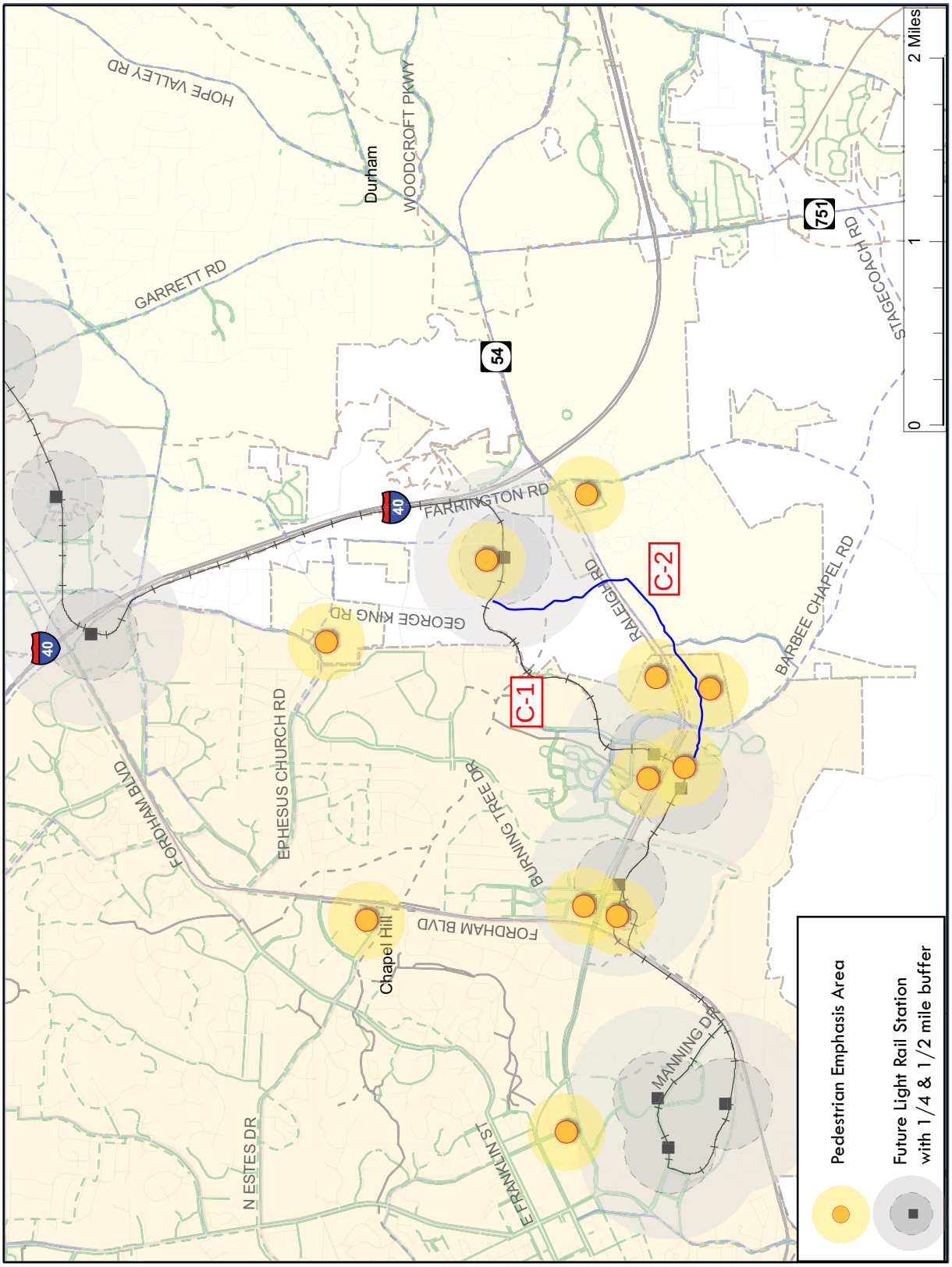


Figure 4-4: Long Term Recommendations

Revised Mar 28, 12



Revised Mar 28, 12

Figure 5-5: Pedestrian Emphasis Areas

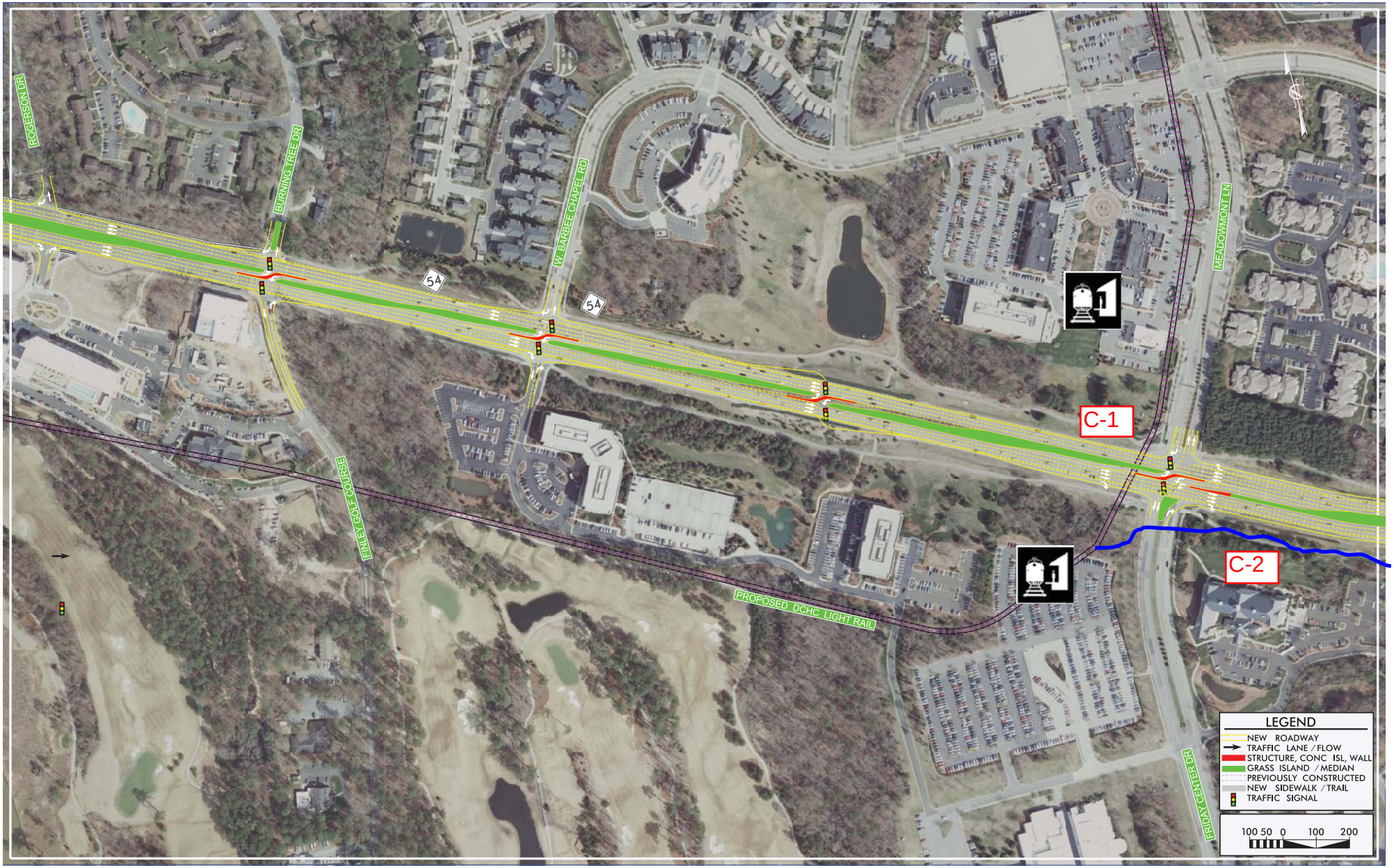


Figure 6-27: Combined NC 54 Roadway Recommendations Sheet 2 - Rogerson Drive to Meadowmont Lane/Friday Center Drive

Revised Mar 28, 12, C-2 location approximate

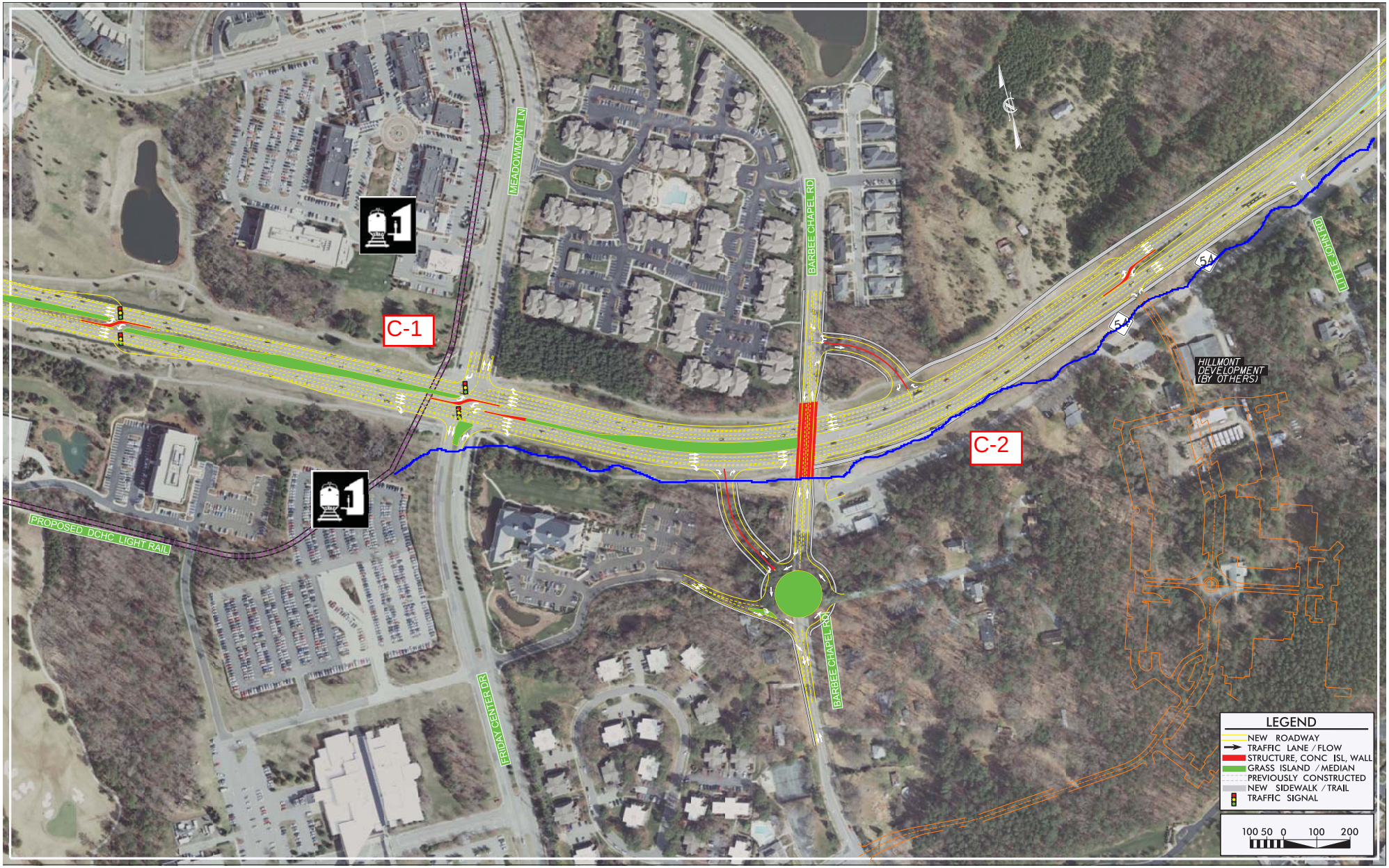


Figure 6-28: Combined NC 54 Roadway Recommendations Sheet 3 - Meadowmont Lane/Friday Center Drive to Little John Road

Revised Mar 28, 12; C-2 location approximate

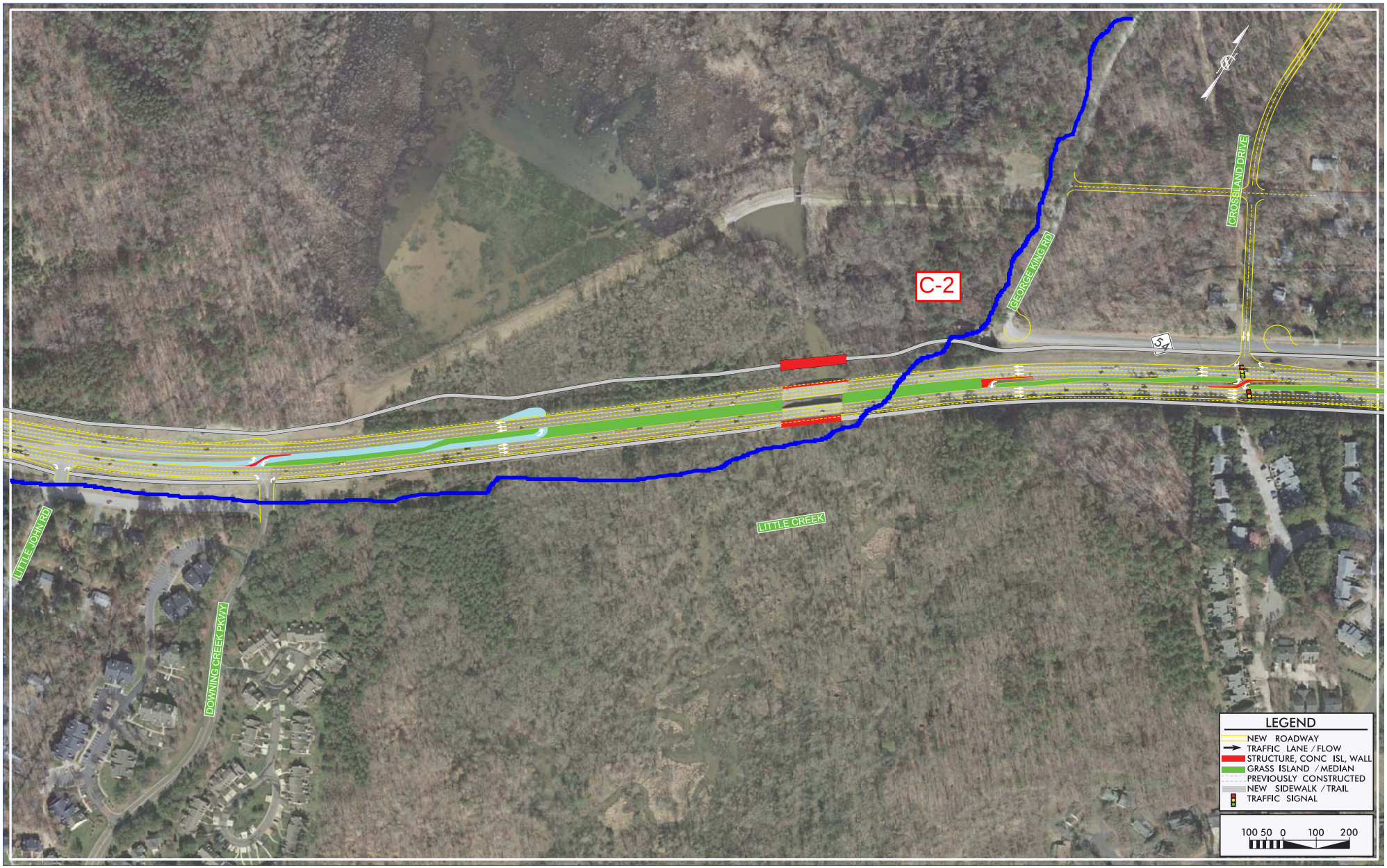


Figure 6-29: Combined NC 54 Roadway Recommendations Sheet 4 - Little John Road to Crossland Drive

Revised Mar 28, 12; C-2 location approximate

MEMORANDUM

To: Transportation Advisory Committee
DCHC MPO

From: DCHC MPO Lead Planning Agency

Date: May 9, 2012

Subject: **FY 2013-2015 CMAQ Changes**

DATA and the Town of Hillsborough have requested changes to the FY 2013-2015 Congestion Mitigation Air Quality funding approved by the TAC on August 11, 2010. The TAC received an update on this in April.

Town of Hillsborough Request

The TAC approved $496,000 federal CMAQ for the Hillsborough Riverwalk Phase II project. NCDOT required us to decrease the funding for the Hillsborough Riverwalk project by $9,690 after the TAC approved the funding since the MPO was slightly over our federal CMAQ allocation (by less than 0.1%). As a result, the federal funding for the project is now $486,310. A minimum 20 percent local match is required.

The Town of Hillsborough has requested modifying this project to use the funds for the construction of sidewalks that will provide access to the Riverwalk greenway and a portion of greenway trail (map attached to application). The Town is making this request because they believe that the NCDOT local programs management requirements for the use of federal funds will less burdensome for a sidewalk project than a greenway project. The replacement project is closely related to the original project and will be obligated on a similar schedule. NCDOT staff have requested a revised CMAQ application form. LPA staff developed emission reduction estimates based on the new project for use in the Town's revised application using the non-motorized trip model.

DATA Request

The TAC approved $1,949,755 federal CMAQ funds for operating assistance for a new Southpoint to Duke bus route. The original route was proposed to be all-day everyday service (15,607 annual service hours). In the draft Designing Better Bus Services report, DATA is now recommending that this service be commuter-oriented so the number of hours and funding necessary to operate the service is lower than originally proposed (3,060 annual service hours). In addition, the new route will now be linked to a Duke to Durham Regional Hospital route. DATA has requested that the project be modified to include the two linked routes plus the addition of passenger amenities and AVL equipment along this route, the funding decreased to match the current amount estimated to run the service, and the service implementation be delayed until FY 2014. This new service is now estimated to cost $464,000 for operating assistance and $201,756 for amenities in FY 2014 and $484,000 for operating assistance in FY 2015. DATA has requested that $800,000 of the remaining funds be approved for a third year of

operating assistance for the Bull City Connector route. The Bull City Connector has received CMAQ funds for capital and operating assistance for two years (FY 11 and FY 12). The total needed for the two projects is $1,949,756 federal CMAQ. As with all CMAQ funding, a minimum 20 percent local match is required in addition to the federal funding.

NCDOT staff have requested a revised CMAQ application form for the new transit route. NCDOT staff say that a new application for the third year of operating for the Bull City Connector is not needed since it is the continuation of an already approved CMAQ project.

Summary

The table below compares the original and the revised projects. Only the federal funding is shown. A minimum 20 percent local match is required for all phases of the projects listed below.

Project	TIP #	FY 13	FY 14	FY 15	Total
Original – Hillsborough Riverwalk Phase II	C-5184	$40,000 (ROW)	$345,600 (ROW)	$100,710 (Construction)	$486,310
Revised – Hillsborough Riverwalk Access Sidewalks	C-5184	$48,728 (Planning) $80,000 (ROW)	$357,582 (Construction)		$486,310
Original – DATA Operating Assistance	TO-5130B	$951,100 (Operation)	$998,655 (Operation)		$1,949,756
Revised – DATA Operating Assistance	TO-5130B		$464,000 (Operation)	$484,000 (Operation)	$948,000
Revised – DATA Passenger Amenities	TG-4738		$201,756 (Capital)		$201,756
Revised – BCC Operating Assistance	C-5103B	$800,000 (Operation)			$800,000

Next Steps

- The DCHC MPO will amend the projects in the MTIP.
- The Town of Hillsborough and DATA will submit new CMAQ applications for the revised projects (see attachments).
- NCDOT and the interagency review team will approve the new CMAQ application forms.
- The NC Board of Transportation will approve a STIP amendment.
- The DCHC MPO will request that the CMAQ funds for DATA be flexed to FTA.

TCC Recommendation: That the TAC approve the revised CMAQ program through a MTIP amendment.

TAC Action: Approve the revised CMAQ program through a MTIP amendment.

CMAQ PROJECT APPLICATION

FOR NCDOT USE ONLY	
APP ID	STIP ID

IN ORDER TO BE CONSIDERED A COMPLETE APPLICATION PACKAGE, ALL FIELDS MUST BE APPROPRIATELY COMPLETED & REQUIRED ADDITIONAL INFORMATION AS NOTED MUST BE ATTACHED. INCOMPLETE APPLICATIONS WILL BE RETURNED.

GENERAL PROJECT INFORMATION

1 SELECT CMAQ PROJECT TYPE

☐ STATEWIDE ☐ REGIONAL ☑ SUBREGIONAL

2 SELECT MPO/RPO(S)

☐ Burlington-Graham MPO	☐ Hickory MPO	☐ NW Piedmont RPO	☐ Unifour RPO
☐ Cabbarus-Rowan MPO	☐ High Point MPO	☐ Piedmont Triad RPO	☐ Upper Coastal Plain RPO
☐ Capital Area MPO	☐ Kerr-Tar RPO	☐ Rocky Mount MPO	☐ Winston-Salem MPO
☑ Durham-Chappel Hill-Carrboro MPO	☐ Lake Norman RPO	☐ Rocky River RPO	
☐ Gaston MPO	☐ Land of Sky RPO	☐ Southwestern RPO	
☐ Greensboro MPO	☐ Mecklenburg Union MPO	☐ Triangle RPO	

3 PROJECT SPONSOR INFORMATION

Agency : Town of Hillsborough

Contact Name : Margaret Hauth, Planning Director

Address : 101 East Orange Street, P.O. Box 429, Hillsborough NC 27278

Telephone : 919-732-1270 ext 86

Email Address : margaret.hauth@hillsboroughnc.org

4 PROJECT INFORMATION

Title : Riverwalk Phase II Sidewalks

Description : Construction of 1208 linear feet of 5-foot wide concrete sidewalk and 615 linear feet of 8-foot wide asphalt greenway to provide pedestrian and bicycle connections to the 1.5 mile, off road, paved greenway along the Eno River known as Riverwalk Phase II, which will connect Occoneechee State Mountain Area trails to Riverwalk Phase I in Gold Park and then on to downtown Hillsborough and River Park. The greenway is shown on the NC-DENR Mountains-to-Sea Trail Map as the preferred route for the statewide walking trail. The trail will serve Town residents and visitors. The connecting sidewalks allow local traffic to access the greenway for both recreation and communting.

Include project details, proposed improvements, purpose, need, how it will provide service, who are the primary stake holders & where it will operate & serve. Attach a sketch design plan of the proposed project which shows the general location.

PROJECT COSTS & DELIVERY SCHEDULE

5 APPLICABLE PROJECT PHASES, FUNDING & YEARS

- CMAQ projects are awarded by Federal Fiscal Years (FFY). FFY run from October 1st of the prior year through September 30th of the next year. For example, FFY 2016 runs from October 1, 2015 through September 30, 2016.
- Cost estimates should reflect anticipated inflation compounded annually at 5% from the current calendar year.
- Minimum 20% match is required for most projects. See 23 U.S.C. §120 paragraph (c) for listing of safety projects that may be funded at up to 100% Federal share.
- In the case of purchasing alternative fueled vehicles (AFV) for general governmental use, CMAQ funding is limited to the cost difference between standard and AFV vehicles. For example, a 2011 Ford Escape lists for $27,000 and a 2011 Ford Escape Hybrid lists for $33,000. The total CMAQ-eligible funding for purchase of this AFV would be: $33,000 - $27,000 = $6,000 (subject to local match).

☑ **Check box if this project is not typical 80/20 split**

Phases(s)	CMAQ $	Matching $	Total $	FFY 2013	FFY 2014
☑ Planning, Engineering & Design	$48,728.00	$12,182.00	$60,910.00	☑	☐
☑ Right-of-Way	$80,000.00	$20,000.00	$100,000.00	☑	☐
☑ Construction	$357,582.00	$89,396.00	$446,978.00	☐	☑
☐ Transit Operation				☐	☐
☐ Transit Implementation				☐	☐
☐ Non-transit Implementation				☐	☐
Project Total	$486,310.00	$121,578.00	$607,888.00		

6 ANTICIPATED PROJECT MILESTONE DATES

- Milestone dates must coordinate with funding schedule in Section 5.
- Planning & environmental document; plans, specifications & estimate package; and right of way certification must be complete prior to let date.

	Month/Year
• Planning & Environmental document to be complete:	1/2013
• Plans, Specifications & Estimate package to be complete:	4/2013
• Right-of-Way acquisition to begin:	7/2013
• Anticipated let date (opening of bids):	1/2014
• Anticipated completion date of project (including project close-out & reimbursement of all eligible expenses):	12/2014

7 LIST THE SOURCE(S) OF MATCHING FUNDS:

Town of Hillsborough General Funds

8 TRANSIT START-UP INFORMATION

Operation assistance under CMAQ is intended to help start up viable new transportation services that will benefit air quality and eventually cover their own costs. This funding is limited to three years. Other funding sources should supplement & ultimately replace CMAQ funds for operation assistance. Briefly describe how funding will be secured to continue the program after year three. (ATTACH ADDITIONAL SHEET(S) IF NEEDED)

GENERAL PROJECT INFORMATION

9 SELECT NC NONATTAINMENT/MAINTENANCE COUNTY(IES):

☐ Cabarrus	☐ Davidson	☐ Edgecombe	☐ Gaston	☐ Haywood*	☐ Lincoln	☑ orange	☐ Swain*
☐ Catawba	☐ Davie	☐ Forsyth	☐ Granville	☐ Iredell*	☐ Mecklenburg	☐ Person	☐ Union
☐ Chatham*	☐ Durham	☐ Franklin	☐ Guilford	☐ Johnston	☐ Nash	☐ Rowan	☐ Wake

*Indicates partial county AQ designation

10 SELECT CMAQ-ELIGIBLE IMPROVEMENT TYPE (check all that apply):

☐ Transportation Control Measures	☐ Extreme Low-Temperature Cold Start Programs
☐ Alternative Fuels	☐ Congestion Relief & Traffic Flow Improvements
☐ Transit Improvements	☑ Bicycle/Pedestrian Facilities & Programs
☐ Transportation Management Associations	☐ Carpooling & Vanpooling
☐ Freight/Intermodal	☐ Diesel Engine Retrofits
☐ Idle Reduction	☐ Training
☐ Travel Demand Management	☐ Public Education & Outreach Activities
☐ I/M Programs	☐ Experimental Pilot Projects

11 IF TRANSPORTATION CONTROL METHOD, CHECK THE ALLOWABLE TYPE(S):

☐ Programs/ordinances to facilitate non-automobile travel, provision/utilization of mass transit & general reduction of the need for SOV travel, as part of transportation planning & development efforts of a locality, including programs & ordinances applicable to new shopping centers, special events & other centers of vehicle activity

☐ Programs for improved public transit

☐ Restriction of certain roads or lanes to, or construction of such roads or lanes for use by, passenger buses or HOV

- ☐ Employer-based transportation management plans, including incentives
- ☐ Trip-reduction ordinances
- ☐ Traffic flow improvement programs that reduce emissions
- ☐ Fringe & transportation corridor parking facilities serving multiple-occupancy vehicle programs or transit services
- ☐ Multiple-occupancy vehicle programs or transit service
- ☐ Programs to limit/restrict vehicle use in downtown areas/other areas of emission concentration during peak periods
- ☐ Programs for the provision of all forms of high-occupancy, shared-ride services
- ☐ Programs to limit portions of road surfaces/certain sections of metro area to the use of non-motorized vehicles or pedestrian
- ☐ Programs for secure bicycle storage facilities & other facilities, including bicycle lanes in both public & private areas
- ☐ Programs to control extended idling of vehicles
- ☐ Reducing emissions from extreme cold-start conditions
- ☐ Employer-sponsored programs to permit flexible work schedules
- ☐ Public Education & Outreach Activities

12 IF TRANSIT IMPROVEMENT, SPECIFY HOW SERVICE WILL BE IMPROVED:

- ☐ New facilities associated with a service increase
- ☐ New vehicles used to expand the transit fleet
- ☐ Operating assistance for new service (limit three years)
- ☐ Fare subsidies as part of program to limit exceedances of NAAQS

13 EMISSIONS REDUCTION CRITERIA

QUANTATIVE analysis of air quality impacts is required for most project types. **QUALITATIVE** analysis is only allowable when it is not possible to accurately quantify emissions benefits, such as public education, marketing & other outreach efforts, which can include advertising alternatives to SOV travel, employer outreach & public education campaigns. The qualitative analysis should be based on a reasoned & logical determination that the project/program will decrease emissions & contribute to attainment or maintenance of NAAQS. The primary benefit of these activities enhanced communication & outreach that is expected to influence travel behavior & air quality.

- **Indicate the type of analysis completed:** ☑ **QUANTITATIVE** ☐ **QUALITATIVE**
- **Describe the method used to estimate the emissions reduction and show calculations: (ATTACH ADDITIONAL SHEET(S) IF NEEDED)**

DCHC MPO staff estimated new pedestrian trips created by this facility by using the MPO's non-motorized trip model. This is an enhancement to the Triangle Regional Model that considers density, length of non-motorized facilities, land use, and socio-economic characteristics of each traffic analysis zone to produce an estimate of non-motorized trips. We ran the model twice - once with the existing bicycle/pedestrain network and once with the added facility and compared the results. We used an estimate of new pedestrian trips in the traffic analysis zone(s) that the project is within and new pedestrian trips to/from nearby traffic analysis zones that might use the facility. We multiplied the total new pedestrian trips per day by the average non-motorized trip length for the model, 3.3 miles, to produce an estimate of vehicle miles traveled that are reduced. We multiplied the VMT reduction by the emission factors for LDGV on the functional classification of the parallel roadway to get an estimate of CO, VOC, and NOx reduced per day.
The attached table displays the calculations and results of this modeling.

For QUANTATIVE analyses, list the expected daily emissions BEFORE and AFTER project implementation:

Pollutant	Daily Emissions Before (kg)	Daily Emission After (kg)	Daily Emissions Reduction (kg)
Carbon Monoxide (CO)			0.23
Volatile Organic Compounds (VOC)			0.01
Oxides of Nitrogen (NOx)			0.01
Total			0.25

14 MISCELLANEOUS

• For construction of trails, has the Department of Interior been contacted?	☐ Yes	☐ No	☐ N/A
• Is the fare/fee subsidy program part of a broad program to reduce emissions?	☐ Yes	☐ No	☐ N/A
• Will the ITS project conform to the National ITS architecture?	☐ Yes	☐ No	☐ N/A

15 SUPPORTING INFORMATION CHECK LIST

Check supporting information included as attachment(s) to this application:

- ☑ MPO/RPO Support Resolution (Required for SUBREGIONAL proposals)
- ☐ Additional project description and/or details
- ☑ Map of general project location
- ☑ Complete emissions calculations
- ☐ Any assumptions used
- ☐ Other, please specify:

16 MPO/RPO PRIORITY INFORMATION

This project has been prioritized by the MPO/RPO and received the following ranking among all CMAQ requests (UNRANKED APPLICATIONS WILL NOT BE PROCESSED): 12

17 SUBMIT APPLICATION

- **SAVE APPLICATION AND ALL ATTACHMENTS IN A SINGLE PDF DOCUMENT**
- **ENTER APPROPRIATE PROPOSAL DETAILS AND UPLOAD PDF APPLICATION IN PARTNER CONNECT BY OCTOBER 31, 2011**

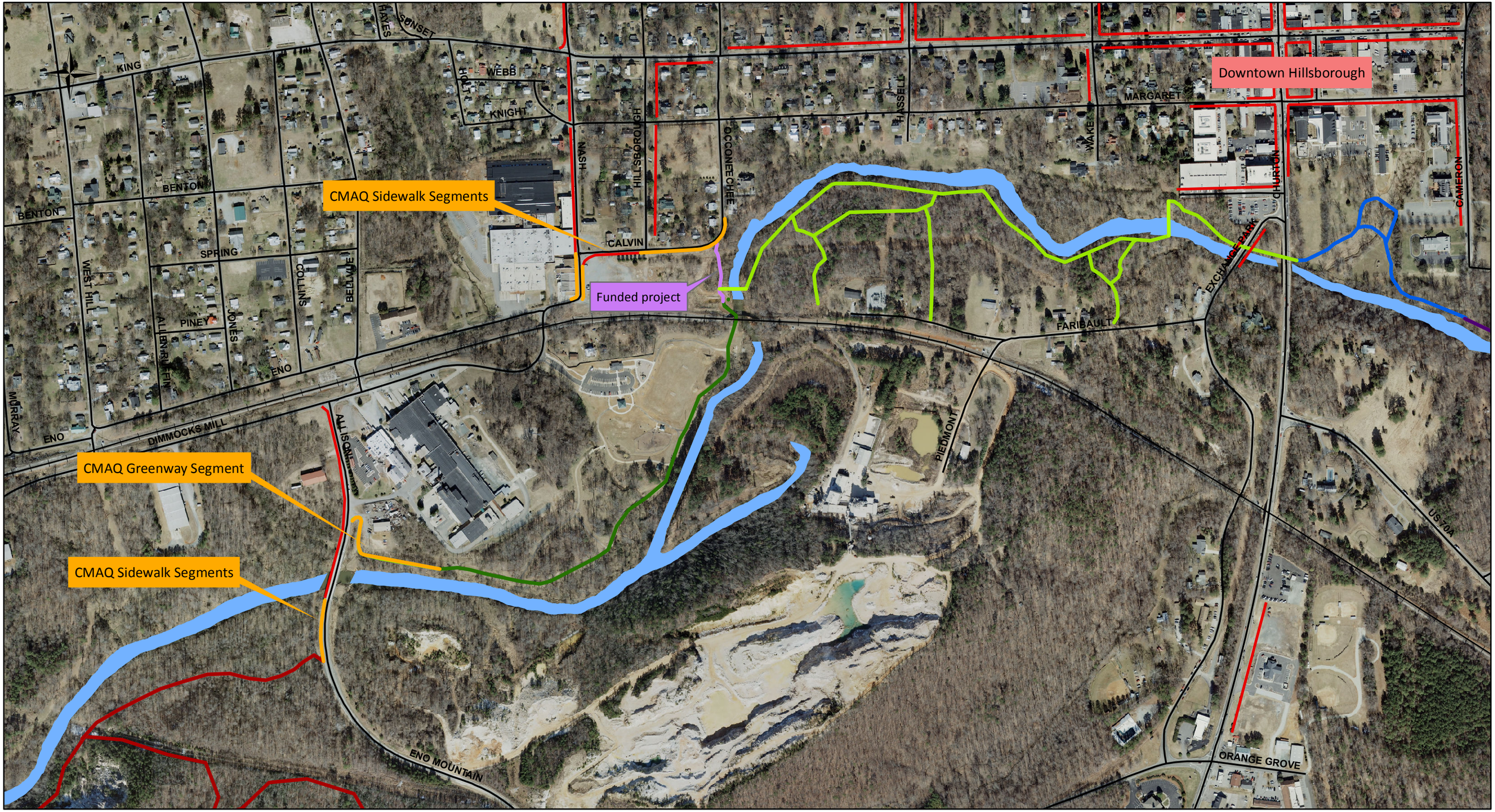
Non-Motorized Trip Summary

MPO staff used the Triangle regional model to estimate new non-motorized trips resulting from the improvement. The table below shows the new trips for the revised CMAQ project (the sidewalks and the short section of greenway) and the entire Riverwalk Phase II project (both CMAQ and Town funded). The emission calculations on the application are only for the revised CMAQ funded project. However, as part of a larger project, the overall impact of the Riverwalk improvements is expected to produce a greater number of trips and emission reduction.

Project	Distance	New Trips in Project Zones	% Change from Base	New Trips From Neighboring Zones	Total New Trips
Riverwalk sidewalks & short section of greenway	0.28 miles	3	0.5%	3	6
Riverwalk sidewalks and all of Phase II	1.42 miles	17	2.5%	14	31

Emission Estimate

Project	Total New Trips	Average n-m trip length (miles)	VMT reduced	Functional Classification	CO (g/mile)	VOC (g/mile)	NOx (g/mile)	CO (kg reduced/day)	VOC (kg reduced/day)	NOx (kg reduced/day)
Riverwalk sidewalks & short section of greenway	6	3.3	19.8	urban local	11.512	0.661	0.460	0.23	0.01	0.01



CMAQ Project: Vicinity Map

CMAQ Greenway Segment
CMAQ Sidewalk Segment
Occoneechee Mountain Trails
Calvin Street Connector Trail
Riverwalk Phase I
Riverwalk Phase II
River Park Trails
Existing Sidewalks
Eno River

N

CMAQ PROJECT APPLICATION

FOR NCDOT USE ONLY	
APP ID	STIP ID

IN ORDER TO BE CONSIDERED A COMPLETE APPLICATION PACKAGE, ALL FIELDS MUST BE APPROPRIATELY COMPLETED & REQUIRED ADDITIONAL INFORMATION AS NOTED MUST BE ATTACHED. INCOMPLETE APPLICATIONS WILL BE RETURNED.

GENERAL PROJECT INFORMATION

1 SELECT CMAQ PROJECT TYPE

☐ STATEWIDE ☐ REGIONAL ☐ SUBREGIONAL

2 SELECT MPO/RPO(S)

☐ Burlington-Graham MPO	☐ Hickory MPO	☐ NW Piedmont RPO	☐ Unifour RPO
☐ Cabbarus-Rowan MPO	☐ High Point MPO	☐ Piedmont Triad RPO	☐ Upper Coastal Plain RPO
☐ Capital Area MPO	☐ Kerr-Tar RPO	☐ Rocky Mount MPO	☐ Winston-Salem MPO
☑ Durham-Chappel Hill-Carrboro MPO	☐ Lake Norman RPO	☐ Rocky River RPO	
☐ Gaston MPO	☐ Land of Sky RPO	☐ Southwestern RPO	
☐ Greensboro MPO	☐ Mecklenburg Union MPO	☐ Triangle RPO	

3 PROJECT SPONSOR INFORMATION

Agency : Durham Area Transit Authority
Contact Name : Pierre Osei-Owusu
Address : 1907 Fay Street
Telephone : 919 560-1535 x36214
Email Address : pierre.osei-owusu@durhamnc.gov

4 PROJECT INFORMATION

Title : OPERATING ASSISTANCE FOR 2 BUS ROUTES & PASS AMENITIES INCLUDING REAL-TIME INFORMATION SYSTEMS

Description : CMAQ FUNDING REQUEST TO OPERATE TWO NEW COMMUTER ROUTES IN DURHAM FROM SOUTH POINT MALL TO DUKE UNIVERSITY & FROM DUKE MEDICAL CENTER TO DURHAM REGIONAL HOSPITAL

Include project details, proposed improvements, purpose, need, how it will provide service, who are the primary stake holders & where it will operate & serve. Attach a sketch design plan of the proposed project which shows the general location.

PROJECT COSTS & DELIVERY SCHEDULE

5 APPLICABLE PROJECT PHASES, FUNDING & YEARS

- CMAQ projects are awarded by Federal Fiscal Years (FFY). FFY run from October 1st of the prior year through September 30th of the next year. For example, FFY 2016 runs from October 1, 2015 through September 30, 2016.
- Cost estimates should reflect anticipated inflation compounded annually at 5% from the current calendar year.
- Minimum 20% match is required for most projects. See 23 U.S.C. §120 paragraph (c) for listing of safety projects that may be funded at up to 100% Federal share.
- In the case of purchasing alternative fueled vehicles (AFV) for general governmental use, CMAQ funding is limited to the cost difference between standard and AFV vehicles. For example, a 2011 Ford Escape lists for $27,000 and a 2011 Ford Escape Hybrid lists for $33,000. The total CMAQ-eligible funding for purchase of this AFV would be: $33,000 - $27,000 = $6,000 (subject to local match).

☐ **Check box if this project is not typical 80/20 split**

Phases(s)	CMAQ $	Matching $	Total $	FY 2014 ~~FFY 2016~~	FY 2015 ~~FFY 2017~~
☐ Planning, Engineering & Design				☐	☐
☐ Right-of-Way				☐	☐
☐ Construction				☐	☐
☑ Transit Operation	$948,000.00	$237,000.00	$1.185.000.00	☑	☑
☑ Transit Implementation	$201,756.00	$50,439.00	$252.195.00	☑	☐
☐ Non-transit Implementation				☐	☐
Project Total	$1,149,756.00	$287,439.00	$1,437,195.00		

6 ANTICIPATED PROJECT MILESTONE DATES

- Milestone dates must coordinate with funding schedule in Section 5.
- Planning & environmental document; plans, specifications & estimate package; and right of way certification must be complete prior to let date.

Month/Year

- Planning & Environmental document to be complete:
- Plans, Specifications & Estimate package to be complete:
- Right-of-Way acquisition to begin:
- Anticipated let date (opening of bids):
- Anticipated completion date of project (including project close-out & reimbursement of all eligible expenses): June 2015

7 LIST THE SOURCE(S) OF MATCHING FUNDS:

City of Durham $287439

8 TRANSIT START-UP INFORMATION

Operation assistance under CMAQ is intended to help start up viable new transportation services that will benefit air quality and eventually cover their own costs. This funding is limited to three years. Other funding sources should supplement & ultimately replace CMAQ funds for operation assistance. Briefly describe how funding will be secured to continue the program after year three. (ATTACH ADDITIONAL SHEET(S) IF NEEDED)

Additional funding for the continuation of the service would be obtained through regular budget requests

GENERAL PROJECT INFORMATION

9 SELECT NC NONATTAINMENT/MAINTENANCE COUNTY(IES):

☐ Cabarrus	☐ Davidson	☐ Edgecombe	☐ Gaston	☐ Haywood*	☐ Lincoln	☐ orange	☐ Swain*
☐ Catawba	☐ Davie	☐ Forsyth	☐ Granville	☐ Iredell*	☐ Mecklenburg	☐ Person	☐ Union
☐ Chatham*	☑ Durham	☐ Franklin	☐ Guilford	☐ Johnston	☐ Nash	☐ Rowan	☐ Wake

*Indicates partial county AQ designation

10 SELECT CMAQ-ELIGIBLE IMPROVEMENT TYPE (check all that apply):

- ☐ Transportation Control Measures
- ☐ Alternative Fuels
- ☑ Transit Improvements
- ☐ Transportation Management Associations
- ☐ Freight/Intermodal
- ☐ Idle Reduction
- ☐ Travel Demand Management
- ☐ I/M Programs
- ☐ Extreme Low-Temperature Cold Start Programs
- ☐ Congestion Relief & Traffic Flow Improvements
- ☐ Bicycle/Pedestrian Facilities & Programs
- ☐ Carpooling & Vanpooling
- ☐ Diesel Engine Retrofits
- ☐ Training
- ☐ Public Education & Outreach Activities
- ☐ Experimental Pilot Projects

11 IF TRANSPORTATION CONTROL METHOD, CHECK THE ALLOWABLE TYPE(S):

- ☐ Programs/ordinances to facilitate non-automobile travel, provision/utilization of mass transit & general reduction of the need for SOV travel, as part of transportation planning & development efforts of a locality, including programs & ordinances applicable to new shopping centers, special events & other centers of vehicle activity
- ☐ Programs for improved public transit
- ☐ Restriction of certain roads or lanes to, or construction of such roads or lanes for use by, passenger buses or HOV
- ☐ Employer-based transportation management plans, including incentives
- ☐ Trip-reduction ordinances
- ☐ Traffic flow improvement programs that reduce emissions
- ☐ Fringe & transportation corridor parking facilities serving multiple-occupancy vehicle programs or transit services
- ☐ Multiple-occupancy vehicle programs or transit service
- ☐ Programs to limit/restrict vehicle use in downtown areas/other areas of emission concentration during peak periods
- ☐ Programs for the provision of all forms of high-occupancy, shared-ride services
- ☐ Programs to limit portions of road surfaces/certain sections of metro area to the use of non-motorized vehicles or pedestrian
- ☐ Programs for secure bicycle storage facilities & other facilities, including bicycle lanes in both public & private areas
- ☐ Programs to control extended idling of vehicles
- ☐ Reducing emissions from extreme cold-start conditions
- ☐ Employer-sponsored programs to permit flexible work schedules
- ☐ Public Education & Outreach Activities

12 IF TRANSIT IMPROVEMENT, SPECIFY HOW SERVICE WILL BE IMPROVED:

- [x] New facilities associated with a service increase
- [x] Operating assistance for new service (limit three years)
- [ ] New vehicles used to expand the transit fleet
- [ ] Fare subsidies as part of program to limit exceedances of NAAQS

13 EMISSIONS REDUCTION CRITERIA

QUANTATIVE analysis of air quality impacts is required for most project types. **QUALITATIVE** analysis is only allowable when it is not possible to accurately quantify emissions benefits, such as public education, marketing & other outreach efforts, which can include advertising alternatives to SOV travel, employer outreach & public education campaigns. The qualitative analysis should be based on a reasoned & logical determination that the project/program will decrease emissions & contribute to attainment or maintenance of NAAQS. The primary benefit of these activities enhanced communication & outreach that is expected to influence travel behavior & air quality.

- **Indicate the type of analysis completed:** [x] **QUANTITATIVE** [ ] **QUALITATIVE**
- **Describe the method used to estimate the emissions reduction and show calculations: (ATTACH ADDITIONAL SHEET(S) IF NEEDED)**

Off-Model Air Quality Analysis for Buses based on 2010 emissions standard (Mobile E 6 Emissions) for 40' hybrid electric -powered diesel fuel buses.

See attached sheet

For QUANTATIVE analyses, list the expected daily emissions BEFORE and AFTER project implementation:

Pollutant	Daily Emissions Before (kg)	Daily Emission After (kg)	Daily Emissions Reduction (kg)
Carbon Monoxide (CO)			23.99
Volatile Organic Compounds (VOC)			1.33
Oxides of Nitrogen (NOx)			-0.31
Total			25.01

14 MISCELLANEOUS

• For construction of trails, has the Department of Interior been contacted?	[ ] Yes	[ ] No	[x] N/A
• Is the fare/fee subsidy program part of a broad program to reduce emissions?	[ ] Yes	[ ] No	[x] N/A
• Will the ITS project conform to the National ITS architecture?	[ ] Yes	[ ] No	[x] N/A

15 SUPPORTING INFORMATION CHECK LIST

Check supporting information included as attachment(s) to this application:

- [x] MPO/RPO Support Resolution (Required for SUBREGIONAL proposals)
- [x] Additional project description and/or details
- [x] Map of general project location
- [x] Complete emissions calculations
- [ ] Any assumptions used
- [ ] Other, please specify:

16 MPO/RPO PRIORITY INFORMATION

This project has been prioritized by the MPO/RPO and received the following ranking among all CMAQ requests (UNRANKED APPLICATIONS WILL NOT BE PROCESSED):

17 SUBMIT APPLICATION

- **SAVE APPLICATION AND ALL ATTACHMENTS IN A SINGLE PDF DOCUMENT**
- **ENTER APPROPRIATE PROPOSAL DETAILS AND UPLOAD PDF APPLICATION IN PARTNER CONNECT BY OCTOBER 31, 2011**

Emissions Reduction

Off-model Air Quality Analysis for Buses based on 2009 Standard (mobile E. 6 Emissions):
The calculation below is for two hybrid-electric Gillig buses. The buses would be 40‘ models powered by diesel fuel. The emissions reduction would be achieved partly as a result of the new Allison electric drive train technology and the reduction in auto use caused by commuters who would park-and-ride using these buses who would otherwise use their cars as shown in the calculations below.

Service Expansion and Related Emissions Calculation	
Auto Emissions	
Two buses running 6 hours per day at 30 minutes Headway during peak hrs (Mon-Fri)	
Hours of Operations/Day (2 buses-peak hr only service)	12
Estimated # of passengers per hour (30 pass/hr/bus)	30
Total trips per service day (12 * 30)	360
Average Auto Occupancy ratio	1.1
Equivalent Auto trips per day	327
Estimated Average Trip Length (32 mile round trip/4 trip legs)	8.0
Average Daily VMT reduced (327 * 8.0)	2618
VMT reduced with 10% increase in ridership due to AVL systems	2880
LDGV **CO** Emissions Factor g/mile for Urban minor arterial	11.832
LDGV **VOC** Emission factor g/mile for Urban minor arterial	0.647
LDG **NOX** Emission factor g/mile for urban minor arterial	0.465
Net Change in Auto CO g per day (2880*11.832)	34076
Net Change in Auto VOC g/day (2880* 0.647)	1863
Net Change in Auto Nox g/day (2880 * 0.465)	1253

Bus Emissions = 32 miles/trip * 6 trips * 2 buses = 384 miles/day * Emission Factor for hybrid buses

Bus CO = Bus VMT x 1.05 g/mi = 403 g/day
Bus VOC = Bus VMT x 0.0 g/mi = 0
Bus NOx = Bus VMT x 4.41 g/mi = 1693 g/day

Source: "Transit Bus Lifecycle Costs and Year 2007 Emissions Estimation". U.S. DOT Federal Transit Administration, FTA-WV-26-7004.2007.1 July 2, 2007. FTA document shows 0.0 g/mi emission factor for VOC.

Net Emission Reduction (Car emission reduced-Bus Emissions increase)

* CO = 34076 - 403 = 3373 x (260 days/365) =23,986 g/day
* VOC = 1863 -0 = 1862 g/day x (260 days/365) =1,327 g/day
* NOX = 1253 -1693 = -440 g/day x(260days/365) =-313 g/day

*The bus will operate 260 days /year therefore avg g/day is multiplied by 260 & divided by 365

Automatic Vehicle Location (AVL) Passenger Amenities Induced Ridership:

A recent longitudinal (Mixed Model) study conducted by Chicago Transit Authority (CTA) from August 2006 to May 2009, that evaluated the ridership effect of real-time (AVL) information technology on the CTA system , determined that the provision of AVL technology does increase bus ridership at a modest level (Tang, & Thakruriah, 2012).

Additionally, a synthesis project conducted by Transportation Research Board (2006), noted that many Transit systems in Europe had demonstrated significant ridership gains resulting from the introduction of AVL technologies (Transportation research Board, 2006).

_____

We assumed a modest 10% increase in ridership resulting from the provision of passenger amenities including the outdoor AVL system.

References:

Tang, L. Thakuriah P. (2012). Ridership effects of real-time bus information system, a case study in the City of Chicago. *Transportation Research Part C 22,* 146-161, Elsevier

Transportation Research Board (2006). Real-Time Bus Arrival Information Systems
Transit, *TCRP Synthesis 48*: Transit Cooperative Research Program, Washington D.C.

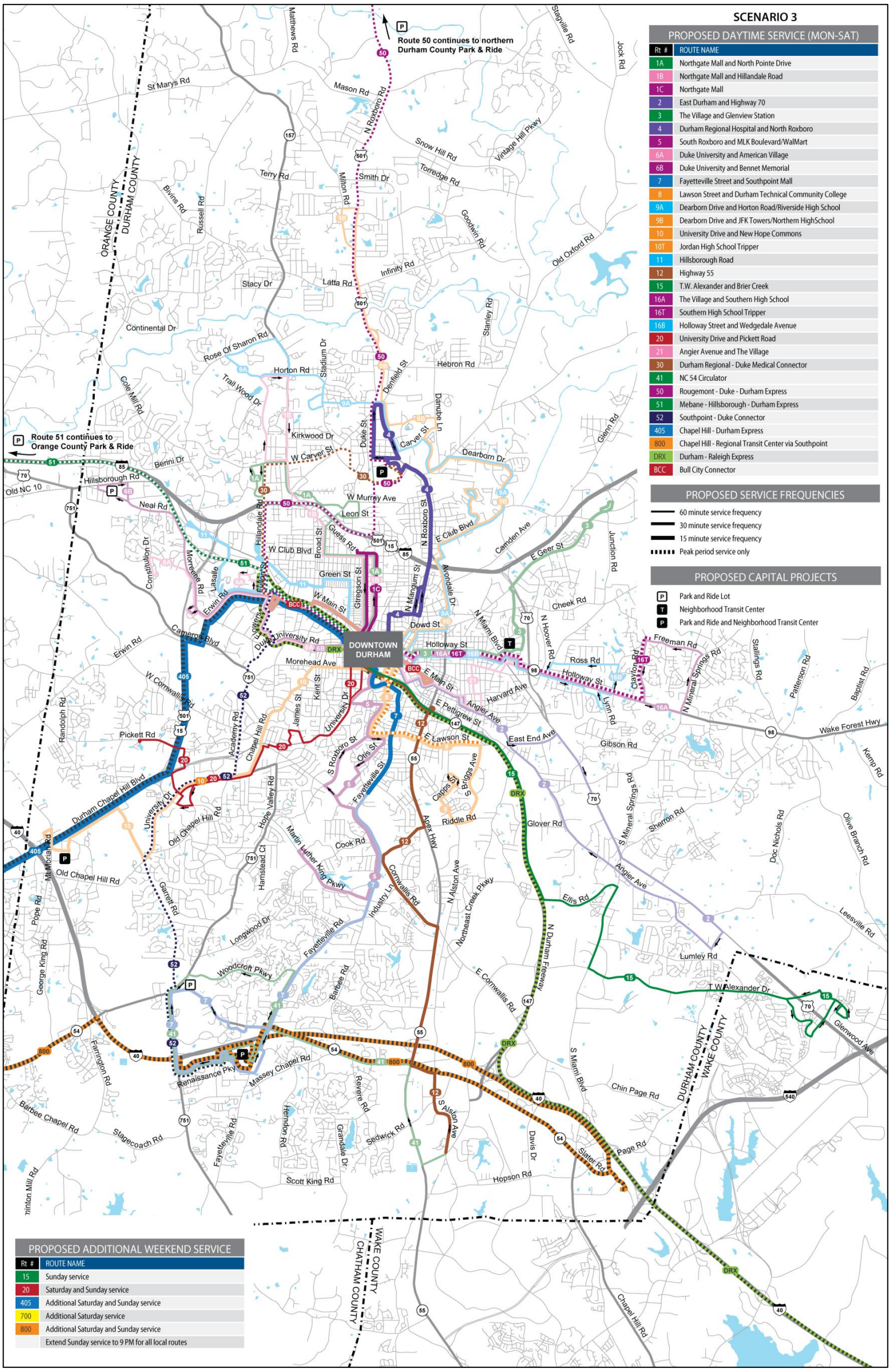


Figure 7-38: Scenario 3 Daytime System Map

DURHAM AREA TRANSIT AUTHORITY
Designing Better Bus Service in Durham

MEMORANDUM

To: Transportation Advisory Committee
DCHC MPO

From: DCHC MPO Lead Planning Agency

Date: May 9, 2012

Subject: **MTIP Amendment #4 –Triangle Transit, FY 2013-2015 CMAQ, STIP Amendments**

FY 2012-2018 MTIP Amendment #4 is needed to amend Triangle Transit projects, reflect changes to the FY 2013-2015 CMAQ program, and match recent amendments to the STIP.

Triangle Transit

Amendment #4 clarifies the description and funding estimates for the Durham-Orange transit corridor in the MTIP. The project was included in the adopted MTIP as a placeholder for the result of the Alternatives Analysis. The project was not included in the STIP. The amendment shows the cost of the project with a proposed 50 percent federal, 25 percent state, and 25 percent local funding source. NCDOT will amend the STIP in May to reflect this.

The second amendment listed under Triangle Transit was recommended by the TCC in March. This amendment was removed from the April TAC agenda because staff had concerns that it was inconsistent with the FY 12 UPWP. Upon further explanation from Triangle Transit, we have determined that it is consistent with the FY 12 UPWP. It adds a project for Planning Assistance that was inadvertently not included in the STIP/MTIP. NCDOT will amend the STIP in May to reflect this.

FY 2013-2015 CMAQ

DATA and the Town of Hillsborough have requested changes to the MPO's FY 2013-2015 CMAQ program. A more thorough explanation of these changes is included in another agenda item. In summary, DATA has requested delaying and reducing the funding for a project to operate a new route, adding funding for passenger amenities, and adding a third year of operating assistance for the Bull City Connector. Hillsborough has requested modifying the description and funding schedule of their Riverwalk Phase II project.

DATA and Hillsborough have submitted revised CMAQ applications to NCDOT. Once NCDOT approves the applications, a STIP amendment will be requested.

Modifications Necessary to Match the STIP

In April and May, the State Board of Transportation adopted several modifications for the STIP. Amendment #4 reflects these changes.

U-0624, the NC 86 corridor upgrade in Chapel Hill, has been delayed one year. In January 2012, bids were opened for this project which exceeded the engineer's estimate. As a result, the project must be rebid. In order to accommodate the University's request that the work begin in the summer, the rebidding has been scheduled for October 2012. This schedule will allow the initial work to commence in the summer of 2013.

W-5205, W-5207, and W-5208 are Division Highway Safety Improvement Program funded projects for Durham, Orange, and Chatham counties, respectively. K-5500B and M-0451 are statewide STIP projects that may or may not occur within our MPO.

TCC Recommendation: That the TAC adopt the Resolution to Modify the 2012-2018 Transportation Improvement Program for the Durham-Chapel Hill-Carrboro Urban Area Amendment #4.

TAC Action: Adopt the Resolution to Modify the 2012-2018 Transportation Improvement Program for the Durham-Chapel Hill-Carrboro Urban Area Amendment #4.

RESOLUTION TO MODIFY THE
2012-2018 TRANSPORTATION IMPROVEMENT PROGRAM
FOR THE DURHAM-CHAPEL HILL-CARRBORO URBAN AREA

AMENDMENT #4
May 9, 2012

A motion was made by TAC Member _____ and seconded by TAC Member _____ for the adoption of the following resolution, and upon being put to a vote, was duly adopted.

WHEREAS, the Metropolitan Transportation Improvement Program (MTIP) is a staged multiple year listing of all federally funded transportation projects scheduled for implementation within the Durham-Chapel Hill-Carrboro Urban Area which have been selected from a priority list of projects; and

WHEREAS, the document provides the mechanism for official endorsement of the program of projects by the Transportation Advisory Committee (TAC); and

WHEREAS, the inclusion of the TIP in the transportation planning process was first mandated by regulations issued jointly by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) and no project within the planning area will be approved for funding by these federal agencies unless it appears in the officially adopted TIP; and

WHEREAS, the procedures for developing the MTIP have been modified in accordance with certain provisions of the SAFETEA-LU Federal Transportation Act and guidance provided by the State; and

WHEREAS, projects listed in the MTIP are also included in the State TIP (STIP) and balanced against anticipated revenues as identified in the STIP; and

WHEREAS, the North Carolina Department of Transportation and the Transportation Advisory Committee have determined it to be in the best interest of the Urban Area to amend the FY 2012-2018 Metropolitan Transportation Improvement Program as described in the attached sheet; and

WHEREAS, there has been no change in the MTIP project schedule or project design concept and scope with regard to the air quality conformity finding made by the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization Transportation Advisory Committee on September 14, 2011; and

WHEREAS, the DCHC MPO certifies that this MTIP amendment is consistent with the intent of the DCHC MPO 2035 LRTP; and

BE IT THEREFORE RESOLVED that the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization Transportation Advisory Committee hereby amends the FY 2012-2018 Metropolitan Transportation Improvement Program of the Durham-Chapel Hill-Carrboro Urban Area, as approved by the TAC on September 14, 2011, and as described in the "Attachment to Resolution for Amendment #4 to DCHC 2012-2018 MTIP" provided here on this, the 9th day of May, 2012.

_____

Lydia E. Lavelle, TAC Chair

Durham County, North Carolina

I certify that Lydia E. Lavelle personally appeared before me this day acknowledging to me that she signed the forgoing document.

Date: May 9, 2012

_____

Frederick Brian Rhodes, Notary Public
My commission expires: May 10, 2015

Attachment to Resolution for Amendment #4 to DCHC 2012-2018 MTIP

Triangle Transit

Existing

IDNUM	SYSTEM	DESCRIPTION	FUNDING	FY12	FY13	FY14	FY15	FY16	FY17	FY18
NA	TRIANGLE TRANSIT	NA	NA							

Modified

IDNUM	SYSTEM	DESCRIPTION	FUNDING	FY12	FY13	FY14	FY15	FY16	FY17	FY18
TE-5202	TRIANGLE TRANSIT	Fixed Guideway - Durham-Orange	FED TBD		6,890	6,890	10,335	6,890	6,890	10,335
			STAT TBD		3,445	3,445	5,168	3,445	3,445	5,168
			L TBD		3,445	3,445	5,168	3,445	3,445	5,168

Existing

IDNUM	SYSTEM	DESCRIPTION	FUNDING	FY12	FY13	FY14	FY15	FY16	FY17	FY18
N/A										

Modified

IDNUM	SYSTEM	DESCRIPTION	FUNDING	FY12	FY13	FY14	FY15	FY16	FY17	FY18
TP-4732	TRIANGLE TRANSIT	Planning Assitance-UPWP	FUZ US	989	1018	1048	1079	1111	1145	1179
			STAT	124	127	131	135	139	143	147
			L	124	127	131	135	139	143	147

FY 2013-2015 CMAQ

Existing

IDNUM	SYSTEM	DESCRIPTION	FUNDING	FY12	FY13	FY14	FY15	FY16	FY17	FY18
TO-5130B	DATA	Operating Assistance - new route	CMAQ US		951	999				
			CMAQ L		238	250				

Modified

IDNUM	SYSTEM	DESCRIPTION	FUNDING	FY12	FY13	FY14	FY15	FY16	FY17	FY18
TO-5130B	DATA	Operating Assistance - new route	CMAQ US			464	484			
			CMAQ L			116	121			

Existing

IDNUM	SYSTEM	DESCRIPTION	FUNDING	FY12	FY13	FY14	FY15	FY16	FY17	FY18
TG-4738	DATA	Routine Capital - Bus stop shelters, benches,	FBUS US							
		shop equip., spare parts, engines, service	FBUS L							
		vehicles, etc.	FUZ US	125	475	475	475	475	475	475
			FUZ L	32	119	119	119	119	119	119

Modified

IDNUM	SYSTEM	DESCRIPTION	FUNDING	FY12	FY13	FY14	FY15	FY16	FY17	FY18
TG-4738	DATA	Routine Capital - Bus stop shelters, benches,	FBUS US							
		shop equip., spare parts, engines, service	FBUS L							
		vehicles, etc.	FUZ US	125	475	475	475	475	475	475
			FUZ L	32	119	119	119	119	119	119
			CMAQ US			208				
			CMAQ L			52				

Existing

IDNUM	SYSTEM	DESCRIPTION	FUNDING	FY12	FY13	FY14	FY15	FY16	FY17	FY18
C-5103B	DATA	Purchase two (2) hybrid electric		in progress						
		buses and provide portion of								
		operating assistance for two years								

Modified

IDNUM	SYSTEM	DESCRIPTION	FUNDING	FY12	FY13	FY14	FY15	FY16	FY17	FY18
C-5103B	DATA	Purchase two (2) hybrid electric	CMAQ US		800					
		buses and provide portion of	CMAQ L		200					
		operating assistance for three years								

Division 7			FUNDING	FY12	FY13	FY14	FY15	FY16	FY17	FY18
C-5184	Riverwalk Trail. Phase III. Construct sidewalks on Nash, Calvin, and	PE	CMAQ		49					
Hillsborough	Occoneechee streets to provide access to Riverwalk Trail	PE	C		12					
Orange		R	CMAQ		80					
		R	C		20					
		C	CMAQ			358				
		C	C			90				

Modifications Necessary to Match STIP

DIVISION 7

U-0624 ORANGE	- DURHAM-CHAPEL HILL-CARRBORO METROPOLITAN PLANNING ORGANIZATION	NC 86 (SOUTH COLUMBIA STREET), SR 1906 (PUREFOY ROAD) TO SR 1902 (MANNING DRIVE) IN CHAPEL HILL. CORRIDOR UPGRADE TO INCLUDE BICYCLE LANES. ***DELAY CONSTRUCTION FROM FY 12 TO FY 13 TO LESSEN IMPACTS TO UNIVERSITY AND HOSPITAL FUNCTIONS.***	CONSTRUCTION	FY 2013 -	$4,850,000 $4,850,000	(STP)

DIVISION 5

* W-5205 WARREN FRANKLIN PERSON GRANVILLE VANCE WAKE DURHAM	VARIOUS, DIVISION 5 RUMBLE STRIPS, GUARDRAIL, SAFETY AND LIGHTING IMPROVEMENTS AT SELECTED LOCATIONS. ***ADD RIGHT OF WAY AND CONSTRUCTION IN FY 13 THROUGH FY 15 NOT PREVIOUSLY PROGRAMMED.***	RIGHT-OF-WAY	FY 2012 -	$50,000	(HSIP)
			FY 2013 -	$100,000	(HSIP)
			FY 2014 -	$100,000	(HSIP)
			FY 2015 -	$100,000	(HSIP)
		CONSTRUCTION	FY 2012 -	$100,000	(HSIP)
			FY 2013 -	$600,000	(HSIP)
			FY 2014 -	$600,000	(HSIP)
			FY 2015 -	$600,000	(HSIP)
				$2,250,000	

DIVISION 7

* W-5207 ALAMANCE CASWELL GUILFORD ORANGE ROCKINGHAM	VARIOUS, DIVISION 7 RUMBLE STRIPS, GUARDRAIL, SAFETY AND LIGHTING IMPROVEMENTS AT SELECTED LOCATIONS. ***ADD RIGHT OF WAY AND CONSTRUCTION IN FY 13 THROUGH FY 15 NOT PREVIOUSLY PROGRAMMED.***	RIGHT-OF-WAY	FY 2012 -	$50,000	(HSIP)
			FY 2013 -	$100,000	(HSIP)
			FY 2014 -	$100,000	(HSIP)
			FY 2015 -	$100,000	(HSIP)
		CONSTRUCTION	FY 2012 -	$100,000	(HSIP)
			FY 2013 -	$600,000	(HSIP)
			FY 2014 -	$600,000	(HSIP)
			FY 2015 -	$600,000	(HSIP)
				$2,250,000	

DIVISION 8

* W-5208 RICHMOND SCOTLAND LEE HOKE MONTGOMERY MOORE RANDOLPH CHATHAM	VARIOUS, DIVISION 8 RUMBLE STRIPS, GUARDRAIL, SAFETY AND LIGHTING IMPROVEMENTS AT SELECTED LOCATIONS. ***ADD RIGHT OF WAY AND CONSTRUCTION IN FY 13 THROUGH FY 15 NOT PREVIOUSLY PROGRAMMED.***	RIGHT-OF-WAY	FY 2012 -	$50,000	(HSIP)
			FY 2013 -	$100,000	(HSIP)
			FY 2014 -	$100,000	(HSIP)
			FY 2015 -	$100,000	(HSIP)
		CONSTRUCTION	FY 2012 -	$100,000	(HSIP)
			FY 2013 -	$600,000	(HSIP)
			FY 2014 -	$600,000	(HSIP)
			FY 2015 -	$600,000	(HSIP)
				$2,250,000	

* K-5500B STATEWIDE	PIEDMONT REGION REST AREA RENOVATIONS. REPLACE LIGHTING WITH EFFICIENT LOW MAINTENANCE LED FIXTURES. ***ADD CONSTRUCTION IN FY 13 NOT PREVIOUSLY PROGRAMMED.***	CONSTRUCTION	FY 2013 -	$458,000 $458,000	(S)
* M-0451 STATEWIDE	STATEWIDE LANDSCAPE PLANS FOR STIP CONSTRUCTION PROJECTS. ***ADD PRELIMINARY ENGINEERING IN FY 12 THROUGH FY 18.***	ENGINEERING	FY 2012 - FY 2013 - FY 2014 - FY 2015 - FY 2016 - FY 2017 - FY 2018 -	$70,000 $70,000 $70,000 $70,000 $70,000 $70,000 $70,000 $490,000	(S) (S) (S) (S) (S) (S) (S)

Orange County Enhanced Transit Plan

April 23, 2012

Bus Capital Projects

- $6 million in small capital projects by 2017 (shelters, real-time info, lease Park-Ride lots)
- MLK Bus Lanes ($22 million) in 2019

Bus Hours

- 28,350 Hours by end of first 3 years
- 34,650 Hours by end of first 5 years
- 40,950 Hours by 2035
    - Bus hours do not include approximately 30,000+ anticipated “Rail Dividend” hours made available when Light Rail opens

Light Rail

- UNC to Alston Ave Light Rail Opens in 2026

Intercity Rail

- Hillsborough Train Station Local Match by 2015

Orange County Core Transit Plan: Capital Projects Emphasis

April 23, 2012

Bus Capital Projects

- $6 million in small capital projects by 2017 (shelters, real-time info, lease Park-Ride lots)
- MLK Bus Lanes ($22 million) in 2019
- Enhanced Bus Capital Project 1 for $30 million in 2023
- Enhanced Bus Capital Project 2 for $30 million in 2027
- Enhanced Bus Capital Project 3 for $30 million in 2031

Bus Hours

- 28,350 Hours by end of first 3 years
- 34,650 Hours by end of first 5 years
- 66,150 Hours by 2035

Light Rail / Commuter Rail

- None

Intercity Rail

- Hillsborough Train Station Local Match by 2015

Orange County Core Transit Plan: Bus Hours Emphasis

Bus Capital Projects

- $3 million in small capital projects by 2017 (shelters, real-time info, lease Park-Ride lots)
- MLK Bus Lanes ($22 million) in 2019

Bus Hours

- 37,800 Hours by end of first 3 years
- 53,550 Hours by end of first 5 years
- 101,000 Hours by 2035

Light Rail / Commuter Rail

- None

Intercity Rail

- Hillsborough Train Station Local Match by 2015

ORANGE COUNTY DRAFT BUS PLAN - FUNDED AND FUTURE COMPONENTS

HILLSBOROUGH LOCAL AND RURAL ORANGE COUNTY SERVICES - FUNDED FIRST FIVE YEARS

Service Type	PROJECTS	Enhanced or New	Cumulative New Service Hours	Service Description
Local	Hillsborough Circulator	Enhanced	**2,008**	Operate Hillsborough Circulator Mon-Fri, 8 hours per day
Local	Improve Service in Unincorporated Orange County	Enhanced	**4,200**	Improve capacity of demand response service to rural areas
Local	Hillsborough Circulator Phase 2	Enhanced	**4,702**	Add Saturday Service to Hillsborough Circulator
Local	Improve Service in Unincorporated Orange County	Enhanced	**6,887**	Further improve capacty of demand response service to rural areas

HILLSBOROUGH LOCAL AND RURAL ORANGE COUNTY SERVICES - UNFUNDED, FUTURE PRIORITIES AFTER YEAR 2020

NA - All identified needs funded in first five years.

Prepared by Triangle Transit
April 23, 2012

ORANGE COUNTY DRAFT BUS PLAN - FUNDED AND FUTURE COMPONENTS

CHAPEL HILL/CARRBORO/UNC SERVICES - FUNDED FIRST FIVE YEARS

Service Type	PROJECTS	Enhanced or New	Cumulative New Service Hours	Service Description
Local	Service Improvements - 15/501 corridor	New / Enhanced	7,279	Reconfigure existing CL, D, D Express route services to improve frequency, span coverage. Improve travel time and connectivity. Extend routes to connect with TTA and DATA
Local	Service Improvements - 54 corridor	New / Enhanced	11,295	reconfigure existing routes in the the 54 corridor. Introduce new service for expanded park and ride operations for new developments. Increase hours of operation to be consistent with demand
Local	Support Existing Services	Enhanced	17,295	Support the growth in cost of established services
Local	Intoduce Sunday service in Chapel Hill, Carrboro, UNC	New	22,391	Introduce fixed route bus service on Sundays in CHT service area
local	Expand Satruday service in Chapel Hill, Carrboro, UNC	Enhanced	26,031	Redesign routes to expand coverage, hours of service and frequency on Saturdays routes
Local	Extend CHT evening service	Enhanced	30,111	Redesign evening routes to serve demand, expand operating hours to meet later work times and make schedules consistent
Local Express	Expand Pittsboro / Chapel Hill Express	Enhanced	30,927	Expand service operating hours and trips
Local	Improve CHT peak hour service frequency	Enhanced	33,136	Add additional buses on peak hour routes that are experiencing peak hour over-crowding

ORANGE COUNTY DRAFT BUS PLAN - FUNDED AND FUTURE COMPONENTS

REGIONAL SERVICES - FUNDED FIRST FIVE YEARS

Service Type	PROJECTS	Enhanced or New	Cumulative New Service Hours	Service Description
Regional Exp	Carrboro-Chapel Hill-Durham Express (Route 405)	Enhanced	**1,506**	Increase peak-hour frequency of the express route between Durham and Chapel Hill to 15 minutes during the peak commute, directly serve Downtown Carrboro with rush hour service to Durham.
Regional Exp	Mebane-Hillsborough-Durham Express Introduce Service	New	**2,510**	Introduce a new express route serving Mebane, Hillsborough, and Durham.
Regional Exp	Carrboro-Chapel Hill-Durham Express (Route 405) - mid-day	Enhanced	**4,016**	Increase frequency of the express route between Durham and Chapel Hill or Carrboro to 30 minutes during the mid-day.
Regional Exp	Carrboro-Chapel Hill-Durham Express (Route 405) - Sundays	New	**4,640**	Introduce Sunday service on route between Durham and Chapel Hill or Carrboro.
Regional	Chapel Hill-Regional Transit Center via Southpoint (Route 800) - Sundays	New	**5,264**	Introduce new Sunday service to the existing TTA route 800.
Regional Exp	Carrboro-Chapel Hill-Durham Express (Route 405) - Saturday	Enhanced	**5,484**	Extend service between Durham and Chapel Hill or Carrboro to 11pm on Saturdays.
Regional	Chapel Hill-Regional Transit Center via Southpoint (Route 800) - Saturdays	Enhanced	**5,704**	Extend service between RTP and Chapel Hill (via Southpoint) to 11pm on Saturdays.
Regional	Route 800-SW Durham (Southpoint)-Chapel Hill peak	Enhanced	**7,210**	Phase 1 service improvement - increase peak hour frequency on the existing TTA Route 800. Currently the route operates at 30-minute frequency.
Regional Exp	Chapel Hill-Raleigh Express (Route CRX) - peak	Enhanced	**7,963**	Introduce mid-day service on the express route between Chapel Hill and Raleigh.
Regional	Hillsborough-Chapel Hill (Route 420) - peak: **IMPLEMENTED in 2012**	Enhanced	**7,963**	Increase frequency of the regional route between Hillsborough and Chapel Hill to 30 minutes during the peak commute.
Regional	Additional service Hours TBD	Enhanced	**8,200**	237 additional hours that may augment any of the services above

REGIONAL SERVICES - UNFUNDED, FUTURE PRIORITIES AFTER YEAR 2020

Service Type	PROJECTS	Enhanced or New	Cumulative New Service Hours	Service Description
Regional Exp	Mebane-Hillsborough-Durham Express Expansion	New	**9,204**	Increase the frequency on an express route serving Mebane, Hillsborough, and Durham to 30 minutes at peak.
Regional	Hillsborough-Chapel Hill (Route 420) - mid-day	Enhanced	**13,722**	Increase frequency of the regional route between Hillsborough and Chapel Hill to 30 minutes during the mid-day.
Regional Exp	White Cross to Carrboro to Chapel Hill Express	New	**15,228**	Phase I - Introduce a new express route serving Alamance County and Chapel Hill (via NC-54) at an hourly frequency.
Regional Exp	White Cross to Carrboro to Chapel Hill Express	New	**16,734**	Phase II - Introduce a new express route serving Alamance County and Chapel Hill (via NC-54) at a 30-minute frequency .
Regional Exp	Chapel Hill-Raleigh Express (Route CRX) - mid-day	Enhanced	**18,366**	Introduce mid-day service on the express route between Chapel Hill and Raleigh.
Regional	Chapel Hill-Regional Transit Center via Southpoint (Route 800) - mid-day	Enhanced	**19,997**	Increase frequency of the regional route between RTP and Chapel Hill (via Southpoint) to 30 minutes during the mid-day.
Regional	Route 800- RTC via SW Durham (Southpoint)-Chapel Hill peak	Enhanced	**20,813**	Phase 2 service improvement - increase frequency of the existing Route 800 between RTP and Chapel Hill (via Southpoint) to 15 minutes during the peak commute.
Regional	Chapel Hill-Regional Transit Center via Woodcroft (Route 805) - mid-day	Enhanced	**21,691**	Introduce added mid-day trips to regional route between Woodcroft and Chapel Hill.

Prepared by Triangle Transit
April 23, 2012

DURHAM-ORANGE REGIONAL SERVICES - Comparison of Plans

The following comparison was made by MPO staff based on the adopted Durham County plan and a draft of the Orange County plan. The Orange County plan may change.

Triangle Transit Regional Bus Projects - funded first five years

Service Type	PROJECTS	Enhanced or New	Orange Plan Description	Orange Plan Hours	Durham Plan Description	Durham Plan Hours
Regional Exp	Carrboro-Chapel Hill-Durham Express (Route 405)	Enhanced	Increase peak-hour frequency of the express route between Durham and Chapel Hill to 15 minutes during the peak commute, directly serve Downtown Carrboro with rush hour service to Durham.	1,506	Carrboro-Chapel Hill-Durham Express (Route 405) - 15 minute service during peak hours	1,500
Regional Exp	Mebane-Hillsborough-Durham Express Introduce Service	New	Introduce a new express route serving Mebane, Hillsborough, and Durham.	1,004	Mebane-Hillsborough-Duke/VA Medical Centers E:	1,600
Regional Exp	Carrboro-Chapel Hill-Durham Express (Route 405) - mid-day	Enhanced	Increase frequency of the express route between Durham and Chapel Hill or Carrboro to 30 minutes during the mid-day.	1,506	Not included.	-
Regional Exp	Carrboro-Chapel Hill-Durham Express (Route 405) - Sundays	New	Introduce Sunday service on route between Durham and Chapel Hill or Carrboro.	624	Carrboro-Chapel Hill-Durham Express (Route 405) - Sundays	600
Regional	Chapel Hill-Regional Transit Center via Southpoint (Route 800) - Sundays	New	Introduce new Sunday service to the existing TTA route 800.	624	Chapel Hill-Regional Transit Center via Southpoint (Route 800) - Sundays	600
Regional Exp	Carrboro-Chapel Hill-Durham Express (Route 405) - Saturday	Enhanced	Extend service between Durham and Chapel Hill or Carrboro to 11pm on Saturdays.	220	Chapel Hill-Durham Express (Route 405) - extend Saturday hours to 11pm	200
Regional	Chapel Hill-Regional Transit Center via Southpoint (Route 800) - Saturdays	Enhanced	Extend service between RTP and Chapel Hill (via Southpoint) to 11pm on Saturdays.	220	Chapel Hill-Regional Transit Center via Southpoint (Route 800) - extend Saturday hours to 11pm	200
Regional	Route 800-SW Durham (Southpoint)-Chapel Hill peak	Enhanced	Phase 1 service improvement - increase peak hour frequency on the existing TTA Route 800. Currently the route operates at 30-minute frequency.	1,506	Chapel Hill-Regional Transit Center via Southpoint (Route 800) 15 minute service during peak hours	1,500
Regional	Additional service Hours TBD	Enhanced	237 additional hours that may augment any of the services above	237	By 2035 (both regional and local)	27,000

Durham-Orange Corridor Rail Project

Opening Date

Durham Plan - opens 2025 (this date is not actually noted anywhere in the text of the plan, but was assumed in the financial analysis)

Orange Plan - opens 2026

Capital Cost

Durham Plan - $1.4 billion total, $1.05 billion Durham County (2011 $)

Orange Plan - $1.4 billion total, $330 million Orange County (2011 $)

Operations and Maintenance Cost

Durham Plan - $15 million/year, $11.3 million/year Durham County (2011 $)

Orange Plan - $15 million/year, $3.2 million Orange County (2011 $)

Local Revenue Share

Durham Plan - "Durham County to fund all rail investment (capital, operations, and maintenance costs) within Durham County with the exception of the light rail investment found within those portions of the Chapel Hill town limit which are inside Durham County"

The percentages are not noted in the text of the plan, but these would be 23.9% Orange County, 76.1% Durham County for both capital and operating costs

Orange Plan - no specific language noted in the text of the plan

Agreement proposed by Durham County in March 2012 was 22.9% Orange County, 77.1% Durham County for capital costs

The DRAFT Bus and Rail Investment Plan of Orange County

5/8/2012

The Bus and Rail Investment Plan of Orange County

The Bus and Rail Investment Plan of Orange County

I. INTRODUCTION

Orange County has achieved an enviable quality of life at the end of the first decade of the 21st century. Recent accolades include its ranking as the best place to live in the South by *Money* magazine, the #1 housing market in the US by the *Wall Street Journal* and one of the best places in the nation to raise children by *Business Week* magazine. Orange County is nationally known for its excellent public education systems. Two districts serve the residents of Orange County - The Chapel Hill-Carrboro City School System and the Orange County School System. The University of North Carolina at Chapel Hill consistently ranks among the great institutions of higher education in the nation, most recently honored by *US News & World Report*.

With these successes comes growth in population and increased pressure on our roads and highways. Since 2004, the Triangle has moved from 46th largest metro area in the nation to 40th in 2009, and our vehicle demand on freeways is up by 28% over those five years. Recently, our region was named the 3rd most sprawling urban area in the country among the 83 areas studied.

In its 2009 long-range (2035) report, the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (DCHC MPO) noted that the region's population would more than double over the 25-year period. For the last two decades, the demand on our roads has grown significantly faster than our population. Even with planned highway improvements and likely additional revenues for new roads, it is clear that Orange County and the region will see declining levels of service on major roads in the next 25 years. Orange County population grew by 1.6% a year since 2000 and is projected to grow from the countywide 2010 census of 133,801 to approximately 173,000 by 2030.

The economic costs for our increasingly congested roads are significant. In its 2010 Annual Urban Mobility Report, the Texas Transportation Institute estimated that our region has "congestion costs" of almost one-half billion dollars a year. Recently, a May 10, 2011 study cited in Forbes magazine found that the Triangle was the urban region in the nation that is most vulnerable to rising gasoline prices. Enhanced transportation options need to be created to ensure that Orange County's residents of all income levels have access to centers of employment and commerce.

Orange County residents and its regional neighbors are aware of the growth in clogged roads, as well as the accompanying air quality problems, negative economic impacts and the loss of the quality of life we enjoy if these transportation challenges are not met. Local citizens and elected leaders have responded to these challenges, with some assistance from state government, as described in this investment plan.

II. TRANSIT PLANNING STEPS LEADING UP TO THIS PLAN

Beginning in 2007, a blue-ribbon group of Triangle leaders (the Special Transit Advisory Commission, or STAC) met for over a year and in 2008 unanimously recommended a regional vision for bus and rail investments. One year later, the region's two Metropolitan Planning Organizations (MPOs) fully incorporated the STAC recommendations into their long-range (25 year) transportation plan.

In August 2009, Governor Beverly Perdue signed into law the Congestion Relief and Intermodal Transport Fund Act (HB 148), legislation that allows Orange, Durham and Wake counties to generate new revenues for public transportation. These new revenues can include a one-half cent sales tax, if approved by the public through a referendum, as well as an additional $10 in local and regional vehicle registration fees.

Over the last 2 years, Triangle Transit staff has worked with municipal, Orange County, MPO and other regional transportation staff to develop a detailed, 25-year plan for new bus and rail investments designed to provide greater transportation options for residents and employers. These investments would positively impact traffic congestion and air quality, and support local land use policies. This plan is the culmination of that collaboration and proposes crucial public investments and services to maintain our quality of life and economic vitality for the next 25 years.

Extensive public engagement has occurred over the past year in the development of the bus and rail elements of this plan. In 2010 and 2011Triangle Transit and local transportation staff members from municipalities, counties and MPOs conducted a series of 19 public workshops, at various locations throughout the Triangle, on the process and substance of the plan's development. A total of over 1,100 participants attended the meetings and they provided over 500 comments on the plan. Since that time, the project web site, www.ourtransitfuture.com, was viewed by over 73,000 unique individuals with 2.3 million page hits. The web site houses all of the presentation materials and proposed plan elements.

Additionally, the DCHC MPO held five public workshops to receive input on the proposed plan in 2011. The Orange County Board of Commissioners held two public hearings and two public workshops to provide opportunities for the public to ask questions and provide feedback on the proposed plan.

There have been dozens of meetings with citizens, local elected officials, staff and members of the region's MPOs, community stakeholders and business leaders, allowing extensive feedback on the proposed bus and rail elements of the plan. The financial and service elements of this plan are coordinated with the adopted Durham County Bus and Rail Investment Plan. Additionally, this bus and rail investment plan builds on the existing transit

services and therefore does not eliminate or reduce the current financial and service commitments.

III. PLAN ELEMENTS

A. Public Transit Providers

The Triangle has a number of public transit providers who have been involved in the development of this plan and will have responsibility to implement the recommendations of the plan once it is approved. Below is a brief description of the transit agencies:

Chapel Hill Transit is a multijurisdictional agency formed by a partnership of the Towns of Chapel Hill, Carrboro and the University of North Carolina at Chapel Hill. Chapel Hill Transit is responsible for regular and express route and demand response service in the Chapel Hill, Carrboro, and University area. Chapel Hill Transit also provides regional express bus service, in cooperation with Triangle Transit to Hillsborough.

Orange County Public Transit is a county agency that provides community transportation in unincorporated Orange County consisting of demand response service and circulator service within Hillsborough in cooperation with the Town of Hillsborough. Orange County Public Transportation is responsible for providing transportation services to all residents of unincorporated Orange County, the Town of Hillsborough and a portion of the City of Mebane with destinations within and beyond Orange County borders.

Triangle Transit is a regional transit agency serving Wake, Durham and Orange counties. Triangle Transit is responsible for the provision of regional commuter express and demand response service connecting Wake, Durham and Orange counties

B. New Bus Service

Representatives from Orange County, Chapel Hill, Carrboro, Hillsborough, The University of North Carolina at Chapel Hill, and Triangle Transit have worked collaboratively to develop a comprehensive bus service improvement plan that supports the effort to improve public transit in Orange County. The group identified a range of services that would address county-wide transit service needs. Identified services were ranked and prioritized based on a set of goals and strategies.

Goals include:

- Improve overall mobility and transportation option in the region
- Provide geographic equity
- Support improved capital facilities
- Support transit supportive land use
- Provide positive impact on air quality.

Strategies to accomplish these goals include:

- Improve connectivity
- Increase frequency in peak hours
- Improve weekend, night services (off peak)
- Enhance existing service
- Maintain existing services
- Maintain level of local funding at no less than the August 1, 2009 spending level

Over the course of the plan, a new half-cent sales tax would enable delivery of a total of 41,000 additional bus hours in Orange County. By comparison, Chapel Hill Transit currently provides 190,000 annual bus hours and Orange Public Transportation provides 12,846 annual bus hours. The projects will provide benefits to all areas of the county by enhancing urban and rural transit services.

Bus improvement projects were classified by type of service:

- Local bus service - service operating within Orange County boundaries
- Rural or Non-urban service- new or supplemented bus service in northern and western portions of the County.
- Regional express service - service operating in more than one county or between separate urban areas

First Five Years following successful sales tax referendum

An investment that equals about 34,650 bus service hours will be provided during the first five years. Improvements include:

Improve connectivity

- New regional service connecting Carrboro, Chapel Hill, and Durham
- New regional express service connecting Mebane, Hillsborough and Durham.

Increase frequency in peak hours

- Enhanced services in the US 15/501 corridor between Durham and Chapel Hill for Chapel Hill Transit, Triangle Transit, and DATA.
- Improvements in the NC 54 corridor transit service.
- Increased peak hour service on Triangle Transit Route 800 between Research Triangle Park and Chapel Hill.
- Increased peak hour service on Triangle Transit Route 420 between Hillsborough and Chapel Hill.

Improve weekend, night services (off peak)

- New Saturday service on the in-town Hillsborough circulator.
- Expanded local Saturday service in Chapel Hill, Carrboro and UNC.
- Expanded regional Saturday service on existing Triangle Transit Route 405 between Durham and Chapel Hill and Triangle Transit Route 800 between Chapel Hill and the Research Triangle Park.

- Expanded regional Sunday service on existing Triangle Transit Route 405 between Durham and Chapel Hill and Triangle Transit Route 800 between Chapel Hill and the Research Triangle Park.
- New local Sunday service in Chapel Hill, Carrboro and UNC.
- Expanded local evening service in Chapel Hill, Carrboro and UNC.

Bus Service Enhancements

- Enhanced rural transit service in unincorporated Orange County.

Maintain existing services.

- A portion of revenues identified in the plan will be used to support existing bus service.
- Continue weekday hourly service on the in-town Hillsborough circulator.

C. New Bus Capital Investments
   a. Park and Ride lots
   b. Bus Shelters
   c. Real-time passenger information signs and technology
   d. Bus stop access improvements such as sidewalks.

D. Hillsborough Amtrak Station

   The plan will provide local funding to support the creation of a station in the Town of Hillsborough.

Year six and beyond following successful sales tax referendum

An additional 6,350 new bus service hours will be provided between year six of the plan implementation through the end of the program (year 2035) bringing the total to 41,000 total new bus hours.

Improvements include:

- Increase frequency in peak hours
  - Increased peak hour service on Pittsboro – Chapel Hill Express.
  - Increased peak hour service on the existing Triangle Transit Route 800 between Research Triangle Park and Chapel Hill.
  - Increased peak hour service in Chapel Hill, Carrboro and UNC.
- Service Enhancements
  - Continued enhancements to rural transit service in unincorporated Orange County.

E. New Light Rail Service

The Orange County Bus and Rail Investment plan provides funding for a fixed guideway transit system that would connect Durham and Orange counties using Light Rail technology (LRT). The 17-mile alignment extends from the University of North Carolina (UNC) Hospitals to Alston Avenue/ NCCU in East Durham. A total of 17 stations have been proposed including a station next to the Dean Smith Center, Hamilton Road, the Friday Center, as well as a potential station at Woodmont/ Hillmont or Meadowmont in Chapel

Hill. Stations in Durham include Patterson Place along US 15-501, the South Square area, at Duke Medical Center, Ninth Street, and downtown Durham, with convenient access to nearby bus and Amtrak intercity rail connections. Due to the light rail vehicle's capabilities and the requirements of the activity centers and neighborhoods being served along the corridor, light rail stations are routinely spaced between ¼ mile and 2 miles apart.

Light Rail vehicles are electrically powered and travel at speeds up to 55 mph. The total travel time for the 17-mile alignment is about 35 minutes, including stops. The vehicles are approximately 90 feet long and can operate in both directions. Additional cars can be added as demand increases. Recent 2035 projections indicate that ridership will exceed approximately 14,000 boardings per day. These projections are subject to change as the demand model is refined and as development, population and employment changes are recognized.

Light rail vehicles can operate in exclusive right of way, as well as along urban streets, and characteristically serve accessible low platforms (14 inches high) at each station. The operations plan for the 17-mile alignment includes train frequencies (headways/ e.g. time between each train) of 10 minutes during the morning and evening peak and 20 minutes during the off-peak hours and on weekends. Vehicles will operate on an 18-hour schedule each weekday. Several potential light rail vehicle maintenance facility locations are being evaluated. Detailed alignment and station location decisions will be made at the end of Preliminary Engineering.

The total capital cost for the Durham and Orange Light Rail Project is approximately $1.4 billion (2011 dollars). Orange County's share is $316.2 million (2011 dollars). Operations and Maintenance costs are estimated at $14.44 million/year (2011 dollars). Orange County's share of the Operations and Maintenance costs are $3.2 million/ year (2011 dollars). For Orange County's share of the capital cost of the Light Rail project the total cost allocation is Orange County 25%, and an assumed State participation of 25% and Federal Participation of 50%.

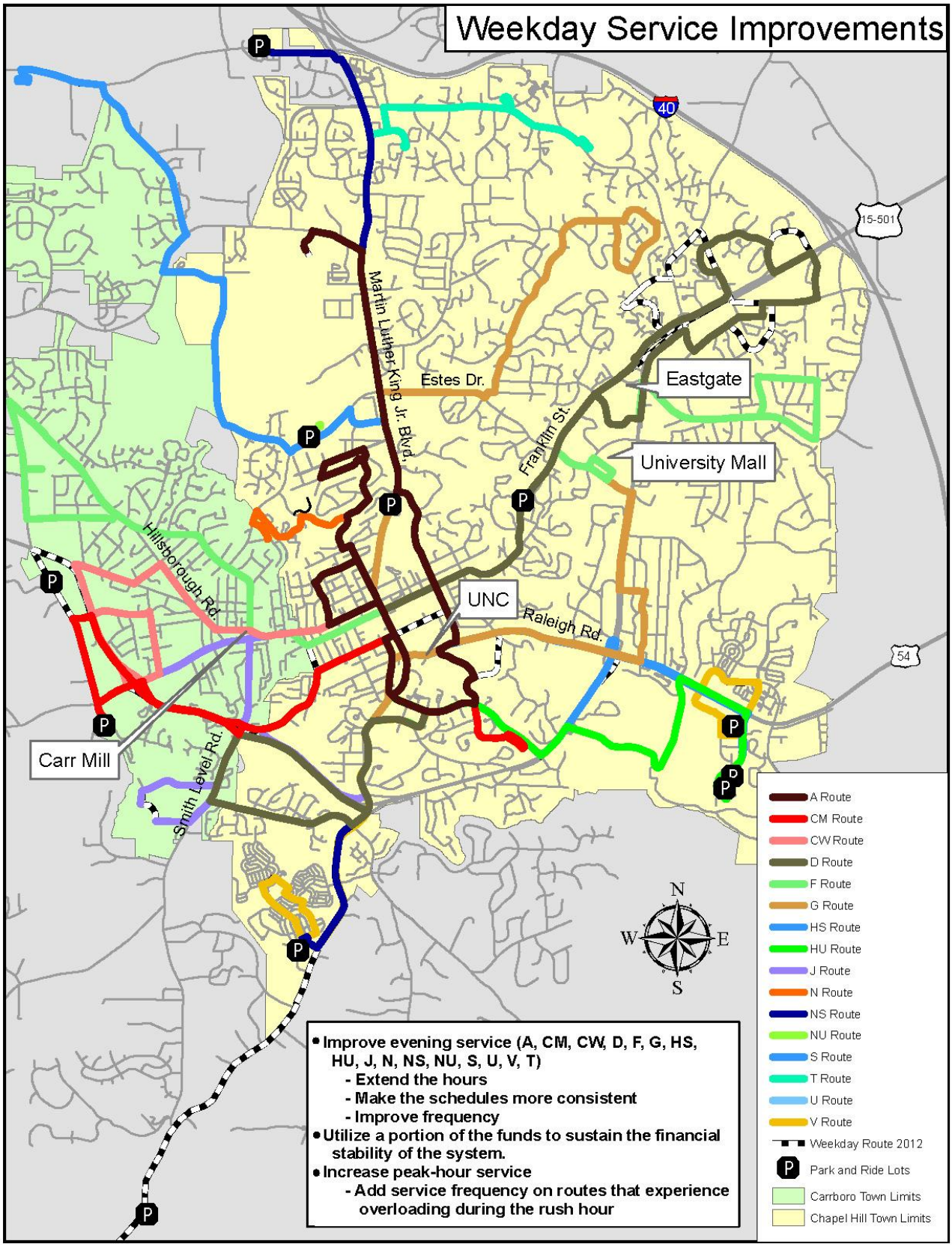
F. Martin Luther King Boulevard Bus Lanes

This investment provides for bus-only lanes on Martin Luther King (MLK) Boulevard from Interstate 40 to Estes Drive. It will make bus travel times more reliable in peak periods. Existing buses in the MLK corridor will be re-routed to take advantage of the enhanced bus lanes.

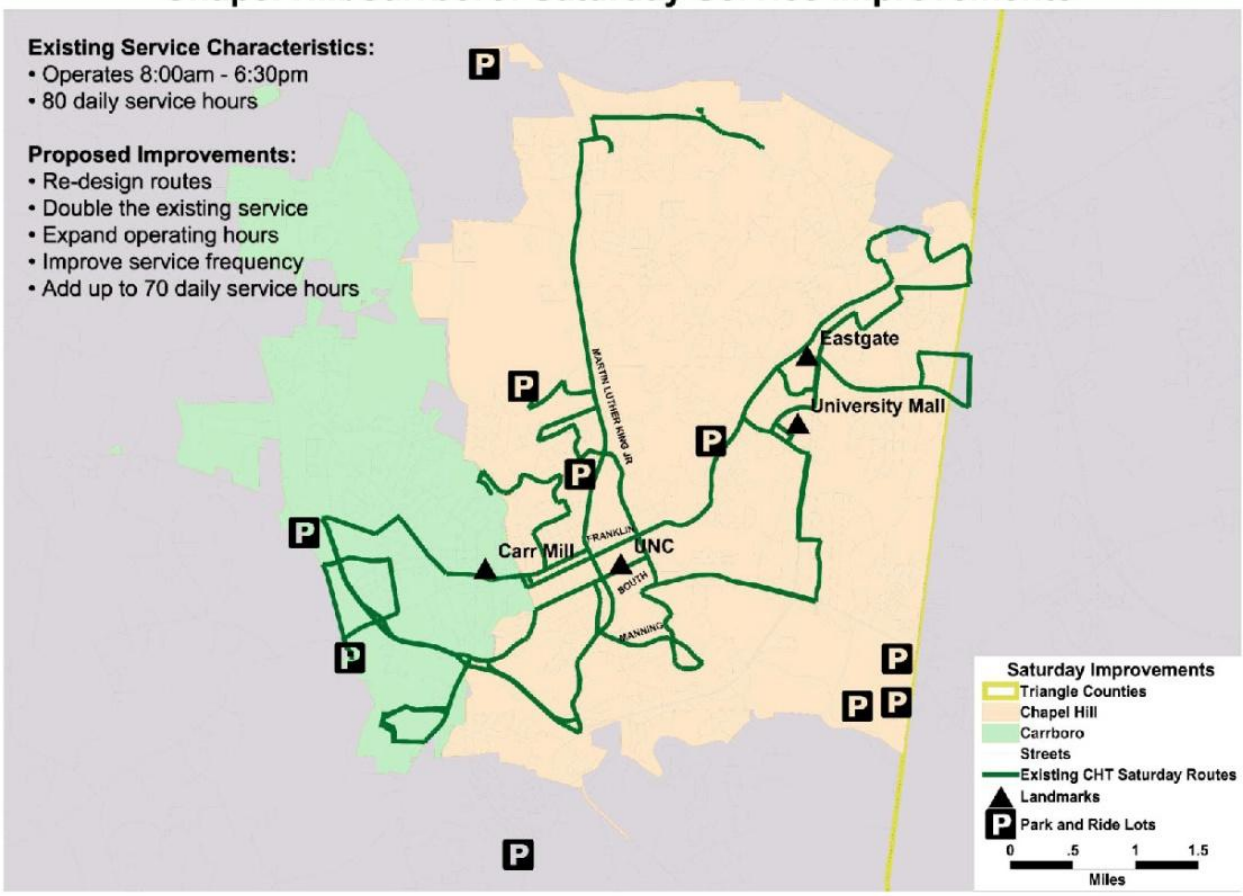
Orange County's cost for the bus lanes is anticipated to be $20 to $25 million. This project assumes 25% of the funding will come from the State and 50% of the funding will come from the Federal Government. Since the bus lanes will be used by existing services, they do not generate any additional operational costs within the plan.

IV. **MAPS :** The series of maps listed below articulate proposed investments in both bus and rail throughout Orange County.

- **a.** Chapel Hill Transit Weekday Service Improvements
- **b.** Chapel Hill/ Carrboro: Saturday Service Improvements
- **c.** Chapel Hill/ Carrboro: Sunday Service Improvements
- **d.** Improved Bus Service in US 15/ 501 and NC 54 Corridors
- **e.** Orange County Transit Plan: Proposed Regional Bus Service Improvements
- **f.** Durham-Orange Light Rail Transit Project
- **g.** Improved Bus service on MLK
- **h.** Regional Integration of Orange, Durham, and Wake Transit Plans

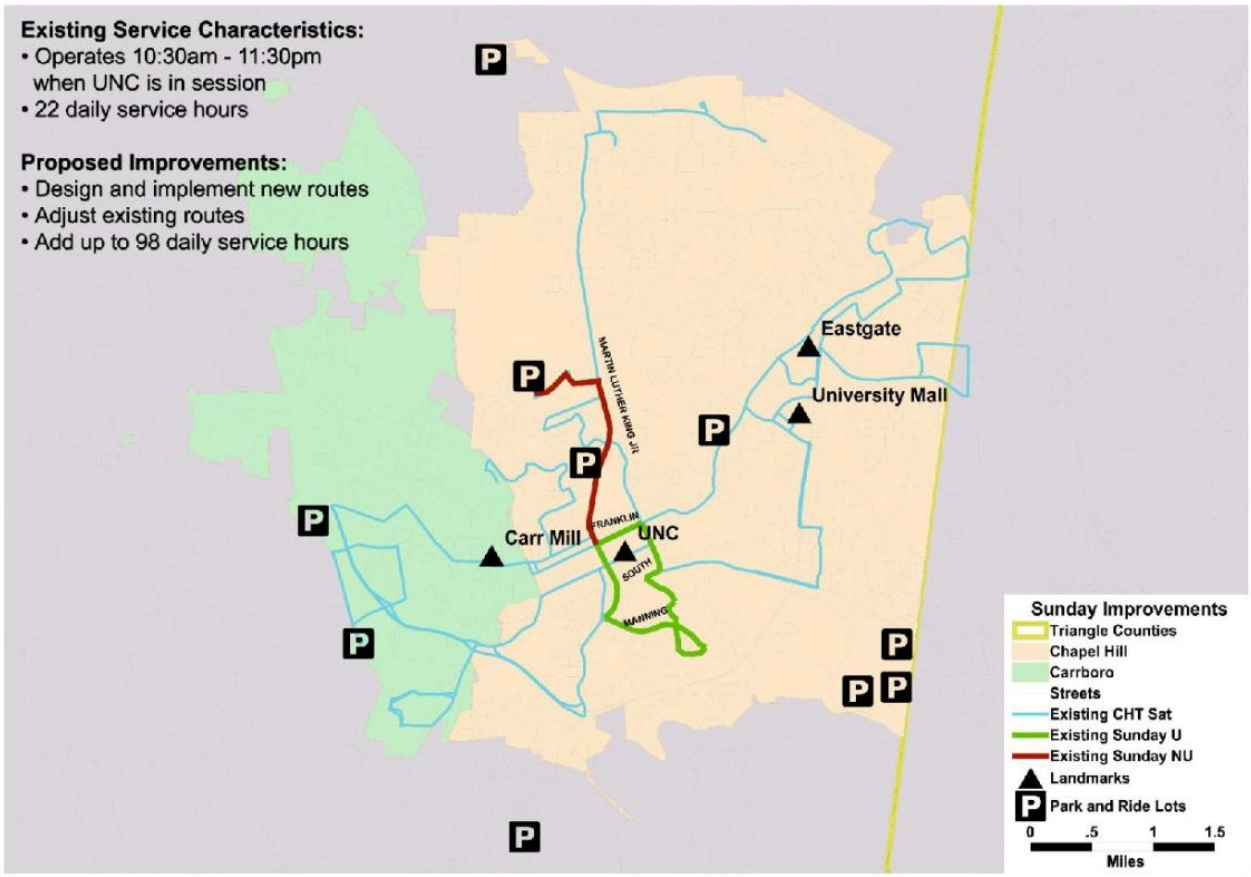

Weekday Service Improvements
40
15-501
54
Martin Luther King Jr. Blvd.
Estes Dr.
Franklin St.
Eastgate
University Mall
UNC
Raleigh Rd.
Hillsborough Rd.
Smith Level Rd.
Carr Mill
N
W
E
S
• Improve evening service (A, CM, CW, D, F, G, HS, HU, J, N, NS, NU, S, U, V, T)
- Extend the hours
- Make the schedules more consistent
- Improve frequency
• Utilize a portion of the funds to sustain the financial stability of the system.
• Increase peak-hour service
- Add service frequency on routes that experience overloading during the rush hour
A Route
CM Route
CW Route
D Route
F Route
G Route
HS Route
HU Route
J Route
N Route
NS Route
NU Route
S Route
T Route
U Route
V Route
Weekday Route 2012
Park and Ride Lots
Carrboro Town Limits
Chapel Hill Town Limits

Chapel Hill/Carrboro: Saturday Service Improvements

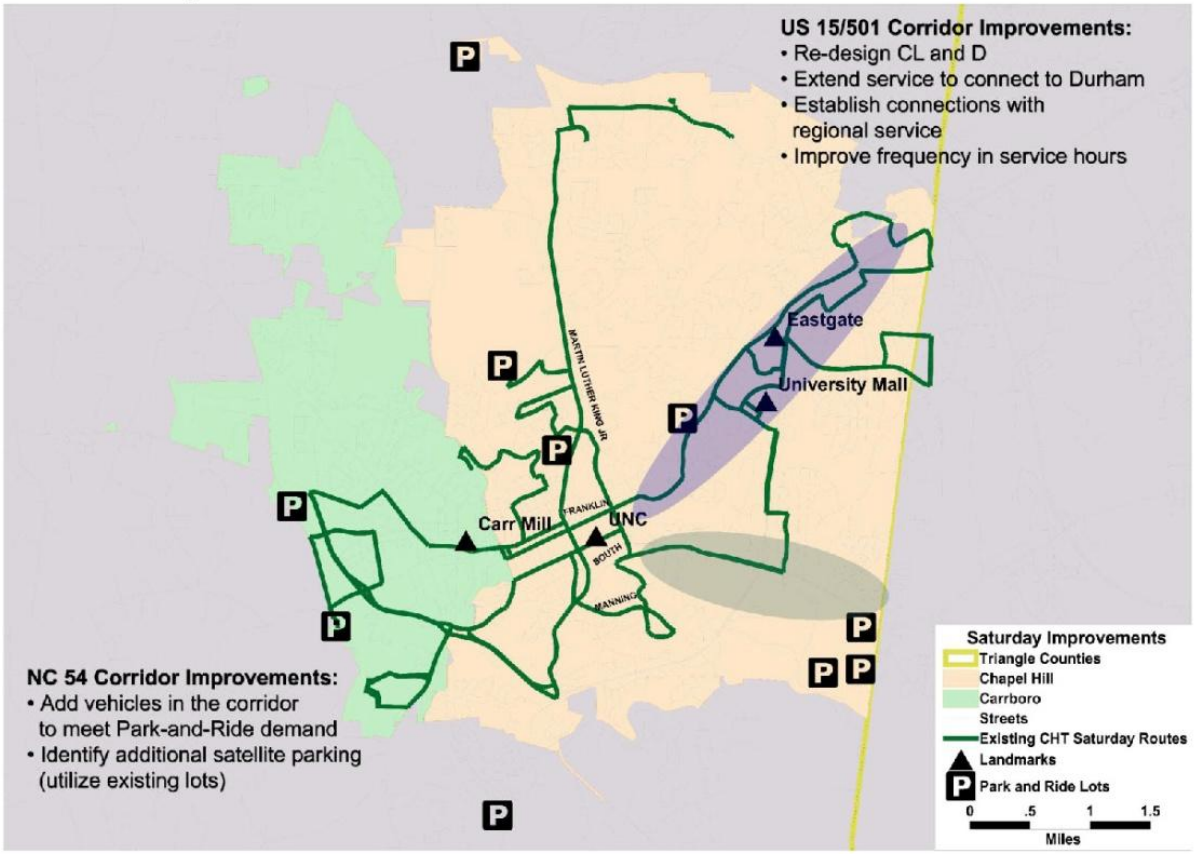


v.

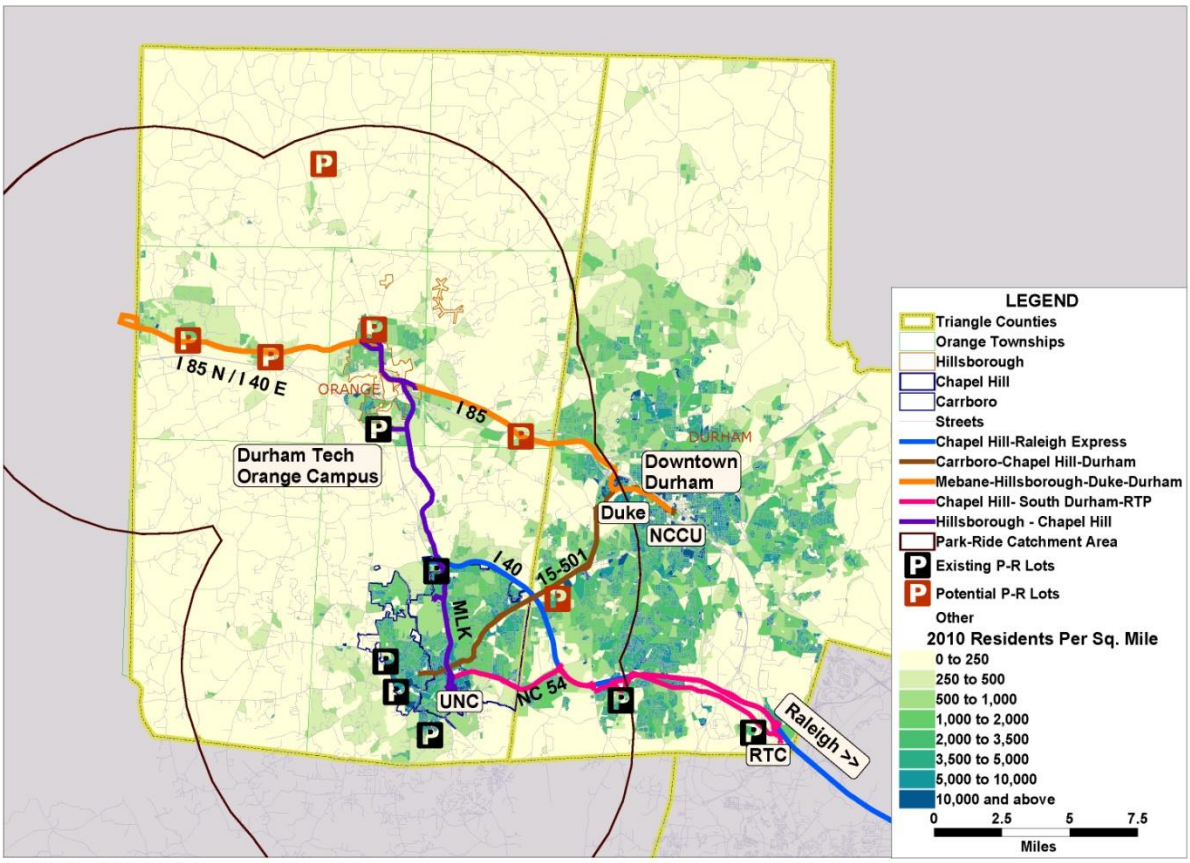
Chapel Hill/Carrboro: Sunday Service Improvements



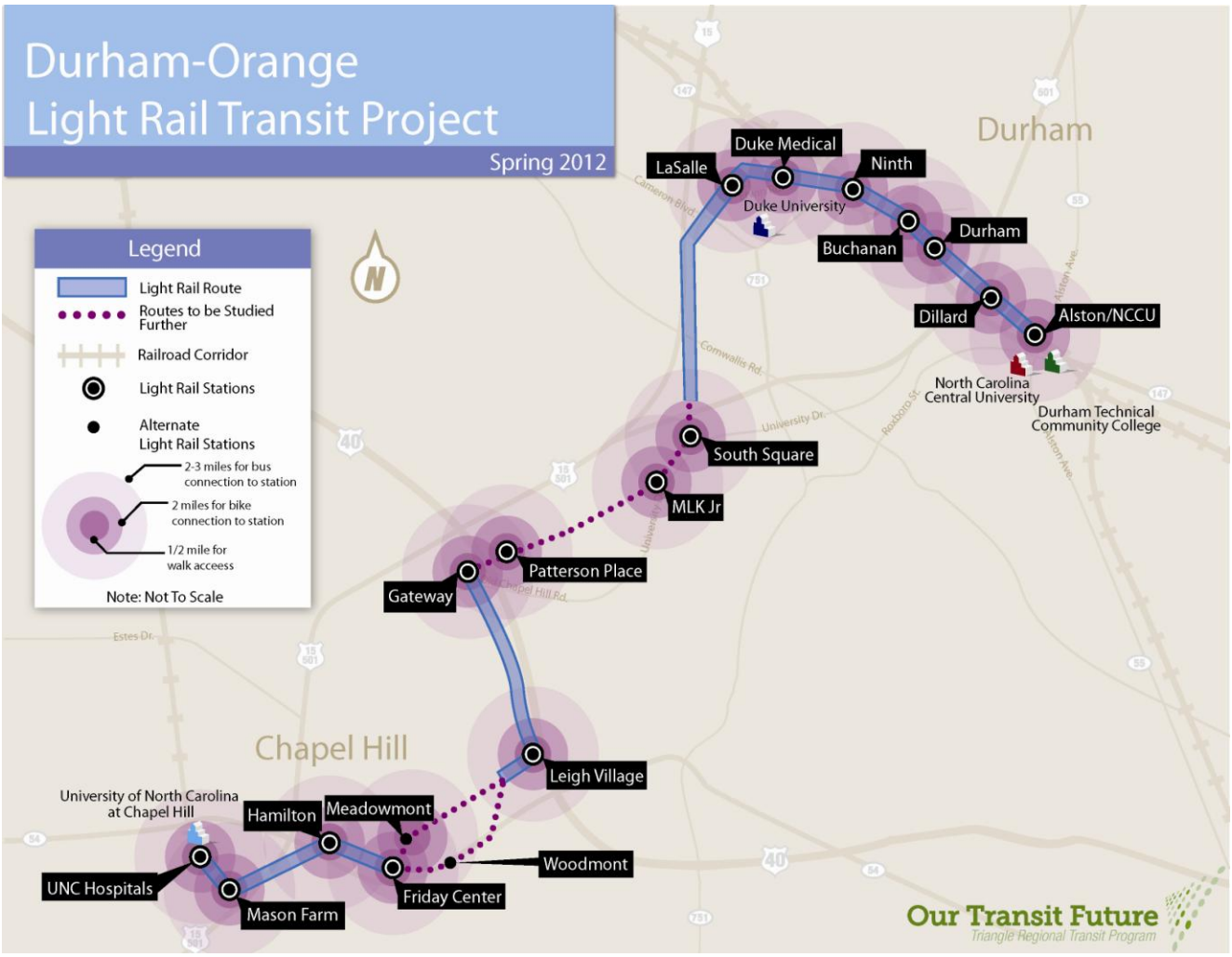
Improved Bus Service in US 15/501 and NC 54 Corridors



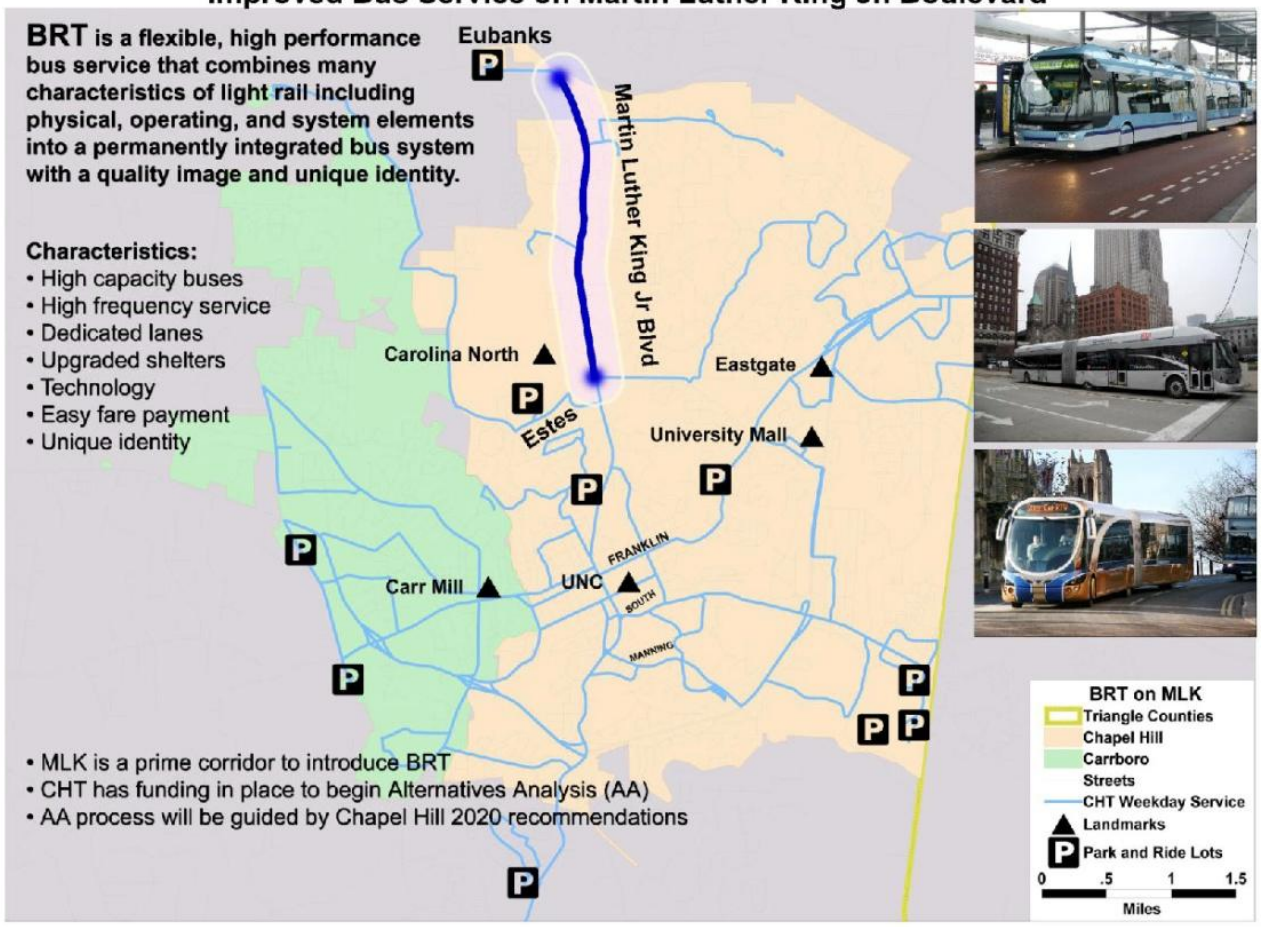
Orange County Transit Plan: Proposed Regional Bus Service Improvements



Created by Triangle Transit Staff
April 23, 2012


Durham-Orange
Light Rail Transit Project
Spring 2012
Legend
Light Rail Route
Routes to be Studied Further
Railroad Corridor
Light Rail Stations
Alternate Light Rail Stations
2-3 miles for bus connection to station
2 miles for bike connection to station
1/2 mile for walk acceess
Note: Not To Scale
Durham
Duke Medical
LaSalle
Ninth
Duke University
Buchanan
Durham
Dillard
Alston/NCCU
North Carolina Central University
Durham Technical Community College
South Square
MLK Jr
Patterson Place
Gateway
Chapel Hill
Leigh Village
University of North Carolina at Chapel Hill
Hamilton
Meadowmont
Woodmont
UNC Hospitals
Mason Farm
Friday Center
Our Transit Future
Triangle Regional Transit Program

Improved Bus Service on Martin Luther King Jr. Boulevard



V. ORANGE COUNTY REVENUES

A variety of revenue sources provide the funding for the Orange County Bus and Rail Investment Plan. Those revenues include:

- A new one-half-cent sales tax in Orange County
- A new $7 vehicle registration fee levied by Orange County
- An increase of $3 to the existing $5 vehicle registration fee currently levied by Triangle Transit in Orange County
- Revenue from Triangle Transit's rental car tax
- NC State Government contributions
- Federal Government contributions
-

In addition, local funding of current transit services will remain in place.

The initial proceeds for each local revenue stream for Orange County in 2012 for transit are assumed to be:

- ½-cent sales tax: $5.1 million
- $7 vehicle registration fee: $770,000
- $3 vehicle registration fee increase: $330,000

- Rental car tax revenue: $560,000

Growth rates assumed for each revenue source:

- ½-cent sales tax:
  - Growth rate from 2011 through 2014: 1.5%
  - Growth rate from 2015 through 2035: 3.6%
- $7 vehicle registration fee: 2.0%
- $3 vehicle registration fee increase: 2.0%
- Rental car tax revenue: 4.0%

$28 million would be borrowed over the life of the plan. This borrowing would cover for the large capital expenditures which occur for 3 to 4 years of construction of the light rail component of the plan. Any borrowing would be from capital markets through government bonds, would require approval by the NC Local Government Commission, and would have to meet debt to revenue ratios required by the capital markets for bond issuance.

Further details for each revenue source follow.

A. One-half cent sales tax in Orange County

A one half-cent sales tax in Orange County means that when individuals spend $10.00 on certain goods and services, an additional five cents ($0.05) is added to the transaction to support the development of the Bus and Rail Investment Plan. Purchases of food, gasoline, medicine, health care and housing are excluded from the tax.

A one half-cent sales tax in Orange County is estimated to generate $5.1 million in 2012. Over the life of the plan to 2035, the sales tax is expected to generate $165 million in Year-Of-Expenditure (YOE) dollars. This tax can only be levied subsequent to a referendum by the Orange Board of County Commissioners and approval by the voters.

Revenue identified in the Bus and Rail Investment Plan for Orange County can be used for financing, constructing, operating and maintain local public transportation systems. The funds can be used to supplement but not supplant or replace existing funds or resources for public transit systems.

B. $7 Vehicle Registration Fee in Orange County

A seven dollar ($7) vehicle registration fee in Orange County means that when an individual registers a new vehicle or renews the registration for an existing vehicle in Orange County, an additional $7 per year is added to the cost above the other required registration fees for that vehicle.

The seven dollar fee in Orange County is expected to bring in $580,000 in 2012. Over the life of the plan to 2035, the seven dollar fee is expected to generate $22.5 million in Year-Of-Expenditure (YOE) dollars.

C. $3 Vehicle Registration Fee Increase for Triangle Transit in Orange County

A three dollar ($3) vehicle registration fee increase in Orange County means that when an individual registers a new vehicle or renews the registration for an existing vehicle in Orange County, an additional $3 per year is added to the cost above the other required registration fees for that vehicle. An existing $5 fee for vehicle registration supports activities of Triangle Transit, including bus operations and long-term planning. This fee would be increased to $8 when the $3 increase is implemented.

The three dollar fee in Orange County is projected to generate $250,000 in 2012. Over the life of the plan to 2035, the three dollar fee is expected to generate $9.7 million in Year-Of-Expenditure (YOE) dollars.

D. Revenue from Triangle Transit's Rental Car Tax

Triangle Transit operations are partially funded by a five percent (5%) tax on car rentals in Wake, Durham, and Orange Counties. Under existing policy adopted by the TTA Board, 50% of the rental car tax revenues are dedicated to advancing long-range bus and rail transit.

Since a significant portion of all cars rented and driven in the three counties are rented at RDU International Airport, it is difficult to determine which rentals are driven primarily in one county or another. Therefore, the 50% rental revenues dedicated to long-term transit were allocated by county according to the percentage of population in the Triangle Region, which is: Wake (68%); Durham (21.5%); Orange (10.5%).

The Triangle Transit rental car tax proceeds directed to project development in Orange County are estimated to be $560,000 in 2012. Over the life of the plan to 2035, the rental car tax is expected to generate $21.3 million in Year-Of-Expenditure (YOE) dollars for Orange County.

E. NC State Government Funding

The plan includes a 25% capital cost contribution by the NC Department of Transportation (NCDOT) for both light rail and commuter rail projects in Orange County. This level of participation was established by the State in the Charlotte Blue Line light rail project in 2003. The plan assumes that NCDOT also pays for 10% of bus capital costs (replacement buses, new buses, park and ride lots, etc) consistent with its current practices.

F. Federal Government Funding

The plan assumes that the Federal Government contributes 50% of the capital cost for the light rail project in Orange County. This was the federal level of participation in the Charlotte Blue Line light rail project and is consistent with federal funding outcomes for most rail projects in the Federal Transit Administration's New Starts program in recent years.

The plan assumes that the Federal Government also pays for 80% of bus capital costs, consistent with its current practices, and continues to provide operating appropriations consistent with present Federal Transit Administration operating grant formulas. Assumed Federal Government contributions to the plan total $239 million in YOE dollars from 2012 through 2035.

G. Transit Fares

The plan assumes fares for all operating agencies remain unchanged from the existing fare structures.

- Light Rail farebox recovery ratio: 20%
- Triangle Transit bus farebox recovery ratio: 15%
- Chapel Hill Transit bus farebox recovery ratio: 0%

H. Additional Revenue Sources

This draft Bus and Rail Investment Plan does not rely on additional municipal contributions, public or private 3rd party contributions, or value capture forms of revenue.

VI. ORANGE FINANCIAL PLAN DATA

The following is a list of the total spending for each technology and category identified in the Orange County Bus and Rail Investment Plan.

- Rail Capital: $418 million ($316.2 million in 2011 dollars)
- Rail Operations: $58 million
- Bus Capital: $40 million (including MLK Bus Lanes)
- Bus Operations: $109 million
- Debt: $19 million

VII. IMPLEMENTATION AGREEMENT: ANNUAL REVIEW AND CHANGES TO THE PLAN

The Bus and Rail Investment Plan of Orange County details the specific elements of local and regional bus service, and Light Rail service to be added in Orange County over a twenty-three year period. Because of the long time frame for implementation of the Plan and its major capital projects, over time there will be changes and revisions made to the Plan. As the statutory implementation agency, Triangle Transit will work with Orange County, the DCHC Metropolitan Planning Organization (MPO), and the towns of Chapel Hill, Carrboro, Hillsborough, the University of North Carolina at Chapel Hill and Chapel Hill Transit, and the public transit provider in Orange County, to develop and execute an Implementation agreement which details the following aspects of implementation of the Plan:

(a) Annual review presentations of the activities and progress made in implementation of the Plan by Triangle Transit to the County and the MPO;

(b) The process for review and vote by the County, the MPO and Triangle Transit's Board of Trustees or the role of the operating agency regarding on any significant or substantial revisions to the Plan required by changes experienced in revenues received, capital costs, operating expenses, or other substantial issues affecting the Plan;
(c) A recognition and preservation of decision making responsibilities of the operating agencies;
(d) Responsibility of Triangle Transit for direct disbursement of funds from the revenues received per Section V (above) to the public agency responsible for implementing the bus services set forth in the Plan; and
(d) Other necessary provisions regarding implementation of this Plan as agreed to by the County, the MPO, and Triangle Transit

VIII. CLOSING SUMMARY

The Bus and Rail Investment Plan of Orange County is the result of years of collaborative work among Orange County elected officials and civic leaders , regional stakeholders, municipal and county staff and Triangle Transit. The plan consists of a balance of bus improvements and rail investment to help accommodate the population and employment growth that the region is expected to experience in the next 25 years.

The proposed plan addresses the ongoing need to provide more options to transit riders with improved and expanded bus and rail connections. Once implemented, the residents of Orange County will be able to have greater access to jobs, shopping, and activity centers such as downtown Chapel Hill and Carrboro, the University, or the Hospital.

Additionally, the plan will provide core infrastructure investment that will help support the goals and objectives of local land use plans in Orange County and its municipalities. In particular, as evidenced in communities across the country, investment in light rail has proven to be a great motivator for private companies to build transit-oriented development at station locations along the rail corridor. This kind of more intense development generally consists of a mixed-use, walkable environment that can provide a more sustainable alternative to the suburban growth pattern that exists today, while allowing more open space to be preserved.

All the elements listed in the Draft Bus and Rail Investment Plan of Orange County are fiscally constrained. At every turn, the Plan is conservative in revenue assumptions and incorporates contingencies for capital and operating expenditures.

The draft plan has been shared with the general public, Carrboro Board of Aldermen, Chapel Hill Town Council, the Hillsborough Town Commissioners, the DCHC MPO, the Burlington-Graham MPO and the Orange County Commission. The draft plan will be considered for approval by the DCHC MPO, the Burlington–Graham MPO, the Triangle Transit Board of Trustees, and the Orange County Board of Commissioners. The Orange County Board of

Commissioners will determine if and when to set a referendum date. Once a referendum passes, work can begin on implementation of the Bus and Rail Investment Plan.

TOWN OF HILLSBOROUGH *Downtown Access Study*

Final Report | February 2012

TOWN OF HILLSBOROUGH

DCHC
Durham-Chapel Hill-Carrboro
METROPOLITAN
Planning Organization

Kimley-Horn
and Associates, Inc.

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Acknowledgements

The *Hillsborough Downtown Access Study* was a collaborative process that built upon previous planning efforts and provided functional design-level detail for improvements to the Churton Street corridor. The plan was initiated by the Town of Hillsborough and the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization. The plan was directed by a staff-level Advisory Committee. The planning process was rooted in a public design charrette attended by residents, business owners, local agency representations, and local staff. Everyone's effort to produce a functional and implementable plan is greatly appreciated.

Churton Street is many things to the Town of Hillsborough and its residents and visitors. It's the Town's "Main Street," a conduit to one of the state's historic and cultural gems, and a north-south access road to residential neighborhoods in the downtown core. And, despite the efforts of state and local planners, it's a cut-through for regional traffic including heavy trucks.

Previous plans focused on rerouting traffic around town with significant cost, environmental obstacles, and likely negative impacts to downtown merchants. Recently, the Elizabeth Brady Road Extension project (Hillsborough Bypass) was eliminated from the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (DCHC-MPO) 2035 Long Range Transportation Plan at the request of the Town of Hillsborough. Instead, the Town and DCHC-MPO turned their attention to a series of projects to address anticipated long-term congestion along Churton Street. These projects include:

- South Churton Street widening
- Eno Mountain Road/Mayo Street re-alignment and safety improvements.
- NC 86 widening between US 70-A and Old NC 10
- NC 86 widening from US 70 Bypass to Coleman Loop Road
- Orange Grove Road Extension to US 70 Alternate

For the most part, these projects are long-term unfunded solutions and cannot be expected to address existing congestion. As a result, the Town shifted its focus to analyzing existing and near-term congestion within the Churton Street corridor and identifying immediate and short-term solutions for mobility. The Town of Hillsborough with support from the DCHC-MPO initiated the *Hillsborough Downtown Access Study* to answer the following questions:

- What cost effective solutions will improve traffic downtown, not necessarily to speed people through town but rather to make a "slow" trip enjoyable?
- Can improvements at intersections (e.g. turn signals, longer or new turn lanes) improve traffic flow?
- What traffic calming measures could protect or enhance the walkability of downtown?
- What are the impacts—positive and negative—if on-street parking along Churton Street was removed to provide wider sidewalks for outside dining?
- How can we accommodate the need for loading zones without compromising other goals or desires?
- What other behavior or built improvements, including bicycle, pedestrian, transit, and streetscaping, can we make to reduce congestion, improve safety, and enhance the downtown experience?
- How can improvements be phased or prioritized?

In general, the *Hillsborough Downtown Access Study* outlines a plan for Churton Street that places concept design-level detail toward answering to these questions. Previous planning efforts have established the need for an approach that balances mobility, safety, aesthetics, and corridor vitality. To a degree, the study embraces the framework of Context Sensitive Solutions, which encourages roadway design decisions to address to the context through which the roadway passes. Thus, three distinct context zones appear, each of which require unique design treatments. As detailed in the recommendations of this plan, a one size fits all approach is not the right strategy.

Guiding Principles

The *Hillsborough Downtown Access Study* empowers the Town to evaluate coordinated planning concepts explored in previous plans and develop design solutions for the corridor that balance the sometimes competing interests of local access, mobility, safety, vitality, and quality of life. Early in the planning process, the project's Guiding Principles were developed by the staff-level Advisory Committee to summarize the core philosophy that guides the Hillsborough Downtown Access Study:

- *Improve circulation and mobility for local traffic.*
- *Use innovative ideas and tools for potential solutions.*
- *Enhance walkability through design applications.*
- *Implement access management where appropriate.*
- *Advocate streetscape improvements that enhance downtown vitality, pedestrian comfort, and historic integrity.*
- *Protect the viewshed to historic properties.*
- *Identify policy and regulatory recommendations to complement physical improvements.*
- *Establish recommendations* that are functional and implementable.

Study Purpose

The Town realizes the trade-offs associated with not supporting a bypass – higher congestion. However, it is here that the focus of the study lies. What can we do to offset traffic congestion or at least mitigate it to acceptable levels? An acceptable level for the purpose of this study is a corridor that is safe for all users, promotes walkability, accentuates the historic character of the core, enhances the aesthetic appeal of the area, and encourages economic vitality.

Corridor Limits & Study Area

The concept design for the *Downtown Access Study* focuses on the Churton Street corridor from the Eno River to the US 70 Bypass, a distance of approximately 1 mile. Detailed traffic analysis was conducted for the heart of the study area from Tryon Street south to Nash and Kollock Street as well as the intersection of US 70 Business and Churton Street just south of the Eno River. While the focus of this study is on Churton Street, the cross streets—particularly in the downtown business and governmental core—require some attention paid to treatments at intersections and just beyond the main corridor. Detailed design concepts extend from the Eno River north to the US 70 Bypass.

Context Zones

The character of Churton Street experiences distinct changes across the 1-mile corridor between the Eno River and US 70 Bypass. A practical planning approach requires each segment be considered for recommendations that respond to the unique needs and issues of each zone. From north to south, the three context zones are:

- Context Zone 1: US 70 Transition
- Context Zone 2: Historic Neighborhood
- Context Zone 3: Central Business District

Zone 1: US 70 Transition

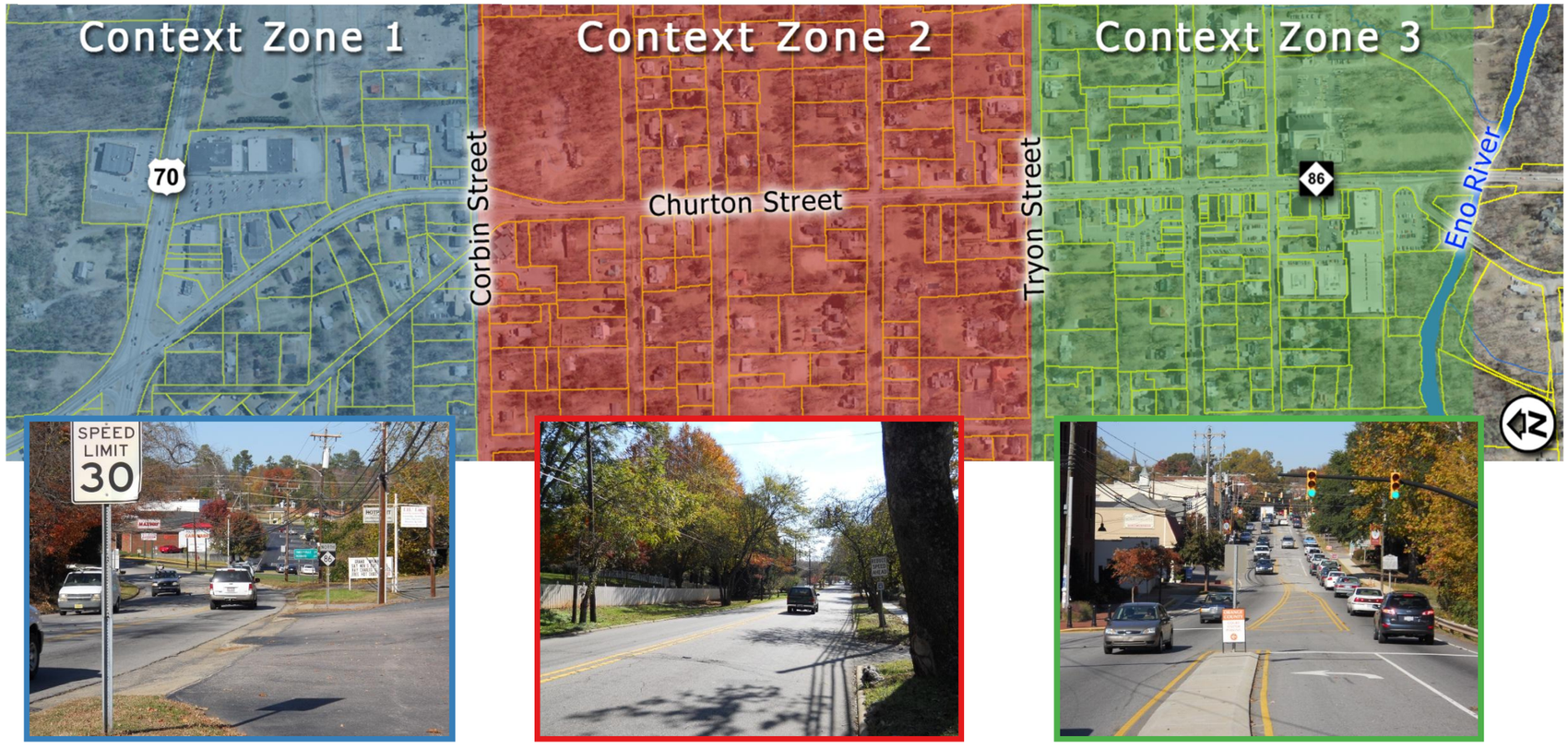
Context Zone 1 provides the northern terminus of the study corridor and is anchored by the North Hills (Maxway) Shopping Center. The east side of this segment of Churton Street includes a mix of retail, services, and offices. The west side is largely residential. The character transitions at Corbin Street to residences and historic properties.

Zone 2: Historic Neighborhood

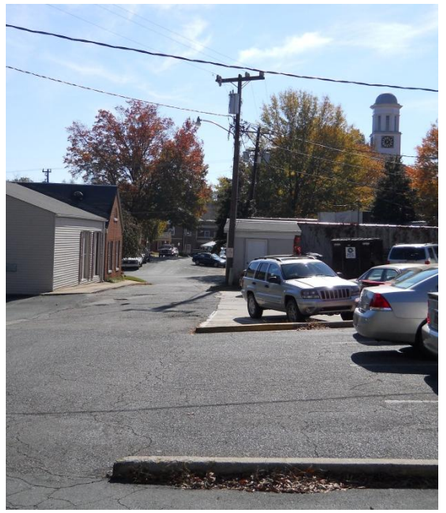
Context Zone 2 stretches between Corbin Street and Tryon Street and bridges the gap between the North Hills (Maxway) Shopping Center and the historic downtown. Activity at the northern intersection of this zone includes Town Hall and a renovated former service station. This stretch of Churton Street is bordered by residences and historic properties such as the Burwell School.

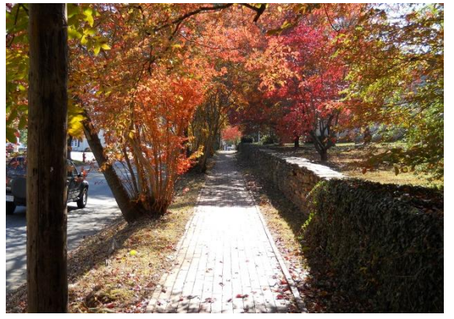
Zone 3: Central Business District

Context Zone 3 consists of the area from the Eno River north to Tryon Street. The area is the governmental and commercial heart of the Town, with few residences located along or within several hundred feet of Churton Street. The Orange County government complex, restaurants, shops, historic sites, and other public buildings are located along this segment of the corridor.



Churton Street Today

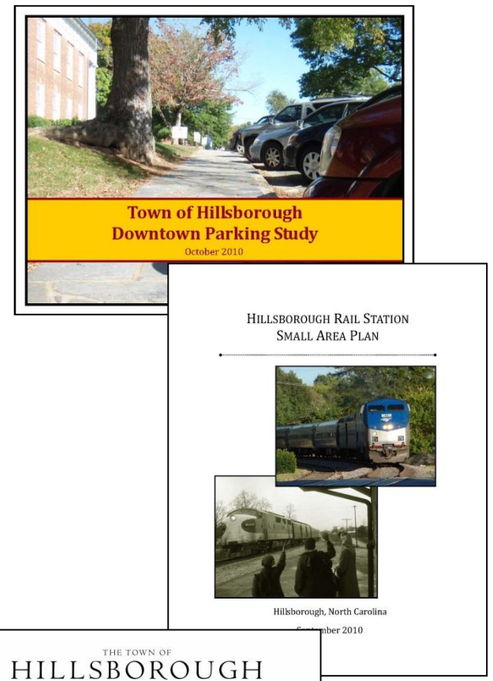


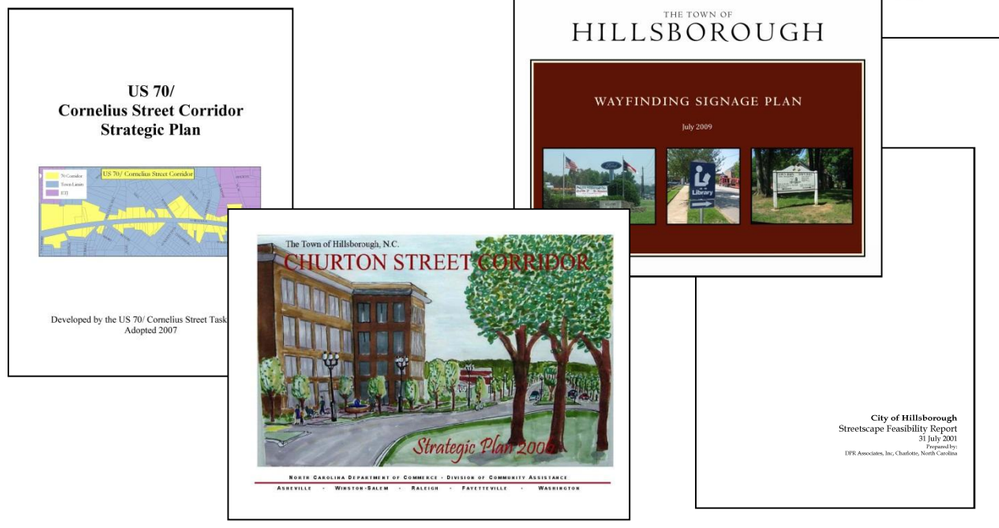


Previous Planning Efforts

Local, regional, and state agencies have initiated projects and studies to identify solutions for Downtown Hillsborough. The *Hillsborough Downtown Access Study* leaned on these previous planning efforts in developing strategies specific to issues facing the corridor. At times, the recommendations described in Chapters 3 may deviate from these previous and ongoing planning efforts due to new information or a new way to consider existing data. The following plans (presented in order of completion) highlight the prior efforts used to define the study.

- City of Hillsborough Streetscape Feasibility Study (2001) – The Hillsborough Streetscape Feasibility Study evaluated the feasibility of improving the streetscapes of sections of Churton Street, Margaret Lane, and East King Street. The study also offered recommendations and cost estimates for improvement alternatives. Recommendations included the relocation of overhead utility lines, installation of decorative street lights, installation of decorative crosswalks, and sidewalk improvements. However, no design concepts were developed as part of this study.
- Churton Street Corridor Strategic Plan (2006) – This plan's vision is to transform Hillsborough into an innovative and future-focused town while celebrating its history. The plan intends to accomplish this vision by improving Churton Street's appearance and economic vitality, protecting the historic and cultural identity of Hillsborough, promoting environmental stewardship, and encouraging active lifestyles for residents and visitors to the Town. The plan stopped short of establishing cost estimates, funding mechanisms, and phasing for these improvements. These recommendations have not proceeded to a feasibility study.
- US 70/Cornelius Street Corridor Strategic Plan (2007) – The potential solutions and recommendations described in this plan include improvements to transportation, crime and code enforcement, economic development, development and redevelopment potential, landscaping and signage, and compatibility with other planning documents. The strategic plan intends to improve the existing Cornelius Street portion of US 70 Bypass, encourage new business enterprises, and expand current businesses to sustain the local economy. Improvements to US 70/Cornelius Street could have secondary impacts on Churton Street.
- Town of Hillsborough Community Connectivity Plan (2009) – The Hillsborough Parks and Recreation Board created a community connectivity plan to forward detailed recommendations to improve the pedestrian and bicycle facilities in Hillsborough. These recommendations include improvements to existing facilities as well as new infrastructure. The existing and planned facilities outlined in this report formed the basis for the bicycle and pedestrian recommendations in the *Downtown Access Study*.
- Town of Hillsborough Wayfinding Signage Plan (2009) – The purpose of the Wayfinding Signage Plan is to improve navigation for residents and visitors by planning, designing, implementing, and maintaining a signage system that directs motorists, pedestrians, and bicyclists to destinations in Hillsborough. The plan includes both the removal of existing directional signs and the construction of new directional signs. Access to and navigation around the downtown area is an important consideration of this plan.
- Hillsborough Rail Station Small Area Plan (2010) – The Rail Station Small Area Plan is a conceptual site and land use plan for 20 acres of land (also known as the Collins Tract) located adjacent to Orange Grove Street. The plan includes a rail station building, a fire station, space for a civic arts center, and other high-density commercial and residential land uses. The *Downtown Access Study* addresses connectivity to the proposed rail station area.
- Town of Hillsborough Downtown Parking Study (2010) – The Downtown Parking Study assesses the current parking situation in Downtown Hillsborough, projects the impact of future development on parking, and develops recommendations for parking improvements to benefit business owners, customers, and visitors. Analysis and outcomes from the Downtown Parking Study was used in the *Downtown Access Study*.





Workbook Premises

The Summary Workbook for the *Downtown Access Study* tackles issues and concerns identified during the planning process, including discussions with staff, downtown merchants, meetings associated with the Public Design Charrette, and issues identified during previous planning efforts. The Workbook summarizes the planning efforts, outlines the issues, and presents recommendations to achieve the community's vision for Churton Street and the downtown core. The following premises regarding the Summary Workbook hold true.

- The Workbook is not intended to educate the reader on standard planning practice. Instead, it focuses on processes and results specific to the Churton Street corridor.
- The Workbook documents issues and concerns for the study corridor and presents recommendations based on analysis, planning, and public input.
- The Workbook has been organized to provide concise representation of issues and recommendations, and to the extent possible, utilizes visual cues to effectively convey ideas.
- The Workbook is not a formal policy document, though the ideas represented herein are presented for adoption.
- The Workbook and its supporting deliverables (Concept Design Maps) are intended to be living documents that provide structured recommendations with flexibility in phasing these improvements.

Workbook Components

The *Downtown Access Study* primarily focuses on transportation issues along Churton Street, though sustainability and vitality of the Town's core also are addressed. Components of the workbook include the following.

Process and Framework

Following this introductory chapter, the workbook presents a brief overview of the planning process and preliminary study area evaluation that forms the foundation of the issues and recommendations presented later in the workbook.

Planning Process

Chapter 2 presents a brief overview of the planning process. Comments and ideas summarized here form the foundation of the issues and recommendations presented later in the Workbook. A collaborative effort provided the essence of a planning process that built upon the previous efforts of Town staff and other agencies. The planning process is summarized here with a focus on the public design charrette.

Resource Maps

Recommendations of the *Downtown Access Study* are rooted in an evaluation of transportation conditions. Chapter 3 presents an overview of this evaluation in the form of various resource maps.

Issues and Recommendations

Chapter 4 presents the issues and recommendations in a series of interrelated elements. Given the overlap between the elements, some repetition is expected. These elements include:

- Traffic Congestion & Safety
- Traffic Noise
- Parking
- Pedestrian Connectivity and Safety
- Transit Accessibility
- Aesthetics and Business Vitality

Action Plan

Considerable interest exists—among Town staff, elected officials, residents, and business owners to create a desirable and sustainable future for the Town core. This planning process was developed with implementation in mind, and many individuals have shown interest in seeing it through to implementation. The Action Plan (Chapter 5) sends out a charge for active citizens and staff members to champion the recommendations of the study.

Workbook Structure

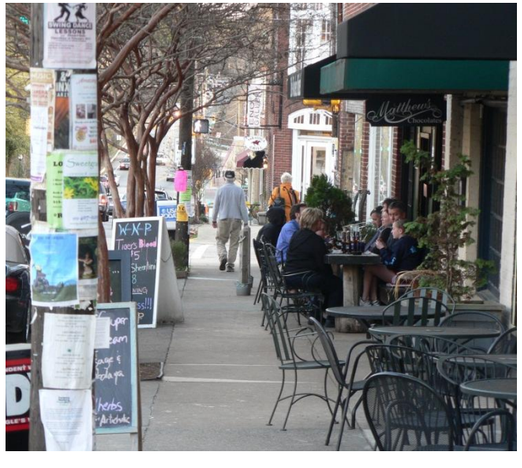
The *Downtown Access Study* balances the competing interests of mobility, access, safety, and aesthetics with the evolution of a public planning process built around a collaborative public design charrette. The Summary Workbook not only presents the approach but also a realistic future in an al-a-carte format. The heart of the workbook is the elements in Chapter 4 for which a series of general issues and specific recommendations are presented. The relationships between issues and recommendations may create repetition but in this repetition overarching themes emerge. Issues and recommendations are presented in a consistent format throughout these chapters. Each chapter begins with a broad summary of existing conditions and an overview of the element's role in the study area. Following the summary, each issue or recommendation uses the same format:

- Issue — States the issue concisely.
- Observation — Summarizes existing conditions and highlights particular problems including causational factors where possible.
- Recommendations — Puts forth specific directives, both physical infrastructure and policies, to mitigate the problem.

Where applicable, photos of existing conditions, sketches, diagrams, and maps are used to illustrate existing conditions and/or recommendations.

Churton Street serves an important role in the Town's transportation network, functioning as a primary commercial corridor for the downtown core and a corridor that serves a disproportionate amount of regional traffic. Numerous businesses rely on the corridor as their primary means of access. In addition, residents along the corridor rely on the link for access and to and from their homes. As a result, it is important to get feedback from a wide expanse of public participants during the visioning and recommendations development process.

The *Town of Hillsborough Downtown Access Study* primarily focuses on approximately one mile of Churton Street between the Eno River and the US 70 Bypass. The need for a coordinated approach to the corridor that yields immediate results is amplified by the attention given to the downtown core and Churton Street in recent plans and studies. The *Downtown Access Study* enables the Town of Hillsborough to develop solutions for the corridor that balance the need for mobility and access and respect the vitality of existing businesses. This Workbook builds on previous plans as well as the visioning exercises conducted in the initial phase of the corridor study.



Planning Process

Collaboration and transparency provided the core strategies for establishing trust among the participants of the planning process. The consultant team and local staff began working together early on and continued to do so as the process moved into the design charrette. This continuity resulted in a shared learning environment and timely communication among participants. Major elements of the planning process included the following.

Advisory Committee

The Advisory Committee, comprised of Town of Hillsborough staff, was established to assist the project team in guiding the planning process. The main focus of the Advisory Committee was to steer the project's initial steps, assist with data collection, and help coordinate key public outreach activities. While the primary role of the committee was to serve in an advisory role, significant participation in visioning exercises and information feedback provided value to the planning process. The Advisory Committee addressed ongoing project activity issues, key decision discussions, presentations of pertinent information and evaluations, and recommendations for the consideration by the project team. Meetings prior to the public design charrette established a framework for the rest of the public outreach and planning process.

Public Design Charrette

To gather feedback from individuals and groups with diverse backgrounds, the *Downtown Access Study* included a charrette with participation by the Advisory Committee, meetings with stakeholders, and design work sessions. The intent of using this outreach method not only was to hear from a diverse group of people but also to build consensus and validate recommendations throughout the planning process.

The core element of the public outreach process for the *Downtown Access Study* was a public design charrette, held November 8 through 10 at the Durham Technical Community College (DTCC) Orange County Campus on Waterstone Drive. The charrette process was used to understand local context and design plans for Churton Street. During the charrette, the project team sat down with the Advisory Committee, businesses, and the general public to identify issues, affirm guiding principles, and validate proposed recommendations. The charrette schedule is illustrated below.

Hillsborough Downtown Access Study - Design Charrette

	Tuesday - November 8	Wednesday - November 9	Thursday - November 10	
	DTCC - Satellite Campus - Rm 103 Waterstone Drive	off-site	DTCC - Satellite Campus - Rm 103 Waterstone Drive	
8:00 a.m.	Set-up Design Studio		Set-up Design Studio	8:00 a.m.
9:00 a.m.	Open Design Studio / Advisory Committee Meeting		Open Design Studio	9:00 a.m.
10:00 a.m.				10:00 a.m.
11:00 a.m.	Parking & Mobility			11:00 a.m.
12:00 p.m.	Lunch		Lunch	12:00 p.m.
1:00 p.m.				1:00 p.m.
2:00 p.m.	Open Design Studio / Multimodal Transportation	Work Day	Refine Materials and Prepare for Open House	2:00 p.m.
3:00 p.m.				3:00 p.m.
4:00 p.m.	Streetscape & Downtown Vitality			4:00 p.m.
5:00 p.m.				5:00 p.m.
6:00 p.m.	Public Workshop (Issues Identification)		Public Open House (Present Alternatives)	6:00 p.m.
7:00 p.m.				7:00 p.m.

Advisory Committee Meeting — Open Design Studio

Focus Group Discussions — Public Outreach

Day 1 – On the first day of the charrette, the project team set-up a working design studio and unveiled a series of maps depicting existing conditions. The team then met with the Advisory Committee to establish guiding principles and conduct a mapping exercise. The team then hosted a series of three focus group sessions related to parking and mobility, multimodal transportation, and streetscape and downtown vitality. Concurrently with these scheduled sessions, the project team conducted field reviews and refined design concepts in working studio. The day concluded with a Public Workshop attended by a small group of citizens.

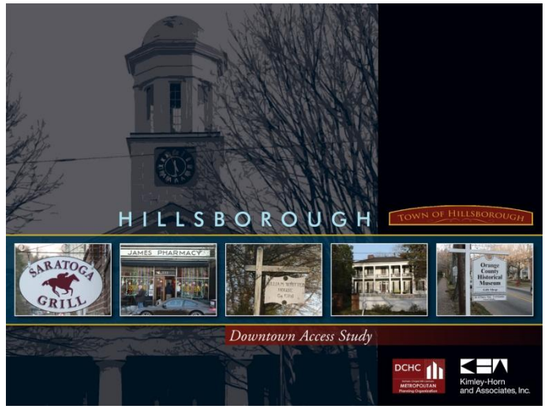
Day 2 – The second day of the charrette consisted of an off-site work day held in the offices of the consultant team. During this time, the project team polished the sketch ideas developed during the previous day into feasible engineering and planning concepts.

Day 3 – The development of detailed conceptual designs continued on the third day of the charrette. Working on-site at DTCC as well as in the offices of consultant team, the project team refined plans and exhibits in anticipation of the evening Public Open House. The final event of the charrette allowed participants to view maps, make comments, and vote for priority recommendations. The evening included a short presentation by the project team and local staff as well as brief remarks by the mayor.

Images captured at the three-day charrette are displayed on this page.

Other Meetings

To present preliminary concepts and gather feedback from local business owners, the project team met with the Downtown Merchants Association on December 2, 2011. The outcome of this meeting yielded some revisions to the corridor concept designs as presented in Chapter 4.



What We Heard

At the outset of the study, the project team conducted a kickoff meeting with members of the Advisory Committee to identify key issues and objectives of the study. These discussions helped define the planning framework and ultimately provided the guidance used to develop the preferred alternatives along the corridor.

At the Public Open House on the third day of the charrette, the project team presented a series of maps that described exactly what was heard during the first two days of the charrette. Specific comments are discussed in detail in Chapter 4. The recommendations presented there address many of these comments and suggestions. This chapter concludes with those maps.

General Themes

Parking & Mobility

- Install turn lanes where appropriate
- Improve sight distances
- Prevent neighborhood cut-through traffic
- Consider construction of roundabouts

Multimodal Transportation

- Fill gaps in the sidewalk network
- Install high-visibility patterned crosswalks
- Provide bicycle racks
- Improve existing bus stops

Streetscape & Downtown Vitality

- Maintain historic character
- Plant trees along street and add green spaces
- Provide wide sidewalks for outdoor dining

Kimley-Horn and Associates, Inc.

What We Heard

TOWN OF HILLSBOROUGH
Downtown Access Study

70

Maxway Shopping Center

Beautify shopping area

Street trees needed

Potential bus pullout with enhanced stop (shelter, parking)

Existing bus stop is inadequate

Sidewalks needed

Potential roundabout

Unsafe merge / sight distance issue

Gateway needed

Crosswalks needed

86

Intersection Improvement with Potential Roundabout

Town Hall

Fill gap in sidewalk

Speeding traffic

Unsafe pedestrian crossings

Sidewalks needed

Traffic noise

Burwell School Historic Site

Prevent cut-through traffic in neighborhoods

E CORBIN ST

E ORANGE ST

E UNION ST

N CHURTON ST

W ORANGE ST

W UNION ST

W CORBIN ST

MCADAMS RD

CEDAR ST

CORNELIUS ST

WESTDALE CT

WARNER LN

N WAKE ST

0 60 120 Feet

Kimley-Horn and Associates, Inc.

What We Heard

TOWN OF HILLSBOROUGH
Downtown Access Study

E QUEEN ST
E TRYON ST
E KING ST
E MARGARET LN
COURT ST
N CHURTON ST
S CHURTON ST
W QUEEN ST
W TRYON ST
W KING ST
W MARGARET LN
N WAKE ST
S WAKE ST
NASH AND KOLLOCK ST
EXCHANGE PARK LN

Sidewalk needed
Add green space
Delineate curb
Install patterned crosswalks
Accommodate left turns
Crossings unsafe
Install patterned crosswalks
Relocate bus stop and construct bus pullout
Provide access to park
Install patterned crosswalks
Sidewalk needed
Construct wide sidewalk / outdoor seating
Street trees needed
Consider roundabout
Gateway signage needed
Create Siren Free Zone
Museum
Police Station
Construct bus pullout
Bicycle rack needed
Remove parking to add dedicated left-turn lane
Fire Station
Improve sight distance
Gateway Center
Bicycle rack needed
Create loading zones
Redesign parking lot
Install patterned crosswalks and pedestrian crossing signs
Install pedestrian crossing sign
Replace vegetation to improve sight distance
Bicycle rack needed
Court House
Library
Orange County Offices
Eno River Parking Deck
Strest is wide due to on-street parking
Traffic calming
Potential 4-way stop

86

0 60 120 Feet

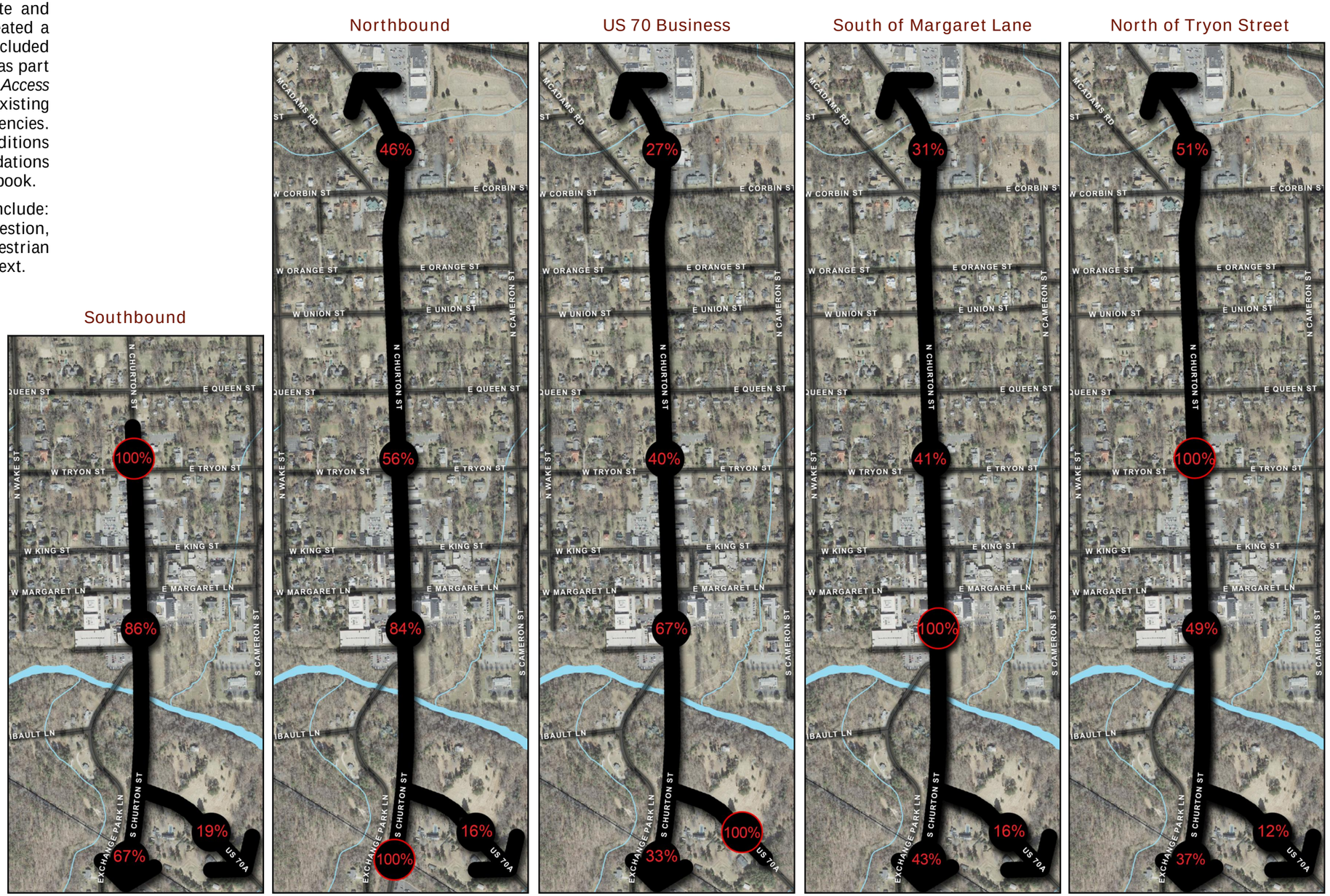
For display at the public design charrette and subsequent analysis, the project team created a series of resource maps. These maps included maps created based on new data collected as part of the *Town of Hillsborough Downtown Access Study* as well as exhibits taken from existing plans created by Town staff and other agencies. These resource maps illustrate existing conditions and provide a foundation for recommendations made in Chapter 4 of the Summary Workbook.

Resource maps found in this chapter include: Origin/Destination results, Traffic & Congestion, Turning Movements, Bicycle & Pedestrian Context, Transit Context, and Parking Context.

Origin/Destination Results

Sensors were set up at five points in the study area to capture anonymous bluetooth signals from passing cars and cell phone devices. By matching unique identifiers at individual locations, the project team was able to determine how much traffic is introduced to the network and the percentage of traffic that moves through the study area. Exhibits showing origin and destination percentages based on average daily traffic are displayed to the right. These maps show:

- 67% of southbound traffic at Tryon Street and 46% of northbound traffic proceeds through the study area.
- For traffic entering at US 70 Business, 33% travel south on Churton Street while 67% travel north across the Eno River bridge. 27% of this traffic proceeds northbound through the study area.
- Approximately 28% of traffic from the south are being captured within downtown or are diverting to St. Marys Road.



Traffic & Congestion

Traffic volumes signify the total number of vehicles traveling along a roadway segment on an average day. Overall, traffic volumes on minor arterials are lower than those on major arterials. This tendency reflects the purpose and function of each roadway class design and location. In 2010, Churton Street experienced traffic volumes ranging from 19,000 just south of Margaret Lane to 12,000 vehicles per day (vpd) approach the US 70 Bypass (Cornelius Street). These volumes are relatively unchanged from 2002, though volumes on Churton Street typically exceed the US 70 Bypass.

Traffic volumes alone should not be used to determine congested corridors because this measurement does not take into account functional classification and roadway capacity. A better measurement is volume-to-capacity (V/C) ratios. V/C ratios are calculated by dividing the traffic volume of a roadway segment by the theoretical capacity of the roadway. The resulting universal measurement standardizes traffic analysis and provides a benchmark for levels of congestion. V/C ratios often are simplified into categories such Approaching Capacity and Over Capacity.

The map to the right shows congestion levels on Churton Street as well as volumes for 2002 and 2010.

Legend:

- Approaching Capacity
- Over Capacity
- Average Daily Traffic

Vehicle Classification		
Personal Vehicles	*Single Unit Trucks*	*Semi Trucks*
91%	5%	4%

Turning Movements

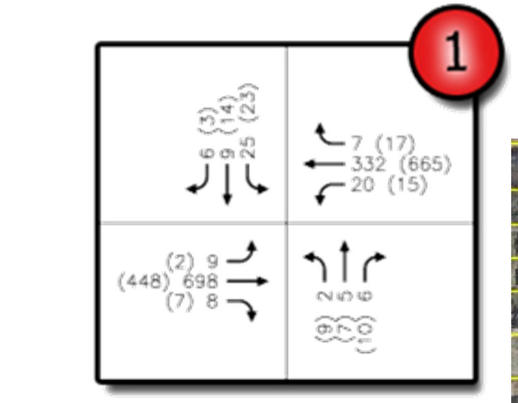
Turning movement count data was collected on September 27, 2011 at five intersections within the study area:

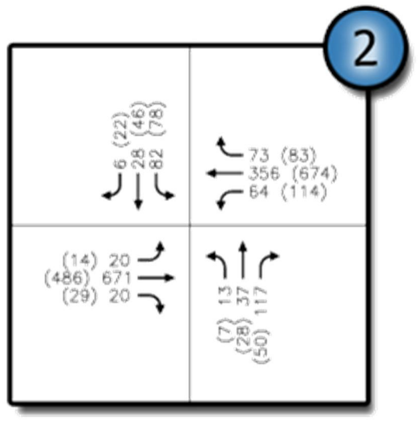
- Churton Street at Tryon Street
- Churton Street at King Street
- Churton Street at Margaret Lane
- Churton Street at Nash & Kollock Street
- Churton Street at US 70 Business

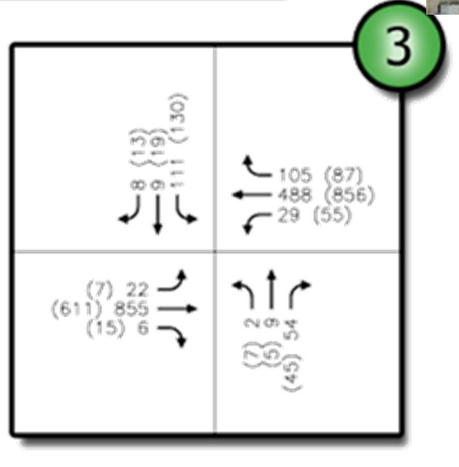
These counts were performed for the AM and PM peak hour periods, and peak hour volumes are shown in the graphics to the right for each intersection. The number closest to the arrow represents the AM peak hour volume while the number in parentheses represents the PM peak hour volume.

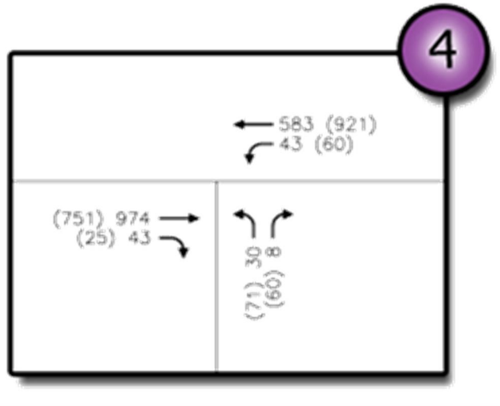
Not surprisingly, most of the observed traffic was along Churton Street. The traffic counts indicated a fairly typical directional split with approximately 65% of the traffic driving southbound and 35% northbound in the AM peak. The PM peak hour is similar but with approximately 60% driving northbound and 40% southbound.

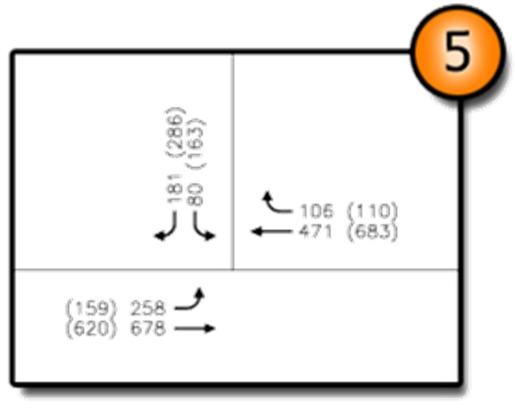
Throughout the day, significant left-turn volumes occur from the side streets to southbound Churton Street, most notably at King Street and Margaret Lane. These left turn volumes likely are due to the government complex located east of Churton Street as well as traffic from St. Mary's Road.





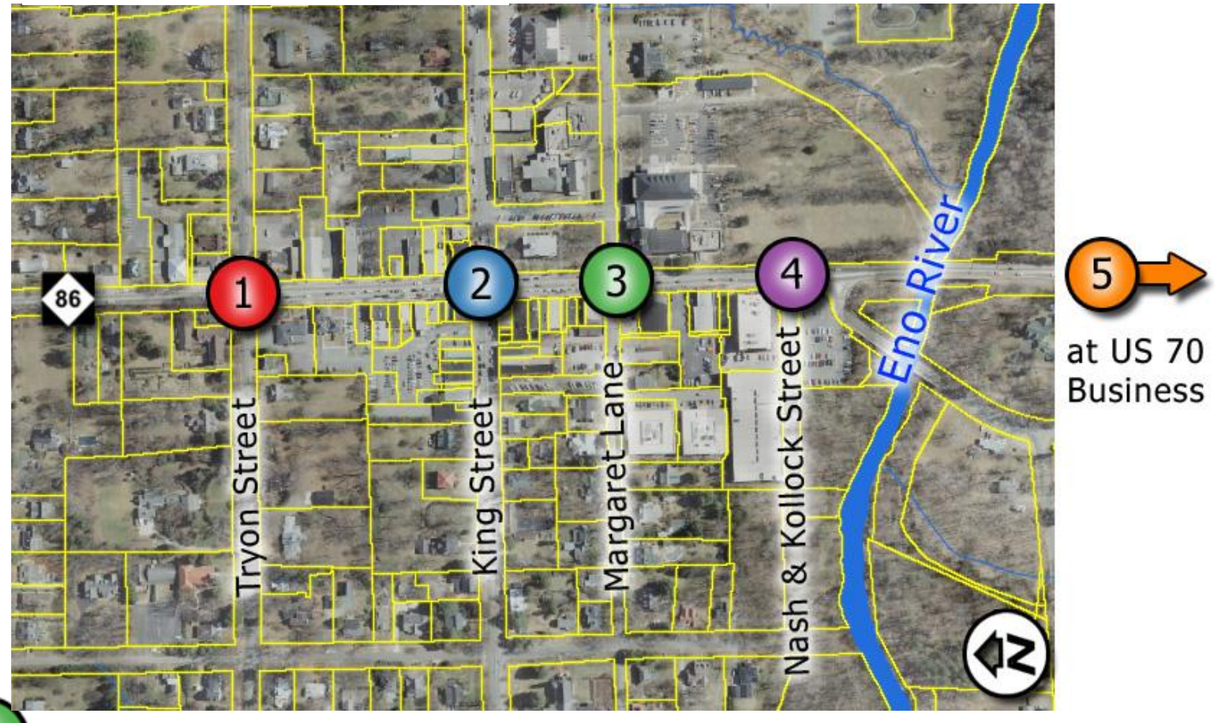






Existing Peak Hour Traffic Volumes

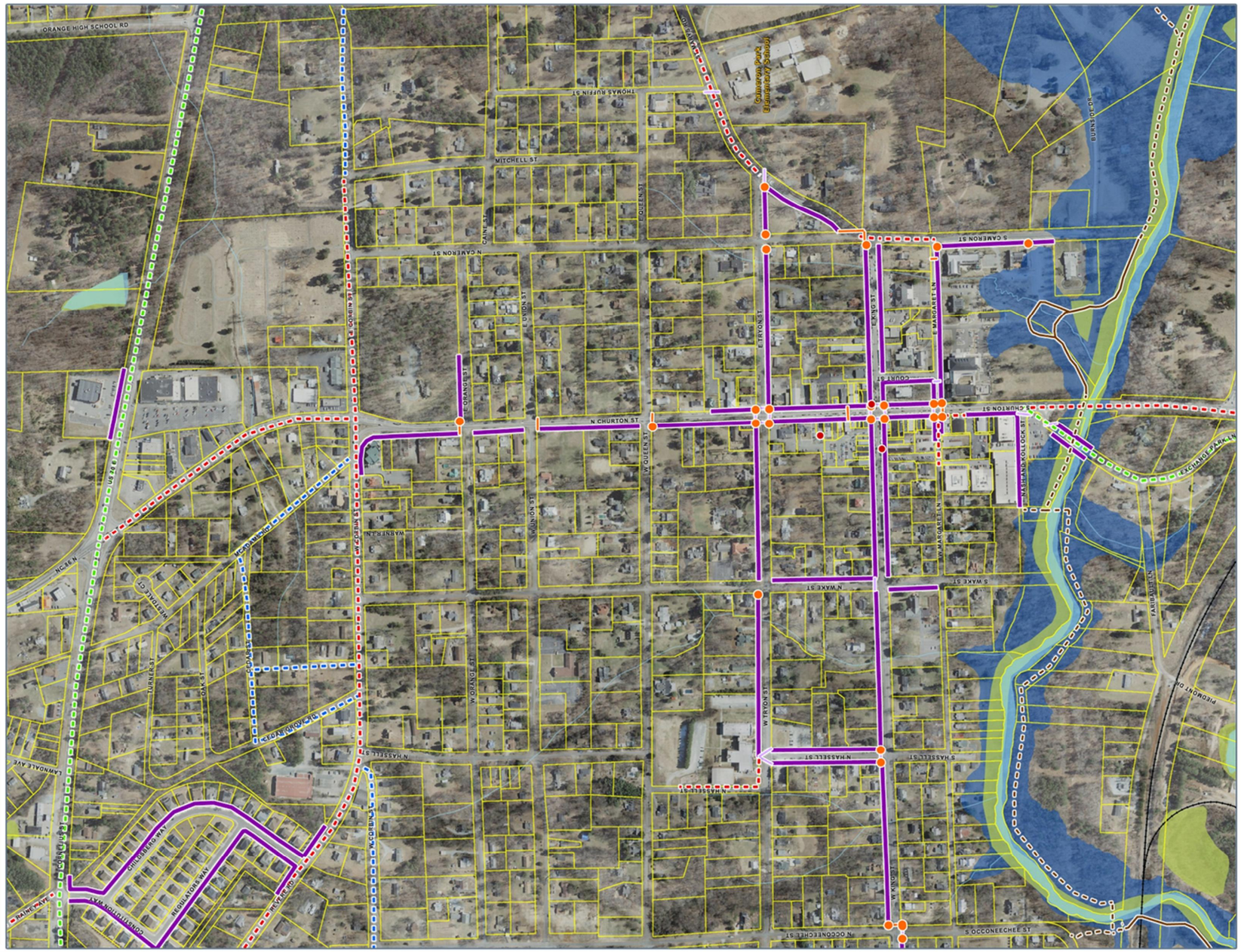
AM (PM)



Bicycle & Pedestrian Context

The review of existing conditions and recommendations for bicycle and pedestrian activity in Hillsborough is directed by the 2009 Community Connectivity Plan developed by Town staff. As mentioned in Chapter 1, this plan provides detailed recommendations to improve the pedestrian and bicycle facilities throughout Hillsborough, including improvements to existing facilities and new infrastructure.

The map to the right details existing and planned facilities outlined in the Community Connectivity Plan and served as the launching point for the bicycle and pedestrian connectivity discussion. As shown, crossing improvements are recommended along Churton Street.



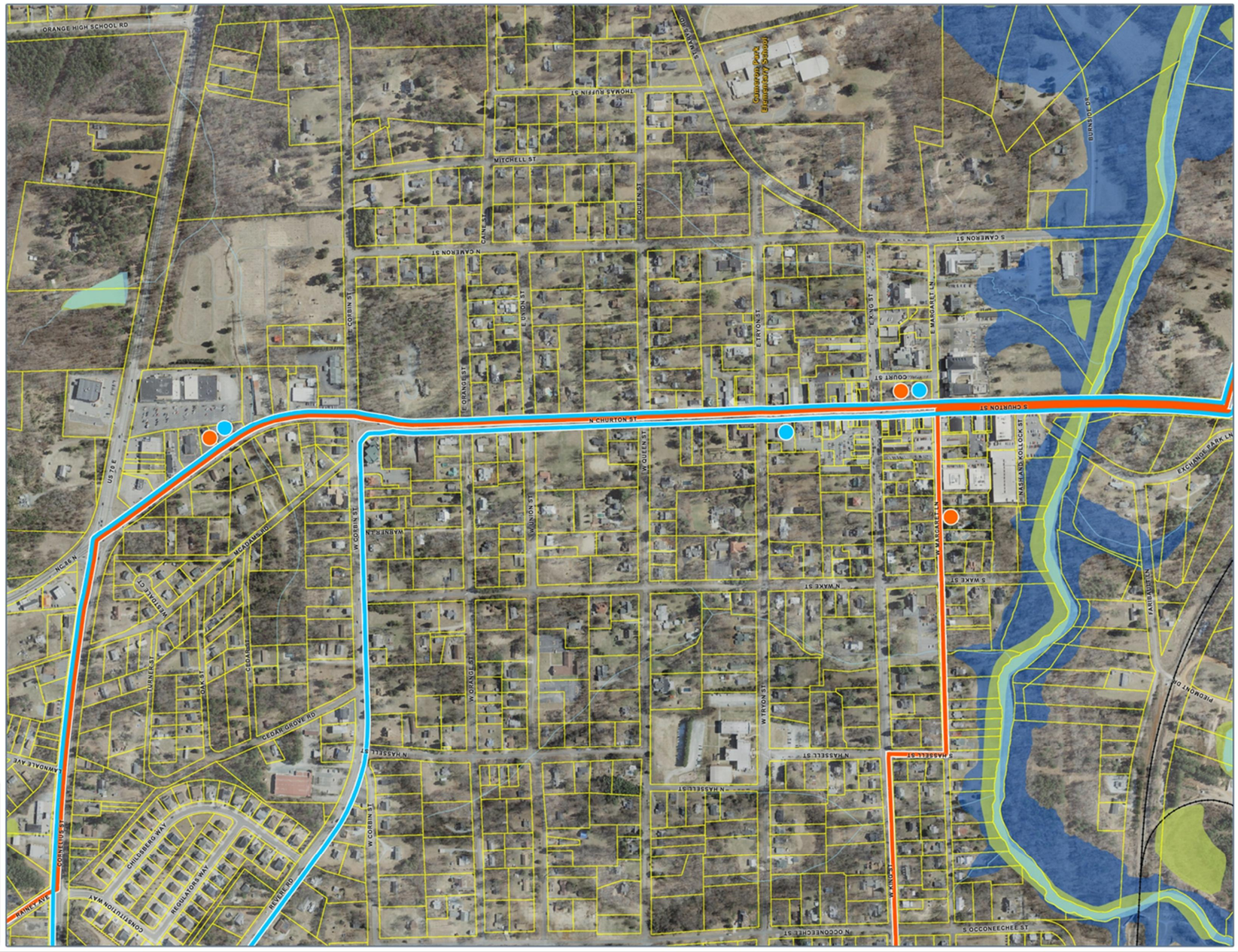
Legend:

- Sidewalk (Existing)
- Low Priority Sidewalk (Recommended)
- High Priority Sidewalk (Recommended)
- Crosswalk (Existing)
- Crosswalk (Identified Need)
- Riverwalk (Existing)
- Riverwalk (Recommended)
- Shared Use (Recommended)
- Curb Ramp (Identified Need)
- Pedestrian Kiosk (Planned)

Transit Context

Transit service in Hillsborough consists of two routes—one route provided by Triangle Transit (Route 420) and the other route provided through a partnership with the Town and Orange County (Hillsborough Circulator). Route 420 connects Hillsborough with Chapel Hill with northbound stops at the historic courthouse and North Hills (Maxway) Shopping Center and a southbound stop at the Police Station. The Hillsborough Circulator route travels along Churton Street downtown, and continues along NC 86 toward Chapel Hill. The bus shares two northbound stops on Churton Street with Triangle Transit Route 420 – at the historic courthouse and North Hills (Maxway) Shopping Center. Other stops are on King Street and Margaret Lane.

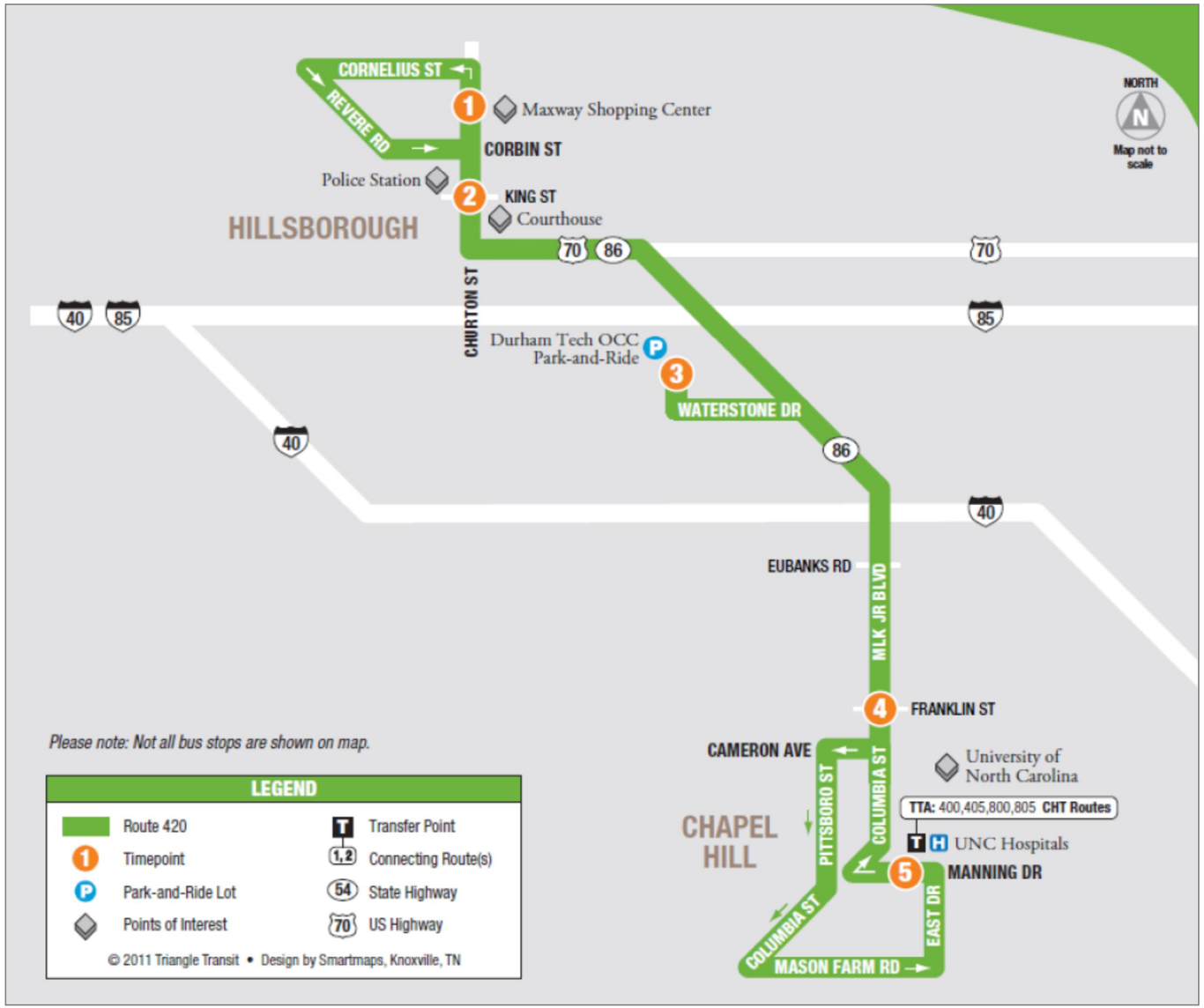
The map to the right and on the following page shows these routes and stops in detail.



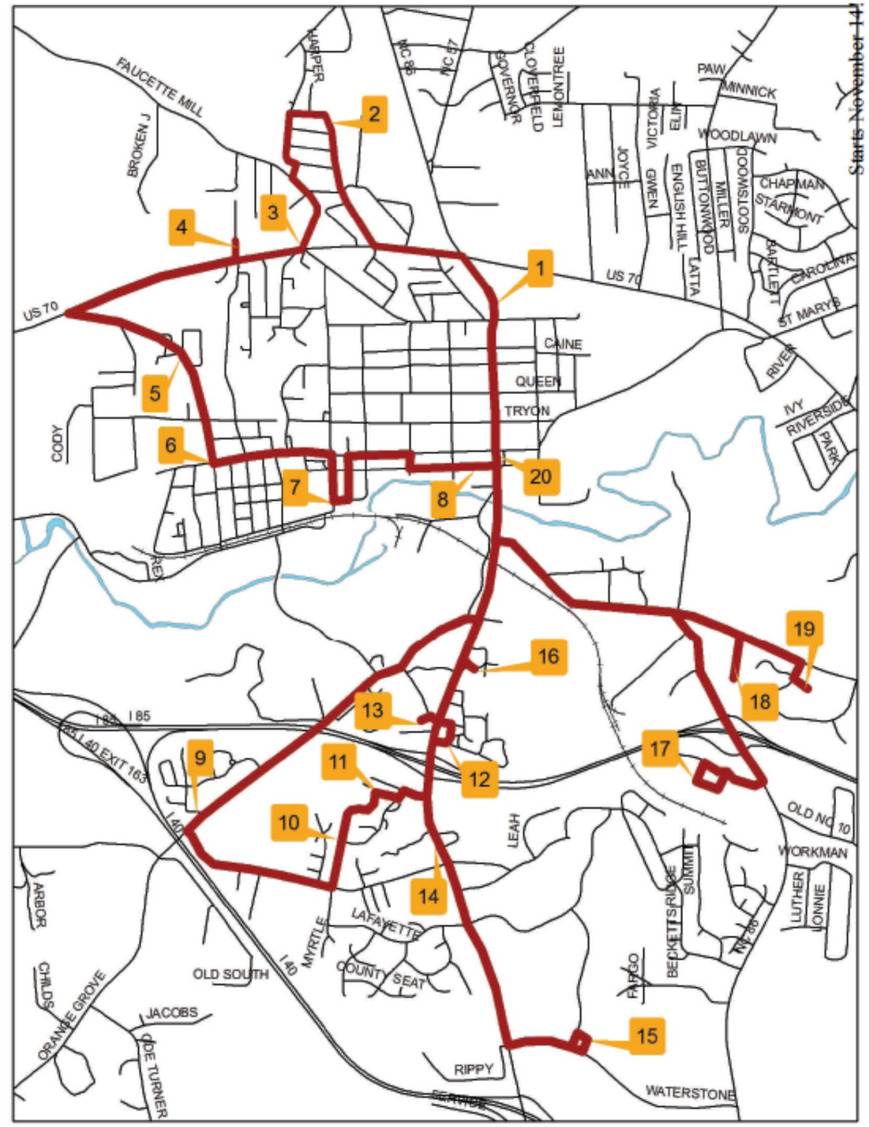
Legend:

- Hillsborough Circulator Stop
- Hillsborough Circulator Route
- Triangle Transit Route 420
- Triangle Transit Route 420 Stop

Triangle Transit Route 420



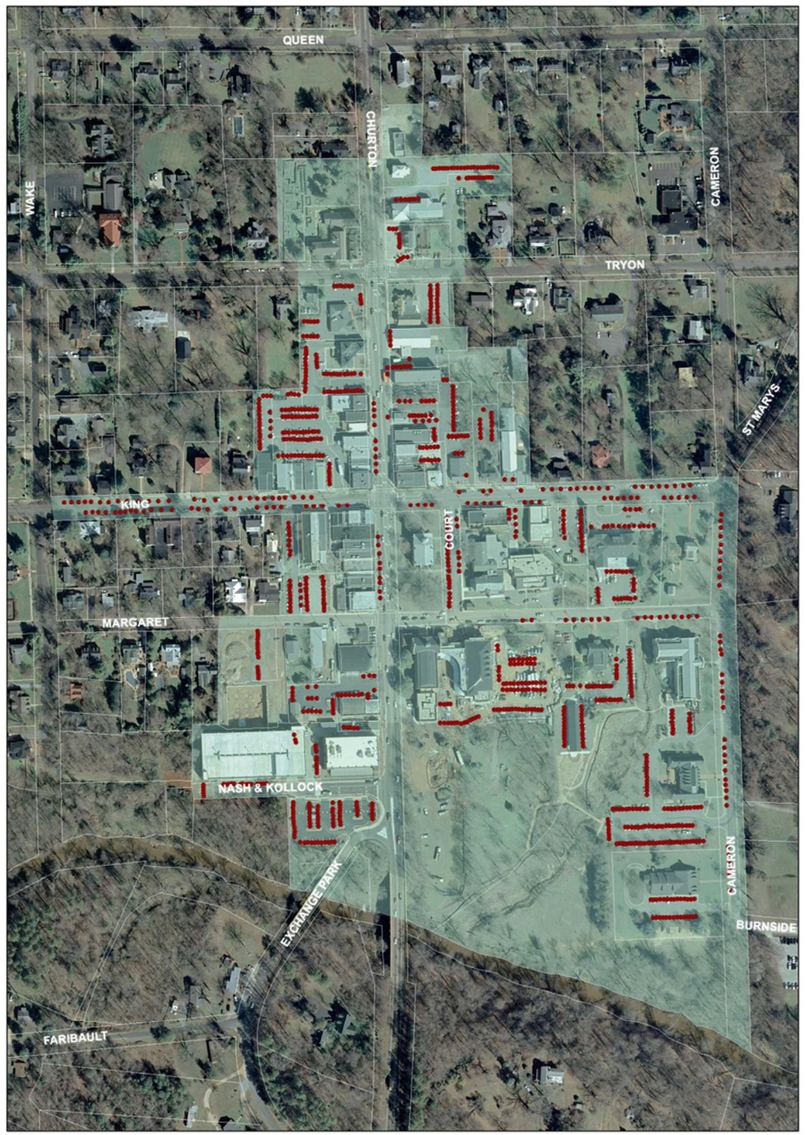
Hillsborough Circulator



Parking Context

The 2010 Downtown Parking Study included numerous exhibits based on data collected by Town staff. This data included a complete inventory of on- and off-street parking as well as occupancy data during a couple times over the course of two days in June 2010. The outcome of the plan is a series of recommended improvements ranging from physical improvements to enforcement and signage.

The maps on this page represent two exhibits form the Downtown Parking Study. The map on the left illustrates the location of on-street parking. As described in Chapter 4, recommended improvements to Churton Street as part of the *Downtown Access Study* will impact on-street parking along the corridor, and in some cases, on side streets near their intersection with Churton Street. The map on the right shows vacancy rates on a Wednesday at noon. This map shows high vacancy in the Eno River Parking Deck and lower occupancy on-street and in the Bank of America parking lot.



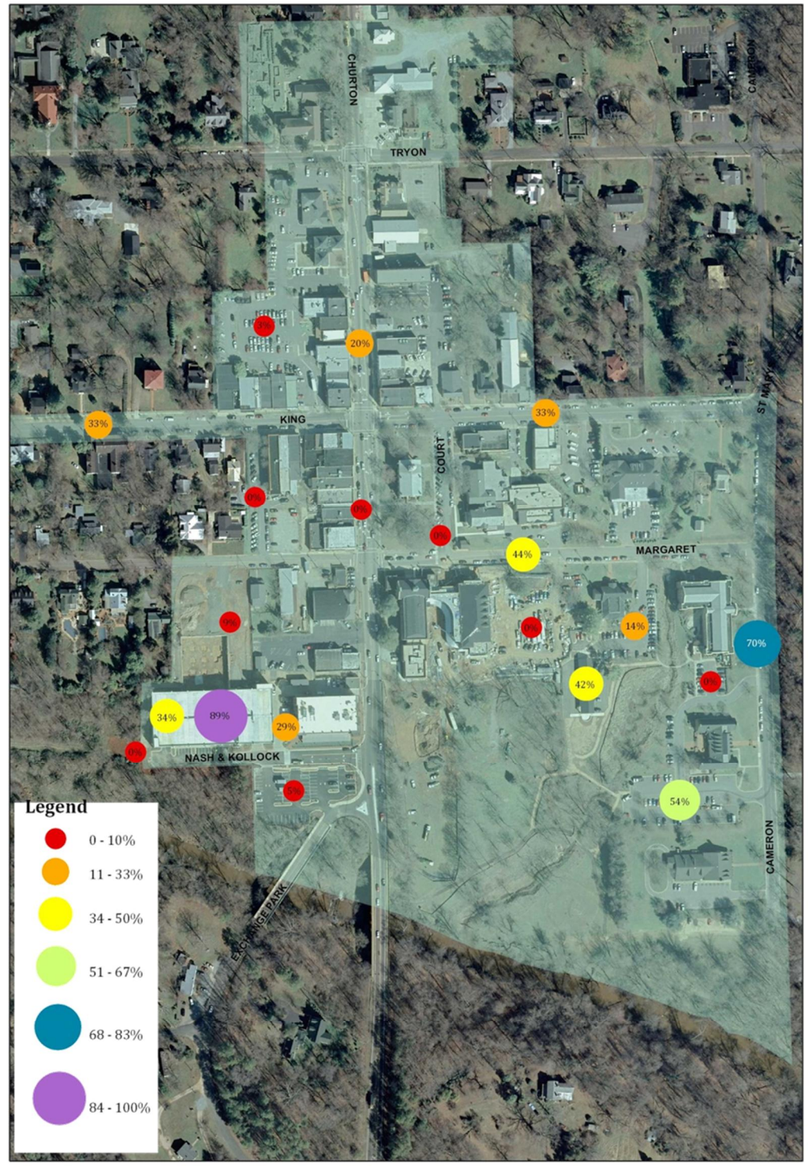
Parking Space Inventory

Parking Spaces Parking Study Area

N

100 50 0 100 Feet

Map Prepared by Hillsborough Planning Department 8/2010



Vacancy Rates on Wednesday June 2, 2010 at 12 pm

N

Map prepared by Hillsborough Planning Department 8/2010

Traffic congestion and safety are the most pressing issues facing Churton Street. Volumes, intersection delay, and crashes can be computed in a variety of ways. High traffic volumes and constrained capacity along the corridor cause traffic backups–especially during peak periods–and the lack of adequate storage for turning vehicles compound the problem. The project team collected traffic counts, reviewed crash data, and conducted capacity analyses to assess these issues. But what often is lost in the planning process is the perception of congestion and safety as well as a host of other issues such as traffic speed, traffic noise, and pedestrian safety. This perception was revealed through discussions with residents and business owners at the public design charrette. For Churton Street to effectively serve the community and the diverse demands placed upon it, improvements are needed. This chapter discusses a series of issues and observations centered around the three focus group sessions from the public design charrette—1) parking & mobility, 2) multimodal transportation, and 3) streetscape & downtown vitality. This discussion sets the stage for the detailed recommendations that follow. These recommendations not only address the current needs along the corridor but also anticipate future issues.

Parking & Mobility

While delay can be uncomfortable for motorists, the purpose of this plan is not to solve all traffic problems. Indeed, local officials and members of the community agree that some level of congestion is good for the vitality of the area and supportive of the shops, bars, and restaurants that line Churton Street. The key to the analysis of traffic and parking was determining the acceptable level of congestion with the understanding that a bypass will not be constructed. The issues that follow relate to the traffic operation of the corridor.

Issue: Traffic Congestion and Safety

An evaluation of traffic operations (including an origin/destination survey, traffic and turning movement analysis, and a review of 3-year crash history) helped determine existing conditions along the corridor. Traffic congestion and safety issues were illustrated in the resource maps in the previous chapter, notably showing traffic volumes approaching 20,000 vehicles per day on Churton Street across the Eno River and revealing the corridor operates over capacity south of Tryon Street.

- Lack of loading zones leads to congestion.
- The lack of left-turn storage for northbound vehicles turning into at the police station/Bank of America lot contributes to congestion as vehicles queue.
- The poorly delineated driveway on the east side of Churton Street just north of Tryon Street creates a potential safety problem.
- Sight distance is an issue at the entrance to the Annex from Tryon Street.
- The bus stops within travel lanes create additional congestion
- The geometrics of the intersection of Churton Street and US 70 Bypass (Cornelius Street) create a wide intersection with right turns/merge areas at odd angles.
- The angle of the right turn lane from eastbound Corbin Street to southbound Churton Street creates a difficult view for motorists to observe oncoming traffic. Safety concerns at this intersection are compounded by the downgrade for southbound vehicles on Churton Street.
- Sight distance is an issue on West Margaret Lane at the intersection with Churton Street.

Issue: Traffic Signal Timing

Because of the close intersection spacing between Nash and Kollock Street, Margaret Lane, King Street, and Tryon Street, traffic signal timing is critical to minimize delays and queues along Churton Street. Currently, peak hour signal timing is such that the northbound Churton Street approaches at Nash and Kollock Street, Margaret Lane, and King Street turn green at the same time. However, there is a delay (or offset) of 34 seconds before the signal at Tryon Street turns green. While a minor offset may be appropriate, the current offset is too long and contributes to the congestion in this area. NCDOT should modify the timing at the Tryon Street intersection to be concurrent with, or more closely follow the initial green indication at the adjacent intersections.

Issue: Traffic Speeds

Safety issues also increase as traffic speeds increase. However, higher traffic volumes and congestion suppress speeds through the central business district. Speed limits along the corridor vary from 20-35 miles per hour.

- Speeding traffic is apparent on southbound Churton Street near Corbin and Orange Streets. These speeds are the result of southbound vehicles cresting the hill and accelerating through the intersection of Corbin Street as well as motorists accelerating through and quickly merging from the free flow right turn from eastbound Corbin Street to southbound Churton Street. Speeding traffic creates potentially unsafe conditions for pedestrians at the unsignalized crossings of Corbin Street at Orange, Union, and Queen Streets.
- Traffic calming is needed on Margaret Lane and King Street west of Churton Street. The cross-section of this segment of King Street is wide due to the on-street parking. This extra width makes drivers feel more comfortable which tends to encourage higher operating speeds.

Issue: Traffic Noise & Cut-Through Traffic

Traffic noise was identified during the public design charrette as an important issue in both Context Zone 2 (Historic Neighborhood) and Context Zone 3 (Central Business District). Traffic noise affects pedestrians and patrons in the outdoor dining areas in the downtown core and impacts residents in historic neighborhoods north of Tryon Street. This noise comes from three main sources – large trucks, motorcycles, and emergency vehicles.

- Vehicle classification data shows 4% of traffic on Churton Street are semi-trucks, which indicate as many as 750 trucks travel the corridor on a given day. While signage directs trucks away from the Churton Street corridor, these volumes and percentages indicate significant volumes of trucks are still present.
- The origin/destination study conducted for the *Downtown Access Study* and presented in Chapter 3 reveals a high percentage of through traffic both northbound and southbound on an average day.
- Residents expressed concern for cut through traffic along cross streets such as Orange Street, particularly if improvements to Churton Street fail to improve traffic flow. The concern is that traffic will divert through the neighborhoods to avoid congested areas of the downtown core.

Issue: Parking

The 2010 Downtown Parking Study included an inventory of on- and off-street parking spaces. This inventory showed 3 on-street spaces northbound, 18 spaces southbound, 66 in the Bank of America lot, and 206 non-reserved spaces in the Eno River Parking Deck. Discussions with local staff, residents, and business owners during the public design charrette as well as a review of the parking study and field verification revealed the following issues associated with parking.

- The layout and ingress/egress points for the Bank of America parking lot create an inefficient use of space.
- On-street parking along Churton Street near intersections impedes sight distances for turning motorists and creates unsafe conditions.
- Some on-street parking is underutilized, especially the few spots near SunTrust on northbound Churton Street.
- The Eno River Parking Deck is underutilized by visitor parking in part due to a lack of pedestrian connectivity to the shops and restaurants near King Street.

Recommendations

It's clear that no silver bullet will solve the traffic issues in Downtown Hillsborough. Feasible solutions come only through the combined application of strategic capacity improvements and various demand management alternatives such as turn lane improvements, access management, signal timing and coordination improvements, traffic calming, multimodal considerations, and transit integration. The recommendations described below highlight key consideration to tackle the issues described in this section. This discussion is followed by a series of maps that show the corridor concept in its entirety.

Churton Street Laneage

Laneage improvements on Churton Street can improve traffic flow by reducing delay associated with queuing for left-turning vehicles. These changes will not require removal of existing curb and gutter, though some underutilized parking will be taken. A critical recommendation is the provision of a two-way left-turn lane that provides storage for vehicles turning left into the Bank of America parking lot at the police station.

These images show laneage on Churton Street between Nash and Kollock Street and Margaret Lane (above) and Margaret Lane to Tryon Street (below). The improvements shown below will require the removal of underutilized northbound on-street parking at SunTrust.

Corbin Street Intersection

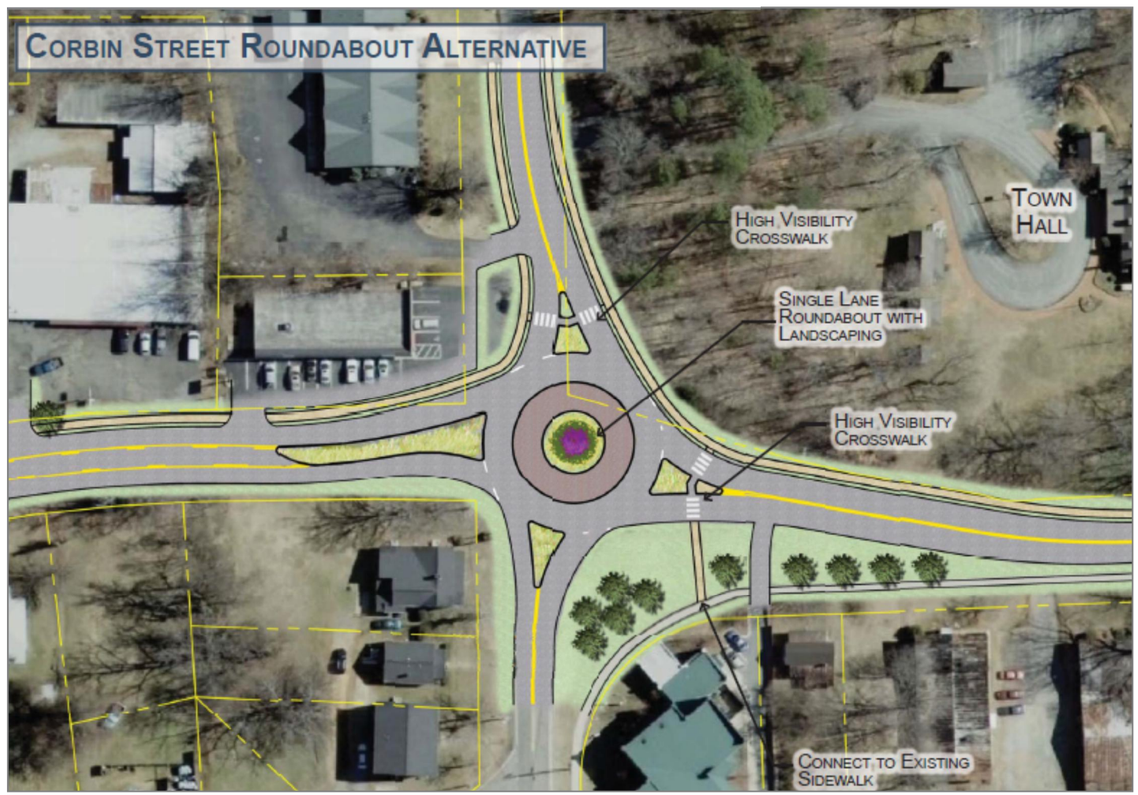
The design issues affecting the intersection of Churton Street and Corbin Street previously described (such sight distance issues due to the angle of the right turn lane from eastbound Corbin Street to southbound Churton Street as well as speeding traffic exiting the intersection) can be corrected with one of the two alternatives described on this page.

Alternative 1 – Turn Lane Improvements and Crosswalks

This alternative removes the free-flow right turn lane to tighten the intersection, improve sight distance issues for vehicles turning right on southbound Churton Street, and slow speeds exiting the intersection southbound. Landscaping is an option at the intersection in the area where the existing right-turn lane is removed.

Alternative 2 – Roundabout

This alternative involves the construction of a single-lane roundabout with high visibility crosswalks. The roundabout provides an enhanced landscaped entrance that contributes to the character of the area and calms southbound traffic. High-visibility crosswalks are provided, connecting to the existing sidewalk. The design shown below requires a 110-foot inscribed circle and maintain access to businesses in the northeast and southwest quadrants and minimizes impacts to residences in the northwest and Town Hall in southeast quadrants.



Margaret Lane Right-In/Right-Out

This exhibit illustrates an alternative treatment for the intersection of Margaret Lane and Churton Street. This alternative restricts movements to and from Margaret Lane to right turns only. Eliminating left turns from Margaret Lane will improve traffic flow on Churton Street.

Associated improvements will be required such as providing a protected left-turn signal phase at King Street and potentially widening Tryon Street to provide a left turn lane. This widening could occur on the north side of Tryon Street.

The Margaret Lane right-in/right-out conversion is projected to provide the most congestion relief along Churton Street per dollar spent. This improvement could be implemented today and would significantly improve traffic congestion in downtown.

Parking

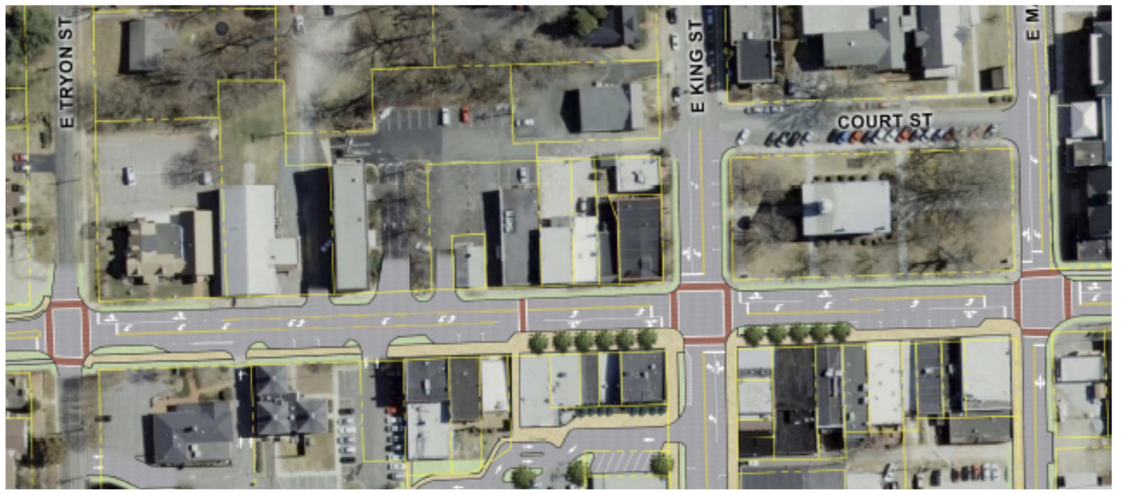
While the focus of the *Downtown Access Study* is on the public realm, parking improvements will require the coordination of public and private efforts. The 2010 Downtown Parking Study noted the changing dynamic of parking in Hillsborough as private entities have invested in parking. A comprehensive on-street and off-street parking study should be conducted to address parking adequacy and location versus parking demand. This study should also include and comment on handicap parking in the area of downtown.

On-Street Parking

The Downtown Parking Study indicates a total of 21 parking spaces on Churton Street in the downtown core. These spaces include

Parking Inventory		
	Existing	Proposed
Northbound		
King St to Tryon St	3	0
Southbound		
Margaret Ln to King St	9	5
King St to Tryon St	9	6
Total	21	11

The image to the right shows the location of on-street parking along Churton Street between Margaret Lane and Tryon Street. Parking is provided on the southbound side, though some spaces have been removed for a bus pullout and wide sidewalks for outdoor dining.

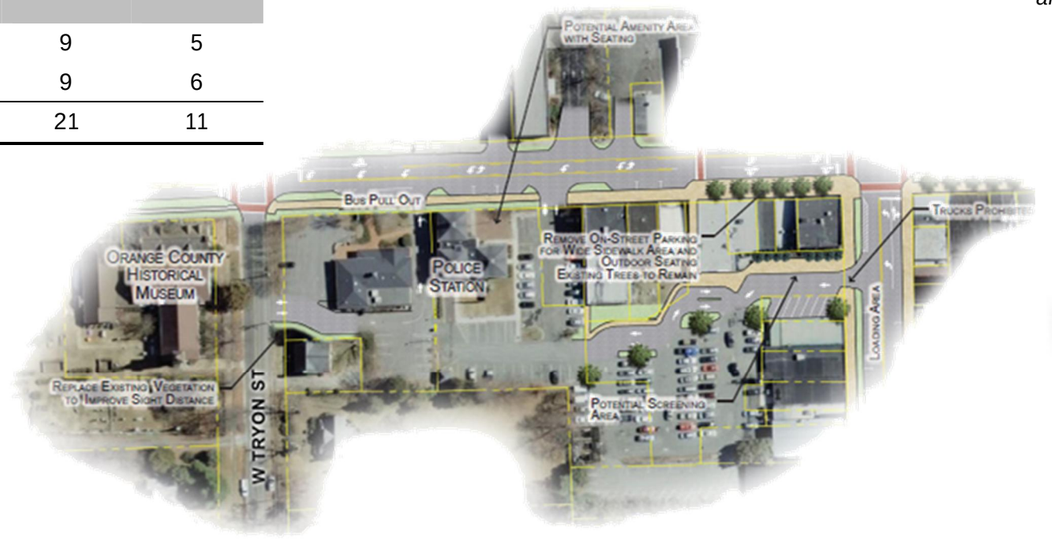


Bank of America Parking Lot

Improvements to the Bank of America parking lot could improve circulation through the parking lot, reduce delay, create loading zones for delivery vehicles, provide screening for the rear of businesses, and provide opportunities for green space. Two alternatives are presented, with varying levels of public investment and connectivity to Tryon Street.

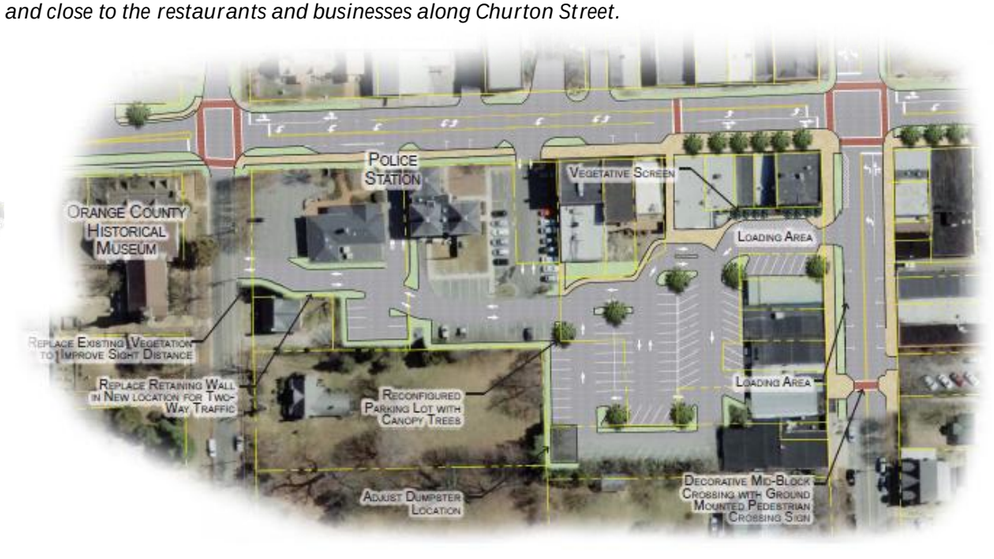
Bank of America Parking Lot – Alternative 1

This alternative focuses on ingress/egress at two points – King Street and Churton Street. The King Street access points would be converted to one-way inbound and a loading zone designated on King Street.



Bank of America Parking Lot – Alternative 2

This alternative is a more whole-scale change to ingress/egress and internal circulation. Vehicular access is provided behind the Annex and police station, allowing vehicles to turn right onto Tryon Street. Circulation improvements and required landscaping improves the functionality of the main portion of the lot. A loading zone near King Street provides a designated area for deliveries that is removed from traffic and close to the restaurants and businesses along Churton Street.



Multimodal Transportation

Downtown Hillsborough's grid network of interconnected streets provides an ideal setting for bicycle and pedestrian movements. Multiple route choices with lower speeds typical of a downtown area help mitigate congestion and safety issues of all modes. However, portions of the transportation network continue to experience significant constraints and challenges. Mobility through the community often conflicts with access to downtown amenities and neighboring residences. These conflicts become magnified when viewed through the lens of bicycle, pedestrian, and transit mobility.

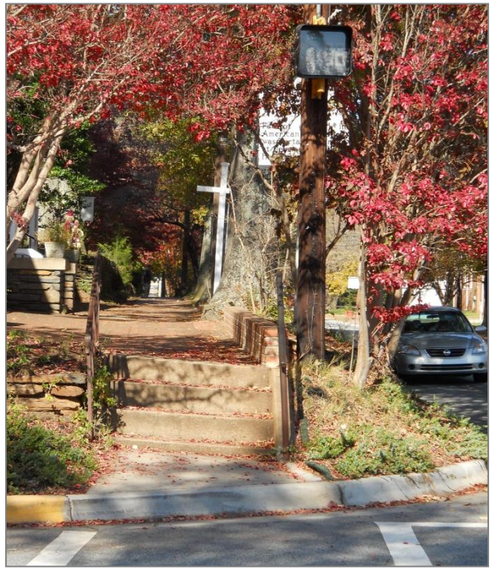
The Town of Hillsborough examined the needs of pedestrian and bicycle travel through its Community Connectivity Plan, finalized in June 2009. This plan identified barriers to travel, documented near-term improvements to the bicycle and pedestrian network, and proposed mid-term and long-term recommendations for the system. These improvements consisted of both on-street and off-street facilities as well as ancillary bicycle and pedestrian facilities and amenities. The issues and recommendations identified by this plan have been folded into the *Downtown Access Study*. Based on feedback during the planning process, some of these recommendations have been augmented or enhanced to best reflect the desires of the public.

The issues that follow relate to the pedestrian, bicycle, and transit operations of Churton Street and key cross-streets.

Issue: Pedestrian Connectivity & Safety

Through feedback from the Advisory Committee, public design charrette, and field review, the desire for enhanced pedestrian connectivity along Churton Street emerged as a clear priority. The following observations were noted during this process:

- Many pedestrian intersection crossings of Churton Street are unsafe.
  - Crosswalks are needed at strategic intersections.
  - Patterned crosswalks would call greater attention to crossing locations and enhance streetscape features.
  - Pedestrian crossing signs at high-volume locations would provide additional notification for vehicles.
- Mid-block crossings of key side street connections near destinations could attract high pedestrian volumes.

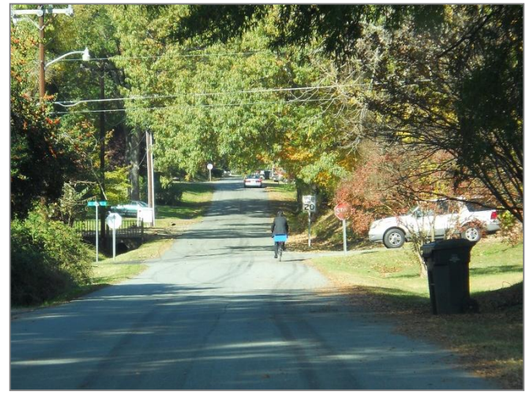


- Gaps in the sidewalk network create an uneven system, making Churton Street difficult for pedestrian travel.
  - The gap in the sidewalk network in front of Town Hall is a high priority.
  - Sidewalk extensions on Churton Street north to the US 70 Bypass and south across the Eno River bridge as well as supporting facilities on Corbin Street and Margaret Street have been identified as high priorities.
- Sidewalk connections need to be provided to destination points such as River Park.
- Churton Street is bookended by a high-traffic roadway (US 70 Bypass) and a bridge crossing the Eno River. These barriers need to be mitigated as much as possible.
- Improvements to the Eno River bridge crossing also need to consider the planned tie-in to Phase II of the Riverwalk greenway facility.

Issue: Bicycle Mobility

No roads in the Downtown Hillsborough area currently signed as bicycle routes. It's important to remember that since bicycles are considered vehicles they have equal right to use any non-restricted roadway. However, bicyclists can be encouraged to frequent certain routes that have amenities while connecting desired attractions and destination points. The following observations were noted during the public involvement process:

- Additional bike racks are needed for near downtown destination points.
  - Existing bike racks in the area could be augmented through donations or public funds.
- Churton Street near the US 70 Bypass and the Eno River Bridge is not bicycle friendly.
- An alternate bicycle route is needed to give cyclists an option to riding on Churton Street through downtown



Issue: Transit Accessibility

Downtown Hillsborough currently is served by two bus routes. Triangle Transit's Route 420 connects Downtown Hillsborough with Chapel Hill. This route travels along Churton Street in the downtown, and continues along NC 86 towards Chapel Hill. The bus makes two stops on Churton Street – near the Maxway Shopping Center and near the intersection with King Street. The Town of Hillsborough and Orange County are currently partnering to run a Hillsborough Circulator Bus. This bus system is funded through a grant from the Congestion Management and Air Quality Program. Through Downtown Hillsborough, this bus runs along Churton Street, with stops at the same locations as Triangle Transit Route 420.

The existing transit options provide service to a large portion of the town. To improve efficiency and functionality in the downtown area, the following observations were noted:

- Lack of bus pullouts creates congestion and safety issues along Churton Street
- Additional amenities such as shelters and parking are needed at certain bus stops to make them more desirable for use
- Bus stop locations need to be re-evaluated to make sure they are at the most suitable locations

Recommendations

Effective bicycle, pedestrian, and transit movement is critical to the success of the Downtown Hillsborough area. With its proliferation of civic, retail, and recreational destination points, the downtown area is a natural hub for non-motorized activities. Based on the issues identified through the Downtown Access Study as well as the issues and proposed solutions developed in the *Community Connectivity Plan*, the following projects are recommended to serve pedestrian, bicycle, and transit users. These improvements can also be seen on the Concept Design maps that follow.

Pedestrian Connectivity and Safety

Overall, the desire expressed by the Advisory Committee and the public was to create a connected sidewalk network that allows pedestrians to travel safely through downtown. The Town's *Community Connectivity Plan* sought to address this at a larger scale. Recommendations for pedestrian improvements also tie closely with recommendations for streetscape enhancements and traffic congestion. The following improvements are recommended to the pedestrian network:

Pedestrian connectivity improvements

Add sidewalk on the east side of Churton Street between US 70 Bypass and Tryon Street. In some areas, adding this sidewalk will necessitate adjusting the curb so that the current treeline can be preserved. Adding sidewalk in this area will reduce the width of the travel lanes from approximately 15' to 12'. These narrower lanes will encourage lower speeds.

Minimize impact of pedestrian barriers

Create a new sidewalk connection on the east side of Churton Street to the Eno River Bridge. This will need to be elevated in some areas to remain consistent with the existing grade. Having sidewalks in this location will also facilitate a future connection to the Riverwalk Greenway.

Enhance high-pedestrian traffic areas

Remove on-street parking to add a wide sidewalk on the west side of Churton Street between Tryon Street and Margaret Lane.

Install decorative crosswalks

The intersections of Churton Street with Corbin Street, Tryon Street, King Street, Margaret Lane, and Nash and Kollock Street should be considered for this treatment on some or all legs. This enhances the streetscape feel and creates a higher-visibility crossing location. Short sidewalk segments may need to be added in some locations to connect these crosswalks to the existing sidewalk network. A crosswalk also needs to be added across the minor legs at Queen Street.

Based on a citizen request, it is our understanding that NCDOT plans to upgrade the Churton Street at King Street traffic signal to an ADA compliant Accessible Pedestrian Traffic Signal. Funding for this project has not yet been identified.

Designate mid-block crossings

Decorative mid-block crossings are recommended on Churton Street between Tryon Street and King Street, on King Street west of Churton Street, and on Margaret Lane west of Churton Street. Mid-block crossings should always be well marked since they invite pedestrians to cross the street at a non-intersection location. The decorative element assists with this while remaining consistent with the proposed streetscape.

Install ground-mounted pedestrian crossing markers

These warning signs will help to alert drivers of mid-block crossing locations. The signs are recommended at the existing crosswalk on Nash and Kollock Street west of Churton Street and the proposed mid-block crossings of King Street and Margaret Lane.

Connect to River Park

A sidewalk connection to River Park is recommended on the east side of Churton Street from Nash and Kollock Street. This connection will create a link between the activity points on Churton Street and the recreational opportunities at River Park. Careful engineering will be needed to determine if this connection is feasible with current grades and existing infrastructure in the area.

This portion of the Concept Design shows many features that aim to improve the safety and mobility for non-vehicular traffic. Improvements shown here include a sidewalk connection that fills the gap between the existing sidewalk near the Courthouse to the Eno River bridge. A decorative crosswalk at the Nash and Kollock Street signal and connection to River Park also is shown. Mid-block crossings on side streets are shown on the Concept Designs with an emphasis on ground-mounted pedestrian crossing markers.

Bicycle Mobility

In order to best serve bicyclists in the Downtown Hillsborough area, improvements need to be made to both the roadways and the supporting facilities. Bicycle recommendations need to balance the desire to access destinations along Churton Street with the viability for more bicycle-friendly routes. In addition, many of the recommendations identified for traffic congestion and safety improvements will also yield benefits for bicycle travel. The following improvements are recommended to the bicycle network:

Designate an alternative bicycle route

The Community Connectivity Plan recommended designating a signed bicycle route that runs along Cameron Street from Margaret Lane to Corbin Street. This route would encourage bicyclists to bypass Churton Street, while still placing them close to desired destination points.

Minimize travel barriers

Signage and other ancillary features should be considered to support bicycle travel along Churton Street near the Eno River Bridge and US 70A. The Community Connectivity Plan recommends striped bicycle lanes in these locations. Since adding these lanes would necessitate additional pavement (including replacement of the Eno River Bridge), they are not part of the near-term recommendations in this plan. However, they should be considered as other roadway improvements are made to this area in the future.

Create bicycle parking areas

As with any vehicle, each bicycle trip begins and ends with a need for parking. To serve these users, bicycle racks should be added near key destination points not currently served with these amenities.

Transit Accessibility

The best way to continue to serve transit riders and grow the ridership population is to provide attractive services and amenities. The existing transit services do provide a variety of connections and opportunities to potential riders. Recommendations to enhance transit service focus on siting bus stops at optimal locations while also giving the user a comfortable waiting experience. The following improvements are recommended for the transit network:

Relocate bus stops

Where bus stops are deemed inadequate, they should be shifted to more suitable locations. Relocations are recommended for the stop near the North Hills (Maxway) Shopping Center and near the Gateway Center. These locations can be seen on the Concept Designs noted as bus pullouts.

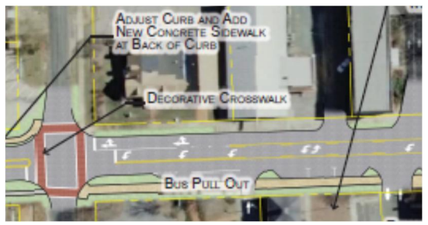
Create bus pullouts

Bus pullouts can alleviate congestion issues, improve safety, and create a more comfortable environment for patrons to wait since they are removed from the flow of traffic. Bus pullouts are recommended at the following locations:

- Northbound Churton Street across from the Gateway Center
- Northbound Churton Street in front of the Highway 70 BBQ, North Hills (Maxway) Shopping Center
- Southbound Churton Street in front of the Town Annex

Enhanced bus stop

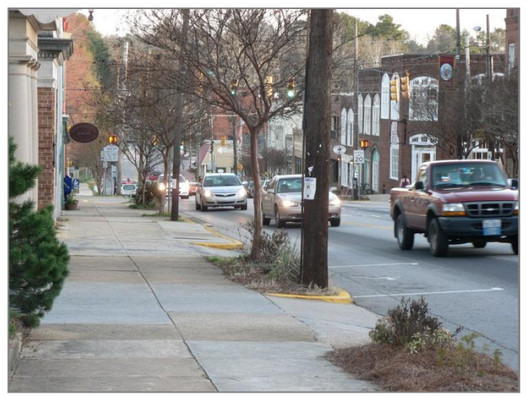
A particular need was communicated to provide amenities at the bus stop near the North Hills (Maxway) Shopping Center. Amenities should include a bus shelter and dedicated parking. The bus stop near the Town Annex would benefit from a recommended bicycle rack at that location.



This series of three images show the bus pull out locations along Churton Street, two northbound and one southbound.

Streetscape & Downtown Vitality

Downtown Hillsborough has an incredibly rich history spanning over 250 years. This history is reflected in the character of the area and contributes to look and feel of downtown. Much of the Town's vibrancy is the result of its historical charm. Churton Street functions as an important north-south link in the Town's transportation network and serves as a gateway into the historic downtown.



Issue: Streetscape

The Context Zones introduced in Chapter 1 are very distinct when viewed in terms of streetscape. The portion of the study area north of Corbin Street (Context Zone 1) includes an aging strip retail center, which is a stark contrast to the historic neighborhood just to the south anchored by the Burwell School (Context Zone 2). These areas are quite different from Context Zone 3 and the mix of commercial establishments, governmental buildings, and historic properties. The following list describes points of emphasis from outreach efforts.

- Street trees are needed along Churton Street between Corbin Street and the US 70 Bypass.
- Landscaping at the Corbin Street intersection could signal a change in character as motorists enter the historic district.
- Greenspace is needed throughout the corridor.
- Trees along the eastside of Churton Street north of Tryon Street need to be preserved.
- Street trees are needed along Churton between King Street and Margaret Lane.
- Patterned crosswalks, especially in the central business district, would serve the dual purpose of improving safety and enhancing the look of the area.

Issue: Enhanced Landscaped Entrances

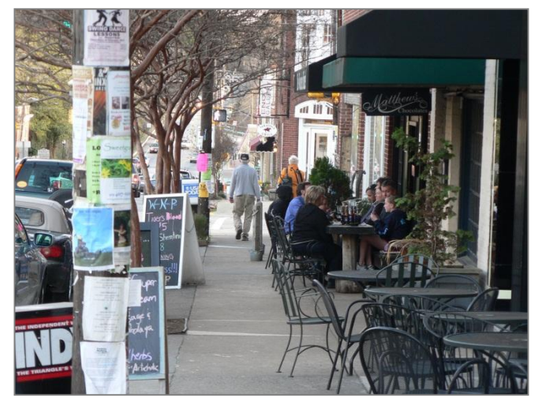
Enhanced landscaped entrances define a change of character for a given area. While the charm and unique character of the Town of Hillsborough is obvious to motorists traveling the Churton Street corridor, the area could benefit from enhanced landscaped entrances with coordinated landscaping and signage as recommended in the Town's recent Wayfinding Signage Plan. These areas that serve as the first impression for many visitors and customers to downtown should not be overlooked. Specific comments from the public design charrette included:

- The North Hills (Maxway) Shopping Center near the US 70 Bypass needs attention.
- Better landscaping on the south end of the Corridor (near the Eno River) could improve the feel of the area as motorists enter the historic district.

Issue: Downtown Vitality

Like most communities, the downtown area of Hillsborough plays a critical role in the health of the community. The area provides much of the community's historical value, tax revenue, tourism generators, and cultural heritage. The vitality of a downtown area is deeply woven into the fabric of its transportation network, in terms of connectivity, choice, safety, mobility, and appearance. Discussions regarding downtown vitality for the *Downtown Access Study* were conducted alongside discussions regarding streetscape. But the conversation often overlapped with topics covered in the parking and mobility and multimodal transportation topic discussions. As such, many of the issues described previously relate to a discussion of the community vitality. Key points include:

- Wide sidewalk with outdoor dining areas would add to the vibrancy of the area.
- Views to historic properties need to be preserved or enhanced.
- Streetscape improvements need to be planned to be continuous and coordinated.



Recommendations

Just as a discussion of issues related to streetscape and downtown vitality overlap with discussions on parking, mobility, and multimodal transportation, improvements in these areas will have a positive impact on the look and feel of the corridor. As such, these improvements should be implemented with an eye toward the impact on the streetscape and downtown vitality. Indeed, the *Downtown Access Study* considered how improvements to the roadway network and system of bicycle and pedestrian facilities can be coordinated with streetscape design. The result is the following list of recommendations:

Street Trees

Street trees are recommended throughout the corridor including understory street trees along the east side of Churton Street north of Corbin and between Tryon Street and Queen Street. Locations with existing, mature street trees should be preserved. For example, the recommended sidewalk along the east side of Churton Street north of Queen Street will be constructed by narrowing the travel lanes to protect existing trees. The existing street trees near the King Street intersection also should be protected as other improvements are completed. Though not street trees, it should be noted that improvements associated with the redesign of the Bank of America Parking Lot likely will require planting trees based on existing Town ordinances.

Wide Sidewalks

Outdoor dining currently is popular in Hillsborough, though the width of the sidewalk limits the functionality of these spaces and can impede safe pedestrian travel. Wide sidewalks are recommended along the west side of Churton Street in the first half block north and south of King Street to accommodate outdoor dining, street trees, and other urban design features.

Historical Views

This historical charm of the Town should be preserved through screenings (e.g. the rear of the existing restaurants along Churton Street).

Enhanced Landscaping Treatments

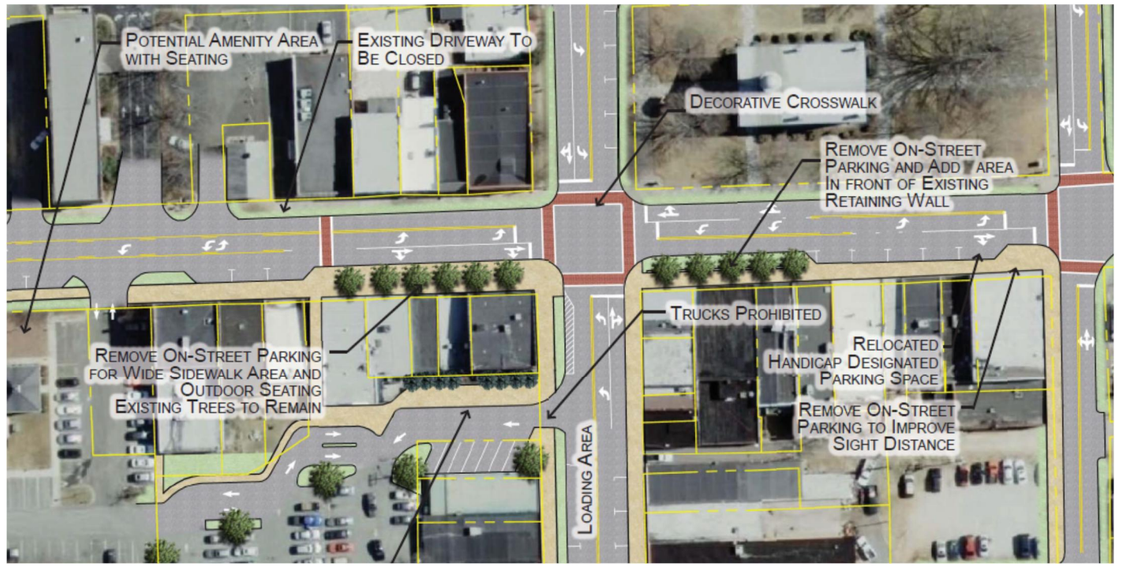
Enhanced landscaped entrances can be a combination of specific entrance points as well as linear entrance corridors, key thoroughfares and highways. They can be an ensemble of streets, buildings, natural features and landscapes, bridges, and special elements such as signage and public art. The major entrances into downtown Hillsborough along main travel corridors can convey the Town's identity by utilizing characteristic design elements that reflect Hillsborough's character. In addition, development along major entranceways influences the visitor's first impressions and their image of Hillsborough.

Concept Designs

(See pages 4-11 & 4-12)

The preceding sections highlighted introduced a series of recommendations based on three categories: 1) Parking & Mobility, 2) Multimodal Transportation, and 3) Streetscape & Downtown Vitality. These sections showed select recommendations usually accompanied by a graphic that depicts the proposed improvements. The maps that follow are the critical deliverable of the *Downtown Access Study*. These exhibits provide more full conceptual designs for the corridor. These plans show design detail regarding the specific recommendations, including intersection improvements, access management strategies, pedestrian enhancements, and streetscape elements. These Concept Designs are included as page 4-11 and 4-12.

Wide sidewalks are recommended to enhance the vitality of the area by providing outdoor seating for restaurants.



Churton Street Concept Design North

This exhibit details improvements from the North Hills (Maxway) Shopping Center near the US 70 Bypass to Union Street, including alternative treatments for the Corbin Street intersection.

Churton Street Concept Design South

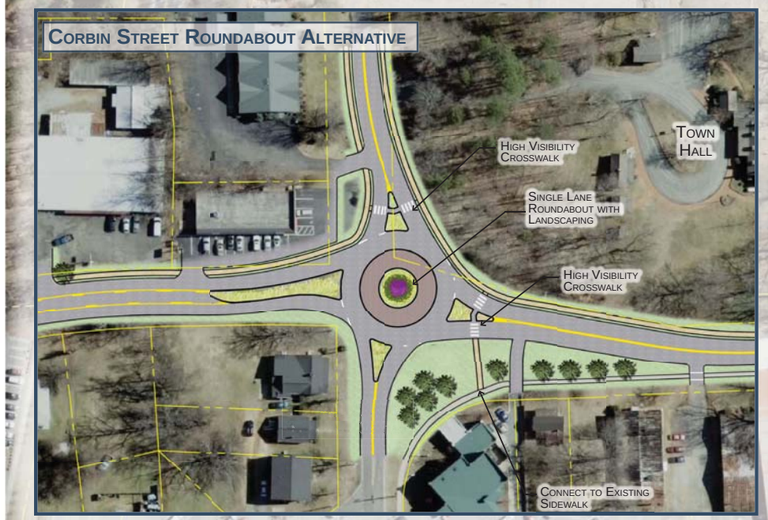
This exhibit details improvements from Queen Street south to the Eno River. This area represents the focus of the *Downtown Access Study* and provides design detail for the heart of Hillsborough. Alternative treatments are shown for the Bank of America parking lot.

Kimley-Horn and Associates, Inc.

CHURTON STREET CONCEPT DESIGN NORTH

TOWN OF HILLSBOROUGH
Downtown Access Study

CORBIN STREET ROUNDABOUT ALTERNATIVE



E CORBIN ST
E ORANGE ST
E UNION ST
TOWN HALL
EXISTING SIDEWALK ALONG ORANGE ST
CONNECT EXISTING ORANGE ST SIDEWALK TO NEW SIDEWALK ON CHURTON
ADJUST CURB AND ADD NEW SIDEWALK AT BACK OF CURB
EXISTING TREES TO BE PRESERVED
EXISTING TREES BE PRESERVED
N CHURTON ST
NEW SIDEWALK AT BACK OF CURB
REMOVE FREE FLOW RIGHT TURN
EXISTING SIDEWALK ON WEST SIDE OF CHURTON
BURWELL SCHOOL HISTORIC SITE
UNDERSTORY STREET TREES
CONNECT TO EXISTING SIDEWALK
N CHURTON ST
BUS PULL OUT
POTENTIAL LANDSCAPING OPPORTUNITY
MCADAMS RD
W CORBIN ST
W ORANGE ST
W UNION ST
0 50 100 Feet

Kimley-Horn and Associates, Inc.

CHURTON STREET CONCEPT DESIGN SOUTH

TOWN OF HILLSBOROUGH
Downtown Access Study

BANK OF AMERICA PARKING LOT ALTERNATIVE

POLICE STATION
VEGETATIVE SCREEN
ORANGE COUNTY HISTORICAL MUSEUM
LOADING AREA
REPLACE EXISTING VEGETATION TO IMPROVE SIGHT DISTANCE
REPLACE RETAINING WALL IN NEW LOCATION FOR TWO-WAY TRAFFIC
RECONFIGURED PARKING LOT WITH CANOPY TREES
LOADING AREA
ADJUST DUMPSTER LOCATION
DECORATIVE MID-BLOCK CROSSING WITH GROUND MOUNTED PEDESTRIAN CROSSING SIGN
W KING ST
W TRYON ST
E QUEEN ST
E TRYON ST
E KING ST
E MARGARET LN
COURT ST
UNDERSTORY STREET TREES
ADD CROSSWALK MARKINGS
ADJUST CURB AND ADD NEW CONCRETE SIDEWALK AT BACK OF CURB
DECORATIVE CROSSWALK
POTENTIAL AMENITY AREA WITH SEATING
EXISTING DRIVEWAY TO BE CLOSED
DECORATIVE CROSSWALK
REMOVE ON-STREET PARKING AND ADD AREA IN FRONT OF EXISTING RETAINING WALL
COURT HOUSE
BUS PULL OUT
DECORATIVE CROSSWALK
SIDEWALK CONNECTION DOWN TO PARK
NEW SIDEWALK CONNECTION TO BRIDGE. ELEVATE WHERE EXISTING GRADE REQUIRES
S CHURTON ST
N CHURTON ST
BUS PULL OUT
EXISTING SIDEWALK ON WEST SIDE OF CHURTON
REDEFINE DRIVEWAY ENTRANCES WITH NEW CURB
ORANGE COUNTY HISTORICAL MUSEUM
POLICE STATION
REMOVE ON-STREET PARKING FOR WIDE SIDEWALK AREA AND OUTDOOR SEATING EXISTING TREES TO REMAIN
TRUCKS PROHIBITED
RELOCATED HANDICAP DESIGNATED PARKING SPACE
REMOVE ON-STREET PARKING TO IMPROVE SIGHT DISTANCE
LOADING AREA
FIRE STATION
GATEWAY CENTER
DECORATIVE CROSSWALK
EXCHANGE PARK
REPLACE EXISTING VEGETATION TO IMPROVE SIGHT DISTANCE
POTENTIAL SCREENING AREA
LOADING AREA
GROUND-MOUNTED PEDESTRIAN CROSSING MARKER
RESTRIPE PARKING FOR HANDICAP SPACES
DECORATIVE MID-BLOCK CROSSING WITH GROUND MOUNTED PEDESTRIAN CROSSING SIGN
DECORATIVE MID-BLOCK CROSSING WITH GROUND MOUNTED PEDESTRIAN CROSSING SIGN
LIBRARY
ORANGE COUNTY OFFICES
ENO RIVER PARKING DECK
NASH AND KOLLOCK ST
W MARGARET LN
W KING ST
W QUEEN ST

0 50 100 Feet

The Town of Hillsborough is ready for a paradigm shift. No longer will they rely solely on decisions made by others that impact the character and well-being of their community. They have made a conscious decision to balance the tradeoffs associated with building a bypass versus protecting the vitality and attractiveness of their community. The choice has been made; community leaders have decided to put their resources and commitment into the enhancement of Churton Street, the primary entryway for their citizens, visitors and commerce into their historic community.

This plan memorializes the Guiding Principles developed at the outset of the Hillsborough Downtown Access Study:

Vision, Plan, Design, and Action

These principles reflect a concerted effort to develop a plan that can be implemented. A well-designed Action Plan for implementation is a critical element to meet the needs of the traveling public, whether by vehicle, bicycle or by foot. Some actions identified here seek to provide a framework in which public and private investments and the development of appropriate programs, policies, projects, and other actions lead to change. The intent of the Action Plan is two-fold. First, it must enable decision-makers to track progress and schedule future year improvements. Second, it must clearly define ways the Town of Hillsborough, Durham-Chapel Hill-Carrboro MPO (DCHC), and NCDOT can leverage public and private investment that foster quality design, economic vitality, and community character through sustainable transportation and land use policies.

Now is the time to plan for the future. Today's conditions on Churton Street are inconvenient at best, potentially unsafe at worst. One thing is certain, without the bypass (i.e., Elizabeth Brady Road Extension) the community will still have to deal with congestion issues. The intent of this study is to develop recommendations that go beyond moving vehicles, but rather connect people with places throughout the community.

The refocusing has begun. Private investment along Churton Street and within the community has energized this historic town into a quality historic village. Completion of the Hillsborough Downtown Access Study represents an important step toward extending this momentum toward a long-term vision of enhanced mobility, improved safety, and renewed development. By design, the plan does not require all improvements to be completed in tandem. Instead, a flexible approach has been created that allows local officials to partner with Town leaders, businesses, development community, and NCDOT to implement the vision in several phases as development occurs and funding surfaces. The plan also protects previous and planned infrastructure investment with careful consideration of how initial phases interact with long-term plans.

This study focuses on identifying multimodal transportation solutions within the corridor to help accommodate immediate and short-term traffic growth while protecting and enhancing the character of the area.

Controlling Factors

The implementation steps identified in this chapter will be executed in phases and will be subject to a variety of factors that will determine their timing. These factors include:

- The degree of control or influence DCHC MPO and the Town of Hillsborough has relative to their desire to implement changes.
- The availability of personnel and financial resources necessary to implement specific improvements.
- The degree to which Hillsborough and NCDOT can proactively work with the development community to enhance the quality of development and urban design within the study area.
- Whether an implementation step is an independent project or program, an incidental part of a larger project, or a component of the rational evaluation of a new development project.
- The interdependence of various implementation items, in particular the degree to which implementing one item is dependent on the successful completion of another item (e.g. intersection improvements to Churton Street before streetscape enhancements).
- The relative severity of the problem that a particular implementation item is designed to remedy.

The Action Plan identifies next step items (priorities) for all categories described and summarized in the preceding chapters. Specific categories include recommendations for Policy & Regulatory, Parking & Mobility, Multimodal Transportation, and Streetscape & Downtown Vitality. Ultimately, these recommendations can be administered concurrently or as priorities and regional initiatives present the opportunity to do so.

Guiding Principles

The *Hillsborough Downtown Access Study* empowers the Town to evaluate coordinated planning concepts explored in previous plans and develop design solutions for the corridor that balance the sometimes competing interests of local access, mobility, safety, vitality, and quality of life. Early in the planning process, the project's Guiding Principles were developed by the staff-level Advisory Committee to summarize the core philosophy that guides the Hillsborough Downtown Access Study:

- *Improve circulation and mobility for local traffic.*
- *Use innovative ideas and tools for potential solutions.*
- *Enhance walkability through design applications.*
- *Implement access management where appropriate.*
- *Advocate streetscape improvements that enhance downtown vitality, pedestrian comfort, and historic integrity.*
- *Protect the viewshed to historic properties.*
- *Identify policy and regulatory recommendations to complement physical improvements.*
- *Establish recommendations* that are functional and implementable.

Funding Considerations

The Town Board in partnership with DCHC MPO, should explore the feasibility of implementing one or more of the preferred funding strategies identified during the planning process. Initial considerations for implementing the various funding strategies should include:

- The feasibility of implementing a self-finance funding strategy for the Town of Hillsborough, including required state authority, regulatory limitations, or political feasibility.
- The extent of the political jurisdiction that would be subject to the provisions of the new funding strategy (e.g., study corridor or town-wide).
- The amount of revenue that can be generated from the funding strategy.
- A list of eligible projects or planning initiatives that could be implemented with the funding source.

Action Plan Matrix – Policy & Regulatory Items

	Responsible Party
Adopt the Town of Hillsborough Downtown Access Study	DCHC / Town
Work cooperatively with the Town and NCDOT during the next update of their Capital Improvement Program (CIP) and Transportation Improvement Program to incorporate the phased recommendations of this study	Town/ NCDOT
Update Town ordinance to require/enforce the use of truck loading zones as identified on the Concept Designs	Town
Town should proactively support the truck route (service trucks only) enforcement including processing the traffic citations	Town
Consider the creation of an access management and design overlay ordinance. The ordinance will provide a legal framework for the Town to administer and enforce consistent access management and urban design standards along the Churton Street corridor as depicted in this study. The ordinance should contain rules and requirements for the "core" components of the Concept Design Plans, including travel lane delineation for traffic signals, streetscape, and driveways; and provisions for corner clearance. The ordinance also should require cross access (where applicable) between adjacent commercial properties, consolidation/elimination of excessive driveways, and retrofitting site access to the side and rear portions of the site	Town
Continue to require developers to fund roadway and access improvements that are rational and proportional to the impact created by development	Town/ NCDOT
Update Town ordinances to clarify design guidance for sidewalk, greenways, and preferred parking layout standards	Town
Enforce time-of-day restrictions and/or time limits for on-street parking along Churton Street	Town
Work with NCDOT to install a pre-emption system for emergency service vehicles along Churton Street	Town/ NCDOT
Conduct a Comprehensive Parking Demand Study (Including availability of handicap spaces)	Town

Action Plan Matrix – Phased Improvements	Planning/Design Cost Estimate	Cost Estimate [A]	Responsible Party [B]
Section 1			
Design and Construct sidewalk along east side of North Churton from Corbin Street to US 70 Bypass. Includes bus pullout, street trees and entranceway landscaping. (See page 4-9).	$20,000	$90,000	Town
Section 2			
Install Hi-Visibility crosswalks on all four legs of Churton Street intersections with Queen Street, Union Street and Orange Street. Also includes sidewalk connection at Town Hall	$3,500	$15,000	DCHC / Town/ NCDOT
Work with NCDOT to design and install improvements to Churton Street at Corbin Street – Alternate 1: includes crosswalks, landscaping and removal of the free-flow right turn lane.	$50,000	$180,000	DCHC / Town/ NCDOT
Work with NCDOT to design and install improvements to Churton Street at Corbin Street – Alternate 2: incorporates landscaping and crosswalk elements of Alternate 1 above into a one-lane roundabout intersection.	$135,000	$550,000	DCHC / Town/ NCDOT
Narrow the cross section of Churton Street and add sidewalk on the east side between Tryon Street and Corbin Street.	$155,000	$620,000	DCHC / Town/ NCDOT
Section 3			
Install mid-block decorative crosswalk and West King Street and West Margaret Lane. Includes pedestrian crossing signs.	$1,000	$5,000	Town
Design and install sidewalk connection along east side of Churton from Courthouse to US 70A with access to River Park (see page 4-7) bus pullout at Nash and Kollock. Planning/Design will assess feasibility of portion of this project. Construction costs should be in four segments – courthouse to Nash & Kollock, Nash and Kollock to Eno bridge, Eno bridge to US 70A, and River Park connection.	$13,000	$75,000	DCHC / Town
Remove portions of on-street parking to widen sidewalk and enhance streetscape in ½ block north and south of King Street; also includes bulb-out at Margaret Lane, mid-block crosswalk on Churton Street at "brick alley".	$15,000	$65,000	DCHC / Town/ NCDOT
Redesign and modify the Bank of America Parking Lot – Alternative 1 (see page 4-5) this improvement include modifications to ingress/egress, one-way operation and new loading zone on King Street.	$5000	$15,000	DCHC / Town
Redesign and modify the Bank of America Parking Lot – Alternative 2 (see page 4-5) this improvement include modifications to internal circulation, modified access near Annex, new loading area, and landscaping/screening improvements.	$10,000	$70,000	DCHC / Town/ NCDOT
Restripe Churton Street to provide greater northbound left turn storage between Tryon and King Streets; includes decorative crosswalks at Tryon Street & bus pullout at Annex. Removes three parking stalls on east side of Churton St.	$20,000	$95,000	DCHC / Town/ NCDOT
Design and install a median along Churton Street at intersection of Margaret Lane (see Concept Design Maps) Includes conversion of Margaret Lane to right-in/right-out. Eliminate traffic signal at Margaret Lane, includes decorative crosswalks at King, Margaret and Nash & Kollock; modify traffic signal at King Street to provide westbound protected left turn phase.	$60,000	$160,000	DCHC / Town/ NCDOT

[A] Cost estimate includes estimated design cost and twenty percent contingency. Probable construction cost estimate is engineer's approximation in current year dollars and is subject to change based on increased construction materials, design, or time of implementation.

[B] Timeframe for implementation will depend on project need and available funding. Actual timeframe may vary based on externalities. All projects and "Action Items" have been vetted through a collaborative process which included the following agencies: DCHC, NCDOT, and Town of Hillsborough.

Action Plan Matrix – Funding Strategies

	Responsible Party
Lobby NCDOT and members of the State Board of Transportation (BOT) to include partial funding of the design and implementation of recommended improvements in the next Transportation Improvement Program (TIP).	DCHC / Town/ NCDOT
Leverage NCDOT District funding allocations for "spot safety" improvement monies to implement safety improvements at key intersections along the Churton Street corridor. See Chapter 4 recommendations for intersection priority list.	DCHC / Town/ NCDOT
Solicit NCDOT Division Hazard Elimination, Governor's Highway Safety Program (GHSP), Small Construction and Contingency funds improvement monies to implement corridor access and safety improvements at key intersections and segments along the Churton Street corridor.	DCHC / Town/ NCDOT
Pursue Enhancement Grants to construct bike, pedestrian and streetscape improvements as outlined in Chapter 4 recommendations. State and federal grants can play an important role in implementing strategic elements of the transportation network. Several grants have multiple applications, including Transportation Enhancement Grants as well as State and Federal Transit Grants. The Enhancement Grant program, established by Congress in 1991 through the Intermodal Surface Transportation Efficiency Act (ISTEA), ensures the implementation of projects not typically associated with the road-building mindset. While the construction of roads is not the intent of the grant, the construction of bicycle and pedestrian facilities is one of many enhancements that the grant targets and could play an important role in enhancing the pedestrian safety and connectivity within the study area.	DCHC / Town/ NCDOT
Continue to aggressively pursue Safe Routes to School (SRTS) funding to enhance bicycle and pedestrian improvements in proximity to the public schools (Cameron Park School, Stanford Middle School, and Hillsborough Elementary School) within the study area. SRTS is a program receiving federal funding through the newest SAFETEA-LU legislation. The program provides funding for individual schools to create route plans or develop facilities that create a safer walking and biking environment for their students. North Carolina has a yearly application program for which any school, school district, municipality or other governmental body, or non-profit association may apply. For more information, visit www.saferoutesinfo.org/. Projects funded through the SRTS program receive 100% federal funding.	DCHC / Town/ NCDOT
Consider passing a Transportation Bond referendum to potentially fund the Churton Street recommendations. Projects that historically have been funded through transportation bonds include sidewalks, road extensions, new road construction, and streetscape enhancements.	Town
Aggressively pursue Recreational Trails Program to construct the River Walk Trail (greenway, part of the Mountains to Sea Trail) in accordance with this Study. According to the FHWA, "the Recreational Trails Program (RTP) provides funds to the States to develop and maintain recreational trails and trail-related facilities for both non-motorized and motorized recreational trail uses. The RTP is an assistance program of the Department of Transportation's Federal Highway Administration (FHWA). Federal transportation funds benefit recreation including hiking, bicycling, in-line skating, equestrian use, cross-country skiing, snowmobiling, off-road motorcycling, all-terrain vehicle riding, four-wheel driving, or using other off-road motorized vehicles."	DCHC / Town/ NCDOT

Conclusion

Churton Street serves many purposes. As the Town's "Main Street", a lifeline to numerous historic resources, and a north-south connection to a host of residences, improvements to mobility and safety must respect the values of the Town and its residents, business owners, and visitors. These stakeholders united with the Town to establish a corridor vision – *"To create a Plan that enhances the safety, mobility, and appearance of the Churton Street corridor, in a manner that promotes quality development and economic vitality"*. This collective vision will move forward only through the efforts of those engaged with the planning process, the "champions" of the Study.

The evolution of NC 86 continues. As a regional commuter route, local north-south connector, lifeline to businesses and neighborhoods, and front door to a historic community a one-size fits all solution is not feasible or desirable. The Town of Hillsborough Downtown Access Study represents a new direction for a corridor that means many things to many people. It's a study built upon the foundation of four directives that demands a renewed focus on coordinated, feasible solutions to address not only the issues we face today but the emerging issues that threaten our way of life. These directives permeate a planning process built on results:

- Vision — The Town of Hillsborough Downtown Access Study will respect previous and ongoing efforts that fostered the current vision for the corridor.
- Plan — The Town of Hillsborough Downtown Access Study will emerge from a planning process grounded in stakeholder involvement and structured analysis and community support.
- Design — The Town of Hillsborough Downtown Access Study will establish realistic design solutions for the transportation and land use interests of the corridor.
- Action — The Town of Hillsborough Downtown Access Study will conclude with a prioritized implementation strategy that assigns responsibility and funding sources.

Funding Reality

The realization that federal and state dollars are becoming more difficult to secure is one illustration of why we must change the way we do business. No longer can we rely on the status-quo for addressing our regional transportation needs. We must take a proactive approach to address identified needs through innovative partnerships and financing mechanisms that support the historic integrity, growth and prosperity Hillsborough. One thing is certain. Funding and implementing the Churton Street corridor improvements will require partnership between local officials and leaders at Durham-Chapel Hill-Carrboro MPO (DCHC) and NCDOT. Ultimately, continued collaboration between state, local agencies, economic development partners, and the general public will provide more opportunities to foster a safe, aesthetically-pleasing, and well-balanced multimodal transportation system that reinvents this critical gateway corridor. In collaboration with state and local officials, the Town's collective efforts will lead to a safe, multimodal corridor that supports sustainable development opportunities through the heart of Hillsborough's historic community.

2040 Long Range Transportation Plan (LRTP)
Comprehensive Transportation Plan (CTP)
Summarized Development Schedule

Public Involvement Activities	
W = Public **W**orkshops/meetings	H = Public **H**earings
N = LRTP **N**ewsletter	O = **O**ther Public Involvement Activities
M = Mailing List - flyers, information, materials	

(bold/blue block) = TAC task/action
(light/blue crosshatch) = First TAC review or action
(light grey block) = task/action
(yellow/horizontal stripe) = adopted or completed

Task ID#	Plan Tasks	Pub. Involve.	2011 Aug	Sep	Oct	Nov	Dec	2012 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2013 Jan	Feb	Mar	Apr	May	Jun
1	**2040 LRTP Work Plan and Schedule** -- **develop, review and endorse**																								
2	**2040 LRTP Public Involvement Plan** -- **update, release for comment, conduct hearing and approve**	N, W, M, H, O										public h													
3	**Goals & Objectives and Targets** -- **develop, release for comment, conduct hearing, and adopt**	N, W, M, H, O										public he													
4	**Socio-economic Data (SE Data)** -- **develop, release for comment, conduct hearing and approve for use in 2040 LRTP**	N, W, M, H, O										public heari													
5	**Triangle Regional Model (TRM)** -- **update model, complete Base Year validation, verify network, and TAC approve**																								
6	**Deficiency Analysis and Needs Assessment** -- **generate deficiency analysis, develop needs assessment, and TAC review and comment**																								
7	**Financial Plan** -- **Preliminary forecasts for Alts. Analysis; final forecasts for Preferred Option**																								
8	**Alternatives Analysis** -- **establish evaluation criteria, generate and evaluate alternatives, conduct workshops and public hearing, other agency and local review, TAC select Preferred Option**	N, W, M, H, O														public hearing									
9	**CTP Projects** -- **Same tasks as #8 (Alternatives Analysis) except most of CTP report will be drafted, and NC Bd. of Transportation needs to approve after TAC approval.**	N, W, M, H, O														public hearing									
10	**Incorporated Studies** -- **Freight; Purpose & Need; Environmental Justice; Resource agency review (4F); Planning Factors; and, Indirect & Cumulative**																								
11	**Adoption of 2040 LRTP** -- **release fiscally-constrained 2040 LRTP full report for public comment, conduct hearing, receive local review, and approve Plan**	M, H, O																public hearing							
12	**CTP Report** -- **Write full CTP report (includes purpose & need, etc.), release for public comment, conduct workshop, TAC adopt final CTP Report, NC BOT approves final CTP Maps.**	M, H, O																public hearing							
13	**AQ Conformity Determination** -- **prepare networks, conduct emissions analysis and prepare draft report**	M, H, O																							
14	**Final LRTP/AQ Conformity Adoption** -- **release fulle report for comment, conduct public hearing, TAC approve full report, and federal agency approval**	M, H																				public hearing			
▶	Conformity Lapse Date -- June 15, 2013																								

MEMORANDUM

To: Transportation Advisory Committee (TAC)
DCHC MPO

From: DCHC MPO Lead Planning Agency

Date: May 9, 2012

Subject: **Lead Planning Agency (LPA) Staff Report**

This memorandum provides a summary status of tasks for projects in the FY 2011-2012 Unified Planning Work Program.

- • Indicates that task is ongoing and not complete.
- ✓ Indicates that task is complete.

FY 2011- 2012 Unified Planning Work Program (UPWP) – Projects

Town of Carrboro Transportation Study/Main Street Road Diet

- ✓ Consultant selected
- ✓ Scope development/contract negotiation complete
- ✓ Data Collection to commence in September 2011 – Analysis Underway

Town of Hillsborough Downtown Transportation Study

- ✓ Consultant selected
- ✓ Scope development/contract negotiation complete
- ✓ Data Collection to commence in September 2011 – Analysis Underway

2040 Long Range Transportation Plan LRTP

- ✓ LRTP Schedule/Timeline TAC Approval – August 2011
- ✓ Socio-economic and demographic data analysis completed
- ✓ LRTP Public Involvement plan – March/April/May 2012
- ✓ LRTP Goals and Objectives – March/April/May 2012
- • Approval of LRTP Targets - March/April/May 2012
- • Deficiency Analysis – March/April/May 2012
- • Socio-economic Forecasts – March 2012
- • Land use Scenario – March 2012
- • Alternative Analysis – May –July 2012
- • Draft LRTP Recommendation - September 2012
- • Air Quality analysis and Conformity Adopted - October 2012 - February 2013
- • Approval of LRTP and Conformity determination - April/May 2013
- • Technical report and implementation

Comprehensive Transportation Plan (CTP)

- • Draft CTP –Depends on NCDOT Schedule
- • Public Input

- Recommended CTP
- Adopted CTP - September 2012
- Technical report and implementation

NC 54/I-40 Corridor/Sub-Area Study

- ✓ Staff study initiation meeting
- ✓ Draft scope of services
- ✓ Agency review of scope and time
- ✓ Request for Proposal notice – October 2008
- ✓ Proposal due January 2009
- ✓ Consultant selected
- ✓ Contract negotiation underway
- ✓ Council contract approval – May 18, 2009
- ✓ Notice to Proceed – June 2009
- ✓ Kickoff Meeting – July 2009
- ✓ Public Outreach Plan – August 2009
- ✓ Prepare Corridor / Subarea Community Profile – Dec 2009
    - ✓ Public Workshop #1 – Fall 2009
- ✓ Development and Evaluation of Scenarios – Apr 2010
    - ✓ Public Workshop #2 – Feb 25, 2010
- ✓ Transportation/Land Use Master Plan – June 2010
    - ✓ Public Workshop #3 – May 11, 2010
- ✓ Documentation and Final Presentation – June 2010
- ✓ Local agency review – ongoing
- ✓ Additional study to address issues raised during public comment
- ✓ Phase 2 – Draft plan completed
- Study completion – June 2012

GIS/Data Integration and Automation

- ✓ Phase I completed. Internal review and implementation in progress
- ✓ Phase I deployment
- Database development – ongoing.
- Phase 2 – underway

Land-use Model Development

- ✓ Multi-year project in progress
- ✓ Phase 1 completed
- ✓ Sensitivity analysis and testing in progress
- ✓ Data development in on-going
- Phase 2- Parcel level model for DCHC
    - Initial database – TBD
    - Initial model estimation – TBD
    - Initial calibration – TBD

MPO Parking Survey and Study (postponed)

- Parking model specification
- Regional Coordination and planning
- Draft scope of services
- Request for Proposal notice
- Consultant selection

- Council contract approval
- Project commences

MPO Community Viz. Scenarios Planning and Visualization

- ✓ Project kick- off in November 2010 – completed
- ✓ Data collection – completed
- ✓ Build Scenario Planning Tool
- ✓ Develop and approve Place Typology – Place Type Palette – completed
- ✓ Focus Group Meetings – completed
- ✓ Trend Forecasts
- ✓ Partnering Strategy
- ✓ Build Development Strategy
- ✓ Rationalize Scenarios
- Land use and Transportation MOEs
- Documentation/Protocol Report

MPO Congestion Management Process CMP

- ✓ CMP Procedure Plan approval – completed
- ✓ FHWA Approval of CMP procedure plan – August 2011
- ✓ CMP data requirement collection plan –Fall of 2011
- ✓ CMP Data collection and monitoring – ongoing
- ✓ CMP implementation – ongoing
- State- of Systems Report – December 2012
- Evaluation of effective of CMP projects and funded projects - ongoing

MPO Safety and Security Plan

- ✓ Action Plan and schedule to be completed in September 2011

Update of the MPO Public Involvement consistent with Federal Certification Review

- ✓ Action Plan and schedule completed in September 2011

MPO Title VI/Environmental Justice (EJ)/Limited English Proficiency (LEP) Plan

- ✓ Action Plan and schedule completed in September 2011

MPO Climate Change (Sustainability Adaptation) Plan/ Update of Greenhouse Emissions Plan

- ✓ Action Plan and schedule completed in September 2011

MPO Freight Plan and Integration

- ✓ Action Plan and schedule completed in September 2011

TAC 5/9/2012 Attachment 16

Contract Number:	C201994	**Route:**	NC-147
Physical Division:	5	**County:**	Durham
Administrative Division:	15	**TIP Number:**	U-4763B
Length:	4.2 miles	**Federal Aid Number:**	TIFIA-540(2)
Resident Engineer:	D. Brian Harrington, PE	**RE Phone Number:**	(919)836-4873
Location Description:	TRIANGLE PARKWAY FROM NC-540 IN WAKE CO TO I-40 IN DURHAM CO		
Type of Work:	GRADING, DRAINAGE, PAVING, SIGNALS, TOLL FACILITIES & STRS.		
Contractor Name:	S. T. WOOTEN CORPORATION		
Contract Amount:	$137,446,000.00	**Cost Overrun/Underrun:**	
Availability Date:	9/19/2008	**Letting Date:**	8/5/2008
Completion Date:	7/1/2011	**Work Began:**	8/3/2009
Revised Completion Date:		**Estimated Completion:**	
Last Estimate Thru:		**Scheduled Progress:**	
Last Estimate Paid:		**Actual Progress:**	

Contract Number:	C202064	**Route:**	SR-2028
Physical Division:	5	**County:**	Durham
Administrative Division:	5	**TIP Number:**	U-3309A
Length:	1.165 miles	**Federal Aid Number:**	STP-2028(4)
Resident Engineer:	Cadmus Capehart, PE	**RE Phone Number:**	(919)840-0914
Location Description:	SR-2028 (TW ALEXANDER DR) FROM CORNWALLIS RD TO EAST OF NC-147 IN DURHAM.		
Type of Work:	WIDENING, GRADING, DRAINAGE, PAVING & SIGNALS.		
Contractor Name:	GELDER AND ASSOCIATES, INC.		
Contract Amount:	$6,502,648.68	**Cost Overrun/Underrun:**	1.61%
Availability Date:	2/1/2010	**Letting Date:**	12/15/2009
Completion Date:	8/15/2011	**Work Began:**	2/8/2010
Revised Completion Date:		**Estimated Completion:**	4/30/2012
Last Estimate Thru:	3/31/2012	**Scheduled Progress:**	100%
Last Estimate Paid:	4/5/2012	**Actual Progress:**	97.84%

Contract Number:	C202164	**Route:**	SR-1959
Physical Division:	5	**County:**	Durham
Administrative Division:	5	**TIP Number:**	U-4011
Length:	0.767 miles	**Federal Aid Number:**	STP-1959(3)
Resident Engineer:	Mark W. Luther, PE	**RE Phone Number:**	(919)220-4680
Location Description:	SR-1959 (S MIAMI BLVD) FROM SOUTH OF SR-2112 (METHODIST ST) TO NORTH OF SR-1960 (BETHESDA AVE).		
Type of Work:	GRADING, DRAINAGE, PAVING & SIGNALS.		
Contractor Name:	TRIANGLE GRADING & PAVING, INC		
Contract Amount:	$4,666,751.41	**Cost Overrun/Underrun:**	0.75%
Availability Date:	6/27/2011	**Letting Date:**	5/17/2011
Completion Date:	7/13/2012	**Work Began:**	7/13/2011
Revised Completion Date:		**Estimated Completion:**	7/13/2012
Last Estimate Thru:	4/15/2012	**Scheduled Progress:**	56.66%
Last Estimate Paid:	4/19/2012	**Actual Progress:**	62.75%

Contract Number:	C202340	**Route:**	SR-1321
Physical Division:	5	**County:**	Durham
Administrative Division:	5	**TIP Number:**	U-3804
Length:	1.07 miles	**Federal Aid Number:**	STM-0505(50)
Resident Engineer:	Mark W. Luther, PE	**RE Phone Number:**	(919)220-4680
Location Description:	SR-1321 (HILLANDALE RD) FROM I-85 TO NORTH OF SR-1407 (CARVER AVE).		
Type of Work:	GRADING, DRAINAGE, PAVING, AND SIGNAL.		
Contractor Name:	REA CONTRACTING A DIVISION OF THE LANE CONSTRUCTION CORPORAT		
Contract Amount:	$4,222,625.78	**Cost Overrun/Underrun:**	15.35%
Availability Date:	8/30/2010	**Letting Date:**	7/20/2010
Completion Date:	6/15/2012	**Work Began:**	9/30/2010
Revised Completion Date:	7/1/2012	**Estimated Completion:**	10/1/2012
Last Estimate Thru:	4/7/2012	**Scheduled Progress:**	81.82%
Last Estimate Paid:	4/26/2012	**Actual Progress:**	63.84%

Contract Number:	C202507	**Route:**	I-540
Physical Division:	5	**County:**	Durham
Administrative Division:	15	**TIP Number:**	R-2635, U-4763B
Length:	18.8 miles	**Federal Aid Number:**	TIFIA-540(2)
Resident Engineer:	Jason R. Peterson, PE	**RE Phone Number:**	(919)571-3000
Location Description:	NC-540 FROM NC-55 NEAR APEX TO NC-54 NEAR RTP AND NC-147 FROM I-40 TO		

NC-540.
Type of Work: DESIGN-BUILD LANDSCAPING.
Contractor Name: SOUTHERN GARDEN, INC.
Contract Amount: $4,800,000.00 **Cost Overrun/Underrun:**
Availability Date: 8/15/2011 **Letting Date:** 4/21/2011
Completion Date: 7/1/2015 **Work Began:**
Revised Completion Date: **Estimated Completion:**
Last Estimate Thru: **Scheduled Progress:**
Last Estimate Paid: **Actual Progress:**

Contract Number: C202538 **Route:** NC-55, NC-751, SR-1118 SR-1357, SR-1404, SR-1615 SR-1641, SR-1646, SR-1656 SR-1670, SR-1671, SR-1901 SR-1954, SR-1955, SR-1981 US-70
Physical Division: 5 **County:** Durham
Administrative Division: 5 **TIP Number:**
Length: 22.96 miles **Federal Aid Number:**
Resident Engineer: Cadmus Capehart, PE **RE Phone Number:** (919)840-0914
Location Description: 1 SECTION OF US-70, 1 SECTION OF NC-55, 1 SECTION OF NC-751 & 13 SECTIONS OF SECONDARY ROADS.
Type of Work: MILLING, RESURFACING & SHOULDER RECONSTRUCTION.
Contractor Name: TRIANGLE GRADING & PAVING, INC
Contract Amount: $4,474,348.51 **Cost Overrun/Underrun:** 1.58%
Availability Date: 3/15/2010 **Letting Date:** 1/19/2010
Completion Date: 12/16/2010 **Work Began:** 4/5/2010
Revised Completion Date: **Estimated Completion:** 3/30/2012
Last Estimate Thru: 6/22/2011 **Scheduled Progress:** 100%
Last Estimate Paid: 7/7/2011 **Actual Progress:** 98.01%

Contract Number: C202610 **Route:** NC-147
Physical Division: 5 **County:** Durham
Administrative Division: 5 **TIP Number:** R-5164D
Length: 6.8 miles **Federal Aid Number:** STM-0147(3)
Resident Engineer: Cadmus Capehart, PE **RE Phone Number:** (919)840-0914
Location Description: NC-147 FROM NORTH OF SR-1322 (BROAD ST) TO NORTH OF SR-2028 (TW ALEXANDER BLVD).
Type of Work: DIAMOND GRINDING, CONC PVT SLAB REMOVAL & SHOULDER RECONST.
Contractor Name: FSC II LLC DBA FRED SMITH COMPANY
Contract Amount: $4,274,880.20 **Cost Overrun/Underrun:** 26.59%
Availability Date: 3/15/2011 **Letting Date:** 9/21/2010
Completion Date: 11/1/2011 **Work Began:** 3/15/2011
Revised Completion Date: **Estimated Completion:** 5/15/2012
Last Estimate Thru: 4/7/2012 **Scheduled Progress:** 100%
Last Estimate Paid: 4/12/2012 **Actual Progress:** 88.42%

Contract Number: C202620 **Route:** I-85
Physical Division: 5 **County:** Durham
Administrative Division: 5 **TIP Number:** I-5145
Length: 12.6 miles **Federal Aid Number:** IMS-085-4(118)178
Resident Engineer: Cadmus Capehart, PE **RE Phone Number:** (919)840-0914
Location Description: I-85 FROM NORTH OF US-70 IN DURHAM COUNTY TO NORTH OF NC-56 IN GRANVILLE COUNTY.
Type of Work: PAVEMENT REHABILITATION AND BRIDGE REPAIR OVERLAYS.
Contractor Name: FSC II LLC DBA FRED SMITH COMPANY
Contract Amount: $8,098,211.15 **Cost Overrun/Underrun:** 4.72%
Availability Date: 6/1/2011 **Letting Date:** 4/19/2011
Completion Date: 7/15/2012 **Work Began:** 6/10/2011
Revised Completion Date: **Estimated Completion:** 7/15/2012
Last Estimate Thru: 4/15/2012 **Scheduled Progress:** 70%
Last Estimate Paid: 4/25/2012 **Actual Progress:** 79.06%

Contract Number: C202875 **Route:** I-540
Physical Division: 5 **County:** Durham
Administrative Division: 5 **TIP Number:** I-5307, I-5310
Length: 17.133 miles **Federal Aid Number:** IM-0540(23)
Resident Engineer: Cadmus Capehart, PE **RE Phone Number:** (919)840-0914
Location Description: I-540 FROM I-40 OVERPASS TO TRIANGLE TOWN BLVD, AND TRIANGLE TOWN

BLVD FROM I-540 TO NEW ASPHALT PAVEMENT JOINT.
Type of Work: MILLING, RESURFACING, SHOULDER RECONST, AND STR REHAB.
Contractor Name: FSC II LLC DBA FRED SMITH COMPANY
Contract Amount: $8,384,157.45 **Cost Overrun/Underrun:** 0.35%
Availability Date: 2/27/2012 **Letting Date:** 1/17/2012
Completion Date: 11/15/2012 **Work Began:** 2/27/2012
Revised Completion Date: **Estimated Completion:** 11/15/2012
Last Estimate Thru: 4/22/2012 **Scheduled Progress:** 10%
Last Estimate Paid: 4/26/2012 **Actual Progress:** 14.74%

Contract Number: C202918 **Route:** SR-1002, SR-1400, SR-1628 SR-1669, SR-1675
Physical Division: 5 **County:** Durham
Administrative Division: 5 **TIP Number:**
Length: 6.09 miles **Federal Aid Number:**
Resident Engineer: Mark W. Luther, PE **RE Phone Number:** (919)220-4680
Location Description: 5 SECTIONS OF SECONDARY ROADS.
Type of Work: MILLING, RESURFACING & SHOULDER RECONSTRUCTION.
Contractor Name: CAROLINA SUNROCK LLC
Contract Amount: $1,398,321.31 **Cost Overrun/Underrun:**
Availability Date: 4/2/2012 **Letting Date:** 1/17/2012
Completion Date: 6/29/2012 **Work Began:** 5/2/2012
Revised Completion Date: **Estimated Completion:**
Last Estimate Thru: **Scheduled Progress:**
Last Estimate Paid: **Actual Progress:**

Contract Number: C202928 **Route:** -
Physical Division: 5 **County:** Durham
Administrative Division: 5 **TIP Number:**
Length: 13.57 miles **Federal Aid Number:**
Resident Engineer: Cadmus Capehart, PE **RE Phone Number:** (919)840-0914
Location Description: NC-54 FROM NC-55 TO WEST OF DAVIS DR AND 10 SECTIONS OF SECONDARY ROADS.
Type of Work: WIDENING, MILLING, RESURFACING, AND SHOULDER RECONSTRUCTION.
Contractor Name: CAROLINA SUNROCK LLC
Contract Amount: $3,634,988.89 **Cost Overrun/Underrun:**
Availability Date: 3/12/2012 **Letting Date:** 1/17/2012
Completion Date: 11/9/2012 **Work Began:**
Revised Completion Date: **Estimated Completion:**
Last Estimate Thru: **Scheduled Progress:**
Last Estimate Paid: **Actual Progress:**

Contract Number: DE00011 **Route:** SR-1308
Physical Division: 5 **County:** Durham
Administrative Division: 5 **TIP Number:**
Length: 4 miles **Federal Aid Number:**
Resident Engineer: Mark W. Luther, PE **RE Phone Number:** (919)220-4680
Location Description: SR-1308 (CORNWALLIS RD) IN DURHAM COUNTY AND SR-1717 (WOOD- LAND RD) IN GRANVILLE COUNTY.
Type of Work: STRENGTHENING, RESURFACING, AND PAVEMEN MARKINGS.
Contractor Name: FSC II LLC DBA FRED SMITH COMPANY
Contract Amount: $1,102,907.60 **Cost Overrun/Underrun:** 7.02%
Availability Date: 9/6/2011 **Letting Date:** 7/26/2011
Completion Date: 11/30/2011 **Work Began:** 9/6/2011
Revised Completion Date: **Estimated Completion:** 4/15/2012
Last Estimate Thru: 3/31/2012 **Scheduled Progress:** 100%
Last Estimate Paid: 4/9/2012 **Actual Progress:** 93.38%

Contract Number: DE00019 **Route:** NC-55
Physical Division: 5 **County:** Durham
Administrative Division: 5 **TIP Number:** W-5110
Length: 0.225 miles **Federal Aid Number:** STP-0055(40)
Resident Engineer: Mark W. Luther, PE **RE Phone Number:** (919)220-4680
Location Description: NC 55 (ALSTON AVE) AT EAST LAWSON STREET
Type of Work: GRADING, PAVING, CURB AND GUTTER, SIDEWALK, SIGNALS, SIGNING
Contractor Name: TRIANGLE GRADING & PAVING, INC
Contract Amount: $615,467.55 **Cost Overrun/Underrun:**
Availability Date: 5/1/2012 **Letting Date:** 3/28/2012

Completion Date:	8/1/2012	**Work Began:**	5/1/2012
Revised Completion Date:		**Estimated Completion:**	
Last Estimate Thru:		**Scheduled Progress:**	
Last Estimate Paid:		**Actual Progress:**	

Contract Number:	DO00069	**Route:**	NC-147
Physical Division:	5	**County:**	Durham
Administrative Division:	5	**TIP Number:**	BK-5102G
Length:	0 miles	**Federal Aid Number:**	BRNHS-0147(4)
Resident Engineer:	Cadmus Capehart, PE	**RE Phone Number:**	(919)840-0914
Location Description:	BRIDGES #12, 71, 137, 154, 156, AND 169 ON NC-147.		
Type of Work:	BRIDGE PAINTING.		
Contractor Name:	S & D INDUSTRIAL PAINTING, INC.		
Contract Amount:	$922,562.15	**Cost Overrun/Underrun:**	
Availability Date:	7/11/2011	**Letting Date:**	8/19/2010
Completion Date:	11/7/2011	**Work Began:**	7/11/2011
Revised Completion Date:	8/28/2012	**Estimated Completion:**	
Last Estimate Thru:		**Scheduled Progress:**	
Last Estimate Paid:		**Actual Progress:**	

ACTIVE NCDOT PROJECTS LOCATED IN DCHC MPO- ARRA

County	TIP/WBS #	Description	Let Date	Completion Date	Status	Cost	Comments
Orange	ER-5100 GE	Landscape planting on US 15-501@ SR 1734 (Erwin Rd./Europa Dr.)	11/24/2009	4/30/2012	**pending final inspection**	$65,000	ARRA
Orange	U-3306 34913.3.ST1 STM-1733 (16)	Grading, drainage, paving, signals, curb and gutter,and retaining wall on SR 1733 (Weaver Dairy Rd.) from NC 86 to Old Sterling Road	7/20/2010	6/15/2013	on schedule	$13.4 million	ARRA
Orange	U-4704	Computerized Traffic Signal System for Chapel Hill-Carrboro	9/15/2009	**Revised completion 9/30/12**	behind schedule	$5.175 million	ARRA
NCDOT PROJECTS CURRENTLY IN 12 MONTH LETTNG LIST							
County	TIP #	Description	Let Date	Completion Date	Status	Cost	Comments

ACTIVE NCDOT PROJECTS LOCATED IN DCHC MPO-NON ARRA

County	TIP/WBS #	Description	Let Date	Completion Date	Status	Cost	Comments
Orange	36945	Upgrade traffic signal with mast arm and install pedestrian signal heads on SR 1010 (Franklin St.) @ Mallette St.	11/4/2010	TBD	**Work delayed; numerous utilities interfere with boring under road; contractor has requested meeting to resolve**	$140,000.00	Small Construction
Orange	C-4932 A	Construct a Transit Shelter at the Park and Ride Lot for DTCC in Hillsborough and install bike racks on Orange Public Transportation buses	5/17/2011		Bike racks installed and reimbursed ; **bus shelter installed; installation & change order pending review**	$20,275	CMAQ
Orange	ER-2971 G 3607.3.09	Widen roadway, install curb and gutter and construct sidewalk along SR 1750 (Estes Drive) between Burlage Circle and SR 1010 (Franklin Street)		10/3/2012	MA with Town executed	$200,000.00	Small Construction/ STP-Division Enhancement
Orange	ER-2973 G 3707.3.16	Rehabilitation of landscape plantings on I-40/I-85 at SR 1114 (Buckhorn Rd.) and installation of landscape plantings at the Hillsborough Maintenance Yard on SR 1009 (Old NC 86)	10/13/2011	3/15/2012	**installation complete**	$137,500.00	STP-Division Enhancement
Orange	SR-5000 S 40922.1.18 PE	Education, encouragement, evaluation, and neighborhood outreach for Carrboro Elementary School	N/A	N/A	Municipal Agreement with Town; program underway	$12,865	Safe Routes to Schools
Orange	SR-5001 AE	Construct 870 linear feet of 5' sidewalk on Elm Street from existing sidewalk near Weaver Street to Shelton Street in Carrboro	2/21/2012	**120 days after Notice to Proceed**	**Pre-const. meeting held 4/26/12**	$300,000.00	SRTS
Orange	SR-5001 AR	Construct 320' of 5' sidewalk on Culbreth Road between Cobbleridge Rd. in Chapel Hill and Rossburn Rd. in Carrboro	4/12/2012	8/10/2012	**Town is evaluating bids**	$50,000/$108,000	SRTS/STP-DA
Orange	SS-4907 U 42205.2 42205.1 42171	Improve sight distance on SR 1710 by lowering the crest vertical curve on the westbound approach to the intersection of SR 1710 (Old NC 10) @ SR 1713 (Mt. Herman Church Road)	N/A	Revised to 6/1/2012	Utility relocation underway; FA construction in Spring 2012	$320,000	Spot Safety-State

Orange	SS -4907 V 42423.3 42423.1	Realign intersection of SR 1005 (Old Greensboro Rd.) @ SR 1951 (White Cross Rd.)	R/W/U 7/20/12	Let 12/20/12	Consultant design underway	$198,000	Spot Safety-State
Orange	SS-4907 AI 43404.1.1	Revise signals on US 70 at SR 1561/1709 (Lawrence Rd.) and at SR 1002 (St. Mary's Rd.) near Hillsborough			**All work complete; final inspection 4/26/12**	$7000 PE	Spot Safety-State
Orange	SS-4907 AM 43504.1.1	Install near-side supplemental signal heads on NC 54 @ SR 1010 (W. Main St.)			Design underway	$1500 PE	Spot Safety-State
Orange	U-4726 DC	Wilson Park Multi-Use Path	3/13/2012	6/30/2012	Municipal Agreement with Town of Carrboro; CEI RFQ underway; **Town reviewing bids**	$39,262.65 PE $129,431.35 C	STPDA
Orange	U-4726 DD	Construct sidewalk on Rogers Road from Homestead Road to Meadowrun Ct.	6/20/2012		Municipal Agreement with Town of Carrboro; Design underway	$67,025 PE $469,175 C	STPDA
Orange	U-4726 DE	Construct Bolin Creek Multi-use Path from Homestead Road to Chapel Hill High School	6/20/2012		Municipal Agreement with Town of Carrboro for construction (replaces EL-4994) Design underway	$59,000 PE	STPDA
Orange	U-4726 DF	Bicycle detection at Signalized Intersections	10/18/2012	FFY 2013	Municipal Agreement with Town of Carrboro	$36,000	STP-DA
Orange	U-4726 IF	Design and install stairs from the sidewalk on the north side of Franklin St. to the Bolin Creek Trail	N/A	N/A	plans pending NCDOT review; Supplemental to remove construction pending; **Town to pay for construction**	$20,000 PE	STPDA

ACTIVE NCDOT PROJECTS LOCATED IN DCHC MPO-NON ARRA

Orange	U-4726 IG	Construct 10' wide greenway from existing Fan Branch Trail near Culbreth Rd. and US 15/501 to Phase I	6/20/2012-to be revised		Municipal Agreement with Town of Chapel Hill; structure designs in review; **Supplemental to add $100,000 pending**	$1,310,000	STPDA
Orange	W-5207 E 45337.1.5 PE	Installation of a roundabout on SR 1734 (Erwin Rd.) and SR 1791 (Mt. Moriah Rd.) near Chapel Hill	Revised to 8/2012	12/31/2012- to be revised	Consultant design- **R/W funding requested**	$450,000	High Hazard Safety
NCDOT PROJECTS CURRENTLY IN 12 MONTH LETTNG LIST							
County	**TIP #**	**Location Description**	**Est. Let Date**	**Completion Date**	**Status**	**Cost**	**Comments**
Durham/ Orange	EB-4707	Bicycle improvements(Bikeway and signals) on Durham/ Chapel Hill (SR 1838/SR 2220)from SR 1116 (Garrett Road) in Durham County to US 15-501 in Orange County				$4.0 million	Delayed R/W to 3/12 and Construction to 5/13 to allow City to secure increased funding
Orange	U-0624	Corridor upgrade on NC 86 (S. Columbia St.)including Bicycle lanes from SR 1906 (Purefoy Rd.) to SR 1902 (Manning Dr.)	10/16/2012			$4.2 million	STP
Orange	U-2803	Widening of SR 1919 (Smith Level Road) from Rock Haven Road to Bridge# 88 over Morgan Creek	12/18/2012			$3,7 million	
Orange	W-5318	GRADE, DRAIN, AND PAVE NC 86 FROM NC 57 TO CASWELL COUNTY LINE GEOMETRIC IMPROVEMENT, PAVED SHOULDERS AND RUMBLE STRIPS; **Resurfacing**	1/15/2013			$4.75 million	
ALAMANCE, ORANGE	17BP.7.P.2	BRIDGE PRESERVATION - BRIDGES 38, 41, 51, 52, 121, AND 293 IN ALAMANCE COUNTY; BRIDGES 6, 59, 81, AND 82 IN ORANGE COUNTY	5/15/2012			$2.3 million	

New toll road is scenic?

The Herald-Sun By Ray Gronberg Posted: April 13, 2012 6:02 PM

DURHAM – They say beauty's in the eye of the beholder, but some City Council members think the N.C. Turnpike Authority is stretching the point a bit by asking the state to label the new Triangle Expressway a scenic byway.

They nonetheless appear likely to endorse the request on Monday, going along with County Commissioners in a move that, if successful, could ban billboards from the sides of the toll road.

Still, council members Diane Catotti, Steve Schewel and Mike Woodard were a bit dubious when the idea came up for a preliminary review earlier this month.

"This is a low standard for 'scenic'," Schewel said.

"Our portion is scenic of a different kind, I guess," Woodard said. "I love seeing the economic development in our portion."

Woodard was alluding to the fact the new highway passes though a section of RTP, threading its way past, among other things, the U.S. Environmental Protection Agency's research center.

City/county planners, who are urging elected officials to support the request, agree it's a bit out of the ordinary.

"It doesn't strike me as the traditional North Carolina scenic byway," said Keith Luck, the Planning Department's assistant director for strategic planning.

Luck added that the chief benefit of the designation would be the additional "limitations on signs along the highway" south of the Durham border. Durham already bars new billboard installations.

The Triangle Expressway's first phase opened over the winter and runs from Interstate 40 south to N.C. 55 in Wake County. The second phase runs from there to Holly Springs and will open later this year.

N.C. Department of Transportation officials in years past have applied the scenic byway designation to roads like the Blue Ridge Parkway.

The chief benefit, other than the prestige value, is that state law bars the agency from issuing permits for billboards along a scenic byway.

The law reserves the designation for "highways that possess unusual, exceptional or distinctive scenic, recreational, historical, educational, scientific, geological, natural, wildlife, cultural or ethnic features."

City/County Planning Director Steve Medlin said in a memo that the Turnpike Authority believes it's created "a destination roadway" with "natural aesthetic beauty" enhanced by new landscaping and careful architectural design.

But state law also says DOT must remove "upon application" the byway designation from roads that "have no scenic value," have the label only to "preserve system continuity" and that abut commercial or industrial property.

The Turnpike Authority wants city and county support for the request because it's required as part of the application to DOT. County Commissioners endorsed it last Monday.

Council members are scheduled to vote on it this Monday.

Local officials by and large are opposed to billboards. The council in August 2010 unanimously rejected a Georgia

company's request that they amend Durham's land-use law to allow the installation of digital roadside advertising displays.

Carolina's Road to Improvement

The Carolina Journal By John Hood April 24th, 2012

RALEIGH - In my forthcoming book on North Carolina's economy, *Our Best Foot Forward*, I discuss at length the role that transportation has played in the state's economic history. I also propose reforms that will increase the productivity of government investment in highways and other infrastructure.

Politicians and activists tend to think of the issue primarily in terms of budget totals. That's a mistake. There is no consistent relationship between government capital spending and outcomes such as accident rates, traffic congestion, and economic growth. Some states and localities spend their money well. Others spend it poorly.

When it comes to infrastructure, North Carolina certainly faces some major challenges. According to federal data, for example, 61 percent of our urban interstates are congested. That's the ninth-worst congestion rate in the country. We have the 10th-highest share of bridges rated as deficient and rank above the national average in the share of rural roads in bad condition. Not coincidentally, we are also higher than average in highway fatalities per miles traveled.

On the other hand, while North Carolina has some obvious deficiencies, we don't compare poorly in every infrastructure category. In its latest nationwide study, the American Society of Civil Engineers gave North Carolina a C- in infrastructure. That's certainly nothing to brag about, but it was slightly higher than the national grade of D. Not surprisingly, North Carolina ranked poorly in bridges and roads. But we matched or exceeded the average national grade in aviation, water and sewer systems, rail service, and school facilities. We ranked particularly high in drinking-water service, a B- vs. a national average grade of D-.

How many times have you heard that North Carolina has the largest network of state-maintained roads in the country? The statement is true but often misunderstood. It does not mean that North Carolina leads the nation in road mileage per driver or in government spending on roads. What it simply means is that, unlike much of the rest of the country, North Carolina has no county road systems. Our cities do administer the state roads in their jurisdictions, and often supplement highway revenues from the state with local bonds or property taxes. But in relative terms, North Carolina leans heavily on state rather than local responsibility for roads.

If you combine state and local spending together, we rank below the national average in highway investment, both in per-capita terms and as a share of personal income. Fiscal conservatives, please take note: that also means that North Carolina ranks below the national average in highway-related taxes and fees. We have the sixth-highest state tax on motor fuels, certainly, but in other states local property taxes, both on vehicles and real estate, play a much more significant role in road finance than they do in North Carolina.

That's not an argument for raising North Carolina's gas tax in order to generate more revenue for bigger highway budgets. First off, North Carolina governments need to do a better job of spending the taxes and fees they already receive. And to the extent additional revenue is needed for new highway capacity, electronic toll collection and other direct user charges are an attractive alternative.

Fortunately, North Carolina is already heading in the right direction in both areas. In the case of road and bridge conditions, they have actually been improving since the turn of the 21st century. While 61 percent of our urban interstates are congested, for example, the rate was 75 percent as recently as 2002.

With regarding to highway finance, the General Assembly enacted legislation in 2002 to authorize new toll roads. The first stretch of the $1 billion Triangle Expressway is already in operation, with thousands of daily users paying tolls either through transponders or camera-based billing. There several more potential tollways in the planning stages, including four Charlotte-area projects: the Monroe Connector to the southeast, the Garden Parkway to the west, new toll lanes on the southern section of I-485, and converting a carpool lane to a highway-occupancy toll (HOT) lane on I-77 north of the city.

There are many things left to do - and many potential benefits to North Carolina's economy from doing them. More on that in a future column.

Hood is president of the John Locke Foundation.

Air Quality

The Charlotte Observer By Bruce Henderson April 25, 2012

Metro Charlotte's improving smog problem placed it 18th-worst among U.S. cities, the American Lung Association says in annual rankings, down from 10th-worst the past two years. The ranking is for ozone, or smog, an invisible gas that in the Charlotte area comes mostly from vehicle tailpipes, power plants and industrial emissions. Mecklenburg County has been unable to meet federal ozone standards for years. Most U.S. cities have the cleanest air since the ratings began 13 years ago, the Lung Association said. Eighteen of the 25 cities most polluted by ozone, for example, showed major improvements. The association credits federal emission standards for coal-fired power plants, diesel engines and SUVs. North Carolina's legislation to reduce power-plant emissions over the past decade have played a large role in this state.

Still, 40 percent of Americans live in areas such as Charlotte, where bad air may hurt their health, the association says. Children, older people and those with respiratory ailments are most at risk. Los Angeles led the smoggiest-city rankings, followed by other cities in California and Texas. The Charlotte-Gastonia-Salisbury metro area ranked fourth-worst in the East, behind Washington, New York and Philadelphia. The report is based on air readings taken from 2008 through 2010.

Road Worrier: TriEx transponder problems take toll on drivers

The News and Observer BY BRUCE SICELOFF Tuesday, May 01, 2012 BY BRUCE SICELOFF

Triangle commuters who are learning to live with a new-technology toll road have been hit this spring by waves of perplexing messages from the N.C. Turnpike Authority.

First, the agency sent baffling bills to hundreds of its non-customers, telling them they owe nothing for driving on part of the 540 Outer Loop that is not under toll – yet.

Next, the Turnpike Authority tacked late fees and $25 civil penalties onto bills sent to other drivers using the Triangle Expressway, telling them they'd better pay promptly – even for toll bills of less than $1.

These mailings were marketing messages. Their intent was to sell transponders to drivers who had been identified by photos of their license plates. The agency basically told them: If you open an account and stick one of our N.C. Quick Pass transponders on your windshield, these hassles will go away.

Now, though, hundreds of Quick Pass customers are having their own hassles.

They have been charged a $5 fee because their transponders were not detected when they used TriEx, and their license plates were photographed instead. Maybe this is their fault, and maybe not.

The Turnpike Authority informed 900 customers last week that it had deducted the $5 from their accounts. The letter suggested that their transponders were not mounted correctly (in most cars, on the inside of the windshield, below the rear-view mirror mount).

Transponder users get a 35 percent discount on toll rates. The agency pushes transponders because it has to spend more money collecting tolls when it relies on a license-plate number.

"We're trying to keep the toll down and trying to do the right thing," Barry Mickle, operations director for the Turnpike Authority, told the Road Worrier. "We're going to be very forgiving. We're going to forgive all these [$5 fees]."

He said some drivers don't stick the transponder on the windshield, and instead try to hold it up to the glass – usually too late – when they drive beneath the TriEx toll sensors. If drivers think their transponders are malfunctioning, they have to drive to the N.C. Quick Pass customer center in Morrisville so a turnpike worker can check it out.

For several drivers who made the trip Monday, the problem recalled those baffling zero-dollar invoices for driving on a toll-free leg of the 540 Outer Loop.

The agency collects tolls now only on the first 3.7-mile leg of TriEx, an extension of N.C. 147 south from Interstate 40 to the 540 Outer Loop. Toll collection will start in August on an existing leg of 540 (between N.C. 54 and N.C. 55), and on six new miles that will extend 540 south from N.C. 55 to U.S. 64 in Apex. The final leg of TriEx, reaching south to Holly Springs, opens in December.

A few frustrated drivers said they had been charged the $5 fee because they traveled the zero-toll section of 540 without their transponders. They don't use N.C. 147, but they have transponders now and plan to install them later, when they drive on the new part of 540.

"It's ridiculous," said Frank Agius, 52, of Cary. "They charge zero dollars and zero cents toll, but they say, 'Oh, you went through without your transponder.' It's not a toll road yet, right?"

Mike Fox, 47, of Moncure said a technician determined Monday that his $5 windshield transponder was not working properly, and gave him a new one. The technician initially refused Fox's request to test the new one, after he stuck it on the windshield of his 1998 Lexus.

"They were not particularly helpful," Fox said. "They didn't want to come out and test it."

But he persisted. He didn't want to go through this hassle again.

Sure enough, the new transponder didn't work, either.

"They said I had it mounted right, but there must be some sort of coating on my windshield that blocks it," Fox said.

He was offered the more expensive option: buy a $25 transponder that attaches to his front license plate.

But Fox gave up. He closed his account with the Turnpike Authority.

DRAFT Mobility Fund Project Scores - SUBJECT TO CHANGE

Projects Listed by Total Score in Descending Order

Rank	Route	Route Name	From / Cross Street	To	Description	First County	Second County	Third County	Construction Cost	Right-of-Way+Utilities Cost	Total Project Cost	Non-Mobility Fund Dollars Contributed	Non-Mobility Fund Dollars Source	Total Cost to the Mobility Fund	Multimodal/ Intermodal Characteristics	Travel Time Savings Benefits for 30 Years ($)	Travel Time Savings/Cost to Mobility Fund (80%)	Multimodal/ Intermodal Points (20%)	Total Score
1	Triangle Bus-on-Shoulder-System		Multiple Routes (I-40, I-540, NC 147, US 70, US 64)		Upgrade shoulders and add signage to accommodate Bus on Shoulder System (BOSS) on select freeway and expressway segments (40 centerline miles)	Wake	Durham		$200,000	$0	$200,000	$0		$200,000	None	$124,080,000	620.40	0	**496.32**
2	I-77		I-277 (Brookshire Freeway)	Catawba Avenue	Construct HOT Lanes - ($106M NCDOT Commitment)	Mecklenburg			$542,507,000	$7,253,000	$549,760,000	$522,160,000	PPP, Equity dollars (NHS), CMAQ	$27,600,000	HOV/HOT Lanes	$3,042,270,000	110.23	100	**108.18**
3	NC 54	Hillsborough Street	Blue Ridge Road	SR 1664/3074 (Blue Ridge Road)	Upgrade at-grade intersection to grade separation	Wake			$23,100,000	$6,330,000	$29,430,000	$20,890,000	Equity dollars	$8,540,000	Commuter Rail / Intercity Rail	$865,458,000	101.34	100	**101.07**
4	CSXT "SF" Line and NS Mainline		NS MP 377		Construct grade separation at existing location where NS and CSX cross underneath I-277 (Brookshire Freeway)	Mecklenburg			$140,000,000	$10,230,000	$150,230,000	$130,000,000	ARRA funds	$20,230,000	Highway and Rail Projects which improve access to or within ports, military installations, and inland ports; rail projects which reduce truck traffic on the highway system.	$1,750,631,880	86.54	100	**89.23**
5	I-440		Wade Avenue	I-40	Widen roadway to six lanes	Wake			$80,291,000	$12,000,000	$92,291,000	$72,000,000	Equity Dollars	$20,291,000	None	$1,865,270,000	91.93	0	**73.54**
6	US 501		SR 1448 (Latta Road) / SR 1639 (Infinity Road)		Add through lanes at intersection (0.25 miles north and south of intersection)	Durham			$2,100,000	$2,000,000	$4,100,000	$2,000,000	City of Durham street impact fee funds	$2,100,000	None	$166,848,000	79.45	0	**63.56**
7	I-485		I-77	US 74 (Independence Boulevard)	Construct one express toll lane in each direction within the existing median	Mecklenburg			$221,000,000	$0	$221,000,000	$134,500,000	Toll revenue bonds	$86,500,000	HOV/HOT Lanes	$4,182,508,000	48.35	100	**58.68**
8	I-40		I-85	US 15/501	Widen roadway to six lanes	Orange			$72,300,000	$0	$72,300,000	$60,000,000	Equity dollars	$12,300,000	None	$808,918,000	65.77	0	**52.61**
9	NC 54		I-40/Farrington Road		Construct slip ramp from northbound SR 1109 (Farrington Road) to eastbound I-40 at the I-40/NC 54 interchange	Durham			$1,300,000	$250,000	$1,550,000	$0		$1,550,000	None	$101,882,000	65.73	0	**52.58**
10	NCVA RR mainline		MP 56.95	MP 186	Upgrade existing track				$13,004,000	$0	$13,004,000	$2,300,000	NCVA Railroad	$10,704,000	Highway and Rail Projects which improve access to or within ports, military installations, and inland ports; rail projects which reduce truck traffic on the highway system.	$411,381,660	38.43	100	**50.75**
11	Pembroke Northeast Connector		CSX A Line	CSX SE Line	Construct track on new location	Robeson			$11,800,000	$1,600,000	$13,400,000	$0		$13,400,000	Highway and Rail Projects which improve access to or within ports, military installations, and inland ports; rail projects which reduce truck traffic on the highway system.	$466,957,770	34.85	100	**47.88**
12	US 70		Brier Creek Parkway		Upgrade existing at-grade intersection to interchange	Wake			$13,400,000	$0	$13,400,000	$0		$13,400,000	None	$801,790,000	59.84	0	**47.87**
13	I-40		SR 1002 (Aviation Parkway)		Construct Aviation Pkwy NB to I-40 WB loop entrance ramp in NE quadrant	Wake			$3,100,000	$500,000	$3,600,000	$0		$3,600,000	None	$192,368,000	53.44	0	**42.75**
14	I-295	Fayetteville Outer Loop	South of SR 1400 (Cliffdale Road)	East of SR 1415 (Yadkin Road)	Construct freeway on new location	Cumberland			$104,600,000	$0	$104,600,000	$50,000,000	State Trust Funds	$54,600,000	Highway and Rail Projects which improve access to or within ports, military installations, and inland ports; rail projects which reduce truck traffic on the highway system.	$1,410,486,000	25.83	100	**40.67**
15	NC 54		I-40	Barbee Chapel Road	Widen roadway to 6 lanes with bicycle, pedestrian, and transit facilities (adjacent multiuse path)	Durham			$8,600,000	$500,000	$9,100,000	$0		$9,100,000	Bicycle/Pedestrian commuter projects (not recreational)	$422,972,000	46.48	10	**39.18**
16	US 70		Slocum Road		Intersection improvements at Slocum Road, including flyover and access management improvements	Craven			$14,700,000	$5,810,000	$20,510,000	$10,000,000	NHS Funds	$10,510,000	Highway and Rail Projects which improve access to or within ports, military installations, and inland ports; rail projects which reduce truck traffic on the highway system.	$213,730,000	20.34	100	**36.27**
17	US 74	Independence Blvd	NC 27 (Albemarle Road)	Idlewild Road	Upgrade roadway to an expressway	Mecklenburg			$62,800,000	$0	$62,800,000	$20,800,000	Equity Dollars committed to the project	$42,000,000	HOV/HOT Lanes	$835,868,000	19.90	100	**35.92**
18	I-40		US 70 Business	US 70 Bypass	Widen roadway to six lanes	Wake			$67,201,000	$15,000,000	$82,201,000	$70,000,000	Equity Dollars and GARVEE Bonds	$12,201,000	None	$527,164,000	43.21	0	**34.57**
19	Wallace to Castle Hayne Rail Corridor	CSX Rail Line	CSX Rail Line in Castle Hayne	CSX Rail Line in Wallace	Resotoration of Castle Hayne to Wallace rail corridor abandon by CSXT, right of way now controlled by NCDOT.	Duplin	Pender	New Hanover	$171,000,000	$0	$171,000,000	$0		$171,000,000	Highway and Rail Projects which improve access to or within ports, military installations, and inland ports; rail projects which reduce truck traffic on the highway system.	$3,089,757,420	18.07	100	**34.46**

DRAFT Mobility Fund Project Scores - SUBJECT TO CHANGE

Projects Listed by Total Score in Descending Order

Rank	Route	Route Name	From / Cross Street	To	Description	First County	Second County	Third County	Construction Cost	Right-of-Way+Utilities Cost	Total Project Cost	Non-Mobility Fund Dollars Contributed	Non-Mobility Fund Dollars Source	Total Cost to the Mobility Fund	Multimodal/ Intermodal Characteristics	Travel Time Savings Benefits for 30 Years ($)	Travel Time Savings/Cost to Mobility Fund (80%)	Multimodal/ Intermodal Points (20%)	Total Score
20	US 70	Glenwood Avenue	West of Duraleigh Road	West of Triangle Drive	Widen roadway to 6 lanes and construct an interchange at Lynn Road	Wake			$38,970,000	$1,600,000	$40,570,000	$30,000,000	Equity dollars	$10,570,000	None	$436,260,000	41.27	0	**33.02**
21	I-40		I-440	NC 42	Construct one express toll lane in each direction within the existing median	Wake	Johnston		$169,300,000	$0	$169,300,000	$91,800,000	Toll revenue bonds	$77,500,000	HOV/HOT Lanes	$906,884,000	11.70	100	**29.36**
22	I-85		US29/601 Connector	NC 73 at Exit 55	Construct additional lanes on I-85 and upgrade interchange at NC 152	Cabarrus	Rowan		$168,181,000	$4,600,000	$172,781,000	$107,781,000	Equity Dollars	$65,000,000	None	$2,361,546,000	36.33	0	**29.07**
23	I-40		I-440/US 1/64		Reconstruct Interchange	Wake			$25,000,000	$500,000	$25,500,000	$0		$25,500,000	None	$775,962,000	30.43	0	**24.34**
24	US 74		US 421		Construct flyover for US 74 WB to US 421 SB and free-flow ramp from US 421 NB to US 74 EB (Isabelle Holmes Bridge)	New Hanover			$10,000,000	$4,000,000	$14,000,000	$0		$14,000,000	Highway and Rail Projects which improve access to or within ports, military installations, and inland ports; rail projects which reduce truck traffic on the highway system.	$55,264,000	3.95	100	**23.16**
25	US 117		O'Berry Road		Construct interchange	Wayne			$6,400,000	$1,345,000	$7,745,000	$1,548,922	City of Goldsboro General Fund or Street Bonds	$6,196,078	None	$175,626,000	28.34	0	**22.68**
26	I-85		NC 73	Lane Street	Widen roadway to eight lanes	Cabarrus			$105,481,000	$2,300,000	$107,781,000	$50,300,000	Equity dollars	$57,481,000	None	$1,627,516,000	28.31	0	**22.65**
27	I-540		I-40	US 1	Construct one express toll lane in each direction within the existing median	Wake			$238,400,000	$0	$238,400,000	$83,200,000	Toll revenue bonds	$155,200,000	HOV/HOT Lanes	$492,316,000	3.17	100	**22.54**
28	NCVA RR mainline		MP 185.8	End of Siding	Construct 1000 feet of new freight rail siding				$500,000	$0	$500,000	$250,000	NCVA Railroad	$250,000	Short line Rail projects which enhance access to industrial sites	$654,570	2.62	100	**22.09**
29	I-540		I-40	NC 50	Construct one express toll lane in each direction within the existing median	Wake	Johnston		$135,700,000	$0	$135,700,000	$38,600,000	Toll revenue bonds	$97,100,000	HOV/HOT Lanes	$241,604,000	2.49	100	**21.99**
30	I-73 Connector and new PTI taxiway & bridge		NC 68	West of Greensboro Western Loop	As part of the I-73 Connector (I-5110), construct taxiway from Runway 5L-23R to access future airport development (includes bridge over I-73)	Guilford			$130,200,000	$52,600,000	$182,800,000	$126,600,000	Equity dollars	$56,200,000	Aviation Runway/Taxiway Projects	$835,934,000	14.87	50	**21.90**
31	CATS Red Line Regional Rail		Charlotte Multimodal Center	Mooresville	Construct commuter rail	Mecklenburg	Iredell		$452,000,000	$0	$452,000,000	$113,000,000	CATS	$339,000,000	Commuter Rail / Intercity Rail	$764,764,000	2.26	100	**21.80**
32	Durham-Wake Corridor Transit Project (Commuter Rail)		Hillandale Road in Durham	Greenfield Parkway in Garner	Construct commuter rail line and service	Durham	Wake		$350,000,000	$300,000,000	$650,000,000	$0	Local Funds and Federal New Starts Grant	$650,000,000	Commuter Rail / Intercity Rail	$1,250,744,000	1.92	100	**21.54**
33	Commuter Rail		Triangle Metro Center / RTP	Southeast Garner	Construct commuter rail	Durham	Wake		$178,200,000	$151,800,000	$330,000,000			$330,000,000	Commuter Rail / Intercity Rail	$603,218,000	1.83	100	**21.46**
34	I-540		I-40	US 64/264	Construct one express toll lane in each direction within the existing median	Wake			$411,300,000	$0	$411,300,000	$139,300,000	Toll revenue bonds	$272,000,000	HOV/HOT Lanes	$383,218,000	1.41	100	**21.13**
35	NC 210		US 17	North Shore Drive	Widen roadway to four lanes	Onslow			$39,200,000	$8,074,266	$47,274,266	$0		$47,274,266	Highway and Rail Projects which improve access to or within ports, military installations, and inland ports; rail projects which reduce truck traffic on the highway system.	$50,072,000	1.06	100	**20.85**
36	NC 172		Camp Lejeune	NC 210	Widen roadway to four lanes	Onslow			$67,700,000	$13,909,105	$81,609,105	$0		$81,609,105	Highway and Rail Projects which improve access to or within ports, military installations, and inland ports; rail projects which reduce truck traffic on the highway system.	$42,548,000	0.52	100	**20.42**
37	Carolina Southern Railroad Milepost 300.4 & 302.3		Fairbluff	Tabor City	Upgrade/repair two bridges	Columbus			$275,000	$0	$275,000	$5,000	Shortline Railroad	$270,000	Short line Rail projects which enhance access to industrial sites	$93,510	0.35	100	**20.28**
38	NCRR-NS Mainline		Craighead Road (MP 375.30)	Matheson Avenue (MPO 374.17)	Relocate NCRR and construction grade separation at 36th Street	Mecklenburg			$15,000,000	$1,200,000	$16,200,000	$0		$16,200,000	Commuter Rail / Intercity Rail	$0	0.00	100	**20.00**
39	I-85		US 321		Reconstruct Interchange	Gaston			$19,900,000	$4,700,000	$24,600,000	$0		$24,600,000	None	$479,512,000	19.49	0	**15.59**
40	I-840	Greensboro Outer Loop	US 220 (Battleground Avenue)	Lawndale Drive	Construct freeway on new location	Guilford			$90,568,000	$0	$90,568,000	$0		$90,568,000	None	$1,670,372,000	18.44	0	**14.75**
41	US 1	Capital Boulevard	I-540	Thornton Road	Upgrade roadway to 8 lane freeway	Wake			$61,600,000	$20,600,000	$82,200,000	$0		$82,200,000	None	$1,312,454,000	15.97	0	**12.77**
42	I-85		US 29 /601 Connector	Cabarrus County	Construct additional lanes on I-85 and upgrade interchange at NC 152 (I-3610).	Rowan			$67,881,000	$2,300,000	$70,181,000	$0		$70,181,000	None	$1,102,816,000	15.71	0	**12.57**
43	I-26		NC 146 (Long Shoals Road)	I-40	Widen roadway with additional lanes	Buncombe			$97,768,000	$1,000,000	$98,768,000	$0		$98,768,000	None	$1,550,538,000	15.70	0	**12.56**
44	NC 55		SR 1624 (Carpenter-Fire Station Road)		Construct interchange and rail separation over CSX Railroad	Wake			$20,100,000	$8,000,000	$28,100,000	$15,000,000	Town of Cary	$13,100,000	None	$201,960,000	15.42	0	**12.33**

DRAFT Mobility Fund Project Scores - SUBJECT TO CHANGE

Projects Listed by Total Score in Descending Order

Rank	Route	Route Name	From / Cross Street	To	Description	First County	Second County	Third County	Construction Cost	Right-of-Way+Utilities Cost	Total Project Cost	Non-Mobility Fund Dollars Contributed	Non-Mobility Fund Dollars Source	Total Cost to the Mobility Fund	Multimodal/ Intermodal Characteristics	Travel Time Savings Benefits for 30 Years ($)	Travel Time Savings/Cost to Mobility Fund (80%)	Multimodal/ Intermodal Points (20%)	Total Score
45	NC 751	Hope Valley Road	SR 1183 (University Drive)		Construct roundabout	Durham			$750,000	$150,000	$900,000	$0		$900,000	None	$12,386,000	13.76	0	**11.01**
46	Currituck Regional Airport Southern Taxiway				Construct new taxiway	Currituck			$3,235,000	$0	$3,235,000	$323,500	Currituck County	$2,911,500	Aviation Runway/Taxiway Projects	$836,000	0.29	50	**10.23**
47	Mount Airy-Surry County Airport Runway Extension		Cottage Drive	Janice Drive	Extend Runway 18-36 at the Mount Airy Surry county Airport from 4,300 ' to 5,500' in length. Project includes relocation and widening of SR 1627 (Holly Springs Road).	Surry			$8,675,000	$0	$8,675,000	$867,500	Mount Airy County Airport Authority	$7,807,500	Aviation Runway/Taxiway Projects	$814,000	0.10	50	**10.08**
48	US 70		TW Alexander Drive		Upgrade existing at-grade intersection to interchange	Wake			$20,400,000	$10,000,000	$30,400,000	$0		$30,400,000	None	$383,064,000	12.60	0	**10.08**
49	NC 12/Corolla Trolley System and Park n' Ride Lot		Pine Island Subdivision	Villages of Ocean Hill / End of NC 12	Construct trolley system and park and ride lot at Mainland terminus of Mid-Currituck Bridge	Currituck			$2,490,850	$1,000,000	$3,490,850	$349,085	Currituck County	$3,141,765	Addition of a new bus route to fixed route system	$154,000	0.05	50	**10.04**
50	Riegelwood To Wilmington Express, Mass Transit		Riegelwood	Wilmington	Add express route serving Acme, Delco and Leland to the New Hanover Medical Center via Downtown State. Route is largely outside of the WMPO area and would require coordination with regional partners.	Columbus	Brunswick	New Hanover	$15,234,000		$15,234,000	$0		$15,234,000	Addition of a new bus route to fixed route system	$0	0.00	50	**10.00**
51	Wilmington Multimodal Transportation Center		North of Red Cross Street	Hanover Street	Construct a new building as a multi-modal transportation facility in downtown Wilmington to serve as hub of activity for local bus service, inter-city bus service, the downtown trolley, human - service transportation and taxis.	New Hanover			$6,404,000	$0	$6,404,000	$0		$6,404,000	Addition of a new bus route to fixed route system	$0	0.00	50	**10.00**
52	NC 55	Alston Avenue	NC 147	Holloway Street	Widen roadway to 4 lanes with a median and transit accommodations, bike lanes, and sidewalks	Durham			$27,628,000	$0	$27,628,000	$23,400,000	Equity dollars	$4,228,000	None	$52,492,000	12.42	0	**9.93**
53	US 70		Miami Boulevard		Upgrade existing at-grade intersection to interchange	Durham			$20,100,000	$15,000,000	$35,100,000	$0		$35,100,000	None	$394,262,000	11.23	0	**8.99**
54	NC 11	Greenville Southwest Bypass	US 264	South of Old NC 11	Construct freeway on new location	Pitt			$166,400,000	$50,825,000	$217,225,000	$38,600,000	Loop dollars for ROW for Sections B and C	$178,625,000	None	$1,932,964,000	10.82	0	**8.66**
55	I-40		I-440/US 64	US 70 Business	Widen roadway to 8 lanes	Wake			$49,000,000	$5,000,000	$54,000,000	$14,400,000	Equity dollars	$39,600,000	None	$424,204,000	10.71	0	**8.57**
56	I-40		SR 3015 (Airport Boulevard)		Convert existing interchange to a diverging diamond	Wake			$7,500,000	$250,000	$7,750,000	$0		$7,750,000	None	$75,504,000	9.74	0	**7.79**
57	US 401	Raeford Road	US 401 Business (Robeson Street)	West of SR 1409 (Seventy First School Road)	Construct median and directional crossovers and upgrade intersections	Cumberland			$17,500,000	$6,500,000	$24,000,000	$10,000,000	Equity Dollars	$14,000,000	None	$136,312,000	9.74	0	**7.79**
58	Future I-74	Winston Salem Northern Beltway	US 421	I-40	Construct multi-lane freeway on new location.	Forsyth			$142,810,000	$104,674,000	$247,484,000	$0		$247,484,000	None	$2,390,344,000	9.66	0	**7.73**
59	I-840	Greensboro Outer Loop	US 29	US 70	Construct freeway on new location	Guilford			$137,271,000	$0	$137,271,000	$0		$137,271,000	None	$1,263,614,000	9.21	0	**7.36**
60	SR 1175	Kerr Avenue	US 74 (Martin Luther King, Jr. Parkway)		Replace the at grade intersection with an interchange.	New Hanover			$11,900,000	$8,855,000	$20,755,000	$0		$20,755,000	None	$185,438,000	8.93	0	**7.15**
61	I-26		NC 280	NC 146 (Long Shoals Road)	Widen roadway with additional lanes	Buncombe			$52,630,000	$1,000,000	$53,630,000	$0		$53,630,000	None	$471,526,000	8.79	0	**7.03**
62	I-77		NC 150		Reconstruct interchange to diverging diamond	Iredell			$5,300,000	$3,000,000	$8,300,000	$0		$8,300,000	None	$62,326,000	7.51	0	**6.01**
63	NC 105		NC 105 Bypass	Clarks Creek Road	Widen road to four lanes	Avery	Watauga		$40,000,000	$1,000,000	$41,000,000	$0		$41,000,000	None	$278,036,000	6.78	0	**5.43**
64	US 421		Westgate Drive	Yadkin River	Upgrade roadway to six lane superstreet with service roads	Wilkes			$30,000,000	$4,500,000	$34,500,000	$0		$34,500,000	None	$229,328,000	6.65	0	**5.32**
65	US 64		SR 1308 (Laura Duncan Road)		Upgrade existing at-grade intersection to a modern roundabout interchange	Wake			$33,300,000	$4,900,000	$38,200,000	$0		$38,200,000	None	$228,118,000	5.97	0	**4.78**
66	US 17	Hampstead Bypass	US 17 Wilmington Bypass	US 17 North of Hampstead	Construct freeway on new location	New Hanover	Pender		$199,000,000	$34,040,000	$233,040,000	$0		$233,040,000	None	$1,231,560,000	5.28	0	**4.23**
67	NC 133	River Road	US 17/74/76 interchange	Planned Skyway Bridge Interchange	Widen NC 133 (River road) from the planned Cape Fear Skyway to the Interchange at US 17/74/76	Brunswick			$19,500,000	$4,875,000	$24,375,000	$0		$24,375,000	None	$121,726,000	4.99	0	**4.00**
68	NC 8	Lexington West Side Bypass	NC 8	I-85 Business	Construct four-lane divided roadway on new location	Davidson			$40,285,000	$19,280,000	$59,565,000	$0		$59,565,000	None	$287,386,000	4.82	0	**3.86**
69	I-26		NC 225	NC 280	Widen interstate to six lanes	Henderson			$108,596,000	$3,000,000	$111,596,000	$40,000,000	Equity Dollars	$71,596,000	None	$343,750,000	4.80	0	**3.84**
70	I-40		NC 54		Convert existing interchange to a diverging diamond	Wake			$5,600,000	$0	$5,600,000	$0		$5,600,000	None	$24,288,000	4.34	0	**3.47**
71	I-40		US 311	I-40 Business/US 421	Widen I-40 to 6 Lanes	Forsyth	Guilford		$67,000,000	$0	$67,000,000	$0		$67,000,000	None	$261,646,000	3.91	0	**3.12**

DRAFT Mobility Fund Project Scores - SUBJECT TO CHANGE

Projects Listed by Total Score in Descending Order

Rank	Route	Route Name	From / Cross Street	To	Description	First County	Second County	Third County	Construction Cost	Right-of-Way+Utilities Cost	Total Project Cost	Non-Mobility Fund Dollars Contributed	Non-Mobility Fund Dollars Source	Total Cost to the Mobility Fund	Multimodal/ Intermodal Characteristics	Travel Time Savings Benefits for 30 Years ($)	Travel Time Savings/Cost to Mobility Fund (80%)	Multimodal/ Intermodal Points (20%)	Total Score
72	I-26		US 64	US 25 Business	Widen existing 4-lane freeway section to six lanes	Henderson			$38,768,000	$1,000,000	$39,768,000	$0		$39,768,000	None	$144,166,000	3.63	0	**2.90**
73	I-26		US 25 Business	NC 280	Widen existing 4-lane freeway section to six lanes	Henderson			$31,060,000	$1,000,000	$32,060,000	$0		$32,060,000	None	$115,764,000	3.61	0	**2.89**
74	New Route	Mid-Currituck Bridge	US 158	NC 12	Construct new bridge	Currituck			$556,260,000	$0	$556,260,000	$0		$556,260,000	None	$1,973,950,000	3.55	0	**2.84**
75	US 17		South of Belgrade	North of Maysville	Widening to multi-lane with bypasses of Belgrade and Maysville	Jones	Onslow		$56,001,000	$4,900,000	$60,901,000	$0		$60,901,000	None	$205,920,000	3.38	0	**2.70**
76	Future I-74	Winston Salem Northern Beltway	US 158	US 311	Multi-lane freeway on new location.	Forsyth			$57,223,000	$25,919,000	$83,142,000	$0		$83,142,000	None	$252,780,000	3.04	0	**2.43**
77	NC 119 Bypass		North of SR 1921 (Mebane Rogers Road)	South of SR 1918 (Mrs. White Road)	Construct bypass around City of Mebane	Alamance			$10,408,000	$0	$10,408,000	$0		$10,408,000	None	$31,350,000	3.01	0	**2.41**
78	NC 43, US 17		Bellsfork Road in Greenville	Mills Street in Bridgeton	Widen existing road since there is little room for passing, no turn lanes either.	Pitt	Craven		$179,900,000	$44,975,000	$224,875,000	$0		$224,875,000	None	$668,448,000	2.97	0	**2.38**
79	US 64		NC 109	NC 49	Widen to 4 lanes	Davidson	Randolph		$99,000,000	$47,800,000	$146,800,000	$0		$146,800,000	None	$380,292,000	2.59	0	**2.07**
80	I-26		US 19/23		Construct new route over the French Broad River	Buncombe			$243,302,000	$44,488,000	$287,790,000	$114,941,000	I-2513A	$172,849,000	None	$409,794,000	2.37	0	**1.90**
81	I-26		US 25	US 64	Widen existing 4-lane freeway section to six lanes	Henderson			$38,768,000	$1,000,000	$39,768,000	$0		$39,768,000	None	$92,158,000	2.32	0	**1.85**
82	I-140	Wilmington Bypass	US 74/76	US 421	Construct freeway on new location	Brunswick			$217,500,000	$0	$217,500,000	$0		$217,500,000	None	$490,842,000	2.26	0	**1.81**
83	US 13	Berkeley Blvd	SR 1705 (Hood Swamp Road)	SR 1572 (Saulston Road)	Widen Roadway to four lanes with a median	Wayne			$6,200,000	$1,550,000	$7,750,000	$2,085,756	City of Goldsboro General Fund or Street Bonds	$5,664,244	None	$12,012,000	2.12	0	**1.70**
84	US 117A		SR 1306 (Fedelon Trail)	US 70 Bypass	Widen roadway and/or make safety improvements	Wayne			$5,100,000	$4,000,000	$9,100,000	$4,793,442	City of Goldsboro General Fund or Street Bonds	$4,306,558	None	$5,412,000	1.26	0	**1.01**
85	US 158		NC 34 at Belcross	NC 168 at Barco	Widen roadway to four lanes with a median	Currituck			$82,500,000	$42,000,000	$124,500,000	$0		$124,500,000	None	$127,270,000	1.02	0	**0.82**
86	US 13	Berkeley Blvd	SR 1003 (New Hope Road)	N. of SR 1705 (Hood Swamp Road)	Widen Roadway to Multi-lanes with Divided Median	Wayne			$9,700,000	$4,000,000	$13,700,000	$2,740,000	City of Goldsboro General Fund or Street Bonds	$10,960,000	None	$10,362,000	0.95	0	**0.76**
87	I-26		NC 191		Upgrade interchange	Buncombe			$17,800,000	$18,975,000	$36,775,000	$0		$36,775,000	None	$29,150,000	0.79	0	**0.63**
88	US 220		US 311/NC 135		Reconstruct Interchange	Rockingham			$26,900,000		$26,900,000	$0		$26,900,000	None	$21,318,000	0.79	0	**0.63**
89	US 13	Berkeley Blvd	Central Heights Road (SR 1709)/Royall Ave (SR 1560)		Realign SR 1709 (Central Heights Road) at the Intersection of US 13 (Berkeley Blvd) and SR 1560 (Royall Ave)	Wayne			$5,900,000	$2,000,000	$7,900,000	$1,616,075	City of Goldsboro General Fund or Street Bonds	$6,283,925	None	$4,950,000	0.79	0	**0.63**
90	I-40		Harper Road	NC 801	Widen I-40 to 6 Lanes	Davie	Forsyth		$48,200,000	$650,000	$48,850,000	$0		$48,850,000	None	$29,348,000	0.60	0	**0.48**
91	I-40		US 64 (Burkemont Road)		Upgrade interchange	Burke			$27,000,000	$5,672,576	$32,672,576	$0		$32,672,576	None	$11,000,000	0.34	0	**0.27**
92	I-85		East of SR 1709	Durham County Line	Widen to 6 lanes and reconstruct interchanges and structures	Orange			$82,720,000	$21,070,000	$103,790,000	$0		$103,790,000	None	$34,386,000	0.33	0	**0.27**
93	I-85		SR 1006 near Hillsborough	East of SR 1709	Widen to 6 lanes and reconstruct interchanges and structures	Orange			$77,065,000	$33,810,000	$110,875,000	$0		$110,875,000	None	$26,378,000	0.24	0	**0.19**
94	NC 540 Toll	Southern and Eastern Wake Freeways	NC 55 in Holly Springs	US 64/264	Construct six-lane toll road on new location	Wake			$1,211,000,000	$94,000,000	$1,305,000,000	$570,000,000	Toll Revenues	$735,000,000	None	$76,098,000	0.10	0	**0.08**
95	I-26		US 74		Revise interchange	Polk			$15,400,000	$4,900,000	$20,300,000	$0		$20,300,000	None	$0	0.00	0	**0.00**

SR 1009 / SR 1010	John Street / Old Monroe Road	SR 3448-SR 3474 (Trade Street)	SR 1377 (Wesley Chapel-Stouts Road)	Widen roadway to four lanes with median with turn lanes, construct sidewalks and/or multi-use paths, and bike lanes	Mecklenburg	Union				Does Not Meet Minimum Eligibility Requirements	
US 74-76		SR 1437 (Old Fayetteville Road)		Convert grade separation to an interchange	Brunswick					Does Not Meet Minimum Eligibility Requirements	
Goat Island Greenway Trail and Pedestrian Bridge		Greenwood Place	Eighth Avenue	Construct greenway bridge and approaches	Gaston					Does Not Meet Minimum Eligibility Requirements	