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
County of Orange
NC Department of Transportation
Town of Hillsborough

DURHAM – CHAPEL HILL-CARRBORO METROPOLITAN PLANNING ORGANIZATION TECHNICAL COORDINATING COMMITTEE (TCC)

AGENDA

May 25, 2011
9:00 a.m.

City Council Committee Room
2nd floor Durham City Hall

1. **Preliminaries**

2. **Adjustments to the Agenda**

3. **Public Comments**

ACTION ITEMS

4. **Approval of April 27, 2011 TCC Meeting Minutes**
(Attachment 4)

A copy of the April 27, 2011 minutes is enclosed as Attachment 4.

TCC Action: Approve minutes of the April 27, 2011 TCC meeting.

5. **Triangle Regional Transit Program**
(Attachment 5)
Patrick McDonough, Triangle Transit
Andy Henry, LPA Staff

Triangle Transit briefed the TAC on the Financial Plan and Locally Preferred Alternative (LPA) at the May TAC meeting (Attachment 5). The TAC authorized the release of the Financial Plan for public comment. The schedule requires that the TAC approve the final Financial Plan at the June meeting. Approval of the LPA and Minimum Operable Segment (MOS) will occur later in 2011.

The TCC will discuss the schedule for the public outreach and approval of the Financial Plan.

The public workshop materials are available at the Triangle Regional Transit Program (TRTP) Web site, www.ourtransitfuture.com.

TCC Action: Discuss the schedule for public outreach and approval of the Financial Plan.

6. **FY 2012-2018 Metropolitan Transportation Improvement Program, 2035 Long Range Transportation Plan Amendment #2, and Air Quality Conformity Process**
(Attachment 6, 6A, 6B, 6C, 6D)

Ellen Beckmann, LPA Staff

The DCHC MPO will be approving three documents by August 2011:

- the FY 2012-2018 Metropolitan Transportation Improvement Program;
- Amendment #2 to the 2035 Long Range Transportation Plan; and
- corresponding air quality conformity determinations.

The MTIP must be coordinated with the State Transportation Improvement Program which is scheduled to be approved by the Board of Transportation in July 2011. The LRTP amendment is needed to ensure that the MTIP/STIP and the LRTP are consistent. Since both documents are subject to the air quality conformity process, air quality conformity determination reports must be prepared and approved.

Attachment 6 is a memo on the three documents and the approval process. Attachment 6 highlights differences between the latest version of the recommended final STIP (May 13, 2011 version) and recommended final MTIP. Attachment 6A is the May 13, 2011 version of the final STIP. NCDOT reports that there will likely be further changes to this document before the BOT approves it in July. Attachment 6B is an updated STPDA table displaying the changes to be incorporated in the final FY 12-18 MTIP. Attachment 6C is a response to the public comments received on the draft MTIP. Attachment 6D is a resolution and table displaying the 2035 LRTP amendment for the DCHC MPO and the Capital Area MPO.

Both the adoption of the MTIP and the adoption of the 2035 LRTP amendment require adoption of an air quality conformity determination report. The draft air quality conformity report will not be complete until early June and must be adopted in August.

Since the STIP is not finalized yet, the TCC may want to defer its recommendation for approval of the final MTIP until June.

TCC Action: Discuss approval schedule for the final FY 2012-2018 MTIP and 2035 LRTP Amendment #2.

7. <u>FY 2014-2020 Transportation Improvement Program – Regional Priority List</u>
(Attachment 7, 7A, 7B, 7C, 7D)
Ellen Beckmann, LPA Staff

NCDOT has begun developing the process for prioritizing projects for the next Transportation Improvement Program (TIP). All projects previously submitted by the MPOs, RPOs, and Divisions are already in the prioritization database and will be scored. MPOs, RPOs, and Divisions are asked to submit any new projects by July 2011. MPOs, RPOs, and Divisions will then be asked to rank projects by November 2011.

Attachment 7 is an overview of the 2014-2020 TIP development process. Attachment 7A is a copy of the local priority lists received as of May 18, 2011. Attachment 7B is a table of the local priority list projects grouped by mode. Attachment 7C is a summary comparison of the ranking methodologies for NCDOT, the adopted MPO methodology, and the LPA staff recommendation for changes to the MPO methodology. Attachment 7D is a document describing the recommended ranking methodology for the 2014-2020 TIP.

TCC Action: Recommend the submission of 15 highway projects, 10 bicycle projects, 10 pedestrian projects, and transit projects to NCDOT SPOT. Recommend approval of the MPO ranking methodology.

8. Job Access Reverse Commute and New Freedom - 2011 Call for Projects
(Attachments 8, 8A, 8B)
Maricia Brown, LPA Staff

The MPO has received JARC appropriations for FFY2006 – FFY2010, and a partial appropriation for FFY 2011. Funding through FFY 2009 have been programmed and obligated, except for $72,671 from FFY 2009. The new appropriation for FFY 2010 is $195,374 and FFY 2011 is $77,804. The LPA will be requesting $27,317 (10%) for administrative cost related to the FFY 2010 & 2011 grant years. The remainder of $318,532 is available for FY2011 Call-for-project programming.

The MPO has received NFP appropriations for FFY2006 - FFY2010, and a partial appropriation for FFY 2011. Funding through FFY2009 have been programmed and obligated, except for $10,769 from FFY 2009. The new appropriation for FFY2010 is $87,757 and FFY 2011 is $34,755. The LPA will be requesting $12,253 (10%) for administrative cost related to the FFY 2010 & 2011 grant years. The remainder of $121,028 is available for FY2011 Call-for-project programming.

Attachment 8 is the memo that describes the program details, gives the revised/updated schedule of events, and the summary of the program of recommended projects. Attachment 8A is the summary of all applications submitted and the scoring results. Attachment 8B is the 2011 Proposed Program of Projects.

TCC Action: Review 2011 program of projects. Recommend that TAC approve the 2011 JARC & NF program of projects.

9. Congestion Management Process (CMP) Procedures and Responsibilities Report
(Attachment 9)
KoSok Chae, LPA Staff

The Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (DCHC MPO) is required by federal regulations to develop and implement a Congestion Management Process (CMP) for monitoring traffic congestion, evaluating system performance, and incorporating mitigation strategies into the long range transportation plan (LRTP) and the transportation improvement plan (TIP).

The Draft Congestion Management Process (CMP) Procedures and Responsibilities Report was released for public comment from Friday, April 15, 2011 through Friday, May 6, 2011.
An electronic copy or copies of the CMP Procedures and Responsibilities Report were available for review on the DCHC MPO Web site and at the following 12 locations - the City of Durham Transportation Department, the Durham City-County Planning Department, the Chapel Hill Planning Department, the Carrboro Planning Department, the Hillsborough Planning Department, the Orange County, the Chatham County Planning Department, Durham – Main libraries, Chapel Hill libraries, Carrboro Branch libraries, Orange County libraries, and Chatham Community libraries.

No major comments were received.

Action	Date
TCC receives draft CMP Procedures and Responsibilities Report	3/23/11
TAC receives draft CMP report and releases for public comment	4/13/11
TCC receives and addresses the public comments	*5/25/11*
TAC approves final report	6/08/11
Submit to FHWA	6/30/11

TCC Action: Recommend that the TAC approve the Congestion Management Process (CMP) Procedures and Responsibilities Report.

10. Ramp Metering Study
Joey Hopkins, NCDOT

The Capital Area MPO Congestion Management Process Stakeholders Group has endorsed a recommendation to the Capital Area MPO TCC that a joint feasibility study be funded between NCDOT and the DCHC MPO for possible Ramp-Metering deployment along segments of I-40, I-540, I-440, and NC 147. The scope of the study is yet to be determined, but the intent is to provide recommendations for any revised or new legislation needed to implement and manage ramp metering; to develop a framework for a marketing/outreach plan to stakeholders; to develop typical installation criteria including detection on mainline, ramps, and side streets; to develop criteria to rank potential ramp metering projects/segments by county; and to develop performance measures to show effectiveness of ramp metering. The specific routes will be determined during scoping but it is anticipated that the study will include most of the interstate facilities in both counties and some additional freeway facilities.

The estimated cost is $400,000 and NCDOT plans to fund $350,000 and requests that the Capital Area MPO and DCHC MPO split the other $50,000.

TCC Action: Receive update on the proposed Ramp Metering Study, and make a recommendation to the TAC.

REPORTS FROM STAFF:

11. Reports from Staff
(Attachment 11)
Felix Nwoko, LPA Staff

TCC Action: Receive Report from staff

12. Report from the Chair
Mark Ahrendsen, TCC Chair

TCC Action: Receive Report from TCC Chair

13. **NCDOT Report**
(Attachment 13)
Wally Bowman, Division 5 – NCDOT
Mike Mills, Division 7 – NCDOT

INFORMATIONAL ITEMS

Adjourn

Next meeting: June 22, 2011

TECHNICAL COORDINATING COMMITTEE

April 27, 2011

MINUTES OF MEETING

The Technical Coordinating Committee met on April 27, 2011 at 9:00 a.m. in the Council Committee Room on the second floor of Durham City Hall. The following attended:

*Mark Ahrendsen	City of Durham – Transportation (TCC Chair)
*David Bonk	Town of Chapel Hill (TCC Vice-Chair)
*Jeff Brubaker	Town of Carrboro
*Melissa Guilbeau	Chatham County
*Andy Henry	City of Durham – Transportation
*John Hodges-Copple	Triangle J COG
*Joey Hopkins (Alternate)	NCDOT – Division 5
*Tom King	Town of Hillsborough
*Karen Lincoln	Orange County
*Brian Litchfield	Town of Chapel Hill
*Ray Magyar	UNC – Transportation
*Patrick McDonough	Triangle Transit
*Kumar Neppalli	Town of Chapel Hill
*Felix Nwoko	City of Durham – Transportation
*Meg Scully	Durham County
*Ed Venable	City of Durham – Engineering
*Scott Whiteman	Durham City/County Planning
*Patrick Wilson (Alternate)	NCDOT – Division 7
*Laura Woods	Durham City/County Planning
Ellen Beckmann	City of Durham – Transportation
Hannah Berg	Durham Planning
Maricia Brown	City of Durham – Transportation
Aaron Cain	Durham City/County Planning
Wib Gulley	Triangle Transit
Jane Korest	Durham County
Corey Liles	Research Triangle Foundation
Ryan Mickles	Town of Chapel Hill
Greg Northcutt	Triangle Transit
Brian Rhodes	City of Durham – Transportation
Mila Vega	Orange County
Emily Yasukochi	Town of Chapel Hill

*Voting Member
^Temporary Non-Voting Member
Quorum Count: 19 of 23 Voting Members

According to the TCC Bylaws, when a member misses three meetings in a row he/she is not considered a voting member on the third consecutive missed meeting. Voting privileges are reinstated on the second consecutive meeting that he/she attends.

Mark Ahrendsen, TCC Chair, called the meeting to order at 9:04 a.m. The Alternate Voting Members were identified and are indicated above.

PRELIMINARIES:

Adjustments to the Agenda

Mark Ahrendsen mentioned the handouts that were distributed at the beginning of the meeting which will discussed during the agenda item.

Public Comments

There were no public comments.

ACTION ITEMS

Approval of March 23, 2011 TCC Meeting Minutes (Attachment 4)

A motion was made by John Hodges-Copple and seconded by David Bonk to approve the March 23, 2011 TCC Meeting Minutes. The motion carried unanimously.

Triangle Regional Transit Program (No attachments)

Patrick McDonough provided an update on the Triangle Regional Transit Program. They are looking at revenues and meeting with the local jurisdictions. There are border issues such as ridership, cost, and growth analysis. They are looking at shorter segments.

Wib Gulley provided an update on the schedule which was distributed at the beginning of the meeting. They need an agreement between Durham and Orange County on the cost split for the May 11, 2011 draft financial plan to be released. Andy Henry asked if we would have a public hearing at the June 8, 2011 meeting for the financial plan and Mark Ahrendsen stated we are not required to have a public hearing but it is the TAC's choice.

Greg Northcutt stated the financial plan is a critical path; the LPA doesn't have to be linked. The hope is the LPA and Minimally Operable Segment (MOS) will be approved by August 10, 2011. The environmental scoping and the submission of the FTA New Starts must also be done. The environmental scoping will take three or four months after the LPA is approved and the New Starts report has shifted to 2012.

Mark Ahrendsen asked the time table for the Durham and Wake corridor. Mr. Northcutt stated it will be later; the top priority is Durham-Orange. Mark Ahrendsen stated updated information would help inform Durham decision-makers. Mr. Northcutt stated Wake County has deferred the referendum.

Ellen Beckmann asked when the document will be ready and Patrick McDonough stated it depends on the decisions and the meetings. Mark Ahrendsen stated the TAC wants the information before the meeting if possible. Patrick McDonough stated they can have the document without the dollar figures that could be distributed to the TAC. Mark Ahrendsen strongly encouraged them not to walk into the TAC meeting and distribute the document. As soon as the figures are obtained it needs to be distributed to the TAC.

FY 2011-2012 Unified Planning Work Program (Attachment 6, 6A, and 6B)

Maricia Brown provided an introduction for the FY 2011-2012 Unified Planning Work Program, along with the attachments.

Maricia Brown reviewed minor changes to the UPWP which were provided by NCDOT. NCDOT requested that we remove the financial tables, the narrative, and any other supporting reference to the NCDOT SPR funding this year, and we don't know why it has been requested. Felix Nwoko is going to try to find out why. Mr. Nwoko recommended leaving the UPWP as is until we receive a clarification on the requirement.

A motion was made by Felix Nwoko and seconded by Andy Henry to allow staff to remove the items referenced above if we receive sufficient clarification and recommend to the TAC approval of the FY 2011-2012 UPWP. The motion carried unanimously.

Job Access Reverse Commute and New Freedom Program (Attachments distributed at the meeting)

Maricia Brown provided an introduction for the Job Access Reverse Commute and New Freedom Program, along with the attachments that were distributed at the meeting.

Brian Litchfield requested more information about how the projects were scored and selected. David Bonk requested measures of how projects are performing – particularly projects requesting the continuation of funding. Brian Litchfield asked if New Freedom funding would go towards purchasing a vehicle for Royal Transportation, and if so, are there oversight requirements for the purchase of vehicles for private sector applicants. Felix Nwoko responded that there are requirements.

After an extensive discussion regarding the selection and distribution of the funds, Maricia Brown recommends holding off one cycle to provide more documentation to the TCC for review. Felix Nwoko added that we will provide information about the purchase of a vehicle by private sector applicants.

Closure of Pickett Road (Attachments 8, 8A, 8B, 8C, and 8D)

Andy Henry provided an introduction and update for the Closure of Pickett Road, along with the attachments.

A motion was made by Scott Whiteman and seconded by Patrick McDonough to recommend the TAC adopt the resolution of support. The motion carried unanimously.

FY 2012-2018 Metropolitan Transportation Improvement Program, 2035 Long Range Transportation Plan Amendment #2, and Air Quality Conformity Process (Attachments 9, 9A, 9B, 9C, and 9D)

Ellen Beckmann provided an introduction for the FY 2012-2018 Metropolitan Transportation Improvement Program, 2035 Long Range Transportation Plan Amendment #2, and Air Quality Conformity Process, along with the attachments.

Ellen Beckmann said Mike Stanley stated they are still waiting to finalize the STIP, and Ms. Beckmann stated we should wait until it is finalized before we recommend an MTIP. Mr. Stanley will be sending an update on changes from the draft STIP in the final STIP. It will be forwarded to the TCC at the next meeting. Ellen Beckmann recommends Amendment #19 to the 2009-2015 TIP for approval today because the funding needs to be in the FY 2009-2015 MTIP.

David Bonk stated we need to know what happens to the CMAQ funds that were not used on NC 54. Mark Ahrendsen asked Ellen Beckmann to check into this issue.

David Bonk stated the Town of Chapel Hill needs additional state funds for the Old Durham-Chapel Hill Road. The revised cost estimate adds $1.25 million plus right of way and utility relocation.

Ellen Beckmann stated there has been a request for a placeholder in the final MTIP for the NC54 corridor study recommendations. Ellen Beckmann recommended holding off until we have the complete study.

David Bonk stated there is a meeting on May 5, 2011 at 1:30 p.m. It was recommended that Ellen Beckmann attend the meeting and try to get a consensus.

A motion was made by David Bonk and seconded by John Hodges-Copple to approve Amendment #19 and recommend TAC approval. A motion carried unanimously.

FY 2014-2020 Transportation Improvement Program – Regional Priority List (Attachment 10 and 10A)

Ellen Beckmann provided an introduction and update for the FY 2014-2020 Transportation Improvement Program – Regional Priority List, along with the attachments.

Patrick McDonough asked when the new process will be in place and Ellen Beckmann stated it will be this fall.

There will be a subcommittee meeting on May 5, 2011 at 3:00 p.m.

2040 Long Range Transportation Plan (Attachments 11 and 11A)

Andy Henry provided an introduction for the 2040 Long Range Transportation Plan, along with the attachments. Andy Henry stated everything shifts three months later on the schedule for NCDOT. Mr. Henry will make the changes to the schedule before it is provided to the TAC.

REPORTS FROM STAFF:

Reports from Staff (Attachment 12)

The report from staff is attached for review.

Report from the Chair

Mark Ahrendsen provided an update on legislative matters. Work on the NC54 study continues. The Federal Certification Review is taking place next week. May is "Bike to Work" month.

NCDOT Report (Attachment 14)

Joey Hopkins, NCDOT Division 5, provided an update on projects. The T.W. Alexander project is under contract again and work is beginning. NC-147 is under construction due to shoulder work. NCDOT is working closely with the City Public Affairs office to keep motorists updated on road projects.

Patrick Wilson, NCDOT Division 7, provided an update on projects. The resurfacing project on I-40/I-85 in Orange County is under construction again, and there will be night work this summer. NCDOT received funding to designate bike routes in Orange County, and the project should be complete by the end of summer.

Karen Lincoln stated they have a start date of June 6, 2011 for the Intra-Hillsborough route.

Adjournment

There being no further business before the Technical Coordinating Committee, the meeting adjourned at 11:30 a.m.

Triangle Regional Transit Program

Durham and Orange Bus and Rail Transit Investment Plan

DCHC MPO TAC
May 11 2011

1

Triangle Regional Transit Program

Bus Planning
- new service
- increased frequency
- park and ride
- amenities

Public Input

Alternatives Analysis
- Light Rail
- Commuter Rail
- Stations
- Cost Estimates

Financial Model
- Balance of Bus & Rail
- Settings for variables
- Use of borrowing
- Plan must be affordable!

The Plan

2

DRAFT Durham Bus and Rail Investment Plan

Triangle Regional Transit Program

Bus Investment

- New bus hours by end of FIRST year– **25,000 hrs**
- New bus hours by end of THIRD year - **50,000 hrs**
- Total new bus hours by 2033 - **77,000 hrs**
- Potential Rail Dividend Bus Hours **15,000- 37,500** additional hours

Rail Investment

- Opening year for Commuter Rail – **2018**
- Opening year of Light Rail – **2025**
- LRT Capital Cost - **$1,050 m**
- LRT Annual Operating Cost - **$11.3 m**
- Commuter Rail Capital Cost - **$300 m**
- Commuter Rail Operating Cost - **$2.57 m**

* *Sales Tax Growth Rate – **3.5 %***

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DRAFT Orange Bus and Rail Investment Plan

Triangle Regional Transit Program

Bus Investment

- New bus hours by end of FIRST year – **22,050 hrs**
- New bus hours by end of THIRD year - **44,100 hrs**
- Total number of new bus hours by 2035 – **50,400 hrs**
- MLK Busway Improvements completed -2017
- Potential Rail Dividend Bus Hours – **30,000 to 45,000**

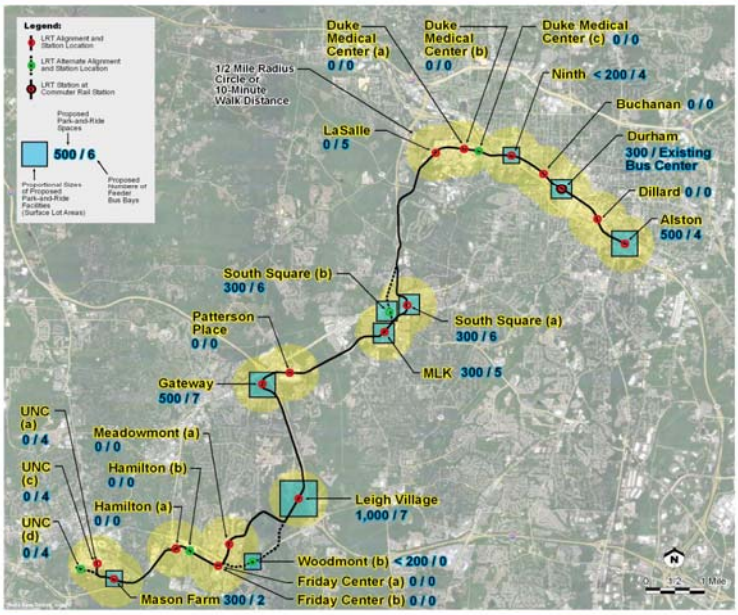
Rail Investment

- Opening year of Light Rail – **2025**
- LRT Capital Cost - **$33 m**
- LRT Annual Operating Cost – **$3.2 m**

* *Sales Tax Growth Rate – **3.6 %***

4

Durham-Orange (Light Rail)



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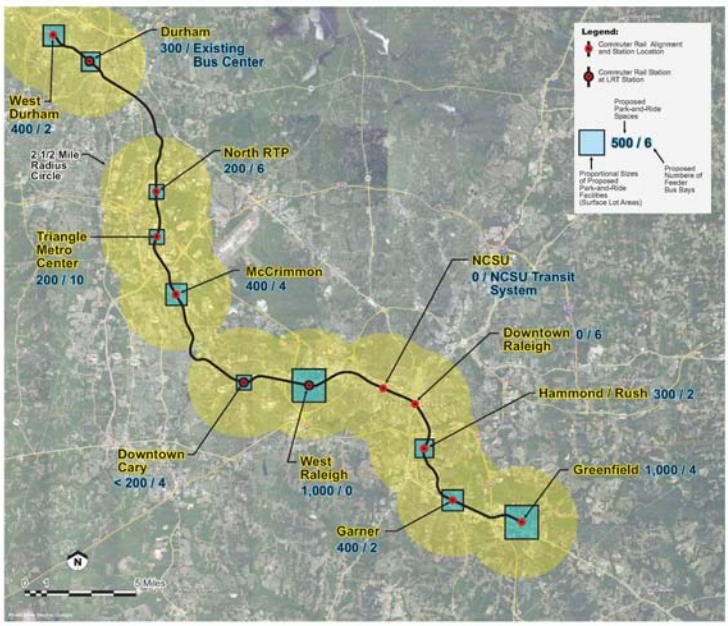
Durham-Wake (Commuter Rail)



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Financial Resources available for Transit

Triangle Regional Transit Program

- Local revenue in Bus and Rail Transit Investment Plan
  - ½ sales tax
  - $7 vehicle registration fee
  - $3 increase in Triangle Transit vehicle registration fee
  - Rental car tax revenue
- State participation - 25% assumed
- Federal participation – 50% assumed

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Approval Process

Triangle Regional Transit Program

- **DCHC MPO** – Must Approve Bus and Rail Investment Plan
- **Triangle Transit Board of Trustees** – Must Approve Bus and Rail Transit Investment Plan
- Both **Durham** and **Orange County Commissions** –
  - Must approve Bus and Rail Investment Plan
  - Must authorize referendum

* *All municipalities within Durham and Orange County must receive copy of Bus and Rail Transit Plan for review*

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Proposed Schedule

Triangle Regional Transit Program

Durham County	Orange County
• DCHC TAC Financial Plan Review – **May 11** • BOCC Review Proposed Financial Plan – **May 23** • Triangle Transit Review of D/O Financial Plan – **May 25** • DCHC TCC Financial Plan Approval – **May 25** • DCHC TAC Approval of D/O Financial Plan – **June 8** • BOCC Review of Financial Plan – **June 13** • Triangle Transit Board Approval – **June 22** • BOCC Vote to Approval of Durham Financial Plan and Authorize Referendum- **June 27**	• DCHC TAC Financial Plan Review – **May 11** • BOCC Brief – **May 17** • Triangle Transit Review of D/O Financial Plan – **May 25** • DCHC TCC Approval of D/O Financial Plan – **May 25** • BOCC Review of Financial Plan – **June 7** • DCHC TAC Approval of D/O Financial Plan – **June 8** • BOCC Approval of Orange Financial Plan and Authorize Referendum – **June 21** • Triangle Transit Board Approval – **June 22** * *BOCC has General Work Sessions on May 10 and May 16, optional add'l Financial Plan review*

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Triangle Regional Transit Program

Discussion and Questions

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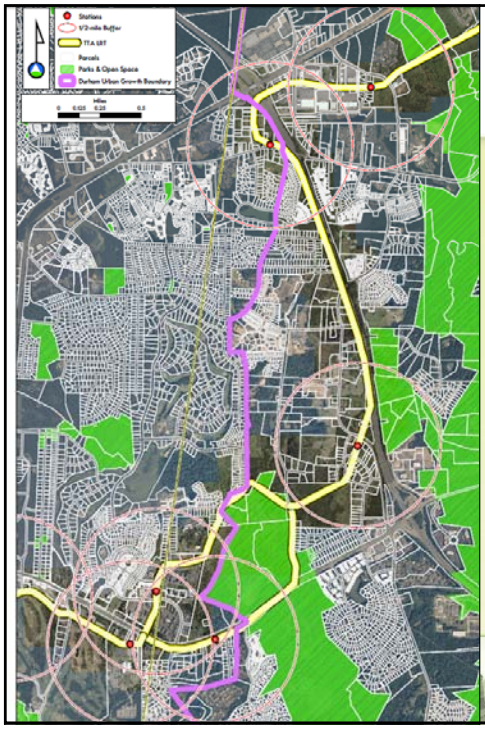

Triangle Regional Transit Program

Light Rail Connection at the Durham and Orange County Boarder

11

MEMORANDUM

To: Technical Coordinating Committee
DCHC MPO

From: DCHC MPO Lead Planning Agency

Date: May 25, 2011

Subject: **FY 2012-2018 Metropolitan Transportation Improvement Program, 2035 Long Range Transportation Plan Amendment #2, and Air Quality Conformity Process**

The DCHC MPO will be approving three documents by August 2011:

- the FY 2012-2018 Metropolitan Transportation Improvement Program,
- Amendment #2 to the 2035 Long Range Transportation Plan,
- and corresponding air quality conformity determinations.

The MTIP must be coordinated with the State Transportation Improvement Program which is scheduled to be approved by the Board of Transportation in August 2011. The LRTP amendment is needed to ensure that the MTIP/STIP and the LRTP are consistent. Since both documents are subject to the air quality conformity process, an air quality conformity determination report must be prepared and approved.

A proposed schedule for the three documents is listed below:

2/9/2011 For the air quality modeling process, the TAC needs to identify changes to non-exempt projects in the first four years of the MTIP and projects crossing air quality horizon years in the LRTP.
The TAC releases the draft MTIP and LRTP Amendment #2 for public comment.

3/1/2011 through 6/17/2011 Air quality modeling, emission analysis, and conformity report preparation.

3/9/2011 The TAC holds a public hearing on the draft MTIP and LRTP Amendment #2.

6/8/2011 The TAC releases the air quality conformity draft for public comment.
TAC approves the final MTIP and LRTP Amendment #2 (subject to air quality conformity).

8/10/2011 The TAC holds a public hearing on the air quality conformity draft and approves the air quality determination report.

9/2/2011 Federal action on air quality conformity determination.

The approval of the final MTIP and LRTP Amendment #2 may shift later in the schedule as long as approval occurs by the August TAC meeting.

Draft MTIP

The North Carolina Department of Transportation released the draft FY 2012-2018 State Transportation Improvement Program (STIP) in August 2010. The seven-year STIP is included within the Department's ten-year work program for FY 2011-2020. The DCHC MPO met with NCDOT to discuss the STIP in November 2010. Subsequently, the TCC developed a recommended draft FY 2012-2018 Metropolitan Transportation Improvement Program (MTIP).

In February, the TAC released the draft MTIP for public comment and held a public hearing at the March meeting. The MPO's public involvement plan establishes a minimum three-week public comment period. An advertisement was posted in the Herald-Sun on February 16, 2011, and a press release was issued on February 28, 2011. Copies are available in the planning departments of all MPO member jurisdictions and in public libraries as well as on www.dchcmpo.org. Attachment 6C is a summary of public comments on the draft MTIP.

Final MTIP

NCDOT provided the MPO a draft version of the final STIP on May 13, 2011 (Attachment 6A). The NC BOT is expected to approve the final STIP in July. NCDOT staff believe that there may still be a few cost and/or schedule changes in the final STIP on R-5164, EB-4707, U-4716A/B/C, and. If the TAC approves the final MTIP before the BOT, MTIP amendments may be needed to ensure that the two documents agree in the first four years (FY 2012-2015).

The tables below include all projects where either the MPO requested a change to the draft STIP and/or where NCDOT changed the draft STIP. Projects where the MPO did not make any requests and no changes were made are not included in these tables.

Projects in final STIP:

Project	MPO Request	Final STIP	Final MTIP
I-3306 (I-40 widening)	Accelerate widening from US 15-501 to NC 86.	No schedule change – years 1 & 2 of 4 year project funded in FY 2019 & 2020. Overall cost increased.	Match STIP. Note request for first phase in description. Phasing to be determined during environmental study.
I-0305 (I-85 widening)	Include widening of NC 86 from 70A to Old NC 10.	Schedule delayed 2 years. Begins in FY 2019.	Match STIP. Note request for NC 86 widening in description. Inclusion of improvement on y-lines to be determined during environmental study.

R-5164 (resurfacing)	None.	More projects included as breaks. NC 147 and US 15-501 under construction. Main Street added as break to be let with B-3638. Mike Stanley 5/13/11: "The cost shown is a placeholder until a separate estimate is generated and logged, so it may be different for the final."	Match STIP.
U-5304 (US 15-501 improvements)	Accelerate. Include Ephesus Church Road improvements.	No change.	Match STIP. Note request for Ephesus Church improvements in description. Inclusion of improvements to be determined during environmental study.
U-5324, was FS-1005C (NC 54 widening I-40 to NC 55)	Add funding.	Added year 1 of R and U funding in FY 2020.	Match STIP.
U-3308 (Alston Avenue widening)	None.	Schedule delayed 1 year. Construction begins FY 2015.	Match STIP.
U-4716 (Hopson Road grade separation, railroad improvements)	None.	Mike Stanley 5/13/11: "I believe there are some schedule changes in the works for U-4716A&B, U-4716C, …those are not yet reflected."	Match STIP.
EB-4707 (Old Durham-Chapel Hill Rd. bike/ped)	Add $1M in funding (placeholder).	Schedule delayed 1 year. Construction begins in FY 2012. Mike Stanley 5/13/11: "Am also aware of the addition of $3.4+ million in ROW cost (not including utilities) for EB-4707, but that is not reflected, as I just received the information and it has not gone through the recording process to be keyed in yet. Utility estimates are still pending, I think."	Match STIP. Amendments can be made as the estimate is confirmed and funding is identified.
FS-1008B (NC 751 widening US 64 to Durham County)	None. Widening is not in the 2035 LRTP.	Feasibility Study Scheduled	Match STIP.
B-5348 (SR 1005 bridge over Phil's Creek)	None.	Schedule accelerated 1 year.	Match STIP.

B-4943 (SR 1616 bridge over Dial Creek/Lake Michie)	None.	Schedule accelerated 3 years.	Match STIP.
B-5512 (SR 1902 bridge over Lick Creek)	None.	New project added. Construction in FY 2020.	Match STIP.
EB-5514 (University Drive bike/ped)	Project on MPO priority list.	New project added. Construction in FY 2015.	Match STIP.
C-5230 (Durham Traffic Signal Controller Upgrade)	None.	New project added. Uses statewide CMAQ funds.	Match STIP.
W-5318 (NC 86 safety improvements)	None.	Mike Stanley 5/17/11: "Accelerated to ROW in 12 and construction in 13" (not reflected in Attachment 6A)	Match STIP.
P-4405 (Rail crossing safety initiative)	None.	New project added. Uses HSR funds.	Match STIP.
EL-4999 (Acquisition of rail corridors and construction of bike/ped trails in Durham)	None.	Schedule accelerated. Project in progress by Rail Division.	Match STIP.
P-2918 (Rail equipment and capital yard maintenance facility)	None.	Schedule change. Uses HSR funds.	Match STIP.

Projects not in final STIP:

Project	**MPO Request**	**Final STIP**	**Final MTIP**
C-4402 (NC 54 bicycle facility)	Project programmed by DCHC MPO using CMAQ funds selected for 2006-2012 TIP. Inactive project.	Deleted. "To be evaluated as part of FS-2005C"	Not included. Previous CMAQ funds were subject to rescissions. Future CMAQ funding could be considered if needed.
Z-4007B (SR 1927 Brewer Road at NS RR crossing safety improvements)	None.	Deleted. "Construction not authorized"	Not included.
NC 54 widening Fordham Blvd. to I-40	Add project for short-term recommendations of NC 54 Corridor Study.	Not included.	Not included. Amendments can be made to include individual projects recommended by final study.
Fayetteville Road widening	Add project with funding in FY 2016-2018.	Not included.	Include as requested.
Erwin Road modernization	Add project with funding in FY 2016.	Not included.	Include as requested.
Jack Bennett Road modernization	Add project with funding in FY 2016.	Not included.	Include as requested.
Churton Street widening	Add project with funding in FY 2019-2020.	Not included.	Include as requested.
Eno Mountain Road Mayo Street realignment	Add project with funding in FY 2020.	Not included.	Include as requested.

NC 86 widening (north of Hillsborough)	Add project with funding in FY 2020.	Not included.	Include as requested.
Orange Grove Road extension	Add project with funding in FY 2020.	Not included.	Include as requested.
Park and Ride Facilities	Add projects with funding in FY 2016-2020.	Not included.	Include as requested.
Orange Grove Road Pedestrian Bridge	Add project with funding in FY 2016.	Not included.	Include as requested.

Minor corrections:

Project	**MPO Request**	**Final STIP**	**Final MTIP**
CMAQ Projects	Include all MPO projects and approved schedule	Corrections made.	Match STIP.
STPDA Projects	Include all MPO projects and approved schedule (see Attachment 6B for more details)	Corrections made.	Match STIP.
New Freedom Grant Projects	Include all MPO projects and funding.	Listed projects are estimates. Amendments to be made as individual projects selected.	Include as one MPO-wide project. Amendments to be made as individual projects selected.
Job Access/Reverse Commute Grant Projects	Include all MPO projects and funding.	Listed projects are estimates. Amendments to be made as individual projects selected.	Include as one MPO-wide project. Amendments to be made as individual projects selected.
TE-4706Au/Bu (Durham-Chapel Hill Fixed Guideway)	Fix project description and operator.	Corrections made.	Match STIP.

Attachment 6B is an updated the STPDA table that will correspond with the final MTIP.

2035 LRTP Amendment #2

Amendment #2 to the 2035 LRTP corrects the mileage for five projects to match the figures in the STIP/MTIP and changes the air quality horizon year for one project (Carver Street Extension). Attachment 6D is the resolution and table for Amendment #2. Additional changes are listed in the table to correct the Capital Area MPO's projects.

Several DCHC MPO projects were coded incorrectly in the modeled network for the 2035 LRTP air quality conformity determination. The air quality conformity determination for the 2012-2018 STIP/MTIP and 2035 LRTP Amendment #2 will correct this error. Since the projects were correctly listed in the 2035 LRTP report, no amendment is needed to correct this modeling error.

DURHAM-CHAPEL HILL-CARRBORO METROPOLITAN PLANNING ORGANIZATION

TYPE OF WORK / ESTIMATED COST IN THOUSANDS / PROJECT BREAK

ROUTE/CITY COUNTY	ID NUMBER	LOCATION / DESCRIPTION (LENGTH)	TOTAL PROJ COST (THOU)	PRIOR YEARS COST (THOU)	FUNDING SOURCE	FISCAL YEARS 5 YEAR WORK PROGRAM FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	DEVELOPMENTAL PROGRAM FY 2017	FY 2018	FY 2019	FY 2020	UNFUNDED FUTURE YEARS
INTERSTATE PROJECTS															
I-40 ORANGE	I-5364	I-40, EAST OF SR 1734 (ERWIN ROAD) TO DURHAM COUNTY LINE. PAVEMENT REHABILITATION. (0.4 MILE)	250		IMPM							C 250			
I-40, I-73 AND I-85 ALAMANCE GUILFORD ORANGE	I-5207	INTERSTATE MAINTENANCE PRESERVATION FOR DIVISION 7.	10395		IMPM	C 1155	C 1155	C 1155	C 1155	C 1155	C 1155	C 1155	C 1155	C 1155	
I-40 DURHAM ORANGE	I-3306	I-40, I-85 IN ORANGE COUNTY TO NC 147 (BUCK DEAN FREEWAY) IN DURHAM COUNTY. ADD ADDITIONAL LANES. (20.7 MILES)	153752	81452	IM NHS								C 7230 A C 10845 A	C 7230 A C 10845 A	C 14460 A C 21690 A
					A I-85 TO DURHAM COUNTY LINE B ORANGE COUNTY LINE TO NC 147 (BUCK DEAN FREEWAY) IN DURHAM - COMPLETE										
STRATEGIC HIGHWAY CORRIDOR															
I-40/85 ORANGE	I-5142	I-40/I-85, WEST OF SR 1114 (BUCKHORN ROAD) TO I-40/85 INTERCHANGE. MILL, RESURFACE, PAVEMENT MARKINGS AND INSTALL RUMBLE STRIPS.	12000	12000											
					UNDER CONSTRUCTION										
I-85 ORANGE	I-5312	I-85, EAST OF I-40 TO DURHAM COUNTY LINE. PAVEMENT REHABILITATION. (7.6 MILES)	6450		IMPM				C 6450						
I-85 DURHAM	I-5331	I-85, NORTH OF MILE POST 183 TO GRANVILLE COUNTY LINE. CLEAN AND RESEAL JOINTS AND REPAIR SPALLS. (0.7 MILE)	250		IMPM					C 250					
I-85 DURHAM	I-5334	I-85, SOUTH OF US 15-501 TO NORTH OF US 70. CLEAN AND RESEAL JOINTS, AND REPAIR SPALLS. (4.6 MILES)	3000		IMPM						C 3000				
I-85 DURHAM GRANVILLE	I-5145	I-85, NORTH OF US 70 IN DURHAM COUNTY TO NORTH OF NC 56 IN GRANVILLE COUNTY. PAVEMENT PRESERVATION. (12.9	9000	9000											
					UNDER CONSTRUCTION										

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COST AND SCHEDULES ARE PRELIMINARY AND SUBJECT TO SIGNIFICANT CHANGE AS MORE INFORMATION BECOMES AVAILABLE

DURHAM-CHAPEL HILL-CARRBORO METROPOLITAN PLANNING ORGANIZATION

TYPE OF WORK / ESTIMATED COST IN THOUSANDS / PROJECT BREAK

FISCAL YEARS

ROUTE/CITY / COUNTY	ID NUMBER	LOCATION / DESCRIPTION (LENGTH)	TOTAL PROJ COST (THOU)	PRIOR YEARS COST (THOU)	FUNDING SOURCE	5 YEAR WORK PROGRAM FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	DEVELOPMENTAL PROGRAM FY 2017	FY 2018	FY 2019	FY 2020	UNFUNDED FUTURE YEARS
INTERSTATE PROJECTS															
I-85 ORANGE	I-0305*	I-85, I-40 AT HILLSBOROUGH TO DURHAM COUNTY LINE. WIDEN TO SIX LANES AND RECONSTRUCT INTERCHANGES AND STRUCTURES. (7.5 MILES)	212582	1800	NHS								R 10134 A	R 10133 A	R 10133 A
					NHS								U 409 A	U 408 A	U 408 A
					NHS										M 538 A
					IM										C 31600 A
					NHS										C 47400 A
					NHS										U 560 B
					NHS										R 19700 B
					NHS										M 359 B
					IM										C 31600 B
					NHS										C 47400 B
					A I-85, SR 1006 NEAR HILLSBOROUGH TO EAST OF SR 1709										
					B I-85, EAST OF SR 1709 TO DURHAM COUNTY LINE										
STRATEGIC HIGHWAY CORRIDOR					PLANNING/DESIGN IN PROGRESS										
NC 540 DURHAM WAKE	I-5378	NC 540, NC 54 TO I-40. CLEAN AND RESEAL JOINTS, AND REPAIR SPALLS. (1 MILE)	1475		IMPM								C 1475		
I-40, I-85, I-440 AND I-540 DURHAM GRANVILLE VANCE WAKE WARREN	I-5205	INTERSTATE MAINTENANCE PRESERVATION FOR DIVISION 5.	13878		IMPM	C 1542	C 1542	C 1542	C 1542	C 1542	C 1542	C 1542	C 1542	C 1542	
DURHAM DURHAM	I-4743*	I-85, US 70 TO SR 1632 (RED MILL ROAD), EXIT 182. ADD LANES. (6.4 MILES)													
STRATEGIC HIGHWAY CORRIDOR					UNFUNDED LOOP PROJECT - THE CROSS SECTION FOR THIS PROJECT WILL BE ESTABLISHED BY MUTUAL AGREEMENT OF THE MPO AND NCDOT THROUGH THE STATE AND FEDERAL ENVIRONMENTAL REVIEW PROCESS										

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DURHAM-CHAPEL HILL-CARRBORO METROPOLITAN PLANNING ORGANIZATION

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ROUTE/CITY / COUNTY	ID NUMBER	LOCATION / DESCRIPTION (LENGTH)	TOTAL PROJ COST (THOU)	PRIOR YEARS COST (THOU)	FUNDING SOURCE	FISCAL YEARS: 5 YEAR WORK PROGRAM FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	DEVELOPMENTAL PROGRAM FY 2017	FY 2018	FY 2019	FY 2020	UNFUNDED FUTURE YEARS
RURAL PROJECTS															
I-540 NC 540 DURHAM WAKE	R-2000*	I-540/NC 540, NORTHERN WAKE FREEWAY, NC 55 WEST OF MORRISVILLE TO US 64 EAST NEAR KNIGHTDALE. FREEWAY ON NEW LOCATION. (29 MILES)	660077	660077											
					AA	NC 55 WEST OF MORRISVILLE TO RESEARCH TRIANGLE PARK EAST LIMITS - COMPLETE									
					AB	RESEARCH TRIANGLE PARK EAST LIMITS TO SOUTHWEST OF I-40 - COMPLETE									
					AC	SOUTHWEST OF I-40 TO I-40 - COMPLETE									
					AD	TOLL GANTRY BETWEEN NC 55 AND NC 54 - WORK TO BE ACCOMPLISHED UNDER R-2635 BY NORTH CAROLINA TURNPIKE AUTHORITY									
					AE	ITS DEVICES, I-540 AND NC 54/EMPEROR BOULEVARD - COMPLETE									
					AF	I-540/I-40 INTERCHANGE IMPROVEMENTS - IN PROGRESS - OPEN TO TRAFFIC									
					BA	I-40 TO NORTHEAST OF I-40 - COMPLETE									
					BB	NORTHEAST OF I-40 TO SOUTHWEST OF LUMLEY ROAD - COMPLETE									
					BD	SOUTHWEST OF LUMLEY ROAD TO NORTHEAST OF LUMLEY ROAD - COMPLETE									
					BE	NORTHEAST OF LUMLEY ROAD TO NORTHEAST OF US 70 - COMPLETE									
					CA	NORTHEAST OF US 70 TO SOUTHWEST OF SR 1826 (RAY ROAD) - COMPLETE									
					CB	SOUTHWEST OF SR 1826 (RAY ROAD) TO EAST OF NC 50 - COMPLETE									
					D	EAST OF NC 50 TO WEST OF SR 2000 (FALLS OF NEUSE ROAD) - COMPLETE									
					EA	WEST OF SR 2000 (FALLS OF NEUSE ROAD) TO EAST SR 2013 (GRESHAM LAKE ROAD) - COMPLETE									
					EB	EAST OF SR 2013 (GRESHAM LAKE ROAD) TO EAST OF US 1 - COMPLETE									
					F	EAST OF US 1 TO SOUTH OF SR 2215 (BUFFALOE ROAD) - COMPLETE									
					G	SOUTH OF SR 2215 (BUFFALOE ROAD) TO US 64 EAST NEAR KNIGHTDALE - COMPLETE									
STRATEGIC HIGHWAY CORRIDOR															
VARIOUS DURHAM WAKE	R-5164	RESURFACING ON FEDERAL-AID ROUTES.	8293	7993	STP	C 300 F									
					A	I-85, ORANGE COUNTY LINE TO SR 1401; NC 147, I-85 TO EXIT 14; US 15-501 BYPASS, I-85 TO US 15-501 BUSINESS - UNDER CONSTRUCTION - $8.65 M									
					B	I-40, NC 147 TO EAST OF I-540 - WORK TO BE ACCOMPLISHED UNDER R-2000AF - $3.75 M .									
					C	US 15-501 BUS. SOUTH, NC 98 TO US 15-501 BUS.; US 15-501 BUS. NORTH, US 15-501 TO NC 98, US 15-501 BUS., US 15-501 TO SR 1361 AND SR 1127 , GREAT JONES STREET TO MO COMPLETE									
					D	NC 147, WEST OF EXIT 14 (SWIFT AVENUE) TO NORTH OF EXIT 7 (T. W. ALEXANDER ROAD) - UNDER CONSTRUCTION									
					E	US 15-501, SR 2295, SR 1118, US 15-501 BUSINESS SOUTHBOUND AND NORTHBOUND AT SELECTED LOCATIONS ALONG EACH ROUTE - UNDER CONSTRUCTION									
					F	US 70 BUSINESS (MAIN STREET), NINTH STREET TO BUCHANAN STREET.									
						PART F TO BE LET WITH B-3638									
URBAN PROJECTS															
US 15-501 DURHAM	U-4012	US 15-501, NORTH OF MT. MORIAH ROAD TO SOUTH OF GARRETT ROAD IN DURHAM. ADD AN ADDITIONAL NORTH AND SOUTHBOUND LANE AND CONSTRUCT AN ADDITIONAL RIGHT TURN LANE IN THE SOUTHEAST QUADRANT OF INTERCHANGE AT I-40 (EXIT 270). (0.9 MILE)	15609	15609											
STRATEGIC HIGHWAY CORRIDOR						UNDER CONSTRUCTION									
US 15-501 ORANGE	U-5304	US 15-501, NC 86 (SOUTH COLUMBIA STREET) TO SR 1742 (EPHESUS CHURCH ROAD) IN CHAPEL HILL. SIDEWALKS, WIDE OUTSIDE LANES AND TRANSIT ACCOMMODATIONS. (4 MILES)	5150		NHS							C 5150			

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DURHAM-CHAPEL HILL-CARRBORO METROPOLITAN PLANNING ORGANIZATION

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ROUTE/CITY / COUNTY	ID NUMBER	LOCATION / DESCRIPTION (LENGTH)	TOTAL PROJ COST (THOU)	PRIOR YEARS COST (THOU)	FUNDING SOURCE	FISCAL YEARS — 5 YEAR WORK PROGRAM FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	DEVELOPMENTAL PROGRAM FY 2017	FY 2018	FY 2019	FY 2020	UNFUNDED FUTURE YEARS
URBAN PROJECTS															
US 70 DURHAM	U-4720*	US 70, LYNN ROAD TO THE PROPOSED NORTHERN DURHAM PARKWAY IN DURHAM. (COORDINATE WITH U-4721). (7.8 MILES)													
STRATEGIC HIGHWAY CORRIDOR						UNFUNDED LOOP PROJECT - THE CROSS SECTION FOR THIS PROJECT WILL BE ESTABLISHED BY MUTUAL AGREEMENT OF THE MPO AND NCDOT THROUGH THE STATE AND FEDERAL ENVIRONMENTAL REVIEW PROCESS									
NC 54 DURHAM	U-5324	NC 54, I-40 TO NC 55 IN DURHAM. WIDEN TO MULTILANES WITH TRANSIT ACCOMMODATIONS, BIKE LANES, AND SIDEWALKS. (5.2 MILES)	116920		STP								R 7500	R 7500	
					STP								U 16160	U 16160	
					STP									C 69600	
NC 86 ORANGE	U-0624	NC 86 (SOUTH COLUMBIA STREET), SR 1906 (PUREFOY ROAD) TO SR 1902 (MANNING DRIVE) IN CHAPEL HILL. CORRIDOR UPGRADE TO INCLUDE BICYCLE LANES. (0.7 MILE)	7860	3010	STP	C 4850									
						RIGHT OF WAY IN PROGRESS									
SR 1126 DURHAM	U-4009	SR 1126 (SERVICE ROAD) PARALLEL TO US 15-501 IN DURHAM. RELOCATE EXISTING SERVICE ROAD. (0.3 MILE)	5683	5683											
STRATEGIC HIGHWAY CORRIDOR						UNDER CONSTRUCTION									
SR 1733 (WEAVER DAIRY ROAD ORANGE	U-3306	SR 1733 (WEAVER DAIRY ROAD), NC 86 TO SR 1734 (ERWIN ROAD) IN CHAPEL HILL. CORRIDOR UPGRADE, PART ON NEW LOCATION. (2.8 MILES)	18316	18316											
						UNDER CONSTRUCTION									
NEW ROUTE DURHAM	U-0071*	EAST END CONNECTOR, NC 147 (BUCK DEAN FREEWAY) TO NORTH OF NC 98 IN DURHAM. MULTI-LANE DIVIDED, PART ON NEW LOCATION. (3.2 MILES)	179839	9056	T	R 21950	R 21950								
					T	U 3000	U 3000								
					T		M 1883								
					T			C 29750	C 29750	C 29750	C 29750				
STRATEGIC HIGHWAY CORRIDOR						PLANNING/DESIGN IN PROGRESS									
NEW ROUTE DURHAM WAKE	U-4763	NEW ROUTE - TRIANGLE PARKWAY/TRIANGLE EXPRESSWAY, MCCRIMMON PARKWAY TO I-40 IN RESEARCH TRIANGLE PARK AND MORRISVILLE. MULTI-LANE FACILITY ON NEW LOCATION. (4.7 MILES)	177163	177163											
STRATEGIC HIGHWAY CORRIDOR						A NEW ROUTE - TRIANGLE PARKWAY, MCCRIMMON PARKWAY TO NC 540 - 1.2 MILES - SCHEDULED FOR REPRIORITIZATION B NEW ROUTE - TRIANGLE PARKWAY/TRIANGLE EXPRESSWAY, TRIANGLE PARKWAY/TRIANGLE EXPRESSWAY, NC 540 TO I-40 - 3.5 MILES - UNDER CONSTRUCTION - NORTH CARO AUTHORITY PROJECT									

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URBAN PROJECTS															
NEW ROUTE DURHAM WAKE	U-4721*	NORTHERN DURHAM PARKWAY, I-540 IN RALEIGH/WAKE COUNTY TO ROXBORO ROAD IN DURHAM/DURHAM COUNTY. (COORDINATE WITH U-4720). (18.8 MILES)													
STRATEGIC HIGHWAY CORRIDOR					UNFUNDED LOOP PROJECT - THE CROSS SECTION FOR THIS PROJECT WILL BE ESTABLISHED BY MUTUAL AGREEMENT OF THE MPO AND NCDOT THROUGH THE STATE AND FEDERAL ENVIRONMENTAL REVIEW PROCESS										
VARIOUS CHATHAM DURHAM ORANGE	U-5023	DURHAM-CHAPEL HILL-CARRBORO (DCHC) DA FUNDS - RESERVED FOR FUTURE PROGRAMMING.	20898		STPDA	C 201			C 187	C 4102	C 4102	C 4102	C 4102	C 4102	
					FUNDS SHOWN IN FY 12 RESERVED FOR PROGRAMMING ON SR-5001C										
VARIOUS DURHAM ORANGE	U-5119	BUS RAPID TRANSIT OPERATIONAL IMPROVEMENTS IN CHAPEL HILL.	625	60	STPDA C	C 452 C 113									
					PLANNING, DESIGN, RIGHT OF WAY AND CONSTRUCTION BY TOWN OF CHAPEL HILL - IN PROGRESS										
VARIOUS CHATHAM DURHAM ORANGE	U-4727	DURHAM-CHAPEL HILL-CARRBORO URBAN AREA PLANNING (DCHC) ALLOCATION AND UNIFIED WORK PROGRAM.	12375	7081	STPDA L	PE 1624 PE 406	PE 1150 PE 287	PE 720 PE 180	PE 742 PE 185						
					IN PROGRESS										
VARIOUS DURHAM ORANGE	U-4704	CHAPEL HILL-CARRBORO COMPUTERIZED TRAFFIC SIGNAL SYSTEM.	5450	5450											
					UNDER CONSTRUCTION										
NC 55 (ALSTON AVENUE) DURHAM	U-3308	NC 55 (ALSTON AVENUE), NC 147 (I. L. "BUCK" DEAN FREEWAY) TO US 70 BUSINESS-NC 98 (HOLLOWAY STREET) IN DURHAM. WIDEN TO FOUR LANE DIVIDED FACILITY AND REPLACE NORFOLK-SOUTHERN RAILROAD BRIDGES. (1 MILE)	31024	2596	STP STP STP	R 800 M 28 C 13800			C 13800						
SR 1321 (HILLANDALE ROAD) DURHAM	U-3804	SR 1321 (HILLANDALE ROAD), I-85 TO SR 1407 (CARVER STREET) IN DURHAM. WIDEN TO MULTI-LANES. (0.7 MILE)	11941	11941											
					UNDER CONSTRUCTION										

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ROUTE/CITY COUNTY	ID NUMBER	LOCATION / DESCRIPTION (LENGTH)	TOTAL PROJ COST (THOU)	PRIOR YEARS COST (THOU)	FUNDING SOURCE	FISCAL YEARS 5 YEAR WORK PROGRAM FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	DEVELOPMENTAL PROGRAM FY 2017	FY 2018	FY 2019	FY 2020	UNFUNDED FUTURE YEARS
URBAN PROJECTS															
US 501 (ROXBORO ROAD) DURHAM	U-4722*	US 501 (ROXBORO ROAD), US 501 BYPASS (DUKE STREET) TO SR 1640 (GOODWIN ROAD) IN DURHAM. (4.4 MILES)													
STRATEGIC HIGHWAY CORRIDOR					UNFUNDED LOOP PROJECT - THE CROSS SECTION FOR THIS PROJECT WILL BE ESTABLISHED BY MUTUAL AGREEMENT OF THE MPO AND NCDOT THROUGH THE STATE AND FEDERAL ENVIRONMENTAL REVIEW PROCESS										
SR 1919 (SMITH LEVEL ROAD) ORANGE	U-2803	SR 1919 (SMITH LEVEL ROAD), ROCK HAVEN ROAD TO BRIDGE NO. 88 IN CARRBORO. WIDEN TO MULTI-LANES. (0.6 MILE)	8199	4299	S		C 3900								
					RIGHT OF WAY IN PROGRESS										
SR 1959 (SOUTH MIAMI BOULEVARD) DURHAM	U-4011	SR 1959 (SOUTH MIAMI BOULEVARD), SOUTH OF SR 2112 (METHODIST STREET) TO NORTH OF SR 1960 (BETHESDA AVENUE) IN DURHAM. WIDEN TO FIVE LANES TO PROVIDE CENTER TURN LANE. (0.7 MILE)	9323	9323											
					UNDER CONSTRUCTION										
SR 2028 (T.W. ALEXANDER DRIVE) DURHAM	U-3309	SR 2028 (T.W. ALEXANDER DRIVE), SR 1121 (CORNWALLIS ROAD) TO SR 1959 (MIAMI BOULEVARD) IN RESEARCH TRIANGLE PARK. WIDEN TO A FOUR LANE DIVIDED FACILITY. (1.7 MILES)	14393	14393											
					A SR 2028 (T.W. ALEXANDER DRIVE), SR 1121 (CORNWALLIS ROAD) TO EAST OF NC 147 - UNDER CONSTRUCTION B SR 2028 (T.W. ALEXANDER DRIVE), EAST OF NC 147 TO SR 1959 (MIAMI BOULEVARD) - COMPLETE										
DURHAM CHAPEL HILL DURHAM ORANGE	EB-4707	SR 2220 (OLD CHAPEL HILL ROAD)-SR 1838 (OLD DURHAM ROAD), SR 1116 (GARRETT ROAD) IN DURHAM COUNTY TO US 15-501 IN ORANGE COUNTY. BICYCLE IMPROVEMENTS. (2.7 MILES)	5450	1450	STPDA C	C 3200 C 800									
					DIVISION DESIGN/LET - RIGHT OF WAY IN PROGRESS										
FEASIBILITY STUDIES															
NC 751 CHATHAM DURHAM	FS-1008B	NC 751, US 64 IN CHATHAM COUNTY TO NORTH OF SR 1118 (FAYETTEVILLE ROAD) IN DURHAM, DURHAM COUNTY. WIDEN TO MULTILANES WITH BICYCLE LANES.													
					SCHEDULED FOR FEASIBILITY STUDY										
FEDERAL BRIDGE PROJECTS															
US 70 BUSINESS DURHAM	B-3638	CAMPUS DRIVE. REPLACE BRIDGE NO. 316	1680	380	FA	C 1300									
					RIGHT OF WAY IN PROGRESS - TO BE LET WITH R-5164F										
US 70 BYPASS ORANGE	B-4962	ENO RIVER. REPLACE BRIDGE NO. 46	6600		FA FA						R 600 C 6000				

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FEDERAL BRIDGE PROJECTS															
SR 1005 ORANGE	B-5348	PHIL'S CREEK. REPLACE BRIDGE NO. 85	1045		FA FA						R 95	C 950			
SR 1116 DURHAM	B-3450	NEW HOPE CREEK. REPLACE BRIDGE NO. 217, SANDY CREEK. REPLACE BRIDGE NO. 122.	4986	4986											
					UNDER CONSTRUCTION										
SR 1616 DURHAM	B-4943	DIAL CREEK (LAKE MICHIE). REPLACE BRIDGE NO. 20	477		NFA NFA NFA					R 40 U 52	C 385				
SR 1902 DURHAM	B-5512	LICK CREEK. REPLACE BRIDGE NO. 89	1150		NFA NFA								R 100	C 1050	
VARIOUS DURHAM FRANKLIN GRANVILLE PERSON VANCE WAKE WARREN	BD-5105	DIVISION 5 PURCHASE ORDER CONTRACT BRIDGE REPLACEMENT PROJECTS AT SELECTED LOCATIONS.	29051	1051	NFA NFA	R 200 C 1800	R 200 C 1800	R 200 C 1800	R 200 C 1800	R 300 C 2700	R 400 C 3600	R 400 C 3600	R 400 C 3600	R 500 C 4500	
					IN PROGRESS - BRIDGE PURCHASE ORDER CONTRACT (BPOC)										
VARIOUS CHATHAM HOKE LEE MONTGOMERY MOORE RANDOLPH RICHMOND SCOTLAND	BD-5108	DIVISION 8 PURCHASE ORDER CONTRACT BRIDGE REPLACEMENT PROJECTS AT SELECTED LOCATIONS.	30490	2490	NFA NFA	R 200 C 1800	R 200 C 1800	R 200 C 1800	R 200 C 1800	R 300 C 2700	R 400 C 3600	R 400 C 3600	R 400 C 3600	R 500 C 4500	
					IN PROGRESS - BRIDGE PURCHASE ORDER CONTRACT (BPOC)										
VARIOUS ALAMANCE CASWELL GUILFORD ORANGE ROCKINGHAM	BD-5107	DIVISION 7 PURCHASE ORDER CONTRACT BRIDGE REPLACEMENT PROJECTS AT SELECTED LOCATIONS.	34538	6538	NFA NFA	R 200 C 1800	R 200 C 1800	R 200 C 1800	R 200 C 1800	R 300 C 2700	R 400 C 3600	R 400 C 3600	R 400 C 3600	R 500 C 4500	
					IN PROGRESS - BRIDGE PURCHASE ORDER CONTRACT (BPOC)										

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DURHAM-CHAPEL HILL-CARRBORO METROPOLITAN PLANNING ORGANIZATION

TYPE OF WORK / ESTIMATED COST IN THOUSANDS / PROJECT BREAK

ROUTE/CITY COUNTY	ID NUMBER	LOCATION / DESCRIPTION (LENGTH)	TOTAL PROJ COST (THOU)	PRIOR YEARS COST (THOU)	FUNDING SOURCE	FISCAL YEARS 5 YEAR WORK PROGRAM FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	DEVELOPMENTAL PROGRAM FY 2017	FY 2018	FY 2019	FY 2020	UNFUNDED FUTURE YEARS
FEDERAL BRIDGE PROJECTS															
VARIOUS ALAMANCE CASWELL GUILFORD ORANGE ROCKINGHAM	BF-5307	SCREEN AND EVALUATE POTENTIAL FEDERAL FUNDED BRIDGE PROJECTS DIVISION 7.	200	20	NFA	PE 20	PE 20	PE 20	PE 20	PE 20	PE 20	PE 20	PE 20	PE 20	
VARIOUS DURHAM FRANKLIN GRANVILLE PERSON VANCE WAKE WARREN	BF-5305	SCREEN AND EVALUATE POTENTIAL FEDERAL FUNDED BRIDGE PROJECTS DIVISION 5.	200	20	NFA	PE 20	PE 20	PE 20	PE 20	PE 20	PE 20	PE 20	PE 20	PE 20	
VARIOUS CHATHAM HOKE LEE MONTGOMERY MOORE RANDOLPH RICHMOND SCOTLAND	BF-5308	SCREEN AND EVALUATE POTENTIAL FEDERAL FUNDED BRIDGE PROJECTS DIVISION 8.	200	20	NFA	PE 20	PE 20	PE 20	PE 20	PE 20	PE 20	PE 20	PE 20	PE 20	
VARIOUS DURHAM FRANKLIN GRANVILLE PERSON VANCE WAKE WARREN	BS-5405	SCREEN AND EVALUATE POTENTIAL STATE FUNDED BRIDGE PROJECTS DIVISION 5.	200	20	S	PE 20	PE 20	PE 20	PE 20	PE 20	PE 20	PE 20	PE 20	PE 20	

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TYPE OF WORK / ESTIMATED COST IN THOUSANDS / PROJECT BREAK

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FEDERAL BRIDGE PROJECTS															
VARIOUS ALAMANCE CASWELL GUILFORD ORANGE ROCKINGHAM	BS-5407	SCREEN AND EVALUATE POTENTIAL STATE FUNDED BRIDGE PROJECTS DIVISION 7.	200	20	S	PE 20	PE 20	PE 20	PE 20	PE 20	PE 20	PE 20	PE 20	PE 20	
VARIOUS CHATHAM HOKE LEE MONTGOMERY MOORE RANDOLPH RICHMOND SCOTLAND	BS-5408	SCREEN AND EVALUATE POTENTIAL STATE FUNDED BRIDGE PROJECTS DIVISION 8.	200	20	S	PE 20	PE 20	PE 20	PE 20	PE 20	PE 20	PE 20	PE 20	PE 20	
MITIGATION PROJECTS															
VARIOUS CHATHAM HOKE LEE MONTGOMERY MOORE RANDOLPH RICHMOND SCOTLAND	EE-4908	ECOSYSTEM ENHANCEMENT PROGRAM FOR DIVISION 8 PROJECT MITIGATION.	8756	8756	IN PROGRESS										
VARIOUS ALAMANCE CASWELL GUILFORD ORANGE ROCKINGHAM	EE-4907	ECOSYSTEM ENHANCEMENT PROGRAM FOR DIVISION 7 PROJECT MITIGATION.	7221	7221	IN PROGRESS										

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DURHAM-CHAPEL HILL-CARRBORO METROPOLITAN PLANNING ORGANIZATION

TYPE OF WORK / ESTIMATED COST IN THOUSANDS / PROJECT BREAK

ROUTE/CITY COUNTY	ID NUMBER	LOCATION / DESCRIPTION (LENGTH)	TOTAL PROJ COST (THOU)	PRIOR YEARS COST (THOU)	FUNDING SOURCE	FISCAL YEARS 5 YEAR WORK PROGRAM FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	DEVELOPMENTAL PROGRAM FY 2017	FY 2018	FY 2019	FY 2020	UNFUNDED FUTURE YEARS
MITIGATION PROJECTS															
VARIOUS DURHAM FRANKLIN GRANVILLE PERSON VANCE WAKE WARREN	EE-4905	ECOSYSTEM ENHANCEMENT PROGRAM FOR DIVISION 5 PROJECT MITIGATION.	5167	5167											
					IN PROGRESS										
BICYCLE AND PEDESTRIAN PROJECTS															
VARIOUS ORANGE	EB-5108	SR 1112 (DAIRYLAND ROAD), SR 1111 UNION (CHAPEL GROVE ROAD) TO SR 1006 (ORANGE GROVE ROAD). ADD WIDE PAVED SHOULDERS.													
					SCHEDULED FOR FEASIBILITY STUDY										
COUNTYWIDE ORANGE	EB-3606	BICYCLE ROUTE MAPPING AND SIGNING.	50	50											
					IN PROGRESS										
DURHAM DURHAM	EB-5514	NC 751 / SR 1183-2220 / NON-SYSTEM (UNIVERSITY DRIVE), SR 1116 (GARRETT ROAD) TO SR 1158 (CORNWALLIS ROAD). ADD BICYCLE LANES AND PEDESTRIAN IMPROVEMENTS. (3.1 MILES)	1025		STPEB				C 1025						
CONGESTION MITIGATION PROJECTS															
AMERICAN TOBACCO TRAIL (ATT) CHATHAM	C-5176	AMERICAN TOBACCO TRAIL, NEW HOPE CHURCH ROAD TRAILHEAD PARK AND RIDE LOT.	1192		CMAQ		C 797								
					C		C 395								
TRIANGLE TRANSIT AUTHORITY DURHAM ORANGE WAKE	C-5173	EXPANDED EXPRESS BUS SERVICE, HOLLY SPRINGS TO DOWNTOWN RALEIGH VIA APEX AND CARY. OPERATING ASSISTANCE TO EXTEND CURRENT ROUTE BETWEEN APEX AND DOWNTOWN RALEIGH AND CONSTRUCT TWO NEW PARK AND RIDE LOTS.													
					FUNDS FLEXED TO PUBLIC TRANSPORTATION PROGRAM TD-4941B (PARK/RIDE) AND TO-5131 (OPERATIONS)										
CARRBORO ORANGE	C-5181	JONES CREEK GREENWAY, CONSTRUCT A 100 FOOT BRIDGE AND 650 FOOT PAVED TRAIL TO FILL GAP BETWEEN THE CARRBORO UPPER BOLIN TRAIL AND TWIN CREEKS GREENWAY AND IMPLEMENT PROGRAM TO SUPPORT NON-VEHICLE TRIPS TO MORRIS GROVE ELEMENTRY SCHOOL.	350		CMAQ		PE 24								
					C		PE 6								
					CMAQ			C 247							
					C			C 61							
					CMAQ				N 10						
					C				N 2						

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DURHAM-CHAPEL HILL-CARRBORO METROPOLITAN PLANNING ORGANIZATION

TYPE OF WORK / ESTIMATED COST IN THOUSANDS / PROJECT BREAK

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CONGESTION MITIGATION PROJECTS															
CHAPEL HILL ORANGE	C-5177	MLK, JR. SHARED PATHWAY, CONSTRUCT PATHWAY ALONG MLK, JR. BOULEVARD, HOMESTEAD ROAD TO PINEY MOUNTAIN ROAD.	906		CMAQ C CMAQ C		R 180 R 45	C 545 C 136							
CHAPEL HILL DURHAM ORANGE	C-5104	PURCHASE TWO (2) HYBRID ELECTRIC BUSES AND PROVIDE PORTION OF OPERATING EXPENSE FOR THREE YEARS.	2100	2100	IN PROGRESS										
CHAPEL HILL ORANGE	C-5179	NORTH ESTES DRIVE, CONSTRUCT A TEN FOOT PATHWAY, FIVE FOOT SIDEWALKS AND A FOUR FOOT BIKE LANE.	1432		CMAQ C CMAQ C		R 166 R 41	C 980 C 245							
CHARLOTTE HILLSBOROUGH MECKLENBURG ORANGE	C-5111	INSTALL TWO STATE MAINTAINED E-85 FUELING SITES IN CHARLOTTE AND HILLSBOROUGH.	250	250	IN PROGRESS										
TRIANGLE J COUNCIL OF GOVERNMENTS DURHAM ORANGE WAKE	C-4924	TRIANGLE J COUNCIL OF GOVERNMENTS (COG). DEVELOP A FLEXIBLE WORK SCHEDULE FOR EMPLOYEES AND ORGANIZATIONS IN TRIANGLE OZONE NON-ATTAINMENT AREA FOR THREE YEARS.	8201	300	CMAQ C CMAQ C		N 481 A N 423 A N 383 B N 423 B	N 482 A N 430 A N 385 B N 430 B	N 572 A N 496 A N 458 B N 496 B	N 620 A N 579 A	N 640 A N 603 A				
					A DEVELOP FLEXIBLE WORK SCHEDULES FOR EMPLOYEES IN CAPITAL AREA MPO (CAMPO) - IN PROGRESS B DEVELOP FLEXIBLE WORK SCHEDULES FOR EMPLOYEES IN DURHAM-CHAPEL HILL-CARRBORO (DCHC) - IN PROGRESS IN PROGRESS BY TRIANGLE J COUNCIL OF GOVERNMENTS										
DURHAM DURHAM	C-5178	CAMPUS WALK AVENUE, MORREENE ROAD TO LASALLE STREET AND LASALLE STREET, KANGAROO DRIVE TO ERWIN ROAD. CONSTRUCT SIDEWALKS.	336		CMAQ C		C 269 C 67								
DURHAM DURHAM	C-5175	DURHAM AREA TRANSIT AUTHORITY (DATA) OPERATING ASSISTANCE FOR NEW FIXED ROUTE.			FUNDS FLEXED TO PUBLIC TRANSPORTATION PROGRAM TO-5130B										
DURHAM DURHAM	C-4929	BICYCLE PARKING PROGRAM. INSTALL BIKE RACKS AT VARIOUS LOCATIONS.	48	48	IN PROGRESS										

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DURHAM-CHAPEL HILL-CARRBORO METROPOLITAN PLANNING ORGANIZATION

TYPE OF WORK / ESTIMATED COST IN THOUSANDS / PROJECT BREAK

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CONGESTION MITIGATION PROJECTS															
DURHAM DURHAM	C-5183	CONSTRUCT SIDEWALKS.	2226		CMAQ C CMAQ C				C 1003 B C 251 B C 778 A C 194 A						
					A CAMERON BOULEVARD, ERWIN ROAD AND DUKE UNIVERSITY ROAD B ALSTON AVENUE, CARPENTER FLETCHER ROAD TO SEDWICK ROAD										
DURHAM DURHAM	C-4702	TEN (10) - REPLACEMENT BUSES.	3000	3000											
					IN PROGRESS - FUNDS FLEXED TO FEDERAL TRANSIT ADMINISTRATION										
DURHAM DURHAM	C-5230	TRAFFIC SIGNAL CONTROLLER UPGRADE.	480	480											
					PLANNING, DESIGN, AND CONSTRUCTION BY CITY OF DURHAM - IN PROGRESS										
DURHAM DURHAM	C-4928	MORREENE ROAD, NEAL ROAD TO ERWIN ROAD. CONSTRUCT BIKE LANES AND SIDEWALKS.	2115		STPDA PE 100 C PE 25 CMAQ C 444 STPDA C 1148 C C 398										
					PLANNING, DESIGN, RIGHT OF WAY AND CONSTRUCTION BY CITY OF DURHAM - IN PROGRESS										
DURHAM DURHAM	C-5182	HOPE VALLEY ROAD, CONSTRUCT SIDEWALKS AND BIKE LANES BETWEEN MLK, JR. PARKWAY AND US 15-501 BUSINESS.	1386		CMAQ R 107 C R 27 CMAQ C 1002 C C 250										
DURHAM DURHAM	C-5103	PURCHASE TWO (2) HYBRID ELECTRIC BUSES AND PROVIDE PORTION OF OPERATING ASSISTANCE FOR TWO YEARS.	1686	1686											
					IN PROGRESS										
DURHAM DURHAM	C-5180	DURHAM AREA TRANSIT AUTHORITY (DATA), REPLACEMENT OF FIVE HYBRID CUTAWAYS (LIGHT TRANSIT VEHICLES).													
					FUNDS FLEXED TO PUBLIC TRANSPORTATION PROGRAM TO-5130B										
HILLSBOROUGH ORANGE	C-5184	RIVERWALK TRAIL, PHASE III. CONSTRUCT A PAVED OFF-ROAD TAIL ALONG ENO RIVER CONNECTING RIVER PARK, GOLD PARK AND THE OCCONEECHEE MOUNTAIN STATE NATURAL AREA.	608		CMAQ PE 40 C PE 10 CMAQ R 346 C R 86 CMAQ C 101 C C 25										

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TYPE OF WORK / ESTIMATED COST IN THOUSANDS / PROJECT BREAK

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CONGESTION MITIGATION PROJECTS															
COUNTYWIDE HILLSBOROUGH ORANGE	C-4932A	PARK AND RIDE FACILITY, INSTALL BUS SHELTERS AND BIKE RACKS.	49	49											
					UNDER CONSTRUCTION										
ENHANCEMENT PROJECTS (LOCAL PROJECTS)															
SR 1158 (CORNWALLIS ROAD) DURHAM	U-4724	SR 1158 (CORNWALLIS ROAD), SOUTH ROXBORO ROAD TO UNIVERSITY DRIVE IN DURHAM. BIKE AND PEDESTRIAN FEATURES.	2395		STPDA PE 255 C PE 64 STPDA C 1661 C C 415										
					PLANNING, DESIGN, RIGHT OF WAY AND CONSTRUCTION BY CITY OF DURHAM										
VARIOUS ORANGE	EL-5103	CARRBORO, INSTALL BUS SHELTERS AT SELECTED LOCATIONS.	76	76											
					UNDER CONSTRUCTION BY TOWN OF CARRBORO										
VARIOUS CHATHAM DURHAM ORANGE	U-4726	DCHC URBAN AREA BICYCLE AND PEDESTRIAN ALLOCATION.	10265	4522	STPDA C 2073 C 817 C 1705 C C 518 C 204 C 426										
					PLANNING, DESIGN, RIGHT OF WAY AND CONSTRUCTION BY OTHERS - IN PROGRESS										
CARRBORO ORANGE	EL-4828	MORGAN CREEK GREENWAY (WEST). SMITH LEVEL ROAD TO UNIVERSITY LAKE. CONSTRUCT GREENWAY AND CONNECTIONS.	578	110	STPDA C 374 C C 94										
					PLANNING, DESIGN, RIGHT OF WAY AND CONSTRUCTION BY TOWN OF CARRBORO - IN PROGRESS										
CHAPEL HILL ORANGE	EL-4601	MORGAN CREEK GREENWAY (EAST). US 15-501-CULBETH ROAD TO SMITH LEVEL ROAD. TEN FOOT MULTI-USE ASPHALT PATH INCLUDING ACCESS TO MERRITT PASTURE.	1290	1290											
					PLANNING, DESIGN, RIGHT OF WAY AND CONSTRUCTION BY TOWN - IN PROGRESS										
DURHAM DURHAM	EL-2921E	AMERICAN TOBACCO RAIL TRAIL. NC 54 TO CHATHAM COUNTY LINE. CONSTRUCT A MULTI-PURPOSE TRAIL.	7805	7805											
					PARTS A-D COMPLETE; PART E UNDER CONSTRUCTION BY CITY OF DURHAM										
HAZARD ELIMINATION PROJECTS															
NC 55 DURHAM	W-5110	NC 55 (ALSTON AVENUE) AT LAWSON STREET IN DURHAM. CONSTRUCT LEFT TURN LANES ON NC 55. (0.2 MILE)	975	500	HES C 475										
					RIGHT OF WAY IN PROGRESS										

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DURHAM-CHAPEL HILL-CARRBORO METROPOLITAN PLANNING ORGANIZATION

TYPE OF WORK / ESTIMATED COST IN THOUSANDS / PROJECT BREAK

ROUTE/CITY COUNTY	ID NUMBER	LOCATION / DESCRIPTION (LENGTH)	TOTAL PROJ COST (THOU)	PRIOR YEARS COST (THOU)	FUNDING SOURCE	FISCAL YEARS 5 YEAR WORK PROGRAM FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	DEVELOPMENTAL PROGRAM FY 2017	FY 2018	FY 2019	FY 2020	UNFUNDED FUTURE YEARS
HAZARD ELIMINATION PROJECTS															
NC 86 ORANGE	W-5318	NC 86, NC 57 TO CASWELL COUNTY LINE. GEOMETRIC IMPROVEMENTS, PAVED SHOULDERS AND RUMBLE STRIPS. (12.2 MILES)	4654		HES		R 227								
					HES				C 4427						
NC 57 NC 157 ORANGE	SF-4907C	WIDEN NC 57 FOR LEFT TURN LANES AND INSTALL A TRAFFIC SIGNAL AT THE INTERSECTION OF NC 157.	654	54	HES	R 50									
					HES	C 550									
					IN PROGRESS										
VARIOUS CHATHAM HOKE LEE MONTGOMERY MOORE RANDOLPH RICHMOND SCOTLAND	W-5208	DIVISION 8 RUMBLE STRIPS, GUARDRAIL, SAFETY AND LIGHTING IMPROVEMENTS AT SELECTED LOCATIONS.	300	150	HES	R 50									
					HES	C 100									
					DIVISION PURCHASE ORDER CONTRACT (DPOC) - IN PROGRESS										
VARIOUS ALAMANCE CASWELL GUILFORD ORANGE ROCKINGHAM	W-5207	DIVISION 7 RUMBLE STRIPS, GUARDRAIL, SAFETY AND LIGHTING IMPROVEMENTS AT SELECTED LOCATIONS.	650	500	HES	R 50									
					HES	C 100									
					DIVISION PURCHASE ORDER CONTRACT (DPOC) - IN PROGRESS										
VARIOUS DURHAM FRANKLIN GRANVILLE PERSON VANCE WAKE WARREN	W-5205	DIVISION 5 RUMBLE STRIPS, GUARDRAIL, SAFETY AND LIGHTING IMPROVEMENTS AT SELECTED LOCATIONS.	330	180	HES	R 50									
					HES	C 100									
					DIVISION PURCHASE ORDER CONTRACT (DPOC) - IN PROGRESS										

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TYPE OF WORK / ESTIMATED COST IN THOUSANDS / PROJECT BREAK

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PASSENGER RAIL PROJECTS															
VARIOUS ALAMANCE CABARRUS DAVIDSON DURHAM GUILFORD MECKLENBURG ROWAN WAKE	P-4405	PRIVATE CROSSING SAFETY INITIATIVE TO CLOSE OR ENHANCE PROTECTION AT RAILROAD CROSSINGS BETWEEN RALEIGH AND CHARLOTTE.	24440	4923	STHSR O STHSR STHSR O	PE 934 PE 500	PE 700 PE 200 R 2500	PE 100 R 750 C 3000 C 881	PE 64 R 712 C 3000 C 881	R 474 C 3000 C 880	C 941				
STRATEGIC HIGHWAY CORRIDOR					**IN PROGRESS**										
AMTRAK ALAMANCE CABARRUS DURHAM EDGECOMBE GUILFORD JOHNSTON MECKLENBURG NASH ROWAN WAKE WILSON	P-2908	CAPITAL AND OPERATIONS COST OF TRAIN 79/80 BETWEEN CHARLOTTE AND ROCKY MOUNT.	47795	38195	S(5)	O 2400	O 2400	O 2400	O 2400						
STRATEGIC HIGHWAY CORRIDOR					**IN PROGRESS**										
DURHAM DURHAM	EL-4999	BICYCLE AND PEDESTRIAN TRAILS IN DURHAM AND DURHAM COUNTY. ACQUISITION OF RAIL CORRIDORS AND CONSTRUCTION.	2504	2504											
					IN PROGRESS - RAIL DIVISION PROJECT										

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DURHAM-CHAPEL HILL-CARRBORO METROPOLITAN PLANNING ORGANIZATION

TYPE OF WORK / ESTIMATED COST IN THOUSANDS / PROJECT BREAK

FISCAL YEARS

ROUTE/CITY / COUNTY	ID NUMBER	LOCATION / DESCRIPTION (LENGTH)	TOTAL PROJ COST (THOU)	PRIOR YEARS COST (THOU)	FUNDING SOURCE	5 YEAR WORK PROGRAM FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	DEVELOPMENTAL PROGRAM FY 2017	FY 2018	FY 2019	FY 2020	UNFUNDED FUTURE YEARS
PASSENGER RAIL PROJECTS															
PIEDMONT CORRIDOR ALAMANCE CABARRUS DURHAM GUILFORD MECKLENBURG ROWAN WAKE	P-2918	TRAIN 73/74 OPERATIONS BETWEEN CHARLOTTE AND RALEIGH, EQUIPMENT AND CAPITAL YARD MAINTENANCE FACILITY.	214284	122589	S(5)	O 2600	O 2600	O 2600	O 2600	O 2600	O 2600	O 2600	O 2600	O 2600	
					T2001	O 4000	O 4000	O 4000	O 4000	O 4000	O 4000	O 4000	O 4000	O 4000	
					STHSR	C 1313 A									
					STHSR	C 1205 E									
					STHSR	PE 1259 F	PE 855 F								
					STHSR		C 8000 F	C 8327 F							
					STHSR	C 5780 G	C 2890 G								
					STHSR	C 1238 H									
					STHSR	PE 100 I									
					STHSR	C 664 I	C 664 I								

A EQUIPMENT REBUILD - 2 F59PHI LOCOMOTIVES - IN PROGRESS
B PURCHASE 2 USED LOCOMOTIVES - ACQUIRED
C EQUIPMENT REHAB - 3 LOCOMOTIVES - IN PROGRESS
D EQUIPMENT REHAB - 3 PASSENGER CARS - COMPLETE
E PASSENGER TRAIN SECURITY SYSTEM, CCTVDATA NETWORK AND GENERATORS - IN PROGRESS
F CRISP CHARLOTTE MAINTENANCE FACILITY TRACK EXTENSION AND SHOP BUILDING - IN PROGRESS
G EQUIPMENT - PURCHASE 4 USED PASSENGER CARS AND REHAB 7 - IN PROGRESS
H CAPITAL YARD PHASE 1 IMPROVEMENTS - EXTEND TRACKS 1 AND 2, MAJOR WORK TRACK 3 - IN PROGRESS
I EQUIP 9 STATIONS AND PLATFORMS WITH ADA/FRA PIDS - IN PROGRESS

STRATEGIC HIGHWAY CORRIDOR IN PROGRESS

VARIOUS PIEDMONT CORRIDOR DURHAM WAKE	U-4716	SR 1978 (HOPSON ROAD), SR 1980 (CHURCH STREET), AND NORFOLK SOUTHERN RAILROAD-NORTH CAROLINA RAILROAD IN DURHAM AND MORRISVILLE, SOUTH OF I-40 TO NORTH OF MCCRIMMON PARKWAY. CONSTRUCT A GRADE SEPARATION AT HOPSON ROAD, EXTEND CHURCH STREET TO HOPSON ROAD, CLOSE CHURCH STREET CROSSING 734 748M OF THE NORFOLK SOUTHERN-NORTH CAROLINA RAILROAD, CONSTRUCT SECOND TRACK, AND WIDEN HOPSON ROAD FROM EAST OF SR 1999 (DAVIS DRIVE) TO NC 54.	27174	1478	STHSR	PE 353 A									
					STHSR	R 146 A									
					STHSR	C 930 A	C 5000 A	C 2000 A							
					O	C 586 A	C 3000 A	C 1000 A							
					STHSR	PE 161 C									
					STHSR	C 1000 C	C 5000 C	C 2234 C							
					O										R 1126 D
					O										C 3160 D

A CONSTRUCT RAILROAD GRADE SEPARATION AT SR 1978 (HOPSON ROAD) AND SHIFT RAIL LINE - INCLUDES U-4716B
B REALIGN SR 1980 (CHURCH STREET) AND CLOSE CROSSING 734 748M OF THE NORFOLK SOUTHERN-NORTH CAROLINA RAILROAD - INCLUDED IN U-4716A
C CLEGG TO NELSON. CONSTRUCT PASSING SIDING
D PLA SR 1978 (HOPSON ROAD), EAST OF SR 1999 (DAVIS DRIVE) TO NC 54, WIDEN TO MULTILANES

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PUBLIC TRANSPORTATION PROGRAM (URBAN)

TYPE OF WORK / ESTIMATED COST IN THOUSANDS / PROJECT BREAKS

FISCAL YEARS

COUNTY	TRANSIT PARTNERS and PROVIDERS	ID NUMBER	LOCATION / DESCRIPTION	TOTAL PROJ COST (THOU)	PRIOR YEARS COST (THOU)	FUNDS	STATE TRANSPORTATION IMPROVEMENT PROGRAM: 5 YEAR WORK PROGRAM FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	DEVELOPMENTAL PROGRAM FY 2017	FY 2018	FY 2019	FY 2020	UNFUNDED FUTURE YEARS
ORANGE	CHAPEL HILL TRANSIT	C-5104	Expansion Bus - plus 3 yrs operating	238	238	CMAQ US										
						CMAQ L										
						CMAQ US										
						CMAQ L										
ORANGE	CHAPEL HILL TRANSIT	TA-4726	Replacement Bus - articulated	32419	17044	FBUS US										
						FBUS L										
						FUZ US	C 2608			C 1939	C 1939	C 1939	C 1939	C 1939		
						FUZ STAT	C 326			C 242	C 242	C 242	C 242	C 242		
						FUZ L	C 326			C 242	C 242	C 242	C 242	C 242		
						FUZ US										
						FUZ STAT										
						FUZ L										
						FUZ US										
						FUZ STAT										
						FUZ L										
ORANGE	CHAPEL HILL TRANSIT	TA-4726A	Replacement Bus	886		FED TBD			C 886							
ORANGE	CHAPEL HILL TRANSIT	TA-4748	Replacement - paratransit vehicle	3633	703	FUZ US		C 923	C 634	C 157	C 157	C 157	C 157	C 157		
						FUZ STAT		C 115	C 115	C 20	C 20	C 20	C 20	C 20		
						FUZ L		C 79	C 79	C 20	C 20	C 20	C 20	C 20		
						FUZ US										
						FUZ STAT										
						FUZ L										
ORANGE	CHAPEL HILL TRANSIT	TA-4979	Replacement Van	1685	893	FUZ US		C 634								
						FUZ STAT		C 79								
						FUZ L		C 79								
						FUZ US										
						FUZ STAT										
						FUZ L										
						FUZ US										
						FUZ STAT										
						FUZ L										
ORANGE	CHAPEL HILL TRANSIT	TA-4979A	Replacement Van - Safe-Ride	217		FED TBD			C 31	C 31	C 31	C 31	C 31	C 31	C 31	
ORANGE	CHAPEL HILL TRANSIT	TA-4981	Replacement - Sedans/Wagons/4X4	873		FED TBD		C 430		C 443						
ORANGE	CHAPEL HILL TRANSIT	TA-4995	Expansion Bus	3600		FED TBD			C 3600							
ORANGE	CHAPEL HILL TRANSIT	TA-6512	Expansion Bus	752	752	JARC US										
						JARC STAT										
						JARC L										
						JARC US										
						JARC STAT										
						JARC L										

ALL SCHEDULES SUBJECT TO AVAILABILITY OF FUNDS

PUBLIC TRANSPORTATION PROGRAM (URBAN)

TYPE OF WORK / ESTIMATED COST IN THOUSANDS / PROJECT BREAKS

FISCAL YEARS

COUNTY	TRANSIT PARTNERS and PROVIDERS	ID NUMBER	LOCATION / DESCRIPTION	TOTAL PROJ COST (THOU)	PRIOR YEARS COST (THOU)	FUNDS	STATE TRANSPORTATION IMPROVEMENT PROGRAM									UNFUNDED
							5 YEAR WORK PROGRAM					DEVELOPMENTAL PROGRAM				
							FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FUTURE YEARS
ORANGE	CHAPEL HILL TRANSIT	TA-6514	Expansion Van	20	20	FEPD US										
						FEPD STAT										
						FEPD L										
ORANGE	CHAPEL HILL TRANSIT	TD-4710	Facility - Park & Ride	2000		FED TBD		C 2000								
ORANGE	CHAPEL HILL TRANSIT	TD-4710B	Facility - Park & Ride	878	878	FUZ US										
						FUZ STAT										
						FUZ L										
ORANGE	CHAPEL HILL TRANSIT	TD-5204	Facility - Intermodal Center - Hillsborough	1000		FED TBD					C 1000					
ORANGE	CHAPEL HILL TRANSIT	TE-5202	Fixed Guideway - Light Rail - carolina Noth to Carrboro - constuction	6200		FED TBD						C 6200				
ORANGE	CHAPEL HILL TRANSIT	TG-4731A	Preventive maintenance	255	255	STPDA US										
						STPDA L										
ORANGE	CHAPEL HILL TRANSIT	TG-4731B	Preventive maintenance	14211	2353	FUZ US	Oc 984	Oc 1013	Oc 1043	Oc 1074	Oc 1074	Oc 1074	Oc 1074	Oc 1074	Oc 1074	
						FUZ L	Oc 246	Oc 253	Oc 261	Oc 269	Oc 269	Oc 269	Oc 269	Oc 269	Oc 269	
						FUZ US										
						FUZ L										
						FUZ US										
						FUZ L										
ORANGE	CHAPEL HILL TRANSIT	TG-4732A	Routine Capital - Bus stop shelters, benches, shop equip., spare parts, engines, farebox, service vehicles, etc	1220	610	FUZ US	C 432	C 56								
						FUZ L	C 108	C 14								
						FUZ US										
						FUZ L										
						FUZ US										
						FUZ L										
						FUZST US										
ORANGE	CHAPEL HILL TRANSIT	TG-4732B	Routine Capital - service vehicle	496	300	FUZ US				C 157						
						FUZ L				C 39						
						FUZ US										
						FUZ L										
ORANGE	CHAPEL HILL TRANSIT	TM-5132	Operating Assistance	216	216	JARC US										
						JARC L										
						JARC US										
						JARC L										
ORANGE	CHAPEL HILL TRANSIT	TO-5133	Operating Assistance	39371	7241	SMAP STAT	O 3570	O 3570	O 3570	O 3570	O 3570	O 3570	O 3570	O 3570	O 3570	
						SMAP STAT										
						SMAP STAT										

ALL SCHEDULES SUBJECT TO AVAILABILITY OF FUNDS

PUBLIC TRANSPORTATION PROGRAM (URBAN)

TYPE OF WORK / ESTIMATED COST IN THOUSANDS / PROJECT BREAKS

FISCAL YEARS

COUNTY	TRANSIT PARTNERS and PROVIDERS	ID NUMBER	LOCATION / DESCRIPTION	TOTAL PROJ COST (THOU)	PRIOR YEARS COST (THOU)	FUNDS	STATE TRANSPORTATION IMPROVEMENT PROGRAM: 5 YEAR WORK PROGRAM FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	DEVELOPMENTAL PROGRAM FY 2017	FY 2018	FY 2019	FY 2020	UNFUNDED FUTURE YEARS
ORANGE	CHAPEL HILL TRANSIT	TQ-6501	Mobility Management - Elderly and Disabled persons - includes vouchers	364	264	FEPD US	Oc 80									
						FEPD STAT	Oc 10									
						FEPD L	Oc 10									
						FEPD US										
						FEPD STAT										
						FEPD L										
ORANGE	CHAPEL HILL TRANSIT	TQ-6506	Operating Assistance - Elderly and Disabled persons	256	256	FEPD US										
						FEPD L										
ORANGE	CHAPEL HILL TRANSIT	TS-5106	Safety & Security - Min. 1% set aside	421	166	FUZ US	C 40	C 26	C 17	C 33	C 32	C 32	C 32	C 32	C 11	
						FUZ US										
						FUZ US										
ORANGE	CHAPEL HILL TRANSIT	TT-5109	Technology - veh. tracking, passenger info, data communications, traffic signal prioirty	1331	1331	STPDA US										
						STPDA L										
ORANGE	CHAPEL HILL TRANSIT	TT-5109B	Technology - maintenance systems	100	100	UTCH STAT										
ORANGE	CHAPEL HILL TRANSIT	TT-5109C	Technology - Real Time Information System and website	64		UTCH STAT	C 58									
						UTCH L	C 6									

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FISCAL YEARS

COUNTY	TRANSIT PARTNERS and PROVIDERS	ID NUMBER	LOCATION / DESCRIPTION	TOTAL PROJ COST (THOU)	PRIOR YEARS COST (THOU)	FUNDS	STATE TRANSPORTATION IMPROVEMENT PROGRAM									UNFUNDED
							5 YEAR WORK PROGRAM					DEVELOPMENTAL PROGRAM				
							FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FUTURE YEARS
DURHAM	DURHAM AREA TRANSIT AUTHORITY / DATA	TA-4755	Expansion Bus	12800		FED TBD			C 4800				C 4000		C 4000	
DURHAM	DURHAM AREA TRANSIT AUTHORITY / DATA	TA-4923	Replacement Bus	28600		FED TBD				C 9100	C 9100			C 5200	C 5200	
DURHAM	DURHAM AREA TRANSIT AUTHORITY / DATA	TA-5019A	Replacement - paratransit vehicle	112		FED TBD	C 112									
DURHAM	DURHAM AREA TRANSIT AUTHORITY / DATA	TA-5019C	Replacement - Light Transit Vehicles	729		CMAQ US		C 583								
						CMAQ STAT		C 73								
						CMAQ L		C 73								
DURHAM	DURHAM AREA TRANSIT AUTHORITY / DATA	TG-4738	Routine Capital - Bus stop shelters, benches, shop equip., spare parts, engines, service vehicles, etc.	7023	2114	FBUS US										
						FBUS L										
						FUZ US	C 125	C 475	C 475	C 475	C 475	C 475	C 475	C 475	C 475	
						FUZ L	C 32	C 119	C 119	C 119	C 119	C 119	C 119	C 119	C 119	
						FUZ US										
						FUZ L										
						FUZ US										
						FUZ L										
DURHAM	DURHAM AREA TRANSIT AUTHORITY / DATA	TG-4738A	Preventive maintenance	40816	7338	FUZ US	Oc 2782	Oc 3000	Oc 3000	Oc 3000	Oc 3000	Oc 3000	Oc 3000	Oc 3000	Oc 3000	
						FUZ L	Oc 696	Oc 750	Oc 750	Oc 750	Oc 750	Oc 750	Oc 750	Oc 750	Oc 750	
						FUZ US										
						FUZ L										
						FUZ US										
						FUZ L										
						FUZST US										
DURHAM ORANGE	DURHAM AREA TRANSIT AUTHORITY / DATA	TN-5102	Operating Assistance - New Freedom - urban	1386	252	FNF US	O 63	O 63	O 63	O 63	O 63	O 63	O 63	O 63	O 63	
						FNF L	O 63	O 63	O 63	O 63	O 63	O 63	O 63	O 63	O 63	
						FNF US										
						FNF L										
						FNF US										
						FNF L										
DURHAM	DURHAM AREA TRANSIT AUTHORITY / DATA	TO-5130	Operating Assistance	30766	5428	SMAP STAT	O 2890	O 2806	O 2806	O 2806	O 2806	O 2806	O 2806	O 2806	O 2806	
						SMAP STAT										
						SMAP STAT										
DURHAM	DURHAM AREA TRANSIT AUTHORITY / DATA	TO-5130B	Operating Assistance - new route	2438		CMAQ US		O 951	O 999							
						CMAQ L		O 238	O 250							

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PUBLIC TRANSPORTATION PROGRAM (URBAN)

TYPE OF WORK / ESTIMATED COST IN THOUSANDS / PROJECT BREAKS

FISCAL YEARS

COUNTY	TRANSIT PARTNERS and PROVIDERS	ID NUMBER	LOCATION / DESCRIPTION	TOTAL PROJ COST (THOU)	PRIOR YEARS COST (THOU)	FUNDS	STATE TRANSPORTATION IMPROVEMENT PROGRAM: 5 YEAR WORK PROGRAM FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	DEVELOPMENTAL PROGRAM FY 2017	FY 2018	FY 2019	FY 2020	UNFUNDED FUTURE YEARS
DURHAM	DURHAM AREA TRANSIT AUTHORITY / DATA	TP-5108	Planning Assistance - 5303	1540	280	FMPL US	C 112	C 112	C 112	C 112	C 112	C 112	C 112	C 112	C 112	
						FMPL STAT	C 14	C 14	C 14	C 14	C 14	C 14	C 14	C 14	C 14	
						FMPL L	C 14	C 14	C 14	C 14	C 14	C 14	C 14	C 14	C 14	
						FMPL US										
						FMPL STAT										
						FMPL L										
						FMPL US										
						FMPL STAT										
						FMPL L										
DURHAM	DURHAM AREA TRANSIT AUTHORITY / DATA	TP-5109	Planning Assistance - 5307	4958	480	FUZ US	C 510	C 384	C 384	C 384	C 384	C 384	C 384	C 384	C 384	
						FUZ STAT	C 64	C 48	C 48	C 48	C 48	C 48	C 48	C 48	C 48	
						FUZ L	C 64	C 48	C 48	C 48	C 48	C 48	C 48	C 48	C 48	
						FUZ US										
						FUZ STAT										
						FUZ L										
DURHAM	DURHAM AREA TRANSIT AUTHORITY / DATA	TS-5108	Safety & Security - Min. 1% set aside	410	64	FUZ US	C 34	C 39	C 39	C 39	C 39	C 39	C 39	C 39	C 39	
						FUZ US										
						FUZ US										
DURHAM	DURHAM AREA TRANSIT AUTHORITY / DATA	TT-4911	Technology - veh. tracking, passenger info, data communications, traffic signal priority	252	252	UTCH STAT										

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TYPE OF WORK / ESTIMATED COST IN THOUSANDS / PROJECT BREAKS

FISCAL YEARS

COUNTY	TRANSIT PARTNERS and PROVIDERS	ID NUMBER	LOCATION / DESCRIPTION	TOTAL PROJ COST (THOU)	PRIOR YEARS COST (THOU)	FUNDS	STATE TRANSPORTATION IMPROVEMENT PROGRAM									UNFUNDED
							5 YEAR WORK PROGRAM					DEVELOPMENTAL PROGRAM				
							FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FUTURE YEARS
WAKE	TRIANGLE TRANSIT	TA-4818	Replacement Bus - over the road coaches - CAMPO funded	7485	7485	STPDA US										
						STPDA L										
						STPDA L										
WAKE	TRIANGLE TRANSIT	TA-4818A	Expansion Bus	5486	4074	FBUS US										
						FBUS L										
						FUZ US	C 360					C 770				
						FUZ STAT	C 45					C 96				
						FUZ L	C 45					C 96				
						FUZ US										
						FUZ STAT										
						FUZ L										
						FUZ US										
						FUZ STAT										
						FUZ L										
DURHAM ORANGE	TRIANGLE TRANSIT	TA-4818B	Replacement Bus	4567	3155	FUZ US	C 360					C 770				
						FUZ STAT	C 45					C 96				
						FUZ L	C 45					C 96				
						FUZ US										
						FUZ STAT										
						FUZ L										
						FUZ US										
						FUZ STAT										
						FUZ L										
WAKE	TRIANGLE TRANSIT	TA-4994	Replacement/Expansion - paratransit vehicle	644	644	FBUS US										
						FBUS L										
						STPDA US										
						STPDA STAT										
						STPDA L										
DURHAM ORANGE	TRIANGLE TRANSIT	TA-4994B	Replacement Van - vanpool	468	231	FBUS US										
						FBUS L										
						FED TBD	C 237									
WAKE	TRIANGLE TRANSIT	TA-5107A	Replacement Van - vanpool	605		FED TBD	C 237		C 258		C 110					
DURHAM ORANGE	TRIANGLE TRANSIT	TA-5108	Replacement Van - vanpool	1096		FED TBD	C 728		C 258		C 110					

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FISCAL YEARS

COUNTY	TRANSIT PARTNERS and PROVIDERS	ID NUMBER	LOCATION / DESCRIPTION	TOTAL PROJ COST (THOU)	PRIOR YEARS COST (THOU)	FUNDS	STATE TRANSPORTATION IMPROVEMENT PROGRAM: 5 YEAR WORK PROGRAM FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	DEVELOPMENTAL PROGRAM FY 2017	FY 2018	FY 2019	FY 2020	UNFUNDED FUTURE YEARS
WAKE	TRIANGLE TRANSIT	TA-5123A	Expansion Bus	14407	1380	FUZ US	C 9200	C 500	C 540	C 540	C 1351					
						FUZ STAT	C 115	C 62	C 68	C 68	C 135					
						FUZ L	C 115	C 62	C 68	C 68	C 135					
						FUZ US										
DURHAM ORANGE	TRIANGLE TRANSIT	TA-5123B	Expansion Bus	14683	1656	FUZ US	C 9200	C 500	C 540	C 540	C 1351					
						FUZ STAT	C 115	C 62	C 68	C 68	C 135					
						FUZ L	C 115	C 62	C 68	C 68	C 135					
						FUZ US										
						FUZ STAT										
						FUZ L										
DURHAM ORANGE WAKE	TRIANGLE TRANSIT	TA-5123C	Expansion Bus	5098		FED TBD		C 728	C 728	C 607	C 607	C 607	C 607	C 607	C 607	
WAKE	TRIANGLE TRANSIT	TA-6511	Expansion Bus - non urban servcie	780	780	JARC US										
						JARC STAT										
						JARC L										
WAKE	TRIANGLE TRANSIT	TD-4941	Facility - Park & Ride - CAMPO funded	750	250	FED TBD		C 500								
						STPDA US										
						STPDA STAT										
						STPDA L										
WAKE	TRIANGLE TRANSIT	TD-4941B	Facility - Park & Ride - Holly Springs	2773		CMAQ US		C 2219								
						CMAQ STAT		C 277								
						CMAQ L		C 277								
DURHAM ORANGE WAKE	TRIANGLE TRANSIT	TD-4944	Facility - I-40 Bus Bypass Shoulder Project.	80		FED TBD		C 80								
WAKE	TRIANGLE TRANSIT	TD-5258	Facility - Maintenance and Ops Center - Design, Engineer and Construct	266		STPDA US	C 212									
						STPDA STAT	C 27									
						STPDA L	C 27									
WAKE	TRIANGLE TRANSIT	TD-5259	Facility - Maintenance Garage - Rehab - Paratransit CAMPO funded	50		STPDA US	C 40									
						STPDA STAT	C 5									
						STPDA L	C 5									
DURHAM ORANGE WAKE	TRIANGLE TRANSIT	TE-4903	Fixed Guideway - Alternatives Analysis for Major Transit Corridor Projects	6912	6912	L L										
						L L										
DURHAM ORANGE WAKE	TRIANGLE TRANSIT	TE-4903A	Fixed Guideway - Light Rail Service-Raleigh-Rtp-Durham Design Phase 1	2000		FED TBD		C 2000								

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FISCAL YEARS

COUNTY	TRANSIT PARTNERS and PROVIDERS	ID NUMBER	LOCATION / DESCRIPTION	TOTAL PROJ COST (THOU)	PRIOR YEARS COST (THOU)	FUNDS	STATE TRANSPORTATION IMPROVEMENT PROGRAM										UNFUNDED
							5 YEAR WORK PROGRAM					DEVELOPMENTAL PROGRAM					
							FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020		FUTURE YEARS
WAKE	TRIANGLE TRANSIT	TG-4821A	Routine Capital - Fuel system upgrade and ADA transit amenities upgrade	150		STPDA US	C 120										
						STPDA L	C 30										
DURHAM ORANGE	TRIANGLE TRANSIT	TG-4821B	Routine Capital - Bus stop shelters, benches, shop equip., spare parts, engines, farebox, service vehicles, etc	7428	2028	FUZ US	C 800	C 800	C 800	C 200	C 200	C 200	C 200	C 200	C 200		
						FUZ L	C 200	C 200	C 200	C 200	C 200	C 200	C 200	C 200	C 200		
						FUZ US											
						FUZ L											
						FUZ US											
						FUZ L											
DURHAM ORANGE	TRIANGLE TRANSIT	TG-4821C	Routine Capital - Bus stop shelters, benches, shop equip., spare parts, engines, service vehicles, etc.	405	405	STPDA US											
						STPDA L											
						STPDA US											
						STPDA L											
WAKE	TRIANGLE TRANSIT	TM-5123A	Operating Assistance - Job Access / Reverse Commute - urban	696	696	JARC US											
						JARC L											
						JARC US											
						JARC L											
DURHAM ORANGE	TRIANGLE TRANSIT	TM-5123B	Operating Assistance - Job Access / Reverse Commute - urban	696	696	JARC US											
						JARC L											
						JARC US											
						JARC L											
WAKE	TRIANGLE TRANSIT	TM-6109	Operating Assistance - Job Access / Reverse Commute - non-urban servcie	404	404	JARC US											
						JARC L											
						JARC US											
						JARC L											
WAKE	TRIANGLE TRANSIT	TN-5129A	Operating Assistance - New Freedom - urban	312	312	FNF US											
						FNF L											
						FNF US											
						FNF L											
DURHAM ORANGE	TRIANGLE TRANSIT	TN-5129B	Operating Assistance - New Freedom - urban	312	312	FNF US											
						FNF L											
						FNF US											
						FNF L											
WAKE	TRIANGLE TRANSIT	TN-6104A	Operating Assistance - New Freedom - non-urban	156	156	FNF US											
						FNF L											
DURHAM ORANGE	TRIANGLE TRANSIT	TN-6104B	Operating Assistance - New Freedom - non-urban	156	156	FNF US											
						FNF L											
WAKE	TRIANGLE TRANSIT	TO-5131	Operating Assistance	21763	4195	SMAP STAT	O 1952	O 1952	O 1952	O 1952	O 1952	O 1952	O 1952	O 1952	O 1952		
						SMAP STAT											
						SMAP STAT											

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FISCAL YEARS

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WAKE	TRIANGLE TRANSIT	TO-5131B	Operating Assistance - express bus Holly Springs, Apex and Cary	564		CMAQ US		O 143	O 150	O 158						
						CMAQ L		O 36	O 38	O 39						
DURHAM ORANGE	TRIANGLE TRANSIT	TQ-6504	Mobility Management - Elderly and Disabled persons	172	86	FEPD US	Oc 68									
						FEPD STAT	Oc 9									
						FEPD L	Oc 9									
						FEPD US										
						FEPD STAT										
						FEPD L										
			OLD NUMBER WAS TQ-5105													
WAKE	TRIANGLE TRANSIT	TS-5118	Safety & Security - Min. 1% set aside	282	80	FUZ US	C 102	C 21	C 10	C 21	C 20	C 7	C 7	C 7	C 7	
						FUZ US										
						FUZ US										
DURHAM ORANGE	TRIANGLE TRANSIT	TS-5119	Safety & Security - Min. 1% set aside	282	80	FUZ US	C 102	C 21	C 10	C 21	C 20	C 7	C 7	C 7	C 7	
						FUZ US										
						FUZ US										
DURHAM ORANGE	TRIANGLE TRANSIT	TS-5133	Safety & Security - surveillance cameras for paratransit vehicles	40		UTCH STAT	C 36									
						UTCH L	C 4									
DURHAM ORANGE	TRIANGLE TRANSIT	TT-5213	Technology - Regional Fare System Upgrade	2500		FED TBD				C 2500						
DURHAM ORANGE	TRIANGLE TRANSIT	TT-5214	Technology - Advanced Public Info Communication System	1487	487	FED TBD					C 1000					
						UTCH STAT										
DURHAM ORANGE	TRIANGLE TRANSIT	TT-5217	Technology - Ridesharing Matching with Vanpool Mgmt Module	70		UTCH STAT	C 63									
						UTCH L	C 7									
DURHAM ORANGE	TRIANGLE TRANSIT	TT-5218	Technology - Regional Real Time Upgrade to 511	60		UTCH STAT	C 54									
						UTCH L	C 6									

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PUBLIC TRANSPORTATION PROGRAM (RURAL)

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FISCAL YEARS

COUNTY	TRANSIT PARTNERS and PROVIDERS	ID NUMBER	LOCATION / DESCRIPTION	TOTAL PROJ COST (THOU)	PRIOR YEARS COST (THOU)	FUNDS	STATE TRANSPORTATION IMPROVEMENT PROGRAM									
							5 YEAR WORK PROGRAM					*DEVELOPMENTAL PROGRAM*				*UNFUNDED*
							FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FUTURE YEARS
CHATHAM	Chatham Transit Network	TA-6177	Replacement Van	165	123	FNU US	C 34									
						FNU STAT	C 4									
						FNU L	C 4									
						FNU US										
						FNU STAT										
						FNU L										
CHATHAM	Chatham Transit Network	TA-6239	Expansion - Light Transit Vehicle	226	148	FEPD US	C 62									
						FEPD STAT	C 8									
						FEPD L	C 8									
						JARC US										
						JARC STAT										
						JARC L										
CHATHAM	Chatham Transit Network	TA-6259	Replacement - Light Transit Vehicle	141		FEPD US	C 62									
						FEPD STAT	C 8									
						FEPD L	C 8									
						FNU US	C 63									

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FISCAL YEARS

COUNTY	TRANSIT PARTNERS and PROVIDERS	ID NUMBER	LOCATION / DESCRIPTION	TOTAL PROJ COST (THOU)	PRIOR YEARS COST (THOU)	FUNDS	STATE TRANSPORTATION IMPROVEMENT PROGRAM: 5 YEAR WORK PROGRAM FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	DEVELOPMENTAL PROGRAM FY 2017	FY 2018	FY 2019	FY 2020	UNFUNDED FUTURE YEARS
CHATHAM	Chatham Transit Network	TG-6109	Routine Capital	22	17	FNU US	C 3									
						FNU STAT	C 1									
						FNU L	C 1									
						FNU US										
						FNU STAT										
						FNU L										
CHATHAM	Chatham Transit Network	TG-6109A	Routine Capital - spare engines	150		CMAQ US		C 120								
						CMAQ L		C 30								
						pass thru from Chapel Hill Transit										
CHATHAM	Chatham Transit Network	TJ-6114	Operating Assistance - employment transportation	187	34	EMP STAT	O 17	O 17	O 17	O 17	O 17	O 17	O 17	O 17	O 17	
						EMP STAT										
						EMP STAT										
CHATHAM	Chatham Transit Network	TK-6117	Administration	729	472	FNU US	O 187									
						FNU L	O 70									
						FNU US										
						FNU STAT										
						FNU L										
						FNU US										
						FNU STAT										
						FNU L										
CHATHAM	Chatham Transit Network	TL-6113	Operating Assistance - Elderly and Disabled persons	891	162	EDTAP STAT	O 81	O 81	O 81	O 81	O 81	O 81	O 81	O 81	O 81	
						EDTAP STAT										
						EDTAP STAT										
CHATHAM	Chatham Transit Network	TM-6102	Mobility Management - ARRA funded	84	84	ARRA US										
						ARRA US										
CHATHAM	Chatham Transit Network	TM-6103	Operating Assistance - Job Access / Reverse Commute - non-urban	136	136	JARC US										
						JARC L										
CHATHAM	Chatham Transit Network	TQ-6111	Mobility Management - Elderly and Disabled persons health rides - Council on Aging	535	421	FEPD US	Oc 90									
						FEPD STAT	Oc 12									
						FEPD L	Oc 12									
						FEPD US										
						FEPD STAT										
						FEPD L										
						FEPD US										
						FEPD STAT										
						FEPD L										
CHATHAM	Chatham Transit Network	TQ-6135	Operating - Elderly and Disabled persons	184		FEPD US	O 92									
						FEPD L	O 92									
CHATHAM	Chatham Transit Network	TR-6153	Operating Assistance - general public in rural areas	1177	214	RGP STAT	O 107	O 107	O 107	O 107	O 107	O 107	O 107	O 107	O 107	
						RGP STAT										
						RGP STAT										

ALL SCHEDULES SUBJECT TO AVAILABILITY OF FUNDS

PUBLIC TRANSPORTATION PROGRAM (RURAL)

TYPE OF WORK / ESTIMATED COST IN THOUSANDS / PROJECT BREAKS

FISCAL YEARS

COUNTY	TRANSIT PARTNERS and PROVIDERS	ID NUMBER	LOCATION / DESCRIPTION	TOTAL PROJ COST (THOU)	PRIOR YEARS COST (THOU)	FUNDS	STATE TRANSPORTATION IMPROVEMENT PROGRAM									
							5 YEAR WORK PROGRAM					*DEVELOPMENTAL PROGRAM*				*UNFUNDED*
							FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FUTURE YEARS
DURHAM	Durham County Access	TA-6187	Replacement Van	82	82	FNU US										
						FNU STAT										
						FNU L										

ALL SCHEDULES SUBJECT TO AVAILABILITY OF FUNDS

PUBLIC TRANSPORTATION PROGRAM (RURAL)

TYPE OF WORK / ESTIMATED COST IN THOUSANDS / PROJECT BREAKS

FISCAL YEARS

COUNTY	TRANSIT PARTNERS and PROVIDERS	ID NUMBER	LOCATION / DESCRIPTION	TOTAL PROJ COST (THOU)	PRIOR YEARS COST (THOU)	FUNDS	STATE TRANSPORTATION IMPROVEMENT PROGRAM: 5 YEAR WORK PROGRAM FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	DEVELOPMENTAL PROGRAM FY 2017	FY 2018	FY 2019	FY 2020	UNFUNDED FUTURE YEARS
DURHAM	Durham County Access	TA-6246	Expansion - Light Transit Vehicle	50		FNU US	C 6									
						FNU STAT	C 39									
						FNU L	C 5									
DURHAM	Durham County Access	TJ-6124	Operating Assistance - employment transportation	275	50	EMP STAT	O 25	O 25	O 25	O 25	O 25	O 25	O 25	O 25	O 25	
						EMP STAT										
						EMP STAT										
DURHAM	Durham County Access	TK-6126	Administration	226	163	FNU US	O 8									
						FNU STAT	O 46									
						FNU L	O 9									
						FNU US										
						FNU STAT										
						FNU L										
						FNU US										
						FNU STAT										
						FNU L										
DURHAM	Durham County Access	TL-6123	Operating Assistance - Elderly and Disabled persons	1716	312	EDTAP STAT	O 156	O 156	O 156	O 156	O 156	O 156	O 156	O 156	O 156	
						EDTAP STAT										
						EDTAP STAT										
DURHAM	Durham County Access	TN-6110	Mobility Management - New Freedom - purchase of service	96		FNF US	O 48									
						FNF L	O 48									
DURHAM	Durham County Access	TN-6111	Mobility Management - New Freedom coordinator	99		FNU US	O 79									
						FNU STAT	O 10									
						FNU L	O 10									
DURHAM	Durham County Access	TQ-6109	Mobility Management - Elderly and Disabled persons - purchase of service	113	113	FEPD US										
						FEPD STAT										
						FEPD L										
DURHAM	Durham County Access	TR-6164	Operating Assistance - general public in rural areas	880	160	RGP STAT	O 72	O 72	O 72	O 72	O 72	O 72	O 72	O 72	O 72	
						RGP L	O 8	O 8	O 8	O 8	O 8	O 8	O 8	O 8	O 8	
						RGP STAT										
						RGP L										
						RGP STAT										
						RGP L										

ALL SCHEDULES SUBJECT TO AVAILABILITY OF FUNDS

PUBLIC TRANSPORTATION PROGRAM (RURAL)

TYPE OF WORK / ESTIMATED COST IN THOUSANDS / PROJECT BREAKS

FISCAL YEARS

COUNTY	TRANSIT PARTNERS and PROVIDERS	ID NUMBER	LOCATION / DESCRIPTION	TOTAL PROJ COST (THOU)	PRIOR YEARS COST (THOU)	FUNDS	STATE TRANSPORTATION IMPROVEMENT PROGRAM: 5 YEAR WORK PROGRAM FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	DEVELOPMENTAL PROGRAM FY 2017	FY 2018	FY 2019	FY 2020	UNFUNDED FUTURE YEARS
ORANGE	Orange Public Transit	TA-6206	Replacement - Light Transit Vehicle	199	199	FNU US										
						FNU STAT										
						FNU L										
ORANGE	Orange Public Transit	TG-6129	Routine Capital	14	14	FNU US										
						FNU STAT										
						FNU US										
						FNU STAT										
						FNU L										
ORANGE	Orange Public Transit	TJ-6149	Operating Assistance - employment transportation	275	50	EMP STAT	0	25	0	25	0	25	0	25	0	25	0	25	0	25	0	25		
						EMP STAT										
						EMP STAT										

ALL SCHEDULES SUBJECT TO AVAILABILITY OF FUNDS

PUBLIC TRANSPORTATION PROGRAM (RURAL)

TYPE OF WORK / ESTIMATED COST IN THOUSANDS / PROJECT BREAKS

FISCAL YEARS

COUNTY	TRANSIT PARTNERS and PROVIDERS	ID NUMBER	LOCATION / DESCRIPTION	TOTAL PROJ COST (THOU)	PRIOR YEARS COST (THOU)	FUNDS	STATE TRANSPORTATION IMPROVEMENT PROGRAM: 5 YEAR WORK PROGRAM FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	DEVELOPMENTAL PROGRAM FY 2017	FY 2018	FY 2019	FY 2020	UNFUNDED FUTURE YEARS
ORANGE	Orange Public Transit	TK-6151	Administration	555	370	FNU US	O 120									
						FNU STAT	O 37									
						FNU L	O 28									
						FNU US										
						FNU STAT										
						FNU L										
						FNU US										
						FNU STAT										
						FNU L										
ORANGE	Orange Public Transit	TL-6148	Operating Assistance - Elderly and Disabled persons	1067	194	EDTAP STAT	O 97	O 97	O 97	O 97	O 97	O 97	O 97	O 97	O 97	
						EDTAP STAT										
						EDTAP STAT										
ORANGE	Orange Public Transit	TR-6156	Operating Assistance - general public in rural areas	1133	206	RGP STAT	O 103	O 103	O 103	O 103	O 103	O 103	O 103	O 103	O 103	
						RGP STAT										
						RGP STAT										

ALL SCHEDULES SUBJECT TO AVAILABILITY OF FUNDS

PUBLIC TRANSPORTATION PROGRAM (STATEWIDE)

TYPE OF WORK / ESTIMATED COST IN THOUSANDS / PROJECT BREAKS

FISCAL YEARS

COUNTY	TRANSIT PARTNERS and PROVIDERS	ID NUMBER	LOCATION / DESCRIPTION	TOTAL PROJ COST (THOU)	PRIOR YEARS COST (THOU)	FUNDS	STATE TRANSPORTATION IMPROVEMENT PROGRAM: 5 YEAR WORK PROGRAM FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	DEVELOPMENTAL PROGRAM FY 2017	FY 2018	FY 2019	FY 2020	UNFUNDED FUTURE YEARS
CALDWELL CATAWBA LINCOLN MECKLENBURG WATAUGA	COACH AMERICA	TI-6101	Intercity Bus - Boone to Charlotte	6556	1192	FNU US	O 246	O 246	O 246	O 246	O 246	O 246	O 246	O 246	O 246	
						FNU STAT	O 244	O 244	O 244	O 244	O 244	O 244	O 244	O 244	O 244	
						FNU L	O 106	O 106	O 106	O 106	O 106	O 106	O 106	O 106	O 106	
						FNU US										
						FNU STAT										
						FNU L										
						FNU US										
						FNU STAT										
						FNU L										
ANSON CUMBERLAND HOKE MOORE RICHMOND UNION	COACH AMERICA	TI-6102	Intercity Bus - Fayetteville to Charlotte	7106	1292	FNU US	O 265	O 265	O 265	O 265	O 265	O 265	O 265	O 265	O 265	
						FNU STAT	O 265	O 265	O 265	O 265	O 265	O 265	O 265	O 265	O 265	
						FNU L	O 116	O 116	O 116	O 116	O 116	O 116	O 116	O 116	O 116	
						FNU US										
						FNU STAT										
						FNU L										
						FNU US										
						FNU STAT										
						FNU L										
FORSYTH GUILFORD WATAUGA WILKES YADKIN	COACH AMERICA	TI-6103	Intercity Bus - Greensboro to Boone	9680	1760	FNU US	O 360	O 360	O 360	O 360	O 360	O 360	O 360	O 360	O 360	
						FNU STAT	O 359	O 359	O 359	O 359	O 359	O 359	O 359	O 359	O 359	
						FNU L	O 161	O 161	O 161	O 161	O 161	O 161	O 161	O 161	O 161	
						FNU US										
						FNU STAT										
						FNU L										
						FNU US										
						FNU STAT										
						FNU L										
DURHAM	DURHAM AREA TRANSIT AUTHORITY / DATA	C-5103B	Operational Assistance - 2 yrs remaining CMAQ support	371	371	CMAQ US										
						CMAQ L										
CALDWELL CATAWBA LINCOLN MECKLENBURG WATAUGA	GREYHOUND LINES	TI-6104	Intercity Bus - Raleigh/Norfork/Camp Lejuene/Myrtle Beach	4410	2098	FNU US	O 1156									
						FNU L	O 1156									
						FNU US										
						FNU L										
STATEWIDE	regional	TP-4901	Planning Assistance - Research support activities	7739	1259	FSPR US	C 600	C 600	C 600	C 600	C 600	C 600	C 600	C 600	C 600	
						FSPR STAT	C 120	C 120	C 120	C 120	C 120	C 120	C 120	C 120	C 120	
						FSPR US										
						FSPR STAT										
						FSPR US										
						FSPR STAT										
STATEWIDE	regional	TT-9702	Technology - veh. tracking, passenger info, data communications, traffic signal prioirty, maintenance software	75	75	UTCH STAT										
STATEWIDE	regional	TT-9702A	Technology - admin (ITRE)	50	50	UTCH STAT										

ALL SCHEDULES SUBJECT TO AVAILABILITY OF FUNDS

PUBLIC TRANSPORTATION PROGRAM (STATEWIDE)

TYPE OF WORK / ESTIMATED COST IN THOUSANDS / PROJECT BREAKS

FISCAL YEARS

COUNTY	TRANSIT PARTNERS and PROVIDERS	ID NUMBER	LOCATION / DESCRIPTION	TOTAL PROJ COST (THOU)	PRIOR YEARS COST (THOU)	FUNDS	STATE TRANSPORTATION IMPROVEMENT PROGRAM									UNFUNDED
							5 YEAR WORK PROGRAM					DEVELOPMENTAL PROGRAM				
							FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FUTURE YEARS
STATEWIDE	statewide	TS-4900Z	Statewide training and support services for rural, small urban and paratransit operations	1278	378	RTAP	A 100	A 100	A 100	A 100	A 100	A 100	A 100	A 100	A 100	
						RTAP										
						RTAP										
STATEWIDE	sub regional	TK-4900Z	State Administration - oversight, and planning assistance for rural area general public transit services	12100	2200	FNU US	A 1100	A 1100	A 1100	A 1100	A 1100	A 1100	A 1100	A 1100	A 1100	
						FNU US										
						FNU US										
STATEWIDE	sub regional	TM-5301	State Administration - Job Access / Reverse Commute	5592	1092	JARC US	A 500	A 500	A 500	A 500	A 500	A 500	A 500	A 500	A 500	
						JARC US										
						JARC US										
STATEWIDE	sub regional	TN-5112	State Administration - New Freedom - beyond Am. Disability Act requirements	3862	712	FNF US	A 350	A 350	A 350	A 350	A 350	A 350	A 350	A 350	A 350	
						FNF US										
						FNF US										
STATEWIDE	sub regional	TV-4903	State Administration - Federal Elderly and Disabled persons assistance program	7274	1424	FEDP US	A 650	A 650	A 650	A 650	A 650	A 650	A 650	A 650	A 650	
						FEDP US										
						FEDP US										

DCHC MPO STPDA Funding Table for FY 2010 through 2015 - Approved May 11, 2011 - with proposed changes to be presented to the TAC for FY12-18 MTIP

Jurisdiction	TIP No		Description	Cost 100%	Cost 80%	2010		2011		2012		2013		2014		2015	
						Phase	Cost	Phase	Cost	Phase	Cost	Phase	Cost	Phase	Cost	Phase	Cost
Carrboro	U-4726	DC	Multi-use Path from Wilson Park to Estes Dr.	$ 210,855	$ 168,684			Construction	$168,684								
Carrboro	U-4726	DE	Bolin Creek Greenway - Carrboro (Homestead to Chapel Hill HS Gr	$ 737,500	$ 590,000			Construction	$590,000								
Carrboro	EL-4828		Morgan Creek Greenway - Carrboro	$ 600,000	$ 480,000			Planning	$105,880	Construction	$374,120						
Carrboro	U-4726	Dx	Bolin Creek Greenway (Jones Creek)	$ 268,375	$ 214,700			Construction	$214,700								
Carrboro	U-4726	DD	Rogers Road - Sidewalk (Homestead to Meadow Run)	$ 536,200	$ 428,960			Planning	$65,000	Construction	$363,960						
Carrboro	U-4726	Dx	S. Greensboro St. - Sidewalk	$ 58,300	$ 46,640					Construction	$46,640						
Carrboro	U-4726	Dx	Bicycle Loop Detectors	$ 37,500	$ 30,000			Construction	$30,000								
Carrboro	U-4726	Dx	Bel Arbor-Plantation Acres Multi-use Path	$ 83,750	$ 67,000							Construction	$ 67,000				
Chapel Hill	TG-4731		Chapel Hill Transit - Misc. Capital - Tires Purchase	$ 255,415	$ 204,332			Capital	$ 204,332								
Chapel Hill	U-4727		Chapel Hill Transit Planning	$ 1,357,500	$ 1,086,000	UPWP/Plann	$ 388,000	UPWP/Plann	$ 373,000	UPWP/Plann	$ 325,000						
Chapel Hill	U-4727		Intersection & Traffic Study @ RAMS Plaza	$ 100,000	$ 80,000	UPWP/Plann	$ 32,000	UPWP/Plann	$ 48,000								
Chapel Hill	SR-5001	AR	CH - Culbreth Rd: Cobble Ridge to Rossburn sidewalk	$ 135,000	$ 108,000			Construction	$ 108,000								
Chapel Hill	U-5119		NC 86/US 15-501 BRT improvements	$ 565,000	$ 452,000					Construction	$ 452,000						
Chapel Hill	TT-5109		FCC Radio Communications (Upgrade fleet)	$ 1,250,000	$ 1,000,000			Capital	$ 1,000,000								
Chapel Hill	U-4726	IG	Morgan Creek Greenway Phase 2 - Chapel Hill	$ 700,000	$ 560,000			Construction	$ 560,000								
Chapel Hill	U-4726	IF	Bolin Creek Stairs - Chapel Hill	$ 125,000	$ 100,000					Construction	$ 100,000						
Chapel Hill	U-4726	Ix	CH - Chapel Hill Sidewalks	$ 400,000	$ 320,000			Construction	$ 320,000								
Chapel Hill	U-4726	Ix	NC86/other locations Pedestrian Safety Improvements	$ 375,000	$ 300,000			Construction	$ 150,000	Construction	$ 150,000						
Chapel Hill	U-4727		Greenways/Bike Ped Maps	$ 30,000	$ 24,000			UPWP/Plann	$ 24,000								
Chapel Hill	U-4726	Ix	Bolin Creek Greenway construction	$ 937,500	$ 750,000							Construction	$ 750,000				
Chapel Hill	TT-5109		Technology: Automatic Passenger Counters	$ 55,811	$ 44,649			Capital	$ 44,649								
Durham	U-4445		NC 147 Bicycle/Pedestrian Bridge - Durham	$ 500,000	$ 400,000	Construction	$400,000										
Durham	E-2921E		American Tobacco Trail Phase E - Durham, Durham County	$ 1,680,000	$ 1,344,000	Construction	$1,344,000										
Durham	U-4726	HL	Barbee Rd. (Orindo to Pearsontown Elem.) Sidewalk	$ 19,600	$ 15,680					Construction	$15,680						
Durham	U-4726	HL	DATA Sidewalk	$ 19,800	$ 15,840					Construction	$15,840						
Durham	C-4928		Morreene Road - Bike/Ped Facilities (Neal to Erwin)	$ 1,560,000	$ 1,248,000					Planning	$100,000			Construction	$ 1,148,000		
Durham	U-4724		Cornwallis Road - Bike/Ped Facilities (S. Roxboro to University or C	$ 2,395,000	$ 1,916,000					Planning	$255,000			Construction	$ 1,661,000		
Durham	U-3804		Hillandale (I-85 to Carver) - Sidewalks	$ 81,144	$ 64,915	Construction	$64,915										
Durham	U-4726	Hx	Carpenter Fletcher - Bike/Ped Facilties (Woodcroft to Alston)	$ 1,174,716	$ 939,773					Planning	$255,000			Construction	$ 684,773		
Durham	U-4726	Hx	Avondale - Sidewalk (I-85 to Geer)	$ 515,000	$ 412,000					Construction	$412,000						
Durham	U-4726	Hx	Cheek - Bike/Ped Facilities (Geer to Hardee)	$ 695,000	$ 556,000					Construction	$556,000						
Durham	U-4726	Hx	Hillandale - Bike/Ped Facilities (I-85 to Fulton)	$ 1,315,484	$ 1,052,387					Planning	$157,858			Construction	$ 894,529		
Durham	U-4726	Hx	Holloway St sidewalks	$ 157,106	$ 125,685									Construction	$ 125,685		
Durham	TT-5110		Technology: Automatic Passenger Counters	$ 98,490	$ 78,792			Capital	$78,792								
Durham	SR-5001	C	Fayetteville Road (Cornwallis to Nelson) bicycle lanes and sidewalk	$ 251,000	$ 200,800					Construction	$200,800						
LPA	U-4727		UPWP - staff and routine	$ 4,962,103	$ 3,969,682	UPWP/Plann	$ 405,872	UPWP/Plann	$ 632,709	UPWP/Plann	$ 856,364	UPWP/Plann	$ 671,241	UPWP/Plann	$ 691,378	UPWP/Plann	$ 712,119
LPA	U-4727		UPWP - ITS Deployment Plan Update	$ 70,000	$ 56,000	UPWP/Plann	$ 56,000										
LPA	U-4727		UPWP - Bike/Ped (non-motorized trip)Model Development	$ 175,000	$ 140,000	UPWP/Plann	$ 113,500	UPWP/Plann	$ 26,500								
LPA	U-4727		UPWP - GIS Integration and Automation	$ 200,000	$ 160,000	UPWP/Plann	$ 160,000										
LPA	U-4727		UPWP - Land Use Model Development	$ 250,000	$ 200,000	UPWP/Plann	$ 200,000										
LPA	U-4727		UPWP - MPO Collector Street Plan	$ 50,000	$ 40,000	UPWP/Plann	$ 40,000										
LPA	U-4727		UPWP - NC 54 Subarea Study	$ 250,000	$ 200,000	UPWP/Plann	$ 150,000	UPWP/Plann	$ 50,000								
LPA	U-4727		UPWP - Commercial Vehicle Study	$ 125,000	$ 100,000	UPWP/Plann	$ 55,100	UPWP/Plann	$ 44,900								
LPA	U-4727		UPWP - GIS Integration Phase II	$ 375,000	$ 300,000					UPWP/Plann	$ 150,000	UPWP/Plann	$ 150,000				
LPA	U-4727		UPWP - Parking Study	$ 125,000	$ 100,000					UPWP/Plann	$ 100,000						
LPA	U-4727		UPWP - Transit Studies	$ 546,454	$ 437,163					UPWP/Plann	$ 137,163	UPWP/Plann	$ 300,000				
TJCOG	U-4727		UPWP - staff and routine	$ 210,541	$ 168,433	UPWP/Plann	$ 26,922	UPWP/Plann	$ 26,922	UPWP/Plann	$ 27,595	UPWP/Plann	$ 28,285	UPWP/Plann	$ 28,992	UPWP/Plann	$ 29,717
TJCOG	U-4727		UPWP - LUCID project/ Fiscal Constraints	$ 13,354	$ 10,683			UPWP/Plann	$ 3,078	UPWP/Plann	$ 7,605						
TJCOG	U-4727		UPWP - HUD Grant	$ 25,000	$ 20,000					UPWP/Plann	$ 20,000						
NCDOT	EB-4707		Old Durham-Chapel Hill Road - Chapel Hill, Durham	$ 4,639,000	$ 3,711,200	ROW	$191,200	ROW	$320,000	Construction	$3,200,000						
Triangle Transit	TT-4911		Technology: Automatic Passenger Counters	$ 49,245	$ 39,396			Capital	$39,396								
				$ 31,346,743	**$ 25,077,394**		**$ 3,627,509**		**$5,228,542**		**$8,278,625**		**$ 1,966,526**		**$ 5,234,357**		**$ 741,836**

MTIP changes to be approved as part of FY12-18 MTIP
Moved Beyond One-Year Grace Period

Draft FY 2012-2018 Metropolitan Transportation Improvement Program
Summary of Public Comments

Comment: Citizen request for information on the extension of Martin Luther King Parkway to Cornwallis Road.
Response: Staff sent the NCDOT feasibility study (2008) for improvements to this intersection to Debra Morgan. The cross-sections for the two alternatives in this feasibility study assume bicycle lanes and sidewalks.

Comment: Citizen request to construct bicycle stations at future park-and-ride lots.
Response: As the location and design of future park and ride lots is being considered, DCHC MPO and local staffs will need to carefully consider the needs of bicyclists and opporunities to encourage bicycle use through the types of facilities available at the park and ride locations. DCHC staff has received additional information from the bicycle station representative who spoke at the public hearing.

Comment: Citizen request to fund Erwin Road and University Drive bicycle and pedestrian projects. The Town of Chapel Hill requests adding funding for improvements to Erwin Road.
Response: The DCHC MPO has requested that the Erwin Road project be funded. NCDOT's response is that this project will not be funded since they are over target for the subregional mobility category. NCDOT suggests using STPDA funding on this project. The University Drive project was the MPO's top ranked bicycle and pedestrian project and ranked third in the State according to NCDOT's prioritization. The University Drive project will be funded in the final STIP and MTIP.

Comment: Citizen request to improve notification for public meetings.
Response: The DCHC MPO will update our email list and use it to send notices on public hearings. The MPO is also in the process of updating our website and investigating the use of social media for notices.

Comment: Citizen request to use enhancement funds to buy the billboard near the R. Kelly Bryant Bicycle and P**e**destrian Bridge over NC 147.
Response: DCHC staff spoke with Jimmy Travis, manager of NCDOT's Programs Management Office. Mr. Travis stated that the last call for transportation enhancement funds was in 2004, and he does not anticipate another call until after the passage of a federal reauthorization bill. He said the request for funds to buy the billboard could be submitted by the MPO for consideration as part of the next TIP process. However, according to NCDOT's SPOT office, enhancement projects will not be accepted in the next TIP prioritization process. Mr. Travis noted that while there currently appears to be a large balance of enhancement and CMAQ funds, in actuality NCDOT cannot spend these funds because they are being used as a cash reserve to enable accelerated construction of highway projects. DCHC staff also spoke with Rob Ayers of the North Carolina FHWA office. Mr. Ayers stated that NCDOT has the discretion to fund billboard removal through enhancement as well as other funding categories, and since there is not an avenue to submit a TIP request or separately apply for funds, the best course of action is to request funding through the DOT board member and division engineer. Mr. Ayers said that NCDOT has the

discretion to manage federal funds in such a way that rescissions will disproportionately impact the enhancement and CMAQ funds.

Comment: RTA supports the acceleration of the widening of I-40 from US 15-501 to NC 86. Orange County and the Town of Chapel Hill urge the acceleration and phasing of I-3306A, widening I-40 from NC 86 to Durham County. The Town of Chapel Hill requests the consideration of noise walls as part of the project.
Response: The DCHC MPO has made this request to NCDOT. NCDOT's response is that they cannot accelerate the project within Division 7's equity constraint. The MPO will request that this section be included in the first phase of the project. Phasing will be considered during the environmental study. Noise walls will be considered during the environmental analysis.

Comment: Orange County urges the funding of a sidewalk and pedestrian bridge at Orange Grove Road over I-40
Response: This project is funded in the recommended final MTIP. The DCHC MPO will ask that it be reconsidered in the next TIP update with the revised project description.

Comment: Orange County urges the initiation of a feasibility study for wide shoulders on Dairyland Road
Response: The DCHC MPO supports this request to NCDOT.

Comment: Orange County urges the acceleration of replacing bridge 85 on Old Greensboro Road over Phil's Creek
Response: The schedule for this project was accelerated by one year in the final MTIP and STIP.

Comment: Orange County urges the inclusion of several project elements on I-0305 and the acceleration of I-0305A, widening I-85 from I-40 to SR 1709 (Lawrence Road),
Response: The DCHC MPO supports these requests. Most of these project elements will be considered as part of the environmental study for the project. The project will likely be constructed in phases and the MPO will support the western section as the first phase of the project.

Comment: Orange County urges the programming of projects to alleviate congestion in downtown Hillsborough.
Response: The DCHC MPO has made this request to NCDOT. NCDOT's response is that they cannot fund more projects in the subregional mobility category. The final MTIP will include funding for the Churton Street widening, Eno Mountain Road Mayo Street realignment, NC 86 widening, and the Orange Grove Road extension in years FY 2019 and 2020.

Comment: Orange County urges the programming of improvements to Buckhorn Road.
Response: The DCHC MPO supports this request to NCDOT.

Comment: The Town of Chapel Hill requests the addition of $1 million to the Old Durham-Chapel Hill Road project.
Response: The DCHC MPO supports funding this high priority project. Once the final estimate is certain, the MPO will seek additional state funds or STPDA funds. This will be completed through a MTIP amendment.

Comment: The Town of Chapel Hill requests the acceleration of U-5304, improvements to US 15-501, and the expansion of the project to Franklin Street.
Response: The DCHC MPO supports this request and will include this in the project description in the final MTIP.

Comment: The Town of Chapel Hill requests funding for the short-term recommendations of the NC 54 Corridor Study.
Response: The DCHC MPO supports this request and will consider adding these projects as and MTIP amendment after the corridor study is complete.

Comment: The Town of Chapel Hill requests including funding for expanded park-and-ride facilities at various locations including Eubanks Road and US 15-501
Response: The DCHC MPO supports this request and will include this in the final MTIP.

RESOLUTION APPROVING
AMENDMENT #2 TO
THE 2035 LONG RANGE TRANSPORTATION PLAN
FOR THE
DURHAM-CHAPEL HILL-CARRBORO (DCHC)
METROPOLITAN PLANNING ORGANIZATION (MPO)

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 Transportation Advisory Committee is the duly recognized transportation decision making body for the 3-C transportation planning process (i.e., continuous, cooperative, and comprehensive) of the Durham–Chapel Hill–Carrboro Metropolitan Planning Organization (DCHC MPO); and,

WHEREAS, the Transportation Advisory Committee approved the DCHC MPO 2035 Long Range Transportation Plan (LRTP) on May 13, 2009; and,

WHEREAS, the DCHC MPO has amended the 2035 Long Range Transportation Plan (LRTP) to ensure that the Plan conforms to the intent and purpose of the North Carolina State Implementation Plan (or interim emissions tests in areas where no SIP is approved or found adequate) in accordance with the Clean Air Act Amendment (CAAA); and,

WHEREAS, the Amended 2035 Long Range Transportation Plan (LRTP) meets the planning requirements of 23 CFR Part 134 and the public involvement policies of the DCHC MPO as adopted on October 11, 2006; and,

WHEREAS, that conformity determination was made according to the established interagency consultation (IC) procedures for North Carolina; and,

WHEREAS, the Transportation Conformity Determination Analysis and Report demonstrate that the Amended 2035 Long Range Transportation Plan (LRTP) conform to the intent and purpose of the North Carolina State Implementation Plan (or interim emissions tests in areas where no SIP is approved or found adequate) in accordance with the Clean Air Act Amendment (CAAA); and,

(Continued)

(Continued – Resolution Adopting Amendment #1 to the DCHC MPO's 2035 LRTP)

NOW THEREFORE, BE IT RESOLVED: that the Amended 2035 Long Range Transportation Plan (LRTP) for the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (DCHC MPO) be approved and adopted.

_____
Lydia E. Lavelle, TAC Chair

Durham County, North Carolina

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

Date: April 13, 2011

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

Addendum

Amendment 2 (April 13, 2011)

Amendment 2 corrects the mileage (called Distance in the project table) to match the values in the North Carolina State Transportation Improvement Program (STIP) and makes changes to the Air Quality Analysis Year to correspond to current estimates of the project complete timeframe. The following table shows the corrections, in **bold** font, using the format from Appendix 1 of the 2035 LRTP.

		Project Limits								
Project ID	Road Name	From	To	Existing # of Lanes	Proposed # of Lanes	Distance (miles)	Regionally Significant	Exempt from AQ	Project Capital Cost (2008 $)	AQ Analysis Year
DCHC MPO Roadway Projects										
83	Northern Durham Pkwy	US 70 E	I 85 N	0	4	~~6.40~~ **8.1**	Yes	No	$66,999,951	2025
84	Northern Durham Pkwy	I 85 North	Old Oxford Hwy	0	4	~~2.40~~ **3.8**	Yes	No	$27,284,982	2025
85	Northern Durham Pkwy	Old Oxford Hwy	Roxboro Rd	0	2	~~2.64~~ **4.4**	No	No	$19,358,989	2025
49	I-85	US 70	Red Mill Rd	4	6	~~5.68~~ **6.4**	Yes	No	$76,107,334	2025
44	I-40	NC 86	I-85	4	6	~~7.32~~ **7.5**	Yes	No	$77,277,997	2035
9	Carver St Ext	Armfield St	Old Oxford Rd	0	4	0.73	No	No	$7,660,000	~~2025~~ **2015**
56	Louis Stephens Dr (RTP)	Hopson Rd	Wake County Line	0	**4 2**	0.90	No	No	$0	2015
56.1	Louis Stephens Dr (RTP)	Hopson Rd	Wake County Line	2	4	0.90	No	No	$8,010,000	2035
NC CAMPO Roadway Projects										
A46	Tryon Rd	Norfolk Southern Rail	South Wilmington St.	2	4	0.9	No	No	$5,200,000	~~2015~~ **2025**
F43	I-40	US 1/64	Lake Wheeler Rd.	6	8	4.43	Yes	No	$49,027,558	~~2015~~ **2025**
	US 64/Laura Duncan Interchange						No	No	$32,500,000	**2025**
A380	US 64	US 1	Laura Duncan Rd.	4	4	2.49	Yes	No	$11,000,000	~~2015~~ **2025**
A90d	US401	Franklin County	NC 39	2	4	10.50	Yes	No	$22,485,000	~~2015~~ **2025**
A222a	NC 54	Cary Parkway	Weston Parkway	2	9	0.90	Yes	No	$4,759,000	~~2015~~ **2025**
A235b	US 1A	Forbes Rd.	Rogers Rd.	2	4	0.26	No	No	$1,700,000	~~2015~~ **2025**

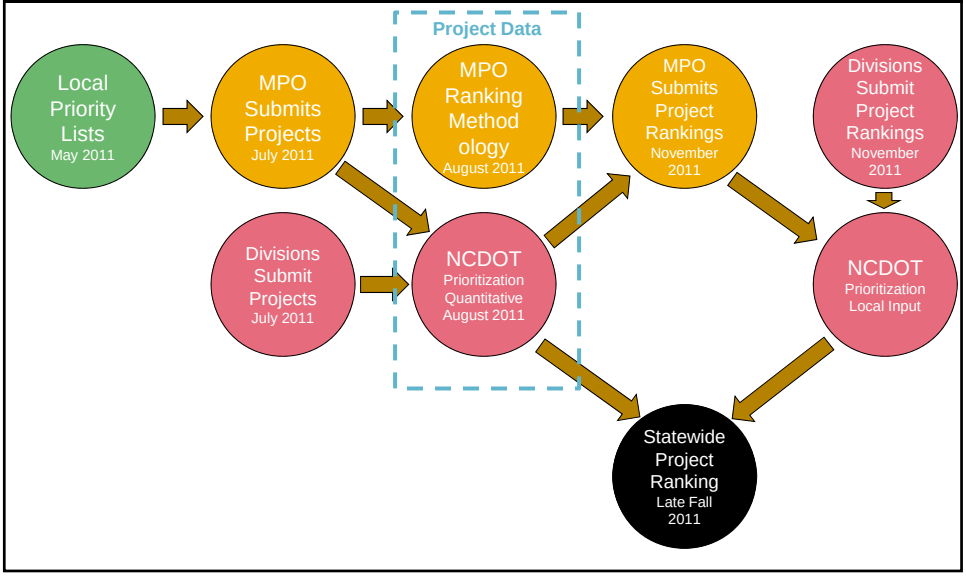
May 25, 2011

Development of the FY 2014-2020 TIP

TCC Meeting

1

TIP Prioritization Process



TAC Schedule

- June 11 TAC
  - Approval of submission of 15 new highway, 10 bicycle, 10 pedestrian, and transit projects.
  - Approval of MPO Ranking Methodology.
- October 12 TAC
  - Public Hearing on MPO Priority List.
- November 9 TAC
  - Approval of application of MPO's 1,300 highway points
  - Approval of ranking of 5 bicycle and 5 pedestrian projects.
  - Approval of ranking of transit projects.

3

2014-2020 TIP Schedule

- Spring 2012 – NCDOT releases draft 10 Year Work Program
- Spring 2013? – NCDOT approves final 10 Year Work Program

4

Project Types

- **Highway**
  - **Mobility** – capacity widening, new location
  - **Modernization** – upgrade, shoulders, on-road bicycle >$1M, etc.
- **Bicycle** – on-road <$1M and greenways
- **Pedestrian**
- **Transit** – capital projects in FY 2013-2015

- Other Modes: Rail, Ferry, Aviation
- Not Included in Prioritization: Highway Safety, Highway Infrastructure Health, CMAQ, STPDA, Urban Loops

5

Highway Tiers

- **Statewide** – Strategic Highway Corridors
- **Regional** – Other US and NC routes not in statewide tier
- **Subregional** – Other secondary routes not in statewide tier

Bicycle and Pedestrian Tiers

- **Statewide** – NC bicycling highways
- **Regional** – multi-county regional routes and trails >20 miles
- **Subregional** – all other routes and sidewalks

7

Transit Tiers

- **Statewide** – serve travel out of state
- **Regional** – serve travel between two or more counties
- **Subregional** – serve travel within one county

8

Project Types and Tiers

	Highway Mobility	Highway Modernization	Bicycle	Pedestrian	Public Transit
Statewide	X	X	X		X
Regional	X	X	X		X
Subregional	X	X	X	X	X

- NCDOT develops project rankings for each category
- NCDOT will hold investment strategy summits to determine how much funding to provide to each category – winter 2011/2012

9

Durham City and County

Adopted FY 2014-2020 Transportation Improvement Program Local Priority List

Highway

	Project Description	Tier	Goal	Previous SPOT Rank
A	NC 147/Glover Road Interchange – Construct new interchange. Widen Glover Road from NC 147 to Angier Ave. Provide bicycle, pedestrian, and transit facilities as appropriate.	Statewide	Mobility	New Project
B	NC 54 (I-40 east to NC 55) – Widen existing two-lane facility to multi-lanes with a divided median with consideration for a bus rapid transit. Provide bicycle, pedestrian, and transit facilities as appropriate.	Regional	Mobility	1
C	NC 54 (I-40 to Barbee Chapel Rd.) – Widen to 6-lane divided. Provide bicycle, pedestrian, and transit facilities as appropriate.	Regional	Mobility	17
D	M.L. King, Jr. Pkwy./NC 55 Interchange (U-2405) – Extend Martin Luther King Jr. Pkwy from NC 55 intersection to Cornwallis Rd. Provide bicycle, pedestrian, and transit facilities as appropriate.	Regional	Mobility	91
E	NC 751 (Phase I, S. Roxboro Rd. to NC 54) – Widen to 4-lane. Provide bicycle, pedestrian, and transit facilities as appropriate.	Regional	Mobility	107
F	NC 751 (NC 54 to Renaissance Pkwy.) – Widen to 4-lane. Provide bicycle, pedestrian, and transit facilities as appropriate.	Regional	Mobility	New Project
G	NC 751 (Renaissance Pkwy. To Fayetteville Rd.) – Widen to 4-lane. Provide bicycle, pedestrian, and transit facilities as appropriate.	Regional	Mobility	New Project
H	Fayetteville Rd. (Woodcroft Pkwy. to Riddle Rd.) – Widen to 4-lane. Provide bicycle, pedestrian, and transit facilities as appropriate.	Subregional	Mobility	35
I	Old Oxford Highway (Phase I, N. Roxboro to Hamlin Rd.) – Expand capacity. Provide bicycle, pedestrian, and transit facilities as appropriate.	Subregional	Mobility	212
J	Fayetteville Rd. (Renaissance Pkwy. To NC 751) – Widen to 4-lane. Provide bicycle, pedestrian, and transit facilities as appropriate.	Subregional	Mobility	New Project
K	S. Roxboro Rd. (Cornwallis Rd. to MLK Pkwy.) – Part widen to 4-lane, part 4-lane on new location. Provide bicycle, pedestrian, and transit facilities as appropriate.	Subregional	Mobility	New Project
L	Southwest Durham Drive (US 15-501 to Mt. Moriah Rd.) – Construct 4-lane road on new location. Provide bicycle, pedestrian, and transit facilities as appropriate.	Subregional	Mobility	New Project
M	NC 751/Hope Valley Rd. (S. Roxboro Rd. to M.L. King Jr. Pkwy.) - On-road bicycle facilities and sidewalks	Regional	Modernization	Unranked (B/P)
N	Club Blvd. (Ambridge St. to Geer St.) – On-road bicycle facilities and sidewalks	Subregional	Modernization	70 (B/P)

	Project Description	Tier	Goal	Previous SPOT Rank
O	Dearborn Dr. (E. Club Blvd. to Old Oxford Rd.) - On-road bicycle facilities and sidewalks	Subregional	Modernization	76 (B/P)
P	Cornwallis Rd. (Erwin Rd. to Chapel Hill Rd.) - On-road bicycle facilities and sidewalks (where appropriate)	Subregional	Modernization	78 (B/P)
Q	Erwin Rd. (Orange County Line to NC 751) - On-road bicycle facilities and sidewalks (where appropriate)	Subregional	Modernization	42
R	Barbee Chapel Rd./Farrington Rd. (NC 54 to Stagecoach Rd.) - On-road bicycle facilities and sidewalks (where appropriate)	Subregional	Modernization	Unranked (B/P)
S	Ephesus Church Rd./Pope Rd. (Orange County Line to Old Durham-Chapel Hill Rd.) - On-road bicycle facilities and sidewalks	Subregional	Modernization	38
T	Sedwick Rd. (Grandale Dr. to Alston Ave.) - On-road bicycle facilities and sidewalks	Subregional	Modernization	Unranked (B/P)

Bicycle

Rank	Project Description
B1	W. Ellerbe Creek Trail (existing trail to Stadium Drive) – Shared Use Path
B2	Scott King Road (Fayetteville Rd. to Grandale Rd.) – On-road bicycle facilities
B3	Rocky Creek Trail (NC 55 to Kelly Bryant Bridge) – Shared Use Path
B4	Duke Beltline Trail – Shared Use Path
B5	NC 751 (Erwin Rd. roundabout to Hillsborough Rd./US 70) – On-road bicycle facilities
B6	Cole Mill Road (Rose of Sharon Rd. to Orange County line) – On-road bicycle facilities

Pedestrian

Rank	Project Description
P1	NC 54 (NC 55 to RTP) – Sidewalks
P2	Roxboro Road (Pacific Ave. to Murray Ave.) – Sidewalks
P3	Cook Road (Fayetteville Rd. near Hillside High to Martin Luther King, Jr. Parkway) – Sidewalks
P4	Duke Street (Murray Ave. to Roxboro Rd.) – Sidewalks
P5	Horton Road (Guess Rd. to Roxboro Rd.) – Sidewalks
P6	Holloway Street (Junction Rd. to Chandler Rd.) – Sidewalks

Transit

Project Description	Year Needed	Cost
14 40’ Hybrid Replacement Buses @$650,000/bus	2013	$9.1 million
14 40’ Hybrid Replacement Buses @ $700,000/bus	2014	$9.8 million
15 ADA Replacement Vans @ $45,000/van	2013	$675,000
6 Replacement Service Vehicles @ $30,000/vehicle	2013	$180,000
4 Replacement Service Vehicles @ $35,000/vehicle	2014	$140,000
Passenger Amenities (shelters, benches, trashcans, solar lights)	2013	$500,000
Passenger Amenities (shelters, benches, trashcans, solar lights)	2015	$750,000
8 40’ Hybrid Expansion Buses @$650,000/bus • 15 minutes headways to Duke • Direct route from downtown to Southpoint • Direct route from downtown to Riverside HS • Direct route from Duke to Southpoint	2013	$5.2 million
18 40’ Hybrid Expansion Buses @$700,000/bus • 15 minutes headways on routes 1, 3, 4, 6, 7, and 10 • 30 minutes headways on route 15 • Cross-town routes	2014	$12.6 million
4 40’ Hybrid Expansion Buses @$750,000/bus • 15 minutes headways on routes 12 and 16	2015	$3.0 million
4 40’ Hybrid Expansion Buses @ $750,000/bus • New Route on MLK Pkwy, NC 55 to South Square • New route from Downtown to Butner	2015	$3.0 million
Land Acquisition and Construction of 2 Park –n-ride Lots @ $1.1 million/lot • North Durham/Treyburn area • US 70 east or Parkwood area	2015	$2.2 million
Regional Rail Service – Durham to Chapel Hill – Light Rail Transit or Bus Rapid Transit - planning and engineering phase *Description and cost will be determined by Triangle Regional Transit Program	2013-2015	*
Regional Rail Service – Durham to Raleigh – Commuter Rail – planning and engineering phase *Description and cost will be determined by Triangle Regional Transit Program	2013-2015	*

Town of Carrboro
Transportation Improvement Program 2014-2020
Local Priority List: approved May 18, 2011

Highway

Priority #	***Description***
1	Estes Dr. – Add bike lanes and transit accommodations on both sides of the road, and a sidewalk on the south side of the road, from Greensboro St. to Town limits.
2	Homestead Rd. – Add bike lanes, sidewalks, and transit accommodations on both sides of the road from Seawell School Rd. to Old NC 86.
3	Old NC 86 – Add bike lanes and transit accommodations on both sides of the road, and a sidewalk on the east side of the road, from Hillsborough Rd. to Homestead Rd.
4	Old NC 86 – Add bike lanes and transit accommodations on both sides of the road, and a sidewalk on the east side of the road, from Homestead Rd. to Eubanks Rd.
5	Eubanks Rd. – Add bike lanes, sidewalks, and transit accommodations on both sides of the road from Old NC 86 to Rogers Rd.
6	Franklin/Main/Merritt Mill/Brewer intersection improvements – Make changes to improve operation and safety for motorists, pedestrians, bicyclists, and transit.

Bicycle

Priority #	***Description***
1	Broad St. to Seawell School Rd. – Construct a multi-use path between Broad St. and Village Dr. and between Village Dr. and Seawell School Rd.; install on-street bicycle facilities on Village Dr.
2	Morgan Creek Greenway – Construct a multi-use path from University Lake to the western terminus of the first phases of the greenway and a multi-use path spur to BPW Club Rd.
3	NC 54 from James St. to Anderson Park – Construct a side path on the north side of the road to accommodate two-direction bicycle transportation.

Pedestrian

Priority #	***Description***
1	W. Main St. – Install improved pedestrian crossings and sidewalks from Hillsborough Rd. to Jones Ferry Rd.
2	S. Greensboro St. – Add sidewalks on the west side of the road from the northern end of Old Pittsboro Rd. to Merritt Mill Rd.
3	N. Greensboro St. corridor from Weaver St. to Shelton St. – pedestrian improvements
4	Estes Dr. – Construct a sidewalk on the south side of the road from N. Greensboro St. to the Town limits.
5	Old NC 86 – Construct a sidewalk on the east side of the road from Homestead Rd. to Eubanks Rd.

Chatham County Projects for SPOT 2.0

Presented to and endorsed by the Board of County Commissioners on May 16, 2011

Highway Project

US 15-501 Bike Lanes (Orange County line to 400' south of Mann's Chapel Rd)

Description: Widen US 15-501, from the Orange County line to 400 feet south of Manns' Chapel Rd, by three to six feet on each side to create either 15' wide outside lanes or six-foot bike lanes.

Needs Statement: This section of US 15-501 is a four-lane divided highway, with typical 12' wide travel lanes, a 2.5' curb-and-gutter, a 45 mph speed limit and AADT of 21,000. There is no safe space for a bicycle to operate in this section, aside from potentially using the newly constructed four-foot wide sidewalk on the east side of the roadway. In contrast, US 15-501 just south of this section has six-foot wide shoulders, and north into Orange County the roadway has 13' wide outside lanes that transition to 6.5' wide shoulders.

Project Length: 1.3 miles

Planning-Level Cost Estimate: $2,340,000

Pedestrian Project

US 15-501 at Mann's Chapel Rd Pedestrian Crossing

Description: Improve the pedestrian crossing at US 15-501 and Mann's Chapel Rd by installing a "pork chop island" in each quadrant, pedestrian-actuated crossing signals and crosswalk striping; relocate or remove existing wheelchair ramps.

Needs Statement: The intersection of US 15-501 and Mann's Chapel Rd is a large signalized intersection – 4 to 6 lanes per crossing, made even wider by large turning radii – and currently has no pedestrian facilities. A new sidewalk terminates in the northeast quadrant of this intersection and there are retail establishments on each corner. This intersection also has a high incidence of vehicle crashes based on anecdotal evidence.

Project Length: N/A

Planning-Level Cost Estimate: $300,000

Hillsborough TIP Priority List
2014-2020

1. **Improvements along South Churton Street (project R-2825):** Develop congestion management, limited access, aesthetic and capacity improvements between US 70 Business and Interstate 40 consistent with the recommendations in the 2006 Churton Street Corridor Plan. The feasibility study completed in February 2002 recommended a 4-lane divided with 16-foot median, curb and gutter cross section for the entire corridor from I-40 to the Eno River bridge.

2. **Orange Grove Road (SR 1006) extension to US 70 Business:** Construct road extension of Orange Grove Road east to cross (over or under to be determined) NCRR to intersect with US 70 Business. Traffic projections should determine road capacity. Improvements for bicycles and pedestrians are included with this request.

3. **U-3436, SR 1148 (Eno Mountain Road) and SR 1192 (Mayo Street) at SR 1006 (Orange Grove Road):** Realign intersection and make safety improvements. Both the EDD Transportation Work Group Recommendations and the Access Management and Awareness Project and Report for Orange Grove Road recommend this project for improved traffic flow and safety.

4. **Train station/multi-modal center:** Construct a train station in Hillsborough and request AMTRAK service to Orange County. The train station can also serve future commuter rail operations and anchor a multimodal transportation hub in Hillsborough. A revenue and ridership study conducted by the North Carolina Department of Transportation Rail Division and AMTRAK has indicated that there is enough potential ridership to make a stop in Hillsborough financially feasible.

5. **NC 86, Bicycle Lanes:** Construct bicycle lanes (4-foot paved shoulders) from Chapel Hill (Whitfield Road) to Hillsborough (US 70 Business). This route is listed as priority 1 of the primary bicycle routes proposed in the Orange County Bicycle Transportation Plan adopted April 6, 1999.

6. **SR 1006, Orange Grove Road, at Interstate 40**: Construct a pedestrian bridge over I-40. Two schools are within walking and cycling distance from residential areas north of I-40. Bicyclists and pedestrian must share the roadway with motor vehicles crossing the narrow two-lane bridge that carries Orange Grove Road over Interstate 40.

7. **US 70 Bypass widening:** Widen US 70 Bypass to a four-lane divided section with bike and pedestrian improvements. This project should be phased to address the traffic counts and existing congestion and the western portion will conform with the recommendations in the 2007 US 70/Cornelius Street Plan.

8. **Western Bypass (project R-3438)** Construct proposed 2-lane facility connecting US 70 with NC 86 North using a portion of Coleman Loop Road (SR 1332) right of way.

ORANGE COUNTY TRANSPORTATION PRIORITY LIST
2014 – 2020 DURHAM-CHAPEL HILL-CARRBORO
METROPOLITAN TRANSPORTATION IMPROVEMENT PROGRAM

1. TIP Project No. EB-4980, SR 1006 (Orange Grove Road) at Interstate 40: Construct a pedestrian bridge over I-40; construct sidewalk along the north side of Orange Grove Road from the bridge to Timbers Drive. This pedestrian bridge is the central element in the Safe Routes to School plan for Grady A. Brown Elementary School and for Cedar Ridge High School. Without the bridge, the SRTS plan cannot move forward. Construction of 0.14 mile (approx.) sidewalk on the north side of the bridge extending from the bridge to Timbers Avenue will provide connectivity from the bridge to three high-density neighborhoods: Patriot's Point, Colonial Estates, and the Timbers. To improve the pedestrian access to the south of the bridge, the Orange County School System has committed to constructing a safe and comfortable path from the pedestrian bridge to the Cedar Ridge entrance.

   Interstate 40 separates two schools, Grady Brown Elementary and Cedar Ridge High School, from residential areas north of the interstate. The Orange County school system estimates that over 262 students live within one mile of the schools. Most of these students live in the high-density Timbers, Patriot's Pointe, and Colonial Estates neighborhoods.

   The "Access Management and Awareness Project and Report for Orange Grove Road" recommends this project.

2. TIP Project No. R-2825, SR 1009 (South Churton Street) Improvements: Develop congestion management, limited access, aesthetic and capacity improvements including bicycle and pedestrian improvements between US 70 Business and Interstate 40. The portion between Interstates 40 and 85 will conform to the design criteria of the Economic Development District Design Manual (4-lane divided section with bike and pedestrian improvements). The feasibility study completed by NCDOT in February 2002 recommends a 4-lane divided curb and gutter cross section, with 16-foot median, for the entire corridor from I-40 to the Eno River. Orange County stresses the need to study improvements within the current right-of-way for the segment north of Interstate 85. Improved capacity through widening is not the County's first choice because of significant constraints between Interstate 85 and US 70 Business and the proximity of the historic district north of the project limits. Orange County requests that, where conditions do not prevent the addition of frontage roads, the feasibility study include the addition of frontage roads with limited access from the corridor.

3. Hillsborough Train Station: Construct a train station in Hillsborough as designated in Hillsborough's *Rail Station Small Area Plan*, and implement AMTRAK service to Orange County. The train station can also serve future commuter rail operations and anchor a multimodal transportation hub in Hillsborough. A revenue and ridership study conducted by the North Carolina Department of Transportation Rail Division and AMTRAK has indicated that there is enough potential ridership to make a stop in Hillsborough financially feasible.

ORANGE COUNTY TRANSPORTATION PRIORITY LIST
2014 – 2020 DURHAM-CHAPEL HILL-CARRBORO
METROPOLITAN TRANSPORTATION IMPROVEMENT PROGRAM

4. Park and Ride Lot in the Buckhorn Economic Development District: Orange County requests funding for a park and ride facility (from the adopted Orange County Economic Development District Design Manual) to be located in the I-85/Buckhorn Road Economic Development District. This project would provide an opportunity for coordination of public transportation efforts between two growing regions in North Carolina, the Triad and Triangle.

5. US 70 East-Interstate 85 Connector: Modify the I-85 Connector interchange at US 70 to provide access from all directions. This project would enable traffic from northwest Orange County to access Interstate 85 more easily without risking the many points of traffic conflict through Efland. The Interstate 85/US 70 Connector just east of Efland is not accessible to traffic on eastbound US 70 and there is no access to westbound US 70 from the connector.

   Traffic has increased through northwestern Orange County on Efland Cedar Grove Road as an alternative to NC 86. Much of that traffic "dog-legs" through Efland via Forrest Avenue to Mt. Willing Road to access Interstate 85. Mt. Willing Road provides an at grade crossing of the North Carolina Railroad corridor, the only access across the railroad tracks between Hillsborough and Buckhorn Road.

6. SR 1009 (Old NC 86) Bicycle Facilities: Construct bicycle facilities on Old NC 86 from Hillsborough Road in Carrboro to I-40 in Hillsborough. This route along Old NC 86, from Carrboro's Transition Area just north of Eubanks Road (SR 1727) to Rippy Lane (SR 1224), is priority 6 of the primary bicycle routes listed in the Orange County Bicycle Transportation Plan. This project would extend bicycle accommodations requested in TIP Project R-2825 (South Churton Street bicycle lanes from Interstate 40 to the Eno River) to Hillsborough Road in Carrboro and provide a connection between proposed bicycle facilities in Carrboro along Old Fayetteville Road, Homestead Road and Eubanks Road.

7. SR 1006 (Orange Grove Road) Extension: Extend Orange Grove Road from the east side of Churton Street (SR 1009) to US 70 business. This project is scheduled for reprioritization. The "EDD Transportation Work Group Recommendations" and the "Access Management and Awareness Project and Report for Orange Grove Road" recommend this project as an alternative access to the US 70 Business/NC 86 corridor to alleviate congestion on Churton Street. This project could also provide access to a potential site for Orange County's priority rail project, AMTRAK service and train station in Hillsborough, although the site for such rail station has not been determined.

8. Tip Project No. U-3436, SR 1148 (Eno Mountain Road) and SR 1192 (Mayo Street) at SR 1006 (Orange Grove Road): realign intersection and make safety improvements. This project is not included in the Draft 2012 – 2018 TIP, and is scheduled for reprioritization. The Hillsborough Town Board and Orange County Board of Commissioners have endorsed this project in two joint studies that included commissioners from both jurisdictions. The "EDD Transportation Work Group Recommendations" and the "Access Management and Awareness Project and Report for Orange Grove Road" recommend this project for improved traffic flow and safety.

ORANGE COUNTY TRANSPORTATION PRIORITY LIST
2014 – 2020 DURHAM-CHAPEL HILL-CARRBORO
METROPOLITAN TRANSPORTATION IMPROVEMENT PROGRAM

9. U-2805, SR 1777 (Homestead Road) Improvements: Improve Homestead Road from Old NC 86 (SR 1009) to NC 86 to include bicycle lanes and sidewalks in sections of the corridor where those facilities do not exist. This project is not in included in the Draft 2012-2020 TIP , and is scheduled for reprioritization. There are three schools in the vicinity of Homestead Road: Chapel Hill High School, Smith Middle School and Seawell Elementary School. Many students live within walking distance and cycling distance to Chapel Hill High School and must walk or cycle along Homestead Road, and cross the road daily. Provision of sidewalks is of utmost importance for the safety of students and other pedestrians who use this corridor. Provision of bicycle facilities is, likewise, necessary for the safety of students and others

10. SR 1727 (Eubanks Road) bicycle lanes: Construct bicycle lanes on Eubanks Road from Old NC 86 (SR 1009) to Rogers Road (SR 1729). The project would provide bicycle access to the new Morris Grove Elementary School off Eubanks Road. Increased traffic on Eubanks from the solid waste convenience center and Chapel Hill Public Works Facility and Transportation Facility on Millhouse Road off of Eubanks presents conflicts with bicycle transportation on the facility.

11. Dairyland Road bicycle facilities: Construct 4-foot paved shoulders on Dairyland Road (SR 1112, SR 1113, SR 1177) from Union Grove Church Road (SR 1111) to Orange Grove Road (SR 1006). This project is one segment of a route providing connection from Carrboro to the Efland/Mebane area via Orange Grove Road and Buckhorn Road (SR 1114) to West Ten Road (SR 1144). The complete route would extend bicycle facilities proposed with highway improvements on Buckhorn Road in the Buckhorn Road Economic Development District.

    This project was submitted for the 2011-2017 TIP through the Triangle Rural (TARPO) Planning Organization. The Dairyland segment ranked #3 in the Strategic Planning Office of Transportation (SPOT) ranking of bicycle projects in the TARPO.

12. NC 86 (North of Hillsborough) Improvements: Widen NC 86 from US 70 bypass to north of NC 57 to four lanes with intersection improvements at US 70 bypass and NC 57. Improvements at the NC 86/US 70 intersection should include extending the queuing lane for traffic turning east onto US 70 Bypass from northbound Churton Street/NC 86. Improvements at the NC 86/NC 57 intersection should include a crosswalk and provide a safe crossing for pedestrians with sidewalk connecting the intersection of NC 86 and NC 57 to Rencher Street. Improvements at the NC 86/NC 57 intersection are identified in the developing Safe Routes to School Action Plan for Stanford Middle School as a major need to provide a safe access for students living north of US 70 and west of NC 86 to walk or bike to school. NC 86 is the major north-south route through Orange County and is designated in North Carolina's Long-Range Statewide Multimodal Transportation Plan as a Strategic Highway Corridor. NC 57 converges into US 86 just north of US 70 Bypass. The segment of NC 86 between NC 57 and US 70 is congested, rendering a high accident location at the intersection of US 70 Bypass at NC 86.

OTHER PROJECTS

Orange County has submitted several priority projects for previous updates to the Transportation Improvement Program that the County has omitted from this priority list for the following reasons:

1. The projects are bicycle projects with estimated costs greater than $1,000,000, and will be prioritized as new highway modernization projects and Orange County complies with the Metropolitan Planning Organization's request to limit requests to 3 new highway projects; or
2. The projects are highway projects that are not included in the 2035 DCHC Long Range Transportation Plan.

These projects will be important for future mobility. Orange County requests the following projects be considered for funding in future updates to transportation plans and programs as traffic and congestion conditions warrant:

- SR 1114 (Buckhorn Road) Widening: Widen Buckhorn Road from US 70 to West Ten Road (SR 1144) to a multi-lanes with bicycle and pedestrian facilities. This stretch of roadway borders the western boundary of the I-85/Buckhorn Road Economic Development District EDD). Orange County has extended water and sewer to this area to serve the Gravelly Hill Middle School on West Ten Road and to increase the attractiveness of the Economic Development District. Improvements to the transportation system to support plans for that district will be necessary to efficiently and safely accommodate anticipated traffic. The Gravelly Hill Middle School and soccer fields on the north side of West Ten Road also increase traffic on this segment of Buckhorn Road.

- SR 1008 (Mt. Carmel Church Road) bicycle lanes: Construct bicycle lanes on Mt. Carmel Church Road from US 15-501 to the Orange/Chatham County line. This project is a segment of the Mountains to Seas Bicycle Route. Mt. Carmel Church Road, from Chapel Hill's extraterritorial planning jurisdiction (ETJ) to the Orange/Chatham County line is priority 8 of the primary priority bicycle routes on the Orange County Bicycle Transportation Plan. Increased traffic on Mt. Carmel Church has worsened travel conditions in this corridor that has many blind curves, making this popular bicycle route unsafe for bicycling.

- US 70 Bypass Widening: Widen US 70 Bypass, from the Orange/Durham County line to the I-85-US 70 Connector east of Efland, to a four-lane divided section with bike and pedestrian improvements. This project should be phased to address traffic counts and existing congestion. Two segments of this corridor are of particular interest. The first segment is the one through northern Hillsborough because of the economic development potential of this segment (as referenced in the US 70/Cornelious Street Corridor Strategic Plan) and proximity to C.W. Stanford Middle School and Orange High School. The second segment is the segment through the Eno Economic Development District that includes the interchange of Interstate 85 and US 70, and should be contemporaneous with TIP Project I-0305, Interstate 85 widening from I-40 to the Orange/Durham County line.

- NC 86, Bicycle Facilities: Construct bicycle facilities (4-foot paved shoulders) from Chapel Hill (Whitfield Road, SR 1730, SR 1731) to Hillsborough (US 70 Business). This project will extend bicycle facilities on Martin Luther King, Jr. Boulevard (NC86) in Chapel Hill to US 70 Business in Hillsborough. NC 86 from Chapel Hill to Hillsborough is experiencing increasing numbers of bicyclists using this route and there are also two schools along this route, A.L. Stanback Middle School and New Hope Elementary School (just off NC 86 on New Hope Church Road, SR 1723). This route is listed as priority I of the primary bicycle routes proposed in the Orange County Bicycle Transportation Plan.

Projects on Local Priority Lists that are already in the SPOT database

Local Rank	Project Description	Tier	Goal	Previous SPOT Rank	Submitted by	Notes	Cost
not provided	NC 54 (I-40 east to NC 55) – Widen existing two-lane facility to multi-lanes with a divided median with consideration for a bus rapid transit. Provide bicycle, pedestrian, and transit facilities as appropriate.	Regional	Mobility	1	Durham, Durham County		$ 91,500,000
not provided	NC 54 (I-40 to Barbee Chapel Rd.) – Widen to 6-lane divided. Provide bicycle, pedestrian, and transit facilities as appropriate.	Regional	Mobility	17	Durham, Durham County		$ 39,100,000
not provided	Fayetteville Rd. (Woodcroft Pkwy. to Riddle Rd.) – Widen to 4-lane. Provide bicycle, pedestrian, and transit facilities as appropriate.	Subregional	Mobility	35	Durham, Durham County		$ 21,100,000
not provided	Ephesus Church Rd./Pope Rd. (Orange County Line to Old Durham-Chapel Hill Rd.) - On-road bicycle facilities and sidewalks	Subregional	Modernization	38	Durham, Durham County		$ 600,000
not provided	Erwin Rd. (Orange County Line to NC 751) - On-road bicycle facilities and sidewalks (where appropriate)	Subregional	Modernization	42	Durham, Durham County		$ 5,527,000
1, 1	Churton Street (SR 1009) I-40 to Eno River. Widen to Multi-Lanes with landscaped median, bicycle lanes, and sidewalks, widen Bridge No. 240 over Southern Railroad.	Subregional	Mobility	87	Hillsborough, Orange County		$ 19,260,000
not provided	M.L. King, Jr. Pkwy./NC 55 Interchange (U-2405) – Extend Martin Luther King Jr. Pkwy from NC 55 intersection to Cornwallis Rd. Provide bicycle, pedestrian, and transit facilities as appropriate.	Regional	Mobility	91	Durham, Durham County		$ 30,000,000
not provided	NC 751 (Phase I, S. Roxboro Rd. to NC 54) – Widen to 4-lane. Provide bicycle, pedestrian, and transit facilities as appropriate.	Regional	Mobility	107	Durham, Durham County		$ 7,200,000
1	SR 1780/Estes Dr. (SR 1772 (Greensboro Street) to NC 86). Widen to add bike lanes, sidewalks, and transit accommodations.	Subregional	Modernization	109	Carrboro		$ 2,197,000
not provided	SR 1114 (Buckhorn Road) Widening: Widen Buckhorn Road from US 70 to West Ten Road (SR 1144) to a multi-lanes with bicycle and pedestrian facilities.	Subregional	Mobility	120	Orange County	Project now in MPO MAB, Not in 2035 LRTP	?
6	Franklin/Main/Merritt Mill/Brewer intersection improvements – Make changes to improve operation and safety for motorists, pedestrians, bicyclists, and transit.	Subregional	Mobility	131	Carrboro		$ 1,000,000
2, 4	Orange Grove Road Extension (Orange Grove Road to US 70) with sidewalks and bicycle lanes	Subregional	Mobility	136	Hillsborough, Orange County		$ 30,000,000
3. 5	SR 1148 (Eno Mountain Road) and SR 1192 (Mayo Street) at SR 1006 (Orange Grove Road). Realign Intersection and Make Safety Improvements. include bicycle lanes and sidewalks.	Subregional	Modernization	180	Hillsborough, Orange County		$ 2,350,000
not provided	Old Oxford Highway (Phase I, N. Roxboro to Hamlin Rd.) – Expand capacity. Provide bicycle, pedestrian, and transit facilities as appropriate.	Subregional	Mobility	212	Durham, Durham County		$ 38,100,000
2, 6	Homestead Rd. - SR 1009 (Old NC 86) to NC 86. Widen to include bicycle lanes, sidewalks, transit accommodations, and safety improvements (design may vary along length).	Subregional	Modernization	237	Carrboro, Orange County		$ 5,505,000
2	US 70 East-Interstate 85 Connector: Modify the I-85 Connector interchange at US 70 to provide access from all directions.	Statewide	Mobility	250	Orange County	Project now in MPO MAB, Not in 2035 LRTP	?
not provided	Club Blvd. (Ambridge St. to Geer St.) – On-road bicycle facilities and sidewalks	Subregional	Modernization	70 (B/P)	Durham, Durham County		$ 2,978,000
not provided	Dearborn Dr. (E. Club Blvd. to Old Oxford Rd.) - On-road bicycle facilities and sidewalks	Subregional	Modernization	76 (B/P)	Durham, Durham County		$ 2,389,000
not provided	Cornwallis Rd. (Erwin Rd. to Chapel Hill Rd.) - On-road bicycle facilities and sidewalks (where appropriate)	Subregional	Modernization	78 (B/P)	Durham, Durham County		$ 3,024,000
not provided	NC 751 (HOPE VALLEY RD) (SR 1146 (S ROXBORO RD) TO Martin Luther King Pkwy BIKE LANES AND SIDEWALKS.	Regional	Modernization	Unranked (B/P)	Durham, Durham County	Needs to be reclassified by SPOT	$ 4,916,000
4, not provided	NC 86 (US 70A TO Whitfield Rd.) WIDE OUTSIDE LANES.	Regional	Modernization	Unranked (B/P)	Hillsborough, Orange County	Needs to be reclassified by SPOT	$ 933,340
not provided	SR 1110 (BARBEE CHAPEL RD/Farrington Rd.) (NC 54 TO SR 1107 (STAGECOACH RD)) (DESIGN MAY VARY ALONG LENGTH) BIKE LANES AND SIDEWALKS.	Subregional	Modernization	Unranked (B/P)	Durham, Durham County	Needs to be reclassified by SPOT	$ 1,759,000
not provided	SR 1102/SR1977 (SEDWICK RD) (SR 1100 (GRANDALE DR) TO SR 1945 (S ALSTON AVE)) BIKE LANES AND SIDEWALKS.	Subregional	Modernization	Unranked (B/P)	Durham, Durham County	Needs to be reclassified by SPOT	$ 2,187,000
3, 3	SR 1009 (OLD NC 86) (SR 1009 (HILLSBOROUGH RD) TO SR 1777 (HOMESTEAD RD))(DESIGN MAY VARY ALONG LENGTH) SIDEWALKS AND BICYCLE LANES and transit accommodations.	Subregional	Modernization	Unranked (B/P)	Carrboro, Orange County	Needs to be reclassified by SPOT	$ 1,320,000

Local Rank	Project Description	Tier	Goal	Previous SPOT Rank	Submitted by	Notes	Cost
4. 3	SR 1009 (OLD NC 86) (SR 1777 (HOMESTEAD RD) TO SR 1727 (EUBANKS RD)) (DESIGN MAY VARY ALONG LENGTH) SIDEWALKS AND BICYCLE LANES and transit accommodations.	Subregional	Modernization	Unranked (B/P)	Carrboro, Orange County	Needs to be reclassified by SPOT	$ 4,233,000
5, 7	SR 1727 (EUBANKS RD) (SR 1009 (OLD NC 86) TO ROGERS RD) (DESIGN MAY VARY ALONG LENGTH) SIDEWALKS, BICYCLE LANES, and transit improvements.	Subregional	Modernization	Unranked (B/P)	Carrboro, Orange County	Needs to be reclassified by SPOT	$ 1,992,000
3	SR 1009 (OLD NC 86) (I-40 TO SR 1727 (EUBANKS RD.)) WIDE OUTSIDE LANES.	Subregional	Modernization	Unranked (B/P)	Orange County	Needs to be reclassified by SPOT	$ 1,598,000
not provided	SR 1008 (MOUNT CARMEL CHURCH RD) (US 15-501 TO CHATHAM COUNTY LINE) BICYCLE LANES.	Subregional	Modernization	Unranked (B/P)	Orange County	Needs to be reclassified by SPOT	$ 1,215,000

Projects on Local Priority Lists that are not ion the SPOT database - MPO can submit up to 15 new projects

Local Rank	Project Description	Tier	Goal	Previous SPOT Rank	Submitted by	Notes	Cost
not provided	NC 147/Glover Road Interchange – Construct new interchange. Widen Glover Road from NC 147 to Angier Ave. Provide bicycle, pedestrian, and transit facilities as appropriate.	Statewide	Mobility	New Project	Durham, Durham County		?
5, not provided	US 70 Bypass widening from the Orange/Durham County line to the I-85-US 70 Connector east of Efland: Widen US 70 Bypass to a four-lane divided section with bike and pedestrian improvements.	Subregional	Mobility	New Project	Hillsborough, Orange County	Not in 2035 LRTP	?
8	Dairyland Road bicycle facilities: Construct 4-foot paved shoulders on Dairyland Road (SR 1112, SR 1113, SR 1177) from Union Grove Church Road (SR 1111) to Orange Grove Road (SR 1006)	Subregional	Modernization	New Project	Orange County		$ 4,217,000
9	NC 86 (North of Hillsborough) Improvements: Widen NC 86 from US 70 bypass to north of NC 57 to four lanes with intersection improvements at US 70 bypass and NC 57.	Statewide	Mobility	New Project	Orange County		?
not provided	NC 751 (NC 54 to Renaissance Pkwy.) – Widen to 4-lane. Provide bicycle, pedestrian, and transit facilities as appropriate.	Regional	Mobility	New Project	Durham, Durham County		?
not provided	NC 751 (Renaissance Pkwy. To Fayetteville Rd.) – Widen to 4-lane. Provide bicycle, pedestrian, and transit facilities as appropriate.	Regional	Mobility	New Project	Durham, Durham County		?
not provided	Fayetteville Rd. (Renaissance Pkwy. To NC 751) – Widen to 4-lane. Provide bicycle, pedestrian, and transit facilities as appropriate.	Subregional	Mobility	New Project	Durham, Durham County		?
not provided	S. Roxboro Rd. (Cornwallis Rd. to MLK Pkwy.) – Part widen to 4-lane, part 4-lane on new location. Provide bicycle, pedestrian, and transit facilities as appropriate.	Subregional	Mobility	New Project	Durham, Durham County		?
not provided	Southwest Durham Drive (US 15-501 to Mt. Moriah Rd.) – Construct 4-lane road on new location. Provide bicycle, pedestrian, and transit facilities as appropriate.	Subregional	Mobility	New Project	Durham, Durham County		?
6	Hillsborough Western Bypass - US 70 to NC 57. Two Lanes on New Location.	Subregional	Mobility	New Project	Hillsborough	Not in 2035 LRTP	?
1	US 15-501 (Orange County Line to 400' south of Mann's Chapel Rd.) - Add either 15' wide outside lanes or 6' bike lanes	Statewide	Modernization	New Project	Chatham County		$ 2,340,000

Projects not on Local Priority Lists that are already in the SPOT database

Project Classification					Project Location						
SPOTID	Tier	Goal	Improvement Type	TIP #	Route	Route Name	From / Cross Street	To	Description	First Division	First MPO/RPO Name
42688	Statewide	Mobility	Capacity	I-0305A	I-085		SR 1006 near Hillsborough	East of SR 1709	I-40 at Hillsborough to Durham County Line. Widen to Six Lanes and Reconstruct Interchanges and Structures. Section A: SR 1006 near Hillsbourgh to East of SR 1709.	07	Durham-Chapel Hill-Carrboro MPO
42689	Statewide	Mobility	Capacity	I-0305B	I-085		East of SR 1709	Durham County Line	I-40 at Hillsborough to Durham County Line. Widen to Six Lanes and Reconstruct Interchanges and Structures. Section B: East of SR 1709 to Durham County Line.	07	Durham-Chapel Hill-Carrboro MPO
42714	Statewide	Mobility	Capacity	I-3306A	I-040		I-85	US 15/501	I-85 in Orange County to NC 147 (Buck Dean Freeway) in Durham County. Add Additional Lanes. Section A: I-85 to US 15/501.	07	Durham-Chapel Hill-Carrboro MPO
43506	Statewide	Mobility	Capacity	U-2807	US015, US501		I-40	US 15/501	I-40 to US 15/501 Bypass in Durham. Major Corridor Upgrade.	05	Durham-Chapel Hill-Carrboro MPO
43514	Subregional	Mobility	Capacity	U-2831B		New Route - Briggs Avenue Extension	Riddle Road	SR 1951 (So-Hi Drive)	Riddle Road to SR 1951 (So-Hi Drive). Two Lanes on Multi-Lane Right of Way.	05	Durham-Chapel Hill-Carrboro MPO
43623	Regional	Mobility	Capacity	U-4010	NC098	Holloway Street	East of US 70	East of Junction Road	East of US 70 to East of Junction Road. Widen For Center Turn Lane.	05	Durham-Chapel Hill-Carrboro MPO
43673	Subregional	Mobility	Capacity	U-4716B	SR1980	New Route - SR 1980 (Church Street) Extension	NC 54	SR 1978 (Hopson Road)	Extend Church Street north, including sidewalks and bicycle lanes, to Hopson Road and close Church St. at-grade crossing	05	Durham-Chapel Hill-Carrboro MPO
45383	Subregional	Mobility	Capacity	U-4716D	SR1978	Hopson Street	SR 1999 (Davis Drive)	NC 54 (Miami Blvd)	Widen to multi-lanes.	05	Durham-Chapel Hill-Carrboro MPO
44257	Statewide	Health	Modernization	U-5304	US015, US501		NC 86 (Columbia Street)	SR 1742 (Ephesus Church Road)	(US 15/501) Fordham Boulevard (NC 86 (Columbia Street)/US 15/501 South to SR 1742 (Ephesus Church Road)) sidewalks, wide-outside lanes, and transit accommodations.	07	Durham-Chapel Hill-Carrboro MPO
44250	Subregional	Health	Modernization		SR1717	Jack Bennett Road	US 15/501	SR 1721 (Lystra Rd)	Jack Bennett Rd (SR 1717) (US 15/501 to Lystra Rd (SR 1721) safety improvements.	08	Durham-Chapel Hill-Carrboro MPO
44262	Subregional	Health	Modernization		SR1780	Estes Drive	NC 86	Caswell Road	Estes Drive (NC 86 to Caswell Road) widen existing roadway to include two 12-foot travel lanes, four-foot bicycle lanes and sidewalks.	07	Durham-Chapel Hill-Carrboro MPO
44273	Subregional	Health	Modernization		SR1762	Jeremiah Drive	SR 1721 (Lystra Road)	End of Road	Elevate road for flood control.	08	Durham-Chapel Hill-Carrboro MPO
44277	Subregional	Health	Modernization		SR1721	Lystra Road	US 15/501	SR 1008 (Farrington Point Road)	Safety improvements.	08	Durham-Chapel Hill-Carrboro MPO
44279	Subregional	Mobility	Interchange/Intersection		SR1780	Estes Drive	SR 1772 (Greensboro Street)		SR 1780 (Estes Drive)/SR 1772 (Greensboro Street) construct roundabout.	07	Durham-Chapel Hill-Carrboro MPO
44308	Regional	Health	Modernization		NC086	Martin Luther King, Jr. Boulevard	I-40	North Street	Construct Bicycle Lanes and Sidewalks	07	Durham-Chapel Hill-Carrboro MPO
44311	Regional	Health	Modernization		NC054		US 15/501	SR 1110 (Barbee Chapel Road)	Construct Bicycle Lanes and Sidewalks	07	Durham-Chapel Hill-Carrboro MPO
44892	Subregional	Health	Modernization		SR1843	Seawell School Road	SR 1780 (Estes)	SR 1777 (Homestead)	Seawell School Road (Homestead to Estes) bicycle lanes, sidewalks, transit accommodations, and Intersection safety improvements (design may vary along length)	07	Durham-Chapel Hill-Carrboro MPO
46022	Statewide	Mobility	Interchange/Intersection		US015, US501		SR 1742 (Ephesus Church Road)		Intersection Improvements	07	Durham-Chapel Hill-Carrboro MPO

Bicycle Projects on Local Priority Lists - MPO can submit up to 10 projects

Local Rank	Project Description	Submitted by	Notes
1, 1	W. Ellerbe Creek Trail (existing trail to Stadium Drive) – Shared Use Path	Durham, Durham County	
2, 2	Scott King Road (Fayetteville Rd. to Grandale Rd.) – On-road bicycle facilities	Durham, Durham County	
3, 3	Rocky Creek Trail (NC 55 to Kelly Bryant Bridge) – Shared Use Path	Durham, Durham County	
4, 4	Duke Beltline Trail – Shared Use Path	Durham, Durham County	
5, 5	NC 751 (Erwin Rd. roundabout to Hillsborough Rd./US 70) – On-road bicycle facilities	Durham, Durham County	
6, 6	Cole Mill Road (Rose of Sharon Rd. to Orange County line) – On-road bicycle facilities	Durham, Durham County	
1	Broad St. to Seawell School Rd. – Construct a multi-use path between Broad St. and Village Dr. and between Village Dr. and Seawell School Rd.; install on-street bicycle facilities on Village Dr.	Carrboro	
2	Morgan Creek Greenway – Construct a multi-use path from University Lake to the western terminus of the first phases of the greenway and a multi-use path spur to BPW Club Rd.	Carrboro	
3	NC 54 from James St. to Anderson Park – Construct a side path on the north side of the road to accommodate two-direction bicycle transportation.	Carrboro	

Pedestrian Projects on Local Priority Lists - MPO can submit up to 10 projects

Local Rank	Project Description	Submitted by	Notes
1, 1	NC 54 (NC 55 to RTP) – Sidewalks	Durham, Durham County	
2, 2	Roxboro Road (Pacific Ave. to Murray Ave.) – Sidewalks	Durham, Durham County	
3, 3	Cook Road (Fayetteville Rd. near Hillside High to Martin Luther King, Jr. Parkway) – Sidewalks	Durham, Durham County	
4, 4	Duke Street (Murray Ave. to Roxboro Rd.) – Sidewalks	Durham, Durham County	
5, 5	Horton Road (Guess Rd. to Roxboro Rd.) – Sidewalks	Durham, Durham County	
6, 6	Holloway Street (Junction Rd. to Chandler Rd.) – Sidewalks	Durham, Durham County	
1	W. Main St. – Install improved pedestrian crossings and sidewalks from Hillsborough Rd. to Jones Ferry Rd.	Carrboro	
2	S. Greensboro St. – Add sidewalks on the west side of the road from the northern end of Old Pittsboro Rd. to Merritt Mill Rd.	Carrboro	
3	N. Greensboro St. corridor from Weaver St. to Shelton St. – pedestrian improvements	Carrboro	
4	Estes Dr. – Construct a sidewalk on the south side of the road from N. Greensboro St. to the Town limits.	Carrboro	
5	Old NC 86 – Construct a sidewalk on the east side of the road from Homestead Rd. to Eubanks Rd.	Carrboro	
1	US 15-501 at Mann's Chapel Rd. - Add pedestrian refuge islands, signals, crosswalks	Chatham County	NCDOT Bike Ped Division does not want to consider intersection improvements as TIP projects.
1, 1	SR 1006, Orange Grove Road, at Interstate 40: Construct a pedestrian bridge over I-40. Include sidewalk from I-40 to Timbers Drive	Hillsborough, Orange County	

Transit Projects on Local Priority Lists - MPO can submit unlimited number of projects

Project Description	Year Needed	Cost	Submitted By
14 40' Hybrid Replacement Buses @$650,000/bus	2013	$9.1 million	Durham, Durham County
14 40' Hybrid Replacement Buses @ $700,000/bus	2014	$9.8 million	Durham, Durham County
15 ADA Replacement Vans @ $45,000/van	2013	$675,000	Durham, Durham County
6 Replacement Service Vehicles @ $30,000/vehicle	2013	$180,000	Durham, Durham County
4 Replacement Service Vehicles @ $35,000/vehicle	2014	$140,000	Durham, Durham County
Passenger Amenities (shelters, benches, trashcans, solar lights)	2013	$500,000	Durham, Durham County
Passenger Amenities (shelters, benches, trashcans, solar lights)	2015	$750,000	Durham, Durham County
8 40' Hybrid Expansion Buses @$650,000/bus • 15 minutes headways to Duke • Direct route from downtown to Southpoint • Direct route from downtown to Riverside HS • Direct route from Duke to Southpoint	2013	$5.2 million	Durham, Durham County
18 40' Hybrid Expansion Buses @$700,000/bus • 15 minutes headways on routes 1, 3, 4, 6, 7, and 10 • 30 minutes headways on route 15 • Cross-town routes	2014	$12.6 million	Durham, Durham County
4 40' Hybrid Expansion Buses @$750,000/bus • 15 minutes headways on routes 12 and 16	2015	$3.0 million	Durham, Durham County
4 40' Hybrid Expansion Buses @ $750,000/bus • New Route on MLK Pkwy, NC 55 to South Square • New route from Downtown to Butner	2015	$3.0 million	Durham, Durham County
Land Acquisition and Construction of 2 Park –n-ride Lots @ $1.1 million/lot • North Durham/Treyburn area • US 70 east or Parkwood area	2015	$2.2 million	Durham, Durham County
Regional Rail Service – Durham to Chapel Hill – Light Rail Transit or Bus Rapid Transit - planning and engineering phase *Description and cost will be determined by Triangle Regional Transit Program	2013-2015	*	Durham, Durham County
Regional Rail Service – Durham to Raleigh – Commuter Rail – planning and engineering phase *Description and cost will be determined by Triangle Regional Transit Program	2013-2015	*	Durham, Durham County
Park and Ride Lot in the Buckhorn Economic Development District:			Orange County

Rail Projects on Local Priority Lists - Projects to be submitted directly to the Rail Division

Project	Submitted by
Train station/multi-modal center: Construct a train station in Hillsborough and request AMTRAK service to Orange County. The train station can also serve future commuter rail operations and anchor a multimodal transportation hub in Hillsborough. A revenue and ridership study conducted by the North Carolina Department of Transportation Rail Division and AMTRAK has indicated that there is enough potential ridership to make a stop in Hillsborough financially feasible.	Hillsborough, Orange County

Prioritization 2.0								DCHC MPO Current Project Ranking Methodology			Subcommittee Recommendation							
		Mobility			Modernization							Mobility			Modernization			
Criteria	Metric	% of Score - Statewide Tier	% of Score - Regional Tier	% of Score - Subregional Tier	% of Score - Statewide Tier	% of Score - Regional Tier	% of Score - Subregional Tier	Criteria	Metric	% of Score	Criteria	Metric	% of Score - Statewide Tier	% of Score - Regional Tier	% of Score - Subregional Tier	% of Score - Statewide Tier	% of Score - Regional Tier	% of Score - Subregional Tier
Congestion	current volume/capacity + AADT	20%	20%	20%	10%	5%		Travel Demand	2035 volume/current capacity	14.3%	Congestion	current volume/capacity + AADT	30%	30%	30%	5%	5%	no SPOT data
Safety	critical crash rates, crash density, severity	10%	5%	5%	10%	10%	10%	Safety	crashes/100 million vehicle miles	14.3%	Safety	critical crash rates, crash density, severity	20%	20%	25%	15%	15%	20%
Pavement Condition	pavement condition rating	10%	5%	5%	10%	5%		not included			Do not include. Poor road maintenance does not justify widening or modernization.							
Benefit/Cost	difference between 2009 v/c and 2009 v/c with project * AADT *	20%	15%					not included			Do not include. Difference in v/c should not be the sole measurement of a project's benefits. Also duplicative of congestion criteria.							
Economic Competitiveness	use TREDIS model, input change in VHT, output economic value added based on % change in Division	10%	5%					not included			Economic Competitiveness	use TREDIS model, input change in VHT, output economic value added based on % change in Division	20%	20%	no SPOT data	no SPOT data	no SPOT data	no SPOT data
Lane Width	existing width vs. standard width				20%	15%	10%	not included			Lane Width	existing width vs. standard width	no SPOT data	no SPOT data	no SPOT data	25%	25%	25%
Shoulder Width	existing width vs. standard width				20%	15%	10%	not included			Shoulder Width	existing width vs. standard width	no SPOT data	no SPOT data	no SPOT data	25%	25%	25%
Multi-modal	options, connection, or design features	Bonus Points: 8 for HOV/HOT, BRT, Rail, BOSS; 5 for connection to terminal; 3 for sidewalks, bike lanes, transit facilities, etc.						Multi-modal	number of modes benfited	14.3%	Multi-modal	options, connection, or design features	Bonus Points: 8 for HOV/HOT, BRT, Rail, BOSS; 5 for connection to terminal; 3 for sidewalks, bike lanes, transit facilities, etc.					
not included								Environmental Impacts	Air quality impacts and GIS analysis of wetlands, streams, species habitat, parks, and water supply watershed	14.3%	Environmental Impacts	Air quality impacts and GIS analysis of wetlands, streams, species habitat, parks, and water supply watershed	10%	10%	15%	10%	10%	10%
not included								Community Impacts	GIS analysis of population density, schools, parks, historic resources, and cemeteries	14.3%	Community Impacts	GIS analysis of population density, schools, parks, historic resources, and cemeteries	10%	10%	15%	10%	10%	10%
not included								Environmental Justice	GIS analysis of negative impact to low-income and minority areas	14.3%	Environmental Justice	GIS analysis of low-income and minority areas	10%	10%	15%	10%	10%	10%
not included								Funding Status	percent of funding in current TIP	14.3%	Do not include. Unfunded/post-year projects are no longer listed in the TIP.							
MPO Rank		10%	25%	40%	10%	25%	40%											
Division Rank		20%	25%	30%	20%	25%	30%											
													100%	100%	100%	100%	100%	100%

Prioritization 2.0			DCHC MPO Current Project Ranking Methodology			Subcommittee Recommendation					
						Bicycle			Pedestrian		
Criteria	Metric	% of Score	Criteria	Metric	% of Score	Criteria	Metric	% of Score	Criteria	Metric	% of Score
Right-of-Way Acquired	Amount of right-of-way acquired	18%	Right-of-Way Availability	Amount of right-of-way acquired	11.1%	Right-of-Way Acquired	Amount of right-of-way available	15%	Right-of-Way Acquired	Amount of right-of-way available	15%
			Local Connectivity	Number of connections to existing sidewalks, greenways, and bicycle facilities	11.1%						
Connectivity	Access to transit, schools, CBD, high density residential or commercial, parks, other bike/ped facilities	15%	Travel Demand from Local Land Uses	Number of schools, colleges, parks, major retail centers, major employment centers, and transit routes within 0.5 miles of ped facility or 2 miles of bike facility	11.1%	Connectivity	Access to transit, schools, CBD, high density residential or commercial, parks, other bike/ped facilities	20%	Connectivity	Access to transit, schools, CBD, high density residential or commercial, parks, other bike/ped facilities	20%
Inclusion in an Adopted Plan	In adopted plan	18%	not included			Do not include. All DCHC MPO jurisdictions have plans.					
Bicycle or Pedestrian Crashes	3 or more bike/ped crashes within last 5 years	2%	Safety	Number of bike/ped crashes within last 3 years	11.1%	Bicycle or Pedestrian Crashes	3 or more bike/ped crashes within last 5 years	10%	Bicycle or Pedestrian Crashes	3 or more bike/ped crashes within last 5 years	10%
Demand/Density	Population density within 0.5 miles of ped facility or 1.5 miles of bicycle facility	12%	Community Impacts	GIS analysis of population density, schools, and parks	11.1%	Demand/Density	Population density within 1.5 miles of bicycle facility	15%	Demand/Density	Population density within 0.5 miles of ped facility	15%
not included			Traffic volume	AADT on roadway	11.1%	Traffic volume	AADT on roadway	15%	Traffic volume	AADT on roadway	15%
not included			Regional Connectivity	Part of regional bicycle route or pedestrian connection to Triangle Transit regional route, future rail, or local bus route	11.1%	Regional Connectivity	Part of regional bicycle route or pedestrian connection to Triangle Transit regional route, future rail, or local bus route	15%	Regional Connectivity	Part of regional bicycle route or pedestrian connection to Triangle Transit regional route, future rail, or local bus route	15%
not included			Environmental Impacts	GIS analysis of impact to wetlands, streams, species habitat, and water supply watersheds	11.1%	Do not include. Negative environmental impact of construction of bicycle facilities, sidewalks, and greenways is minimal.					
not included			Environmental Justice	GIS analysis of benefit to minority and low-income population	11.1%	Environmental Justice	GIS analysis of benefit to minority and low-income population	10%	Environmental Justice	GIS analysis of benefit to minority and low-income population	10%
not included			Funding Status	percent of funding in current TIP	11.1%	Do not include. Unfunded/post-year projects are no longer listed in the TIP.					
MPO Rank		35%						100%			100%

Prioritization 2.0									DCHC MPO Current Project Ranking Methodology			Subcommittee Recommendation		
		Statewide Tier	Regional Tier			Subregional Tier						All Tiers and Types		
Criteria	Metric	All % of Score	Mobility % of Score	Infrastructure Health % of Score	Safety & Security % of Score	Mobility % of Score	Infrastructure Health % of Score	Safety & Security % of Score	Criteria	Metric	% of Score	Criteria	Metric	% of Score
Availability	One point for every percent increase in system-wide service hours; maximum 12 points	18%	6%	2%	6%	2%	2%	6%	not included			Availability	One point for every percent increase in system-wide service hours	15%
Connectivity	One point for connection to taxi stand, bicycle facility, sidewalk facility; demand response transit, high density housing within 1/2 mile, mixed use development; two points for connection to fixed route with 1 hour all day headway; three points for connection to fixed route with 30 minute peak headway; maximum 10 points	15%	5%	2%	5%	2%	2%	5%	Connectivity	Number of connections to fixed route transit systems	14.3%	Connectivity	One point for connection to taxi stand, bicycle facility, sidewalk facility; demand response transit, high density housing within 1/2 mile, mixed use development; two points for connection to fixed route with 1 hour all day headway; three points for connection to fixed route with 30 minute peak headway	15%
Technology	One point for every percent increase in funding spend on information technology; maximum 8 points	12%	4%	2%	4%	2%	2%	4%	not included			Technology	One point for every percent increase in funding spend on information technology	5%
Age/Modernization	One point for every percent decrease in average age of fleet; Facilities: age of old facility/expected life of new facility + one-tenth of one point for every percent increase in surface area of space; maximum 20 points	30%	10%	4%	10%	4%	4%	10%	not included			State of Good Repair	One point for every percent decrease in average age of fleet; Facilities: one-tenth of one point for every percent increase in surface area of space	50%
not included									Service Type	Replacement/O&M, Expansion/LRT/BRT/PnR, Enhancements/Amenities/ITS	14.3%	Do not include.		
not included									Ridership	Estimated number of new or benefitted riders per year	14.3%	Do not include.		
not included									Environmental Impacts	Based on project type, vehicle type, GIS analysis	14.3%	Environmental Impacts	Based on project type, vehicle type	5%
not included									Community Impacts	Based on density, schools, parks served	14.3%	Community Impacts	Based on density, schools, parks served	5%
not included									Environmental Justice Impacts	GIS analysis of benefit to low-income and minority areas	14.3%	Environmental Justice Impacts	GIS analysis of benefit to low-income and minority areas	5%
not included									Funding Status in TIP	percent of funding in current TIP	14.3%	Do not include.		
MPO Rank		25%	75%	90%	75%	90%	90%	75%						

DURHAM-CHAPEL HILL-CARRBORO MPO
METHODOLOGY FOR RANKING
METROPOLITAN TRANSPORATION IMPROVEMENT PROGRAM
PRIORITY PROJECT REQUESTS (FY 2014-2020)

INTRODUCTION

The purpose of the Regional Priority List is to facilitate determination of the region's project priorities to be used in development of a fiscally constrained Transportation Improvement Program (TIP). SAFETEA-LU calls for a TIP development process that documents a methodology for ranking project requests, reflects local and metropolitan goals, and addresses mobility, environmental and air quality goals.

OBJECTIVE

The methodology outlined below is designed to address multi-modal transportation needs and to ensure regional balance through the use of specific technical criteria. The Technical Coordinating Committee (TCC) will use the methodology to develop a draft Regional Priority List. This draft Priority List is to be used as a starting point or a reference base by the Transportation Advisory Committee (TAC) for the approval of a final Regional Priority List.

The TAC may reorder projects at its discretion to promote jurisdictional and geographical balance, or based upon the TAC members' knowledge of the urban area and the policies of their communities. Therefore, the TCC will make its technical recommendation on a draft Priority List based on the methodology described in this document, and the TAC will then be afforded the opportunity to make any changes it deems appropriate.

METHODOLOGY GOALS

- Produce a program of projects (or project priorities) which satisfies MPO, local and state goals, and addresses SAFETEA-LU policies of system preservation, operational efficiency in the movement of people and goods, multi/inter-modalism, and air quality mandates.

- Be simple enough for project-level analysis without requiring unnecessary data collection.

- Be understandable by the general public.

PROCEDURE FOR RANKING PROJECTS

1) Goal Setting For Regional Priority List

Since the Regional Priority List should be a subset of the DCHC MPO Long Range Transportation Plan (LRTP), the goals for the regional priority list are the same as the DCHC MPO goals and objectives in the 2035 LRTP.

2) Submission of Local Priority Lists

All MPO member jurisdictions and Triangle Transit will submit a local priority list to the MPO. The

DCHC MPO requests that the local jurisdictions apply screening criteria during the development of these lists. The screening criteria are:

a) Regional Goals - How well does the project meet the adopted regional goals? Is the project an element of the current long-range plan? Does it implement community objectives (for the intrastate system, does it meet NCDOT mobility objectives)? Does the project have a broad base of local support?

b) Cost Effectiveness - How much benefit does the project offer compared to the estimated cost?

c) Timing Factor – Is the project needed within the TIP funding cycle? Is timing a critical element for the project (one-time opportunity)? Will the opportunity to do the project be lost if it is not in the current priority cycle?

Local jurisdictions may also elect to use the ranking methodology to create their local priority lists but are not required to do so. The TCC will review local priority lists for adherence to these screening criteria before applying the ranking methodology.

Local jurisdictions shall provide the DCHC MPO a list of projects in priority order. The list should be grouped by mode (highway, transit, bicycle, and pedestrian). The local jurisdictions shall provide a short description of the project, including the project limits, name, mileage, and cost. The description should note any essential elements of the project such as bike lanes, sidewalks, transit accommodations, vehicle types, etc.

3) Submission of Projects for the Regional Priority List

For the 2014-2020 TIP, the DCHC MPO will submit projects to NCDOT's Strategic Planning Office of Transportation by July 2011for the application of the NCDOT's quantitative ranking methodology. The MPO is limited to fifteen new highway projects, ten bicycle projects, ten pedestrian projects, and an unlimited number of transit projects. Highway projects that were submitted for the 2012-2018 TIP do not need to be resubmitted.

DCHC MPO will combine the local priority lists into a list that the MPO will submit to NCDOT. In the event that more projects are submitted to the MPO than the MPO is allowed submit to NCDOT, the TCC will select projects based on the screening criteria, the air quality horizon year in the LRTP, regional significance, geographic distribution, and local priority.

4) Application of the Ranking Methodology

The NCDOT will apply a quantitative ranking methodology to the MPO's projects and provide the MPO project scores and data. DCHC MPO staff in coordination with local staff will use the project data and collect additional data to apply the MPO ranking methodology. The list of projects will then be presented to the TCC as the draft regional priority list.

The TCC first examines the consistency in which local jurisdictions and MPO staff have responded to the screening criteria and applied the methodology. If the methodology is not applied consistently, the TCC can agree to change some responses for consistency among all projects. The draft Regional Priority List is then forwarded to the TAC, as the TCC's recommended project priorities for the urban area. The TCC will also recommend a distribution of highway ranking points among projects.

5) Approval of Project Rankings and Points

The TAC will release the draft list for public comment and hold a public hearing at a TAC meeting. The TAC may reorder projects at its discretion to promote jurisdictional and geographical balance, or based upon the TAC members' knowledge of the urban area and the policies of their communities. After review and public comment, the TAC will approve the final Regional Priority List including the distribution of highway ranking points.

APPLICATION OF THE METHODOLOGY

1. There are four separate ranking methodologies based on the primary mode of transportation: 1) highway; 2) bicycle; 3) pedestrian; and 4) transit. The four ranking methodologies are independent of each other. Points for different modes are on different scales and are not comparable.

2. Points are weighted and totaled for each project using the four modal ranking methodologies outlined on the last pages of this document.

MODAL RANKING METHODOLOGIES IN DETAIL

Highway

There are nine criteria. All criteria are not applied to all project types and tiers, and the criteria are weighted differently based on the project type and tier.

1. *Congestion* - This category awards points to projects based on the level of congestion and travel demand. For road projects, congestion is measured by the volume to capacity (V/C) ratio and the annual average daily traffic (AADT). For new road facilities in which traffic counts are not available, volumes on a parallel existing facility may be used.

   Data will be collected and provided by NCDOT's SPOT.

2. *Safety* - Safety points are awarded to projects based on the critical crash rate, crash density, and severity.

   Data will be collected and provided by NCDOT's SPOT.

3. *Economic Competitiveness* – Points are awarded based on the output from the TREDIS model.

   Data will be collected and provided by NCDOT's SPOT.

4. *Lane Width* – Points are awarded based on the existing width of the lane versus the standard width

   Data will be collected and provided by NCDOT's SPOT.

5. *Shoulder Width* – Points are awarded based on the existing width of the shoulder versus the standard width.

   Data will be collected and provided by NCDOT's SPOT.

6. *Multi-modal Benefits*– Points are awarded to projects based on if they include multi-modal options (BRT, LRT, BOSS, HOV/HOT), connections (airport, rail depot, transit terminal), or design features (sidewalks, pedestrian crossings, bicycle lanes, wide outside shoulders, bus pullouts, transit prioritization, bus shelters).

   Local jurisdictions are asked to describe the benefits. Data will be collected and provided by NCDOT's SPOT.

7. *Environmental Impacts* - Points are awarded based on the impact on wetlands, streams, water supply watersheds, wildlife habitat, parks, and air quality.

   The MPO will provide local jurisdictions a base map of environmental areas. Local jurisdictions are asked to use the environmental impacts worksheet to assess the impact of projects based on a GIS analysis.

8. *Community Impacts* – Points are awarded based on the impact on neighborhoods, communities, schools, parks, recreation facilities, historic resources, and cemeteries.

   The MPO will provide local jurisdictions a base map of community resources and 2010 population density. Local jurisdictions are asked to use the community impacts worksheet to assess the impact of projects based on a GIS analysis.

9. *Environmental Justice*- Points are awarded based on the impact on low-income and minority populations. This item is designed to penalize projects that may have negative impacts on low income areas or federally recognized disadvantaged groups.

   The MPO will provide local jurisdictions a base map that indicates which Traffic Analysis Zones have a high percentage of minority and low income populations. Local jurisdictions are asked to use the environmental justice worksheet to assess the impact of projects based on a GIS analysis.

Bicycle and Pedestrian

There are seven criteria that are weighted differently. All project types and tiers are subject to the same criteria.

1. *Right-of-Way Availability* – This category awards points to projects based on the right-of-way available for the project. Right-of-way should be estimated based on the local jurisdiction's best knowledge of the area and the NCDOT right-of-way database. Extensive research into property deeds is not required.

   Data will be collected and provided by NCDOT's SPOT.

2. *Connectivity* – This category awards points to projects based on the proximity to transit, schools, central business districts, high density residential or commercial areas, parks, and other bicycle and pedestrian facilities.

   Data will be collected and provided by NCDOT's SPOT.

3. *Bicycle or Pedestrian Crashes* - Points are awarded based on if there have been three or more bicycle or pedestrian crashes within the last five years.

Data will be collected and provided by NCDOT's SPOT.

4. *Demand/Density* – Points are awarded based on the population density within 1.5 miles of a bicycle facility or 0.5 miles of a pedestrian facility.

   Data will be collected and provided by NCDOT's SPOT.

5. *Traffic Volume* - This category awards points to projects based on the amount of vehicular traffic on the road that the bicycle and pedestrian facility is provided on. Off-road greenways are based on the parallel or alternate roadways. More points are provided for higher volume facilities to reflect the safety hazard for bicyclists and pedestrians on larger busier roadways. The traffic counts should be taken from the latest Annual Average Daily Traffic (AADT) maps on the NCDOT website.

   Data will be collected and provided by NCDOT's SPOT.

6. *Regional Connectivity* – Points are awarded to bicycle based on if the project is a part of the regional routes recognized in the 1992 Regional Bicycle Plan (these routes will be reevaluated as part of the 2035 LRTP process). Projects part of a regional bicycle route that partially exists receive three points. Projects part of a regional bicycle route that does not currently exist receive two points. Projects not part of a regional bicycle route that connect to a regional bicycle route receive one points. Projects that are not part of a regional bicycle route and do not connect to a regional bicycle route receive zero points.

   Points are awarded to pedestrian only projects based on if the project provides a pedestrian connection to regional and local buses. Project limits that include a bus stop for an existing Triangle Transit regional route receive three points. Project limits that include a station area for a future regional rail receive two points. Project limits that include a bus stop for a local bus route receive one point. Project limits that do not include a bus stop for a transit route receive zero points.

7. *Environmental Justice* - Points are awarded based on the impact on low-income and minority populations. Since bicycle and pedestrian facilities are perceived as amenities and usually require little right-of-way acquisition, projects that serve low income and minority areas will receive more points.

   The MPO will provide local jurisdictions a base map that indicates which Traffic Analysis Zones have a high percentage of minority and low income populations. Local jurisdictions are asked to use the environmental justice worksheet to assess the impact of projects based on a GIS analysis.

Transit

There are seven criteria for transit projects that are weighted differently. All project types and tiers are subject to the same criteria.

1. *State of Good Repair* – This category is designed to award points to projects that are essential to maintaining the current transit service. Projects will receive more points for every percentage decrease in average age of fleet. Facilities receive more points for every percentage increase in surface area of space.

Data will be collected and provided by NCDOT's SPOT.

2. *Availability* – This category awards points based on the percentage increase in system-wide service hours.

   Data will be collected and provided by NCDOT's SPOT.

3. *Connectivity* – Projects receive points based on connections to taxi stands, bicycle facilities, sidewalk facilities, demand response transit, high density housing within 0.5 miles, mixed use development, and fixed route services.

   Data will be collected and provided by NCDOT's SPOT.

4. *Technology* – Projects receive points based on the percentage increase in funding on information technology.

   Data will be collected and provided by NCDOT's SPOT.

5. *Environmental Impacts* - Points are awarded based on the impact on the natural environment. Since most transit projects use existing roadway facilities and thus do not require construction, projects are assessed based on their relative positive air quality impacts. Transit projects that require construction such as fixed guideway, BRT, and park and ride lots should have points deducted if significant environmental impacts may occur due to construction, including impacts on wetlands, streams, water supply watersheds, and rare species habitats.

   The MPO will provide local jurisdictions a base map of environmental areas. Local jurisdictions are asked to use the environmental impacts worksheet to assess the impact of projects based on project type and a GIS analysis for construction projects.

6. *Community Impacts* – Points are awarded based on the impact on neighborhoods, communities, schools, parks, and recreation facilities. Since transit projects are community amenities and usually require little right-of-way acquisition, projects that serve more dense neighborhoods and community facilities receive more points.

   The MPO will provide local jurisdictions a base map of community resources and 2010 population density. Local jurisdictions are asked to use the community impacts worksheet to assess the impact of projects based on a GIS analysis.

7. *Environmental Justice* - Points are awarded based on the impact on low-income and minority populations. Since transit projects are community amenities and usually require little right-of-way acquisition, projects that serve low income and minority areas will receive more points.

   The MPO will provide local jurisdictions a base map that indicates which Traffic Analysis Zones have a high percentage of minority and low income populations. Local jurisdictions are asked to use the environmental justice worksheet to assess the impact of projects based on a GIS analysis.

OBSERVATIONS

The order of transit priorities could vary significantly from year to year if anticipated funding sources are reduced or eliminated by Congress.

- Mandates (e.g., the American's with Disabilities Act) may take precedence when programming projects from the Regional Priority List in the TIP.

- The fiscal constraints of programming projects in the TIP may result in the programming of less expensive, lower ranked projects.

- Some lower ranking projects may be implemented earlier than a higher ranked, large project due to the time constraints associated with a more complex project (i.e., major investment studies, preparing environmental documents, designing the project, right-of way acquisition, etc.).

- The utility of ranking more than 25 projects is minimal due to the availability of project funds.

MEMORANDUM

TO: Technical Coordinating Committee (TCC)
DCHC MPO

FROM: Lead Planning Agency

DATE: May 25, 2011

RE: Job Access Reverse Commute and New Freedom 2011 Call for Projects

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The available funds are from two sources – Job Access/Reverse Commute (JARC) and New Freedom (NF). JARC funds are intended to fund "the development and maintenance of transportation services designed to transport welfare recipients and eligible low-income individuals to and from jobs and activities related to their employment". NF funds are intended to provide improved public transportation services and alternatives to public transportation for people with disabilities beyond those required by the Americans with Disabilities Act of 1990 (ADA). Eligible applicants for both programs include state or local governments, private non-profit organizations, and operators of public transportation services including private operators of public transportation services. Funds may be used for planning, capital, or operating costs. Funds can be used to support up to 80 percent for capital projects, and not more than 50 percent for operating assistance. Up to 10% of annual funds are permitted to be spent on administration of the program

As required by the FTA, the DCHC MPO created a Coordinated Public Transit - Human Services Transportation Plan to guide the selection and funding of future JARC and NF projects. The TAC approved this plan in March 2007. The DCHC MPO has held three Calls for Projects in 2007, 2008, and 2009 for the MPO's FY 2006- FY 2009 JARC and NF funds using the procedures outlined in the Coordinated Public Transit - Human Services Transportation Plan. The DCHC MPO has allocated all of the FY 2007, 2008 and a portion of FY 2009 funds. The remainder of FY 2009 funds available will be made available for allocation during FY 2011's Call for Projects.

Funding Availability

The MPO has received JARC appropriations for FFY2006 – FFY2010, and a partial appropriation for FFY 2011. Funding through FFY 2009 have been programmed and obligated, except for $72,671 from FFY 2009. The new appropriation for FFY 2010 is $195,374 and FFY 2011 is $77,804. The LPA will be requesting $27,317 (10%) for administrative cost related to the FFY 2010 & 2011 grant years. The remainder of $318,532 is available for FY2011 Call-for-project programming.

The MPO has received NFP appropriations for FFY2006 - FFY2010, and a partial appropriation for FFY 2011. Funding through FFY2009 have been programmed and obligated, except for $10,769 from FFY 2009. The new appropriation for FFY2010 is $87,757 and FFY 2011 is $34,755. The LPA will be requesting $12,253 (10%) for administrative cost related to the FFY 2010 & 2011 grant years. The remainder of $121,028 is available for FY2011 Call-for-project programming.

Updated Schedule

The LPA recommends the following schedule for the 2011 Call for Projects:

- 9/22/2010 TCC received FFY 2010 appropriation & updated schedule for 2011 Call for Projects.
- 10/13/2010 TAC receives updated schedule for 2011 Call for Projects.
- 11/17/2010 TCC will receive 2011 Call-for-Projects application package.
- 12/08/10 TAC approve application package and request LPA staff begins project solicitations.
- 12/10/10 Begin Advertising & Solicitation for applications
- 1/19/11 Application Workshop
- 2/28/11 Application deadline
- 3/1/11 Review Committee reviews and scores proposals
- 4/21/11 Review Committee selects CPT-HSTP projects for recommendation to the TCC
- 5/25/2011 TCC action on Review Committee recommendations
- 6/08/2011 TAC action on TCC recommendations & STIP Amendment to add new projects
- 6/17/2011 Notifications sent out to grant recipients
- 6/30/2011 FTA Application Deadline for obligation 2010 program of projects.
- 09/23/2011 FY 2009 funds lapse if not obligated

Committee Recommendations

The Capital Area Metropolitan Planning Organization (CAMPO) reviewed and scored the applications. The LPA staff made the final recommendations for funding based on the scoring results. The DCHC has traditionally, for the last two calls for projects, agreed to be lenient on the project requirement that projects be new or expanded due to the current budget conditions.

Recommendations for JARC funding:

- CHT – Year-Round night service (continuation) - $63,687
  - This project would maintain the 1 year of operations of evening service on the NS and G routes, providing transportation for low-income and transit dependent residents and employees with non-traditional work hours.
- Durham County – On-Demand transportation services - $37,950
  - The Durham County Job Access Transportation Program will provide demand-responsive service through Durham County ACCESS (DCA) to residents of Durham County to and from jobs and activities related to their employment. The service will be provided to residents throughout the county, but will be marketed especially to those who are transportation disadvantaged - low-income, live in the rural areas of the county and to those who are otherwise limited in their ability to access other modes of transportation.
- CHT – HS/Rogers Road extended bus service (continuation) - $42,408
  - Continuation of extension service hours on two routes that connect downtown/UNC to north Chapel Hill and east Chapel Hill.
- Suzi Taxi – The Work Wheels Work Para-Transit service - $163,958
  - Work Wheel Works Program is a para-transit service that offers transportation for low-income individuals and welfare assistance recipients, in Durham, NC.
- City of Durham – 10% for administration of the program - $27,317

Recommendations for NF funding:

- CHT – GoTriangle Regional Transit Information Partnership - $66,000
  - This project would allow CHT to continue membership for 2 years in the GoTriangle Regional Transit Information Center.
- DATA – Improved Service for Paratransit Clients - $54,600
  - This project is a continuation of taxi and accessible shuttle services for DATA ACCESS passengers who require early pick-ups from medical appointments.
- City of Durham – 10% for administration of the program - $12,253

SUMMARY

Job-Access Reverse Commute (JARC)	**Applicant**	**Chapel Hill Transit**	**Durham County**	**Chapel Hill Transit**	**Suzie Taxi**	**City of Durham**	**Total**
	Service	Year-Round Night Bus Service	County On-Demand Transportation Service	HS/Rogers Road Extended Bus Service	The Work Wheels Work Para-Transit Program	10% Program Administration	
	Requested	$191,061	$37,950	$127,225	$163,958	$27,317	$547,511
	Recommendation	$63,687	$37,950	$42,408	$163,958	$27,317	$335,320
New Freedom (NFP)	**Applicant**	**Chapel Hill Transit**	**DATA**			**City of Durham**	**Total**
	Service	Go Triangle Call Center Membership	Access Medical Taxi Program			10% Program Administration	
	Requested	$99,000	$54,600			$12,253	$165,853
	Recommendation	$66,000	$54,600			$12,253	$132,853

Attachment 8A for this agenda item is the summary of all applications submitted and the scoring results. Attachment 8B is the 2011 Proposed Program of Projects

TCC Action: Review 2011 Proposed JARC & NF Program of Projects and recommend that TAC approve it also

2011 Call for Projects
Proposed Program of Projects
JARC (Section 5317) FTA Grant Program
5.25.2011

TCC 5/25/2011 Attachment 8A

MPO Approval Date	Subrecipient	Agency Type	Location of Service	Description of the Service	Project Type	Total Cost	Federal Share	% Federal	% Planning and Program Administration	FTA TEAM Project ID
5/11/2011	CHT	Public Transit	Year-round Night Service	Chapel Hill Transit (CHT) is requesting funding to continue night service available during full service periods on the CM, CW, D, J, and V routes to be year-round extend the Froute service later in the evening on a year-round basis, and continue evening service on the NS and G routes. The operation of these services between the hours of 6:30 p.m. and 10:00 p.m. on a year-round basis will provide consistent nighttime access to a greater proportion of residents and employees in CHT's service area for those with non-traditional work hours.	Operating	$ 127,374	$ 63,687	50%	0%	NC-37-X017-XX
5/11/2011	Durham County	Government	Durham County	The Durham County Job Access Transportation Program will provide demand-responsive service through Durham County ACCESS (DCA) to residents of Durham County to and from jobs and activities related to their employment. The service will be provided to residents throughout the county, but will be marketed especially to those who are transportation disadvantaged - low-income, live in the rural areas of the county and to those who are otherwise limited in their ability to access other modes of transportation.	Operating	$ 75,900	$ 37,950	50%	0%	NC-37-X017-XX
5/11/2011	CHT	Public Transit	CHT HS/Rogers Road	Continuation of extension service hours on two routes that connect downtown/UNC to north Chapel Hill and east Chapel Hill	Operating	$ 84,817	$ 42,408	50%	0%	NC-37-X017-XX
5/11/2011	Suzie Taxi	Private Service Co.	Durham City/County	Work Wheel Works Program is a para-transit service that offers transportation for low- income individuals and welfare assistance recipients, in Durham, NC. The program's focus is offering safe, reliable and discounted para-transport services for the targeted group to job training and employment opportunities.	Capital /Operating	$ 296,778	$ 163,958	80% cap. 50% oper.	0%	NC-37-X017-XX
5/11/2011	DURHAM	MPO	DCHC MPO-wide	Administration of the JARC program in FY2010	Admin.	$ 19,537	$ 19,537	100%	100%	NC-37-X017-XX
5/11/2011	DURHAM	MPO	DCHC MPO-wide	Administration of the JARC program in FY2011	Admin.	$ 7,780	$ 7,780	100%	100%	NC-37-X017-XX
					Totals	$ 612,186	$ 335,320			

MPO Approved Funding					
Total Prior Programmed/Obligated		$626,107			
DCHC MPO Appropriations	FY 2006	$152,453	**Remaining in each FY**	FY 2006	$124
	FY 2007	$160,702		FY 2007	$0
	FY 2008	$174,094		FY 2008	$0
	FY 2009	$204,341		FY 2009	$72,671
	FY 2010	$195,374		FY 2010	$195,374
	FY 2011	$77,804		FY 2011	$77,804
	Total Appropriations	$964,768		Total Unobligated Balance	$345,973
	Remaining Funds	$ 10,653			

LEGEND	
	Lapsed funds
	Partial Federal Appropriation

2011 Call for Projects
Proposed Program of Projects
NFP (Section 5316) FTA Grant Program
5.25.2011

MPO Approval Date	Subrecipient	Agency Type	Location of Service	Description of the Service	Project Type	Total Cost	Federal Share	% Federal	% Planning and Program Administration	FTA TEAM Project ID
5/11/2011	CHT	Public Transit	Regional Call Center	Continue (2 years)membership in the Go Triangle Call center	Operating	$ 132,000	$ 66,000	50%	0%	NC-37-X017-XX
5/11/2011	DATA	Public Transit	Access Taxi-Cab Medical Trip Program	Continue taxi and accessible shuttle services for DATA ACCESS passengers who require early pick-ups from medical appointments.	Operating	$ 109,200	$ 54,600	50%	0%	NC-37-X017-XX
5/11/2011	DURHAM	MPO	DCHC MPO-wide	Administration of the JARC program in FY2010	Administration	$ 8,776	$ 8,776	100%	100%	NC-37-X017-XX
5/11/2011	DURHAM	MPO	DCHC MPO-wide	Administration of the JARC program in FY2011	Administration	$ 3,477	$ 3,477	100%	100%	NC-37-X017-XX
					Totals	$ 253,453	$ 132,853			

MPO Approved Funding					
Total Prior Programmed/Obligated		$251,275			
DCHC MPO Appropriations	FY 2006	$71,878	**Remaining in each FY**	**FY 2006**	$48,633
	FY 2007	$71,810		**FY 2007**	$0
	FY 2008	$77,573		**FY 2008**	$0
	FY 2009	$89,416		**FY 2009**	$10,769
	FY 2010	$87,757		**FY 2010**	$87,757
	FY 2011	$34,755		**FY 2011**	$34,755
	Total Appropriations	$433,189		Total Unobligated Balance	$133,281
	Remaining Funds	$ 428			

LEGEND	
	Lapsed funds
	Partial Federal Appropriation

FY 2009 Application Summary and Scoring
Job Access Reverse Commute

Applicant	Chapel Hill Transit	Durham County	Chapel Hill Transit	Suzie Taxi	Royal Transportation	TROSA - Transp Project	Essential Transp Services	City of Durham	Total
Service	Year-Round Night Bus Service	County On-Demand Transportation Service	HS/Rogers Road Extended Bus Service	The Work Wheels Work Para-Transit Program	Job Access Shuttle-day, nights, weekends	Transportation for TROSA residents transitioning out of the program	Transportation Service to Orange Co. DHHS	10% for Administration of the JARC Program in FY 2010 & FY 2011	
Requested	$191,061	$37,950	$127,225	$163,958	$46,000	$50,985	$30,637	$27,317	$675,133
Recommendation	$63,687	$37,950	$42,408	$163,958	$0	$0	$0	$27,317	$335,320
Project Requirements									
Is the proposed project a non-duplicative service or program?	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Are eligible matching funds identified and available?	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Is the proposed project a new or expanded service or program?	Expanded (Continuation)	Expanded	Expanded (Continuation)	New	New	New	New		
Is the primary focus of the proposed service or program serving target populations (i.e., persons with low-income for the JARC funds, or persons with disabilities or elders for the New Freedom funds)?	Yes	Yes	Yes	Yes	No	Yes (Sort of)	Yes	**n/a**	
Does the project provide benefits to the Durham – Chapel Hill – Carrboro urbanized area?	Yes	Yes	Yes	Yes	No	Yes	Yes		
Project Evaluation Criteria									**Possible Points**
Project Need/Goals & Objectives									
How well does this project address high priority needs identified in the Coordinated Plan?	20	20	20	20	20	10	20		20
How effectively will this project increase the number of target market customers served?	10	10	10	10	0	10	0		10
Implementation Plan									
What is the quality of the implementation plan?	20	20	20	20	20	10	20		20
Project Budget									
How efficiently will the projects provide benefits to the customers (e.g., cost per customer served)	10	10	10	10	5	10	0		10
How financially sustainable is the program/service beyond the grant period?	5	5	5	5	2.5	5	0		5
Partnerships and Outreach								**n/a**	
How effectively are partnerships used in provision of the program/service?	5	5	5	5	5	5	5		5
How strong is the demonstration of stakeholder support (e.g., survey data, letters from end users)?	5	5	5	5	5	0	5		5
What is the quality of marketing/outreach plan?	5	5	5	5	5	5	5		5
How widely will the benefits of this project be felt? (more points for region-wide benefits)	5	5	5	5	5	2.5	5		5
Program Effectiveness and Performance Indicators									
What is the quality of the evaluation plan (including customer satisfaction, cost per unit of service, and customers per unit of service)?	10	10	10	10	0	5	5		10
Innovation									
Does the project contain innovative ideas that could be applied elsewhere in the region?	5	5	0	0	5	5	0		5
Total Points	***100***	***100***	***95***	***95***	***72.5***	***67.5***	***65***		100

DURHAM-CHAPEL HILL-CARRBORO - METROPOLITAN PLANNING ORGANIZATION

FY 2009 Application Summary and Scoring

New Freedom

Applicant	**Chapel Hill Transit**	**Suzi Taxi**	**Royal Transporation**	**DATA**	**City of Durham**	**Total**
Service	Go Triangle Call Center Membership (Mobilty Mgmt)	On-Demad Medical Access Taxi	On-Demad Medical Access Taxi	Access Medical Taxi Program	10% for Administration of the JARC Program in FY 2010 & FY 2011	
Requested	$99,000	$155,635	$36,000	$54,600	$12,253	$357,488
Recommendation	$66,000	$0	$0	$54,600	$12,253	$132,853
Project Requirements						
Is the proposed project a non-duplicative service or program?	Yes	Yes	Yes	Yes		
Are eligible matching funds identified and available?	Yes	Yes	Yes	Yes		
Is the proposed project a new or expanded service or program?	Expanded (Continuation)	Expanded	Expanded (Continuation)	New		
Is the primary focus of the proposed service or program serving target populations (i.e., persons with low-income for the JARC funds, or persons with disabilities or elders for the New Freedom funds)?	Yes	Yes	Yes	Yes	**n/a**	
Does the project provide benefits to the Durham – Chapel Hill – Carrboro urbanized area?	Yes	Yes	Yes	Yes		
Project Evaluation Criteria						**Possible Points**
Project Need/Goals & Objectives						
How well does this project address high priority needs identified in the Coordinated Plan?	20	20	20	20		20
How effectively will this project increase the number of target market customers served?	10	10	10	10		10
Implementation Plan						
What is the quality of the implementation plan?	20	20	20	20		20
Project Budget						
How efficiently will the projects provide benefits to the customers (e.g., cost per customer served)	10	10	7.5	10		10
How financially sustainable is the program/service beyond the grant period?	5	0	0	0	**n/a**	5
Partnerships and Outreach						
How effectively are partnerships used in provision of the program/service?	5	5	5	5		5
How strong is the demonstration of stakeholder support (e.g., survey data, letters from end users)?	5	5	5	0		5
What is the quality of marketing/outreach plan?	5	5	5	5		5
How widely will the benefits of this project be felt? (more points for region-wide benefits)	0	2.5	5	2.5		5
Program Effectiveness and Performance Indicators						
What is the quality of the evaluation plan (including customer satisfaction, cost per unit of service, and customers per unit of service)?	10	5	5	10		10
Innovation						
Does the project contain innovative ideas that could be applied elsewhere in the region?	5	2.5	0	0		5
Total Points	***95***	***85***	***82.5***	***82.5***		100

Congestion Management Process

Procedures and Responsibilities

Report (DRAFT)

Durham-Chapel Hill-Carrboro

Metropolitan Planning Organization

May 2011

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1. Introduction

The Congestion Management Process (CMP), which is required by Federal law, is a systematic approach to managing new and existing transportation systems for relieving congestion and maximizing the safety and mobility of people and goods. The measured system performance and defined strategies should be incorporated in the process of the long range transportation plan (LRTP) and the transportation improvement plan (TIP).

The Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (DCHC MPO) is responsible for transportation planning in the urbanized areas of Durham and Orange counties and parts of northern Chatham County. As part of the planning process, the DCHC MPO is required to develop and implement a CMP for monitoring traffic congestion, evaluating system performance, and incorporating mitigation strategies into the LRTP and TIP.

This Procedures and Responsibilities Report describes how the CMP will be implemented and used on a continuing basis to comply with federal requirements. It will include congestion management objectives; the monitored coverage area and networks; performance measures; performance monitoring plan; identifying & evaluating strategies, and implementation & management.

1.1. Background

a) Legislative Background

The Safe, Accountable, Flexible, and Efficient Transportation Equity Act – A Legacy for Users (SAFETEA-LU)[1] is the Federal authorization of funding for surface transportation programs for highways, highway safety, and transit. The act was in place from August 2005 to September 2009 and was extended until the end of 2010.

SAFETEA-LU requires that "the transportation planning process in Transportation Management Areas (TMA – urban areas over 200,000 populations) shall address congestion management through a process that provides for safe and effective integrated management and operation of the multimodal transportation system, based on a cooperatively developed and implemented metropolitan-wide strategy, of new and existing transportation facilities eligible for funding through the use of travel demand reduction and operational management strategies [23 CFR 450.320]."

The Congestion Management Process evolved from the Congestion Management System (CMS), which was required by previous surface transportation authorization laws: the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 and the Transportation Equity Act for the 21st Century (TEA-21). The CMP differs from the CMS primarily in mandating the incorporation of CMP within metropolitan transportation planning, rather than as a stand-alone program or system. The CMS has been described as a "7 Step" process, but the CMP is an "8 Step" process with the addition of a new "first step - Develop Congestion Management Objectives."

[1] Public Law 109–59, 109th Cong., August 10, 2005

b) Requirements

Federal rules define congestion as "the level at which transportation system performance is no longer acceptable due to traffic interference. The level of system performance deemed acceptable by State and local officials may vary by type of transportation facility, geographic location (metropolitan area or subarea, rural area), and/or time of day."

An effective CMP is defined as "a systematic process for managing congestion that provides information on transportation system performance and on alternative strategies for alleviating congestion and enhancing the mobility of persons and goods to the levels that meet State and local needs. The CMP results in consideration and implementation of strategies that provide the most efficient and effective use of existing and future transportation systems."

A CMP will provide planners, policy makers and the public with a clearer understanding of congestion problems and the most cost-effective means for addressing them. In order to accomplish this mission, USDOT recommends that the following key elements be part of a CMP:

- Congestion management objectives;
- identification of the CMP coverage area;
- transportation system definition, including modes and network;
- performance measures;
- performance monitoring plan;
- identification and evaluation of strategies;
- monitoring of strategy effectiveness; and
- implementation and management.

The SAFETEA-LU planning rule states that the CMP shall include the definition of congestion management objectives and performance measures to assess the extent of congestion, and support the evaluation of the effectiveness of congestion reduction and mobility enhancement strategies for the movement of people and goods.

1.2. Outreach

Although the CMP is the responsibility of the DCHC MPO, it is an interagency multidisciplinary approach that seeks to optimize the performance of infrastructure through the implementation of multimodal, intermodal, and cross-jurisdictional systems, services and projects. As such, the expertise of a diverse team is needed that can provide input on transportation operations, the availability of existing and new data sources, and policy issues related to the development and update on the CMP. To assure this multidisciplinary approach, the DCHC MPO recommends working with the three groups described below, in the development of a CMP that addresses congestion through shared goals.

a) Stakeholders

The stakeholder group will be involved in all elements of the CMP program including discussing ideas, identifying improvement strategies, and working towards consensus on key elements. The stakeholder group includes representatives from the following organizations:

- DCHC MPO member agencies,
- NC DOT,
- Transit agencies,
- Federal Highway Administration,
- Federal Transit Administration, and
- Others as deemed necessary

b) Technical Steering Committee

The Technical Steering Committee is a technical advisory group. The committee will be made up of a diverse set of specialists. The committee members provide guidance on the availability of existing and new data sources that are necessary to identify recurring and nonrecurring congestion. The committee members also provide substantial guidance on the selection and use of performance measures, the review of the technical analysis methodologies and the results, and the identification of an improvement strategy. The committee members include:

- DCHC MPO planners and engineers,
- Transit planners,
- Bicycle & pedestrian specialists,
- Congestion management engineers,
- Traffic signal, operation, ITS engineers, and
- Others as deemed necessary.

c) Public

Citizens will have opportunities for involvement throughout all stages of the CMP process including development, update, monitoring and implementation. To increase public understanding of both the CMP and congestion issues, all documented reports, statistics, and maps will be uploaded to an interactive WEB tool or web-based map.

1.3. CMP Goals and Objectives

a) Goals

In order for the MPO, State and local governments to respond to growing demands for maintaining and improving our mobility needs, these agencies must cost-effectively manage existing facilities. In order to maximize our return on transportation investments, we must effectively manage congestion. A primary purpose for the CMP is to provide a systematic approach for a better understanding of existing and projected system performance and the effectiveness of various management strategies.

b) Objectives

CMP objectives should be consistent with regional goals and plans. To develop the congestion management objectives, the list of 2035 LRTP goals, objectives, and the measures of effectiveness (MOE) were reviewed for application to the CMP. The goals and objectives which are related to the CMP are shown in Table 1.1.

Table 1.1 LRTP Goals and Objectives that Relate to the CMP

Goals	ID	Objectives	MOE
Overall Transportation System	L-1.1	- Establish performance standards that will measure the effectiveness of the urban area's overall transportation system in supporting access to goods, services, activities, and destinations.	N/A
	L-1.2	- Select and program transportation projects, which are consistent with community goals and are a cost-effective use of funds.	Benefit-Cost Ratio
	L-1.3	- Develop and maintain a multi-modal regional transportation model that reflects travel patterns and incorporates innovative techniques for evaluating the impacts of proposed transportation investments on travel and land use patterns.	N/A
	L-1.4	- Develop cooperative strategies with employers to reduce congestion and increase the efficiency of the transportation system.	Person-to-Capacity ratios, by facility and mode
Multi-Modal Street and Highway System	L-2.1	- Establish performance standards and report on the condition and effectiveness of the multimodal street and highway system.	N/A
	L-2.2	- Develop and implement level of service (LOS) standards for the urban area that are based on a cooperative agreement between state and local agencies.	N/A
Public Transportation System	L-3.1	- Establish performance standards and report on the condition and effectiveness of the public transportation system.	N/A
	L-3.2	- Develop and implement alternatives to the use of single occupant vehicles, including high occupancy vehicle (HOV) facilities and regional rail services.	N/A
Pedestrian and Bicycle System	L-4.1	- Establish performance standards and report on the condition and effectiveness of the pedestrian and bicycle system.	N/A
	L-4.2	- Maintain and implement a Regional Pedestrian Plan and a Regional Bicycle Plan.	N/A
	L-4.3	- Provide greater safety for pedestrians and bicyclists of all levels of ability, and safer interaction with users of other modes of transportation.	N/A
Public Involvement	L-7.1	- Educate the public and elected officials, in order to increase public understanding of both the options and the constraints of transportation alternatives.	Number of Meetings and Contacts
Safety and Security	L-8.1	- Reduce fatality, injury, and crash/incident rates on all modes.	Fatality & Crash Rates, Local transit crashes, Bike/Ped incidents/injuries
Freight Transportation and Urban Goods Movement	L-9.1	- Relieve congestion on heavily-traveled truck routes.	Percentage of truck VMT under congested conditions / in off-peak

In order to achieve the regional goals and objectives that relate to the CMP, seven CMP objectives are selected: the objectives and the associated measurements are described in Table 1.2.

Table 1.2 CMP Objectives

CMP ID	Objectives	Possible Support Measurements	Related LRTP Goals & Objectives (ID)
C-1	Improve accessibility and mobility for people and freight	Travel Time Index – Ratio of actual travel time to uncongested travel time during peak-hour and daily Duration of Congestion – the congested time length Control Delay – the average vehicle delay at intersection during peak-hour	L-1.4
C-2	Maintain productivity and efficiency of the transportation facilities	Volume-to-Capacity Ratio during peak-hour	L-1.4
C-3	Identify and implement transportation safety enhancements	Number of Crashes and Incident Severity by intersection, by corridor	L-8.1, L-4.3
C-4	Increase transit service to reduce dependency on single occupant auto travel	Number of transit routes / frequency Ridership	L-3.1, L-2.1, L-2.2
C-5	Increase bicycle/pedestrian facilities to promote the use of non-motorized mode	Center line miles Pedestrian/Bicyclist count during weekday	L-2.1, L-2.2, L-4.1, L-4.2
C-6	Provide system operational status to public using a state-of-the-art technology, and maintain system reliability	Travel Time and Standard deviation of travel time or 85 percentile of travel time during peak-hour and daily Number of web visitor during weekdays	L-7.1
C-7	Develop and maintain a multi-modal regional operation model to evaluate and estimate the system performance	N/A	L-1.1, L-1.3

1.4. Study Area

a) Geographic Coverage

The geographic area will cover the Metropolitan Area Boundary (MAB) as shown in Figure 1.1. This coverage includes all of Durham County, the City of Durham, Carrboro, Chapel Hill, Hillsborough, and the MPO planning jurisdiction portions of Orange County and Chatham County. This wide coverage is more beneficial in identifying existing and future congestion locations, evaluating systemwide effects of management strategies, and providing perspective for the extent and degree of congestion throughout the area. This coverage and transportation facilities within the area will dictate data needs for both system performance and strategy effectiveness.

b) CMP Network

Since congestion is an interacted result between the supply and demand of the transportation system and its operation, congestion management is associated with most transportation systems. The selected network should be able to achieve the goals and objectives, and the existing facilities and financially committed projects in the transportation plans will be considered. Recommendations from the stakeholders, technical steering committee, and public will be included in the selection of the networks. The transportation systems, which are related to our CMP goals and objectives, are highways, public transportation, pedestrians and bicycles, safety and security, freight and goods movement, and ITS.

The selection criteria for the CMP network differ by transportation system as shown in Table 1.3. Figure 1.2 illustrates some examples of the identified facilities.

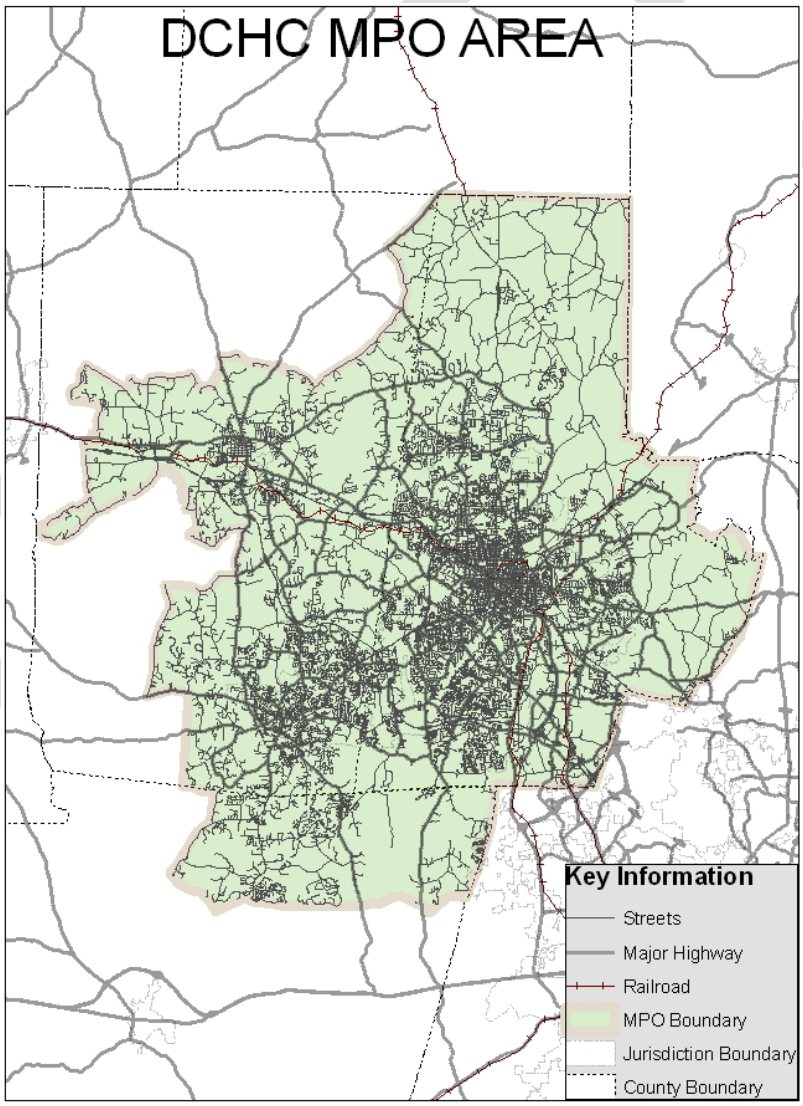


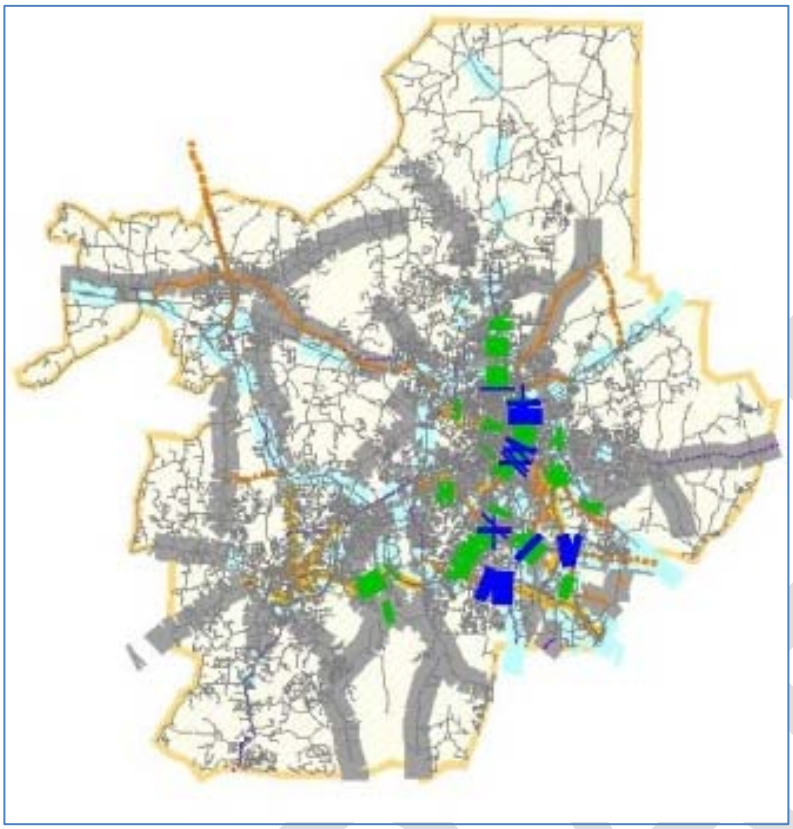
Figure 1.1 CMP Geographic Coverage

Table 1.3 Network Selection Criteria and CMP Network

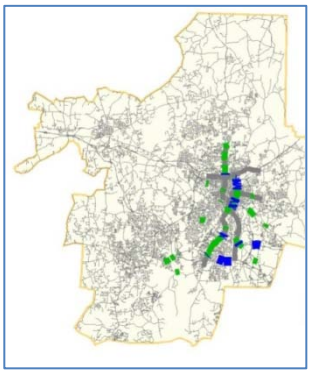
System Area & Networks	Criteria	Description
1) Highway	All roads in the Triangle Regional Model (TRM) base year highway network	Interstate Highway, Expressway, Arterial, Collector, and Local roadways
	plus the committed highway network, which will be completed within three years and the alternative routes of the network	Before-After analysis for monitoring the implemented strategy effectiveness.
	plus roadways with a fixed transit route	Durham Area Transit (DATA), Chapel Hill Transit (CHT), and Triangle Transit (TTA)
	plus Designated evacuation routes and emergency management networks	Security
	plus Major road alternative routes	Incident Management
2)Public Transportation	Fixed routes in TRM transit network	Bus, LRT, and Commuter Rail
3)Pedestrian	Pedestrian path and sidewalks/Walkways	Pedestrian facilities that provide regional connectivity with destinations to schools, major trip generators, and high activity density and land use
4)Bicycle	Bicycle paths and greenways	Bicycle facilities that provide regional connectivity with destinations to schools, major trip generators, and high activity density and land use
5)Safety	Crash rate	More than 120 crashes per million entering vehicles at intersections and segments for nonrecurring congestion.
6) Freight	Major freight route	Designated truck routes. Connectivity to land use density activity centers

c) CMP Tier System

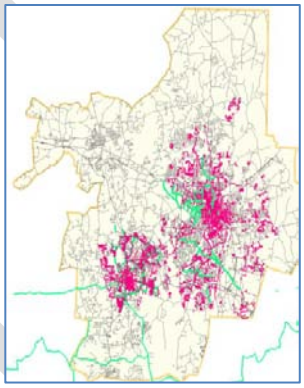
Two main considerations in decisions regarding CMP are data availability and cost. Since data collection represent the biggest portion of costs in CMP effort, a CMP data collection tiered system is recommended. The CMP tiered architecture designed to match the data collection effort to the specific system components is a cost effective approach given the financial constraints and the MPO funding situation. Each component of the transportation system will be identified as either Tier 1, Tier 2, or Tier 3. A description of the three tiers and the recommended monitoring cycle are described in Table 1.4.



(a) Example of Highway Network



(b) Examples of High Crash Sites



(c) Examples of Pedestrian/Bike Networks

Figure 1.2 CMP Network

Table 1.4 CMP Three Tier-Systems

Level	Tier-1: High priority corridors and networks of regional significance	Tier-2: Most Congested/Unsafe Corridors or Areas – Group I	Tier-3: Congested/Unsafe/Other Corridors or Areas – Group II
Purpose	Monitoring system trend	Monitoring the congested corridors including the Tier-1 group and new facilities for a Before-After evaluation	Monitoring the other corridors including the Tier-1 group
Selection Criteria	-More than 4 network selection criteria duplicated in Table 1-3 -Recommendation from the stakeholders, technical steering committee, and public	-More than 3 network selection criteria duplicated in Table 1-3* -Newly implemented strategy (projects) and the alternatives within two years, or the alternatives of the planned projects in LRTP, TIP, or etc. within 2 years	-Other corridor or area identified in Table 1-3
Monitoring Cycle	Every year	Every two years	Every four years

* More detailed selection criteria are explained in Appendix B.

2. CMP Steps

The CMP is a process; therefore, the CMP steps form a feedback loop. The CMP will continually be revised based on findings from the monitoring process and from other planning efforts.

The primary focus areas of the CMP are summarized in the following steps and displayed in Figure 2.1:

1. Develop Performance Measures: Performance measures are determined through a cooperative effort. The measures are used in all steps of the process. In this step, guidelines are also identified for determining congestion in terms of extent, intensity and duration and congestion-based ranking.

2. Collect and Analyze Data: A coordinated data collection program is to be established, using existing data sources when possible.

3. Quantify Performance, Identify and Evaluate Alternatives: Develop data summaries, graphics, and maps that quantify the performance of the system based on previously defined measures and associated data analysis. Expected benefits of the congestion management strategies are identified and evaluated based on the established performance measures.

4. Select Projects: Appropriate improvement strategies are selected. Consideration should be given to demand management, traffic operational improvements, public transportation improvements, Intelligent Transportation Systems (ITS) improvements, and where necessary, additional system capacity. Implementation schedules and responsibilities are to be identified.

5. Monitor Improvements: Compare before and after conditions using performance measures. Learn from the results and apply the appropriate findings to subsequent projects.

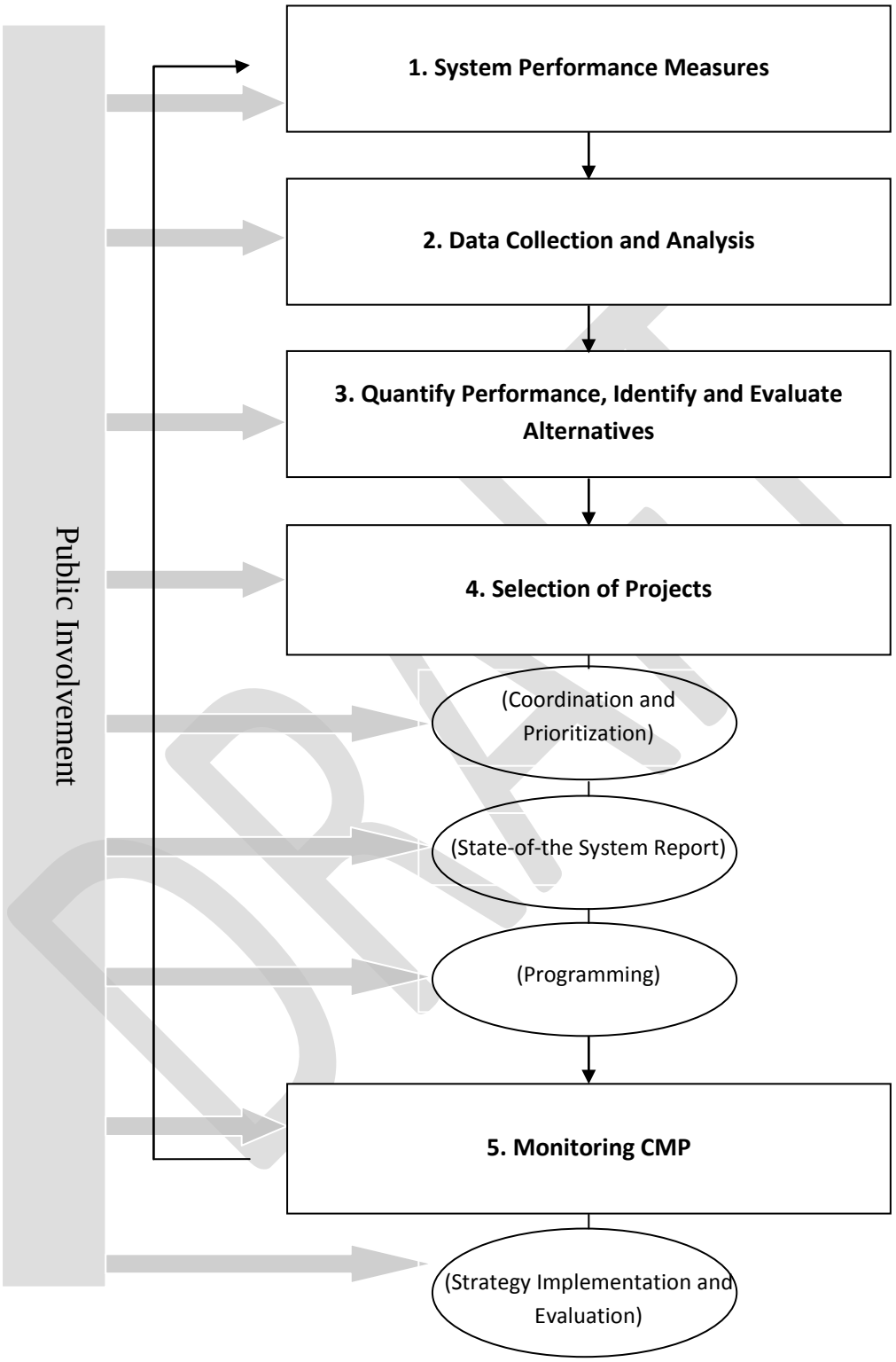


Figure 2.1 Congestion Management Process (CMP) Structure

3. Performance Measures

The performance measurements should be identified, evaluated, and selected properly to monitor system performance effectively. This chapter discusses potential measures and the initially identified performance measures. The final measures will be selected by the technical steering committee.

3.1. Identification and Evaluation of Performance Measurements

Many potential measures were considered to identify effective performance measures that fit our region. Efforts were made to adapt the various potential performance measures to the needs of our region. Table 3.1 provides a summary of the various performance measures reviewed.

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Table 3.1 Performance Measures

Performance Measures	Definition	Units of Measurement	Benefits	Constraints	Data Type (Observed / Estimated)	Goals & Objectives (ID)	Application Level	Recommendation
Volume to Capacity (v/c) ratio	Measurement of average volume compared to adopted service volume or capacity.	• Roadway v/c ratio (daily and/or peak hour). • Intersection movement v/c ratio.	• Can indicate congestion. Can be flexible for multiple time periods and area types. Daily v/c can be determined using existing data by combining AADT and service volumes. Daily v/c can be used as first screen of congestion, providing a cost-effective use of limited resources.	• Daily v/c may limit the identification of certain types of improvements, additional data sources are needed to determine peak-hour v/c.	Estimated	C-2	Major Corridors, Intersections	Yes
Vehicle delay	Measurement of average vehicle delay of all of the movements, or average vehicle delay of an individual movement(s) during a specified time period	• Average control delay (sec/veh)	• Can indicate congestion and may highlight potential safety issues.	• Difficult to measure. • Forecast data will be useful.	Estimated	C-1	Corridor, Intersection	Yes
Number of lane miles that are congested	Miles of roadway that can be classified as "congested". The definition of "congested" can be customized for a particular area or facility type.	• Lane miles of congested roadways. • Percent of congested roadways (congested/total x 100%).	• Indicator of severity of congestion. Can be used to determine percentage of total lane miles that are congested.	• Difficult to measure. There are no existing data sources. While this is a useful areawide indicator, it does not identify specific constraints, or causes.	Observed	C-1, C-2	System wide	No
Duration of Congestion	Time duration where pre-defined sections can be classified as "congested".	• Hours of congestion.	• Indicator of severity of congestion, can be used to determine percentage of time that a facility is congested.	• Difficult to measure. There are no existing data sources. Does not identify specific constraints, causes, or needed improvements.	Observed	C-2	Interstates	Yes
Percent of daily miles traveled under congested conditions	The percentage of travel distance that is spent under congested conditions.	• Percent of congestion.	• Indicator of severity of congestion.	• Difficult to measure. While this is a useful areawide indicator, it does not identify specific constraints, causes, or needed improvements.	Estimated	C-2, C-7	Major Corridors, Interstates	For future consideration

Performance Measures	Definition	Units of Measurement	Benefits	Constraints	Data Type (Observed / Estimated)	Goals & Objectives (ID)	Application Level	Recommendation
Daily vehicle miles	Miles traveled throughout the region.	• Miles traveled per average vehicle. Total miles traveled.	• Can be derived from AADT or TRM	• Takes more effort than AADT, but is not more informative.	Estimated	C-1, C-7	Systemwide	For future consideration
Average Delay – recurring	Average vehicle delay that occurs at a typical time-of day and day-of-week.	• Vehicle-hours.	• Indicates average congestion. Can be measured over different area types, time periods, and facilities.	• Delay is difficult to calculate when v/c ratios are exceeded.	Observed / Estimated	C-1, C-7	Systemwide, Major Corridors	For future consideration
Average Speed	Average travel speed.	• Miles per hour.	• Indicates average congestion. Can be measured over different area types, time periods, and facilities. Easily understood.	• Speed is difficult to calculate when congestion exists.	Observed / Estimated	C-1, C-7	Systemwide, Major Corridors	Yes
Person Miles of Travel	Total miles traveled per person (miles per vehicle times occupancy).	• Miles per person.	• Provides a region-wide indicator of transportation demand.	• Does not identify mode split, potential for demand management, or congested locations.	Estimated	C-1, C-7	Systemwide	For future consideration
Travel Time Index (TTI)	Ratio of actual travel time to uncongested travel time.	• Unitless; the measurement is an index. 1.0 indicates no congestion. • Travel Time • Speed Limit	• Qualifies average travel time data. Can be used to calculate average travel speed as a percent of the speed limit (or 15 percentile of free flow speed).	• Requires travel speed data.	Observed	C-1	Systemwide, Major Corridors	Yes
Buffer Index (BI)	Buffer Index measures the amount of time added to an average trip to ensure on-time arrival for 95% of trips. Buffer Index indicates predictability.	• Unitless; the measurement is an index. 0.0 indicates no volatility.	• Can indicate instability and areas with higher potential for nonrecurring congestion.	• Difficult to measure. Needs extensive data collection and processing.	Observed	C-1, C-2	Systemwide, Major Corridors	No
Planning Index (PI)	This measurement is an indicator of the total time required to arrive on time. It is calculated by combining TTI and BI.	• Unitless; the measurement is an index. 1.0 indicates no congestion.	• Indicates areas with recurring and nonrecurring congestion.	• Difficult to measure. Needs extensive data collection and processing.	Observed	C-1, C-2	Systemwide, Major Corridors	No
Roughness Index for pavement	A measurement of the quality of pavement conditions.	• Unitless; the measurement is an index. •	• Can identify potential contributing factor of congestion.	• Additional factors are more likely to cause congestion.	Observed	-	Systemwide, Major Corridors	No

Performance Measures	Definition	Units of Measurement	Benefits	Constraints	Data Type (Observed / Estimated)	Goals & Objectives (ID)	Application Level	Recommendation
Customer Satisfaction (User Surveys) – Bike/Ped	A qualitative measure of the opinions of people using the transportation system. This can be specific to areas.	• Very satisfied. • Somewhat satisfied. • Neutral. • Somewhat dissatisfied. • Very dissatisfied. • Not applicable.	• Projects determined with user input are desirable to users.	• Collection and processing of data is relatively difficult.	Observed	C-5	Systemwide, Major Corridors	For future consideration
Incident Duration	The time elapsed from notification of an incident until all evidence of the incident has been removed from the scene.	• Minutes per incident.	• Indicator of non-recurring congestion. Great indicator of conditions before and after improvements.	• Difficult to collect data.	Observed	C-1, C-3	Systemwide, Major Corridors	For future consideration
Incident Severity	A quantitative measurement of the cost of an incident. Assumed injury costs vary by injury severity.	• Cost per incident.	• Indicator of potential safety concern that can lead to long incident durations	• Additional data is needed to prioritize locations, such as number of crashes per million vehicles.	Observed	C-3	Major Corridors, Intersections	For future consideration
Number of crashes	Measurement of the total number of crashes at a certain location per unit of time.	• Crashes per year.	• Indicator of nonrecurring congestion. Can identify problem areas to help focus limited resources. Can be determined using existing data sources.	• Ignores type, cause, severity, etc. To be more useful, there is a need to determine the relationship with total volume entering the location. Additional data needed to evaluate causes.	Observed	C-3	Major Corridors, Intersections	For future consideration
Crash Rate	Measurement of the total number of crashes at a certain location, compared to the total volume at the location. This measurement allows for the identification of locations that have a disproportionate number of crashes (compared to intersections with similar volumes).	• Crashes per million entering vehicles at intersections • Crashes per million entering vehicles at segments	• Indicator of nonrecurring congestion. Can identify problem areas to help focus limited resources. Can be determined using existing data sources.	• Ignores type, cause, severity, etc. • Additional data is needed to evaluate causes.	Observed	C-3	Major Corridors, Intersections	Yes

Performance Measures	Definition	Units of Measurement	Benefits	Constraints	Data Type (Observed / Estimated)	Goals & Objectives (ID)	Application Level	Recommendation
Air quality analysis	A measure of the concentration of vehicle emissions.	• Emissions – kg, kg per year.	• Indicator of congestion.	• Secondary indicator; low travel speeds and excessive delay will result in poor air quality.	Estimated	-	Systemwide, Major Corridors, Intersections	Yes
Office Parking	Parking lot utilization data	• Ratio of Occupied / available parking lots	• Indicator of parking strategy • Can divert SOV user to transit	• Regarding to development of a jurisdiction's policy	Observed	C-1	Areawide	For future consideration
Bike parking	Bike parking utilization data	• Bike racks • Bike parking lots	• Can promote bike user	• Secondary indicator	Observed	C-5	Systemwide	For future consideration
Pedestrian Facilities	Sidewalk length	• Sidewalk length • Sidewalk length within transit service area	• Important for transit mobility and pedestrian safety	• Ignores connectivity and Pedestrian density or connectivity and density of population	Observed	C-5	Systemwide, areawide	Yes
Pedestrian Activity	A measure of the number of pedestrians	• Pedestrian count	• what level of pedestrian activity is being experienced • where pedestrian activity is occurring in order to better understand the reasons why there may or may not be pedestrian activity in different areas	• Difficult to understand a function for land use, facility presence, and facility design. • Difficulty of count	Observed	C-5	Systemwide, areawide	Yes
Centerline miles of bike path	Total miles of bike path	• Length of facilities	• Indicator of bicycle network	• Data does not consider demand. Does not identify specific corridors or routes that should be improved.	Observed	C-5	Systemwide, areawide	Yes
Bike Activity	A measure of the number of bicyclists	• Number of bicyclist	• what level of bicyclist activity is being experienced • where bicyclist activity is occurring	• Difficult to understand a function for land use, facility presence, and facility design. • Difficulty of count	Observed	C-5	Systemwide, areawide	Yes
Non-motorized traffic safety	Measurement of the total number of crashes related with pedestrian or bicyclist	• Number of pedestrian/bicycle accidents	• Indicator of safer route • Indicator of nonrecurring congestion	• Ignores type, cause, severity, etc.	Observed	C-5, C-3	Systemwide, major routes	For future consideration

Performance Measures	Definition	Units of Measurement	Benefits	Constraints	Data Type (Observed / Estimated)	Goals & Objectives (ID)	Application Level	Recommendation
Transit Ridership	Number of people on a transit route per unit of time.	• Riders per hour	• Key performance measure when determining which routes to expand or reduce service on.	• It can be difficult to forecast ridership for proposed routes.	Observed	C-4	Systemwide, major routes	Yes
Schedule Adherence	Ability of transit to adhere to the planned schedule. This is typically used to determine how to operate a route.	• Percentage of stops that are on-time	• Can use adherence to identify LOS. Can be used to help determine how to run a route.	• Not used to determine whether or not to increase or reduce service.	Observed	C-4	Systemwide, major routes	For future consideration
Subsidized Cost of Transit	This measurement identifies the amount of money it costs to operate a route. This is the cost to the transit agency, not the cost paid by the user.	• Cost per rider	• The subsidized cost per route is used to make decisions about whether a route should be run or not. Critical element in decision making process.	• Cost is not a stand-alone measure. This must be used in combination with other measures.	Observed	C-4	Systemwide, major routes	For future consideration
Transit Service	Measurement of transit service availability	• Annual service hours of operation • Geographical coverage • Population coverage	• Indicates whether transit service is available	• Does not consider demand.	Observed	C-4	Systemwide	Yes
Availability of transit within congested corridor	Presence of a transit route or system within or adjacent to a congested corridor.	• Available/Not available. Type and frequency of transit should be specified.	• Indicates whether modal split options are available.	• Does not consider demand.	Observed	C-4, C-1	Systemwide	For future consideration

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3.2. Selection of Performance Measures

All of the listed performance measures have the potential to provide useful information for managing congestion. Some are most useful in certain area types, and some are most useful at certain levels of analysis. The selection of performance measures should consider a) the availability of data from existing sources, b) the applicability of those measures in quantifying system performance, and c) the ability of the performance measure to identify future system deficiencies.

In order to select a manageable list of performance measures that are customized to the unique characteristics of the DCHC MPO Area, the Technical Steering Committee will be consulted in the process of review, selection, and approval.

While a number of different performance measures were identified in Table 3.1, not all of them are applicable to each type of facility. Also, availability of data for some of the measures is limited at the current time, thus some will be phased in at a future time as the data becomes available. The performance measures, which can be selected for the DCHC CMP, are as follows:

a) Recurring Congestion

The following recurring congestion performance measures will be selected:

- TTI (peak-hour: AM, Noon, PM),
- Volume / capacity ratio for through movement at downstream boundary intersection (peak-hour: AM, Noon, PM),
- Extension of congestion[2]: spatial, temporal (daily),
- Segment volume / capacity ratio (daily, peak-hour: AM, Noon, PM),
- Average pedestrian space(peak-hour: AM, Noon, PM),
- LOS Scores for pedestrian, bicycle, and transit modes(peak-hour: AM, Noon, PM),
- Transit Ridership (including Peak passengers/seat ratio),
- Signal control delay (including retiming cost/benefit)

b) Non-Recurring Congestion

The following nonrecurring performance measures will be selected:

- High crash intersections: by crash rate (crashes per million vehicles entering) and by the number of crashes
- High crash corridors: by crash rate (crashes per million vehicles miles)
- Incident duration
- Customer or Expert survey

[2] Available data is limited currently; Interstate only.

4. Monitoring Plan

The monitoring plan includes overview and data sections; the overview includes the identification of data source, the development of a data management system, and the definition of a reporting procedure. The data section will cover data collection and analysis.

4.1. Monitoring Plan Overview

a) Data Source

Identifying existing data sources and databases that may be used as part of a performance monitoring system is important to maximize the utilization of available resources and to develop a cost-effective data collection program. The existing data sources identified for potential application and new data collection efforts are shown in Table 4.1. The existing sources have established programs for a specific purpose focused on a limited number of facilities or specific geographic coverage. The challenges or barriers of obtaining the data are described in Table 4.2.

b) Data Management

Integration and coordination of the data collection activities will create data management issues and responsibilities. Currently, there is no existing data management system. DCHC MPO will develop an appropriate data management tool using the GIS. It can be used for data management activities as well as for analysis and presentation purposes. Once the analysis is completed, tables and maps of links, corridors, or the entire system can be generated to provide spatial and temporal contexts for the discussion of congestion and mobility. It is also expected that the management tool will be connected with the DCHC MPO Web site to facilitate its use and the efficient flow of information between agencies and the public.

DCHC MPO will take an active role in ensuring that the necessary data is made available and passed forward for use in the CMP. The member agencies are responsible for the flow of data between the agencies and the MPO.

Table 4.1 Data Sources and Hierarchy

Data Type	Source	Primary	Secondary	Innovative Strategy
Travel Time	I-95 Corridor Coalition / INRIX®	X		
	Traffic .com	X		
	NCDOT Operations Center	X		
	MPO Data Collection		X	
	City of Durham – speed warning signs			X
	Downstream loop detector data			X
	Transit agency data		X	
Traffic Count	NCDOT Count Program	X		
	Municipal Signal System Count Programs	X		
	MPO Data Collection		X	
	Municipal Detector Data Counts			X
	Data collected for TIA studies	X		
Turning Movement Count	Municipal Signal System Count Programs	X		
	MPO Data Collection		X	
	Local Consulting Firm Data			X
Control Delay	Regional Operational Model			X
Ped/Bike count & survey	UNC sponsored Data	X		
	Volunteer Data Collection		X	
	MPO Data Collection		X	
Transit ridership & survey	Transit Agencies	X		
Crash rate, count, & severity	NCDOT TEAAS	X		
Public and expert survey results	MPO Survey			X
	MPO WEB survey system			X

Table 4.2 Data Collection Challenges and Barriers

Data Type	Source	Challenge	Barrier
Travel Time	I-95 Corridor Coalition/ INRIX®	Real-time acquisition	Interstate only
	Traffic .com	Real-time acquisition	Interstate only
	NCDOT Operations Center	Data acquisition ability	Interstate only
	MPO Data Collection	A detailed plan	Budget, Staff
	City of Durham – speed warning signs	Calibration	Only 2 locations
	Downstream loop detector data	Calibration	
	Transit agency data	Data acquisition & process	
Traffic Count	NCDOT Count Program		Two year program State Rd only
	Municipal Signal System Count Programs		Paused (?)
	MPO Data Collection	A detailed plan	Budget, Staff
	Municipal Detector Data Counts	Calibration	
	Data collected for TIA studies	Cooperation	
Turning Movement Count	Municipal Signal System Count Programs		Paused (?), Few locations
	MPO Data Collection	A detailed plan	Budget, Staff
	Local Consulting Firm Data	Cooperation	Legal agreement
Control Delay	Regional Operational Model		
Ped/Bike count & survey	UNC sponsored Data	Cooperation	
	Volunteer Data Collection	Identifying groups	
	MPO Data Collection		Budget, Staff
Transit ridership & survey	Transit Agencies	Cooperation	
Crash rate, count, & severity	NCDOT TEAAS	Pedestrian /Bicycle accident report acquisition	
Public & expert survey	MPO Survey		Budget, Staff
	MPO WEB survey system		Budget, Staff

c) Reporting Procedure

CMP Status Report

The main product of this activity will be the State of the System Report. The report will summarize the performance of the region's transportation system including the benefits of the strategies as related to the performance measures discussed earlier. Results will be presented using tables, graphs, or maps. This report will also include an analysis of results by: identifying performance trends; highlighting performance changes resulting from the implemented projects; and identifying system deficiencies or areas of concern.

This report will be documented on a biannual basis, staggered with development of the LRTP since these results will help inform the development of the LRTP. Project, corridor, and subarea reports may also be generated if needed.

WEB Based GIS Database Report

The summarized system performance results and data will be published through the DCHC MPO Web system. It will improve the public accessibility to the congestion information, educate the public on MPO activity and planning, and improve communication between agencies as well as the public. The system will include the following information: TMC, volume (AADT), speed, safety (accident spot, number, severity), network (existing and future routes – committed), network (existing and future routes – planned), and relevant other agencies' web-address (NCDOT, CAMPO, etc).

4.2. Coordinated Data Collection

Data should be collected in a coordinated manner between the MPO and member agencies. The corridors or areas where data should be collected would consist of a 3 tier system: 1st-benchmark corridors or areas, 2nd- congested/unsafe corridors or areas, and 3rd-other corridors or areas. The total number of corridors or areas will not exceed more than 50. Data collection methodologies for the identified measurements are described in this section, and the methodologies are focused on the MPO's data collection efforts.

a) Travel time and travel speeds

The data will be collected mainly using a GPS device (GeoLogger) if existing resources such as downstream loop detectors, ITS facilities, and etc. are not applicable.

For quality control of the data, at least, 5 good travel time samples for each direction on the corridors will be required in each peak period- AM, Noon, and PM. For instance, the total number of runs per corridor should be more than 30 (3 peaks * 2 directions * (5+alpha)) if other resources are not available. A more detailed description of the travel time data collection methodology is shown in Appendix C.

b) Traffic volume

If traffic volume from downstream loop detector or other resources is feasible, no extra data will be collected since the detector can report 365 days and 24 hours ideally. The data from the loop detectors will be analyzed, and the results will be released every year.

If the downstream system detector is not practical, the segments on the corridors identified by the CMP Tier System will be considered to be selected and the number of the selected segments will not be more than 100 including segments in the NCDOT Count Program.

The criteria and weight point for the segment selection are described in Appendix B.

Based on the locations of the segments in the Tier system, it will be categorized as annual, bi-annual, and 4th year program. Data including the vehicle classification should be collected at least during 72 consecutive hours with 15 minute time periods using the tube counter. The data and traffic counts from

various resources such as NCDOT- statewide planning branch, member agencies' traffic division and private consulting firms are analyzed, and the results will be released bi-annually.

c) Turning Movement Count

Initially, 20 intersections will be identified using GeoLogger's travel time data. Once travel time is collected, the travel time data can be geo-coded and the most congested 20 intersections in terms of travel time delay on both directions of a main approach can be recognized using the coded data within 200 feet at an upstream segment. Manual count using Jammar or tube counters can be applied to collect the TMC with 15 minute intervals.

The locations and others, where TMC was collected by various agencies' traffic divisions, will be coded into a regional operation model. The analysis results such as control delay, queue length, the optimized phasing & timing plan, and off-set parameters will be helpful to understand the causes of congestion and to create a mitigation strategy. The analyzed results will be released bi-annually.

d) Pedestrian and Bicyclist Count and Satisfaction Survey

Pedestrian and bicyclist counts will be taken using various resources. One idea is to utilize volunteers to collect this data in as much as possible. Another potential source of pedestrian crossing activity in the downtown area is the surveillance cameras already in place to support the traffic operation centers. Later the digital image can be analyzed manually or automatically. In lieu of these resources, temporary data collectors or consultant resources will be utilized for this effort. The results will be released bi-annually.

e) Transit ridership and satisfaction survey

DATA, Chapel Hill Transit, and the Triangle Transit each provide annual operating performance statistics to the Federal Transit Administration. The transit agencies also conduct a bi-annual customer satisfaction survey. These data sources will be used to monitor transit performance. It will be released biannually.

f) Crash rate, count, and severity

The Traffic Engineering Accident Analysis System (TEAAS) is a tool to analyze accidents that occur on the state's roads, and is maintained by NCDOT- Traffic Engineering and Safety Systems Branch. This tool will be used to monitor safety. The most dangerous 20 locations will be ranked by crash rate and another 20 locations will be ranked by crash frequency. The result will be released biannually.

g) Public and expert survey results

Experts' comments for CMP are mostly collected during the steering committee meeting. For hearing public comments, the MPO web-page will have a comment window and also a brief survey will be conducted biannually to the member agencies for what kind of public comments they have received.

4.3. Data Analysis

To describe congestion conditions and trends systemwide, the collected data will be analyzed and the following outputs will be summarized using tables, graphs, or maps. The Level-of-Service (LOS) criteria for the intersections and corridors in Table 4.3 and Table 4.4 will be applied to summarize the analysis results. These summaries will help identify overall congestion status and problematic areas. The LOS criteria for non-automobile modes are shown in Table 4.5 and 4.6.

- Recurring congestion performance measures
  - Travel time index and comparison result with historical data
  - V/C ratio and comparison result with historical data
  - Temporal and spatial extension of congestion, and comparison result with historical data
  - Control delay and queue length
  - Transit route/frequency, ridership, and peak-hour passenger/seat ratio
  - Bicycle/Pedestrian facilities information with counts and satisfaction survey
  - LOS Scores for pedestrian, bicycle, and transit modes
  - Key truck route, if possible
  - Evacuation route, if possible
- Nonrecurring congestion performance measures
  - High crash intersections by crash rate, the number of crashes, and incident severity
  - High crash corridors by crash rate, the number of crashes, and incident severity

Table 4.3 LOS for At-Grade Intersections

LOS	Signalized Intersection	Unsignalized Intersection
A	< 10 sec	< 10 sec
B	10~20 sec	10~15 sec
C	20~35 sec	15~25 sec
D	35~55 sec	25~35 sec
E	55~80 sec	35~50 sec
F	> 80 sec	> 50 sec

Table 4.4 LOS for Corridors (TTI)

LOS	Signalized Corridor (TTI =Posted Speed Limit / Avg. Travel Speed)	Freeway	Congestion Status
A	≤ 1.20	≤ 1.00	Not congested
B	1.20~1.50	1.00~1.08	Not congested
C	1.50~1.96	1.08~1.59	Not congested
D	1.96~2.50	1.59~2.17	Approaching congestion
E	2.50~3.46	2.17~3.25	Congested
F	> 3.46	> 3.25	Severely Congested

Table 4.5 LOS Criteria for Pedestrian Mode

Pedestrian LOS Score	LOS by Average Pedestrian Space (ft^2/p)*					
	> 60	40-60	24-40	15-24	8-15	≤ 8.0
≤ 2.00	A	B	C	D	E	F
2.00~2.75	B	B	C	D	E	F
2.75~3.50	C	C	C	D	E	F
3.50~4.25	D	D	D	D	E	F
4.25~5.00	E	E	E	E	E	F
> 5.00	F	F	F	F	F	F

Source: 2010 HCM

Table 4.6 LOS Criteria for Bicycle and Transit Modes

LOS	LOS Score*
A	≤ 2.00
B	2.00~2.75
C	2.75~3.50
D	3.50~4.25
E	4.25~5.00
F	> 5.00

Source: 2010 HCM

To identify the congested corridor or location and to develop strategies, the performance measurement results of corridors and locations will be analyzed.

For the motorized traffic congestion analysis, a rank system will be applied to the existing and projected congestion. The severity of existing congestion will be 80 % of weight and the severity of projected congestion with financially committed improvements will be 20 % of weight in the rank system. The severity of projected congestion with committed improvements in the TIP will be drawn from a Regional operation model or the TRM model at a target year. The volume-to-capacity ratio can be applied if the travel time index is not available.

The rank system is as follows:

$$\text{Rank} = \text{ELOS} + \text{FLOS}$$

$$= \text{MAX}(\{ (TTI_E + CT_E + D_E)*.80 + (TTI_P + CT_P + D_P)*.20\}, \{ (CT_E + v/c_E + D_E)*.80 + (CT_P + v/c_P + D_P)*.20\})$$

Where:

ELOS = (Existing congestion)
FLOS = (Projected congestion from a operational model or TRM)
TTI_E = (Existing Travel Time Index, Free flow speed/travel speed)
CT_E = (Duration of existing congestion)

v/c_E = (Existing volume/capacity)
D_E = (Existing control delay / 120)
TTI_P = (Projected Travel Time Index, Free flow speed/travel speed)
CT_P = (Duration of projected congestion)
v/c_P = (Projected volume/capacity)
D_P = (Projected control delay / 120)

Once the congested corridors and locations are ranked, the top ranked 20 areas will be reported for problem identification, strategy review and project selection.

The high crash intersections and corridors for nonrecurring congestion will be ranked and the top ranked 5 corridors or locations will be reported for identifying the cause of problems.

The performance measurement in the area of pedestrian & bicycle, transit, freight, and security will be analyzed independently. Once the congested areas are identified, the corridors or locations should be reported for problem identification.

In further, the Multimodal Level of Service (MMLOS) analysis method will be considered to introduce in the CMP. The MMLOS method can address the perceived quality of service within the right of way of the urban street for passenger car driver, bus passengers, bicyclists, and pedestrians. It is noted that (a) the MMLOS method is not simple, (b) it cannot be applicable for the analysis of dynamic conditions such as the determination of the beginning and end times of congestion, and (c) the MMLOS analysis for the four modes requires various additional data, which are not defined in the previous sections, including the number of times a vehicle decelerates to a full stop, number of the exclusive left turn lanes, proportion of heavy vehicles, pavement surface condition rate, percentage of segment with occupied on-street parking, lane configuration and the width on segments, number of right-turn-on-red vehicles, etc.

5. Problem Identification

To identify the causes of the problem for the reported corridors or intersections, the results of the following analyses will be carefully reviewed:

- Existing facility analysis (lane configuration, signal-timing plan, bus loading bay, bicycle/pedestrian facilities, and driveway density),
- Capacity analysis (V/C ratio during a peak-hour and daily),
- Intersection LOS analysis (control delay during a peak-hour),
- Corridor analysis (intensity of travel time index during a peak-hour and daily),
- Temporal and spatial extension of congestion (V/C ratio or TTI during daily), and
- Collision analysis (crash types and incident severity during last 5 years)

This comprehensive analysis results will help to find the problem causes and lead to develop an improvement strategy.

6. Identification of Strategies

After the causes of congestion have been identified and evaluated, specific improvement strategies will be identified. During the identification of appropriate improvement strategies, the following contributing factors that affect the feasibility of the strategies should be assessed: estimated cost, right-of-way availability, technology infrastructure, and environmental and social constraints. Environmental Justice Analysis will be conducted in the assessment of environmental and social constraints. This analysis will prove to ensure that the candidate improvement strategy will not impact negatively on minority and low-income populations. For recurring congestion problems, improvement strategies will be focused on decreasing the travel time index, V/C, and control delay. It is noted that the mentioned performance measurements are projected numbers and they can be estimated from a regional operation model or TRM. Strategies for nonrecurring congestion problems will be evaluated in terms of their ability to decrease crash rates or decrease the incident severity. To quantify estimated crash rate, number of crashes, or incident severity, the development of a regional safety model is required. The detailed identification process of appropriate improvement strategies is shown in Figure 6.1.

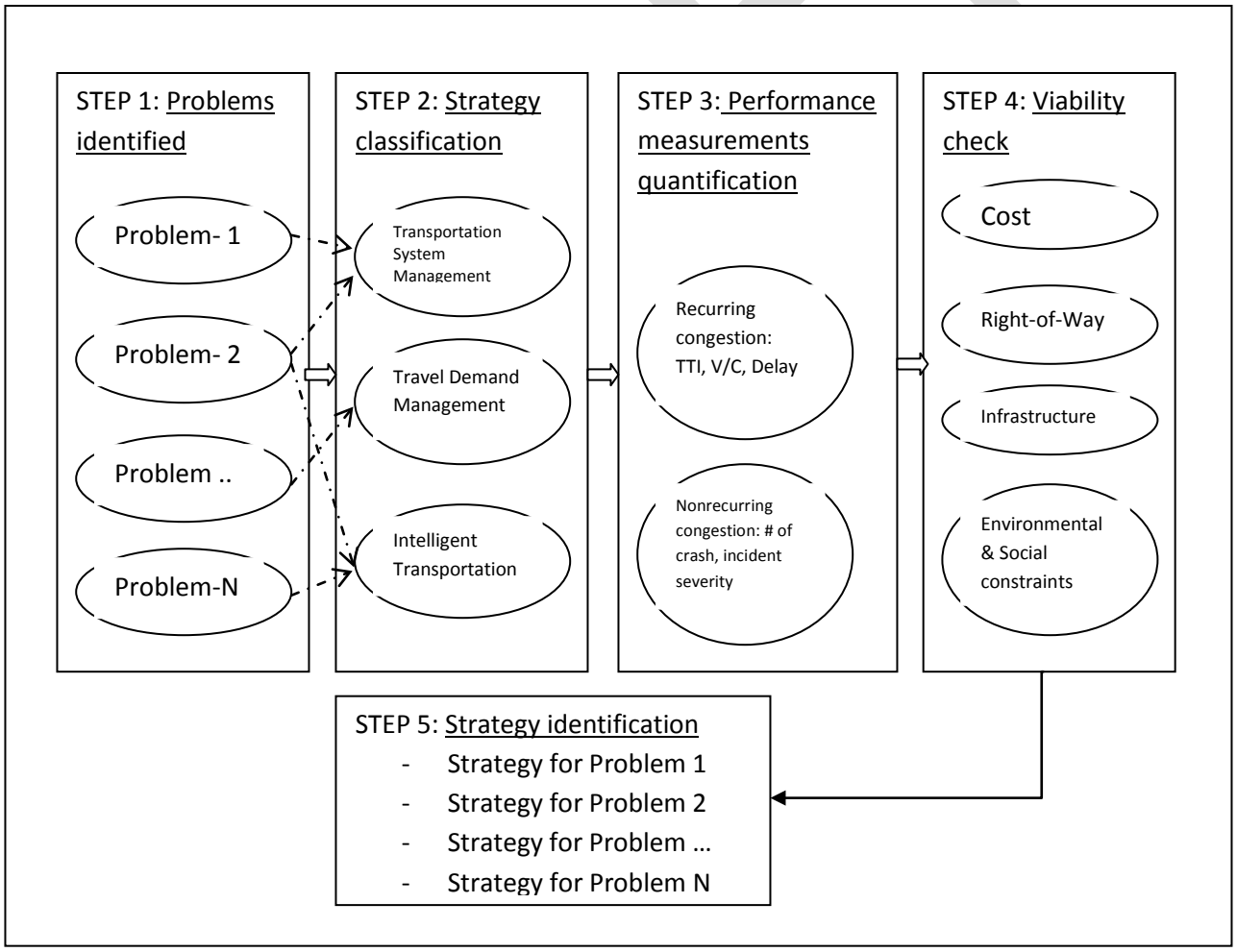

Figure 6.1 Strategies identification process

Some types of strategies are stated in SAFETEA-LU Sec. 450.320 (c) (4), and the strategies are reorganized for the following categories;

- Transportation System Management Strategies;

- Travel Demand Management Strategies; and

- Intelligent Transportation System Strategies;

Each congested area will have specific characteristics that that will lead to certain improvements. While every category of strategies will not be applicable for every situation, it is important to consider the alternatives when they are applicable. Some examples of the types of improvement strategies included in each category are shown in Table 6.1.

Table 6.1 DCHC MPO CMP Improvement Strategies Tool Box

Main group	Sub group	Strategies
Transportation System Management Strategies	Traffic Signalization and Control	- new signal installation, - signal re-timing, - signal hardware upgrades, - signal interconnection, and - demand-responsive signal system
	System capacity and Intersection Improvements	- new travel lanes on major freeway and streets, - Intersection/street widening, - lane assignment changes, - installation of turn lanes, - land use restrictions, - bus loading bays, and - Bus on Shoulder System (BOSS)
	Bottleneck Removal	- re-striping, - installation of signage, - addition of lanes, - reduction of merging and weaving
	Special-Event Management	- traffic management plans, - signal timing plans, and - dynamic lane assignments
	Access Management	- turn lanes, - driveway closures - median treatment - implementation of superstreet design

Table 6-1 Improvement strategies (continue)

Main group	Sub group	Strategies
Travel Demand Management Strategies	Improve Transportation Options	- alternative work schedules, - vanpooling/carpooling, - park & ride, and - bike and pedestrian improvements
	Incentives to Use Alternative Modes	- parking management/shared parking, - congestion pricing/road pricing, and - guaranteed ride home programs
	Sustainable Development	- transit-oriented development, - land use density and clustering, and - bicycle parking facilities
	Policy and Institutional Reform	- car-free planning, - speed reduction, and - context sensitive design
	TDM Marketing and Education	- walking and cycling encouragement, and - transit and alternative mode encouragement
Intelligent Transportation System Strategies	Public Transportation	- transit vehicle tracking, - transit fixed-route operations, - transit passenger and fare management, and - transit traveler information
	Traffic Management	- network surveillance, - surface street control, - freeway control, - traffic incident-management system, - advanced railroad-grade crossing, - roadway closure management, and - Traffic Management Center improvement
	Commercial Vehicle Operations	- fleet and freight administration, - electronic clearance, - weigh-in-motion, - roadside commercial vehicle operations safety, and - freight assignment tracking
	Emergency Management	- emergency routing, - roadway service patrols, and - disaster traveler information
	Maintenance & Construction Management	- maintenance and construction vehicle and equipment tracking, - road weather data collection, and - work-zone management

7. Implementing Strategies and Monitoring Strategy Effectiveness

7.1. Implementation and Management

The previously identified improvement strategies should be incorporated into the long range transportation plan (LRTP) and the transportation improvement plan (TIP). The implementation processes of the defined strategies will be closely monitored if the improvements are adopted in the TIP or other program with the financial commitment. The implementation of the improvement strategies will be led by the operating agencies, and the progress should be reported to the MPO every month.

7.2. Monitoring Strategy Effectiveness

The implemented strategies will be monitored to assess their effectiveness. Monitoring techniques and schedules will be dependent on the type of improvement that is implemented, and the data availability. It may take years to assess the benefits of safety-type improvements that are intended to reduce crash rates, crash severity, or incidents. Conversely, the benefits of capacity improvements are relatively easy to measure and assess.

The benefits of the implemented strategies will be documented in the biannual report. For the improvements that may not be accurately measured in a two year time frame, results will be presented with a description of the limitations of monitoring. Capacity projects and other improvements that are implemented through non CMP methods will still be monitored to determine their benefits. Based upon the monitoring results, the learned facts will feedback for the CMP to verify and update the used performance measures, the applied data analysis techniques, and the considered strategies. If necessary, the CMP objectives and the CMP itself will be adjusted.

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Appendix A: TITLE 23--HIGHWAYS

CHAPTER I--FEDERAL HIGHWAY ADMINISTRATION, DEPARTMENT OF TRANSPORTATION

PART 450—PLANNING ASSISTANCE AND STANDARDS

Subpart C—Metropolitan Transportation Planning and Programming

< http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=e1e6fded77bb21ea5585c6420e6552eb&rgn=div8&view=text&node=23:1.0.1.5.11.3.1.11&idno=23 >

§ 450.320 Congestion management process in transportation management areas.

(a) The transportation planning process in a TMA shall address congestion management through a process that provides for safe and effective integrated management and operation of the multimodal transportation system, based on a cooperatively developed and implemented metropolitan-wide strategy, of new and existing transportation facilities eligible for funding under title 23 U.S.C. and title 49 U.S.C. Chapter 53 through the use of travel demand reduction and operational management strategies.

(b) The development of a congestion management process should result in multimodal system performance measures and strategies that can be reflected in the metropolitan transportation plan and the TIP. The level of system performance deemed acceptable by State and local transportation officials may vary by type of transportation facility, geographic location (metropolitan area or subarea), and/or time of day. In addition, consideration should be given to strategies that manage demand, reduce single occupant vehicle (SOV) travel, and improve transportation system management and operations. Where the addition of general purpose lanes is determined to be an appropriate congestion management strategy, explicit consideration is to be given to the incorporation of appropriate features into the SOV project to facilitate future demand management strategies and operational improvements that will maintain the functional integrity and safety of those lanes.

(c) The congestion management process shall be developed, established, and implemented as part of the metropolitan transportation planning process that includes coordination with transportation system management and operations activities. The congestion management process shall include:

(1) Methods to monitor and evaluate the performance of the multimodal transportation system, identify the causes of recurring and non-recurring congestion, identify and evaluate alternative strategies, provide information supporting the implementation of actions, and evaluate the effectiveness of implemented actions;

(2) Definition of congestion management objectives and appropriate performance measures to assess the extent of congestion and support the evaluation of the effectiveness of congestion reduction and mobility enhancement strategies for the movement of people and goods. Since levels of acceptable system performance may vary among local communities, performance measures should be tailored to the specific needs of the area and established cooperatively by the State(s), affected MPO(s), and local officials in consultation with the operators of major modes of transportation in the coverage area;

(3) Establishment of a coordinated program for data collection and system performance monitoring to define the extent and duration of congestion, to contribute in determining the causes of congestion, and evaluate the efficiency and effectiveness of implemented actions. To the extent possible, this data collection program should be coordinated with existing data sources (including archived operational/ITS data) and coordinated with operations managers in the metropolitan area;

(4) Identification and evaluation of the anticipated performance and expected benefits of appropriate congestion management strategies that will contribute to the more effective use and improved safety of existing and future transportation systems based on the established performance measures. The following categories of strategies, or combinations of strategies, are some examples of what should be appropriately considered for each area:

(i) Demand management measures, including growth management and congestion pricing;

(ii) Traffic operational improvements;

(iii) Public transportation improvements;

(iv) ITS technologies as related to the regional ITS architecture; and

(v) Where necessary, additional system capacity;

(5) Identification of an implementation schedule, implementation responsibilities, and possible funding sources for each strategy (or combination of strategies) proposed for implementation; and

(6) Implementation of a process for periodic assessment of the effectiveness of implemented strategies, in terms of the area's established performance measures. The results of this evaluation shall be provided to decisionmakers and the public to provide guidance on selection of effective strategies for future implementation.

(d) In a TMA designated as nonattainment area for ozone or carbon monoxide pursuant to the Clean Air Act, Federal funds may not be programmed for any project that will result in a significant increase in the carrying capacity for SOVs (*i.e.* , a new general purpose highway on a new location or adding general purpose lanes, with the exception of safety improvements or the elimination of bottlenecks), unless the project is addressed through a congestion management process meeting the requirements of this section.

(e) In TMAs designated as nonattainment for ozone or carbon monoxide, the congestion management process shall provide an appropriate analysis of reasonable (including multimodal) travel demand reduction and operational management strategies for the corridor in which a project that will result in a significant increase in capacity for SOVs (as described in paragraph (d) of this section) is proposed to be advanced with Federal funds. If the analysis demonstrates that travel demand reduction and operational management strategies cannot fully satisfy the need for additional capacity in the corridor and additional SOV capacity is warranted, then the congestion management process shall identify all reasonable strategies to manage the SOV facility safely and effectively (or to facilitate its management in the future). Other travel demand reduction and operational management strategies appropriate for the corridor, but not appropriate for incorporation into the SOV facility itself, shall also be identified through the congestion management process. All identified reasonable travel demand reduction and operational management strategies shall be incorporated into the SOV project or committed to by the State and MPO for implementation.

(f) State laws, rules, or regulations pertaining to congestion management systems or programs may constitute the congestion management process, if the FHWA and the FTA find that the State laws, rules, or regulations are consistent with, and fulfill the intent of, the purposes of 23 U.S.C. 134 and 49 U.S.C. 5303.

Appendix B: Tier-2 Selection Criteria

Travel Time

The selection criteria of corridors in the Tier-2 and the associated weight points are;

- Daily and peak-hour v/c ratio: if the ratio on a corridor is greater than 80 percentile in the predefined network, the weight is 4, else 0.
- Traffic volume: if the percentile of the volume on a corridor is greater than 80, the weight is 1, else 0.
- Transit route and service frequency: if a transit service is provided on a corridor, the weight is 1, else 0. If a transit service is provided and the service frequency percentile is more than 50, another two points of weight are given. In transit subject, maximum 3 points are available.
- Incident rate and numbers: the each subject has 1 weight point if each subjects of percentile is greater than 80. Maximum is 2 weight points.
- Truck route: if a corridor is designated as truck route, the weight is 2, else 0.
- Evacuation route: if a corridor is evacuation route, the weight is 2, else 0.
- Bypass or an alternative route of a committed project in LRTP (Metropolitan transportation Plan such as LRTP, TIP, or etc.): if a committed project in LRTP will be completed and was completed within 2 years, both the alternative corridor(s) and the completed project or the alternative corridor(s) alone will be selected in the 2nd tier level regardless of the weight points.
- Newly implemented projects within three years or the alternative routes of the planned projects in LRTP, Tip, etc. within two years.
- Corridor suggested by this steering committee: the corridor will be selected, regardless of the weight points.

Traffic Count

The selection criteria of segments for traffic count and the associated weight points are;

- TTI(maximum weight: 5),
- Transit route and service frequency (max 3),
- Incident rate and numbers (max 2),
- Truck route (max 2), and
- Evacuation route (2).

A segment on the bypass or an alternative route of a committed project, and segments suggested by the Technical Steering Committee will be selected, regardless of the weight points.

Appendix C: Travel Time Data Collection Procedures

1. Sample Size Calculation
   a. Using Standard Deviation of Travel Time

$$n = \left(\frac{t \times s}{\varepsilon}\right)^2 = \left(\frac{t \times c.v.}{e}\right)^2$$

Where n = Sample Size;
t = Student's t statistics value from confidence interval for (n-1) degree of freedom;
$c.v.$ = Coefficient of variance – the relative variability in the travel times from empirical data, expressed as a percentage (%); and
e = Relative error- the relative permissible error in the travel time estimate, expressed as a percentage (%).

Coefficients of Variance for the Test Vehicle Technique on Freeway and Arterial Streets from Empirical data[1)]

Freeway		Arterial Streets	
Average Daily Traffic (ADT) Volume per lane	Average Coefficient of Variation (%)	Traffic Signal Density (signals per database)	Average Coefficient of Variation (%)
0 ~ 15,000	9	< 3	9
15,000 ~ 20,000	11	3 to 6	12
> 20,000	17	> 6	15

Source 1) Lomax, T. and e.t.c. "quantifying Congestion: User's Guide". NCHRP Report 398, Volume II. Transportation Research Board, Washington, DC, 1997.

Test Vehicle Sample Sizes on Freeways[1)]

Average Daily Traffic (ADT) Volume per lane	Average Coefficient of Variation (%)	Sample Sizes		
		90% Confidence, ± 10% error[2)]	95% Confidence, ± 10% error	95% Confidence, ± 5% error[3)]
< 15,000	9	5	6	15
15,000 to 20,000	11	6	8	21
> 20,000	17	10	14	47

Test Vehicle Sample Sizes on Arterial Streets1)

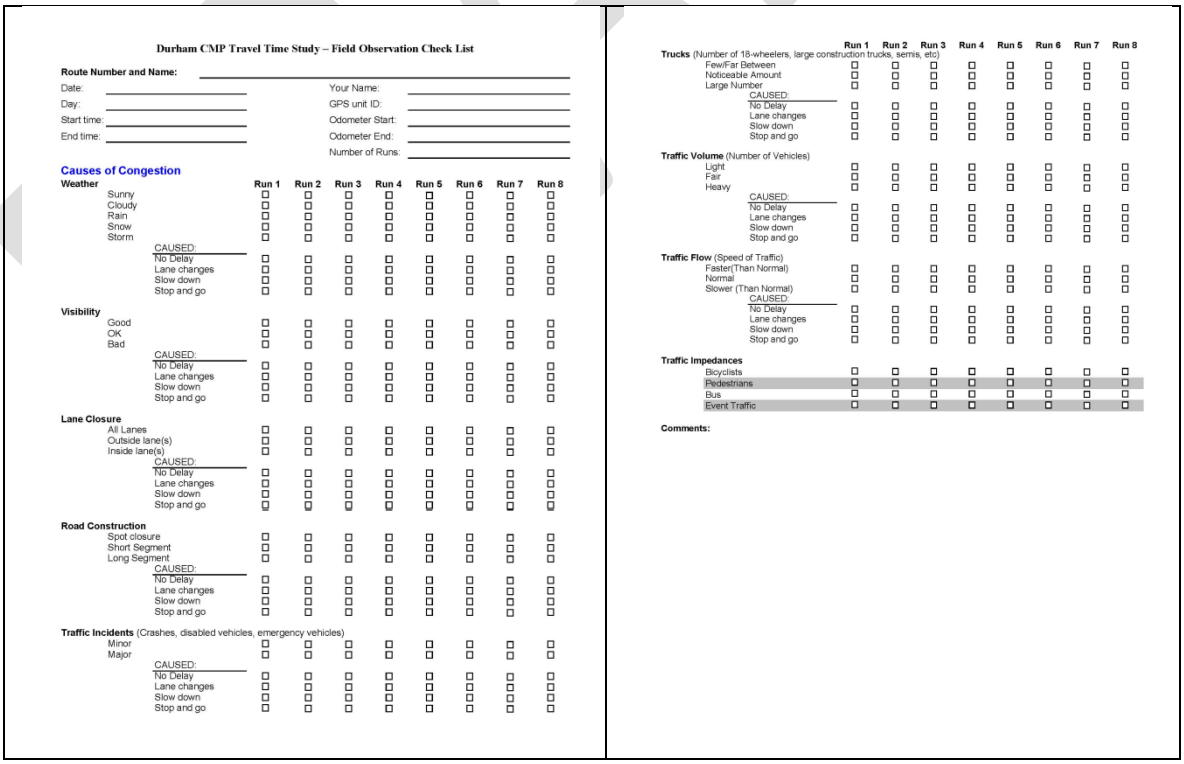
Average Daily Traffic (ADT) Volume per lane	Average Coefficient of Variation (%)	Sample Sizes		
		90% Confidence, ± 10% error[2)]	95% Confidence, ± 10% error	95% Confidence, ± 5% error[3)]
< 3	9	5	6	15
3 to 6	12	6	8	25
> 6	13	9	12	37

2) Planning purpose
3) Operational purpose

b. Budget restriction method (Common practice?)
   1. Typically 3 to 6 runs per routes
   2. In our plan, 5 runs/direction/peak-period/route are designed.

2. Procedures
   a. Safety considered highest priority. Do not attempt to fill out any forms while driving. Do not feel pressured to make unsafe lane changes, travel at unsafe speeds or drive in any unsafe manner in order to "keep up" with normal traffic speed. If fatigued, discontinue study. Become familiar with the route and turnaround locations well in advance of the study. If possible, make a practice run to familiarize yourself with the route.
   b. When it is safe to do so, driving should reflect the average speed of those around you. Try to keep up with a platoon if possible. Try not to accelerate or stop quickly. Unless there is a safety issue necessitating a stop or deviation from the specified route, drive the entire route from start to finish for each run without interruption.
   c. Install and turn on the GPS equipment at least a few minutes before driving is to start, as it can take a minute or two for the unit to pick up a signal. Make sure battery in unit is working (back of unit has instructions for determining whether battery is working, signal is received, etc.). Make sure unit is properly plugged into vehicle's power source (red light indicates power source is connected properly).

The following sheet is used to record information about the travel time runs. The sheet should be filled out in a safe location *before and after* driving the runs, NOT while driving.



Durham CMP Travel Time Study – Field Observation Check List

Route Number and Name: _____

Date: _____ Your Name: _____

Day: _____ GPS unit ID: _____

Start time: _____ Odometer Start: _____

End time: _____ Odometer End: _____

Number of Runs: _____

Causes of Congestion

	Run 1	Run 2	Run 3	Run 4	Run 5	Run 6	Run 7	Run 8
Weather								
Sunny	☐	☐	☐	☐	☐	☐	☐	☐
Cloudy	☐	☐	☐	☐	☐	☐	☐	☐
Rain	☐	☐	☐	☐	☐	☐	☐	☐
Snow	☐	☐	☐	☐	☐	☐	☐	☐
Storm	☐	☐	☐	☐	☐	☐	☐	☐
CAUSED:								
No Delay	☐	☐	☐	☐	☐	☐	☐	☐
Lane changes	☐	☐	☐	☐	☐	☐	☐	☐
Slow down	☐	☐	☐	☐	☐	☐	☐	☐
Stop and go	☐	☐	☐	☐	☐	☐	☐	☐
Visibility								
Good	☐	☐	☐	☐	☐	☐	☐	☐
OK	☐	☐	☐	☐	☐	☐	☐	☐
Bad	☐	☐	☐	☐	☐	☐	☐	☐
CAUSED:								
No Delay	☐	☐	☐	☐	☐	☐	☐	☐
Lane changes	☐	☐	☐	☐	☐	☐	☐	☐
Slow down	☐	☐	☐	☐	☐	☐	☐	☐
Stop and go	☐	☐	☐	☐	☐	☐	☐	☐
Lane Closure								
All Lanes	☐	☐	☐	☐	☐	☐	☐	☐
Outside lane(s)	☐	☐	☐	☐	☐	☐	☐	☐
Inside lane(s)	☐	☐	☐	☐	☐	☐	☐	☐
CAUSED:								
No Delay	☐	☐	☐	☐	☐	☐	☐	☐
Lane changes	☐	☐	☐	☐	☐	☐	☐	☐
Slow down	☐	☐	☐	☐	☐	☐	☐	☐
Stop and go	☐	☐	☐	☐	☐	☐	☐	☐
Road Construction								
Spot closure	☐	☐	☐	☐	☐	☐	☐	☐
Short Segment	☐	☐	☐	☐	☐	☐	☐	☐
Long Segment	☐	☐	☐	☐	☐	☐	☐	☐
CAUSED:								
No Delay	☐	☐	☐	☐	☐	☐	☐	☐
Lane changes	☐	☐	☐	☐	☐	☐	☐	☐
Slow down	☐	☐	☐	☐	☐	☐	☐	☐
Stop and go	☐	☐	☐	☐	☐	☐	☐	☐
Traffic Incidents (Crashes, disabled vehicles, emergency vehicles)								
Minor	☐	☐	☐	☐	☐	☐	☐	☐
Major	☐	☐	☐	☐	☐	☐	☐	☐
CAUSED:								
No Delay	☐	☐	☐	☐	☐	☐	☐	☐
Lane changes	☐	☐	☐	☐	☐	☐	☐	☐
Slow down	☐	☐	☐	☐	☐	☐	☐	☐
Stop and go	☐	☐	☐	☐	☐	☐	☐	☐

	Run 1	Run 2	Run 3	Run 4	Run 5	Run 6	Run 7	Run 8
Trucks (Number of 18-wheelers, large construction trucks, semis, etc)								
Few/Far Between	☐	☐	☐	☐	☐	☐	☐	☐
Noticeable Amount	☐	☐	☐	☐	☐	☐	☐	☐
Large Number	☐	☐	☐	☐	☐	☐	☐	☐
CAUSED:								
No Delay	☐	☐	☐	☐	☐	☐	☐	☐
Lane changes	☐	☐	☐	☐	☐	☐	☐	☐
Slow down	☐	☐	☐	☐	☐	☐	☐	☐
Stop and go	☐	☐	☐	☐	☐	☐	☐	☐
Traffic Volume (Number of Vehicles)								
Light	☐	☐	☐	☐	☐	☐	☐	☐
Fair	☐	☐	☐	☐	☐	☐	☐	☐
Heavy	☐	☐	☐	☐	☐	☐	☐	☐
CAUSED:								
No Delay	☐	☐	☐	☐	☐	☐	☐	☐
Lane changes	☐	☐	☐	☐	☐	☐	☐	☐
Slow down	☐	☐	☐	☐	☐	☐	☐	☐
Stop and go	☐	☐	☐	☐	☐	☐	☐	☐
Traffic Flow (Speed of Traffic)								
Faster(Than Normal)	☐	☐	☐	☐	☐	☐	☐	☐
Normal	☐	☐	☐	☐	☐	☐	☐	☐
Slower (Than Normal)	☐	☐	☐	☐	☐	☐	☐	☐
CAUSED:								
No Delay	☐	☐	☐	☐	☐	☐	☐	☐
Lane changes	☐	☐	☐	☐	☐	☐	☐	☐
Slow down	☐	☐	☐	☐	☐	☐	☐	☐
Stop and go	☐	☐	☐	☐	☐	☐	☐	☐
Traffic Impedances								
Bicyclists	☐	☐	☐	☐	☐	☐	☐	☐
Pedestrians	☐	☐	☐	☐	☐	☐	☐	☐
Bus	☐	☐	☐	☐	☐	☐	☐	☐
Event Traffic	☐	☐	☐	☐	☐	☐	☐	☐

Comments:

3. Examples

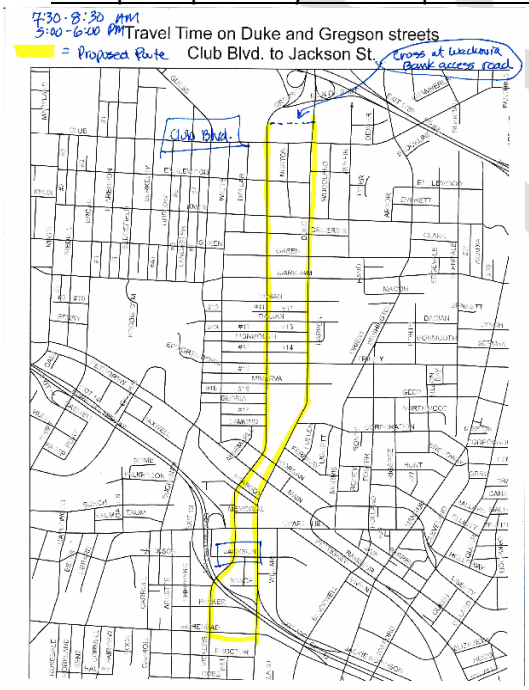
Example of Schedule

a. Date (typically middle 3 days of week): Tuesday, Wednesday, Thursday
b. Time (Approximately 12.75 hours, 8 core hours)
    i. 6:15 ~6:45 (0.5hr): travel to target route
    ii. 6:45 ~8:45 (2.0hr): AM peak hour runs – inbound / outbound (2/2 times)
    iii. 8:45 ~9:30 (0.75hr): Break
    iv. 9:30 ~10:30 (1.0hr): Off-peak I runs – inbound / outbound (1/1 times)
    v. 10:30 ~11:30 (1.0hr): Break
    vi. 11:30 ~13:30 (2.0hr): Noon peak hour runs – inbound / outbound (2/2 times)
    vii. 13:30 ~14:30 (1.0hr): Break
    viii. 14:30 ~15:30 (1.0hr): Off-peak II runs – inbound / outbound (1/1 times)
    ix. 15:30 ~16:30 (1.0hr): Break
    x. 16:30 ~18:30 (2.0hr): PM peak hour runs – inbound / outbound (2/2 times)
    xi. 18:30 ~19:00 (0.5hr): Return
c. Prior to study, information about the route should be collected and organized as follows. A map should be prepared with the route as well as turnaround locations.

Example of pre-study information (MLK Blvd.)

Route	Apporx.Length (miles)	# of signals	Signal density	start point	end point	AADT	Speed limit (mph)
Martin Luther King Jr. Blvd.	5	11	2.2 (signal/ mile)	MLK and NC 55	MLK and University	15,000 to 23,000	35 to 45

Example of pre-study route map with turnaround points (Duke/Gregson)



MEMORANDUM

To: Transportation Advisory Committee (TAC)
DCHC MPO

From: DCHC MPO Lead Planning Agency

Date: May 11, 2011

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

This memorandum provides a summary status of tasks for projects in the FY 2010-2011 Unified Planning Work Program.

- • Indicates that task is ongoing and not complete.
- ✓ Indicates that task is complete.

2010-2011 Unified Planning Work Program (UPWP) – Projects

Town of Carrboro Transportation Study/Main Street Road Diet

- ✓ Consultant selected
- Scope development/contract negotiation underway

Town of Hillsborough Downtown Transportation Study

- ✓ Consultant selected
- Scope development/contract negotiation underway

2040 Long Range Transportation Plan LRTP

- LRTP Schedule/Timeline TAC Approval – August 2011
- Socio-economic and demographic data analysis completed
- LRTP Public Involvement plan – Nov/December 2011
- LRTP Goals and Objectives – January 2012
- Approval of LRTP Targets January/February 2012
- Deficiency Analysis – April 2012
- Socio-economic Forecasts – January 2012
- Land use Scenario – January 2012
- Alternative Analysis – May –July 2010
- Draft LRTP Recommendation September 2012
- Air Quality analysis and Conformity Adopted -October 2012 - February 2013
- Approval of LRTP and Conformity determination April/may 2013
- Technical report and implementation

Comprehensive Transportation Plan (CTP)

- Draft CTP – November 2011 – Depends on NCDOT Schedule
- Public Input
- Recommended CTP

- Adopted CTP - March 2012
- Technical report and implementation

NC 54/I-40 Corridor/Sub-Area Study

- ✓ Staff study initiation meeting
- ✓ Draft scope of services
- ✓ Agency review of scope and time
- ✓ Request for Proposal notice – October 2008
- ✓ Proposal due January 2009
- ✓ Consultant selected
- ✓ Contract negotiation underway
- ✓ Council contract approval May 18, 2009
- ✓ Notice to Proceed – June 2009
- ✓ Kickoff Meeting – July 2009
- ✓ Public Outreach Plan – August 2009
- ✓ Prepare Corridor / Subarea Community Profile – Dec 2009
    - ✓ Public Workshop #1 – Fall 2009
- ✓ Development and Evaluation of Scenarios – Apr 2010
    - ✓ Public Workshop #2 – Feb 25, 2010
- ✓ Transportation/Land Use Master Plan – June 2010
    - ✓ Public Workshop #3 – May 11, 2010
- ✓ Documentation and Final Presentation – June 2010
- Local agency review – ongoing
- Additional study to address issues raised during public comment
- Phase 2 - ongoing
- Study completion – June 2012

GIS/Data Integration and Automation

- ✓ Phase I completed. Internal review and implementation in progress
- ✓ Phase I deployment
- Database development – ongoing.
- Phase 2 to commence in July 2011

Land-use Model Development

- ✓ Multi-year project in progress
- ✓ Phase 1 completed
- ✓ Sensitivity analysis and testing in progress
- ✓ Data development in on-going
- Phase 2- Parcel level model for DCHC – To commence in July 2011
    - Initial database – TBD
    - Initial model estimation – TBD
    - Initial calibration – TBD

Non-Motorized Model Development

- ✓ Phase 1 completed.
- ✓ Phase 2 completed
- Sensitivity analysis and testing in progress
- White Paper on non-motorized prioritization tool

MPO Parking Survey and Study (postponed)

- Parking model specification
- Regional Coordination and planning
- Draft scope of services
- Request for Proposal notice
- Consultant selection
- Council contract approval
- Project commences

MPO Community Viz. Scenarios Planning and Visualization

- ✓ Project kick- off in November 2010 – completed
- Data collection – ongoing
- Build Scenario Planning Tool
- Develop and approve Place Typology – Place Type Palette – May 2012
- Focus Group Meetings – May 2012
- Trend Forecasts
- Partnering Strategy
- Build Development Strategy
- Rationalize Scenarios
- Land use and Transportation MOEs
- Documentation/Protocol Report

MPO Congestion Management Process CMP

- CMP Procedure Plan approval – June 2011
- FHWA Approval of CMP procedure plan – August 2011
- CMP data requirement collection plan –Fall of 2011
- CMP Data collection and monitoring – ongoing
- CMP implementation – ongoing
- State- of Systems Report – December 2010
- Evaluation of effective of CMP projects and funded projects - ongoing

MPO Safety and Security Plan

- Action Plan and schedule under development

Update of the MPO Public Involvement consistent with Federal Certification Review

- Action Plan and schedule under development

MPO Title VI/Environmental Justice (EJ)/Limited English Proficiency (LEP)y Plan

- Action Plan and schedule under development

MPO Climate Change (Sustainability Adaptation) Plan/ Update of Greenhouse Emissions Plan

- Action Plan and schedule under development

MPO Freight Plan and Integration

- Action Plan and schedule under development

TCC 5/25/2011 Attachment 13

Contract Number:	C201487	**Route:**	US-15
Physical Division:	5	**County:**	Durham
Administrative Division:	5	**TIP Number:**	B-3450, U-4009, U-4012
Length:	1.769 miles	**Federal Aid Number:**	BRSTP-1116(6)
Resident Engineer:	Chad D. Hinnant	**RE Phone Number:**	(919)220-4680
Location Description:	BRIDGES OVER SANDY CRK & TRIBUTARY & APPROACHES ON SR-1116, SR-1126 NEAR US-15/501 & SR-1116, US-15/501 AT MT MORIAH RD.		
Type of Work:	GRADING, DRAINAGE, PAVING, SIGNALS, AND STRUCTURES.		
Contractor Name:	DLB, INC DBA DLB INC (OF VA)		
Contract Amount:	$18,810,912.36	**Cost Overrun/Underrun:**	0.4%
Availability Date:	10/1/2007	**Letting Date:**	8/21/2007
Completion Date:	8/1/2010	**Work Began:**	10/1/2007
Revised Completion Date:	12/15/2010	**Estimated Completion:**	4/30/2011
Last Estimate Thru:	4/21/2011	**Scheduled Progress:**	100%
Last Estimate Paid:	4/26/2011	**Actual Progress:**	99.99%

Contract Number:	C201994	**Route:**	NC-147
Physical Division:	5	**County:**	Durham
Administrative Division:	15	**TIP Number:**	U-4763B
Length:	4.2 miles	**Federal Aid Number:**	TIFIA-540(2)
Resident Engineer:	D. Brian Harrington, PE	**RE Phone Number:**	(919)836-4873
Location Description:	TRIANGLE PARKWAY FROM NC-540 IN WAKE CO TO I-40 IN DURHAM CO		
Type of Work:	GRADING, DRAINAGE, PAVING, SIGNALS, TOLL FACILITIES & STRS.		
Contractor Name:	S. T. WOOTEN CORPORATION		
Contract Amount:	$137,446,000.00	**Cost Overrun/Underrun:**	
Availability Date:	9/19/2008	**Letting Date:**	8/5/2008
Completion Date:	7/1/2011	**Work Began:**	8/3/2009
Revised Completion Date:		**Estimated Completion:**	
Last Estimate Thru:		**Scheduled Progress:**	
Last Estimate Paid:		**Actual Progress:**	

Contract Number:	C202064	**Route:**	SR-2028
Physical Division:	5	**County:**	Durham
Administrative Division:	5	**TIP Number:**	U-3309A
Length:	1.165 miles	**Federal Aid Number:**	STP-2028(4)
Resident Engineer:	Cadmus Capehart, PE	**RE Phone Number:**	(919)840-0914
Location Description:	SR-2028 (TW ALEXANDER DR) FROM CORNWALLIS RD TO EAST OF NC-147 IN DURHAM.		
Type of Work:	WIDENING, GRADING, DRAINAGE, PAVING & SIGNALS.		
Contractor Name:	THOMPSON CONTRACTING GRADING PAVING & UTILITIES INC		
Contract Amount:	$6,502,648.68	**Cost Overrun/Underrun:**	2.89%
Availability Date:	2/1/2010	**Letting Date:**	12/15/2009
Completion Date:	8/15/2011	**Work Began:**	2/8/2010
Revised Completion Date:		**Estimated Completion:**	12/31/2011
Last Estimate Thru:	3/31/2011	**Scheduled Progress:**	72%
Last Estimate Paid:	4/29/2011	**Actual Progress:**	38.79%

Contract Number:	C202277	**Route:**	I-40
Physical Division:	5	**County:**	Durham
Administrative Division:	5	**TIP Number:**	R-2000AF, R-5164B
Length:	3.56 miles	**Federal Aid Number:**	STM-540(15)
Resident Engineer:	Jeffrey D. Allen, PE	**RE Phone Number:**	(919)733-9499
Location Description:	NORTHERN WAKE FREEWAY INTERCHANGE IMPROVEMENTS AT I-540 AND I-40, AND I-40 FROM NC-147 TO EAST OF I-540.		
Type of Work:	WIDENING, GRADING, DRAINAGE, MILLING, PAVING, & STRUCTURE .		
Contractor Name:	FSC II LLC DBA FRED SMITH COMPANY		
Contract Amount:	$7,577,355.48	**Cost Overrun/Underrun:**	-4.6%
Availability Date:	3/1/2010	**Letting Date:**	1/19/2010
Completion Date:	12/31/2010	**Work Began:**	4/1/2010
Revised Completion Date:	1/9/2011	**Estimated Completion:**	5/1/2011
Last Estimate Thru:	1/7/2011	**Scheduled Progress:**	100%
Last Estimate Paid:	1/12/2011	**Actual Progress:**	96.85%

Contract Number:	C202340	**Route:**	SR-1321
Physical Division:	5	**County:**	Durham
Administrative Division:	5	**TIP Number:**	U-3804
Length:	1.07 miles	**Federal Aid Number:**	STM-0505(50)
Resident Engineer:	Chad D. Hinnant	**RE Phone Number:**	(919)220-4680

Location Description: SR-1321 (HILLANDALE RD) FROM I-85 TO NORTH OF SR-1407 (CARVER AVE).
Type of Work: GRADING, DRAINAGE, PAVING, AND SIGNAL.
Contractor Name: REA CONTRACTING A DIVISION OF THE LANE CONSTRUCTION CORPORAT
Contract Amount: $4,222,625.78 **Cost Overrun/Underrun:** 0%
Availability Date: 8/30/2010 **Letting Date:** 7/20/2010
Completion Date: 6/15/2012 **Work Began:** 9/30/2010
Revised Completion Date: **Estimated Completion:** 6/15/2012
Last Estimate Thru: 4/7/2011 **Scheduled Progress:** 19%
Last Estimate Paid: 4/18/2011 **Actual Progress:** 14%

Contract Number: C202493 **Route:** I-85
Physical Division: 5 **County:** Durham
Administrative Division: 5 **TIP Number:** R-5164A
Length: 9.6 miles **Federal Aid Number:** STM-085-4(114)171
Resident Engineer: Cadmus Capehart, PE **RE Phone Number:** (919)840-0914
Location Description: 1 SECTION OF I-85, 1 SECTION OF US-15/501, AND 1 SECTION OF NC-147.
Type of Work: MILLING, RESURFACING & MILLED RUMBLE STRIPS.
Contractor Name: REA CONTRACTING A DIVISION OF THE LANE CONSTRUCTION CORPORAT
Contract Amount: $6,088,736.11 **Cost Overrun/Underrun:** -8.96%
Availability Date: 3/15/2010 **Letting Date:** 1/19/2010
Completion Date: 12/16/2010 **Work Began:** 8/4/2010
Revised Completion Date: **Estimated Completion:** 4/30/2011
Last Estimate Thru: 2/7/2011 **Scheduled Progress:** 100%
Last Estimate Paid: 2/17/2011 **Actual Progress:** 97.58%

Contract Number: C202538 **Route:** NC-55, NC-751, SR-1118 SR-1357, SR-1404, SR-1615 SR-1641, SR-1646, SR-1656 SR-1670, SR-1671, SR-1901 SR-1954, SR-1955, SR-1981 US-70
Physical Division: 5 **County:** Durham
Administrative Division: 5 **TIP Number:**
Length: 22.96 miles **Federal Aid Number:**
Resident Engineer: Cadmus Capehart, PE **RE Phone Number:** (919)840-0914
Location Description: 1 SECTION OF US-70, 1 SECTION OF NC-55, 1 SECTION OF NC-751 & 13 SECTIONS OF SECONDARY ROADS.
Type of Work: MILLING, RESURFACING & SHOULDER RECONSTRUCTION.
Contractor Name: TRIANGLE GRADING & PAVING, INC
Contract Amount: $4,474,348.51 **Cost Overrun/Underrun:** 0.14%
Availability Date: 3/15/2010 **Letting Date:** 1/19/2010
Completion Date: 12/16/2010 **Work Began:** 4/5/2010
Revised Completion Date: **Estimated Completion:** 5/15/2011
Last Estimate Thru: 4/22/2011 **Scheduled Progress:** 100%
Last Estimate Paid: 4/28/2011 **Actual Progress:** 95.23%

Contract Number: C202610 **Route:** NC-147
Physical Division: 5 **County:** Durham
Administrative Division: 5 **TIP Number:** R-5164D
Length: 6.8 miles **Federal Aid Number:** STM-0147(3)
Resident Engineer: Cadmus Capehart, PE **RE Phone Number:** (919)840-0914
Location Description: NC-147 FROM NORTH OF SR-1322 (BROAD ST) TO NORTH OF SR-2028 (TW ALEXANDER BLVD).
Type of Work: DIAMOND GRINDING, CONC PVT SLAB REMOVAL & SHOULDER RECONST.
Contractor Name: FSC II LLC DBA FRED SMITH COMPANY
Contract Amount: $4,274,880.20 **Cost Overrun/Underrun:** 0%
Availability Date: 3/15/2011 **Letting Date:** 9/21/2010
Completion Date: 11/1/2011 **Work Began:** 3/15/2011
Revised Completion Date: **Estimated Completion:** 11/1/2011
Last Estimate Thru: 4/7/2011 **Scheduled Progress:** 10%
Last Estimate Paid: 4/13/2011 **Actual Progress:** 13.47%

Contract Number: C202613 **Route:** US-15501
Physical Division: 5 **County:** Durham
Administrative Division: 5 **TIP Number:** R-5164E
Length: 7.59 miles **Federal Aid Number:** STM-0070(140)
Resident Engineer: Chad D. Hinnant **RE Phone Number:** (919)220-4680
Location Description: 1 SECTION OF US-70 BUS, 13 SECTIONS OF US-15/501 BUS, 1 SECTION OF NC-751 AND 4 SECTIONS OF SECONDARY ROADS.

Type of Work: MILLING, RESURFACING & SHOULDER RECONSTRUCTION.
Contractor Name: FSC II LLC DBA FRED SMITH COMPANY
Contract Amount: $1,844,694.96 **Cost Overrun/Underrun:**
Availability Date: 3/15/2011 **Letting Date:** 9/21/2010
Completion Date: 9/2/2011 **Work Began:** 4/1/2011
Revised Completion Date: **Estimated Completion:**
Last Estimate Thru: **Scheduled Progress:**
Last Estimate Paid: **Actual Progress:**

Contract Number: C202712 **Route:** NC-751, SR-1811, SR-1903 SR-1905, SR-1919, SR-1921 SR-1959
Physical Division: 5 **County:** Durham
Administrative Division: 5 **TIP Number:**
Length: 13.04 miles **Federal Aid Number:**
Resident Engineer: Cadmus Capehart, PE **RE Phone Number:** (919)840-0914
Location Description: NC-751 FROM 3 LANE SECTION TO THE CHATHAM COUNTY LINE & 6 SECTIONS OF SECONDARY ROADS.
Type of Work: WIDENING, RESURFACING & SHOULDER RECONSTRUCTION.
Contractor Name: REA CONTRACTING A DIVISION OF THE LANE CONSTRUCTION CORPORAT
Contract Amount: $2,700,860.68 **Cost Overrun/Underrun:**
Availability Date: 4/4/2011 **Letting Date:** 2/15/2011
Completion Date: 9/30/2011 **Work Began:**
Revised Completion Date: **Estimated Completion:**
Last Estimate Thru: **Scheduled Progress:**
Last Estimate Paid: **Actual Progress:**

Contract Number: C202713 **Route:** NC-157
Physical Division: 5 **County:** Durham
Administrative Division: 5 **TIP Number:**
Length: 14.99 miles **Federal Aid Number:**
Resident Engineer: Chad D. Hinnant **RE Phone Number:** (919)220-4680
Location Description: US-15/501 FROM MT MORIAH RD TO ORANGE CO LINE, NC-157 FROM BEG 2 LANE TO ORANGE CO LINE & 7 SECTIONS OF SECONDARY RDS.
Type of Work: WIDENING, RESURFACING & SHOULDER RECONSTRUCTION.
Contractor Name: REA CONTRACTING A DIVISION OF THE LANE CONSTRUCTION CORPORAT
Contract Amount: $3,152,859.31 **Cost Overrun/Underrun:**
Availability Date: 4/4/2011 **Letting Date:** 2/15/2011
Completion Date: 8/26/2011 **Work Began:** 4/4/2011
Revised Completion Date: **Estimated Completion:**
Last Estimate Thru: **Scheduled Progress:**
Last Estimate Paid: **Actual Progress:**

Contract Number: DO00069 **Route:** NC-147
Physical Division: 5 **County:** Durham
Administrative Division: 5 **TIP Number:** BK-5102G
Length: 0 miles **Federal Aid Number:** BRNHS-0147(4)
Resident Engineer: Cadmus Capehart, PE **RE Phone Number:** (919)840-0914
Location Description: BRIDGES #12, 71, 137, 154, 156, AND 169 ON NC-147.
Type of Work: BRIDGE PAINTING.
Contractor Name: S & D INDUSTRIAL PAINTING, INC.
Contract Amount: $922,562.15 **Cost Overrun/Underrun:**
Availability Date: **Letting Date:** 8/19/2010
Completion Date: **Work Began:**
Revised Completion Date: **Estimated Completion:**
Last Estimate Thru: **Scheduled Progress:**
Last Estimate Paid: **Actual Progress:**

Contract Number: DO00070 **Route:** NC-147
Physical Division: 5 **County:** Durham
Administrative Division: 5 **TIP Number:** BK-5102E
Length: 0 miles **Federal Aid Number:** BRZ-1940(2)
Resident Engineer: Cadmus Capehart, PE **RE Phone Number:** (919)840-0914
Location Description: BRIDGES #194 ON SR-1940, #202 ON SR-2080, #206 ON SR-1121, AND #212 ON NC-147.
Type of Work: BRIDGE PAINTING.
Contractor Name: ASTRON GENERAL CONTRACTING COMPANY INC
Contract Amount: $1,079,557.80 **Cost Overrun/Underrun:**
Availability Date: **Letting Date:** 8/19/2010

Completion Date:		**Work Began:**	
Revised Completion Date:		**Estimated Completion:**	
Last Estimate Thru:		**Scheduled Progress:**	
Last Estimate Paid:		**Actual Progress:**	

Contract Number:	DO00076	**Route:**	-
Physical Division:	5	**County:**	Durham
Administrative Division:	5	**TIP Number:**	BK-5102F
Length:	0 miles	**Federal Aid Number:**	BRSTP-1959(5)
Resident Engineer:	Jeffrey D. Allen, PE	**RE Phone Number:**	(919)733-9499
Location Description:	BRIDGES #228 ON SR-1959, #224 ON SR-1999, AND #100 ON SR-2028.		
Type of Work:	BRIDGE PAINTING.		
Contractor Name:	SAFFO CONTRACTORS INC		
Contract Amount:	$1,138,000.00	**Cost Overrun/Underrun:**	
Availability Date:		**Letting Date:**	9/2/2010
Completion Date:		**Work Began:**	
Revised Completion Date:		**Estimated Completion:**	
Last Estimate Thru:		**Scheduled Progress:**	
Last Estimate Paid:		**Actual Progress:**	

ACTIVE NCDOT PROJECTS LOCATED IN DCHC MPO- ARRA

County	TIP/WBS #	Description	Let Date	Completion Date	Status	Cost	Comments
Orange	EL-4601	Morgan Creek Greenway	11/9/2009	5/31/2011	75.14% complete	$940,000	ARRA
Orange	ER-5100 GE	Landscape planting on US 15-501@ SR 1734 (Erwin Rd./Europa Dr.)	11/24/2009	4/30/2012	**80% complete**	$65,000	ARRA
Orange	U-3306 34913.3.ST1 STM-1733 (16)	Grading, drainage, paving, signals, curb and gutter,and retaining wall on SR 1733 (Weaver Dairy Rd.) from NC 86 to Old Sterling Road	7/20/2010	6/15/2013	**16.24% complete**	$13.4 million	ARRA
Orange	U-4704	Computerized Traffic Signal System for Chapel Hill-Carrboro	9/15/2009	8/1/2012	**29.95% complete**	$5.175 million	ARRA
Orange	U-4726 GA	Twin Creeks Park Greenway	11/19/2009	6/30/2011	**82.29% complete**	$429,457.00	ARRA
Orange	U-4726 JA	Construct sidewalks in Hillsborough	11/19/2009	9/17/2011	50+% complete	$1,034,110.00	ARRA, STP-DA & Contingency; M.A. w/ City
NCDOT PROJECTS CURRENTLY IN 12 MONTH LETTNG LIST							
County	TIP #	Description	Let Date	Completion Date	Status	Cost	Comments

ACTIVE NCDOT PROJECTS LOCATED IN DCHC MPO-NON ARRA

County	TIP/WBS #	Description	Let Date	Completion Date	Status	Cost	Comments
Orange	36945	Upgrade traffic signal with mast arm and install pedestrian signal heads on SR 1010 (Franklin St.) @ Mallette St.	11/4/2010	6/1/2011	No work underway	$140,000.00	Small Construction
Orange	42502	Replace deteriorated curb and gutter at several locations on both sides of SR 1010 (Franklin St.) between Hillsborough St. and Plant Rd.	**TBD**	**TBD**	Awaiting execution of M.A. by Town	$30,000	Small Construction
Orange	43030	Safety improvements near railroad crossing #736157R on SR 1843 (Seawell School Rd.)(signing, tree removal, grading for visibility, paved shoulders, wedging, short overlay & snow-plowable pavement markers)	**N/A**	**5/30/2011**	F.A. construction	$45,000	Small Construction
Orange	43114	Install a pedestrian countdown signal and crosswalk on SR 1005 (Jones Ferry Road) at SR 1937 (Old Fayetteville Road)	N/A	TBD	F.A. construction	$20,000	Small Construction
Orange	**C-4932 A**	**Construct a Transit Shelter at the Park and Ride Lot for DTCC in Hillsborough and install bike racks on Orange Public Transportation buses**	**5/17/2011**	**TBD**		**$20,275**	**CMAQ**
Orange	**EB-4409 34025.1.1**	**Installation of Orange County Bike Route Signs**	**4/5/2011**	**7/22/2011**	**no work underway**	**$34,564.50**	**STP**
Orange	I-5142	Mill, resurface and install pavement markers and rumble strips on I-85/I-40from west of SR 1114(Buckhorn Road) to the I-85/I-40 interchange	3/16/2010	7/15/2011	19.77% complete	$8.60 million	TIP (IM)
Orange	SR-5000 S 40922.1.18 PE	Education, encouragement, evaluation, and neighborhood outreach for Carrboro Elementary School	**N/A**	**N/A**	Municipal Agreement with Town	$12,865	Safe Routes to Schools
Orange	**SR-5001 AE**	**Construct 870 linear feet of 5' sidewalk from existing sidewalk near Weaver Street to Shelton Street in Carrboro**	**TBD**	**4/12/2012**	**PE and R/W underway**	**$300,000.00**	**SRTS**
Orange	**SR-5001 AR**	**Construct 320' of 5' sidewalk between Cobbleridge Rd. and Rossburn Rd. in Chapel Hill**	**TBD**	**TBD**	**Construction plan review**	**$50,000 $108,000**	**SRTS/STP-DA**
Orange	SS-4907 T 42204.2 42204.1 42170	Construct a right turn lane on SR 1710 and install a traffic signal @ NC 86	10/20/2010	9/1/2011	**no work underway**	$215,000	Spot Safety-State

ACTIVE NCDOT PROJECTS LOCATED IN DCHC MPO-NON ARRA

Orange	SS-4907 U 42205.2 42205.1 42171	Improve sight distance on SR 1710 by lowering the crest vertical curve on the westbound approach to the intersection of SR 1710 (Old NC 10) @ SR 1713 (Mt. Herman Church Road)	**TBD**	**TBD**	**utility relocation meeting pending**	**$320,000**	Spot Safety-State
Orange	SS -4907 V 42423.3 42423.1	Realign intersection of SR 1005 (Old Greensboro Rd.) @ SR 1951 (White Cross Rd.)	**TBD**	**TBD**	**Design pending**	**$198,000**	Spot Safety-State
Orange	SS-4907 AC 43040.1.1 PE 07-10-727	Installation of a left turn lane on Erwin Rd. and a traffic signal at SR 1791 (Mt. Moriah Rd.) near Chapel Hill	N/A	N/A	Roundabout requested by MPO; see below	$10,000 PE $1000 R/W $239,000 C	Spot Safety-State
Orange	SS-4907 AG 07-09-1320	Widen radii and install 4-way stop on US 70 Bus./Alt. and SR 1709 (Lawrence Road)	**N/A**	**N/A**	**F.A. construction**	**$1000 R/W/U $24,000 C**	Spot Safety-State
Orange	W-5207E 45337.1.5 PE	Installation of a roundabout on SR 1734 (Erwin Rd.) and SR 1791 (Mt. Moriah Rd.) near Chapel Hill	**6/1/2012**	**TBD**	To replace SS-4907 AC	$450,000	High Hazard Safety
NCDOT PROJECTS CURRENTLY IN 12 MONTH LETTNG LIST							
County	**TIP #**	**Location Description**	**Est. Let Date**	**Completion Date**	**Status**	**Cost**	**Comments**
Durham/ Orange	EB-4707	Bicycle improvements(Bikeway and signals) on Durham/ Chapel Hill (SR 1838/SR 2220)from SR 1116 (Garrett Road) in Durham County to US 15-501 inOrange County	**Apr. 17, 2012**			**$4.0 million**	
Orange	U-0624	Corridor upgrade on NC 86 (S. Columbia St.)including Bicycle lanes from SR 1906 (Purefoy Rd.) to SR 1902 (Manning Dr.)	Nov. 15, 2011			$4.85 million	