

**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**

**December 19, 2007  
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 November 28, 2007 TCC Meeting Minutes  
(Attachment 4)**

A copy of the November 28, 2007 minutes is enclosed as Attachment 4.

**TCC Action:** Approve minutes of the November 28, 2007 TCC meeting.

**5. CMAQ and STP-DA Call for Projects  
(Attachment 5, 5A, 5B, 5C, 5D)**

**Dale McKeel, LPA Staff**

**Ellen Beckmann, LPA Staff**

The primary purpose of the Congestion Mitigation and Air Quality Improvement Program (CMAQ) is to fund projects and programs in air quality nonattainment and maintenance areas for ozone, carbon monoxide (CO), and small particulate matter (PM-10) which reduce transportation related emissions. According to NCDOT records, DCHC currently has programmed \$4,786,952 of a total \$9,332,400 allocation, leaving a balance of \$4,545,448. The first year that there are CMAQ funds available for programming is FY 2009. NCDOT has suggested that the MPO submit CMAQ projects for funding (FY 2009 –2012) through the normal TIP process. In order to document the air quality benefits and receive project approval, a completed CMAQ application will need to be submitted for each CMAQ project.

Chapel Hill Transit, DATA, and Triangle J COG submitted applications for CMAQ funds (Attachment 5, 5A, 5B, and 5C). A summary of these applications is in Attachment 5D. The TCC subcommittee recommends funding all four proposals using CMAQ funds.

STP-DA Projects have also been solicited. Due to the similarities, STP-DA and CMAQ projects will be considered jointly. The TCC Subcommittee met on December 7, 2007 and December 13,

2007 to discuss the STP-DA and CMAQ Call for Projects and will provide an update at the TCC meeting.

**TCC Action:** Recommend that the TAC approve CMAQ funding as outlined in Attachment 5D. Receive update on STPDA funding.

**6. 2009-2015 Transportation Improvement Program – Release for Public Comment**  
**(Attachment 6)**

**Ellen Beckmann, LPA Staff**

The State Board of Transportation released the draft 2009-2015 STIP in November 2007. The DCHC MPO supplement is included as Attachment 6. The TAC is asked to release the DCHC MPO supplement to the draft 2009-2015 STIP as the draft MTIP for public comment. The MPO has customarily done this to ensure that the public has one document to provide comment on and to minimize confusion. LPA staff expect there to be several changes made to the draft STIP based on local priorities and schedules.

The TCC should also discuss the process for creating the final 2009-2015 MTIP.

**TCC Action:** Recommend that the TAC release the draft 2009-2015 STIP as the draft 2009-2015 MTIP for public comment and schedule a public hearing at the February TAC meeting.

**7. 2009-2015 Transportation Improvement Program – Regional Priority List**  
**(Attachment 7, 7A)**

**Ellen Beckmann, LPA Staff**

The TAC approved the 2009-2015 Transportation Improvement Program (TIP) Regional Priority List at the TAC meeting on November 14, 2007. The lists were adopted as three separate lists by mode – transit, bicycle/pedestrian, and highway (Attachment 7). The TAC requested that staff work on developing combined lists by division for the January TAC meeting. These combined lists will be used for the one-on-one meetings with NCDOT in early 2008.

Durham County staff have created a recommended combined list for Division 5 (Attachment 7A). Orange County staff will be meeting on December 17 and will provide a report at the TCC meeting.

**TCC Action:** Recommend that the TAC adopt the combined Regional Priority Lists by Division.

**8. Safe Routes to School – Action Plan Service Awards**  
**(Attachment 8, 8A, 8B)**

**Karen Lincoln, Orange County**

NCDOT has issued a call for applications for Safe Routes to Schools (SRTS) Action Plan Service Awards. In order to apply, a resolution of support from an MPO must be obtained and attached to the application (Attachment 8B). Orange County is applying for this program. A brief description of the application from Orange County is included as Attachment 8. A resolution from the Orange County Board of Commissioners endorsing the proposal is Attachment 8A.

**TCC Action:** Recommend that the TAC adopt the resolution endorsing Orange County's application for the Safe Routes to School Action Plan Service Awards.

**9. 2008 DCHC MPO Legislative Agenda**

**(Attachment 9, 9A)**

**Ellen Beckmann, LPA Staff**

The DCHC MPO periodically updates its legislative agenda. The previous legislative agenda was completed in spring 2006 cooperatively with CAMPO (Attachment 9). The TCC should evaluate this agenda and suggest additions or modifications as needed. The City of Charlotte recently created its legislative agenda for 2008 (Attachment 9A). The DCHC MPO legislative agenda could be done with CAMPO again.

**TCC Action:** Discuss the creation of a 2008 DCHC MPO Legislative Agenda. Refer this item to the subcommittee if needed or forward a recommendation to the TAC.

**REPORTS FROM STAFF:**

**10. Reports from Staff**

**(Attachment 10)**

**Felix Nwoko, LPA Staff**

**TCC Action:** Receive Report from staff

**11. Report from the Chair**

**Mark Ahrendsen, TCC Chair**

**TCC Action:** Receive Report from TCC Chair

**12. NCDOT Report**

**(Attachment 12)**

**Wally Bowman, Division 5 – NCDOT**

**Mike Mills, Division 7 – NCDOT**

**INFORMATIONAL ITEMS**

**13. Recent News Articles**

**(Attachment 13)**

**14. 2008 TAC/TCC Meeting Schedule**

**(Attachment 14)**

**PENDING ITEMS**

**Adjourn**

**Next meeting: January 23, 2008**

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26

**TECHNICAL COORDINATING COMMITTEE**

**November 28, 2007**

**MINUTES OF MEETING**

- \*Mark Ahrendsen City of Durham/Transportation (TCC Chair)
- \*Ellen Beckmann City of Durham/Transportation
- \*David Bonk Town of Chapel Hill (TCC Vice-Chair)
- \*John Hodges-Copple Triangle J COG
- \*John Hunsinger NCDOT – Division 7 Engineer
- \*Karen Lincoln Orange County Planning
- \*Ray Magyar UNC – Transportation
- \*Patrick McDonough Triangle Transit Authority
- \*Adena Messenger Town of Carrboro
- \*Felix Nwoko City of Durham/Transportation
- \*Pierre Osei Owusu City of Durham/DATA
- \*Liz Rooks Research Triangle Foundation
- \*Scott Walston NCDOT /TPB
- \*Battle Whitley NCDOT – Division 5 Engineer
- Jeff Dayton HNTB
- Dale McKeel City of Durham/Transportation
- Priya Nimbole City of Durham/Transportation
- (Dawn) Xiaodan Qiu City of Durham/Transportation
- Jill Stark FHWA
- John Tallmadge Triangle Transit Authority
- \*Voting Member

Mark Ahrendsen, TCC Chair, called the meeting to order at 9:08 a.m.

**PRELIMINARIES:**

**Adjustments to the Agenda**

There were no adjustments to the agenda.

**Public Comments**

There were no public comments.

**ACTION ITEMS:**

**Approval of the October 24, 2007 TCC Meeting Minutes (Attachment 4)**

35 John Hodges-Copple made an amendment to the October 24, 2007 TCC Meeting Minutes  
36 on page 3, line 73. It should read “John Hodges-Copple asked if the air quality budget amounts  
37 in the 2035 baseline are from the proposed SIP. Andy stated that they have not been updated and  
38 therefore are from the currently-adopted SIP and not the proposed SIP.”

39 A motion was made by Liz Rooks and seconded by Pierre Osei Owusu to approve the  
40 October 24, 2007 TCC Meeting Minutes with the amendment. The motion carried unanimously.

41 **Job Access Reverse Commute (JARC) and New Freedom (NF) Call for Projects**  
42 **(Attachments 5 and 5A)**

43  
44 John Tallmadge provided an update on the Job Access Reverse Commute (JARC) and  
45 New Freedom (NF) Call for Projects, along with the attachments.

46 The subcommittee has made a few recommendations for improvement. The first is staff  
47 recommends the attached solicitation schedule be submitted to the TAC so we can begin the call  
48 for projects in December. The second recommendation is to add to the requirements in the  
49 application a certified financial statement. The third recommendation is to work it out with  
50 CAMPO that their TCC would do the initial review of projects for the DCHC and we would do  
51 the initial review of the projects for CAMPO. The final issue is an update on the Program  
52 Management Plan (PMP).

53 Pierre Osei Owusu stated the PMP has been provided to Felix; but it has not been sent to  
54 FTA. Felix Nwoko stated the PMP needs to be approved by the TCC and TAC. The State has  
55 not submitted their State Management Plan (SMP). Mark Ahrendsen asked if delaying the PMP  
56 will affect the receipt of funds. Pierre stated the recipients have not received funds yet, but are  
57 providing the service. Felix stated we won't receive the funds until the SMP is submitted.

58 A motion was made by Pierre Osei Owusu and seconded by Liz Rooks to allow the LPA  
59 staff to review the Program Management Plan and make any necessary changes and forward to  
60 the TAC. The motion carried unanimously.

61 A motion was made by David Bonk and seconded by Liz Rooks to approve the schedule  
62 for the JARC and New Freedom applications, as well as, the modification to the application  
63 related to financial statements. The motion carried unanimously.

64 **Safe Routes to School Demonstration Program Funds**

65 Dale McKeel provided an update on the Safe Routes to School Demonstration Program  
66 Funds. There are three municipalities eligible for the funds. As part of the application program,  
67 there needs to be a resolution of support from the TAC. Dale is not sure if all three  
68 municipalities will submit applications, but Dale included all three in the resolution. The  
69 resolution will be amended if all three do not submit an application. The deadline for submitting  
70 the grant is December 14, 2007.

71 A motion was made by Liz Rooks and seconded by John Hodges-Copple to recommend  
72 that the TAC adopt a resolution of support to be attached to SRTS demonstration program  
73 applications from the City of Durham, Town of Chapel Hill, and Town of Carrboro. The motion  
74 carried unanimously.

75 **2035 Long Range Transportation Plan and Comprehensive Transportation Plan – Update**  
76 **(Attachment 7)**

77  
78 Felix Nwoko provided an update on the 2035 Long Range Transportation Plan and  
79 Comprehensive Transportation Plan – Update, along with the attachment.

80 Dawn Qiu provided an update on the isochrome maps and travel time maps which are  
81 now consistent. They were inconsistent because the regions and destination points were for the  
82 opposite time.

83 Mark Ahrendsen asked how we communicate peak hour congestion to the public. A four  
84 hour peak with 25% of the traffic over the four hours is not accurate either because there is  
85 actually a higher peak within the peak. How do we visually reflect that to the public? Felix  
86 Nwoko stated we have a month to resolve this issue.

87 John Hodges-Copple stated that the model is what it is. How we communicate that is a  
88 separate issue. David Bonk has a concern that putting a favorable spin on the model information  
89 is not helpful. He is concerned that the transit element will be inaccurate. Jill Stark stated we  
90 are addressing this in the Dynasmart. John Hodges-Copple stated they had a meeting with  
91 CAMPO and DCHC to discuss this. John stated we do not need to re-hash this again.

92 Jill Stark strongly recommended that Felix Nwoko attend the Regional Model meetings.  
93 There will be a LRTP subcommittee meeting on December 5, 2007.

94 David Bonk asked the status of land use scenarios for Orange County. Felix Nwoko  
95 stated that Andy Henry has been working on this and he has not provided an update. Andy will  
96 coordinate with David Bonk.

97 **CMAQ and STP-DA Call for Projects (Attachments to be distributed at TCC Meeting)**

98 Ellen Beckmann provided an update on the CMAQ and STP-DA Call for Projects, along  
99 with the attachments.

100 David Bonk stated the subcommittee did not have this detailed information; so it needs to  
101 be sent back to the subcommittee for review. Patrick McDonough has a concern that there is a  
102 problem with limiting funding by size of municipality. Patrick asked if we can consider past  
103 geographic equity. Mark Ahrendsen has a concern over the sliding scale for local match. John  
104 Hodges-Copple stated the logic is that larger entities are better able to fund projects.

105 There will be a subcommittee meeting on December 7, 2007 at 1:30 p.m. regarding  
106 CMAQ funds and there will be a subcommittee meeting on December 13, 2007 at 9:00 a.m.  
107 regarding STD-DA funds.

108 **2009-2015 Transportation Improvement Program – Regional Priority List (Attachment 9)**

109 Ellen Beckmann provided an introduction for the 2009-2015 Transportation  
110 Improvement Program – Regional Priority List, along with the attachment. The directive from  
111 the TAC was to create a combined list of projects.

112 David Bonk suggested the jurisdictions get together to discuss by division. John Hodges-  
113 Cople stated it should be by division since the STP funding is by division and suggested that we  
114 only focus on projects that can be funded by STP funds. John Tallmadge wants Triangle Transit  
115 Authority to be invited to both meetings. Mark Ahrendsen stated that we need to maintain the  
116 relative ranking within each mode. David Bonk questions this point for TTA regional projects.  
117 Mark Ahrendsen stated we should honor the approved ranking methodology of each list.

118 Mark Ahrendsen stated the assignment to each division will be to merge the three modal  
119 lists into one for the division respecting the relative ranking within each mode and bring back a  
120 recommendation to the next TCC meeting for review and comment. John Hodges-Copple asked  
121 if there will be costs included and Ellen Beckmann stated she will add the cost to the lists.

122 **REPORTS FROM STAFF:**

123 **Reports from Staff (Attachment 10)**

124 Felix Nwoko stated the TCC needs to know the UPWP updates for funds/budget  
125 revisions by January for TAC approval in March 2008. There are not any meetings scheduled  
126 for the GIS. The scope has been changed for the Land Use Model to include parcel level.

127 David Bonk wants a page for each project on the website. Felix Nwoko stated there will  
128 be a meeting on the Farrington Road/Stagecoach Road project in December.

129 **Report from the Chair**

130 Mark Ahrendsen stated the STAC is still continuing to meet and hopefully will complete  
131 the assignment in January. There is a STAC meeting on December 4, 2007 and there will be a  
132 special meeting scheduled for a Saturday in January 2008. There is an East End Connector  
133 community meeting scheduled for December 10, 2007 at the Orange Grove Missionary Baptist  
134 Church from 4 p.m. to 7 p.m. There is a public hearing meeting for the Hillandale Road project  
135 on December 4, 2007 from 4:30 p.m. to 7:30 p.m.

136 Felix Nwoko stated we need to ask NCDOT for the status on the environmental study for  
137 Elizabeth Brady Road.

138 **NCDOT Report**

139 Battle Whitley, NCDOT Division 5 Engineer, provided an update on projects. On (R-  
140 2906 A/C) widening of NC-55 from North of US-64 in Wake County to Cornwallis Road; "A"  
141 project is essentially complete and the "C" project they are working on the punch list. The  
142 NCDOT's desire is to see it complete by the end of the year. I-306DB; has been accepted and is  
143 complete. I-306C; there are a few items to be resolved with the contractor. NC-54 resurfacing  
144 was finished on November 19, 2007 and the secondary resurfacing is essentially complete with a  
145 few punch list items to be done. I-3306BB is complete and has been accepted. Davis Drive is  
146 ahead of schedule. NC-98; the contractor has brought the project up to schedule. Hopson Road  
147 project started November 9, 2007. The Garrett Road project has started and is on schedule.

148 John Hunsinger, NCDOT Division 7 Engineer, provided an update on projects. NC 54 @  
149 SR 1952 (White Cross Road) turn lane was opened for bid yesterday. It will not begin

150 construction until April 2008. SR 1780 (Estes Drive) from Hillcrest Drive to SR 1843 (Seawell  
151 School Road) to add paved shoulders to accommodate bicycles is scheduled for completion on  
152 December 10, 2007.

153 **INFORMATIONAL ITEMS:**

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

155 The recent news articles and updates are attached for review.

156 **Adjournment**

157 There being no further business before the Technical Coordinating Committee, the  
158 meeting was adjourned at 11:07 a.m.

### CMAQ Application

Project Sponsor Triangle J Council of Governments  
 Project Description Triangle Transportation Demand Management Services  


---

 Transportation Demand Management (TDM) program services  


---

 for employers and organizations in the Triangle ozone non-attainment  


---

 region for a period of four years (2009-12).  


---

General Project Eligibility		
<b>1. Is the project in one or more of North Carolina's nonattainment or maintenance counties? (CHECK ALL THAT APPLY) (*Partial Counties)</b>		
<input type="checkbox"/> Cabarrus	<input type="checkbox"/> Davidson	<input type="checkbox"/> Edgecombe
<input type="checkbox"/> Catawba	<input type="checkbox"/> Davie	<input type="checkbox"/> Forsyth
<input checked="" type="checkbox"/> Chatham*	<input checked="" type="checkbox"/> Durham	<input checked="" type="checkbox"/> Franklin
<input type="checkbox"/> Gaston	<input checked="" type="checkbox"/> Granville	<input type="checkbox"/> Guilford
<input type="checkbox"/> Haywood	<input type="checkbox"/> Iredell*	<input checked="" type="checkbox"/> Johnston
<input type="checkbox"/> Lincoln	<input type="checkbox"/> Mecklenburg	<input type="checkbox"/> Nash
<input checked="" type="checkbox"/> Orange	<input type="checkbox"/> Person	<input type="checkbox"/> Rowan
<input type="checkbox"/> Swain*	<input type="checkbox"/> Union	<input checked="" type="checkbox"/> Wake
<b>2. Is the project type generally eligible? (CHECK ALL THAT APPLY)</b>		
<input type="checkbox"/> Transportation activities in the North Carolina Maintenance Plan	<input type="checkbox"/> Bicycle and pedestrian facilities and programs	<input type="checkbox"/> Intermodal freight
<input type="checkbox"/> Extreme low-temperature cold start program	<input checked="" type="checkbox"/> Travel demand management	<input type="checkbox"/> Planning and project development activities
<input checked="" type="checkbox"/> Public-private partnerships	<input checked="" type="checkbox"/> Outreach and ridesharing activities	<input type="checkbox"/> Motor vehicle inspection and maintenance programs (see question 8)
<input type="checkbox"/> Alternative fuel programs	<input checked="" type="checkbox"/> Telecommuting	<input type="checkbox"/> Magnetic levitation transportation technology program
<input type="checkbox"/> Traffic flow improvements (includes ITS see question 11)	<input type="checkbox"/> Fare/Fee subsidy programs (see question 10)	<input type="checkbox"/> Experimental pilot projects
Transportation Control Measures as defined in the Clean Air Act		
<input type="checkbox"/> programs for improved transit (see question 8)	<input type="checkbox"/> traffic flow improvement programs that achieve emission reductions	<input type="checkbox"/> programs to control extended idling of vehicles
<input type="checkbox"/> reducing emissions from extreme cold-start conditions	<input checked="" type="checkbox"/> employer sponsored programs to permit flexible work schedules	<input type="checkbox"/> trip reduction ordinances
<input checked="" type="checkbox"/> employer based transportation management plans – including incentives (see question 8)	<input type="checkbox"/> programs to limit or reduce vehicle use in downtown areas or other areas of emission concentration	<input type="checkbox"/> restriction of certain roads or lanes to, or construction of such roads or lanes of use by, passenger bus or HOV
<input type="checkbox"/> fringe and transportation corridor parking facilities serving multiple-occupancy vehicles	<input type="checkbox"/> programs for the provision of all forms of high-occupancy, shared ride services	<input type="checkbox"/> program for secured bicycle storage facilities and other facilities including bicycle lanes, for the convenience of bicyclists in both public and private areas.
<input type="checkbox"/> programs to limit portions of road surfaces or certain sections of metropolitan areas to the use of non-motorized vehicles or pedestrian use, both as to time and place	<input type="checkbox"/> programs for new construction and major reconstruction of paths, tracks or areas solely for use by pedestrians or other non-motorized means of transportation when economically feasible and in the public interest (requires USDOT consultation with the Department of Interior. See question 9)	<input type="checkbox"/> programs or ordinances to facilitate non-automobile travel, provision or utilization of mass transit, and to generally reduce the need for SOV travel, as part of transportation planning and development efforts of a locality, including programs and ordinances applicable to new shopping centers, special events, and other centers of vehicle activity

Improved (increased) transit service

New facilities associated with a service increase       New vehicles used to expand the transit fleet

Operating assistance for new service (limit three years see question 8)       Fare subsidies as part of a program to limit exceedances of NAAQS

**Emissions Criteria**

**3. What are the annual expected emissions before and after project completion?**

Pollutant	Annual Emissions before implementation	Annual emissions after implementation	Difference (kgs/yr for total program)
Carbon Monoxide			290,892 kg/yr reduction
Volatile Organic Compounds			15,258 kg/yr reduction
Oxides of Nitrogen			11,749 kg/yr reduction

**4. The emissions estimate is  quantitative  qualitative.**

**5. Briefly, describe the method used to estimate the emissions reduction.**

Estimate is based on commute VMT reduction from the Triangle 7-Year TDM Plan prepared by UrbanTrans and emissions data supplied by DENR.

**Financial Information**

**6. Estimated Project Cost (Total life of the project)**

Federal Share (CMAQ) \$	Local Match (20% minimum) \$	Total \$	Expected Project Life (Years)
\$2,593,896 (total)	\$5,388,648	\$7,982,544	4 years (2009-12)
\$1,156,721 (DCHC)			
\$1,437,175 (CAMPO)			

**7. What is the source(s) of the matching funds?**      Combination

**8. For agencies seeking operating assistance, how will the program be funded after year three?**

**Miscellaneous**

<b>9. For construction of trails, has the Department of Interior been contacted?</b>	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	N/a
<b>10. Is the fare/fee subsidy program part of a broad program to reduce emissions?</b>	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	N/a
<b>11. Will the ITS project conform to the National ITS architecture?</b>	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	N/a

**12. Supporting Information** (Please provide a list of any supporting information e.g., complete emissions calculations, assumptions, letters of support. Use extra sheets as necessary.)

See attached for additional information and detail. This form includes the full 4-year program costs (but excluding administrative and technology costs which are funded through separate contracts) and the federal CMAQ allocation requests for both MPOs, including total matching funds from other partners, which is the only way to calculate the emissions reduction benefits. The year-by-year CMAQ allocation request reported by MPO is provided in the attached detail.

TDM Emissions Calculations

Line	Daily VMT reduction from 7-year TDM Plan (Table 28 on page 66)																
1	(Note: 2009-12 4-year amounts for this round of CMAQ funding are highlighted.)																
2		Year															
3		2008	2009	2010	2011	2012	2013	2014	2015								
4	Hot Spot	Chapel Hill	10,510	10,801	11,100	11,408	11,724	12,049	12,383	12,726							
5		Downtown Raleigh	15,873	16,313	16,765	17,229	17,706	18,197	18,701	19,219							
6		Durham	14,510	14,912	15,325	15,750	16,186	16,634	17,095	17,569							
7		NCSU	2,578	2,649	2,723	2,798	2,876	2,955	3,037	3,121							
8		RTP	17,152	17,627	18,116	18,617	19,133	19,663	20,208	20,768							
9		North Raleigh	21,012	21,594	22,192	22,807	23,439	24,088	24,756	25,442							
10	TOTAL	81,635	83,897	86,221	88,610	91,065	93,588	96,180	98,845								
11	Percent of Target	102.40%	101.90%	101.30%	100.80%	100.20%	99.60%	99.10%	98.50%								
12																	
13	Translation to Annual VMT reduction (daily times:)										250						
14																	
15		Year															
16		2008	2009	2010	2011	2012	2013	2014	2015								
17	Hot Spot	Chapel Hill	2,627,500	2,700,250	2,775,000	2,852,000	2,931,000	3,012,250	3,095,750	3,181,500							
18		Downtown Raleigh	3,968,250	4,078,250	4,191,250	4,307,250	4,426,500	4,549,250	4,675,250	4,804,750							
19		Durham	3,627,500	3,728,000	3,831,250	3,937,500	4,046,500	4,158,500	4,273,750	4,392,250							
20		NCSU	644,500	662,250	680,750	699,500	719,000	738,750	759,250	780,250							
21		RTP	4,288,000	4,406,750	4,529,000	4,654,250	4,783,250	4,915,750	5,052,000	5,192,000							
22		North Raleigh	5,253,000	5,398,500	5,548,000	5,701,750	5,859,750	6,022,000	6,189,000	6,360,500							
23	TOTAL	20,408,750	20,974,250	21,555,250	22,152,500	22,766,250	23,397,000	24,045,000	24,711,250								
24																	
25	Total VMT reduction 2009-15 (7 year period):			159,601,500	VMT reduction for 2009-12 (4 years):			87,448,250									
26																	
27	Emission factors from DENR and VMT from 2007 Conformity Report (g/mi)										2009 AM Peak Daily VMT (2010 for Orange County)						
28											Durham	Orange	Wake	Total	Percent		
29	<b>Description</b>	<b>Pol Name</b>	<b>LDGV</b>	<b>Pol Name</b>	<b>LDGV</b>	<b>Pol Name</b>	<b>LDGV</b>										
30	Rural interstate	NOx	0.562	VOC	0.657	CO	14.547	26,862	528,664	121,701	677,227	5.6%					
31	Rural principal arterial	NOx	0.553	VOC	0.667	CO	14.120	7,207	0	414,545	421,752	3.5%					
32	Rural minor arterial	NOx	0.534	VOC	0.698	CO	13.187	74,284	56,750	350,594	481,628	4.0%					
33	Rural major collector	NOx	0.528	VOC	0.712	CO	12.838	49,797	118,519	252,230	420,546	3.5%					
34	Rural minor collector	NOx	0.526	VOC	0.716	CO	12.761	18,603	51,843	292,842	363,288	3.0%					
35	Rural local	NOx	0.526	VOC	0.716	CO	12.761	135,265	106,483	655,632	897,380	7.5%					
36	Urban interstate	NOx	0.555	VOC	0.664	CO	14.211	785,422	74,527	2,058,115	2,918,064	24.3%					
37	Urban freeway	NOx	0.559	VOC	0.660	CO	14.384	493,130	16,929	530,099	1,040,158	8.7%					
38	Urban principal arterial	NOx	0.523	VOC	0.723	CO	12.594	313,808	118,013	1,070,728	1,502,549	12.5%					
39	Urban minor arterial	NOx	0.523	VOC	0.723	CO	12.594	428,713	115,734	1,137,447	1,681,894	14.0%					
40	Urban collector	NOx	0.518	VOC	0.745	CO	12.169	229,217	19,383	445,129	693,729	5.8%					
41	Urban local	NOx	0.518	VOC	0.740	CO	12.254	274,701	50,238	579,211	904,150	7.5%					
42	Total	NOx	0.537	VOC	0.698	CO	13.306	2,837,009	1,257,083	7,908,273	12,002,365	100.0%					
43																	
44																	
45	7-yr reduction (kg):	NOx	85,773	VOC	111,391	CO	2,123,623										
46	(factor in line 42 times VMT reduced in line 25 divided by 1,000)										Average Annual Reduction (2009-12)						
47	average annual reduction	NOx	12,253	VOC	15,913	CO	303,375										
48	2009-12 (4-year) reduction:	NOx	46,996	VOC	61,033	CO	1,163,568			11,749	15,258	290,892					
49	(factor in line 42 times VMT reduced in line 25 divided by 1,000)										2009-12 (4 years)						
50	Total 7-year CMAQ allocation:		\$5,353,585														
51	Total 2009-12 allocation (4 years):		\$2,593,896														
52	CMAQ expenditure per kg reduced (7 years):	NOx	\$62	VOC	\$48	CO	\$3										
53	CMAQ expenditure per kg reduced (4 years):	NOx	\$55	VOC	\$42	CO	\$2										

### CMAQ Application

Project Sponsor: Town of Chapel Hill

Project Description: The Town of Chapel Hill proposes to fund the purchase of 2 new hybrid electric articulated transit buses to reduce headways during peak hours along the Martin Luther King Jr. Blvd. corridor. The Town proposes to fund the purchase of equipment to provide service and funding of a portion of the operating cost of the service.

General Project Eligibility		
<b>1. Is the project in one, or more of North Carolina's nonattainment or maintenance counties? (CHECK ALL THAT APPLY) (*Partial Counties)</b>		
<input type="checkbox"/> Cabarrus	<input type="checkbox"/> Davidson	<input type="checkbox"/> Edgecombe
<input type="checkbox"/> Gaston	<input type="checkbox"/> Haywood*	<input type="checkbox"/> Lincoln
<input type="checkbox"/> Orange	<input type="checkbox"/> Swain*	<input type="checkbox"/> Union
<input type="checkbox"/> Person	<input type="checkbox"/> Rowan	<input type="checkbox"/> Wake
<input type="checkbox"/> Catawba	<input type="checkbox"/> Davie	<input type="checkbox"/> Forsyth
<input type="checkbox"/> Granville	<input type="checkbox"/> Iredell*	<input type="checkbox"/> Mecklenburg
<input type="checkbox"/> Chatham*	<input type="checkbox"/> Durham	<input type="checkbox"/> Franklin
<input type="checkbox"/> Guilford	<input type="checkbox"/> Johnston	<input type="checkbox"/> Nash
<b>2. Is the project type generally eligible? (CHECK ALL THAT APPLY)</b>		
<input type="checkbox"/> Transportation activities in the North Carolina Maintenance Plan	<input type="checkbox"/> Bicycle and pedestrian facilities and programs	<input type="checkbox"/> Intermodal freight
<input type="checkbox"/> Extreme low-temperature cold start program	<input checked="" type="checkbox"/> Travel demand management	<input type="checkbox"/> Planning and project development activities
<input type="checkbox"/> Public-private partnerships	<input type="checkbox"/> Outreach and ridesharing activities	<input type="checkbox"/> Motor vehicle inspection and maintenance programs (see question 8)
<input type="checkbox"/> Alternative fuel programs	<input type="checkbox"/> Telecommuting	<input type="checkbox"/> Magnetic levitation transportation technology program
<input type="checkbox"/> Traffic flow improvements (includes ITS see question 11)	<input type="checkbox"/> Fare/Fee subsidy programs (see question 10)	<input type="checkbox"/> Experimental pilot projects
Transportation Control Measures as defined in the Clean Air Act		
<input checked="" type="checkbox"/> programs for improved transit (see question 8)	<input type="checkbox"/> traffic flow improvement programs that achieve emission reductions	<input type="checkbox"/> programs to control extended idling of vehicles
<input type="checkbox"/> reducing emissions from extreme cold-start conditions	<input type="checkbox"/> employer sponsored programs to permit flexible work schedules	<input type="checkbox"/> trip reduction ordinances
<input type="checkbox"/> employer based transportation management plans – including incentives (see question 8)	<input checked="" type="checkbox"/> programs to limit or reduce vehicle use in downtown areas or other areas of emission concentration	<input type="checkbox"/> restriction of certain roads or lanes to, or construction of such roads or lanes of use by, passenger bus or HOV
<input type="checkbox"/> fringe and transportation corridor parking facilities serving multiple-occupancy vehicles	<input type="checkbox"/> programs for the provision of all forms of high-occupancy, shared ride services	<input type="checkbox"/> program for secured bicycle storage facilities and other facilities including bicycle lanes, for the convenience of bicyclists in both public and private areas.
<input type="checkbox"/> programs to limit portions of road surfaces or certain sections of metropolitan areas to the use of non-motorized vehicles or pedestrian use, both as to time and place	<input type="checkbox"/> programs for new construction and major reconstruction of paths, tracks or areas solely for use by pedestrians or other non-motorized means of transportation when economically feasible and in the public interest (requires USDOT consultation with the Department of Interior. See question 9)	<input checked="" type="checkbox"/> programs or ordinances to facilitate non-automobile travel, provision or utilization of mass transit, and to generally reduce the need for SOV travel, as part of transportation planning and development efforts of a locality, including programs and ordinances applicable to new shopping centers, special events, and other centers of vehicle activity

**Improved (increased) transit service**

New facilities associated with a service increase

New vehicles used **to replace existing vehicles**

Operating assistance for new service (limit three years see question 8)

Fare subsidies as part of a program to limit exceedances of NAAQS

**Emissions Criteria**

**3. What are the annual expected emissions before and after project completion?**

Pollutant	Annual Emissions before implementation	Annual emissions after implementation	Difference
Carbon Monoxide	11,560 kg	.98 kg	11,559 kg
Volatile Organic Compounds	635 kg	9 kg	625 kg
Oxides of Nitrogen	476 kg	226 kg	269 kg

**4. The emissions estimate is  quantitative  qualitative.**

**5. Briefly, describe the method used to estimate the emissions reduction.**

**See attached documents, Emissions Reduction Methods, and Financial and Emissions Spreadsheet.**

**Financial Information**

**6. Estimated Project Cost (Total life of the project)**

Federal Share (CMAQ)	Local Match (20% minimum)	Total \$	Expected Project Life (Years) <sup>3</sup>
\$1,758,955	\$577,392	\$2,506,349	

Note: Total cost includes 10% state match for capital component.

**7. What is the source(s) of the matching funds? The Town of Chapel Hill and State of North Carolina**

**8. For agencies seeking operating assistance, how will the program be funded after year three? The Town of Chapel Hill will providing continuing operating assistance.**

**Miscellaneous**

<b>9. For construction of trails, has the Department of Interior been contacted?</b>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/a
<b>10. Is the fare/fee subsidy program part of a broad program to reduce emissions?</b>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/a
<b>11. Will the ITS project conform to the National ITS architecture?</b>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/a

**12. Supporting Information** (Please provide a list of any supporting information e.g., complete emissions calculations, assumptions, letters of support. Use extra sheets as necessary.)

1) Emissions Reduction Methods  
2) Financial and Emissions Spreadsheet

## Emissions Reductions Methods

### Quantitative

Ridership on the NS in the Martin Luther King Jr. Blvd. corridor from the Eubanks Rd. Park and Ride Lot to UNC campus and hospitals is among the highest in the Chapel Hill Transit system, with an estimated average daily ridership of more than 1,500 passengers, or about 750 in each direction, in this segment of the route. In the 2006 service year, buses operated at 10 minute headways in the peak. Because of serious crowding issues, where buses would leave passengers behind, Chapel Hill Transit made changes to the route. By adding higher capacity 60 foot articulated buses which accommodate 87 passengers rather than the 55 a standard 40 foot bus accommodates, some peak hour trips were eliminated while still providing an additional capacity for 185 more passenger trips compared to the 2006 service year. Given budget limitations, this change was the most economically efficient way to increase capacity in the peak, yet it also detracted from the service by increasing headways to 20 minutes. By improving headways back to 10 minute intervals, we expect to improve air quality from several sources:

- 1) Reduction in VMT from new riders utilizing the Eubanks Park and Ride Lot
- 2) Reduction in VMT from new riders who live along Martin Luther King Jr. Blvd.
- 3) Elimination of emissions from standard diesel buses the hybrids will replace

Below we describe the projections and methods used to derive the air quality improvement from these three sources. More detailed calculations can be viewed in the Financial and Emissions Reduction spreadsheet.

#### 1) New riders utilizing the Eubanks Park and Ride Lot

The Eubanks Park and Ride lot has a capacity of 400 spots, but only ~200 spots are utilized on an average day. Other park and ride lots with more frequent headways such as the Friday Center Lot and the NC 54 Lot fill up every day. Given the high desirability of frequent headways, some users of this lot may actually live closer to the Eubanks lot, but choose to drive an extra distance to park at a lot with more frequent headways. Additionally, some potential park and ride users may choose to purchase a parking spot on campus because they perceive that there is no viable park and ride option for them. The excess demand at the NC 54 and Friday Center lots suggests that if the NS service from the Eubanks lot improved its headways some of these park and ride users would travel less distance in their cars to utilize this lot. Additionally, there will be an increase in demand for park and ride services overall as the UNC Campus Master Plan calls for a decrease in the ratio of parking spots to employees.

We estimate that improved service will attract 150 more park and ride users, 75 who live closest to the Eubanks lot, but currently criss-cross commute to one of the other park and ride lots, and 75 who currently drive to campus.

Assuming that the new users of the Eubanks lot would be approaching from I-40, then the distance eliminated would be the distance from Eubanks Rd. and NC-86 to UNC (we assume the intersection of Cameron Ave and Columbia. This distance is 4.1 miles, which is an 8.2 mile roundtrip. Thus, these 75 additional park and ride users amounts to a daily VMT reduction of 615 miles.

Assuming that the existing criss-cross commuters who would be diverted to the Eubanks lot currently travel from I-40 to NC-54, the distance eliminated would be the distance from I-40 and NC-86, to NC-54 and Friday Center Dr. which is 8.75 miles, or a 17.5 roundtrip distance. Fifty less cars traveling this distance over 250 weekdays that Chapel Hill Transit provides service for 3 years amounts to a daily VMT reduction of 1,312.5 miles.

#### 2) New riders who live along the Martin Luther King Jr. Blvd.

Between 2006 and 2007, the average daily ridership for October and November on the NS increased from 2,264 to 2,918 passengers, an increase of 654 passengers or about 29%. Yet, the number of trips originating at the Eubanks Park and Ride lot has remained relatively stable. Thus, there has been an increase in the number of riders who's trips originate along the corridor. Because 29% is an extraordinarily high rate of growth, we assume a 10% increase in riders for each year the new service is provided. We also assume that without the proposed service improvements, there will only be a 5% growth rate per year. The difference between the base increase in ridership compared to the increase if the proposed improvements are implemented amounts to 271 more passenger trips. Assuming a vehicle occupancy rate of 1.1, this means 247 automobile trips on the corridor will be eliminated. Because we cannot accurately project where along the corridor the new riders will come from, we assume a distance of 3 miles from the UNC campus. This takes into account the fact that many more bus lines are available to those who live in the southern part of the corridor (more proximate to campus), so more of the new riders are likely to come from the northern part of the corridor.

We estimate that 1,482 daily VMTs will be reduced by 2009 because of new users in the Martin Luther King Jr. Corridor.

### **3) Elimination of emissions from standard diesel buses the hybrids will replace**

By adding the service proposed, without adding additional buses, the bus spare ratio will decline. The current spare buses are often used as trippers, when a route is overcrowded and needs additional capacity for a short period of time. We assume the new buses will service as trippers an average of 30 miles/day (15/bus). We quantify this emission improvement by deriving a new emission factor by subtracting the emission factor used for the hybrid from the emission factor used for the diesel transit and urban bus category HDDBT. This new factor is used to calculate the reduction from replacing 30 miles/week with hybrid emission rates instead of regular diesel rates.

#### **Total Reductions**

By adding the reductions from new park and rider users, new riders along the corridor, and the replacement of diesel buses with hybrid buses, and subtracting the emissions from the bus itself, we find that the net result of our proposed project will be 1.08 kg/day of NOX, 2.5 kg/day of VOCs, and 46.24 kg/day of CO. To calculate emissions from the new hybrid buses, we used emission factors provided by the manufacturer, North American Bus Industries based on a series of emission tests that have been conducted. We use the average emission from the Braunschweig cycle of speeding up and breaking, which has an engine cycle with an average speed most similar to the NS scheduled speed and a maximum speed most similar to the speed limit on Martin Luther King Jr. Blvd. These emission factors are used for both NOX and CO; however, there was no emissions testing data for VOC. Thus, we use the emission factor for the regular diesel HDDBT vehicle category instead.

#### **Qualitative**

In addition to the quantitative air quality emissions methods employed above, we provide qualitative reasoning to implement the proposed project as well.

#### **New riders from new growth in the area**

Chapel Hill is facing intense development pressure in the northern area of town. A development moratorium enacted in May 2007 is set to expire at the end of January 2008, at which point it is expected that many new development applications will be submitted. The Town is exploring policy options presented by a task force to promote transit-oriented development in this part of town, such as requiring higher levels of density. Additionally, developers are more likely to develop in a transit-supportive way if they view the transit system as viable and successful. With the NS route the major bus line that connects the northern area to downtown, more frequent headways will encourage land use patterns that will allow new residents and employees to travel by bus rather than by car.

**VMT Reduction**

**1) Park and Ride**

	Number of Cars	Roundtrip Distance	Daily VMT Reduction
New Users	75	8.2	615
Criss-Cross Commuters	75	17.5	1312.5

**2) New Riders Who Live in Corridor**

	Without Project Passenger Trips	With Project Passenger Trips	Difference
2007	2982	2982	
2008	3131	3131	
2009	3288	3444	
2010	3452	3789	
2011	3625	4167	543

  

Passenger Trips	Round-Trips	Vehicle Trips	Roundtrip Distance	Daily VMT Reduction
543	272	247	6	1629

\*2007 ridership figures are average daily ridership Oct.-Nov. 2007 for entire route, not exclusively the MLK segment  
 \*assumes a 5% increase in the base case and 10% increase for each year of project implementation

**3) Use of Hybrid as Tripper, Replacing a Diesel Bus**

\*assumes an average of one 30 mile roundtrip/day

Emisions	-PR New Users	-PR Criss-Cross	-Live in Corridor	+Hybrid Bus	-Tripper	Net Emissions Reduction
VMT	615	1312.5	1629	131.2	30	
Vehicle Class	LDGV	LDGV	LDGV	HDDBT	HDDBT	
NOX Factor	0.52	0.56	0.52	6.90	2.69	
NOX Change	321.65	728.44	851.97	905.28	80.70	1,077.47
VOC Factor	0.75	0.66	0.75	0.27	0.00	
VOC Change	458.18	866.25	1213.61	34.90	0.00	2,503.13
CO Factor	12.17	14.38	12.17	0.03	1.90	
CO Change	7483.94	18876.38	19823.30	3.94	56.85	46,236.53

\*emissions factors for hybrid bus for NOX and CO based on data provided by the manufacturer based on emissions tests performed  
 \*emissions factors for hybrid bus for VOC same as HDDBT bus category, because no data provided by manufacturer  
 \*uses an emission factor for tripper emissions reduction that is the difference between the hybrid emission factor and the regular HDDBT emissions factor  
 \*assumes urban collector emission factor for the Park and Ride new users and new riders in corridor scenario  
 \*assumes urban highway for the criss-cross commuter scenario

Summary Emission Reductions	Daily, in grams	Daily, in kilograms	Annual, in kilograms
NOX	1,077.47	1.08	269.37
VOC	2,503.13	2.50	625.78
CO	46,236.53	46.24	11,559.13

\*assumes 250 service days/year

Change (Annual, in kg)	Before	After	Net Change
NOX		475.51	226.32
VOC		634.51	8.72
CO		11560.12	0.98

\*After numbers come from the pollutant changes for the hybrid bus category in the Emissions table \*250/1000 to convert to kg/day  
 \*Net Change numbers come from the summary emissions reductions table  
 \*Before numbers are the sum of the after and net change numbers

**Estimated Project Cost**

Capital	\$850,000 per bus	2 buses		\$1,700,000.00
Operating	\$65.21 per operating hour	15 hrs/day	250 service days/year	\$244,538

\*Capital cost is for NABI articulated hybrid with GPS and APC upgrades to be purchaed in 2008

**Operating Cost Expense (Inflation Adjusted)**

Average annual CPI Increase between 2003 and 2006	0.0319	
Operating Cost in 2007 \$	\$244,538	
Operating Cost in 2008 \$	\$252,339	
Operating Cost in 2009 \$	\$260,388	
Operating Cost in 2010 \$	\$268,695	<-- years operating assistance is requested
Operating Cost in 2011 \$	\$277,266	

<b>Funding Split</b>	<b>Capital</b>	<b>Operating 2009</b>	<b>Operating 2010</b>	<b>Operating 2011</b>	<b>Total</b>
Total	\$1,700,000.00	\$260,388	\$268,695	\$277,266	
Federal	\$1,360,000.00	\$195,291	\$134,347	\$69,317	\$1,758,955
State	\$170,000.00	\$0	\$0	\$0	\$170,000
Local	\$170,000.00	\$65,097	\$134,347	\$207,950	\$577,394
					\$2,506,349

### CMAQ Application

**Project Sponsor** *Durham Area Transit Authority*

**Project Description**

*Durham Area Transit Authority requests additional CMAQ funds to purchase and operate two hybrid buses in downtown Durham as a circulator service beginning March 2009 from 8 a.m. - 6 p.m. Monday - Friday*

General Project Eligibility		
<b>1. Is the project in one, or more of North Carolina's nonattainment or maintenance counties? (CHECK ALL THAT APPLY) (*Partial Counties)</b>		
<input type="checkbox"/> Cabarrus	<input type="checkbox"/> Davidson	<input type="checkbox"/> Edgecombe
<input type="checkbox"/> Gaston	<input type="checkbox"/> Haywood*	<input type="checkbox"/> Lincoln
<input type="checkbox"/> Orange	<input type="checkbox"/> Swain*	<input type="checkbox"/> Union
<input type="checkbox"/> Wake	<input type="checkbox"/> Wayne	<input type="checkbox"/> Yadkin
<input type="checkbox"/> Catawba	<input type="checkbox"/> Davie	<input type="checkbox"/> Forsyth
<input type="checkbox"/> Granville	<input type="checkbox"/> Iredell*	<input type="checkbox"/> Mecklenburg
<input type="checkbox"/> Person	<input type="checkbox"/> Rowan	<input type="checkbox"/> Wake
<input type="checkbox"/> Chatham*	<input checked="" type="checkbox"/> Durham	<input type="checkbox"/> Franklin
<input type="checkbox"/> Guilford	<input type="checkbox"/> Johnston	<input type="checkbox"/> Nash
<b>2. Is the project type generally eligible? (CHECK ALL THAT APPLY)</b>		
<input checked="" type="checkbox"/> Transportation activities in the North Carolina Maintenance Plan	<input type="checkbox"/> Bicycle and pedestrian facilities and programs	<input type="checkbox"/> Intermodal freight
<input type="checkbox"/> Extreme low-temperature cold start program	<input type="checkbox"/> Travel demand management	<input type="checkbox"/> Planning and project development activities
<input type="checkbox"/> Public-private partnerships	<input type="checkbox"/> Outreach and ridesharing activities	<input type="checkbox"/> Motor vehicle inspection and maintenance programs (see question 8)
<input type="checkbox"/> Alternative fuel programs	<input type="checkbox"/> Telecommuting	<input type="checkbox"/> Magnetic levitation transportation technology program
<input type="checkbox"/> Traffic flow improvements (includes ITS see question 11)	<input type="checkbox"/> Fare/Fee subsidy programs (see question 10)	<input type="checkbox"/> Experimental pilot projects
<b>Transportation Control Measures as defined in the Clean Air Act</b>		
<input checked="" type="checkbox"/> programs for improved transit (see question 8)	<input type="checkbox"/> traffic flow improvement programs that achieve emission reductions	<input type="checkbox"/> programs to control extended idling of vehicles
<input type="checkbox"/> reducing emissions from extreme cold-start conditions	<input type="checkbox"/> employer sponsored programs to permit flexible work schedules	<input type="checkbox"/> trip reduction ordinances
<input type="checkbox"/> employer based transportation management plans – including incentives (see question 8)	<input type="checkbox"/> programs to limit or reduce vehicle use in downtown areas or other areas of emission concentration	<input type="checkbox"/> restriction of certain roads or lanes to, or construction of such roads or lanes of use by, passenger bus or HOV
<input type="checkbox"/> fringe and transportation corridor parking facilities serving multiple-occupancy vehicles	<input type="checkbox"/> programs for the provision of all forms of high-occupancy, shared ride services	<input type="checkbox"/> program for secured bicycle storage facilities and other facilities including bicycle lanes, for the convenience of bicyclists in both public and private areas.
<input type="checkbox"/> programs to limit portions of road surfaces or certain sections of metropolitan areas to the use of non-motorized vehicles or pedestrian use, both as to time and place	<input type="checkbox"/> programs for new construction and major reconstruction of paths, tracks or areas solely for use by pedestrians or other non-motorized means of transportation when economically feasible and in the public interest (requires USDOT consultation with the Department of Interior. See question 9)	<input type="checkbox"/> programs or ordinances to facilitate non-automobile travel, provision or utilization of mass transit, and to generally reduce the need for SOV travel, as part of transportation planning and development efforts of a locality, including programs and ordinances applicable to new shopping centers, special events, and other centers of vehicle activity

**Improved (increased) transit service**

New facilities associated with a service increase

New vehicles used to expand the transit fleet

Operating assistance for new service (limit three years see question 8)

Fare subsidies as part of a program to limit exceedances of NAAQS

**Emissions Criteria**

**3. What are the annual expected emissions before and after project completion?**

Pollutant	Annual Emissions before implementation	Annual emissions after implementation	Difference
Carbon Monoxide	13,515 Kg	12,719 Kg	796 Kg
Volatile Organic Compounds	1,862 Kg	1,752 Kg	109 Kg
Oxides of Nitrogen	67,320 Kg	63,357 Kg	3,963 Kg

**4. The emissions estimate is  quantitative  qualitative.**

**5. Briefly, describe the method used to estimate the emissions reduction.**

*We used mobile E6 Vehicle classified for diesel transit urban bus (HDDBT) on an urban collector street (average speed: 37 mph). Determined the NOX, VOX, and the CO before and after the introduction of the 40 ft., 39,000 lb. hybrid electric bus which will be new buses on 2 new routes.*

**Financial Information**

**6. Estimated Project Cost (Total life of the project)**

Federal Share (CMAQ) \$ 1,445,982	Local Match (20% minimum) \$ 797,981	Total \$2,224,396	Expected Project Life (Years) 12
-----------------------------------	--------------------------------------	-------------------	----------------------------------

**7. What is the source(s) of the matching funds?** City budget for operating city and state for capital purchase.

**8. For agencies seeking operating assistance, how will the program be funded after year three?** As part of annual city budget

**Miscellaneous**

<b>9. For construction of trails, has the Department of Interior been contacted?</b>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/a
<b>10. Is the fare/fee subsidy program part of a broad program to reduce emissions?</b>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/a
<b>11. Will the ITS project conform to the National ITS architecture?</b>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/a

**12. Supporting Information** (Please provide a list of any supporting information e.g., complete emissions calculations, assumptions, letters of support. Use extra sheets as necessary.)

+

**December 10, 2007**

MEMORANDUM TO: N.C. Department of Transportation  
1554 Mail Service Center  
Raleigh, N.C. 27699-1554

FROM: Steve Mancuso, Transit Administrator  
Durham, Area Transit Authority  
224 North Hoover Road  
Durham, NC 27703

Subject: APPLICATION FOR CMAQ FUNDING TO PURCHASE AND OPERATE 2  
HYBRID BUSES AS DOWNTOWN DURHAM CIRCULATOR SERVICE

I am pleased to submit this application on behalf of the Durham Area Transit Authority (DATA) for Congestion Mitigation and Air Quality (CMAQ) funding assistance to enable the transit system to purchase and operate two 40' Hybrid buses to expand DATA's current fixed route service in the form of a downtown circulator. The total CMAQ (federal capital at 80%) funding requested for the purchase of the two buses is **\$864,000**, while the CMAQ (federal operating assistance at 50%) funding, over three years is **\$581,982**, bringing the total federal funding request for the service to **\$1,445,982**. The two buses would be purchased in FY2009 and operated soon after. Accordingly the funding request is over a one year period and not three years. If approved DATA would initiate immediately purchase and implementation of service.

The Durham Area Transit Authority would be very grateful if this funding request is approved.

Any issues/questions related to this application should be directed to me (x209) or to Pierre Owusu at (919) 560-1535 x 214.

Attachments

Cc: Mark Ahrendsen, DCHC, TAC Chair  
Dr. Alice Gordon, TAC Chair

## PROPOSAL FOR CMAQ FUNDING TO PURCHASE AND OPERATE 2 HYBRID BUSES

### **Project Overview**

The Durham Area Transit Authority is pleased to submit this application in response to the NCDOT/FTA's recent request for projects to be funded using Congestion Mitigation and Air Quality funds. This proposal is to obtain additional CMAQ funds to be used to purchase two (2) 40' low floor hybrid buses that would enable DATA to provide a Downtown Circulator Service.

### **Background**

The City of Durham is building a downtown bus station, which will be used by DATA and other service providers. The project is scheduled to be completed in March of 2009. DATA plans to operate a downtown bus circulator service as part of the overall Durham downtown renewal. Two buses will connect the bus terminal and several activity centers within the downtown area. Six years ago DATA developed this downtown circulator plan but because of the delay in the station project the circulator service has not been implemented to date. Now that the Durham station is under construction DATA needs to plan and implement the circulator service.

### **Request for CMAQ Funding for Two Hybrid Buses and operate it**

DATA is requesting \$864,000 in Congestion Mitigation and Air Quality (CMAQ) capital assistance (federal share) to purchase two (2) 40' Low-floor Hybrid, and \$581,982 also in federal assistance to operate the buses.

### **I. Electric Hybrid Buses**

The hybrid electric buses are manufactured by the Gillig Corporation. It comes with Allison EP40 electric drive and dual power inverter module. Other specifications of the bus include the following:

- Cummins 04 ISB engine with PM filter
- Allison EP 40 Drive system
- Concentrated AC induction motors
- Dual Power inverter module
- System controllers and a NHVH energy storage and management system
- Dynex I/O multiplex electric system

## II. Budget for Hybrid Bus Purchase

The budget for Capital Purchase of:

**Two 40' Hybrid buses to be purchased in 2009 @ \$540,000 each = \$1,080,000**

### Year 1-3

CMAQ-Federal (80%)	State (10%)	Local (10%)	Total Amount
<b>\$864,000</b>	<b>\$108,000</b>	<b>\$108,000</b>	<b>\$1,080,000</b>

**The federal share (CMAQ) requested is therefore \$864,000. This amount is requested in one apportionment**

### CMAQ Operating Assistance Request Calculation

**\$73.15 cost per hour \*20 hours (2vehicles\*10 hrs/day)\* 255 days of operation per year \* 3 years =\$1,119,195\* 1.04% (1 year inflationary factor @4% per year = 1,163,963(combined federal and local share for three years) The shared apportionment comes to 50% federal share and 50% share local over three years as explained below:**

<b>Year 1-3</b>	<b>Year 1-3</b>	<b>Year 1-3</b>
<b>CMAQ-Federal (50%)</b>	<b>Local (50%)</b>	<b>Total Amount</b>
<b>\$ 581,982</b>	<b>\$581,981</b>	<b>\$1,163,963</b>

**Total Federal (CMAQ) funding requested over three years is \$581,982 in operating assistance. This amount is requested in one single apportionment.**

DATA and the State are expected to match the federal amounts in the amount of **\$204,000** for the capital assistance, as required by the funding provision. The local share for the operating funds in the amount of **\$581,981** shall be provided by the City without any state contributions. Also, DATA shall include the operating portion of the service in its annual budget after the three years.

**Total Cost (Capital and Operating Assistance combined) for the Downtown Circulator service is \$2,243,963, and the total CMAQ (federal portion) is \$1,445,982**

## III. OFF-Model Air Quality Analysis for Buses based on 2009 Standards (Mobile E6.Emissions):

The calculation below is for the 2 hybrid-electric Gillig buses. The buses would be 40' powered by the same diesel fuel. However, the emissions reduction would be achieved as a result of the new Allison Drive train technology and improvement of the emission technology for these buses as shown by the Allison Company above. Other standard emission computations are shown below:

- (a) Downtown Circulator Service (Monday through Friday) using two buses  
 Average passenger per hour system-wide = 28\*2 (buses) =56  
 Total daily ridership = 56 \* 20 hours of service combined = 1120

Daily Person Trips = 1120 daily person trips

- (b) Auto Trip estimation  
Average auto occupancy = 1:1  
1120/1.1= 1018 auto trips
- (c) An estimation of VMT, assuming that the auto trips will be the same using the average route length (system-wide) of 13.5 miles \* 2 buses = 27 miles for the circulator 1018\* 27 miles/trip =27486 VMT

The daily NOX, VOC and CO reductions are calculated using Diesel Transit Urban Buses (HDDBT) emission rates operating on mostly urban collector roads shown below. Also, the rates are based on the given average auto travel speed of 37 mph.

**EMISSIONS REDUCTION FROM PROPOSED FIVE 40' BUS**

Pollutant	Estimated Daily VMT Reduction	Peak hour LDGV Emission Factor	Estimated Daily pollutant reduction in grams (VMT* peak hr Emission/1000)	Estimated Yearly Total Pollutant reduction in kilograms (255 days)
Nitrogen Oxide NOX	<b>27'486</b>	<b>9.590 grams/mile</b>	<b>264kg</b>	<b>67'320kgs</b>
Volatile Organic Compounds VOC	<b>27'486</b>	<b>0.266grams/mile</b>	<b>7.3kg</b>	<b>1'862kgs</b>
Carbon Monoxide CO	<b>27'486</b>	<b>1.925grams/mile</b>	<b>53kgs</b>	<b>13'515kgs</b>

**Total Annual Reduced Emissions**

**Nitrogen Oxide (NOX)**

2 hybrid buses=**67'320**

**Volatile Organic Compounds (VOC)**

2 hybrid buses **1'862kgs**

**Carbon Monoxide Compounds (CO)**2 hybrid buses **13'515kgs**

- (a) **Increase in VMT is calculated based on the average trip distance traveled, which is 27(system-wide average trip miles) \*60 total daily trips (30/busx2) = 1620 VMT.**
- (b) **The daily increase in NOX, VOC and CO is computed using Mobile 6E with the average bus speed of Heavy Duty Diesel Vehicle (HDDBT) of 37 mph, as shown below.**

**EMISSIONS REDUCTION FROM PROPOSED FIVE 40' BUS**

Pollutant	Estimated Daily VMT Reduction	Peak hour HDDV Emission Factor	Estimated Daily pollutant reduction in grams (VMT* peak hr Emission/1000)	Estimated Yearly Total Pollutant reduction in kilograms (255 days)
Nitrogen Oxide NOX	<b>1620</b>	<b>9.590grams/mile</b>	<b>15.54kgs/mile</b>	<b>3'963kgs/mile</b>
Volatile Organic Compounds VOC	<b>1620</b>	<b>0.266grams/mile</b>	<b>.431kgs/mile</b>	<b>109.89kgs/mile</b>
Carbon Monoxide CO	<b>1620</b>	<b>1.925grams/mile</b>	<b>3.12kgs/mile</b>	<b>796kgs/mile</b>

**The net daily emission reduction for each particulate matter is calculated below:**

**NOX- Daily emission reduction = 264kg – 15.54kg = 248.46kg/mile**

**VOC-Daily emission reduction = 7.3kg- .431kg = 6.87kg/mile**

**CO – Daily emission reduction = 53kg –3.12kg = 49.88kg/mile**

**The net annual emission reduction for each particulate matter is computed below:**

$$\text{NOX} = 67'320\text{kgs} - 3'963\text{kgs} = 63'357\text{kgs}$$

$$\text{VOX} = 1'862\text{kgs} - 109.89\text{kgs} = 1'752.11\text{kgs}$$

$$\text{CO} = 13'515\text{kgs} - 796\text{kgs} = 12'719\text{kgs}$$

**Project Timetable**

The timetable for the implementation of the project will depend upon the award of the funds. This request is for the FY2009 and FY2012 CMAQ appropriation and is anticipated that planning and vehicle procurement related to the service would begin no later 30 days after the award of the funds,

### CMAQ Application

Project Sponsor  
Project Description

*Durham Area Transit Authority requests additional CMAQ funds to enable DATA to meet the funding shortfall for the purchase of 5 hybrid buses from a previously approved (2005-08) CMAQ program*

General Project Eligibility																										
<p><b>1. Is the project in one, or more of North Carolina's nonattainment or maintenance counties? (CHECK ALL THAT APPLY) (*Partial Counties)</b></p> <table style="width: 100%; border: none;"> <tr> <td><input type="checkbox"/> Cabarrus</td> <td><input type="checkbox"/> Davidson</td> <td><input type="checkbox"/> Edgecombe</td> <td><input type="checkbox"/> Gaston</td> <td><input type="checkbox"/> Haywood*</td> <td><input type="checkbox"/> Lincoln</td> <td><input type="checkbox"/> Orange</td> <td><input type="checkbox"/> Swain*</td> </tr> <tr> <td><input type="checkbox"/> Catawba</td> <td><input type="checkbox"/> Davie</td> <td><input type="checkbox"/> Forsyth</td> <td><input type="checkbox"/> Granville</td> <td><input type="checkbox"/> Iredell*</td> <td><input type="checkbox"/> Mecklenburg</td> <td><input type="checkbox"/> Person</td> <td><input type="checkbox"/> Union</td> </tr> <tr> <td><input type="checkbox"/> Chatham*</td> <td><input checked="" type="checkbox"/> Durham</td> <td><input type="checkbox"/> Franklin</td> <td><input type="checkbox"/> Guilford</td> <td><input type="checkbox"/> Johnston</td> <td><input type="checkbox"/> Nash</td> <td><input type="checkbox"/> Rowan</td> <td><input type="checkbox"/> Wake</td> </tr> </table>			<input type="checkbox"/> Cabarrus	<input type="checkbox"/> Davidson	<input type="checkbox"/> Edgecombe	<input type="checkbox"/> Gaston	<input type="checkbox"/> Haywood*	<input type="checkbox"/> Lincoln	<input type="checkbox"/> Orange	<input type="checkbox"/> Swain*	<input type="checkbox"/> Catawba	<input type="checkbox"/> Davie	<input type="checkbox"/> Forsyth	<input type="checkbox"/> Granville	<input type="checkbox"/> Iredell*	<input type="checkbox"/> Mecklenburg	<input type="checkbox"/> Person	<input type="checkbox"/> Union	<input type="checkbox"/> Chatham*	<input checked="" type="checkbox"/> Durham	<input type="checkbox"/> Franklin	<input type="checkbox"/> Guilford	<input type="checkbox"/> Johnston	<input type="checkbox"/> Nash	<input type="checkbox"/> Rowan	<input type="checkbox"/> Wake
<input type="checkbox"/> Cabarrus	<input type="checkbox"/> Davidson	<input type="checkbox"/> Edgecombe	<input type="checkbox"/> Gaston	<input type="checkbox"/> Haywood*	<input type="checkbox"/> Lincoln	<input type="checkbox"/> Orange	<input type="checkbox"/> Swain*																			
<input type="checkbox"/> Catawba	<input type="checkbox"/> Davie	<input type="checkbox"/> Forsyth	<input type="checkbox"/> Granville	<input type="checkbox"/> Iredell*	<input type="checkbox"/> Mecklenburg	<input type="checkbox"/> Person	<input type="checkbox"/> Union																			
<input type="checkbox"/> Chatham*	<input checked="" type="checkbox"/> Durham	<input type="checkbox"/> Franklin	<input type="checkbox"/> Guilford	<input type="checkbox"/> Johnston	<input type="checkbox"/> Nash	<input type="checkbox"/> Rowan	<input type="checkbox"/> Wake																			
<p><b>2. Is the project type generally eligible? (CHECK ALL THAT APPLY)</b></p> <table style="width: 100%; border: none;"> <tr> <td><input checked="" type="checkbox"/> Transportation activities in the North Carolina Maintenance Plan</td> <td><input type="checkbox"/> Bicycle and pedestrian facilities and programs</td> <td><input type="checkbox"/> Intermodal freight</td> </tr> <tr> <td><input type="checkbox"/> Extreme low-temperature cold start program</td> <td><input type="checkbox"/> Travel demand management</td> <td><input type="checkbox"/> Planning and project development activities</td> </tr> <tr> <td><input type="checkbox"/> Public-private partnerships</td> <td><input type="checkbox"/> Outreach and ridesharing activities</td> <td><input type="checkbox"/> Motor vehicle inspection and maintenance programs (see question 8)</td> </tr> <tr> <td><input type="checkbox"/> Alternative fuel programs</td> <td><input type="checkbox"/> Telecommuting</td> <td><input type="checkbox"/> Magnetic levitation transportation technology program</td> </tr> <tr> <td><input type="checkbox"/> Traffic flow improvements (includes ITS see question 11)</td> <td><input type="checkbox"/> Fare/Fee subsidy programs (see question 10)</td> <td><input type="checkbox"/> Experimental pilot projects</td> </tr> </table>			<input checked="" type="checkbox"/> Transportation activities in the North Carolina Maintenance Plan	<input type="checkbox"/> Bicycle and pedestrian facilities and programs	<input type="checkbox"/> Intermodal freight	<input type="checkbox"/> Extreme low-temperature cold start program	<input type="checkbox"/> Travel demand management	<input type="checkbox"/> Planning and project development activities	<input type="checkbox"/> Public-private partnerships	<input type="checkbox"/> Outreach and ridesharing activities	<input type="checkbox"/> Motor vehicle inspection and maintenance programs (see question 8)	<input type="checkbox"/> Alternative fuel programs	<input type="checkbox"/> Telecommuting	<input type="checkbox"/> Magnetic levitation transportation technology program	<input type="checkbox"/> Traffic flow improvements (includes ITS see question 11)	<input type="checkbox"/> Fare/Fee subsidy programs (see question 10)	<input type="checkbox"/> Experimental pilot projects									
<input checked="" type="checkbox"/> Transportation activities in the North Carolina Maintenance Plan	<input type="checkbox"/> Bicycle and pedestrian facilities and programs	<input type="checkbox"/> Intermodal freight																								
<input type="checkbox"/> Extreme low-temperature cold start program	<input type="checkbox"/> Travel demand management	<input type="checkbox"/> Planning and project development activities																								
<input type="checkbox"/> Public-private partnerships	<input type="checkbox"/> Outreach and ridesharing activities	<input type="checkbox"/> Motor vehicle inspection and maintenance programs (see question 8)																								
<input type="checkbox"/> Alternative fuel programs	<input type="checkbox"/> Telecommuting	<input type="checkbox"/> Magnetic levitation transportation technology program																								
<input type="checkbox"/> Traffic flow improvements (includes ITS see question 11)	<input type="checkbox"/> Fare/Fee subsidy programs (see question 10)	<input type="checkbox"/> Experimental pilot projects																								
<p><b>Transportation Control Measures as defined in the Clean Air Act</b></p>																										
<p><input checked="" type="checkbox"/> programs for improved transit (see question 8)</p> <p><input type="checkbox"/> reducing emissions from extreme cold-start conditions</p> <p><input type="checkbox"/> employer based transportation management plans – including incentives (see question 8)</p> <p><input type="checkbox"/> fringe and transportation corridor parking facilities serving multiple-occupancy vehicles</p> <p><input type="checkbox"/> programs to limit portions of road surfaces or certain sections of metropolitan areas to the use of non-motorized vehicles or pedestrian use, both as to time and place</p>	<p><input type="checkbox"/> traffic flow improvement programs that achieve emission reductions</p> <p><input type="checkbox"/> employer sponsored programs to permit flexible work schedules</p> <p><input type="checkbox"/> programs to limit or reduce vehicle use in downtown areas or other areas of emission concentration</p> <p><input type="checkbox"/> programs for the provision of all forms of high-occupancy, shared ride services</p> <p><input type="checkbox"/> programs for new construction and major reconstruction of paths, tracks or areas solely for use by pedestrians or other non-motorized means of transportation when economically feasible and in the public interest (requires USDOT consultation with the Department of Interior. See question 9)</p>	<p><input type="checkbox"/> programs to control extended idling of vehicles</p> <p><input type="checkbox"/> trip reduction ordinances</p> <p><input type="checkbox"/> restriction of certain roads or lanes to, or construction of such roads or lanes of use by, passenger bus or HOV</p> <p><input type="checkbox"/> program for secured bicycle storage facilities and other facilities including bicycle lanes, for the convenience of bicyclists in both public and private areas.</p> <p><input type="checkbox"/> programs or ordinances to facilitate non-automobile travel, provision or utilization of mass transit, and to generally reduce the need for SOV travel, as part of transportation planning and development efforts of a locality, including programs and ordinances applicable to new shopping centers, special events, and other centers of vehicle activity</p>																								

**Improved (increased) transit service**

New facilities associated with a service increase       New vehicles used to expand the transit fleet

Operating assistance for new service (limit three years see question 8)       Fare subsidies as part of a program to limit exceedances of NAAQS

**Emissions Criteria**

**3. What are the annual expected emissions before and after project completion?**

Pollutant	Annual Emissions before implementation	Annual emissions after implementation	Difference
Carbon Monoxide	61,516 Kg	60,305 Kg	1,211 Kg
Volatile Organic Compounds	38,220 Kg	38,078 Kg	142 Kg
Oxides of Nitrogen	307,216 Kg	301,184 Kg	6,032 Kg

**4. The emissions estimate is  quantitative  qualitative.**

**5. Briefly, describe the method used to estimate the emissions reduction.**

*We used mobile E6 Vehicle classified for diesel transit urban bus (HDDBT) on an urban collector street (average speed: 37 mph). Determined the NOX, VOX, and the CO before and after the introduction of the 40 ft., 39,000 lb. hybrid electric bus which will be new buses on 2 new routes.*

**Financial Information**

**6. Estimated Project Cost (Total life of the project)**

Federal Share (CMAQ) \$ 397,995	Local Match (20% minimum) \$ 99,499	Total \$ 497,494	Expected Project Life (Years) 12
---------------------------------	-------------------------------------	------------------	----------------------------------

**7. What is the source(s) of the matching funds?**      *Local budget and state matching funds*

**8. For agencies seeking operating assistance, how will the program be funded after year three?**

**Miscellaneous**

<b>9. For construction of trails, has the Department of Interior been contacted?</b>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/a
<b>10. Is the fare/fee subsidy program part of a broad program to reduce emissions?</b>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/a
<b>11. Will the ITS project conform to the National ITS architecture?</b>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/a

**12. Supporting Information** (Please provide a list of any supporting information e.g., complete emissions calculations, assumptions, letters of support. Use extra sheets as necessary.)

**December 12, 2007**

MEMORANDUM TO: N.C. Department of Transportation  
1554 Mail Service Center  
Raleigh, N.C. 27699-1554

FROM: Steve Mancuso, Transit Administrator  
Durham, Area Transit Authority  
1907 Fay Street  
Durham, NC 27704

Subject: Request for additional CMAQ funding to enable DATA meet the funding shortfall for the purchase of 5 Hybrid Buses from a previously approved (2005-2008) CMAQ program

I am pleased to submit this application on behalf of the Durham Area Transit Authority (DATA) for Congestion Mitigation and Air Quality (CMAQ) funding assistance to enable DATA complete the purchase of 5 hybrid buses partially funded by a prior (2005-2008) CMAQ program. The amount needed in order to meet the shortfall is \$397,995 (federal portion). This shortfall has come about because of the increase in the price of a Hybrid bus beyond the amount originally quoted in the previous funding request. DATA is now preparing to procure these buses. Three years ago, DATA was approved by the FTA and NCDOT for CMAQ funds in the amount of \$2,202,506 (total funds) for the purchase of 5 hybrid buses. The estimated price provided for a unit price of a hybrid bus at that time was approximately \$440,000. The federal portion of the amount was \$1,762,005. Currently the price per bus is \$540,000, and DATA would need a total of \$2,700,000 to purchase all 5 buses. Therefore, in order for DATA to purchase all 5 vehicles previously approved by the 2005-2008 CMAQ program, an additional amount of \$497,494 representing the total shortfall and \$397,995 as the federal share of the shortfall is being requested from the FY09-FY12 CMAQ funding appropriation. The five hybrid buses are to be used to expand service on the DATA fixed route system.

The attached proposal is in response to the recent (November 2007) memo published by the Division of Planning and Environmental Services of the North Carolina Department of Transportation calling for Congestion Mitigation Air Quality (CMAQ) Projects. This proposal has been prepared following the guidelines set forth in the project announcement.

The Durham Area Transit Authority would be very grateful if this funding request is approved.

Any issues/questions related to this application should be directed to me (x209) or to Pierre Owusu at (919) 560-1535 x 214.

Attachments

Cc: Mark Ahrendsen, DCHC, TCC Chair  
Dr. Alice Gordon, DCHC, TAC Chair

## PROPOSAL FOR ADDITIONAL CMAQ FUNDS TO PURCHASE 5 HYBRID ELECTRIC BUSES

### Project Overview

The Durham Area Transit Authority is pleased to submit this application in response to the NCDOT/FTA's recent request for projects to be funded using Congestion Mitigation and Air Quality funds. This proposal is to obtain additional funds to enable DATA purchase 5 hybrid-electric buses previously approved for CMAQ funding.

### Background

DATA currently has a fleet of 47 Gillig buses and runs 39 during peak hours along 17 fixed routes. The average daily ridership is 14,000 passengers. For FY 2007 the system carried a total of 4.5 million passengers, making DATA the third largest after Charlotte and Chapel Hill transit systems in the number of transit passengers served in the State of North Carolina. Additionally, DATA is averaging 200,000 new riders each year for the past several years. In spite of the increasing service patronage, DATA currently lacks the number of buses needed to meet daily pull-outs and also expand or improvement service to cope with the increasing demand.

Furthermore, DATA is currently having great difficulty meeting its daily bus pull-out requirement because of defect in 31 of its 47 fleet system. The problem is nationwide affecting several transit systems. Even though this defect is being corrected by the manufacturer, because they are warranty items, it is believed that a more realistic solution would be to replace the entire engine assembly on all 31 buses. Currently, the Federal Transit Administration (FTA) and the North Carolina transportation Association are in discussion to determine how best to resolve the matter. In the mean time this problem has exacerbated the already serious fleet shortage that the DATA transit system has. Therefore any additional units would be extremely helpful.

Three years ago DATA requested for CMAQ funding to purchase 5 hybrid electric buses to expand its fixed route service. That request was approved but due a delay in the release of funds, DATA is just now beginning to access the funds to procure the fleet. The delay has resulted in a price differential between the 2005 price of a hybrid bus and today's (2007) price. The total price difference for the five buses is now \$497,494. The federal portion of the shortfall is \$397,995. Further explanation of this shortfall is provided in the outline below:

**Current price for 1 Hybrid Electric bus = \$ 540,000.**

**Current approved number of buses from prior CMAQ funding =5**

**Total cost for the 5 buses at current price = \$2,700,000**

**Apportionment of \$2,700,000 needed to purchase 5 buses:**

<b>Federal</b>	<b>@ 80%</b>	<b>of \$2,700,000</b>	<b>=</b>	<b>\$ 2,160,000</b>
<b>State</b>	<b>@ 10%</b>	<b>“ “</b>	<b>=</b>	<b>\$270,000</b>
<b>Local</b>	<b>@ 10%</b>	<b>“ “</b>	<b>=</b>	<b><u>\$270,000</u></b>
<b>Total</b>			<b>=</b>	<b>\$2,700,000</b>

**Previously (2005) approved CMAQ amount (total) was \$2,202,506**

<b>Federal</b>	<b>@80%</b>	<b>of \$2,202,506</b>	<b>=</b>	<b>\$1,762,005</b>
<b>State</b>	<b>@10%</b>	<b>“ “</b>	<b>=</b>	<b>\$220,250</b>
<b>Local</b>	<b>@10%</b>	<b>“ “</b>	<b>=</b>	<b><u>\$220,251</u></b>
<b>Total</b>			<b>=</b>	<b>\$2,202,506</b>

**Total shortfall in funding from the 2005 approved request and the current price of the 5 buses is:**

**\$2,700,000 - \$2,202,506 = \$497,494 (total funding shortfall)**

**Shortfall Apportionment:**

<b>Federal</b>	<b>@ 80%</b>	<b>of \$497,494</b>	<b>=</b>	<b>\$397,995</b>
<b>State</b>	<b>@10%</b>	<b>“ “</b>	<b>=</b>	<b>\$49,750</b>
<b>Local</b>	<b>@10%</b>	<b>“ “</b>	<b>=</b>	<b><u>\$49,749</u></b>
<b>Total</b>				<b>\$497,494</b>

**Therefore, DATA is requesting the federal portion of the funding shortfall in the amount of \$397,995 from the current (2009-2012) CMAQ appropriation to enable the transit system purchase the 5 buses approved in the previous (2005) funding request.**

**I. Budget for Hybrid Bus Purchase**

Total Federal (CMAQ) funding requested over three years (2009-2012) with this application is **\$397,995**. The City of Durham and the State of North Carolina are also expected to provide additional matching funds in the amounts of **\$49,749, and \$49,750** respectively, in order to fully cover the funding shortfall.

**II. Electric Hybrid Buses**

As contained in the previous application, the five hybrid buses are 40' long and are manufactured by the Gillig Corporation in California. The buses come with Allison EP40 electric drive and dual power inverter module (OPIM. Other specifications of the bus include the following:

- Cummins 04 ISB engine with PM filter
- Allison EP 40 Drive system
- Concentrated AC induction motors

- Dual Power inverter module
- System controllers and a NHVH energy storage and management system
- Dynex I/O multiplex electric system

### **III. Proposed Service for the procurement of the 5 Hybrid buses**

#### **A new route # 18 to serve South Alston Avenue, Hwy 54 & 55, Lowe's Grove School Area.**

This route is intended to provide transit serve to the Hwy 54/55 corridor including Falls Pointe Apartments, Grandview Forest Apartments, Stonestrow Apartments, Glenn Falls Apartments, Federal Express, and other business. Requests for service from residents have come in for the past three years. Service on this route will be every 30 minutes; Monday though Saturday and hourly on Sundays. The total # of service hours will be 32 per day x 6 days (Monday through Saturday) and 13 hours per day x 1 day for Sundays. Please see attached map. The closest route in this corridor is route # 12 which now runs hourly service. The proposed route # 18 and existing route # 12 which will soon be upgraded to a 30 minutes service, will enable the corridor receive 30 minutes service all day. The total number of service hours will be approximately 205 hours per week. Two buses would be needed to run this route.

#### **A new route # 19 to serve Mineral Springs, Wake Forest Hwy, Neal Middle School area.**

This new route is intended to serve East Durham, along Hwy 98, Mineral Springs Road, Wake Forest Hwy, serving Oak Grove Elementary school, Grove Park, Sharon Road community, Food Lion, and Neal Middle school area. Service on this route will be every 30 minutes; Monday though Saturday and hourly on Sundays. The total # of service hours will be 32 per day x 6 days (Monday through Saturday) and 13 hours per day x 1 day for Sundays. Please see attached map. Currently there is no service in this area, and the closest bus service is route # 16 along Mineral Springs Road. Therefore this action would add 30 minutes service as well as night service (Monday through Saturday) The total number of hours will be approximately 205 hours per week. Two buses will be used on this route. Please see attached maps for proposed routes.

#### **Summary of Expanded service and Bus Use**

Route # 18 will use 2 buses @ 30 minutes headway

Route # 19 will use 2 buses @ 30 minutes headway

One bus will be used as spare

### **IV. Emission Reduction: (Hybrid Bus Purchase)**

Emissions reduction information as provided by the manufacturer includes the following:

- Particulate (PM) reduction up to 90%
- Hydrocarbons (HC) up to 90%
- Oxides of Nitrogen, (NOX) up to 50%
- Carbon Monoxide, (CO) up to 90%

- Fuel economy up to 60%
  - Overall exhaust emissions reduction up to 90%
- Source: Allison Electric Drives, EP 40 System transit bus.*

#### **V. OFF-Model Air Quality Analysis for Buses based on 2009 Standards (Mobile E6.Emissions):**

The calculation below is for five hybrid-electric Gillig buses. The buses would be 40' powered by the same diesel fuel. However, the emissions reduction would be achieved as a result of the new Allison Drive train technology and improvement of the emission technology for these buses as shown by the Allison Company above. Other standard emission computations are shown below:

- (a) Average passengers per hour = 28 per route (system-wide)  
 Total daily ridership therefore =  $28 * 2 \text{ routes} = 56 \text{ passengers} * 64 \text{ hours of service for 4 buses/day} = 3584$   
 Daily Person Trips = 3584
- (b) Auto Trip estimation  
 Average auto occupancy = 1:1  
 $3584 / 1.1 = 3258 \text{ auto trips}$
- (c) An estimation of VMT, assuming that the auto trips will be the same using the average route length (system-wide) of 13.5\*2 route miles  $3258 \text{ auto trips} * 27 \text{ miles/trip for 2 routes} = 87,966 \text{ Daily VMT for the 4 Hybrid Buses.}$
- (d) The daily NOX, VOC and CO reductions are calculated using Diesel Transit Urban Buses (HDDBT) emission rates operating on mostly urban collector roads shown below. Also, the rates are based on the given average auto travel speed of 37 mph.

**EMISSIONS REDUCTION FROM PROPOSED FIVE 40' BUS**

Pollutant	Estimated Daily VMT Reduction	Peak hour LDGV Emission Factor	Estimated Daily pollutant reduction in grams (VMT* peak hr Emission/1000)	Estimated Yearly Total Pollutant reduction in kilograms (364 days)
Nitrogen Oxide NOX	<b>87,966</b>	<b>9.590 grams/mile</b>	<b>844kg</b>	<b>307,216kgs</b>
Volatile Organic Compounds VOC	<b>87,966</b>	<b>0.266grams/mile</b>	<b>105kg</b>	<b>38,220kgs</b>
Carbon Monoxide CO	<b>87,966</b>	<b>1.925grams/mile</b>	<b>169kgs</b>	<b>61,516kgs</b>

**Total Annual Reduced Emissions****Nitrogen Oxide (NOX)**

4 hybrid buses=307,216kgs

**Volatile Organic Compounds (VOC)**

4 hybrid buses 38,220kgs

**Carbon Monoxide Compounds (CO)**

4 hybrid buses 61,516kgs

(a) Increase in VMT is calculated based on the average trip distance traveled, which is (27miles /trip) \* 64 trips = 1728 VMT.

(b) The daily increase in NOX, VOC and CO is computed using Mobile 6E with the average bus speed of Heavy Duty Diesel Vehicle (HDDBT) of 37 mph, as shown below.

**EMISSIONS REDUCTION FROM PROPOSED FIVE 40' BUS**

Pollutant	Estimated Daily VMT Reduction	Peak hour HDDV Emission Factor	Estimated Daily pollutant reduction in grams (VMT* peak hr Emission/1000)	Estimated Yearly Total Pollutant reduction in kilograms (364 days)
Nitrogen Oxide NOX	<b>1728</b>	<b>9.590grams/mile</b>	<b>16.57kgs/mile</b>	<b>6,032kgs/mile</b>
Volatile Organic Compounds VOC	<b>1728</b>	<b>0.266grams/mile</b>	<b>.391kgs/mile</b>	<b>142kgs/mile</b>
Carbon Monoxide CO	<b>1728</b>	<b>1.925grams/mile</b>	<b>3.33kgs/mile</b>	<b>1,211kgs/mile</b>

**The net emission reductions are found for each particulate:**

**NOX- Daily emission reduction = 844kg – 16.57kg = 827.43kg**

**VOC-Daily emission reduction = 105kg - .391kg = 104.61 kg**

**CO – Daily emission reduction = 169kg – 3.33kg =165.67kg**

**The net annual emission reduction found for each particulate:**

**NOX = 307,216kgs – 6,032kgs = 301,184kgs/mile/year**

**VOX = 38,220kgs – 142kgs = 38,078kgs/mile/year**

**CO = 61,516- 1,211kgs = 60,305kgs/mile/year**

**Estimated Useful life of the Project (Bus)**

The estimated useful life of the project is 12 years or 500,000 miles.

**Project Timetable (Bus)**

The timetable for the implementation of the project will depend upon the award of the funds. However, this request is for the FY2006 and FY2009 CMAQ funding. It is anticipated that planning and vehicle procurement would begin no later 60 days after the award of the funds and may take up to 18 months for vehicles to be delivered.

**CMAQ application summary**

Applicant	Description	Federal request	Year	AQ Benefits (kgs)		
				CO	VOC	NOX
Chapel Hill Transit	Purchase and Operation of 2 Hybrid Buses	1,758,955	2009-2012	11,559	625	269
DATA	Purchase and Operation of 2 Hybrid Buses	1,445,982	2009-2012	796	109	3,963
DATA	Hybrid Bus Funding Shortfall	397,995	2009	1,211	142	6,032
TJCOG	TDM	1,156,721	2009-2012	290,892	15,258	11,749
<b>Total</b>		<b>4,759,653</b>				

<b>Funds Available</b>	<b>\$4,545,448</b>	<b>2009-2012</b>
------------------------	--------------------	------------------

<b>Shortfall</b>	<b>(\$214,205)</b>
------------------	--------------------

DURHAM-CHAPEL HILL-CARRBORO METROPOLITAN PLANNING ORGANIZATION

TCC 12/19/07 Attachment 6

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	"DELIVERABLE STIP"					"DEVELOPMENTAL STIP"					"UNFUNDED"	
						FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FUTURE YEARS			
<b>INTERSTATE PROJECTS</b>																	
I-40 ORANGE	I-4716	I-85 TO DURHAM COUNTY LINE. GRIND AND RESEAL JOINTS. (11 MILES)	1725	225	IMPM C	1500											
<b>STRATEGIC HIGHWAY CORRIDOR</b>					<b>DIVISION PROJECT - PLANNING/DESIGN IN PROGRESS</b>												
I-40 DURHAM	I-5104	I-540/I-40 INTERCHANGE IMPROVEMENTS. ADD LANE ON I-540 WESTBOUND COLLECTOR-DISTRIBUTOR TO I-40 AND ADD AUXILIARY LANE ON I-40 WESTBOUND, I-540 TO SR 1973 (PAGE ROAD). (1 MILE)	3900		IM		R	100									
					IM				C	3800							
<b>STRATEGIC HIGHWAY CORRIDOR</b>					<b>UNDER CONSTRUCTION (OPEN TO TRAFFIC)</b>												
I-40 DURHAM ORANGE	I-3306	I-85 IN ORANGE COUNTY TO NC 147 (BUCK DEAN FREEWAY) IN DURHAM COUNTY. ADD ADDITIONAL LANES. (20.7 MILES)	128452	81452	IM												
					NHS												
					A I-85 TO DURHAM COUNTY LINE. B ORANGE COUNTY LINE TO NC 147 (BUCK DEAN FREEWAY) IN DURHAM - UNDER CONSTRUCTION.												
<b>STRATEGIC HIGHWAY CORRIDOR</b>					<b>UNDER CONSTRUCTION (OPEN TO TRAFFIC)</b>												
I-85 DURHAM	I-0306*	ORANGE COUNTY LINE TO EAST OF MIDLAND TERRACE ROAD ON I-85 AND EAST OF CHEEK ROAD ON US 70 BYPASS. WIDEN TO EIGHT LANES, US 15-501 TO US 70 AND ADD LIGHTING. (9.7 MILES)	270352	270352													
<b>STRATEGIC HIGHWAY CORRIDOR</b>					<b>PLANNING/DESIGN IN PROGRESS</b>												
I-85 ORANGE	I-0305*	I-40 AT HILLSBOROUGH TO DURHAM COUNTY LINE. WIDEN TO SIX LANES AND RECONSTRUCT INTERCHANGES AND STRUCTURES. (7.5 MILES)	161907	1800	NHS												
					NHS										R	960 A	
					IM											M	359
					NHS											M	538
					IM											C	158000
					A SR 1006 NEAR HILLSBOROUGH TO EAST OF SR 1709. B EAST OF SR 1709 TO DURHAM COUNTY LINE.												
<b>STRATEGIC HIGHWAY CORRIDOR</b>					<b>PLANNING/DESIGN IN PROGRESS</b>												
I-85 DURHAM	I-4743*	I-85, US 70 TO SR 1632 (RED MILL ROAD), EXIT 182. ADD LANES. (6.4 MILES)															
<b>STRATEGIC HIGHWAY CORRIDOR</b>					<b>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.</b>												

\* INDICATES INTRASTATE PROJECT

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	"DELIVERABLE STIP"					"DEVELOPMENTAL STIP"					"UNFUNDED"
						FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FUTURE YEARS		
<b>RURAL PROJECTS</b>																
I-540 NC 540 DURHAM WAKE	R-2000*	NORTHERN WAKE FREEWAY, NC 55 WEST OF MORRISVILLE TO US 64 EAST NEAR KNIGHTDALE. FREEWAY ON NEW LOCATION. (29 MILES)	757500	757500												
					AA	NC 55 WEST OF MORRISVILLE TO RESEARCH TRIANGLE PARK EAST LIMITS - UNDER CONSTRUCTION (OPEN TO TRAFFIC).										
					AB	RESEARCH TRIANGLE PARK EAST LIMITS TO SOUTHWEST OF I-40 - UNDER CONSTRUCTION (OPEN TO TRAFFIC).										
					AC	SOUTHWEST OF I-40 TO I-40 - UNDER CONSTRUCTION (OPEN TO TRAFFIC).										
					AD	TOLL PLAZA BETWEEN NC 55 AND NC 54 - PLANNING IN PROGRESS. NORTH CAROLINA TURNPIKE AUTHORITY PROJECT.										
					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) - UNDER CONSTRUCTION (OPEN TO TRAFFIC).										
					G	SOUTH OF SR 2215 (BUFFALOE ROAD) TO US 64 EAST NEAR KNIGHTDALE - UNDER CONSTRUCTION (OPEN TO TRAFFIC).										
<b>STRATEGIC HIGHWAY CORRIDOR</b>																
US 15-501, US 29, US 158, US 220, US 421, NC 68 CASWELL GUILFORD ORANGE ROCKINGHAM	R-4403	NATIONAL HIGHWAY SYSTEM GUARD-RAIL REHABILITATION. UPGRADE SUB-STANDARD GUARDRAIL, END TREATMENTS AND BRIDGE ANCHOR UNITS.	1068	1068												
DIVISION PROJECT - UNDER CONSTRUCTION																
NC 54 SR 1973 DURHAM	R-2904	NC 54, SR 1999 (DAVIS DRIVE) TO SR 1959 (MIAMI BOULEVARD) AND SR 1973 (PAGE ROAD), NC 54 TO I-40. WIDEN TO MULTI-LANES AND REPLACE RAILROAD STRUCTURE. (1.1 MILES)	4283	925	S	C	3358									
UNDER CONSTRUCTION - PROJECT LET WITH U-4026 - FFY 08 AMOUNT PROGRAMMED REFLECTS PAYBACK TO RESEARCH TRIANGLE FOUNDATION (RTF).																
NC 55 DURHAM WAKE	R-2906	US 64 IN WAKE COUNTY TO SR 1121 (CORNWALLIS ROAD) IN DURHAM COUNTY. WIDEN TO MULTI-LANES. (13 MILES)	65816	65816												
					A	NORTH OF US 64 TO SOUTH OF NC 540 - UNDER CONSTRUCTION (OPEN TO TRAFFIC).										
					C	NORTH OF NC 540 IN WAKE COUNTY TO SR 1121 (CORNWALLIS ROAD) IN DURHAM - UNDER CONSTRUCTION (OPEN TO TRAFFIC).										

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	"DELIVERABLE STIP"			FISCAL YEARS					"UNFUNDED"	
						FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FUTURE YEARS	
<b>RURAL PROJECTS</b>															
SR 1004 DURHAM	R-4752A	SR 2602 (RED MILL ROAD) TO THE MERCK PHAMACEUTICAL PLANT. STRENGTHEN PAVEMENT AND RESURFACE, ADD TURN LANES, AND INSTALL THERMOPLASTIC PAVEMENT MARKINGS.	900	900											
DIVISION PROJECT - UNDER CONSTRUCTION															
NEW ROUTE ORANGE	R-3438	HILLSBOROUGH WESTERN BYPASS, US 70 TO NC 57. TWO LANES ON NEW LOCATION. (2.9 MILES)	7450		STP										R 200 C 7250
SR 1009 (SOUTH CHURTON STREET) ORANGE	R-2825	I-40 TO ENO RIVER. WIDEN TO MULTI-LANES AND WIDEN BRIDGE NO. 240 OVER SOUTHERN RAILROAD. (1.8 MILES)	19300		STP										R 4400 C 14900
<b>URBAN PROJECTS</b>															
VARIOUS DURHAM	U-4729	CONGESTION MANAGEMENT STUDY FOR DURHAM COUNTY.	100	100											
IN PROGRESS															
VARIOUS CHATHAM DURHAM ORANGE	U-5023	DURHAM-CHAPEL HILL-CARRBORO (DCHC) DA FUNDS - RESERVED FOR FUTURE PROGRAMMING.	12700		STPDA								C 6350	C 6350	
VARIOUS CHATHAM DURHAM ORANGE	U-4727	DURHAM-CHAPEL HILL-CARRBORO URBAN AREA PLANNING (DCHC) ALLOCATION AND UNIFIED WORK PROGRAM - ONGOING ACTIVITIES.	42728	40000	STPDA	C 273	C 273	C 273	C 273	C 273	C 273	C 273	C 273	C 273	
IN PROGRESS															
CARRBORO ORANGE	U-2803	SR 1919 (SMITH LEVEL ROAD), ROCK HAVEN ROAD TO BRIDGE NO. 88. WIDEN TO MULTI-LANES. (0.6 MILE)	5871	471	S										R 600 C 4800
PLANNING/DESIGN IN PROGRESS															
CHAPEL HILL ORANGE	U-4008	US 15-501/ERWIN ROAD. INTERSECTION IMPROVEMENT.	6220	6220											
STRATEGIC HIGHWAY CORRIDOR UNDER CONSTRUCTION															

\* INDICATES INTRASTATE PROJECT

DURHAM-CHAPEL HILL-CARRBORO METROPOLITAN PLANNING ORGANIZATION

TCC 12/19/07 Attachment 6

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	"DELIVERABLE STIP"			FISCAL YEARS					"UNFUNDED"	
						FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FUTURE YEARS	
<b>URBAN PROJECTS</b>															
CHAPEL HILL ORANGE	U-449	REAL-TIME TRANSPORTATION INFORMATION SYSTEM.	1248	1248											
IN PROGRESS															
CHAPEL HILL DURHAM ORANGE	U-4704	CHAPEL HILL-CARRBORO COMPUTERIZED TRAFFIC SIGNAL SYSTEM.	5000		STP		C	4550							
					C		C	450							
PLANNING/DESIGN IN PROGRESS															
CARRBORO CHAPEL HILL ORANGE	U-2805	SR 1777 (HOMESTEAD ROAD), SR 1834 (HIGH SCHOOL ROAD) TO NC 86. WIDEN TO MULTI-LANES. (1.4 MILES)	10600	300	STP										R 4000
					STP										C 6300
CHAPEL HILL CARRBORO ORANGE	U-2909	SR 1780 (ESTES DRIVE), SR 1772 (GREENSBORO STREET) TO NC 86. WIDEN TO MULTI-LANES. (1.7 MILES)	7600	1000	STP										R 1600
					STP										C 5000
DURHAM CHAPEL HILL CHATHAM DURHAM ORANGE	U-3475	DCHC UNIFIED PLANNING WORK PROGRAM - SPECIAL PROJECTS SUPPLEMENT.	3317	1032	STPDA	PE	1148	PE	380						
					O	PE	287	PE	95						
										PE	300				
										PE	75				
IN PROGRESS															
CHAPEL HILL ORANGE	U-3306	SR 1733 (WEAVER DAIRY ROAD), NC 86 TO SR 1734 (ERWIN ROAD). CORRIDOR UPGRADE, PART ON NEW LOCATION. (2.8 MILES)	15966	4925	STP		M	241							
					STP				C	4692					
					STPDA				C	566					
					C				C	142					
RIGHT OF WAY IN PROGRESS															
CHAPEL HILL ORANGE	U-0624	NC 86 (SOUTH COLUMBIA STREET), SR 1906 PUREFOY ROAD) TO SR 1902 (MANNING DRIVE). CORRIDOR UPGRADE TO INCLUDE BICYCLE LANES. (0.7 MILE)	6660	3010	STP		C	3650							
RIGHT OF WAY IN PROGRESS															
CHAPEL HILL ORANGE	U-4725A	EIGHTEEN (18) EXPANSION BUSES.	2088	2088											
FUNDS TRANSFERRED TO PROJECT TD-4711D FOR CHAPEL HILL TRANSIT MAINTENANCE FACILITY															

\* INDICATES INTRASTATE PROJECT

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	"DELIVERABLE STIP"					"DEVELOPMENTAL STIP"					"UNFUNDED"
						FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FUTURE YEARS		
<b>URBAN PROJECTS</b>																
DURHAM DURHAM	U-4720*	US 70, LYNN ROAD TO THE PROPOSED NORTHERN DURHAM PARKWAY. (COORDINATE WITH U-4721) (7.8 MILES)														
STRATEGIC HIGHWAY CORRIDOR			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.													
DURHAM DURHAM	U-4446	NC 147 (DURHAM FREEWAY), I-40 TO I-85. INSTALL ITS INFRASTRUCTURE IMPROVEMENTS.	1502	1502												
STRATEGIC HIGHWAY CORRIDOR			UNDER CONSTRUCTION													
DURHAM DURHAM	U-2405	M. L. KING, JR. PARKWAY AND NC 55. CONSTRUCT INTERCHANGE.	25800		STP											
					STP										R 12000	
															C 13800	
STRATEGIC HIGHWAY CORRIDOR			FEASIBILITY STUDY RE-EVALUATION IN PROGRESS													
DURHAM DURHAM WAKE	U-4721*	NORTHERN DURHAM PARKWAY, I-540 TO ROXBORO ROAD. (COORDINATE WITH U-4720) (29.4 MILES)														
STRATEGIC HIGHWAY CORRIDOR			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.													
DURHAM DURHAM	U-4722*	US 501 (ROXBORO ROAD), US 501 BYPASS (DUKE STREET) TO SR 1640 (GOODWIN ROAD). (4.4 MILES)														
STRATEGIC HIGHWAY CORRIDOR			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.													
DURHAM DURHAM	U-4445	NC 147 (DURHAM FREEWAY), NEAR ALSTON AVENUE. CONSTRUCT PEDESTRIAN BRIDGE OVER NC 147 AND REMOVE EXISTING SUBSTANDARD PEDESTRIAN BRIDGE.	2000	2000												
STRATEGIC HIGHWAY CORRIDOR			UNDER CONSTRUCTION													
DURHAM CHAPEL HILL DURHAM ORANGE	U-2807	US 15-501, SR 1010 (FRANKLIN STREET) IN CHAPEL HILL TO US 15-501 BYPASS IN DURHAM. MAJOR CORRIDOR UPGRADE. (3.8 MILES)	124653	1653	STP											
					STP										R 25000	
															C 98000	
STRATEGIC HIGHWAY CORRIDOR			UNDER CONSTRUCTION													
DURHAM DURHAM	U-4009	SR 1126 (SERVICE ROAD) PARALLEL TO US 15-501. RELOCATE EXISTING SERVICE ROAD. (0.3 MILE)	5683	3633	S	C	1850									
					O	C	200									
STRATEGIC HIGHWAY CORRIDOR			UNDER CONSTRUCTION													

\* INDICATES INTRASTATE PROJECT

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	"DELIVERABLE STIP"			FISCAL YEARS					"UNFUNDED"				
						FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FUTURE YEARS				
<b>URBAN PROJECTS</b>																		
DURHAM	U-3309	SR 2028 (T.W. ALEXANDER DRIVE), SR 1121 (CORNWALLIS ROAD) TO SR 1959 (MIAMI BOULEVARD). WIDEN TO A FOUR LANE DIVIDED FACILITY. (1.7 MILES)	13728	4684	STP	R	500	A										
DURHAM					STP	M	44	A										
					STP			C	4250	A	C	4250	A					
A SR 1121 (CORNWALLIS ROAD) TO EAST OF NC 147 - RIGHT-OF-WAY IN PROGRESS. B EAST OF NC 147 TO SR 1959 (MIAMI BOULEVARD) - COMPLETE.																		
DURHAM	U-3804	SR 1321 (HILLANDALE ROAD), I-85 TO SR 1407 (CARVER STREET). WIDEN TO MULTI-LANES. (0.7 MILE)	11191	248	STP	R	5614											
DURHAM					STP	U	1429											
					STP				C	1950								
PLANNING/DESIGN IN PROGRESS																		
DURHAM	U-0071*	EAST END CONNECTOR, NC 147 (BUCK DEAN FREEWAY) TO NORTH OF NC 98. MULTI-LANE DIVIDED, PART ON NEW LOCATION. (2.5 MILES)	161792	6391	T					R	6876							
DURHAM					T					U	2877							
					T					M	2895							
					T								C	33250	C	33250		
															C	66500		
STRATEGIC HIGHWAY CORRIDOR																		
PLANNING/DESIGN IN PROGRESS																		
DURHAM	U-4716	SR 1978 (HOPSON ROAD) AND SR 1980 (CHURCH STREET). CONSTRUCT A GRADE SEPARATION, EXTEND CHURCH STREET AND CLOSE CHURCH STREET CROSSING 734 748M OF THE NORFOLK SOUTHERN-NORTH CAROLINA RAILROAD.	6500		RR											C	6500	
DURHAM																		
DURHAM	U-3308	NC 55 (ALSTON AVENUE), NC 147 (I. L. "BUCK" DEAN FREEWAY) TO US 70 BUS.-NC 98 (HOLLOWAY STREET). WIDEN TO FOUR LANE DIVIDED FACILITY AND REPLACE NORFOLK-SOUTHERN RAILROAD BRIDGES. (1 MILE)	28886	4545	STP	R	800											
DURHAM					STP					M	241							
					STP								C	7767	C	7767	C	7766
DURHAM	U-4012	US 15-501, NORTH OF MT. MORIAH ROAD TO SOUTH OF GARRETT ROAD. 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)	14909	7759	NHS	C	7150											
DURHAM																		
STRATEGIC HIGHWAY CORRIDOR																		
UNDER CONSTRUCTION																		

\* INDICATES INTRASTATE PROJECT

DURHAM-CHAPEL HILL-CARRBORO METROPOLITAN PLANNING ORGANIZATION

TCC 12/19/07 Attachment 6

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	"DELIVERABLE STIP"			FISCAL YEARS					"UNFUNDED"			
						FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FUTURE YEARS			
<b>URBAN PROJECTS</b>																	
DURHAM	U-4011	SR 1959 (SOUTH MIAMI BOULEVARD), SOUTH OF SR 2112 (METHODIST STREET) TO NORTH OF SR 1960 (BETHESDA AVENUE). WIDEN TO FIVE LANES TO PROVIDE CENTER TURN LANE. (0.7 MILE)	6627	150	STPDA	M	34										
DURHAM					S(M)	M	9										
					STPDA	R	2827										
					S(M)	R	707										
					STP			C	2900								
PLANNING/DESIGN IN PROGRESS																	
DURHAM	U-4010	NC 98 (HOLLOWAY STREET), EAST OF US 70 TO EAST OF JUNCTION ROAD. WIDEN FOR CENTER TURN LANE. (0.3 MILE)	6241	6241													
DURHAM																	
UNDER CONSTRUCTION																	
DURHAM	U-2831B	BRIGGS AVENUE EXTENSION, RIDDLE ROAD TO SR 1951 (SO-HI DRIVE). TWO LANES ON MULTI-LANE RIGHT OF WAY. (1 MILE)	10685	6185	S										R	1200	
DURHAM					S										C	3300	
PROJECT U-2831A - COMPLETE																	
HILLSBOROUGH	U-3808	ELIZABETH BRADY ROAD EXTENSION, SOUTH OF US 70 BUSINESS TO NORTH OF US 70 BYPASS AT SR 1002 (ST. MARY'S ROAD). MULTI-LANES WITH A NEW CROSSING OF ENO RIVER. (1.4 MILES)	24730	400	STP					R	2995						
ORANGE					STP					M	535						
					STP							C	6934	C	6933	C	6933
PLANNING/DESIGN IN PROGRESS																	
HILLSBOROUGH	U-3436	SR 1148 (ENO MOUNTAIN ROAD) AND SR 1192 (MAYO STREET) AT SR 1006 (ORANGE GROVE ROAD). REALIGN INTERSECTION AND MAKE SAFETY IMPROVEMENTS.	2350		STP										R	600	
ORANGE					STP										C	1750	
RESEARCH	U-4763B	NEW ROUTE - TRIANGLE PARKWAY, I-540 TO I-40. MULTI-LANE FACILITY ON NEW LOCATION. (3.5 MILES)	174703	6703	O	R	20900										
TRIANGLE PARK					O	C	47100	C	51900	C	48100						
DURHAM																	
WAKE																	
STRATEGIC HIGHWAY CORRIDOR																	
PLANNING/DESIGN IN PROGRESS - NORTH CAROLINA TURNPIKE AUTHORITY PROJECT																	

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	"DELIVERABLE STIP"			FISCAL YEARS					"UNFUNDED"	
						FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FUTURE YEARS	
<b>URBAN PROJECTS</b>															
RESEARCH TRIANGLE PARK DURHAM WAKE	U-4026	SR 1613-SR 1999 (DAVIS DRIVE), SR 3014 (MORRISVILLE-CARPENTER ROAD) IN WAKE COUNTY TO NC 54 IN DURHAM COUNTY. WIDEN TO MULTI-LANES. (5.7 MILES)	52182	38182	S	C	14000	B							
					A	SR 3014 (MORRISVILLE-CARPENTER ROAD) TO SR 1635 (KOPPERS ROAD-MCCRIMMON PARKWAY) - UNDER CONSTRUCTION.									
					B	SR 1635 (KOPPERS ROAD-MCCRIMMON PARKWAY) IN WAKE COUNTY TO NC 54 IN DURHAM COUNTY - UNDER CONSTRUCTION.									
PROJECT LET WITH R-2904															
<b>FEASIBILITY STUDIES</b>															
CHAPEL HILL ORANGE	FS-0307A	RELOCATED MASON FARM ROAD, NC 86 (SOUTH COLUMBIA STREET) TO US 15-501.	23100		O										R 13900 C 9200
STRATEGIC HIGHWAY CORRIDOR															
FEASIBILITY STUDY - COMPLETE															
<b>FEDERAL BRIDGE PROJECTS</b>															
US 70 BUSINESS DURHAM	B-3638	CAMPUS DRIVE. REPLACE BRIDGE NO. 316	1355	120	FA			R	260						
					FA					C	975				
US 70 BYPASS ORANGE	B-4962	ENO RIVER. REPLACE BRIDGE NO. 46	3300		FA							R	300		C 3000
					FA										
SR 1002 ORANGE	B-4216	STROUDS CREEK. REPLACE BRIDGE NO. 66	1125	150	FA			R	100						
					FA					C	875				
SR 1116 DURHAM	B-3450	NEW HOPE CREEK. REPLACE BRIDGE NO. 217, SANDY CREEK. REPLACE BRIDGE NO. 122.	4986	4986											
UNDER CONSTRUCTION															
SR 1303 DURHAM	B-4109	MUD CREEK. REPLACE BRIDGE NO. 120	1115	265	NFA	C	850								
RIGHT OF WAY IN PROGRESS															
SR 1402 DURHAM	B-3169	CREEK. REPLACE BRIDGE NO. 158	724	174	FA	C	550								
RIGHT-OF-WAY IN PROGRESS															
SR 1561 ORANGE	B-4592	ENO RIVER. REPLACE BRIDGE NO. 64	1805	200	NFA	R	80								
					NFA			C	1525						

DURHAM-CHAPEL HILL-CARRBORO METROPOLITAN PLANNING ORGANIZATION

TCC 12/19/07 Attachment 6

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	<u>"DELIVERABLE STIP"</u>			FISCAL YEARS					<u>"UNFUNDED"</u>	
						FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FUTURE YEARS	
<b>FEDERAL BRIDGE PROJECTS</b>															
SR 1616 DURHAM	B-4110	MOUNTAIN CREEK. REPLACE BRIDGE NO. 5	1594	1594											
UNDER CONSTRUCTION															
SR 1616 DURHAM	B-4943	SANDY CREEK. REPLACE BRIDGE NO. 20	1100		NFA							R	100		
					NFA								C	1000	
SR 1730 ORANGE	B-4218	NEW HOPE CREEK. REPLACE BRIDGE NO. 108	1008	258	NFA	C	750								
RIGHT OF WAY IN PROGRESS															
SR 1839 WAKE	B-3528	SYCAMORE CREEK. REPLACE BRIDGE NO. 429	1810	510	NFA	C	1300								
RIGHT OF WAY IN PROGRESS															
<b>MITIGATION PROJECTS</b>															
VARIOUS ALAMANCE CASWELL GUILFORD ORANGE ROCKINGHAM	EE-4907	ECOSYSTEM ENHANCEMENT PROGRAM FOR DIVISION 7 PROJECT MITIGATION.	7221	7221											
IN PROGRESS															
VARIOUS CHATHAM HOKE LEE MONTGOMERY MOORE RANDOLPH RICHMOND SCOTLAND	EE-4908	ECOSYSTEM ENHANCEMENT PROGRAM FOR DIVISION 8 PROJECT MITIGATION.	8756	8756											
IN PROGRESS															

\* INDICATES INTRASTATE PROJECT

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	"DELIVERABLE STIP"					"DEVELOPMENTAL STIP"					"UNFUNDED"
						FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FUTURE YEARS		
<b>MITIGATION PROJECTS</b>																
VARIOUS DURHAM FRANKLIN GRANVILLE PERSON VANCE WAKE WARREN	EE-4905	ECOSYSTEM ENHANCEMENT PROGRAM FOR DIVISION 5 PROJECT MITIGATION.	5167	5167												
IN PROGRESS																
<b>BICYCLE AND PEDESTRIAN PROJECTS</b>																
CARRBORO CHAPEL HILL ORANGE	EB-5021	SR 1780 (ESTES DRIVE), SR 1772 (GREENSBORO STREET) TO SR 1843 (SEAWELL SCHOOL ROAD). ADD PAVED SHOULDERS TO ACCOMMODATE BICYCLES. (0.94 MILE)	480	480												
DIVISION PROJECT - UNDER CONSTRUCTION																
CARRBORO ORANGE	U-3100B	SR 1107 (OLD FAYETTEVILLE ROAD), NC 54 TO SR 1106 (STROUD LANE). PROVIDE BICYCLE AND PEDESTRIAN FACILITIES AND TRANSIT ACCOMMODATIONS. (0.5 MILE)	1800		S											
					S										C 1500	
PROJECT U-3100A COMPLETE - PLANNING/DESIGN IN PROGRESS																
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)	3828		STPEB			C 400								
					STPDA			C 1371	C 1371							
					O			C 343	C 343							
CHAPEL HILL ORANGE	EB-4710	SEAWELL SCHOOL ROAD BICYCLE IMPROVEMENTS, HOMESTEAD ROAD TO ESTES DRIVE (1.9 MILES)	2000		STPEB										C 2000	
COUNTYWIDE ORANGE	EB-3606	BICYCLE ROUTE MAPPING AND SIGNING.	50	50												
IN PROGRESS																
DURHAM CHATHAM	EB-2921F	AMERICAN TOBACCO RAIL TRAIL. DURHAM COUNTY LINE TO WAKE COUNTY LINE. CONSTRUCT A MULTI-PURPOSE TRAIL.	2392	2392												
UNDER CONSTRUCTION																

\* INDICATES INTRASTATE PROJECT

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	"DELIVERABLE STIP"					"DEVELOPMENTAL STIP"					"UNFUNDED"
						FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FUTURE YEARS		
<b>BICYCLE AND PEDESTRIAN PROJECTS</b>																
SR 1006 ORANGE GROVE ROAD ORANGE	EB-4980	CONSTRUCT PEDESTRIAN BRIDGE OVER I-40.														
SCHEDULED FOR FEASIBILITY STUDY																
<b>CONGESTION MITIGATION PROJECTS</b>																
NC 54 DURHAM	C-4402	I-40 WEST OF NC 751 TO TRIANGLE DRIVE IN RESEARCH TRIANGLE PARK. CONSTRUCT ON-ROAD BICYCLE FACILITY.	1035			CMAQ	R	100								
						L	R	25								
						CMAQ			C	364	C	364				
						L			C	91	C	91				
PLANNING, DESIGN, RIGHT OF WAY AND CONSTRUCTION BY OTHERS																
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.	300	200		CMAQ	N	40	A							
						L	N	10	A							
						CMAQ	N	40	B							
						L	N	10	B							
A DEVELOP FLEXIBLE WORK SCHEDULES FOR EMPLOYEES IN CAPITAL AREA MPO (CAMPO). B DEVELOP FLEXIBLE WORK SCHEDULES FOR EMPLOYEES IN DURHAM-CHAPEL HILL-CARRBORO (DCHC).																
IN PROGRESS																
COUNTYWIDE HILLSBOROUGH ORANGE	C-4932A	CONSTRUCT A 125 SPACE PARK AND RIDE LOT. SECTION A: DURHAM-CHAPEL HILL-CARRBORO (DCHC) MPO TO PARTICIPATE IN CONSTRUCTION AND OPERATING ASSISTANCE FOR THREE YEARS FOR A NEW TRANSIT SERVICE.	275			CMAQ	C	22								
						L	C	7								
						CMAQ			O	41	O	41				
						L			O	41	O	41				
DURHAM DURHAM	C-4928	MORREENE ROAD, NEAL ROAD TO ERWIN ROAD. CONSTRUCT BIKE LANES AND SIDEWALKS.	556			CMAQ			C	222	C	222				
						L			C	56	C	56				
DURHAM DURHAM	C-4702	TEN (10) - REPLACEMENT BUSES.	3000			CMAQ			A	3000						
DURHAM DURHAM	C-4929	BICYCLE PARKING PROGRAM. INSTALL BIKE RACKS AT VARIOUS LOCATIONS.	48	32		CMAQ	C	13								
						L	C	3								
IN PROGRESS																

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	"DELIVERABLE STIP"			FISCAL YEARS					"UNFUNDED"	
						FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FUTURE YEARS	
<b>ENHANCEMENT PROJECTS</b>															
SR 1002 ST. MARY'S ROAD ORANGE	E-4779	ACQUIRE SCENIC CONSERVATION EASEMENTS AT SELECTED LOCATIONS.	194	18	STPE O	A A	141 35								
CARRBORO ORANGE	E-4942	MAIN STREET, CARRBORO POST OFFICE TO NC 54. CONSTRUCT SIDEWALKS.	8	8											
UNDER CONSTRUCTION															
CARRBORO ORANGE	E-4781	CONSTRUCT A FIVE-FOOT SIDEWALK ALONG PORTIONS OF WESLEY STREET, HARGRAVES STREET, BREWER LANE AND LANDSCAPE.	93	93											
UNDER CONSTRUCTION															
CARRBORO ORANGE	E-4545	OLD FAYETTEVILLE ROAD, JONES FERRY ROAD TO AUTUMN WOODS APARTMENTS AND CAROLINA SPRING APARTMENTS TO CARRBORO PLAZA PARK AND RIDE LOT. CONSTRUCT SIDEWALK ALONG EAST SIDE.	91	91											
UNDER CONSTRUCTION															
CARRBORO ORANGE	E-4780	CONSTRUCT A FIVE-FOOT SIDEWALK ON THE NORTH SIDE OF JONES FERRY ROAD AND LANDSCAPE.	23	23											
UNDER CONSTRUCTION															
CHAPEL HILL ORANGE	E-3807B	LOWER BOOKER CREEK GREENWAY. CONSTRUCT BICYCLE/PEDESTRIAN FACILITIES, CONNECT EXISTING SIDE- WALKS AND IMPROVE LANDSCAPING ADJACENT TO US 15-501 BYPASS (FORDHAM BOULEVARD) AND BOOKER CREEK.	350	350											
UNDER CONSTRUCTION															
DURHAM DURHAM	E-4924	CLUB BOULEVARD, OVAL DRIVE TO OAKLAND AVENUE AT THE INTERSECTIONS OF WEST CLUB BOULEVARD WITH OVAL DRIVE AND OAKLAND AVENUE. CONSTRUCT A PEDESTRIAN MEDIAN AND A REFUGE ISLAND.	95	95											
UNDER CONSTRUCTION															
DURHAM DURHAM	E-4529	WEST POINT ON THE ENO PARK TO PENNY'S BEND NATURE RESERVE. CONSTRUCT OFF-ROAD MULTI-USE TRAIL.	569	569											
UNDER CONSTRUCTION															

\* INDICATES INTRASTATE PROJECT

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	"DELIVERABLE STIP"			FISCAL YEARS					"UNFUNDED"								
						FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FUTURE YEARS								
<b>ENHANCEMENT PROJECTS (LOCAL PROJECTS)</b>																						
VARIOUS COUNTY	U-4726	DCHC URBAN AREA BICYCLE AND PEDESTRIAN ALLOCATION.	4460	210	STPDA	C	200	C	200	C	500	C	500	C	500	C	500	C	500			
					O	C	50	C	50	C	125	C	125	C	125	C	125	C	125			
CHATHAM																						
DURHAM																						
ORANGE																						
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.	600		STPDA	C	480															
					O	C	120															
PLANNING, DESIGN, RIGHT OF WAY AND CONSTRUCTION BY OTHERS																						
CARRBORO CHAPEL HILL ORANGE	EL-4995	DRY CREEK GREENWAY.	700		STPDA	C	560															
					O	C	140															
PLANNING, DESIGN, RIGHT OF WAY AND CONSTRUCTION BY OTHERS																						
CARRBORO ORANGE	EL-4994	BOLIN CREEK GREENWAY.	738		STPDA	C	590															
					O	C	148															
PLANNING, DESIGN, RIGHT OF WAY AND CONSTRUCTION BY TOWN																						
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.	872	72	O	C	160															
					STPDA	C	640															
PLANNING, DESIGN, RIGHT OF WAY AND CONSTRUCTION BY OTHERS																						
CHAPEL HILL ORANGE	EL-5022	UPPER BOOKER CREEK GREENWAY.	720		STPDA							C	576									
					O							C	144									
PLANNING, DESIGN, RIGHT OF WAY AND CONSTRUCTION BY OTHERS																						
DURHAM DURHAM	EL-4999	BICYCLE AND PEDESTRIAN TRAILS IN DURHAM AND DURHAM COUNTY. ACQUISITION OF RAIL CORRIDORS AND CONSTRUCTION.																				
PROGRAMMED FOR PLANNING AND ENVIRONMENTAL STUDY ONLY - PLANNING, DESIGN, RIGHT OF WAY AND CONSTRUCTION BY OTHERS																						

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	"DELIVERABLE STIP"			FISCAL YEARS					"UNFUNDED"	
						FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FUTURE YEARS	
<b>ENHANCEMENT PROJECTS (LOCAL PROJECTS)</b>															
DURHAM	EL-2921E	AMERICAN TOBACCO RAIL TRAIL. NC 54	4762		DP		C	246		C	246				
DURHAM		TO CHATHAM COUNTY LINE. CONSTRUCT			HP		C	1118		C	1118				
		A MULTI-PURPOSE TRAIL.			STPDA		C	590		C	590				
					O		C	427		C	427				
PLANNING, DESIGN, RIGHT OF WAY AND CONSTRUCTION BY CITY															
DURHAM	U-4724	CORNWALLIS ROAD, SOUTH ROXBORO	2270		STPDA		C	1816							
DURHAM		ROAD TO UNIVERSITY DRIVE. BIKE			O		C	454							
		AND PEDESTRIAN FEATURES.													
PLANNING, DESIGN, RIGHT OF WAY AND CONSTRUCTION BY OTHERS															
<b>HAZARD ELIMINATION PROJECTS</b>															
I-40	W-5125	EAST OF NC 147.	83		HES		C	83							
DURHAM		INSTALL MEDIAN BARRIER. (0.25 MILE)													
<b>STRATEGIC HIGHWAY CORRIDOR</b>															
I-540, SR 3097	W-4814	I-540, I-40 EASTWARD TO EAST OF US 1	195	195											
AVIATION PARKWAY		(CAPITAL BOULEVARD) AND SR 3097													
DURHAM		(AVIATION PARKWAY), TERMINAL													
WAKE		BOULEVARD NORTHWARD TO SR 1644													
		(GLOBE ROAD). INSTALL MILLED RUMBLE													
		STRIPS ON THE INSIDE AND OUTSIDE													
		PAVED SHOULDERS.													
UNDER CONSTRUCTION															
US 501	SF-4905A	SR 1601 (MOORES MILL ROAD)-SR 1468	98	98											
DURHAM		(QUAIL ROOST FARM ROAD). INSTALL													
		TRAFFIC SIGNAL.													
DIVISION PROJECT - UNDER CONSTRUCTION															
NC 57	SF-4907C	INSTALL CENTER TRAFFIC ISLANDS WITH	166		HES	R	50								
NC 157		STOP SIGNS AND MAKE SIGHT DISTANCE			HES	C	116								
ORANGE		IMPROVEMENTS.													
US 70	SF-4907B	INSTALL RIGHT TURN LANE.	130		HES	R	5								
NC 751					HES	C	125								
ORANGE															
NC 751	SF-4908I	INTERSECTION WITH SR 1731 (O'KELLY	146		HES	R	6								
CHATHAM		CHURCH ROAD). INSTALL TRAFFIC			HES	C	140								
		SIGNAL AND LEFT TURN LANE.													

\* INDICATES INTRASTATE PROJECT

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	"DELIVERABLE STIP"			FISCAL YEARS					"UNFUNDED"	
						FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FUTURE YEARS	
<b>HAZARD ELIMINATION PROJECTS</b>															
I-85, US 70, US 15-501 AND NC 147 DURHAM GRANVILLE	W-4811	SECTIONS OF I-85 (DURHAM AND GRANVILLE COUNTIES), US 70, US 15-501 AND NC 147 (DURHAM COUNTY). INSTALL MILLED RUMBLE STRIPS ON THE INSIDE AND OUTSIDE PAVED SHOULDERS.	285	285											
UNDER CONSTRUCTION															
DURHAM DURHAM	W-5110	NC 55 (ALSTON AVENUE) AT LAWSON STREET. CONSTRUCT LEFT TURN LANES ON NC 55. (0.2 MILE)	975		HES					R	500				
					HES										
					C	475									
SR 1548 SCHLEY ROAD ORANGE	SI-4807	SR 1538 (NEW SHARON CHURCH ROAD). INSTALL CENTER ISLAND WITH STOP SIGN.	56	56											
DIVISION PROJECT - UNDER CONSTRUCTION															
<b>PASSENGER RAIL PROJECTS</b>															
AMTRAK ALAMANCE CABARRUS DURHAM GUILFORD MECKLENBURG ROWAN WAKE	P-2918	TRAIN 73/74 OPERATIONS BETWEEN CHARLOTTE AND RALEIGH AND CAPITAL YARD MAINTENANCE FACILITY.	85752	32952	S(5)	O	2600	O	2600	O	2600	O	2600	O	2600
					T2001	O	4000	O	4000	O	4000	O	4000	O	4000
						O	2600	O	2600	O	2600	O	2600	O	2600
						O	4000	O	4000	O	4000	O	4000	O	4000
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	28595	S(5)	O	2400	O	2400	O	2400	O	2400	O	2400
IN PROGRESS															

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	"DELIVERABLE STIP"			FISCAL YEARS					"UNFUNDED"	
						FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FUTURE YEARS	
<b>PASSENGER RAIL PROJECTS</b>															
CARRBORO ORANGE	Z-4007B	SR 1927 (BREWER ROAD) IN CARRBORO AT NORFOLK SOUTHERN RAILWAY CROSSING 735 179M. SAFETY IMPROVEMENTS.	95	95											
FUNDED - CONSTRUCTION NOT AUTHORIZED															
DURHAM DURHAM	P-3802	STATION CONSTRUCTION.	3000		CMAQ										C 3000
<b>PUBLIC TRANSPORTATION PROJECTS</b>															
TRIANGLE TRANSIT AUTHORITY DURHAM ORANGE WAKE	TA-4818	REPLACEMENT BUSES. 17 - FY 2009 15 - FY 2011 11 - FY 2012	14620		FED L STAT		CP CP CP	4624 578 578							
									CP CP CP	4080 510 510	CP CP CP	2992 374 374			
UNFUNDED PROJECT															
TRIANGLE TRANSIT AUTHORITY DURHAM ORANGE WAKE	TA-4994	PARATRANSIT FLEET REPLACEMENT.	32		FEDU L STAT		CP CP CP	26 3 3							
UNFUNDED PROJECT															
TRIANGLE TRANSIT AUTHORITY DURHAM ORANGE WAKE	TA-4993	PARATRANSIT FLEET EXPANSION.	67		FEDU L STAT		CP CP CP	53 7 7							
UNFUNDED PROJECT															
TRIANGLE TRANSIT AUTHORITY DURHAM ORANGE WAKE	TA-4992	VANPOOL FLEET EXPANSION.	890		FEDU L		CP CP	712 178							
UNFUNDED PROJECT															
TRIANGLE TRANSIT AUTHORITY DURHAM WAKE	TD-4944	I-40 BUS BYPASS SHOULDER PROJECT.	800		FEDU L STAT		CP CP CP	640 80 80							
UNFUNDED PROJECT															

\* INDICATES INTRASTATE PROJECT

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	"DELIVERABLE STIP"			FISCAL YEARS					"UNFUNDED"	
						FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FUTURE YEARS	
<b>PUBLIC TRANSPORTATION PROJECTS</b>															
TRIANGLE TRANSIT AUTHORITY DURHAM ORANGE WAKE	TE-4903	ALTERNATIVES ANALYSIS FOR MAJOR TRANSIT CORRIDOR PROJECT.	2000		L		CP 500	CP 500							
					STAT		CP 500	CP 500							
UNFUNDED PROJECT															
TRIANGLE TRANSIT AUTHORITY DURHAM ORANGE	TE-4706B	FIXED GUIDEWAY PROJECT FOR US 15-501 PRELIMINARY ENGINEERING AND DESIGN.	2749		FED								CP 1649		
					L								CP 550		
					STAT								CP 550		
UNFUNDED PROJECT															
CHAPEL HILL ORANGE	C-4931	PROVIDE SHARED FEEDER SERVICE TO AREAS NOT RECEIVING REGULAR BUS SERVICE. CMAQ FUNDS TO BE TRANSFERRED TO FTA.	52	24	CMAQ	O 14									
					L	O 14									
CHAPEL HILL ORANGE	C-4930	PURCHASE 1 HYBRID ELECTRIC BUSES. CMAQ FUNDS TO BE TRANSFERRED TO FTA.	588		CMAQ	CP 470									
					L	CP 118									
CHAPEL HILL ORANGE	TA-4726	REPLACEMENT BUSES. 12 - FY 2009 8 - FY 2010 16 - FY 2011 6 - FY 2012 17 - FY 2013 10 - FY 2014	26408		FED		CP 3890	CP 2700			CP 5781	CP 2258	CP 4642	CP 2739	
					L		CP 422	CP 288			CP 624	CP 245	CP 503	CP 247	
					STAT		CP 375	CP 256			CP 555	CP 217	CP 447	CP 219	
UNFUNDED PROJECT															
CHAPEL HILL ORANGE	TA-4979	REPLACEMENT VANS. 7 - FY 2010 4 - FY 2011	377		FED			CP 168			CP 160				
					L			CP 34			CP 15				
UNFUNDED PROJECT															
CHAPEL HILL ORANGE	TA-4748	REPLACEMENT VANS. 1 - FY 2008 8 - FY 2009 1 - FY 2010 4 - FY 2011 1 - FY 2012 8 - FY 2013	1559		FED	CP 36	CP 288	CP 36			CP 144	CP 37	CP 704		
					L	CP 5	CP 36	CP 5			CP 18	CP 5	CP 88		
					STAT	CP 5	CP 36	CP 5			CP 18	CP 5	CP 88		
UNFUNDED PROJECT															

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	"DELIVERABLE STIP"			FISCAL YEARS					"UNFUNDED"			
						FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FUTURE YEARS			
<b>PUBLIC TRANSPORTATION PROJECTS</b>																	
CHAPEL HILL	TA-4995	EXPANSION BUSES.	4131		FEDU						CP	1201	CP	1147	CP	1147	
ORANGE		3 - FY 2013			L						CP	130	CP	103	CP	103	
		3 - FY 2014			STAT						CP	116	CP	92	CP	92	
		3 - FY 2015															
UNFUNDED PROJECT																	
CHAPEL HILL	TA-4981	SEDANS/WAGONS/4X4 - 2.	60		FED						CP	48					
ORANGE					L						CP	12					
UNFUNDED PROJECT																	
CHAPEL HILL	TD-4909	PARK AND RIDE LOT EXPANSION NC 54.	4000		FED						CP	1600	CP	1600			
ORANGE		DESIGN AND LAND ACQUISITION FY 2011			L						CP	200	CP	200			
		CONSTRUCTION FY 1012.			STAT						CP	200	CP	200			
UNFUNDED PROJECT																	
CHAPEL HILL	TD-4710A	PARK AND RIDE LOT. DESIGN AND	375		FBUS	CP	301										
ORANGE		LAND ACQUISITION - FY 2008.			L	CP	37										
					STAT	CP	37										
UNFUNDED PROJECT																	
CHAPEL HILL	TD-4710B	PARK AND RIDE LOT.	2000		FEDU						CP	1600					
ORANGE		CONSTRUCTION - FY 2009.			L						CP	200					
					STAT						CP	200					
UNFUNDED PROJECT																	
CHAPEL HILL	TG-4732	REPLACEMENT SUPPORT VEHICLES.	818		FEDU	CP	34				CP	38	CP	70	CP	514	
ORANGE		2 - FY 2008			L	CP	8				CP	9	CP	17	CP	128	
		2 - FY 2011															
		3 - FY 2012															
		15 - FY 2013															
UNFUNDED PROJECT																	
CHAPEL HILL	TG-4731	PREVENTIVE MAINTENANCE,	13250		FUZ	CP	1669	CP	1869	CP	2093	CP	2344	CP	2626		
ORANGE		ASSOCIATED CAPITAL MAINTENANCE			L	CP	417	CP	467	CP	523	CP	586	CP	656		
		ITEMS, ROUTINE CAPITAL ITEMS--OFFICE															
		AND SHOP EQUIPMENT, PASSENGER															
		AMENITIES, SERVICE VEHICLES, ETC.															

\* INDICATES INTRASTATE PROJECT



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	"DELIVERABLE STIP"					"DEVELOPMENTAL STIP"					"UNFUNDED"
						FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FUTURE YEARS		
<b>PUBLIC TRANSPORTATION PROJECTS</b>																
DURHAM COUNTYWIDE DURHAM	TD-4945	PARK AND RIDE LOT IN NORTHERN DURHAM.	1176		FEDU		CP 940									
					L		CP 118									
					STAT		CP 118									
<b>UNFUNDED PROJECT</b>																
TRIANGLE TRANSIT AUTHORITY DURHAM ORANGE WAKE	TG-4821	PREVENTIVE MAINTENANCE AND ROUTINE CAPITAL ITEMS - SPARE PARTS, OFFICE AND SHOP EQUIPMENT, PASSENGER AMENITIES, SERVICE VEHICLE, ETC.	8000		FUZ	CP 800	CP 800	CP 800	CP 800	CP 800	CP 800	CP 800	CP 800	CP 800		
					L	CP 200	CP 200	CP 200	CP 200	CP 200	CP 200	CP 200	CP 200	CP 200		
TRIANGLE TRANSIT AUTHORITY DURHAM ORANGE WAKE	TP-4732	PLANNING ASSISTANCE---UPWP. TOTAL PROJECT COST SHOWN.	8000		FUZ	PL 800	PL 800	PL 800	PL 800	PL 800	PL 800	PL 800	PL 800	PL 800		
					L	PL 100	PL 100	PL 100	PL 100	PL 100	PL 100	PL 100	PL 100	PL 100		
					STAT	PL 100	PL 100	PL 100	PL 100	PL 100	PL 100	PL 100	PL 100	PL 100		
TRIANGLE TRANSIT AUTHORITY DURHAM ORANGE WAKE	TT-4911	ITS PROJECT - REAL TIME PASSENGER INFORMATION PROJECT.	700		FED				CP 560							
					L				CP 140							
<b>UNFUNDED PROJECT</b>																

**DCHC MPO**  
**FY 2009-2015 Transportation Improvement Program**  
**Regional Priority List**  
**Adopted November 14, 2007**

I. Bicycle and Pedestrian

Regional Priority Number	Project Name and Description	Local Priority Number	TIP Number	TIP Status in Draft FY09-15 STIP	Estimated Cost (\$THOU)
1	Cornwallis Road (S. Roxboro to Chapel Hill Rd.) Bike and Ped	3 - D 3 - DC	U-4724	Partially Funded	1,621
2	Northeast Chatham County Roadway/Ped/Bike Plan	1 - CC		Unfunded	unknown
3	MLK-NC 86 Corridor Bike and Ped	1 - CH		Partially Funded	3,945
4	Fayetteville Rd (Cornwallis to Nelson) Bike and Ped	13 - D 13 - DC		Unfunded	356
5	Bolin Creek Greenway	2 - CH		Partially Funded	493
6	Morreene Road (Erwin to Neal) Bike and Ped	4 - D 4 - DC	C-4928	Partially Funded	1,728
7	Avondale Drive (Roxboro to Geer) Bike and Ped	6 - D 6 - DC		Unfunded	513
8	University Drive (Garrett to Hope Valley) Bike and Ped	14 - D 14 - DC		Unfunded	1,025
9	15 Chapel Hill Intersection Improvements	4 - CH		Unfunded	1,542
10	Old Fayetteville Road (McDougle School to NC 54) Bike and Ped	2 - C	U-3100B	Partially Funded	1,800
11	Hillandale Road (I-85 to NC 147) Bike and Ped	2 - D 2 - DC		Partially Funded	722
12	Club Boulevard (Ruffin to Geer) Bike and Ped	7 - D 7 - DC		Unfunded	2,978
13	Erwin Road (Sage to Durham County Line) Bike and Ped	17 - CH		Unfunded	3,585
14	Fordham (15-501 South to Ephesus Ch) Bike and Ped	18 - CH		Unfunded	5,147
15	Estes Extension (S Greensboro to Carrboro Town Limits) Bike and Ped	1 - C		Unfunded	1,152
16	Nash Street (Faucette Mill to Dimmocks Mill) Sidewalk	3 - H		Partially Funded	640
17	Dearborn Drive (Club to Old Oxford) Bike and Ped	10 - D 10 - DC		Unfunded	2,389
18	Southern Railroad Greenway	10 - CH		Unfunded	370
19	Cornwallis Rd. (Erwin Rd. to Chapel Hill Rd.) Bike and Ped	11 - D 11 - DC		Unfunded	3,204
20	Culbreth Road (Adam Way to Smith Level) Sidewalk	8 - CH		Unfunded	182
21	Holloway Street (Lynn to Miami) Sidewalk	1 - D 1 - DC		Unfunded	992

Regional Priority Number	Project Name and Description	Local Priority Number	TIP Number	TIP Status in Draft FY09-15 STIP	Estimated Cost (\$THOU)
22 (tied)	Estes Drive (Curtis to Franklin) Sidewalk	5 - CH		Unfunded	422
22 (tied)	Old NC 86 (Hillsborough to Homestead) Bike and Ped	5 - C		Unfunded	515
24	Pope Road (Old Durham-Chapel Hill Rd. to Ephesus Church Rd.) & Ephesus Church Road Bike and Ped	6 - CH; 19 - DC		Unfunded	3,526
25	Hope Valley Road (S. Roxboro to US 15-501 Bus) Bike and Ped	9 - D 9 - DC		Unfunded	4,916
26	Cheek Road (Geer to Hardee) Bike and Ped	12 - D 12 - DC		Unfunded	695
27	Country Club Road (South Rd to Raleigh St) Sidewalk	13 - CH		Unfunded	143
28	Bolin Creek Little Creek Greenway	15 - CH		Unfunded	943
29	Cook Rd. (Fayetteville St. to Martin Luther King) Bike and Ped	16 - DC		Unfunded	1,365
30	I-40/Orange Grove Road Pedestrian Bridge	1 - OC; 1 - H	EB-4980	Unfunded	1,000
31	NC 86 (Whitfield to US 70 Bus) Bike Route	2 - H; 3 - OC		Unfunded	933
32	Fordham Pedestrian Overpass	3 - CH		Unfunded	2,261
33	Barbee Chapel Road (NC 54 to Stagecoach) Bike and Ped	9 - CH; 17 - DC		Unfunded	1,759
34	Franklin St./Bolin Creek Greenway Bike and Ped Access	11 - CH		Unfunded	178
35	Fordham (Manning to Carmichael) Sidewalk	14 - CH		Unfunded	98
36	Fordham (Ephesus Ch to Elliott) Sidewalk	7 - CH		Unfunded	175
37	Alston Avenue (Carpenter Fletcher to Sedwick) Bike and Ped	8 - D 8 - DC		Unfunded	2,069
38	Mt.Carmel Church Rd (US 15-501 to Chatham County Line) Bike and Ped	12 - CH		Unfunded	3,662
39	Erwin Rd (Orange County Line to NC 751) Bike and Ped	18 - DC		Unfunded	1,942
40	BPW Club Rd/Westbrook Dr. Greenway	4 - C		Unfunded	5
41	NC 54 Corridor (Fordham to Barbee Chapel) Bike and Ped	19 - CH		Unfunded	1,549
42	Old Mason Farm/Finley Golf Course (NC 54 to Fordham) Bike and Ped	16 - CH		Unfunded	1,793
43	S. Greensboro Street (Main to Merritt Mill) Sidewalks	3 - C		Unfunded	922
44	Carpenter Fletcher Road (Woodcroft to Alston) Bike and Ped	5 - D 5 - DC		Partially Funded	1,267
45	Sedwick Rd. (Grandale to Alston) Bike and Ped	15 - D 15 - DC		Unfunded	2,187

<b>Regional Priority Number</b>	<b>Project Name and Description</b>	<b>Local Priority Number</b>	<b>TIP Number</b>	<b>TIP Status in Draft FY09-15 STIP</b>	<b>Estimated Cost (\$THOU)</b>
46	Old NC 86 (Eubanks to I-40) Bike Lanes	2 - OC		Unfunded	1,130
47	Old NC 86 (Homestead to Eubanks) Bike and Ped	6 - C		Unfunded	2,641
48	Eubanks (Old NC 86 to Rogers) Bike and Ped	7 - C		Unfunded	1,067

## II. Transit

Regional Priority Number	Project Name and Description	Year Requested	Local Priority Number or Agency	TIP Number	TIP Status in Draft FY09-15 STIP	Estimated Cost (\$THOU)
1 (tie)	TTA 15 – Replacement Buses	2009	TTA	TA-4818	17 buses unfunded	4,128
1 (tie)	TTA Routine Capital Items--Shop Equipment, Spare Parts.	2009	TTA	TG-4821	Funded	1,000
1 (tie)	TTA Planning Assistance---UPWP.	2009	TTA	TP-4732	Funded	1,000
4	1 Replacement Van	2009	1 - TTA	TA-4994	Unfunded	33
5	26 Replacement Buses	2009	1 - CH; 1 - C	TA-4726	12 buses unfunded	10,325
6 (tie)	DATA Preventative Maintenance and Routine Capital Items	2009	DATA	TG-4738	Funded	3,018
6 (tie)	CHT Preventative maintenance, associated capital maintenance items, routine capital items—office and shop equipment, passenger amenities, service vehicles, etc.	2009	CHT	TG-4731	Funded	2,336
8	9 Replacement Vans	2009	2 - CH; 2 - C	TA-4748	8 vans unfunded	1,026
9 (tie)	11 Replacement Support Vehicles	2009	3 - CH; 3 - C		Not included	396
9 (tie)	18 Replacement Vans	2009	3 - D 3 - DC		Not included	630
11	2 Replacement Service Trucks	2009	5 - CH; 5 - C		Not included	88
12	12 Hybrid Expansion Buses	2009	1 - D 1 - DC		Not included	5,700
13	Placeholder - Regional Transit Service Phase 2 - Alternatives Analysis	2009, 2010	7 - D; 7 - DC; 26 - C	TE-4706B	Planning and Design for 15-501 Corridor unfunded in 2015	1,000
14	Real Time Passenger Information Project	2009	2 - TTA	TT-4911	Unfunded in 2010	700
15	Vanpool Fleet Expansion - 12 vans	2009	3 - TTA	TA-4992	Unfunded	285
16	2 Expansion Vans	2009	4 - TTA	TA-4993	Unfunded	66
17	Placeholder - Regional Transit Svc. Phase 1 - Alternatives Analysis	2009, 2010	2 - D 2 - DC	TE-4903	Unfunded	1,000
18	6 Expansion Vans	2009	4 - D 4 - DC	TA-4757	Unfunded in 2008	210
19	DATA Passenger Amenities - 75 shelters, 50 benches, 50 trash cans, 50 solar lights	2009	DATA	TG-4958	Unfunded	492
20	Park and Ride Lot 15-501 Corridor - Construction	2009	6 - CH; 6 - C	TD-4710B	Unfunded	2,000

<b>Regional Priority Number</b>	<b>Project Name and Description</b>	<b>Year Requested</b>	<b>Local Priority Number or Agency</b>	<b>TIP Number</b>	<b>TIP Status in Draft FY09-15 STIP</b>	<b>Estimated Cost (\$THOU)</b>
21 (tie)	TTA Routine Capital Items--Shop Equipment, Spare Parts.	2010	TTA	TG-4821	Funded	1,000
21 (tie)	TTA Planning Assistance---UPWP.	2010	TTA	TP-4732	Funded	1,000
23	12 Replacement Buses	2010	7 - CH; 7 - C	TA-4726	8 buses unfunded	4,210
24 (tie)	DATA Preventative Maintenance and Routine Capital Items	2010	DATA	TG-4738	Funded	3,169
24 (tie)	CHT Preventative maintenance, associated capital maintenance items, routine capital items—office and shop equipment, passenger amenities, service vehicles, etc.	2010	CHT	TG-4731	Funded	2,616
26	6 Replacement Vans	2010	9 - CH; 9 - C	TA-4979 TA-4748	8 vans unfunded	704
27	3 Replacement Support Vehicles	2010	10 - CH; 10 - C	TA-4981	2 vehicles unfunded	110
28	CHT 1 Replacement Service Truck	2010	CHT		Not included	70
29	3 Hybrid Expansion Buses	2010	8 - CH; 8 - C		Not included	1,679
30	Vanpool Fleet Expansion - 19 vans	2010	3 - TTA		Not included	361
31	Park and Ride Lot - Treyburn area - Land Acquisition and Construction	2010	5 - D 5 - DC	TD-4945	Unfunded in 2009	1,175
32 (tie)	TTA Routine Capital Items--Shop Equipment, Spare Parts.	2011	TTA	TG-4821	Funded	1,000
32 (tie)	TTA Planning Assistance---UPWP.	2011	TTA	TP-4732	Funded	1,000
32 (tie)	TTA 15 - Replacement Buses	2011	TTA	TA-4818	Unfunded	4,946
35	13 Replacement Buses	2011	14 - CH; 14 - C	TA-4726	16 buses unfunded	4,695
36 (tie)	DATA Preventative Maintenance and Routine Capital Items	2011	DATA	TG-4738	Funded	3,169
36 (tie)	CHT Preventative maintenance, associated capital maintenance items, routine capital items—office and shop equipment, passenger amenities, service vehicles, etc.	2011	CHT	TG-4731	Funded	2,930
38	1 Replacement Support Vehicles	2011	13 - CH; 13 - C	TG-4732	2 vehicles unfunded	40
39	3 Diesel Expansion Buses	2011	11 - CH; 11 - C		Not included	1,084
40	Bus Priority at Traffic Signals along 15-501	2011	5 - TTA		Not included	350
41	Park and Ride Lot Expansion - Design and Land Acquisition - NC 54	2011	12 - CH; 12 - C	TD-4909	Unfunded	2,000
42 (tie)	TTA Routine Capital Items--Shop Equipment, Spare Parts.	2012	TTA	TG-4821	Funded	1,000

Regional Priority Number	Project Name and Description	Year Requested	Local Priority Number or Agency	TIP Number	TIP Status in Draft FY09-15 STIP	Estimated Cost (\$THOU)
42 (tie)	TTA Planning Assistance---UPWP.	2012	TTA	TP-4732	Funded	1,000
42 (tie)	TTA 11 Replacement Buses	2012	TTA	TA-4818	Unfunded	3,670
45	31 40-foot Hybrid Replacement Buses	2012	6 - D 6 - DC	TA-4757	11 buses unfunded in 2011	14,000
46 (tie)	DATA Preventative Maintenance and Routine Capital Items	2012	DATA	TG-4738	Funded	3,169
46 (tie)	CHT Preventative maintenance, associated capital maintenance items, routine capital items—office and shop equipment, passenger amenities, service vehicles, etc.	2012	CHT	TG-4731	Funded	3,282
48	3 Expansion Buses (2 hybrid 1 diesel)	2012	15 - CH; 15 - C		Not included	1,560
49	Park and Ride Lot Expansion - Construction - NC 54	2012	12 - CH; 12 - C	TD-4909	Unfunded	3,000
50 (tie)	TTA Routine Capital Items--Shop Equipment, Spare Parts.	2013	TTA	TG-4821	Funded	1,000
50 (tie)	TTA Planning Assistance---UPWP.	2013	TTA	TP-4732	Funded	1,000
52	17 Replacement Buses	2013	16 - CH; 16 - C	TA-4726	Unfunded	6,513
53 (tie)	DATA Preventative Maintenance and Routine Capital Items	2013	DATA	TG-4738	Funded	3,169
53 (tie)	CHT Preventative maintenance, associated capital maintenance items, routine capital items—office and shop equipment, passenger amenities, service vehicles, etc.	2013	CHT		Not included	3,676
55	2 Replacement Service Trucks	2013	18 - CH; 18 - C		Not included	99
56	9 Replacement Vans	2013	19 - CH; 19 - C	TA-4748	8 vans unfunded	1,154
57	11 Replacement Support Vehicles	2013	20 - CH; 20 - C	TG-4732	15 vehicles unfunded	441
58	3 Expansion Buses (2 hybrid 1 diesel)	2013	17 - CH; 17 - C	TA-4995	Unfunded	1,606
59 (tie)	TTA Routine Capital Items--Shop Equipment, Spare Parts.	2014	TTA	TG-4821	Funded	1,000
59 (tie)	TTA Planning Assistance---UPWP.	2014	TTA	TP-4732	Funded	1,000
59 (tie)	5 Replacement Buses	2014	TTA		Not included	500
62	10 Replacement Buses	2014	22 - CH; 22 - C	TA-4726	Unfunded	3,946
63 (tie)	DATA Preventative Maintenance and Routine Capital Items	2014	DATA	TG-4738	Funded	3,228

<b>Regional Priority Number</b>	<b>Project Name and Description</b>	<b>Year Requested</b>	<b>Local Priority Number or Agency</b>	<b>TIP Number</b>	<b>TIP Status in Draft FY09-15 STIP</b>	<b>Estimated Cost (\$THOU)</b>
63 (tie)	CHT Preventative maintenance, associated capital maintenance items, routine capital items—office and shop equipment, passenger amenities, service vehicles, etc.	2014	CHT		Not included	4,117
65 (tie)	CHT 6 Replacement Vans	2014	CHT		Not included	792
65 (tie)	CHT 3 Replacement Support Vehicles	2014	CHT		Not included	124
65 (tie)	CHT 1 Replacement Service Truck	2014	CHT		Not included	70
68	3 Expansion Buses (2 hybrid 1 diesel)	2014	23 - CH; 23 - C	TA-4995	Unfunded	1,655
69 (tie)	TTA Routine Capital Items--Shop Equipment, Spare Parts.	2015	TTA	TG-4821	Funded	1,000
69 (tie)	TTA Planning Assistance---UPWP.	2015	TTA	TP-4732	Funded	1,000
71 (tie)	DATA Preventative Maintenance and Routine Capital Items	2015	DATA	TG-4738	Funded	3,339
71 (tie)	CHT Preventative maintenance, associated capital maintenance items, routine capital items—office and shop equipment, passenger amenities, service vehicles, etc.	2015	CHT		Not included	4,611
73	3 Expansion Buses (2 hybrid 1 diesel)	2015	24 - CH; 24 - C	TA-4995	Unfunded	1,704
74	15-501 Bus Route	2015	1 - CC		Not included	unknown
75	Fixed Guideway to Carolina North	2015	25 - C		Not included	unknown

## III. Highway

Regional Priority Number	Project Name and Description	Local Priority Number	TIP Number	TIP Status in Draft FY09-15 STIP	Estimated Cost (\$THOU)
1	Transportation Demand Management (TDM)	12 - D 12 - DC		Unfunded	18,251
2	ITS Deployment	11 - D 11 - DC		Unfunded	21,400
3	S. Churton Street Improvements	2 - H, 2 - OC	R-2825	Unfunded	19,260
4	East End Connector	1 - D 1 - DC	U-0071	Partially Funded	198,300
5	Franklin/Main/Merritt Mill/Brewer Intersection	3 - C		Unfunded	688
6	Homestead Road Improvements	1 - CH, 1 - OC, 2 - C	U-2805	Unfunded	3,030
7	MLK Jr. Parkway/Hwy 55 Intersection	2 - D 2 - DC	U-2405	Unfunded	25,800
8	Eno Mt./Mayo St. at Orange Grove Rd. Realignment	4 - H, 5 - OC	U-3436	Unfunded	unknown
9	NC 751 (Phase 1) Widening	9 - D 9 - DC		Unfunded	10,900
10	Seawell School Road Improvements	1 - C; 2 - CH	EB-4710	Unfunded	3,524
11	Elizabeth Brady Rd. Extension	1 - H	U-3808	Partially Funded	23,198
12	Fayetteville Road Widening	4 - D 4 - DC		Unfunded	17,431
13	NC 86 North Widening	3 - OC		Unfunded	unknown
14	Piney Mountain Road Improvements	4 - CH		Unfunded	2,441
15	Jack Bennett/Lystra Rd Safety Improvements	2 - CC		Unfunded	unknown
16	NC 54 (I-40 east to NC 55) Widening	5 - D 5 - DC		Unfunded	75,582
17	Old Oxford Highway Widening	8 - D 8 - DC		Unfunded	31,492
18	Estes Drive Improvements	3 - CH		Unfunded	1,630
19	Triangle Parkway	3 - D 3 - DC	U-4763B	Partially Funded	174,703
20	NC 751 Widening	1 - CC		Unfunded	unknown
21	US 70 (Lynn Rd. to Wake County Line) Convert to Freeway	6 - D 6 - DC	U-4720	Unfunded	101,747
22	NC 54 (I-40 to Barbee-Chapel) Widening	10 - D 10 - DC		Unfunded	32,351
23	Northern Durham Parkway	7 - D 7 - DC	U-4721	Unfunded	131,954
24	US 70 Bypass Widening	3 - H, 4 - OC		Unfunded	unknown

<b>Regional Priority Number</b>	<b>Project Name and Description</b>	<b>Local Priority Number</b>	<b>TIP Number</b>	<b>TIP Status in Draft FY09-15 STIP</b>	<b>Estimated Cost (\$THOU)</b>
25	Perry Harrison School Turn Lanes	4 - CC		Unfunded	unknown
26	Orange Grove Rd. Extension	6 - OC		Unfunded	unknown
27	Western Bypass	5 - H	R-3438	Unfunded	5,300

**DCHC MPO Regional Priority List  
Division 5 – Durham County**

Top 15 Priority Projects

1. Transportation Demand Management (TDM)
  - Estimated Cost: \$18,251,000
  - Cost shared between DCHC MPO, CAMPO, NCDOT, and local service providers
  - DCHC MPO has recommended CMAQ funding for years 2009-2012
2. Intelligent Transportation System (ITS) Deployment
  - Estimated Cost: \$21,400,000
3. U-0071 East End Connector
  - Estimated Cost: \$182,200,000
  - Fully funded for ROW in FY 2010 and Partially funded for Construction in FY 2014 (delayed two years from FY 2012 in the 2007-2013 STIP)
  - Includes Holloway Street Sidewalk Project from US 70 Bypass to N. Miami Blvd. (Bicycle/Pedestrian priority project #10)
4. 2009 Transit Projects
  - Estimated Cost: \$19,262,000
  - All projects requested by DATA and TTA in FY 2009
    - i. TTA – 15 Replacement Buses
    - ii. TTA – Routine Capital Items
    - iii. TTA – Planning Assistance (*placeholder for STAC recommendation*)
    - iv. TTA – 1 Replacement Van
    - v. DATA – Preventative Maintenance and Routine Capital Items
    - vi. DATA – 18 Replacement Vans
    - vii. DATA – 12 Hybrid Buses
    - viii. Regional Transit Service (Durham to Chapel Hill) Alternatives Analysis (*placeholder for STAC recommendation*)
    - ix. TTA/DATA – Real Time Passenger Information Project
    - x. TTA – 12 Expansion Vans for vanpool
    - xi. TTA – 2 Expansion Vans
    - xii. Regional Transit Service (Durham to Raleigh) Alternatives Analysis (*placeholder for STAC recommendation*)
    - xiii. DATA – 6 Expansion Vans
    - xiv. DATA Passenger Amenities
5. U-4724 Cornwallis Road (S. Roxboro St. to Chapel Hill Rd.) Bicycle and Pedestrian Project
  - Estimated Cost: \$1,621,000
  - Partially funded with STP-DA in FY 2009
6. Fayetteville Road (Cornwallis Rd. to Nelson St.) Bicycle and Pedestrian Project
  - Estimated Cost: \$356,000
  - The City of Durham has submitted a proposal for a Safe Routes to School Project along part of this section of road.
7. C-4928 Morreene Road (Erwin Rd. to Neal Rd.) Bicycle and Pedestrian Project

- Estimated Cost: \$1,728,000
  - Partially funded with CMAQ
  - This project will provide a connection between Duke University and residential neighborhoods.
8. U-2405 MLK Jr. Parkway/NC 55 Intersection Feasibility Study
    - Currently identified project is a fully grade separated interchange with a cost of \$25,800,000.
    - Request is for a feasibility study to identify a less expensive alternative project.
  9. NC 751 Widening Phase I (NC 54 to S. Roxboro St.)
    - Estimated Cost: \$10,900,000
  10. Fayetteville Road Widening (Woodcroft Parkway to Riddle Rd.)
    - Estimated Cost \$17,431,000
  11. Avondale Drive (N. Roxboro St. to E. Geer St.) Bicycle and Pedestrian
    - Estimated Cost: \$513,000
  12. University Drive (Garrett Rd. to Hope Valley Rd.) Bicycle and Pedestrian
    - Estimated Cost: \$1,025,000
    - Along with the bicycle and pedestrian improvements planned for Old Durham-Chapel Hill Road, this route will provide a connection between Chapel Hill and Durham.
  13. Hillandale Road (I-85 to NC 147) Bicycle and Pedestrian
    - Estimated Cost: \$722,000
    - This project will extend the current sidewalk north providing a connection between Duke University and residential neighborhoods.
  14. NC 54 Widening (I-40 to NC 55)
    - Estimated Cost: \$17,431,000
  15. 2010 Transit Projects
    - Estimated Cost: \$6,705,000
    - All projects requested by DATA and TTA in FY 2010
      - i. TTA – Routine Capital Items
      - ii. TTA – Planning Assistance (*placeholder for STAC recommendation*)
      - iii. DATA – Preventative Maintenance and Routine Capital Items
      - iv. TTA – 19 Expansion Vans for vanpool
      - v. DATA – Park and Ride Lot near Treyburn

## All Division 5 Projects Listed by Mode of Transportation in Priority Order

## I. Bicycle and Pedestrian

Division 5 Priority Number	Project Name and Description	Local Priority Number	TIP Number	TIP Status in Draft FY09-15 STIP	Estimated Cost (\$THOU)
1	Cornwallis Road (S. Roxboro to Chapel Hill Rd.) Bike and Ped	3 - D 3 - DC	U-4724	Partially Funded	1,621
2	Fayetteville Rd (Cornwallis to Nelson) Bike and Ped	13 - D 13 - DC		Unfunded	356
3	Morreene Road (Erwin to Neal) Bike and Ped	4 - D 4 - DC	C-4928	Partially Funded	1,728
4	Avondale Drive (Roxboro to Geer) Bike and Ped	6 - D 6 - DC		Unfunded	513
5	University Drive (Garrett to Hope Valley) Bike and Ped	14 - D 14 - DC		Unfunded	1,025
6	Hillandale Road (I-85 to NC 147) Bike and Ped	2 - D 2 - DC		Partially Funded	722
7	Club Boulevard (Ruffin to Geer) Bike and Ped	7 - D 7 - DC		Unfunded	2,978
8	Dearborn Drive (Club to Old Oxford) Bike and Ped	10 - D 10 - DC		Unfunded	2,389
9	Cornwallis Rd. (Erwin Rd. to Chapel Hill Rd.) Bike and Ped	11 - D 11 - DC		Unfunded	3,204
10	Holloway Street (Lynn to Miami) Sidewalk	1 - D 1 - DC		Unfunded	992
11	Pope Road (Old Durham-Chapel Hill Rd. to Ephesus Church Rd.) & Ephesus Church Road Bike and Ped	6 - CH; 19 - DC		Unfunded	3,526
12	Hope Valley Road (S. Roxboro to US 15-501 Bus) Bike and Ped	9 - D 9 - DC		Unfunded	4,916
13	Cheek Road (Geer to Hardee) Bike and Ped	12 - D 12 - DC		Unfunded	695
14	Cook Rd. (Fayetteville St. to Martin Luther King) Bike and Ped	16 - DC		Unfunded	1,365
15	Barbee Chapel Road (NC 54 to Stagecoach) Bike and Ped	9 - CH; 17 - DC		Unfunded	1,759
16	Alston Avenue (Carpenter Fletcher to Sedwick) Bike and Ped	8 - D 8 - DC		Unfunded	2,069
17	Erwin Rd (Orange County Line to NC 751) Bike and Ped	18 - DC		Unfunded	1,942
18	Carpenter Fletcher Road (Woodcroft to Alston) Bike and Ped	5 - D 5 - DC		Partially Funded	1,267
19	Sedwick Rd. (Grandale to Alston) Bike and Ped	15 - D 15 - DC		Unfunded	2,187

## II. Transit

Regional Priority Number	Project Name and Description	Year Requested	Local Priority Number or Agency	TIP Number	TIP Status in Draft FY09-15 STIP	Estimated Cost (\$THOU)
1 (tie)	TTA 15 – Replacement Buses	2009	TTA	TA-4818	17 buses unfunded	4,128
1 (tie)	TTA Routine Capital Items--Shop Equipment, Spare Parts.	2009	TTA	TG-4821	Funded	1,000
1 (tie)	TTA Planning Assistance---UPWP.	2009	TTA	TP-4732	Funded	1,000
2	1 Replacement Van	2009	1 - TTA	TA-4994	Unfunded	33
3	DATA Preventative Maintenance and Routine Capital Items	2009	DATA	TG-4738	Funded	3,018
4	18 Replacement Vans	2009	3 - D 3 - DC		Not included	630
5	12 Hybrid Expansion Buses	2009	1 - D 1 - DC		Not included	5,700
6	Placeholder - Regional Transit Service Phase 2 - Alternatives Analysis	2009, 2010	7 - D; 7 - DC; 26 - C	TE-4706B	Planning and Design for 15-501 Corridor unfunded in 2015	1,000
7	Real Time Passenger Information Project	2009	2 - TTA	TT-4911	Unfunded in 2010	700
8	Vanpool Fleet Expansion - 12 vans	2009	3 - TTA	TA-4992	Unfunded	285
9	2 Expansion Vans	2009	4 - TTA	TA-4993	Unfunded	66
10	Placeholder - Regional Transit Svc. Phase 1 - Alternatives Analysis	2009, 2010	2 - D 2 - DC	TE-4903	Unfunded	1,000
11	6 Expansion Vans	2009	4 - D 4 - DC	TA-4757	Unfunded in 2008	210
12	DATA Passenger Amenities - 75 shelters, 50 benches, 50 trash cans, 50 solar lights	2009	DATA	TG-4958	Unfunded	492
13 (tie)	TTA Routine Capital Items--Shop Equipment, Spare Parts.	2010	TTA	TG-4821	Funded	1,000
13 (tie)	TTA Planning Assistance---UPWP.	2010	TTA	TP-4732	Funded	1,000
14	DATA Preventative Maintenance and Routine Capital Items	2010	DATA	TG-4738	Funded	3,169
15	Vanpool Fleet Expansion - 19 vans	2010	3 - TTA		Not included	361
16	Park and Ride Lot - Treyburn area - Land Acquisition and Construction	2010	5 - D 5 - DC	TD-4945	Unfunded in 2009	1,175
17 (tie)	TTA Routine Capital Items--Shop Equipment, Spare Parts.	2011	TTA	TG-4821	Funded	1,000
17 (tie)	TTA Planning Assistance---UPWP.	2011	TTA	TP-4732	Funded	1,000

<b>Regional Priority Number</b>	<b>Project Name and Description</b>	<b>Year Requested</b>	<b>Local Priority Number or Agency</b>	<b>TIP Number</b>	<b>TIP Status in Draft FY09-15 STIP</b>	<b>Estimated Cost (\$THOU)</b>
17 (tie)	TTA 15 - Replacement Buses	2011	TTA	TA-4818	Unfunded	4,946
18	DATA Preventative Maintenance and Routine Capital Items	2011	DATA	TG-4738	Funded	3,169
19	Bus Priority at Traffic Signals along 15-501	2011	5 - TTA		Not included	350
20 (tie)	TTA Routine Capital Items--Shop Equipment, Spare Parts.	2012	TTA	TG-4821	Funded	1,000
20 (tie)	TTA Planning Assistance---UPWP.	2012	TTA	TP-4732	Funded	1,000
20 (tie)	TTA 11 Replacement Buses	2012	TTA	TA-4818	Unfunded	3,670
21	31 40-foot Hybrid Replacement Buses	2012	6 - D 6 - DC	TA-4757	11 buses unfunded in 2011	14,000
22	DATA Preventative Maintenance and Routine Capital Items	2012	DATA	TG-4738	Funded	3,169
23 (tie)	TTA Routine Capital Items--Shop Equipment, Spare Parts.	2013	TTA	TG-4821	Funded	1,000
23 (tie)	TTA Planning Assistance---UPWP.	2013	TTA	TP-4732	Funded	1,000
24	DATA Preventative Maintenance and Routine Capital Items	2013	DATA	TG-4738	Funded	3,169
25 (tie)	TTA Routine Capital Items--Shop Equipment, Spare Parts.	2014	TTA	TG-4821	Funded	1,000
25 (tie)	TTA Planning Assistance---UPWP.	2014	TTA	TP-4732	Funded	1,000
25 (tie)	5 Replacement Buses	2014	TTA		Not included	500
26	DATA Preventative Maintenance and Routine Capital Items	2014	DATA	TG-4738	Funded	3,228
27 (tie)	TTA Routine Capital Items--Shop Equipment, Spare Parts.	2015	TTA	TG-4821	Funded	1,000
27 (tie)	TTA Planning Assistance---UPWP.	2015	TTA	TP-4732	Funded	1,000
28	DATA Preventative Maintenance and Routine Capital Items	2015	DATA	TG-4738	Funded	3,339

## III. Highway

<b>Regional Priority Number</b>	<b>Project Name and Description</b>	<b>Local Priority Number</b>	<b>TIP Number</b>	<b>TIP Status in Draft FY09-15 STIP</b>	<b>Estimated Cost (\$THOU)</b>
1	Transportation Demand Management (TDM)	12 - D 12 - DC		Unfunded	18,251
2	ITS Deployment	11 - D 11 - DC		Unfunded	21,400
3	East End Connector	1 - D 1 - DC	U-0071	Partially Funded	182,200
4	MLK Jr. Parkway/Hwy 55 Intersection	2 - D 2 - DC	U-2405	Unfunded	25,800
5	NC 751 (Phase 1) Widening	9 - D 9 - DC		Unfunded	10,900
6	Fayetteville Road Widening	4 - D 4 - DC		Unfunded	17,431
7	NC 54 (I-40 east to NC 55) Widening	5 - D 5 - DC		Unfunded	75,582
8	Old Oxford Highway Widening	8 - D 8 - DC		Unfunded	31,492
9	Triangle Parkway	3 - D 3 - DC	U-4763B	Partially Funded	174,703
10	US 70 (Lynn Rd. to Wake County Line) Convert to Freeway	6 - D 6 - DC	U-4720	Unfunded	101,747
11	NC 54 (I-40 to Barbee-Chapel) Widening	10 - D 10 - DC		Unfunded	32,351
12	Northern Durham Parkway	7 - D 7 - DC	U-4721	Unfunded	131,954

# ORANGE COUNTY PLANNING & INSPECTIONS DEPARTMENT

Craig N. Benedict, AICP, Director

**Comprehensive Planning**  
**(919) 245-2589**  
**(919) 644-3002 (FAX)**  
[www.co.orange.nc.us](http://www.co.orange.nc.us)



**306F Revere Road**  
**P O Box 8181**  
**Hillsborough,**  
**North Carolina, 27278**



## MEMORANDUM

**Date:** December 14, 2007  
**To:** DCHC Technical Coordinating Committee (TCC)  
**From:** Karen Lincoln, Orange County Transportation Planner  
**Subject:** Safe Routes to School (SRTS) Action Plan Service Awards

Orange County requests that the TCC recommend to the Transportation Advisory Committee to endorse a resolution of support for Orange County's application for a SRTS Action Plan Service Award. The Orange County Board of County Commissioners, at its meeting on December 11, 2007, endorsed the attached Resolution of Support and Management to apply for a SRTS Action Plan Service Award for Grady Brown Elementary School, Stanford Middle School and Cameron Park Elementary School. The applicant must obtain and attach to the application a resolution of support from the respective Metropolitan Planning Organization.

North Carolina Department of Transportation (NCDOT), October 22, 2007, issued a call for projects for funding to assist communities in preparing Action Plans to address active travel to schools serving Kindergarten – Grade 8. Each SRTS Action Plan must address engineering, education, encouragement, enforcement and evaluation. The plan will provide a framework to systematically identify obstacles to safe travel and then identify solutions and prioritize their implementation. Any state, local, and regional agency, including nonprofit organizations, that can demonstrate the ability to meet the requirements of the federal SRTS program is eligible to apply for an Action Plan.

The Action Plan Service Award program is unlike other NCDOT SRTS grants in that it is not a reimbursement program. The NCDOT will assign a qualified consultant under contract with NCDOT to work with recipients of Action Plan Service Awards, and will directly compensate consultants according to an agreed upon scope of work and agreed upon fee (\$15,000 - \$30,000). The Action Plan Service Award program is available at two geographic levels:

1. One or two schools in close proximity that can be addressed in one action plan; and
2. Multiple schools (3 –5 schools) within a school district that can be targeted through an action plan.

The Orange Unified Transportation Board identified Grady Brown Elementary, Stanford School and Cameron Park Elementary in the Orange County School District, which were recommended by members of Walkable Hillsborough, to recommend to the Orange County Commissioners for an Action Plan Service Award application for multiple schools.

**ORANGE COUNTY BOARD OF COUNTY COMMISSIONERS**

**RESOLUTION OF SUPPORT AND ADMINISTRATION FOR A NORTH CAROLINA DEPARTMENT OF TRANSPORTATION ACTION PLAN SERVICE AWARD FOR DEVELOPING AN ACTION PLAN FOR NEW GRADY BROWN ELEMENTARY SCHOOL, STANFORD MIDDLE SCHOOL AND CAMERON PARK ELEMENTARY SCHOOL**

**WHEREAS**, Orange County gives priority to identified safety needs, especially with regard to schools, and to transportation projects that encourage alternatives to automobile travel; and

**WHEREAS**, the SAFETEA-LU federal transportation reauthorization of August 2005 established the Safe Routes to School Program to empower communities to improve conditions for bicycling and walking to school; and

**WHEREAS**, the Safe Route to School (SRTS) programs facilitate the planning, development and implementation of projects and activities that will improve safety and reduce traffic, fuel consumption, and air pollution in the vicinity of schools; and

**WHEREAS**, the North Carolina Department of Transportation has appropriated \$300,000 to assist communities in preparing Action Plans to address active travel to schools serving Kindergarten – Grade 8; and

**WHEREAS**, the North Carolina Department of Transportation has issued a call for projects for SRTS Action Plan Service Awards; and

**WHEREAS**, the Orange Unified Transportation Board endorses making application for a SRTS Action Plan Service Award; and

**NOW, THEREFORE, BE IT RESOLVED** by the Orange County Board of County Commissioners that The Board of County Commissioners is willing and able to enter into an award agreement with the North Carolina Department of Transportation, and supports development of a Service Plan that addresses engineering, education, encouragement, enforcement and evaluation of programs and projects to improve conditions for bicycling and walking to New Grady Brown Elementary School, Stanford Middle School and Cameron Park Elementary School.

**BE IT FURTHER RESOLVED** that the Board of County Commissioners commits to administration of a Service Plan, and charges the Orange County Planning Department to act as program manager for the preparation, management, and completion of the Action Plan.

Upon motion of Commissioner \_\_\_\_\_, seconded by Commissioner \_\_\_\_\_, the foregoing resolution was adopted this the 11<sup>th</sup> day of December 2007.

I, Donna Baker, Clerk to the Board of Commissioners for the County of Orange, North Carolina, DO HEREBY CERTIFY that the foregoing is a true copy of so much of the proceedings of said Board at a meeting held on December 11, 2007, as relates in any way to the adoption of the foregoing and that said proceedings are recorded in the minutes of said Board.

WITNESS my hand and the seal of said County, this \_ day of \_\_\_\_\_, 2007.

---

Clerk to the Board of Commissioners

**RESOLUTION TO ENDORSE APPLICATIONS FROM THE DURHAM-CHAPEL HILL-CARRBORO MPO AREA FOR NCDOT SAFE ROUTES TO SCHOOL ACTION PLAN SERVICE AWARDS**

**WHEREAS**, the North Carolina Department of Transportation has appropriated \$300,000 of Safe Routes to School (SRTS) funding to assist communities in preparing Action Plans to address active travel to schools serving Kindergarten – Grade 8; and

**WHEREAS**, the North Carolina Department of Transportation has issued a call for projects for SRTS Action Plan Service Awards; and

**WHEREAS**, the Safe Routes to Schools Action Plan Service Award is a program whereby the NCDOT will assign a qualified consultant under contract with NCDOT to work with recipients of Action Plan Service Awards to develop plans that include engineering, education, encouragement, enforcement and evaluation to provide a framework to systematically identify obstacles to safe travel and then identify solutions and prioritize their implementation; and

**WHEREAS**, any state, local, and regional agency, including nonprofit organizations, that can demonstrate the ability to meet the requirements of the federal SRTS program is eligible to apply for an Action Plan; and

**WHEREAS**, the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization Transportation Advisory Committee (DCHC TAC) recognizes the importance of a balanced transportation network to the economic and social well-being of the community; and

**WHEREAS**, Orange County is within the Durham-Chapel Hill-Carrboro MPO region and is submitting an application for Safe Routes to Schools Action Plan Service Award funding; and

**WHEREAS**, at its meeting on January 9, 2008, the DCHC TAC voted unanimously to endorse that application for consideration of funding by NCDOT;

**BE IT THEREFORE RESOLVED** that the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization Transportation Advisory Committee give its support for the NCDOT Division of Bicycle and Pedestrian Transportation's Safe Routes to School Action Plan Service Award application from Orange County.

**BE IT FURTHER RESOLVED** that the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization Transportation Advisory Committee encourages the continuation and expansion of the North Carolina Department of Transportation's Safe Routes to School Action Plan Service Award to help local governments identify improvements that can help make bicycling and walking to and from school a safe and healthy transportation alternative in North Carolina.

---

TAC Chair

STATE of: North Carolina

COUNTY of: \_\_\_\_\_

I, \_\_\_\_\_, a Notary Public of County, North Carolina do hereby certify that personally appeared before me on the day of \_\_\_\_\_, 2007, to affix her signature to the foregoing document.

---

Notary Public for the State of NC

Residing at: \_\_\_\_\_

My commission expires \_\_\_\_\_

(Seal)



## **JOINT MPO TRANSPORTATION FUNDING INITIATIVES TASK FORCE**

### **LEGISLATIVE AGENDA**

The Joint Transportation Funding Initiatives Task Force met on Friday, March 31, 2006 to discuss the region's transportation needs and formulate a unified legislative agenda.

The Capital Area Metropolitan Planning Organization Transportation Advisory Committee adopted the legislative agenda on April 19, 2006.

The Durham-Chapel Hill-Carrboro Metropolitan Planning Organization Transportation Advisory Committee adopted the legislative agenda on April 12, 2006.

#### **Unified Position on Transportation**

The Joint Transportation Funding Initiatives Task Force, representing the Greater Triangle Region, has identified a unified legislative agenda that is consistent with the State of North Carolina's Blue Ribbon Commission on Transportation Needs.

Based on the funding needs in the Triangle and other funding initiatives in North Carolina, the emphasis items in order of priority are:

- (1) Permanently end the transfer of Highway Trust Fund Revenue (over \$250 million/year) to the North Carolina General Fund.
- (2) Modernize the equity formula to address congestion related needs.
- (3) Create transportation and infrastructure local revenue option authority.
- (4) Ensure that any toll revenue generated in a region stays in that region

## 2008 Transportation Legislative Priorities

### Priorities Critical for all Municipalities

#### 1 - *Pursue Innovative Financing for State Roads*

Citizens and businesses are increasingly concerned about congestion and maintenance on state roads like I-77, I-85, Independence Boulevard, I-485, NC51, Freedom Drive and many others. There is over \$1.8B in unfunded road related capital needs on the State road system in Charlotte. We are willing to work with the 21<sup>st</sup> Century Transportation Committee and legislature to identify acceptable revenue options and innovative financing methods.

#### 2 - *Remove Interstates and US Highways from the Equity Formula*

These roads have high usage by travelers passing through the region and are most important for statewide and interstate freight and travel purposes. They are very expensive to improve and difficult to address through the Equity Formula. For instance, Mecklenburg and Union Counties receive about \$65M per year for roads funding through the Equity Formula. Widening I-77 South alone, between Uptown and I-485 would cost \$650M or more.

#### 3 - *Eliminate Highway Trust Fund Transfers to the General Fund*

In the last budget, the Legislature and Governor committed to eliminate all transfers by 2010. We need to hold them to this commitment. This would free at least \$175M statewide.

#### 4 - *Consider Revenue Source to address Local Road Needs*

All needs are not solely on the State road system. Charlotte identified \$3.57B in needs on its system by 2030 in its TAP. This need is too great to fund through property taxes alone. We are willing to work with the 21<sup>st</sup> Century Transportation Committee and Legislature to identify acceptable revenue options.

### Priorities Critical for Charlotte Region

#### 1 - *Advocate for HOT/Managed Lanes/Turnpike Authority Funding*

A regional study will be completed in early 2008 to identify regional tolling priorities which the Legislature must authorize for study by the Turnpike Authority. In addition, there are opportunities to work with Raleigh, and other communities where toll roads are authorized to identify gap funding (funds beyond those secured through tolls) outside the Equity Formula for roads like the Monroe Bypass/Connector and Garden Parkway. If gap funds for the Monroe project could be identified outside the Equity Formula, it could free up \$185.7M for other road projects in our region.

#### 2 - *Preserve and Protect Transit Matching Funds*

The 25-year plan to implement transit services to support regional sustainability will cost \$8.9B. We are providing our share locally, but are counting on a roughly 25% State match for capital projects and operating support totaling \$2.3B. No ongoing source for the State match currently exists.

#### 3 - *Continue to Improve Street Lighting, Litter and Maintenance Issues on State Roads*

These have been ongoing street maintenance issues, and we want to continue to work with NCDOT staff to address. More funding may be required.

#### 4 - *Create Greater Presence of NCDOT staff in Charlotte*

An office of key decision makers in Charlotte would improve the ability of the NCDOT to understand and meet local needs as well as provide better customer service. Currently, staff, local officials, developers and citizens must go to Albemarle or Raleigh too often to obtain approvals or answers.

## MEMORANDUM

**To:** Transportation Advisory Committee (TAC)  
DCHC MPO

**From:** DCHC MPO Lead Planning Agency

**Date:** December 12, 2007

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

---

This memorandum provides a summary status of tasks for projects in the FY 2007-2008 Unified Planning Work Program.

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

### **2007-08 Unified Planning Work Program (UPWP) – Projects**

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

- ✓ Draft schedule – August 2006
- ✓ Release SE Data for public comment – January 2007
- ✓ Release Goals and Objectives for public comment – July 2007
- ✓ TAC approve SE Data – September 2007
- ✓ Goals and Objectives – TAC hold public hearing, September 2007, and approve, October 2007.
  - TAC approve Targets – January 2007
  - TAC review Deficiency Analysis – January 2008
  - TAC review Land Use Scenarios – February 2008
  - TAC review LRTP Alternatives – March 2008

#### **Travel Time Survey/Speed Study**

- ✓ Consultant has been selected for the survey.
- ✓ Scoping and contract negotiations completed.
- ✓ Field reconnaissance and data collection – in progress.
- Survey in progress

#### **GIS/Data Integration and Automation**

- ✓ Issue RFQ – September 11, 2006
- ✓ Non-mandatory pre-proposal conference – September 25, 2006
- ✓ Receive written proposals – October 15, 2006
- ✓ Consultant short list by October 23-27, 2006

- ✓ Consultant short list interviews/references check and city issues Notice of Intent to Award a Contract by October 30-November 13, 2006
- ✓ Contract negotiation and scoping in progress
- ✓ Council approves contract – August 13, 2007
- ✓ City issues contract
- ✓ Notice to proceed

#### **Land-use Model development**

- ✓ Issue RFQ – August 7, 2006
- ✓ Pre-proposal conference – August 29, 2006
- ✓ Receive written proposals – September 8, 2006
- ✓ Consultant short list – September 13-22, 2006
- ✓ Consultant short list interviews/references check and City issues notice of intent to award a contract – September 25-29, 2006
- ✓ Contract negotiation and scoping completed
- ✓ Council approves contract March 5, 2007
- ✓ City issues contract – March 25, 2007
- ✓ Notice to proceed – March 25, 2007
- Study underway –completion December 2008

#### **Non-Motorized Model development**

- ✓ Issue RFQ – August 21, 2006
- ✓ Non-mandatory pre-proposal conference – September 6, 2006
- ✓ Receive written proposals – September 21, 2006
- ✓ Consultant short list – September 25-29, 2006
- ✓ Consultant short list interviews/references check and City issues notice of intent to award a contract – October 2-6, 2006
- ✓ Contract negotiation and scoping completed
- ✓ Council approves contract – March 5, 2007
- ✓ City issues contract – March 25, 2007
- ✓ Notice to proceed – March 25, 2007
- Study underway –completion December 2008

#### **ITS Deployment Plan**

- Two Triangle regional stakeholder coordination meetings held.
- ✓ Update of ITS short range strategies for the 2007-2013 TIP.
- ✓ Update of 2007-2010 ITS project – December 2006
- ✓ Request for funding from NCDOT
- ✓ Draft scope of services and Request for Proposals.
- Consultants selection in fall of 2007
- Notice to proceed in January 2008
- Completion of Project expected in Fall of 2008.

#### **Farrington Road/Stagecoach Road Corridor Study**

- This study would involve the following tasks:
  1. Data collection and analysis

2. Traffic circulation plan (including a collector street system plan)
  3. Sub-area modeling analysis and forecast of future demand
  4. Alternative evaluation
  5. Recommendation
- Kimley Horn and Associates is the consultant
  - Data collection underway
  - Steering Committee proposed
  - Completion of study expected in January
  - Integration in the 2035 LRTP

#### **MPO Collector Street Plan**

- ✓ Supplemental Agreement with Kimley Horn and Associates
- ✓ Data collection underway
- ✓ Completion of study and integration with the 2035 LRTP in Spring 2008

#### **Regional Transit Infrastructure Blueprint**

- ✓ Establish and convene sponsors and partners teams, agree on detailed task list, responsibilities, products, begin infrastructure and corridor descriptions; begin investment principles - summer 2006
- ✓ Finish corridor and infrastructure descriptions; finalize principles fall 2006
- ✓ Begin land use, travel and cost analysis - winter 2006
- ✓ Finish land use, travel, cost analysis - spring 2007
- Conclude work, issue Blueprint, implement tracking mechanism - summer 2007

#### **Chapel Hill/Carrboro/UNC Long Range Transit Plan**

### **Unified Planning Work Program (UPWP) – Continuing Projects**

#### **Greenhouse Gas (GHG) Emission Inventory and Action Plan**

- ✓ Execute contract and give consultant Notice-to-Proceed – March 2006 (delayed due to contract issues)
- ✓ Formation of Technical Committee finalized in February 2006.
- ✓ Formation of stakeholder committee (Advisory Committee) finalized in February 2006.
- ✓ Kick off meeting for the study held March 23, 2006
- ✓ Establish Project Team List serve in February 2006
- ✓ Base Year data Collection and Information Gathering to be completed in March-August 2006 (Durham – complete; Orange – in progress).
- ✓ Data Analysis and Projection likely to be completed in (Durham - August 2006; Orange - ?).
- ✓ Determine and quantify historic and existing measures likely to be completed in July-August 2006.
- ✓ Identify new measures to be completed in August 2006.

- ✓ Criteria Air Pollutant (CAP) Analysis anticipated to be completed in September 2006.
- ✓ Identify GHG target and model reduction targets anticipated to be completed in February-March 2006.
- ✓ Formulate Action Plan anticipated to be completed in March 2007.
- ✓ Recommend reduction targets, strategies and action plan anticipated to be done by March 2007.
- ✓ Draft Plan finalized in June 2007.
- ✓ Durham Public Forum - June 21, 2007
- Plan Adoption anticipated occurring during fall 2007. Durham City and Durham County approved on September 19, 2007.
- The Orange County plan has been delayed several months beyond the Durham County plan.

### **Congestion Management System (CMS)/Mobility Report Card**

- ✓ Consultants selected for the study.
- ✓ Data collection for the Mobility Report Card underway
- ✓ Data Collection for the Durham study about 80% complete.
- Data Collection and field inventory to be completed by fall 2007.
- Level of Service analysis anticipated to be completed by fall 2007.
- Development of CMS performance measures and guidelines likely to be completed in fall 2007.
- Evaluation of congestion management strategies and development of cost-effective mitigation measures expected to be done by fall 2007.
- Draft CMS State of System Report likely to be done in fall 2007.
- Public Comment and local review in fall 2007.
- Adoption anticipated in winter 2008.

### **Travel Demand Model Update – Model Revision to Incorporate FTA New Start Enhancement**

- ✓ Consultant has been selected to assist the Triangle Regional Model (TRM) Service Bureau at ITRE in the model update.
- ✓ Data collection is complete.
- ✓ Migration of model from Tranplan to TransCad has been completed.
- ✓ Phase I (TTA new start model revision) completed in October 2005.
- ✓ Phase II TTA New Start model conversion to TransCad to be completed in August 2006.
- Calibration of 2002 model in TransCad anticipated to be completed in fall 2007.
- Validation of 2002 model against 2005 count data anticipated to be completed in fall 2007.

### **Unified Planning Work Program (UPWP) – Routine and Other Special Projects**

**MPO Environmental Justice (EJ) and Limited English Proficiency (LEP) Plan Integration**

- Mandated by federal regulations
- Draft plan to be prepared in 2008.

**Update of the MPO Public Involvement Policy Consistent with SAFETEA-LU**

- ✓ Draft to be ready for fall of 2007.
- ✓ Adopted anticipated in Spring of 2008

**MPO Expansion for the next LRTP Update**

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

**Public Outreach for the East End Connector Planning and Environmental Study**

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

**NCDOT PROJECTS UNDER CONSTRUCTION IN DURHAM COUNTY - 12/1/2007**

County	TIP #	Route	Location Description	Contract Amount	Length	Contractor Name	Resident Engineer	RE Ph. #	Contract Completion	Scheduled Progress	Actual Progress	Estimated Completion
Durham, Wake	R-2906A/C	NC-55	WIDENING OF NC-55 FROM NORTH OF US-64 IN WAKE COUNTY TO CORNWALLIS RD.	\$ 34,668,947.33	11.634 miles	Blythe Development Co	Jeff Allen, PE	(919) 678-0444	06/01/2006	100%	98.3%	12/15/2007
Durham	I-306C	I-85	WIDENING OF I-85 FROM EAST OF COLE MILL RD TO WEST OF BROAD STREET.	\$ 66,628,382.65	3.416 km	Granite Construction Company	Aaron V. Earwood, PE	(919) 220-4680	12/31/2006	100%	98.9%	12/15/2007
<i>DURHAM</i>	<i>RESURFACING</i>	<i>PRIMARY</i>	<i>NC-54 FROM FALCONBRIDGE ROAD TO DRESDEN DRIVE</i>	<i>\$ 318,281.20</i>	<i>1.45 miles</i>	<i>Barnhill Contracting</i>	<i>Aaron V. Earwood, PE</i>	<i>(919) 220-4680</i>	<i>8/30/2007</i>	<i>100%</i>	<i>98.1%</i>	<i>COMPLETE</i>
DURHAM	RESURFACING	SECONDARY	21 SECTIONS OF SECONDARY ROADS	\$ 2,795,584.75	18.9 miles	Barnhill Contracting	Bob Shultes	(919) 840-0914	9/1/2007	100%	100%	12/7/2007
DURHAM / WAKE	U-4026A/B 2904	R DAVIS DRIVE / NC-54	WIDENING OF DAVIS DRIVE FROM MORRISVILLE-CARPENTER ROAD TO NC 54, WIDENING OF NC-54 FROM DAVIS DRIVE TO MIAMI BLVD	\$ 35,467,891.08	6.363 miles	C C Mangum Company LLC	Jeff Allen, PE	(919) 733-9499	11/1/2009	22.3%	33.9%	11/1/2009
<i>DURHAM</i>	<i>I-3306BB</i>	<i>I-40</i>	<i>I-40 FROM ORANGE COUNTY LINE TO NC-147, MILL AND FILL DESIGN-BUILD</i>	<i>\$ 21,749,430.00</i>	<i>10.401 miles</i>	<i>The Lane Construction Corp.</i>	<i>Phillip R. Johnson, PE, PLS</i>	<i>(919) 733-9499</i>	<i>5/10/2008</i>	<i>84.9%</i>	<i>100.0%</i>	<i>COMPLETE</i>
DURHAM	U-4010	NC 98	WIDENING OF NC 98 (HOLLOWAY ST) FROM EAST OF US 70 TO EAST OF JUNCTION ROAD	\$ 3,288,207.30	0.369 miles	Triangle Grading and Paving	Bob Shultes	(919) 840-0914	6/15/2008	14.2%	12.7%	6/15/2008
DURHAM	B-3450 / U-4009 / U-4012	GARRETT ROAD	TWO BRIDGES ON GARRETT RD; SERVICE ROAD NEAR US 15-501 AND GARRETT RD INTERSECTION; US 15-501 FROM NORTH MT. MORIAH RD SOUTH OF GARRETT RD	\$ 18,810,912.36	1.769 miles	DLB, Inc.	Aaron V. Earwood, PE	(919) 220-4680	8/1/2010	2.8%	3.0%	8/1/2010
DURHAM	U-4410DB	HOPSON ROAD	NEW ALIGNMENT OF HOPSON ROAD FROM NC-55 TO LOUIS STEPHENS DRIVE	\$ 3,476,305.55	0.587 miles	Thompson Contracting, Inc.	Jeff Allen, PE	(919) 733-9499	10/1/2008			

**NCDOT PROJECTS FOR LET NEXT 12 MONTHS IN DURHAM COUNTY - 12/1/2007**

County	TIP #	Route	Location Description	Contract Estimate	Length	Contact Engineer	Phone #	Contract Let Date
DURHAM	B-3169	RIVERMONT ROAD	BRIDGE 158 ON RIVERMONT ROAD	\$ 550,000.00	0.067 miles	J. MOORE	(919) 250-4016	1/15/2008
DURHAM	U-2055B	NC 55	CONSTRUCTION OF TURN LANES AT RIDDLE ROAD AND NC-55	\$ 223,238.50		B. UPSHAW	(919) 220-4600	spring 2008
DURHAM	U-2055D	AVONDALE DRIVE	CONSTRUCTION OF ROUNDABOUT ON AVONDALE DRIVE	\$ 493,065.78		B. UPSHAW	(919) 220-4600	spring 2008
DURHAM	B-4109	PICKETT ROAD	BRIDGE OVER MUD CREEK	\$ 850,000.00	0.078 miles	D. TAYLOR	(919) 250-4016	5/20/2008

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

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

**ACTIVE NCDOT PROJECTS LOCATED IN ORANGE COUNTY - DCHC MPO** Attachment 12

County	WBS #	Route	Location Description	Amount	Status
Orange	U-4008 35009.3.2	US 15-501 & SR1734 (Erwin Rd.)	Grading, drainage, paving and intersection improvements (Super Street)	\$4.98 million	<b>66.39% complete; behind schedule</b>
Orange	36945	SR 1010 (Franklin St.) @ Malette St.	Upgrade traffic signal and install pedestrian signal heads REVISION: Install mast arm	\$110,000.00	POC pending for compl. by 12/31/07
Orange	SF-4907 B 41699.1	US 70 (Hillsborough Rd.) and NC 751 near Durham	Install a right turn lane for traffic travelling east on US 70 and turning right onto NC 751	\$35,000 PE	Survey requested; <b>funding &amp; R/W limited for roundabout</b>
Orange	SF-4907 C 41698.1	NC 57 @ NC157 near Hillsborough	Install center traffic islands with stop signs on NC 157	\$7,000 PE	Survey requested
Orange	SS-4907E 41026.3	NC 54 @ SR 1952 (White Cross Road)	Construct a left turn lane	\$173,000.00	<b>APAC-Atlantic, Thompson Arthur Div. = low bid</b>
Orange	SS-4907 J 41634.3	NC 54 and SR 1945 (Neville Rd.)	Construct a left turn lane	\$187,000.00	DDC PO; Survey compl.; <b>plans underway-need channelization @ U- Haul</b>
Orange	41096	NC 54 @ SR 2016 (Southern Drive)	Construct a left turn lane on NC 54 westbound	\$200,000.00	Barrett, Irvin & Jordan Contr., Inc.; available 4/15/08
Orange	41488	US 15-501 @ SR 1900 (Old Mason Farm Road)	Extend the left turn lane on northbound US 15-501 , revise the signal and add a right turn lane at SR 1900	\$147,500.00	District design pending
Orange	41593	Union Street	Construct 750 feet of sidewalk and a crosswalk to connect Hillsborough Elementary School to SR 1156 (Nash St.)	\$32,000.00	Town to construct w/ PE certification
Orange	41594	SR 1010 (W. Main St.) @ NC 54	Install pedestrian signal heads and crosswalk markings	\$40,000.00	Crosswalk & wheelchair ramps <b>to be compl. by 12/15/07</b>
Orange	41686	NC 54 @ SR 1102/1951 (Dodson's Crossroads/ Butler Rd.)	Construct left turn lanes in both directions	\$250,000.00	<b>Plans underway</b>
Orange	EB-5021 41565.3.1	SR 1780 (Estes Drive) from Hillcrest Dr. to SR 1843 (Seawell School Road)	Add paved shoulders to accommodate bicycles (Widening, milling, guardrail and pavement markings)	\$480,000.00	S.T. Wooten Corp. = <b>100% complete</b>
Orange	7CR.10681.14 7CR.20681.14 7C.068081	4 sections of NC 54 and ramps and 5 sections of secondary roads	Milling, resurfacing, pavement markings, and shoulder reconstruction		Let 1/15/08 Avail. 5/12/08 ICD 8/8/08 Compl. 10/31 /08

**ACTIVE NCDOT PROJECTS LOCATED IN ORANGE COUNTY - DCHC MPO** 12/5/07 Attachment 12

<b>NCDOT PROJECTS CURRENTLY IN 12 MONTH LETTING LIST</b>					
County	TIP #	Route	Location Description	TIP Est.	Est. Let Date
Orange	I-4716	I-40	Grind and reseal joints on I-40 from I-85 to Durham Co.	\$1.5 million to be revised	Letting to be moved to 1/20/09 to acq. additional funds (\$3 million) for new scope
Orange	B-4218	SR 1730 (Turkey Farm Rd.)	Replace Bridge # 108 over New Hope Creek	\$675,000.00	July 15,2008

## **U.S. 15-501 Superstreet project finish in sight**

**BY DANIEL GOLDBERG : The Herald-Sun**  
**[dgoldberg@heraldsun.com](mailto:dgoldberg@heraldsun.com)**  
**Nov 27, 2007**

CHAPEL HILL -- Like most construction projects, work on the so-called U.S. 15-501 Superstreet has hardly come along faster than a speeding bullet. Completion is in view, however, and the project is running close to its \$5 million budget, the N.C. Department of Transportation engineer overseeing the project said.

"We've made some progress," said Resident Engineer Donnie Huffines. "It appears that we're trying to move forward and make the next phase, which is putting in the U-turn patterns.

"The best estimate now [for completing the project] is probably the end of December. That's weather permitting. This time of year it's hard to plan."

Work began on improvements at the busy intersection of U.S. 15-501, Erwin Road and Europa Drive in July 2006 and was scheduled to finish at the end of last month.

Kumar Neppalli, traffic engineer for the Town of Chapel Hill, said DOT and the town agreed that lane closures would be limited to night hours in order to reduce the inconvenience to drivers. That approach spared commuters from longer delays, but slowed down the timetable for completing construction.

Asphalt can't be placed when the temperature falls below 50 degrees, Huffines said. In other words, construction workers haven't been able to do that job during several recent shifts, and overnight temperatures will only fall further from that asphalt threshold as winter advances.

DOT can still install the turns that are expected to improve traffic flow through the area as well as secondary surfaces if workers are unable to place the final pavement and lane markings. Huffines said the department could open the new traffic pattern once traffic signals are operational, coming back to complete the surfacing in the spring.

"The key is to get into the final traffic pattern where it will help some of the flow in that area and it won't be as congested as it is now," Huffines said.

The Superstreet is similar to an elongated traffic circle with traffic signals. An existing signal at the intersection of U.S. 15-501, Erwin Road and Europa Drive will be replaced by four signals that engineers believe will foster better flow.

Drivers no longer will be able to make left turns onto either Erwin or Europa from the highway or drive directly across U.S. 15-501 from one to the other. Instead, commuters will use U-turn points located about 800 feet in either direction from the current intersection.

Neppalli said his office is working closely with DOT to design the timing of the four new traffic signals. Their goal is to set the signals at shorter intervals, moving motorists through the intersection faster.

*© 2007 by The Durham Herald Company. All rights reserved.*

Published: Dec 05, 2007 12:30 AM  
Modified: Dec 05, 2007 02:41 AM

## **Street won't be done till '08**

### **Company to be fined \$800 a day**

Mark Schultz and Jesse James DeConato, Staff Writers

CHAPEL HILL - The \$5 million "Superstreet" project at U.S. 15-501 and Erwin Road, which was to be completed Oct. 31, has been delayed until the spring, a state Department of Transportation engineer said Tuesday.

The elongated roundabout, meant to unclog a bottleneck where the highway splits into Fordham Boulevard and Franklin Street, cannot be finished because of cold weather.

"If you put asphalt down now you'll be replacing it in a year," said Jeremy Warren, a DOT engineer who is working on the project. "You won't get a good bond. You'll have chunks coming out of it."

The state will fine Triangle Grading & Paving Inc. of Burlington \$800 a day for missing the deadline, Warren said.

"I'm at a loss for words," Warren said. "It is very frustrating for us. The department as a whole is frustrated."

### **DOT plan 'defective'**

Jack Bailey, chief operating officer for the paving company, said the delay was not unusual for such a project.

The company, which worked on Durham's downtown street improvements, ran into problems with the underground utilities. DOT's plan, including a sewer line that was not where a map put it, was "defective," he said.

The project could be finished sooner if DOT allowed more work during the day when it's warmer, Bailey said. Crews are prohibited from working within 10 feet of the highway during the day, he said.

"We haven't been sitting around doing nothing," he said. "We're bound by working only at night. That's been a real pain in the rear."

### **More Superstreets?**

In previous interviews, DOT officials and local transportation planners said they will be watching the Superstreet to see whether they can duplicate it elsewhere on U.S. 15-501.

As it stands now, six movements are allowed at the intersection. The Superstreet will have three: right turns from Erwin Road and Europa Drive, U-turns at either end, and drivers headed either way on U.S. 15-501.

The fines could shave tens of thousands of dollars off the final cost, but Warren said he couldn't estimate how much because the contractor will argue it could not avoid some of the delay.

"We were told that this was the most difficult intersection in North Carolina," Bailey said. "Some things happen that you just can't account for."

[mark.schultz@newsobserver.com](mailto:mark.schultz@newsobserver.com) or (919) 932-2003

## Median could trouble ailing plaza

**By Monica Chen : The Herald-Sun**  
**[mchen@heraldsun.com](mailto:mchen@heraldsun.com)**  
**Dec 5, 2007**

DURHAM -- At a meeting about the future of Hillandale Road on Tuesday everyone agreed: Loehmann's Plaza is teetering on the edge.

Since 2003, it's been pummeled by construction on Interstate 85 and the closing in January of its main anchor of more than 20 years, Loehmann's.

The shopping center now has a chance to draw in business and traffic again. Harris Teeter has expressed interest in locating there.

But that lifeline will hinge on help from the N.C. Department of Transportation, and it looks like Loehmann's Plaza could be scuttled again by traffic woes.

In a \$10.9 million project, the DOT is planning to widen Hillandale Road from three lanes to four with a concrete median from north of I-85 to a little beyond Carver Street.

Plans do not call for a traffic signal into the shopping center or cuts in the median to allow for left turns.

That spells trouble for the shopping center, because Harris Teeter will come only if a traffic signal is installed and access provided, said John Amols, a principal with Glenwood Development Co., owner of the center.

"The lifeblood of any shopping center is access," said Amols at a public hearing with the DOT here Tuesday night.

"We're a neighborhood center. It's not like Southpoint where people are sitting in traffic for half an hour to get to Nordstrom," he said, referring to The Streets at Southpoint. "Human nature being what it is, if there's no access, people will just go to another shopping center."

Business owners and residents also are expressing disapproval and disbelief at the DOT plans.

"Where are the customers going to go? Go all the way down to Carver Street and then turn around?" said Angelika Papanikas, owner of Papas Grille. "If they cannot make a left turn here, then they're not going to come here."

But citing increased traffic and a high crash rate in that section of Hillandale Road, DOT engineers say the median is needed.

"A median would be safer than a five-lane section," said engineer Jamille Robbins. "Left-turn movements account for two-thirds of accidents."

The DOT estimates that traffic on Hillandale Road could increase by 33 percent by 2030, from 28,500 vehicles per day now to 37,800 then on Hillandale north of I-85.

Hillandale Road also had a crash rate about 74 percent more than the statewide average for similar roads, according to a DOT study conducted between 2002 and 2005.

Residents and business owners argue the study was conducted when construction on I-85 might have resulted in a higher crash rate for the area. They say no median is needed at all.

David Beischer, vice president of Garden View Realty, the developer of Croasdaile Farm and manager of a nearby office park, collected 356 signatures for a petition to that end.

Citing Guess Road as an example, Beischer said there's no reason why a five-lane road wouldn't work just as well on Hillandale.

"This is not a contextually sensitive design," he said of the DOT plan, and said a right turn lane to the north of Carver Street is also unnecessary and destroys the tree-lined buffers to homes.

The agency will accept public comments on the project through Jan. 4. The DOT has no other public hearing scheduled for Hillandale Road, but that could change, Robbins said Tuesday.

Robbins said Tuesday's hearing was to determine what changes, such as median cuts and a traffic signal, need to occur in the plans.

If things proceed on schedule, right-of-way acquisition would take place in August, with construction to begin in December 2009.

Meanwhile, Croasdaile residents and businesses along the Hillandale corridor are biting their nails, hoping the road improvement will not spell the death of the center.

"We're all talking about the shopping center teetering. Let's hope it teeters closer to Teeter," said Avi Alkon, owner of BookDabbler.

*© 2007 by The Durham Herald Company. All rights reserved.*

Triangle Briefs:

Published: Dec 05, 2007 12:30 AM

Modified: Dec 05, 2007 02:41 AM

## **Workshop planned on connector**

DURHAM - People interested in plans for the East End Connector, a highway to link the Durham Freeway and U.S. 70, can attend a workshop Monday in Durham.

The workshop will run from 4 to 7 p.m. at Orange Grove Missionary Baptist Church, 505 East End Ave. Officials with the state Department of Transportation say they will consider comments made at the workshop as they refine plans for the project.

The state plans to start acquiring right of way for the project in August 2010. Construction is scheduled to start in August 2012, with a total cost of \$90 million.

The project includes interchanges at the freeway and U.S. 70 and would affect portions of state and municipal streets in eastern Durham. It also includes improvements to U.S. 70 between N.C. 98 (Holloway Street) and Pleasant Drive.

The preferred route would be 3.6 miles long.

General information on the project is available at [www.ncdot.org/projects/eastendconnector/](http://www.ncdot.org/projects/eastendconnector/) or (800) 734-7062.

Residents may also write, referring to Transportation Improvement Program project No. U-0071, to Beverly Robinson, NCDOT Project Development and Environmental Analysis Branch, 1548 Mail Service Center, Raleigh, NC 27699-1548.

All rights reserved. This copyrighted material may not be published, broadcast or redistributed in any manner.

© Copyright 2007, The News & Observer Publishing Company

A subsidiary of The McClatchy Company

**DCHC MPO TAC/TCC Meeting Dates 2008**

<b>TAC</b>	<b>TCC</b>
<i>09-Jan-08</i>	<i>23-Jan-08</i>
<i>13-Feb-08</i>	<i>27-Feb-08</i>
<i>12-Mar-08</i>	<i>26-Mar-08</i>
<i>09-Apr-08</i>	<i>23-Apr-08</i>
<i>14-May-08</i>	<i>28-May-08</i>
<i>11-June-08</i>	<i>25-June-08</i>
<i>No July TAC meeting</i>	<i>23-July-08</i>
<i>13-Aug-08</i>	<i>27-Aug-08</i>
<i>10-Sept-08</i>	<i>24-Sept-08</i>
<i>08-Oct-08</i>	<i>22-Oct-08</i>
<i>12-Nov-08</i>	<i>26-Nov-08</i>
<i>10-Dec-08</i>	<i>17-Dec-08*</i>

**Tentative Joint TAC Meeting Dates**

*30-April-08*  
*29-Oct-08*

**\*Rescheduled to avoid a holiday.**