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)

September 10, 2008 **Committee Room**
7:00 PM **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. August 13, 2008 TAC Meeting Minutes
(Attachment 5)

A copy of the August 13, 2008 TAC meeting minutes is enclosed as Attachment 5.

TAC Action: Approve minutes of the August 13, 2008 TAC meeting.

6. 2035 Long Range Transportation Plan and Comprehensive Transportation Plan – Alternatives Analysis – Public Hearing
(Attachment 6)
Andy Henry, LPA Staff

The 2035 Long Range Transportation Plan and Comprehensive Transportation Plan alternatives analysis was released for public comment on August 13, 2008 (Attachment 6). Attachment 6 is a slightly edited version of the alternatives analysis booklet that was distributed with the August TAC agenda. A public hearing is scheduled for the September 10, 2008 TAC meeting. Public meetings and workshops have begun. Staff will provide an update of the 2035 LRTP activities, including status of the alternatives analysis and preferred option.

TAC Action: Hold a public hearing on the 2035 Long Range Transportation Plan and Comprehensive Transportation Plan Alternatives Analysis. Discuss and refer comments to staff.

7. Unified Planning Work Program – Amendment #1
(Attachment 7)
Felix Nwoko, LPA Staff
Adena Messinger, Town of Carrboro

The DCHC MPO approved the FY 2008-2009 Unified Planning Work Program (UPWP) on April 9, 2008. The Town of Carrboro has requested a UPWP amendment to better reflect its

work tasks. Attachment 7 is a resolution approving Amendment #1 to the FY 2008-2009 UPWP. There is no net change in funding for the Town of Carrboro.

TCC Recommendation: That the TAC approve the resolution to amend the FY 2008-2009 Unified Planning Work Program.

TAC Action: Approve the resolution to amend the FY 2008-2009 Unified Planning Work Program.

8. **Request to Transfer FY 2009 CMAQ and STPDA Funds to FTA**
(Attachment 8)
Ellen Beckmann, LPA Staff

The DCHC MPO has approved CMAQ and STPDA funding for several transit projects in FY 2009. CMAQ and STPDA are Federal Highway Administration funding programs. As required by federal regulations, these funds must be transferred from the Federal Highway Administration to the Federal Transit Administration for use on transit projects. Attachment 8 is a resolution requesting that the FY 2009 CMAQ and STPDA funds for transit projects be transferred to FTA.

TCC Recommendation: That the TAC approve a resolution requesting that the FY 2009 CMAQ and STPDA funds for transit projects be transferred to FTA.

TAC Action: Approve a resolution requesting that the FY 2009 CMAQ and STPDA funds for transit projects be transferred to FTA.

REPORTS:

9. **Report from the TAC Chair**
Alice Gordon, TAC Chair

TAC Action: Receive Report from TAC Chair

10. **Report from Staff**
(Attachment 10)
Felix Nwoko, LPA Staff

TAC Action: Receive Report from Staff

11. **Report from the TCC Chair**
Mark Ahrendsen, TCC Chair

TAC Action: Receive Report from TCC Chair

12. **NCDOT Report**
(Attachment 12)
Wally Bowman, Division 5 – NCDOT

Mike Mills, Division 7 – NCDOT
Bill Barlow, PTD - NCDOT

TAC Action: Receive NCDOT report

INFORMATIONAL ITEMS

13. **Recent News Articles and Updates**
(Attachment 13)

14. **U-4763B Triangle Parkway – NC Turnpike Authority Letter to Durham BPAC – August 21, 2008**
(Attachment 14)

15. **21st Century Transportation Committee – August 21, 2008 Meeting Materials**
(Attachment 15)

16. **21st Century Transportation Committee – September 11, 2008 Meeting Notice**
(Attachment 16)

Adjourn

Next meeting: October 8, 2008

TAC Directives to Staff

06/11/03 – 12/31/06 (Pending/In Progress/On Going)
01/01/07 – Present (Completed/Pending/In Progress)

Meeting Date	Directive	Status
06/11/03	(TAC) Letter to Durham City Council and Jon Nance requesting they take some action to address the safety issue for pedestrians at US 15-501/ Garrett Road Service Road relocation project.	Completed/Pending – Letter sent to Council and NCDOT. Staff has met with NCDOT. Under consideration by NCDOT. Plan to include pedestrian improvements in the US 15-501 widening project (U-4012)
03/10/04	Send letter to NCDOT expressing concern over NC-147 /I-40 interchange and concern over backups occurring on NC-147.	Completed/Pending - Letter sent 03/17/04. Staff has discussed with NCDOT various alternatives under consideration by NCDOT.
08/25/04	Metropolitan Area Boundary	Completed/In Progress – TAC approved MAB for the 2030 LRTP. Staff to bring back proposal for MAB expansion for the next LRTP update.
08/25/04	Further study of Farrington Road/Stagecoach Road corridor to move projects forward for funding.	In Progress – See Attachment 11 of 6/11/08 TAC Agenda.
08/25/04	Further study of Latta Road/Infinity Road/Roxboro Road intersection.	In Progress – To be evaluated as part of the next (2035) LRTP update.
09/14/05	Staff to check with DATA about the possibility of designating a Park-and-Ride in northern Durham.	In Progress
04/12/06	Investigate use of peer review for Triangle Regional Model (TRM)	In Progress: TRM committee has taken up this project
04/12/06	Address cost splits for TRM tasks at next DCHC MPO/CAMPO joint TAC meeting	In Progress:
08/09/06	Follow up with the BPAC and DATA Boards regarding public involvement for MPO activities.	In Progress:
10/11/06	Provide information on if a municipality can accelerate resurfacing using local funding.	In Progress
01/10/07	Work with the TAC officers to identify candidates for the Joint MPO Special Advisory Commission for Transit. Recommend appointments	Completed: See Attachment 6 of the 02/14/07 TAC Agenda.

01/10/07	Work with NCDOT to resolve the remaining concerns with the design of U-3308 Alston Avenue	In Progress: See Attachment 11A of 02/14/07 TAC Agenda, Attachment 20 of 4/11/07 TAC Agenda, and Attachment 18 of 6/13/07 TAC Agenda
02/14/07	Send a letter to NCDOT and state legislative delegation requesting the NCDOT reconsider its decision not to relocate the Durham Amtrack station	Completed: See Attachment 23 of 4/11/07 TAC Agenda
02/14/07	Send a letter to the Governor, state legislative delegation, and NCDOT on TIP funding issues.	Completed: See Attachment 23 of 3/14/07 TAC Agenda
02/14/07	Develop a long-term and short-term strategy for addressing funding needs working with other MPOs and the Metropolitan Coalition	In Progress: See 10/31/07 Joint TAC Agenda.
03/14/07	Review Phil Post's proposed adjustments to the Southwest Durham Southeast Chapel Hill Collector Street Plan/Southwest Durham Drive. Develop a recommended final plan.	Completed: See Attachment 7A of 4/11/07 TAC Agenda
04/11/07	Review Chapel Hill's request for one crossing on I-40 on the Southwest Durham Southeast Chapel Hill Collector Street Plan.	Completed: See Attachment 10 of 5/09/07 TAC Agenda.
04/11/07	Provide information on the effect of the Triangle Parkway on alleviating traffic on I-40.	Completed: See Attachment 16 of 6/13/07 TAC Agenda.
04/11/07	Send a letter to the DCHC MPO state legislative delegation regarding transportation bills introduced in the General Assembly	Completed: See Attachment 20 of 6/13/07 TAC Agenda.
05/09/07	Review the STP-DA allocation procedure including eligible projects and geographic distribution	Completed: See Attachment 7C of 6/13/07 TAC Agenda, Attachment 8 of 3/12/08 TAC Agenda, Attachment 8 of 4/09/08 TAC Agenda, and Attachment 6 of 5/14/08 TAC Agenda.
05/09/07	Send a letter to the DCHC MPO state legislative delegation regarding H1462 (Municipal Street Provisions) and the Land Transfer Tax	Completed: See Attachment 20 of 6/13/07 TAC Agenda.
05/09/07	Send a letter of support for the Durham, Chapel Hill, and NCDOT earmark requests	Completed: See Attachment 15 of 8/8/07 TAC Agenda
08/08/07	Provide a summary of transportation-related development review regulations from member jurisdictions	Completed: See Attachment 17 of 10/10/07 TAC Agenda
08/08/07	Add information on student employment, employment-to-population ratios, and household size to the SE Data	Completed: See Attachment 6 of 9/12/07 TAC Agenda
08/08/07	Provide an update on damage to NC-147 due to the I-40 detour	Completed: NCDOT staff replied via email to TAC members

09/12/07	Develop final goals and objectives for the 2035 LRTP considering public comments and the Chapel Hill resolution	Completed: See Attachment 8 of 10/10/07 TAC Agenda
10/10/07	Send a letter to thank the NCDOT for the I-40 repair project	Completed: See Attachment 17 of 11/14/07 TAC Agenda.
11/14/07	Develop a strategy for pursuing regional bicycle routes between MPO jurisdictions. Include public input and identify funding sources.	In Progress: Corridors to be identified as part of the 2035 LRTP process. STP-DA funding has been reserved.
11/14/07	Develop a combined mode 2009-2015 TIP regional priority list by division with costs.	Completed: See Attachment 7 and 7A of 1/09/08 TAC Agenda.
12/12/07	Provide a presentation and update on the 21st Century Transportation Committee	Completed: See Attachment 6 of 3/12/08 TAC Agenda.
12/12/07	Send a letter to NCDOT regarding U-3804 Hillandale Road widening using similar language as the Durham Board of County Commissioners.	Completed: See Attachment 15 of 1/09/08 TAC Agenda.
02/13/08	Present to the JCCPC and planning boards on the LRTP targets and the importance of land use.	In Progress:
03/12/08	Present to the JCCPC and Orange County Assembly of Governments on the LRTP Deficiency Analysis	Completed: Presentations given at the 4/2/08 JCCPC and 3/31/08 Assembly of Governments.
03/12/08	Provide an update on the state's human services transportation plan	In Progress:
04/09/08	Provide a report on Triangle Transit's funding sources from the DCHC MPO and CAMPO	Completed: See Attachment 6C of 5/14/08 TAC Agenda.
04/09/08	Consider the Morgan Creek Greenway project in Chapel Hill when evaluating projects for the STP-DA regional bicycle and pedestrian category	In Progress: To be considered as part of the evaluation of regional bicycle and pedestrian corridors during the 2035 LRTP.
04/09/08	Develop a list of principles that should be considered in the proposed Congestion Intermodal Transportation Fund legislation.	Completed: See Attachment 10B of 5/14/08 TAC agenda.
05/14/08	Develop a recommendation for funding regional bicycle and pedestrian projects with STP-DA.	In Progress: To be considered as part of the evaluation of regional bicycle and pedestrian corridors during the 2035 LRTP.
06/11/08	Send a letter to the NC Turnpike Authority expressing the TAC's concerns regarding Triangle Parkway.	Completed: See Attachment 18 and 18A of the 8/13/08 TAC agenda.
06/11/08	Send a letter to the MPO's state delegation stating the MPO's position on the Triangle Parkway.	Completed: See Attachment 17 of the 8/13/08 TAC agenda.
8/13/08	Work with NCDOT to amend the 2009-2015 TIP to address transit project errors.	In Progress: To be considered at 10/08/08 TAC.

TRANSPORTATION ADVISORY COMMITTEE

August 13, 2008

MINUTES OF MEETING

The Transportation Advisory Committee met on August 13, 2008, at 9:00 a.m. in the Council Chambers on the first floor of Durham City Hall. The following attended:

**William V. "Bill" Bell	City of Durham
*Diane Catotti	City of Durham
**Kevin Foy	Town of Chapel Hill
**Alice Gordon	Orange County (TAC Chair)
*Ed Harrison	Town of Chapel Hill
**Becky Heron	Durham County
**Lydia Lavelle	Town of Carrboro
**George Lucier	Chatham County
*Ellen Reckhow	Durham County
**Mike Woodard	City of Durham (TAC Vice-Chair)

**Voting Members
*Alternate or Non-Voting Members

Mark Ahrendsen	City of Durham/Transportation
Jamal Alavi	NCDOT - TPB
Allison Anderson	Durham Chamber of Commerce
Bill Barlow	NCDOT - PTD
Ellen Beckmann	City of Durham/Transportation
David Bonk	Town of Chapel Hill
Wally Bowman	NCDOT – Division 5 Engineer
Kevin Harward	City of Durham/Transportation
Andy Henry	City of Durham/Transportation
John Hodges-Copple	Triangle J COG
Joe Huegy	ITRE
Ed Johnson	CAMPO
Karen Lincoln	Orange County
Patrick McDonough	Triangle Transit
Adena Messinger	Town of Carrboro
Ryan Mickles	Town of Chapel Hill
Felix Nwoko	City of Durham/Transportation
Dawn Qiu	City of Durham/Transportation

Alice Gordon, 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.

Directives to Staff (Attachment 4)

There were no comments regarding the Directives to Staff.

ACTION ITEMS:

June 11, 2008 TAC Meeting Minutes (Attachment 5)

Lydia Lavelle made an amendment to the minutes on page 1, line 36. It is should read "Adena Messinger, Town of Carrboro." A motion was made by Mike Woodard and seconded by Lydia Lavelle to approve the June 11, 2008 TAC Meeting Minutes with the amendment noted above. The motion carried unanimously.

Diane Catotti provided a brief introduction for the new City Manager for the City of Durham, Thomas Bonfield.

2035 Long Range Transportation Plan and Comprehensive Transportation Plan (Attachment 6)

Andy Henry provided an introduction and update for the 2035 Long Range Transportation Plan and Comprehensive Transportation Plan and attachments.

Becky Heron suggested contacting the Durham County Transportation Board. Andy Henry stated he would contact them to see if they wanted to be included.

Andy Henry provided an overview of the schedule including a proposed joint TAC meeting between CAMPO and DCHC on October 29, 2008 to discuss the preferred option and have a joint public hearing in addition to the schedule.

Lydia Lavelle stated she noticed the figures for Orange County are the same as last time. Andy Henry stated that is what was submitted based on the build-out land use; it is high because there is a lot of undeveloped land.

George Lucier stated that on one of the earlier submittals, a meeting was scheduled for Chatham County Board of County Commissioners on September 15, 2008; but now it has "to be determined." Andy Henry confirmed the meeting is September 15, 2008.

Andy Henry stated staff will be fixing typos and completing some of the performance measures.

Andy Henry provided some initial observations of the data. Andy Henry stated, in regards to the Fixed Guideway alternatives, they are not seeing much reduction in the congestion on I-40 and the Durham Freeway. However, they are seeing a lot of reduction on US 15-501 and NC-54. Diane Catotti asked what projects do help congestion on I-40 and Andy Henry stated he doesn't know. Ed Harrison stated the region wants to know what works. Kevin Foy asked why the congestion reduces on NC-54 and not on I-40. Andy Henry stated they will need to examine it further. Ed Harrison stated that the NC-54/I-40 interchange collects traffic from Durham County, Orange County, and Chatham County. The feeder roads from Chatham County are in the model as four lanes. There isn't right of way in the U.S. Army Corps of Engineers land and widening isn't feasible.

Alice Gordon stated the action for the TAC today is to release the report.

Lydia Lavelle stated she would like clarity about the "Income Tax" on page 3-4. Ms. Lavelle requested to add "proposed" to the Income Tax line on page 3-4. She does not think local government has the authority to have an income tax in North Carolina. Becky Heron stated that we shouldn't give up

on the real estate transfer tax at this time. Andy Henry will add more of an introduction for the local options.

A motion was made by Mike Woodard and Lydia Lavelle to release the 2035 LRTP Alternatives with suggested changes and adopt the schedule as presented. A motion carried unanimously.

FY 2009-2015 Metropolitan Transportation Improvement Program (Attachments 7, 7A, 7B, 7C, 7D, 7E, and 7F)

Ellen Beckmann provided an introduction for the FY 2009-2015 Metropolitan Transportation Improvement Program, along with the attachments.

Ellen Beckmann stated that staff recommends approving the MTIP with the errors noted because the MTIP must be consistent with the STIP. The errors will be addressed through amendments adopted as the transit projects are funded throughout the years.

Alice Gordon asked if the amendments could be addressed as soon as possible. Ellen Beckmann stated she would contact NCDOT to see what can be amended.

Mayor Bell asked if the railroad bridge on Alston Avenue will be replaced and Mark Ahrendsen stated yes it is a part of the project.

A motion was made by Mike Woodard and seconded by Becky Heron to adopt the resolution for FY 2009-2015 Metropolitan Transportation Improvement Program and the resolution finding the FY 2009-2015 Metropolitan Transportation Improvement Program in conformity with the North Carolina State Implementation Plan. The motion carried unanimously.

Triangle Regional Model (Attachments 8, 8A, and 8B)

Felix Nwoko provided an introduction for the Triangle Regional Model, along with the attachments.

Kevin Foy stated that the Town of Chapel Hill, UNC, and Carrboro have used the model for transit studies. The model does not include parking constraints. The model also assumes that the

higher the income the less likely you are to take an alternative form of transportation. Mr. Foy stated there is a continued concern with the model and wants improvement. The model has improved, but should continue to be refined.

Becky Heron stated that although the 2005 traffic counts are outdated they are still being used for zoning cases. Felix Nwoko stated there is a two year lag between data collection and getting the information from NCDOT. Staff is working with Jamal Alavi, NCDOT, to get the data available sooner. Felix Nwoko stated that the MPO is trying to do their own data collection to get the data updated.

A motion was made by Mike Woodard and seconded by Lydia Lavelle to approve the resolution adopting the Triangle Regional Model version TCV4-2008 and send a letter to the Triangle Model Service Bureau. The motion carried unanimously.

FY 2011-2017 Transportation Improvement Program – Regional Priority List – Ranking Methodology (Attachments 9, 9A, and 9B)

Ellen Beckmann provided an introduction for the FY 2011-2017 Transportation Improvement Program – Regional Priority list – Ranking Methodology, along with the attachments.

Kevin Foy stated that the year needed category on the transit ranking methodology should be deleted. Instead, the transit projects should simply be sorted by year.

Alice Gordon suggested making the environmental impacts language the same on all sheets. Ms. Gordon stated the description and ranking sheets need to be consistent.

Becky Heron expressed a concern with getting the TAC packets the Friday before the meeting.

Alice Gordon suggested approving the FY 2011-2017 Transportation Improvement Program Regional Priority List Ranking Methodology in draft form now with a possible amendment in September.

A motion was made by Mike Woodard and seconded by George Lucier to approve the FY 2011-2017 Transportation Improvement Program Regional Priority List Ranking Methodology with the changes noted above. The motion carried with Becky Heron opposing.

Memorandum of Agreement between the DCHC MPO, DATA, Chapel Hill Transit and Triangle Transit (Attachment 10)

Felix Nwoko provided an introduction for the Memorandum of Agreement between the DCHC MPO, DATA, Chapel Hill Transit and Triangle Transit.

A motion was made by Mike Woodard and seconded by Lydia Lavelle to authorize the Chair to execute the Memorandum of Agreement between the DCHC MPO, DATA, Chapel Hill Transit, and Triangle Transit. The motion carried unanimously.

REPORTS:

Report from the TAC Chair

Alice Gordon stressed the importance of keeping the LRTP on schedule.

Report from Staff

Ed Harrison expressed a concern that the dates on the report are no longer accurate. Felix Nwoko stated they will be updated by next month.

Report from the TCC Chair

Mark Ahrendsen stated that the environmental document on the East End Connector has been completed and is under review by the FHWA. The second public meeting on the Hillandale Road widening project was held July 18th. It was recommended that the TAC Chairs finalize the time and location for the Joint TAC meeting to be held on October 29, 2008.

NCDOT Report

Wally Bowman, NCDOT Division 5 Engineer, provided an update on the NCDOT reorganization. Alice Gordon suggested that NCDOT provide a Power Point presentation to TAC members on the incident management operational issues at the October TAC meeting. Ellen Reckhow stated the volunteer fire departments need to be involved. Ms. Reckhow also suggested that NCDOT use the electronic sign boards better.

NCDOT has begun the feasibility study for the grade separation at Martin Luther King Jr. Parkway and NC-55. The NC-98/Holloway Street project is behind schedule. A letter was sent to the contractor. The project should be complete by the end of the year.

Mark Ahrendsen stated a new attachment will be distributed with the packets. It is a NCDOT - transit news report.

Alice Gordon stated that the Chapel Hill to Hillsborough transit service is over capacity and needs more buses.

Ellen Reckhow stated that Triangle Transit's ridership is increasing and they are looking to expand service.

George Lucier suggested scheduling a presentation to the Board of Chatham County Commissioners on the Farrington Road Study on either September 3 or September 15, 2008.

Allison Anderson with the Durham Chamber of Commerce invited the TAC members to a transit trip to Charlotte, NC. The formal invitations will be sent today. The trip will be to look at circulators, the new LYNX light rail system, and the old trolley system. The date is October 10, 2008.

Adjournment

There being no further business before the Transportation Advisory Committee, a motion was made by Mayor Bill Bell and seconded by Kevin Foy to adjourn the meeting at 11:05 a.m.

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
N.C. Department of Transportation
County of Orange

2035 Long Range Transportation Plan
Alternatives Analysis Report

August 13, 2008

Direct Questions and Comments to:

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Table of Contents

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2035 LRTP and CTP
Alternatives -- Introduction

What is the 2035 LRTP?

The 2035 Long-Range Transportation Plan (LRTP) is the guide for major transportation investments in the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (DCHC-MPO) area. The DCHC-MPO area covers the entire Durham County and the urbanized portions of Orange and Chatham Counties. The 2035 LRTP recommends major transportation projects, policies and strategies designed to maintain existing transportation systems and serve the region's future travel needs. The 2035 LRTP is also designed to support land use and air quality goals for the urban area, and must be prepared in accordance with Federal transportation and environmental requirements. Projects must be in the 2035 LRTP in order to receive state and federal transportation funding through the North Carolina Transportation Improvement Program (TIP).

What is the CTP?

North Carolina General Statute 136-66.2 requires each municipality or Metropolitan Planning Organization (MPO), with the cooperation of the NCDOT, to develop a Comprehensive Transportation Plan (CTP) serving present and anticipated travel demand in and around the MPO. The CTP is a series of 5 sheets that include: Adoption Sheet, Highway Map, Public Transportation and Rail Map, Bicycle Map, and Pedestrian Map. These sheets show current and future transportation facilities. The principal differences between the LRTP and CTP include:

- LRTP lists only proposed highway improvements and transit services, whereas the CTP maps out both the current and proposed projects;
- LRTP must be fiscally-constrained, i.e., the anticipated revenues must cover the anticipated costs, but the CTP has no fiscal element.

The development process for these two documents, which includes the use of a travel demand model and extensive public involvement, are very similar. As a result, the DCHC MPO will complete the development process for both documents at the same time.

What are Alternatives?

The DCHC MPO plans to develop and evaluate several Alternatives in the process to create the 2035 Long Range Transportation Plan. Each Alternative will be a combination of a Transportation System, which includes a set of highway, transit and other transportation improvements, and a Land Use Scenario that distributes the forecasted

population and employment for the year 2035. These Alternatives will be run in the Triangle Regional Model (TRM) to produce a set of transportation performance measures that describe how the transportation system will handle the travel demand generated by a particular population and employment distribution in the year 2035. These performance measures, such as the level of roadway congestion, average travel time, and transit ridership, will be used to evaluate and compare the various Alternatives.

It should be noted that it is very unlikely that one of the Alternatives in its entirety would be advanced as the Preferred Option. These Alternatives have been designed to emphasize a particular mode in meeting the future travel demands so that the public and technical staff can understand how well the designated mode works.

How can Citizens Participate?

There are many opportunities for citizens to review and comment on the Alternatives and Preferred Option at a series of public workshops and public hearings that will take place from August through December 2009. The public involvement calendar for the Alternatives is displayed below. The DCHC MPO Website will continue to post a detailed list of these public involvement opportunities in the 2035 LRTP section of the Website – www.dchcmpo.org. For more information, citizens can also contact Andy Henry, (919) 560-4366, andrew.henry@durhamnc.gov.

Alternatives Analysis – Public Involvement Calendar

Jurisdiction	Elected Board	Planning Board	Transportation Board	Bicycle/ Pedestrian Board	Transit Board	Public Workshops
City of Durham	9/18/2008	9/9/2008	n/a	8/19/2008	9/3/2008	9/11 Main Library*, 4:30-7:30pm 9/2 Northern H.S., 6:30-8:30pm 9/4 Jordan H.S. ., 6:30-8:30pm
Durham County	9/1/2008 or 9/8/2008	9/9/2008	n/a	8/19/2008	n/a	
Chapel Hill	9/8 (Forum) and 9/22	8/19	8/28	9/11 (Active Living)	n/a	9/9 Chapel Hill Main Library, 4-7pm
Carrboro	9/2/2008	8/21/2008	8/21/2008			
Hillsborough	9/24 (workshop)	9/18	n/a	n/a	n/a	8/28 "The Barn", 4-7 pm
Orange County	9/16/2008	Can attend Transportation Bd. meeting	8/27/2008 (special mtg.)	n/a	n/a	
Chatham County	(to be determined)	(to be determined)	n/a	n/a	n/a	8/22 Ag Center in Pittsboro, 4-7pm

*One workshop will be focused for environmental justice organizations

Note: Check DCHC MPO Web site for any meeting date and time updates – www.dchcmpo.org

What is the Next Step in the 2035 LRTP Process?

In the next major step in the 2035 LRTP development process, the public, elected officials and technical staff will use the evaluation and comparison of the Alternatives to create a single Alternative that best meets the MPO's Goals and Objectives and the fiscal constraint requirements. These requirements demand that the project costs do not exceed the expected funding revenues. This final Alternative is called the Preferred Option, and it will also go through an extensive public review process similar to that of the Alternatives.

Development of Alternatives

The table on page 4 shows the combinations of Transportation Systems and Land Use Scenarios that will be modeled for the 2035 LRTP development process. Each of these Transportation Systems will be combined with one, or more, Land Use Scenarios to create an Alternative.

- The first two Transportation Systems (#1 and #2), the 2030 LRTP and Comprehensive Transportation Plan, will be used as benchmarks to compare with the 2035 LRTP Alternatives, and therefore will not form Alternatives.
- The next five Transportation Systems (#3 through #7), are Alternatives for the 2035 LRTP.

There is a unique set of Socioeconomic Data (SE Data) for each Land Use Scenario. The Baseline Land Use Scenario, for example, is the SE Data approved by the Transportation Advisory Committee (TAC) for use in developing the 2035 LRTP and is based on the current land use plans and policies of the local jurisdictions in the DCHC MPO's planning area. The other Land Use Scenarios assume certain changes to current land use policies.

Summary Description of Transportation Systems

Each Transportation System is composed of many highway, transit and other transportation projects. A review of the long list of projects is a difficult task. The table on page 5 provides a summary of the major projects in each of the Transportation Systems to highlight the level and type of investment in the three major modes – highway, bus transit and fixed-guideway.

Section 4 of this report, called *Alternatives – Detailed Description*, presents maps and project tables for each of the transportation systems used in the Alternatives.

Combinations of Transportation Systems and Land Use Scenarios (1)

No.	Transportation System	Land Use Scenarios				
		Baseline	**Constrained**	**Buildout**	**Corridor**	**Transit Nodes**
Benchmarks for comparison						
1	**2030 Adopted LRTP** Currently adopted plan	**1a**				
2	**Comprehensive Transportation Plan** Vision Plan to address population and employment buildout beyond the year 2035; no budget constraint	**2a**		**2b**		
2035 LRTP Alternatives						
3	**Intensive Highway** Emphasize highway investment to address transportation needs	**3a**	**3b**		**3c**	
4	**Intensive Fixed Guideway** Light rail and other grade separated transit	**4a**			**4b**	**4c**
5	**Intensive Bus Transit** Emphasize bus transit service to address transportation needs	**5a**			**5b**	**5c**
6	**Moderate Multimodal** Continue current investment trends with some shift to non-automobile modes	**6a**			**6b**	**6c**
7	**System Preservation** (2) Preserve effectiveness of existing transportation using ITS, TDM, and CMS-TSM projects and policies					

(1) Each combination of a Transportation System and Land Use Scenario creates an Alternative and will require a unique travel demand model run.

(2) The Triangle Regional Model (TRM) is not designed to be very sensitive to changes in ITS, TDM, and CMS-TSM projects and policies. Therefore, the System Preservation Alternative will not require additional model runs.

Summary of Transportation Systems (Alternatives)(1)

Transportation System	Highway	Bus Transit	Fixed Guideway
2030 LRTP	• **518** lane miles added • HOV/HOT on I-40 and part of NC 147 • Triangle Parkway (toll) • US 15-501 freeway • 7 "loop" projects	• Major regular, express and regional bus expansion • Peak headways **10-15 minutes** • Off-Peak headways **20-30 minutes**	• Light Rail -- Durham to Raleigh • Fixed guideway -- Durham to Chapel Hill
CTP	• **703** lane miles added • HOV/HOT on I-40, NC 147, East End Connector, US 70 and I-85 • Triangle Parkway (toll) • US 15-501 freeway • 7 "loop" projects	• Major regular, express and regional bus expansion • Peak headways **5-7 minutes** • Off-Peak headways **7-15 minutes** • BRT in Chapel Hill • Includes all **STAC** recommendations	• Light Rail -- Durham to Raleigh • Fixed guideway -- Durham to Chapel Hill • Includes all **STAC** recommendations
Intensive Highway	• **665** lane miles added • HOV/HOT on I-40, I-85 and part of NC 147 • Triangle Parkway (toll) • US 15-501 freeway • 7 "loop" projects	• Minor regular, express and regional bus expansion • Peak headways **15-30 minutes** • Off-Peak headways **30-45 minutes**	• No fixed guideway service
Intensive Fixed Guideway	• **276** lane miles added • No HOV/HOT • Triangle Parkway (toll) • 6 "loop" projects	• Moderate regular, express and regional bus expansion • Peak headways **7-10 minutes** • Off-Peak headways **15-20 minutes** • BRT in Chapel Hill • Includes all **STAC** recommendations	• Light Rail -- Durham to Raleigh • Fixed guideway -- Durham to Chapel Hill • Includes all **STAC** recommendations
Intensive Bus Transit	• **324** lane miles added • HOV/HOT on I-40 • Triangle Parkway (toll) • 6 "loop" projects	• Major regular, express and regional bus expansion • Peak headways **5-7 minutes** • Off-Peak headways **10-15 minutes**	• No fixed guideway service
Moderate Multimodal	• **285** lane miles added • No HOV/HOT • Triangle Parkway (toll) • 7 "loop" projects	• Moderate regular, express and regional bus expansion • Peak headways **15 minutes** • Off-Peak headways **30 minutes**	• Commuter Rail – Burlington to Raleigh; and Selma to Durham

(1) Some helpful definitions: HOV/HOT = High Occupancy Vehicle/Toll; lanes that can only be used by vehicles that pay a toll or have at least a specified number of passengers. Headway = minutes to wait before next bus arrives. Peak = period of highest travel, generally 7am-9am and 4pm-6pm. BRT = Bus Rapid Transit, which are buses on a separate roadway. Fixed Guideway = transit vehicles on traveling on separate track or roadway. STAC = Special Transit Advisory Commission, which was a regional commission that recommended major transit investments.

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2035 LRTP and CTP
Alternatives – Performance Measures

Purpose of Performance Measures

Performance Measures provide a general indicator of the a transportation system from a variety of perspectives such as mobility, travel time, congestion, mode choice, air quality, financial, and environmental justice (i.e., perspective of minority and low-income populations). The measures are not specific to a particular travel corridor but instead cover the entire transportation system, and therefore are useful for comparing the efficiency and effectiveness of the different transportation Alternatives. Most of the data used for calculating the Performance Measures comes from the Triangle Regional Model, which is a travel demand model that forecasts future travel statistics based on a set of assumptions concerning the highway network, transit service and other transportation facilities.

The tables in this section provide the Performance Measures for the fifteen different transportation Alternatives that are being analyzed. Each Alternative is a combination of one of the five transportation systems, including:

- Comprehensive Transportation Plan;
- Intensive Highway;
- Intensive Fixed Guideway;
- Intensive Bus Transit; and,
- Moderate Multimodal,

And, one of the five Land Use Scenarios, including:

- Baseline;
- Constrained;
- Buildout;
- Travel Corridors; and,
- Transit Node.

(Note: For additional information on the development of the Alternatives, see Section 4, "Alternatives – Detailed Description" in this report.)

Performance Measures Tables

For comparison purposes, the Performance Measure tables are organized by transportation system type, plus the first table compares all the Alternatives that use the Baseline Land Use Scenario. The order of the tables on the following pages is:

1. Alternatives using Baseline SE Data
2. Comprehensive Transportation Plan (CTP) Alternatives
3. Intensive Highway Alternatives
4. Intensive Fixed Guideway Alternatives
5. Intensive Bus Transit
6. Moderate Multimodal Alternatives

Use of E+C

The column in the table designated as E+C indicates Existing plus Committed. The E+C is composed of a transportation network of the existing and committed highway and transit facilities, and the 2035 socioeconomic data (i.e., population and employment in the year 2035). Thus, the E+C serves as a benchmark for comparing how much the performance measures improve with the transportation investments in the different Alternatives.

Targets

The DCHC MPO set Targets – Good, Better and Best – for each Performance Measure. The Target values are shown in the right side columns and serve as another benchmark for comparing the different Alternatives.

2035 Long Range Transportation Plan
LRTP Alternatives Using Baseline Land Use Scenario

		7a	2a	3a	4a	5a	6a	Targets		
		2035 E+C	CTP	Highway	Fixed Guideway	Bus Transit	Mod. Multimodal	Good	Better	Best
1	**Mobility Targets**									
1.1	VMT Per Capita (daily miles)	31.6	31.2	32.1	31.4	31.5	31.3	29.1	27.5	24.5
1.2	Total VMT change from 2035 E+C	N/A	-1.1%	1.8%	-0.4%	-0.2%	-0.8%	-5%	-10%	-20%
1.3	VHT per capita (daily minutes)	50.0	42.3	43.7	45.9	46.0	45.4	50.5	47.9	42.5
1.4	Total VHT change from 2035 E+C	N/A	-15.4%	-12.5%	-8.0%	-7.8%	-9.1%	-5%	-10%	-20%
1.5	Percent of Peak Period VMT at Congestion (V/C > 1)	10.4%	2.8%	2.8%	5.3%	5.7%	5.3%	12%	8%	4%
1.6	Average Travel Time (work trips) (daily minutes)	25.8	22.6	22.6	23.5	23.5	23.5	24	22	20
1.7	Average Travel Time (all trips) (daily minutes)	17.2	16.2	16.2	16.4	16.5	16.5	15	14	13
1.8	Average Travel Time (all peak trips) (daily minutes)	20.5	18.6	18.5	19.1	19.1	19.2	19	17	15
2	**Transit Targets**									
2.1	Transit Mode Share (all trips)	2.3%	3.6%	2.8%	3.5%	3.3%	2.9%	3.0%	5.0%	8.0%
2.2	Percent Ridership change from 2035 E+C	N/A	77.6%	23.4%	78.3%	61.8%	26.5%	100%	200%	400%
2.3	Transit Mode Share (peak trips)	2.5%	4.0%	3.1%	3.8%	3.6%	3.2%	5.0%	8.0%	12.0%
2.4	Daily Transit Trips per Capita	0.13	0.20	0.15	0.19	0.18	0.16	0.29	0.43	0.72
3	**TDM Targets**									
3.1	Percent SOV Trip Share (all trips)	54.8%	53.5%	54.3%	53.8%	53.9%	54.1%	52.5%	50.0%	44.5%
3.2	Percent SOV Trip Change from 2035 E+C	N/A	-1.0%	0.6%	-1.5%	-1.4%	-0.3%	-5%	-10%	-20%
3.3	Percent SOV Trip Share (peak trips)	58.8%	57.3%	58.1%	57.7%	57.7%	57.9%	78.4%	74.3%	66.0%
3.4	Percent Non-motorized Trip Share (all trips)	6.8%	6.7%	6.7%	6.8%	6.8%	6.7%	9%	11%	15%
3.5	Percent Non-motorized trip change from 2035 E+C	N/A	0.2%	0.2%	0.0%	0.0%	0.0%	30%	59%	117%
4	**Air Quality and Environmental Targets** (Guide data is the federal Air Quality Conformity budget)									
4.1	Carbon Monoxide - CO (kg/day)	96,717	97,475	99,257	96,796	97,021	86,533	5% under budget	10% under budget	20% under budget
4.2	Nitrogen Oxides - NOx (kg/day)	3,294	3,260	3,363	3,285	3,291	2,888			
4.3	Greenhouse Gas Change (community target)	N/A	N/A	N/A	N/A	N/A	N/A	-10%	-20%	-30%
5	**Financial/Economics Targets**									
5.1	Revenue/Cost Gap (Ratio of traditional revenue/cost)	N/A	0.32	0.74	0.62	0.59	1.11	0.90	0.95	1.00
5.2	Cost per Trip	N/A	N/A	N/A	N/A	N/A	N/A	$0.20	$0.18	$0.16
5.3	Annual Cost of Congestion (in million $)	730	355	385	537	538	521	1,030	848	666
6	**Environment Justice/Land Use Targets**									
6.1	Percent of EJ Population within 1/4 mile of transit	72%	80%	77%	78%	77%	77%	65%	75%	85%
6.2	Percent of Employment within 1/4 mile of transit	75%	86%	80%	84%	83%	81%	75%	80%	90%
6.3	EJ Travel Time (ratio of avg.travel time) (EJ/All)	0.94	0.95	0.95	0.95	0.94	0.94	1.00	0.95	0.90

2035 Long Range Transportation Plan
Comprehensive Transportation Plan (CTP) Alternatives

		7a	2a	2b	Targets		
		2035 ENC	Baseline	Buildout	Good	Better	Best
1	**Mobility Targets**						
1.1	VMT Per Capita (daily miles)	**31.6**	**31.2**	**32.2**	**29.1**	**27.5**	**24.5**
1.2	Total VMT change from 2035 E+C	**N/A**	**-1.1%**	**49.4%**	**-5%**	**-10%**	**-20%**
1.3	VHT per capita (daily minutes)	**50.0**	**42.3**	**55.1**	**50.5**	**47.9**	**42.5**
1.4	Total VHT change from 2035 E+C	**N/A**	**-15.4%**	**61.3%**	**-5%**	**-10%**	**-20%**
1.5	Percent of Peak Period VMT at Congestion (V/C > 1)	**10.4%**	**2.8%**	**15.9%**	**12%**	**8%**	**4%**
1.6	Average Travel Time (work trips) (daily minutes)	**25.8**	**22.6**	**25.7**	**24**	**22**	**20**
1.7	Average Travel Time (all trips) (daily minutes)	**17.2**	**16.2**	**18.3**	**15**	**14**	**13**
1.8	Average Travel Time (all peak trips) (daily minutes)	**20.5**	**18.6**	**21.8**	**19**	**17**	**15**
2	**Transit Targets**						
2.1	Transit Mode Share (all trips)	**2.3%**	**3.6%**	**2.4%**	**3.0%**	**5.0%**	**8.0%**
2.2	Percent Ridership change from 2035 E+C	**N/A**	**77.6%**	**108.4%**	**100%**	**200%**	**400%**
2.3	Transit Mode Share (peak trips)	**2.5%**	**4.0%**	**2.6%**	**5.0%**	**8.0%**	**12.0%**
2.4	Daily Transit Trips per Capita	**0.13**	**0.20**	**0.13**	**0.29**	**0.43**	**0.72**
3	**TDM Targets**						
3.1	Percent SOV Trip Share (all trips)	**54.8%**	**53.5%**	**53.8%**	**52.5%**	**50.0%**	**44.5%**
3.2	Percent SOV Trip Change from 2035 E+C	**N/A**	**-1.0%**	**-1.8%**	**-5%**	**-10%**	**-20%**
3.3	Percent SOV Trip Share (peak trips)	**58.8%**	**57.3%**	**58.9%**	**78.4%**	**74.3%**	**66.0%**
3.4	Percent Non-motorized Trip Share (all trips)	**6.8%**	**6.7%**	**8.0%**	**9%**	**11%**	**15%**
3.5	Percent Non-motorized trip change from 2035 E+C	**N/A**	**0.2%**	**69.3%**	**30%**	**59%**	**117%**
4	**Air Quality and Environmental Targets** (Guide data is the federal Air Quality Conformity budget)						
4.1	Carbon Monoxide - CO (kg/day)	**96,717**	**97,475**	**98,416**	**5% under budget**	**10% under budget**	**20% under budget**
4.2	Nitrogen Oxides - NOx (kg/day)	**3,294**	**3,260**	**3,343**			
4.3	Greenhouse Gas Change (community target)	**N/A**	**N/A**	**N/A**	**-10%**	**-20%**	**-30%**
5	**Financial/Economics Targets**						
5.1	Revenue/Cost Gap (Ratio of traditional revenue/cost)	**N/A**	**0.74**	**0.62**	**0.90**	**0.95**	**1.00**
5.2	Cost per Trip	**N/A**	**N/A**	**N/A**	**$0.20**	**$0.18**	**$0.16**
5.3	Annual Cost of Congestion (in million $)	**730**	**355**	**1283**	**1,030**	**848**	**666**
6	**Environment Justice/Land Use Targets**						
6.1	Percent of EJ Population within 1/4 mile of transit	**72%**	**80%**	**81%**	**65%**	**75%**	**85%**
6.2	Percent of Employment within 1/4 mile of transit	**75%**	**86%**	**82%**	**75%**	**80%**	**90%**
6.3	EJ Travel Time (ratio of avg.travel time) (EJ/All)	**0.94**	**0.95**	**0.94**	**1.00**	**0.95**	**0.90**

2035 Long Range Transportation Plan
Highway Intensive Alternatives

		7a	3a	3b	3c	Targets		
		2035 ENC	Baseline	Constrained	Corridor	Good	Better	Best
1	**Mobility Targets**							
1.1	VMT Per Capita (daily miles)	31.6	32.1	32.4	31.9	29.1	27.5	24.5
1.2	Total VMT change from 2035 E+C	N/A	1.8%	-7.0%	0.8%	-5%	-10%	-20%
1.3	VHT per capita (daily minutes)	50.0	43.7	42.7	43.3	50.5	47.9	42.5
1.4	Total VHT change from 2035 E+C	N/A	-12.5%	-22.6%	-13.5%	-5%	-10%	-20%
1.5	Percent of Peak Period VMT at Congestion (V/C > 1)	10.4%	2.8%	2.4%	2.9%	12%	8%	4%
1.6	Average Travel Time (work trips) (daily minutes)	25.8	22.6	21.4	21.9	24	22	20
1.7	Average Travel Time (all trips) (daily minutes)	17.2	16.2	15.7	15.9	15	14	13
1.8	Average Travel Time (all peak trips) (daily minutes)	20.5	18.5	17.9	18.2	19	17	15
2	**Transit Targets**							
2.1	Transit Mode Share (all trips)	2.3%	2.8%	3.0%	2.8%	3.0%	5.0%	8.0%
2.2	Percent Ridership change from 2035 E+C	N/A	23.4%	18.5%	25.4%	100%	200%	400%
2.3	Transit Mode Share (peak trips)	2.5%	3.1%	3.4%	3.2%	5.0%	8.0%	12.0%
2.4	Daily Transit Trips per Capita	0.13	0.15	0.16	0.16	0.29	0.43	0.72
3	**TDM Targets**							
3.1	Percent SOV Trip Share (all trips)	54.8%	54.3%	54.4%	54.3%	52.5%	50.0%	44.5%
3.2	Percent SOV Trip Change from 2035 E+C	N/A	0.6%	-9.5%	-0.9%	-5%	-10%	-20%
3.3	Percent SOV Trip Share (peak trips)	58.8%	58.1%	58.0%	58.2%	78.4%	74.3%	66.0%
3.4	Percent Non-motorized Trip Share (all trips)	6.8%	6.7%	6.7%	6.9%	9%	11%	15%
3.5	Percent Non-motorized trip change from 2035 E+C	N/A	0.2%	-10.8%	1.1%	30%	59%	117%
4	**Air Quality and Environmental Targets** (Guide data is the federal Air Quality Conformity budget)							
4.1	Carbon Monoxide - CO (kg/day)	96,717	99,257	90,464	97,612	5% under budget	10% under budget	20% under budget
4.2	Nitrogen Oxides - NOx (kg/day)	3,294	3,363	3,084	3,330			
4.3	Greenhouse Gas Change (community target)	N/A	N/A	N/A	N/A	-10%	-20%	-30%
5	**Financial/Economics Targets**							
5.1	Revenue/Cost Gap (Ratio of traditional revenue/cost)	N/A	0.74	0.74	0.74	0.90	0.95	1.00
5.2	Cost per Trip	N/A	N/A	N/A	N/A	$0.20	$0.18	$0.16
5.3	Annual Cost of Congestion (in million $)	730	385	287	383	1,030	848	666
6	**Environment Justice/Land Use Targets**							
6.1	Percent of EJ Population within 1/4 mile of transit	72%	77%	79%	79%	65%	75%	85%
6.2	Percent of Employment within 1/4 mile of transit	75%	80%	80%	82%	75%	80%	90%
6.3	EJ Travel Time (ratio of avg.travel time) (EJ/All)	0.94	0.95	0.95	0.95	1.00	0.95	0.90

2035 Long Range Transportation Plan
Fixed Guideway Alternatives

		7a	4a	4b	4c	Targets		
		2035 ENC	Baseline	Corridor	Transit Nodes	Good	Better	Best
1	**Mobility Targets**							
1.1	VMT Per Capita (daily miles)	31.6	31.4	31.2	31.7	29.1	27.5	24.5
1.2	Total VMT change from 2035 E+C	N/A	-0.4%	-1.2%	-0.5%	-5%	-10%	-20%
1.3	VHT per capita (daily minutes)	50.0	45.9	45.6	46.6	50.5	47.9	42.5
1.4	Total VHT change from 2035 E+C	N/A	-8.0%	-9.0%	-7.7%	-5%	-10%	-20%
1.5	Percent of Peak Period VMT at Congestion (V/C > 1)	10.4%	5.3%	5.5%	5.7%	12%	8%	4%
1.6	Average Travel Time (work trips) (daily minutes)	25.8	23.5	22.7	23.4	24	22	20
1.7	Average Travel Time (all trips) (daily minutes)	17.2	16.4	16.2	16.4	15	14	13
1.8	Average Travel Time (all peak trips) (daily minutes)	20.5	19.1	18.7	19.0	19	17	15
2	**Transit Targets**							
2.1	Transit Mode Share (all trips)	2.3%	3.5%	3.6%	3.6%	3.0%	5.0%	8.0%
2.2	Percent Ridership change from 2035 E+C	N/A	78.3%	80.7%	83.2%	100%	200%	400%
2.3	Transit Mode Share (peak trips)	2.5%	3.8%	3.9%	3.9%	5.0%	8.0%	12.0%
2.4	Daily Transit Trips per Capita	0.13	0.19	0.20	0.20	0.29	0.43	0.72
3	**TDM Targets**							
3.1	Percent SOV Trip Share (all trips)	54.8%	53.8%	53.8%	53.6%	52.5%	50.0%	44.5%
3.2	Percent SOV Trip Change from 2035 E+C	N/A	-1.5%	-2.8%	-2.0%	-5%	-10%	-20%
3.3	Percent SOV Trip Share (peak trips)	58.8%	57.7%	57.8%	57.5%	78.4%	74.3%	66.0%
3.4	Percent Non-motorized Trip Share (all trips)	6.8%	6.8%	6.9%	6.9%	9%	11%	15%
3.5	Percent Non-motorized trip change from 2035 E+C	N/A	0.0%	0.9%	1.7%	30%	59%	117%
4	**Air Quality and Environmental Targets** (Guide data is the federal Air Quality Conformity budget)							
4.1	Carbon Monoxide - CO (kg/day)	96,717	96,796	95,333	96,068	5% under budget	10% under budget	20% under budget
4.2	Nitrogen Oxides - NOx (kg/day)	3,294	3,285	3,257	3,275			
4.3	Greenhouse Gas Change (community target)	N/A	N/A	N/A	N/A	-10%	-20%	-30%
5	**Financial/Economics Targets**							
5.1	Revenue/Cost Gap (Ratio of traditional revenue/cost)	N/A	0.62	0.62	0.62	0.90	0.95	1.00
5.2	Cost per Trip	N/A	N/A	N/A	N/A	$0.20	$0.18	$0.16
5.3	Annual Cost of Congestion (in million $)	730	537	533	553	1,030	848	666
6	**Environment Justice/Land Use Targets**							
6.1	Percent of EJ Population within 1/4 mile of transit	72%	78%	80%	81%	65%	75%	85%
6.2	Percent of Employment within 1/4 mile of transit	75%	84%	85%	85%	75%	80%	90%
6.3	EJ Travel Time (ratio of avg.travel time) (EJ/All)	0.94	0.95	0.95	0.95	1.00	0.95	0.90

2035 Long Range Transportation Plan
Bus Transit Alternatives

		7a	5a	5b	5c	Targets		
		2035 ENC	Baseline	Corridor	Transit Nodes	Good	Better	Best
1	**Mobility Targets**							
1.1	VMT Per Capita (daily miles)	31.6	31.5	31.4	31.4	29.1	27.5	24.5
1.2	Total VMT change from 2035 E+C	N/A	-0.2%	-0.8%	-0.8%	-5%	-10%	-20%
1.3	VHT per capita (daily minutes)	50.0	46.0	45.8	45.8	50.5	47.9	42.5
1.4	Total VHT change from 2035 E+C	N/A	-7.8%	-8.5%	-8.5%	-5%	-10%	-20%
1.5	Percent of Peak Period VMT at Congestion (V/C > 1)	10.4%	5.7%	5.5%	5.5%	12%	8%	4%
1.6	Average Travel Time (work trips) (daily minutes)	25.8	23.5	22.7	22.7	24	22	20
1.7	Average Travel Time (all trips) (daily minutes)	17.2	16.5	16.3	16.3	15	14	13
1.8	Average Travel Time (all peak trips) (daily minutes)	20.5	19.1	18.8	18.8	19	17	15
2	**Transit Targets**							
2.1	Transit Mode Share (all trips)	2.3%	3.3%	3.4%	3.4%	3.0%	5.0%	8.0%
2.2	Percent Ridership change from 2035 E+C	N/A	83.7%	87.2%	87.2%	100%	200%	400%
2.3	Transit Mode Share (peak trips)	2.5%	3.6%	3.7%	3.7%	5.0%	8.0%	12.0%
2.4	Daily Transit Trips per Capita	0.13	0.18	0.19	0.19	0.29	0.43	0.72
3	**TDM Targets**							
3.1	Percent SOV Trip Share (all trips)	54.8%	53.9%	53.8%	53.8%	52.5%	50.0%	44.5%
3.2	Percent SOV Trip Change from 2035 E+C	N/A	-1.4%	-1.5%	-1.5%	-5%	-10%	-20%
3.3	Percent SOV Trip Share (peak trips)	58.8%	57.7%	57.8%	57.6%	78.4%	74.3%	66.0%
3.4	Percent Non-motorized Trip Share (all trips)	6.8%	6.8%	6.9%	6.9%	9%	11%	15%
3.5	Percent Non-motorized trip change from 2035 E+C	N/A	-1.1%	1.0%	0.5%	30%	59%	117%
4	**Air Quality and Environmental Targets** (Guide data is the federal Air Quality Conformity budget)							
4.1	Carbon Monoxide - CO (kg/day)	96,717	97,021	95,693	95,693	5% under budget	10% under budget	20% under budget
4.2	Nitrogen Oxides - NOx (kg/day)	3,294	3,291	3,268	3,268			
4.3	Greenhouse Gas Change (community target)	N/A	N/A	N/A	N/A	-10%	-20%	-30%
5	**Financial/Economics Targets**							
5.1	Revenue/Cost Gap (Ratio of traditional revenue/cost)	N/A	0.59	0.59	0.59	0.90	0.95	1.00
5.2	Cost per Trip	N/A	N/A	N/A	N/A	$0.20	$0.18	$0.16
5.3	Annual Cost of Congestion (in million $)	730	538	539	539	1,030	848	666
6	**Environment Justice/Land Use Targets**							
6.1	Percent of EJ Population within 1/4 mile of transit	72%	77%	79%	79%	65%	75%	85%
6.2	Percent of Employment within 1/4 mile of transit	75%	83%	84%	84%	75%	80%	90%
6.3	EJ Travel Time (ratio of avg.travel time) (EJ/All)	0.94	0.94	0.95	0.95	1.00	0.95	0.90

2035 Long Range Transportation Plan
Moderate Multimodal Alternatives

		7a	6a	6b	6c	Targets		
		2035 ENC	Baseline	Corridor	Transit Nodes	Good	Better	Best
1	**Mobility Targets**							
1.1	VMT Per Capita (daily miles)	31.6	31.3	31.5	31.4	29.1	27.5	24.5
1.2	Total VMT change from 2035 E+C	N/A	-0.8%	-0.4%	-1.7%	-5%	-10%	-20%
1.3	VHT per capita (daily minutes)	50.0	45.4	45.3	45.4	50.5	47.9	42.5
1.4	Total VHT change from 2035 E+C	N/A	-9.1%	-9.6%	-10.1%	-5%	-10%	-20%
1.5	Percent of Peak Period VMT at Congestion (V/C > 1)	10.4%	5.3%	5.6%	5.7%	12%	8%	4%
1.6	Average Travel Time (work trips) (daily minutes)	25.8	23.5	22.6	23.2	24	22	20
1.7	Average Travel Time (all trips) (daily minutes)	17.2	16.5	16.2	16.4	15	14	13
1.8	Average Travel Time (all peak trips) (daily minutes)	20.5	19.2	18.7	19.0	19	17	15
2	**Transit Targets**							
2.1	Transit Mode Share (all trips)	2.3%	2.9%	2.6%	2.6%	3.0%	5.0%	8.0%
2.2	Percent Ridership change from 2035 E+C	N/A	26.5%	10.3%	12.0%	100%	200%	400%
2.3	Transit Mode Share (peak trips)	2.5%	3.2%	2.8%	2.9%	5.0%	8.0%	12.0%
2.4	Daily Transit Trips per Capita	0.13	0.16	0.14	0.14	0.29	0.43	0.72
3	**TDM Targets**							
3.1	Percent SOV Trip Share (all trips)	54.8%	54.1%	54.0%	53.8%	52.5%	50.0%	44.5%
3.2	Percent SOV Trip Change from 2035 E+C	N/A	-0.3%	-2.6%	-1.8%	-5%	-10%	-20%
3.3	Percent SOV Trip Share (peak trips)	58.8%	57.9%	58.2%	57.9%	78.4%	74.3%	66.0%
3.4	Percent Non-motorized Trip Share (all trips)	6.8%	6.7%	7.0%	6.9%	9%	11%	15%
3.5	Percent Non-motorized trip change from 2035 E+C	N/A	0.0%	0.9%	1.6%	30%	59%	117%
4	**Air Quality and Environmental Targets** (Guide data is the federal Air Quality Conformity budget)							
4.1	Carbon Monoxide - CO (kg/day)	96,717	86,533	96,955	96,723	5% under budget	10% under budget	20% under budget
4.2	Nitrogen Oxides - NOx (kg/day)	3,294	2,888	3,286	3,233			
4.3	Greenhouse Gas Change (community target)	N/A	N/A	N/A	N/A	-10%	-20%	-30%
5	**Financial/Economics Targets**							
5.1	Revenue/Cost Gap (Ratio of traditional revenue/cost)	N/A	1.11	1.11	1.11	0.90	0.95	1.00
5.2	Cost per Trip	N/A	N/A	N/A	N/A	$0.20	$0.18	$0.16
5.3	Annual Cost of Congestion (in million $)	730	521	514	513	1,030	848	666
6	**Environment Justice/Land Use Targets**							
6.1	Percent of EJ Population within 1/4 mile of transit	72%	77%	79%	80%	65%	75%	85%
6.2	Percent of Employment within 1/4 mile of transit	75%	81%	83%	83%	75%	80%	90%
6.3	EJ Travel Time (ratio of avg.travel time) (EJ/All)	0.94	0.94	0.95	0.95	1.00	0.95	0.90

2035 LRTP and CTP
Alternatives – Evaluation Measures

Purpose of Evaluation Measures

Evaluation Measures are very similar to Performance Measures. Evaluation Measures indicate the general performance of a transportation system and therefore are useful for comparing the efficiency and effectiveness of the different transportation Alternatives. All of the data used for calculating the Evaluation Measures comes from the Triangle Regional Model. The Evaluation Measures provides a more detailed set of statistics than the Performance Measures.

The tables in this section are presented in the same order as the Performance Measures in the preceding pages. The only significant difference in the format will be:

- The Performance Measures compares the Alternatives' values to a set of Targets, while the Evaluation Measures compares the Alternatives' values to the E+C values. The E+C is composed of a transportation network of the existing and committed highway and transit facilities, and the 2035 socioeconomic data (i.e., population and employment in the year 2035). Thus, the E+C serves as a benchmark for comparing how much the evaluation measures improve with the transportation investments in the different Alternatives.
- The Evaluation Measures table has columns are in the right-hand side that calculate the difference between the E+C and Alternatives values.

Please note that there are two pages for each Evaluation Measure table.

DCHC MPO Alternatives

Evaluation Measures -- Baseline vs. E+C

	Measures	2035 E+C	Baseline SE Data					(Percent change from 2035 E+C)				
			CTP	Highway	Fixed Guideway	Bus Transit	Mod. Multi.	CTP	Highway	Fixed Guideway	Bus Transit	Mod. Multi.
1	**Performance Measures**											
1.1	Total VMT (daily)	17,397,077	17,204,339	17,703,440	17,333,966	17,366,268	17,264,268	-1%	2%	0%	0%	-1%
1.2	Total VHT (daily)	459,072	388,572	401,467	422,181	423,072	417,458	-15%	-13%	-8%	-8%	-9%
1.3	Average Speed by Facility (miles/hour)											
1.3.1	- Freeway	57	61	61	59	59	59	7%	6%	4%	4%	4%
1.3.2	- Arterial	36	40	40	38	38	38	13%	13%	6%	6%	6%
1.3.3	- All Facility	45	49	49	47	47	48	11%	11%	6%	6%	7%
1.4	Peak Average Speed by Facility (miles/hour)											
1.4.1	- Freeway	54	60	59	58	57	57	10%	9%	6%	6%	6%
1.4.2	- Arterial	34	39	39	36	36	36	17%	16%	8%	8%	8%
1.4.3	- All Facility	42	48	48	45	45	46	14%	14%	7%	7%	8%
1.5	Average Travel Time - All Trips	17	16	16	16	16	17	-5%	-6%	-4%	-4%	-4%
1.6	Average Travel Time - Work Trips	26	23	23	23	23	23	-13%	-12%	-9%	-9%	-9%
1.7	Peak Average Travel Time - All Trips	21	19	19	19	19	19	-9%	-10%	-7%	-7%	-6%
1.8	Hours of Delay (daily)	112,862	54,365	58,666	81,929	82,216	79,980	-52%	-48%	-27%	-27%	-29%
1.8.1	CV Hours of Delay (daily)	4,580	2,329	2,566	3,551	3,563	3,377	-49%	-44%	-22%	-22%	-26%
1.9	Percent of VMT experiencing congestion - All Day											
1.9.1	- Freeway	5.8%	1.9%	1.8%	2.9%	3.3%	3.0%	-67%	-69%	-50%	-43%	-48%
1.9.2	- Arterial	9.2%	2.2%	2.6%	5.2%	5.3%	5.3%	-76%	-72%	-43%	-42%	-42%
1.9.3	- All Facility	6.4%	1.8%	1.9%	3.5%	3.7%	3.5%	-72%	-70%	-45%	-42%	-45%
1.10.	Percent of VMT experiencing congestion - Peak											
1.10.1	- Freeway	10.5%	3.2%	2.9%	5.0%	5.7%	5.0%	-70%	-72%	-52%	-46%	-52%
1.10.2	- Arterial	13.8%	3.1%	3.4%	7.4%	7.6%	7.5%	-78%	-75%	-46%	-45%	-46%
1.10.3	- All Facility	10.4%	2.8%	2.8%	5.3%	5.7%	5.3%	-73%	-73%	-49%	-45%	-49%
1.10.4	Degree of congestion (V/C >1) on designated truck routes	8.4%	2.0%	2.1%	5.5%	5.6%	5.0%	-76%	-75%	-35%	-33%	-40%
1.10.5	Degree of congestion (V/C >1) on facilities w/bus routes	8.7%	2.1%	2.9%	4.3%	4.9%	4.1%	-76%	-67%	-51%	-44%	-53%
2	**Mode Share Measures**											
2.1	Number Mode Choice - All Trips											
2.1.1	- Drive alone (single occupant vehicle -SOV)	1,660,787	1,644,098	1,669,973	1,635,486	1,638,253	1,656,077	-1%	1%	-2%	-1%	0%
2.1.2	- Carpool (Share ride)	1,095,943	1,107,693	1,112,086	1,090,378	1,095,342	1,109,840	1%	1%	-1%	0%	1%
2.1.3	- Bus	69,664	97,883	85,115	95,266	101,323	87,345	41%	22%	37%	45%	25%
2.1.4	- Rail	-	14,086	-	11,752	-	-	0%	0%	0%	0%	0%
2.1.5	- Non-Motorized (Bike and Walk)	206,552	206,971	206,969	206,616	206,616	206,533	0%	0%	0%	0%	0%

DCHC MPO Alternatives

Evaluation Measures -- Baseline vs. E+C

	Measures	2035 E+C	Baseline SE Data					(Percent change from 2035 E+C)				
			CTP	Highway	Fixed Guideway	Bus Transit	Mod. Multi.	CTP	Highway	Fixed Guideway	Bus Transit	Mod. Multi.
2.2	Number Mode Choice - Peak Hours											
2.2.1	- Drive alone (single occupant vehicle -SOV)	834,496	833,192	844,070	823,194	824,154	831,906	0%	1%	-1%	-1%	0%
2.2.2	- Carpool (Share ride)	550,209	562,135	563,600	549,562	551,949	558,949	2%	2%	0%	0%	2%
2.2.3	- Bus	35,228	49,505	45,174	47,618	51,832	45,738	41%	28%	35%	47%	30%
2.2.4	- Rail	-	8,279	-	6,851	-	-	0%	0%	0%	0%	0%
2.2.5	- Non-Motorized (Bike and Walk)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2.3	Number Mode Choice - Non Work Trips											
2.3.1	- Drive alone (single occupant vehicle -SOV)	1,098,746	1,083,925	1,102,354	1,080,093	1,082,954	1,096,473	-1%	0%	-2%	-1%	0%
2.3.2	- Carpool (Share ride)	998,378	1,011,159	1,014,171	995,906	1,000,043	1,012,646	1%	2%	0%	0%	1%
2.3.3	- Bus	53,261	69,047	61,392	67,895	72,103	62,953	30%	15%	27%	35%	18%
2.3.4	- Rail	-	10,462	-	8,974	-	-	0%	0%	0%	0%	0%
2.3.5	- Non-Motorized (Bike and Walk)	199,646	200,049	200,047	199,712	199,712	199,632	0%	0%	0%	0%	0%
2.4	Daily Bicycle and Pedestrian Trips	206,552	206,971	206,969	206,616	206,616	206,533	0%	0%	0%	0%	0%
3	**Transit Measures**											
3.1	Average Weekday Transit Ridership											
3.1.1	- TTA (Including Rail)	4,900	37,963	7,649	29,079	9,084	8,181	675%	56%	493%	85%	67%
3.1.2	- CAT	22,874	20,676	26,059	37,936	39,493	22,512	-10%	14%	66%	73%	-2%
3.1.3	- CHT	44,990	71,431	55,560	67,194	65,020	55,113	59%	23%	49%	45%	23%
3.1.4	- DATA	23,312	68,911	38,099	66,833	66,704	47,937	196%	63%	187%	186%	106%
3.1.5	- NCSU	20,080	19,866	21,148	18,429	17,581	20,043	-1%	5%	-8%	-12%	0%
3.1.6	- DUKE	14,642	11,526	13,331	11,045	11,498	11,123	-21%	-9%	-25%	-21%	-24%
3.1.7	- C-Tran	1,557	4,648	1,441	5,515	4,816	2,528	199%	-7%	254%	209%	62%
3.1.8	Total	132,358	235,025	163,291	236,035	214,200	167,442	78%	23%	78%	62%	27%
3.2	Rail											
4	**Demographics Measures**											
4.1	Population	551,362	551,362	551,362	551,362	551,362	551,362	0%	0%	0%	0%	0%
4.2	Employment	389,249	389,249	389,249	389,249	389,249	389,249	0%	0%	0%	0%	0%
4.3	Total Daily Trips	3,032,947	3,070,733	3,074,145	3,039,499	3,041,534	3,059,795	1%	1%	0%	0%	1%
4.4	Total Daily Work Trips	682,913	696,088	696,180	686,918	686,721	688,090	2%	2%	1%	1%	1%
4.5	Total Daily Non-Work Trips	2,350,033	2,374,644	2,377,965	2,352,580	2,354,813	2,371,705	1%	1%	0%	0%	1%

DCHC MPO Alternatives

Evaluation Measures -- CTP vs. E+C

	Measures	2035 E+C	Comprehensive Transportation Plan		(Percent change from 2035 E+C)	
			Baseline	Buildout	Baseline	Buildout
1	Performance Measures					
1.1	Total VMT (daily)	17,397,077	17,204,339	25,987,013	-1%	49%
1.2	Total VHT (daily)	459,072	388,572	740,388	-15%	61%
1.3	Average Speed by Facility (miles/hour)					
1.3.1	- Freeway	57	61	53	7%	-7%
1.3.2	- Arterial	36	40	35	13%	0%
1.3.3	- All Facility	45	49	43	11%	-4%
1.4	Peak Average Speed by Facility (miles/hour)					
1.4.1	- Freeway	54	60	49	10%	-9%
1.4.2	- Arterial	34	39	33	17%	-3%
1.4.3	- All Facility	42	48	39	14%	-7%
1.5	Average Travel Time - All Trips	17.2	16	18	-5%	6%
1.6	Average Travel Time - Work Trips	25.8	23	26	-13%	0%
1.7	Peak Average Travel Time - All Trips	20.5	19	22	-9%	6%
1.8	Hours of Delay (daily)	112,862	54,365	228,383	-52%	102%
1.8.1	CV Hours of Delay (daily)	4,580	2,329	10,258	-49%	124%
1.9	Percent of VMT experiencing congestion - All Day					
1.9.1	- Freeway	5.8%	1.9%	11.6%	-67%	100%
1.9.2	- Arterial	9.2%	2.2%	10.6%	-76%	15%
1.9.3	- All Facility	6.4%	1.8%	10.4%	-72%	63%
1.10.	Percent of VMT experiencing congestion - Peak					
1.10.1	- Freeway	10.5%	3.2%	17.1%	-70%	63%
1.10.2	- Arterial	13.8%	3.1%	16.7%	-78%	21%
1.10.3	- All Facility	10.4%	2.8%	15.9%	-73%	53%
1.10.4	Degree of congestion (V/C >1) on designated truck routes	8.4%	2.0%	11.1%	-76%	32%
1.10.5	Degree of congestion (V/C >1) on facilities w/bus routes	8.7%	2.1%	11.4%	-76%	31%
2	Mode Share Measures					
2.1	Number Mode Choice - All Trips					
2.1.1	- Drive alone (single occupant vehicle -SOV)	1,660,787	1,644,098	2,358,740	-1%	42%
2.1.2	- Carpool (Share ride)	1,095,943	1,107,693	1,571,327	1%	43%
2.1.3	- Bus	69,664	97,883	89,791	41%	29%
2.1.4	- Rail		14,086	14,776		
2.1.5	- Non-Motorized (Bike and Walk)	206,552	206,971	349,685	0%	69%

DCHC MPO Alternatives

Evaluation Measures -- CTP vs. E+C

	Measures	2035 E+C	Comprehensive Transportation Plan		(Percent change from 2035 E+C)	
			Baseline	Buildout	Baseline	Buildout
2.2	Number Mode Choice - Peak Hours					
2.2.1	- Drive alone (single occupant vehicle -SOV)	834,496	833,192	1,224,859	0%	47%
2.2.2	- Carpool (Share ride)	550,209	562,135	799,873	2%	45%
2.2.3	- Bus	35,228	49,505	44,740	41%	27%
2.2.4	- Rail	0	8,279	8,716		
2.2.5	- Non-Motorized (Bike and Walk)	N/A	N/A	N/A	N/A	N/A
2.3	Number Mode Choice - Non Work Trips					
2.3.1	- Drive alone (single occupant vehicle -SOV)	1,098,746	1,083,925	1,480,548	-1%	35%
2.3.2	- Carpool (Share ride)	998,378	1,011,159	1,422,126	1%	42%
2.3.3	- Bus	53,261	69,047	57,212	30%	7%
2.3.4	- Rail	0	10,462	9,994		
2.3.5	- Non-Motorized (Bike and Walk)	199,646	200,049	336,060	0%	68%
2.4	Daily Bicycle and Pedestrian Trips	206,552	206,971	349,685	0%	69%
3	Transit Measures					
3.1	Average Weekday Transit Ridership					
3.1.1	- TTA (Including Rail)	4,900	37,963	56,879	675%	1061%
3.1.2	- CAT	22,874	20,676	39,444	-10%	72%
3.1.3	- CHT	44,990	71,431	63,733	59%	42%
3.1.4	- DATA	23,312	68,911	75,688	196%	225%
3.1.5	- NCSU	20,080	19,866	21,000	-1%	5%
3.1.6	- DUKE	14,642	11,526	9,104	-21%	-38%
3.1.7	- CARY	1,557	4,648	9,967	199%	540%
3.1.8	Total	132,358	235,025	275,819	78%	108%
3.2	Rail	0				
4	Demographics Measures					
4.1	Population	551,362	551,362	806,286	0%	46%
4.2	Employment	389,249	389,249	570,835	0%	47%
4.3	Total Daily Trips	3,032,947	3,070,733	4,384,321	1%	45%
4.4	Total Daily Work Trips	682,913	696,088	1,078,378	2%	58%
4.5	Total Daily Non-Work Trips	2,350,033	2,374,644	3,305,942	1%	41%

DCHC MPO Alternatives

Evaluation Measures -- Highway vs. E+C

	Measures	2035 E+C	Highway			(Percent Change from 2035 E+C)		
			Baseline	Constrained	Corridor	Baseline	Constrained	Corridor
1	**Performance Measures**							
1.1	Total VMT (daily)	17,397,077	17,703,440	16,185,055	17,533,311	2%	-7%	1%
1.2	Total VHT (daily)	459,072	401,467	355,259	397,097	-13%	-23%	-14%
1.3	Average Speed by Facility (miles/hour)							
1.3.1	- Freeway	57	61	62	61	6%	8%	6%
1.3.2	- Arterial	36	40	41	40	13%	14%	12%
1.3.3	- All Facility	45	49	50	49	11%	13%	11%
1.4	Peak Average Speed by Facility (miles/hour)							
1.4.1	- Freeway	54	59	60	59	9%	11%	9%
1.4.2	- Arterial	34	39	40	39	16%	19%	16%
1.4.3	- All Facility	42	48	49	48	14%	17%	14%
1.5	Average Travel Time - All Trips	17.2	16.2	15.7	15.9	-6%	-8%	-7%
1.6	Average Travel Time - Work Trips	25.8	22.6	21.4	21.9	-12%	-17%	-15%
1.7	Peak Average Travel Time - All Trips	20.5	18.5	17.9	18.2	-10%	-13%	-11%
1.8	Hours of Delay (daily)	112,862	58,666	43,854	58,308	-48%	-61%	-48%
1.8.1	CV Hours of Delay (daily)	4,580	2,566	1,885	2,568	-44%	-59%	-44%
1.9	Percent of VMT experiencing congestion - All Day							
1.9.1	- Freeway	5.8%	1.8%	1.8%	1.9%	-69%	-69%	-67%
1.9.2	- Arterial	9.2%	2.6%	1.6%	2.7%	-72%	-83%	-71%
1.9.3	- All Facility	6.4%	1.9%	1.5%	2.0%	-70%	-77%	-69%
1.10.	Percent of VMT experiencing congestion - Peak			0.0%	0.0%			
1.10.1	- Freeway	10.5%	2.9%	3.0%	3.2%	-72%	-71%	-70%
1.10.2	- Arterial	13.8%	3.4%	2.4%	3.6%	-75%	-83%	-74%
1.10.3	- All Facility	10.4%	2.8%	2.4%	2.9%	-73%	-77%	-72%
1.10.4	Degree of congestion (V/C >1) on designated truck routes	8.4%	2.1%	1.6%	2.4%	-75%	-81%	-71%
1.10.5	Degree of congestion (V/C >1) on facilities w/bus routes	8.7%	2.9%	1.8%	3.0%	-67%	-79%	-66%
2	**Mode Share Measures**							
2.1	Number Mode Choice - All Trips							
2.1.1	- Drive alone (single occupant vehicle -SOV)	1,660,787	1,669,973	1,502,374	1,645,095	1%	-10%	-1%
2.1.2	- Carpool (Share ride)	1,095,943	1,112,086	994,680	1,090,070	1%	-9%	-1%
2.1.3	- Bus	69,664	85,115	82,181	85,581	22%	18%	23%
2.1.4	- Rail							
2.1.5	- Non-Motorized (Bike and Walk)	206,552	206,969	184,201	208,789	0%	-11%	1%

DCHC MPO Alternatives

Evaluation Measures -- Highway vs. E+C

	Measures	2035 E+C	Highway			(Percent Change from 2035 E+C)		
			Baseline	Constrained	Corridor	Baseline	Constrained	Corridor
2.2	Number Mode Choice - Peak Hours							
2.2.1	- Drive alone (single occupant vehicle -SOV)	834,496	844,070	759,681	836,024	1%	-9%	0%
2.2.2	- Carpool (Share ride)	550,209	563,600	505,496	554,471	2%	-8%	1%
2.2.3	- Bus	35,228	45,174	43,901	45,498	28%	25%	29%
2.2.4	- Rail	0				0%	0%	0%
2.2.5	- Non-Motorized (Bike and Walk)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2.3	Number Mode Choice - Non Work Trips							
2.3.1	- Drive alone (single occupant vehicle -SOV)	1,098,746	1,102,354	992,933	1,076,109	0%	-10%	-2%
2.3.2	- Carpool (Share ride)	998,378	1,014,171	906,371	992,104	2%	-9%	-1%
2.3.3	- Bus	53,261	61,392	59,509	61,232	15%	12%	15%
2.3.4	- Rail	0				0%	0%	0%
2.3.5	- Non-Motorized (Bike and Walk)	199,646	200,047	177,950	201,482	0%	-11%	1%
2.4	Daily Bicycle and Pedestrian Trips	206,552	206,969	184,201	208,789	0%	-11%	1%
3	**Transit Measures**							
3.1	Average Weekday Transit Ridership							
3.1.1	- TTA (Including Rail)	4,900	7,649	7,338	7,733	56%	50%	58%
3.1.2	- CAT	22,874	26,059	23,734	26,649	14%	4%	17%
3.1.3	- CHT	44,990	55,560	53,004	55,265	23%	18%	23%
3.1.4	- DATA	23,312	38,099	36,956	39,465	63%	59%	69%
3.1.5	- NCSU	20,080	21,148	21,565	22,097	5%	7%	10%
3.1.6	- DUKE	14,642	13,331	13,040	13,336	-9%	-11%	-9%
3.1.7	- C-Tran	1,557	1,441	1,218	1,400	-7%	-22%	-10%
3.1.8	Total	132,358	163,291	156,858	165,948	23%	19%	25%
3.2	Rail	0						
4	**Demographics Measures**							
4.1	Population	551,362	551,362	499,321	550,205	0%	-9%	0%
4.2	Employment	389,249	389,249	353,712	389,208	0%	-9%	0%
4.3	Total Daily Trips	3,032,947	3,074,145	2,763,437	3,029,536	1%	-9%	0%
4.4	Total Daily Work Trips	682,913	696,180	626,672	698,607	2%	-8%	2%
4.5	Total Daily Non-Work Trips	2,350,033	2,377,965	2,136,765	2,330,928	1%	-9%	-1%

DCHC MPO Alternatives

Evaluation Measures -- Fixed Guideway vs. E+C

	Measures	2035 E+C	Fixed Guideway			(Percent Change from 2035 E+C)		
			Baseline	Corridor	TransitNode	Baseline	Corridor	TransitNode
1	**Performance Measures**							
1.1	Total VMT (daily)	17,397,077	17,333,966	17,188,087	17,302,220	0%	-1%	-1%
1.2	Total VHT (daily)	459,072	422,181	417,700	423,775	-8%	-9%	-8%
1.3	Average Speed by Facility (miles/hour)							
1.3.1	- Freeway	57	59	59	59	4%	4%	4%
1.3.2	- Arterial	36	38	38	38	6%	6%	6%
1.3.3	- All Facility	45	47	47	47	6%	6%	5%
1.4	Peak Average Speed by Facility (miles/hour)							
1.4.1	- Freeway	54	58	57	57	6%	6%	6%
1.4.2	- Arterial	34	36	36	36	8%	8%	7%
1.4.3	- All Facility	42	45	45	45	7%	7%	7%
1.5	Average Travel Time - All Trips	17.2	16.4	16.2	16.4	-4%	-6%	-4%
1.6	Average Travel Time - Work Trips	25.8	23.5	22.7	23.4	-9%	-12%	-9%
1.7	Peak Average Travel Time - All Trips	20.5	19.1	18.7	19.0	-7%	-9%	-7%
1.8	Hours of Delay (daily)	112,862	81,929	81,070	84,689	-27%	-28%	-25%
1.8.1	CV Hours of Delay (daily)	4,580	3,551	3,572	3,628	-22%	-22%	-21%
1.9	Percent of VMT experiencing congestion - All Day							
1.9.1	- Freeway	5.8%	2.9%	2.8%	2.8%	-50%	-52%	-52%
1.9.2	- Arterial	9.2%	5.2%	5.5%	5.8%	-43%	-40%	-37%
1.9.3	- All Facility	6.4%	3.5%	3.6%	3.8%	-45%	-44%	-41%
1.10.	Percent of VMT experiencing congestion - Peak			0.0%	0.0%			
1.10.1	- Freeway	10.5%	5.0%	4.9%	4.9%	-52%	-53%	-53%
1.10.2	- Arterial	13.8%	7.4%	7.7%	8.3%	-46%	-44%	-40%
1.10.3	- All Facility	10.4%	5.3%	5.5%	5.7%	-49%	-47%	-45%
1.10.4	Degree of congestion (V/C >1) on designated truck routes	8.4%	5.5%	5.6%	6.0%	-35%	-33%	-29%
1.10.5	Degree of congestion (V/C >1) on facilities w/bus routes	8.7%	4.3%	5.1%	5.5%	-51%	-41%	-37%
2	**Mode Share Measures**							
2.1	Number Mode Choice - All Trips							
2.1.1	- Drive alone (single occupant vehicle -SOV)	1,660,787	1,635,486	1,614,140	1,627,932	-2%	-3%	-2%
2.1.2	- Carpool (Share ride)	1,095,943	1,090,378	1,071,425	1,089,572	-1%	-2%	-1%
2.1.3	- Bus	69,664	95,266	95,842	97,374	37%	38%	40%
2.1.4	- Rail		11,752	11979	12457			
2.1.5	- Non-Motorized (Bike and Walk)	206,552	206,616	208,488	209,968	0%	1%	2%

DCHC MPO Alternatives

Evaluation Measures -- Fixed Guideway vs. E+C

	Measures	2035 E+C	Fixed Guideway			(Percent Change from 2035 E+C)		
			Baseline	Corridor	TransitNode	Baseline	Corridor	TransitNode
2.2	Number Mode Choice - Peak Hours			0	0			
2.2.1	- Drive alone (single occupant vehicle -SOV)	834,496	823,194	818,748	818,409	-1%	-2%	-2%
2.2.2	- Carpool (Share ride)	550,209	549,562	542,628	548,250	0%	-1%	0%
2.2.3	- Bus	35,228	47,618	48,070	48,612	35%	36%	38%
2.2.4	- Rail	0	6851	6979	7188	0%	0%	0%
2.2.5	- Non-Motorized (Bike and Walk)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2.3	Number Mode Choice - Non Work Trips							
2.3.1	- Drive alone (single occupant vehicle -SOV)	1,098,746	1,080,093	1,054,678	1,076,549	-2%	-4%	-2%
2.3.2	- Carpool (Share ride)	998,378	995,906	976,229	994,902	0%	-2%	0%
2.3.3	- Bus	53,261	67,895	67,633	68,826	27%	27%	29%
2.3.4	- Rail	0	8974	9090	9452	0%	0%	0%
2.3.5	- Non-Motorized (Bike and Walk)	199,646	199,712	201,203	202,994	0%	1%	2%
2.4	Daily Bicycle and Pedestrian Trips	206,552	206,616	208,488	209,968	0%	1%	2%
3	**Transit Measures**							
3.1	Average Weekday Transit Ridership							
3.1.1	- TTA (Including Rail)	4,900	29,079	29,512	30,436	493%	502%	521%
3.1.2	- CAT	22,874	37,936	38,837	39,266	66%	70%	72%
3.1.3	- CHT	44,990	67,194	66,904	68,041	49%	49%	51%
3.1.4	- DATA	23,312	66,833	68,399	68,723	187%	193%	195%
3.1.5	- NCSU	20,080	18,429	18,999	19,015	-8%	-5%	-5%
3.1.6	- DUKE	14,642	11,045	11,252	11,506	-25%	-23%	-21%
3.1.7	- C-Tran	1,557	5,515	5,331	5,442	254%	242%	250%
3.1.8	Total	132,358	236,035	239,236	242,432	78%	81%	83%
3.2	Rail	0						
4	**Demographics Measures**							
4.1	Population	551,362	551,362	550,205	545,552	0%	0%	-1%
4.2	Employment	389,249	389,249	389,208	390,416	0%	0%	0%
4.3	Total Daily Trips	3,032,947	3,039,499	3,001,875	3,037,304	0%	-1%	0%
4.4	Total Daily Work Trips	682,913	686,918	693,040	684,579	1%	1%	0%
4.5	Total Daily Non-Work Trips	2,350,033	2,352,580	2,308,834	2,352,725	0%	-2%	0%

DCHC MPO Alternatives

Evaluation Measures -- Bus Transit vs. E+C

	Measures	2035 E+C	Bus Transit			(Percent change from 2035 E+C)		
			Baseline	Corridor	TransitNode	Baseline	Corridor	TransitNode
1	**Performance Measures**							
1.1	Total VMT (daily)	17,397,077	17,366,268	17,254,460	17,364,161	0%	-1%	0%
1.2	Total VHT (daily)	459,072	423,072	420,239	426,402	-8%	-8%	-7%
1.3	Average Speed by Facility (miles/hour)							
1.3.1	- Freeway	57	59	59	59	4%	4%	4%
1.3.2	- Arterial	36	38	38	37	6%	6%	5%
1.3.3	- All Facility	45	47	47	47	6%	6%	5%
1.4	Peak Average Speed by Facility (miles/hour)							
1.4.1	- Freeway	54	57	57	57	6%	6%	6%
1.4.2	- Arterial	34	36	36	36	8%	8%	7%
1.4.3	- All Facility	42	45	45	45	7%	7%	7%
1.5	Average Travel Time - All Trips	17.2	16.5	16.3	16.4	-4%	-5%	-4%
1.6	Average Travel Time - Work Trips	25.8	23.5	22.7	23.4	-9%	-12%	-9%
1.7	Peak Average Travel Time - All Trips	20.5	19.1	18.8	19.1	-7%	-8%	-7%
1.8	Hours of Delay (daily)	112,862	82,216	82,189	86,015	-27%	-27%	-24%
1.8.1	CV Hours of Delay (daily)	4,580	3,563	3,604	3,683	-22%	-21%	-20%
1.9	Percent of VMT experiencing congestion - All Day							
1.9.1	- Freeway	5.8%	3.3%	3.0%	3.2%	-43%	-48%	-45%
1.9.2	- Arterial	9.2%	5.3%	5.3%	6.3%	-42%	-42%	-32%
1.9.3	- All Facility	6.4%	3.7%	3.6%	4.1%	-42%	-44%	-36%
1.10.	Percent of VMT experiencing congestion - Peak			0.0%	0.0%			
1.10.1	- Freeway	10.5%	5.7%	5.3%	5.7%	-46%	-50%	-46%
1.10.2	- Arterial	13.8%	7.6%	7.4%	9.0%	-45%	-46%	-35%
1.10.3	- All Facility	10.4%	5.7%	5.5%	6.3%	-45%	-47%	-39%
1.10.4	Degree of congestion (V/C >1) on designated truck routes	8.4%	5.6%	5.6%	6.2%	-33%	-33%	-26%
1.10.5	Degree of congestion (V/C >1) on facilities w/bus routes	8.7%	4.9%	5.1%	5.9%	-44%	-41%	-32%
2	**Mode Share Measures**							
2.1	Number Mode Choice - All Trips							
2.1.1	- Drive alone (single occupant vehicle -SOV)	1,660,787	1,638,253	1,617,838	1,631,331	-1%	-3%	-2%
2.1.2	- Carpool (Share ride)	1,095,943	1,095,342	1,077,404	1,095,519	0%	-2%	0%
2.1.3	- Bus	69,664	101,323	102,061	103,972	45%	47%	49%
2.1.4	- Rail							
2.1.5	- Non-Motorized (Bike and Walk)	206,552	206,616	208,488	209,968	0%	1%	2%

DCHC MPO Alternatives

Evaluation Measures -- Bus Transit vs. E+C

	Measures	2035 E+C	Bus Transit			(Percent change from 2035 E+C)		
			Baseline	Corridor	TransitNode	Baseline	Corridor	TransitNode
2.2	Number Mode Choice - Peak Hours							
2.2.1	- Drive alone (single occupant vehicle -SOV)	834,496	824,154	820,305	819,569	-1%	-2%	-2%
2.2.2	- Carpool (Share ride)	550,209	551,949	545,858	551,343	0%	-1%	0%
2.2.3	- Bus	35,228	51,832	52,397	53,138	47%	49%	51%
2.2.4	- Rail	0				0%	0%	0%
2.2.5	- Non-Motorized (Bike and Walk)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2.3	Number Mode Choice - Non Work Trips							
2.3.1	- Drive alone (single occupant vehicle -SOV)	1,098,746	1,082,954	1,058,369	1,080,326	-1%	-4%	-2%
2.3.2	- Carpool (Share ride)	998,378	1,000,043	981,192	999,823	0%	-2%	0%
2.3.3	- Bus	53,261	72,103	71,898	73,362	35%	35%	38%
2.3.4	- Rail	0				0%	0%	0%
2.3.5	- Non-Motorized (Bike and Walk)	199,646	199,712	201,203	202,994	0%	1%	2%
2.4	Daily Bicycle and Pedestrian Trips	206,552	206,616	208,488	209,968	0%	1%	2%
3	**Transit Measures**							
3.1	Average Weekday Transit Ridership							
3.1.1	- TTA (Including Rail)	4,900	9,084	9,070	9,187	85%	85%	87%
3.1.2	- CAT	22,874	39,493	40,427	41,022	73%	77%	79%
3.1.3	- CHT	44,990	65,020	64,865	66,150	45%	44%	47%
3.1.4	- DATA	23,312	66,704	68,524	68,787	186%	194%	195%
3.1.5	- NCSU	20,080	17,581	18,349	18,211	-12%	-9%	-9%
3.1.6	- DUKE	14,642	11,498	11,363	11,856	-21%	-22%	-19%
3.1.7	- C-Tran	1,557	4,816	4,678	4,767	209%	200%	206%
3.1.8	Total	132,358	214,200	217,279	219,982	62%	64%	66%
3.2	Rail	0						
4	**Demographics Measures**							
4.1	Population	551,362	551,362	550,205	545,552	0%	0%	-1%
4.2	Employment	389,249	389,249	389,208	390,416	0%	0%	0%
4.3	Total Daily Trips	3,032,947	3,041,534	3,005,791	3,040,791	0%	-1%	0%
4.4	Total Daily Work Trips	682,913	686,721	693,128	684,285	1%	1%	0%
4.5	Total Daily Non-Work Trips	2,350,033	2,354,813	2,312,662	2,356,506	0%	-2%	0%

DCHC MPO Alternatives

Evaluation Measures -- Moderate Multimodal vs. E+C

	Measures	2035 E+C	Moderate Multimodal			(Percent change from 2035 E+C)		
			Baseline	Corridor	TransitNode	Baseline	Corridor	TransitNode
1	**Performance Measures**							
1.1	Total VMT (daily)	17,397,077	17,264,268	17,323,513	17,103,212	-1%	0%	-2%
1.2	Total VHT (daily)	459,072	417,458	415,073	412,714	-9%	-10%	-10%
1.3	Average Speed by Facility (miles/hour)							
1.3.1	- Freeway	57	59	59	60	4%	4%	4%
1.3.2	- Arterial	36	38	38	37	6%	6%	5%
1.3.3	- All Facility	45	48	48	48	7%	7%	7%
1.4	Peak Average Speed by Facility (miles/hour)							
1.4.1	- Freeway	54	57	57	57	6%	5%	6%
1.4.2	- Arterial	34	36	36	36	8%	8%	7%
1.4.3	- All Facility	42	46	46	46	8%	8%	8%
1.5	Average Travel Time - All Trips	17.2	17	16	16	-4%	-5%	-4%
1.6	Average Travel Time - Work Trips	25.8	23	23	23	-9%	-12%	-10%
1.7	Peak Average Travel Time - All Trips	20.5	19	19	19	-6%	-9%	-7%
1.8	Hours of Delay (daily)	112,862	79,980	78,604	79,018	-29%	-30%	-30%
1.8.1	CV Hours of Delay (daily)	4,580	3,377	3,371	3,269	-26%	-26%	-29%
1.9	Percent of VMT experiencing congestion - All Day							
1.9.1	- Freeway	5.8%	3.0%	3.0%	3.2%	-48%	-48%	-45%
1.9.2	- Arterial	9.2%	5.3%	4.9%	5.2%	-42%	-47%	-43%
1.9.3	- All Facility	6.4%	3.5%	3.4%	3.7%	-45%	-47%	-42%
1.10.	Percent of VMT experiencing congestion - Peak							
1.10.1	- Freeway	10.5%	5.0%	5.4%	5.5%	-52%	-49%	-48%
1.10.2	- Arterial	13.8%	7.5%	7.7%	7.7%	-46%	-44%	-44%
1.10.3	- All Facility	10.4%	5.3%	5.6%	5.7%	-49%	-46%	-45%
1.10.4	Degree of congestion (V/C >1) on designated truck routes	8.4%	5.0%	4.6%	4.9%	-40%	-45%	-42%
1.10.5	Degree of congestion (V/C >1) on facilities w/bus routes	8.7%	4.1%	4.0%	4.1%	-53%	-54%	-53%
2	**Mode Share Measures**							
2.1	Number Mode Choice - All Trips							
2.1.1	- Drive alone (single occupant vehicle -SOV)	1,660,787	1,656,077	1,616,862	1,631,379	0%	-3%	-2%
2.1.2	- Carpool (Share ride)	1,095,943	1,109,840	1,089,630	1,109,398	1%	-1%	1%
2.1.3	- Bus	69,664	87,345	77,038	78,877	25%	11%	13%
2.1.4	- Rail		-	-	-			
2.1.5	- Non-Motorized (Bike and Walk)	206,552	206,533	208,407	209,919	0%	1%	2%

DCHC MPO Alternatives

Evaluation Measures -- Moderate Multimodal vs. E+C

	Measures	2035 E+C	Moderate Multimodal			(Percent change from 2035 E+C)		
			Baseline	Corridor	TransitNode	Baseline	Corridor	TransitNode
2.2	Number Mode Choice - Peak Hours							
2.2.1	- Drive alone (single occupant vehicle -SOV)	834,496	831,906	824,773	825,024	0%	-1%	-1%
2.2.2	- Carpool (Share ride)	550,209	558,949	553,009	560,236	2%	1%	2%
2.2.3	- Bus	35,228	45,738	40,157	40,806	30%	14%	16%
2.2.4	- Rail	0	-	-	-	0%	0%	0%
2.2.5	- Non-Motorized (Bike and Walk)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2.3	Number Mode Choice - Non Work Trips							
2.3.1	- Drive alone (single occupant vehicle -SOV)	1,098,746	1,096,473	1,051,438	1,074,026	0%	-4%	-2%
2.3.2	- Carpool (Share ride)	998,378	1,012,646	991,374	1,011,445	1%	-1%	1%
2.3.3	- Bus	53,261	62,953	51,648	53,181	18%	-3%	0%
2.3.4	- Rail	0	-	-	-	0%	0%	0%
2.3.5	- Non-Motorized (Bike and Walk)	199,646	199,632	201,123	202,944	0%	1%	2%
2.4	Daily Bicycle and Pedestrian Trips	206,552	206,533	208,407	209,919	0%	1%	2%
3	**Transit Measures**							
3.1	Average Weekday Transit Ridership							
3.1.1	- TTA (Including Rail)	4,900	8,181	5,632	5,714	67%	15%	17%
3.1.2	- CAT	22,874	22,512	21,150	21,427	-2%	-8%	-6%
3.1.3	- CHT	44,990	55,113	49,682	50,806	23%	10%	13%
3.1.4	- DATA	23,312	47,937	41,951	42,569	106%	80%	83%
3.1.5	- NCSU	20,080	20,043	15,767	15,677	0%	-21%	-22%
3.1.6	- DUKE	14,642	11,123	9,369	9,600	-24%	-36%	-34%
3.1.7	- C-Tran	1,557	2,528	2,421	2,463	62%	55%	58%
3.1.8	Total	132,358	167,442	145,974	148,260	27%	10%	12%
3.2	Rail	0						
4	**Demographics Measures**							
4.1	Population	551,362	551,362	550,205	545,552	0%	0%	-1%
4.2	Employment	389,249	389,249	389,208	390,416	0%	0%	0%
4.3	Total Daily Trips	3,032,947	3,059,795	2,991,938	3,029,573	1%	-1%	0%
4.4	Total Daily Work Trips	682,913	688,090	696,354	687,975	1%	2%	1%
4.5	Total Daily Non-Work Trips	2,350,033	2,371,705	2,295,583	2,341,597	1%	-2%	0%

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2035 LRTP and CTP
Alternatives – Congestion Maps (V/C maps)

Use of Congestion Maps

The Performance Measures provide a general indicator of the overall transportation system. On the other hand, the Congestion Maps show the forecasted level of service on specific road segments and corridors based on the afternoon peak hour. These maps are sometimes called "V/C" maps (V over C maps) because the level of service, or existence of congestion, is derived by dividing the traffic volume by the traffic capacity of the road segment. For example, a volume of 9,000 vehicles on a road that is capable of carrying 10,000 vehicles will produce a V/C of 0.9. A V/C of 1.0 is equal to a Level of Service (LOS) of "E", which can be described as:

> Limit of acceptable delay, unstable flow, poor signal progression, traffic near roadway capacity, frequent cycle failures.

Although the term traffic congestion is subjective in that it means different levels of delay to different people, it can be said that any road segment approaching a V/C of 1.0, which is indicated on the maps with an **orange color**, experiences some delays. A V/C greater than 1.0, which is indicated on the maps by the **purple color**, means frequent delays for the motorist, and a V/C greater than 1.1, which is indicated by the **red color** on the maps, translates into unacceptable travel delays.

The Triangle Regional Model (the travel demand model for the Triangle Region) uses travel behavior data for the Triangle Region, future transportation system networks, and future population and employment data, to forecast the volume and capacity values needed to produce these maps. The forecasts are for the year 2035. Each Congestion Map represents one of the Alternatives, which are comprised of a specific transportation system (Intensive Highway, Fixed Guideway, etc.) and Socioeconomic Data (Baseline, Buildout, etc.).

Review and comparison of the Congestion Maps for the various Alternatives will show how well a particular Alternative addresses travel demand on the key roadway segments and corridors in the MPO planning area.

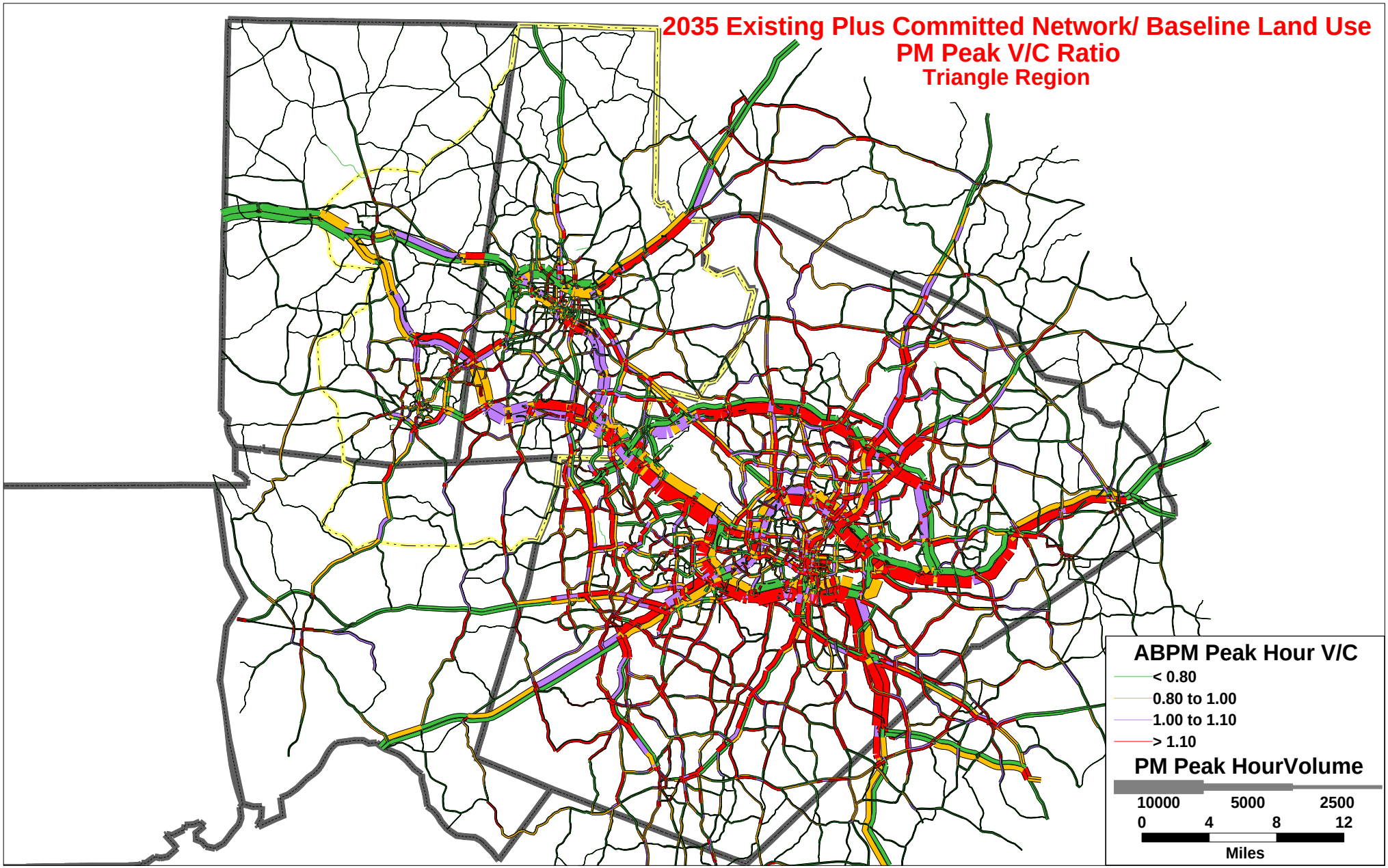
Of particular importance is the comparison of any one Alternative with the **E+C map** (Existing plus Committed), which can be considered a benchmark. The E+C map uses a transportation network with the current roadways and transit services plus any others that have been committed to being implemented, and the Socioeconomic Data (i.e., population and employment) for the year 2035. This map shows the level of service to be experienced if no additional roadways improvements or transit services are implemented, and thus helps to answer the question, "When we make our next transportation investment decision, where do we need to focus our investment?" Furthermore, by

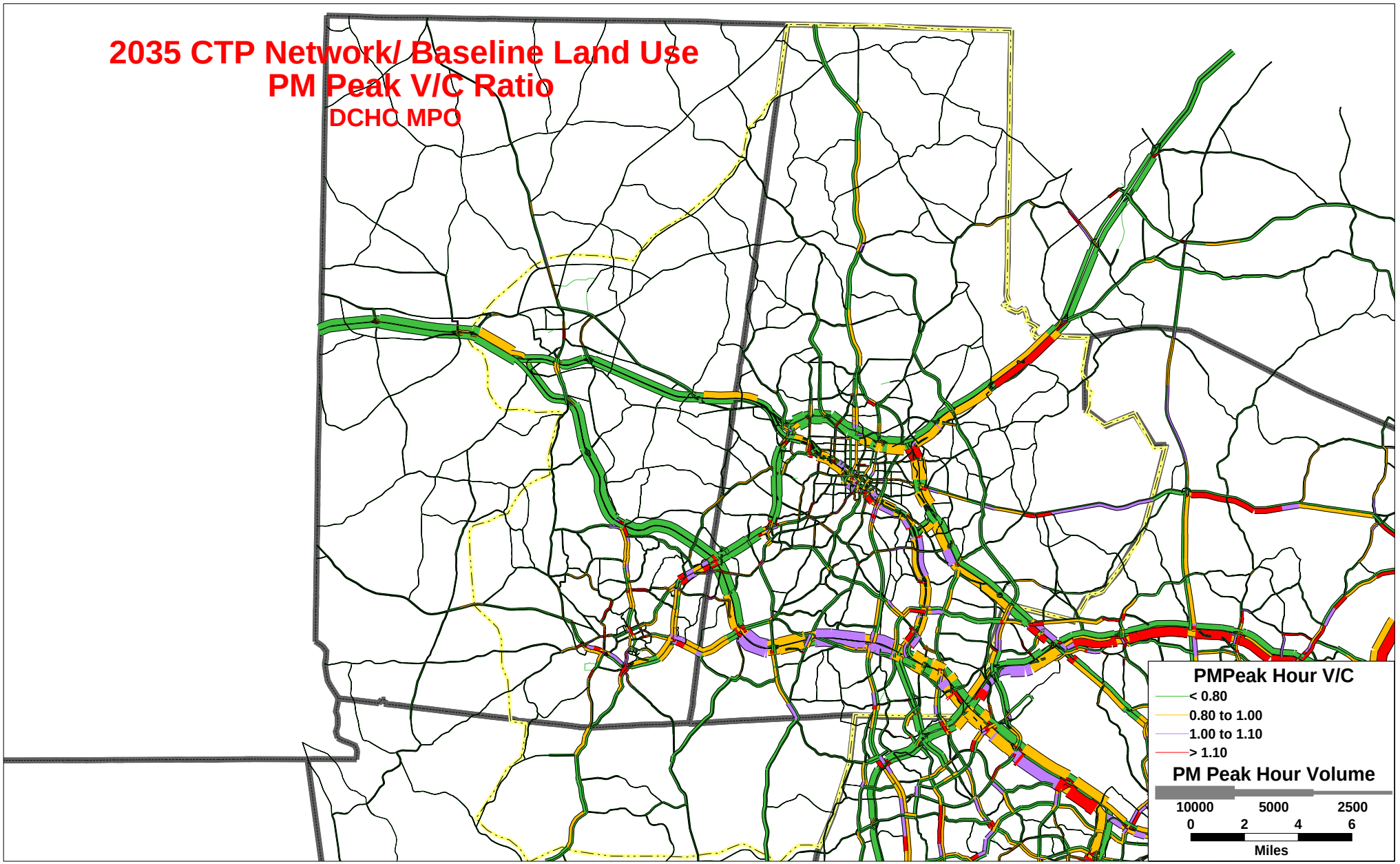
comparing the E+C Congestion Map with the other Alternatives, you can see how well the transportation investments in that Alternative address the congestion in the E+C.

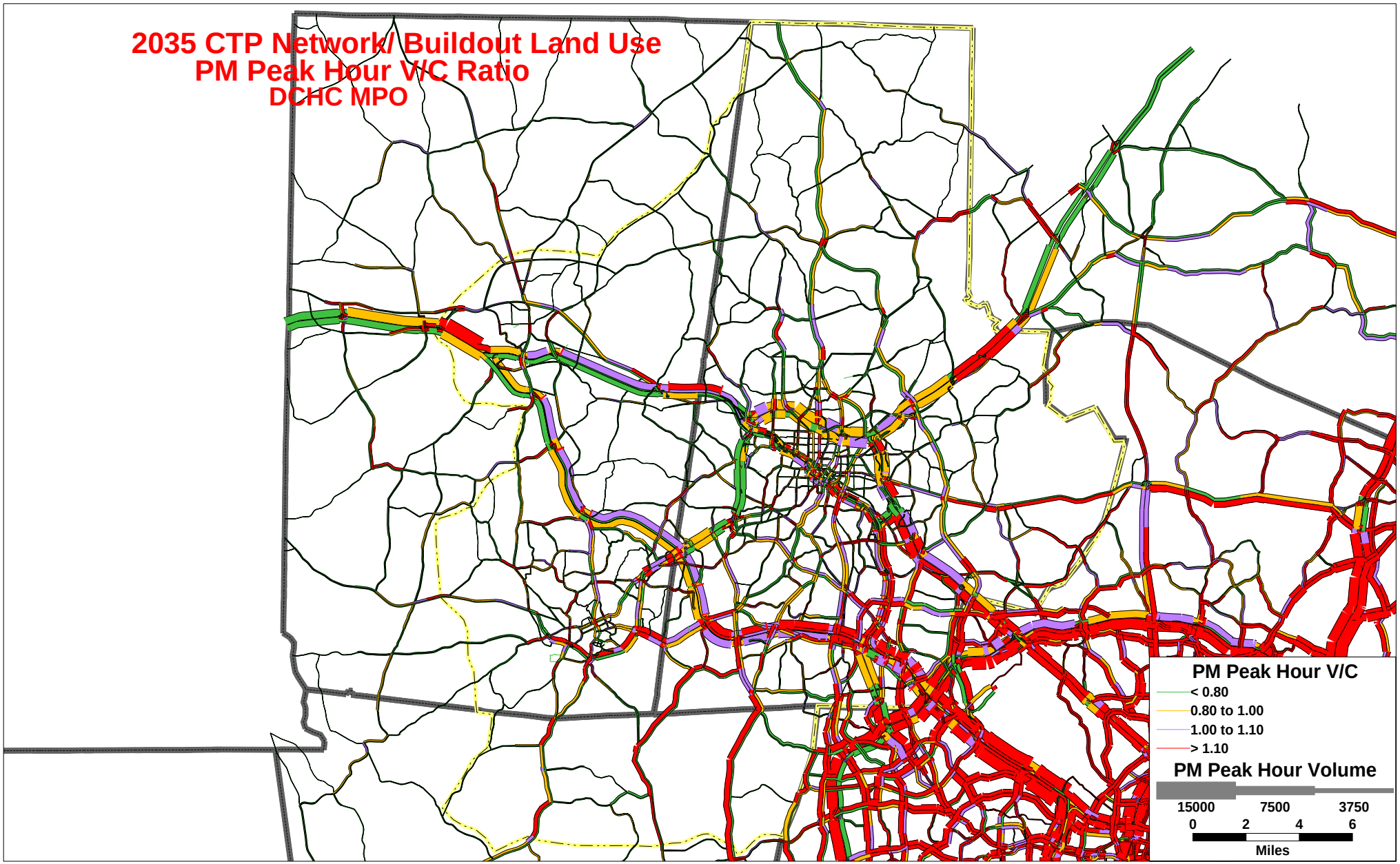
Congestion Maps for Alternatives

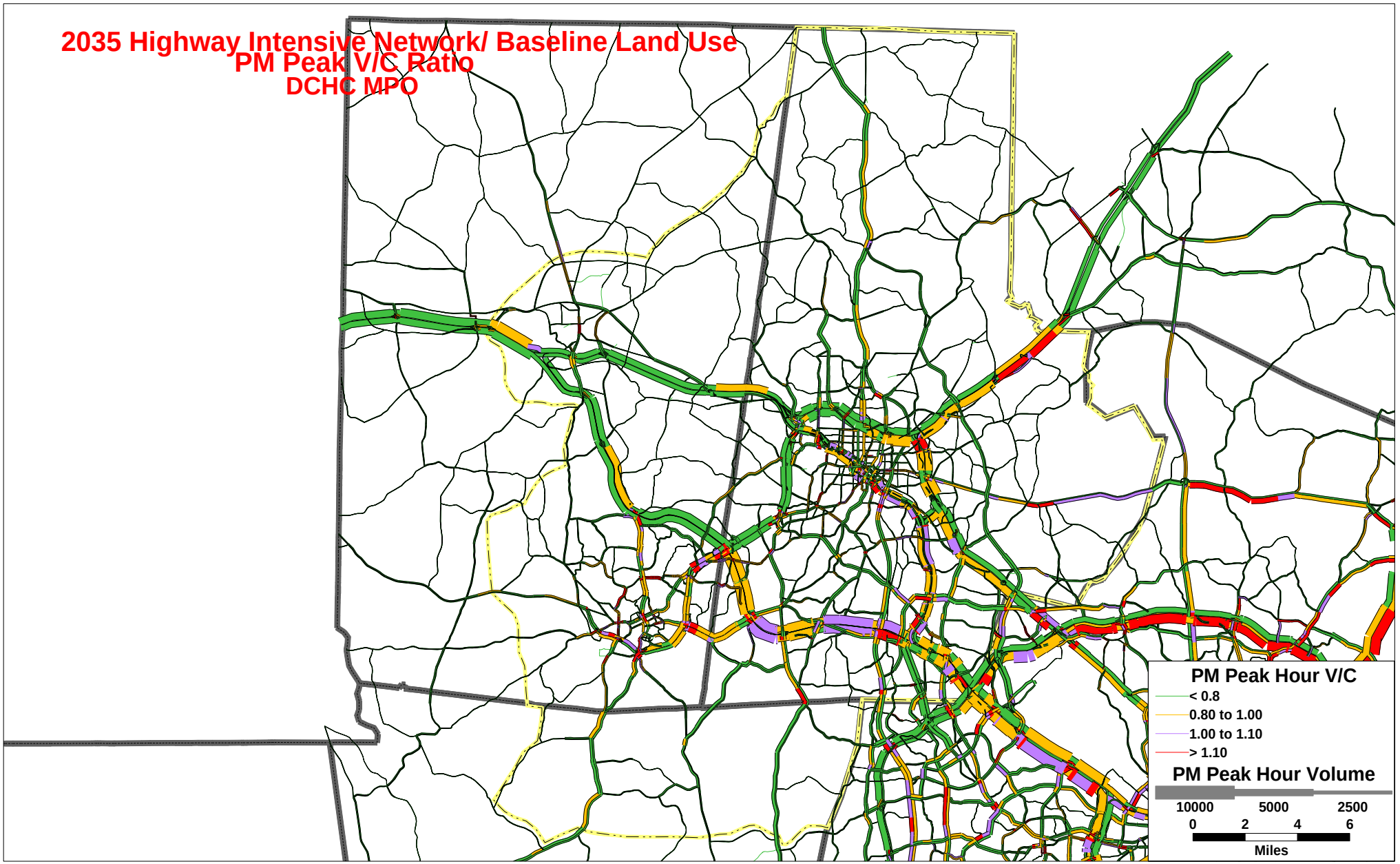
On the following pages, the Congestion Maps are presented in the order shown on the table below.

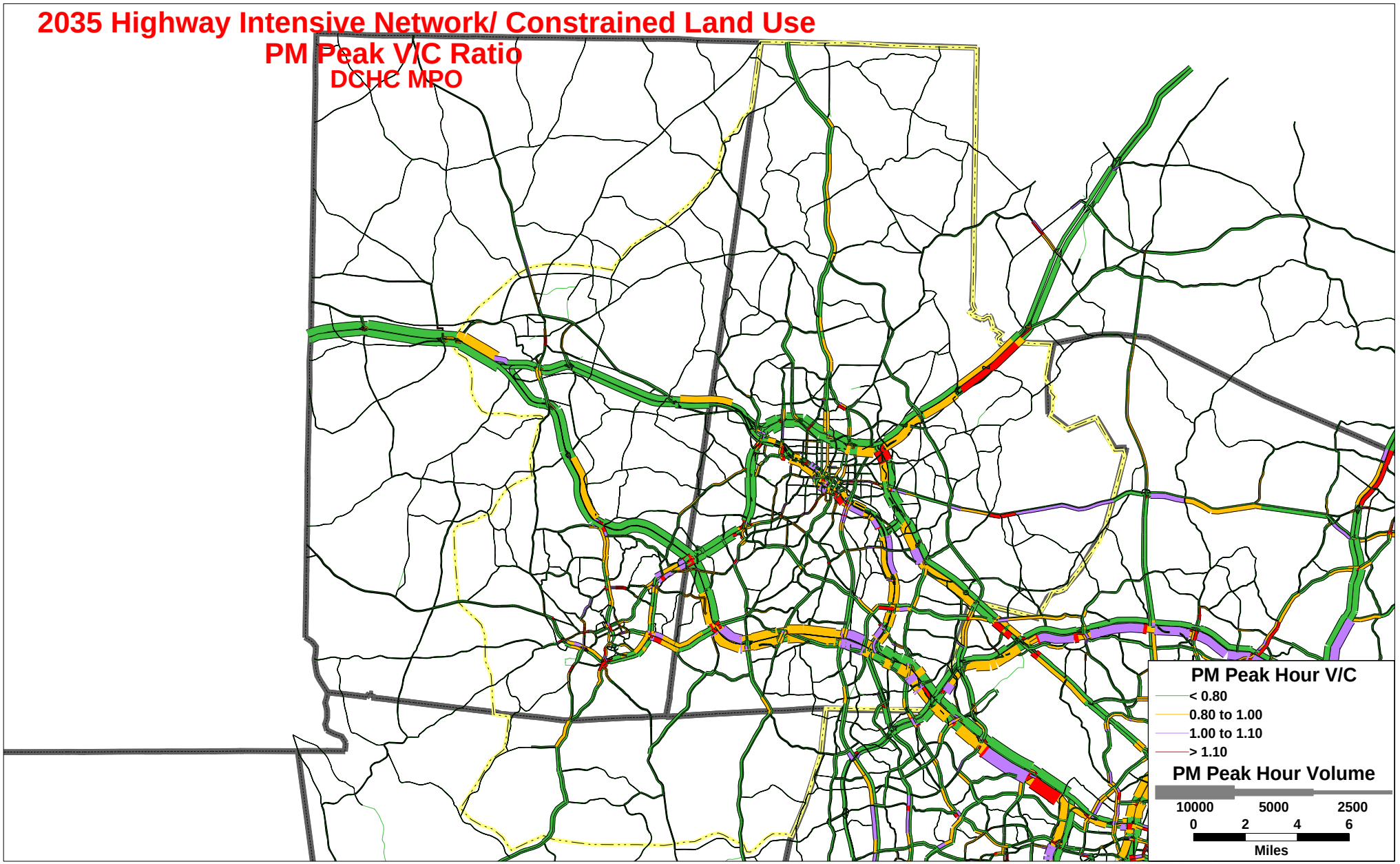
	Alternative:	
ID	Transportation System	Land Use Scenario
N/A	Existing Plus Committed	Baseline
2–A	Comprehensive Transportation Plan	Baseline
2-B	Comprehensive Transportation Plan	Buildout
3–A	Intensive Highway	Baseline
3–B	Intensive Highway	Constrained
3-C	Intensive Highway	Travel Corridor
4-A	Intensive Fixed Guideway	Baseline
4-B	Intensive Fixed Guideway	Travel Corridor
4-C	Intensive Fixed Guideway	Transit Node
5-A	Intensive Bus Transit	Baseline
5-B	Intensive Bus Transit	Travel Corridor
5-C	Intensive Bus Transit	Transit Node
6-A	Moderate Multimodal	Baseline
6-B	Moderate Multimodal	Travel Corridor
6-C	Moderate Multimodal	Transit Node

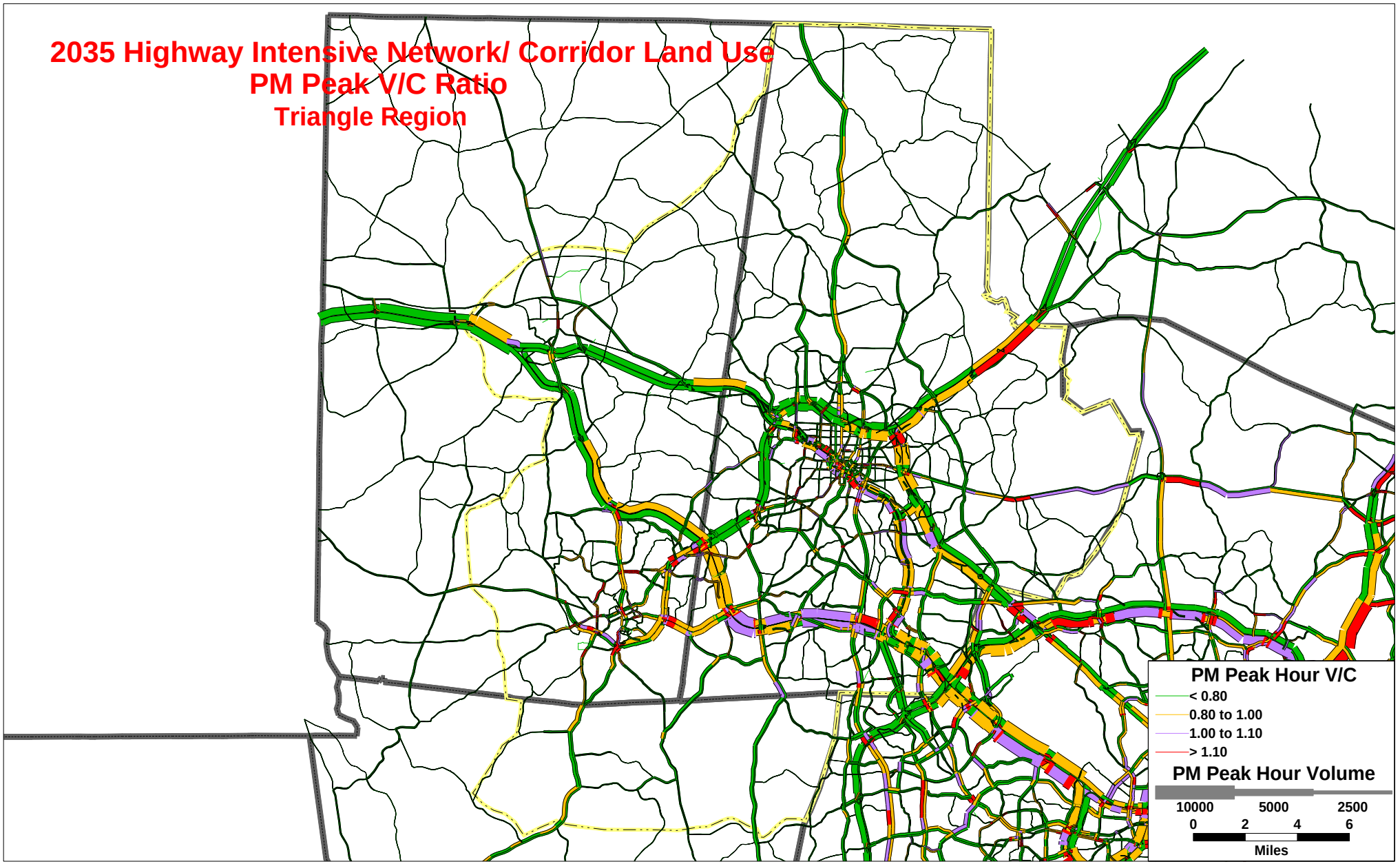

2035 Existing Plus Committed Network/ Baseline Land Use
PM Peak V/C Ratio
Triangle Region
ABPM Peak Hour V/C
< 0.80
0.80 to 1.00
1.00 to 1.10
> 1.10
PM Peak HourVolume
10000
5000
2500
0
4
8
12
Miles

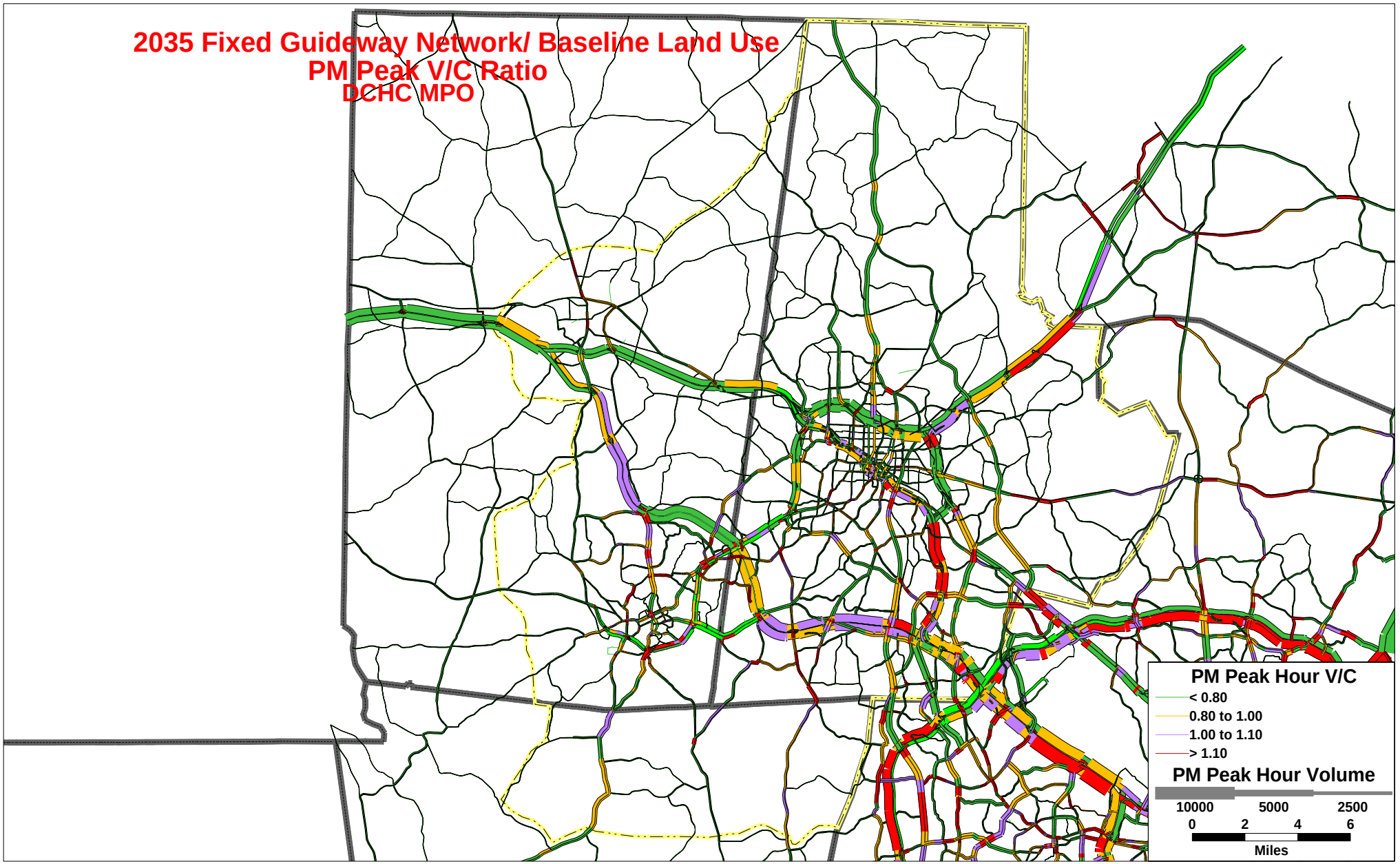

2035 CTP Network/ Baseline Land Use
PM Peak V/C Ratio
DCHC MPO
PMPeak Hour V/C
< 0.80
0.80 to 1.00
1.00 to 1.10
> 1.10
PM Peak Hour Volume
10000
5000
2500
0
2
4
6
Miles


2035 CTP Network/ Buildout Land Use
PM Peak Hour V/C Ratio
DCHC MPO
PM Peak Hour V/C
< 0.80
0.80 to 1.00
1.00 to 1.10
> 1.10
PM Peak Hour Volume
15000
7500
3750
0
2
4
6
Miles

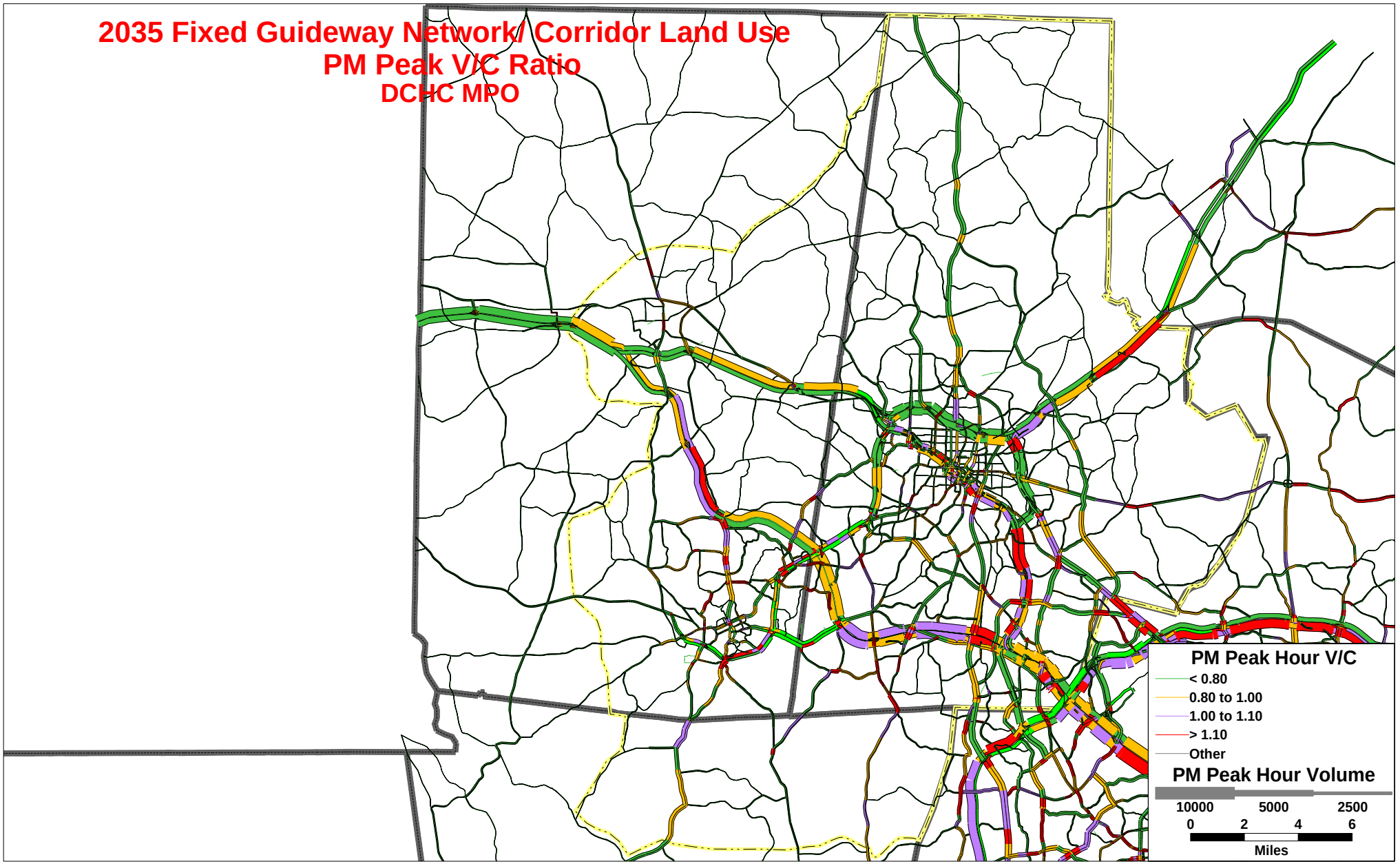

2035 Highway Intensive Network/ Baseline Land Use
PM Peak V/C Ratio
DCHC MPO
PM Peak Hour V/C
< 0.8
0.80 to 1.00
1.00 to 1.10
> 1.10
PM Peak Hour Volume
10000
5000
2500
0
2
4
6
Miles

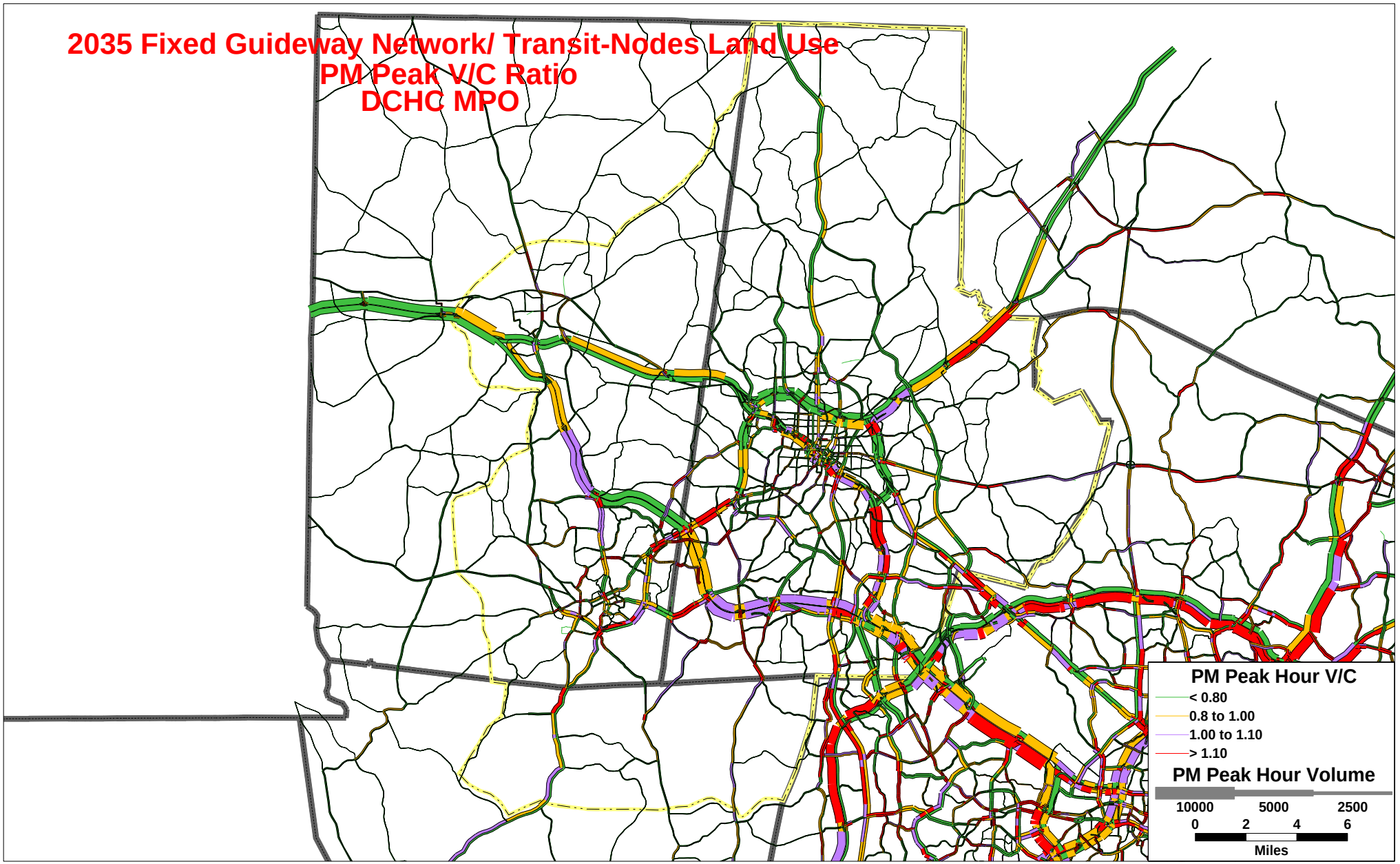

2035 Highway Intensive Network/ Constrained Land Use
PM Peak V/C Ratio
DCHC MPO
PM Peak Hour V/C
< 0.80
0.80 to 1.00
1.00 to 1.10
> 1.10
PM Peak Hour Volume
10000
5000
2500
0
2
4
6
Miles

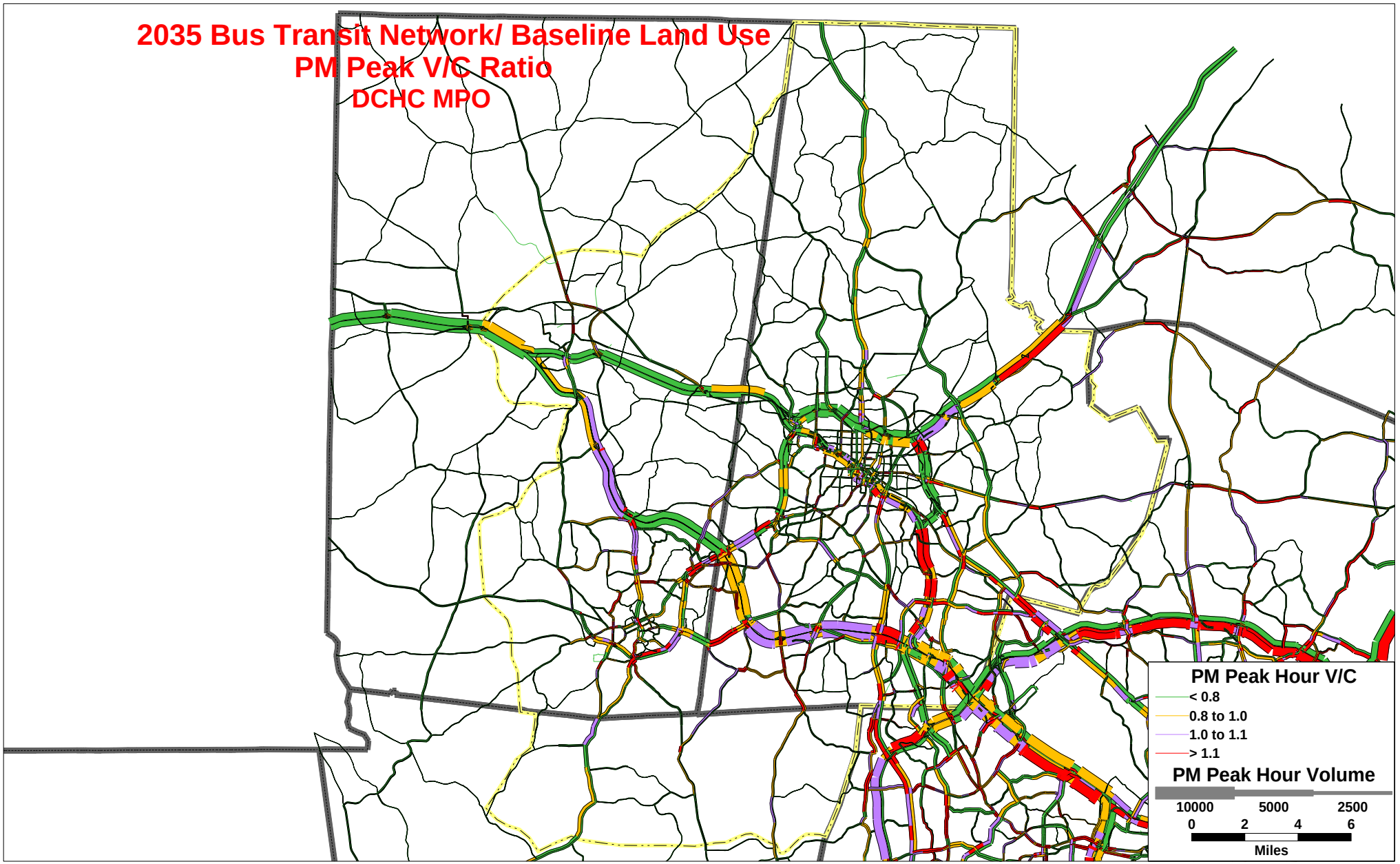

2035 Highway Intensive Network/ Corridor Land Use
PM Peak V/C Ratio
Triangle Region
PM Peak Hour V/C
< 0.80
0.80 to 1.00
1.00 to 1.10
> 1.10
PM Peak Hour Volume
10000
5000
2500
0
2
4
6
Miles

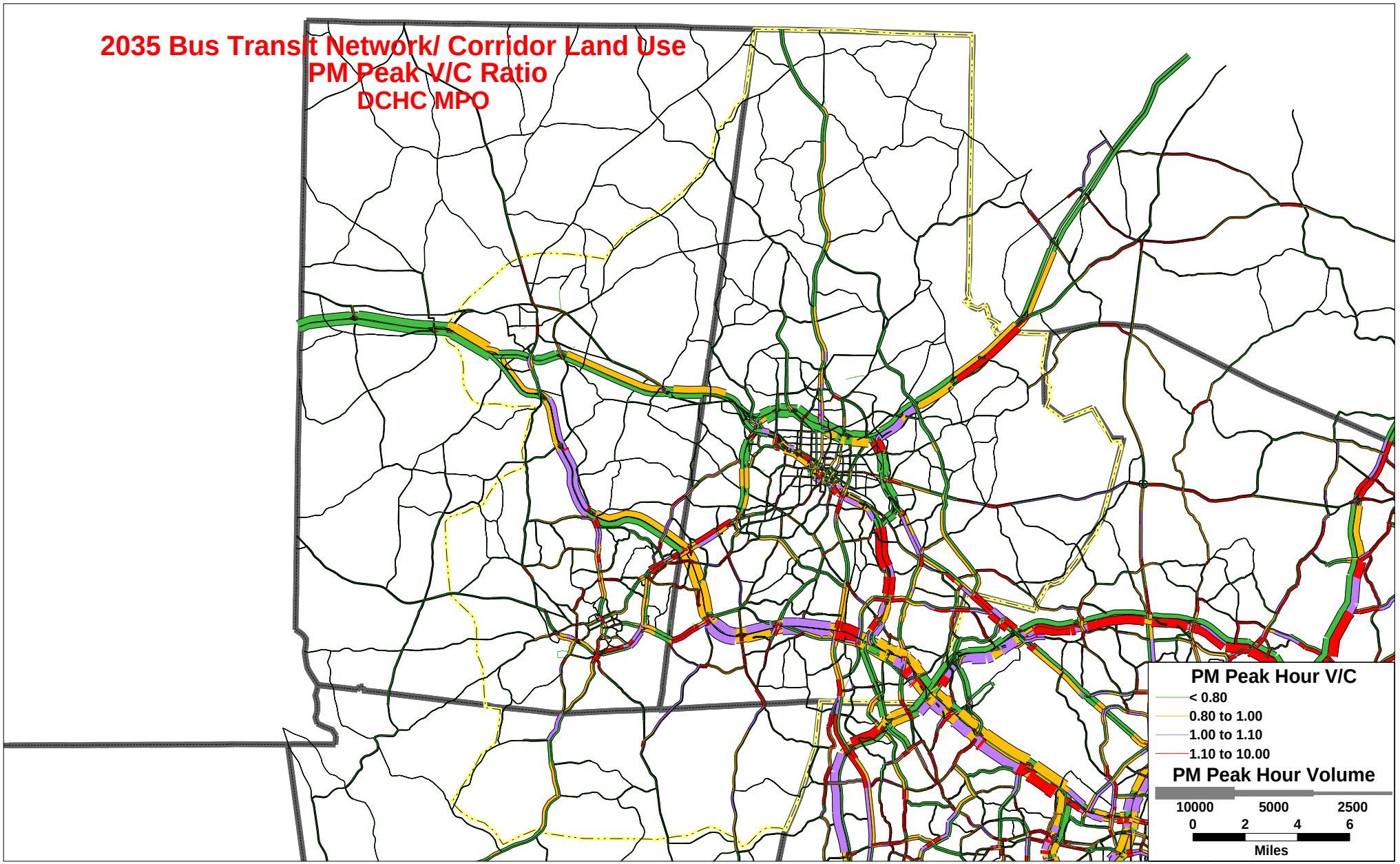

2035 Fixed Guideway Network/ Baseline Land Use
PM Peak V/C Ratio
DCHC MPO
PM Peak Hour V/C
< 0.80
0.80 to 1.00
1.00 to 1.10
> 1.10
PM Peak Hour Volume
10000
5000
2500
0
2
4
6
Miles

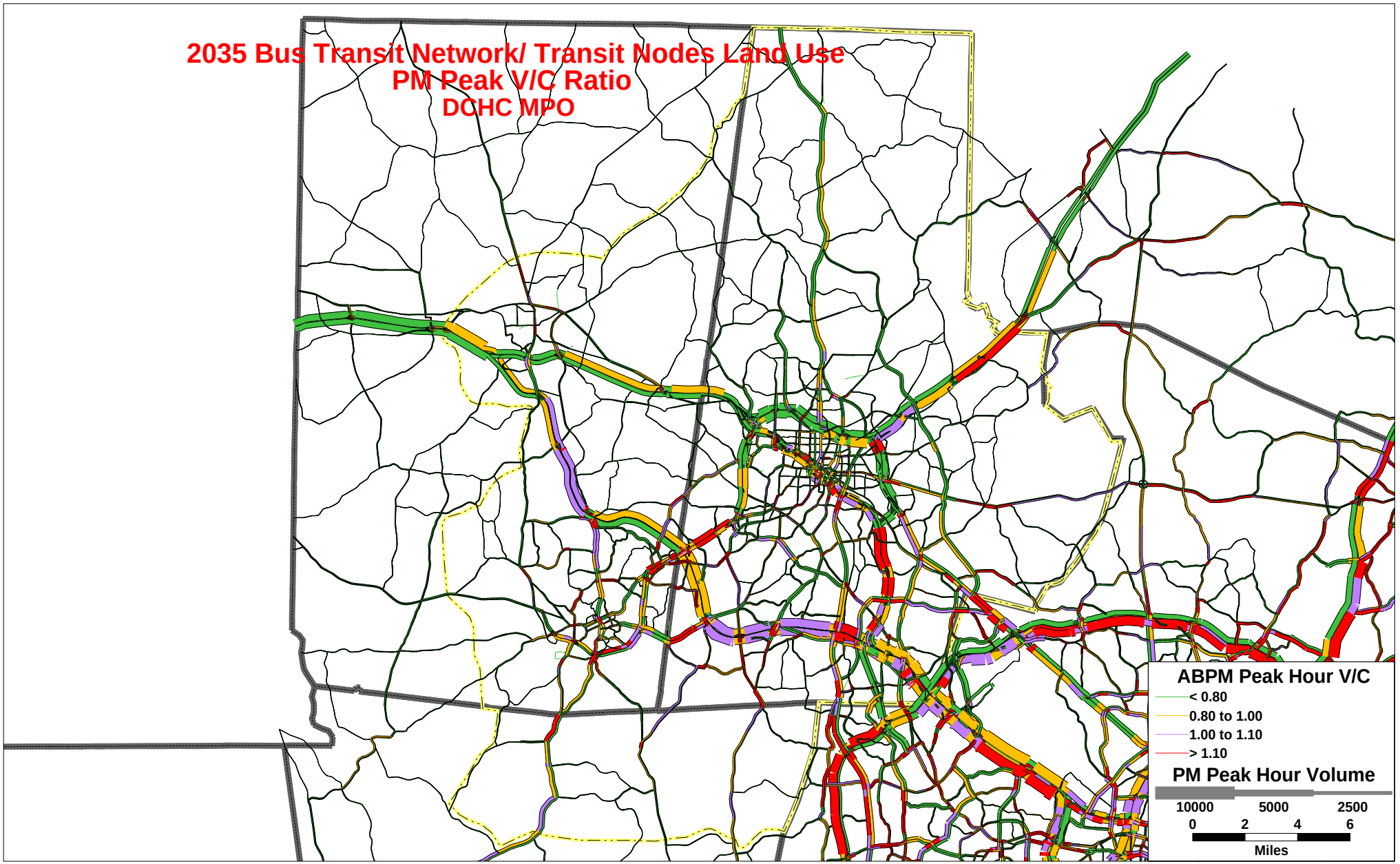
2035 Fixed Guideway Network/ Corridor Land Use
PM Peak V/C Ratio
DCHC MPO

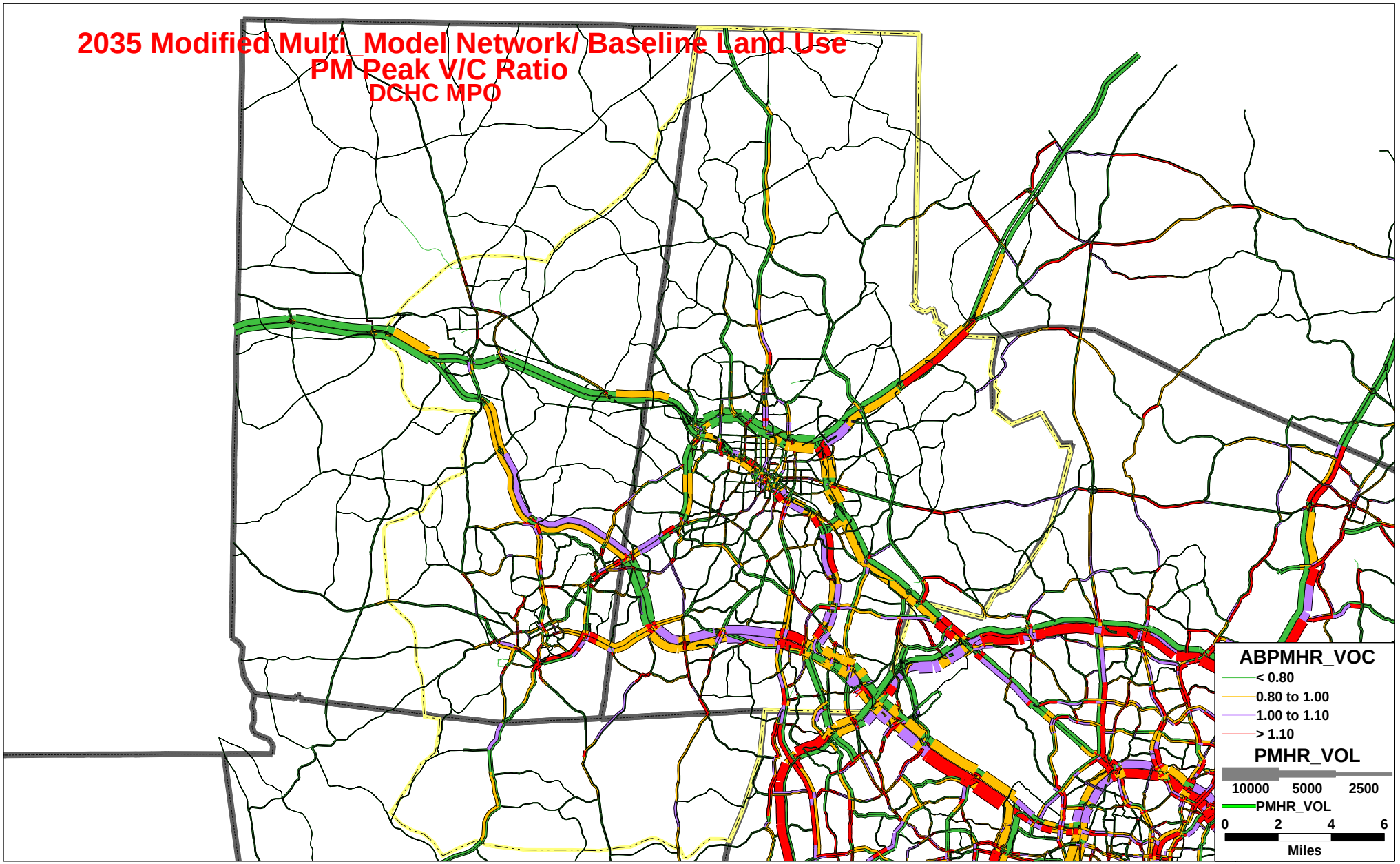


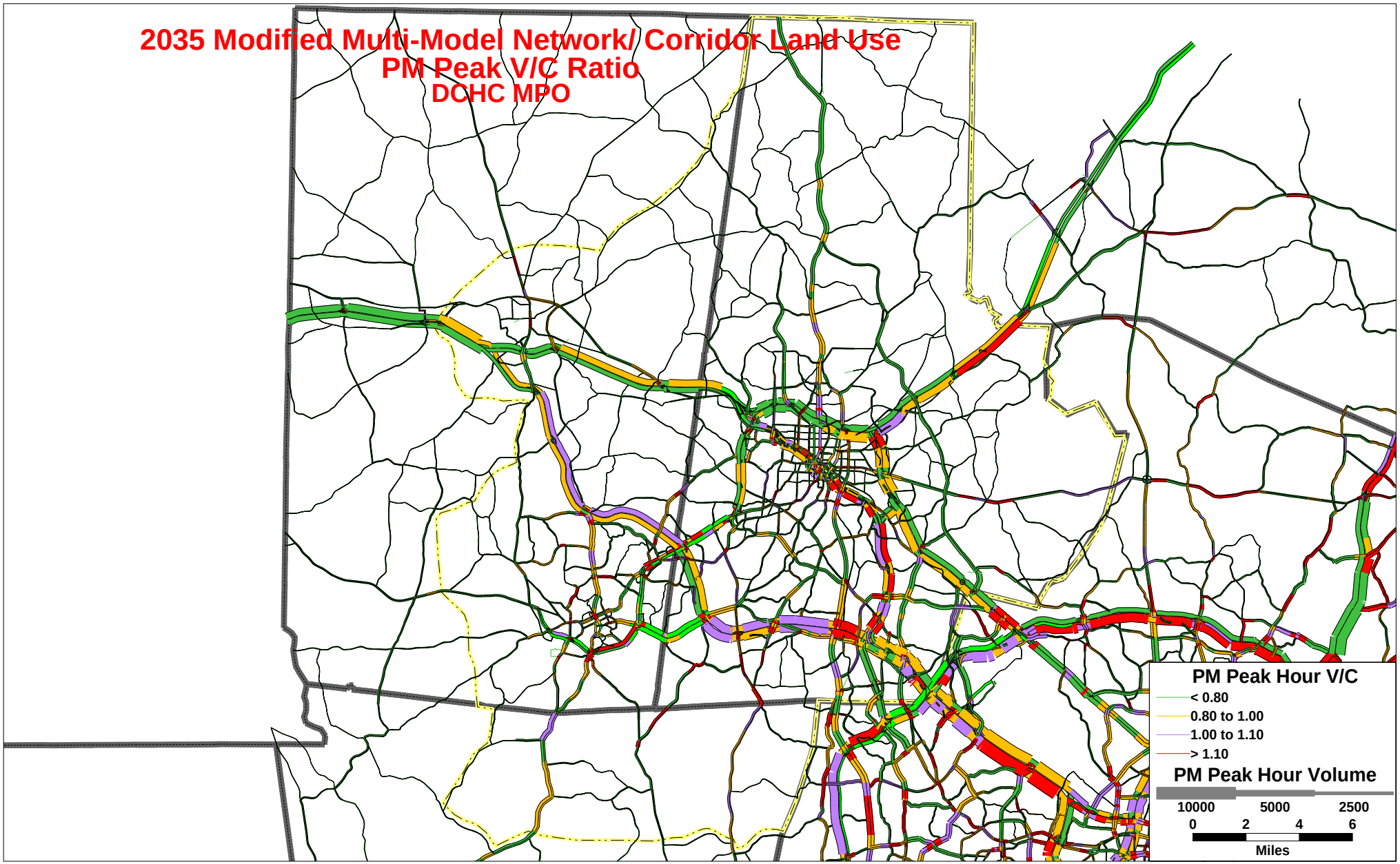

2035 Fixed Guideway Network/ Transit-Nodes Land Use
PM Peak V/C Ratio
DCHC MPO
PM Peak Hour V/C
< 0.80
0.8 to 1.00
1.00 to 1.10
> 1.10
PM Peak Hour Volume
10000
5000
2500
0
2
4
6
Miles

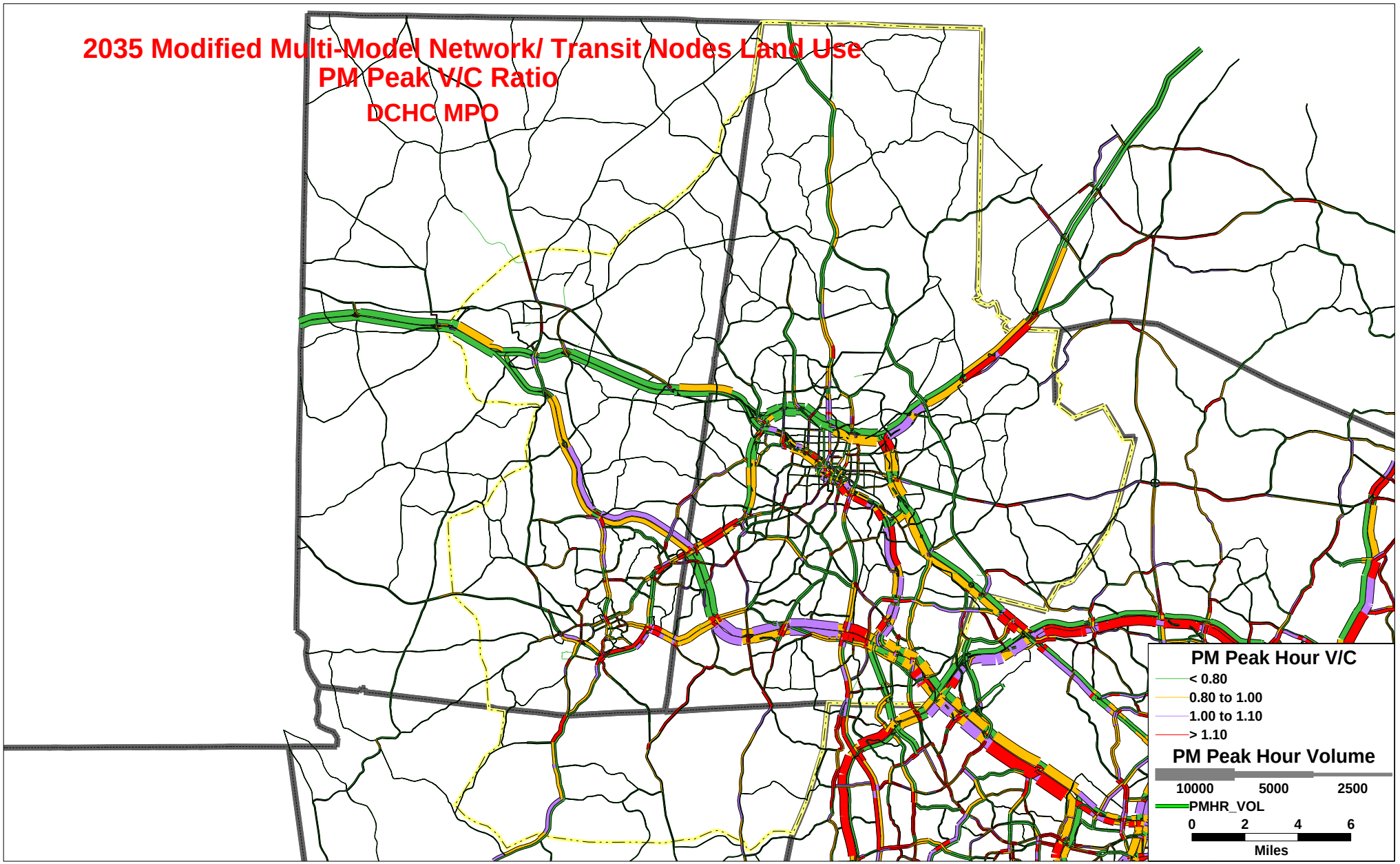

2035 Bus Transit Network/ Baseline Land Use
PM Peak V/C Ratio
DCHC MPO
PM Peak Hour V/C
< 0.8
0.8 to 1.0
1.0 to 1.1
> 1.1
PM Peak Hour Volume
10000
5000
2500
0
2
4
6
Miles


2035 Bus Transit Network/ Corridor Land Use
PM Peak V/C Ratio
DCHC MPO
PM Peak Hour V/C
< 0.80
0.80 to 1.00
1.00 to 1.10
1.10 to 10.00
PM Peak Hour Volume
10000
5000
2500
0
2
4
6
Miles


2035 Bus Transit Network/ Transit Nodes Land Use
PM Peak V/C Ratio
DCHC MPO
ABPM Peak Hour V/C
< 0.80
0.80 to 1.00
1.00 to 1.10
> 1.10
PM Peak Hour Volume
10000
5000
2500
0
2
4
6
Miles


2035 Modified Multi_Model Network/ Baseline Land Use
PM Peak V/C Ratio
DCHC MPO
ABPMHR_VOC
< 0.80
0.80 to 1.00
1.00 to 1.10
> 1.10
PMHR_VOL
10000
5000
2500
PMHR_VOL
0
2
4
6
Miles


2035 Modified Multi-Model Network/ Corridor Land Use
PM Peak V/C Ratio
DCHC MPO
PM Peak Hour V/C
< 0.80
0.80 to 1.00
1.00 to 1.10
> 1.10
PM Peak Hour Volume
10000
5000
2500
0
2
4
6
Miles


2035 Modified Multi-Model Network/ Transit Nodes Land Use
PM Peak V/C Ratio
DCHC MPO
PM Peak Hour V/C
< 0.80
0.80 to 1.00
1.00 to 1.10
> 1.10
PM Peak Hour Volume
10000
5000
2500
PMHR_VOL
0
2
4
6
Miles

2035 LRTP and CTP
Alternatives – Financial Information

Preliminary Costs and Revenues

The 2035 LRTP must be fiscally-constrained. This requirements means that the cost of the various highway, transit and other transportation facilities must be covered by the reasonably-expected state, federal, local and private transportation revenues. The Alternatives presented at this stage of the 2035 LRTP development process do not have to be fiscally-constrained because these are draft proposals that are used to analyze the performance of the various transportation facility types. Nonetheless, knowing the costs and revenues related to an Alternative will help inform us to where that particular Alternative stands in relation to being fiscally-constrained.

Therefore, preliminary costs and revenue estimates have been developed. It must be stressed that these figures are preliminary, and therefore could change significantly as the project details of the Preferred Option (i.e., final Alternative) are decided. Certainty in cost and revenue estimates for Alternatives is difficult because so many project details are unknown. For example, moving the implementation year of several fixed-route transit services, say five years, can change the system life cost by millions of dollars. Therefore, the costs and revenue presented at this point are to be used to get an idea of an order of magnitude presented for each Alternative.

The table on the next page presents the total costs and revenues for each Alternative, including a breakdown by highway and transit facilities, and shows the difference between the total cost and revenue.

Local Options Revenue Estimates

There are several options for raising revenue on a local basis, e.g., by county, that could be targeted to finance transportation projects. The tables on pages 3 and 4 present the estimated annual and 25-year total revenues for each option. The 25-year total assumes that the option would be implemented in the year 2011, and therefore produces 25 years of revenue from 2011 through 2035 (horizon year for the 2035 LRTP). These figures are illustrative and not intended to be final estimates for use in the 2035 LRTP. One of more of these options could be selected for further refinement and inclusion in the 2035 LRTP.

It is important to note that many of these revenue options would require enabling legislation from the North Carolina General Assembly, and those in which enabling legislation exists, i.e., Sales and Use Tax, and Real Estate Transfer Tax, require a local referendum for approval.

Page 5 shows the 25-year totals for the local options in a chart format.

Preliminary Revenue Estimate					
Highway Sources	**Comprehensive Trans. Plan**	**Intensive Highway**	**Intensive Fixed Guideway**	**Intensive Bus Transit**	**Moderate Multimodal**
Highway Funding Programs	$ 3,095,599,272	$ 3,095,599,272	$ 3,095,599,272	$ 3,095,599,272	$ 3,095,599,272
Other-CIP, private, etc.	$ 237,000,000	$ 237,000,000	$ 237,000,000	$ 237,000,000	$ 237,000,000
Highway Trust Fund ("Loop")	$ 621,959,553	$ 621,959,553	$ 498,845,607	$ 498,845,607	$ 621,959,553
Triangle Parkway (tolls & "gap" funding)	$ 84,747,784	$ 84,747,784	$ 84,747,784	$ 84,747,784	$ 84,747,784
Total Highway Revenue ($ Billions)	**$ 4.0**	**$ 4.0**	**$ 3.9**	**$ 3.9**	**$ 4.0**
Transit Sources					
Transit Funding Programs	$ 721,783,746	$ 721,783,746	$ 721,783,746	$ 721,783,746	$ 721,783,746
New Start (Fixed Guideway)	$ 294,950,000	$ -	$ 294,950,000	$ -	$ -
Fares and Other	$ 218,875,000	$ 124,125,000	$ 186,125,000	$ 156,875,000	$ 124,125,000
Total Transit Revenue ($ Billions)	**$ 1.2**	**$ 0.8**	**$ 1.2**	**$ 0.9**	**$ 0.8**
Total Highway and Transit Revenue ($ Billions)	**$ 5.27**	**$ 4.89**	**$ 5.12**	**$ 4.79**	**$ 4.89**
Preliminary Cost Estimate					
Highway Costs	**Comprehensive Trans. Plan**	**Intensive Highway**	**Intensive Fixed Guideway**	**Intensive Bus Transit**	**Moderate Multimodal**
Highway Capital & Maintenance	$ 5,433,009,723	$ 4,887,493,386	$ 1,725,554,817	$ 2,585,934,958	$ 1,901,388,490
Bicycle, TDM, ITS, etc.	$ 196,197,958	$ 196,197,958	$ 196,197,958	$ 196,197,958	$ 196,197,958
Total Highway Costs ($ Billions)	$ 5.6	$ 5.1	$ 1.9	$ 2.8	$ 2.1
Transit Costs					
Fixed Guideway (Capital and O&M)	$ 1,569,800,000	$ -	$ 1,569,800,000	$ -	$ -
Bus Transit (Capital and O&M)	$ 9,151,690,647	$ 1,546,305,187	$ 4,701,481,896	$ 5,340,500,669	$ 2,300,066,801
Total Transit Costs ($ Billions)	$ 10.7	$ 1.5	$ 6.3	$ 5.3	$ 2.3
Total Highway and Transit Costs ($ Billions)	**$ 16.35**	**$ 6.63**	**$ 8.19**	**$ 8.12**	**$ 4.40**
Difference (Revenue - Costs)	**$ (11.08)**	**$ (1.74)**	**$ (3.07)**	**$ (3.33)**	**$ 0.49**
(Note: Negative values in parenthesis					

Local Options Revenue Estimates
Transportation and Infrastructure (values in $millions)

(Source: Regional Transportation Alliance; updated January 10, 2008)

It is important to note that many of these revenue options would require enabling legislation from the North Carolina General Assembly, and those in which enabling legislation exists, i.e., Sales and Use Tax, and Real Estate Transfer Tax, require a local referendum for approval.

The RTA (Regional Transportation Alliance) is composed of businesses and chambers of commerce that promote solutions to transportation issues in the Triangle Region. The RTA compiles the data for these revenue estimates.

➢ Sales and Use Tax*

	¼% sales tax**	½% sales tax	1% sales tax
Durham:	$9.3 m	$18.5 m	$37.0 m
Orange:	$2.6 m	$5.3 m	$10.5 m
Chatham:	$1.1 m	$2.1 m	$4.2 m
Revenue per year:	**$13.0 m**	**$25.9 m**	**$51.7 m**
Revenue over 25 years: (2011 through 2035)	**$325.0 m**	**$647.5 m**	**$1,292.5 m**

* The statewide Sales and Use Tax rate is currently 4.25%, with the addition of the local rate of 2.5%, there is an overall 6.75% Sales and Use Tax for Durham, Wake and Orange Counties.

** In 2007, the State Legislature authorized an additional Article 39 (point-of-sale-based) local option sales and use tax of ¼%.

➢ Motor Fuels Tax

	1¢ / gal	5¢ / gal	11.9¢ / gal
Durham:	$1.2 m	$5.9 m	$14.2 m
Orange:	$0.6 m	$3.1 m	$7.4 m
Chatham:	$0.4 m	$2.0 m	$4.8 m
Revenue per year:	**$2.2 m**	**$11.0 m**	**$26.4 m**
Revenue over 25 years:	**$55.0 m**	**$275 m**	**$660.0 m**

➢ Vehicle Registration Fee*

	(additional) $20
Durham:	$3.8 m
Orange:	$2.0 m
Chatham:	$1.3 m
Revenue per year:	**$7.1 m**
Revenue over 25 years:	**$177.5 m**

* The current cost of vehicle registration renewal is $20 plus a $5 Triangle Transit Authority tax. Refer to GS 160A-613, 623-624.

➢ Rental Car Tax*

	(additional) 5%	(additional) 10%
3 County:	**$8.7 m**	**$17.5 m**
Revenue over 25 years:	**$217.5 m**	**$437.5 m**

* Revenue for future Triangle Transit fixed-guideway project(a) are based on a 5% car rental tax levied.

➢ Real Estate Property Tax

	$0.05 / $100 (0.05%)	$0.10 / $100 (0.1%)
Durham:	$8.7 m	$17.3 m
Orange:	$5.5 m	$10.9 m
Revenue per year:	**$14.2 m**	**$28.2 m**
Revenue over 25 years:	**$355 m**	**$705 m**

➢ Real Estate Transfer Tax

	$0.20 / $100 (0.2%)*	$0.40 / $100 (0.4%)**
Durham:	$5.1 m	$10.2 m
Orange:	$2.0 m	$4.1 m
Revenue per year:	**$7.1 m**	**$14.3 m**
Revenue over 25 years:	**$177.5 m**	**$357.5 m**

* *The State of North Carolina currently levies a 0.2% tax on any real estate transfer.*

** *In 2007, the State Legislature authorized an additional 0.4% local option real estate transfer tax.*

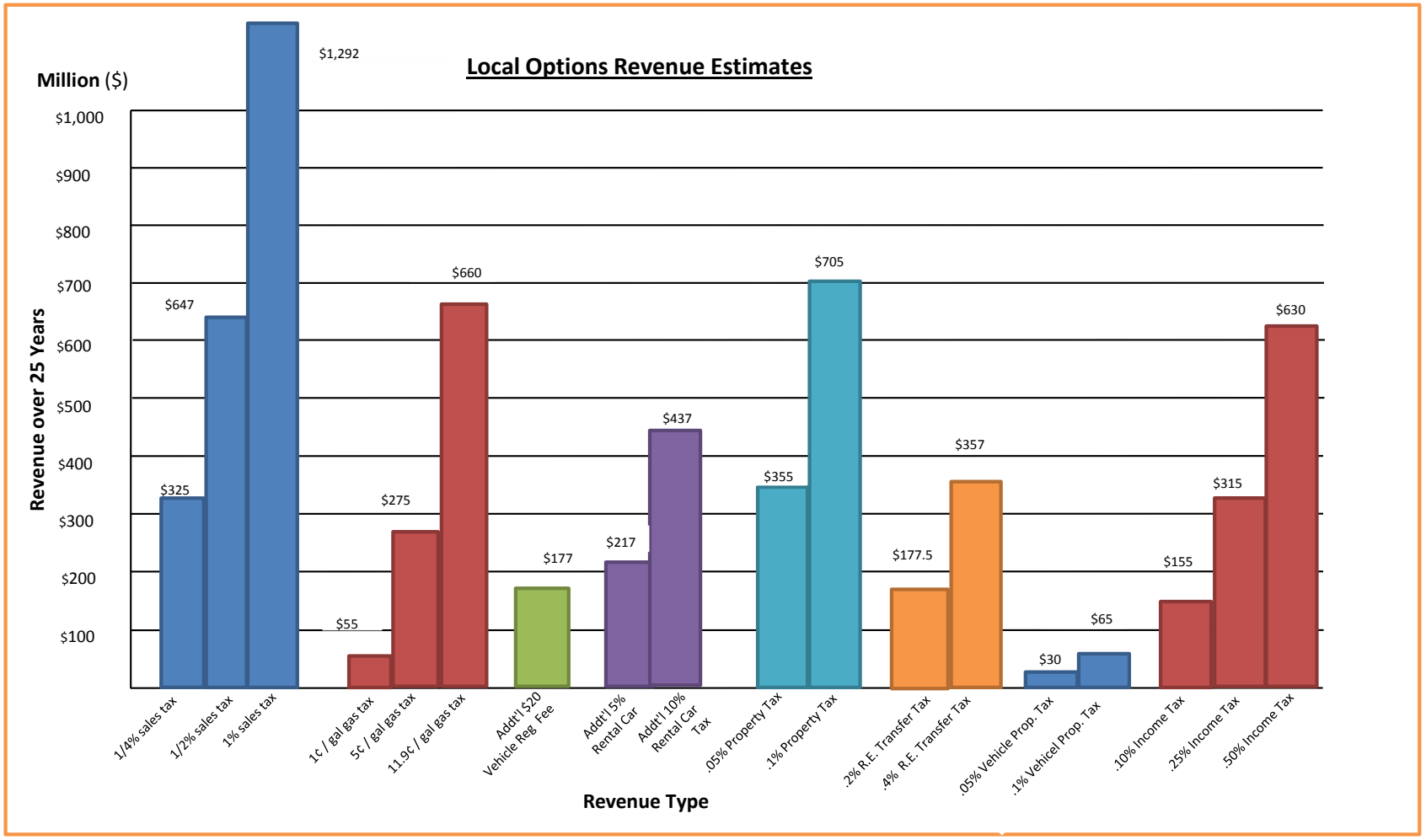
➢ Vehicle Property Tax

	$0.05 / $100 (.05%)	$0.10 / $100 (0.1%)
Durham:	$0.8 m	$1.7 m
Orange:	$0.4 m	$0.9 m
Revenue per year:	**$1.2 m**	**$2.6 m**
Revenue over 25 years:	**$30 m**	**$65 m**

* Personal/Vehicle property tax must be congruent with Real (Estate) property tax rates per Art. 5 of the NC Constitution

➢ Income Tax

	0.10 %	0.25 %	0.50 %
Durham:	$3.6 m	$7.4 m	$14.8 m
Orange:	$2.6 m	$5.2 m	$10.4 m
Revenue per year:	**$6.2 m**	**$12.6 m**	**$25.2 m**
Revenue over 25 years:	**$155 m**	**$315 m**	**$630 m**


Local Options Revenue Estimates
Million ($)
Revenue over 25 Years
$1,000
$900
$800
$700
$600
$500
$400
$300
$200
$100
$325
$647
$1,292
$55
$275
$660
$177
$217
$437
$355
$705
$177.5
$357
$30
$65
$155
$315
$630
1/4% sales tax
1/2% sales tax
1% sales tax
1¢ / gal gas tax
5¢ / gal gas tax
11.9¢ / gal gas tax
Addt'l $20 Vehicle Reg. Fee
Addt'l 5% Rental Car
Addt'l 10% Rental Car Tax
.05% Property Tax
.1% Property Tax
.2% R.E. Transfer Tax
.4% R.E. Transfer Tax
.05% Vehicle Prop. Tax
.1% Vehicel Prop. Tax
.10% Income Tax
.25% Income Tax
.50% Income Tax
Revenue Type

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2035 LRTP and CTP
Alternatives – Detailed Description

Purpose of Alternatives

The DCHC MPO plans to develop and evaluate several Alternatives in the process to create the 2035 Long Range Transportation Plan. Each Alternative will be a combination of a Transportation System, which includes a set of highway, transit and other transportation improvements, and a Land Use Scenario that distributes the forecasted population and employment for the year 2035. These Alternatives will be run in the Triangle Regional Model (TRM) to produce a set of transportation performance measures that describe how the transportation system will handle the travel demand generated by a particular population and employment distribution in the year 2035. These performance measures, such as the level of roadway congestion, average travel time, and transit ridership, will be used to evaluate and compare the various Alternatives.

In the next major step in the 2035 LRTP development process, the public, elected officials and technical staff will use this evaluation and comparison information to create a single Alternative that best meets the MPO's Goals and Objectives and the fiscal constrain requirement that demands that the project costs do not exceed the expected funding revenues. This final Alternative is called the Preferred Option, and it will also go through an extensive public review process similar to that of the Alternatives.

It should be noted that it is very unlikely that one of the Alternatives in its entirety would be advanced as the Preferred Option. These Alternatives have been designed to emphasize a particular mode in meeting the future travel demands so that the public and technical staff can understand how well the designated mode works. For example, the Intensive Highway Alternative has a high level of High-Occupancy Vehicle/Toll (HOV/HOT), road widenings and new roads, a relatively low level of bus transit and no fixed-guideway (e.g., light rail) to meet the future demands. The Alternative is helpful in understanding the effect of increased roadway capacity on specific corridor congestion, travel time, mode share and other performance measures. This knowledge will be used to develop the Preferred Option, which is likely to have a lower level of roadway expansion than the Intensive Highway Alternative and a more balanced modal approach.

Development of Alternatives

The table on the page 3 shows the combinations of Transportation Systems and Land Use Scenarios that will be modeled for the 2035 LRTP development process. Each of these Transportation Systems will be combined with one, or more, Land Use Scenarios to create an Alternative.

- The first two Transportation Systems (#1 and #2), the 2030 LRTP and Comprehensive Transportation Plan, will be used to compare with the 2035 LRTP Alternatives, and therefore will not form Alternatives.
- The next five Transportation Systems (#3 through #7), are Alternatives for the 2035 LRTP.

There is a unique set of Socioeconomic Data (SE Data) for each Land Use Scenario. The Baseline Land Use Scenario, for example, is the SE Data approved by the Transportation Advisory Committee (TAC) for use in developing the 2035 LRTP and is based on the current land use plans and policies of the local jurisdictions in the DCHC MPO's planning area. The other Land Use Scenarios assume certain changes to current land use policies.

The Transportation System and Land Use Scenarios have only been combined into logical matches. For example, the Intensive Highway Transportation System assumes many highway improvements, relatively few transit improvements and no fixed-guideway service. Thus, this System was not matched with the Transit Node Land Use Scenario, which is designed to support fixed-guideway stations. There are 15 combinations of Transportation Systems and Land Use Scenarios to for the Alternatives. The System Preservation (#7) will not require separate travel demand data because the TRM (model) is not designed to be sensitive to the levels of Intelligent Transportation Systems (ITS), Travel Demand Management (TDM) and the other related programs and policies inherent in the System Preservation Alternative. The impact of these particular programs and polices will be accounted for after the model is run (these are sometimes called off-model credits).

Description of Transportation Systems

Each Transportation System is composed of many highway, transit and other transportation projects. A review of the long list of projects is a difficult task. The table on page 4 provides a summary of the major projects in each of the Transportation Systems to highlight the level and type of investment in the three major modes – highway, bus transit and fixed-guideway.

The detailed Highway and Transit project lists are presented at the end of this section.

To compute the transportation system performance measures, the Triangle Regional Model (TRM) does not account for transportation facilities and services related to bicycles, pedestrians, Travel Demand Management (TDM), Transportation System Management (TSM), and Intelligent Transportation System (TSM). These facilities and services are accounted for after the model process occurs (called post processing adjustments), and therefore they are not listed in the Transportation System project lists.

Combinations of Transportation Systems and Land Use Scenarios (1)

No.	Transportation System	Land Use Scenarios				
		Baseline	**Constrained**	**Buildout**	**Corridor**	**Transit Nodes**
Benchmarks for comparison						
1	**2030 Adopted LRTP** Currently adopted plan	**1a**				
2	**Comprehensive Transportation Plan** Vision Plan to address population and employment buildout beyond the year 2035; no budget constraint	**2a**		**2b**		
2035 LRTP Alternatives						
3	**Intensive Highway** Emphasize highway investment to address transportation needs	**3a**	**3b**		**3c**	
4	**Intensive Fixed Guideway** Light rail and other grade separated transit	**4a**			**4b**	**4c**
5	**Intensive Bus Transit** Emphasize bus transit service to address transportation needs	**5a**			**5b**	**5c**
6	**Moderate Multimodal** Continue current investment trends with some shift to non-automobile modes	**6a**			**6b**	**6c**
7	**System Preservation** (2) Preserve effectiveness of existing transportation using ITS, TDM, and CMS-TSM projects and policies					

(1) Each combination of a Transportation System and Land Use Scenario creates an Alternative and will require a unique travel demand model run.

(2) The Triangle Regional Model (TRM) is not designed to be very sensitive to changes in ITS, TDM, and CMS-TSM projects and policies. Therefore, the System Preservation Alternative will not require additional model runs.

Summary of Transportation Systems (Alternatives)(1)

Transportation System	Highway	Bus Transit	Fixed Guideway
2030 LRTP	• **518** lane miles added • HOV/HOT on I-40 and part of NC 147 • Triangle Parkway (toll) • US 15-501 freeway • 7 "loop" projects	• Major regular, express and regional bus expansion • Peak headways **10-15 minutes** • Off-Peak headways **20-30 minutes**	• Light Rail -- Durham to Raleigh • Fixed guideway -- Durham to Chapel Hill
CTP	• **703** lane miles added • HOV/HOT on I-40, NC 147, East End Connector, US 70 and I-85 • Triangle Parkway (toll) • US 15-501 freeway • 7 "loop" projects	• Major regular, express and regional bus expansion • Peak headways **5-7 minutes** • Off-Peak headways **7-15 minutes** • BRT in Chapel Hill • Includes all **STAC** recommendations	• Light Rail -- Durham to Raleigh • Fixed guideway -- Durham to Chapel Hill • Includes all **STAC** recommendations
Intensive Highway	• **665** lane miles added • HOV/HOT on I-40, I-85 and part of NC 147 • Triangle Parkway (toll) • US 15-501 freeway • 7 "loop" projects	• Minor regular, express and regional bus expansion • Peak headways **15-30 minutes** • Off-Peak headways **30-45 minutes**	• No fixed guideway service
Intensive Fixed Guideway	• **276** lane miles added • No HOV/HOT • Triangle Parkway (toll) • 6 "loop" projects	• Moderate regular, express and regional bus expansion • Peak headways **7-10 minutes** • Off-Peak headways **15-20 minutes** • BRT in Chapel Hill • Includes all **STAC** recommendations	• Light Rail -- Durham to Raleigh • Fixed guideway -- Durham to Chapel Hill • Includes all **STAC** recommendations
Intensive Bus Transit	• **324** lane miles added • HOV/HOT on I-40 • Triangle Parkway (toll) • 6 "loop" projects	• Major regular, express and regional bus expansion • Peak headways **5-7 minutes** • Off-Peak headways **10-15 minutes**	• No fixed guideway service
Moderate Multimodal	• **285** lane miles added • No HOV/HOT • Triangle Parkway (toll) • 7 "loop" projects	• Moderate regular, express and regional bus expansion • Peak headways **15 minutes** • Off-Peak headways **30 minutes**	• Commuter Rail – Burlington to Raleigh; and Selma to Durham

(1) Some helpful definitions: HOV/HOT = High Occupancy Vehicle/Toll; lanes that can only be used by vehicles that pay a toll or have at least a specified number of passengers. Headway = minutes to wait before next bus arrives. Peak = period of highest travel, generally 7am-9am and 4pm-6pm. BRT = Bus Rapid Transit, which are buses on a separate roadway. Fixed Guideway = transit vehicles on traveling on separate track or roadway. STAC = Special Transit Advisory Commission, which was a regional commission that recommended major transit investments. Loop = Highway projects funded by the N.C. Highway Trust Fund – this funding is in addition to the standard transportation budget (i.e., Transportation Equity Formula).

Maps of Transportation Systems

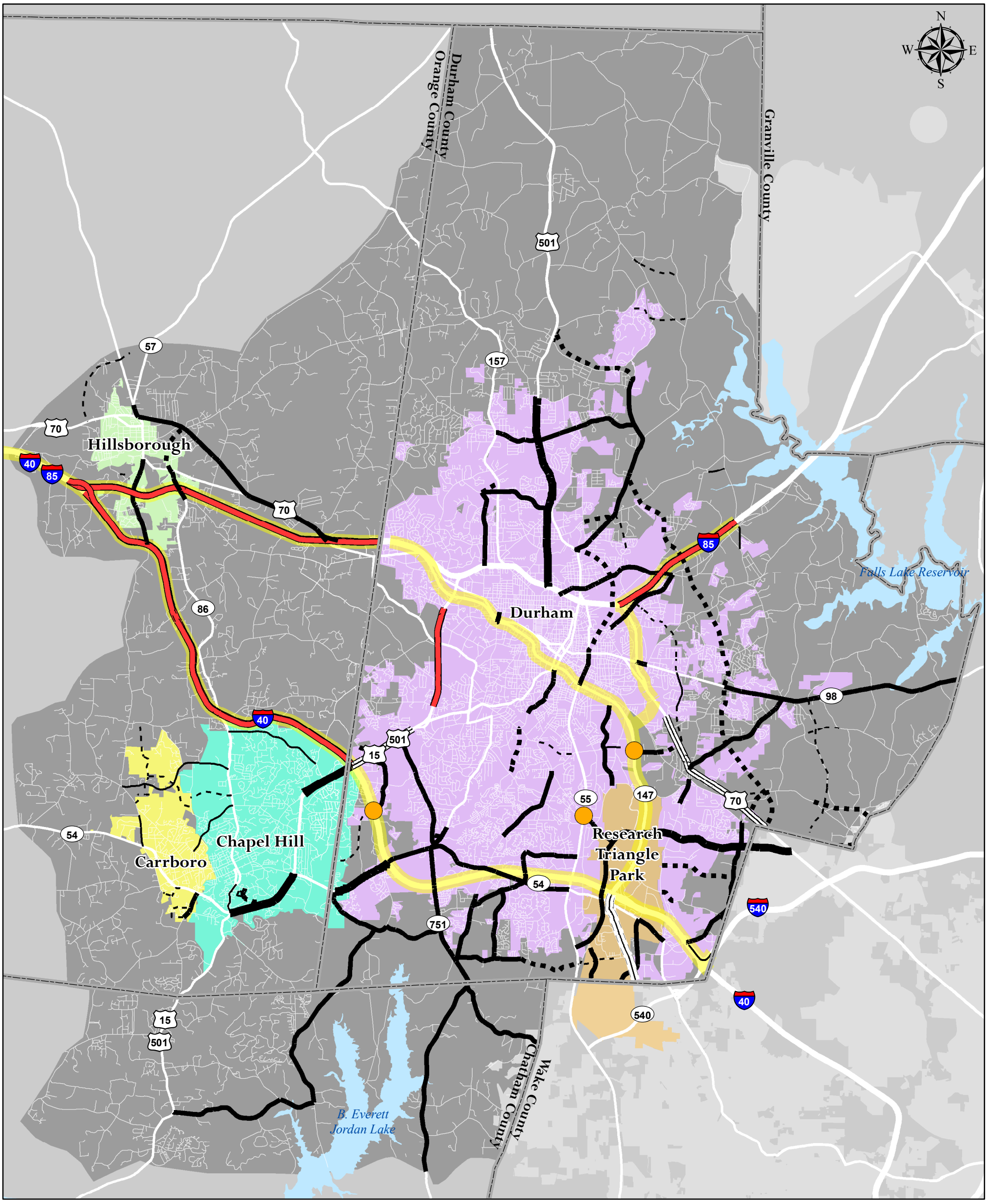
This section presents one highway and one transit map for each of the five proposed transportation systems, including:

- Comprehensive Transportation Plan (CTP);
- Intensive Highway;
- Intensive Fixed-Guideway;
- Intensive Bus Transit; and,
- Moderate Multimodal.

In addition, there is a one bicycle facility and one off-road facility map. The various transportation systems have the same set of bicycle and off-road facility projects, and therefore, these maps don't vary from one system to another.

Durham Chapel Hill Carrboro Metropolitan Planning Organization

Roadway Improvements in CTP Alternative



New/Improved Intersections
HOV Projects
Interstates
US and NC Highways

Roadways in CTP Alternative

2-3 Lane New Location
2-3 Lane Improvement
4-5 Lane Divided New Location
4-5 Lane Divided Improvement
6-Lane Divided Improvement
Upgrade to Freeway
New Freeway/Expressway
Upgrade Existing Freeway

Carrboro
Chapel Hill
Durham
Hillsborough
Other Municipalities
Research Triangle Park

MPO Boundary
County Boundaries

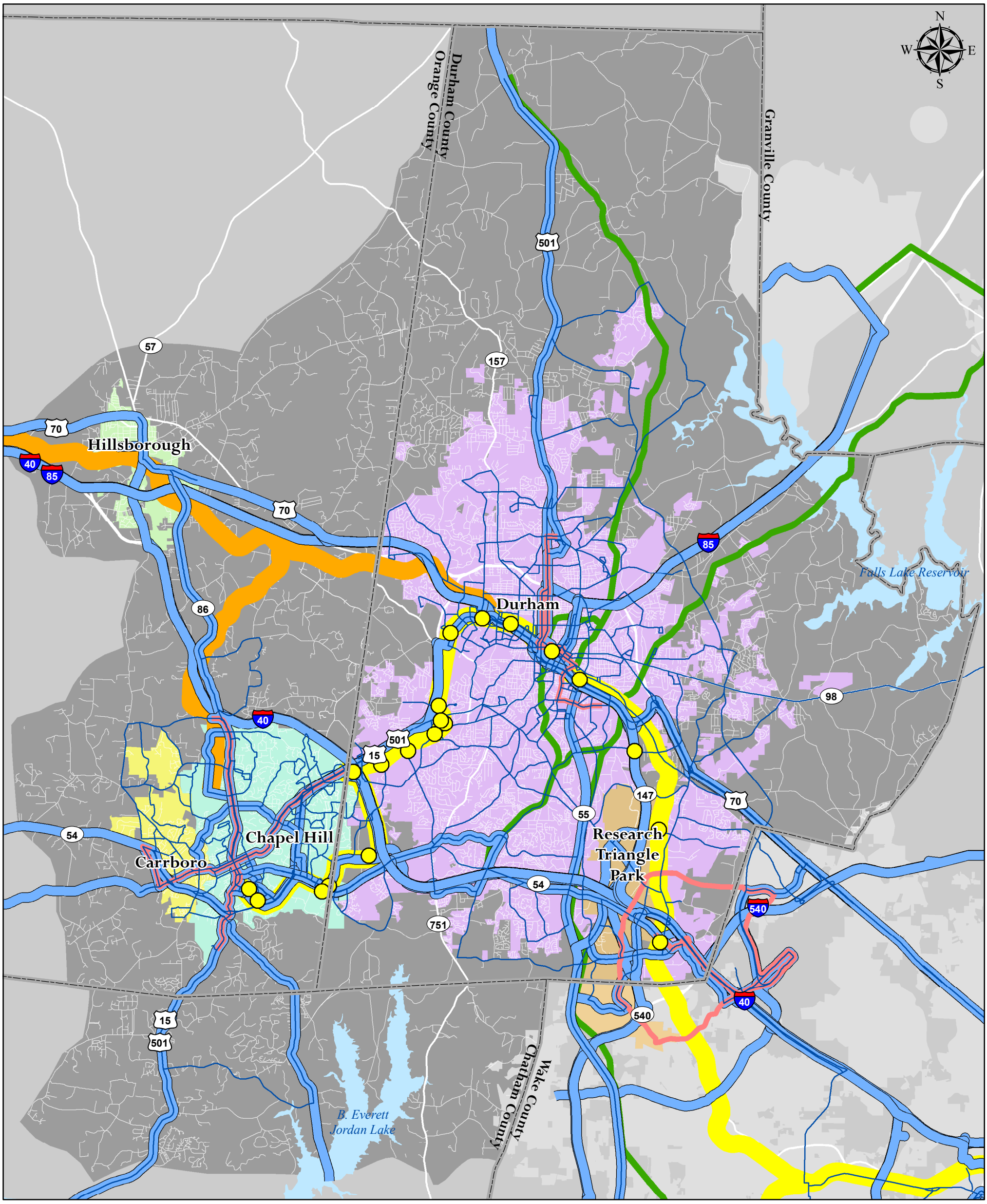
Transportation Plan 2035

The Louis Berger Group, Inc.
8.6.2008

0 1.25 2.5 5 Miles

Durham Chapel Hill Carrboro Metropolitan Planning Organization

Transit Services in CTP Alternative



Transit Services in CTP Alternative

- Fixed Guideway Stations
- Interstates
- US and NC Highways
- MPO Boundary
- County Boundaries

- Local Bus
- Express Bus
- Circulator
- Fixed Guideway
- Fixed Guideway (Commuter Rail)
- Rail Corridor Preservation

- Carrboro
- Chapel Hill
- Durham
- Hillsborough
- Other Municipalities
- Research Triangle Park

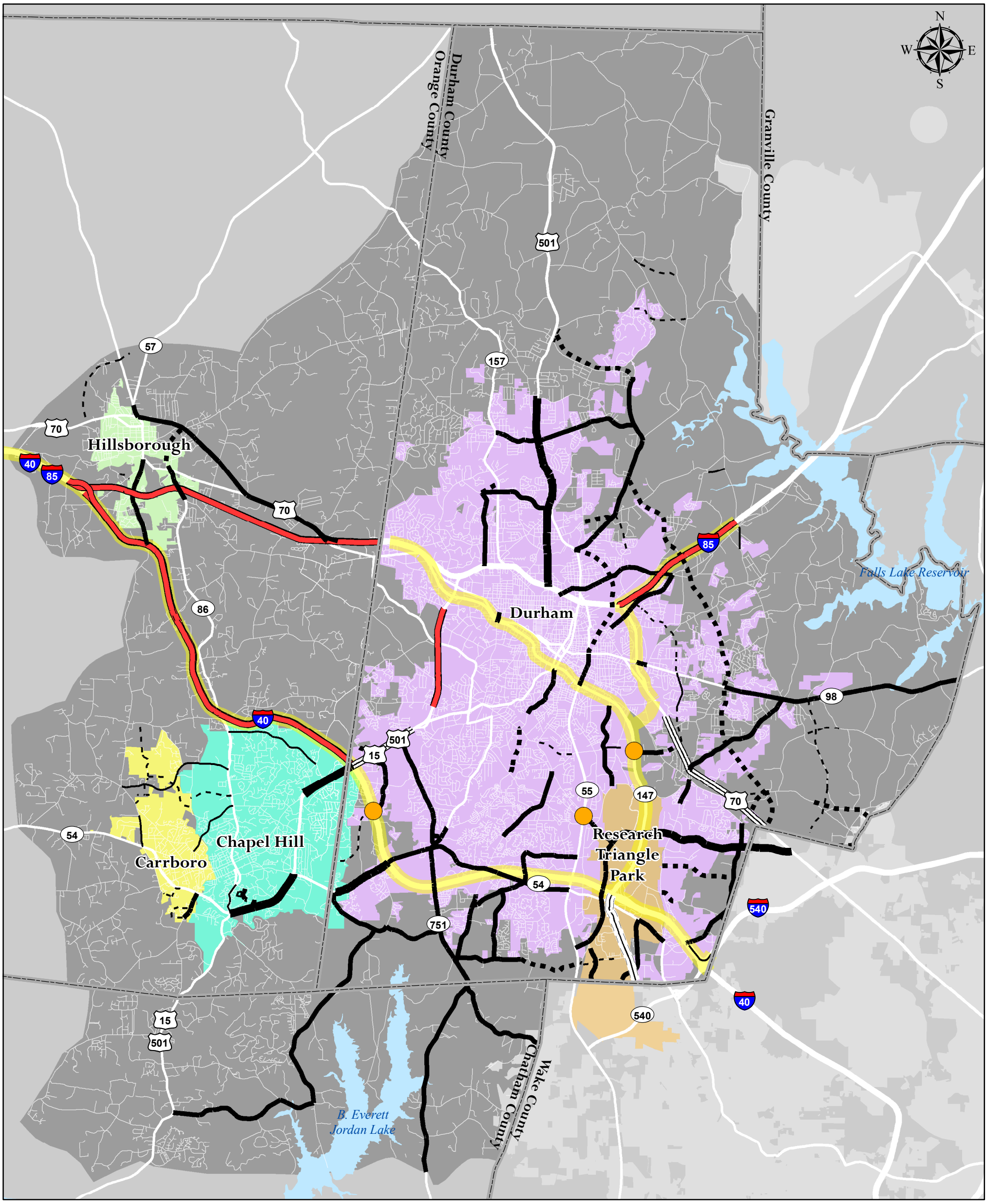
Transportation Plan 2035

The Louis Berger Group, Inc.
8.6.2008

Miles
0 1 2 4

Durham Chapel Hill Carrboro Metropolitan Planning Organization

Roadway Improvements in Highway Intensive Alternative



New/Improved Intersections
HOV Projects
Interstates
US and NC Highways

Roadways in Highway Intensive Alternative

2-3 Lane New Location
2-3 Lane Improvement
4-5 Lane Divided New Location
4-5 Lane Divided Improvement
6-Lane Divided Improvement
Upgrade to Freeway
New Freeway/Expressway
Upgrade Existing Freeway

Carrboro
Chapel Hill
Durham
Hillsborough
Other Municipalities
Research Triangle Park

MPO Boundary
County Boundaries

Transportation Plan 2035

The Louis Berger Group, Inc.
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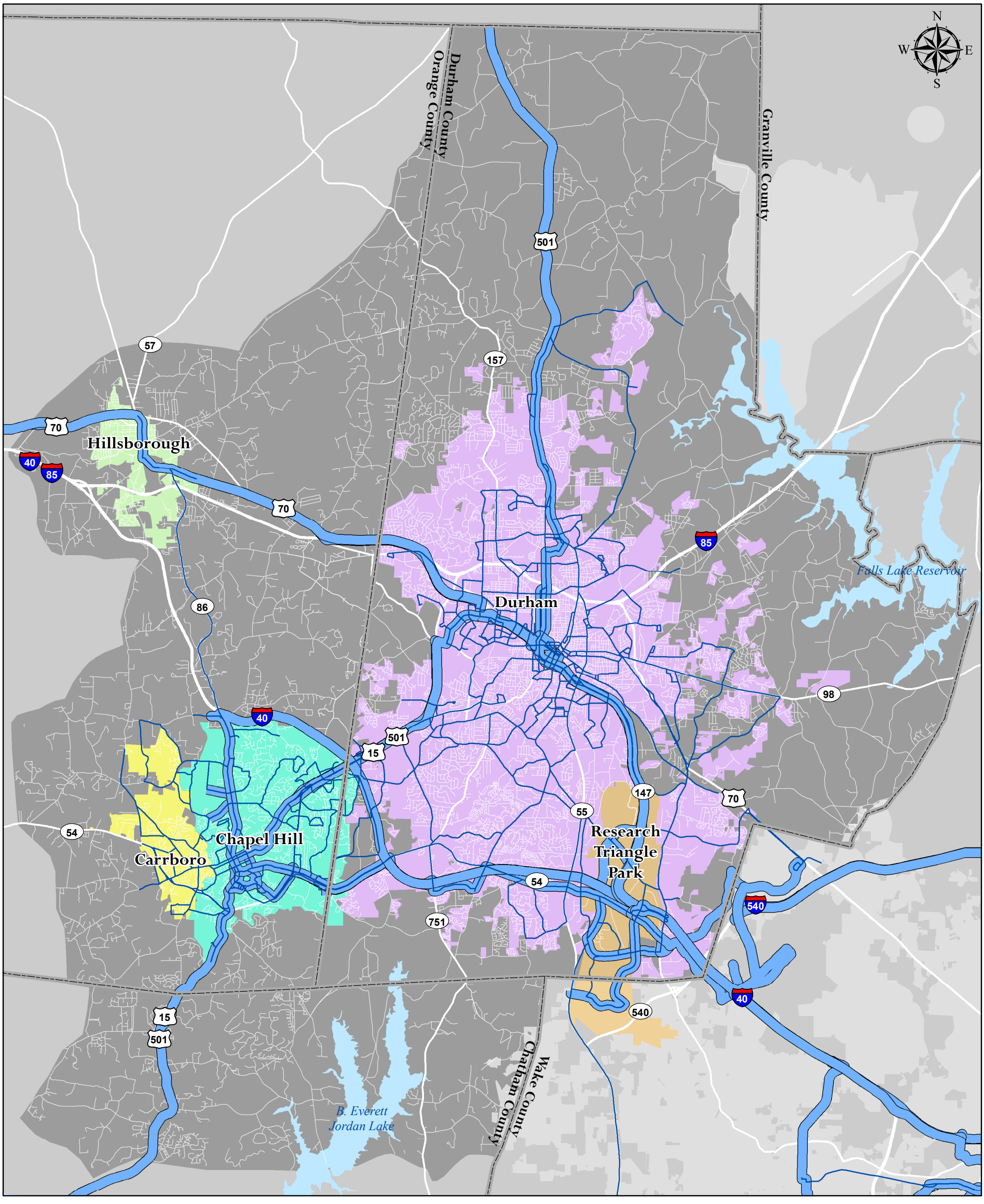
0 1.25 2.5 5 Miles

Durham Chapel Hill Carrboro Metropolitan Planning Organization

Transit Services in Highway Intensive Alternative



Interstates
US and NC Highways
MPO Boundary
County Boundaries

Transit in Highway Intensive Alternative

Local Bus
Express Bus

Carrboro
Chapel Hill
Durham
Hillsborough
Other Municipalities
Research Triangle Park

Transportation Plan 2035

The Louis Berger Group, Inc.
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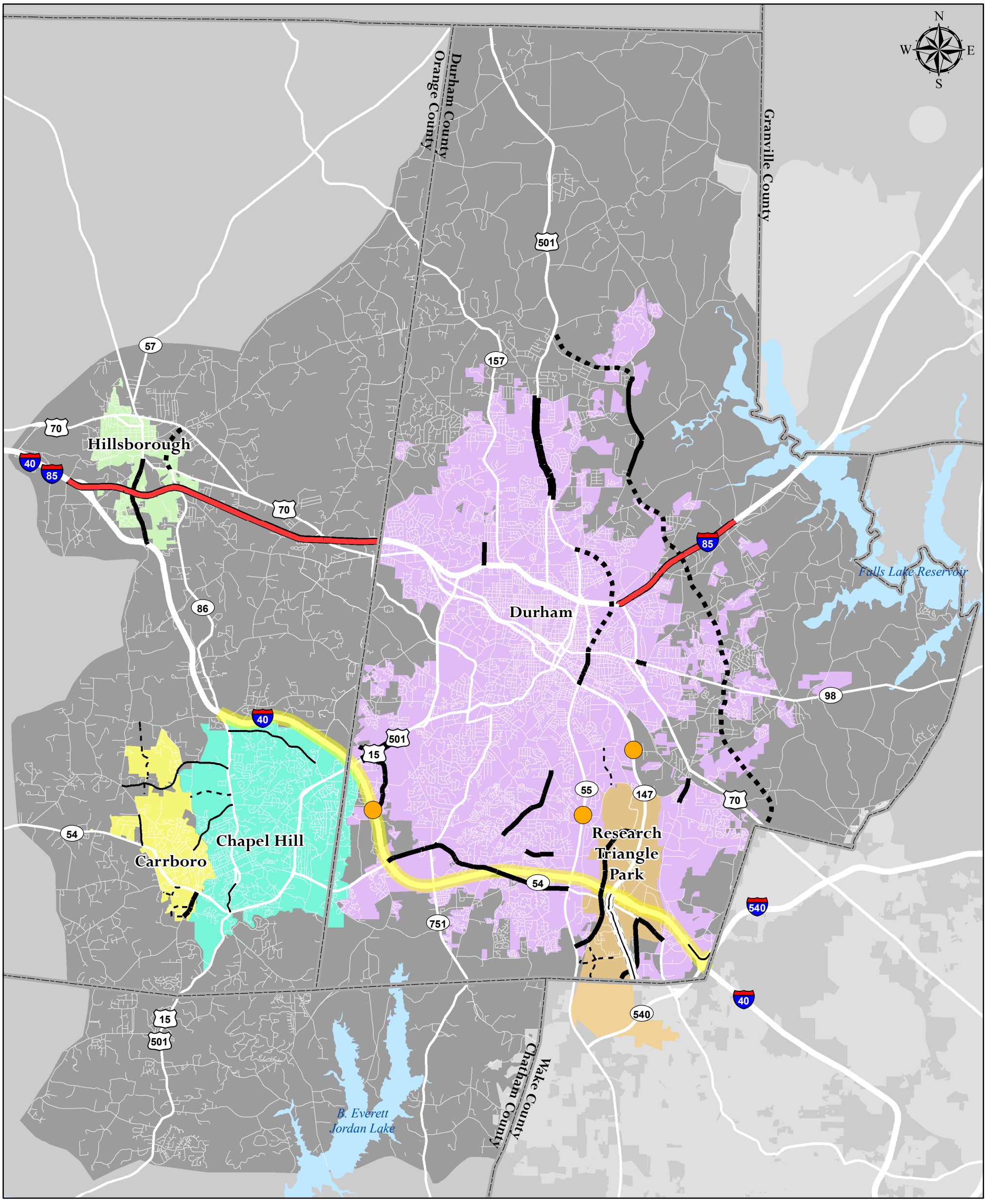
0 1.25 2.5 5 Miles

Durham Chapel Hill Carrboro Metropolitan Planning Organization

Roadway Improvements in Fixed Guideway Alternative



New/Improved Intersections
HOV Projects
Interstates
US and NC Highways

Roadways in Fixed Guideway Alternative

2-3 Lane New Location
2-3 Lane Improvement
4-5 Lane Divided New Location
4-5 Lane Divided Improvement
6-Lane Divided Improvement
Upgrade to Freeway
New Freeway/Expressway
Upgrade Existing Freeway

Carrboro
Chapel Hill
Durham
Hillsborough
Other Municipalities
Research Triangle Park

MPO Boundary
County Boundaries

Transportation Plan 2035

The Louis Berger Group, Inc.
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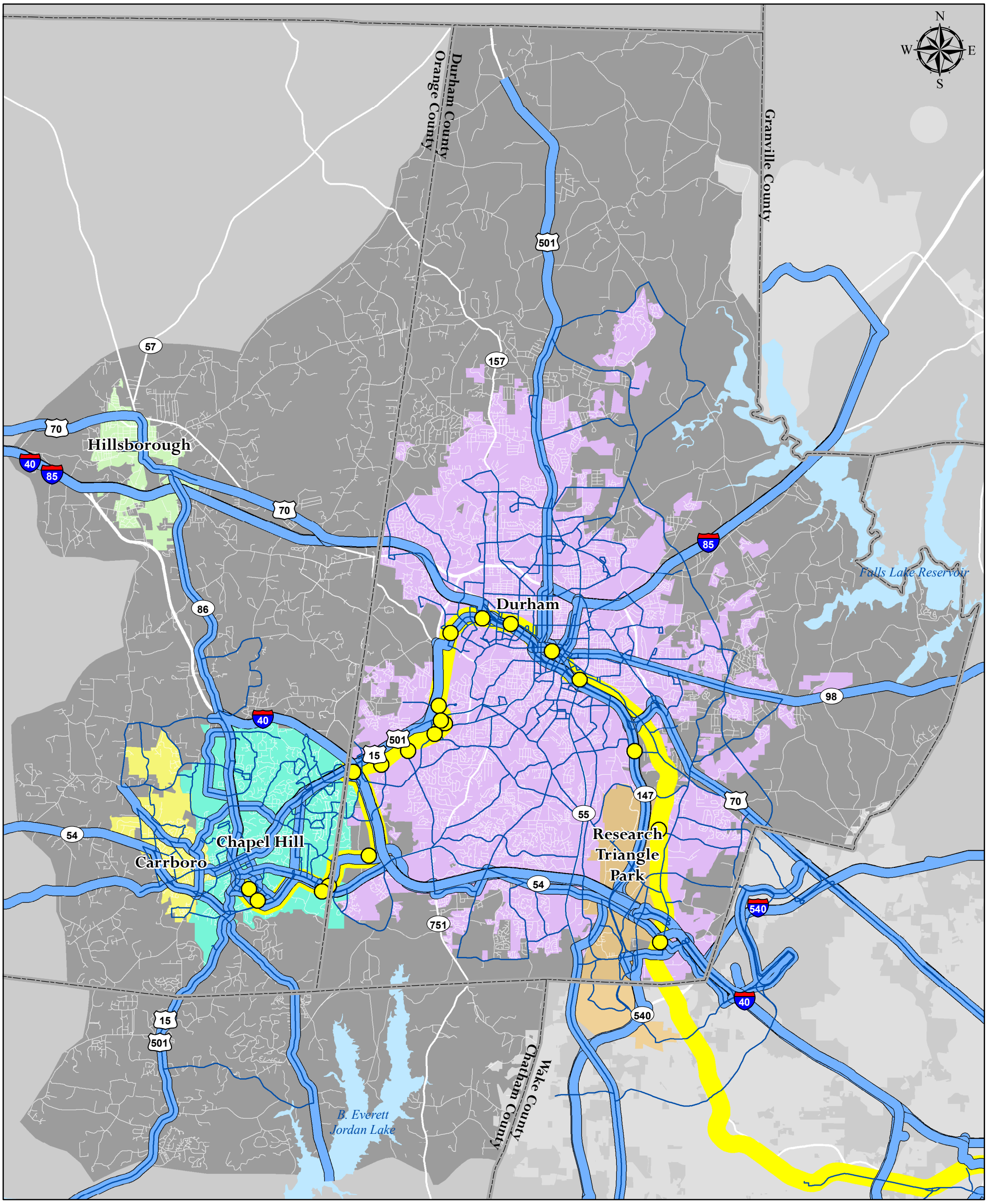
0 1.25 2.5 5 Miles

Durham Chapel Hill Carrboro Metropolitan Planning Organization

Transit Services in Fixed Guideway Alternative



Transit in Fixed Guideway Alternative

- Fixed Guideway Stations
- Interstates
- US and NC Highways
- MPO Boundary
- County Boundaries
- Local Bus
- Express Bus
- Fixed Guideway
- Carrboro
- Chapel Hill
- Durham
- Hillsborough
- Other Municipalities
- Research Triangle Park

Transportation Plan 2035

The Louis Berger Group, Inc.
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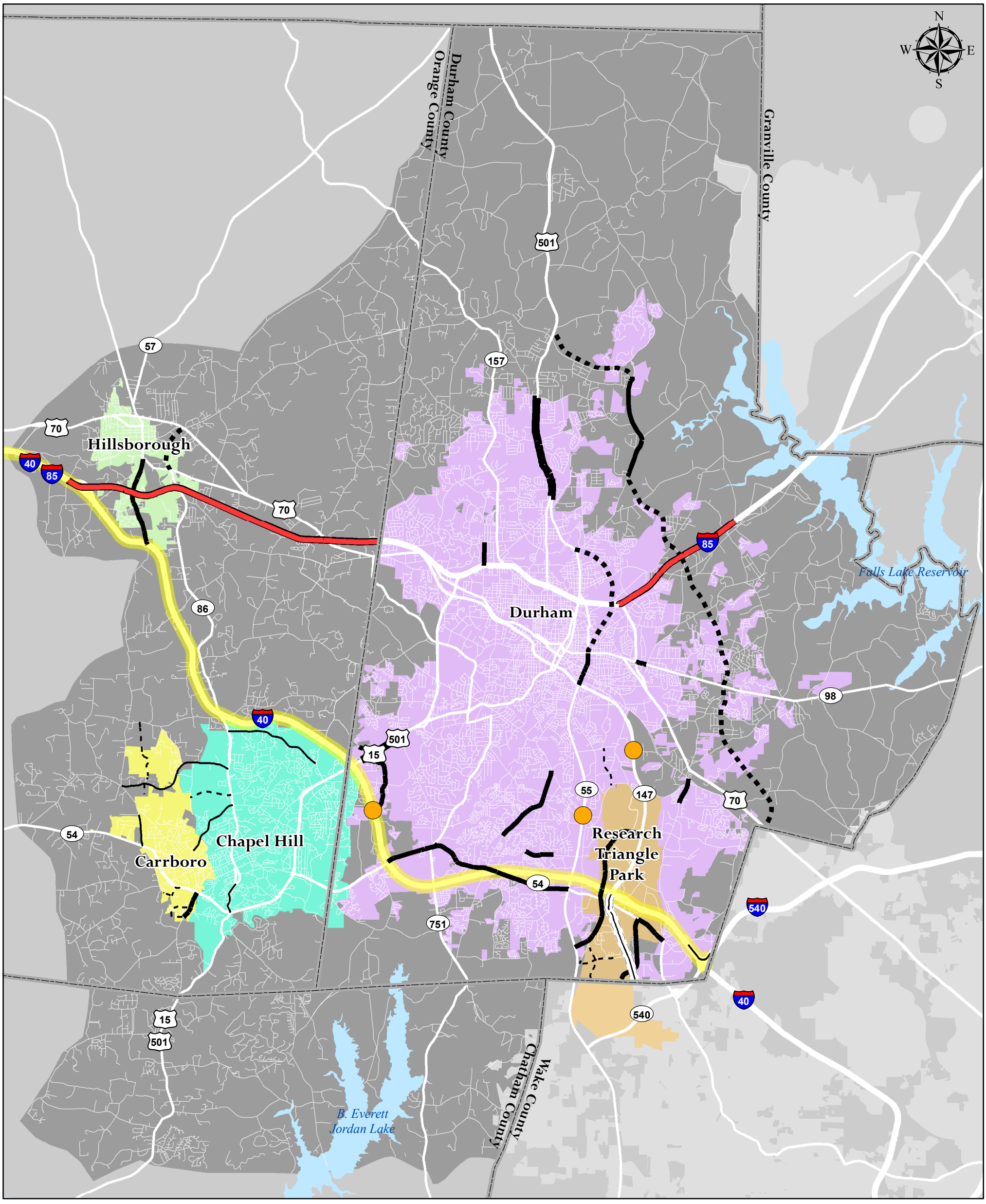
0 1.25 2.5 5 Miles

Durham Chapel Hill Carrboro Metropolitan Planning Organization

Roadway Improvements in Bus Intensive Alternative



New/Improved Intersections
HOV Projects
Interstates
US and NC Highways

Roadways in Bus Intensive Alternative

2-3 Lane New Location
2-3 Lane Improvement
4-5 Lane Divided New Location
4-5 Lane Divided Improvement
6-Lane Divided Improvement
Upgrade to Freeway
New Freeway/Expressway
Upgrade Existing Freeway

Carrboro
Chapel Hill
Durham
Hillsborough
Other Municipalities
Research Triangle Park

MPO Boundary
County Boundaries

Transportation Plan 2035

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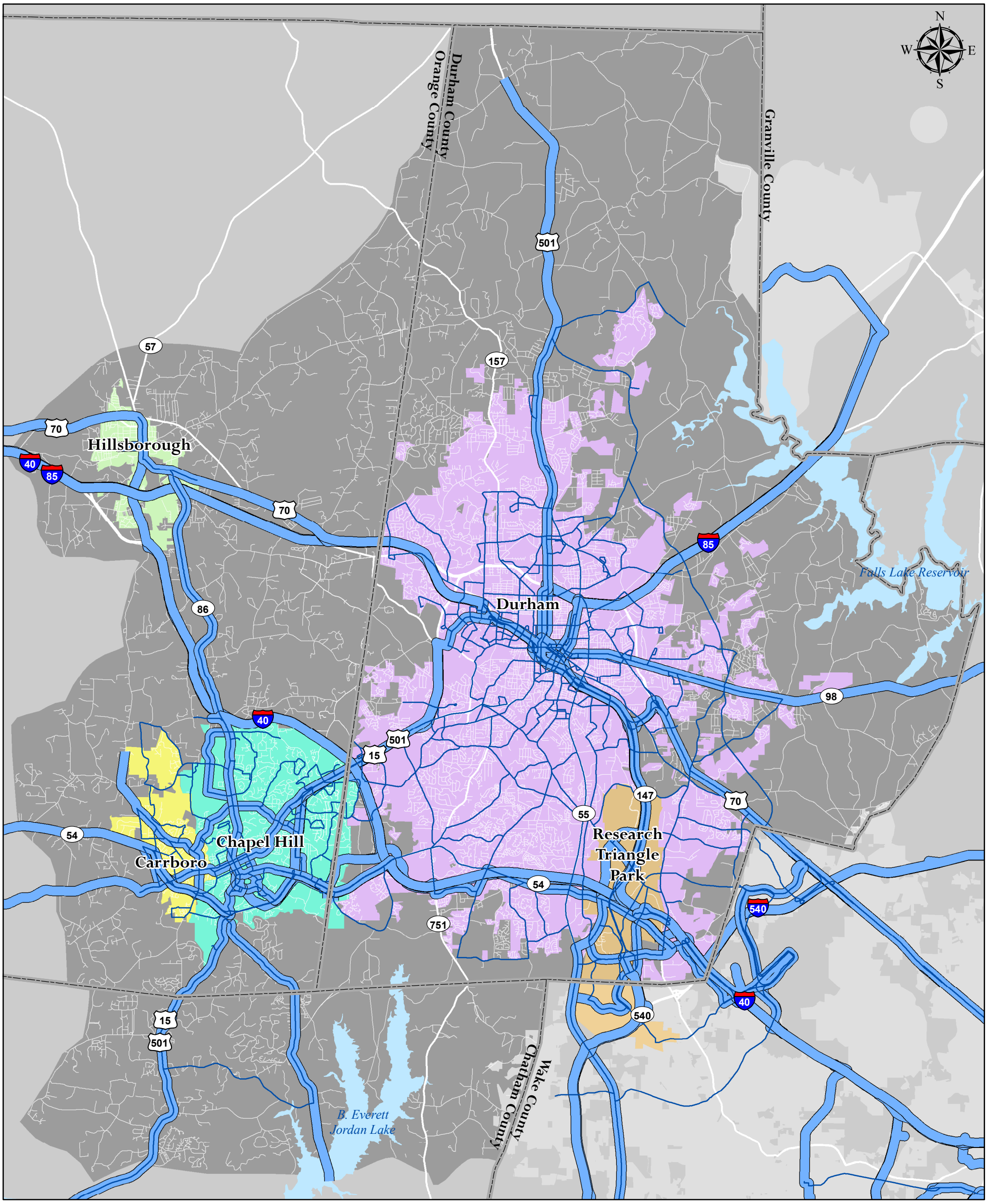
0 1.25 2.5 5 Miles

Durham Chapel Hill Carrboro Metropolitan Planning Organization

Transit Services in Bus Intensive Alternative



Interstates
US and NC Highways
MPO Boundary
County Boundaries

Transit in Bus Intensive Alternative

Local Bus
Express Bus

Carrboro
Chapel Hill
Durham
Hillsborough
Other Municipalities
Research Triangle Park

Transportation Plan 2035

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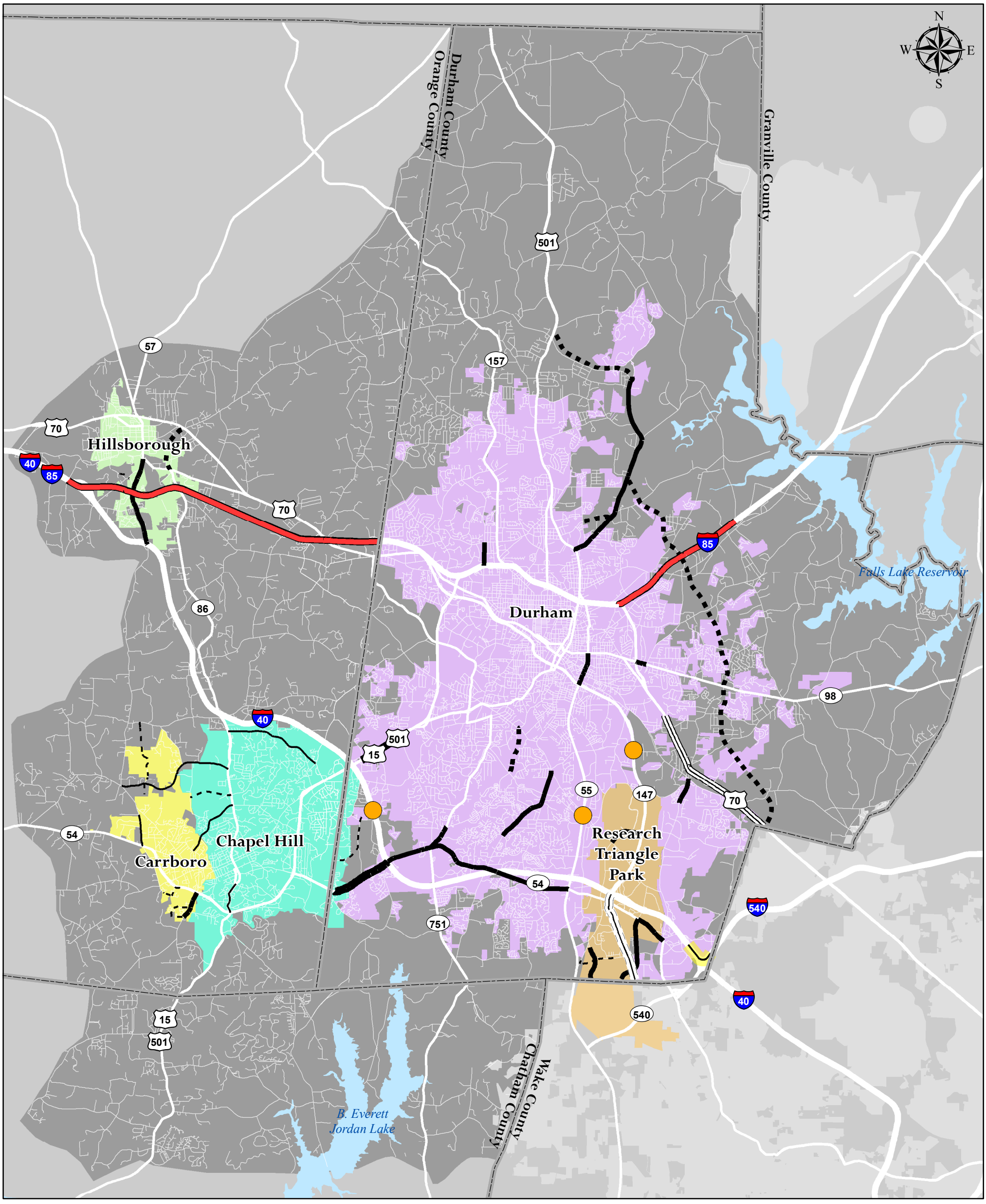
0 1.25 2.5 5 Miles

Durham Chapel Hill Carrboro Metropolitan Planning Organization

Roadway Improvements in Modified Alternative



- New/Improved Intersections
- HOV Projects
- Interstates
- US and NC Highways

Roadways in Modified Alternative

- 2-3 Lane New Location
- 2-3 Lane Improvement
- 4-5 Lane Divided New Location
- 4-5 Lane Divided Improvement
- 6-Lane Divided Improvement
- Upgrade to Freeway
- New Freeway/Expressway
- Upgrade Existing Freeway
- Carrboro
- Chapel Hill
- Durham
- Hillsborough
- Other Municipalities
- Research Triangle Park
- MPO Boundary
- County Boundaries

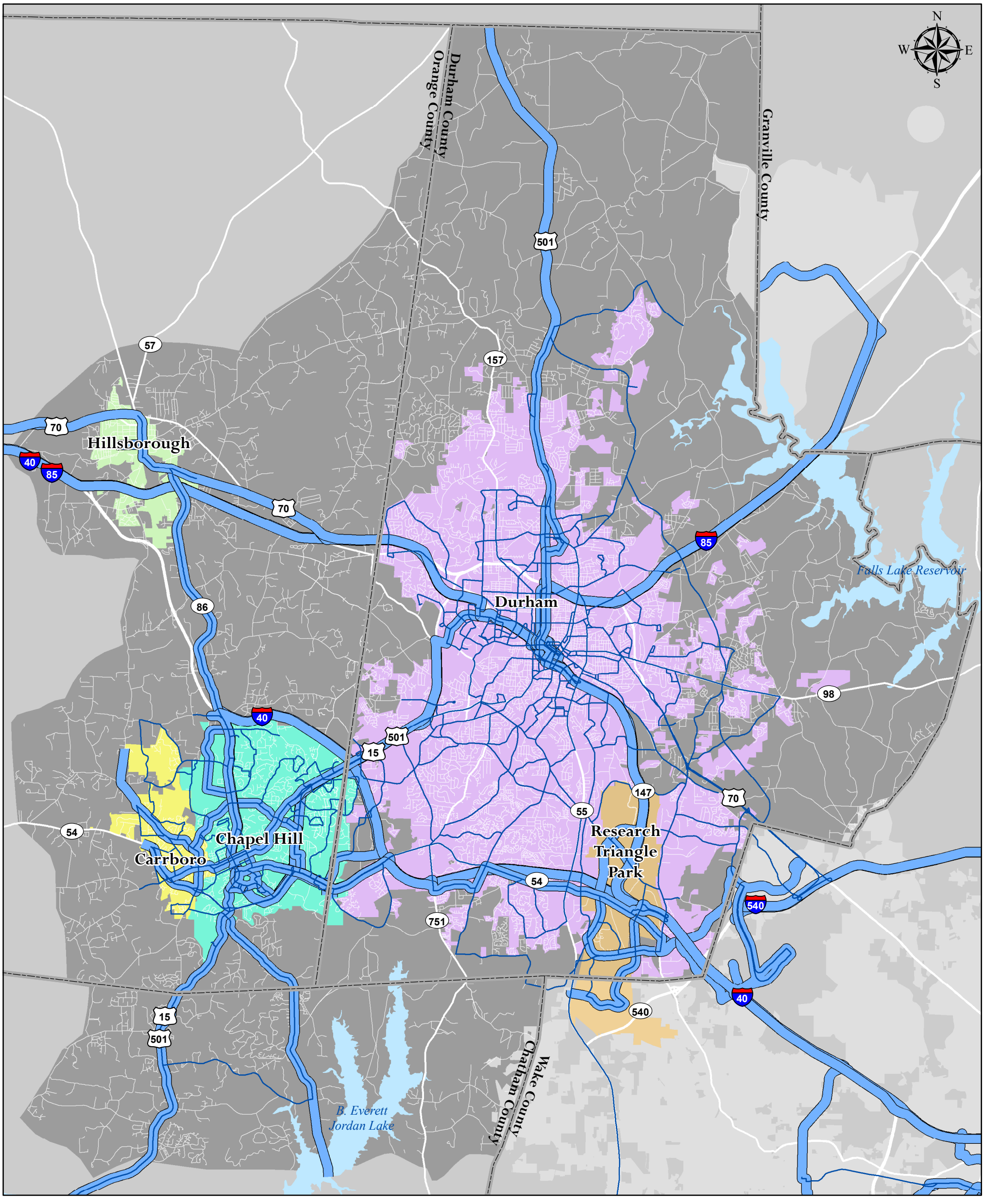
Transportation Plan 2035

The Louis Berger Group, Inc.
8.6.2008

Miles
0 1.25 2.5 5

Durham Chapel Hill Carrboro Metropolitan Planning Organization

Transit Services in Modified Alternative



Transit in Modified Alternative

- Interstates
- US and NC Highways
- MPO Boundary
- County Boundaries
- Local Bus
- Express Bus
- Carrboro
- Chapel Hill
- Durham
- Hillsborough
- Other Municipalities
- Research Triangle Park

Transportation Plan 2035

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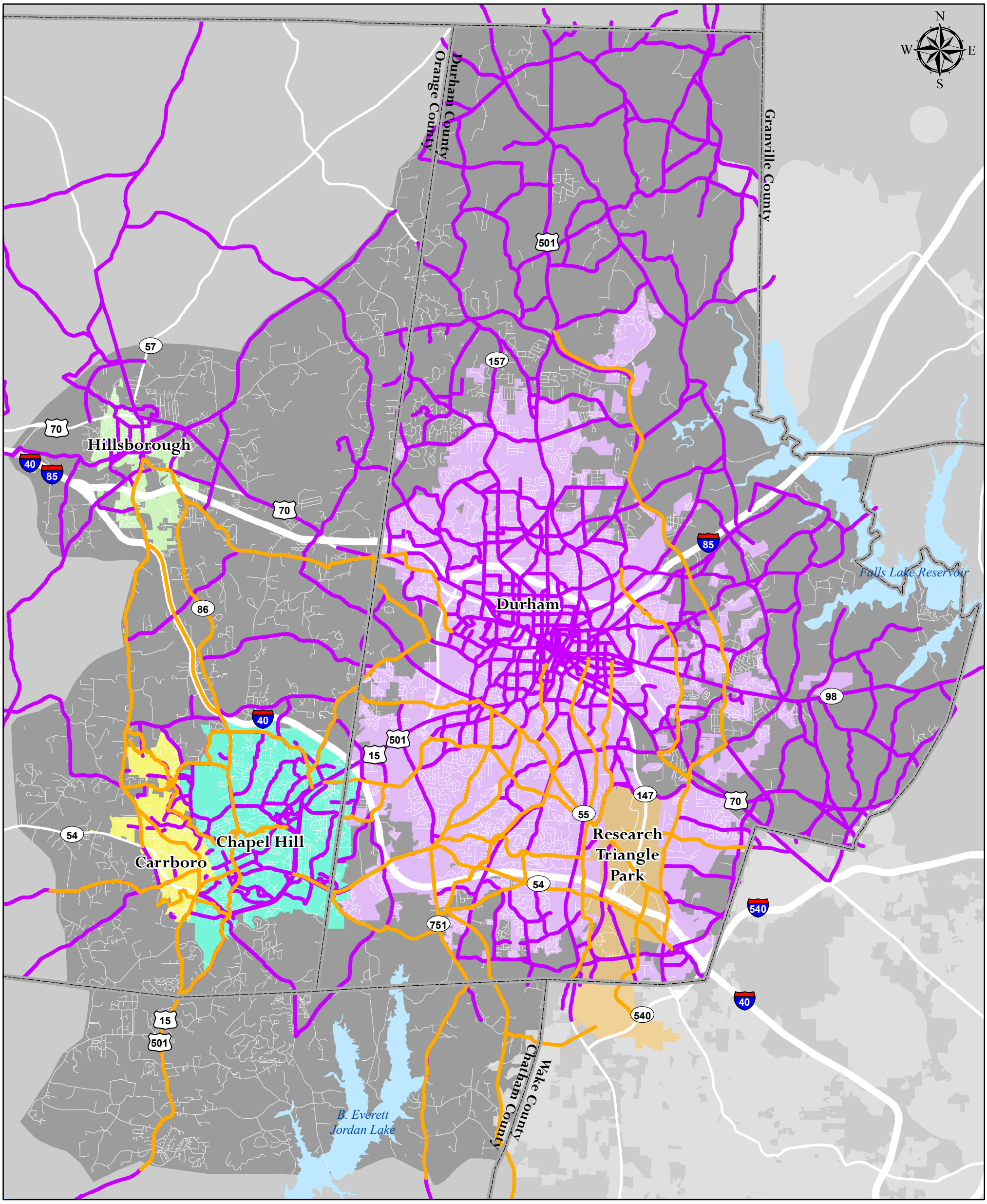
0 1.25 2.5 5 Miles

Durham Chapel Hill Carrboro Metropolitan Planning Organization

On-Road Bicycle Facilities



Interstates
US and NC Highways
MPO Boundary
County Boundaries
Regional Bicycle Facilities
On-Road Bicycle Facilities
Carrboro
Chapel Hill
Durham
Hillsborough
Other Municipalities
Research Triangle Park

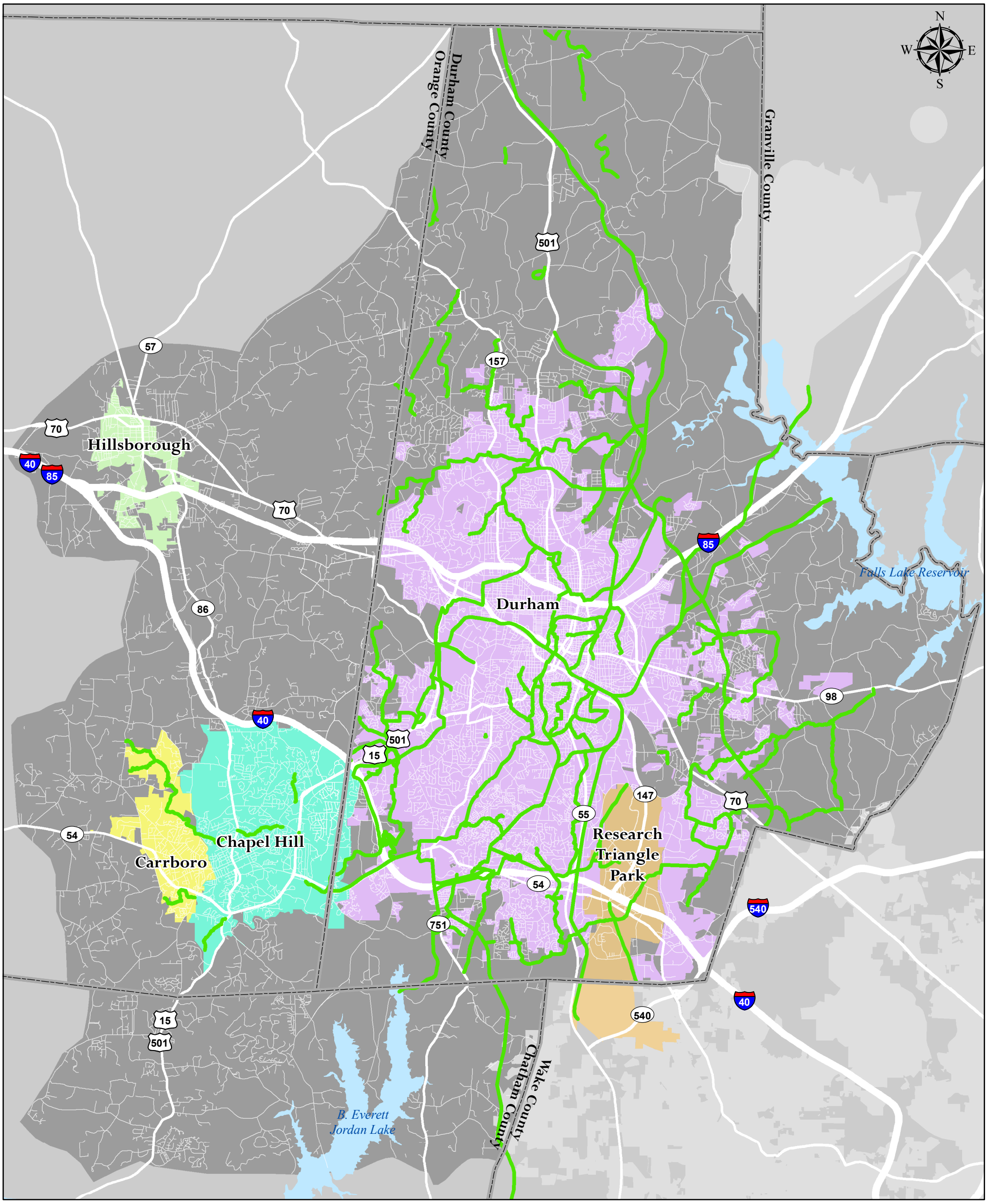
Transportation Plan 2035

The Louis Berger Group, Inc.
8.6.2008

0 1.25 2.5 5 Miles

Durham Chapel Hill Carrboro Metropolitan Planning Organization

Off-Road Bicycle Facilities



- Interstates
- US and NC Highways
- MPO Boundary
- County Boundaries
- Off-Road Bicycle Facilities
- Carrboro
- Chapel Hill
- Durham
- Hillsborough
- Other Municipalities
- Research Triangle Park

Transportation Plan 2035

The Louis Berger Group, Inc.
8.6.2008

0 1.25 2.5 5 Miles

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Tables of Transportation Systems

This section presents one highway project and one transit project table that shows which project are in each of the five proposed transportation systems and in the benchmark systems such as the Existing plus Committed (E+C) and 2030 LRTP (the current long range plan that is to be updated by the 2035 LRTP).

2035 LRTP and CTP

Highway Projects and Alternatives

									Benchmarks			LRTP Alternatives				
Old ID	**New ID**	**Project**	**Project Limits**	**Existing Cross-Section**	**CTP 2040 Proposed Cross-Section**	**TIP No.**	**County**	**Proposed Improvement**	**0--E+C**	**1--2030**	**2--CTP**	**3--Hwy**	**4--FG**	**5--Bus**	**6--Mod**	**7--Pres**
1	1	Alexander Dr	Cornwallis Rd to NC 147	2-lane	4-lane divided	U-3309	Durham	Widening	0	1	1	1	1	1	1	1
2	2	Alexander Dr	NC 147 to Miami Blvd	2-lane	4-lane divided	U-3309	Durham	Widening	1	1	1	1	1	1	1	1
	2.1	Alexander Dr	NC 147 to Miami Blvd	4-lane divided	6-lane divided	U-3310	Durham	Widening	0	0	1	1	0	0	0	0
3	3	Alexander Dr	NC 54 to NC 55	2-lane	4-lane divided		Durham	Widening	0	1	1	1	1	1	0	0
4	4	Alexander Dr	NC 54 to Cornwallis Rd	2-lane	4-lane divided		Durham	Widening	0	1	1	1	1	1	0	0
5	5	Alston Ave Ext	Holloway St to Old Oxford/Roxboro	New	4-lane divided	CIP/ Bond	Durham	New	0	1	1	1	1	1	0	0
	5.1	Anderson St Ext (15th St)	Erwin Rd to Hillsborough Rd. (US 70 Bus)	2-lane	4-lane		Durham	Widening	0	0	1	1	0	0	0	0
	5.2	Barbee Road	E Woodcroft Pkwy to Herndon Rd	2-lane	4-lane		Durham	Widening	0	0	1	1	0	0	0	0
	5.3	Barbee Chapel Road	NC 54 to Farrington Mill Rd.	2-lane	4-lane		Durham	Widening	0	0	1	1	0	0	0	0
6	6	Berryhill/Old Fayetteville Conn.	Old Fayetteville Rd to NC 54 Bypass	New	2-lane	Private	Orange	New	1	1	1	1	1	1	1	1
7	7	BPW Club/Rock Haven Conn.	Loop at Smith Level Road	New	2-lane	Private	Orange	New	1	1	1	1	1	1	1	1
	7.1	Briggs Ave Ext	Lawson-NE Creek Pkway	2-lane	4-lane divided		Durham	Widening	0	0	1	1	0	0	0	0
8	8	Briggs Ave Ext	So-Hi Dr to Riddle Rd	New	*4-lane*	U-2831	Durham	New	0	1	1	1	1	1	0	0
	8.1	Burton Road Ext	Burton Rd to Red Mill Rd/I-85	new	2-lane		Durham	New	0	0	1	1	0	0	0	0
	8.2	Carpenter Fletcher	Woodcroft Pkwy ext to NC 55	2 lane	4-lane divided		Durham	Widening	0	0	1	1	0	0	0	0
9	9	Carver Street Ext	Armfield St to Old Oxford Rd	New	4-lane divided		Durham	New	0	1	1	1	0	0	1	1
10	10	Chin Page Ext.	Page Rd to Wake County Line	New	4-lane		Durham	New	0	1	1	1	0	0	0	0
11	11	Churton Connector	Old NC 86 to NC 86 (Between I-85 & I-40)	New	4-lane divided		Orange	New	1	1	1	1	1	1	1	1
	11.1	Club Blvd	Washington to Roxboro	2-lane	4-lane divided		Durham	Widening	0	0	1	1	0	0	0	0
	11.2	Club Blvd	Roxboro to Geer St	2-lane	4-lane divided		Durham	Widening	0	0	1	1	0	0	0	0
12	12	Cornwallis Rd	MLK to Alexander Dr	2-lane	4-lane divided		Durham	Widening	0	1	1	1	0	0	0	0
13	13	Cornwallis Rd Ext	Miami Blvd to Chin Page Rd	New	4-lane divided		Durham	New	0	1	1	1	0	0	0	0
14	14	Davis Dr	NC 54 to County Line	2-lane	4-lane divided	U-4026	Durham	Widening	1	1	1	1	1	1	1	1
	14.1	Duke Street (North)	I-85 to N Roxboro split	4-lane	*6-lane*		Durham	Widening	0	0	1	1	0	0	0	0
15	15	East End Connector (EEC)	NC 147 to US 70 E; US 70:EEC to NC 98	New	4-lane freeway	U-71	Durham	New	0	1	1	1	1	1	1	1
	15.1	East End Connector (EEC) HOV	NC 147 to US 70 E; US 70:EEC to NC 99	6-lane freeway	6-lane HOV freeway	U-72	Durham	Widening	0	0	1	1	0	0	0	0
16	16	Elizabeth Brady Rd Ext	US 70 Business to St Mary's Rd	New	4-lane divided	U-3808	Orange	New	0	1	1	1	1	1	1	1
	16.1	Eno Mountain Rd./Mayo Rd.	Orange Grove Rd. intersection	2-lane	2-lane	U-3436	Orange	Realignment	0	0	1	1	0	0	1	1
17	17	Estes Dr	Greensboro Rd to NC 86	2-lane	3-lane	U-2909	Orange	Widening	0	1	1	1	1	1	1	1
18	18	FarmHouse/Tramore Conn.	Old NC 86 to Stratford Drive	New	2-lane	Private	Orange	New	0	1	1	1	0	0	0	0
19	19	Farrington Mill Rd	Jack Bennett Rd to Durham Co line	2-lane	4-lane divided		Durham	Widening	0	0	1	1	0	0	0	0
20	20	Farrington Mill Rd	Barbee Chapel Rd to Chatham Co. line	2-lane	4-lane divided		Durham	Widening	0	0	1	1	0	0	0	0

1 = In Alternative 0 = Not in Alternative Shaded Project Name = New Project (not in 2030 LRTP)

2035 LRTP and CTP

Highway Projects and Alternatives

									Benchmarks			LRTP Alternatives				
Old ID	**New ID**	**Project**	**Project Limits**	**Existing Cross-Section**	**CTP 2040 Proposed Cross-Section**	**TIP No.**	**County**	**Proposed Improvement**	**0--E+C**	**1--2030**	**2--CTP**	**3--Hwy**	**4--FG**	**5--Bus**	**6--Mod**	**7--Pres**
21	21	Farrington Rd	Barbee Chapel Rd to Stagecoach Rd	2-lane	4-lane divided		Durham		0	0	1	1	0	0	0	0
22	22	Fayetteville Rd	Woodcroft Pkwy to Renaissance Pkwy	2-lane	4-lane divided	CIP/ Bond	Durham	Widening	1	1	1	1	1	1	1	1
	22.1	Fayetteville Rd	Renaissance Pkwy to NC 751	2-lane	4-lane divided		Durham	Widening	1	1	1	1	0	0	0	0
23	23	Fayetteville Rd	Woodcroft Pkwy to Cornwallis Rd	2-lane	4-lane divided		Durham	Widening	0	1	1	1	1	1	1	1
24	24	Garrett Rd	NC 751 to US 15-501	2-lane	4-lane divided		Durham	Widening	0	1	1	1	0	0	0	0
	25	Garrett Rd/Chapel Hill Rd.	Garrett Rd/Chapel Hill Rd.	Intersection	4-lane	U-3105	Durham	Widening	0	0	1	1	1	1	1	1
	25.1	Geer Street	Club Blvd to Cheek	2-lane	4-lane		Durham	Widening	0	0	1	1	0	0	0	0
26	26	Globe St Ext. (Brier Creek Pkway)	Miami Blvd. To Wake County Line	New	4-lane		Durham	New	0	1	1	1	0	0	0	0
27	27	Glover Rd	Glover Rd/NC 147 interchange; 147 to Angier	2-lane	Interchg/4-lane divided		Durham	Widen/interchg	0	1	1	1	0	0	0	0
28	28	Glover Rd	Angier to US 70	New	4-lane divided		Durham	New	0	1	1	1	0	0	0	0
29	29	Guess Rd	Carver St to Umstead Rd	2-lane	5-lane/4-lane divided	U-2102	Durham	Widening	1	1	1	1	1	1	1	1
	29.1	Hamlin Road Ext	Glenn Rd to Red Mill Rd	new	2-lane		Durham	New	0	0	1	1	0	0	0	0
	29.2	Herndon Rd	Scott King to Barbee Rd/Massey Chapel	2-lane	4-lane divided		Durham	Widening	0	0	1	1	0	0	0	0
30	30	Hillandale Rd	I-85 to Carver St.	2-lane	4-lane divided	U-3804	Durham	Widening	1	1	1	1	1	1	1	1
31	31	Hillandale Rd	Carver to Horton Rd	2-lane	4-lane divided		Durham	Widening	0	1	1	1	0	0	0	0
32	32	Hillandale Rd Ext	Horton Rd to Guess Rd	New	4-lane divided		Durham	New	0	1	1	1	0	0	0	0
33	33	Hillsborough Rd/Old Fayetteville	Lorraine St to Old Fayetteville/NC 54	2-lane	2-lane (36-ft curb/gutter)	U-3100	Orange	Widening	0	1	1	1	1	1	1	1
34	34	Holloway Street	US 70 to east of Junction Rd	2-lane	5-lane	U-4010	Durham	Widening	1	1	1	1	1	1	1	1
35	35	Homestead Rd	High School Rd to NC 86	2-lane	3-lane	U-2805	Orange	Widening	0	1	1	1	1	1	1	1
36	36	Homestead Rd	Old NC 86 to High School Rd	2-lane	3-lane		Orange	Widening	0	1	1	1	1	1	1	1
37	37	Hopson Rd. realignment (RTP)	Louis Stephens Dr to NC 55	2-lane	2-lane	U-4410	Durham	Realignment	1	1	1	1	1	1	1	1
39	39	Horton Rd	Duke St to Hillandale Rd	2-lane	4-lane divided		Durham	Widening	0	1	1	1	0	0	0	0
40	40	(Horace Williams Network) Carolina North	Carolina North Campus (this is not an extension of Weaver Dairy Rd.)	New	2-lane		Orange	New	0	1	1	1	1	1	1	1
	41	I-40/Farrington Rd interchange	I-40/Farrington Interchange	New	Interchange		Durham	New	0	0	1	1	0	0	0	0
42	42	I-40	US 15-501 to NC 147	4-lane freeway	6-lane freeway	I-3306	Durham	Widening	1	1	1	1	1	1	1	1
43	43	I-40	US 15-501 to NC 86	4-lane freeway	6-lane freeway	I-3307	Orange	Widening	0	1	1	1	0	0	0	0
44	44	I-40	NC 86 to I-85	4-lane freeway	6-lane freeway	I-3306	Orange	Widening	0	1	1	1	0	0	0	0
45	45	I-40 HOV	Wake County Line to NC 86	New	HOV/HOT lane		Durham	New	0	1	1	1	1	1	0	0

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2035 LRTP and CTP

Highway Projects and Alternatives

									Benchmarks			LRTP Alternatives				
Old ID	**New ID**	**Project**	**Project Limits**	**Existing Cross-Section**	**CTP 2040 Proposed Cross-Section**	**TIP No.**	**County**	**Proposed Improvement**	**0--E+C**	**1--2030**	**2--CTP**	**3--Hwy**	**4--FG**	**5--Bus**	**6--Mod**	**7--Pres**
	45.1	I-40 HOV	NC 86 to I-85/Orange County Line	New	HOV/HOT lane		Orange	New	0	0	1	1	0	1	0	0
46	46	I-540	Ramp improvement: I-540 W to I-40 W	1-lane ramp	*2-lane ramp*	R-2000	Durham	Widening	0	1	1	1	1	1	1	1
47	47	I-85	US 15-501 Bypass N to US 70	4-lane freeway	8-lane freeway	I-306	Durham	Widening	1	1	1	1	1	1	1	1
48	48	I-85	I-40 to the Durham Co line	4-lane freeway	*6-lane freeway*	I-305	Orange	Widening	0	1	1	1	1	1	1	1
	48.1	I-85 HOV	I-40 to the Durham Co line	6-lane freeway	*8-lane HOV freeway*		Orange	Widening	0	0	1	0	0	0	0	0
49	49	I-85	US 70 to Red Mill Rd.	4-lane freeway	*6-lane freeway*	I-4743	Durham	Widening	0	1	1	1	1	1	1	1
	49.1	I-85 HOV	US 70 to Red Mill Rd.	6-lane freeway	*8-lane HOV freeway*		Durham	Widening	0	1	1	1	0	0	0	0
50	50	Infinity Rd	Roxboro Rd to Snow Hill Rd	2-lane	4-lane divided		Durham	Widening	0	1	1	1	0	0	0	0
	50.1	Jack Bennet Rd/Lystra Rd.	US 15-5501 South to Farrington Mill/Point Rd	2-lane	4-lane divided		Chatham	Widening	0	0	1	1	0	0	0	0
	50.2	Kemp Road (SR 1902)	SR 1809 to Olive Branch	New	2-lane		Durham	New	0	0	1	1	0	0	0	0
51	51	Lake Hogan Farms Rd	Eubanks Road to Homestead Rd.	New	2-lane	Private	Orange	New	0	1	1	1	1	1	1	1
52	52	Latta Rd	Guess Rd to Roxboro Rd	2-lane	4-lane divided		Durham	Widening	0	1	1	1	0	0	0	0
53	53	Leesville Rd Ext	Northern Parkway to US 70/Page Rd.	New	*4-lane*		Durham	New	0	1	1	1	0	0	0	0
54	54	Leesville Rd Realignment	East of Olive Branch Rd to County line	2-lane	*4-lane*		Durham	Realignment	0	1	1	1	0	0	0	0
	54.1	Leesville Rd	US 70 to Panoramic Dr	New	*2-lane*		Durham	New	0	0	1	1	0	0	0	0
55	56	Louis Stephens Drive (RTP)	Hopson Rd to County Line	New	2-lane		Durham	New	0	1	1	1	1	1	1	1
56	56.1	Louis Stephens Drive (RTP)	Hopson Rd to County Line	2-lane	*4-lane*		Durham	Widening	0	0	1	1	0	0	1	1
57	57	Lynn Rd. Ext	NC 98/Glover Rd Ext to Existing Lynn Rd.	New	2-lane		Durham	New	0	1	1	1	0	0	0	0
	57.1	Massey Chapel Rd	Fayetteville Rd. to Herndon Rd	2-lane	4-lane		Durham		0	0	1	1	0	0	0	0
58	58	Mason Farm Rd Realignment	Near S Columbia St	2-lane	2-lane		Orange	Realignment	0	1	1	1	0	0	0	0
59	59	Miami Blvd.	Methodist Dr to Angier Ave	2-lane	5-lane	U-4011	Durham	Widening	1	1	1	1	1	1	1	1
60	60	Midland Terrace	NC 98 to Geer St	New	2-lane		Durham	New	0	1	1	1	0	0	0	0
61	61	Midland Terrace	Dearborn to Old Oxford Rd/Hamlin Junction	New	2-lane		Durham	New	0	1	1	1	0	0	0	0
62	62	MLK Parkway	Old Chapel Hill Rd to NC 55	2-lane/new	4-lane divided	CIP/ Bond	Durham	New	1	1	1	1	1	1	1	1
63	63	MLK Pkwy (NC 55 interchange)	NC 55 to Cornwallis Rd connector	New	4-lane divided	U-2405	Durham	New	0	1	1	1	0	0	0	0

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2035 LRTP and CTP

Highway Projects and Alternatives

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Old ID	**New ID**	**Project**	**Project Limits**	**Existing Cross-Section**	**CTP 2040 Proposed Cross-Section**	**TIP No.**	**County**	**Proposed Improvement**	**0--E+C**	**1--2030**	**2--CTP**	**3--Hwy**	**4--FG**	**5--Bus**	**6--Mod**	**7--Pres**
64	64	NC 147 HOV	Alston Ave to East End Conn	4-lane freeway	*6-lane HOV freeway*		Durham	Widening	0	1	1	1	0	0	0	0
	64.1	NC 147 HOV	Alston Ave to I-85	4-lane freeway	*6-lane HOV freeway*		Durham	Widening	0	0	1	1	0	0	0	0
65	65	NC 147 HOV	East End Conn to I-40	4-lane freeway	*6-lane HOV freeway*		Durham	Widening	0	1	1	1	0	0	0	0
66	66	NC 147 South Ext (Triangle Pkwy -toll)	I-40 to County Line	New	6-lane freeway		Durham	New	0	1	1	1	1	1	1	1
67	67	NC 54	Burning Tree to Barbee Chapel	4-lane	6-lane divided	Private	Durham	Widening	1	1	1	1	1	1	1	1
68	68	NC 54	Miami Blvd to Wake Co line	2-lane	4-lane divided		Durham	Widening	1	1	1	1	1	1	1	1
69	69	NC 54	I-40 Interchange to NC 55	2-lane	4-lane divided		Durham	Widening	0	1	1	1	1	1	1	1
70	70	NC 54	I-40 to Barbee Chapel Rd	4-lane	6-lane divided		Durham	Widening	0	1	1	1	0	0	1	1
71	71	NC 54/NC 751/Garrett Rd	NC 751/Garrett to NC 54	Intersection	Upgrade		Durham	Upgrade	1	1	1	1	1	1	1	1
72	72	NC 54/Page Rd	Davis Dr to Miami Blvd	2-lane	4-lane divided	R-2904	Durham	Widening	1	1	1	1	1	1	1	1
73	73	NC 54/US 15-501 Bypass	NC 54 to US 15-501	4-lane	6-lane divided		Orange	Widening	0	1	1	1	0	0	0	0
74	74	NC 55	Cornwallis Rd to Wake Co.	2-lane	4-lane divided	R-2906	Durham	Widening	1	1	1	1	1	1	1	1
75	75	NC 55 (Alston Ave.)	NC 147 to NC 98	2-lane	4-lane divided	U-3308	Durham	Widening	1	1	1	1	1	1	1	1
76	76	NC 751	US 64 (MAB) to Durham Co. line	2-lane	4-lane divided		Chatham	Widening	0	1	1	1	0	0	0	0
77	77.1	NC 751	S Roxboro St to NC 54	2-lane	4-lane divided		Durham	Widening	0	1	1	1	0	0	1	1
77	77.2	NC 751	NC 54 to Renaissance Pkwy	2-lane	4-lane divided		Durham	Widening	0	1	1	1	0	0	0	0
77	77.3	NC 751	Renaissance Pkwy to Fayetteville/Scott King Rd	2-lane	4-lane divided		Durham	Widening	0	1	1	1	0	0	0	0
78	78	NC 751	Chatham Co. Line to Fayetteville/Scott King Rd	2-lane	4-lane divided		Durham		0	1	1	1	0	0	0	0
80	80	NC 86	Old NC 10 to US 70 Business	2-lane	4-lane divided		Orange	Widening	0	1	1	1	0	0	0	0
81	81	NC 86	US 70 Bypass to NC 57	2-lane	4-lane divided		Orange	Widening	0	1	1	1	0	0	0	0
	81.1	NC 98 (Holloway St)	Wake County Line to Mineral Springs	2-lane	4-lane		Durham	Widening	0	0	1	1	0	0	0	0
83	83	Northern Durham Pkwy	US 70 E to I 85 N	New	4-lane divided	U-4721[A]	Durham	New	0	1	1	1	1	1	1	1
84	84	Northern Durham Pkwy	I 85 North to Old Oxford Hwy	New	4-lane divided	U-4721[B]	Durham	New	0	1	1	1	1	1	1	1
85	85	Northern Durham Pkwy	Old Oxford Hwy to Roxboro Rd	New	*4-lane divided*	U-4721 [C]	Durham	New	0	1	1	1	1	1	1	1
	85.1	Oakdale Rd.	Old NC 85 to Old NC 86	New	*2-lane*		Orange		0	0	1	1	0	0	0	0
	85.2	O'kelly Chapel Rd.	NC 751 to Wake Co. line	2-lane	4-lane divided		Chatham	Widening	0	0	1	1	0	0	0	0
86	86	Old NC 86	I-40 to Lafayette Dr.	2-lane	4-lane divided	R-2825	Orange	Widening	0	1	1	1	1	1	1	1
87	87	Old NC 86	Lafayette Dr to US 70 Business	2-lane	4-lane divided	R-2825	Orange	Widening	0	1	1	1	1	1	1	1
88	88	Old Oxford Rd	Roxboro Rd to Snow Hill Rd	2-lane	4-lane divided		Durham	Widening	0	1	1	1	0	0	1	1
89	89	Olive Branch Rd Ext	NC 98 to US 70	New	2-lane		Durham	New	0	1	1	1	0	0	0	0
	89.1	Orange Factory Road	Snow Hill to Orange Factory	New	2-lane		Durham	New	0	0	1	1	0	0	0	0
	89.2	Orange Factory Road	Treyburn to Staggsville Connector	New	2-lane		Durham	New	0	0	1	1	0	0	0	0

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2035 LRTP and CTP

Highway Projects and Alternatives

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Old ID	**New ID**	**Project**	**Project Limits**	**Existing Cross-Section**	**CTP 2040 Proposed Cross-Section**	**TIP No.**	**County**	**Proposed Improvement**	**0--E+C**	**1--2030**	**2--CTP**	**3--Hwy**	**4--FG**	**5--Bus**	**6--Mod**	**7--Pres**
90	90	Page Rd	I-40 to Page Rd Ext	2-lane	4-lane divided		Durham	Widening	0	1	1	1	0	0	0	0
91	91	Riddle Rd. Extension	Briggs Ave. to NC 147	New	2-lane		Durham	New	0	1	1	1	0	0	0	0
	91.1	Riddle Rd. Extension	Cornwallis to NC 55	New	2-lane		Durham	New	0	0	1	1	0	0	0	0
92	92	Roxboro Road (501N)	Duke Street to Goodwin Rd	4-lane divided	6-lane divided	U-4722	Durham	Widening	0	1	1	1	1	1	0	0
93	93	Roxboro St Ext	Hope Valley Farms to MLK Pkwy	2-lane	4-lane divided	Private	Durham	Widening	1	1	1	1	1	1	1	1
94	94	Roxboro St	Cornwallis Rd to MLK Pkwy	2-lane	4-lane divided		Durham	New	0	1	1	1	0	0	1	1
	94.1	Roxboro St South	Summit to E. Lakewood	2-lane	4-lane divided		Durham	Widening	0	0	1	1	0	0	0	0
95	95	Scott King Rd	Grandale Dr to Hopson Rd	New	4-lane divided		Durham	New	0	1	1	1	0	0	0	0
	95.1	Scott King Rd	Grandale Dr to Fayetteville Rd	2-lane	4-lane divided		Durham	Widening	0	0	1	1	0	0	0	0
96	96	Seawell School Connector	Lake Hogan Farms Rd to Seawell School Rd	New	2-lane	Private	Orange	New	0	1	1	1	0	0	0	0
	96.1	Sherron Rd.	Us 70 to NC 98	2-lane	4-lane divided		Durham	Widening	0	0	1	1	0	0	0	0
97	97	Smith Level Rd	Rock Haven Rd to NC 54 bypass	2-lane	Multilanes	U-2803	Orange	Widening	0	1	1	1	1	1	1	1
	97.1	Snow Hill Rd (SR 1631)	Infinity Rd to Old Oxford Ext	new	2-lane		Durham	New	0	0	1	1	0	0	0	0
98	98	South Columbia St	NC 54 to Manning Dr.	2-lane	turn lanes/bike facilities	U-624	Orange	Widening	0	1	1	1	1	1	1	1
100	100	Stadium Drive Ext	Shaftsbury Dr to Kirkwood Dr	2-lane	3-lane curb & gutter	CIP/ Bond	Durham	Widening	1	1	1	1	1	1	1	1
101	101	Stagecoach Rd	Farrington Mill Rd to NC 751	2-lane	4-lane divided		Durham	Widening	0	0	1	1	0	0	0	0
	101.1	Staggville Rd (SR 1615)	SR 1619 to SR 1626	New	2-lane		Durham	New	0	0	1	1	0	0	0	0
102	102	SW Durham Dr	Meadowmont Dr to I-40	New	*2-lane divided*	Private /Public	Durham	New	0	1	1	1	0	0	1	1
103	103	SW Durham Pkwy	Farrington Rd (I-40 to Old Chapel Hill Rd)	2-lane	*4-lane divided*		Durham	Widening	0	1	1	1	1	1	0	0
104	104	SW Durham Pkwy	Watkins Rd (Old Chapel Hill Rd to US 15-501	2-lane	4-lane divided	Private /Public	Durham	Widening	0	1	1	1	1	1	0	0
105	105	SW Durham Pkwy	NC 54 to Rizzo Conf. Driveway	New	4-lane divided	Private	Durham	New	1	1	1	1	1	1	1	1
106	106	SW Durham Pkwy	15-501 to Mt. Moriah Rd.	New	4-lane divided	Private	Durham	New	0	1	1	1	1	1	0	0
	106.1	T. W. Alexander Dr	Miami Blvd to US 70	4-lane divided	6-lane divided	Private/Public	Durham	Widening	0	0	1	1	0	0	0	0
107	107	T. W. Alexander Dr Ext	US 70 to Carpenter Ponds (Durham Portion)	New	4-lane divided	Private/Public	Durham	New	0	1	1	1	0	0	0	0
108	108	UNC Access to the Bypass	Manning Dr to 54/15-501 Bypass	New	4-lane divided		Orange	New	0	1	1	1	0	0	0	0
109	109	US 15-501	Pittsboro Bypass (MAB) to Orange Co. line	2-lane	4-lane divided	R-942	Chatham	Widening	1	1	1	1	1	1	1	1
110	110	US 15-501	Mt Moriah Rd to Garrett Rd	4-lane divided	6-lane divided	U-4012	Durham	Widening	1	1	1	1	1	1	1	1
111	111	US 15-501	I-40 to Franklin St	4-lane divided	6-lane divided	U-2807	Orange	Widening	0	1	1	1	0	0	0	0
112	112	US 15-501	Orange Co line to Chapel Hill Bypass	2-lane	4-lane divided	R-942	Orange	Widening	1	1	1	1	1	1	1	1

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2035 LRTP and CTP

Highway Projects and Alternatives

Old ID	New ID	Project	Project Limits	Existing Cross-Section	CTP 2040 Proposed Cross-Section	TIP No.	County	Proposed Improvement	Benchmarks			LRTP Alternatives				
									0--E+C	1--2030	2--CTP	3--Hwy	4--FG	5--Bus	6--Mod	7--Pres
113	113	US 15-501	Bypass to I-40 (freeway conversion)	6-lane divided	6-lane freeway	U-2807	Durham	Widening	0	1	1	1	0	0	0	0
114	114	US 15-501 Bypass	Pickett Rd to Morreene Rd	4-lane freeway	6-lane freeway		Durham	Widening	0	1	1	1	0	0	0	0
115	115	US 15-501 Service Rd (SR 1126)	Relocation of existing service road.	2-lane	2-lane	U-4009	Durham	Realignment	1	1	1	1	1	1	1	1
	115.1	US 70 HOV	I-85 to East End Connector	6-lane freeway	*8-lane HOV freeway*		Durham	Widening	0	0	1	1	0	0	0	0
116	116	US 70	Lynn Rd to Wake Co line	4-lane divided	6-lane freeway	U-4720	Durham	Widening	0	1	1	1	0	0	1	1
117	117	US 70 Bypass	NC 86 to I-85 (exit 170)	2-lane	4-lane divided		Orange	Widening	0	1	1	1	0	0	0	0
118	118	US 70/Miami Blvd/Mineral	Intersection Upgrade	Existing	Upgrade	U-2808	Durham	New	1	1	1	1	1	1	1	1
119	119	Weaver Dairy Rd	NC 86 to Erwin Rd	2-lane	3-lane	U-3306	Orange	Widening	0	1	1	1	1	1	1	1
120	120	Western Bypass	US 70 to NC 86	New	2-lane		Orange		0	1	1	1	0	0	0	0
121	121	Western Bypass	NC 86 to Stroud Creek Rd	New	2-lane		Orange		0	1	1	1	0	0	0	0
	122.1	Woodcroft Pkwy	Barbee Rd to Carpenter-Fletcher Rd.	2-lane divided	4-lane divided	Private	Durham	Widening	0	0	1	1	1	1	0	0
123	123	Woodcroft Pkwy Ext	Garrett Rd to Hope Valley Rd	New	*4-lane divided*		Durham	New	0	1	1	1	0	0	0	0

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2030 LRTP and CTP

Transit Projects and Alternatives

							Benchmarks:			LRTP Alternatives:				
ID	**Route Name**	**System**	**CTP Peak Headway**	**CTP Off-Peak Headway**	**Reg. Fare**	**Service Type**	**0--E+C**	**1--2030**	**2--CTP**	**3--Hwy**	**4--FG**	**5--Bus**	**6--Mod**	**7--Pres**
STAC	Burlington to Downtown Raleigh	MTC	45	NA	NA	Commuter Rail	0	0	1	0	0	0	1	0
STAC	Selma to Downtown Durham	MTC	45	NA	NA	Commuter Rail	0	0	1	0	0	0	1	0
STAC	Carolina North to Durham Multimodal Center Corridor	MTC	10	20	NA	LRT or BRT	0	1	1	0	1	0	0	0
STAC	UNC Hospital to Carolina North	MTC	10	20	NA	Local	0	0	1	0	0	0	0	0
STAC	Burlington to Carolina North:	MTC	45	NA	NA	Commuter Rail	0	0	1	0	0	0	0	0
STAC	Hillsborough to Carolina North	MTC	30	60	NA	Regional	0	0	1	0	0	1	0	0
STAC	Triangle Expressway/Apex I40 to Triangle Metro Center	MTC	20	60	NA	Regional	0	0	1	0	0	1	0	0
STAC	Duke to Triangle Metro Center via NC 147	MTC	20	60	NA	Regional	0	0	1	0	0	1	0	0
STAC	Durham to North Durham	MTC	30	60	NA	Express	0	0	1	0	0	1	0	0
STAC	Duke to Triangle Metro Center	MTC	10	20	NA	Regional Rail (DMU)	0	0	1	0	1	0	0	0
STAC	Triangle Metro Center to NW Cary	MTC	10	20	NA	Regional Rail (DMU)	0	0	1	0	1	0	0	0
STAC	I-540 Northern Arc	MTC	20	60	NA	Regional	0	0	1	0	0	1	0	0
STAC	Southern Arc 540 Eastern/Southern Segments	MTC	20	60	NA	Regional	0	0	1	0	0	0	0	0
STAC	Pittsboro to Chapel Hill	MTC	30	60	NA	Regional	0	0	1	0	0	0	0	0
STAC	Triangle Metro Center to Carolina North	MTC	10	20	NA	Bus Rapid Transit	0	0	1	0	1	1	0	0
STAC	Raleigh to Durham via US 70	MTC	30	60	NA	Regional	0	0	1	0	0	0	0	0
STAC	Chapel Hill Circulator	MTC	10	10	NA	Local	0	0	1	1	1	1	1	0

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2030 LRTP and CTP

Transit Projects and Alternatives

							Benchmarks:			LRTP Alternatives:				
ID	**Route Name**	**System**	**CTP Peak Headway**	**CTP Off-Peak Headway**	**Reg. Fare**	**Service Type**	**0--E+C**	**1--2030**	**2--CTP**	**3--Hwy**	**4--FG**	**5--Bus**	**6--Mod**	**7--Pres**
STAC	Durham Circulator	MTC	10	10	NA	Local	0	0	1	0	1	1	1	0
STAC	RTP-RDU Circulator	MTC	10	10	NA	Bus Rapid Transit	0	0	1	0	1	1	1	0
23	DATA Treyburn Station Feeder	DATA	7	15	$ 1.	Local bus		1	1	0	1	1	0	0
24	DATA Woodcroft Feeder IB	DATA	7	15	$ 1.	Local bus		1	1	0	1	0	0	0
25	DATA Woodcroft Feeder OB	DATA	7	15	$ 1.	Local bus		1	1	0	1	0	0	0
26	DATA Meridian Pkwy Feeder IB	DATA	7	15	$ 1.	Local bus		1	1	0	1	0	0	0
27	DATA Meridian Pkwy Feeder OB	DATA	7	15	$ 1.	Local bus		1	1	0	1	0	0	0
28	DATA Joyner-Club-Duke IB	DATA	7	15	$ 1.	Local bus		1	1	1	1	1	1	1
29	DATA Joyner-Club-Duke OB	DATA	7	15	$ 1.	Local bus		1	1	1	1	1	1	1
30	DATA S Square Feeder IB	DATA	7	15	$ 1.	Local bus		1	1	0	1	1	0	0
31	DATA S Square Feeder OB	DATA	7	15	$ 1.	Local bus		1	1	0	1	1	0	0
32	DATA S Square Shuttle IB	DATA	7	15	$ 1.	Local bus		1	1	0	1	1	0	0
33	DATA S Square Shuttle OB	DATA	7	15	$ 1.	Local bus		1	1	0	1	1	0	0
34	DATA 17 Feeder Eno Loop	DATA	7	15	$ 1.	Local bus		1	1	0	1	1	0	0
35	DATA 17 Feeder OB	DATA	7	15	$ 1.	Local bus		1	1	0	1	1	0	0
36	DATA 17 Feeder IB	DATA	7	15	$ 1.	Local bus		1	1	0	1	1	0	0
37	DATA 30R Duke Hospital IB	DATA	7	15	$ 1.	Local bus		1	1	1	1	1	1	1
38	DATA 30 Duke Hospital OB	DATA	7	15	$ 1.	Local bus		1	1	1	1	1	1	1
39	DATA 28R RTP E IB	DATA	7	15	$ 1.	Local bus		1	1	1	1	1	1	1
40	DATA 28 RTP E OB	DATA	7	15	$ 1.	Local bus		1	1	1	1	1	1	1
41	DATA 27R Ngate-RTP W IB	DATA	7	15	$ 1.	Local bus		1	1	0	1	1	0	0
42	DATA 27 Ngate-RTP W OB	DATA	7	15	$ 1.	Local bus		1	1	0	1	1	0	0
43	DATA 25 DurReg-DukeMed OB	DATA	7	15	$ 1.	Local bus		1	1	1	1	1	1	1
44	DATA 25R DurReg-DukeMed IB	DATA	7	15	$ 1.	Local bus		1	1	1	1	1	1	1
45	DATA 20 Ngate-RTP OB	DATA	7	15	$ 1.	Local bus		1	1	1	1	1	1	1
46	DATA 20R Ngate-RTP IB	DATA	7	15	$ 1.	Local bus		1	1	1	1	1	1	1
47	DATA 15R Willowdale IB	DATA	7	15	$ 1.	Local bus		1	1	1	1	1	1	1
48	DATA 15 Willowdale OB	DATA	7	15	$ 1.	Local bus		1	1	1	1	1	1	1
49	DATA 20 UniDr-RTP IB	DATA	7	15	$ 1.	Local bus		1	1	1	1	1	1	1
50	DATA 20 UniDr-RTP OB	DATA	7	15	$ 1.	Local bus		1	1	1	1	1	1	1
51	DATA 17 Roxboro-Davinci SB	DATA	7	15	$ 1.	Local bus		1	1	1	1	1	1	1
52	DATA 17 Roxboro-Davinci NB	DATA	7	15	$ 1.	Local bus		1	1	1	1	1	1	1
53	DATA Durham XT NWB	DATA	7	15	$ 1.	Local bus		1	1	1	1	1	1	1

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2030 LRTP and CTP

Transit Projects and Alternatives

							Benchmarks:			LRTP Alternatives:				
ID	Route Name	System	CTP Peak Headway	CTP Off-Peak Headway	Reg. Fare	Service Type	0--E+C	1--2030	2--CTP	3--Hwy	4--FG	5--Bus	6--Mod	7--Pres
54	DATA Durham XT SEB	DATA	7	15	$ 1.	Local bus		1	1	1	1	1	1	1
63	DATA Treyburn NB	DATA	7	15	$ 1.	Local bus		1	1	1	1	1	1	1
64	DATA Treyburn SB	DATA	7	15	$ 1.	Local bus		1	1	1	1	1	1	1
65	DATA Bethesda SB	DATA	7	15	$ 1.	Local bus		1	1	1	1	1	1	1
66	DATA Bethesda NB	DATA	7	15	$ 1.	Local bus		1	1	1	1	1	1	1
67	DATA 17 Horton-Davinci SEB	DATA	7	15	$ 1.	Local bus		1	1	1	1	1	1	1
68	DATA 17 Horton-Davinci NWB	DATA	7	15	$ 1.	Local bus		1	1	1	1	1	1	1
69	DATA 21 Ngate-Spoint OB	DATA	7	15	$ 1.	Local bus		1	1	1	1	1	1	1
70	DATA 21 Ngate-Spoint IB	DATA	7	15	$ 1.	Local bus		1	1	1	1	1	1	1
71	DATA Holoway/The Village OB	DATA	7	15	$ 1.	Local bus		1	1	1	1	1	1	1
72	DATA Holoway/The Village IB	DATA	7	15	$ 1.	Local bus		1	1	1	1	1	1	1
73	DATA Riddle Station Feeder IB	DATA	7	15	$ 1.	Local bus		1	1	0	1	0	0	0
74	DATA Riddle Station Feeder OB	DATA	7	15	$ 1.	Local bus		1	1	0	1	0	0	0
75	DATA NC98 - US70 - Miami OB	DATA	7	15	$ 1.	Local bus		1	1	1	1	1	1	1
76	DATA NC98 - US70 - Miami IB	DATA	7	15	$ 1.	Local bus		1	1	1	1	1	1	1
77	DATA Dtech-Snow IB	DATA	7	15	$ 1.	Local bus		1	1	1	1	1	1	1
78	DATA Dtech-Snow OB	DATA	7	15	$ 1.	Local bus		1	1	1	1	1	1	1
79	DATA Dtown Terminal Shuttle IB	DATA	7	15	$ 1.	Local bus		1	1	1	1	1	1	1
80	DATA Dtown Terminal Shuttle OB	DATA	7	15	$ 1.	Local bus		1	1	1	1	1	1	1
81	DATA Dtown Terminal Feeder IB	DATA	7	15	$ 1.	Local bus		1	1	1	1	1	1	1
82	DATA Dtown Terminal Feeder OB	DATA	7	15	$ 1.	Local bus		1	1	1	1	1	1	1
83	DATA EPA IB	DATA	7	15	$ 1.	Express bus		1	1	1	1	1	1	1
84	DATA EPA OB	DATA	7	15	$ 1.	Express bus		1	1	1	1	1	1	1
85	DATA 19 Feeder OB	DATA	7	15	$ 1.	Local bus		1	1	0	1	1	0	0
86	DATA 19 Feeder IB	DATA	7	15	$ 1.	Local bus		1	1	0	1	1	0	0
87	DATA 18 Feeder OB	DATA	7	15	$ 1.	Local bus		1	1	0	1	1	0	0
88	DATA 18 Feeder IB	DATA	7	15	$ 1.	Local bus		1	1	0	1	1	0	0
89	DATA 12XR DTT-EPA IB	DATA	7	15	$ 1.	Express bus		1	1	1	1	1	1	1
90	DATA 12X DTT-EPA OB	DATA	7	15	$ 1.	Express bus		1	1	1	1	1	1	1
91	DATA 7SPR Southpoint Mall IB	DATA	7	15	$ 1.	Local bus		1	1	1	1	1	1	1
116	DATA 7SP Southpoint Mall OB	DATA	7	15	$ 1.	Local bus		1	1	1	1	1	1	1
327	DATA 1-3 OB:Hillndal-Guess-Mdlnd	DATA	7	15	$ 1.	Local bus		1	1	1	1	1	1	1
328	DATA 3-1 IB:Mdlnd-Guess-Hillndal	DATA	7	15	$ 1.	Local bus		1	1	1	1	1	1	1
329	DATA 13 IB:Fayette-Birchwood	DATA	7	15	$ 1.	Local bus		1	1	1	1	1	1	1
330	DATA 12 OB:Downtown-TTATerm	DATA	7	15	$ 1.	Local bus		1	1	1	1	1	1	1

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2030 LRTP and CTP

Transit Projects and Alternatives

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331	DATA 7 OB:Downtown-Southpointe	DATA	7	15	$ 1.	Local bus		1	1	1	1	1	1	1
332	DATA 14 OB:NCCUShuttle	DATA	7	15	Free	Local bus		1	1	1	1	1	1	1
333	DATA 14 IB:NCCUShuttle	DATA	7	15	Free	Local bus		1	1	1	1	1	1	1
334	DATA 17 IBTreyburn-Horton	DATA	7	15	$ 1.	Local bus		1	1	1	1	1	1	1
335	DATA 16 OB:Downtown-MineralSprng	DATA	7	15	$ 1.	Local bus		1	1	1	1	1	1	1
336	DATA 4-2 OB:Horton-Angier	DATA	7	15	$ 1.	Local bus		1	1	1	1	1	1	1
337	DATA 2-4 IB:Angier-Horton	DATA	7	15	$ 1.	Local bus		1	1	1	1	1	1	1
354	DATA 15 OB:WellonsVlg-Briarcreek	DATA	7	15	$ 1.	Local bus		1	1	1	1	1	1	1
355	DATA 15 IB:Briarcreek-WellonsVlg	DATA	7	15	$ 1.	Local bus		1	1	1	1	0	1	1
356	DATA 11-9 IB:Bennett-DRHosp	DATA	7	15	$ 1.	Local bus		1	1	1	1	0	1	1
357	DATA 5-6 OB:Emrld-Crnw-Cnstitutn	DATA	7	15	$ 1.	Local bus		1	1	1	1	0	1	1
358	DATA 10-8 IB:Woodcroft-DrhmTech	DATA	7	15	$ 1.	Local bus		1	1	1	1	0	1	1
359	DATA 1-3 OB:Hillndal-Point-Mdlnd	DATA	7	15	$ 1.	Local bus		1	1	1	1	0	1	1
360	DATA 6-5 IB:Cnstitutn-HV-Emerald	DATA	7	15	$ 1.	Local bus		1	1	1	1	0	1	1
361	DATA 5-6 OB:Emerald-HV-Cnstitutn	DATA	7	15	$ 1.	Local bus		1	1	1	1	0	1	1
366	DATA 13 OB: Birchwood-Fayette	DATA	7	15	$ 1.	Local bus		1	1	1	1	0	1	1
405	DATA 12 IB:TTATerm-Downtown	DATA	7	15	$ 1.	Local bus		1	1	1	1	0	1	1
406	DATA 7 IB:Southpointe-Downtown	DATA	7	15	$ 1.	Local bus		1	1	1	1	0	1	1
407	DATA 17 OB:Horton-Treyburn	DATA	7	15	$ 1.	Local bus		1	1	1	1	0	1	1
408	DATA 16 IB:MineralSprng-Downtown	DATA	7	15	$ 1.	Local bus		1	1	1	1	0	1	1
409	DATA 9-11 OB:DRHosp-Bennett	DATA	7	15	$ 1.	Local bus		1	1	1	1	0	1	1
410	DATA 8-10 OB:DrhmTech-Woodcroft	DATA	7	15	$ 1.	Local bus		1	1	1	1	0	1	1
411	DATA 8-10 OB:DrhmTech-NewHopeCmn	DATA	7	15	$ 1.	Local bus		1	1	1	1	0	1	1
419	DATA 3-1 IB:Mdlnd-Point-Hillndal	DATA	7	15	$ 1.	Local bus		1	1	1	1	0	1	1
420	DATA 10-8 IB:NewHopeCmn-DrhmTech	DATA	7	15	$ 1.	Local bus		1	1	1	1	0	1	1
441	DATA 6-5 IB:Cnstitutn-Crnw-Emrld	DATA	7	15	$ 1.	Local bus		1	1	1	1	0	1	1
L1	NDP: Carver Street ext via old oxfor	DATA	7	15	$ 1.	Local bus		1	1	0	1	0	0	0
L1	NDP: Carver Street ext via old oxfor	DATA	7	15	$ 1.	Local bus		1	1	0	1	0	0	0
L2	North Creek Pkway:Cornwallis-Brier C	DATA	7	15	$ 1.	Local bus		1	1	1	1	0	1	1
L2	North Creek Pkway:Cornwallis-Brier C	DATA	7	15	$ 1.	Local bus		1	1	1	1	0	1	1
L3	S Alston Glover:Cornwallis/S Alston-	DATA	7	15	$ 1.	Local bus		1	1	0	1	0	0	0
L3	S Alston Glover:Cornwallis/S Alston-	DATA	7	15	$ 1.	Local bus		1	1	0	1	0	0	0
L4	S Roxboro/NC 751:W Cornwallis- South	DATA	7	15	$ 1.	Local bus		1	1	1	1	0	1	1
L4	S Roxboro/NC 751:W Cornwallis- South	DATA	7	15	$ 1.	Local bus		1	1	1	1	0	1	1
L5	SW Durham Dr: Mt Moraih- NC 54/Hunti	DATA	7	15	$ 1.	Local bus		1	1	0	1	0	0	0

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2030 LRTP and CTP

Transit Projects and Alternatives

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L5	SW Durham Dr: Mt Moraih- NC 54/Hunti	DATA	7	15	$ 1.	Local bus		1	1	0	1	0	0	0
L6	University Drive: Morehead-Cornwalli	DATA	7	15	$ 1.	Local bus		1	1	0	1	0	0	0
L6	University Drive: Morehead-Cornwalli	DATA	7	15	$ 1.	Local bus		1	1	0	1	0	0	0
L7	W Trinity/Buchanan: Avondale- Chapel	DATA	7	15	$ 1.	Local bus		1	1	0	1	0	0	0
L7	W Trinity/Buchanan: Avondale- Chapel	DATA	7	15	$ 1.	Local bus		1	1	0	1	0	0	0
L8	Sparger/Cole Mill:hillsborough rd N-	DATA	7	15	$ 1.	Local bus		1	1	0	1	0	0	0
L8	Sparger/Cole Mill:hillsborough rd N-	DATA	7	15	$ 1.	Local bus		1	1	0	1	0	0	0
L9	Scott King RD: Rennaisance pkway- Ho	DATA	7	15	$ 1.	Local bus		1	1	0	1	0	0	0
L9	Scott King RD: Rennaisance pkway- Ho	DATA	7	15	$ 1.	Local bus		1	1	0	1	0	0	0
427	TTA Rail: Dur-CH SB	TTA	7	15	$ 2.	Rail		1	1	0	1	0	0	0
428	TTA Rail: Dur-CH NB	TTA	7	15	$ 2.	Rail		1	1	0	1	0	0	0
425	TTA Rail: Ral-Dur EB	TTA	7	15	$ 2.	Rail		1	1	0	1	0	0	0
426	TTA Rail: Ral-Dur WB	TTA	7	15	$ 2.	Rail		1	1	0	1	0	0	0
c3a	dchc: durham beltline -Treyburn NB	DCHC	7	15	$ 2.	Rail		1	1	0	1	0	0	0
c3b	dchc: durham beltline-Treyburn SB	DCHC	7	15	$ 2.	Rail		1	1	0	1	0	0	0
c4a	dchc: durham beltline-Creedmor-butne	DCHC	7	15	$ 2.	Rail		1	1	0	1	0	0	0
c4b	dchc: durham beltline-Creedmor-butne	DCHC	7	15	$ 2.	Rail		1	1	0	1	0	0	0
c5a	dchc: durham beltline-briggs ave-dow	DCHC	7	15	$ 2.	Rail		1	1	0	1	0	0	0
c5b	dchc: durham beltline-briggs ave-dow	DCHC	7	15	$ 2.	Rail		1	1	0	1	0	0	0
c6	dchc: durham beltline-briggs ave-dun	DCHC	7	15	$ 2.	Rail		1	1	0	1	0	0	0
c7a	dchc: durham beltline-NC 147- briggs	DCHC	7	15	$ 2.	Rail		1	1	0	1	0	0	0
c7b	dchc: durham beltline-NC 147- briggs	DCHC	7	15	$ 2.	Rail		1	1	0	1	0	0	0
c8a	Chapel Hill/Carrboro - Hillsborough/	DCHC	7	15	$ 2.	Rail		0	1	0	1	0	0	0
c8b	Chapel Hill/Carrboro - Hillsborough/	DCHC	7	15	$ 2.	Rail		0	1	0	1	0	0	0
c9a	Burlington to Duke Commuter rail NB	DCHC	7	15	$ 2.	Rail		1	1	0	1	0	0	0
c9b	Burlington to Duke Commuter rail NB	DCHC	7	15	$ 2.	Rail		1	1	0	1	0	0	0
cb1	downtown durham DATA terminal via du	DCHC	7	15	$ 1.	local		1	1	0	0	0	0	0
cb2	downtown durham DATA terminal via du	DCHC	7	15	$ 1.	local		1	1	0	0	0	0	0
cb3	Duke univ to mebane: erwin/fulton vi	DCHC	7	15	$ 1.	local		1	1	0	0	0	0	0
cb4	Chapel Hill from Columbia St via MLK	DCHC	7	15	$ 1.	local		1	1	0	0	0	0	0
cb5	RDU -Hillborough: RDU via I40 NC 86	DCHC	7	15	$ 1.	local		1	1	0	0	0	0	0
cb5a	Chapel Hill	DCHC	7	15	$ 1.	local		0	1	0	0	0	0	0
cb6	NC54 W to Alance Co:from US15501 via	DCHC	7	15	$ 1.	local		0	1	0	0	0	0	0
cb7	NC54 W to Alamance: jones ferry rd t	DCHC	7	15	$ 1.	local		0	1	0	0	0	0	0
cb8	Chapel to Pittsboro: columbia via US	DCHC	7	15	$ 1.	local		1	1	0	1	0	0	0

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cb9	Mt carmel church rd: us15501 to old	DCHC	7	15	$ 1.	local		1	1	0	1	0	0	0
cb10	nc98 wake forest rd: DATA terminal t	DCHC	7	15	$ 1.	express		1	1	0	1	0	0	0
cb11	US70 Glenwood Ave:DATA term via chap	DCHC	7	15	$ 1.	local		1	1	0	0	0	0	0
cb12	NC 147 Triangle Parkway: from Duke/F	DCHC	7	15	$ 1.	local		1	1	0	0	0	0	0
cb13	NC 55 to Apex : Alston rail station	DCHC	7	15	$ 1.	local		1	1	0	0	0	0	0
cb14	Western Wake RDU via aviation pkway	DCHC	7	15	$ 1.	local		1	1	0	0	0	0	0
cb16	NC 54-RDU: Southpoint mail, via slat	DCHC	7	15	$ 1.	local		1	1	0	1	0	0	0
162	CHT Gateway Feeder 2	CHT	5	10	Free	Local bus		1	1	0	1	0	0	0
163	CHT Gateway Feeder 3	CHT	5	10	Free	Local bus		1	1	0	1	0	0	0
164	CHT HW 2B Feeder	CHT	5	10	Free	Local bus		1	1	0	1	0	0	0
165	CHT HW 2A Feeder	CHT	5	10	Free	Local bus		1	1	0	1	0	0	0
166	CHT HW 1B Feeder	CHT	5	10	Free	Local bus		1	1	0	1	0	0	0
167	CHT HW 1A Feeder	CHT	5	10	Free	Local bus		1	1	0	1	0	0	0
168	CHT Eubanks Station 1B Feeder	CHT	5	10	Free	Local bus		1	1	0	1	0	0	0
169	CHT Eubanks Station 1A Feeder	CHT	5	10	Free	Local bus		1	1	0	1	0	0	0
170	CHT MOD 10 XPS OB	CHT	5	10	Free	Express bus		1	1	1	1	0	1	1
171	CHT MOD 10 XPS IB	CHT	5	10	Free	Express bus		1	1	1	1	0	1	1
172	CHT Meadowmont Feeder OB	CHT	5	10	Free	Local bus		1	1	0	1	0	0	0
173	CHT Meadowmont Feeder IB	CHT	5	10	Free	Local bus		1	1	0	1	0	0	0
174	CHT CH MODY	CHT	5	10	Free	Local bus		1	1	1	1	0	1	1
175	CHT CARR 2 Feeder	CHT	5	10	Free	Local bus		1	1	0	1	0	0	0
176	CHT Base 11 S Orange OB	CHT	NA	NA	Free	Express bus		1	1	1	0	0	1	1
177	CHT Base 11 S Orange IB	CHT	NA	NA	Free	Express bus		1	1	1	0	0	1	1
178	CHT MOD 8 OB-1	CHT	5	10	Free	Local bus		1	1	1	1	0	1	1
179	CHT MOD 8 IB-1	CHT	5	10	Free	Local bus		1	1	1	1	0	1	1
180	CHT MOD 8 OB-2	CHT	5	10	Free	Express bus		1	1	1	1	0	1	1
181	CHT MOD 8 IB-2	CHT	5	10	Free	Express bus		1	1	1	1	0	1	1
182	CHT MOD 1 OB	CHT	5	10	Free	Local bus		1	1	1	1	0	1	1
183	CHT MOD 1 IB	CHT	5	10	Free	Local bus		1	1	1	1	0	1	1
184	CHT Meadowmont Feeder 3	CHT	5	10	Free	Local bus		1	1	0	1	0	0	0
185	CHT Meadowmont Feeder 2	CHT	5	10	Free	Local bus		1	1	0	1	0	0	0
186	CHT MODV OB	CHT	5	10	Free	Local bus		1	1	1	1	0	1	1
187	CHT MODV IB	CHT	5	10	Free	Local bus		1	1	1	1	0	1	1
188	CHT MOD 22 Exp OB	CHT	NA	NA	Free	Express bus		1	1	1	0	0	1	1
189	CHT MOD 22 Exp IB	CHT	NA	NA	Free	Express bus		1	1	1	0	0	1	1

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190	CHT MOD 21 OB	CHT	5	10	Free	Local bus		1	1	1	1	0	1	1
191	CHT MOD 21 IB	CHT	5	10	Free	Local bus		1	1	1	1	0	1	1
192	CHT HW 3B Feeder	CHT	5	10	Free	Local bus		1	1	1	1	0	1	1
193	CHT HW 3A Feeder	CHT	5	10	Free	Local bus		1	1	1	1	0	1	1
194	CHT EW Crosstown	CHT	NA	NA	Free	Express bus		1	1	1	0	0	1	1
195	CHT Carr 1B Feeder	CHT	5	10	Free	Local bus		1	1	0	1	0	0	0
196	CHT Carr 1A Feeder	CHT	5	10	Free	Local bus		1	1	0	1	0	0	0
197	CHT Base 9 Mason Farm Exp OB	CHT	NA	NA	Free	Express bus		1	1	1	0	0	1	1
198	CHT Base 9 Mason Farm Exp IB	CHT	NA	NA	Free	Express bus		1	1	1	0	0	1	1
199	CHT Base 8 UNC Exp OB	CHT	5	10	Free	Express bus		1	1	1	1	0	1	1
200	CHT Base 8 UNC Exp IB	CHT	5	10	Free	Express bus		1	1	1	1	0	1	1
201	CHT Base 2 New Hope Commons OB	CHT	5	10	Free	Local bus		1	1	1	1	0	1	1
202	CHT Base 2 New Hope Commons IB	CHT	5	10	Free	Local bus		1	1	1	1	0	1	1
203	CHT Base 13 Hills. Exp OB	CHT	NA	NA	Free	Express bus		1	1	1	0	0	1	1
204	CHT Base 13 Hills. Exp IB	CHT	NA	NA	Free	Express bus		1	1	1	0	0	1	1
205	CHT Base 1 Carr N OB	CHT	5	10	Free	Local bus		1	1	1	1	0	1	1
206	CHT Base 1 Carr N IB	CHT	5	10	Free	Local bus		1	1	1	1	0	1	1
207	CHT Base 4 Laurel Hills OB	CHT	5	10	Free	Local bus		1	1	1	1	0	1	1
208	CHT Base 4 Laurel Hills IB	CHT	5	10	Free	Local bus		1	1	1	1	0	1	1
209	CHT Base 3 Estes-Carrboro OB	CHT	5	10	Free	Local bus		1	1	1	1	0	1	1
210	CHT Base 3 Estes-Carrboro IB	CHT	5	10	Free	Local bus		1	1	1	1	0	1	1
211	CHT MOD 20 Pitt. Exp OB	CHT	NA	NA	Free	Express bus		1	1	1	0	0	1	1
212	CHT MOD 20 Pitt. Exp IB	CHT	NA	NA	Free	Express bus		1	1	1	0	0	1	1
253	CHT A OB:MLKBlvd-Weiner	CHT	5	10	Free	Local bus		1	1	1	1	0	1	1
254	CHT A IB:Weiner-MLKBlvd	CHT	5	10	Free	Local bus		1	1	1	1	0	1	1
255	CHT CW OB:JonesFerry-Pittsboro	CHT	5	10	Free	Local bus		1	1	1	1	0	1	1
256	CHT CW IB:Pittsboro-JonesFerry	CHT	5	10	Free	Local bus		1	1	1	1	0	1	1
257	CHT CM IB:FamPrac-JonesFerry	CHT	5	10	Free	Local bus		1	1	1	1	0	1	1
258	CHT CM OB:JonesFerry-FamPrac	CHT	5	10	Free	Local bus		1	1	1	1	0	1	1
259	CHT CPX OB:CarrboroP&R-UNC	CHT	NA	NA	Free	Express bus		1	1	1	0	0	1	1
260	CHT CPX IB:UNC-CarborroP&R	CHT	NA	NA	Free	Express bus		1	1	1	0	0	1	1
261	CHT D OB:SmithLevel-Providence	CHT	5	10	Free	Local bus		1	1	1	1	0	1	1
262	CHT D IB:Providence-SmithLevel	CHT	5	10	Free	Local bus		1	1	1	1	0	1	1
263	CHT CL OB: UNCHosp-WaldenGrnflds	CHT	5	10	Free	Local bus		1	1	1	1	0	1	1
264	CHT CL IB: WaldenGrnflds-UNCHosp	CHT	5	10	Free	Local bus		1	1	1	1	0	1	1

1 = In Alternative 0 = Not in Alternative NA = Data not available

2030 LRTP and CTP

Transit Projects and Alternatives

							Benchmarks:			LRTP Alternatives:				
ID	Route Name	System	CTP Peak Headway	CTP Off-Peak Headway	Reg. Fare	Service Type	0--E+C	1--2030	2--CTP	3--Hwy	4--FG	5--Bus	6--Mod	7--Pres
265	CHT FCX OB:FridayCntr-Pittsboro	CHT	NA	NA	Free	Express bus		1	1	1	0	0	1	1
266	CHT FCX IB:Pittsboro-FridayCntr	CHT	NA	NA	Free	Express bus		1	1	1	0	0	1	1
267	CHT F IB:ColonyWoods-McDougle	CHT	5	10	Free	Local bus		1	1	1	1	0	1	1
268	CHT F OB:McDougle-ColonyWoods	CHT	5	10	Free	Local bus		1	1	1	1	0	1	1
269	CHT G OB:BookerCreek-Briarcliff	CHT	5	10	Free	Local bus		1	1	1	1	0	1	1
270	CHT G IB:Briarcliff-BookerCreek	CHT	5	10	Free	Local bus		1	1	1	1	0	1	1
271	CHT HS OB:Hghsch-VarsityTheater	CHT	5	10	Free	Local bus		1	1	1	1	0	1	1
272	CHT HS IB:VarsityTheater-Hghsch	CHT	5	10	Free	Local bus		1	1	1	1	0	1	1
273	CHT HUX OB:HedrickBldg-UNCHosp	CHT	5	10	Free	Express bus		1	1	1	1	0	1	1
274	CHT HUX IB:UNCHosp-HedrickBldg	CHT	5	10	Free	Express bus		1	1	1	1	0	1	1
275	CHT J OB:RockCrkApt-SGreensboro	CHT	5	10	Free	Local bus		1	1	1	1	0	1	1
276	CHT J IB:SGreensboro-RockCrkApt	CHT	5	10	Free	Local bus		1	1	1	1	0	1	1
277	CHT JFX OB:JonesFerry-Pittsboro	CHT	NA	NA	Free	Express bus		1	1	1	0	0	1	1
278	CHT JFX IB:Pittsboro-JonesFerry	CHT	NA	NA	Free	Express bus		1	1	1	0	0	1	1
279	CHT NS IB:SVillage-Eubanks	CHT	NA	NA	Free	Local bus		1	1	1	0	0	1	1
280	CHT NUX OB: PRLot-UNCHosp	CHT	5	10	Free	Express bus		1	1	1	1	0	1	1
281	CHT NUX IB:UNCHosp-PR Lot	CHT	5	10	Free	Express bus		1	1	1	1	0	1	1
282	CHT T OB:ECHHghSch-UNCHosp	CHT	5	10	Free	Local bus		1	1	1	1	0	1	1
283	CHT T IB:UNCHosp-ECHHghSch	CHT	5	10	Free	Local bus		1	1	1	1	0	1	1
284	CHT U OB:FranklinSt-BowlesDr	CHT	5	10	Free	Local bus		1	1	1	1	0	1	1
285	CHT U IB:BowlesDr-FranklinSt	CHT	5	10	Free	Local bus		1	1	1	1	0	1	1
286	CHT RU OB:FamilyPract-Columbia	CHT	5	10	Free	Local bus		1	1	1	1	0	1	1
287	CHT RU IB:Columbia-FamilyPract	CHT	5	10	Free	Local bus		1	1	1	1	0	1	1
288	CHT V OB:SVillage-Meadowmont	CHT	5	10	Free	Local bus		1	1	1	1	0	1	1
289	CHT V IB:Meadowmont-SVillage	CHT	5	10	Free	Local bus		1	1	1	1	0	1	1
290	CHT N OB:FamilyPract-EstsPrkApt	CHT	5	10	Free	Local bus		1	1	1	1	0	1	1
291	CHT N IB:EstsParkApt-FamilyPract	CHT	5	10	Free	Local bus		1	1	1	1	0	1	1
292	CHT M IB:UnivMall-CrestCole	CHT	5	10	Free	Local bus		1	1	1	1	0	1	1
293	CHT M OB:CrestCole-UnivMall	CHT	5	10	Free	Local bus		1	1	1	1	0	1	1
308	CHT NS OB:Eubanks-SVillage	CHT	NA	NA	Free	Local bus		1	1	1	0	0	1	1
362	CHT S OB: HedrickBldg-UNCHosp	CHT	5	10	Free	Local bus		1	1	1	1	0	1	1
363	CHT S IB: UNCHosp-HedrickBldg	CHT	5	10	Free	Local bus		1	1	1	1	0	1	1
c1	BRT 1 IB I40_Rosemary_UNC	CHT	3	10	free	BRT		0	1	0	1	0	0	0
c2	BRT 1 OB UNC- Rosemary - I40	CHT	3	10	free	BRT		0	1	0	1	0	0	0
c3	BRT 3A IB I40 to UNC via US 15	CHT	3	10	free	BRT		0	1	0	1	0	0	0

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2030 LRTP and CTP

Transit Projects and Alternatives

							Benchmarks:			LRTP Alternatives:				
ID	Route Name	System	CTP Peak Headway	CTP Off-Peak Headway	Reg. Fare	Service Type	0--E+C	1--2030	2--CTP	3--Hwy	4--FG	5--Bus	6--Mod	7--Pres
c4	BRT 3A OB UNC to I40 via US15	CHT	3	10	free	BRT		0	1	0	1	0	0	0
c5	BRT 3B IB I40-Elizabeth-UNC	CHT	3	10	free	BRT		0	1	0	1	0	0	0
c6	BRT 3B OB UNC-Elizabeth-I40	CHT	3	10	free	BRT		1	1	0	1	0	0	0
c7	BRT 3C IB I40 to Carolina N	CHT	3	10	free	BRT		0	1	0	1	0	0	0
c8	BRT 3C OB Carolina N to I40	CHT	3	10	free	BRT		0	1	0	1	0	0	0
c9	BRT 4 IB City Boundary to UNC	CHT	3	10	free	BRT		0	1	0	1	0	0	0
c10	BRT 4 OB UNC to City Boundary	CHT	3	10	free	BRT		0	1	0	1	0	0	0
c11	BRT 5 IB I40 to UNC	CHT	3	10	free	BRT		0	1	0	0	0	0	0
c12	BRT 5 OB UNC to I40	CHT	3	10	free	BRT		0	1	0	0	0	0	0
c13	BRT 6 IB to Carolina North	CHT	3	10	free	BRT		0	1	0	1	0	0	0
c14	BRT 6 OB from Carolina North	CHT	3	10	free	BRT		0	1	0	1	0	0	0
c15	BRT 7 IB to Carolina North	CHT	3	10	free	BRT		0	1	0	1	0	0	0
c16	BRT 7 IB to UNC	CHT	3	10	free	BRT		0	1	0	1	0	0	0
c17	BRT 7 OB from Carolina North	CHT	3	10	free	BRT		0	1	0	1	0	0	0
c18	BRT 7 OB from UNC	CHT	3	10	free	BRT		0	1	0	1	0	0	0
c19	BRT 8 IB to UNC	CHT	3	10	free	BRT		0	1	0	1	0	0	0
c20	BRT 8 OB from UNC	CHT	3	10	free	BRT		0	1	0	1	0	0	0
c21	BRT 8 IB to Carolina North	CHT	3	10	free	BRT		0	1	0	1	0	0	0
c22	BRT 8 OB from Carolina North	CHT	3	10	free	BRT		0	1	0	1	0	0	0
117	Duke Med 1 WB	Duke	5	10	Free	Local bus		1	1	1	1	0	1	1
118	Duke Med 1 EB	Duke	5	10	Free	Local bus		1	1	1	1	0	1	1
119	Duke Villa NB	Duke	5	10	Free	Local bus		1	1	1	1	0	1	1
120	Duke Villa SB	Duke	5	10	Free	Local bus		1	1	1	1	0	1	1
121	Duke Med 4 WB	Duke	5	10	Free	Local bus		1	1	1	1	0	1	1
122	Duke Med 4 EB	Duke	5	10	Free	Local bus		1	1	1	1	0	1	1
123	Duke Student Park WB	Duke	5	10	Free	Local bus		1	1	1	1	0	1	1
124	Duke Student Park EB	Duke	5	10	Free	Local bus		1	1	1	1	0	1	1
125	Duke Med 3 SB	Duke	5	10	Free	Local bus		1	1	1	1	0	1	1
126	Duke Med 3 NB	Duke	5	10	Free	Local bus		1	1	1	1	0	1	1
127	Duke Science Loop CW	Duke	5	10	Free	Local bus		1	1	1	1	0	1	1
128	Duke Science Loop CCW	Duke	5	10	Free	Local bus		1	1	1	1	0	1	1
129	Duke E/Cent./W WB	Duke	5	10	Free	Local bus		1	1	1	1	0	1	1
130	Duke E/Cent./W EB	Duke	5	10	Free	Local bus		1	1	1	1	0	1	1
131	Duke E/W WB	Duke	5	10	Free	Local bus		1	1	1	1	0	1	1
132	Duke E/W EB	Duke	5	10	Free	Local bus		1	1	1	1	0	1	1

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2030 LRTP and CTP

Transit Projects and Alternatives

							Benchmarks:			LRTP Alternatives:				
ID	Route Name	System	CTP Peak Headway	CTP Off-Peak Headway	Reg. Fare	Service Type	0--E+C	1--2030	2--CTP	3--Hwy	4--FG	5--Bus	6--Mod	7--Pres
309	DUKE C2 OB:WestCampus-EastCampus	Duke	5	10	Free	Local bus		1	1	1	1	0	1	1
310	DUKE C2 IB:EastCampus-WestCampus	Duke	5	10	Free	Local bus		1	1	1	1	0	1	1
311	DUKE C3 OB:ScienceDr-EastCampus	Duke	5	10	Free	Local bus		1	1	1	1	0	1	1
312	DUKE C3 IB:EastCampus-ScienceDr	Duke	5	10	Free	Local bus		1	1	1	1	0	1	1
313	DUKE H1 IB:Entry11-PG3	Duke	5	10	Free	Local bus		1	1	1	1	0	1	1
314	DUKE H1 OB:PG3-Entry11	Duke	5	10	Free	Local bus		1	1	1	1	0	1	1
315	DUKE H2 IB:HospNorth-PG3	Duke	5	10	Free	Local bus		1	1	1	1	0	1	1
316	DUKE H3 OB:HospNorth-HillsbghRd	Duke	5	10	Free	Local bus		1	1	1	1	0	1	1
317	DUKE H3 IB:HillsbghRd-HospNorth	Duke	5	10	Free	Local bus		1	1	1	1	0	1	1
318	DUKE H5 OB:MillBldg-HockPlaza	Duke	5	10	Free	Local bus		1	1	1	1	0	1	1
319	DUKE PR1 IB:Entry11-BassettDr	Duke	5	10	Free	Local bus		1	1	1	1	0	1	1
320	DUKE PR2 IB:ScienceDr-BassettDr	Duke	5	10	Free	Local bus		1	1	1	1	0	1	1
321	DUKE H2 OB:PG3-HospNorth	Duke	5	10	Free	Local bus		1	1	1	1	0	1	1
322	DUKE PR1 OB:BassettDr-Entry11	Duke	5	10	Free	Local bus		1	1	1	1	0	1	1
323	DUKE PR2 OB:BassettDr-ScienceDr	Duke	5	10	Free	Local bus		1	1	1	1	0	1	1
324	DUKE H6 OB: LaSalleStLot-Entry11	Duke	5	10	Free	Local bus		1	1	1	1	0	1	1
325	DUKE C1 IB:WestCampus-EastCampus	Duke	5	10	Free	Local bus		1	1	1	1	0	1	1
326	DUKE C1 OB:EastCampus-WestCampus	Duke	5	10	Free	Local bus		1	1	1	1	0	1	1
364	DUKE H5 IB: HockPlaza-MillBldg	Duke	5	10	Free	Local bus		1	1	1	1	0	1	1
365	DUKE H6 IB: Entry11-LasalleStLot	Duke	5	10	Free	Local bus		1	1	1	1	0	1	1
156	NCCU Circular	NCCU	5	10	Free	Local bus		1	1	1	1	0	1	1
157	NCCU Shuttle SB	NCCU	5	10	Free	Local bus		1	1	1	1	0	1	1
158	NCCU Shuttle NB	NCCU	5	10	Free	Local bus		1	1	1	1	0	1	1
159	OPT Hillsborough-Chapel Hill SB	OPT	7	15	NA	Express bus		1	1	1	1	0	1	1
160	OPT Hillsborough-Chapel Hill NB	OPT	7	15	NA	Express bus		1	1	1	1	0	1	1

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2035 LRTP and CTP
Land Use Scenarios

Land Use Scenarios Proposed

Background

The Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (DCHC MPO) prepared Socioeconomic Data (SE Data) based on the current land use plans and policies of local jurisdictions for the year 2005 and 2035. The SE Data shows the location of population and employment throughout the planning area. The Transportation Advisory Committee (TAC – the DCHC MPO policy board) approved this SE Data for use with the Triangle Regional Model (TRM) at their meeting on September 12, 2007. The TRM uses the SE Data to generate trips and show how those trips will be accommodated on highways, transit and other transportation modes, and then produces transportation system performance data, such as the level of congestion and vehicle miles traveled, for the Long Range Transportation Plan (LRTP) and Comprehensive Transportation Plan (CTP).

The question is often asked during the development process – How might changes in land use plans or policies affect the design and performance of future transportation system? And, how might local jurisdictions change their land use plans and policies to realize a desired outcome in the future transportation system?

The DCHC MPO has created land use scenarios as part of the 2035 LRTP and CTP development process to evaluate the impacts that land use changes might have on the transportation system performance data of the TRM (travel demand model). That is, the MPO has developed alternative land use assumptions that change the SE Data that was approved in September 2007. The SE Data approved in September 2007 is often referred to as the Baseline SE data.

Contents of this Document

This presentation of the land use scenarios is detailed and lengthy. Therefore, therefore it will help the reader to know the principal contents of this document:

2035 LRTP and CTP
Land Use Scenarios

No.	Name	Description	Purpose	SE Data Changes	Land Use Plan Changes	Control Total Changes
1	**Baseline**	Uses current land use plans, policies and official actions. Most likely future reality.	Produces adopted LRTP and Air Quality Conformity Determination	None	None	No change -- Use baseline control totals
2	**Build-out**	Assumes all available land is developed as proposed in existing long range land use plans, policies and official actions.	Identify needs in CTP, which does not have time horizon, and show long range trajectory of current plans	Realize buildout for each TAZ	None	No control totals used because there is no time horizon
3	**Constrained Growth**	Assume overall slower growth than current forecasts (could include only "existing plus committed" transportation network)	Impact of slower growth because of congestion (reduced mobility)	Decrease development in specified TAZs	Recommend policy changes to reduce overall development	Reduce population and employment control totals
4	**Travel Corridors**	Increase population and employment development in key corridors (perhaps those identified by Special Transit Advisory Commission)	Impact of new policies that direct development to existing transportation infrastructure	Increase development in identified TAZs, and reduce in other TAZs	Recommended specific policy changes that encourage and permit more development in corridors	No change -- Use baseline control totals
5	**Transit Nodes**	Increase population and employment development in transit oriented areas (distinct nodes)	Impact of new policies that direct development to existing and appropriate transportation infrastructure	Increase development in identified TAZs, and reduce in other TAZs	Recommended specific policy changes that encourage and permit more development in corridors	No change -- Use baseline control totals

- Recommended Policies – There is a discussion of the objectives of each scenario and a list of sample policy directions to realize the scenarios. Begins on page 21.

Additional Information

There are a few additional points that are important to understanding the use of these scenarios:

CAMPO Participation – The Capital Area Metropolitan Planning Organization (CAMPO) has developed SE Data for a set of land use scenarios that complement the four DCHC MPO land use scenarios. The SE Data for these scenarios has been combined and checked by the Triangle Regional Model Service Bureau.

Scenario Implementation -- The TAC might be able to adopt the SE Data produced by a favorable land use scenario. The 2035 LRTP and Air Quality Conformity Determination would also be based on this newly adopted SE Data.

Scenario Review

This section presents several methods for reviewing the Scenarios.

Total Comparison

The two tables on page 4 compare the total employment and population for each Scenario with the Baseline SE Data (the data approved by the TAC for use in the 2035 LRTP development and that is based on the current land use plans and policies of the jurisdictions). The tables demonstrate that the overall totals for the Travel Corridor and Transit Nodes Scenarios remain equal to the Baseline SE Data, and that the Buildout and Constrained Scenarios show expected increases and decreases, respectively, compared to the Baseline SE Data.

Population

	Baseline		Buildout		Constrained		Travel Corridors		Transit Nodes	
Jurisdiction	2005	2035	Pop.	% Change	Pop.	% Change	Pop.	% Change	Pop.	% Change
Durham (1)	244,022	354,164	545,514	54%	325,325	-8%	354,163	0%	354,164	0%
Orange (2)	44,904	57,649	217,359	277%	50,346	-13%	57,649	0%	57,649	0%
Chatham (3)	34,067	117,130	140,583	20%	75,986	-35%	117,130	0%	117,150	0%
Chapel Hill (4)	58,339	80,483	86,957	8%	72,373	-10%	80,466	0%	80,483	0%
Carrboro	20,858	28,269	28,269	0%	24,626	-13%	28,255	0%	28,269	0%
Hillsborough	12,438	22,380	22,380	0%	21,262	-5%	22,380	0%	22,382	0%
Total	**414,628**	**660,075**	**1,041,062**	**58%**	**569,918**	**-14%**	**660,043**	**0%**	**660,097**	**0%**

Employment

	Baseline		Buildout		Constrained		Travel Corridors		Transit Nodes	
Jurisdiction	2005	2035	Emp.	% Change	Emp.	% Change	Emp.	% Change	Emp.	% Change
Durham (1)	175,487	282,571	440,830	56%	258,653	-8%	282,583	0%	282,601	0%
Orange (2)	4,290	10,087	*34,347*	241%	9,204	-9%	10,087	0%	10,087	0%
Chatham (3)	8,199	23,863	47,035	97%	17,606	-26%	23,863	0%	23,853	0%
Chapel Hill (4)	36,702	74,875	82,313	10%	67,735	-10%	74,875	0%	74,923	0%
Carrboro	4,390	6,857	6,945	1%	5,734	-16%	6,856	0%	6,856	0%
Hillsborough	5,679	14,453	14,625	1%	13,916	-4%	14,452	0%	14,426	0%
Total	**234,747**	**412,706**	**626,095**	**52%**	**372,848**	**-10%**	**412,716**	**0%**	**412,746**	**0%**

(1) Durham County does not include Chapel Hill jurisdiction
(2) Includes parts of Orange County that are not in Carrboro, Chapel Hill and Hillsborough

(3) Includes eastern half of Chatham County

(4) Includes parts of Chapel Hill in Orange County and Durham County

Movement Comparison

The total population and employment in the Travel Corridor and Transit Node Scenarios remains the same as that of the Baseline SE Data. However, the individual TAZ totals increase and decrease to depict a shift, or movement, of the population and employment from one TAZ to another. The two tables on page 6 show the amount of population and employment movement that occurs in these two Scenarios for the various jurisdictions, and indicates what percentage of the total this movement represents.

TAZ Maps

The remaining pages in this section present ten maps:

- A population and employment map showing the forecasted growth in each TAZ from the year 2005 through 2035 for the Baseline Scenario. There is one map for each county.
- A population and employment map for each of the four Scenarios.

The map coloring depicts the level of increase or decrease of population and employment in each TAZ (Traffic Analysis Zone) for that Scenario. The reader can distinguish the expected patterns such as the increases around transit stations and along corridors for the Transit Node and Travel Corridor Scenarios, and decreases in areas of low transportation access for the Constrained Scenario.

TAZ Tables

The tables showing the detailed SE Data for each of the four scenarios are voluminous and therefore are not included in this document. The tables are available on the MPO's Web site – www.dchhcmpo.org, or by contacting Andy Henry, (919) 560-4366, andrew.henry@durhamnc.gov.

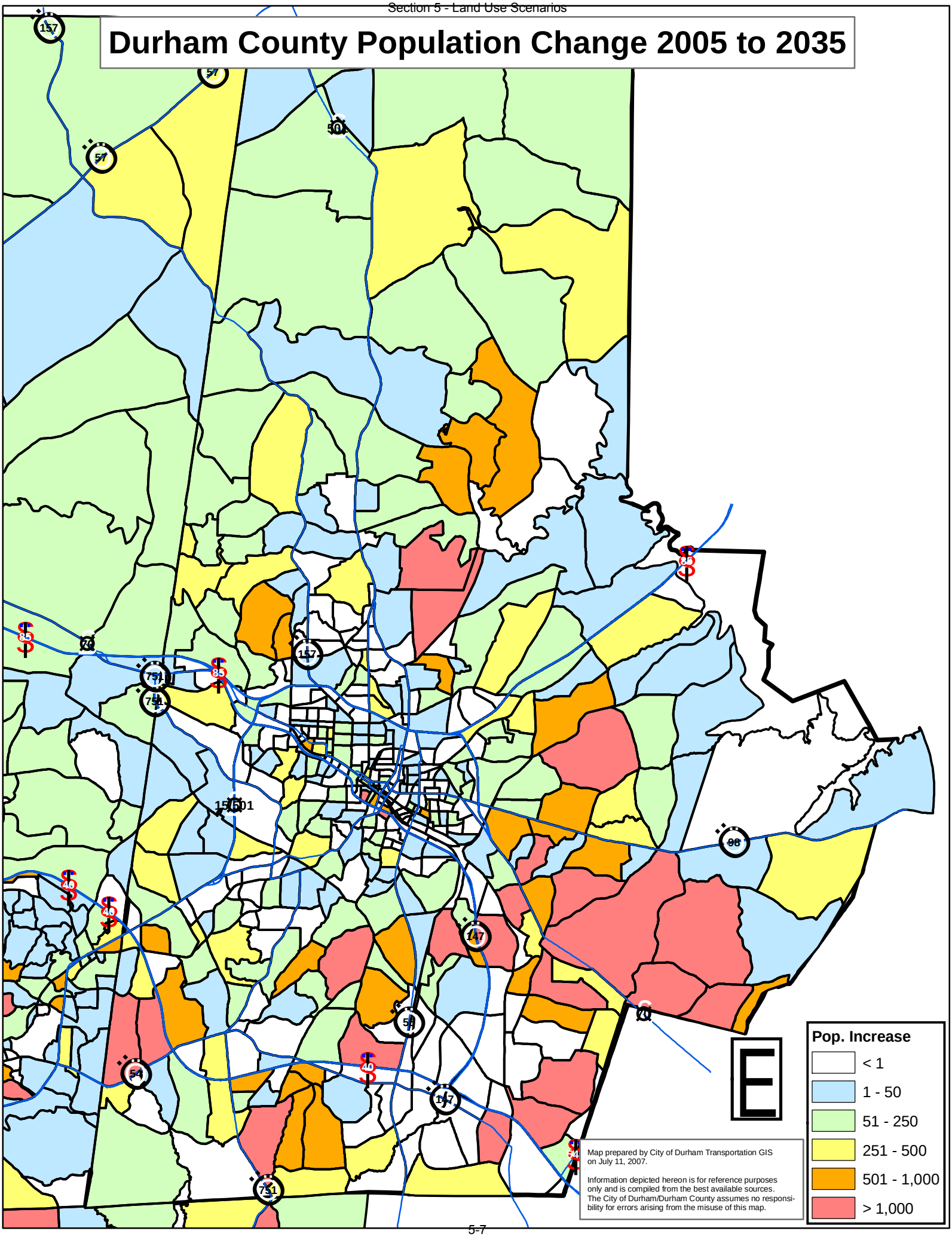
Travel Corridor Movement

	Population			Employment		
Jurisdiction	**Total**	**Movement**	**Percent Move**	**Total**	**Movement**	**Percent Move**
Durham (1)	354,163	20,002	6%	282,583	13,138	5%
Orange (2)	57,649	4,780	8%	10,087	297	3%
Chatham (3)	117,130	0	0%	23,863	0	0%
Chapel Hill (4)	80,466	2,140	3%	74,875	1,371	2%
Carrboro	28,255	928	3%	6,856	230	3%
Hillsborough	22,380	849	4%	14,452	421	3%
Total	**660,043**	**28,699**	**4%**	**412,716**	**15,457**	**4%**

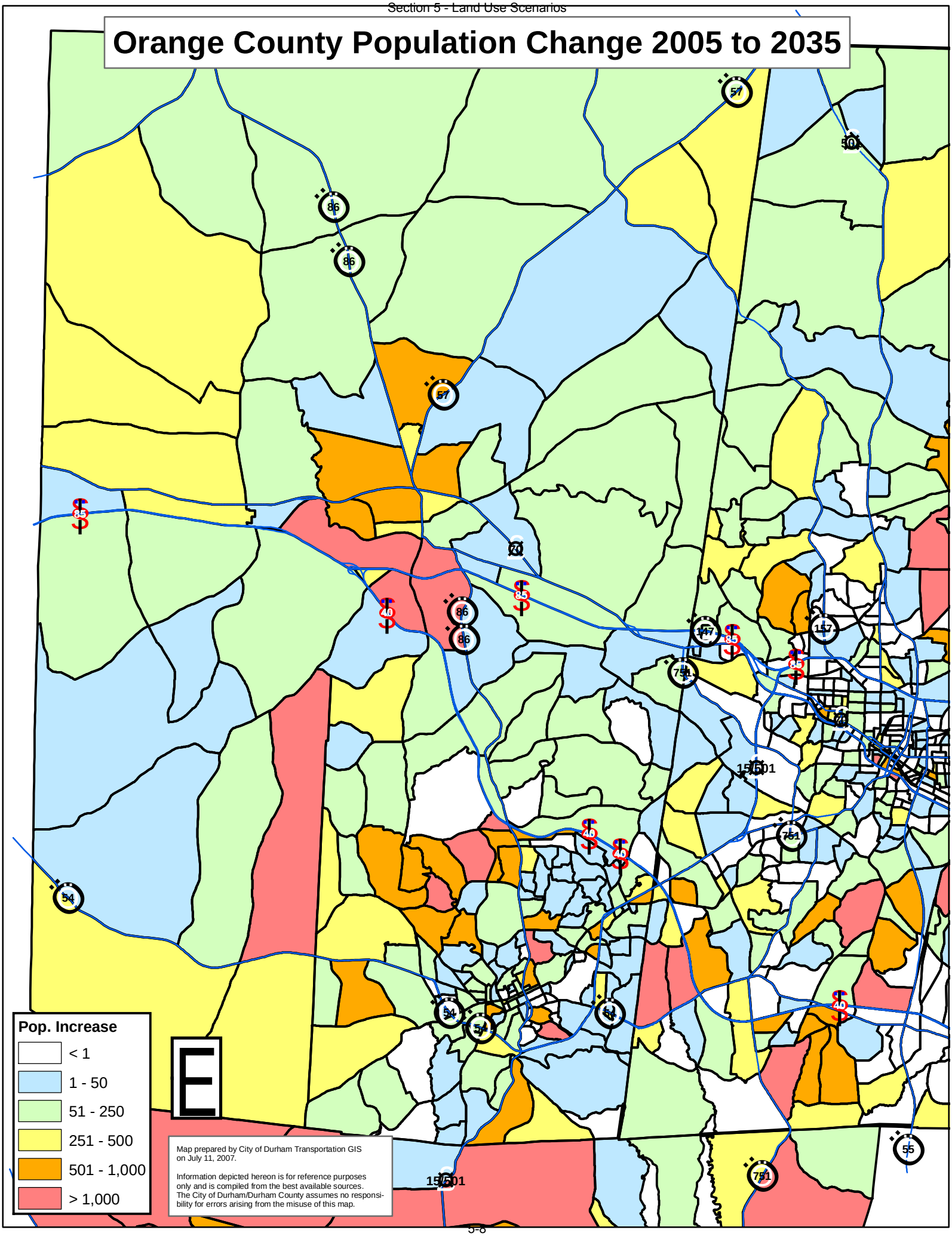
Transit Node Movement

	Population			Employment		
Jurisdiction	**Total**	**Movement**	**Percent Move**	**Total**	**Movement**	**Percent Move**
Durham (1)	354,164	15,842	4%	282,601	20,535	7%
Orange (2)	57,649	5,370	9%	10,087	848	8%
Chatham (3)	117,150	24,671	21%	23,853	14,556	61%
Chapel Hill (4)	80,483	5,643	7%	74,923	1,532	2%
Carrboro	28,269	26	0%	6,856	830	12%
Hillsborough	22,382	842	4%	14,426	803	6%
Total	**660,097**	**52,394**	**8%**	**412,746**	**39,104**	**9%**

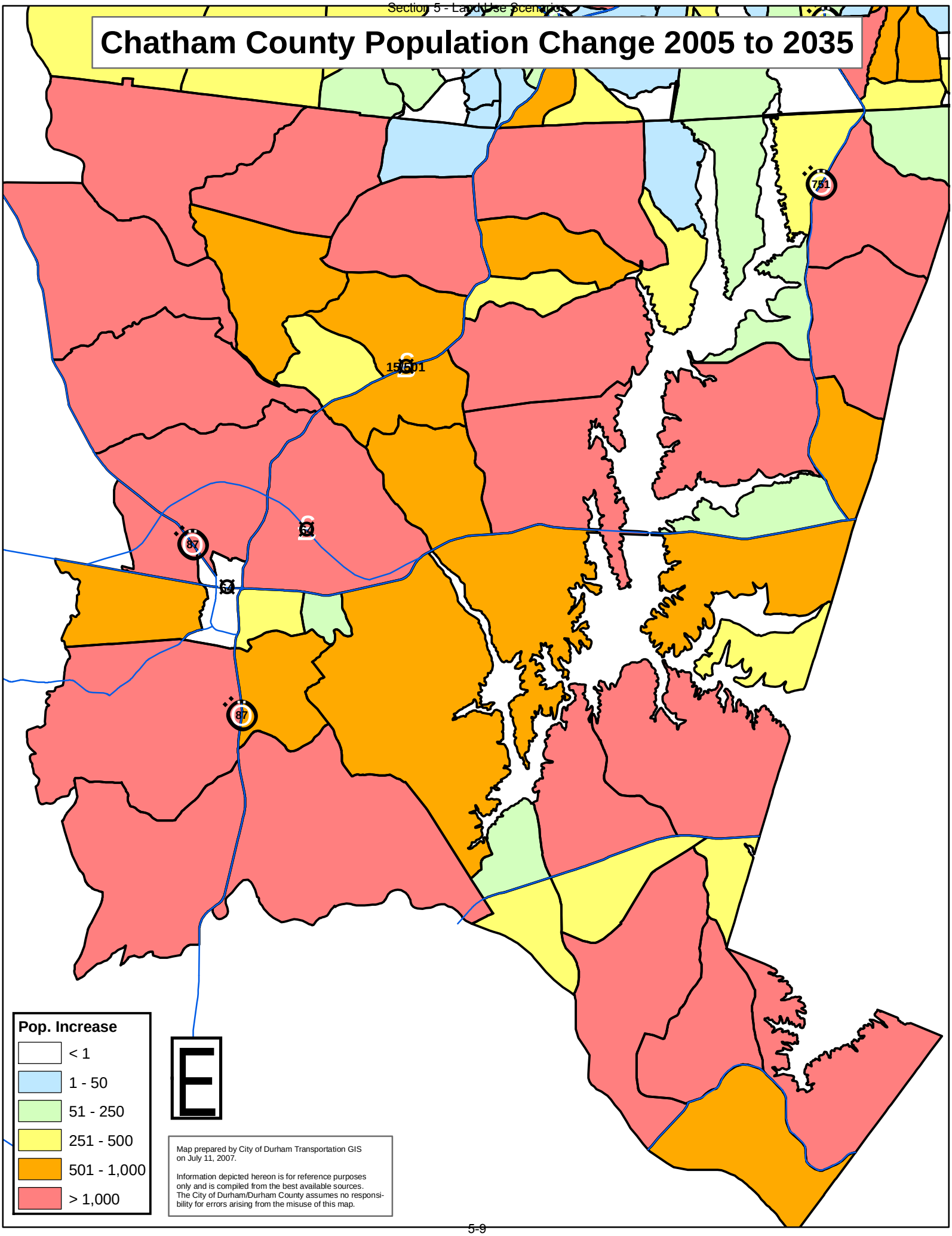
Durham County Population Change 2005 to 2035



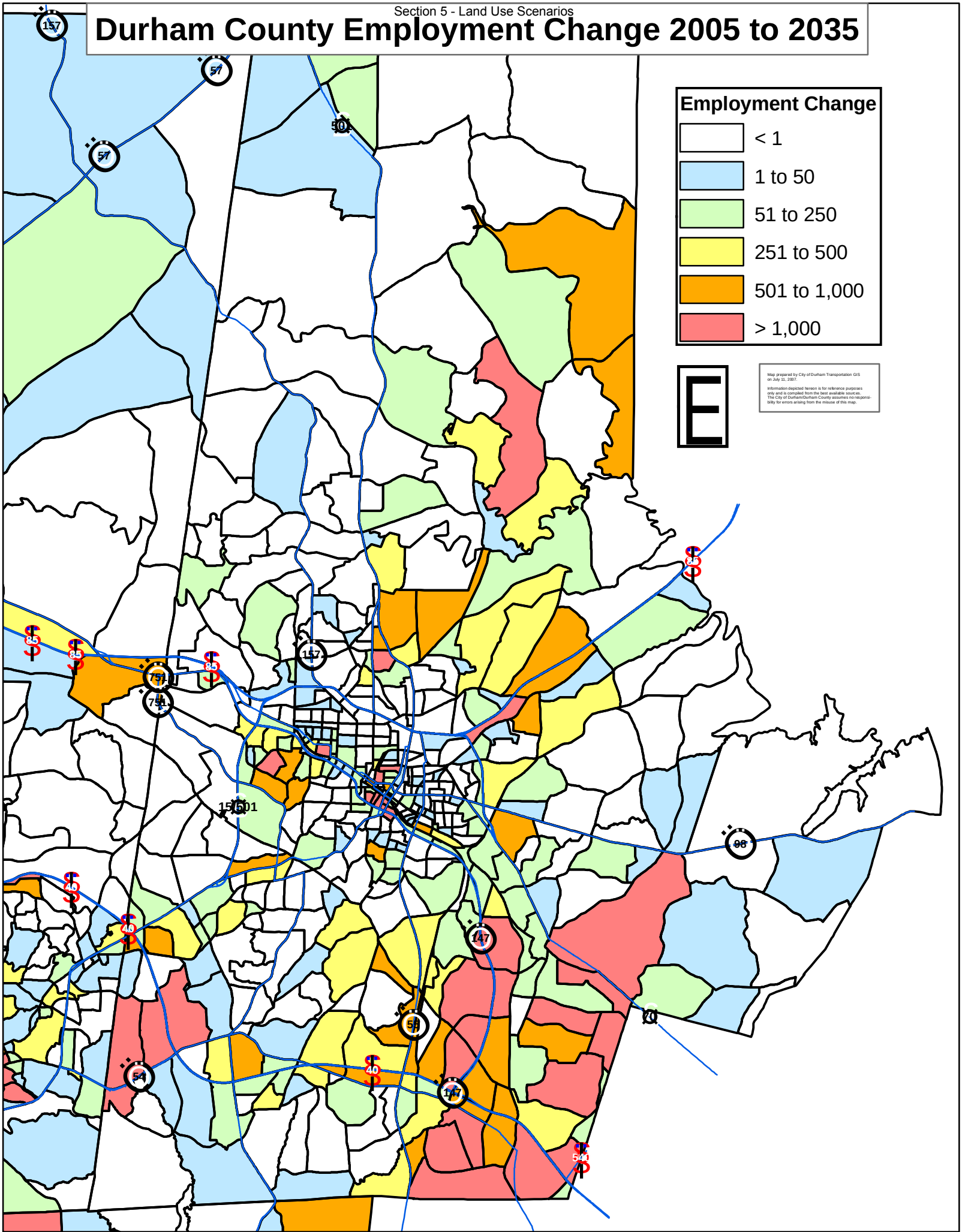
Orange County Population Change 2005 to 2035



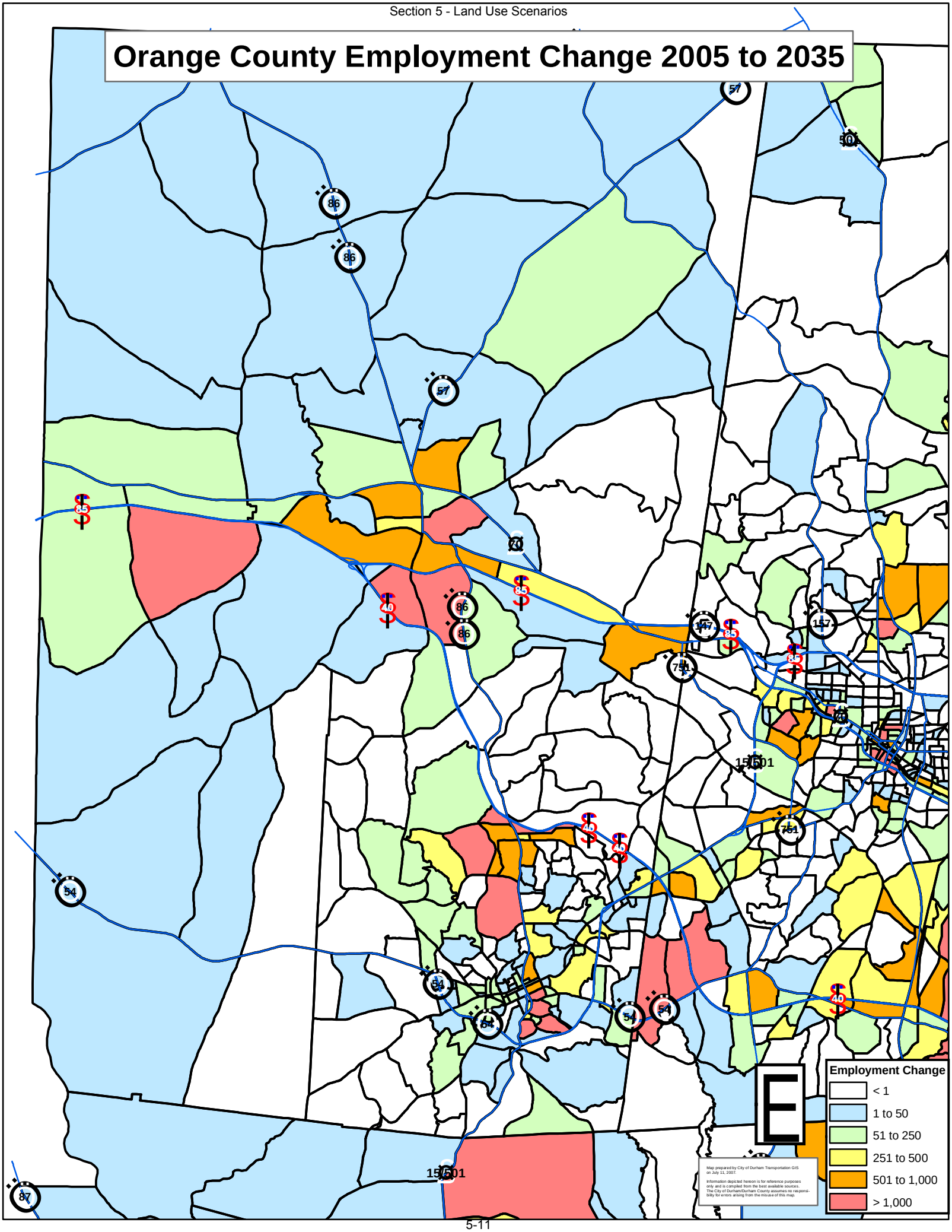
Chatham County Population Change 2005 to 2035



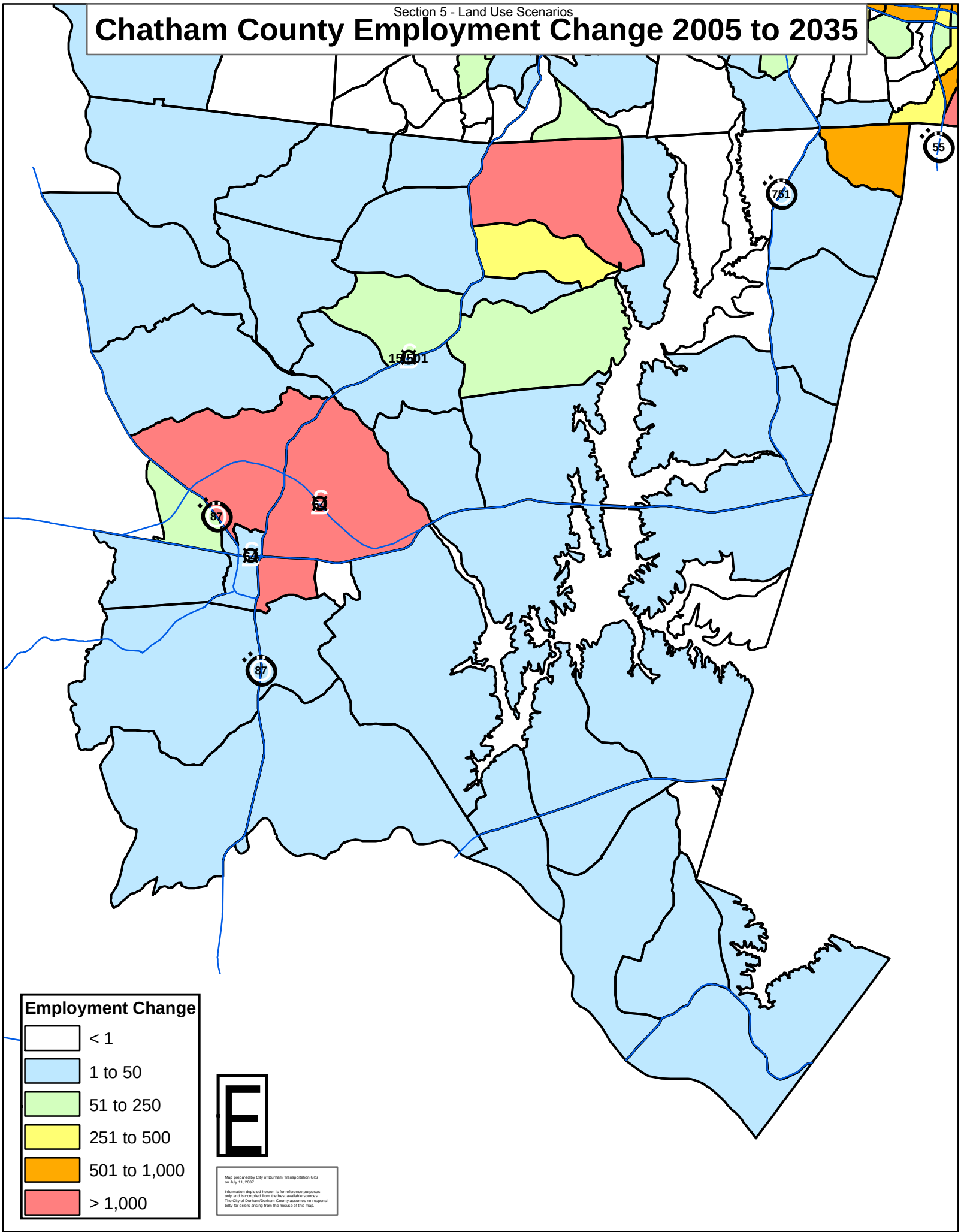
Durham County Employment Change 2005 to 2035



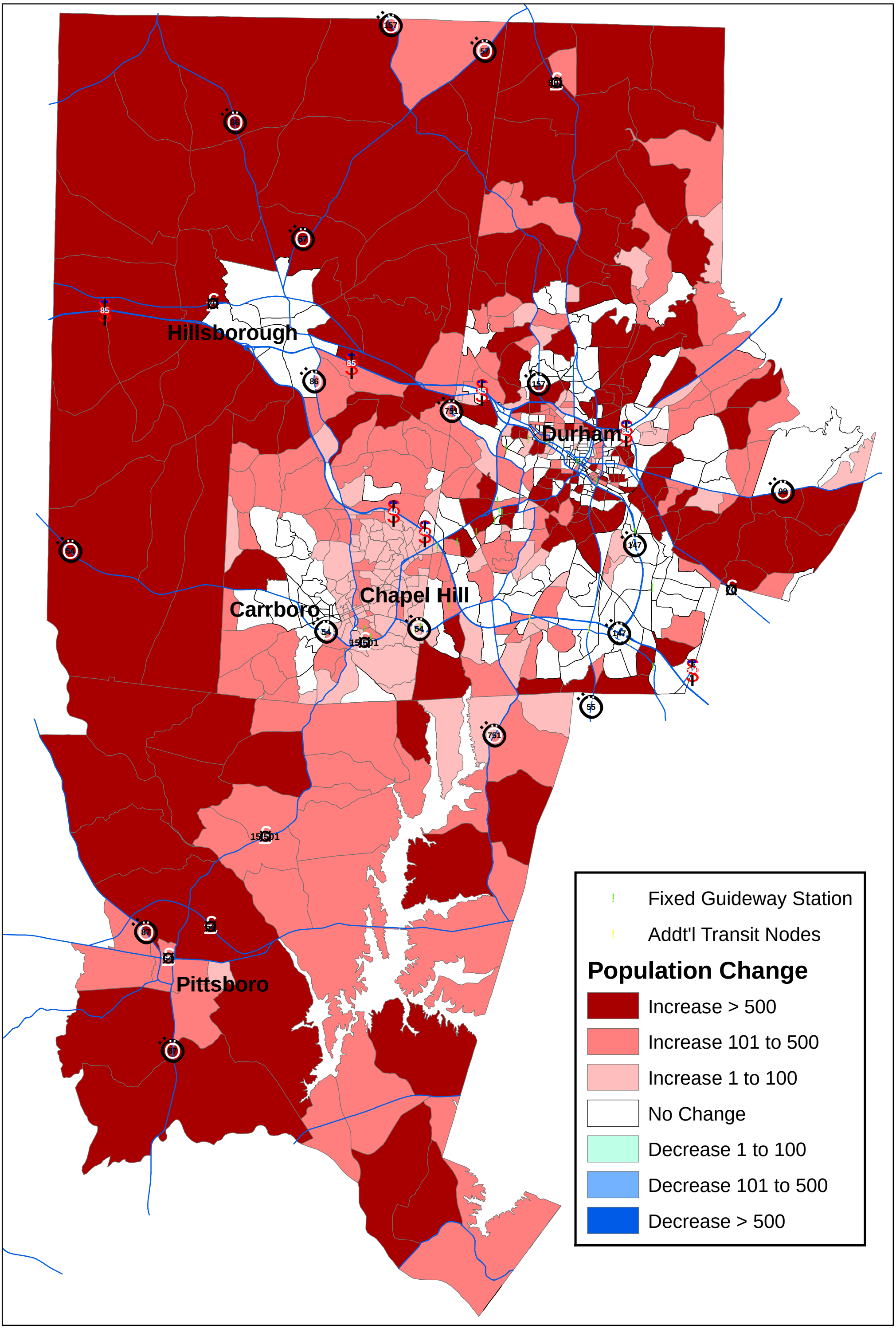
Orange County Employment Change 2005 to 2035



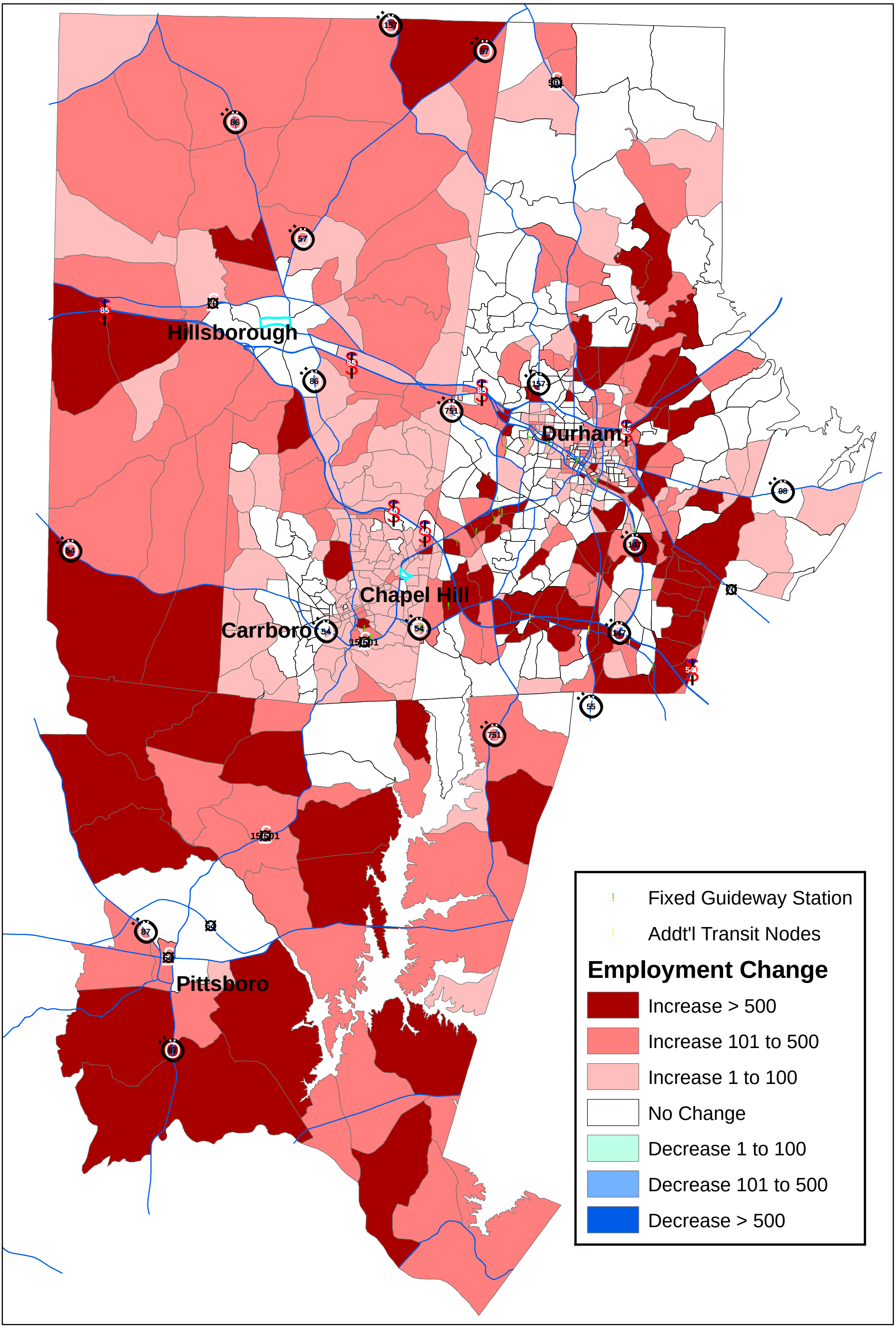
Chatham County Employment Change 2005 to 2035



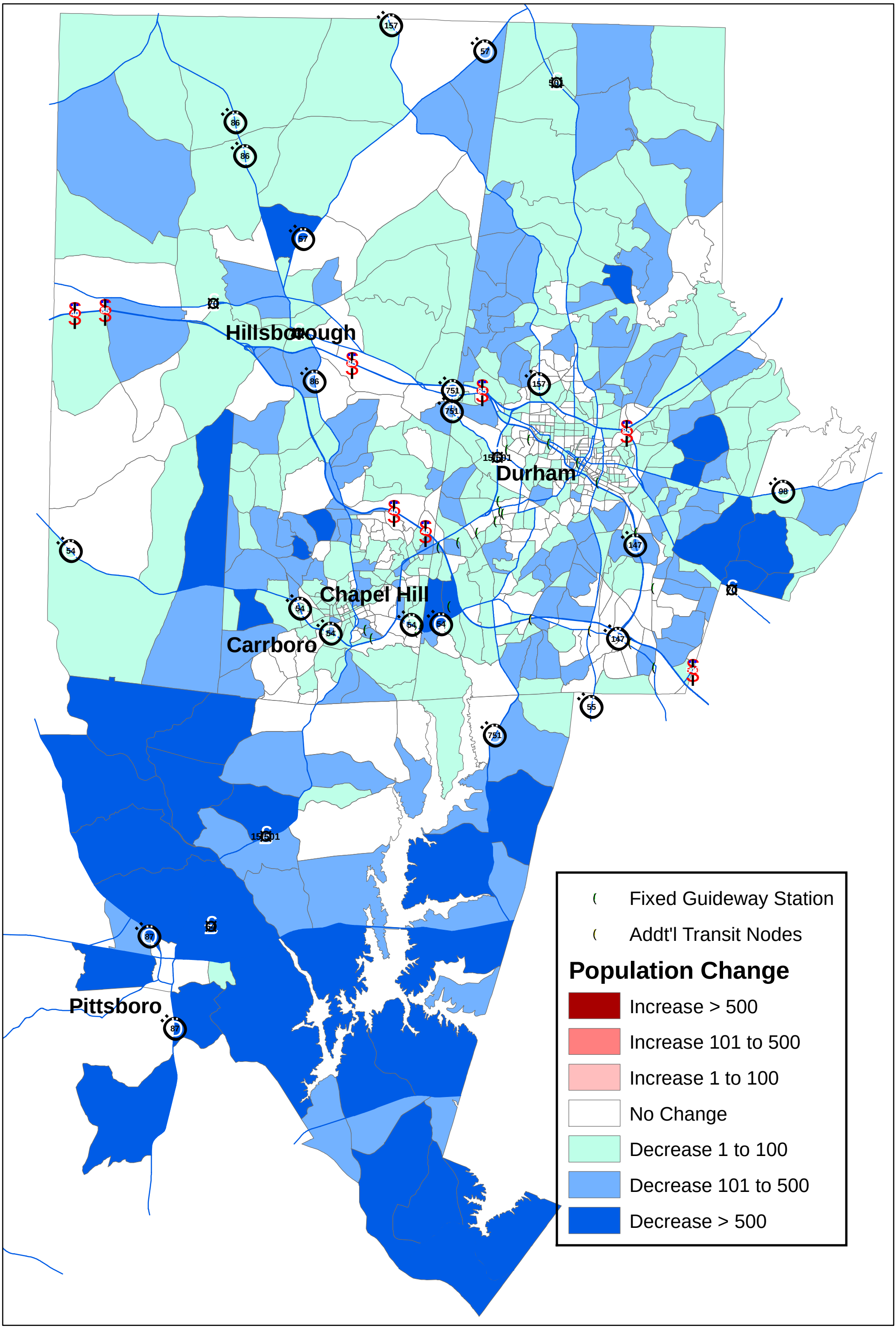
Buildout L.U. Scenario -- Population Compared to Baseline



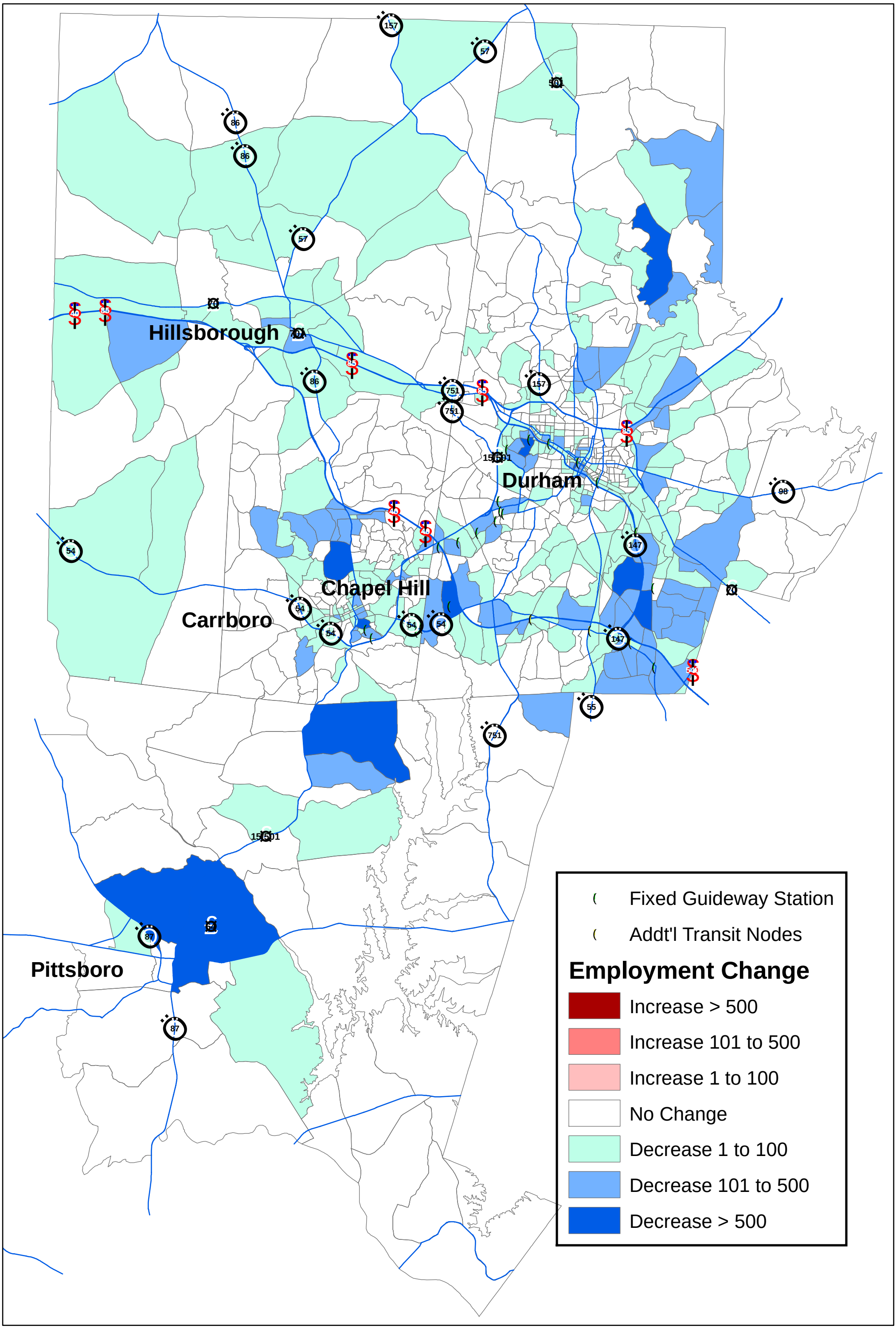
Buildout L.U. Scenario -- Employment Compared to Baseline



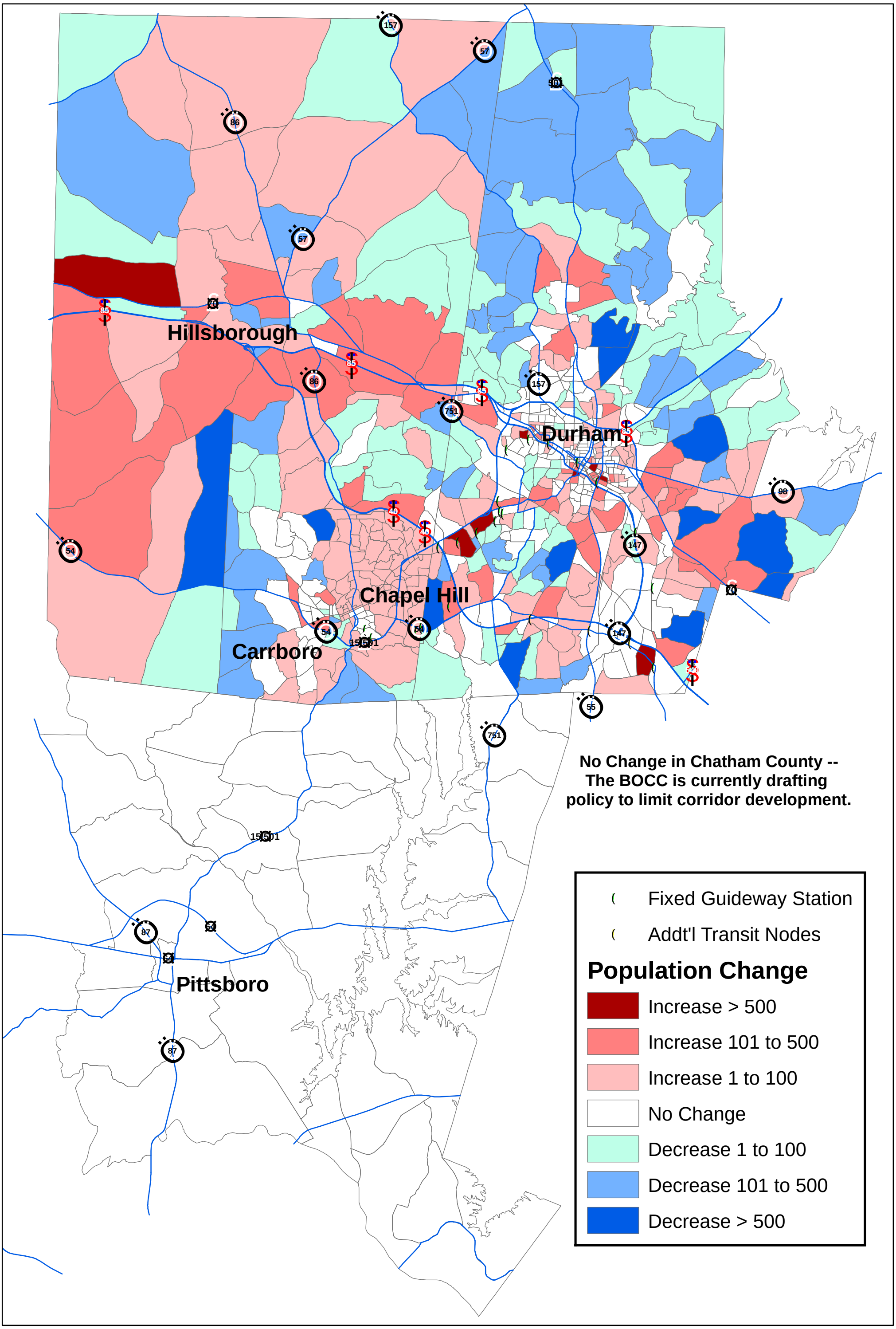
Constrained L.U. Scenario -- Population Compared to Baseline



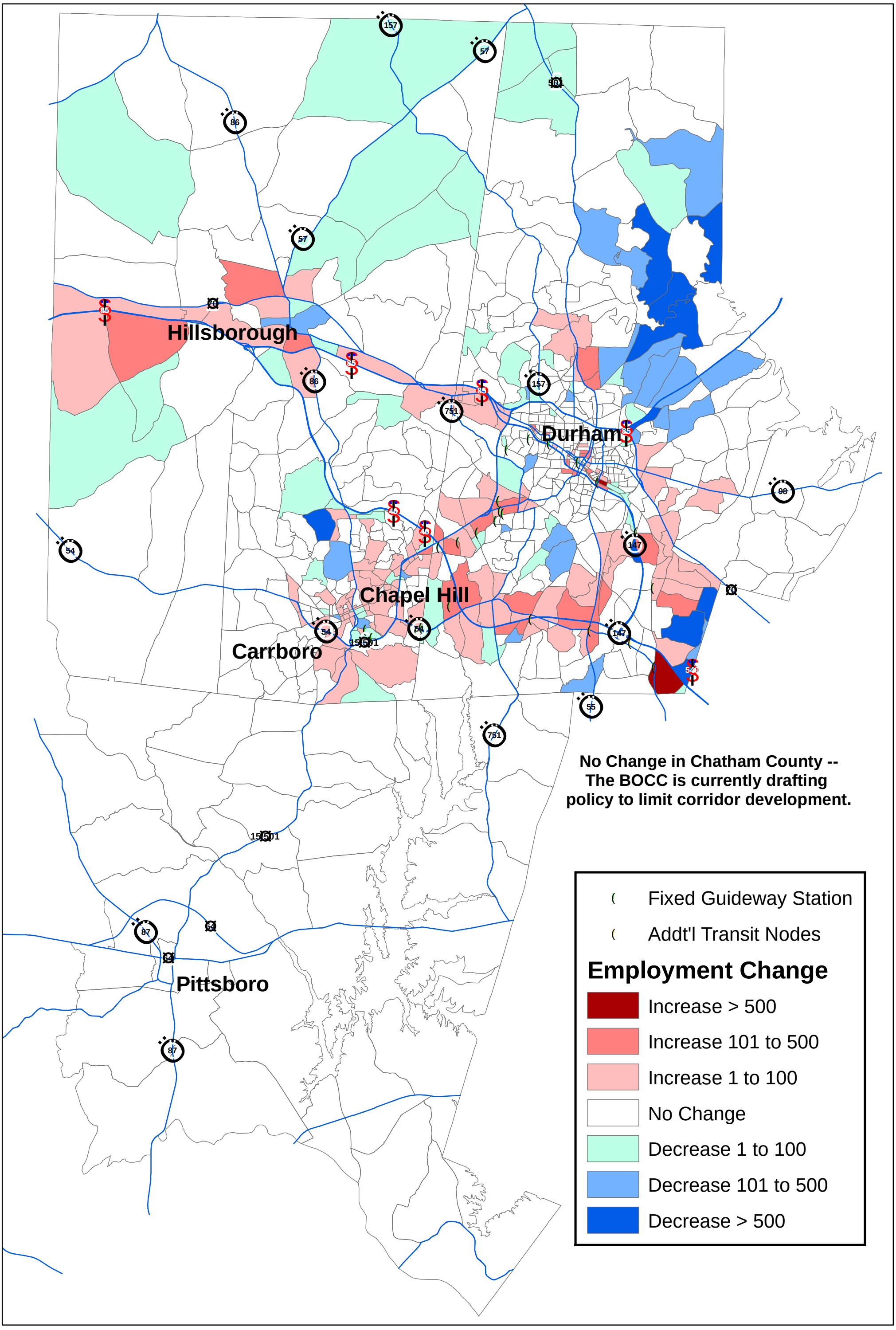
Constrained L.U. Scenario --Employment Compared to Baseline



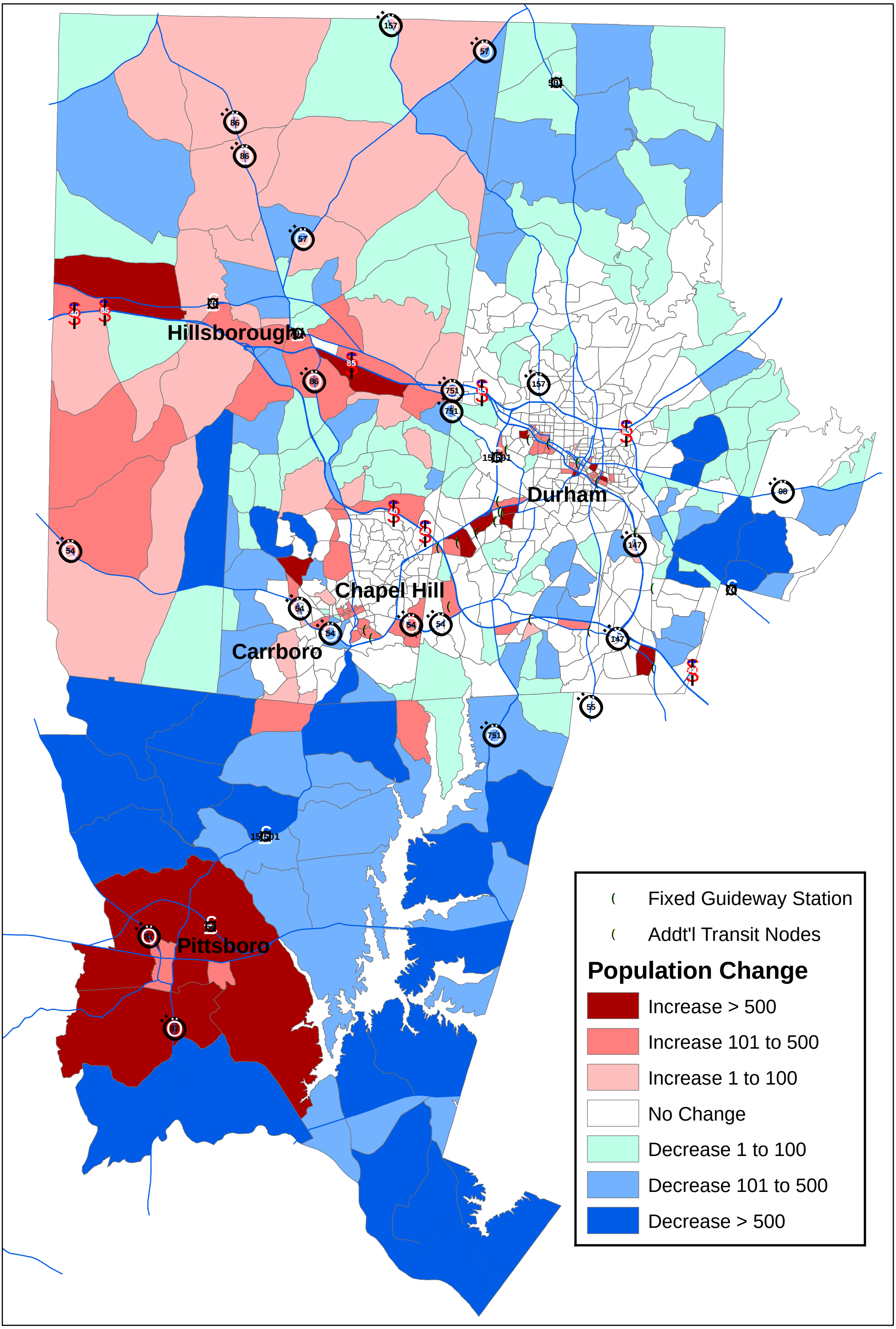
Travel Corridor L.U. Scenario -- Population Compared to Baseline



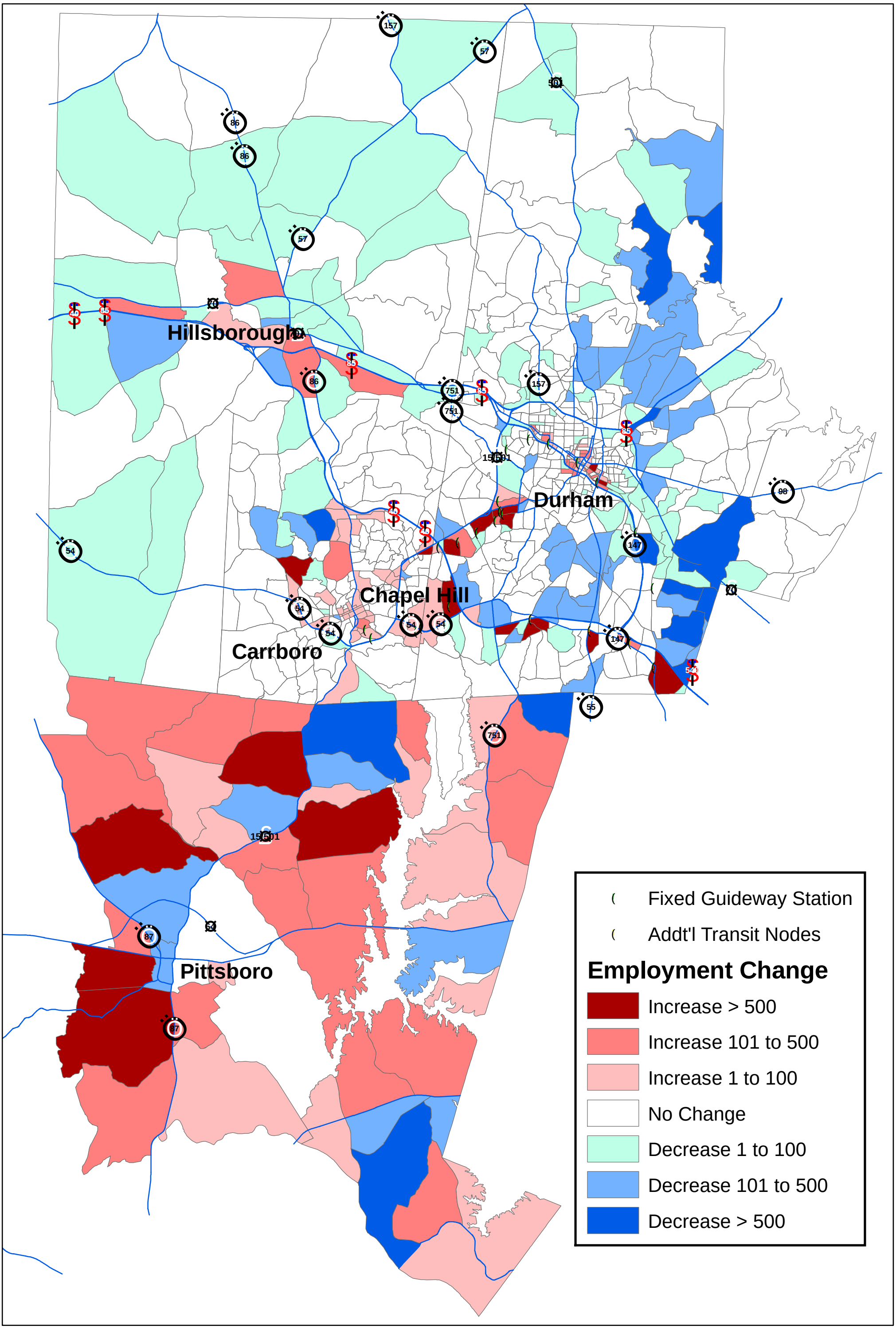
Travel Corridor L.U. Scenario -- Employment Compared to Baseline



Transit Node L.U. Scenario -- Population Compared to Baseline



Transit Node L.U. Scenario -- Employment Compared to Baseline



Policy Direction for Land Use Scenarios

Introduction

In preparing the Long Range Transportation Plan (LRTP), the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (MPO) has developed a series of alternative land use scenarios. The purpose of these scenarios is to explore how patterns of land use different from those reflected in adopted land use plans would affect travel demand. The MPO staff presented those scenarios to the Transportation Advisory Committee (TAC) in spring 2008.

A reasonable question that follows is, "What objectives and policies would the MPO's jurisdictions have to put into place to begin moving the community in the direction outlined in the scenario?" Below is a preliminary response to the question. This memo presents various sample policy directions that local governments could pursue to begin to implement the scenarios.

The policy directions suggested below span a range of complexity and political acceptability. Some are relatively easy to implement, while others may require complex planning studies and revisions to land use codes. They may require significant research, legal advice, and potentially enabling legislation to implement. Some may be inexpensive, while others may require a significant shift in priorities for operating and capital budgets. Note that this list of policy directions is preliminary and not exhaustive. Other policy directions or variations of these might be the best fit for the implementing the changes that the scenarios envision. Clearly, broader discussion with a variety of stakeholders about long range community goals and objectives would be needed to reach agreement how best to proceed.

Scenario 1 -- Baseline

The baseline scenario represents the fundamental projection of the MPO's future for purposes of transportation modeling. Fundamentally, the scenario assumes that land is developed over the next few decades in a manner consistent with the adopted land use plans, policies, and official actions of MPO jurisdictions. Projections of employment and housing were developed by determining what amount of housing and employment could be expected from each of several hundred traffic analysis zones, based on the future land use anticipated. Assumptions are used to account for: a) land undevelopable for environmental reasons (floodplains, stream buffers, etc.); b) the density and intensity of future development; and c) the proportion of development that might be expected by the 2035 planning horizon of the LRTP. The Baseline Scenario forms the basis for the adopted LRTP and the Air Quality Conformity Determination.

Scenario 2 -- Build-Out

The Build-Out Scenario is similar to the Baseline Scenario in that it represents the amount of housing and employment that could be expected if the MPO area were to develop in a manner consistent with adopted land use plans, policies, and official actions of MPO jurisdictions. However, the Build-Out Scenario is not "time constrained." It does not focus on a future

year, 2035, as the Baseline Scenarios does, but instead on an end state. It assumes that the entire scope of the MPO is developed.

Scenario 3 -- Constrained Growth

The Constrained Growth Scenario is the first of three that asks the question, "What might the future projections of employment and housing, and ultimately travel demand, be if the MPO was to alter its land use and development policies?" This scenario assumes that long range land use plans and development regulations would be consciously changed to scale down the amount of new development allowed each year. It also assumes that mechanisms be established to prevent growth beyond a certain annual target level.

Scenario Objective: Local governments in the MPO should employ conscious planning and policy actions to constrain growth in certain locations, resulting in forecast housing and employment by 2035 of approximately 10 percent less than for the Baseline Scenario, and up to 35 percent in Chatham County.

A. Land Use Planning

1. Develop a systematic and defensible method for determining the maximum amount of development that the local jurisdiction wants to accommodate each year and the basis for that determination.
2. Change local urban growth area boundaries to limit the extent of urban and suburban development.
3. Restrict the extension of sewer and water utilities.

B. Land Use Regulation

1. Develop a systematic and defensible method of evaluating and selecting highly desirable development projects that will be considered for legislative approval each year.

Scenario 4 -- Travel Corridors

The Travel Corridors Scenario speculates about what might be the effect on housing, employment, and travel demand from a conscious effort to achieve a different land use pattern in the MPO area. The focus in this scenario is on new development along major arterial roadways. This approach assumes the same amount of employment and housing growth, but assigns it to locations different than in the Baseline Scenario.

Scenario Objective: Local governments in the MPO should employ conscious planning and policy actions to focus a significant portion of future growth into transit-oriented corridors, including Downtown Durham. Ensure that new development is located and designed in an appropriate manner and that appropriate regional and local transit service are available. Develop effective strategies to encourage new development in Corridor areas and discourage new development elsewhere.

A. Land Use Planning

1. Through the Comprehensive Plan Future Land Use Map, identify transit oriented corridors as the land within a certain distance (perhaps ¼ mile) from major arterial streets. Examples in Durham include Roxboro Road, Main Street/Hillsborough Road, University Drive/Chapel Hill Road, Alston Avenue/NC 55, Holloway Street/NC 98, Miami Blvd, and NC 54. Other examples include: US 15-501 (Gateway area) in Chapel Hill; I-85 in Orange County; NC 54 by-pass in Carrboro; and Old NC 86 in the southern part of Hillsborough.
2. Prepare detailed small area plans to identify locations in transit-oriented corridor areas for mixed use and high intensity development, transit stops/stations, structured parking, pedestrian/bicycle facilities, other infrastructure, etc.

B. Land Use Regulation

1. Create a transit-oriented corridor zoning overlay district or base district.
2. Establish minimum land use intensity (residential density in dwelling units per acre and non-residential floor area ratios) for new development in the transit-oriented corridor district.
3. Require a high level of pedestrian and bicycle connections within the transit-oriented corridor district and between the district and surrounding neighborhoods.
4. Require accommodation for bus transit in specific locations identified in the small area plan for the transit-oriented corridor.
5. Prepare design guidelines and review new development against the guidelines to ensure that new development is transit, pedestrian, and bicycle friendly.
6. Prohibit auto-intensive land uses.
7. Significantly restrict surface parking and encourage/require structured parking.
8. Amend the development review and approval process to provide a higher priority and reduced application fees to new development in transit-oriented corridors and a lower priority and higher application fees for new development outside of transit-oriented corridors.

C. Transportation System Management (TSM)

1. Systematically assess the designated transit-oriented corridors to identify opportunities for TSM and roadway improvements to better coordinate traffic flow, especially with increased bus traffic.
2. Incorporate a program of TSM and roadway improvements into the jurisdiction's CIP.

D. Transportation Demand Management (TDM)

1. Prepare a TDM Plan for each transit-oriented corridor, including objectives and strategies to reduce traffic congestion; manage parking; and make the corridor area a desirable place to live, work, and visit.
2. Require that TDM improvements and programs be included in any new development in accordance with the TDM Plan.

E. Transit Service

1. Provide a high level of bus transit service along the arterials in the transit-oriented corridors.
2. Ensure that transit amenities are convenient and comfortable to encourage transit use. Amenities could include benches, shelters, lighting, landscaping, public art and graphics, ticket vending machines, rider information displays, bicycle facilities, etc.

F. Parking

1. Prohibit commercial parking lots as a stand-alone use in transit-oriented corridors.
2. Reduce or eliminate required parking in transit-oriented corridors.
3. Establish a maximum parking requirement in transit-oriented corridors.

Scenario 5 -- Transit Compact Zone

The Transit Compact Zone Scenario also speculates about what might be the affect on housing, employment, and travel demand from a conscious effort to achieve a different land use pattern. The focus in this scenario is on new development in transit-oriented compact neighborhoods in strategic location in the MPO. Likewise, this approach assumes the same amount of employment and housing growth as the Baseline Scenario, but assigns it to different locations.

Scenario Objective: Focus a significant proportion of future growth in compact neighborhoods. Ensure that that new development is located and designed in an appropriate manner and that appropriate regional and local transit service are available. Develop effective strategies to encourage new development in Transit Compact Zones and discourage new development elsewhere.

A. Land Use Planning

1. Through the Comprehensive Plan Future Land Use Map, identify transit-oriented compact neighborhoods as the land within a certain distance (perhaps ½ mile) from regional transit stops or stations. Examples in Durham include Roxboro Road, Main Street/Hillsborough Road, University Drive/Chapel Hill Road, Alston Avenue/NC 55, Holloway Street/NC 98, Miami Blvd, and NC 54. Other examples include: US 15-501 (Gateway area), Carolina North, and UNC Hospitals in Chapel Hill; I-85 in Orange County; NC 54 by-pass in Carrboro; and Old NC 86 in the southern part of Hillsborough
2. Prepare detailed small area plans to identify locations in transit-oriented compact neighborhoods for mixed use and high intensity development, transit stops/stations, structured parking, pedestrian/bicycle facilities, other infrastructure, etc.

B. Land Use Regulations

1. Create a transit-oriented compact neighborhood zoning district.

2. Establish minimum land use intensity (residential density in dwelling units per acre and non-residential floor area ratios) for new development in the transit-oriented compact neighborhood district.
3. Require a high level of pedestrian and bicycle connections within the transit-oriented compact neighborhood district and between the district and surrounding neighborhoods.
4. Require accommodation for bus transit in specific locations identified in the small area plan for the transit-oriented compact neighborhood.
5. Prepare design guidelines and review new development against the guidelines to ensure that new development is transit-, pedestrian-, and bicycle-friendly.
6. Prohibit auto-intensive land uses.
7. Significantly restrict surface parking and encourage/require structured parking.
8. Amend the development review and approval process to give a higher priority and reduced application fees for new development in transit compact zones and a lower priority and higher application fees for new development outside of transit compact zones.

C. Transportation System Management (TSM)

1. Systematically assess the designated transit-oriented compact neighborhood districts to identify opportunities for TSM and roadway improvements to better coordinate traffic flow, especially with increased bus traffic.
2. Incorporate a program of TSM and roadway improvements into the jurisdiction's CIP.

D. Transportation Demand Management (TDM)

1. Prepare a TDM Plan for each transit-oriented compact neighborhood district, including objectives and strategies to reduce traffic congestion; manage parking; and make the corridor area a desirable place to live, work, and visit.
2. Require that TDM improvements and programs be included in any new development in accordance with the TDM Plan.

E. Transit Service

1. Provide a high level of regional transit between and bus feeder transit services to the transit-oriented compact neighborhoods.
2. Ensure that transit amenities are convenient and comfortable to encourage transit use. Amenities could include benches, shelters, lighting, landscaping, public art and graphics, ticket vending machines, rider information displays, bicycle facilities, etc.

F. Parking

1. Prohibit commercial parking lots as a stand-alone use in transit-oriented compact neighborhood districts.
2. Reduce or eliminate required parking in transit-oriented compact neighborhood districts.

RESOLUTION

TO APPROVE AMENDMENT #1 TO THE FY 2008-2009 UNIFIED PLANNING WORK PROGRAM OF THE DURHAM-CHAPEL HILL-CARRBORO METROPOLITAN PLANNING ORGANIZATION (DCHC MPO)

September 10, 2008

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 planning projects are effectively allocated to the DCHC MPO; and

WHEREAS, The Durham-Chapel Hill-Carrboro MPO requests an amendment to the 2008-2009 UPWP as outlined on the attached tables; and

WHEREAS, Members of the Transportation Advisory Committee agree that the Unified Planning Work Program amendment effectively advances transportation planning for 2008-2009.

Now, therefore, be it resolved that the Transportation Advisory Committee hereby endorses Amendment #1 of the Durham-Chapel Hill-Carrboro Urban Area Unified Planning Work Program for the FY 2008-2009 as described in the attached sheets.

I, Alice M. Gordon, Transportation Advisory Committee 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 Urban Area Transportation Advisory Committee, duly held on the 10th day of September, 2008.

_____
Signature of TAC Chair
Durham-Chapel Hill-Carrboro Metropolitan Planning Organization

STATE OF: North Carolina
COUNTY OF: Durham

I, _____, a Notary Public of _____County, North Carolina do hereby certify that Alice M. Gordon personally appeared before me on ___day of _____, 2008 to affix her signature to the foregoing document.

_____
Notary Public

101 City Hall Plaza
Durham, NC 27701

My commission expires:_____

Reallocation of funds by the Town of Carrboro to better reflect current and scheduled work activities for the 2008-2009 fiscal year. As indicated in the table below, there is no net change in total funding with these changes.

	Section 104(f) Planning Funds					
Carrboro	Original 2008-2009 UPWP Adopted April 9, 2008		Proposed Amendment #1 August 13, 2008		Difference (change)	
Task Description	Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%
Surveillance of Change						
Transit System Data	125	500	90	360	-35	-140
Mapping	60	240	95	380	35	140
Planning Work Program						
Planning Work Program	200	800	250	1000	50	200
Transportation Improvement Plan						
Transportation Improvement Plan	125	500	400	1600	275	1100
Civil Rights						
Public Involvement	300	1200	200	800	-100	-400
Incidental Planning/Project Dvlpt.						
Tranp. Enhancement Planning	100	400	50	200	-50	-200
Special Studies (greenway planning)	300	1200	800	3200	500	2000
Management and Operations						
Management and Operations	3000	12000	2325	9300	-675	-2700
Net Change					**0**	**0**

RESOLUTION TO REQUEST THE TRANSFER OF FFY 2009 CONGESTION MITIGATION AIR QUALITY (CMAQ) AND SURFACE TRANSPORTATION PROGRAM – DIRECT ATTRIBUTABLE (STPDA) FUNDS FROM FHWA TO FTA FOR THE DURHAM-CHAPEL HILL-CARRBORO URBAN AREA

September 10, 2008

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 Congestion Mitigation Air Quality (CMAQ) program provides funding for surface transportation and other related projects that contribute to air quality improvements and reduce congestion; and

WHEREAS, transit projects that are likely to increase transit ridership and reduce congestion are permitted to receive CMAQ funds; and

WHEREAS, the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (DCHC MPO) approved FFY 2009 CMAQ funds for three eligible transit projects: C-4927 (Durham purchase of five hybrid expansion buses), C-5103 (Durham purchase of two hybrid expansion buses and operating assistance), and C-5104 (Chapel Hill purchase of two hybrid articulated buses and operating assistance); and

WHEREAS, Surface Transportation Program – Direct Attributable (STPDA) funds are provided to the DCHC MPO for transportation projects and planning activities; and

WHEREAS, the DCHC MPO approved FFY 2008 STP-DA funds for four transit projects: TG-4958 (Durham passenger amenities), TA-4755 (Durham purchase of six hybrid expansion buses), TA-4748 (Chapel Hill purchase of five replacement vans), U-4727 (Chapel Hill transit marketing and short range planning); and

WHEREAS, the Federal Transit Administration (FTA) administers most transit projects through the FTA's Urbanized Area Formula Grant Program; and

WHEREAS, in order for local governments to receive CMAQ and STPDA funds for transit projects, the Federal Highway Administration (FHWA) must transfer the funds to the FTA; and

Now, therefore, be it resolved that:

The Durham-Chapel Hill-Carrboro Transportation Advisory Committee hereby requests that the Federal Highway Administration transfer the Congestion Mitigation Air Quality (CMAQ) funds and Surface Transportation Program Direct Attributable (STPDA) funds for FFY 2009 to the Federal Transit Administration for projects C-4927 (Durham purchase of five hybrid expansion buses), C-5103 (Durham purchase of two hybrid expansion buses and operating assistance), C-

5104 (Chapel Hill purchase of two hybrid articulated buses and operating assistance), TG-4958 (Durham passenger amenities), TA-4755 (Durham purchase of six hybrid expansion buses), TA-4748 (Chapel Hill purchase of five replacement vans), and U-4727 (Chapel Hill transit marketing and short range planning) as described on the attached table as soon as it is authorized to do so.

I, Alice M. Gordon, Transportation Advisory Committee Chair, do hereby certify that the above is a true and correct copy of the excerpt from the minutes of a meeting of the Durham-Chapel Hill-Carrboro Transportation Advisory Committee, duly held on the 10th day of September 2008.

_____
Signature of the TAC Chair
Durham-Chapel Hill-Carrboro Transportation Advisory Committee

STATE of: North Carolina
COUNTY of _____

I, _____, Notary Public of _____ County, North Carolina do hereby certify that _____ personally appeared before me on the _____ day of _____ 2008 to affix her signature to the foregoing document.

_____
Notary Public
My Commission expires: _____

Table: FFY 2009 CMAQ funds that need to be transferred from FHWA to FTA.

TIP #	Project	FFY 2009 (federal funds)	Funding Source
TG-4958	Durham, passenger amenities	$86,274	STPDA
TA-4755	Durham, purchase six hybrid electric expansion buses	$2,592,000	STPDA
TA-4748	Chapel Hill, purchase five replacement vans	$400,000	STPDA
U-4727	Chapel Hill, transit marketing/short range planning	$200,000	STPDA
C-4927	Durham, additional capital funding to address a funding shortfall for a previously approved CMAQ project to purchase five hybrid electric buses for service expansion	$397,995	CMAQ
C-5103	Durham, purchase two hybrid electric buses for service expansion and a portion of operating assistance for two years (FY 2009 and 2010)	$864,000 capital $237,911 operating	CMAQ
C-5104	Chapel Hill, purchase two hybrid electric articulated buses to operate on an existing route and a portion of operating assistance for three years (FY 2009, 2010, and 2011)	$1,360,000 capital $90,868 operating	CMAQ

MEMORANDUM

To: Transportation Advisory Committee (TAC)
DCHC MPO

From: DCHC MPO Lead Planning Agency

Date: September 10, 2008

Subject: **Lead Planning Agency (LPA) Staff Report**

This memorandum provides a summary status of tasks for projects in the FY 2008-2009 Unified Planning Work Program.

- ✓ Indicates that task is complete.
- ✓ Indicates that task is ongoing or not complete.

2008-09 Unified Planning Work Program (UPWP) – Projects

Long Range Transportation Plan (LRTP) / Comprehensive Transportation Plan (CTP) Update

- ✓ Draft schedule – August 2006
- ✓ Release SE Data for public comment – January 2007
- ✓ Release Goals and Objectives for public comment – July 2007
- ✓ TAC approve SE Data – September 2007
- ✓ Goals and Objectives – TAC hold public hearing, September 2007, and approve, October 2007.
- ✓ TAC approve Targets – February 2008
- ✓ TAC review Deficiency Analysis – March 2008
- ✓ TAC review Land Use Scenarios – May 2008
- ✓ TAC review LRTP Alternatives – August 2008
- ▪ Public Outreach for Alternatives – August-September 2008
- ▪ Public Hearing on the LRTP Alternatives – September 10, 2008
- ▪ Release of the Preferred Option for Public Comments and Input – October 200.
- ▪ Public Hearing on the Preferred Option – October 8, 2008
- ▪ Approval of 2035 LRTP to be used for air quality analysis – December 2008
- ▪ Air analysis and Inter-Agency Coordination – December 2008 to February 2009
- ▪ Release of draft 2036 LRTP Conformity report – March 2009
- ▪ TAC approval of LRTP conformity Determination – April 2009

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 November 2008
Consultant selection November/ December 2008
Council contract approval February/March 2009
Notice to Proceed – February/March 2009

MPO Parking Survey and Study

Draft scope of services
Request for Proposal notice – December 2008
Proposal due January 2009
Consultant selection February 2009
Council contract approval March/April 2009
Notice to Proceed – April 2009

Commercial Vehicle/Freight Survey

Model specification September 2008
Draft scope of services September/October 2008
Request for Proposal notice – December 2008
Proposal due January 2009
Consultant selection February 2009
Council contract approval March/April 2009
Notice to Proceed – April 2009

GIS/Data Integration and Automation

- ✓ Phase I in progress
- ✓ Initial Kick of meeting and scan completed
- ✓ Initiation Workshop report completed
- ✓ Draft Requirement Assessment & Application Development Report - October 2008

GIS Warehouse Design & Implementation
Functional TELUDE Development
Development of Common Maps, Models & Reports
TELUDE Implementation, Testing and Evaluation
TELUDE Computing Environment
Deployment, Documentation, Users Guide and Training

Land-use Model development

- ✓ Multi-year project in progress
- ✓ Review of existing data and need/requirement analysis completed
- ✓ Land use data collection completed
- ✓ Development of Model specification Completed

Page 2 of 4

✓ Model architecture and design completed
Database for UrbanSim model
Phase 1 model development
Demographic and Economic Transition Models
Household and Job Location Choice Models
Development Models
Price Models
Accessibility and TRM Interface
Integration of Model Outputs
Training, documentation, User's manual
Final Presentation

Non-Motorized Model development

✓ Phase 1 completed.
Phase 2 underway awaiting the completion of LRTP modeling tasks

- Update and enhancement of Generation Choice Models
- Revision and revalidation of Destination choice models
- Development of improved Model Choice model
- Prepare and implement new TransCad routines to implement new models
- Documentation, User's manual, and training
- Project completion date anticipated in 2010

ITS Deployment Plan

✓ Two Triangle regional stakeholder coordination meetings held.
✓ Update of ITS short range strategies for the 2007-2013 TIP.
✓ Update of 2007-2010 ITS project – December 2006
✓ Request for funding from NCDOT
✓ Draft scope of services and Request for Proposals.
✓ Consultant selection in spring of 2008

- Notice to proceed in October 2008
- Scan of Best practices
- ITS Vision and goals
- Gap Assessment
- Development of ITS Architecture
- Development of ITS Cost Estimates and Cost database
- Development of Maintenance Plan
- Development of IDAS Model
- Integration & Streamlining of ITS with Transportation Planning.
- Strategic Deployment Plan
- Project Management
- Final Reports
- Completion of Project expected in Winter of 2010.

Farrington Road/Stagecoach Road Corridor Study

Page 3 of 4

- ✓ This study involved the following tasks:
  1. Data collection and analysis
  2. Traffic circulation plan (including a collector street system plan)
  3. Sub-area modeling analysis and forecast of future demand
  4. Alternative evaluation
  5. Recommendation
- ✓ Kimley Horn and Associates is the consultant
- ✓ Data collection underway
- ✓ Steering Committee proposed
- ✓ Completion of study expected in January
- ✓ Integration in the 2035 LRTP
- ✓ Draft report complete
- ✓ Presentation at June TAC

MPO Collector Street Plan

- ✓ Supplemental Agreement with Kimley Horn and Associates
- ✓ Data collection underway
- ▪ Completion of study and integration with the 2035 LRTP in Spring 2009

MPO Expansion for the next LRTP Update

- ✓ Initiated dialogue with Person County, Granville County, Butner, Roxboro and Pittsboro – July 2006
- ✓ Met with governing bodies of these jurisdictions – September 2006
- ✓ MPO expansion and revision of MOU expected to be completed as part of the 2035 LRTP update.

Public Outreach for the East End Connector Planning and Environmental Study

- ✓ LPA working on the Public Involvement and Outreach Program for the East End Connector Planning and Environmental Study (NEPA).
- ✓ Development of mailing list database complete.
- ✓ Received project schedule and time line from NCDOT.
- ✓ Newsletter distributed May 2006
- ✓ Speakers Bureau presentations June 2006 – ongoing
- ✓ First public meeting September 26, 2006
- ✓ Second public meeting – January 30, 2007
- ✓ Alternative 3 selected as LEDPA – June 19, 2007
- ✓ Ad Hoc Committee Meetings – August 9, 2007, August 27, 2007, September 19, 2007, October 10, 2007, November 7, 2007, December 5, 2007
- ✓ Third public meeting December 10, 2007, Orange Grove Missionary Baptist Church
- • Environmental Study expected completion - summer 2008

Page 4 of 4

NCDOT PROJECTS UNDER CONSTRUCTION IN DURHAM COUNTY - 9/2/2008

County	TIP #	Route	Location Description	Contract Amount	Length	Contractor Name	Resident Engineer	RE Ph. #	Contract Completion	Scheduled Progress	Actual Progress	Estimated Completion
~~*DURHAM*~~	~~*I-306C*~~	~~*I-85*~~	~~*WIDENING OF I-85 FROM EAST OF COLE MILL RD TO WEST OF BROAD STREET.*~~	~~*$ 66,628,382.65*~~	~~*3.416 km*~~	~~*Granite Construction Company*~~	~~*Durham RE Office*~~	~~*(919) 220-4680*~~	~~*12/31/2006*~~	~~*100%*~~	~~*100%*~~	*COMPLETE*
DURHAM	U-4010	NC 98	WIDENING OF NC 98 (HOLLOWAY ST) FROM EAST OF US 70 TO EAST OF JUNCTION ROAD	$ 3,288,207.30	0.369 miles	Triangle Grading and Paving	Cadmus Capehart, PE	(919) 840-0914	6/15/2008	100.0%	45.6%	12/15/2008
DURHAM	U-4410DB	HOPSON ROAD	NEW ALIGNMENT OF HOPSON ROAD FROM NC-55 TO LOUIS STEPHENS DRIVE	$ 3,476,305.55	0.587 miles	Thompson Contracting, Inc.	Jeff Allen, PE	(919) 733-9499	10/1/2008	74.0%	68.9%	10/1/2008
~~*DURHAM*~~	~~*2008 RESURF*~~	~~*US-501, NC-55, SR*~~	~~*RESURFACING AND SHLDR RECONSTR. OF US-501, NC-55 AND 14 SECTIONS OF SECONDARY RDS*~~	~~*$ 3,389,883.53*~~	~~*21.5 miles*~~	~~*C C Mangum Company LLC*~~	~~*Cadmus Capehart, PE*~~	~~*(919) 840-0914*~~	~~*8/1/2008*~~	~~*100%*~~	~~*100%*~~	*COMPLETE*
DURHAM / WAKE	U-4026A/B R-2904	DAVIS DRIVE / NC-54	WIDENING OF DAVIS DRIVE FROM MORRISVILLE-CARPENTER ROAD TO NC 54, WIDENING OF NC-54 FROM DAVIS DRIVE TO MIAMI BLVD	$ 35,467,891.08	6.363 miles	C C Mangum Company LLC	Jeff Allen, PE	(919) 733-9499	11/1/2009	46.1%	62.1%	11/1/2009
DURHAM	B-3169	RIVERMONT ROAD	BRIDGE 158 ON RIVERMONT ROAD (SR-1402)	$ 539,350.81	0.067 miles	SMITH-ROWE, INC.	Durham RE Office	(919) 220-4680	11/10/2008	46.5%	52.5%	11/10/2008
DURHAM	B-3450 / U-4009 / U-4012	GARRETT ROAD	TWO BRIDGES ON GARRETT RD; SERVICE ROAD NEAR US 15-501 AND GARRETT RD INTERSECTION; US 15-501 FROM NORTH MT. MORIAH RD SOUTH OF GARRETT RD	$ 18,810,912.36	1.769 miles	DLB, Inc.	Durham RE Office	(919) 220-4680	8/1/2010	15.2%	14.1%	8/1/2010
DURHAM / WAKE	B-3528	LEESVILLE ROAD	BRIDGE OVER SYCAMORE CREEK ON LEESVILLE ROAD (SR-1839)	$ 1,174,705.74	0.284 miles	Mountain Creek Contractors, LLC	Cadmus Capehart, PE	(919) 840-0914	5/15/2009	22.4%	37.1%	5/15/2009
DURHAM	B-4109	PICKETT ROAD	BRIDGE OVER MUD CREEK ON PICKETT ROAD (SR-1303)	$ 1,102,441.20	0.078 miles	Kirkman Construction, Inc.	Cadmus Capehart, PE	(919) 840-0914	11/21/2008	4.50%	7.60%	11/21/2008
DURHAM / WAKE	2008-RESURF	US-70	WIDENING, RESURF. AND SHLDR RECONSTR. OF US-70 W OF ANGIER AVE TO W OF ANGUS DR	$ 1,889,926.35	4.39 miles	Rea Contracting, LLC	Cadmus Capehart, PE	(919) 840-0914	10/31/2008			

NCDOT PROJECTS FOR LET NEXT 12 MONTHS IN DURHAM COUNTY - 9/2/2008

County	TIP #	Route	Location Description	Contract Estimate	Length	Contact Engineer	Phone #	Contract Let Date
DURHAM	U-2055B	NC 55	CONSTRUCTION OF TURN LANES AT RIDDLE ROAD AND NC-55	$ 223,238.50		B. UPSHAW	(919) 220-4600	12/1/2008
DURHAM	U-2055D	AVONDALE DRIVE	CONSTRUCTION OF ROUNDABOUT ON AVONDALE DRIVE	$ 493,065.78		B. UPSHAW	(919) 220-4600	3/1/2009
DURHAM	U-3309A	TW ALEXANDER DR	WIDENING FROM CORNWALLIS ROAD TO EAST OF NC-147	$ 9,900,000.00	1.072 miles	J. MOORE	(919) 250-4016	8/18/2009
DURHAM	U-4011	S MIAMI BLVD	WIDENING FROM METHODIST ST TO BETHESDA AVE	$ 3,700,000.00	0.7 miles	J. MOORE	(919) 250-4016	8/18/2009

12 MONTH TENTATIVE LET LIST MAY BE FOUND ONLINE AT: http://www.ncdot.org/planning/development/ProjectMgmt/12month/

PROGRESS REPORTS MAY BE FOUND ONLINE AT: https://apps.dot.state.nc.us/traffictravel/progloc/

ACTIVE NCDOT PROJECTS LOCATED IN ORANGE COUNTY - DCHC MPO

County	WBS #	Route	Location Description	Amount	Status
Orange	36945	SR 1010 (Franklin St.) @ Mallette St.	Upgrade traffic signal and install pedestrian signal heads REVISION: Install mast arm	$110,000.00	Advertisement pending
Orange	41488	US 15-501 @ SR 1900 (Old Mason Farm Road)	Extend the left turn lane on northbound US 15-501 , revise the signal and add a right turn lane at SR 1900	$147,500.00	District design underway; construction pending completion of OWASA project
Orange	41593	Union Street	Construct 750 feet of sidewalk and a crosswalk to connect Hillsborough Elementary School to SR 1156 (Nash St.)	$32,000.00	Town to include as part of large STP-DA sidewalk contract for Nash St.-Enc. Agreement under review
Orange	41686	NC 54 @ SR 1102/1951 (Dodson's Crossroads/ Butler Rd.)	Construct left turn lanes in both directions	$250,000.00	S.T. Wooten Corp. = 90% complete
Orange	42037	SR 1939 (Damascus Ch. Rd.) 0.8 mi. west of SR 1919 (Smith Level Rd.)	Install guardrail at Pipe# 89	$17,000	Req. by OWASA; District POC to be compl. by 10/31/08
Orange	42038	SR 1005 (Greensboro - Chapel Hill Rd.) approx. 1.6 mi. west of SR 1942 (Jones Ferry Rd.)	Install guardrail at Bridge# 85	$11,000	Req. by OWASA; District POC to be compl. by 10/31/08
Orange	B-4218	SR 1730 (Turkey Farm Rd.)	Replace Bridge # 108 over New Hope Creek	$750,000.00	Dane Const., Inc. **=began work 9/2/08; Completion by 4/29/09**
Orange	42170 SS-4907 T 42204.2	SR 1710 (Old NC 10) @ NC 86	Construct a right turn lane on SR 1710 and install a traffic signal	$215,000	Survey pending

ACTIVE NCDOT PROJECTS LOCATED IN ORANGE COUNTY - DCHC MPO

Orange	42171 SS-4907 U 42205.2	SR 1710 (Old NC 10) @ SR 1713 (Mt. Herman Church Road)	Improve sight distance on SR 1710 by lowering the crest vertical curve on the westbound approach to the intersection	$300,000	Survey pending
Orange	7CR.10681.14 7CR.20681.14 7C.068081	4 sections of NC 54 and ramps and 5 sections of secondary roads	Milling, resurfacing, pavement markings, and shoulder reconstruction		S.T. Wooten Corp.=20% complete; ICD 8/8/08 Compl. 10/31/08;
Orange	SF-4907 B **41699.3 C** 41699.1 PE	US 70 (Hillsborough Rd.) and NC 751 near Durham	Install a right turn lane for traffic travelling east on US 70 and turning right onto NC 751	**$90,000 C** $35,000 PE	**Bid opening 9/18/08**
Orange	SS-4907 J 41634.3	NC 54 and SR 1945 (Neville Rd.)	Construct a left turn lane	$187,000.00	S.T. Wooten Corp. =90% complete
NCDOT PROJECTS CURRENTLY IN 12 MONTH LETTNG LIST					
County	**TIP #**	**Route**	**Location Description**	**TIP Est.**	**Est. Let Date**
Orange	I-4716	I-40	Grind and reseal joints on I-40 from I-85 to Durham Co. (Scope may be revised)	$1.05 million	Jan. 20, 2009
Orange	B-4592	SR 1561 (Lawrence Rd.)	Replace Bridge # 64 over the Eno River	$1.6 million	Jan. 20, 2009
Orange	U-0624	NC 86 (S. Columbia St.)	Corridor upgrade including Bicycle lanes from SR 1906 (Purefoy Rd.) to SR 1902 (Manning Dr.)	**$4.40 million**	July 21, 2009
Orange	U-4704	Chapel Hill-Carrboro	Computerized Traffic Signal System	$5.0 million	April 21, 2009

Transit News – Triangle Area – August 2008

Urban System Grants

CAT-Raleigh, Chapel Hill Transit, DATA, Triangle Transit have received an allocation of either CMAQ or Section 5309 funds for bus and/or facility. NCDOT expects more requests for State FY2009 matching funds than can be accommodated. *The early birds will get the worms.*
NCDOT sent a support letter asking FTA to approve the Triangle Transit request for a 3 year extension of their New Starts Grant.

Community Transit Systems and Non-Urbanized Areas

Technology Grants are available to CTS that have at least 300 trips a day – Wake County (WCTS) has completed the pre-application for Automated Vehicle Location (AVL) and Mobile Data Terminals, in order to do schedule changes while en-route. WTCS also received a $360,000 New Freedom (5317) allocation for their AVL equipment.

2006 lapsing $2.8M EDTAP (5310), $2.1M JARC (5316), $1.3 New Freedom (5317)

A last minute call was issued for public transit proposals that met the criteria of these three programs and served small urban and non-urbanized areas. Two eligible Triangle Region JARC projects from Chapel Hill Transit to serve the non-urbanized area between Chapel Hill and Pittsboro and Chapel Hill and Burlington were reviewed by NCDOT-PTD; requesting operational funding (50/50 grant) for a commuter runs at $352,712 and $469,217 respectively. The service would run from January 1, 2009 through June 30, 2010. Both applications are pending further information.

Travel Demand Management

The Triangle Regions TDM program has been bundled to reside under the administration of Triangle J Council of Governments. Triangle J has a $102,500 budget to staff and coordinate the $2,158,048 FY2009 TDM budget. The balance goes to programs run by: UNC, NCSU, Smart-Commute RTP, Town of Chapel Hill and Triangle Transit.

Coordination/Collaboration/Consolidation

NCDOT prepared a CTAA Institute 2008 application – if selected, a team consisting of Delphine Sellars, NC Cooperative Extension (representing Durham Co./DCA), Stephen Mancuso (DATA), Gail Souare, Council for Senior Citizens, and Bill Barlow (NCDOT) will spend three days brainstorming opportunities for coordination / collaboration / consolidation for DCA and DATA transit services.

The NCDOT funded Triangle Area Regional Development Plan final draft was released to the oversight committee in July 2008. The primary recommendation calls for Triangle Transit to assume: marketing, call center, and brokerage responsibility for the Durham, Orange, and Wake Counties Community Transit Systems (CTS) in the Triangle Region. The Consultant envisions this being implemented through the hiring of a Triangle Transit Mobility Manager - responsible for standardizing the way the CTS in the Triangle do business.

STIP- IMPORTANT REMINDER

Amendment requests received by September 10th will be bundled together and submitted to our Board for information at its October meeting and approval at the November meeting. If you sent in FY09-15 STIP amendment prior to August 15th, please resend your request. USDOT has approved the recent version of the FY09-15 STIP NCDOT submitted in July.

NCDOT Transportation Management Team (TMT) Restructuring

Each highway division office will hire a multi-modal coordinator.

Triennial Review

Reminder - FTA will conduct the State Management Review in North Carolina from September 30 through October 2. FTA will also visit a few sub- recipients within a day trip of Raleigh. Please assist your affiliate transit systems in getting prepared.

20 million transit passenger trips in 2007 - OPSTATs 2007 Report

SYSTEM		Peak hr Veh	Annual passenger (PAX)	Expense /PAX	Cost /rev hour	Cost /rev ml	Revenue MLS	Revenue Hrs	Expense	Fare box share	deficiet
CARY	FXD	6	61,779	$18.58	$50.88	$2.99	383,324	22,555	$1,147,582	100%	($1,077,387)
CAT - RALEIGH	FXD	53	4,092,639	$3.22	$73.26	$5.72	2,299,442	179,617	$13,159,404	87%	($10,773,793)
CHAPEL HILL	FXD	60	5,900,478	$1.76	$63.66	$5.28	1,962,378	162,700	$10,357,889	82%	($9,874,672)
DATA - DURHAM	FXD	36	4,684,536	$2.85	$78.79	$5.85	2,282,268	169,584	$13,361,933	96%	($10,735,798)
WOLFLINE	FXD	28	1,769,855	$1.99	$63.19	$6.42	548,604	55,744	$3,522,442	78%	$0
TRIANGLE TRANSIT	FXD	47	842,285	$10.52	$93.60	$4.51	1,966,460	94,680	$8,861,765	98%	($7,764,018)
	FXD	**230**	**17,351,572**	**$6.84**	**$61.77**	**$5.68**	**9,442,476**	**684,880**	**$50,411,015**		**($40,225,668)**
CARY	ADA	15	38,736	$38.59	$68.34	$3.70	403,924	21,874	$1,494,865	100%	($1,441,040)
ART - RALEIGH	ADA	6	44,289	$6.06	$85.75	$5.65	47,574	3,132	$268,559	100%	($261,578)
CHAPEL HILL	ADA	16	75,396	$26.61	$68.43	$5.10	393,423	29,317	$2,006,102	100%	($2,004,178)
DATA - DURHAM	ADA	33	81,885	$29.64	$58.97	$3.55	684,200	41,154	$2,426,762	100%	($2,287,714)
TRIANGLE TRANSIT	ADA	6	12,765	$70.19	$138.66	$4.68	191,580	6,462	$895,995	100%	($842,169)
	ADA	**76**	**253,071**	**$30.02**	**$71.52**	**$5.28**	**1,720,701**	**101,939**	**$7,092,283**		**($6,836,679)**
Chatam Co. - CTN	CTS	18	69,721	$10.09	$31.56	$1.75	402,645	22,282	$703,238	2%	$67,201
Durham Co. - DCA	CTS	15	52,727	$19.62	$39.06	$1.99	518,751	26,480	$1,034,251	1%	$179,025
Johnston - JCATS	CTS	20	68,812	$21.04	$36.11	$1.86	776,755	40,087	$1,447,514	1%	($14,578)
Orange Co. - OPT	CTS	18	123,550	$8.25	$28.58	$2.19	466,071	35,654	$1,018,857	2%	$0
Wake Co. - WCTS	CTS	35	102,947	$39.89	$36.77	$1.70	2,420,001	111,661	$4,106,077	1%	$370,871
	CTS	**106**	**417,757**	**$17.98**	**$30.18**	**$3.08**	**4,584,223**	**236,164**	**$8,309,937**		**$602,519**
Grand total		**412**	**18,022,400**	**$18.67**	**$60.94**	**$4.36**	**15,747,400**	**1,022,983**	**$65,813,235**		**($46,459,828)**

Also to be considered

	daily observed PAX 2006	days	Est. annual PAX trips
DUKE	13,211	156.4	2,642,200

New taxes urged for roads, bridges

Current levies are bringing in less when billions more are needed, a study leader says

Bruce Siceloff, Staff Writer

RALEIGH - North Carolina will need new taxes to bolster sagging transportation revenue and tackle a backlog of bridge and highway needs, the chairman of a statewide study group said Thursday.

Gas and car sales taxes are declining while traffic demands and construction costs rise, said Brad Wilson of Raleigh, chairman of the 21st Century Transportation Committee. Legislators and Gov. Mike Easley have asked the group to recommend new revenue sources for consideration by the 2009 General Assembly.

"The current funding model for transportation needs in North Carolina is failing us and will continue to fail us going forward," Wilson, chief operating officer of Blue Cross and Blue Shield of North Carolina, told committee members in Raleigh.

Transportation planners have predicted that North Carolina will fall $64 billion short of its needs for roads, bridges and transit over the next 25 years. Wilson said the committee should recommend tax options that would produce at least $10 billion over the next 10 years.

He asked panel members to consider recommendations to:

* Increase North Carolina's 3 percent highway use tax on car sales, which is lower than the rate charged in most nearby states. North Carolina's tax is applied after the value of a trade-in is subtracted from the new car price.

* Expand toll road plans, possibly collecting tolls from Interstate 95 drivers to fix costly problems on the neglected Eastern North Carolina freeway.

* Give local governments the option of a sales tax increase for transportation needs.

* Make long-term plans to replace the per-gallon gas tax with a tax on the miles driven by each car and truck.

* Plan a major state bond issue for road, bridge and other transportation needs.

* Press Congress to strengthen federal transportation funding and give North Carolina its fair share.

The state Department of Transportation has made steps toward reducing waste and making better use of road money, Wilson said. He praised the legislature for beginning to phase out a controversial transfer of money from the Highway Trust Fund to the General Fund, where it has been used for nontransportation needs.

"Stopping the transfer and making DOT more efficient are contributors to the solution," Wilson said. "They are not the solution by themselves."

North Carolina is one of the few states where county governments are not responsible for the minor roads that make up most of the state network. State Rep. Nelson Cole, a Reidsville Democrat, said it might be time "to transfer some of these roads -- and we've already built them -- the maintenance of these roads back to the counties and cities."

State Sen. Richard Stevens, a Cary Republican, said the group should recommend changes in how the state distributes transportation money. Stevens criticized the legislature's "equity" formula -- "some would call it the inequity formula," Stevens said -- which limits the priority placed on reducing urban freeway congestion.

bruce.siceloff@newsobserver.com or (919) 829-4527

Road Worrier:
Published: Aug 12, 2008 12:30 AM
Modified: Aug 12, 2008 08:49 AM

Where do gas taxes really go?

Bruce Siceloff, Staff Writer
If North Carolina truly is running low on money for roads, buses and bridges, Marjorie Minor says, don't blame drivers who buy less gas.

Blame state political leaders who take gas tax money from the Highway Trust Fund -- and then spend it on other stuff.

"For the last couple of years, they've taken hundreds of millions of dollars," said Minor, 60, a Raleigh legal secretary. "This is money they charged us for gas taxes. It's supposed to be for roads. They keep taking it away."

Several readers were skeptical when The News & Observer reported last week that the state Department of Transportation is suffering as drivers cut spending on two big sources of DOT taxes: gas and car sales.

"You never mentioned the way the governor has 'robbed' the funds collected from gas tax and licensing fees to help balance the general budget," Bob Eby, 70, of Fearrington Village said by e-mail.

Eby and other readers asked for an accounting of the money that moves every year from the Highway Trust Fund to a general operating fund, where it helps pay for schools, hospitals and nearly everything other than roads.

Is this a lawful, bipartisan transfer, as mostly Democratic defenders say? Or -- as mostly Republican critics like to spin it -- is it a pork-barrel raiding party?

Have we misspent enough loot to rebuild 3,000 bridges and upgrade every inch of Interstate 95? Or is this just enough cash to fuel a steady, smudge-pot cynicism about government waste?

The issue has bounced around for years on blogs and talk radio, and in campaign debates. The Road Worrier dug out the numbers with the help of the legislature's fiscal research staff.

Marjorie Minor is mostly right.

Before 1989, North Carolina collected a sales tax on cars that generated money for the General Fund -- not for roads. In 1989, Republican Gov. Jim Martin and the Democrat-controlled legislature replaced the car sales tax with a highway use tax on cars. This money went to a new Highway Trust Fund, to help build bridges and highways.

To make up for the money lost to the General Fund, legislators would have to raise taxes or cut spending. Instead, they agreed that $170 million would move each year from the Highway Trust Fund to the General Fund. (Today the highway use tax generates a lot more for the Highway Trust Fund -- $565 million last year.)

What critics call raiding started in 2001 and continued through 2005. Democratic Gov. Mike Easley and the legislature upped the transfer by $80 million, to $250 million a year. This added up to an extra $400 million removed from the Highway Trust Fund over five years.

They grabbed another $125 million in 2002. But they called this a loan, and they reimbursed the Highway Trust Fund in 2006.

These days, pundits and press accounts frequently say that the extra money taken from the Highway Trust Fund was repaid.

But most of it never was. The only money paid back was the $125 million "loan."

The other $400 million, moved to the General Fund between 2001 and 2005, never came back to the Highway Trust Fund.

In all, $3.1 billion has been moved to the General Fund in the yearly $170 million transfers authorized by the 1989 Highway Trust Fund Act. It's hard to call that a raid, but some people do.

On top of that, if you want to call the extra $400 million highway robbery, be my guest. This money was spent for other stuff our legislature decided we needed. We won't see it again.

This year, the legislature finally began phasing out the yearly transfer. The shift to the General Fund will fall from $145 million this year to $71 million in 2010.

Where will that money go? Starting this year at $25 million a year, it will help the N.C. Turnpike Authority build toll roads -- including the Triangle Expressway, set to start construction in December.

Four hundred million dollars is a lot of money. But state planners figure North Carolina will fall at least $65 billion short of the money it needs for transportation over the next 25 years.

Brad Wilson of Raleigh, an insurance executive, is chairman of a statewide committee that will meet next week to talk about ideas for closing that $65 billion gap.

"I think if they never had that $170 million transfer, and we'd had that $170 million over time for transportation, we'd still be having this conversation today," Wilson said.

Enlighten the Road Worrier: blogs.newsobserver.com/crosstown or (919)829-4527 or bruce.siceloff@newsobserver.com. Comments, questions and tips welcome. Plea

Turnpike Authority approves toll road bids

Posted: Aug. 20 6:43 p.m.
Updated: Aug. 20 8:43 p.m.

The North Carolina Turnpike Authority's Board of Governors on Wednesday approved bids for construction of the remainder of the Triangle Expressway.

S.T. Wooten Corp. of Wilson bid more than $137.4 million on the Triangle Parkway, a 3.4-mile toll highway between N.C. 147, which is the Durham Freeway, and N.C. Highway 540 in Morrisville.

The Raleigh/Durham Road Builders, a joint venture of Archer Western Contractors and Granite Construction with the LPA Group as lead designer, bid more than $446.4 million for the Western Wake Freeway, a 12.6-mile stretch. It will be an extension of the new N.C. 540, from N.C. 55 near Research Triangle Park to N.C. 55 between Holly

Springs and Apex.

The bids total nearly $584 million – about $62 million less than what the Turnpike Authority expected.

Wednesday's vote means the contractors have a notice of bid. Construction can't begin until bonds are issued, which could happen in mid-October.

If so, the Triangle Parkway could open by December 2010, the Western Wake Freeway by 2011.

The first of the three sections of the Triangle Expressway, the Northern Wake Expressway, opened in July 2007 and stretches 2.8 miles from N.C. 54 in Morrisville to N.C. 55 near Research Triangle Park.

Web Editor: Kelly Gardner

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Triangle Transit adding service

From Staff Reports

RALEIGH - To thin the standing-room-only crowds that have been packing its popular intercity express buses, Triangle Transit is adding more weekday service for its Chapel Hill-Raleigh and Durham-Raleigh routes.

Starting Tuesday:

* Express 500 (Chapel Hill to Raleigh) for people who commute to Raleigh adds a trip leaving downtown Chapel Hill at 6:30 a.m. and adds a return leaving downtown Raleigh at 5:30 p.m. Raleigh afternoon departure times for two other trips will be changed by a few minutes.

* Express 550 (Raleigh to Chapel Hill) for people who commute to Chapel Hill adds a downtown Raleigh departure at 7:30 a.m. and a downtown Chapel Hill return at 4:15 p.m.

* Express 600 (Durham to Raleigh) for people who commute to Raleigh adds a downtown Durham departure at 7:37 a.m. and a downtown Raleigh return at 4:45 p.m.

* Express 650 (Raleigh to Durham) for people who commute to Durham adds a downtown Raleigh departure at 6:37 a.m. and a return from Duke Hospital at 3:45 p.m.

Route and schedule details are available at http://triangletransit.org/bus/maps-and-schedules/ or 485-7433.

STATE OF NORTH CAROLINA
TURNPIKE AUTHORITY

MICHAEL F. EASLEY
GOVERNOR

1578 MAIL SERVICE CENTER, RALEIGH, N.C. 27699-1578

DAVID W. JOYNER
EXECUTIVE DIRECTOR

August 21, 2008

Dan Clever
Durham Bicycle & Pedestrian Advisory Commission
Durham Transportation Division
101 City Hall Plaza
Durham, NC 27701

Subject: Triangle Parkway, from NC 540 to I-40, Durham and Wake Counties, STIP No. U-4763B; WBS No. 39942.1.TA1

Dear Mr. Clever:

The North Carolina Turnpike Authority (NCTA) appreciates the Durham Bicycle & Pedestrian Advisory Commission's (BPAC) continued involvement with the Triangle Parkway project. The NCTA offers the following information in response to your July 21, 2008 letter regarding pedestrian and bicycle facilities crossing the Triangle Parkway.

1. a. Five-Foot Wide Sidewalks along Hopson Road and Davis Drive

The NCTA is adhering to the North Carolina Department of Transportation's (NCDOT) Pedestrian Policy Guidelines (effective October 1, 2000, attached). In accordance with this policy, the NCTA commits to paying 100% of the cost to replace existing sidewalks that are removed to facilitate construction of the project. The municipality and/or county is required to notify the NCTA in writing of its desire for incorporation of pedestrian facilities into project planning and design. This notification should state the party's commitment to participate in the cost of the facility as well as to be responsible for all maintenance and liability.

To date, we have not received a request from Durham for specific pedestrian facilities on the Triangle Parkway, notification of a commitment for participation in the cost of any new pedestrian, or a commitment of maintenance and liability responsibility. The policy further states that if the facility is not contained within the project berm width, the municipality is responsible for providing the right-of-way and/or construction easements as well as utility relocation. This provision is applicable to all pedestrian facilities including multi-use trails and greenways.

The project has incorporated sidewalks in accordance with the above stated policy along Hopson Road and Davis Drive as follows:

Davis Drive

The widening of Davis Drive at the Triangle Parkway bridges will be constructed with a five-foot sidewalk on the north side of Davis Drive to connect to the existing jogging path on the west side of the proposed bridge and the sidewalk on the east side of the proposed bridge.

The widening along the south side of Davis Drive at the Triangle Parkway bridges will accommodate but not construct a future five-foot sidewalk.

Hopson Road

Hopson Road will be constructed with a five-foot sidewalk on the north side that will connect with the sidewalk at the intersection of Davis Drive and Hopson Road. In addition, there will be portions of Hopson Road, mainly at the Davis Drive intersection, that will have sidewalk on both sides.

Hopson Road and Triangle Parkway will be grade separated. Sidewalk will be constructed on both sides of Hopson Road at this grade separation.

1. b. Four-Foot Wide Bicycle Lanes along Hopson Road, Davis Drive and NC 54

The sections of Davis Drive and Hopson Road proposed to be widened as part of the project will be constructed with 14-foot outside lanes to accommodate bicycles, and the section of NC 54 to be reconstructed as part of the project will have 14-foot outside lanes to accommodate bicycles. The proposed widening is consistent with NCDOT policy.

1. c. RTP Jogging Path

All reconnections to existing jogging paths will be coordinated with the Research Triangle Foundation (RTF) and constructed to their specifications. Regarding the use of the term multi-use trail, the RTF has stated in previous conversations that bicycles are allowed on their trails and their trails are described in the design plans for the current widening of Davis Drive as "multi-use trails." Based on this information, we referred to them as multi-use trails in previous correspondence. The NC 54 bridge over Triangle Parkway will include five-foot sidewalks on both sides of the bridge and the reconnection of the existing jogging trail.

1. d. ADA-Compliant Crosswalks and Pedestrian Activated Signals

The sidewalks will be compliant with the Americans with Disabilities Act. No new pedestrian activated signal locations are proposed as part of this project. The existing signals will be modified to accommodate the new travel lane configuration. The NCDOT maintains jurisdiction over the roads that Triangle Parkway crosses. They have advised us on the scope of work for the Triangle Parkway project and have not recommended additional pedestrian activated signal locations.

2. Pedestrian and Bicycle Connectivity at NC 54 during Construction

Pedestrian and bicycle connectivity will be maintained along NC 54 during the construction of the project.

3. Pedestrian and Bicycle Access within Construction Zone

The project will provide safe pedestrian and bicycle access within construction zones in accordance with the Manual on Uniform Traffic Control Devices (MUTCD) and Federal Highway Administration (FHWA) requirements relative to pedestrian and bicycle safety.

4. Maintenance of Bicycle and Pedestrian Facilities during Construction

The contractor will be required to maintain all existing and temporary bicycle and pedestrian facilities in safe and useful condition for the duration of the project.

In conclusion, all toll project decisions are made in the context of four basic overriding considerations - safety, environmental impact, project cost, and project revenue. These issues are fundamentally important to toll financing and are key factors when considering reasonable accommodations requested by other organizations.

Again, thank you for your continued support of this important project. Please feel free to contact me at (919) 571-3000 or at jennifer.harris@ncturnpike.org.

Sincerely,

Jennifer H. Harris

Jennifer H. Harris, P.E.

Attachment: NCDOT's Pedestrian Policy Guidelines

cc: Bill Bell, Mayor, City of Durham

Ellen Reckhow, Chair, Durham Board of County Commissioners
Kenneth Spaulding, NC Board of Transportation
Wally Bowman, NCDOT Division 5 Engineer
Tom Norman, NCDOT Division of Bicycle and Pedestrian Transportation
Mark Ahrendsen, Transportation Manager, City of Durham
Dale McKeel, Bicycle and Pedestrian Coordinator, City of Durham/DCHC MPO
Shannon Sweitzer, P.E., NCTA Director of Construction
Jason Peterson, P.E., NCTA Triangle Parkway Construction Project Manager
Rodger Rochelle, P.E., NCDOT
Jonathan Bivens, S.T. Wooten Corporation
Jay Bissett, P.E., Mulkey Engineers and Consultants
Tracy Roberts, AICP, NCTA

DEPARTMENT OF TRANSPORTATION
PEDESTRIAN POLICY GUIDELINES
EFFECTIVE OCTOBER 1, 2000

These guidelines provide an updated procedure for implementing the Pedestrian Policy adopted by the Board of Transportation August 1993 and the Board of Transportation Resolution September 8, 2000. The resolution reaffirms the Department's commitment to improving conditions for bicycling and walking, and recognizes non-motorized modes of transportation as critical elements of the local, regional, and national transportation system. The resolution encourages North Carolina cities and towns to make bicycling and pedestrian improvements an integral part of their transportation planning and programming.

REQUIREMENTS FOR DOT FUNDING:

REPLACEMENT OF EXISTING SIDEWALKS:

The Department will pay 100% of the cost to replace an existing sidewalk that is removed to facilitate the widening of a road.

TIP INCIDENTAL PROJECTS:

DEFINED: Incidental pedestrian projects are defined as TIP projects where pedestrian facilities are included as part of the roadway project.

REQUIREMENTS:

1. The municipality and/or county notifies the Department in writing of its desire for the Department to incorporate pedestrian facilities into project planning and design. Notification states the party's commitment to participate in the cost of the facility as well as being responsible for all maintenance and liability. Responsibilities are defined by agreement. Execution is required prior to contract let.

   The municipality is responsible for evaluating the need for the facility (ie: generators, safety, continuity, integration, existing or projected traffic) and public involvement.

2. Written notification must be received by the **Project Final Field Inspection (FFI) date.** Notification should be sent to the Deputy Highway Administrator - Preconstruction with a copy to the Project Engineer and the Agreements Section of the Program Development Branch. Requests received after the project FFI date will be incorporated into the TIP project, if feasible, and only if the requesting party commits by agreement to pay 100% of the cost of the facility.

3. The Department will review the feasibility of including the facility in our project and will try to accommodate all requests where the Department has acquired appropriate right of way on curb and gutter sections and the facility can be installed in the current project berm width. The standard project section is a 10-ft berm (3.0-meter) that accommodates a 5-ft sidewalk. In accordance with

AASHTO standards, the Department will construct 5-ft sidewalks with wheelchair ramps. Betterment cost (ie: decorative pavers) will be a Municipal responsibility.

4. If the facility is not contained within the project berm width, the Municipality is responsible for providing the right of way and/or construction easements as well as utility relocations, at no cost to the Department. This provision is applicable to all pedestrian facilities including multi-use trails and greenways.

5. A cost sharing approach is used to demonstrate the Department's and the municipality's/county's commitment to pedestrian transportation (sidewalks, multi-use trails and greenways). The matching share is a sliding scale based on population as follows:

MUNICIPAL POPULATION	DOT PARTICIPATION	LOCAL PARTICIPATION
> 100,000	50%	50%
50,000 to 100,000	60%	40%
10,000 to 50,000	70%	30%
< 10,000	80%	20%

Note: The cost of bridges will not be included in the shared cost of the pedestrian installation if the Department is funding the installation under provision 6 - pedestrian facilities on bridges.

6. For bridges on streets with curb and gutter approaches, the Department will fund and construct sidewalks on both sides of the bridge facility if the bridge is less than 200 feet in length. If the bridge is greater than 200 feet in length, the Department will fund and construct a sidewalk on one side of the bridge structure. The bridge will also be studied to determine the costs and benefits of constructing sidewalks on both sides of the structure. If in the judgement of the Department sidewalks are justified, funding will be provided for installation. The above provision is also applicable to dual bridge structures. For dual bridges greater than 200 ft in length, a sidewalk will be constructed on the outside of one bridge structure. The bridges will also be studied to determine if sidewalks on the outside of both structures are justified.

7. FUNDING CAPS are no longer applicable.

8. This policy does not commit the Department to the installation of facilities in the Department's TIP projects where the pedestrian facility causes an unpractical design modification, is not in accordance with AASHTO standards, creates an unsafe situation, or in the judgement of the Department is not practical to program.

INDEPENDENT PROJECTS

DEFINED: The DOT has a separate category of funds for all independent pedestrian facility projects in North Carolina where installation is unrelated to a TIP roadway project. An independent pedestrian facility project will be administered in accordance with Enhancement Program Guidelines.

D U R H A M

Bicycle & Pedestrian Advisory Commission

Durham Transportation Division ▪ 101 City Hall Plaza ▪ Durham, NC 27701

July 21, 2008

Subject: Comments on Triangle Parkway from NC 540 to I-40, STIP Project No. U-4763B, Wake and Durham Counties, WBS No. 39942.1.TA1

Ms. Jennifer Harris, PE
North Carolina Turnpike Authority
1578 Mail Service Center
Raleigh, NC 27699-1578

Dear Ms. Harris,

In response to your letter dated April 16, 2008, the Durham Bicycle and Pedestrian Advisory Commission (BPAC) submits these follow-up comments for your consideration. BPAC comments referenced below refer to the BPAC letter of April 7, 2008.

1. BPAC comment 1 requested that the NCTA construct incidental bicycle and pedestrian facilities along all local roadways and signalized intersections within the project scope, as required by the Durham Uniform Development Ordinance, the adopted Durham-Chapel Hill-Carrboro MPO 2030 Long Range Transportation Plan, and NCDOT Policies. This includes:

    a. Constructing five-foot wide concrete sidewalks along both sides of Hopson Road and Davis Drive for the full limits of roadway improvements within Durham City limits. Your response which indicates that the NCTA will only replace existing facilities that are disturbed from road improvements with new facilities is inadequate, as it does not fulfill the Durham UDO and DCHC MPO requirements noted above. The scope of the proposed Triangle Parkway is functionally incomplete unless these sidewalks are constructed as an incidental part of this project.

    b. Constructing four-foot wide bicycle lanes along both sides of Hopson Road, Davis Drive, and NC54 for the full limits of all roadway improvements. Your response which indicates that the NCTA will only replace existing facilities that are disturbed from road improvements with new facilities is inadequate, as it does not fulfill the Durham UDO and DCHC MPO requirements noted above. The scope of the proposed Triangle Parkway is functionally incomplete unless minimum 4-foot bicycle lanes along both sides of Hopson Road, Davis Drive, and NC54 are constructed as incidental improvements for the full limits of all roadway improvements.

c. Constructing the RTP Jogging Path in accordance with the RTP Master Plan along roadways within the RTP Service District for the full limits of roadway improvements, to include Hopson Road, Davis Drive, and NC54. The proposal to replace the existing sidewalks on both sides of NC54 (see page 3-12) is not necessary as sidewalks do not exist in this section of NC54. However, the RTP Jogging Trail, a pedestrian-only facility (not a multi-use path as noted on page 3-12), does exist along the south side of NC54 and must be included in the design of the new bridge and approaches. Your response indicates that the existing RTP multi-use path will be replaced where disturbed, impacted or relocated, both along roadways and under new structures. However, your response does not recognize that the existing RTP Jogging Path is not considered a multi-use path or greenway, a flaw in your Scope of Work which remains unaddressed and uncorrected. If it is the intent of NCTA to replace existing RTP Jogging Paths with standard multi-use facilities, this must be clarified, and the exact extent and limits of the existing Jogging Trails be clearly identified, including transitions from on-road bicycle facilities to off-road (i.e., multi-use side paths if proposed). Your response which relates to greenways (synonymous with multi-use paths) also confuses the distinct needs for bicycle facilities and pedestrian facilities, and may represent an inconsistent approach to addressing the needs of bicyclists and pedestrians throughout the scope of the project. In summary, your response to this item only partially addresses this issue and raises more questions than it answers.

d. Providing ADA-compliant crosswalks and pedestrian activated crossing signals at all intersections, to include Davis Drive and Hopson Road, Triangle Parkway interchange ramps at Hopson Road and Triangle Parkway interchange ramps at Davis Drive. This is especially important given the number of motor vehicle travel lanes proposed at these intersections. Crossing signals shall be timed to allow safe crossing, and shall include median islands/refuges and other elements as necessary. Your response does not address this issue.

2. BPAC comment 2 requested that the NCTA maintain full pedestrian and bicycle connectivity along the temporary NC54 bridge, to include full accommodation of pedestrians and bicycles along this major bicycle and pedestrian corridor within RTP. Your response does not address this issue.

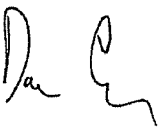
3. BPAC comment 3 requested that NCTA commit to provide safe pedestrian and bicycle access within all construction zones as required by the MUTCD and FHWA. Pedestrian zones within the right-of-way shall be physically separated from vehicular traffic to maximize pedestrian safety. Share The Road and other appropriate signs shall be posted to alert motor vehicle operators to the presence of bicycles. Speed limits within construction zones along local roadways shall not exceed 45 mph. Your response does not address this issue.

4. BPAC comment 4 requested that all existing and temporary bicycle and pedestrian facilities are continuously maintained in safe and useful condition for the duration of the project. This may include routine sweeping of gravel and debris from travel lanes, bike lanes and pedestrian zones, repair of potholes and other road hazards, and to provide all other necessary

routine maintenance for the safe passage of pedestrians and cyclists as may be required. Your response does not address this issue.

Please do not hesitate to contact me at 919-286-3827 (or daclever@gmail.com) if you have any questions or require any additional information.

Sincerely,



Dan Clever

cc: Bill Bell, Mayor, City of Durham
Ellen Reckhow, Chair, Durham Board of County Commissioners
Kenneth Spaulding, NC Board of Transportation
Wally Bowman, NCDOT Division 5 Engineer
Tom Norman, NCDOT Division of Bicycle and Pedestrian Transportation
Mark Ahrendsen, Transportation Manager, City of Durham
Dale McKeel, Bicycle and Pedestrian Coordinator, City of Durham/DCHC MPO

STATE OF NORTH CAROLINA
TURNPIKE AUTHORITY

MICHAEL F. EASLEY
GOVERNOR

1578 MAIL SERVICE CENTER, RALEIGH, N.C. 27699-1578

DAVID W. JOYNER
EXECUTIVE DIRECTOR

April 16, 2008

Dan Clever
Durham Bicycle & Pedestrian Advisory Commission
Durham Transportation Division
101 City Hall Plaza
Durham, North Carolina 27701

Dear Mr. Clever:

Thank you for sharing your comments regarding bicycle and pedestrian facilities in relation to the proposed Triangle Parkway project. Your comments are a part of the project record. We are currently reviewing all the comments we received on the Environmental Assessment (EA) and at the Public Hearing. Responses to comments we received will be included in the final NEPA document.

Bicycle and pedestrian accommodations were considered for the connecting roadways in accordance with standard NCDOT Bicycle and Pedestrian Policy Guidelines. These guidelines state that existing facilities disturbed from road improvements will be replaced and new facilities will be constructed at the request of a municipality offering reimbursement. As indicated in the EA, the project designs will accommodate future sidewalks along Hopson Road and the existing sidewalks and multiuse paths impacted will be replaced. For additional information, the Request for Proposals for the Design Build contract is available on the NCTA's website at http://www.ncturnpike.org/design-build/u4763b/FinalRFPCombined.pdf. Please see pages 81 and 191-192 for information related to the bicycle and pedestrian facilities.

Thank you again for sharing your comments. NCTA remains committed to continuing coordination with the public regarding this very important project.

If you have further questions or concerns or would like additional information please contact Jennifer Harris, P.E., (919) 571-3004 or triangleparkway@ncturnpike.org.

Sincerely,

Jennifer Harris

Jennifer Harris, P.E.
Staff Engineer

cc: Steve DeWitt, P.E., NCTA Chief Engineer
Shannon Sweitzer, P.E., NCTA Director of Construction
Reid Simons, NCTA Director of Government and Public Affairs
Jay Bissett, P.E., Mulkey Engineers and Consultants
Adin McCann, P.E., HNTB Corporation

D U R H A M
Bicycle & Pedestrian Advisory Commission
Durham Transportation Division ▪ 101 City Hall Plaza ▪ Durham, NC 27701

April 7, 2008

Ms. Jennifer Harris, PE
North Carolina Turnpike Authority
1578 Mail Service Center
Raleigh, NC 27699-1578

Subject: Triangle Parkway from NC 540 to I-40, STIP Project No. U-4763B, Wake and Durham Counties, WBS No. 39942.1.TA1

Dear Ms. Harris,

The Durham Bicycle and Pedestrian Advisory Commission has reviewed the Draft Environmental Assessment Document and the Preferred Alternative Map for this project and is pleased to offer comments and recommendations for your consideration. We request that the following comments be entered into the public record and that these concerns be addressed in post-hearing meeting and fully incorporated into the Final Environmental Assessment and the scope of the subsequent Triangle Parkway Design-Build contract.

1) We request that the NCTA construct incidental bicycle and pedestrian facilities along all local roadways and signalized intersections within the project scope, as required by the Durham Uniform Development Ordinance, the adopted Durham-Chapel Hill-Carrboro MPO 2030 Long Range Transportation Plan, and NCDOT Policies. This includes:
   a) Constructing five-foot wide concrete sidewalks along both sides of Hopson Road and Davis Drive for the full limits of roadway improvements within Durham City limits.
   b) Constructing four-foot wide bicycle lanes along both sides of Hopson Road, Davis Drive, and NC54 for the full limits of all roadway improvements.
   c) Constructing the RTP Jogging Path in accordance with the RTP Master Plan along roadways within the RTP Service District for the full limits of roadway improvements, to include Hopson Road, Davis Drive, and NC54. The proposal to replace the existing sidewalks on both sides of NC54 (see page 3-12) is not necessary as sidewalks do not exist in this section of NC4. However, the RTP Jogging Trail, a pedestrian-only facility (not a multi-use path as noted on page 3-12), does exist along the south side of NC54 and must be included in the design of the new bridge and approaches.
   d) Providing ADA-compliant crosswalks and pedestrian activated crossing signals at all intersections, to include Davis Drive and Hopson Road, Triangle Parkway interchange ramps at Hopson Road, and Triangle Parkway interchange ramps at Davis Drive. This is

especially important given the number of motor vehicle travel lanes proposed at these intersections. Crossing signals shall be timed to allow safe crossing, and shall include median islands/refuges and other elements as necessary.

2) We request that the NCTA maintain full pedestrian and bicycle connectivity along the temporary NC54 bridge, to include full accommodation of pedestrians and bicycles along this major bicycle and pedestrian corridor within RTP.

3) We request that NCTA commit to provide safe pedestrian and bicycle access within all construction zones as required by the MUTCD and FHWA. Pedestrian zones within the right-of-way shall be physically separated from vehicular traffic to maximize pedestrian safety. Share The Road and other appropriate signs shall be posted to alert motor vehicle operators to the presence of bicycles. Speed limits within construction zones along local roadways shall not exceed 45 mph.

4) We request that all existing and temporary bicycle and pedestrian facilities are continuously maintained in safe and useful condition for the duration of the project. This may include routine sweeping of gravel and debris from travel lanes, bike lanes and pedestrian zones, repair of potholes and other road hazards, and to provide all other necessary routine maintenance for the safe passage of pedestrians and cyclists as may be required.

The construction of bicycle facilities on local roads is critical to enhancing non-motorized mobility options included commuters to employment centers within the RTP. We appreciate the opportunity to provide comments on this project and respectfully request a copy of the Minutes of the post-hearing meeting.

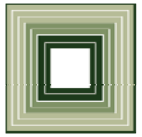
Sincerely,

Dan Clever

cc: Bill Bell, Mayor, City of Durham
Ellen Reckhow, Chair, Durham Board of County Commissioners
Wally Bowman, NCDOT Division 5 Engineer
Tom Norman, NCDOT Division of Bicycle and Pedestrian Transportation
Mark Ahrendsen, Transportation Manager, City of Durham
Dale McKeel, Bicycle and Pedestrian Coordinator, City of Durham/DCHC MPO

Transportation Funding State Comparisons

21st Century Transportation Committee
August 21, 2008



FISCAL RESEARCH DIVISION
A Staff Agency of the North Carolina General Assembly

State Comparisons

State	Population 2007 (millions)[1]	State-controlled highway miles[2]	% of total miles controlled by state
Florida	18.3	12,069	10%
Georgia	9.5	17,910	15%
North Carolina	**9.1**	**79,067**	**76%**
South Carolina	4.4	41,430	63%
Tennessee	6.2	13,836	15%
Texas	23.9	79,849	26%
Virginia	7.7	57,481	79%
US total	**301.6**	**301,642**	**19%**

- **North Carolina and Texas have the largest state-owned highway systems, over 79,000 miles.**
- **North Carolina (76%) and Virginia (79%) control most of the road miles in those states.**
- **Florida (10%), Georgia (15%), and Tennessee (15%) control comparatively few miles at the state level, leaving most of the miles to local control.**
- **For the US as a whole, about 19% of the road miles are controlled by the state agency.**
  - *1 Bureau of Census*
  - *2 US FHWA, Highway Statistics, 2006, Tables HM-20, HM-80, http://www.fhwa.dot.gov/policy/ohpi/hss/index.htm*

Total Highway Funding 2006

	State Funding	Federal Funding	Local Funding	Total State, Federal, Local
Florida	$ 5,633,809	$ 1,631,711	$ 3,010,010	$ 10,275,530
Georgia	$ 1,379,136	$ 894,739	$ 936,527	$ 3,210,402
North Carolina	**$ 2,393,518**	**$ 978,527**	**$ 526,398**	**$ 3,898,443**
South Carolina	$ 605,071	$ 777,375	$ 283,744	$ 1,666,190
Tennessee	$ 1,191,384	$ 567,517	$ 172,699	$ 1,931,600
Texas	$ 5,307,706	$ 3,050,945	$ 4,660,882	$ 13,019,533
Virginia	$ 2,785,987	$ 498,597	$ 924,955	$ 4,209,539
US total	**$83,684,046**	**$31,766,767**	**$45,224,826**	**$160,675,639**

- ***Funding in thousands***

- **Funding for highways varies among the states based on geography, history, and state-local division of responsibility.**
- **Source – US FHWA, Highway Statistics 2006**

Per Capita Highway Funding

	Total Per Capita	State Per Capita	Federal Per Capita	Local Per Capita
Florida	$ 562	$ 308	$ 89	$ 164
Georgia	$ 338	$ 145	$ 94	$ 99
North Carolina	**$ 428**	$ 263	$ 108	$ 58
South Carolina	$ 379	$ 138	$ 177	$ 64
Tennessee	$ 312	$ 192	$ 92	$ 28
Texas	$ 545	$ 222	$ 128	$ 195
Virginia	$ 547	$ 362	$ 65	$ 120
US total	**$ 533**	**$ 277**	**$ 105**	**$ 150**

- **North Carolina total per capita highway funding ($428) from federal, state and local sources is on the high side for the region, but below the national average ($533).**
- **State per capita highway funding for North Carolina ($263) and Virginia ($362) and Florida ($308) is high for the region.**
- **Local per capita highway funding in North Carolina ($58), South Carolina ($64), and Tennessee ($28) are low. The national average is $150.**

Local Property Taxes Used for Highways

	Local Per Capita from Property Taxes
Florida	$14
Georgia	$11
North Carolina	**$<1**
South Carolina	$6
Tennessee	$1
Texas	$44
Virginia	$5
US total	**$27**

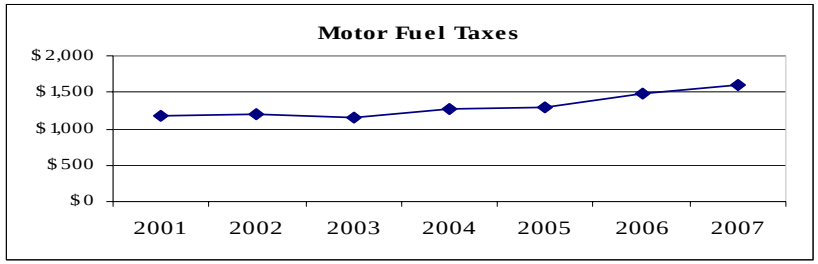
- **<u>Local property taxes per capita</u> are significant in Texas ($44), Florida ($14), and Georgia ($11) but insignificant in other states in the region. The national average is $27.**

Federal, State, and Local Share of Highway Funding

	State %	Federal %	Local %
Florida	55%	16%	29%
Georgia	43%	28%	29%
North Carolina	**61%**	25%	**14%**
South Carolina	36%	47%	17%
Tennessee	62%	29%	9%
Texas	41%	23%	36%
Virginia	66%	12%	22%
US total	**52%**	**20%**	**28%**

- **In North Carolina the state share of highway funding is comparatively high and the local share is low.**

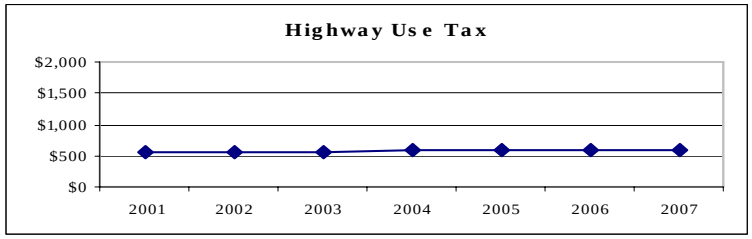
N.C. Motor Fuel Taxes



Revenues in million $

- NC Statutory motor fuels tax rate varies with the historical wholesale price but tax rate is capped at 29.9 cents per gallon (cpg) through June 30, 2009.
- Without the cap the rate would have been 33.4 cpg for January-June 2008 period and 34.8 cpg for July-December 2008 period.
- Each cent of motor fuels tax yields about $54 million in revenues.
- Tax revenues have increased in recent years because higher prices led to higher tax rates per gallon. Consumption has shown little growth and is beginning to decline nationally.
- North Carolina taxes gasoline and diesel fuel at the same rate.
- North Carolina state total gasoline taxes are high for this region. *(Data as of 2008)*
  - *Florida 33.2 cpg*
  - *Georgia 28*
  - ***North Carolina 30.15 (includes .25 cpg inspection fee)***
  - *South Carolina 16.87*
  - *Tennessee 21.4*
  - *Texas 20.0*
  - *Virginia 19.6*
  - *U.S. average 31.0*

NC Highway Use Tax

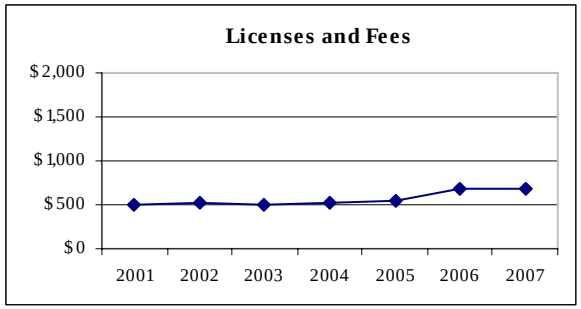


- NC Highway Use Tax is collected when the vehicle is titled. It is 3% of the vehicle's price or value (net of trade) and brings in about $570 million per year. One percent tax rate yields about $190 million.
- Highway Use Tax has not shown strong growth and has declined this past year
- NC Highway Use Tax is generally lower than other states in the region, except South Carolina.

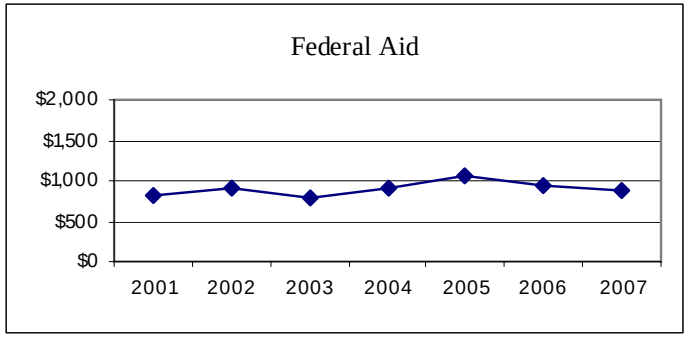
State	Tax	Increase if NC taxed at this rate (millions)
Florida	6% (no trade allowance) Local Option .25% -3%	$800
Georgia	4%-7% net of trade Local Option, Special County Tax, Educational Tax & MARTA tax	$190-$760
South Carolina	5% net of trade max $300	Reduction
Tennessee	7% net of trade Local Tax of 1.5%-2.75%, max $44	$760
Texas	6.25% net of trade	$617
Virginia	3% (no trade allowance)	$115

Licenses and Fees

- Division of Motor Vehicles collects licenses and fees of about $700 million per year for vehicle registration, driver licenses, titles, sales of motor vehicle records, etc.
- Transaction growth has been slow; fees were raised in 2005 to catch up with inflation; many of the fees had been originally set in the 1980's.
- NC yearly passenger vehicle registration fee was raised in 2005 to $28 from $20. An increase in the passenger vehicle registration fee of $10 would yield approximately $65 million.
  - Other states:
  - Florida Based on vehicle weight; $27-$45.60
    - most are $45.60
  - Georgia $20
  - South Carolina $24 for two years
  - Tennessee $21.50
  - Texas $40.80-$58.80 depending on vehicle age
  - Virginia $39.50-$44.50 depending on vehicle weight



Federal Aid

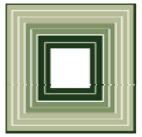


- Federal aid has not grown in recent years.
- The future of the federal-aid program is under consideration by the Congress.

2008 Post Session Budget Highlights Transportation

21ST Century Transportation Committee

August 21, 2008



FISCAL RESEARCH DIVISION

A Staff Agency of the North Carolina General Assembly

Highway Fund and Highway Trust Fund 2008-09 Budget

	2007-08 Actual Collection of Revenues	2008-2009 Certified Budget	Changes to Certified Budget	2008-09 Legislative Approved Budget	2008-09 Legislative Approved NCDOT Budget (subtracting transfers)
Highway Fund	$1,829,630,000	$1,810,990,000	$46,560,000	$1,857,550,000	**$1,594,972,000**
Highway Trust Fund	$1,060,058,225	$1,138,780,000	($65,620,000)	$1,073,160,000	**$925,628,755**
Federal Funding & other participation	$964,274,572	$981,502,019*	0	$981,502,019	**$981,502,019**
Total Budget	$3,853,962,797	$3,931,272,019	-$19,060,000	$3,912,212,019	**$3,502,102,774**

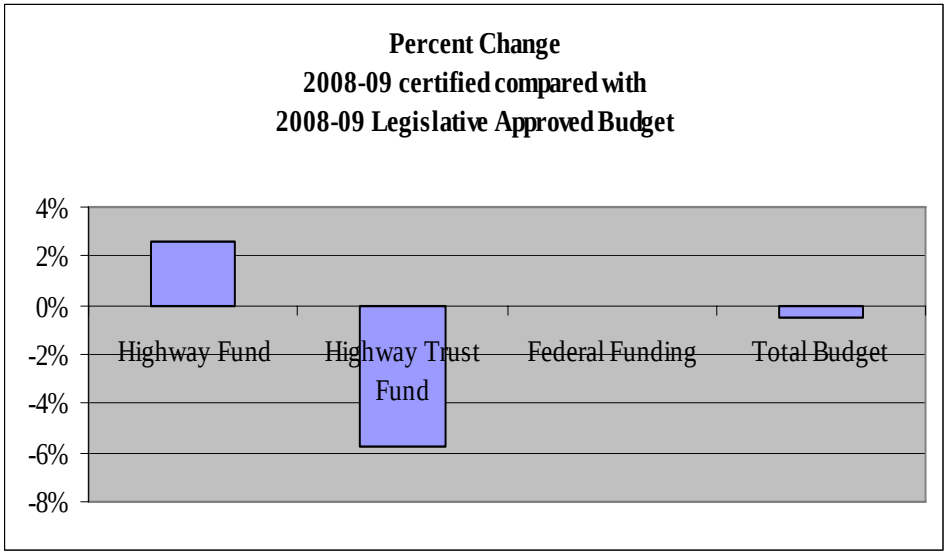
Note: GARVEE bond proceeds are not included above. Amount received during FY2007-08 is $114 million.

*Federal and other participation is an estimated amount and not the amount certified by the OSBM.

Highway Fund and Highway Trust Fund 2008-09 Funds Availability

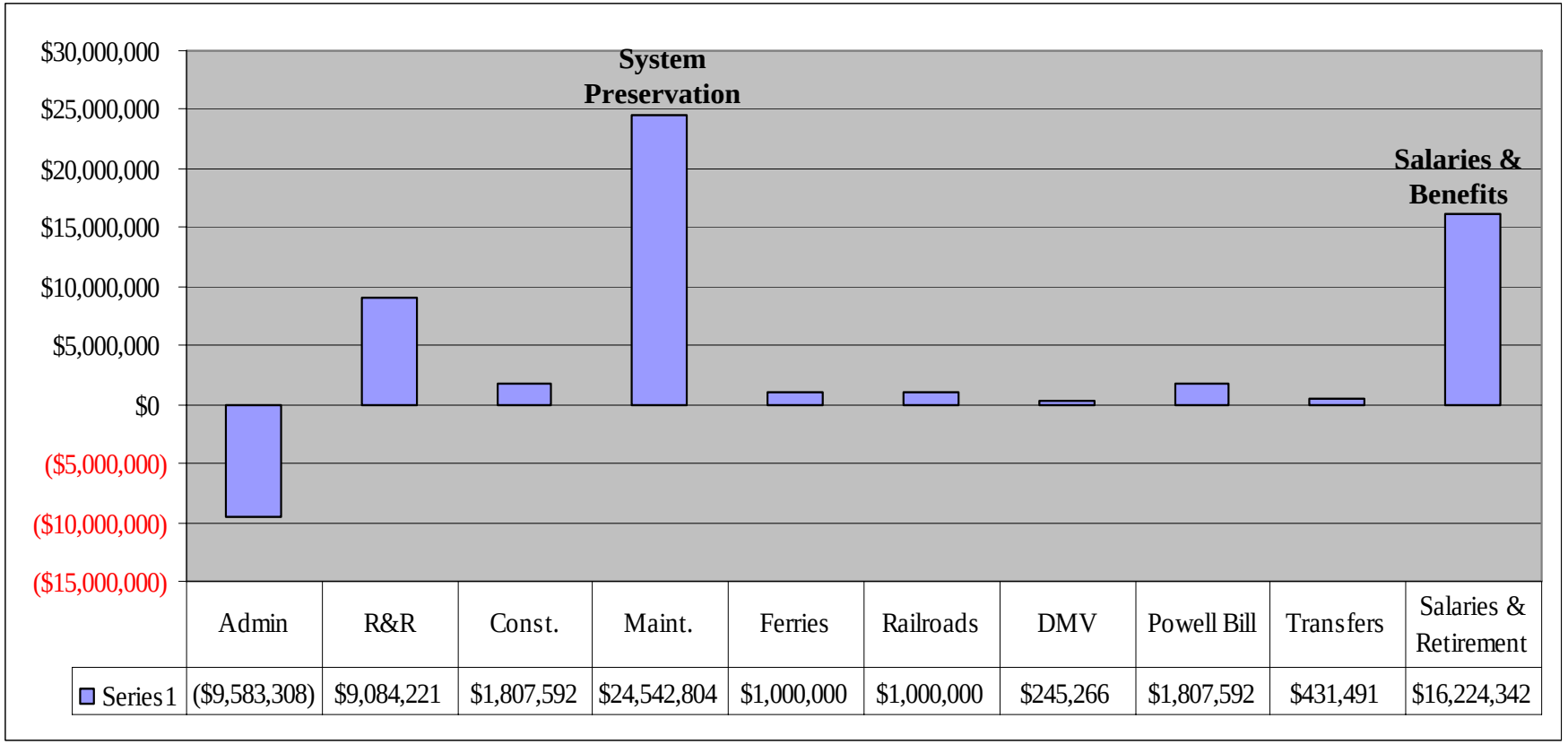
- $46.5 million increase to Highway Fund
  - Approx. $10 million higher projection for motor fuels tax collections
  - $35 million credit balance
  - $5 million – interest earned on investments
  - reduction in licenses and fees of $4 million

- ($65.2 million) reduction to Highway Trust Fund
  - ($60 million) reduced from Highway Use Tax
  - ($9 million) reduced from Certificate of Title Fees and other fees
  - $3.4 million increase in motor fuels tax and $1.2 million increase in interest earned on investments



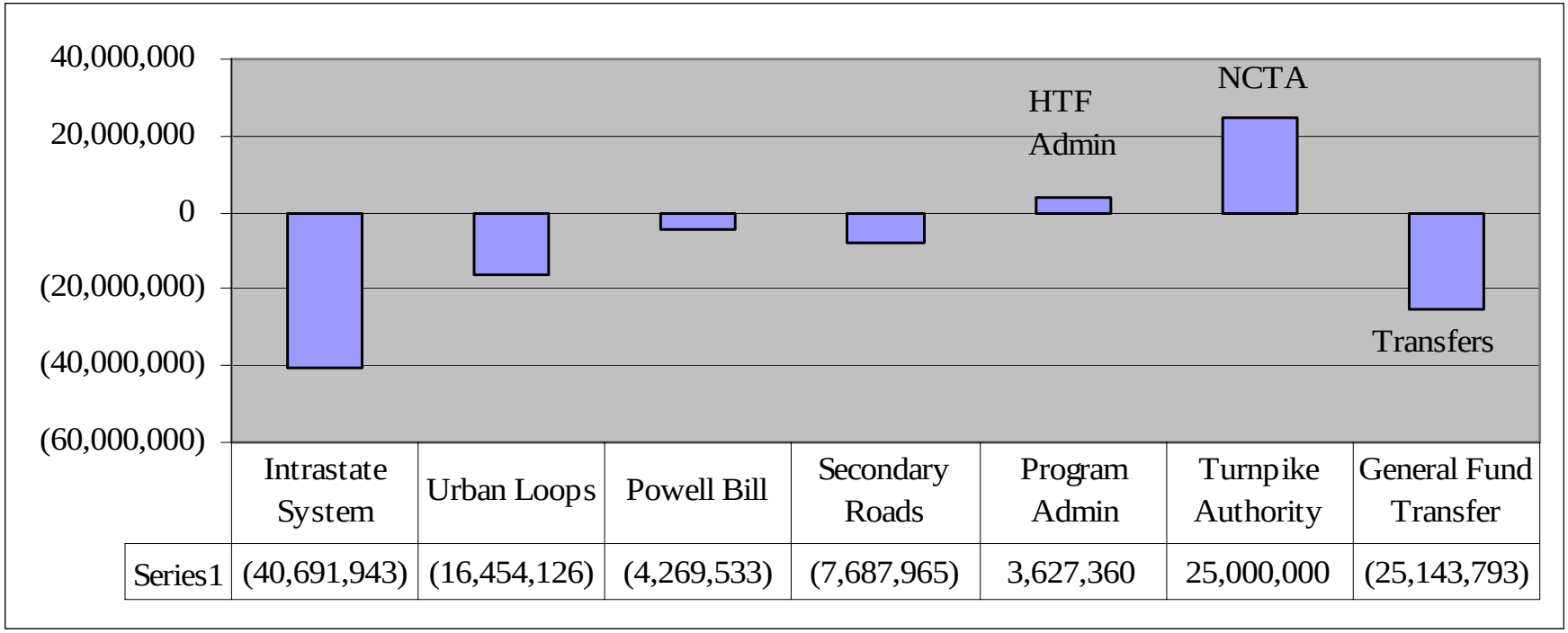
* Forecast created by North Carolina's Office of State Budget and Management and adopted by NCGA 2008

Approved Budget for NCDOT Highway Fund – Expansion Items $46.5 million 2008-09



	Admin	R&R	Const.	Maint.	Ferries	Railroads	DMV	Powell Bill	Transfers	Salaries & Retirement
Series1	($9,583,308)	$9,084,221	$1,807,592	$24,542,804	$1,000,000	$1,000,000	$245,266	$1,807,592	$431,491	$16,224,342

Approved Budget for NCDOT
Highway Trust Fund – Adjustments ($65,620,000)
2008-09



	Intrastate System	Urban Loops	Powell Bill	Secondary Roads	Program Admin	Turnpike Authority	General Fund Transfer
Series1	(40,691,943)	(16,454,126)	(4,269,533)	(7,687,965)	3,627,360	25,000,000	(25,143,793)

2008 Post Session Highlights
Transportation Budget
Session Law 2008-107, Section 25.5

- Reduction of Highway Trust Fund Transfers
  - Change in law
  - Recommendation of the 21st Century Transportation Committee
- Recurring Funding for North Carolina Turnpike Authority

	FY 2008-09	FY 2009-10	FY 2010-11
Triangle Expressway	**$25,000,000**	**$25,000,000**	**$25,000,000**
Monroe Connector		**$24,000,000**	**$24,000,000**
Mid-Currituck Bridge		**$15,000,000**	**$15,000,000**
Garden Parkway			**$35,000,000**
Total	**$25,000,000**	**$64,000,000**	**$99,000,000**

2008 Post Session Highlights
Transportation Budget
Session Law 2008-107, Transportation Section

- See Handout – Transportation Section of Budget

2008 Post Session Highlights
Transportation Budget

- Congestion Relief/Intermodal Transport Funds
  - HB 2363, filed and referred to Transportation Committee

- Yadkin River Bridge
  - No bills in 2008, planning bill in 2007

Questions

21st Century Transportation Meeting
August 21, 2008

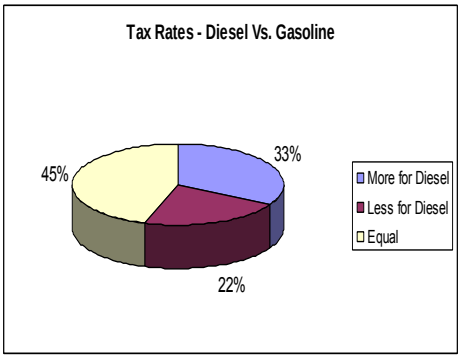
FISCAL RESEARCH DIVISION
A Staff Agency of the North Carolina General Assembly

Questions

• Sen. Stevens – Diesel vs. Gasoline Tax Rates	Slide 3
• Rep. Coates – Revenue Questions	Slides 4 & 5
• Ms. Szlosberg – Cost/Revenue per capita questions	Slide 6
• Ms. Szlosberg – Comparison of property tax	Slide 7
• Rep. McGee – NCDOT employees raise of $1,100 vs. 2.75%	Slide 8
• Federal funding questions - (reform proposal)	Slide 9

- *Mr. Sewell – expected gross toll revenues by facility for the ten year period starting the first year of collections - *pending response

Sen. Stevens
Comparing Gasoline Vs. Diesel Rates Across States How many states have a higher tax for diesel than gasoline?



- 17 Charge More
  Alabama, Arizona, Arkansas, California, Florida, Hawaii, Illinois, Indiana, Iowa, Kansas, Maine, Maryland, Montana, New Jersey, New Mexico, Pennsylvania, Vermont
- 11 Charge Less
  Colorado, Connecticut, Delaware Georgia, Kentucky, Michigan, New York, Nevada, Oregon, Oklahoma, Tennessee,

Rep. Coates
Question of Revenues –
Tolls credited by state or local governments -

	State Road/Crossing Receipts from Tolls, Concessions, and Rentals 2006	Local Road/Crossing Receipts from Tolls, Concessions, and Rentals 2005	Total - State and Local
Florida	$1,008,806	$70,532	$1,079,338
Georgia	$16,298		$16,298
North Carolina	$2,590		$2,590
South Carolina	$11,081		$11,081
Tennessee	$28		$28
Texas	$201,444	$419,326	$620,770
Virginia	$142,635	$33,576	$176,211
			$0
US Total	$7,552,279	$2,267,726	$9,820,005
Source: FHWA Highway Statistics 2006, Tables LGF-3B and SF-3B			
Note: North Carolina receipts are from the Ferry System.			

Rep. Coates
Question of Revenues

- Texas and North Carolina have state-agency control over 79,000 miles; however, NC owns 76% of the total miles in the state and Texas owns only 26% of its total miles. The miles in Texas total over 300,000 compared with slightly over 100,000 in North Carolina. Texas' budget is much greater since they have three times as many roads as North Carolina.

Nina Szlosberg
Question about cost vs. revenues
Per Capita Highway Funding
The costs of transportation systems equal the revenues.

	Total Per Capita	State Per Capita	Federal Per Capita	Local Per Capita
Florida	$ 562	$ 308	$ 89	$ 164
Georgia	$ 338	$ 145	$ 94	$ 99
North Carolina	**$ 428**	$ 263	$ 108	$ 58
South Carolina	$ 379	$ 138	$ 177	$ 64
Tennessee	$ 312	$ 192	$ 92	$ 28
Texas	$ 545	$ 222	$ 128	$ 195
Virginia	$ 547	$ 362	$ 65	$ 120
US total	**$ 533**	**$ 277**	**$ 105**	**$ 150**

- **North Carolina total per capita highway funding ($428) from federal, state and local sources is on the high side for the region, but below the national average ($533).**
- **State per capita highway funding for North Carolina ($263) and Virginia ($362) and Florida ($308) is high for the region.**
- **Local per capita highway funding in North Carolina ($58), South Carolina ($64), and Tennessee ($28) are low. The national average is $150.**

Ms. Szlosberg
Comparison of property taxes

This was compiled by the Tax Foundation

State	Collections Per Household	Rank	Collections Per Capita	Rank
U.S. Total	$3,022	-	$1,134	
Florida	$2,893	18	$1,150	17
Georgia	$2,474	31	$902	33
North Carolina	$1,891	40	$743	38
South Carolina	$2,285	35	$879	34
Tennessee	$1,646	42	$650	41
Texas	$3,795	12	$1,325	13
Virginia	$2,903	17	$1,110	20

Source: Department of Commerce, Bureau of the Census

Rep. McGee
What is the percentage of DOT employees receiving the $1,100 pay increase vs. 2.75%

- Based upon a June report, 57% of the employees earned salary less than $40,000 and, thus, would receive the $1,100 annual increase. 43% of the employees would receive the 2.75% increase.

Federal Funding Questions

- The transportation reform proposals of US Secretary of Transportation Mary Peters can be found at:

- http://www.fightgridlocknow.gov/reform/reformproposal08.pdf

STATE OF NORTH CAROLINA
NORTH CAROLINA GENERAL ASSEMBLY
STATE LEGISLATIVE BUILDING
RALEIGH, NORTH CAROLINA 27601

September 3, 2008

MEMORANDUM

TO: Members of the 21st. Century Transportation Committee

FROM: Chairman Brad Wilson

SUBJECT: 21st Century Transportation Committee Meeting

There will be a meeting of the 21st Century Transportation Committee on Thursday, September 11, 2008 at 11:00 am at the Four Points Sheraton Downtown Asheville Hotel located on 22 Woodfin Street, Asheville, North Carolina.

On Wednesday, September 10th at 3:00 pm, the Committee will board buses to travel to the I-26 Visitors Center in Madison County and back to the NC Arboretum for a reception and dinner.

Please advise Mr. Larry Goode at (919) 301-1589 or email larryg@ncleg.net if you will be unable to attend.