

**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**

**April 26, 2006  
9:00 a.m.**

**City Council Committee Room  
2nd floor Durham City Hall**

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- 1. Preliminaries**
- 2. Adjustments to the Agenda**
- 3. Public Comments**

**ACTION ITEMS**

- 4. Approval of March 22, 2006 and April 3, 2006 TCC Meeting Minutes  
(Attachment 4, 4A)**

A copy of the March 22, 2006 minutes is enclosed as Attachment 4.  
A copy of the April 3, 2006 minutes is enclosed as Attachment 4A.

**TCC Action:** Approve minutes of the March 22, 2006 and April 3, 2006 TCC meetings.

- 5. 2006-2007 Unified Planning Work Program (UPWP)  
(Attachment 5, 5A)  
Felix Nwoko, LPA Staff**

Annually, as required by federal regulations, the DCHC MPO prepares, a Unified Planning Work Program (UPWP), the document that details and guides the urban area transportation planning activities. Funding sources for planning activities include the Federal Highway Administration, Federal Transit Administration, and state and local governments.

At the 4/12/06 meeting the TAC received a draft UPWP, an organizational chart of MPO staff, a summary spreadsheet of projects, and a summary spreadsheet of LPA staff work allocation. The TAC released the draft for public comment.

Attachment 5 is a memo describing the UPWP and attachments. Attachment 5A is the draft 2006-2007 UPWP.

**TCC Action:** Review materials, make a recommendation for adoption to the TAC.

**6. US 15-501 Transit Corridor – Memorandum of Agreement (MOA)  
(Attachment 6, 6A, 6B)  
Andy Henry, LPA Staff  
Mark Ahrendsen, TCC Chair**

The TAC approved a Memorandum of Agreement for the US 15-501 Transit Corridor at its October 12, 2005 meeting. In summary, the MOA states that each signatory shall include modified alignments in transportation plans and adopt supportive land uses along the corridor and at proposed transit stations. In addition, parties to the MOA agree to defer development decisions requiring a change in the transit corridor alignment until the TAC has had an opportunity to review and comment on analysis associated with the proposed alignment change. The four signatories were to include the City of Durham, Durham County, Town of Chapel Hill and Triangle Transit Authority (TTA).

In its consideration of the MOA, the City of Durham identified several issues that needed to be resolved and these issues were presented to the TAC at their April 12, 2006 meeting. The TAC requested that the TCC modify the MOA to resolve any jurisdictional issues and present a recommended MOA to the TAC.

In addition, the TAC was uncertain whether the MOA, which the TAC approved on October 12, 2005, officially changes the corridor in the MPO's long-range transportation plan. They requested clarification on this issue.

**TCC Action:** The TCC needs to: 1) Review and discuss the MOA, recommend changes, and forward those recommendations to the TAC; and, 2) Establish the status of US 15-501 Transit Corridor changes and report this to the TAC.

**7. Southwest Durham/Southeast Chapel Hill Collector Street Plan  
(Attachment 7, 7A, 7B, 7C, 7D, 7E, 7F, 7G, 7H, 7I)  
Andy Henry, LPA Staff**

The Technical Steering Committee (TSC) for the Southwest Durham/Southeast Chapel Hill Collector Street Plan has conducted three public workshops since October 2005 to present collector street concepts to citizens and to receive feedback on the proposed plan. The TSC has reviewed the draft Southwest Durham/Southeast Chapel Hill Collector Street Plan report and network map and citizen comments to develop the following recommendation to the TCC: 1) The TAC defer action on the Southwest Durham/Southeast Chapel Hill Collector Street Plan until issues related to improvements to the NC 54 corridor are resolved; and, 2) The MPO initiate a partnership with other local agencies, the NCDOT and area developers and land owners to complete an area transportation study that will identify improvements to the NC 54 corridor. At a minimum these improvements will address the location and/or design/cross section of NC 54, I-40 interchanges at NC 54 and Farrington Road, and the Southwest Durham Drive. The TSC has recommended deferring plan adoption because of the tremendous citizen opposition to the collector street plan. However, much of the opposition is caused by issues outside the scope of the collector street plan and purpose, and more related to the NC 54 corridor, Southwest Durham Drive and I-40 interchanges.

Attachment 7 is a staff memorandum providing additional details on the collector street plan. The recommended plan and several documents that provide public input from the 3<sup>rd</sup> Public Workshop are attached:

- Attachment 7A: *Recommended Southwest Durham/Southeast Chapel Hill Collector Street Plan* (Figure 4.5, or page 4-18, is the collector street network map) – *Full and abridged versions of Att 7A posted online*
- Attachment 7B: *Survey Comments Part 1 – What Do You Like About the Recommended Collector Street Network?*
- Attachment 7C: *Survey Comments Part 2 – What Don't You Like About the Recommended Collector Street Network that Would Cause You to Actively Oppose Adoption of the Plan?*
- Attachment 7D: *Survey Comments Part 3 -- How Was This Workshop Helpful? What Workshop Improvements Would You Recommend?*
- Attachment 7E: *Survey Summary*
- Attachment 7F: *General Comments*
- Attachment 7G: *Citizen Letter #1*
- Attachment 7H: *Citizen Letter #2*
- Attachment 7I: *Citizen Letter #3*

**TCC Action:** Receive Technical Steering Committee (TSC) recommendation, discuss the recommendation, and provide a recommendation to the TAC.

#### **8. Triangle Ozone Redesignation**

**(Attachment 8, 8A)**

**Eddie Dancausse, FHWA**

**Felix Nwoko, LPA Staff**

The North Carolina Division of Air Quality recently announced that the Triangle area was attaining the 8-hour ozone standard based on the 2003-2005 data. A Triangle ozone redesignation interagency consultation meeting was held with the Triangle transportation partners on March 23, 2006. The schedule and data needs for the redesignation demonstration and maintenance plan were discussed. Attachment 8 is a memo from Triangle J COG describing the implications of redesignation on the selection of the motor vehicle emissions budget. Attachment 8A is an informational item from Triangle J COG describing the source of VMT data used in the air quality analysis for each county in the Triangle.

**TCC Action:** Review information and offer a recommendation to the TAC as appropriate.

#### **9. STP-DA Amendment in Chapel Hill**

**(Attachment 9)**

**David Bonk, Town of Chapel Hill**

**Felix Nwoko, LPA Staff**

The Town of Chapel Hill is requesting an amendment to the STP-DA allocations in order to fund the Culbreth Road sidewalks in FY 2006. A key property has recently changed hands and the Town will request an easement to build the sidewalks. The Town wishes to request for bids and construction summer/fall 2006. Attachment 9 displays the requested change.

The \$200,000 allocated for U-4726 F in FY06 (Chapel Hill Sidewalks) is planned for use on NC86/MLK Jr. Blvd., formerly Airport Rd. The Town is currently undertaking an implementation plan for the NC86 project and would not realistically be ready to start the project until after October 2006.

**TCC Action:** Review the request, discuss, and take action if appropriate.

**10. Request by NC Turnpike Authority for Non-voting TAC Membership**

**(Attachment 10, 10A)**

**Ellen Beckmann, LPA Staff**

At the November 2005 TAC meeting, the TAC directed the TCC to create a policy for reviewing requests for non-voting membership to the TAC. The TCC Admin/UPWP Subcommittee met on January 18, 2006, and February 17, 2006 to create a policy. This policy was brought to the TCC at its February meeting and a recommendation was made to the TAC. The TAC approved the policy with change at its March meeting (Attachment 10A).

Subsequently, the application was completed by the NC Turnpike Authority (Attachment 10). LPA reviewed the application and makes a recommendation in favor of non-voting TAC membership for the NC Turnpike Authority. The TCC needs to review the application and make a recommendation to the TAC.

**TCC Action:** Review the application; make a recommendation to the TAC.

**11. Job Access Reverse Commute (JARC) and New Freedom Funds**

**(Attachment TBD)**

**Felix Nwoko, LPA Staff**

The TCC Transit Subcommittee met on April 19, 2006 to discuss the JARC and New Freedom programs. The subcommittee will report on its meeting. Attachments will be presented at the TCC meeting.

**TCC Action:** Receive subcommittee report and take action if appropriate.

**12. 2007-2013 TIP Project Description Sheets for Bicycle and Pedestrian Regional Priorities**

**(Attachment 12, 12A, 12B)**

**Alison Carpenter, LPA Staff**

With the help of the Bicycle and Pedestrian Subcommittee, LPA staff have completed the attached project description sheets for all bicycle and pedestrian regional priorities in Divisions 5, 7 and 8 (Attachments 12, 12A, and 12B). These project sheets will be submitted to the Bicycle and Pedestrian Transportation Division of NCDOT, in order to aid in the development of the 2007-2013 Transportation Improvement Program (TIP).

**TCC Action:** Review materials and forward information to NCDOT.

**REPORTS FROM STAFF:**

**13. Reports from Staff**

**(Attachment 13)**

**Felix Nwoko, LPA Staff**

**TCC Action:** Receive Report from staff

**14. Report from the Chair**

**Mark Ahrendsen, TCC Chair**

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

**15. NCDOT Report**

**(Attachment 15)**

**Jon Nance, Division 5 – NCDOT**

**Mike Mills, Division 7 – NCDOT**

Progress Reports for current Division 5 and 7 construction work is provided as Attachment 11.

**TCC Action:** Receive report of Division Engineers

**INFORMATIONAL ITEMS**

**16. Recent Newspaper Articles/Legislative Update**

**(Attachment 16)**

**17. Bike Education Materials**

**(Attachment 17, 17A, 17B, 17C)**

**18. Bicycle/Pedestrian Planning Strategies Teleconference 5/4/2006**

**(Attachment 18)**

**PENDING ITEMS**

**MAB Boundary/MPO Expansion**

**MPO Functional Classification of Streets and Roadways**

**Regional Priority List Ranking Methodology**

**Adjourn**

**Next meeting: May 24, 2006**

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**TECHNICAL COORDINATING COMMITTEE**

**March 22, 2006**

**MINUTES OF MEETING**

The Technical Coordinating Committee met on March 22, 2006 at 9:00 a.m. in

the Council Committee Room on the second floor of Durham City Hall. The following

attended:

- \*Mark Ahrendsen City of Durham/Transportation (TCC Chair)
- \*David Bonk Town of Chapel Hill (TCC Vice Chair)
- \*Andy Henry City of Durham/Transportation
- \*John Hodges-Copple Triangle J Council of Governments (TJCOG)
- \*John Hunsinger NCDOT-Division 7
- \*Claire Kane UNC
- \*Michael Kneis NCDOT-Division 5
- \*Karen Lincoln Orange County Planning
- \*Dale McKeel Town of Carrboro
- \*Felix Nwoko City of Durham/Transportation
- \*Pierre Osei-Owusu City of Durham/DATA
- \*Tamra Shaw NCDOT/PTD
- \*Jill Stark FHWA
- \*Scott Walston NCDOT-TPB
- Ellen Beckmann City of Durham/Transportation
- Alison Carpenter City of Durham/Transportation
- Eddie Dancausse FHWA
- Donny Hamilton, Jr. FHWA
- John Tallmadge Triangle Transit Authority
- Chao Wang City of Durham/Transportation

\*Voting Members

Mark Ahrendsen, TCC Chair, called the meeting to order at 9:09 a.m.

**Preliminaries:**

**Adjustments to the Agenda**

Dale McKeel made an adjustment to the agenda. The Town of Carrboro is requesting to move some of the STP-DA funds from two projects to another project.

34 Felix Nwoko wants to discuss the Job Access Reverse Commute and New Freedom  
35 programs. Mark Ahrendsen stated he wants to update staff on the ozone attainment status  
36 and the state's development of an implementation plan including setting the motor  
37 vehicle emissions budget. In addition, Mark wants to check the status of the FY 2007-  
38 2013 draft MTIP as well as the State TIP schedule.

39 **Public Comment**

40 There were no public comments.

41 **Action Items:**

42 **Approval of the February 22, 2006 TCC Meeting Minutes (Attachment 4)**

43 A motion was made by Felix Nwoko and seconded by Pierre Osei-Owusu to  
44 approve the February 22, 2006 TCC Meeting Minutes. The motion carried unanimously.

45 **FY 2006-2007 Unified Planning Work Program**

46 Mark Ahrendsen stated that the TCC Subcommittee has been working on the FY  
47 2006-2007 Unified Planning Work Program and Felix Nwoko will provide an update  
48 from the subcommittee.

49 Felix stated that two attachments were distributed at the beginning of the meeting  
50 in regard to this item. The first one is an 11 x 17 UPWP overview organized by routine  
51 planning, funded special projects, and new requests and the other attachment is a table  
52 which has the funding allocation and distribution. Felix reviewed the two attachments in  
53 detail.

54 David Bonk stated in this fiscal year the TAC had allocated through the STP  
55 program \$85,000 for the TDM program. David asked if that money is still in this fiscal

56 year. Felix stated yes. The layout of 2006-2007 Planning Funds Allocation and  
57 Distribution needs to be corrected. The columns are not titled correctly.

58 Felix Nwoko stated that perhaps we need to have an emergency TCC meeting  
59 next week to review the draft UPWP before it is given to the TAC. Staff is currently  
60 working on the timeline for the TAC. The LPA staff is working to have a draft TIP to  
61 give to the TAC in addition to the other information they have requested.

62 David Bonk stated for clarification that section 2 on the 11 x 17 UPWP overview  
63 sheet represents projects that have already received funding in the STP-DA program.  
64 The funds have already been set aside for the projects. Items in section 3 have not been  
65 programmed. Mark Ahrendsen recommended updating the master sheet. Staff needs to  
66 have the most accurate information in order to proceed.

67 A special called TCC meeting was set for Monday, April 3, 2006 at 1:30 p.m.  
68 Everyone needs to get their information to the LPA no later than the first of next week for  
69 the agenda. Ellen Beckmann stated the TCC Admin/UPWP/STPDA met on March 15,  
70 2006 and the minutes from that meeting are attached. There was general agreement by  
71 the subcommittee on the funding for most of the projects. The Farrington Road-I 40  
72 interchange study and bridges over I 40 should be included in the LRTP, and joint  
73 projects should be funded with a 1/3, 2/3 funding split with CAMPO. The transit master  
74 plan was a large item of discussion and the subcommittee did not come to a  
75 recommendation because there were several questions raised and more information is  
76 needed. The subcommittee decided to have a meeting next Wednesday at 9:00 a.m. in  
77 the Transportation Conference Room which will be on UPWP/STPDA/TIP. In addition,  
78 the transit subcommittee will meet to discuss the transit master plan. John Hodges

79 Cople stated to make sure that TTA, PTD, and TJCOG are included in the meeting.  
80 Mark Ahrendsen encouraged this meeting to be held before the TCC Admin  
81 subcommittee gets together next Wednesday so the information can be included. Mark  
82 Ahrendsen stated that it would be helpful to check calendars to see what dates the TCC is  
83 available for a joint transit subcommittee meeting with CAMPO. Everyone can meet  
84 Monday or Tuesday morning.

85 John Hodges Cople stated that one thing that continues to bother him is section 2  
86 on the UPWP overview sheet, the Funded Special Emphasis Projects. We are scheduling  
87 LRTP work, a major model update, bike-ped trip forecast, land use model, and data/GIS  
88 automation all at the same time. He is not convinced that we can complete all of these  
89 projects and asked that attention be paid to the order in which these projects are  
90 completed.

91 Dale McKeel stated that looking at the STP/DA spreadsheet and the new  
92 spreadsheet some things do not seem to match up. For example, under the  
93 Unfunded/Underfunded/New Requests-Initiatives, there appears to be some money  
94 available. Felix stated there are no funds available. David also stated that on the meeting  
95 minutes from the subcommittee on March 15, 2006 for clarification under (2) Update on  
96 STP-DA funds on the first page. Are the funds for the Cornwallis Road bike/ped  
97 facilities going to be moved to other projects or will the money be moved to a different  
98 year? Felix stated there may be an opportunity to move the money. The project is still in  
99 the CIP, but will not happen this year.

100 **Triangle Regional Model Update (Attachment 6)**

101 Felix Nwoko provided an introduction for the Triangle Regional Model update.

102 Jeremy Raw would like to get comments from the TCC. He will set up a meeting with  
103 the subcommittee when he returns next week so staff can provide guidance. Felix stated  
104 this item will be placed on the agenda for the April 3, 2006 special called TCC meeting.

105 **Request to NCDOT Regarding the Management of Bicycle and Pedestrian Projects**  
106 **(Attachment 7)**

107  
108 Mark Ahrendsen provided an introduction for the Request to NCDOT Regarding  
109 the Management of Bicycle and Pedestrian Projects. Mark stated the reason this item  
110 was added to the agenda was because we have a lot of bicycle and pedestrian projects  
111 coming up. The MPO continues to focus the allocation of resources on bicycle and  
112 pedestrian improvements either as stand alone projects or as enhancements to other  
113 projects. There has been some concern about the ability to continue all these projects in  
114 house. NCDOT has expressed some concern with being able to manage all these projects  
115 when we have limited resources at both the local level and the state level.

116 Alison Carpenter stated it is unclear to her who is responsible for the construction  
117 of the STP/DA projects other than the Transportation division. It is critical to set up a  
118 funding structure for the projects. Also, in terms of the TIP projects, the NCDOT Bicycle  
119 and Pedestrian Division designs and manages some construction projects, but some  
120 projects that come from the local agencies are not given to the Bike/Ped Division. It  
121 doesn't seem like the division offices have roadway design people who are doing  
122 bike/ped design and it is unclear what funding sources the individual division offices  
123 have and how it is structured. It needs to be clear for everyone.

124 Mark Ahrendsen stated that it would be helpful for the local division office to  
125 help manage some of the projects. John Hunsinger stated there may be a way for the  
126 local division office to become involved for large projects. Currently, they just distribute

127 the funds. Mark stated that staff would like to continue discussing this item with  
128 NCDOT. Dale McKeel stated he distributed a copy of a resolution from the NCDOT  
129 Board of Transportation on mainstreaming bike and pedestrian projects. This resolution  
130 is perfect for this discussion. It seems like we are segmenting out these projects from the  
131 way other projects are being handled. This resolution points toward not treating them  
132 differently. The memo that was written in the second paragraph has a reference to the  
133 Roadway Design Unit and Highway Division. He suggested adding the Project  
134 Development and Environmental Analysis Branch to this section because they are also  
135 involved with some of our projects.

136 A motion was made by Felix Nwoko and seconded by Andy Henry to follow the  
137 resolution in not treating the bike/ped projects differently and that NCDOT should play a  
138 larger role. The motion carried unanimously.

139 **Request to NCDOT Regarding the Transfer of CMAQ Funds to FTA**  
140 **(Attachment 8)**

141 Mark Ahrendsen provided an introduction for the Request to NCDOT Regarding  
142 the transfer of CMAQ Funds to FTA. These are projects that have been identified for the  
143 use of CMAQ funds and are transit projects. David Bonk asked if they have to be flexed  
144 year by year. Tamra Shaw stated that Mike Kozak will be sending out a letter giving  
145 more information about this and how the process will work. Tamra stated that 2006 is  
146 the only year that can be flexed right now. When you apply for a grant from FTA for a  
147 project that is going to be spent over several years, the grant can be amended in  
148 subsequent years. Mark stated that the funds have been authorized over three years.  
149 Tamra Shaw stated this item could be postponed to the next TCC meeting at which time  
150 she could provide more information about the potential of transferring all three years at

151 one time. Everyone agreed to postpone it to the 4/3 TCC meeting. There was a  
152 discussion to talk to TTA about the possibility of flexing with them. Usually in the TIP,  
153 there is a designated amount of money. Ed Dancausse stated the authorization is going to  
154 come to them in one year increments.

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**Adjustment to the Agenda:**

158 **Urban Bicycle and Pedestrian Allocation**

159 Dale McKeel stated that under the Urban Bicycle and Pedestrian allocation there  
160 have been two projects funded for the Town of Carrboro. They are the Bel Arbor bike  
161 path (#41) and a sidewalk on South Greensboro Street (#42). The Town of Carrboro is  
162 requesting to move the funds allocated to these projects to another project (Roberson  
163 Place Greenway) that is also in the STP/DA spreadsheet (#17). Based on the estimates  
164 from the engineer, they need \$100,000 additional funds to construct the project. If there  
165 are any funds left over, they will be moved back.

166 A motion was made by Felix Nwoko and seconded by John Hodges Cople to  
167 reallocate the funds associated with the Bel Arbor and South Greensboro Street projects  
168 in the Town of Carrboro to the Roberson Place Greenway project in the Town of  
169 Carrboro in FY 2006. The motion carried unanimously. The spreadsheet will be  
170 amended to reflect this change.

171 **JARC-New Freedom Funding for 2006**

172 Pierre Osei-Owusu stated that DATA/TTA/CAT are providing service to Brier  
173 Creek and want to request the TCC to allow this to continue. Felix Nwoko asked if there

174 is a requirement in the Federal Register for what the JARC funds are to be used for.  
175 Pierre stated yes. Tamra stated that it was intended for larger metropolitan areas where  
176 there were declining downtowns with large populations. David Bonk stated that the total  
177 for both funds (New Freedom and JARC) for this urban area is about \$150,000. The new  
178 rule for allocation of the New Freedom funds is that the recipient has to submit a plan.  
179 On the JARC funds, the Brier Creek service has been grandfathered. There is no  
180 guidance on how the future funds should be distributed. Mark Ahrendsen stated we need  
181 to know the cost to carry the Brier Creek service forward for another year and how the  
182 cost would be split among the stakeholders both on the CAMPO and the DCHC side.  
183 John Tallmadge asked whether the MPO or the transit operator collects the requests for  
184 service and makes the selection. It seems that it would be more efficient if it was done at  
185 the MPO level. David Bonk stated that he believes it should be left at the local  
186 jurisdiction level. John Hodges Copple asked if the FY 2006 funds would be carried over  
187 or if they will be lost if they are not allocated in 2006. Mark requested John Hodges  
188 Copple and Pierre Osei-Owusu to work together to formulate a proposal for the April 3,  
189 2006 TCC meeting.

190 **SAFETEA-LU Transportation Conformity Update**

191 Eddie Dancausse with the Federal Highway Administration provided a  
192 presentation.

193 John Hodges Copple recommended placing the SIP development on the agenda  
194 for the next regular TCC meeting.

195 Dale McKeel asked about the status of the draft TIP release, and Felix stated that  
196 it might be June.

197 **Reports from Staff:**

198 Ellen Beckmann discussed the TCC Subcommittee meeting dates. Ellen sent an  
199 email asking individuals if they had a preference for a regular meeting and in general the  
200 Wednesday after the TCC meeting in the morning was something that everyone had in  
201 common. Ellen wants to have two days for flexibility or if multiple committees need to  
202 meet. Since there were conflicts with the Thursday and Friday after the TCC meeting, it  
203 was decided to only have one designated day for TCC subcommittee meetings.

204 **Reports from the Chair:**

205 There was no report.

206 **NCDOT Report:**

207 Mike Kneis, NCDOT Division 5 Engineer, provided staff with a project update.  
208 They will take bids for the NC54/I-40 project on March 31, 2006 that will allow daytime  
209 work. There are joints being cut on I-40 for the next three weeks involving some night  
210 lane closures.

211 John Hunsinger, NCDOT Division 7 Engineer, provided staff with a project  
212 update. There is some maintenance grinding and resealing scheduled for February 2007  
213 I-40 from I-85 to Durham County in Orange County.

214 **Informational Items:**

215 **Recent Newspaper Articles/Legislative Update (Attachment 13)**

216 The recent newspaper articles/Legislative Updates are attached.

217 **Schedule for TAC and TCC Agenda Preparation (Attachment 14, and 14A)**

218 Attachments 14 and 14A display the schedule for the TAC and TCC meeting  
219 agendas. Please adhere to this schedule when submitting items to the LPA for these

220 meetings.

221 **Adjournment:**

222           There being no further business before the Technical Coordinating Committee,

223 the committee adjourned at 11:58 a.m.

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**TECHNICAL COORDINATING COMMITTEE**

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**April 3, 2006**

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**MINUTES OF MEETING**

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The Technical Coordinating Committee met on April 3, 2006 at 1:30 p.m. in the Council Committee Room on the second floor of Durham City Hall. The following

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attended:

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\*Mark Ahrendsen City of Durham/Transportation (TCC Chair)

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\*David Bonk Town of Chapel Hill (TCC Vice Chair)

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\*Andy Henry City of Durham/Transportation

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\*John Hodges Cople Triangle J Council of Governments (TJCOG)

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\*Claire Kane UNC

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\*Karen Lincoln Orange County Planning

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\*Dale McKeel Town of Carrboro

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\*Felix Nwoko City of Durham/Transportation

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\*Pierre Osei-Owusu City of Durham/DATA

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\*Jill Stark FHWA

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Ellen Beckmann City of Durham/Transportation

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Eddie Dancausse FHWA

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Jeremy Raw City of Durham/Transportation

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John Tallmadge Triangle Transit Authority

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Chao Wang City of Durham/Transportation

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\*Voting Members

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Mark Ahrendsen, TCC Chair, called the meeting to order at 1:30 p.m.

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**Preliminaries:**

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**Triangle Regional Model Update (Attachment 4, and 4A)**

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Jeremy Raw provided a presentation on the Triangle Regional Model Update.

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Jeremy stated he would like to receive input from everyone in preparation for a

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presentation to the TAC at their April meeting. Andy Henry asked if he was going to

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discuss what the model enhancements are, how much they cost, who is paying for them,

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and what will we get out of the enhancements. We need to know how the model

33 enhancements will help us with our other projects. We need to provide as much  
34 information as possible for the TAC. Jeremy will revise the presentation for the TAC  
35 meeting.

36 **2006-2007 Urban Planning Work Program (UPWP) Draft (Attachment 5, other**  
37 **attachments to be distributed at the meeting)**

38  
39 Mark Ahrendsen provided an introduction for the 2006-2007 Urban Planning  
40 Work Program (UPWP), along with the attachments. Mark stated the subcommittee has  
41 met and there have been discussions with CAMPO regarding the UPWP. Felix Nwoko  
42 stated the TCC's recommendation today is to recommend a draft of the 2006-2007  
43 UPWP to the TAC for release for public comment, and then TAC adoption will be in  
44 May 2006. The TCC should also provide advice on what materials should be provided to  
45 the TAC.

46 Felix stated that LPA staff needs the staff allocation for Chapel Hill and Carrboro.  
47 In addition, all transit agencies must submit a Disadvantaged Business Contracting  
48 Opportunities form from PTD even if there is no activity. Felix stated it must be  
49 submitted through the UPWP.

50 David Bonk stated that this draft includes the use of \$133,000 in carry-over PL  
51 funds as well as additional funds from the STP-DA program. We would still have a  
52 surplus through FY 2008, in FY 2009 there would be a deficit, and the years after FY  
53 2010 will have surpluses. This assumes a fairly conservative estimate of future revenues.  
54 John Tallmadge stated that all future year expenses are not well defined.

55 John Hodges Copple stated that the subcommittee discussed the bike/ped, model  
56 development, data automation, and land use to get a better sense of the time, the time  
57 period, and how the products feed into either enhancing the existing model or are used in

58 the LRTP development. David Bonk stated that the land use model and the data  
59 automation projects contain implications that he is not comfortable with that will effect  
60 local jurisdictions. David asked to what degree the model will set up potential conflicts  
61 with local jurisdictions. David Bonk stated the stakeholders need to have a coordination  
62 meeting so that everyone understands what is going on and what their role will be for  
63 these proposed projects.

64 There was discussion on the scope of the MPO-wide collector street plan. David  
65 Bonk stated that Chapel Hill and Carrboro would be reluctant to provide a local match  
66 since most of the relevant study area is in the County. John Hodges-Copple added that  
67 the Farrington/Stagecoach Road study is best done with the next LRTP. However, the  
68 LRTP process will not conclude for at least two years and the study needs to be done  
69 sooner. Thus, the Farrington/Stagecoach Road study could be part of the MPO-wide  
70 collector street plan. A motion was made by Felix Nwoko and seconded by David Bonk  
71 to recommend forwarding the draft UPWP to the TAC for their consideration and to  
72 make it available for public comment as a draft. Dale McKeel referenced Attachment 4,  
73 Triangle Regional Model and other Model Related Investments. He wants to make sure  
74 the figures on the spreadsheet match up. Felix stated that they do not match. Attachment  
75 4 needs to be reconciled with the draft UPWP. The motion carried.

76 Dale McKeel stated that since we are going to show all of these projects in FY  
77 2007, he thinks we need to agree on a priority for the projects. The bike/ped and non-  
78 motorized model development should be the highest priority and the other projects will  
79 fall into place. Dale questions if the ITS deployment plan needs to be done within the  
80 next year and asked if it could be moved to FY 2008. Dale reminded the TCC that when

81 we first began looking at all of these projects, we had a large deficit. Basically we got  
82 out of the deficit, and out of making some hard decisions, by moving the Cornwallis  
83 Road project to FY 2009. We should have made the hard decisions instead of postponing  
84 them.

85 John Tallmadge made another point. At the bottom on additional requests, the  
86 TDM additional request (TTA) is programmed to be part of 1/3, 2/3 funding split  
87 between DCHC and CAMPO. However, at this point, there has not been any discussion  
88 with CAMPO. John requests that we return this item to the \$40,000 Federal originally  
89 requested and that we continue to work with CAMPO on the 1/3, 2/3 share so that the  
90 project is not delayed. This project is population based.

91 John Tallmadge asked for an understanding of how the Chapel Hill/Carrboro  
92 Transit Master Plan will fit into these other regional transit planning activities including  
93 the LRTP. There needs to be a map for how the elements fit together so that we don't end  
94 up with various transit planning activities that don't agree. David Bonk stated in terms of  
95 the LRTP, the plan will identify the level investment for transit and address some of the  
96 funding issues. Hopefully, the timeframe will allow for the recommendations to be part  
97 of the LRTP. In regard to the vision plan, the Chapel Hill plan will have much more  
98 detail. John Tallmadge asked the timeline for completing the LRTP. Andy Henry stated  
99 that the completion date should be the fall of 2008. John asked what happens to the  
100 Chapel Hill transit master plan if the fiscally constrained LRTP cannot include all of the  
101 master plan projects. David Bonk stated that we would have to revise the master plan or  
102 find outside funding and amend the LRTP.

103 Dale McKeel asked if there was any discussion at the meeting this morning with

104 CAMPO regarding the ITS deployment plan. There is still the 1/3, 2/3 split with  
105 CAMPO that they might reject. David Bonk stated that we need to remind CAMPO that  
106 we are absorbing the entire cost of doing the bike/ped non-motorized enhancement to the  
107 model which they will end up taking advantage of.

108 Andy Henry recommended that we provide a summary for the UPWP with issues  
109 that need to be explained for the TAC.

110 **Triangle Ozone Redesignation (Attachment 6, 6A, and 6B)**

111 Eddie Dancausse provided an update on the Triangle Ozone Redesignation. At  
112 the statewide interagency consultation meeting, it was announced that the Triangle area is  
113 going to be redesignated as a maintenance SIP. DENR has not made a decision on the  
114 initial recommendations. The bigger issue is that CAMPO recommended a regional  
115 motor vehicle emissions budget, and DENR has not decided if they will approve it. Once  
116 the type of SIP budget is determined, it will be used for ten years.

117 Mark Ahrendsen asked when we will be setting budgets regardless of whether it is  
118 area-wide or a county-by-county budget. Eddie stated within the next four to six months  
119 there should be a draft SIP out to EPA and the public. If the MPO wants to change their  
120 recommendation, the MPO must provide it by the end of May. Mark stated that we need  
121 to pay close attention to the county-level budgets that are set to make sure they are  
122 realistic and conservative so that we don't get ourselves in a position where one county  
123 doesn't make the budget and we fail. Assuming we stay with the county-by-county  
124 budget, when do we have the opportunity to make sure that the county-level budgets are  
125 appropriate? Andy Henry stated that we could have problems when we move from one  
126 model to the next. Eddie stated that we have an opportunity to make changes whenever

127 the draft data is released for public comment. Other opportunities to ensure a county  
128 does not fail include: the MPO can check the data before submitting it to DENR; and, the  
129 MPO can push for safety margins.

130 **TIP Amendments for FTA Section 5309 Funds (Attachment 7)**

131 A motion was made by Felix Nwoko and seconded by David Bonk to recommend  
132 the TAC adopt the amendment to the 2006-2012 TIP to reflect the allocations of the  
133 statewide earmark to Chapel Hill, TTA, and City of Durham consistent with attachment 7  
134 which are letters from NCDOT to the City of Durham, the Town of Chapel Hill, and the  
135 Triangle Transit Authority. The amendment will be drafted for the TAC meeting. The  
136 motion carried unanimously.

137 David Bonk stated in addition to the buses we are receiving from the statewide  
138 earmark, the Town of Chapel Hill is also receiving a direct earmark from USDOT for  
139 buses and an earmark for four years of funding for the purchase of land and the design of  
140 a park and ride lot. David provided handouts displaying these earmarks.

141 **Request to NCDOT Regarding the Transfer of CMAQ Funds to FTA**  
142 **(Attachment 8)**

143  
144 Mark Ahrendsen provided an introduction for the Request to NCDOT Regarding  
145 the Transfer of CMAQ Funds to FTA. Mark stated that there were questions about  
146 flexing the CMAQ funds to FTA. Mark asked if there was an opportunity for Orange  
147 County and TTA to get their CMAQ funds flexed as well in order to give them more  
148 flexibility. Karen Lincoln stated that Tamra Shaw checked on this and said because the  
149 Orange County funds are going to OPT the Public Transportation Division will  
150 automatically flex those types of funds when they are available and therefore Orange  
151 County does not need to take any action.

152 A motion was made by Felix Nwoko and seconded by David Bonk to recommend  
153 that the TAC approve the request to flex the CMAQ funds for FY 2006 for the Town of  
154 Chapel Hill and the City of Durham as indicated in Attachment 8. The motion carried  
155 unanimously.

156 **JARC/New Freedom Funding Programs (Attachment 9)**

157 A motion was made by Felix Nwoko and seconded by Pierre Osei-Owusu to refer  
158 the JARC/New Freedom Funding Programs request to the Transit Subcommittee. The  
159 subcommittee will be asked to bring back a formal proposal for the FY 2006 allocation  
160 and the process for allocating future years at the April 2006 TCC meeting. The motion  
161 carried unanimously.

162 The Transit Subcommittee will meet regarding this item on April 7, 2006 at 9:00  
163 a.m. The location will be announced at a later time.

164 **Adjournment**

165 There being no further business before the Technical Coordinating Committee,  
166 the committee adjourned at 3:32 p.m.

## MEMORANDUM

**TO:** Technical Coordinating Committee  
DCHC MPO

**FROM:** DCHC MPO Lead Planning Agency

**DATE:** April 26, 2006

**SUBJECT:** 2006-07 Draft Unified Planning Work Program (UPWP)

---

### Background

Annually, the DCHC MPO is required by federal regulations to prepare a Unified Planning Work Program (UPWP) that identifies the annual funding allocations to support the ongoing transportation planning activities of the DCHC MPO. These funds are used to support the Lead Planning Agency (LPA), partner agencies (e.g., Chapel Hill and Carrboro) and transit operator staff, and the hiring of technical consultants. Funding for the UPWP is provided on an annual basis by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) and includes a local matching share.

The TAC received a draft at their 4/12/06 meeting and released it for public comment. The draft has been posted on the MPO website and distributed to local libraries and municipal and county planning departments. LPA staff have edited and revised the draft to include additional information and to ensure that the document is accurate and consistent.

### TCC Action

The TCC should review the document, make modifications as needed, and recommend a final FY 2006-2007 UPWP for adoption by the TAC at their 5/10/06 meeting.

### Description of Attachments

5A: 2006-2007 Unified Planning Work Program (UPWP)

The full UPWP report provides the detailed task and project descriptions and funding amounts as required by federal policy. The report includes:

- Adoption Resolutions (p. 1-4)
- Description and amount of the federal and local funding sources (p. 8-11)
- Summary table of ongoing tasks, special projects, and new initiatives in the FY 2006-07 UPWP, and lists the allocation amount for the Lead Planning Agency (LPA) and partner agencies for each task and project (p. 12-13).
- Tables listing Lead Planning Agency (LPA) and partner agency staff positions and the percentage of their work time dedicated to MPO tasks and projects.

Much of this data is incomplete due to data being not provided or not correct (p. 14-16).

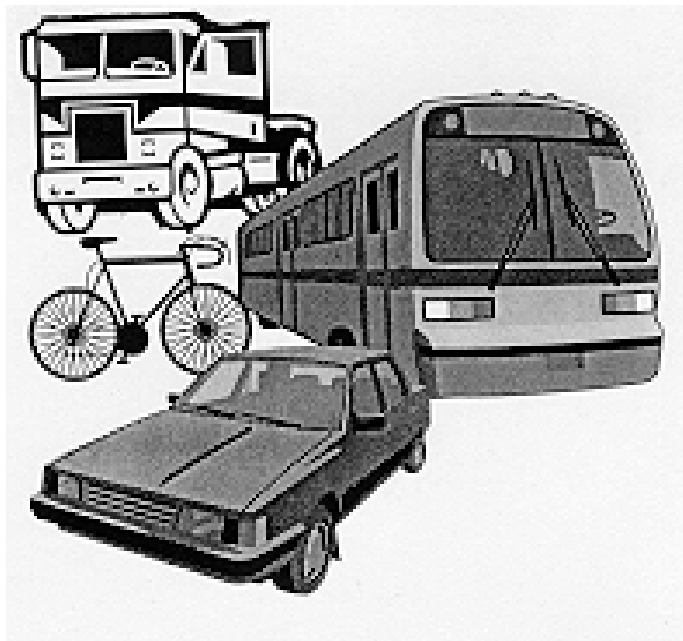
- Task and project descriptions, including previous work, proposed activities; expected products, and funding distribution (p. 49-74).
- Funding Source tables that present the funding source (Planning funding, STP-DA, etc.) and distribution (i.e., to LPA, Chapel Hill, etc.) for each of the various tasks (appendix).
  - These task categories are prescribed by the State and federal policy. Note that a complete narrative description for each task is more completely described in the *Prospectus for Continuing Transportation Planning for the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization*, approved by the TAC on February 13, 2002. The *Prospectus* was developed by NCDOT in cooperation with MPOs throughout the state. Tasks are identified by an alphanumeric task code and description.

### UPWP Schedule

The remaining steps in developing and adopting the FY 2006-07 UPWP is presented in the table below. This process differs from the previous process in that a public involvement component has been incorporated in this process and the TAC is involved early in the process during the formulation of major emphasis areas. In addition, the schedule provides the opportunity to link the UPWP development with the local member governments' budget process.

	<b>Date</b>	<b>Task Descriptions</b>
1	March-April	Development of Draft 2006-07 UPWP
2	3-Apr-06	TCC receives draft 2006-2007 UPWP
3	12-Apr-06	TAC receives Draft 2006-2007 UPWP and provides comments to the TCC. Draft UPWP released for public comment period.
4	26-Apr-06	TCC recommends final 2006-2007 UPWP for TAC approval
5	10-May-06	TAC adopts 2006-2007 UPWP and self-certifies MPO planning process
6	Jun-06	NCDOT/FHWA approves 2006-2007 UPWP

**Durham-Chapel Hill-Carrboro  
Metropolitan Planning Organization**



2006-2007  
Unified Planning Work Program (UPWP)

May 10, 2006



**Durham-Chapel Hill-Carrboro  
Metropolitan Planning Organization**

**FY 2006-2007 Unified Planning Work Program**

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Durham-Chapel Hill-Carrboro  
Metropolitan Planning Organization

**RESOLUTION**

Approving the FY 2006-2007 Unified Planning Work Program

May 10, 2006

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

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

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

Whereas, members of the Transportation Advisory Committee agree that the Unified Planning Work Program will effectively advance transportation planning for FY 2006-2007.

**Now, therefore, be it resolved that** the Transportation Advisory Committee hereby endorses the *Durham-Chapel Hill-Carrboro Metropolitan Planning Organization FY 2006-2007 Unified Planning Work Program*.

\*\*\*\*\*

I, \_\_\_\_\_, TAC Chair do hereby certify that the above is a true and correct copy of an excerpt from the minutes of a meeting of the Durham-Chapel Hill-Carrboro Transportation Advisory Committee, duly held on the 10<sup>th</sup> day of May, 2006.

\_\_\_\_\_  
TAC Chair

Subscribed and sworn to me this \_\_\_\_\_ day of \_\_\_\_\_, 2006.

(Notary seal)

\_\_\_\_\_  
Notary Public  
101 City Hall Plaza  
Durham, NC 27701

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

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

**RESOLUTION (Transit)**

Approving the FY 2006-2007 Unified Planning Work Program (UPWP) of the  
DCHC Urban Area

May 10, 2006

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

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

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

Whereas, members of the Transportation Advisory Committee agree that the Unified Planning  
Work Program will effectively advance transportation planning for FY 2006-2007.

**Now, therefore, be it resolved that** the Transportation Advisory Committee hereby endorses  
the *FY 2006-2007 Unified Planning Work Program for the Durham-Chapel Hill-Carrboro  
Metropolitan Planning Organization.*

\*\*\*\*\*

I, \_\_\_\_\_, Chair of the DCHC MPO Transportation Advisory Committee (TAC)  
do hereby certify that the above is a true and correct copy of an excerpt from the minutes of a  
meeting of the Durham-Chapel Hill-Carrboro Transportation Advisory Committee, duly held on  
the 10<sup>th</sup> day of May, 2006.

\_\_\_\_\_  
William V. "Bill" Bell  
Chairman, Transportation Advisory Committee

Subscribed and sworn to me this \_\_\_\_\_ day of \_\_\_\_\_, 2006.

(Notary seal)

\_\_\_\_\_  
Notary Public  
101 City Hall Plaza  
Durham, NC 27701

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

**RESOLUTION CERTIFYING THE DURHAM-CHAPEL HILL-CARRBORO (DCHC)  
METROPOLITAN PLANNING ORGANIZATION'S  
TRANSPORTATION PLANNING PROCESS FOR FY 2006-07**

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

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

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

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

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

WHEREAS, the Durham-Chapel Hill-Carrboro Urban Area Metropolitan Transportation Improvement Program is a subset of the currently conforming DCHC MPO 2030 Long Range Transportation Plan;

WHEREAS, the Transportation Plan has a planning horizon year of 2030, and meets all the requirements for an adequate Transportation Plan,

NOW THEREFORE, be it resolved that the Transportation Advisory Committee certifies the transportation planning process for the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization on this the 10th day of May, 2006.

---

Chair, Transportation Advisory Committee

\_\_\_\_\_  
Clerk/Planner (Transportation Planning Manager)

STATE of: North Carolina  
COUNTY of: Durham

I, \_\_\_\_\_, a Notary Public of \_\_\_\_\_ County, North Carolina do hereby  
certify that \_\_\_\_\_ personally appeared before me on the \_\_\_\_\_ day of  
\_\_\_\_\_, 2006 to affix his/her signature to the foregoing document.

\_\_\_\_\_  
Notary Public

101City Hall Plaza  
Durham, NC 27701

# Overview

Durham-Chapel Hill Carrboro  
Metropolitan Planning Organization  
FY 2006-2007 Unified Planning Work Program

Overview

Federal legislation (SAFETEA-LU) and implementing regulations mandate that each Metropolitan Planning Organization prepare an annual work program known as the Unified Planning Work Program (UPWP). The UPWP must identify the MPO planning tasks to be undertaken with the use of federal transportation funds, including highway and transit programs. Tasks are identified by an alphanumeric task code and description. A complete narrative description for each task is more completely described in the *Prospectus for Continuing Transportation Planning for the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization*, approved by the TAC on February 13, 2002. The *Prospectus* is hereby referenced as an element of the UPWP and is available upon request from any member agency of the DCHC MPO.

The UPWP also contains supplemental project descriptions for special projects and Federal Transit Administration (FTA) projects. Special project descriptions are provided by the responsible agency. FTA planning project task descriptions, FTA Disadvantaged Businesses Contracting Opportunities forms, and FTA funding source tables (a subset of the funding source table) are also included in this work program.

The funding source tables reflect available federal planning fund sources and the amounts of non-federal matching funds. The match is provided through either local or state funds or both. Statewide Planning and Research Funds (SPR) are designated for State use only and reflect the amount of those funds to be expended by the N. C. Department of Transportation Statewide Planning Division on DCHC MPO activities. Federal Highway Administration (FHWA) Section 104(f) funds, FHWA Section 133(b)(3)(7) funds, FTA Section 5303 (formerly Section 8) funds, FTA Section 5307 (formerly Section 9) funds, and Section 5309 (formerly Section 3) funds are designated for MPO use. The Section 5303 and Section 5307 funds have historically been used for transit planning tasks while other MPO transportation planning tasks have been funded with Section 104(f) and Section 133(b)(3)(7) funds. The Section 104(f) funds and the Section 133(b)(3)(7) funds, also known as Surface Transportation Program – Direct Attributable (STP-DA) funds are set by congressional authorization on an annual basis. With the exception of FTA Section 5307 and 5309 funds, these funds can only be used for MPO transportation planning purposes. FTA Section 5309 funds are used for transit capital expenses, and Section 5307 funds are used for transit capital and operating expenses as reflected in the Transportation Improvement Program.

As part of the annual UPWP adoption process, the MPO is required to certify that it adheres to a transportation planning process that is continuous, cooperative, and comprehensive. This certification was traditionally a part of the MTIP development until the NCDOT transitioned to a 2 year TIP in order to bolster public involvement. The certification resolution was included as part of the FY 2005-2006 UPWP and is also included in this work program.

# Introduction

## INTRODUCTION

Annually, the DCHC MPO is required by federal regulations to prepare a Unified Planning Work Program (UPWP) that details and guides the urban area transportation planning activities. Funding for the UPWP is provided on an annual basis by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) and includes a local matching share.

The Unified Planning Work Program (UPWP) is a narrative description of the annual technical work program for a continuing, cooperative and comprehensive (3C) transportation planning process in the DCHC metropolitan area. As the Lead Planning Agency (LPA) for the DCHC Metropolitan Planning Organization (MPO), the City of Durham, Transportation Division is responsible for developing the UPWP in cooperation with other members of the MPO including the Town of Chapel Hill, the Town of Carrboro, Orange County, Triangle Transit Authority (TTA), MPO local transit operators, and the North Carolina Department of Transportation (NCDOT).

The UPWP provides an indication of regional long and short-range transportation planning objectives, the manner in which these objectives will be achieved, the budget necessary to sustain the overall planning effort, and the sources of funding for each specific program element. All tasks will be performed by the MPO member agencies in cooperation with appropriate agencies, unless otherwise stated.

The work tasks within this UPWP are reflective of issues and concerns originating from transportation agencies at the federal, state and local levels. The 2004-2005 UPWP departs from the previous work programs in that it is product driven and emphasis is placed on "results-oriented" tasks. Several UPWP tasks are specifically targeted to implement provisions of several pieces of federal legislation, particularly the Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21), the Clean Air Act Amendments of 1990 (CAAA), the Americans with Disabilities Act (ADA), and the North Carolina General Statute.

Federal regulations require Metropolitan Planning Organizations like the DCHC MPO develop an annual UPWP in cooperation with State and publicly-owned transit services. The annual work program is required to serve as a framework for collaborative planning among the Lead Planning Agency staff and staffs of the MPO member agencies. Also, the UPWP is intended to advance a strategic, integrated planning process within the metropolitan area.

The descriptions of the tasks to be accomplished and the budgets for these tasks are based on the best estimate of what can be accomplished within the confines of available resources. If, in the performance of this work program, it becomes apparent that certain tasks cannot be accomplished due to changing or unforeseen circumstances, redefining the scope of the tasks and/or reallocating funds among tasks will adjust the UPWP. Such adjustments are handled through UPWP amendments, and are developed in cooperation with NCDOT, the Federal Highway Administration (FHWA), the Federal Transit

Administration (FTA), the transit agencies, and other concerned agencies as appropriate.

## **SOURCES OF FUNDS**

There are three main sources of funds used for transportation Planning UPWP:

- 1 Federal funds - US Department of Transportation (FHWA & FTA)
- 2 State funds - North Carolina Department of Transportation - NCDOT
- 3 Local Match (Durham, Chapel Hill and Carrboro)

### **Federal Funds**

**FHWA Funds** - Two principle FWHA funds used for UPWP funding are the Section 104(f) – PL funds and STP-DA.

**Other Funding Sources** - Other funding sources available are typically sought to conduct specific planning activities. These funds include highway funds such as Congestion Mitigation Air Quality (CMAQ) funds and HPR funds, grant from FHWA to NCDOT for highway planning and research.

### **State Funds (NCDOT)**

NCDOT provides 10% match for FTA 5303 and 5307 planning funds received by the MPO transit operators – Chapel Hill Transit, DATA, and TTA.

### **Local Funds**

Recipients of FHWA funds are required to provide 20% local match. The City of Durham, Town of Chapel Hill, Town of Carrboro, and Orange County provide 20% local match for Section 104(f) – PL and STP-DA funds. Also, the City of Durham and the Town of Chapel Hill provide 10% local match for FTA section 5303 and 5307 funds.

FY 2006-07 UPWP funding levels as well as the descriptions of funding sources are summarized below.

**Section 104(f)** also known as PL funds are FHWA funds for urbanized areas, administered by NCDOT. These funds require a 20% match. The PL funding apportionment to the state is distributed to the MPOs through a population-based formula. The proposed Section 104(f) funding level is based on the SAFETEA-LU Section 104(f) allocation as well as new PL distribution approved by NCDOT Board of Transportation in June 2005. The statewide section 104(f) funds are distributed among the 17 MPOs based on the following formula: All MPOs get an equal share of \$130,000 (hold harmless) and the rest of the funds are distributed based on the MPO urbanized area

population. The DCHC MPO PL fund allocation for FY 2006-07 is \$373,549. The unobligated balance available from previous years is \$133,388. Additional PL funds in the amount of \$109,604 have been de-obligated through Amendment #1 of the 2005-06 UPWP and are available in FY 2006-07.

Federal (PL funds)	\$616,541
Local (20% match)	<u>\$154,135</u>
Total	\$770,676

**STP-DA** – These funds are the Direct Attributable Allocation portion of the federal Surface Transportation Program (STP) funds provided to Transportation Management Areas (TMAs are MPOs over 200,000 population). By agreement with the DCHC MPO and NCDOT, a portion of these funds are used for MPO transportation planning activities. STP-DA funds earmarked for programming in the FY 2006-2007 UPWP are shown below.

Federal (STP-DA)	\$1,775,600
Local (20% match)	<u>\$ 443,900</u>
Total	\$2,219,500

**State Planning and Research Funds (SPR Funds)** – These are FHWA funds allocated to the Transportation Planning Branch (TPB) of NCDOT. NCDOT determines the allocation of these funds among tasks in the UPWP and is responsible for contributing 20% of non federal matching funds. SPR funds programmed in the 2006-2007 UPWP are as follows:

Federal	\$49,200
NCDOT-TPB	\$12,300
Total SPR funds	\$61,500

**FTA Funds** -Two types of funds are used for transit planning purposes by the DCHC MPO; Section 5303 (formerly Section 8 Metropolitan Planning) and Section 5307 funds (formerly Section 9) of the Federal Transit Act Amendments of 1991.

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

	CHT	DATA	TTA	MPO Total
Federal	\$94,456	\$98,312		\$191,071
State	\$11,807	\$12,289		\$ 23,884
<u>Local</u>	<u>\$11,807</u>	<u>\$12,289</u>		<u>\$ 23,884</u>
Total	\$118,070	\$122,890		\$240,960

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

	CHT	DATA	TTA	MPO Total
Federal	\$160,000	\$351,445	\$1,225,000	\$1,736,445
State	\$20,000	\$ 43,931	\$153,125	\$ 217,056
Local	\$20,000	\$ 43,931	\$153,125	\$ 217,056
<b>Total</b>	<b>\$200,000</b>	<b>\$439,306</b>	<b>\$1,531,250</b>	<b>\$2,170,556</b>

**DCHC MPO – UPWP Funding Sources (FY 2006-07)**

<b>Funding Type</b>	<b>Federal</b>	<b>State</b>	<b>Local</b>	<b>Total</b>
<b>Section 104(f)</b>	<b>\$616,541</b>	<b>\$0</b>	<b>\$154,135</b>	<b>\$770,676</b>
<b>STP-DA</b>	<b>\$1,775,600</b>	<b>\$0</b>	<b>\$443,900</b>	<b>\$2,219,500</b>
<b>FTA 5303</b>	<b>\$192,768</b>	<b>\$24,096</b>	<b>\$24,096</b>	<b>\$240,960</b>
<b>FTA 5307</b>	<b>\$1,736,445</b>	<b>\$217,056</b>	<b>\$217,056</b>	<b>\$2,170,556</b>

### FY 2006-07 UPWP Overview : General Planning (3-C)/Funded Special Projects & New Initiatives

1	Routine Planning Broad Categories	LPA	DATA	Chapel Hill		Carrboro	TTA		Orange	TJCOG
No.	Routine/General transportation planning process	FHWA	transit	FHWA	transit	FHWA	FHWA	transit	FHWA	FHWA
1.10	Data monitoring monitoring surveillance of change	\$148,607	\$58,312		\$25,000	\$2,840				
1.20	LRTP/CTP/modeling/CMS/Collector street/Air quality	\$392,591	\$17,429	\$35,000	\$35,512	\$6,260		\$110,000	\$5,640	
1.30	Short Range Transit Planning				\$1,000	\$1,000		\$970,000		
1.40	UPWP	\$10,497	\$25,191	\$1,000	\$6,000	\$1,200				
1.50	TIP	\$22,932	\$1,711	\$2,000	\$2,000	\$1,600				
1.60	Civil rights/EJ/Minority Business/Elderly/Public Involvement	\$44,262	\$77,632		\$40,000	\$1,200				
1.70	Environmental analysis/Special studies/Regional & Statewide Planning.	\$73,454		\$5,000	\$65,000	\$400		\$145,000		
1.80	Management, operation, administration of planning process	\$135,410	\$269,482	\$22,996	\$79,944	\$10,864				
	<b>Total Routine/General transportation process</b>	<b>\$827,753</b>	<b>\$449,757</b>	<b>\$65,996</b>	<b>\$254,456</b>	<b>\$25,364</b>	<b>\$0</b>	<b>\$1,225,000</b>	<b>\$5,640</b>	<b>\$0</b>
<b>2</b>	<b>Special Emphasis Projects &amp; Other STP-DA Projects (approved in 2005-06 UPWP)</b>	<b>LPA</b>	<b>DATA</b>	<b>Chapel Hill</b>		<b>Carrboro</b>	<b>TTA</b>		<b>Orange</b>	<b>TJCOG</b>
No.	Special project funded with STP-DA Funds	FHWA	transit	FHWA	transit	FHWA	FHWA	transit	FHWA	FHWA
2.10	Bicycle-pedestrian (non-motorized) trip demand forecasting	\$200,000								
2.20	Land use Model	\$200,000								
2.30	Data/GIS integration & Automation	\$160,000								
2.40	Model Enhancements, including MPO enhancements	\$150,000								
2.50	Intelligent Transportation System (ITS) Deployment plan update & Measures of Effectiveness	\$56,000								
2.60	MPO Collector Street Plan	\$40,000								
2.70	TDM Program						\$85,000			
	<b>Total funded projects (approved by the TAC)</b>	<b>\$806,000</b>					<b>\$85,000</b>			

### FY 2006-07 UPWP Overview : General Planning (3-C)/Funded Special Projects & New Initiatives

3	New Requests-Initiatives	LPA	DATA	Chapel Hill		Carrboro	TTA		Orange	TJCOG
		FHWA	transit	FHWA	transit	FHWA	FHWA	transit	FHWA	FHWA
3.11	TRM - Model Surveys									
3.12	Onboard survey	\$51,000								
3.13	External trip survey	\$24,000								
3.20	Travel time speed survey	\$120,000								
3.30	MPO Collector Street Plan (under funded)	\$28,058								
3.40	Intelligent Transportation System (ITS) Deployment plan update & Measures of Effectiveness (under funded)	\$14,400								
3.50	MPO Congestion Management System Study: Integration of Durham & Chapel Hill/Carrboro studies and incorporation of Orange-Chatham Counties (under funded)	\$48,000								
3.60	Farrington Road-Stagecoach Road corridor study	\$40,000								
3.90	Regional Transit Vision Plan									\$37,000
3.10	Chapel Hill (or Chapel Hill/Durham) Transit Master Plan			\$160,000						
3.11	Regional TDM (addition request, TAC approved \$85,000 for FY 2006-07)						\$40,000			
3.12	TJCOG air quality coordination and socio-economic data forecast coordination.									\$13,930
<b>Total 2006-07 new requests</b>		<b>\$325,458</b>	<b>\$0</b>	<b>\$160,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$40,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$50,930</b>
<b>Total 2006-07 UPWP Federal Funds</b>		<b>\$1,959,211</b>	<b>\$449,757</b>	<b>\$225,996</b>	<b>\$254,456</b>	<b>\$25,364</b>	<b>\$125,000</b>	<b>\$1,225,000</b>	<b>\$5,640</b>	<b>\$50,930</b>

**FY 2006-2007 UPWP  
Summary of LPA Staff Hours and Total Funding**

<b>Staff Position &amp; Percentage of Hours</b>										
<b>Task/Project</b>	<b>Trans. Pl. -- MPO</b>	<b>Trans. Pl. -- LRTP/Tech Svs.</b>	<b>Trans. Pl. -- Modeling</b>	<b>Engineer -- Modeling</b>	<b>GIS Technician</b>	<b>Planning Manager</b>	<b>Trans. Pl. -- Bike/Ped</b>	<b>Secretary MPO Clerk</b>	<b>TCC Chair</b>	<b>Interns</b>
L RTP	23%	37%	26%	53%	8%	17%	26%		1%	
Travel Model Updates & Surveys			51%	20%		4%				
TIP	9%	6%			6%	6%	3%		3%	
UPWP	4%					10%				
Air Quality Conformity	2%					7%				
Congestion Management System	3%	15%				4%	2%			
Collector Street Plan		11%				3%				
Short Range Transit Planning										
Monitoring Transportation System/ Data Collection					18%		9%			56%
EJ/Elderly/Public Involvement	22%	5%	5%	4%	7%	14%			2%	9%
Environ./Pre-TIP/Reg. Planning	4%	6%			6%	8%	2%		6%	
Special Studies	6%	16%	15%	15%		4%	5%		3%	27%
MPO Mgmt. & Operations	27%	4%	3%	8%	7%	15%	6%	10%	12%	8%
<b>Totals</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>52%</b>	<b>93%</b>	<b>53%</b>	<b>10%</b>	<b>28%</b>	<b>100%</b>

<b>Total Funding (federal + Local)</b>			
<b>Task/Project</b>	<b>Consulting Svs.</b>	<b>Staff Salary</b>	<b>Total Funding</b>
L RTP	\$0	\$146,829	\$146,829
Travel Model Updates & Surveys	\$1,122,250	\$56,365	\$1,178,615
TIP	\$0	\$28,665	\$28,665
UPWP	\$0	\$13,121	\$13,121
Air Quality Conformity	\$0	\$8,641	\$8,641
Congestion Management System	\$161,120	\$18,734	\$179,854
Collector Street Plan	\$110,000	\$11,121	\$121,121
Short Range Transit Planning	\$0	\$0	\$0
Monitoring Transportation System/ Data Collection	\$127,020	\$58,737	\$185,757
EJ/Elderly/Public Involvement	\$0	\$55,327	\$55,327
Environ./Pre-TIP/Reg. Planning	\$0	\$29,316	\$29,316
Special Studies	\$270,000	\$71,082	\$341,082
MPO Mgmt. & Operations	\$0	\$160,685	\$160,685
<b>Totals</b>	<b>\$1,790,390</b>	<b>\$658,624</b>	<b>\$2,449,014</b>

**FY 2006-2007 UPWP  
Summary of Carrboro Staff Hours and Total Funding**

<b>Staff Position &amp; Percentage of Hours</b>	
<b>Task/Project</b>	
L RTP	7%
Travel Model Updates & Surveys	
TIP	3%
UPWP	2%
Air Quality Conformity	0%
Congestion Management System	5%
Collector Street Plan	1%
Short Range Transit Planning	6%
Monitoring Transportation System/ Data Collection	2%
EJ/Elderly/Public Involvement	2%
Environ./Pre-TIP/Reg. Planning	1%
Special Studies	0%
MPO Mgmt. & Operations	22%
<b>Totals</b>	<b>52%</b>

<b>Total Funding (federal + Local)</b>			
<b>Task/Project</b>	<b>Consulting Svs.</b>	<b>Staff Salary</b>	<b>Total Funding</b>
L RTP	\$0	\$4,450	\$4,450
Travel Model Updates & Surveys	\$0	\$0	\$0
TIP	\$0	\$2,000	\$2,000
UPWP	\$0	\$1,500	\$1,500
Air Quality Conformity	\$0	\$0	\$0
Congestion Management System	\$0	\$3,000	\$3,000
Collector Street Plan	\$0	\$375	\$375
Short Range Transit Planning	\$0	\$1,250	\$1,250
Monitoring Transportation System/ Data Collection	\$0	\$3,550	\$3,550
EJ/Elderly/Public Involvement	\$0	\$1,500	\$1,500
Environ./Pre-TIP/Reg. Planning	\$0	\$500	\$500
Special Studies	\$0	\$0	\$0
MPO Mgmt. & Operations	\$0	\$13,580	\$13,580
<b>Totals</b>	<b>\$0</b>	<b>\$31,705</b>	<b>\$31,705</b>

**FY 2006-2007 UPWP**  
Summary of Staff Hours and Total Funding

DATA, Chapel Hill, Chapel Hill Transit, TJCOG, and TTA

Information either has not been received or is incomplete.

## Synopsis of Routine and On-Going Projects

## **SYNOPSIS OF ROUTINE AND ONGOING PROJECTS**

### ***Management and certification of Transportation Planning (3-C) Process***

This work element encompasses the administration and support of the 3-C transportation planning process as mandated and required by federal regulations.

#### ***Objective:***

To assist, support, and facilitate an open Comprehensive, Cooperative, and Continuing (3C) transportation planning and programming process at all levels of government in conformance with applicable federal and state requirements and guidelines as described in the 3C Memorandum of Understanding.

#### ***Previous Work:***

Management of the 3C process using previous Unified Work Program and prospectus documents, transportation plans, and Memorandum of Understanding. Specifically, previous tasks include but not limited to preparation of Technical Coordinating Committee (TCC) and the Transportation Advisory Committee (TAC) meetings agenda, providing technical assistance to the TAC, development of the MTIP, preparation of the annual UPWP, working with other agencies, such as NC Division of Air Quality, etc.

#### ***Proposed Activities:***

1. Provide liaisons between DCHC MPO member agencies, transit providers, CAMPO, NCDOT, DENR, TJCOG, and other organizations at the local, regional, state, and federal levels on transportation related matters, issues and actions.
2. Work with the Capital Area Metropolitan Planning Organization (CAMPO) on regional issues. Prepare Regional Priority lists and MTIP and amend as necessary, Update transportation plans, travel demand model, and monitor data changes. Evaluate transportation planning programs developed through the 3C public participation process for appropriate MPO action.
3. Provide technical assistance to the Transportation Advisory Committee (TAC) and other member jurisdictions policy bodies.
4. Participate in Joint CAMPO/DCHC TCC and TAC meetings as a means to continually improve the quality and operation of the transportation planning process and decision making in the Triangle Region.
5. Review and comment on federal and state transportation-related plans, programs, regulations and guidelines.

***Work Product Expected:***

1. Technical assistance memoranda, reports, and public involvement meetings and workshops as needed.
2. Updates to the planning documents as required.
3. MPO meeting minutes.

***Model Maintenance/Air Quality Planning******Objective:***

To maintain and improve the regional travel demand model and the MPO sub-area model as a tool for transportation planning and air quality conformity. To develop certification documents, reports, and other materials that meet the goals of the Clean Air Act Amendments (CAAA), TEA-21 as it pertains to air quality planning, the State Implementation Plan (SIP), and the goals and objectives of the DCHC MPO.

***Previous Work:***

1. Development of the Triangle Regional Model (TRM).
2. Air quality conformity determinations for the LRTP, TIP and sub-area modeling.
3. Modeling for project forecasting for NEPA projects e.g., East End Connector.

***Proposed Activities:***

1. Continue maintenance and improvements of the regional model (TRM).
2. Rebuild future network horizon years with new data and updated versions of TransCad.
3. Continue the refinement of TRM using the TransCAD to improve forecasts of highway and transit demand with consideration for changes in land use.
4. Work with NCDOT, DENR and the statewide Modeling Users Group for necessary improvements to the travel demand model for conformity determination purposes.
5. Coordinate air quality planning efforts with DENR, NCDOT, EPA, FHWA, FTA, and other appropriate agencies.
6. Work with the Division of Air Quality in the development of the State Implementation Plans (SIP).

***Expected Work Products:***

1. On-going maintenance of the model.
2. Quality and error checks.
3. Model forecasts for the development of the SIP.
4. Travel demand forecasts for NEPA projects, including the East End Connector.

***Unified Planning Work Program - UPWP******Objective:***

To prepare and continually maintain a Unified Planning Work Program (UPWP) that describes all transportation and transportation-related planning activities anticipated

within the DCHC MPO planning area for the FY 2006-2007. To develop, maintain, and complete the UPWP in conformance with applicable federal, state, and regional guidelines. To prepare UPWP amendments as necessary and requested by member agencies, to reflect any change in programming or focus for the current fiscal year.

**Previous Work:**

1. FY 2004-2005 Unified Planning Work Programs adopted by the TAC on April 14, 2004 and FY 2005-06 UPWP expected to be approved by the TAC on April 13, 2005.
2. Amendments of the UPWP as requested by member agencies.

**Proposed Activities:**

1. Review and amend relevant portions of the DCHC's UPWP in order to meet new planning requirements and/or circumstances pertinent to the MPO emphasis and transportation planning objectives.
2. Develop a new UPWP for the DCHC planning area covering the next program year. The development of a new UPWP will be prepared in cooperation with NCDOT and subject to the development process and public involvement endorsed by the TAC at its January 2005 meeting.

**Expected Work Products:**

1. Amendments to the current UPWP as necessary.
2. Development of the FY 2006-07 Unified Planning Work Program (UPWP).

***Public Involvement Process***

**Objectives:**

To provide the public with complete information, timely notice, full access to key decisions and opportunities for early and continuing involvement in the 3C process. To assess the effectiveness of the current Public Involvement Process as required by the federal Certification Team, and to develop and enhance the process of public dissemination of information.

**Previous Work:**

1. MPO Public Involvement Process.
2. MPO website.
4. News Letters
5. News paper advertisements.

**Proposed activities:**

1. Refine the current Public Participation Process as needed.
2. Apply the Public Involvement Process to transportation programs and tasks:
3. Public meetings, workshops, and outreach programs to increase public

participation, information dissemination, and education.

**Expected Work Products:**

1. Update and maintenance of website.
2. Update and maintenance of mailing list database
3. Quarterly MPO News letters, and project specific news letters.
4. Support of Citizen Advisory Committee

***Transportation Improvement Program (TIP) Development***

**Objectives:**

As the Lead Planning Agency (LPA) of the DCHC MPO, the City of Durham, Transportation Division is responsible for annually developing, amending, adjusting and maintaining the Transportation Improvement Program (TIP) for the metropolitan area. Under this activity, the LPA will update and amend the current, seven-year program of transportation improvement projects (MTIP) that is consistent with the 2025 Long-Range Transportation Plan, STIP, the State Implementation Plan (SIP), EPA Air Quality Conformity Regulations and FHWA/FTA Planning Regulations.

**Previous Work:**

2006-2012 Regional Priority List and DCHC Metropolitan Transportation Improvement Programs (MTIP). Development MPO Issue paper for One-on-One sessions with NCDOT.

**Proposed Activities:**

1. Solicit transportation improvement projects from municipalities and transit providers.
2. Develop 2007-2013 MPO Regional Priority Lists and 2007-13 MTIP.
3. Refine project ranking methodology and priority system.
4. Conduct appropriate public participation for the TIP consistent with the MPO Public Involvement Policy.
5. Conduct formal amendments and adjustments as necessary.
6. Produce and distribute TIP documents for federal, state and local officials.
7. Attend regular meetings with NCDOT to exchange information regarding transportation improvement projects.

**Expected Work Product:**

1. Amendments to the 2006 - 2012 Metropolitan Transportation Improvement Program.
2. 20097-2015 Regional Priority Lists ranking methodology
3. 2007 - 2013 Metropolitan Transportation Improvement Program
4. Develop and refine procedures necessary for TIP preparation and amendment as necessary.
5. TIP Amendments and Adjustments as necessary.

## ***Environmental Justice***

### **Objectives:**

To ensure that minority and low-income communities are ; 1) not adversely affected by transportation projects and policies; 2) treated equitably in the provision of transportation services and projects; and 3) provided full opportunity for participation in MPO transportation planning and decision making process.

### **Previous Work:**

Demographic profiles based on 1990 Census- maps to identify areas of low-income, minority and elderly populations, job accessibility, and overlay of major employers, fixed route transit systems, and major shopping areas.

### **Proposed activities:**

1. Develop MPO Environmental Justice Plan, including establishment of Environmental Justice Advisory Board
2. Update demographic profiles based on 2000 Census and MPO 2002 base year data - maps to identify areas of low-income, minority and elderly populations, job accessibility, and overlay of major employers, fixed route transit systems, and major shopping areas.
3. Provide increased opportunities for under-served populations to be represented in the transportation planning process.
4. Define target areas through the use of Census Block Group data from the 2000 Census.
5. Analyze the mobility of target area populations to jobs, childcare, and transit routes.
6. Review existing public outreach and involvement plan.
7. Develop a protocol for responding to issues and concerns regarding Environmental Justices in general and Hispanic population in particular.

### **Expected Products:**

1. Updated maps utilizing information from the 2000 Census and 2002 base year data.
2. Increased involvement of low-income and minority populations in the transportation planning process.
3. Technical assistance memoranda, reports, and workshops as needed.
4. Protocol for responding to issues and concerns regarding Environmental Justices
5. MPO Environmental Justice plan

## Major Emphasis Areas & Special Projects

## **SPECIAL EMPHASIS PROJECTS SUMMARY DESCRIPTION**

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

Currently the DCHC MPO does not have a unified GIS database for the metropolitan planning area. Lack of integrated GIS data has impeded effective transportation planning such as the **L RTP alternative analysis, environmental justice analysis, TIP project ranking, and prioritization**. Over the years, it has become increasingly apparent that transportation models, land use analysis, and long range transportation plan, TIP and CMS development processes are critically dependent on comprehensive, integrated, high quality spatial data. The Lead Planning Agency (LPA) does not have a GIS-Transportation for the entire metropolitan area. The LPA, like most agencies, is heavily dependent upon spatial data for a host of transportation planning activities and public information dissemination. Due to concerns and comments expressed by the public and the TAC regarding the quality of GIS, access to information, etc., the GIS data integration and automation task was proposed and approved by the TAC.

The proposed GIS data integration will create a geo-spatial warehouse within the LPA and automate GIS functions. Various MPO agencies use separate GIS and database systems. While these systems share certain standards and formats, they have no physical relationship. As a result, there are inconsistencies and overlap problems.

This project will eliminate redundancies, reduce costs of data collection (over 70% of the CMS cost is attributed to data collection), and, most importantly, improve GIS functions and public access to MPO spatial information.

The majority of data and spatial analyses required to meet and support the planning requirements of SAFETEA-LU, especially for the development of the LRTP, TIP and congestion mitigation system will come from the proposed GIS data integration project.

### **Summary of Project Scope**

1. Design and implement a GIS data warehouse for the MPO, including designing a relational database and single enterprise-wide base layers. The system and database design will involve a needs assessment, conceptual and logical design, physical design, automation plan, maintenance strategy, and final implementation.
2. Testing the system for functionality, performance, and flexibility will involve evaluating the automation plan (procedures, validity, and system), the application's design, the hardware and software configurations, and the organizational and administrative procedures. It is anticipated that existing data will be used to populate the database and test system and database design.
3. Develop a protocol for linking attributes from member agencies' GIS systems. This will include a data dictionary and location table to support transit spatial feature portability and storing transit feature data. Essentially, this is a mechanism for converting data fields from other systems to a unique attribute for the MPO. Data standards and protocol are also especially important for data sharing and exchange. As such, this should be thought of carefully to insure all regional agencies and potential data sources are taken into cognizant when establishing a protocol.

4. Develop a MPO-wide master line layer or “base map” (a foundation for spatial and attribute data). Develop master line layer to integrate transportation GIS applications. The line layer shall be linked to other layers of information, such as zip codes, Census geography orthophotos, etc.
5. Develop a relational database that captures the following (this item is linked to tasks 1 and 4):
  - Functional classification
  - TIP
  - LRTP
  - CMS
  - TIP priority lists
  - Environmental data
  - Census PUMS, CTPP, ACS
  - Model input data, results and intermediate outputs
  - Land use and parcel data
  - Property tax
  - Employment data
  - Centerline data and attributes
  - NCDOT roadway attributes
  - Transit data and attributes
  - Sidewalk and pedestrian attributes
  - Bicycle facilities attributes
  - Previous completed improvements
  - Monitoring results based on completed improvements
  - Traffic count data, including TMCs
  - Accident information
  - TRM networks data
  - ITS information
  - Additional data sources as needed
6. Create customized applications for the LPA and MPO agencies using standard open source scripting languages.
7. Develop a user-friendly graphical interface and interactive web application. The interface is vital for staff, the public, and decision-makers in terms accessing information and improving spatial analytical capabilities. Also, it would enhance decision-makers’ understanding of complex issues and facilitate the quick response to transportation GIS requests.
8. Develop a data maintenance strategy

## **Applications**

This project will be very invaluable in the development of the CTP and 2035 LRTP. Sample applications and analyses are summarized as follows.

- Highway and transit projects assumed in 2008, 2011, and 2016 air quality analysis.
- Differences in future transportation system performance with or without certain projects
- Indirect and cumulative impacts of CTP or LRTP projects
- Quantifying the environmental impacts of LRTP or TIP projects (useful also for developing project priority lists).
- Base and future year environmental justice demographic profile (see federal certification EJ questions).
- Effectiveness and efficiency of planning, analysis and graphical display.
- Land use scenario testing and analysis (this has been a major comment on previous LRTPs).
- Visualization requirement of SAFETEA-LU.

**LPA staff resources:**

Jeremy Raw - 100 hours  
Felix Nwoko – 100 hours  
Brian Rhodes - 175 hours

MPO Technical Team will be constituted to provide oversight

### **Development of the Land Use Model**

The linkage between land use and transportation is fundamental to understanding transportation system performance. It has been well established that trip-making patterns, volumes, and modal distributions are largely a function of the distribution and use of land. Thus, exercising control over the trip generating characteristics of individual development sites (e.g., development density) can be used to ensure that the resulting travel demand is consistent with the existing transportation infrastructure and the level of service desired.

Over the long run, the spatial distribution of land use can greatly influence regional travel patterns. In turn, this land use distribution can be influenced by the level of accessibility provided by the transportation system.

Federal planning regulations have reinforced the importance of the linkage between transportation planning and land use. For example, the metropolitan transportation planning process should “consider the likely effect of transportation policy decisions on land use and development and the consistency of transportation plans and programs with the provisions of all applicable short- and long-term land use and development plans...”.

The plan itself should “reflect, to the extent that they exist, consideration of the area’s comprehensive long-range land use plan and metropolitan development objectives; national, state, and local housing goals and strategies; community development and employment plans and strategies; and employment plans and strategies...”.

### **Origin of Project**

During the development of the first TRM model, the TAC raised two issues regarding representing the interaction of land use and transportation in the model as well as the need to incorporate non-motorized trips. Staff was directed to prepare a white paper dealing with the DCHC model goals. Based on the white paper, the TAC adopted the following goals and model needs:

- The forecast model should be capable of analyzing multimodal alternatives (i.e. it should be a tool that can provide demand estimates for both motorized and non-motorized options).
- The model should provide a feedback process for analyzing various land use scenarios.
- The model should have the ability to provide air quality evaluation.
- The model should be flexible and easily updated.
- Policy Relevance: A model that is sensitive and capable of analyzing relevant policy options (pricing, land use, TDM, etc).
- Flexibility: A model that allows analysis at varying level of detail and spatial and time scales (i.e. subarea, corridor, development impact, what ifs, long range, short range, etc.)
- Comprehensiveness: A model that represents a full range of travel decisions and potential options.

The TAC also approved the allocation of nearly \$1 million of STP-DA funds for these efforts. At the national level, Portland, Oregon in cooperation with TMIP, initiated the first symposium on land use-transportation model integration. The results from the national discussion on this subject matter will inform the MPO process. In recent years, due to requests by the TAC, the

LPA conducted a survey and review of land use model implementation at the MPO level. The effort resulted in the recommendation to use the UrbanSim platform.

### **Objectives:**

Two policy objectives motivate this project:

1. Recent guidance from EPA and FHWA that encourages all MPO's to model interactions between land use development and transportation system enhancements
2. Request from the DCHC MPO TAC to include analysis of transportation system changes that may promote, discourage, or modify land development patterns as part of the LRTP analysis and other planning initiatives

These policy objectives will be met by implementing an integrated land use and transportation model system.

### **Synopsis of benefits:**

- Land use scenario analysis and testing
- Evaluation of land use impacts on transportation and vice versa (received comments both from elected officials and the public during the previous LRTP update).
- Addresses the insensitivity of TRM to changes in "4D" (density, diversity, design and destination) characteristics. The insensitivities or "blind spots" are: 1) No consideration is given to the distances between land uses within a given TAZ; 2) Interaction between different non-residential land uses (e.g. offices and restaurants) not well represented; 3) Treatment of density largely ignored (e.g. a TAZ with a dense development in one corner is treated the same as a TAZ with the same population spread evenly throughout the area (uniform zonal distribution of SE data); and 4) Travel models grossly underestimate benefits of smart growth and transit – things that cannot be measured are lumped into bias constants.
- Land use model provides a useful tool for consistent and effective analysis of indirect and cumulative impacts, needed for the CTP and stressed in the SAFETEA-LU requirements.
- Land use model can better assess the benefits of smart growth and neo-traditional developments or new urbanism.
- Provides a better tool for analyzing induced traffic.

### **Applications:**

UrbanSim is a decision support tool land use model that will be useful for examining the interactions between land use, transportation, the economy, and the environment (including air quality) for the DCHC MPO. Like any tool, it must be appropriate for the task for which it will be used. It should be able to, among other things, provide the DCHC MPO decision-makers and technical staff with information that is useful for the types of problems facing the metropolitan area. Some of these questions include the effect of the following actions on future travel patterns, air quality, and land use development:

- Pricing (e.g., land use tax/subsidies, road tolls, parking fees, vehicle ownership/licensing tax, fuel costs).

- Infrastructure and services (e.g., building of public housing, availability of land for schools and parks, providing public utilities, and transport system investment).
- Regulatory (e.g., Land-use, zoning, parking regulations, road speeds, environmental air quality/noise/safety restrictions).
- Education and marketing (e.g., changes in traveler behavior, value of time).
- Accessibility and Transit Oriented Developments (TOD) and non-motorized travel.
- Induced demand from highway expansion that might undermine the capacity expansion or alter travel patterns and thus future land use patterns.
- Equity analysis (various household income groups and industries), consumer surplus.
- Economic effects (e.g., indirect costs and benefits of investments, economic competitiveness and market accessibility to trade partners).

The proposed land use model must integrate with the Triangle Regional Model (TRM), a travel forecasting model for the region.

### **Proposed Approach:**

A two-phased approach is proposed for the development and implementation of UrbanSim for the DCHC MPO:

1. Phase 1 will involve the development and implementation of UrbanSim at the “neighborhood” level. Essentially, this entails implementing a short term land use-transportation modeling capability for the DCHC MPO. This would be a version of UrbanSim modeling at a higher geographic level which should implement most, if not all, of the desired capabilities. It is anticipated that this would take about six (6) to nine (9) months and could be accomplished alongside the current TRM TransCad model enhancement. This will include effective benchmarks, back-casting and visualization tools. The thrust of this phase is three-fold: 1) to allow the MPO to review and evaluate the model performance; 2) propose any refinements; and 3) reassess resource requirements. Such a model would allow planners to explore land use-transport interactions on either a MPO or neighborhood/transit station-area basis, test various development scenarios, and examine likely land use impacts of a rapidly growing region and associated travel patterns. Such an implementation would provide experience with political and institutional agencies and constraints and data collection efforts at an early stage which would be helpful in long term model design and development.
2. Phase 2 will involve the development and implement of the full blown model at the parcel level or in grid cells. A more comprehensive and complex modeling system can be developed over the longer term. It would be capable of addressing the entire requirements of the UrbanSim model. It would incorporate or operate in tandem with the TRM major travel demand model update. The development time for such a model is expected to be between 18 and 24 months, and will depend upon the capabilities required, manpower and data availability, and deadlines imposed by the MPO transportation planning initiatives.

A phased development process will permit a continual review of model objectives throughout the life of the project, allowing mid-course corrections and additional data collection as required. The consultant should make recommendations regarding the utility of establishing a peer review for this project. Would a peer review panel result in a substantially better product, bring valuable

experience from projects to supplement the consulting team, and provide many invaluable suggestions for the proposed land model development and implementation? If a peer review is deemed vital for the success and oversight of this project, the consultant should propose potential candidates to be considered for a review panel for the model development work.

**LPA staff resources:**

Jeremy Raw – 96 hours

Felix Nwoko – 72 hours

Chao Wang – 48 hours

MPO Technical Team will be consulted to provide oversight

## **MPO Model Enhancements**

### ***1) Sub-area analysis tool***

The purpose of this sub-area model enhancement is essentially to develop a tool that would allow for an in-depth evaluation of a multi-modal transportation system in relatively small geographic area or within a corridor. Generally, three techniques can be used to implement sub-area or to create subsets of the regional model:

1. Region-wide abstraction
2. Sub-area windowing
3. Sub-area focusing

#### **Region-wide Abstraction**

This technique is simply uniform aggregation of networks and zone information across the TRM boundary to create a coarse hierarchy – usually a district system.

#### **Sub-area Windowing**

Windowing is simply the extraction of the sub-area of interest (window) from the TRM and collapsing trip ends outside the window onto the window boundary much like the treatment of external stations in the original network.

In essence, this involves drawing a cordon around the focus area of analysis – e.g. Carolina North, and designating external stations outside the cordon. Within the focus area, network and zone details will be added, and trip tables that correspond to the revised network will be derived from the regional model trip table. Because the trip table is constant, this technique can only be used if the network, land use, and policy changes are not expected to significantly change trip generation, trip distribution, or mode split patterns.

#### **Sub-area Focusing**

Focusing is the abstraction of the focus of interest (e.g. Carolina North) from the regional model and abstraction of zones and network information outside the planning area boundary. In this technique, the current Triangle Regional Model (TRM) networks will be retained either in its entirety or in some detailed form within the sub-area. Likewise, zones will be represented in more detail where possible, especially along transit service areas. Outside the study or influence area, networks will be collapsed in some skeleton form, and zones will be aggregated into progressively larger zones as distance from the sub-area increases.

The resulting zone and network structure enable the modeling of the effects of SE data and policy changes, as well as network changes, because the entire travel forecast model chain can be run with the “focused” data set.

#### **Recommended Technique**

Sub-area focusing is recommended as a technique for creating subsets from the regional model for sub-area analysis. This technique is best suited for local and corridor analyses and major updates of the regional model when only a small sub-area is under investigation. The Federal Highway Administration (FHWA) sponsored the development of a sub-area focusing tool called

SAF. The program converts large regional datasets into focused datasets that can be output into any computer package format the user chooses.

Task involves the development of scripts and user interface within the TRM environment to permit sub-area analysis.

### ***2) Select Link Analysis Tool.***

MPO staff members are often asked to ascertain the origin and destination of trips along specific links. This is done through what is called select link analysis. The LPA staff was requested to conduct this analysis for Weaver Dairy Road in Chapel Hill and the erstwhile Eno Drive. Select link analysis is also used as a tool in the determination of the “Purpose and Need” of a project. This tool will be extremely useful tool for the CTP and 2035 LRTP update as well as fulfilling SAFETEA-LU planning requirements for metropolitan transportation plans.

Task involves development of scripts and user interface within the TRM environment to permit select link analysis.

### ***3) LRTP and AQ Performance Measures.***

As part of the development of the 2025 LRTP, the TAC approved performance measures and targets for evaluation of LRTP alternatives. The measures are as follows: travel time, average speed, total VMT, total VHT, VMT and VMT per capita, percent network experiencing congestion, hours of delay, mode share (SOV, HOV, rail, buses, bike and pedestrian), daily transit ridership, v/c ratio, etc. The TAC requested that the measures be summarized by county, district, and major activity center.

Task involves the development of scripts and user interface within the TRM environment to permit extraction of model results and intermediate outputs. Tasks will link the LRTP with mobile6 and air quality results.

#### **Staff Resources**

Jeremy Raw – 72 hours

Felix Nwoko – 72 hours

Chao Wang – 40 hours

**ITS Deployment Plan Update)**

Intelligent Transportation Systems (ITS) are applications of advanced transportation operation and communication technologies used to improve safety, relieve congestion and provide better information to travelers. The Federal Highway Administration (FHWA) issued a final rule to implement Section 5206(e) of the Transportation Equity Act for the 21st Century (TEA-21) in January of 2001. This final rule required that States develop regional ITS strategies which conform to the National ITS Architecture and applicable standards. To meet these requirements and ensure future federal funding eligibility, the North Carolina Department of Transportation (NCDOT), in cooperation with CAMPO and DCHC MPO, developed the Triangle regional ITS architectures and deployment plan. Update of the ITS deployment plan is required to provide a framework for Long Range Transportation Plan (LRTP) integration as well as to identify specific projects for TIP programming.

**Objectives:**

1. To update the Triangle regional ITS architecture and deployment plan.
2. To estimate the benefits and costs of ITS investments.

**Previous Work:**

1. Triangle regional ITS deployment plan in 2000

**Proposed Activities:**

1. Identify ITS needs and issues in the Triangle region.
2. Map the needs to the national ITS architecture to determine work scope.
3. Update the regional ITS architecture.
4. Update the deployment plan using Turbo Architecture 3.2 (the existing plan was developed with 1.0).
5. Develop communication plans and system engineering plans.
6. Evaluate the effectiveness of ITS strategies using software ITS Deployment Analysis System (IDAS).
7. Assess air quality benefits of ITS strategies.

**Products:**

1. Updated regional ITS architecture.
2. Updated regional ITS deployment plan.
3. Detailed cost estimates
4. Performance evaluation and Measures of effectiveness of ITS strategies
5. Reports of cost-benefit evaluation on ITS deployment plan.

**Relationship to Other Plans and MPO Activities:**

Update of the ITS deployment plan is required to provide a framework for LRTP integration as well as to identify specific projects for TIP programming. It is also closely related to CMS and air quality analysis etc.

Staff Resources

Felix Nwoko – 120

### 2006-2007 UPWP Major Emphasis Projects - Local Matching Funds Distribution

				<b>Local</b>	<b>FHWA</b>	<b>Total</b>
1	<b>Bicycle and Pedestrian Trip (non-motorized) Model Enhancement</b>	250,000				
			<b>Durham</b>	38,622	200,000	
			<b>Town of Chapel Hill</b>	8,463		
			<b>Town of Carrboro</b>	2,915		
			<b>Orange County</b>	0		
			<b>Total</b>	<b>50,000</b>	<b>200,000</b>	<b>250,000</b>
2	<b>Travel Demand Model Major Update and Enhancement</b>	187,500				
			<b>Durham</b>	28,966	150,000	
			<b>Town of Chapel Hill</b>	6,347		
			<b>Town of Carrboro</b>	2,187		
			<b>Orange County</b>	0		
			<b>Total</b>	<b>37,500</b>	<b>150,000</b>	<b>187,500</b>
3	<b>Travel Survey Phase II: On-Board, External trips &amp; Travel time/speed surveys</b>	243,750				
			<b>Durham</b>	37,656	195,000	
			<b>Town of Chapel Hill</b>	8,251		
			<b>Town of Carrboro</b>	2,843		
			<b>Orange County</b>	0		
			<b>Total</b>	<b>48,750</b>	<b>195,000</b>	<b>243,750</b>
4	<b>MPO Transportation Data Management/Automation &amp; GIS Integration</b>	200,000				
			<b>Durham</b>	30,897	160,000	

### 2006-2007 UPWP Major Emphasis Projects - Local Matching Funds Distribution

				<b>Local</b>	<b>FHWA</b>	<b>Total</b>
			<b>Town of Chapel Hill</b>	6,771		
			<b>Town of Carrboro</b>	2,332		
			<b>Orange County</b>	0		
			<b>Total data automation/GIS</b>	<b>40,000</b>	<b>160,000</b>	<b>200,000</b>
5	<b>Land Use / Transportation/AQ Integration Model</b>	250,000				
			<b>Durham</b>	38,622	200,000	
			<b>Town of Chapel Hill</b>	8,463		
			<b>Town of Carrboro</b>	2,915		
			<b>Orange County</b>	0		
			<b>Total</b>	<b>50,000</b>	<b>200,000</b>	<b>250,000</b>
6	<b>Collector Street Plans</b>	50,000				
			<b>Durham</b>	7,724	40,000	
			<b>Town of Chapel Hill</b>	1,693		
			<b>Town of Carrboro</b>	583		
			<b>Orange County</b>	0		
			<b>Total</b>	<b>10,000</b>	<b>40,000</b>	<b>50,000</b>
7	<b>ITS Deployment Plan Update</b>	70,000				
	Triangle Regional Architecture		<b>Durham</b>	10,814	56,000	
			<b>Town of Chapel Hill</b>	2,370		
			<b>Town of Carrboro</b>	816		

**2006-2007 UPWP Major Emphasis Projects - Local Matching Funds Distribution**

				<b>Local</b>	<b>FHWA</b>	<b>Total</b>
			<b>Orange County</b>	0		
			<b>Total</b>	<b>14,000</b>	<b>56,000</b>	<b>70,000</b>

8	<b>Total matching funds</b>	1,251,250				
			<b>Durham</b>	193,301	1,001,000	
			<b>Town of Chapel Hill</b>	42,357		
			<b>Town of Carrboro</b>	14,592		
			<b>Orange County</b>	0		
			<b>Total</b>	<b>250,250</b>	<b>1,001,000</b>	<b>1,251,250</b>

## Funding Distribution & Agency Allocation Tables

Durham-Chapel Hill-Carrboro Urban Area																		MPO Summary	
MPO Funds Distribution by Agency																		4/20/2006 10:42	
FY 2006-2007 Unified Planning Work Program																			
Funding Distribution by Agency & Funding Sources																			
Receiving Agency	SPR		STP-DA		Section 104(f)		Section 5303			Section 5307			Section 5309			Task Funding Summary			
	Highway		Sec. 133(b)(3)(7)		PL		Highway/Transit			Transit			Transit			Local	NCDOT	Federal	Total
	NCDOT	FHWA	Local	FHWA	Local	FHWA	Local	NCDOT	FTA	Local	NCDOT	FTA	Local	NCDOT	FTA				
	20%	80%	20%	80%	20%	80%	10%	10%	80%	10%	10%	80%	10%	10%	80%				
Durham/DATA			372,650	1,490,600	117,153	468,611	12,289	12,289	98,312	43,931	43,931	351,445	0	0	0	546,022	56,220	2,408,968	3,011,210
Carrboro			0	0	6,341	25,364	0	0	0	0	0	0	0	0	0	6,341	-	25,364	31,705
Chapel Hill/CHT			40,000	160,000	16,499	65,996	11,807	11,807	94,456	20,000	20,000	160,000	0	0	0	88,306	31,807	480,452	600,565
Orange County			0	0	1,410	5,640	0	0	0	0	0	0	0	0	0	1,410	-	5,640	7,050
TJCOG			0	0	12,733	50,930	0	0	0	0	0	0	0	0	0	-	-	50,930	63,663
TTA			31,250	125,000	0	0	0	0	0	153,125	153,125	1,225,000	0	0	0	153,125	184,375	1,350,000	1,687,500
NCDOT	12300	49200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12,300	49,200	61,500
Totals	\$12,300	\$49,200	\$443,900	\$1,775,600	\$154,135	\$616,541	\$24,096	\$24,096	\$192,768	\$217,056	\$217,056	\$1,736,445	\$0	\$0	\$0	\$795,204	\$284,702	\$4,370,554	\$5,463,192

## Summary MPO Funding Source Tables

MPO Summary (FHWA/FTA Funds)		Durham-Chapel Hill-Carrboro Urban Area FY 2006-2007 Unified Planning Work Program Summary Funding Source Tables - FHWA/FTA Fund:															MPO Summary 4/20/2006 10:43			
Task Description	SPR Highway		STP-DA 133(b)(3)(7)		Sec. 104(f) PL		Section 5303 Highway/Transit			Section 5307 Transit			Section 5309 Transit			Task Funding Summary				
	NCDOT 20%	FHWA 80%	Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 10%	NCDOT 10%	FTA 80%	Local 10%	NCDOT 10%	FTA 80%	Local 25%	NCDOT 25%	FTA 50%	Local	NCDOT	Federal	Total	
	<b>II A</b>	<b>Surveillance of Change</b>																		
1	0	0	0	0	3,404	13,617	0	0	0	0	0	0	0	0	0	0	3,404	-	13,617	17,021
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
3	0	0	0	0	50	200	0	0	0	0	0	0	0	0	0	0	50	-	200	250
4	0	0	0	0	550	2,200	0	0	0	0	0	0	0	0	0	0	550	-	2,200	2,750
5	0	0	0	0	300	1,200	7,289	7,289	58,312	0	0	0	0	0	0	0	7,589	7,289	59,512	74,390
6	0	0	0	0	1,000	4,000	0	0	0	0	0	0	0	0	0	0	1,000	-	4,000	5,000
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
9	0	0	19,000	76,000	7,400	29,600	0	0	0	0	0	0	0	0	0	0	26,400	-	105,600	132,000
10	0	0	2,319	9,274	150	600	1,875	1,875	15,000	1,250	1,250	10,000	0	0	0	0	5,594	3,125	34,874	43,593
11	0	0	800	3,200	0	0	0	0	0	0	0	0	0	0	0	0	800	-	3,200	4,000
12	0	0	1,333	5,331	60	240	0	0	0	0	0	0	0	0	0	0	1,393	-	5,571	6,964
13	0	0	1,496	5,985	0	0	0	0	0	0	0	0	0	0	0	0	1,496	-	5,985	7,481
<b>II B</b>	<b>Long Range Transp. Plan</b>																			
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
2	0	0	0	0	60	240	0	0	0	0	0	0	0	0	0	0	60	-	240	300
3	2,100	8,400	185,842	743,367	0	0	0	0	0	12,500	12,500	100,000	0	0	0	0	198,342	14,600	851,767	1,064,709
4	0	0	49,881	199,525	0	0	0	0	0	1,250	1,250	10,000	0	0	0	0	51,131	1,250	209,525	261,906
5	0	0	0	0	5,889	23,556	625	625	5,000	0	0	0	0	0	0	0	6,514	625	28,556	35,695
6	0	0	0	0	5,615	22,460	0	0	0	0	0	0	0	0	0	0	5,615	-	22,460	28,075
7	0	0	0	0	1,546	6,184	0	0	0	0	0	0	0	0	0	0	1,546	-	6,184	7,730
8	0	0	0	0	9,892	39,566	307	307	2,456	0	0	0	0	0	0	0	10,199	307	42,022	52,528
9	0	0	0	0	3,969	15,877	0	0	0	0	0	0	0	0	0	0	3,969	-	15,877	19,846
10	0	0	40,000	160,000	12,019	48,077	2,500	2,500	20,000	775	775	6,202	0	0	0	0	55,295	3,275	234,279	292,849
11	0	0	4,039	16,155	3,000	12,000	0	0	0	0	0	0	0	0	0	0	7,039	-	28,155	35,194
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
13	200	800	17,000	68,000	7,299	29,197	0	0	0	0	0	0	0	0	0	0	24,299	200	97,997	122,496
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
15	0	0	0	0	659	2,634	0	0	0	0	0	0	0	0	0	0	659	-	2,634	3,293
16	0	0	0	0	4,449	17,797	625	625	5,000	0	0	0	0	0	0	0	5,074	625	22,797	28,496
17	800	3,200	56,250	225,000	11,571	46,283	0	0	0	1,785	1,785	14,283	0	0	0	0	69,606	2,585	288,766	360,958
18	200	800	0	0	3,740	14,961	0	0	0	0	0	0	0	0	0	0	3,740	200	15,761	19,701
<b>II C</b>	<b>Short Range Transit Planning</b>																			
1	0	0	0	0	250	1,000	125	125	1,000	121,250	121,250	970,000					121,625	121,375	972,000	1,215,000
<b>III-A</b>	<b>Planning Work Program</b>																			
	400	1,600	0	0	3,174	12,697	375	375	3,000	3,524	3,524	28,191	0	0	0	0	7,073	4,299	45,488	56,860
<b>III-B</b>	<b>Transp. Improvement Plan</b>																			
	400	1,600	0	0	6,633	26,532	0	0	0	464	464	3,711	0	0	0	0	7,097	864	31,843	39,804
<b>III-C</b>	<b>Cvl Rgts. Cmp/Otr .Reg. Rqs.</b>																			
1	0	0	0	0	0	0	0	0	0	375	375	3,000	0	0	0	0	375	375	3,000	3,750
2	0	0	0	0	5,162	20,649	0	0	0	375	375	3,000	0	0	0	0	5,537	375	23,649	29,561
3	0	0	0	0	40	160	0	0	0	1,250	1,250	10,000	0	0	0	0	1,290	1,250	10,160	12,700
4	0	0	0	0	1,037	4,147	5,000	5,000	40,000	1,250	1,250	10,000	0	0	0	0	7,287	6,250	54,147	67,684
5	0	0	0	0	0	0	0	0	0	625	625	5,000	0	0	0	0	625	625	5,000	6,250
6	0	0	0	0	5,127	20,506	0	0	0	5,454	5,454	43,632	0	0	0	0	10,581	5,454	64,138	80,173
7	0	0	0	0	0	0	0	0	0	375	375	3,000	0	0	0	0	375	375	3,000	3,750
<b>III-D</b>	<b>Incidental Ping/Project Dev.</b>																			
1	100	400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	100	400	500
2	1,000	4,000	0	0	3,383	13,531	0	0	0	0	0	0	0	0	0	0	3,383	1,000	17,531	21,914
3	1,000	4,000	54,000	216,000	13,750	55,000	0	0	0	19,375	19,375	155,000	0	0	0	0	87,125	20,375	430,000	537,500
4	2,100	8,400	0	0	2,581	10,323	625	625	5,000	6,250	6,250	50,000	0	0	0	0	9,456	8,975	73,723	92,154
<b>III-E</b>	<b>Management &amp; Operations</b>																			
1	4,000	16,000	11,941	47,763	30,377	121,507	4,750	4,750	38,000	38,928	38,928	311,426	0	0	0	0	85,996	47,678	534,696	668,370
<b>Totals</b>	\$12,300	\$49,200	\$443,900	\$1,775,600	\$154,135	\$616,541	\$24,096	\$24,096	\$192,768	\$217,056	\$217,056	\$1,736,445	\$0	\$0	\$0	\$0	\$839,187	\$253,452	\$4,370,554	\$5,463,192

## MPO PL and STP-DA Tasks Funding Tables

FHWA Planning Funds MPO PL & STP-DA Total		Durham-Chapel Hill-Carrboro Urban Area FY 2006-2007 Unified Planning Work Program MPO PL & STP-DA Funding Tables								
Task Description	STP-DA Section 133(b)(3)(7)	PL Section 104(f)			Total FHWA Planning Funds					
		Local 20%	FHWA 80%	Total 100%	Local 20%	FHWA 80%	Total 100%			
<b>II A</b>	<b>Surveillance of Change</b>									
1	Traffic Volume Counts	0	0	0	3,404	13,617	17,021	3,404	13,617	17,021
2	Vehicle Miles of Travel	0	0	0	0	0	0	0	0	0
3	Street System Changes	0	0	0	50	200	250	50	200	250
4	Traffic Accidents	0	0	0	550	2,200	2,750	550	2,200	2,750
5	Transit System Data	0	0	0	300	1,200	1,500	300	1,200	1,500
6	Dwelling Unit, Pop. & Emp. Change	0	0	0	1,000	4,000	5,000	1,000	4,000	5,000
7	Air Travel	0	0	0	0	0	0	0	0	0
8	Vehicle Occupancy Rates	0	0	0	0	0	0	0	0	0
9	Travel Time Studies	19,000	76,000	95,000	7,400	29,600	37,000	26,400	105,600	132,000
10	Mapping	2,319	9,274	11,593	150	600	750	2,469	9,874	12,343
11	Central Area Parking Inventory	800	3,200	4,000	0	0	0	800	3,200	4,000
12	Bike & Ped. Facilities Inventory	1,333	5,331	6,664	60	240	300	1,393	5,571	6,964
13	Bike & Ped. Counts	1,496	5,985	7,481	0	0	0	1,496	5,985	7,481
<b>II B</b>	<b>Long Range Transp. Plan</b>									
1	Collection of Base Year Data	0	0	0	0	0	0	0	0	0
2	Collection of Network Data	0	0	0	60	240	300	60	240	300
3	Travel Model Updates	185,842	743,367	929,209	0	0	0	185,842	743,367	929,209
4	Travel Surveys	49,881	199,525	249,406	0	0	0	49,881	199,525	249,406
5	Forecast of Data to Horizon year	0	0	0	5,889	23,556	29,445	5,889	23,556	29,445
6	Community Goals & Objectives	0	0	0	5,615	22,460	28,075	5,615	22,460	28,075
7	Forecast of Future Travel Patterns	0	0	0	1,546	6,184	7,730	1,546	6,184	7,730
8	Capacity Deficiency Analysis	0	0	0	9,892	39,566	49,458	9,892	39,566	49,458
9	Highway Element of th LRTP	0	0	0	3,969	15,877	19,846	3,969	15,877	19,846
10	Transit Element of the LRTP	40,000	160,000	200,000	12,019	48,077	60,096	52,019	208,077	260,096
11	Bicycle & Ped. Element of the LRTP	4,039	16,155	20,194	3,000	12,000	15,000	7,039	28,155	35,194
12	Airport/Air Travel Element of LRTP	0	0	0	0	0	0	0	0	0
13	Collector Street Element of LRTP	17,000	68,000	85,000	7,299	29,197	36,496	24,299	97,197	121,496
14	Rail, Water or other mode of LRTP	0	0	0	0	0	0	0	0	0
15	Freight Movement/Mobility Planning	0	0	0	659	2,634	3,293	659	2,634	3,293
16	Financial Planning	0	0	0	4,449	17,797	22,246	4,449	17,797	22,246
17	Congestion Management Strategies	56,250	225,000	281,250	11,571	46,283	57,854	67,821	271,283	339,104
18	Air Qual. Planning/Conformity Anal.	0	0	0	3,740	14,961	18,701	3,740	14,961	18,701
<b>II C</b>	<b>Short Range Transit Planning</b>									
1	Short Range Transit Planning	0	0	0	250	1,000	1,250	250	1,000	1,250
<b>III-A</b>	<b>Planning Work Program</b>	0	0	0	3,174	12,697	15,871	3,174	12,697	15,871
<b>III-B</b>	<b>Transp. Improvement Plan</b>	0	0	0	6,633	26,532	33,165	6,633	26,532	33,165
<b>III-C</b>	<b>Cvl Rgts. Cmp./Otr. Reg. Reqs.</b>									
1	Title VI	0	0	0	0	0	0	0	0	0
2	Environmental Justice	0	0	0	5,162	20,649	25,811	5,162	20,649	25,811
3	Minority Business Enterprise	0	0	0	40	160	200	40	160	200
4	Planning for the Elderly & Disabled	0	0	0	1,037	4,147	5,184	1,037	4,147	5,184
5	Safety/Drug Control Planning	0	0	0	0	0	0	0	0	0
6	Public Involvement	0	0	0	5,127	20,506	25,633	5,127	20,506	25,633
7	Private Sector Participation	0	0	0	0	0	0	0	0	0
<b>III-D</b>	<b>Incidental Plng./Project Dev.</b>									
1	Transportation Enhancement Plng.	0	0	0	0	0	0	0	0	0
2	Enviro. Analysis & Pre-TIP Plng.	0	0	0	3,383	13,531	16,914	3,383	13,531	16,914
3	Special Studies	54,000	216,000	270,000	13,750	55,000	68,750	67,750	271,000	338,750
4	Regional or Statewide Planning	0	0	0	2,581	10,323	12,904	2,581	10,323	12,904
<b>III-E</b>	<b>Management &amp; Operations</b>									
1	Management & Operations	11,941	47,763	59,704	30,377	121,507	151,884	42,318	169,270	211,588
<b>Totals</b>		<b>443,900</b>	<b>1,775,600</b>	<b>2,219,500</b>	<b>154,135</b>	<b>616,541</b>	<b>770,676</b>	<b>598,035</b>	<b>2,392,141</b>	<b>2,990,176</b>

## Composite Agency Tables - PL and STP-DA

Composite Agency Tables PL/STP-DA		Durham-Chapel Hill-Carrboro Urban Area FY 2005-2006 Unified Planning Work Program Composite Agency Tables (PL & STP-DA Funds)																					MPO Summary		
	Task Description	Chapel Hill			Carrboro			Orange			TJCOG			Durham			TTA			MPO					
		Local 20%	FHWA 80%	Total 100%	Local 20%	FHWA 80%	Total 100%	Local 20%	FHWA 80%	Total 100%	Local 20%	FHWA 80%	Total 100%	Local 20%	FHWA 80%	Total 100%	Local 20%	FHWA 80%	Total 100%	Local 20%	FHWA 80%	Total 100%			
II A	<b>Surveillance of Change</b>																								
1	Traffic Volume Counts	0	0	0	0	0	0	0	0	0	0	0	0	3,404	13,617	17,021	0	0	0	3,404	13,617	17,021			
2	Vehicle Miles of Travel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
3	Street System Changes	0	0	0	50	200	250	0	0	0	0	0	0	0	0	0	0	0	0	50	200	250			
4	Traffic Accidents	0	0	0	150	600	750	0	0	0	0	0	0	400	1,600	2,000	0	0	0	550	2,200	2,750			
5	Transit System Data	0	0	0	300	1,200	1,500	0	0	0	0	0	0	0	0	0	0	0	0	300	1,200	1,500			
6	Dwelling Unit, Pop. & Emp. Change	0	0	0	0	0	0	0	0	0	0	0	0	1,000	4,000	5,000	0	0	0	1,000	4,000	5,000			
7	Air Travel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
8	Vehicle Occupancy Rates	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
9	Travel Time Studies	0	0	0	0	0	0	0	0	0	0	0	0	26,400	105,600	132,000	0	0	0	26,400	105,600	132,000			
10	Mapping	0	0	0	150	600	750	0	0	0	0	0	0	2,319	9,274	11,593	0	0	0	2,469	9,874	12,343			
11	Central Area Parking Inventory	0	0	0	0	0	0	0	0	0	0	0	0	800	3,200	4,000	0	0	0	800	3,200	4,000			
12	Bike & Ped. Facilities Inventory	0	0	0	60	240	300	0	0	0	0	0	0	1,333	5,331	6,664	0	0	0	1,393	5,571	6,964			
13	Bike & Ped. Counts	0	0	0	0	0	0	0	0	0	0	0	0	1,496	5,985	7,481	0	0	0	1,496	5,985	7,481			
II B	<b>Long Range Transp. Plan</b>																								
1	Collection of Base Year Data	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
2	Collection of Network Data	0	0	0	60	240	300	0	0	0	0	0	0	0	0	0	0	0	0	60	240	300			
3	Travel Model Updates	0	0	0	0	0	0	0	0	0	0	0	0	185,842	743,367	929,209	0	0	0	185,842	743,367	929,209			
4	Travel Surveys	0	0	0	0	0	0	0	0	0	0	0	0	49,881	199,525	249,406	0	0	0	49,881	199,525	249,406			
5	Forecast of Data to Horizon year	1,250	5,000	6,250	120	480	600	0	0	0	2,881	11,522	14,403	1,639	6,554	8,193	0	0	0	5,889	23,556	29,445			
6	Community Goals & Objectives	0	0	0	60	240	300	0	0	0	0	0	0	5,555	22,220	27,775	0	0	0	5,615	22,460	28,075			
7	Forecast of Future Travel Patterns	0	0	0	0	0	0	0	0	0	0	0	0	1,546	6,184	7,730	0	0	0	1,546	6,184	7,730			
8	Capacity Deficiency Analysis	1,250	5,000	6,250	0	0	0	0	0	0	0	0	0	8,642	34,566	43,208	0	0	0	9,892	39,566	49,458			
9	Highway Element of the LRTP	1,250	5,000	6,250	50	200	250	0	0	0	0	0	0	2,669	10,677	13,346	0	0	0	3,969	15,877	19,846			
10	Transit Element of the LRTP	40,000	160,000	200,000	100	400	500	0	0	0	9,250	37,000	46,250	2,669	10,677	13,346	0	0	0	52,019	208,077	260,096			
11	Bicycle & Ped. Element of the LRTP	2,500	10,000	12,500	500	2,000	2,500	0	0	0	0	0	0	4,039	16,155	20,194	0	0	0	7,039	28,155	35,194			
12	Airport/Air Travel Element of LRTP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
13	Collector Street Element of LRTP	0	0	0	75	300	375	0	0	0	0	0	0	24,224	96,897	121,121	0	0	0	24,299	97,197	121,496			
14	Rail, Water or other mode of LRTP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
15	Freight Movement/Mobility Planning	0	0	0	0	0	0	0	0	0	0	0	0	659	2,634	3,293	0	0	0	659	2,634	3,293			
16	Financial Planning	2,500	10,000	12,500	0	0	0	0	0	0	0	0	0	1,949	7,797	9,746	0	0	0	4,449	17,797	22,246			
17	Congestion Management Strategies	0	0	0	600	2,400	3,000	0	0	0	0	0	0	35,971	143,883	179,854	31,250	125,000	156,250	67,821	271,283	339,104			
18	Air Qual. Planning/Conformity Anal.	0	0	0	0	0	0	1,410	5,640	7,050	602	2,408	3,010	1,728	6,913	8,641	0	0	0	3,740	14,961	18,701			
II C	<b>Short Range Transit Planning</b>																								
1	Short Range Transit Planning	0	0	0	250	1,000	1,250	0	0	0	0	0	0	0	0	0	0	0	0	250	1,000	1,250			
III-A	<b>Planning Work Program</b>	250	1,000	1,250	300	1,200	1,500	0	0	0	0	0	0	2,624	10,497	13,121	0	0	0	3,174	12,697	15,871			
III-B	<b>Transp. Improvement Plan</b>	500	2,000	2,500	400	1,600	2,000	0	0	0	0	0	0	5,733	22,932	28,665	0	0	0	6,633	26,532	33,165			
III-C	<b>Cvi Rgts. Cmp./Otr .Reg. Reqs.</b>																								
1	Title VI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
2	Environmental Justice	0	0	0	60	240	300	0	0	0	0	0	0	5,102	20,409	25,511	0	0	0	5,162	20,649	25,811			
3	Minority Business Enterprise	0	0	0	40	160	200	0	0	0	0	0	0	0	0	0	0	0	0	40	160	200			
4	Planning for the Elderly & Disabled	0	0	0	50	200	250	0	0	0	0	0	0	987	3,947	4,934	0	0	0	1,037	4,147	5,184			
5	Safety/Drug Control Planning	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
6	Public Involvement	0	0	0	150	600	750	0	0	0	0	0	0	4,977	19,906	24,883	0	0	0	5,127	20,506	25,633			
7	Private Sector Participation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
III-D	<b>Incidental Plng./Project Dev.</b>																								
1	Transportation Enhancement Plng.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
2	Enviro. Analysis & Pre-TIP Plng.	0	0	0	100	400	500	0	0	0	0	0	0	3,283	13,131	16,414	0	0	0	3,383	13,531	16,914			
3	Special Studies	1,250	5,000	6,250	0	0	0	0	0	0	0	0	0	66,500	266,000	332,500	0	0	0	67,750	271,000	338,750			
4	Regional or Statewide Planning	0	0	0	0	0	0	0	0	0	0	0	0	2,581	10,323	12,904	0	0	0	2,581	10,323	12,904			
III-E	<b>Management &amp; Operations</b>																								
1	Management & Operations	5,749	22,996	28,745	2,716	10,864	13,580	0	0	0	0	0	0	33,853	135,410	169,263	0	0	0	42,318	169,270	211,588			
Totals		56,499	225,996	282,495	6,341	25,364	31,705	1,410	5,640	7,050	12,733	50,930	63,663	489,803	1,959,211	2,449,014	31,250	125,000	156,250	598,035	2,392,141	2,990,176			

## Consulting Services Breakdown (MPO Total)

Durham-Chapel Hill-Carrboro Urban Area FY 2006-2007 Unified Planning Work Program Consulting Services Breakdown													
DCHC MPO Total													
	Task Description	STP-DA 133(b)(3)(7)						Section 104(f) - PL					
		Staff		Consulting		Total STP-DA		Staff		Consulting		Total PL	
		Local	FHWA	Local	FHWA	Local	FHWA	Local	FHWA	Local	FHWA	Local	FHWA
		20%	80%	20%	80%	20%	80%	20%	80%	20%	80%	20%	80%
II A	<b>Surveillance of Change</b>												
II A 1	Traffic Volume Counts	0	0	0	0	0	0	2,000	8,001	1,404	5,616	3,404	13,617
2	Vehicle Miles of Travel	0	0	0	0	0	0	0	0	0	0	0	0
3	Street System Changes	0	0	0	0	0	0	50	200	0	0	50	200
4	Traffic Accidents	0	0	0	0	0	0	550	2,200	0	0	550	2,200
5	Transit System Data	0	0	0	0	0	0	300	1,200	0	0	300	1,200
6	Dwelling Unit, Pop. & Emp. Change	0	0	0	0	0	0	1,000	4,000	0	0	1,000	4,000
7	Air Travel	0	0	0	0	0	0	0	0	0	0	0	0
8	Vehicle Occupancy Rates	0	0	0	0	0	0	0	0	0	0	0	0
9	Travel Time Studies	0	0	19,000	76,000	19,000	76,000	2,400	9,600	5,000	20,000	7,400	29,600
10	Mapping	2,319	9,274	0	0	2,319	9,274	150	600	0	0	150	600
11	Central Area Parking Inventory	800	3,200	0	0	800	3,200	0	0	0	0	0	0
12	Bike & Ped. Facilities Inventory	1,333	5,331	0	0	1,333	5,331	60	240	0	0	60	240
13	Bike & Ped. Counts	1,496	5,985	0	0	1,496	5,985	0	0	0	0	0	0
II B	<b>Long Range Transp. Plan</b>												
II B 1	Collection of Base Year Data	0	0	0	0	0	0	0	0	0	0	0	0
2	Collection of Network Data	0	0	0	0	0	0	60	240	0	0	60	240
3	Travel Model Updates	10,142	40,567	175,700	702,800	185,842	743,367	0	0	0	0	0	0
4	Travel Surveys	1,131	4,525	48,750	195,000	49,881	199,525	0	0	0	0	0	0
5	Forecast of Data to Horizon year	0	0	0	0	0	0	5,889	23,556	0	0	5,889	23,556
6	Community Goals & Objectives	0	0	0	0	0	0	5,615	22,460	0	0	5,615	22,460
7	Forecast of Future Travel Patterns	0	0	0	0	0	0	1,546	6,184	0	0	1,546	6,184
8	Capacity Deficiency Analysis	0	0	0	0	0	0	9,892	39,566	0	0	9,892	39,566
9	Highway Element of the LRTP	0	0	0	0	0	0	3,969	15,877	0	0	3,969	15,877
10	Transit Element of the LRTP	0	0	40,000	160,000	40,000	160,000	12,019	48,077	0	0	12,019	48,077
11	Bicycle & Ped. Element of the LRTP	4,039	16,155	0	0	4,039	16,155	3,000	12,000	0	0	3,000	12,000
12	Airport/Air Travel Element of LRTP	0	0	0	0	0	0	0	0	0	0	0	0
13	Collector Street Element of LRTP	1,000	4,000	16,000	64,000	17,000	68,000	1,299	5,197	6,000	24,000	7,299	29,197
14	Rail, Water or other mode of LRTP	0	0	0	0	0	0	0	0	0	0	0	0
15	Freight Movement/Mobility Planning	0	0	0	0	0	0	659	2,634	0	0	659	2,634
16	Financial Planning	0	0	0	0	0	0	4,449	17,797	0	0	4,449	17,797
17	Congestion Management Strategies	31,250	125,000	25,000	100,000	56,250	225,000	4,347	17,387	7,224	28,896	11,571	46,283
18	Air Qual. Planning/Conformity Anal.	0	0	0	0	0	0	2,330	9,321	1,410	5,640	3,740	14,961
II C	<b>Short Range Transit Planning</b>												
II C 1	Short Range Transit Planning	0	0	0	0	0	0	250	1,000	0	0	250	1,000
III-A	<b>Planning Work Program</b>	0	0	0	0	0	0	3,174	12,697	0	0	3,174	12,697

<b>III-B</b>	<b>Transp. Improvement Plan</b>	0	0	0	0	0	0	6,633	26,532	0	0	6,633	26,532
<b>III-C</b>	<b>Cvl Rgts. Cmp./Otr .Reg. Reqs.</b>												
1	3 Title VI	0	0	0	0	0	0	0	0	0	0	0	0
2	Environmental Justice	0	0	0	0	0	0	5,162	20,649	0	0	5,162	20,649
3	Minority Business Enterprise	0	0	0	0	0	0	40	160	0	0	40	160
4	Planning for the Elderly & Disabled	0	0	0	0	0	0	1,037	4,147	0	0	1,037	4,147
5	Safety/Drug Control Planning	0	0	0	0	0	0	0	0	0	0	0	0
6	Public Involvement	0	0	0	0	0	0	5,127	20,506	0	0	5,127	20,506
7	Private Sector Participation	0	0	0	0	0	0	0	0	0	0	0	0
<b>III-D</b>	<b>Incidental Plng./Project Dev.</b>												
1	Transportation Enhancement Plng.	0	0	0	0	0	0	0	0	0	0	0	0
2	Enviro. Analysis & Pre-TIP Plng.	0	0	0	0	0	0	3,383	13,531	0	0	3,383	13,531
3	Special Studies	10,000	40,000	54,000	216,000	64,000	256,000	13,750	55,000	2,327	9,306	16,077	64,306
4	Regional or Statewide Planning	0	0	0	0	0	0	2,581	10,323	0	0	2,581	10,323
<b>III-EE</b>	<b>Management &amp; Operations</b>												
1	Management & Operations	11,941	47,763	0	0	11,941	47,763	30,377	121,507	0	0	30,377	121,507
<b>Totals</b>		<b>\$75,450</b>	<b>\$301,800</b>	<b>\$378,450</b>	<b>\$1,513,800</b>	<b>\$453,900</b>	<b>\$1,815,600</b>	<b>\$133,097</b>	<b>\$532,389</b>	<b>\$23,365</b>	<b>\$93,458</b>	<b>\$156,462</b>	<b>\$625,847</b>



## Task Descriptions and Summary

## Task Descriptions and Summary Narratives for FY 2006-07 UPWP

### II-A: Surveillance of Change

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

#### **Task II-A-1: Traffic Volume Counts**

Automatic traffic counts and turning movement counts at specified locations. Maintain ADT counts and database for model calibration on arterial, minor arterial, and collector streets. Produce 2005-05 count location and traffic volume maps.

FHWA Funds				FTA Transit Funds				
	Federal	Local	Total		Federal	State	Local	Total
Durham	13,617	3,404	17,021	DATA	0	0	0	0
Chapel Hill	0	0	0	CHT	0	0	0	0
Carrboro	0	0	0	TTA	0	0	0	0
Orange	0	0	0					
TTA	0	0	0					
TJCOG	0	0	0					
Total	13,617	3,404	17,021	Total	0	0	0	0

#### **Task II-A-2: Vehicle Miles of Travel**

No activities proposed, therefore no funds programmed.

#### **Task II-A-3: Street System Mileage Change**

The MPO will update inventory of improvements to municipal street system. Update inventory of signalization on existing major streets to provide accurate inputs for the Triangle Regional Model (TRM). The MPO will monitor changes in street mileage systems from the previous year and summarize inventory by functional classification. The Town of Chapel Hill, the Town of Carrboro, and the City of Durham will obtain from the NCDOT Division 7 and 5 offices and compile in database, improvements to the state highway system, whether planned, underway, or completed. Each municipality will compile and maintain similar records for its municipal street system. The MPO municipalities participating in the Powell Bill Program will certify street mileage

maintained during this fiscal year. The product of this task will feed into the proposed MPO Data Integration/Automation and Management Systems. The objective is that, periodically or as changes or additions to the major street system occur, street inventory will be updated and current through proposed data automation and management system.

FHWA Funds				FTA Transit Funds				
	Federal	Local	Total		Federal	State	Local	Total
Durham	0	0	0	DATA	0	0	0	0
Chapel Hill	0	0	0	CHT	0	0	0	0
Carrboro	200	50	250	TTA	0	0	0	0
Orange	0	0	0					
TTA	0	0	0					
TJCOG	0	0	0					
Total	200	50	250	Total	0	0	0	0

**Task II-A-4: Traffic Accidents**

The DCHC MPO will collect traffic accident data and prepare summary and analysis of high accident locations. Compare data analysis to previous years' results. Build off of and support the safety work of the NCDOT and MPO municipal governments. The task will feed into the MPO Congestion Management Systems (CMS) and the Mobility Report Card.

FHWA Funds				FTA Transit Funds				
	Federal	Local	Total		Federal	State	Local	Total
Durham	1,600	400	2,000	DATA	0	0	0	0
Chapel Hill	0	0	0	CHT	0	0	0	0
Carrboro	600	150	750	TTA	0	0	0	0
Orange	0	0	0					
TTA	0	0	0					
TJCOG	0	0	0					
Total	2,200	550	2,750	Total	0	0	0	0

**Task II-A-5: Transit System Data**

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

	Federal	Local	Total
Durham	0	0	0
Chapel Hill	0	0	0
Carrboro	1,200	300	1,500
Orange	0	0	0
TTA	0	0	0
TJCOG	0	0	0
Total	1,200	300	1,500

	Federal	State	Local	Total
DATA	58,312	7289	7289	72890
CHT	0	0	0	0
TTA	0	0	0	0
Total	58,312	7,289	7,289	72,890

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

Maintain inventory of dwelling units and population to determine needed changes in transportation services to meet current and projected demands. Review developments to assess impacts to the 2030 LRTP, the model update, and transportation project development. Changes in dwelling units and employment within the MPO will be identified and evaluated to determine accuracy and consistency with the socio-economic forecast. The MPO will review and tabulate Census data, local parcel, zoning, tax data records, InfoUSA and Employment Security Commission data as part of this monitoring tasks. The MPO will commence the first phase of Data Automation/Integration and Management System.

FHWA Funds			
	Federal	Local	Total
Durham	4,000	1,000	5,000
Chapel Hill	0	0	0
Carrboro	0	0	0
Orange	0	0	0
TTA	0	0	0
TJCOG	0	0	0
Total	4,000	1,000	5,000

FTA Transit Funds				
	Federal	State	Local	Total
DATA	0	0	0	0
CHT	0	0	0	0
TTA	0	0	0	0
Total	0	0	0	0

**Task II-A-7: Air Travel**

No activities proposed, therefore no funds programmed.

**Task II-A-8: Vehicle Occupancy Rates**

No activities proposed, therefore no funds programmed.

**Task II-A-9: Travel Time Studies**

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

FHWA Funds			
	Federal	Local	Total
Durham	105,600	26,400	132,000
Chapel Hill	0	0	0
Carrboro	0	0	0
Orange	0	0	0
TTA	0	0	0
TJCOG	0	0	0
Total	105,600	26,400	132,000

FTA Transit Funds				
	Federal	State	Local	Total
DATA	0	0	0	0
CHT	0	0	0	0
TTA	0	0	0	0
Total	0	0	0	0

**Task II-A-10: Mapping**

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

FHWA Funds				FTA Transit Funds				
	Federal	Local	Total		Federal	State	Local	Total
Durham	9,274	2,319	11,593	DATA	0	0	0	0
Chapel Hill	0	0	0	CHT	25,000	3125	3125	31250
Carrboro	600	150	750	TTA	0	0	0	0
Orange	0	0	0					
TTA	0	0	0					
TJCOG	0	0	0					
Total	9,874	2,469	12,343	Total	25,000	3,125	3,125	31,250

**Task II-A-11: Central Area Parking Inventory**

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

FHWA Funds				FTA Transit Funds				
	Federal	Local	Total		Federal	State	Local	Total
Durham	3,200	800	4,000	DATA	0	0	0	0
Chapel Hill	0	0	0	CHT	0	0	0	0
Carrboro	0	0	0	TTA	0	0	0	0
Orange	0	0	0					
TTA	0	0	0					
TJCOG	0	0	0					
Total	3,200	800	4,000	Total	0	0	0	0

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

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

FHWA Funds				FTA Transit Funds				
	Federal	Local	Total		Federal	State	Local	Total
Durham	5,331	1,333	6,664	DATA	0	0	0	0
Chapel Hill	0	0	0	CHT	0	0	0	0
Carrboro	240	60	300	TTA	0	0	0	0
Orange	0	0	0					
TTA	0	0	0					
TJCOG	0	0	0					
Total	5,571	1,393	6,964	Total	0	0	0	0

**Task II-A-13: Bicycle and Pedestrian Counts**

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

FHWA Funds				FTA Transit Funds				
	Federal	Local	Total		Federal	State	Local	Total
Durham	5,985	1,496	7,481	DATA	0	0	0	0
Chapel Hill	0	0	0	CHT	0	0	0	0
Carrboro	0	0	0	TTA	0	0	0	0
Orange	0	0	0					
TTA	0	0	0					
TJCOG	0	0	0					
Total	5,985	1,496	7,481	Total	0	0	0	0

**II-A: Long Range Transportation Plan Activities**

Federal Law (as updated by TEA-21) and USDOT’s Metropolitan Planning Regulations, require the MPO to have a Long-Range Transportation Plan (LRTP) that is: multi-modal, financially constrained, has a minimum 20 year horizon, adhere to the MPO’s adopted Public Involvement Policy (PIP), have growth forecasts consistent with latest planning assumptions and local land use plan, meet air quality conformity and be approved by the Transportation Advisory Committee. The LRTP must be updated and reaffirmed every 4 years. The following tasks describe long range transportation planning work activities proposed for the 2006-07 UPWP.

**Task II-B-1: Collection of Base Year Data**

No activities proposed, therefore no funds programmed

**Task II-B-2: Collection of Network Data**

The Town of Carrboro will collect transportation network data.

FHWA Funds				FTA Transit Funds				
	Federal	Local	Total		Federal	State	Local	Total
Durham	0	0	0	DATA	0	0	0	0
Chapel Hill	0	0	0	CHT	0	0	0	0
Carrboro	240	60	300	TTA	0	0	0	0
Orange	0	0	0					
TTA	0	0	0					
TJCOG	0	0	0					
Total	240	60	300	Total	0	0	0	0

**Task II-B-3: Travel Model Updates**

Update of the Triangle Regional Model (TRM) including conversion and full implementation of model from Tranplan to TransCad. Proposed tasks include model improvements and enhancements, work associated with the calibration of the 2005 base model, commencement of the first phase of the MPO land use model and non-motorized trip sub model. The MPO will carry out other tasks needed to support the Triangle Regional Model update, including providing the MPO’s share of the Service Bureau funding and 50% FTE.

	Federal	Local	Total
Durham	743,367	185,842	929,209
Chapel Hill	0	0	0
Carrboro	0	0	0
Orange	0	0	0
TTA	0	0	0
TJCOG	0	0	0
Total	743,367	185,842	929,209

	Federal	State	Local	Total
DATA	0	0	0	0
CHT	0	0	0	0
TTA	100,000	12500	12500	125000
Total	100,000	12,500	12,500	125,000

**Task II-B-4: Travel Surveys**

The MPO will provide its share of funding for the collection travel surveys proposed for the Triangle region. The central purpose of the survey is to collect information on origins and destinations, traveler behavior, transit ridership, commercial vehicle usage, work place commuting, freight movement, etc. which would provide accurate inputs for the travel model update. The Service Bureau will be conducting following travel surveys for the TRM update: (1) External station/external-internal trip; (2) transit onboard survey; (3) travel time/speed survey; (4) special generators (including universities) survey.

FHWA Funds			
	Federal	Local	Total
Durham	199,525	49,881	249,406
Chapel Hill	0	0	0
Carrboro	0	0	0
Orange	0	0	0
TTA	0	0	0
TJCOG	0	0	0
Total	199,525	49,881	249,406

FTA Transit Funds				
	Federal	State	Local	Total
DATA	0	0	0	0
CHT	0	0	0	0
TTA	10,000	1250	1250	12500
Total	10,000	1,250	1,250	12,500

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

The MPO will project demographic and socio-economic factors described in Task II-B-1 into plan horizon year and air quality intermediate years. Forecasts will be generated for County control totals and traffic analysis zones. Forecasts will be made consistent with local land use plans and in corporation with local Planning Departments.

FHWA Funds				FTA Transit Funds				
	Federal	Local	Total		Federal	State	Local	Total
Durham	6,554	1,639	8,193	DATA	0	0	0	0
Chapel Hill	5,000	1,250	6,250	CHT	5,000	625	625	6,250
Carrboro	480	120	600	TTA	0	0	0	0
Orange	0	0	0					
TTA	0	0	0					
TJCOG	11,522	2,881	14,403					
Total	23,556	5,889	29,445	Total	5,000	625	625	6,250

**Task II-B-6: Community Goals and Objectives**

The MPO will re-evaluate community goals and objectives for the 2035 Long range Transportation Plan (LRTP) and the Comprehensive Transportation Plan (CTP). The process of formulating and re-evaluating goals will begin with visioning exercise. The MPO will conduct public meetings to assess community vision in terms of transportation, land use, growth, quality of life, etc. The expected work products will be adopted goals and objectives, and targets and policy framework for achieving goals.

FHWA Funds				FTA Transit Funds				
	Federal	Local	Total		Federal	State	Local	Total
Durham	22,220	5,555	27,775	DATA	0	0	0	0
Chapel Hill	0	0	0	CHT	0	0	0	0
Carrboro	240	60	300	TTA	0	0	0	0
Orange	0	0	0					
TTA	0	0	0					
TJCOG	0	0	0					
Total	22,460	5,615	28,075	Total	0	0	0	0

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

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

FHWA Funds				FTA Transit Funds				
	Federal	Local	Total		Federal	State	Local	Total
Durham	6,184	1,546	7,730	DATA	0	0	0	0
Chapel Hill	0	0	0	CHT	0	0	0	0
Carrboro	0	0	0	TTA	0	0	0	0
Orange	0	0	0					
TTA	0	0	0					
TJCOG	0	0	0					
Total	6,184	1,546	7,730	Total	0	0	0	0

**Task II-B-8: Capacity Deficiency Analysis**

The MPO will conduct a capacity deficiency analysis as part of the 2035 LRTP, CTP and CMS. The analysis will be made to determine existing and existing-plus-committed deficiencies.

FHWA Funds				FTA Transit Funds				
	Federal	Local	Total		Federal	State	Local	Total
Durham	34,566	8,642	43,208	DATA	0	0	0	0
Chapel Hill	5,000	1,250	6,250	CHT	2,456	307	307	3070
Carrboro	0	0	0	TTA	0	0	0	0
Orange	0	0	0					
TTA	0	0	0					
TJCOG	0	0	0					
Total	39,566	9,892	49,458	Total	2,456	307	307	3,070

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

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

FHWA Funds			
	Federal	Local	Total
Durham	10,677	2,669	13,346
Chapel Hill	5,000	1,250	6,250
Carrboro	200	50	250
Orange	0	0	0
TTA	0	0	0
TJCOG	0	0	0
Total	15,877	3,969	19,846

FTA Transit Funds				
	Federal	State	Local	Total
DATA	0	0	0	0
CHT	0	0	0	0
TTA	0	0	0	0
Total	0	0	0	0

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

The MPO will begin evaluation of transit elements of the Comprehensive Transportation Plan and the 2035 LRTP. Transit evaluate will include fixed-route bus service, fixed-guideway transit, highway capacity transit and demand responsive transit. Using travel behavior, ridership forecasts and other analysis, evaluation of transit element will look at unmet needs, new services areas and potential markets. Performance measures will be established for evaluating transit alternatives.

FHWA Funds			
	Federal	Local	Total
Durham	10,677	2,669	13,346
Chapel Hill	160,000	40,000	200,000
Carrboro	400	100	500
Orange	0	0	0
TTA	0	0	0
TJCOG	37,000	9,250	46,250
Total	208,077	52,019	260,096

FTA Transit Funds				
	Federal	State	Local	Total
DATA	6,202	775.25	775.25	7752.5
CHT	20,000	2500	2500	25000
TTA	0	0	0	0
Total	26,202	3,275	3,275	32,753

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

The MPO will begin evaluation of bicycle and pedestrian elements of the Comprehensive Transportation Plan and the 2035 LRTP. The MPO will continue work on the Durham Comprehensive pedestrian Plan and the Old Durham-Chapel Hill Road bicycle and

pedestrian feasibility study. Work will commence on the development of the Durham Comprehensive Bicycle Plan.

FHWA Funds				FTA Transit Funds				
	Federal	Local	Total		Federal	State	Local	Total
Durham	16,155	4,039	20,194	DATA	0	0	0	0
Chapel Hill	10,000	2,500	12,500	CHT	0	0	0	0
Carrboro	2,000	500	2,500	TTA	0	0	0	0
Orange	0	0	0					
TTA	0	0	0					
TJCOG	0	0	0					
Total	28,155	7,039	35,194	Total	0	0	0	0

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

No activities proposed, therefore no funds programmed. This work task will commence in the FY 2007-08 UPWP period.

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

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

FHWA Funds				FTA Transit Funds				
	Federal	Local	Total		Federal	State	Local	Total
Durham	96,897	24,224	121,121	DATA	0	0	0	0
Chapel Hill	0	0	0	CHT	0	0	0	0
Carrboro	300	75	375	TTA	0	0	0	0
Orange	0	0	0					
TTA	0	0	0					
TJCOG	0	0	0					
Total	97,197	24,299	121,496	Total	0	0	0	0

**Task II-B-14: Rail, Water, or other mode of LRTP**

No activities proposed, therefore no funds programmed

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

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

FHWA Funds				FTA Transit Funds				
	Federal	Local	Total		Federal	State	Local	Total
Durham	2,634	659	3,293	DATA	0	0	0	0
Chapel Hill	0	0	0	CHT	0	0	0	0
Carrboro	0	0	0	TTA	0	0	0	0
Orange	0	0	0					
TTA	0	0	0					
TJCOG	0	0	0					
Total	2,634	659	3,293	Total	0	0	0	0

**Task II-B-16: Financial Planning**

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

FHWA Funds				FTA Transit Funds				
	Federal	Local	Total		Federal	State	Local	Total
Durham	7,797	1,949	9,746	DATA	0	0	0	0
Chapel Hill	10,000	2,500	12,500	CHT	5,000	625	625	6250
Carrboro	0	0	0	TTA	0	0	0	0
Orange	0	0	0					
TTA	0	0	0					
TJCOG	0	0	0					
Total	17,797	4,449	22,246	Total	5,000	625	625	6,250

**Task II-B-17: Congestion Management Systems Strategies**

The MPO will work to implement and monitor the Congestion Management System (CMS) in accordance with the provisions of 23 U.S.C. and 23 CFR. Specifically, the MPO will continue on the development of CMS strategies and State of the Systems Report. This task also includes management of the MPO TDM programs by TTA.

FHWA Funds				FTA Transit Funds				
	Federal	Local	Total		Federal	State	Local	Total
Durham	143,883	35,971	179,854	DATA	11,227	1403.375	1403.38	14033.8
Chapel Hill	0	0	0	CHT	3,056	382	382	3820
Carrboro	2,400	600	3,000	TTA	0	0	0	0
Orange	0	0	0					
TTA	125,000	31,250	156,250					
TJCOG	0	0	0					
Total	271,283	67,821	339,104	Total	14,283	1,785	1,785	17,854

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

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

consultation, and providing assistance to NCDENR in developing and maintaining mobile source emission inventories.

FHWA Funds				FTA Transit Funds				
	Federal	Local	Total		Federal	State	Local	Total
Durham	6,913	1,728	8,641	DATA	0	0	0	0
Chapel Hill	0	0	0	CHT	0	0	0	0
Carrboro	0	0	0	TTA	0	0	0	0
Orange	5,640	1,410	7,050					
TTA	0	0	0					
TJCOG	2,408	602	3,010					
Total	14,961	3,740	18,701	Total	0	0	0	0

**Task II-C: Short Range Transit Planning**

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

FHWA Funds				FTA Transit Funds				
	Federal	Local	Total		Federal	State	Local	Total
Durham	0	0	0	DATA	0	0	0	0
Chapel Hill	0	0	0	CHT	1,000	125	125	1250
Carrboro	1,000	250	1,250	TTA	970,000	121250	121250	1212500
Orange	0	0	0					
TTA	0	0	0					
TJCOG	0	0	0					
Total	1,000	250	1,250	Total	971,000	121,375	121,375	1,213,750

**Task III-A: Planning Work Program**

Administer the FY 2005-2006 UPWP and prepare and process amendments as needed. Evaluate transportation planning work needs and emphasis areas and prepare the FY 2007-2008 UPWP. To prepare and continually maintain a Unified Planning Work Program (UPWP) that describes all transportation and transportation-related planning

activities anticipated within the DCHC MPO planning area for the FY 2007-2008. To develop, maintain, and complete the UPWP in conformance with applicable federal, state, and regional guidelines. To prepare UPWP amendments as necessary and requested by member agencies, to reflect any change in programming or focus for the current fiscal year.

FHWA Funds				FTA Transit Funds				
	Federal	Local	Total		Federal	State	Local	Total
Durham	10,497	2,624	13,121	DATA	25,191	3148.875	3148.88	31488.75
Chapel Hill	1,000	250	1,250	CHT	6,000	750	750	7500
Carrboro	1,200	300	1,500	TTA	0	0	0	0
Orange	0	0	0					
TTA	0	0	0					
TJCOG	0	0	0					
Total	12,697	3,174	15,871	Total	31,191	3,899	3,899	38,989

**Task III-B: Transportation Improvement Program (TIP)**

Amend FY 2006-2012 MTIP as needed. Continue to develop FY 2007 – 2013 MTIP. This includes the refinement of the MPO Priority Needs and the identification of the transportation projects, programs, and services towards which the MPO will direct STP DA funds. As the Lead Planning Agency (LPA) of the DCHC MPO, the City of Durham, Transportation Division is responsible for annually developing, amending, adjusting and maintaining the Transportation Improvement Program (TIP) for the metropolitan area. Under this activity, the LPA will update and amend the current, seven-year program of transportation improvement projects (MTIP) that is consistent with the 2025 Long-Range Transportation Plan, STIP, the State Implementation Plan (SIP), EPA Air Quality Conformity Regulations and FHWA/FTA Planning Regulations.

FHWA Funds				FTA Transit Funds				
	Federal	Local	Total		Federal	State	Local	Total
Durham	22,932	5,733	28,665	DATA	1,711	213.875	213.875	2138.75
Chapel Hill	2,000	500	2,500	CHT	2,000	250	250	2500
Carrboro	1,600	400	2,000	TTA	0	0	0	0
Orange	0	0	0					
TTA	0	0	0					
TJCOG	0	0	0					
Total	26,532	6,633	33,165	Total	3,711	464	464	4,639

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

**Task III-C-1: Title VI**

The federal legislation and regulations requires that the MPO comply with all the requirements imposed by Title VI of the Civil Rights Act of 1964 (78 Stat. 252), 49 U.S.C. 2000D TO 2000-D-4; the Regulations of DOT issued thereafter in the Code of Federal Regulations (commonly and herein referred to as CFR) Title 49, Subtitle A, Part 21), and the assurance by the MPO pursuant thereto. Accordingly, the MPO will continue to provide an update of Civil Rights statistics report to determine MPO compliance to civil rights provisions.

FHWA Funds				FTA Transit Funds				
	Federal	Local	Total		Federal	State	Local	Total
Durham	0	0	0	DATA	0	0	0	0
Chapel Hill	0	0	0	CHT	3,000	375	375	3750
Carrboro	0	0	0	TTA	0	0	0	0
Orange	0	0	0					
TTA	0	0	0					
TJCOG	0	0	0					
Total	0	0	0	Total	3,000	375	375	3,750

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

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

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

FHWA Funds				FTA Transit Funds				
	Federal	Local	Total		Federal	State	Local	Total
Durham	20,409	5,102	25,511	DATA	0	0	0	0
Chapel Hill	0	0	0	CHT	3,000	375	375	3750
Carrboro	240	60	300	TTA	0	0	0	0
Orange	0	0	0					
TTA	0	0	0					
TJCOG	0	0	0					
Total	20,649	5,162	25,811	Total	3,000	375	375	3,750

**Task III-C-3: Minority Business Enterprise**

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

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

FHWA Funds				FTA Transit Funds				
	Federal	Local	Total		Federal	State	Local	Total
Durham	0	0	0	DATA	0	0	0	0
Chapel Hill	0	0	0	CHT	10,000	1250	1250	12500
Carrboro	160	40	200	TTA	0	0	0	0
Orange	0	0	0					
TTA	0	0	0					
TJCOG	0	0	0					
Total	160	40	200	Total	10,000	1,250	1,250	12,500

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

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

FHWA Funds				FTA Transit Funds				
	Federal	Local	Total		Federal	State	Local	Total
Durham	3,947	987	4,934	DATA	40,000	5000	5000	50000
Chapel Hill	0	0	0	CHT	10,000	1250	1250	12500
Carrboro	200	50	250	TTA	0	0	0	0
Orange	0	0	0					
TTA	0	0	0					
TJCOG	0	0	0					
Total	4,147	1,037	5,184	Total	50,000	6,250	6,250	62,500

**Task III-C-5: Safety/Drug Control Planning**

No funds programmed.

**Task III-C-6: Public Involvement**

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

1. Refine the current Public Participation Process as needed.
2. Apply the Public Involvement Process to transportation programs and tasks:
3. Public meetings, workshops, and outreach programs to increase public participation, information dissemination, and education.
4. Update and maintenance of website.
5. Update and maintenance of mailing list database
6. Quarterly MPO newsletters, and project specific news letters.
7. Support of Citizen Advisory Committee

FHWA Funds				FTA Transit Funds				
	Federal	Local	Total		Federal	State	Local	Total
Durham	19,906	4,977	24,883	DATA	37,632	4704	4704	47040
Chapel Hill	0	0	0	CHT	6,000	750	750	7500
Carrboro	600	150	750	TTA	0	0	0	0
Orange	0	0	0					
TTA	0	0	0					
TJCOG	0	0	0					
Total	20,506	5,127	25,633	Total	43,632	5,454	5,454	54,540

**Task III-C-7: Private Sector Participation**

No funds programmed.

**III-D Incidental Planning/Project Development**

No funds programmed.

**Task III-D-1: Transportation Enhancement Planning**

No funds programmed

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

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

FHWA Funds				FTA Transit Funds				
	Federal	Local	Total		Federal	State	Local	Total
Durham	13,131	3,283	16,414	DATA	0	0	0	0
Chapel Hill	0	0	0	CHT	0	0	0	0
Carrboro	400	100	500	TTA	0	0	0	0
Orange	0	0	0					
TTA	0	0	0					
TJCOG	0	0	0					
Total	13,531	3,383	16,914	Total	0	0	0	0

### **Task III-D-3 Special Studies**

The MPO will be engaged in wide range of studies which will be conducted to meet the transportation planning needs of the area. These studies are expected to include a The Green House Gas Emissions Inventory/Action and MPO Air quality Initiatives, I-40 HOV/HOT Financial feasibility Study, Triangle Parkway Toll Road feasibility study, the East End Connector environmental study, ITS Regional Architecture Deployment Plan, the US15501 Transit Corridor Alignment study, TTA Phase 1 Rail Study, Regional Financing study, etc.

FHWA Funds				FTA Transit Funds				
	Federal	Local	Total		Federal	State	Local	Total
Durham	266,000	66,500	332,500	DATA	0	0	0	0
Chapel Hill	5,000	1,250	6,250	CHT	55,000	6875	6875	68750
Carrboro	0	0	0	TTA	100,000	12500	12500	125000
Orange	0	0	0					
TTA	0	0	0					
TJCOG	0	0	0					
Total	271,000	67,750	338,750	Total	155,000	19,375	19,375	193,750

**Task III-D-4: Regional or Statewide Planning**

The MPO will continue to coordinate with CAMPO, TTA, NCDOT, DENR, FHWA, FTA, EPA, and other State and regional agencies in regional transportation. This includes participation in the DCHC-CAMPO joint TAC meetings, TTA Board Meetings, Durham-Chapel Hill-Orange County Work Group, and a wide range of regional transportation planning working groups and committees. Examples include the Model Team, the Executive Committee, and the regional transit planning/operation coordination. Statewide planning includes participation in various statewide planning initiatives such as CMAQ Committee, Indirect and Cumulative Impacts of Transportation Projects in North Carolina, the State Transportation Plan process, and the Comprehensive Transportation Plan.

FHWA Funds				FTA Transit Funds				
	Federal	Local	Total		Federal	State	Local	Total
Durham	10,323	2,581	12,904	DATA	0	0	0	0
Chapel Hill	0	0	0	CHT	10,000	1250	1250	12500
Carrboro	0	0	0	TTA	45,000	5625	5625	56250
Orange	0	0	0					
TTA	0	0	0					
TJCOG	0	0	0					
Total	10,323	2,581	12,904	Total	55,000	6,875	6,875	68,750

### **Task III-E: Management and Operations**

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

1. Provide liaisons between DCHC MPO member agencies, transit providers, CAMPO, NCDOT, DENR, TJCOG, and other organizations at the local, regional, state, and federal levels on transportation related matters, issues and actions.
2. Work with the Capital Area Metropolitan Planning Organization (CAMPO) on regional issues. Prepare Regional Priority lists and MTIP and amend as necessary, Update transportation plans, travel demand model, and monitor data changes. Evaluate transportation planning programs developed through the 3C public participation process for appropriate MPO action.
3. Provide technical assistance to the Transportation Advisory Committee (TAC) and other member jurisdictions policy bodies.
4. Participate in Joint CAMPO/DCHC TCC and TAC meetings as a means to continually improve the quality and operation of the transportation planning process and decision making in the Triangle Region.
5. Review and comment on federal and state transportation-related plans, programs, regulations and guidelines.
6. Prepare and distribute TAC and TCC meeting agendas Attend TAC, TCC and other meetings associated with MPO planning activities.

FHWA  
Funds

	Federal	Local	Total
Durham	135,410	33,853	169,263
Chapel Hill	22,996	5,749	28,745
Carrboro	10,864	2,716	13,580
Orange	0	0	0
TTA	0	0	0
TJCOG	0	0	0
Total	169,270	42,318	211,588

FTA  
Transit  
Funds

	Federal	State	Local	Total
DATA	269,482	33685.25	33685.3	336852.5
CHT	79,944	9993	9993	99930
TTA	0	0	0	0
Total	349,426	43,678	43,678	436,783



## *Appendices*

### *Agency Project Descriptions and Funding Source Tables*



City of Durham  
Durham/LPA Task Funding Table  
Durham/LPA Task description and Narrative  
Consulting Services Breakdown  
DATA Transit (FTA) Table  
DATA Transit (FTA) Narrative  
FTA Disadvantaged Business Contracting Opportunities Form

City of Durham/LPA

**Durham-Chapel Hill-Carrboro Urban Area  
FY 2006-2007 Unified Planning Work Program  
Proposed Funding Source Tables**

Durham  
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	Task Description	STP-DA 133(b)(3)(7)		Sec. 104(f) PL		Section 5303 Highway/Transit			Section 5307 Transit			Section 5309 Transit			Task Funding Summary			
		Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 10%	NCDOT 10%	FTA 80%	Local 10%	NCDOT 10%	FTA 80%	Local 25%	NCDOT 25%	FTA 50%	Local	NCDOT	Federal	Total
		<b>II A</b>	<b>Surveillance of Change</b>															
II A 1	Traffic Volume Counts	0	0	3,404	13,617	0	0	0	0	0	0				3,404	-	13,617	17,021
2	Vehicle Miles of Travel	0	0	0	0	0	0	0	0	0	0				-	-	-	-
3	Street System Changes	0	0	0	0	0	0	0	0	0	0				-	-	-	-
4	Traffic Accidents	0	0	400	1,600	0	0	0	0	0	0				400	-	1,600	2,000
5	Transit System Data	0	0	0	0	7,289	7,289	58,312	0	0	0				7,289	7,289	58,312	72,890
6	Dwelling Unit, Pop. & Emp. Change	0	0	1,000	4,000	0	0	0	0	0	0				1,000	-	4,000	5,000
7	Air Travel	0	0	0	0	0	0	0	0	0	0				-	-	-	-
8	Vehicle Occupancy Rates	0	0	0	0	0	0	0	0	0	0				-	-	-	-
9	Travel Time Studies	19,000	76,000	7,400	29,600	0	0	0	0	0	0				26,400	-	105,600	132,000
10	Mapping	2,319	9,274	0	0	0	0	0	0	0	0				2,319	-	9,274	11,593
11	Central Area Parking Inventory	800	3,200	0	0	0	0	0	0	0	0				800	-	3,200	4,000
12	Bike & Ped. Facilities Inventory	1,333	5,331	0	0	0	0	0	0	0	0				1,333	-	5,331	6,664
13	Bike & Ped. Counts	1,496	5,985	0	0	0	0	0	0	0	0				1,496	-	5,985	7,481
<b>II B</b>	<b>Long Range Transp. Plan</b>																	
B 1	Collection of Base Year Data	0	0	0	0	0	0	0	0	0	0				-	-	-	-
2	Collection of Network Data	0	0	0	0	0	0	0	0	0	0				-	-	-	-
3	Travel Model Updates	185,842	743,367	0	0	0	0	0	0	0	0				185,842	-	743,367	929,209
4	Travel Surveys	49,881	199,525	0	0	0	0	0	0	0	0				49,881	-	199,525	249,406
5	Forecast of Data to Horizon year	0	0	1,639	6,554	0	0	0	0	0	0				1,639	-	6,554	8,193
6	Community Goals & Objectives	0	0	5,555	22,220	0	0	0	0	0	0				5,555	-	22,220	27,775
7	Forecast of Future Travel Patterns	0	0	1,546	6,184	0	0	0	0	0	0				1,546	-	6,184	7,730
8	Capacity Deficiency Analysis	0	0	8,642	34,566	0	0	0	0	0	0				8,642	-	34,566	43,208
9	Highway Element of th L RTP	0	0	2,669	10,677	0	0	0	0	0	0				2,669	-	10,677	13,346
10	Transit Element of the L RTP	0	0	2,669	10,677	0	0	0	775	775	6,202				3,445	775	16,879	21,099
11	Bicycle & Ped. Element of the L RTP	4,039	16,155	0	0	0	0	0	0	0	0				4,039	-	16,155	20,194
12	Airport/Air Travel Element of L RTP	0	0	0	0	0	0	0	0	0	0				-	-	-	-
13	Collector Street Element of L RTP	17,000	68,000	7,224	28,897	0	0	0	0	0	0				24,224	-	96,897	121,121
14	Rail, Water or other mode of L RTP	0	0	0	0	0	0	0	0	0	0				-	-	-	-
15	Freight Movement/Mobility Planning	0	0	659	2,634	0	0	0	0	0	0				659	-	2,634	3,293
16	Financial Planning	0	0	1,949	7,797	0	0	0	0	0	0				1,949	-	7,797	9,746
17	Congestion Management Strategies	25,000	100,000	10,971	43,883	0	0	0	1,403	1,403	11,227				37,374	1,403	155,110	193,888
18	Air Qual. Planning/Conformity Anal.	0	0	1,728	6,913	0	0	0	0	0	0				1,728	-	6,913	8,641
<b>II C</b>	<b>Short Range Transit Planning</b>																	
1	Short Range Transit Planning	0	0	0	0	0	0	0	0	0	0				-	-	-	-
<b>III-A</b>	<b>Planning Work Program</b>	0	0	2,624	10,497	0	0	0	3,149	3,149	25,191				5,773	3,149	35,688	44,610
<b>III-B</b>	<b>Transp. Improvement Plan</b>	0	0	5,733	22,932	0	0	0	214	214	1,711				5,947	214	24,643	30,804
<b>III-C</b>	<b>Cvl Rgts. Cmp./Otr .Reg. Reqs.</b>																	
1	Title VI	0	0	0	0	0	0	0	0	0	0				-	-	-	-
2	Environmental Justice	0	0	5,102	20,409	0	0	0	0	0	0				5,102	-	20,409	25,511
3	Minority Business Enterprise	0	0	0	0	0	0	0	0	0	0				-	-	-	-
4	Planning for the Elderly & Disabled	0	0	987	3,947	5,000	5,000	40,000	0	0	0				5,987	5,000	43,947	54,934
5	Safety/Drug Control Planning	0	0	0	0	0	0	0	0	0	0				-	-	-	-
6	Public Involvement	0	0	4,977	19,906	0	0	0	4,704	4,704	37,632				9,681	4,704	57,538	71,923
7	Private Sector Participation	0	0	0	0	0	0	0	0	0	0				-	-	-	-
<b>III-D</b>	<b>Incidental Png./Project Dev.</b>																	
1	Transportation Enhancement Png.	0	0	0	0	0	0	0	0	0	0				-	-	-	-
2	Enviro. Analysis & Pre-TIP Png.	0	0	3,283	13,131	0	0	0	0	0	0				3,283	-	13,131	16,414

City of Durham/LPA

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 Proposed Funding Source Tables**

Durham  
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	Task Description	STP-DA 133(b)(3)(7)		Sec. 104(f) PL		Section 5303 Highway/Transit			Section 5307 Transit			Section 5309 Transit			Task Funding Summary					
		Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 10%	NCDOT 10%	FTA 80%	Local 10%	NCDOT 10%	FTA 80%	Local 25%	NCDOT 25%	FTA 50%	Local	NCDOT	Federal	Total		
3	Special Studies	54,000	216,000	12,500	50,000	0	0	0	0	0	0	0	0	0	0	0	66,500	-	266,000	332,500
4	Regional or Statewide Planning	0	0	2,581	10,323	0	0	0	0	0	0	0	0	0	0	0	2,581	-	10,323	12,904
III-E	<b>Management &amp; Operations</b>																			
1	Management & Operations	11,941	47,763	21,912	87,647	0	0	0	33,685	33,685	269,482	0	0	0	67,538	33,685	404,892	506,115		
Totals		\$372,650	\$1,490,600	\$117,153	\$468,611	\$12,289	\$12,289	\$98,312	\$43,931	\$43,931	\$351,445	\$0	\$0	\$0	\$546,022	\$56,220	\$2,408,968	\$3,011,210		

## **City of Durham/LPA UPWP Funding Table Tasks Narrative**

### **Task II-A-1: Traffic Volume Counts**

The MPO will continue traffic counts data collection at specific locations. These counts will augment triennial traffic counts collected by NCDOT. Traffic counts will include daily, hourly, vehicle classification, or turning movements. The Municipalities will be responsible for obtaining counts at specified locations on the Urban Area Municipal Street System and for furnishing the raw daily traffic counts, count information, and location maps to the Lead Planning Agency (LPA).

The LPA plans to take approximately 20 traffic counts and 100 turning movement counts at locations that will be representative of the street system as a whole. The traffic volume counts will be at 15-minute intervals, bi-directional, and collected for a minimum of 48 hours so they can be used to determine peak hour spreading.

#### **Objectives:**

1. To collect traffic counts and turning movements throughout the planning area; and,
2. To monitor traffic growth and provide continuous updates.

#### **Previous Work:**

1. 2003 traffic counts collected as part of the Mobility Report Card;
2. Turning movement counts 2005;
3. Screenline counts for the 2002 TRM update;
4. ADT counts, 2004-2005;
5. NCDOT triennial counts and ADT maps;
6. Updated the DCHC traffic count library by supplementing the NCDOT count locations in the region and performing traffic counts for communities on a limited request basis;
7. Update and maintain the DCHC traffic count database; and
8. Continue to expand the DCHC traffic count database to include the hourly breakdown of traffic counts.

#### **Proposed Activities:**

1. Collect 48-hour traffic count for surveillance of change;
2. Collect turning movement counts;
3. Develop the DCHC traffic count library by supplementing the NCDOT count locations within the metropolitan area;
4. Develop MPO Count database/GIS and mapping; and,
5. Conduct four monthly traffic counts to collect seasonal traffic information which will assist in the development of adjustment factors and growth rates.

**Products:**

1. Summary reports of daily traffic count information for the MPO;
2. Compilation of peak period turning movement counts; and,
3. Seasonal adjustment factors and growth rates specific to the DCHC region.

**Completion Date:**

June 2007.

**Proposed Budget and Level of Effort (Staff and/or Consulting):**

Tasks will largely be undertaken with consulting help and temporary staffing. MPO staff will oversee project, provide project management and review work products. Traffic counts will be conducted when schools are in session. Anticipated completion date is June 2007.

LPA Staff hours - 500 hours

Consulting - \$10,000

**Funding Commitments from Other Entities:**

None applicable.

**Task II-A-4: Traffic Accidents**

The DCHC MPO will collect traffic accident data and prepare summary and analysis of high accident locations. Data will be compared to previous years' results. This task will build from and support the safety work of the NCDOT and MPO municipal governments. The task will feed into the MPO Congestion Management Systems (CMS) and the Mobility Report Card.

**Objectives:**

1. To improve the safety of the transportation system; and,
2. To integrate accident analysis into MPO planning activities.

**Previous Work:**

1. 2005 accident data.
2. Accident data for CMS and Mobility Report Card.

**Proposed Activities:**

1. Collect traffic accident data from NCDOT's Traffic Engineering Accident;
2. Summarize accident data from Analysis System (TEAAS) program and municipal governments;
3. Prepare a summary and analysis of high accident locations;
4. Compare traffic accident data to previous years; and,

5. Integrate traffic accident analyses into other MPO planning activities.

**Products:**

1. Summary reports of high accident locations; and,
2. Customized data and analysis information for other MPO planning activities.

**Relationship to Other Plans and MPO Activities:**

Traffic accident data will be used in the analysis for the Congestion Management System (CMS), Mobility Report Card, Regional Priority List ranking analysis and project level analyses.

**Completion Date:**

June 2006.

**Proposed Budget and Level of Effort (Staff or Consulting):**

Tasks will be undertaken by LPA and municipal staff.

Consulting - \$0

Staff effort – 100 person hours

**Funding Commitments from Other Entities:**

NCDOT maintains the TEAAS program that will be used in this task.

**Task II-A-5: Transit System Data**

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

**Objectives:**

1. To evaluate and monitor transit services; and,
2. To fulfill FTA reporting requirements.

**Previous Work:**

1. The three transit systems continuously compile data and evaluate system performance.

2. 2005 Section 15 transit data.
3. Boarding and alighting counts
4. 2005 Transit system data for CMS and Mobility Report Card

**Proposed Activities:**

1. Create a short range transit services plan;
2. Develop new routes to serve cross-town and university travel demand;
3. Consolidate and develop bus stop standards;
4. Create reports on system performance by route; and,
5. Prepare reports to fulfill FTA requirements.

**Products:**

1. Summary reports of transit system performance; and,
2. Reports to fulfill FTA requirements

**Relationship to Other Plans and MPO Activities:**

Transit system data will be used to influence route changes and service expansions. Transit system data will also be used in the development of the Long Range Transportation Plan, Regional Transit Vision Plan, and Transit Master Plan.

**Completion Date:**

Transit system data will be compiled continuously. Reports for specific projects and initiatives will be created on an as-needed basis. Reports for the FTA will be completed to fulfill requirements and meet deadlines throughout the year.

**Proposed Budget and Level of Effort (Staff or Consulting):**

Tasks will largely be undertaken by the MPO transit operators; Chapel Hill Transit (CHT), the Durham Area Transit Authority (DATA) and the Triangle Transit Authority (TTA). The LPA will tabulate and summarize data as well as maintain database information.

**Funding Commitments from Other Entities:**

None.

**Task II-A-6: Dwelling Unit, Population, and Employment Change**

LPA and municipal planning staff will maintain an inventory of dwelling units, population, and employment to determine needed changes in transportation services to meet current and projected demands. Staff will review new developments to assess impacts to the 2030 LRTP, the model update, and transportation project development. Changes in dwelling units and employment within the MPO will be identified and

evaluated to determine accuracy and consistency with the socio-economic forecast. The MPO will review and tabulate Census data, local parcel, zoning, tax data records, and InfoUSA and Employment Security Commission data as part of this monitoring task. The MPO will commence the first phase of the Data Automation/Integration and Management System.

**Objectives:**

1. To monitor changes in dwelling units, population, and employment change; and,
2. To provide current data for MPO planning activities.

**Previous Work:**

Dwelling unit, population, and employment data has been collected for 10 years. This data is integral to many planning and modeling activities.

**Proposed Activities:**

1. Review new developments and certificates of occupancy for dwelling unit, population, and employment changes;
2. Obtain data from the Census, InfoUSA, ESC, and local governments;
3. Compare changes to the socio-economic forecast; and,
4. Develop the Data Automation/Integration and Management System to streamline this task.

**Products:**

1. Summary reports of socio-economic data;
2. Updated socio-economic data for use in the Triangle Regional Model and other MPO planning activities; and,
3. Data Automation/Integration and Management System.

**Relationship to Other Plans and MPO Activities:**

Dwelling unit, population, and employment change data will be used in the Triangle Regional Model. The Triangle Regional Model is used in many MPO planning activities including the Long Range Transportation Plan, the Congestion Management System and Mobility Report Card.

**Completion Date:**

Dwelling unit, population, and employment data will be compiled on a continual basis.

**Proposed Budget and Level of Effort (Staff or Consulting):**

Tasks will be undertaken by LPA and municipal staff.

Consulting - \$0  
 Staff effort – 250 person hours

**Funding Commitments from Other Entities:**

None.

**Task II-A-9: Travel Time Studies**

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

**Task II-A-10: Mapping**

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

**Objectives:**

1. To provide maps for use in various MPO planning activities; and,
2. To maintain updated geospatial information for transportation analyses.

**Previous Work:**

The LPA has prepared mapping for various MPO activities such as the 2030 LRTP, 2006-12 Regional Priority project Lists, 2006-12 MTIP, functional classification based on the 2000 Census, MPO urbanized area maps, MAB, etc.

**Proposed Activities:**

1. Collect updated geospatial information from local governments;
2. Integrate local government geospatial information into region-wide geospatial information;
3. Create files and maps containing MPO transportation information; and,
4. Develop the Data Automation/Integration and Management System to streamline this task.

**Products:**

1. Maps for various MPO planning activities;
2. Region-wide GIS files; and,
3. Data Automation/Integration and Management System.

**Relationship to Other Plans and MPO Activities:**

GIS data will be used in many MPO activities such as the Triangle Regional Model, Long Range Transportation Plan, the Congestion Management System, and Mobility Report Card, Functional classification update, TIP Regional Priority List, 2007-2013 MTIP development, Greenhouse Gas emission Study and Action Plan, and other MPO transportation planning activities.

**Completion Date:**

GIS data will be compiled on a continual basis. Mapping will be completed as needed for various projects. GIS data integration and automation is anticipated to be completed in 2007.

**Proposed Budget and Level of Effort (Staff or Consulting):**

Tasks will be undertaken by LPA and municipal staff.

Staff effort – 350 person hours

**Funding Commitments from Other Entities:**

None.

**Task II-A-11: Central Area Parking Inventory**

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

**Objectives:**

1. To provide parking information for use in the Triangle Regional Model, Congestion Management System, and Mobility Report Card.
2. Parking cost model to improve model mode choice model
3. Provide linkage between CBD parking and Travel Demand Management (TDM)

**Previous Work:**

None.

**Proposed Activities:**

1. Inventory on- and off-street parking facilities in the Central Business Districts and at universities; and,
2. Integrate and customize parking data for use in MPO planning activities and the Triangle Regional Model.

**Products:**

1. Database of parking facilities;
2. Region-wide GIS files containing parking data; and,
3. Reports on parking facilities for use in MPO planning activities.

**Relationship to Other Plans and MPO Activities:**

Parking data will be used in the Triangle Regional Model, the Congestion Management System, and Mobility Report Card.

**Completion Date:**

June 2006.

**Proposed Budget and Level of Effort (Staff and/or Consulting):**

Tasks will be undertaken by LPA and municipal staff.

Staff effort – 200 person hours

**Funding Commitments from Other Entities:**

None.

**Task II-A-12: Bicycle and Pedestrian Facilities Inventory**

The MPO will conduct inventories of bicycle and pedestrian facilities as part of various regional planning activities. The proposed inventory will provide accurate inputs for the travel model update as well as help identify future bicycle and sidewalk project needs, guide bicycle and pedestrian improvement planning, and support specific projects, such as the Old Durham-Chapel Hill Road Bicycle/Pedestrian Feasibility Study. In addition, this work will help Lead Planning Agency staff when processing materials for state/federal grant applications and identifying facility improvement requests.

**Objectives:**

1. To collect information on existing and proposed bicycle and pedestrian facilities throughout the MPO area;
2. To monitor traffic growth and provide continuous updates on potential bicycle and pedestrian facilities;
3. To monitor NCDOT, MPO and local project work for opportunities for improvements to bicycle and pedestrian facilities, e.g. spot improvements, street resurfacings, etc.; and,
4. To ensure that bicycle and pedestrian facility implementation occurs in compliance with local, state and federal guidelines.

**Previous Work:**

1. Collected bicycle and pedestrian facility information for CMAQ, TE and STP-DA grant processes;
2. Collected bicycle and pedestrian facility information for planning studies, such as the Old Durham-Chapel Hill Rd Bicycle/Pedestrian Feasibility Study; and,
3. Coordinated with NCDOT and other agencies regarding potential bicycle and pedestrian facility improvements, as incidental or independent projects.

**Proposed Activities:**

1. To collect digital images of various planned bicycle and pedestrian routes;
2. Collect bicycle and pedestrian facility information for CMAQ, TE and STP-DA grant processes;
3. Collect bicycle and pedestrian facility information for regional planning studies; and,
4. Coordinate with NCDOT and other agencies on potential bicycle and pedestrian facility improvements, as incidental or independent projects.

**Products:**

Work products will include digital images, maps and other visual representations of facilities, as well as indirect products related to plans, communications, and project applications.

**Relationship to Other Plans and MPO Activities:**

The facility inventory will be used for regional planning efforts, grant application processes, and other regionally coordinated activities.

**Completion Date:**

Facility inventory to be conducted as needed on a year round basis.

**Proposed Budget and Level of Effort (Staff or Consulting):**

Tasks will largely be undertaken by regular full-time staff, as needed throughout the year. MPO staff will provide project management and review work products, as related to various regional plans undertaken by the MPO.

Regular, Full-time Staffing time – year round  
Staff effort – approximately 275 person hours

**Funding Commitments from Other Entities:**

None

### **Task II-A-13: Bike & Ped Counts**

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

#### **Objectives:**

1. To collect data on current bicycle and pedestrian facility use; and,
2. To monitor traffic growth and provide continuous updates on bicycle and pedestrian latent demand.

#### **Previous Work:**

Collected bicycle and pedestrian facility information for various local and regional projects and planning activities.

#### **Proposed Activities:**

1. Collect 48-hour traffic count as part of CMS and Mobility Report Card;
2. Collect turning movement counts as part of the CMS;
3. Develop the DCHC traffic count library by supplementing the NCDOT count locations within the metropolitan area;
4. Develop MPO Count database/GIS and mapping; and,
5. Conduct four monthly traffic counts to collect seasonal traffic information, which will assist in the development of adjustment factors and growth rates.

#### **Products:**

1. Summary reports of daily traffic count information for the MPO;
2. Compilation of peak period turning movement counts; and,
3. Seasonal adjustment factors and growth rates specific to the DCHC region.

#### **Relationship to Other Plans and MPO Activities:**

Bicycle and pedestrian count data to be used for model validation, model analysis, CMS, air quality analysis, etc.

#### **Completion Date:**

June 2006.

#### **Proposed Budget and Level of Effort (Staff and/or Consulting):**

Tasks will largely be undertaken with temporary staffing. The LPA staff will oversee project, provide project management and review work products. Inventory and counts will be conducted when schools are in session. Anticipated completion date is June 2007.

Staff effort – approximately 298 person hours

**Funding Commitments from Other Entities:**

None

**Task II-B-3: Travel Model Updates:**

Update of the Triangle Regional Model (TRM) including conversion and full implementation of model from Tranplan to TransCad. Proposed tasks include model improvements and enhancements, work associated with the calibration of the 2005 base model, commencement of the first phase of the MPO land use model and non-motorized trip sub model. The MPO will carry out other tasks needed to support the Triangle Regional Model update, including providing the MPO's share of the Service Bureau funding and 50% FTE.

**Objectives:**

To ensure that DCHC MPO policymakers and the MPO member agencies have modeling tools at their disposal to support analysis of non-motorized (bicycling and walking) travel impacts of project and policy alternatives. In particular, the model should be sensitive to demographic and land use changes that might increase or decrease the number and location of non-motorized trips, as well as to other factors such as the impact of facility changes and improvements, travel demand management programs, and other factors that have been demonstrated to have an effect on non-motorized travel.

**Previous Work:**

1. A simple framework for identifying non-motorized travel has been part of the Triangle Regional Model since its inception; and,
2. The recent model update commissioned by TTA for its New Starts application, and currently being built into the Triangle Regional Model includes trip generation improvements that relate the propensity for non-motorized trips to demographic and land use characteristics.

**Proposed Activities:**

1. Develop a scope of work with a qualified consultant to reach the DCHC MPO's goals for non-motorized travel modeling;
2. Develop a non-motorized trip destination component to complement the work already undertaken on trip generation in time for use in the 2035 LRTP analyses;
3. Develop a work program to design and implement additional non-motorized travel enhancements in conjunction with the TRM Major Model Update; and,
4. Implement the TRM Major Model Update non-motorized travel enhancements, including model implementation and additional data collection.
5. Commence the development of the MPO land use model.
6. Work on the 2005 TRM update and validation.

7. Work on the major TRM update
8. MPO model enhancements – sub-area analysis, select analysis, LRTP and air quality interface and scripts

**Products:**

1. Non-motorized modeling extensions for the trip generation and trip distribution steps in the TRM for use in LRTP alternative analysis
2. Additional non-motorized modeling extensions as part of the TRM Major Model Update. These extensions may entail internal modifications to the TRM, as well as new data requirements.
3. MPO model enhancement: sub-area analysis capability, select link analysis, user interface and scripts for LRTP and air quality.
4. Validation of the 2005 model update to be used in the LRTP, CTP and other technical analyses.
5. Statistical analysis of survey results and the development of the major model update intermediate specification and parameters.

**Relationship to Other Plans and MPO Activities:**

Non-motorized modeling has not been of interest to the other TRM stakeholders, but is of great interest to DCHC MPO stakeholders. These extensions will be used in development of the LRTP, in Air Quality Conformity Determination, and in various special studies in which non-motorized travel effects may be of interest.

**Completion Date:**

1. Initial non-motorized modeling extensions will be complete along with the TRM update; and,
2. Further non-motorized modeling extensions will be developed alongside the TRM Major Model Update.

**Proposed Budget and Level of Effort (Staff or Consulting):**

Consulting/Temporary Staffing time –Consultants will be retained by DCHC MPO for assistance in the development of the non-motorized model components, MPO model enhancements and land use model.

Consulting - \$878,500  
Staff effort – 1340 person hours.

**Funding Commitments from Other Entities:**

CAMPO, NCDOT and TTA are participants of the Triangle Regional Model development, update and maintenance. Each participant is contributing \$100,000 for the model Service Bureau functions as well as funds for the TRM update.

### **Task II-B-4: Travel Surveys**

The MPO will provide its share of funding for the collection travel surveys proposed for the Triangle region. The central purpose of the survey is to collect information on origins and destinations, traveler behavior, transit ridership, commercial vehicle usage, work place commuting, freight movement, etc. which would provide accurate inputs for the travel model update. The Service Bureau will be conducting following travel surveys for the TRM update: (1) External station/external-internal trip; (2) transit onboard survey; (3) travel time/speed survey; (4) special generators (including universities) survey.

#### **Objectives:**

The MPO will participate in regional data collection for the Triangle Regional Model and other transportation planning purposes. Three surveys are proposed for 2006-2007:

1. Transit On-Board Survey;
2. External Trip Survey; and,
3. Travel Time and Speed Survey.

Each of these surveys will produce vital information for calibrating the Triangle Regional Model and validating its performance, and provide some supplemental information for developing transit plans and for the Congestion Management System.

#### **Previous Work:**

A major data collection effort was started in 2005 in order to support the Triangle Regional Model Major Update, and to improve the validation of the model that will be used for the 2035 LRTP analysis starting in fall 2006. A twelve-county household travel survey covering the Triangle and adjacent counties is underway in spring 2006, and a transit boarding and alighting survey was conducted for all regional transit agencies in fall 2005. In addition, NCDOT has performed special counts at approximately 400 additional locations in the Triangle along with their regular biennial traffic counts.

#### **Proposed Activities:**

Three surveys will be completed. The Transit On-Board survey will collect complete information on origins, destinations and travel path for a statistically significant number of trips on every transit route in the triangle (approximately 7000 trip records). The External Trip Survey will evaluate trips entering, leaving and passing through the area in order to develop correct calibration targets for the Triangle Regional Model. The Travel Time and Speed Survey will comprehensively assess travel speed characteristics on different roadway facility types, free-flow and congested travel times between important destinations and along significant travel corridors, and bus speeds and travel times in relation to traffic congestion. The Travel Time and Speed Survey is important for trustworthy future forecasts since it will provide data about how travelers in the Triangle area respond to changes in levels of congestion, as well as providing data about speeds

and travel times that are used in calibrating the model.

**Products:**

1. Transit onboard surveys for DATA, Chapel Hill Transit, Duke University, and the TTA.
2. Report of survey statistical and modeling analyses and summarization.

**Relationship to Other Plans and MPO Activities:**

These surveys provide some of the fundamental ground counts necessary to ensure that the Triangle Regional Model performs correctly, both in reproducing observed travel patterns and in forecasting future activity.

**Completion Date:**

These surveys will be complete by spring 2007.

**Proposed Budget and Level of Effort (Staff or Consulting):**

Consulting/Temporary Staffing time –All work collecting and collating data for these surveys will be undertaken by consultants, under the oversight of staff at the Triangle Regional Model Service Bureau.

Staff effort – LPA staff will be involved in regional stakeholder technical team meetings to establish the work scope for each survey, to evaluate the survey results, and to make these results available to DCHC MPO member agencies.

Consulting - \$243,750

Staff hours – 130 person hours

**Funding Commitments from Other Entities:**

Each of the four TRM stakeholders (DCHC MPO, CAMPO, NCDOT, and TTA) are participating at various levels in these surveys.

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

The LPA will project base year demographic and socio-economic data-1 into plan horizon year and air quality intermediate years (LRTP horizon year is 2035 and intermediate years for air quality analyses are 2008, 2010, 2011, 2014, 2020 2025, 2030, 2035). Forecasts will be generated for County control totals and traffic analysis zones. Forecasts will be made consistent with local land use plans and in corporation with local Planning Departments.

**Objectives:**

1. To develop regionally consistent forecasts of future year socio-economic data.

2. Develop future forecast for population, dwelling units, households, income, vehicle ownership, university beds, counts, etc

**Previous Work:**

1. Work has been ongoing by LPA staff, staff at DCHC MPO member agencies, and others throughout 2005-2006 to develop a consistent regional methodology for constructing future year land use and socio-economic forecasts; and,
2. Preliminary forecasts will be finalized in early summer 2006

**Proposed Activities:**

1. Continue to work with LPA partners to collect future land use information and to develop and check future year forecasts;
2. Acquire benchmark data for evaluating correctness of future year forecasts, and perform the evaluation;
3. Develop maps, tables and other presentation materials for review of the forecasts by elected officials and the public in local jurisdictions and also at the MPO level; and,
4. Coordinate public review of the future year forecasts and seek formal adoption of the forecasts by the DCHC MPO TAC.

**Products:**

1. Forecasts of land use and socio-economic data for use in the 2035 LRTP; and,
2. Presentation materials based on those forecasts for public review.

**Relationship to Other Plans and MPO Activities :**

1. Future year forecasts are an essential element in preparing analyses of alternatives for the 2035 LRTP and for all land use and transportation modeling activities.

**Completion Date:**

1. Forecasts for use in developing the 2035 LRTP are anticipated to be adopted by the TAC in fall 2006 or spring of 2007.

**Proposed Budget and Level of Effort (Staff or Consulting):**

Consulting/Temporary Staffing time – None anticipated; some funds will be applied to defray costs of materials and to acquire benchmark data from private sector forecasting companies.

Staff effort – 200 person hours.

### **Funding Commitments from Other Entities:**

Parallel efforts are underway in CAMPO, and joint staff work has been undertaken to ensure consistency of results. However each MPO is funding its own work.

### **Task II-B-6: Community Goals and Objectives**

The MPO will re-evaluate community goals and objectives for the 2035 Long range Transportation Plan (LRTP) and the Comprehensive Transportation Plan (CTP). The process of formulating and re-evaluating goals will begin with visioning exercise. The MPO will conduct public meetings to assess community vision in terms of transportation, land use, growth, quality of life, etc. In addition, the MPO will establish performance targets that will likely be related to mobility, transit use, TDM use, air quality, financial and economics concerns, environmental justice, and land use. The expected work products will be adopted goals and objectives and targets, and a policy framework for achieving the goals.

#### **Objectives:**

1. To develop updated set of Goals and Objectives, and targets; and,
2. To involve citizens in a visioning process help update the Goals and Objectives, and targets.
3. Develop policy statements for the LRTP and CTP

#### **Previous Work:**

1. Goals and Objectives and targets in 2030 LRTP; and,
2. List of citizens and leaders who might be interested in participating in the process to update the Goals and Objectives and targets.

#### **Proposed Activities:**

1. Conduct public workshops to complete citizen visioning process;
2. Develop community visions
3. Develop draft Goals, Objectives and Targets
4. Conduct public workshops, meetings and hearing to receive input on proposed Goals and Objectives and targets; and,
5. Adopt Goals and Objectives and targets.

#### **Products:**

1. Citizen transportation vision; and,
2. Updated Goals and Objectives and targets.

#### **Relationship to Other Plans and MPO Activities:**

Updating the Goals and Objectives and targets will be the first public step in developing the 2035 LRTP

**Completion Date:**

The citizen vision process will begin fall 2006, and the update Goals and Objectives and targets will be adopted winter 2006/2007.

**Proposed Budget and Level of Effort (Staff or Consulting):**

LPA and local government staff will manage and implement the process to complete a citizen vision and update the Goals and Objectives and targets.

Staff effort – 716 person hours

**Funding Commitments from Other Entities:**

None.

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

MPO will generate travel demand forecasts for future years including the LRTP horizon and air quality intermediate years. The forecast of travel patterns will include a review of these factors and comparison to community goals and objectives to determine if changes in assumptions are warranted. Essentially, this task encompasses application of the Triangle Regional Model and other modeling tools to forecast future travel patterns (distribution of trips, volume of travel, vehicle miles traveled, levels of congestion, etc.).

**Objectives:**

1. Produce model runs as required to support the MPO planning process and development of the Long Range Transportation Plan.

**Previous Work:**

1. Travel demand forecasts for the 2030 LRTP and air quality conformity determination.
2. Travel demand forecasts for various project level analysis and NEPA, e.g. Elizabeth Brady, South Columbia Street, South Miami Blvd., Triangle Parkway, I-40 HOV, TDM analyses, US 15-501 transit corridor, etc.

**Proposed Activities:**

1. Run Triangle Regional Model and other modeling tools to develop future year forecasts (summary tables, maps, etc.):
  - a. Run model to evaluate performance and suitability of model to be delivered by TRM Service Bureau;
  - b. Develop future year model setups as required for Long Range Transportation Plan alternative analysis, Air Quality Conformity and other

- needs; and,
- c. Run model for LRTP alternative analysis.

**Products:**

1. Confirmation of suitability of Triangle Regional Model for LRTP Analysis; and,
2. Long Range Transportation Plan Alternative Analysis (summary tables, maps, etc.)

**Relationship to Other Plans and MPO Activities:**

This is a core task for preparing the Long Range Transportation Plan.

**Completion Date:**

The specific proposed activities in this UPWP will be completed during FY 2006-2007.

**Proposed Budget and Level of Effort (Staff or Consulting):**

Work on this project will be completed by LPA staff.  
Staff effort - 200 person hours

**Funding Commitments from Other Entities:**

None.

**Task II-B-8: Capacity Deficiency Analysis**

The MPO will conduct a capacity deficiency analysis as part of the 2035 LRTP, CTP and CMS. The analysis will be made to determine existing and existing-plus-committed deficiencies. Volume-to-capacity ration maps will be produced for the 2005 base year, E+C year, and other LRTP and CTP years. Essentially this task encompasses application of the Triangle Regional Model and other modeling tools to analyze deficiencies in the existing transportation system relative to anticipated future travel demand.

**Objectives:**

Produce model setups and output runs as required to evaluate deficiencies in the existing transportation system in the DCHC MPO planning area.

**Previous Work:**

1. Deficiency analyses for the 2030 LRTP
2. Capacity deficiencies for the CMS, Mobility Report Card and other technical studies.

**Proposed Activities:**

Run Triangle Regional Model and other modeling tools to develop forecasts of travel deficiencies (summary tables, maps, etc.):

- a. Develop model setups as required for deficiency analysis (existing+committed network with future year socio-economic data); and,
- b. Run model for and prepare output files

**Products:**

1. Long Range Transportation Plan Deficiency Analysis (summary tables, maps, etc.)

**Relationship to Other Plans and MPO Activities:**

This is a core task for preparing the Long Range Transportation Plan.

**Completion Date:**

The specific proposed activities in this UPWP will be completed during FY 2006-2007

**Proposed Budget and Level of Effort (Staff or Consulting):**

Work on this project will be completed by LPA staff.

Staff effort – 1,114 person hours

**Funding Commitments from Other Entities:**

None.

**Task II-B-9: Highway Element of LRTP and CTP**

The MPO will begin evaluation of highway elements of the Comprehensive Transportation Plan and the 2035 LRTP. Performance measures will be established for evaluating highway alternatives. An extensive roster of highway projects will be identified based on the current 2030 LRTP, congestion management system, travel demand forecast and capacity deficiency analysis. Different combinations of these projects will produce a variety of highway alternatives that will be analyzed to find the alternative that best meets the LRTP Goals and Objectives and targets, and meets the fiscal constraint requirement. Each alternative will characterize a one or more emphasis area such as new roadways, transit, etc. The highway element of the Comprehensive Transportation Plan (CTP) will be developed in parallel with the LRTP, but will likely have a different set of constraints (e.g., no fiscal constraint).

**Objectives:**

1. To identify a list of highway projects based on travel demand and deficiencies;

2. To develop a series of highway alternatives (i.e., set of highway projects with a distinct objective); and,
3. To develop key data for each highway project such as capacity, length, alignment, cost, implementation year, etc.

**Previous Work:**

1. 2030 LRTP;
2. Congestion Management System;
3. Triangle Regional Model;
4. Travel demand forecast; and,
5. Capacity Deficiency Analysis.

**Proposed Activities:**

1. Establish evaluation criteria;
2. Develop key data for highway projects;
3. Generate highway projects and alternatives;
4. Evaluate highway projects and alternatives; and,
5. TAC comments on alternatives.

**Products:**

1. Preferred highway element option; and,
2. Key data for highway projects

**Relationship to Other Plans and MPO Activities:**

Before the highway element can be developed, several other tasks must be successfully completed including: TRM update and surveys; travel demand forecasts; capacity deficiency analysis. In addition, the Congestion Management System and 2030 LRTP will be important input to this task.

**Completion Date:**

Analysis associated with the highway elements of LRTP and CTP will commence in 2007.

**Proposed Budget and Level of Effort (Staff or Consulting):**

LPA and local government staff will manage and implement the highway element of the LRTP and CTP.

LPA staff effort – 320 person hours

**Funding Commitments from Other Entities:**

None.

### **Task II-B-10: Transit Element of LRTP and CTP**

The MPO will begin evaluation of transit elements of the Comprehensive Transportation Plan and the 2035 LRTP. Transit evaluate will include fixed-route bus service, fixed-guideway transit, highway capacity transit and demand responsive transit. Using travel behavior, ridership forecasts and other analysis, evaluation of transit element will look at unmet needs, new services areas and potential markets. Performance measures will be established for evaluating transit alternatives. An extensive roster of transit routes, projects and services will be identified based on the current 2030 LRTP, transit feasibility studies, transit 5-year and master plans, travel demand forecast and capacity deficiency analysis. Different combinations of these services will produce a variety of transit alternatives that will be analyzed to find the alternative that best meets the LRTP Goals and Objectives and targets, and meets the fiscal constraint requirement. Each alternative will characterize a one or more emphasis area such as new roadways, transit intensive, etc. The transit element of the Comprehensive Transportation Plan (CTP) will be developed in parallel with the LRTP, but will likely have a different set of constraints (e.g., no fiscal constraint).

#### **Objectives:**

1. To identify a list of transit routes, projects and services based on completed transit studies, travel demand and deficiencies;
2. To develop a series of transit alternatives (i.e., set of transit routes, projects and services with a distinct objective); and,
3. To develop key data for each transit project such as route, ridership capacity (e.g., load capacity and headway), service hours, cost, implementation year, etc.

#### **Previous Work:**

1. 2030 LRTP;
2. Feasibility studies (e.g., US 15-501 Transit Corridor and I-40/NC 54 Transit Corridor);
3. Transit 5-year and master plans;
4. Travel demand forecast; and,
5. Capacity Deficiency Analysis.

#### **Proposed Activities:**

1. Establish evaluation criteria;
2. Develop key data for transit services;
3. Generate transit projects and alternatives;
4. Evaluate transit projects and alternatives; and,
5. TAC comments on alternatives.

#### **Products:**

1. Preferred transit element option; and,
2. Key data for transit projects.

**Relationship to Other Plans and MPO Activities:**

Before the transit element can be developed, several other tasks must be successfully completed including: TRM update and surveys; travel demand forecasts; capacity deficiency analysis. In addition, transit plans and feasibility studies, the Congestion Management System and 2030 LRTP will be important input to this task.

**Completion Date:**

Analysis and studies associated with the transit elements of the LRTP and CTP will commence in spring of 2007.

**Proposed Budget and Level of Effort (Staff or Consulting):**

LPA and local government staff will manage and implement the transit element of the LRTP and CTP.

LPA staff effort – 320 person hours

**Funding Commitments from Other Entities:**

None.

**Task II-B-11: Bicycle and Pedestrian Element of the LRTP and CTP**

The MPO will begin evaluation of bicycle and pedestrian elements of the Comprehensive Transportation Plan and the 2035 LRTP. The MPO will continue work on the Durham Comprehensive pedestrian Plan and the Old Durham-Chapel Hill Road bicycle and pedestrian feasibility study. Work will commence on the development of the Durham Comprehensive Bicycle Plan.

**Objectives:**

1. Update the LRTP Bicycle and Pedestrian Element project descriptions and cost information;
2. Collect public input on bicycle and pedestrian facilities and programs to be included in the LRTP;
3. Update the LRTP ancillary planning and program information.
4. Coordinate existing local and regional plans and projects with LRTP bicycle and pedestrian element;
5. Update LRTP Bicycle and Pedestrian Element maps; and,
6. Work with local communities on Regional Priority Lists, in order to implement

LRTP Bicycle and Pedestrian Element through the TIP.

**Previous Work:**

1. Created Bicycle and Pedestrian element of the 2030 LRTP.
2. Durham Comprehensive Bicycle Plan
3. Durham Comprehensive Pedestrian Plan

**Proposed Activities:**

1. Collect planned and proposed bicycle and pedestrian project information from local and regional plans and forums for inclusion in the LRTP;
2. Create and update bicycle and pedestrian facility maps;
3. Create and update bicycle and pedestrian demand analysis;
4. Coordinate planning activities between local and regional agencies for bicycle, and pedestrian, trail/greenway and TDM initiatives.

**Products:**

Bicycle and Pedestrian elements of the LRTP and CTP will include project descriptions and demand analysis, assessment of need, maps of regional projects, etc.

**Relationship to Other Plans and MPO Activities:**

Planning activities for the LRTP Bicycle and Pedestrian Element should be coordinated with local and regional bicycle, pedestrian, greenway and TDM Plans, in order to capture all proposed projects within the MPO.

**Completion Date:**

Task will commence in the spring of 2007.

**Proposed Budget and Level of Effort (Staff or Consulting):**

Tasks will largely be undertaken by LPA staff along with MPO member agencies

Staff effort – 390 person hours

**Funding Commitments from Other Entities:**

None

**Task II-B-13: Collector Street Plan of LRTP**

The MPO will also undertake the development of an MPO wide Collector Street Plan and circulation study. This is envisioned to involve the identification of future collector street connectivity needs, provisions for local street connectivity, development ordinance

implementation provisions, additional local government consultation, and public involvement.

**Objectives:**

1. To create an efficient and effective transportation network, especially that part of the network not addressed in the MPO's long-range transportation plan;
2. To develop a plan that the development community, planners and citizens can easily understand and use for creating this ideal transportation network; and,
3. To ensure coordination of the collector street network among the various jurisdictions and transportation plans in the MPO planning area.

**Previous Work:**

1. Southwest Durham/Southeast Chapel Hill Collector Street Plan;
2. Wake-Durham Comprehensive Street System Plan;
3. Center of the Region Enterprise (CORE) Collector Street Plan (to be developed);
4. GIS map layers for street networks, parcels, land use, and environmental features; and,
5. 2030 Long Range Transportation Plan.

**Proposed Activities:**

1. Form technical oversight team;
2. Collect GIS data layers and produce maps of existing conditions;
3. Conduct series of three workshops in five different geographic areas;
4. Develop collector street network and full report; and,
5. Present final network and plan to TAC.

**Products:**

1. Map of collector street network; and,
2. Full report that includes existing conditions maps, factors considered in developing collector street network, proposed collector street network, and street design considerations.

**Relationship to Other Plans and MPO Activities**

The process and product of the MPO-wide collector street plan will be based on the Southwest Durham/Southeast Chapel Hill Collector Street Plan. It will be coordinated with the upcoming CORE and existing Wake/Durham collector street plans, and the will complement the arterial street network envisioned in the 2030 LRTP.

**Completion Date:**

Data collection will begin summer 2006 and the first public workshops will occur in fall 2006. The final plan will be ready for adoption in 2007.

**Proposed Budget and Level of Effort (Staff and/or Consulting):**

MPO staff will conduct most of the tasks for this project, and a private consultant will assist with technical tasks (e.g., compilation and presentation of GIS mapping layers, and main presentation at workshops).

Consulting - \$110,000  
Staff effort – 270 person hours

**Funding Commitments from Other Entities:**

None.

**Task II-B-15: Freight Movement and Mobility Planning**

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

**Objectives:**

1. To include freight movement data is included in the Triangle Regional Model (TRM); and,
2. To include freight movement data in the project evaluation phase of the 2035 LRTP.

**Previous Work:**

1. 2030 LRTP; and,
2. Triangle Regional Model (TRM).

**Proposed Activities:**

1. Gather Triangle Region freight movement data;
2. Incorporate the freight movement data into the Triangle Regional Model; and
3. Incorporate the freight movement data into the 2035 LRTP development process.

**Products:**

1. Freight movement level in Triangle Regional Model (TRM); and,
2. Highway alternatives in 2035 LRTP development process that consider the needs of freight movement.

**Relationship to Other Plans and MPO Activities**

This task will be coordinated with the Triangle Regional Model (TRM) and be input data into the 2035 LRTP development.

**Completion Date:**

This task will be complete in summer 2007.

**Proposed Budget and Level of Effort (Staff or Consulting):**

LPA staff will complete these tasks.

Staff effort – 85 person hours

**Funding Commitments from Other Entities:**

Much of this task will be coordinated with the North Carolina Department of Transportation (NCDOT) and RDU and freight and logistics companies

**Task II-B-16: Financial Planning**

The MPO will examine financial options for funding proposed transportation projects and programs on an as-needed basis. These tasks will include reviewing the financial planning assumptions/projections in the 2030 LRTP to refine cost estimates, and providing support regional efforts geared toward identifying new and alternative funding sources.

**Objectives:**

1. To ensure that sound financial information is available for project evaluation; and,
2. To support efforts to identify new transportation funding sources

**Previous Work:**

1. 2030 LRTP;
2. FY 2006-2007 TIP; and,
3. Various local plans for roadways, transit, bicycles, pedestrian facilities, and Intelligent Transportation Systems (ITS).

**Proposed Activities:**

1. Refine project costs estimates, as needed;
2. Coordinate and support regional efforts to identify new transportation sources such as the joint TAC finance committee meeting for DCHC/CAMPO, mayors' meetings, North Carolina Metropolitan Coalition (League of Municipalities), and Regional Transportation Alliance; and,
3. Investigate technical aspects of potential funding sources such as taxing strategies, impact fees and private/public partnerships.

**Products:**

1. Recommendations from joint TAC finance committee;
2. Provide cost and revenue data to joint TAC finance committee, RTA and other partner agencies; and,
3. Resolutions and letters to elected officials.

**Relationship to Other Plans and MPO Activities**

The success in identifying new or modified funding sources will directly affect the 2035 LRTP.

**Completion Date:**

These tasks will be ongoing.

**Proposed Budget and Level of Effort (Staff or Consulting):**

MPO LPA staff will complete these tasks.  
Staff effort – 229 person hours

**Funding Commitments from Other Entities:**

None.

**Task II-B-17: Congestion Management System**

The MPO plans to develop and implement a Congestion Management System (CMS) to address the growing traffic congestion in the region. Besides being a sensible practice, the CMS is a federal transportation planning requirement under the provisions of 23 U.S.C. and 23 CFR. The CMS will identify areas of traffic congestion, investigate the causes of congestion, evaluate alternatives for alleviating congestion, identify strategies for the implementation of those alternatives, and assess financial and economic impacts of those strategies. The Town of Chapel Hill and the Town of Carrboro have already completed several Mobility Report Cards, which contain much of the traffic data and congestion identification inherent in a CMS. The most recent Mobility Report Cards for these towns will be integrated into the MPO CMS.

This task also includes management, operation and administration of the of the MPO TDM programs.

**Objectives:**

- To identify transportation congestion; and,
- To propose projects and policies to address congestion.

**Previous Work:**

1. DCHC MPO Congestion Management System Report;
2. Town of Chapel Hill Mobility Report Card;
3. Town of Carrboro Mobility Report Card;
4. Turning movement counts (i.e., intersection traffic counts);
5. ADT counts (traffic volume counts);
6. Screenline counts for the TRM;
7. AADT counts from NCDOT (traffic volume counts);
8. Bicycle counts from bicycle plans;
9. Pedestrian counts from pedestrian plans; and,
10. Transit ridership data from transit operators.

**Proposed Activities:**

Develop performance measures for evaluating congestion that are appropriate for the MPO;

Collect data and apply models to identify causes and locations of traffic bottlenecks (data will include different modes);

Provide a central database and a graphical user-interface to allow for area- facility-based, and intersection-based congestion mitigation planning;

Define Transportation Improvement Projects (TIP) and other projects to mitigate the congestion, and their implementation priorities; and,

Document the study results in a State of the Systems report.

**Products:**

1. Reports for system components, including performance measures, congestion definition, transportation data and congestion identification, proposed congestion mitigation measures and policies, and a State of the System Report; and,
2. Database and user interface.

**Relationship to Other Plans and MPO Activities**

The CMS will share transportation data with the Triangle Regional Model (TRM) and several tasks that support the Surveillance of Change.

**Completion Date:**

Pre-collection tasks will occur in the summer 2006. Traffic and other modal counts for CMS will be conducted during fall 2005, spring 2006 and fall 2006. The complete system and report will be finished by summer of 2007.

**Proposed Budget and Level of Effort (Staff or Consulting):**

Tasks will largely be undertaken with consulting help and temporary staffing. MPO staff will oversee project, provide project management and review work products. Traffic counts will be conducted when schools are in session.

Consulting - \$177,812  
Staff effort – 460 person hours

**Funding Commitments from Other Entities:**

The NCDOT is to commit \$3,200 in federal and \$800 in State funding for this task.

**Task II-B-18: Air Quality Planning and Conformity Analysis**

The DCHC MPO (the Transportation Advisory Committee) is responsible in making a determination as to whether or not transportation plans, programs, and projects (e.g., 2035 LRTP and FY 2007-2013 TIP) conform to air quality standards and the intent of the State Implementation Plan (SIP). The LPA will continue to provide technical support to the TAC and TCC regarding air quality planning. In addition the LPA will continue participation in the development and application of State Implementation Plans for air quality, participation in the Statewide Interagency Consultation Meetings, and providing assistance to NCDENR in developing and maintaining mobile source emission inventories.

**Objectives:**

1. To ensure that the plans, programs and projects in the DCHC MPO meet air quality conformity standards; and,
2. To ensure that partner agencies, which affect an air quality conformity lapse in the DCHC MPO planning area, meet air quality conformity standards.

**Previous Work:**

1. 2030 LRTP;
2. FY 2006-2007 TIP;
3. Triangle Regional Model (TRM) and TRM updates; and,
4. TRM data such as VMT and speeds for each analysis year.

**Proposed Activities:**

1. Participate in State Interagency Consultation Meetings to make decisions on schedule, model version use, analysis years, potential SIP revisions, MOBILE6.2 modeling parameters, etc.; and,
2. Coordinate State Interagency Consultation Meetings requirements with MPO activities such as TRM enhancements, FY 2007-2013 TIP, Socio-economic data update for 2035 LRTP.

**Products:**

1. State Interagency Consultation Meetings policy that considers needs of DCHC MPO; and,
2. Air quality conformity coordination with State Interagency Consultation Meetings, CAMPO, NCDOT, etc.

### **Relationship to Other Plans and MPO Activities**

Coordination between the State Interagency Consultation Meetings policies and the needs of the DCHC MPO's 2035 LRTP and FY 2007-2013 TIP are critical for ensuring air quality conformity.

### **Completion Date:**

These tasks will be ongoing.

### **Proposed Budget and Level of Effort (Staff or Consulting):**

MPO staff will complete these tasks.  
Staff effort – 176 person hours.

### **Funding Commitments from Other Entities:**

Air quality inter agencies – CAMPO, NCDOT, DENR-DAQ and EPA – contribute staff hours to the air SIP development and air quality non- attainment demonstration.

### **Task III-A: Planning Work Program**

This task will be to administer the FY 2005-2006 UPWP and prepare and process amendments as needed. Evaluate transportation planning work needs and emphasis areas and prepare the FY 2007-2008 UPWP. To prepare and continually maintain a Unified Planning Work Program (UPWP) that describes all transportation and transportation-related planning activities anticipated within the DCHC MPO planning area for the FY 2007-2008. To develop, maintain, and complete the UPWP in conformance with applicable federal, state, and regional guidelines. To prepare UPWP amendments as necessary and requested by member agencies, to reflect any change in programming or focus for the current fiscal year.

### **Objectives:**

1. To prepare and continually maintain a Unified Planning Work Program (UPWP) that describes all transportation and transportation-related planning activities anticipated within the DCHC MPO planning area for FY 2006-2007;
2. To develop, maintain, and complete the UPWP in conformance with applicable federal, state, and regional guidelines; and,
3. To prepare UPWP amendments as necessary and requested by member agencies, to reflect any change in programming or focus for the current fiscal year.

**Previous Work:**

1. FY 2005-06 UPWP; and,
2. Amendment of the UPWP as requested by member agencies.

**Proposed Activities:**

1. Review and amend relevant portions of the UPWP in order to meet new planning requirements and/or circumstances pertinent to the MPO emphasis and transportation planning objectives;
2. Develop a new UPWP for the DCHC planning area covering the next program year. The development of a new UPWP will be prepared in cooperation with NCDOT and subject to the development and public involvement process; and,
3. Amend the UPWP, as needed (the amendment process commonly occurs in January/February of each year).

**Products:**

1. Amendments to the FY 2006-2007 UPWP, as needed; and,
2. Development of the FY 2007-2008 UPWP.

**Relationship to Other Plans and MPO Activities**

The UPWP funds the MPO's planning activities, including many critical programs such as the long-range transportation plan, Transportation Improvement Program (TIP) and air quality conformity.

**Completion Date:**

These tasks will be ongoing.

**Proposed Budget and Level of Effort (Staff or Consulting):**

MPO staff will complete these tasks.  
LPA staff effort – 272 person hours

**Funding Commitments from Other Entities:**

The Towns of Chapel Hill and Carrboro are proposing funding for UPWP task item.

**Task III-B: Transportation Improvement Program**

The LPA will perform tasks associated with the amendment of the FY 2006-2012 MTIP. The LPA staff will continue to develop FY 2007 – 2013 MTIP. This includes the refinement of the MPO Priority Needs and the identification of the transportation projects, programs, and services towards which the MPO will direct STP DA funds. As

the Lead Planning Agency (LPA) of the DCHC MPO, the City of Durham, Transportation Division is responsible for annually developing, amending, adjusting and maintaining the Transportation Improvement Program (TIP) for the metropolitan area. Under this activity, the LPA will update and amend the current, seven-year program of transportation improvement projects (MTIP) that is consistent with the 2025 Long-Range Transportation Plan, STIP, the State Implementation Plan (SIP), EPA Air Quality Conformity Regulations and FHWA/FTA Planning Regulations.

**Objectives:**

1. To develop and adopt the FY 2007-2013 MTIP to support MPO goals; and,
2. To appropriately amend the FY 2006-2012 MTIP, as needed.

**Previous Work:**

1. FY 2006-2012 MTIP; and,
2. FY 2007-2013 MTIP Regional Priority Project List

**Proposed Activities:**

1. Draft FY 2007-2013 MTIP;
2. Conduct public involvement activities for Draft FY 2007-2013 MTIP;
3. Analyze Draft FY 2007-2013 State Transportation Improvement Program (STIP) and develop support documents for negotiations (e.g., “Flagged Issues”);
4. Negotiate MTIP and STIP project reconciliation with NCDOT; and,
5. Adopt FY 2007-2013 MTIP.

**Products:**

1. Draft FY 2007-2013 MTIP and full report (including financial and project analysis);
2. Flagged Issues;
3. Meetings with NCDOT (and meeting materials); and,
4. Adopted FY 2007-2013 MTIP.

**Relationship to Other Plans and MPO Activities**

The FY 2007-2013 MTIP Regional Project Priority List provides information for drafting the FY 2007-2013 MTIP.

**Completion Date:**

June 2007.

**Proposed Budget and Level of Effort (Staff and/or Consulting):**

MPO staff will complete these tasks.  
LPA staff effort – 709 hours

**Funding Commitments from Other Entities:**

None

**Task III-C-2: Environmental Justice**

In accordance with Federal Action (Executive Order 12898), the MPO will develop an Environmental Justice Plan which will focus on complying with the Executive Order and the three basic principles of Environmental Justice:

1. Ensure adequate public involvement of low-income and minority groups in decision-making;
2. Prevent disproportionately high and adverse impacts to low-income and minority groups resulting from transportation and environmental decisions made by the MPO; and
3. Assure that low-income and minority groups receive a proportionate share of benefits resulting from transportation decisions made by the MPO.

**Objectives:**

To ensure that minority and low-income communities are:

1. Not adversely affected by transportation projects and policies;
2. Treated equitably in the provision of transportation services and projects; and
3. Provided full opportunity for participation in MPO transportation planning and decision-making process.

**Previous Work:**

1. Demographic profiles based on 2000 Census
2. Maps to identify areas of low-income, minority and elderly populations, job accessibility, and overlay of major employers, fixed route transit systems, and major shopping areas.

**Proposed Activities:**

1. Develop MPO Environmental Justice Plan, including establishment of an Environmental Justice Advisory Board;
2. Update demographic profiles based on 2000 Census and MPO 2002 base year data - maps to identify areas of low-income, minority and elderly populations, job accessibility, and overlay of major employers, fixed route transit systems, and major shopping areas;
3. Provide increased opportunities for under-served populations to be represented in the transportation planning process;

4. Define target areas through the use of Census Block Group data from the 2000 Census;
5. Analyze the mobility of target area populations to jobs, childcare, and transit routes;
6. Review existing public outreach and involvement plan;
7. Develop a protocol for responding to issues and concerns regarding Environmental Justices in general and Hispanic population in particular; and,
8. Conduct analysis as needed regarding equitable distribution of transportation system benefits and costs among all socio-economic groups throughout the MPO area.

**Products:**

1. Updated maps utilizing information from the 2000 Census and 2002 base year data;
2. Increased involvement of low-income and minority populations in the transportation planning process;
3. Technical assistance memoranda, reports, and workshops as needed;
4. Protocol for responding to issues and concerns regarding Environmental Justice; and,
5. MPO Environmental Justice plan.

**Relationship to Other Plans and MPO Activities:**

All MPO planning activities involving public outreach will be affected by the recommendations of this plan – including the public involvement for the East End Connector SEIS. Project selection and evaluation for the Long Range Transportation Plan will include an environmental justice component. The Environmental Justice Advisory Board will be consulted on various MPO planning activities.

**Completion Date:**

A draft plan will be presented to the TAC in fall spring of 2007. Environmental justice activities will be on-going.

**Proposed Budget and Level of Effort (Staff and/or Consulting):**

Tasks will be undertaken by LPA staff.  
Staff effort – 826 person hours.

**Funding Commitments from Other Entities:**

None.

**Task III-C-4: Planning for the Elderly and Disabled**

The MPO will emphasize planning and provision of transportation facilities and services for the elderly and disabled, especially in the development of the 2035 Long Range Transportation Plan (LRTP). The MPO will update inventory of locations and needs of elderly and disabled persons and ensure that the proposed highway, transit and pedestrian plans integrate this information in the planning process.

**Objectives:**

To ensure that the elderly and disabled population is not adversely affected by transportation projects and policies; are treated equitably in the provision of transportation services and projects; and are provided full opportunity for participation in MPO transportation planning and decision-making process.

**Previous Work:**

Demographic profiles based on 2000 Census; and,  
 Maps to identify areas of elderly and disabled population in relationship to services and other destinations;  
 Local transit and pedestrian plans that have integrated the elderly and disabled population into the planning process; and,  
 Transit operator plans and grant applications.

**Proposed Activities:**

1. Update demographic profiles and define target areas based on 2000 Census and MPO 2002 base year data;
2. Provide increased opportunities for under-served populations to be represented in the transportation planning process; and,
3. Integrate this data into the 2035 LRTP planning process and transit operator plans.

**Products:**

Updated maps utilizing information from the 2000 Census and 2002 base year data;  
 Increased involvement of the elderly and disabled population;  
 Specific tasks in the 2035 LRTP that address the needs of the elderly and disabled;  
 and,  
 Major tasks in the transit plans and grant applications of the local and regional transit operators that specifically address the service needs of the elderly and disabled.

**Relationship to Other Plans and MPO Activities:**

The needs of the elderly and disabled will be addressed in all MPO planning activities involving public outreach and service and project planning.

**Completion Date:**

All the transit and MPO planning efforts will contain an element addressing the needs of the elderly and disabled.

**Proposed Budget and Level of Effort (Staff or Consulting):**

Tasks will be undertaken by LPA staff.  
Staff effort – 122 person hours

**Funding Commitments from Other Entities:**

None.

**Task III-C-6: Public Involvement**

The MPO will continue to provide an early, proactive and a meaningful public participation and input throughout the transportation planning process, including providing for open exchange of information and ideas between the public and transportation decision-makers.

**Objectives:**

1. To provide the public with complete information, timely notice, full access to key decisions and opportunities for early and continuing involvement in the 3C process;
2. To assess the effectiveness of the current Public Involvement Process as required by the federal certification team; and,
3. To develop and enhance the process of public dissemination of information.

**Previous Work:**

1. MPO Public Involvement Process;
2. MPO website;
3. Newsletters;
4. Stakeholder address database; and,
5. Newspaper advertisements.

**Proposed Activities:**

1. Refine the current Public Involvement Process as needed;
2. Apply the Public Involvement Process to transportation programs and tasks; and,
3. Public meetings, workshops, and outreach programs to increase public participation, information dissemination, and education.

**Products:**

1. Update and maintenance of website;

2. Update and maintenance of mailing list database;
3. Quarterly MPO newsletters, and project specific news letters; and,
4. Support of Citizen Advisory Committee

**Relationship to Other Plans and MPO Activities:**

Public involvement is essential to all MPO planning activities. The Public Involvement Process should inform and guide all outreach initiatives.

**Completion Date:**

Public involvement will occur on a continual basis. The website, emails, and mailings will occur regularly throughout the year.

**Proposed Budget and Level of Effort (Staff or Consulting):**

Tasks will be undertaken by LPA and municipal staff.  
Staff effort – 660 person hours

**Funding Commitments from Other Entities:**

None.

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

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

**Objectives:**

1. To ensure that the goals, objectives and needs of the DCHC MPO are integrated in the environmental planning process of transportation projects; and,
2. To ensure the needs of the citizens in the DCHC MPO planning area are considered in the project planning process.

**Previous Work:**

Regular project scoping, environmental study and public meetings, especially those conducted by the NCDOT.

**Proposed Activities:**

Regular participation at project scoping, environmental study and public meetings,

especially those conducted by the NCDOT;  
Review and comment on project scoping and environmental documents;  
LPA participation in NEPA process for the East End Connector; and,  
LPA leadership in the public involvement process for the East End Connector.

**Products:**

Written comments on project scoping and environmental studies, activities and documents;

**Relationship to Other Plans and MPO Activities:**

The activities of this task are directly related to transportation projects in the long-range transportation plan and to projects that are being considered for TIP funding.

**Completion Date:**

These activities are provided as needed.

**Proposed Budget and Level of Effort (Staff or Consulting):**

Tasks will be undertaken by LPA and municipal staff.  
Staff effort – 402 person hours

**Funding Commitments from Other Entities:**

None.

Durham-Chapel Hill-Carrboro Urban Area FY 2006-2007 Unified Planning Work Program Consulting Services Breakdown													
City of Durham													
	Task Description	STP-DA 133(b)(3)(7)						Section 104(f) - PL					
		Staff		Consulting		Total STP-DA		Staff		Consulting		Total PL	
		Local	FHWA	Local	FHWA	Local	FHWA	Local	FHWA	Local	FHWA	Local	FHWA
		20%	80%	20%	80%	20%	80%	20%	80%	20%	80%	20%	80%
II A	<u>Surveillance of Change</u>												
II A	1 Traffic Volume Counts	0	0	0	0	0	0	2,000	8,001	1,404	5,616	3,404	13,617
	2 Vehicle Miles of Travel	0	0	0	0	0	0	0	0	0	0	0	0
	3 Street System Changes	0	0	0	0	0	0	0	0	0	0	0	0
	4 Traffic Accidents	0	0	0	0	0	0	400	1,600	0	0	400	1,600
	5 Transit System Data	0	0	0	0	0	0	0	0	0	0	0	0
	6 Dwelling Unit, Pop. & Emp. Change	0	0	0	0	0	0	1,000	4,000	0	0	1,000	4,000
	7 Air Travel	0	0	0	0	0	0	0	0	0	0	0	0
	8 Vehicle Occupancy Rates	0	0	0	0	0	0	0	0	0	0	0	0
	9 Travel Time Studies	0	0	19,000	76,000	19,000	76,000	2,400	9,600	5,000	20,000	7,400	29,600
	10 Mapping	2,319	9,274	0	0	2,319	9,274	0	0	0	0	0	0
	11 Central Area Parking Inventory	800	3,200	0	0	800	3,200	0	0	0	0	0	0
	12 Bike & Ped. Facilities Inventory	1,333	5,331	0	0	1,333	5,331	0	0	0	0	0	0
	13 Bike & Ped. Counts	1,496	5,985	0	0	1,496	5,985	0	0	0	0	0	0
II B	<u>Long Range Transp. Plan</u>												
II B	1 Collection of Base Year Data	0	0	0	0	0	0	0	0	0	0	0	0
	2 Collection of Network Data	0	0	0	0	0	0	0	0	0	0	0	0
	3 Travel Model Updates	10,142	40,567	175,700	702,800	185,842	743,367	0	0	0	0	0	0
	4 Travel Surveys	1,131	4,525	48,750	195,000	49,881	199,525	0	0	0	0	0	0
	5 Forecast of Data to Horizon year	0	0	0	0	0	0	1,639	6,554	0	0	1,639	6,554
	6 Community Goals & Objectives	0	0	0	0	0	0	5,555	22,220	0	0	5,555	22,220
	7 Forecast of Future Travel Patterns	0	0	0	0	0	0	1,546	6,184	0	0	1,546	6,184
	8 Capacity Deficiency Analysis	0	0	0	0	0	0	8,642	34,566	0	0	8,642	34,566
	9 Highway Element of the LRTP	0	0	0	0	0	0	2,669	10,677	0	0	2,669	10,677
	10 Transit Element of the LRTP	0	0	0	0	0	0	2,669	10,677	0	0	2,669	10,677
	11 Bicycle & Ped. Element of the LRTP	4,039	16,155	0	0	4,039	16,155	0	0	0	0	0	0
	12 Airport/Air Travel Element of LRTP	0	0	0	0	0	0	0	0	0	0	0	0
	13 Collector Street Element of LRTP	1,000	4,000	16,000	64,000	17,000	68,000	1,224	4,897	6,000	24,000	7,224	28,897
	14 Rail, Water or other mode of LRTP	0	0	0	0	0	0	0	0	0	0	0	0
	15 Freight Movement/Mobility Planning	0	0	0	0	0	0	659	2,634	0	0	659	2,634
	16 Financial Planning	0	0	0	0	0	0	1,949	7,797	0	0	1,949	7,797
	17 Congestion Management Strategies	0	0	25,000	100,000	25,000	100,000	3,747	14,987	7,224	28,896	10,971	43,883
	18 Air Qual. Planning/Conformity Anal.	0	0	0	0	0	0	1,728	6,913	0	0	1,728	6,913
II C	<u>Short Range Transit Planning</u>												
II C	1 Short Range Transit Planning	0	0	0	0	0	0	0	0	0	0	0	0
III-A	<u>Planning Work Program</u>	0	0	0	0	0	0	2,624	10,497	0	0	2,624	10,497

Durham-Chapel Hill-Carrboro Urban Area FY 2006-2007 Unified Planning Work Program Consulting Services Breakdown													
City of Durham													
	Task Description	STP-DA 133(b)(3)(7)						Section 104(f) - PL					
		Staff		Consulting		Total STP-DA		Staff		Consulting		Total PL	
		Local	FHWA	Local	FHWA	Local	FHWA	Local	FHWA	Local	FHWA	Local	FHWA
		20%	80%	20%	80%	20%	80%	20%	80%	20%	80%	20%	80%
III-B	Transp. Improvement Plan	0	0	0	0	0	0	5,733	22,932	0	0	5,733	22,932
III-C	Cvl Rgts. Cmp./Otr .Reg. Reqs.												
1	3 Title VI	0	0	0	0	0	0	0	0	0	0	0	0
2	Environmental Justice	0	0	0	0	0	0	5,102	20,409	0	0	5,102	20,409
3	Minority Business Enterprise	0	0	0	0	0	0	0	0	0	0	0	0
4	Planning for the Elderly & Disabled	0	0	0	0	0	0	987	3,947	0	0	987	3,947
5	Safety/Drug Control Planning	0	0	0	0	0	0	0	0	0	0	0	0
6	Public Involvement	0	0	0	0	0	0	4,977	19,906	0	0	4,977	19,906
7	Private Sector Participation	0	0	0	0	0	0	0	0	0	0	0	0
III-D	Incidental Png./Project Dev.												
1	Transportation Enhancement Png.	0	0	0	0	0	0	0	0	0	0	0	0
2	Enviro. Analysis & Pre-TIP Png.	0	0	0	0	0	0	3,283	13,131	0	0	3,283	13,131
3	Special Studies	0	0	54,000	216,000	54,000	216,000	12,500	50,000	0	0	12,500	50,000
4	Regional or Statewide Planning	0	0	0	0	0	0	2,581	10,323	0	0	2,581	10,323
III-EE	Management & Operations												
1	Management & Operations	11,941	47,763	0	0	11,941	47,763	21,912	87,647	0	0	21,912	87,647
Totals		\$34,200	\$136,800	\$338,450	\$1,353,800	\$372,650	\$1,490,600	\$97,525	\$390,099	\$19,628	\$78,512	\$117,153	\$468,611

Durham Area Transit Authority DATA		Durham-Chapel Hill-Carrboro Urban Area FY 2006-2007 Unified Planning Work Program Proposed Funding Source Tables - FTA Transit Funds													Durham 4/20/2006 14:33			
		STP-DA 133(b)(3)(7)		Sec. 104(f) PL		Section 5303 Highway/Transit			Section 5307 Transit			Section 5309 Transit			Task Funding Summary			
		Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 10%	NCDOT 10%	FTA 80%	Local 10%	NCDOT 10%	FTA 80%	Local 25%	NCDOT 25%	FTA 50%	Local	NCDOT	Federal	Total
II A	<b>Surveillance of Change</b>																	
II A	1 Traffic Volume Counts	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	2 Vehicle Miles of Travel	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	3 Street System Changes	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	4 Traffic Accidents	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	5 Transit System Data	0	0	0	0	7,289	7,289	58,312	0	0	0	0	0	7,289	7,289	58,312	72,890	
	6 Dwelling Unit, Pop. & Emp. Change	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	7 Air Travel	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	8 Vehicle Occupancy Rates	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	9 Travel Time Studies	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	10 Mapping	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	11 Central Area Parking Inventory	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	12 Bike & Ped. Facilities Inventory	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	13 Bike & Ped. Counts	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
II B	<b>Long Range Transp. Plan</b>																	
II B	1 Collection of Base Year Data	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	2 Collection of Network Data	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	3 Travel Model Updates	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	4 Travel Surveys	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	5 Forecast of Data to Horizon year	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	6 Community Goals & Objectives	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	7 Forecast of Future Travel Patterns	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	8 Capacity Deficiency Analysis	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	9 Highway Element of th LRTP	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	10 Transit Element of the LRTP	0	0	0	0	0	0	0	775	775	6,202	0	0	775	775	6,202	7,753	
	11 Bicycle & Ped. Element of the LRTP	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	12 Airport/Air Travel Element of LRTP	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	13 Collector Street Element of LRTP	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	14 Rail, Water or other mode of LRTP	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	15 Freight Movement/Mobility Planning	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	16 Financial Planning	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	17 Congestion Management Strategies	0	0	0	0	0	0	0	1,403	1,403	11,227	0	0	1,403	1,403	11,227	14,034	
	18 Air Qual. Planning/Conformity Anal.	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
II C	<b>Short Range Transit Planning</b>																	
II C	1 Short Range Transit Planning	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
III-A	<b>Planning Work Program</b>																	
III-A	1 Planning Work Program	0	0	0	0	0	0	0	3,149	3,149	25,191	0	0	3,149	3,149	25,191	31,489	
III-B	<b>Transp. Improvement Plan</b>																	
III-B	1 Transp. Improvement Plan	0	0	0	0	0	0	0	214	214	1,711	0	0	214	214	1,711	2,139	
III-C	<b>Cvl Rgts. Cmp/Otr .Reg. Reqs.</b>																	
III-C	1 Title VI	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	2 Environmental Justice	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	3 Minority Business Enterprise	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	4 Planning for the Elderly & Disabled	0	0	0	0	5,000	5,000	40,000	0	0	0	0	0	5,000	5,000	40,000	50,000	

Task Description		Durham-Chapel Hill-Carrboro Urban Area FY 2006-2007 Unified Planning Work Program Proposed Funding Source Tables - FTA Transit Funds														Durham 4/20/2006 14:33			
		STP-DA 133(b)(3)(7)		Sec. 104(f) PL		Section 5303 Highway/Transit			Section 5307 Transit			Section 5309 Transit			Task Funding Summary				
		Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 10%	NCDOT 10%	FTA 80%	Local 10%	NCDOT 10%	FTA 80%	Local 25%	NCDOT 25%	FTA 50%	Local	NCDOT	Federal	Total	
5	Safety/Drug Control Planning	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-		
6	Public Involvement	0	0	0	0	0	0	0	4,704	4,704	37,632			4,704	4,704	37,632	47,040		
7	Private Sector Participation	0	0	0	0	0	0	0	0	0	0			-	-	-	-		
<b>III-D</b>																			
	<b>Incidental Plng./Project Dev.</b>																		
1	Transportation Enhancement Plng.	0	0	0	0	0	0	0	0	0	0			-	-	-	-		
2	Enviro. Analysis & Pre-TIP Plng.	0	0	0	0	0	0	0	0	0	0			-	-	-	-		
3	Special Studies	0	0	0	0	0	0	0	0	0	0			-	-	-	-		
4	Regional or Statewide Planning	0	0	0	0	0	0	0	0	0	0			-	-	-	-		
<b>III-E</b>																			
	<b>Management &amp; Operations</b>																		
1	Management & Operations	0	0	0	0	0	0	0	33,685	33,685	269,482	0	0	0	33,685	33,685	269,482	336,853	
<b>Totals</b>		\$0	\$0	\$0	\$0	\$12,289	\$12,289	\$98,312	\$43,931	\$43,931	\$351,445	\$0	\$0	\$0	\$56,220	\$56,220	\$449,757	\$562,196	

	MPO	City of Durham	City of Durham	City of Durham	City of Durham	City of Durham
2-	FTA Code			442400		442100
3-	Task Code	III-A	III-B	III-C-4	III-C-6	III-E
4-	Title of Planning Task	Planning Work Program	Transportation Improvement Plan	Planning for the Ederly & Disabled	Public Involvement	Management & Operations
5-	Task Objective	To identify task areas and staff hours needed to complete each task.	To continue developing plans for improving transportation locally.	To develop revised certification procedures and routing network to maximize efficiency of system fleet using Paratransit Scheduling Software.	To prepare a marketing plan that will outline how we will promote the transit system to the public. To conduct marketing surveys and seek new advertising mediums.	To prepare all required reports, and attend technical meetings relating to transit.
6-	Tangible Product Expected	Annual Planning Work Program outline of tasks and costs associated with them.	Continue to seek ways to improve service for customers locally.	Continued certification and re-certification of ACCESS clients and enhancement of service in the most cost efficient manner.	Positive customer view of the transit system and increased ridership from non traditional users.	The Transportation Division will compile all required federal reports; prepare technical reports for Board of Directors, Council and public. The division will attend Board, regional and national meetings.
7-	Expected Completion Date of Product(s)	Jun-07	Jun-07	Jun-07	Jun-07	Jun-07
8-	Previous Work			Earlier mapping of ACCESS user trips and certification of ACCESS clients.	Previous marketing efforts have been minimal as the marketing position was vacant.	Earlier efforts included creation of internal procedures to monitor and report grant data.
9-	Prior FTA Funds			0	0	0
10-	Relationship To Other Activities	City of Durham, Public Works Department (Transportation)	This work is identified in Task III-A	Will coordinate with major healthcare providers concerning scheduling efficiency.	City of Durham, Public Works Department	Data retrieved from Transit System Data task, II-A-5, relevant also to this task.
11-	Agency Responsible for Task Completion	City of Durham, Public Works Department (Transportation)	City of Durham, Public Works Department (Transportation)	City of Durham, Department of Public Works (Transportation).	City of Durham, Public Works Department (Transportation)	City of Durham, Department of Public Works (Transportation)
12-	HPR - Highway - NCDOT 20%					
13-	HPR - Highway - FHWA 80%					
14-	Section 104 (f) PL Local 20%					
15-	Section 104 (f) PL FHWA 80%					
16-	Section 5303 Local 10%				\$5,000.00	
17-	Section 5303 NCDOT 10%				\$5,000.00	
18-	Section 5303 FTA 80%				\$40,000.00	
19-	Section 5307 Transit - Local 10%	\$3,149	\$214		\$4,704	\$33,684
20-	Section 5307 Transit - NCDOT 10%	\$3,149	\$214		\$4,704	\$33,685
21-	Section 5307 Transit - FTA 80%	\$25,191	\$1,711		\$37,632	\$269,482
22-	Additional Funds - Local 100%					

	MPO	City of Durham	City of Durham		
2-	FTA Code	442400			
3-	Task Code	II-A-5	II-B-10	II-B-17	
4-	Title of Planning Task	Transit System Data	Transit Element of the LRTP	Congestion Mgmt. Strategies	TOTALS
5-	Task Objective	To conduct systemwide service performance surveys and studies for the purpose of service improvement.	Transit survey (Boarding and Alighting, On-Board Surveys) Input at the TCC level on matters related to the transit element of the LRTP	Surveys conducted by the DATA TDM coordinator. Seminars provided by TDM Coordinator. Regional congestion mamangement team member TDM Survey Reports	
6-	Tangible Product Expected	Ridership and Route Recommendation Report.	Transit-on-board and transit boarding & alighting survey results. Current and future transit network.		
7-	Expected Completion Date of Product(s)	Jun-07	Jun-07	Jun-07	
8-	Previous Work	Similar exercise was done in 2002. Any subsequent reports would be an update.			
9-	Prior FTA Funds		0	0	0
10-	Relationship To Other Activities	City of Durham, Public Works Department			
11-	Agency Responsible for Task Completion	City of Durham, Public Works Department (Transportation)	City of Durham, Public Works Department (Transportation)	City of Durham, Public Works Department (Transportation)	
12-	HPR - Highway - NCDOT 20%				\$0.00
13-	HPR - Highway - FHWA 80%				\$0.00
14-	Section 104 (f) PL Local 20%				\$0.00
15-	Section 104 (f) PL FHWA 80%				\$0.00
16-	Section 5303 Local 10%	\$7,289			\$12,289.00
17-	Section 5303 NCDOT 10%	\$7,289			\$12,289.00
18-	Section 5303 FTA 80%	\$58,312			\$98,312.00
19-	Section 5307 Transit - Local 10%		\$775.00	\$1,404.00	\$43,930.00
20-	Section 5307 Transit - NCDOT 10%		\$775.00	\$1,403.00	\$43,930.00
21-	Section 5307 Transit - FTA 80%		\$6,202.00	\$11,227.00	\$351,445.00
22-	Additional Funds - Local 100%				\$0.00

### Attachment # 7 Anticipated DBE Contracting Opportunities for FY07

Name of MPO: City of Durham

Person Completing Form: Harriet Lyons

Telephone Number: (919) 957-7336

Prospectus Task Code	Prospectus Description	Name of Agency Contracting Out	Type of Contracting Opportunity (Consultant, etc.)	Federal Funds to be Contracted Out	Total Funds to be Contracted Out
			<b>NO DBE CONTRACTING OPPORTUNITIES</b>		

Sample Entry:

II-C-11	Transit Plan Evaluation	Big City Planning Department	Consultant	\$48,000	\$60,000
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**Note: This form must be submitted to NCDOT-PTD even if you anticipate no DBE Contracting Opportunities. Note “No contracting opportunities” on the table if you do not anticipate having any contracting opportunities.**

Town of Carrboro  
Task Funding Table  
Task Description and Narrative  
Consulting Services Breakdown

Task Description		Durham-Chapel Hill-Carrboro Urban Area FY 2006-2007 Unified Planning Work Program Proposed Funding Source Tables															Carrboro 4/20/2006 10:51			
		STP-DA 133(b)(3)(7)		Sec. 104(f) PL		Section 5303 Highway/Transit			Section 5307 Transit			Section 5309 Transit			Task Funding Summary					
		Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 10%	NCDOT 10%	FTA 80%	Local 10%	NCDOT 10%	FTA 80%	Local 25%	NCDOT 25%	FTA 50%	Local	NCDOT	Federal	Total		
II A	<b>Surveillance of Change</b>																			
II A	1 Traffic Volume Counts	0	0	0	0										-	-	-	-		
	2 Vehicle Miles of Travel	0	0	0	0										-	-	-	-		
	3 Street System Changes	0	0	50	200										50	-	200	250		
	4 Traffic Accidents	0	0	150	600										150	-	600	750		
	5 Transit System Data	0	0	300	1,200				0	0					300	-	1,200	1,500		
	6 Dwelling Unit, Pop. & Emp. Change	0	0	0	0										-	-	-	-		
	7 Air Travel	0	0	0	0										-	-	-	-		
	8 Vehicle Occupancy Rates	0	0	0	0										-	-	-	-		
	9 Travel Time Studies	0	0	0	0										-	-	-	-		
	10 Mapping	0	0	150	600										150	-	600	750		
	11 Central Area Parking Inventory	0	0	0	0										-	-	-	-		
	12 Bike & Ped. Facilities Inventory	0	0	60	240										60	-	240	300		
	13 Bike & Ped. Counts	0	0	0	0										-	-	-	-		
II B	<b>Long Range Transp. Plan</b>																			
B	1 Collection of Base Year Data	0	0	0	0										-	-	-	-		
	2 Collection of Network Data	0	0	60	240										60	-	240	300		
	3 Travel Model Updates	0	0	0	0										-	-	-	-		
	4 Travel Surveys	0	0	0	0										-	-	-	-		
	5 Forecast of Data to Horizon year	0	0	120	480										120	-	480	600		
	6 Community Goals & Objectives	0	0	60	240				0	0	0				60	-	240	300		
	7 Forecast of Future Travel Patterns	0	0	0	0										-	-	-	-		
	8 Capacity Deficiency Analysis	0	0	0	0										-	-	-	-		
	9 Highway Element of th LRTP	0	0	50	200										50	-	200	250		
	10 Transit Element of the LRTP	0	0	100	400										100	-	400	500		
	11 Bicycle & Ped. Element of the LRTP	0	0	500	2,000										500	-	2,000	2,500		
	12 Airport/Air Travel Element of LRTP	0	0	0	0										-	-	-	-		
	13 Collector Street Element of LRTP	0	0	75	300										75	-	300	375		
	14 Rail, Water or other mode of LRTP	0	0	0	0										-	-	-	-		
	15 Freight Movement/Mobility Planning	0	0	0	0										-	-	-	-		
	16 Financial Planning	0	0	0	0										-	-	-	-		
	17 Congestion Management Strategies	0	0	600	2,400										600	-	2,400	3,000		
	18 Air Qual. Planning/Conformity Anal.	0	0	0	0										-	-	-	-		
II C	<b>Short Range Transit Planning</b>																			
	1 Short Range Transit Planning	0	0	250	1,000										250	-	1,000	1,250		
III-A	<b>Planning Work Program</b>	0	0	300	1,200										300	-	1,200	1,500		
III-B	<b>Transp. Improvement Plan</b>	0	0	400	1,600										400	-	1,600	2,000		
III-C	<b>Cvl Rgts. Cmp./Otr .Reg. Reqs.</b>																			
	1 Title VI	0	0	0	0										-	-	-	-		
	2 Environmental Justice	0	0	60	240										60	-	240	300		
	3 Minority Business Enterprise	0	0	40	160										40	-	160	200		

Task Description		Durham-Chapel Hill-Carrboro Urban Area FY 2006-2007 Unified Planning Work Program Proposed Funding Source Tables															Carrboro 4/20/2006 10:51			
		STP-DA 133(b)(3)(7)		Sec. 104(f) PL		Section 5303 Highway/Transit			Section 5307 Transit			Section 5309 Transit			Task Funding Summary					
		Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 10%	NCDOT 10%	FTA 80%	Local 10%	NCDOT 10%	FTA 80%	Local 25%	NCDOT 25%	FTA 50%	Local	NCDOT	Federal	Total		
4	Planning for the Elderly & Disabled	0	0	50	200				0	0	0				50	-	200	250		
5	Safety/Drug Control Planning	0	0	0	0										-	-	-	-		
6	Public Involvement	0	0	150	600										150	-	600	750		
7	Private Sector Participation	0	0	0	0										-	-	-	-		
<b>III-D Incidental Png./Project Dev.</b>						0	0													
1	Transportation Enhancement Png.	0	0	0	0										-	-	-	-		
2	Enviro. Analysis & Pre-TIP Png.	0	0	100	400										100	-	400	500		
3	Special Studies	0	0	0	0										-	-	-	-		
4	Regional or Statewide Planning	0	0	0	0										-	-	-	-		
<b>III-E Management &amp; Operations</b>																				
1	Management & Operations	0	0	2,716	10,864	0	0	0	0	0	0	0	0	0	2,716	-	10,864	13,580		
<b>Totals</b>		<b>\$0</b>	<b>\$0</b>	<b>\$6,341</b>	<b>\$25,364</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$6,341</b>	<b>\$0</b>	<b>\$25,364</b>	<b>\$31,705</b>		

**FY 2006-2007 Unified Planning Work Program  
Task Descriptions  
Town of Carrboro**

**II-A Surveillance of Change**

- II-A-1 Traffic Volume Counts. No funds programmed.
- II-A-2 Vehicle Miles of Travel. No funds programmed.
- II-A-3 Street System Mileage Change. Update inventory of improvements to the municipal street system to provide accurate inputs for the travel model update.
- II-A-4 Traffic Accidents. Collect traffic accident data and prepare summary and analysis of high accident locations. Compare data analysis to previous years' results.
- II-A-5 Transit System Data. Review summary and analysis of transit ridership prepared by Chapel Hill Transit to assess strengths and weaknesses of service, identify future options, and monitor service.
- II-A-6 Dwelling Unit, Population, and Employment Changes. No funds programmed.
- II-A-7 Air Travel. No funds programmed.
- II-A-8 Vehicle Occupancy Rates. No funds programmed.
- II-A-9 Travel Time Studies. No funds programmed.
- II-A-10. Mapping. Maintain the planning area's base maps, including updates to the maps for the municipal street system, the bicycle routes map, and pedestrian facilities map.
- II-A-11 Central Area Parking Inventory. No funds programmed.
- II-A-12 Bike and Pedestrian Facilities Inventory. Maintain inventory of bicycle and pedestrian facilities to provide accurate inputs for the travel model update and long-range transportation plan, and as a base for identifying future needs for bicycle and pedestrian facilities.
- II-A-13 Bike and Pedestrian Counts. No funds programmed.

**II-B Maintenance of Inventories**

- II-B-1 Collection of Base Year Data. No funds programmed.

- II-B-2 Collection of Network Data. Collection and updating of the following variables describing the existing transportation system to build the network for the travel demand model: posted speed limit, width/lanes, segment length, traffic signal locations, and other needed data.
- II-B-3 Travel Model Updates. No funds programmed.
- II-B-4 Travel Surveys. No funds programmed.
- II-B-5 Forecast of Data to Horizon Year. Produce new household and employment forecasts for inclusion in the travel model.
- II-B-6 Community Goals and Objectives. Take steps to ensure that local goals and objectives are discerned and addressed during the development and implementation of the long-range transportation plan.
- II-B-7 Forecasts of Future Travel Patterns. No funds programmed.
- II-B-8 Capacity Deficiency Analysis. No funds programmed.
- II-B-9 Highway Element of the LRTP. Evaluate and update the highway element of the long-range transportation plan.
- II-B-10 Transit Element of the LRTP. Evaluate and update the transit element of the long-range transportation plan. Activities include long-range transit planning in collaboration with the Town of Chapel Hill, the University of North Carolina, and the Triangle Transit Authority, including the annual Transit Forum.
- II-B-11 Bicycle and Pedestrian Element of the LRTP. Evaluate and update the bicycle and pedestrian element of the long-range transportation plan. Activities will include updating the Town of Carrboro's bicycle policy and sidewalk policy.
- II-B-12 Airport/Air Travel Element of the LRTP. No funds programmed.
- II-B-13 Collector Street Element of the LRTP. Evaluate and update the collector street element of the long-range transportation plan. Activities include the identification of future collector streets, provisions for local street connectivity, development ordinance implementation provisions, and public involvement.
- II-B-14 Rail, Waterway, or Other Mode of the LRTP. No funds programmed.
- II-B-15 Freight Movement / Mobility Planning. No funds programmed.
- II-B-16 Financial Planning. No funds programmed.

II-B-17 Congestion Management Strategies. Plan, implement, and monitor congestion management strategies, which may include the following: Transportation Demand Management, Intelligent Transportation Systems, Access Control and Management, Traffic Operations Improvements, Growth Management. This item includes costs associated with planning for these items, coordinating with public and private stakeholders, development ordinance implementation provisions, public involvement, and marketing or public education.

II-B-18 Air Quality Planning / Conformity Analysis. No funds programmed.

**II-C-1 Short Range Transit Planning.**

Evaluate and update the transit element of the long-range transportation plan. Activities include short-range transit planning in collaboration with the Town of Chapel Hill, the University of North Carolina, and the Triangle Transit Authority, including the annual Transit Forum.

**III-A Planning Work Program.**

Administer the FY 2005-2006 UPWP and prepare and process amendments as needed. Evaluate transportation planning work needed and emphasis areas and prepare the FY 2005-2006 UPWP.

**III-B Transportation Improvement Program.**

Continue to develop the FY 2008-2014 TIP. This includes the adoption of local priority lists, application of criteria to local projects, and the identification of projects, programs, and services for STP-DA and CMAQ funding.

**III-C Civil Rights Compliance / Other Regulations and Requirements**

III-C-1 Title VI. No funds programmed.

III-C-2 Environmental Justice. Continue efforts to support principles of environmental justice in transportation planning activities. Continue to review and refine public involvement process and activities to enhance opportunities for participation in transportation decision-making among low income and minority groups.

III-C-3 Minority Business Enterprise. Continue efforts to ensure full consideration of the potential services that could be provided by minority business enterprises in the development of transportation plans and programs, and in the provision of transportation services.

III-C-4 Planning for the Elderly & Disabled. Continue efforts to emphasize the planning, development, evaluation, and reevaluation of transportation facilities and services for the elderly and disabled.

III-C-5 Safety/Drug Control Planning. No funds programmed.

III-C-6 Public Involvement. Continue to provide for an open exchange of information and ideas between the public and transportation decision-makers. Continue to evaluate community concerns regarding transportation issues.

III-C-7 Private Sector Participation. No funds programmed.

### **III-D Incidental Planning and Project Development**

III-D-1 Transportation Enhancement Planning. No funds programmed.

III-D-2 Environmental Analysis & Pre-TIP Planning. Participate regularly in the project development process, including submission of comments, attending public meetings, attending scoping meetings, attending NEPA 404 merger meetings, participating in field inspections, and LRTP development.

III-D-3 Special Studies. Develop a preliminary functional plan for the Morgan Creek Greenway that would determine the best location for the trail and show connections to residential areas, streets, and public facilities.

III-D-4 Regional or Statewide Planning. No funds programmed.

### **III-E Management & Operations**

Management and operations includes items such as: 1) conducting TAC and TCC meetings and associated material and presentation development; 2) preparing quarterly progress reports and documenting expenditures for planning work items; 3) staff development through professional training courses, seminars, and conferences; 4) subscriptions to professional publications and professional organizational dues; 5) the acquisition of needed software, books, and other materials; and 6) other MPO capacity building efforts for the TAC, TCC and MPO staff.

Durham-Chapel Hill-Carrboro Urban Area FY 2006-2007 Unified Planning Work Program Consulting Services Breakdown													
Town of Carrboro													
	Task Description	STP-DA 133(b)(3)(7)						Section 104(f) - PL					
		Staff		Consulting		Total STP-DA		Staff		Consulting		Total PL	
		Local	FHWA	Local	FHWA	Local	FHWA	Local	FHWA	Local	FHWA	Local	FHWA
		20%	80%	20%	80%	20%	80%	20%	80%	20%	80%	20%	80%
II A	<u>Surveillance of Change</u>												
II A	1 Traffic Volume Counts	0	0	0	0	0	0	0	0	0	0	0	0
	2 Vehicle Miles of Travel	0	0	0	0	0	0	0	0	0	0	0	0
	3 Street System Changes	0	0	0	0	0	0	50	200	0	0	50	200
	4 Traffic Accidents	0	0	0	0	0	0	150	600	0	0	150	600
	5 Transit System Data	0	0	0	0	0	0	300	1,200	0	0	300	1,200
	6 Dwelling Unit, Pop. & Emp. Change	0	0	0	0	0	0	0	0	0	0	0	0
	7 Air Travel	0	0	0	0	0	0	0	0	0	0	0	0
	8 Vehicle Occupancy Rates	0	0	0	0	0	0	0	0	0	0	0	0
	9 Travel Time Studies	0	0	0	0	0	0	0	0	0	0	0	0
	10 Mapping	0	0	0	0	0	0	150	600	0	0	150	600
	11 Central Area Parking Inventory	0	0	0	0	0	0	0	0	0	0	0	0
	12 Bike & Ped. Facilities Inventory	0	0	0	0	0	0	60	240	0	0	60	240
	13 Bike & Ped. Counts	0	0	0	0	0	0	0	0	0	0	0	0
II B	<u>Long Range Transp. Plan</u>												
B	1 Collection of Base Year Data	0	0	0	0	0	0	0	0	0	0	0	0
	2 Collection of Network Data	0	0	0	0	0	0	60	240	0	0	60	240
	3 Travel Model Updates	0	0	0	0	0	0	0	0	0	0	0	0
	4 Travel Surveys	0	0	0	0	0	0	0	0	0	0	0	0
	5 Forecast of Data to Horizon year	0	0	0	0	0	0	120	480	0	0	120	480
	6 Community Goals & Objectives	0	0	0	0	0	0	60	240	0	0	60	240
	7 Forecast of Future Travel Patterns	0	0	0	0	0	0	0	0	0	0	0	0
	8 Capacity Deficiency Analysis	0	0	0	0	0	0	0	0	0	0	0	0
	9 Highway Element of th LRTP	0	0	0	0	0	0	50	200	0	0	50	200
	10 Transit Element of the LRTP	0	0	0	0	0	0	100	400	0	0	100	400
	11 Bicycle & Ped. Element of the LRTP	0	0	0	0	0	0	500	2,000	0	0	500	2,000
	12 Airport/Air Travel Element of LRTP	0	0	0	0	0	0	0	0	0	0	0	0
	13 Collector Street Element of LRTP	0	0	0	0	0	0	75	300	0	0	75	300
	14 Rail, Water or other mode of LRTP	0	0	0	0	0	0	0	0	0	0	0	0
	15 Freight Movement/Mobility Planning	0	0	0	0	0	0	0	0	0	0	0	0
	16 Financial Planning	0	0	0	0	0	0	0	0	0	0	0	0
	17 Congestion Management Strategies	0	0	0	0	0	0	600	2,400	0	0	600	2,400
	18 Air Qual. Planning/Conformity Anal.	0	0	0	0	0	0	0	0	0	0	0	0
II C	<u>Short Range Transit Planning</u>												
	1 Short Range Transit Planning	0	0	0	0	0	0	250	1,000	0	0	250	1,000
III-A	<u>Planning Work Program</u>	0	0	0	0	0	0	300	1,200	0	0	300	1,200

Durham-Chapel Hill-Carrboro Urban Area FY 2006-2007 Unified Planning Work Program Consulting Services Breakdown													
Town of Carrboro													
	Task Description	STP-DA 133(b)(3)(7)						Section 104(f) - PL					
		Staff		Consulting		Total STP-DA		Staff		Consulting		Total PL	
		Local	FHWA	Local	FHWA	Local	FHWA	Local	FHWA	Local	FHWA	Local	FHWA
		20%	80%	20%	80%	20%	80%	20%	80%	20%	80%	20%	80%
III-B	Transp. Improvement Plan	0	0	0	0	0	0	400	1,600	0	0	400	1,600
III-C	Cvl Rgts. Cmp./Otr .Reg. Reqs.												
1	3 Title VI	0	0	0	0	0	0	0	0	0	0	0	0
2	Environmental Justice	0	0	0	0	0	0	60	240	0	0	60	240
3	Minority Business Enterprise	0	0	0	0	0	0	40	160	0	0	40	160
4	Planning for the Elderly & Disabled	0	0	0	0	0	0	50	200	0	0	50	200
5	Safety/Drug Control Planning	0	0	0	0	0	0	0	0	0	0	0	0
6	Public Involvement	0	0	0	0	0	0	150	600	0	0	150	600
7	Private Sector Participation	0	0	0	0	0	0	0	0	0	0	0	0
III-D	Incidental Png./Project Dev.												
1	Transportation Enhancement Png.	0	0	0	0	0	0	0	0	0	0	0	0
2	Enviro. Analysis & Pre-TIP Png.	0	0	0	0	0	0	100	400	0	0	100	400
3	Special Studies	0	0	0	0	0	0	0	0	0	0	0	0
4	Regional or Statewide Planning	0	0	0	0	0	0	0	0	0	0	0	0
III-EE	Management & Operations												
1	Management & Operations	0	0	0	0	0	0	2,716	10,864	0	0	2,716	10,864
Totals		\$0	\$0	\$0	\$0	\$0	\$0	\$6,341	\$25,364	\$0	\$0	\$6,341	\$25,364



Town of Chapel Hill  
Task Funding Table  
Task Description and Narrative  
Consulting Services Breakdown  
Chapel Hill Transit (FTA) Funding Table  
Chapel Hill Transit (FTA) Narrative  
FTA Disadvantaged Business Contracting Opportunities Form

Town of Chapel Hill		Durham-Chapel Hill-Carrboro Urban Area FY 2006-2007 Unified Planning Work Program Proposed Funding Source Tables													Town of Chapel Hill 4/20/2006 10:49			
	Task Description	STP-DA 133(b)(3)(7)		Sec. 104(f) PL		Section 5303 Highway/Transit			Section 5307 Transit			Section 5309 Transit			Task Funding Summary			
		Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 10%	NCDOT 10%	FTA 80%	Local 10%	NCDOT 10%	FTA 80%	Local 25%	NCDOT 25%	FTA 50%	Local	NCDOT	Federal	Total
		<b>II A</b>	<b>Surveillance of Change</b>															
II A	1 Traffic Volume Counts	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
	2 Vehicle Miles of Travel	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	3 Street System Changes	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	4 Traffic Accidents	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	5 Transit System Data	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	6 Dwelling Unit, Pop. & Emp. Change	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	7 Air Travel	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	8 Vehicle Occupancy Rates	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	9 Travel Time Studies	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	10 Mapping	0	0	0	0	1,875	1,875	15,000	1,250	1,250	10,000			3,125	3,125	25,000	31,250	
	11 Central Area Parking Inventory	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	12 Bike & Ped. Facilities Inventory	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	13 Bike & Ped. Counts	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
<b>II B</b>	<b>Long Range Transp. Plan</b>																	
II B	1 Collection of Base Year Data	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	2 Collection of Network Data	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	3 Travel Model Updates	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	4 Travel Surveys	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	5 Forecast of Data to Horizon year	0	0	1,250	5,000	625	625	5,000	0	0	0	0	0	1,875	625	10,000	12,500	
	6 Community Goals & Objectives	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	7 Forecast of Future Travel Patterns	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	8 Capacity Deficiency Analysis	0	0	1,250	5,000	307	307	2,456	0	0	0	0	0	1,557	307	7,456	9,320	
	9 Highway Element of th LRTP	0	0	1,250	5,000	0	0	0	0	0	0	0	0	1,250	-	5,000	6,250	
	10 Transit Element of the LRTP	40,000	160,000	0	0	2,500	2,500	20,000	0	0	0	0	0	42,500	2,500	180,000	225,000	
	11 Bicycle & Ped. Element of the LRTP	0	0	2,500	10,000	0	0	0	0	0	0	0	0	2,500	-	10,000	12,500	
	12 Airport/Air Travel Element of LRTP	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	13 Collector Street Element of LRTP	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	14 Rail, Water or other mode of LRTP	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	15 Freight Movement/Mobility Planning	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	16 Financial Planning	0	0	2,500	10,000	625	625	5,000	0	0	0	0	0	3,125	625	15,000	18,750	
	17 Congestion Management Strategies	0	0	0	0	0	0	0	382	382	3,056			382	382	3,056	3,820	
	18 Air Qual. Planning/Conformity Anal.	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
<b>II C</b>	<b>Short Range Transit Planning</b>																	
II C	1 Short Range Transit Planning	0	0	0	0	125	125	1,000	0	0	0	0	0	125	125	1,000	1,250	
														-	-	-	-	
<b>III-A</b>	<b>Planning Work Program</b>																	
III-A	1 Planning Work Program	0	0	250	1,000	375	375	3,000	375	375	3,000			1,000	750	7,000	8,750	
														-	-	-	-	
<b>III-B</b>	<b>Transp. Improvement Plan</b>																	
III-B	1 Transp. Improvement Plan	0	0	500	2,000	0	0	0	250	250	2,000			750	250	4,000	5,000	
														-	-	-	-	
<b>III-C</b>	<b>Cvl Rgts. Cmp./Otr .Reg. Reqs.</b>																	
III-C	1 Title VI	0	0	0	0	0	0	0	375	375	3,000			375	375	3,000	3,750	
	2 Environmental Justice	0	0	0	0	0	0	0	375	375	3,000			375	375	3,000	3,750	
	3 Minority Business Enterprise	0	0	0	0	0	0	0	1,250	1,250	10,000			1,250	1,250	10,000	12,500	

Town of Chapel Hill		Durham-Chapel Hill-Carrboro Urban Area FY 2006-2007 Unified Planning Work Program Proposed Funding Source Tables													Town of Chapel Hill 4/20/2006 10:49			
Task Description	STP-DA 133(b)(3)(7)		Sec. 104(f) PL		Section 5303 Highway/Transit			Section 5307 Transit			Section 5309 Transit			Task Funding Summary				
	Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 10%	NCDOT 10%	FTA 80%	Local 10%	NCDOT 10%	FTA 80%	Local 25%	NCDOT 25%	FTA 50%	Local	NCDOT	Federal	Total	
	4	Planning for the Elderly & Disabled	0	0	0	0	0	0	0	1,250	1,250	10,000				1,250	1,250	10,000
5	Safety/Drug Control Planning	0	0	0	0	0	0	0	625	625	5,000				625	625	5,000	6,250
6	Public Involvement	0	0	0	0	0	0	0	750	750	6,000				750	750	6,000	7,500
7	Private Sector Participation	0	0	0	0	0	0	0	375	375	3,000				375	375	3,000	3,750
<b>III-D Incidental Png./Project Dev.</b>																		
1	Transportation Enhancement Png.	0	0	0	0	0	0	0	0	0	0				-	-	-	-
2	Enviro. Analysis & Pre-TIP Png.	0	0	0	0	0	0	0	0	0	0				-	-	-	-
3	Special Studies	0	0	1,250	5,000	0	0	0	6,875	6,875	55,000				8,125	6,875	60,000	75,000
4	Regional or Statewide Planning	0	0	0	0	625	625	5,000	625	625	5,000				1,250	1,250	10,000	12,500
<b>III-E Management &amp; Operations</b>																		
1	Management & Operations	0	0	5,749	22,996	4,750	4,750	38,000	5,243	5,243	41,944	0	0	0	15,742	9,993	102,940	128,675
<b>Totals</b>		<b>\$40,000</b>	<b>\$160,000</b>	<b>\$16,499</b>	<b>\$65,996</b>	<b>\$11,807</b>	<b>\$11,807</b>	<b>\$94,456</b>	<b>\$20,000</b>	<b>\$20,000</b>	<b>\$160,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$88,306</b>	<b>\$31,807</b>	<b>\$480,452</b>	<b>\$600,565</b>

## **Task Descriptions and Summary Narratives for FY 2006-07 UPWP**

### **Task II-A-10: Mapping**

Development and maintenance of maps for use in the development and implementation of various tasks.

#### **Objectives:**

1. To prepare maps to support new transportation planning initiatives.
2. To maintain and update existing maps.

#### **Previous Work:**

1. Preparation of mapping for 2030 Long Range Transportation Plan
2. Preparation of mapping for Chapel Hill Transit

#### **Proposed Activities:**

1. Prepare mapping for 2035 Long Range Transportation Plan
2. Prepare various mapping for ongoing transit and transportation planning projects.

#### **Products:**

1. 2035 Plan maps
2. 2006-2007 Chapel Hill Transit maps

#### **Completion Date:**

Mapping for 2035 plan will be ongoing throughout year. Mapping for Chapel Hill Transit will be completed in August, 2006.

#### **Proposed Budget and Level of Effort (Staff or Consulting)**

Tasks will completed by staff, in consultation with MPO staff.

### **Task II-B-5: Forecast Data to Horizon Year**

Refinement and updating of 2035 forecast data.

#### **Objectives:**

1. To prepare estimates of change in base year socio economic data
2. Project 2035 data.

#### **Previous Work:**

1. Development of 2030 projections.

#### **Proposed Activities:**

1. Collect base year data and review for accuracy.
2. Develop projections for 2035.

#### **Products:**

1. 2035 socio economic projections.

**Completion Date:**

September, 2006

**Proposed Budget and Level of Effort (Staff or Consulting)**

Tasks will completed by staff, in consultation with MPO staff.

**Task II-B-8: Capacity/Deficiency Analysis**

Evaluation of 2035 projections to anticipated and proposed transportation network.

**Objectives:**

1. To assess the adequacy of the existing and proposed transportation network to future person trips.

**Previous Work:**

1. Assessment of 2030 capacity/deficiency projections.

**Proposed Activities:**

1. Review projected person trip data
2. Compare projected person trip data to transportation networks to assess adequacy.

**Products:**

1. MPO capacity deficiency analysis.

**Completion Date:**

June 30, 2007

**Proposed Budget and Level of Effort (Staff or Consulting)**

Tasks will completed by staff, in consultation with MPO staff.

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

Assessment of 2035 highway network.

**Objectives:**

1. To assess the adequacy of the adopted highway network and evaluate possible modifications for inclusion in the 2035 Regional Plan.

**Previous Work:**

1. Assessment of 2030 highway network.

**Proposed Activities:**

1. Review capacity/deficiency data and evaluate highway network..

**Products:**

1. MPO 2035 Plan highway element.

**Completion Date:**

June 30, 2007

**Proposed Budget and Level of Effort (Staff or Consulting)**

Tasks will completed by staff, in consultation with MPO staff.

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

Assessment of 2035 transit network.

**Objectives:**

1. To assess the adequacy of the adopted transit network and evaluate possible modifications for inclusion in the 2035 Regional Plan.

**Previous Work:**

1. Assessment of 2030 transit network network.

**Proposed Activities:**

1. Review capacity/deficiency data and evaluate transit network.

**Products:**

1. MPO 2035 Plan transit element.

**Completion Date:**

June 30, 2007

**Proposed Budget and Level of Effort (Staff or Consulting)**

Tasks will completed by staff, in consultation with MPO staff.

**Task II-B-11: Bicycle and Pedestrian Element of LRTP**

Assessment of 2035 bicycle and pedestrian network.

**Objectives:**

1. To assess the adequacy of the adopted bicycle and pedestrian network and evaluate possible modifications for inclusion in the 2035 Regional Plan.

**Previous Work:**

1. Assessment of 2030 bicycle and pedestrian network.

**Proposed Activities:**

1. Review existing bicycle and pedestrian networks and prepare recommended modifications.

**Products:**

1. MPO 2035 Plan bicycle and pedestrian element.

**Completion Date:**

June 30, 2007

**Proposed Budget and Level of Effort (Staff or Consulting)**

Tasks will completed by staff, in consultation with MPO staff.

**Task II-B-16: Financial Planning**

Development of financial plan for the 2035 Transportation Plan

**Objectives:**

1. To develop estimates of anticipated transportation revenue and project costs for development of a fiscally constrained 2035 Plan.

**Previous Work:**

1. 2030 Plan Financial Plan, TIP and management of the STP DA fund.

**Proposed Activities:**

1. Collect information on status of current transportation funding and prepare projections of anticipated funding.
2. Develop cost estimates for construction and operation of transportation facilities included in the 2035 Plan.
3. Prepare a fiscally constrained financial plan.

**Products:**

1. MPO 2035 Financial Plan

**Completion Date:**

Draft, June 30, 2007

**Proposed Budget and Level of Effort (Staff or Consulting)**

Tasks will completed by staff, in consultation with MPO staff.

**Task III-B-: TIP**

Development of 2007-2013 and draft 2008-2014 TIP.

**Objectives:**

1. To develop the 2007-2013 and draft 2008-2014 TIP.

**Previous Work:**

Draft 2007-2013 and 2006-2012 TIP.

**Proposed Activities:**

1. Develop priority list
2. Prepare draft TIP
3. Negotiations with NCDOT
4. Development of final TIP.

**Products:**

1. 2007-2013 and draft 2008-2014 TIP

**Completion Date:**

Draft, June 30, 2007

**Proposed Budget and Level of Effort (Staff or Consulting)**

Tasks will completed by staff, in consultation with MPO staff.

**Task III-A-: Planning Work Program**

Development of 2007-2008 PWP.

**Objectives:**

1. To develop a 2007-2008 planning work program.

**Previous Work:**

2006-2007 planning work program.

**Proposed Activities:**

1. Identify anticipated work tasks for FY2007-2008.
2. Allocate anticipated resources to complete work tasks.

**Products:**

1. FY2007-2008 PWP.

**Completion Date:**

Draft, June 30, 2007

**Proposed Budget and Level of Effort (Staff or Consulting)**

Tasks will completed by staff, in consultation with MPO staff.

**Task III-C-1: Title VI**

Complete an assessment of compliance with federal Title VI regulations.

**Objectives:**

1. To review compliance with Title VI regulations.

**Previous Work:**

Ongoing evaluation of Title VI compliance.

**Proposed Activities:**

1. Review status of Title VI activities
2. Identify changes to Title VI regulations
3. Certify compliance with Title VI.

**Products:**

1. Title VI compliance

**Completion Date:**

June 30, 2007

**Proposed Budget and Level of Effort (Staff or Consulting)**

Tasks will completed by staff, in consultation with MPO staff.

**Task III-C-2: Environmental Justice**

Prepare assessment of environmental justice in development of 2035 Long Range Transportation Plan and ongoing provision of transit service.

**Objectives:**

1. To evaluate environmental justice issues in 2035 Plan and ongoing transit planning.

**Previous Work:**

Title VI evaluation.

**Proposed Activities:**

1. Prepare environmental justice assessment of current Chapel Hill transit service.
2. Prepare environmental justice assessment of 2035 Long Range Transportation Plan.

**Products:**

1. 2035 Regional Plan Environmental Justice evaluation
2. Chapel Hill Title VI compliance

**Completion Date:**

June 30, 2007

**Proposed Budget and Level of Effort (Staff or Consulting)**

Tasks will completed by staff, in consultation with MPO staff.

**Task III-C-3: Minority Business Enterprise**

Prepare assessment of compliance with minority business regulations and identify opportunities for expanded opportunities.

**Objectives:**

1. To evaluate compliance with minority business enterprise regulations.

**Previous Work:**

Minority business evaluation

**Proposed Activities:**

1. Identify opportunities for minority businesses.
2. Determine compliance with minority business enterprise regulations

**Products:**

1. Title VI certification

**Completion Date:**

June 30, 2007

**Proposed Budget and Level of Effort (Staff or Consulting)**

Tasks will completed by staff, in consultation with MPO staff.

**Task III-C-4: Planning for Elderly and Disabled**

Evaluate existing transit service for elderly and disabled populations.

**Objectives:**

1. To evaluate transit services for elderly and disabled population. Assess opportunities for expanded service.

**Previous Work:**

Annual review of elderly and disabled transit services.

**Proposed Activities:**

1. Monitor elderly and disabled transit ridership
2. Review service levels and identify need for additional service.

**Products:**

1. Annual review of elderly and disabled transit services.

**Completion Date:**

June 30, 2007

**Proposed Budget and Level of Effort (Staff or Consulting)**

Tasks will completed by staff, in consultation with MPO staff.

**Task III-C-5: Safety/Drug Control Planning**

Evaluate safety and drug control policies and programs.

**Objectives:**

1. To evaluate drug control programs and monitor transit safety efforts.

**Previous Work:**

Annual review of drug control and transit safety programs.

**Proposed Activities:**

1. Monitor drug control programs
2. Evaluate transit safety programs

**Products:**

1. Annual review of drug control and transit safety programs.

**Completion Date:**

June 30, 2007

**Proposed Budget and Level of Effort (Staff or Consulting)**

Tasks will completed by staff, in consultation with MPO staff.

**Task III-C-6: Public Involvement**

Implement programs to increase public involvement.

**Objectives:**

1. To allow for public involvement in operation of transit system.

**Previous Work:**

Ongoing public involvement programs.

**Proposed Activities:**

1. Implement outreach programs to provide information to the public
2. Solicit public comments on public transit services.

**Products:**

1. Annual transit forum.

**Completion Date:**

June 30, 2007

**Proposed Budget and Level of Effort (Staff or Consulting)**

Tasks will completed by staff, in consultation with MPO staff.

**Task III-C-7: Private Sector Participation**

To assess opportunities for private sector participation in the provision of transit services.

**Objectives:**

1. To review the opportunities for private sector provision of transit services.

**Previous Work:**

Ongoing evaluation of private sector participation.

**Proposed Activities:**

1. Assess private sector opportunities.

**Products:**

1. Annual evaluation.

**Completion Date:**

June 30, 2007

**Proposed Budget and Level of Effort (Staff or Consulting)**

Tasks will completed by staff, in consultation with MPO staff.

**Task III-D-3: Special Studies**

To complete special transportation planning studies.

**Objectives:**

1. Prepare special studies.

**Previous Work:**

1. NC86 Bicycle and Pedestrian Safety Improvements Implementation Study.

**Proposed Activities:**

1. Chapel Hill Downtown Transit Transfer Study Feasibility Study.

**Products:**

1. Chapel Hill Downtown Transit Transfer Study Feasibility Study.

**Completion Date:**

June 30, 2007

**Proposed Budget and Level of Effort (Staff or Consulting)**

Tasks will completed by consultant.

**Task III-D-4: Regional or Statewide Planning**

Participate in various regional and statewide planning projects.

**Objectives:**

1. To provide guidance and support regional and Statewide planning projects.

**Previous Work:**

US 15-501 Fixed Guideway Corridor Realignment

**Proposed Activities:**

1. Provide support to Regional Transit Vision Plan.

**Products:**

1. Regional Transit Vision Plan.

**Completion Date:**

June 30, 2007

**Proposed Budget and Level of Effort (Staff or Consulting)**

Tasks will completed by staff, in consultation with MPO staff.

**Task III-E: Management and Operations**

Provide support to MPO and manage Chapel Hill transportation planning tasks.

**Objectives:**

1. Support MPO activities, including monthly and subcommittee meetings. Provide input to regional planning projects.

**Previous Work:**

1. DCHC MPO meetings and subcommittee meetings.

**Proposed Activities:**

1. Attend MPO meetings, chair subcommittees and provide staff support to regional projects.

**Products:**

1. 2008-2014 TIP
2. 2035 Regional Transportation Plan.

**Completion Date:**

June 30, 2007

**Proposed Budget and Level of Effort (Staff or Consulting)**

Tasks will completed by staff, in consultation with MPO staff.

Durham-Chapel Hill-Carrboro Urban Area FY 2006-2007 Unified Planning Work Program Consulting Services Breakdown													
Town of Chapel Hill													
	Task Description	STP-DA 133(b)(3)(7)						Section 104(f) - PL					
		Staff		Consulting		Total STP-DA		Staff		Consulting		Total PL	
		Local	FHWA	Local	FHWA	Local	FHWA	Local	FHWA	Local	FHWA	Local	FHWA
		20%	80%	20%	80%	20%	80%	20%	80%	20%	80%	20%	80%
II A	<u>Surveillance of Change</u>												
II A	1 Traffic Volume Counts	0	0	0	0	0	0	0	0	0	0	0	0
	2 Vehicle Miles of Travel	0	0	0	0	0	0	0	0	0	0	0	0
	3 Street System Changes	0	0	0	0	0	0	0	0	0	0	0	0
	4 Traffic Accidents	0	0	0	0	0	0	0	0	0	0	0	0
	5 Transit System Data	0	0	0	0	0	0	0	0	0	0	0	0
	6 Dwelling Unit, Pop. & Emp. Change	0	0	0	0	0	0	0	0	0	0	0	0
	7 Air Travel	0	0	0	0	0	0	0	0	0	0	0	0
	8 Vehicle Occupancy Rates	0	0	0	0	0	0	0	0	0	0	0	0
	9 Travel Time Studies	0	0	0	0	0	0	0	0	0	0	0	0
	10 Mapping	0	0	0	0	0	0	0	0	0	0	0	0
	11 Central Area Parking Inventory	0	0	0	0	0	0	0	0	0	0	0	0
	12 Bike & Ped. Facilities Inventory	0	0	0	0	0	0	0	0	0	0	0	0
	13 Bike & Ped. Counts	0	0	0	0	0	0	0	0	0	0	0	0
II B	<u>Long Range Transp. Plan</u>												
B	1 Collection of Base Year Data	0	0	0	0	0	0	0	0	0	0	0	0
	2 Collection of Network Data	0	0	0	0	0	0	0	0	0	0	0	0
	3 Travel Model Updates	0	0	0	0	0	0	0	0	0	0	0	0
	4 Travel Surveys	0	0	0	0	0	0	0	0	0	0	0	0
	5 Forecast of Data to Horizon year	0	0	0	0	0	0	1,250	5,000	0	0	1,250	5,000
	6 Community Goals & Objectives	0	0	0	0	0	0	0	0	0	0	0	0
	7 Forecast of Future Travel Patterns	0	0	0	0	0	0	0	0	0	0	0	0
	8 Capacity Deficiency Analysis	0	0	0	0	0	0	1,250	5,000	0	0	1,250	5,000
	9 Highway Element of th LRTP	0	0	0	0	0	0	1,250	5,000	0	0	1,250	5,000
	10 Transit Element of the LRTP	0	0	40,000	160,000	40,000	160,000	0	0	0	0	0	0
	11 Bicycle & Ped. Element of the LRTP	0	0	0	0	0	0	2,500	10,000	0	0	2,500	10,000
	12 Airport/Air Travel Element of LRTP	0	0	0	0	0	0	0	0	0	0	0	0
	13 Collector Street Element of LRTP	0	0	0	0	0	0	0	0	0	0	0	0
	14 Rail, Water or other mode of LRTP	0	0	0	0	0	0	0	0	0	0	0	0
	15 Freight Movement/Mobility Planning	0	0	0	0	0	0	0	0	0	0	0	0
	16 Financial Planning	0	0	0	0	0	0	2,500	10,000	0	0	2,500	10,000
	17 Congestion Management Strategies	0	0	0	0	0	0	0	0	0	0	0	0
	18 Air Qual. Planning/Conformity Anal.	0	0	0	0	0	0	0	0	0	0	0	0
II C	<u>Short Range Transit Planning</u>												
	1 Short Range Transit Planning	0	0	0	0	0	0	0	0	0	0	0	0
III-A	<u>Planning Work Program</u>	0	0	0	0	0	0	250	1,000	0	0	250	1,000

Durham-Chapel Hill-Carrboro Urban Area FY 2006-2007 Unified Planning Work Program Consulting Services Breakdown													
Town of Chapel Hill													
	Task Description	STP-DA 133(b)(3)(7)						Section 104(f) - PL					
		Staff		Consulting		Total STP-DA		Staff		Consulting		Total PL	
		Local	FHWA	Local	FHWA	Local	FHWA	Local	FHWA	Local	FHWA	Local	FHWA
		20%	80%	20%	80%	20%	80%	20%	80%	20%	80%	20%	80%
III-B	Transp. Improvement Plan	0	0	0	0	0	0	500	2,000	0	0	500	2,000
III-C	Cvl Rgts. Cmp./Otr .Reg. Reqs.												
1	3 Title VI	0	0	0	0	0	0	0	0	0	0	0	0
2	Environmental Justice	0	0	0	0	0	0	0	0	0	0	0	0
3	Minority Business Enterprise	0	0	0	0	0	0	0	0	0	0	0	0
4	Planning for the Elderly & Disabled	0	0	0	0	0	0	0	0	0	0	0	0
5	Safety/Drug Control Planning	0	0	0	0	0	0	0	0	0	0	0	0
6	Public Involvement	0	0	0	0	0	0	0	0	0	0	0	0
7	Private Sector Participation	0	0	0	0	0	0	0	0	0	0	0	0
III-D	Incidental Png./Project Dev.												
1	Transportation Enhancement Png.	0	0	0	0	0	0	0	0	0	0	0	0
2	Enviro. Analysis & Pre-TIP Png.	0	0	0	0	0	0	0	0	0	0	0	0
3	Special Studies	0	0	0	0	0	0	1,250	5,000	0	0	1,250	5,000
4	Regional or Statewide Planning	0	0	0	0	0	0	0	0	0	0	0	0
III-EE	Management & Operations												
1	Management & Operations	0	0	0	0	0	0	5,749	22,996	0	0	5,749	22,996
Totals		\$0	\$0	\$40,000	\$160,000	\$40,000	\$160,000	\$16,499	\$65,996	\$0	\$0	\$16,499	\$65,996

Chapel Hill Transit (CHT)		Durham-Chapel Hill-Carrboro Urban Area FY 2006-2007 Unified Planning Work Program Proposed Funding Source Tables - FTA Transit Funds													Town of Chapel Hill 4/20/2006 14:33			
		STP-DA 133(b)(3)(7)		Sec. 104(f) PL		Section 5303 Highway/Transit			Section 5307 Transit			Section 5309 Transit			Task Funding Summary			
		Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 10%	NCDOT 10%	FTA 80%	Local 10%	NCDOT 10%	FTA 80%	Local 25%	NCDOT 25%	FTA 50%	Local	NCDOT	Federal	Total
II A	<b>Surveillance of Change</b>																	
II A	1 Traffic Volume Counts	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	2 Vehicle Miles of Travel	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	3 Street System Changes	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	4 Traffic Accidents	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	5 Transit System Data	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	6 Dwelling Unit, Pop. & Emp. Change	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	7 Air Travel	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	8 Vehicle Occupancy Rates	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	9 Travel Time Studies	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	10 Mapping	0	0	0	0	1,875	1,875	15,000	1,250	1,250	10,000	0	0	3,125	3,125	25,000	31,250	
	11 Central Area Parking Inventory	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	12 Bike & Ped. Facilities Inventory	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	13 Bike & Ped. Counts	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
II B	<b>Long Range Transp. Plan</b>																	
II B	1 Collection of Base Year Data	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	2 Collection of Network Data	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	3 Travel Model Updates	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	4 Travel Surveys	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	5 Forecast of Data to Horizon year	0	0	0	0	625	625	5,000	0	0	0	0	0	625	625	5,000	6,250	
	6 Community Goals & Objectives	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	7 Forecast of Future Travel Patterns	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	8 Capacity Deficiency Analysis	0	0	0	0	307	307	2,456	0	0	0	0	0	307	307	2,456	3,070	
	9 Highway Element of the LRTP	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	10 Transit Element of the LRTP	0	0	0	0	2,500	2,500	20,000	0	0	0	0	0	2,500	2,500	20,000	25,000	
	11 Bicycle & Ped. Element of the LRTP	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	12 Airport/Air Travel Element of LRTP	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	13 Collector Street Element of LRTP	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	14 Rail, Water or other mode of LRTP	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	15 Freight Movement/Mobility Planning	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
	16 Financial Planning	0	0	0	0	625	625	5,000	0	0	0	0	0	625	625	5,000	6,250	
	17 Congestion Management Strategies	0	0	0	0	0	0	0	382	382	3,056	0	0	382	382	3,056	3,820	
	18 Air Qual. Planning/Conformity Anal.	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
II C	<b>Short Range Transit Planning</b>																	
	1 Short Range Transit Planning	0	0	0	0	125	125	1,000	0	0	0	0	0	125	125	1,000	1,250	
III-A	<b>Planning Work Program</b>	0	0	0	0	375	375	3,000	375	375	3,000	0	0	750	750	6,000	7,500	
III-B	<b>Transp. Improvement Plan</b>	0	0	0	0	0	0	0	250	250	2,000	0	0	250	250	2,000	2,500	
III-C	<b>Cvl Rgts. Cmp/Otr .Reg. Reqs.</b>																	
	1 Title VI	0	0	0	0	0	0	0	375	375	3,000	0	0	375	375	3,000	3,750	
	2 Environmental Justice	0	0	0	0	0	0	0	375	375	3,000	0	0	375	375	3,000	3,750	
	3 Minority Business Enterprise	0	0	0	0	0	0	0	1,250	1,250	10,000	0	0	1,250	1,250	10,000	12,500	
	4 Planning for the Elderly & Disabled	0	0	0	0	0	0	0	1,250	1,250	10,000	0	0	1,250	1,250	10,000	12,500	
	5 Safety/Drug Control Planning	0	0	0	0	0	0	0	625	625	5,000	0	0	625	625	5,000	6,250	

Chapel Hill Transit (CHT)		Durham-Chapel Hill-Carrboro Urban Area FY 2006-2007 Unified Planning Work Program Proposed Funding Source Tables - FTA Transit Funds											Town of Chapel Hill 4/20/2006 14:33					
		STP-DA 133(b)(3)(7)		Sec. 104(f) PL		Section 5303 Highway/Transit			Section 5307 Transit			Section 5309 Transit			Task Funding Summary			
		Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 10%	NCDOT 10%	FTA 80%	Local 10%	NCDOT 10%	FTA 80%	Local 25%	NCDOT 25%	FTA 50%	Local	NCDOT	Federal	Total
6	Public Involvement	0	0	0	0	0	0	0	750	750	6,000			0	750	750	6,000	7,500
7	Private Sector Participation	0	0	0	0	0	0	0	375	375	3,000			0	375	375	3,000	3,750
<b>III-D</b>																		
	<b>Incidental Png./Project Dev.</b>																	
1	Transportation Enhancement Png.	0	0	0	0	0	0	0	0	0	0			0	-	-	-	-
2	Enviro. Analysis & Pre-TIP Png.	0	0	0	0	0	0	0	0	0	0			0	-	-	-	-
3	Special Studies	0	0	0	0	0	0	0	6,875	6,875	55,000			0	6,875	6,875	55,000	68,750
4	Regional or Statewide Planning	0	0	0	0	625	625	5,000	625	625	5,000			0	1,250	1,250	10,000	12,500
<b>III-E</b>																		
	<b>Management &amp; Operations</b>																	
1	Management & Operations	0	0	0	0	4,750	4,750	38,000	5,243	5,243	41,944	0	0	0	9,993	9,993	79,944	99,930
<b>Totals</b>		\$0	\$0	\$0	\$0	\$11,807	\$11,807	\$94,456	\$20,000	\$20,000	\$160,000	\$0	\$0	\$0	\$31,807	\$31,807	\$254,456	\$318,070

**CHAPEL HILL TRANSIT  
FTA TASK NARRATIVE TABLE  
FY 2006-2007**

1- MPO	Town of Chapel Hill
2- FTA Code	442301
3- Task Code	II-A-10
4- Title	Mapping
5- Task Objective	To maintain and modify maps of Chapel Hill Transit routes using GIS technology.
6- Tangible Product Expected	Maps will be prepared for use in various projects. Both electronic and paper maps will be prepared.
7- Expected Completion Date of Products	June-07
8- Previous Work	Preparation of mapping.
9- Prior FTA Funds	\$12,500
10- Relationship	This mapping will be provided to the Regional Model Bureau for use in the calibration of the Regional Model. The maps will also be used to update the Short Range Transit Plan, annual system maps and in the development of the 2035 Regional Transportation Plan.
11- Agency	Town of Chapel Hill Transit and Planning Departments
12- HPR - Highway - NCDOT 20%	
13- HPR - Highway - F11WA 80%	
14- Section 104 (f) PI, Local 20%	
15- Section 104 (f) P I FHWA 80%	
16- Section 5303 Local 10%	1,875
17- Section 5303 NCDOT 10%	1,875
18- Section 5303 FTA 80%	15,000
19- Section 5307 Transit - Local 10%	1,250
20- Section 5307 Transit - NCDOT 10%	1,250
21- Section 5307 Transit - FTA 80%	10,000
22- Additional Funds - Local 100%	

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1- MPO	Town of Chapel Hill
2- FTA Code	442301
3- Task Code	II-B-5
4- Title	Forecast of Data to Horizon Year Model Updates
5- Task Objective	To participate in the revision to the Triangle Regional Model and further refinement of the mode split procedures and transit element.
6- Tangible Product Expected	Revised Triangle Regional Model.
7- Expected Completion Date of Products	June-07

8- Previous Work	Participation in the development of the Triangle Regional Model.
9- Prior FTA Funds	\$3,000
10- Relationship	This effort is necessary to complete the 2040 Regional Transportation Plan.
11- Agency	Town of Chapel Hill Transit and Planning Departments
12- HPR - Highway - NCDOT 20%	
13- HPR - Highway - F11WA 80%	
14- Section 104 (f) PI, Local 20%	
15- Section 104 (f) P I FHWA 80%	
16- Section 5303 Local 10%	625
17- Section 5303 NCDOT 10%	625
18- Section 5303 FTA 80%	5,000
19- Section 5307 Transit - Local 10%	
20- Section 5307 Transit - NCDOT 10%	
21- Section 5307 Transit - FTA 80%	
22- Additional Funds - Local 100%	

I- MPO	Town of Chapel Hill
2- FTA Code	442301
3- Task Code	II-B-8
4- Title	Capacity Deficiency Analysis
5- Task Objective	To analyze system performance and develop strategies to reduce congestion.
6- Tangible Product Expected	2035 Regional Plan
7- Expected Completion Date of Products	June, 07
8- Previous Work	2030 Regional Plan
9- Prior FTA Funds	\$4,800
10- Relationship	This information will be used in the development of the 2035 Plan and Regional Transit Vision Plan
11- Agency	Town of Chapel Hill Transit and Planning Departments
12- HPR - Highway - NCDOT 20%	
13- HPR - Highway - F11WA 80%	
14- Section 104 (f) PI, Local 20%	
15- Section 104 (f) P I FHWA 80%	
16- Section 5303 Local 10%	307
17- Section 5303 NCDOT 10%	307
18- Section 5303 FTA 80%	2,456
19- Section 5307 Transit - Local 10%	
20- Section 5307 Transit - NCDOT 10%	
21- Section 5307 Transit - FTA 80%	
22- Additional Funds - Local 100%	

I- MPO	Town of Chapel Hill
2- FTA Code	442301
3- Task Code	II-B-10
4- Title	Transit Element of the Long Range Plan
5- Task Objective	To revise the 2030 transit plan as part of the development of the 2040 Long Range Plan.
6- Tangible Product Expected	Transit element of the 2040 Plan.
7- Expected Completion Date of Products	June-07
8- Previous Work	Development of the 2030 Plan transit element.
9- Prior FTA Funds	\$6,000
10- Relationship	The transit element will be part of the DCHC 2040 Plan.
11- Agency	Town of Chapel Hill Transit and Planning Departments
12- HPR - Highway - NCDOT 20%	
13- HPR - Highway - F11WA 80%	
14- Section 104 (f) PI, Local 20%	
15- Section 104 (f) P I FHWA 80%	
16- Section 5303 Local 10%	625
17- Section 5303 NCDOT 10%	625
18- Section 5303 FTA 80%	5,000
19- Section 5307 Transit - Local 10%	
20- Section 5307 Transit - NCDOT 10%	
21- Section 5307 Transit - FTA 80%	
22- Additional Funds - Local 100%	

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I- MPO	Town of Chapel Hill
2- FTA Code	442301
3- Task Code	II-B-16
4- Title	Financial Planning
5- Task Objective	To prepare the Financial Plan for the 2035 Regional Transportation Plan
6- Tangible Product Expected	2035 Regional Plan
7- Expected Completion Date of Products	June-07
8- Previous Work	2030 Plan.
9- Prior FTA Funds	\$4,000
10- Relationship	This information will be used to refine Chapel Hill Transit's efforts to complete a long range transit plan.
11- Agency	Town of Chapel Hill Transit and Planning Departments
12- HPR - Highway - NCDOT 20%	
13- HPR - Highway - F11WA 80%	
14- Section 104 (f) PI, Local 20%	

15- Section 104 (f) P I FHWA 80%	
16- Section 5303 Local 10%	1,875
17- Section 5303 NCDOT 10%	1,875
18- Section 5303 FTA 80%	15,000
19- Section 5307 Transit - Local 10%	
20- Section 5307 Transit - NCDOT 10%	
21- Section 5307 Transit - FTA 80%	
22- Additional Funds - Local 100%	

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1- MPO	Town of Chapel Hill
2- FTA Code	442301
3- Task Code	II-B-17
4- Title	Congestion Management Strategies
5- Task Objective	To evaluate Congestion Management strategies for the 2035 Regional Transportation Plan
6- Tangible Product Expected	2035 Regional Plan
7- Expected Completion Date of Products	June-07
8- Previous Work	2030 Plan.
9- Prior FTA Funds	\$4,000
10- Relationship	This information will be used to refine Chapel Hill Transit's efforts to complete a long range transit plan.
11- Agency	Town of Chapel Hill Transit and Planning Departments
12- HPR - Highway - NCDOT 20%	
13- HPR - Highway - F11WA 80%	
14- Section 104 (f) PI, Local 20%	
15- Section 104 (f) P I FHWA 80%	
16- Section 5303 Local 10%	
17- Section 5303 NCDOT 10%	
18- Section 5303 FTA 80%	
19- Section 5307 Transit - Local 10%	382
20- Section 5307 Transit - NCDOT 10%	382
21- Section 5307 Transit - FTA 80%	3,056
22- Additional Funds - Local 100%	

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1- MPO	Town of Chapel Hill
2- FTA Code	442100
3- Task Code	III-A
4- Title	Planning Work Program
5- Task Objective	To develop and monitor the annual planning work program.
6- Tangible Product Expected	2007-08 Planning Work Program.
7- Expected Completion Date of Products	May-07
8- Previous Work	2006-07 Planning Work Program.

9- Prior FTA Funds	\$2,000
10- Relationship	The Planning Work Program supports various regional planning efforts
11- Agency	Town of Chapel Hill Transit and Planning Departments
12- HPR - Highway - NCDOT 20%	
13- HPR - Highway - F11WA 80%	
14- Section 104 (f) PI, Local 20%	
15- Section 104 (f) P I FHWA 80%	
16- Section 5303 Local 10%	125
17- Section 5303 NCDOT 10%	125
18- Section 5303 FTA 80%	1,000
19- Section 5307 Transit - Local 10%	375
20- Section 5307 Transit - NCDOT 10%	375
21- Section 5307 Transit - FTA 80%	3,000
22- Additional Funds - Local 100%	

I- MPO	Town of Chapel Hill
2- FTA Code	442500
3- Task Code	III-B
4- Title	Transportation Improvement Program
5- Task Objective	To prepare the 2007-2013 TIP.
6- Tangible Product Expected	2007-2013 TIP.
7- Expected Completion Date of Products	June-07
8- Previous Work	Development of the 2006-2012 TIP.
9- Prior FTA Funds	\$2,000
10- Relationship	The transit element will be part of the DCHC 2035 Plan.
11- Agency	Town of Chapel Hill Transit and Planning Departments
12- HPR - Highway - NCDOT 20%	
13- HPR - Highway - F11WA 80%	
14- Section 104 (f) PI, Local 20%	
15- Section 104 (f) P I FHWA 80%	
16- Section 5303 Local 10%	375
17- Section 5303 NCDOT 10%	375
18- Section 5303 FTA 80%	3,000
19- Section 5307 Transit - Local 10%	250
20- Section 5307 Transit - NCDOT 10%	250
21- Section 5307 Transit - FTA 80%	2,000
22- Additional Funds - Local 100%	

I- MPO	Town of Chapel Hill
2- FTA Code	442700
3- Task Code	III-C-1
4- Title	Title VI
5- Task Objective	To assess compliance with federal Title VI regulations.

6- Tangible Product Expected Title VI assessment.  
 7- Expected Completion  
 Date of Products June-07  
 8- Previous Work Ongoing monitoring  
 9- Prior FTA Funds \$3,000  
 10- Relationship This project supports the development of the 2007-2013 TIP.  
 11- Agency Town of Chapel Hill Transit and Planning Departments  
 12- HPR - Highway - NCDOT 20%  
 13- HPR - Highway - F11WA 80%  
 14- Section 104 (f) PI, Local 20%  
 15- Section 104 (f) P I FHWA 80%  
 16- Section 5303 Local 10%  
 17- Section 5303 NCDOT 10%  
 18- Section 5303 FTA 80%  
 19- Section 5307 Transit - Local 10% 375  
 20- Section 5307 Transit - NCDOT 10% 375  
 21- Section 5307 Transit - FTA 80% 3,000  
 22- Additional Funds - Local 100%

I- MPO Town of Chapel Hill  
 2- FTA Code 442604  
 3- Task Code III-C-2  
 4- Title Environmental Justice  
 5- Task Objective To assess impact of transit services on low income and minority populations  
 6- Tangible Product Expected Annual assessment.  
 7- Expected Completion  
 Date of Products June-07  
 8- Previous Work Ongoing monitoring  
 9- Prior FTA Funds \$3,000  
 10- Relationship This project supports the development of the 2035 Regional Plan.  
 11- Agency Town of Chapel Hill Transit and Planning Departments  
 12- HPR - Highway - NCDOT 20%  
 13- HPR - Highway - F11WA 80%  
 14- Section 104 (f) PI, Local 20%  
 15- Section 104 (f) P I FHWA 80%  
 16- Section 5303 Local 10%  
 17- Section 5303 NCDOT 10%  
 18- Section 5303 FTA 80%  
 19- Section 5307 Transit - Local 10% 375  
 20- Section 5307 Transit - NCDOT 10% 375  
 21- Section 5307 Transit - FTA 80% 3,000  
 22- Additional Funds - Local 100%

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I- MPO	Town of Chapel Hill
2- FTA Code	442700
3- Task Code	III-C-3
4- Title	Minority Business Enterprise
5- Task Objective	To assess compliance with minority business enterprise regulations
6- Tangible Product Expected	Annual assessment.
7- Expected Completion Date of Products	June-07
8- Previous Work	Ongoing monitoring
9- Prior FTA Funds	\$12,000
10- Relationship	
11- Agency	Town of Chapel Hill Transit and Planning Departments
12- HPR - Highway - NCDOT 20%	
13- HPR - Highway - F11WA 80%	
14- Section 104 (f) PI, Local 20%	
15- Section 104 (f) P I FHWA 80%	
16- Section 5303 Local 10%	
17- Section 5303 NCDOT 10%	
18- Section 5303 FTA 80%	
19- Section 5307 Transit - Local 10%	1,250
20- Section 5307 Transit - NCDOT 10%	1,250
21- Section 5307 Transit - FTA 80%	10,000
22- Additional Funds - Local 100%	

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I- MPO	Town of Chapel Hill
2- FTA Code	442400
3- Task Code	III-C-4
4- Title	Planning for Elderly and Handicapped
5- Task Objective	To assess impact of transit services on elderly and handicapped populations
6- Tangible Product Expected	Annual assessment.
7- Expected Completion Date of Products	June-07
8- Previous Work	Ongoing monitoring
9- Prior FTA Funds	\$12,000
10- Relationship	This project supports the development of the 2035 Regional Plan.
11- Agency	Town of Chapel Hill Transit and Planning Departments
12- HPR - Highway - NCDOT 20%	
13- HPR - Highway - F11WA 80%	

14- Section 104 (f) PI, Local 20%  
 15- Section 104 (f) P I FHWA 80%  
 16- Section 5303 Local 10%  
 17- Section 5303 NCDOT 10%  
 18- Section 5303 FTA 80%  
 19- Section 5307 Transit - Local 10% 1,250  
 20- Section 5307 Transit - NCDOT 10% 1,250  
 21- Section 5307 Transit - FTA 80% 12,000  
 22- Additional Funds - Local 100%

I- MPO Town of Chapel Hill  
 2- FTA Code 442400  
 3- Task Code III-C-5  
 4- Title Safety Drug Control Planning  
 5- Task Objective To implement and monitor federal safety and drug control planning  
 6- Tangible Product Expected Annual assessment.  
 7- Expected Completion Date of Products June-07  
 8- Previous Work Ongoing monitoring  
 9- Prior FTA Funds \$0  
 10- Relationship  
 11- Agency Town of Chapel Hill Transit and Planning Departments  
 12- HPR - Highway - NCDOT 20%  
 13- HPR - Highway - F11WA 80%  
 14- Section 104 (f) PI, Local 20%  
 15- Section 104 (f) P I FHWA 80%  
 16- Section 5303 Local 10%  
 17- Section 5303 NCDOT 10%  
 18- Section 5303 FTA 80%  
 19- Section 5307 Transit - Local 10% 625  
 20- Section 5307 Transit - NCDOT 10% 625  
 21- Section 5307 Transit - FTA 80% 5,000  
 22- Additional Funds - Local 100%

I- MPO Town of Chapel Hill  
 2- FTA Code 442100  
 3- Task Code III-C-6  
 4- Title Public Involvement  
 5- Task Objective To establish public outreach efforts to engage public involvement.  
 6- Tangible Product Expected Annual transit forum.  
 7- Expected Completion Date of Products June-07  
 8- Previous Work January, 06 public forum.

9- Prior FTA Funds	\$6,000
10- Relationship	This project supports the development of the 2035 Regional Plan.
11- Agency	Town of Chapel Hill Transit and Planning Departments
12- HPR - Highway - NCDOT 20%	
13- HPR - Highway - F11WA 80%	
14- Section 104 (f) PI, Local 20%	
15- Section 104 (f) P I FHWA 80%	
16- Section 5303 Local 10%	
17- Section 5303 NCDOT 10%	
18- Section 5303 FTA 80%	
19- Section 5307 Transit - Local 10%	750
20- Section 5307 Transit - NCDOT 10%	750
21- Section 5307 Transit - FTA 80%	6,000
22- Additional Funds - Local 100%	

I- MPO	Town of Chapel Hill
2- FTA Code	442400
3- Task Code	III-C-7
4- Title	Private Sector Participation
5- Task Objective	To assess opportunities for private sector contracting.
6- Tangible Product Expected	Annual assessment.
7- Expected Completion Date of Products	June-07
8- Previous Work	Ongoing monitoring
9- Prior FTA Funds	\$0
10- Relationship	
11- Agency	Town of Chapel Hill Transit and Planning Departments
12- HPR - Highway - NCDOT 20%	
13- HPR - Highway - F11WA 80%	
14- Section 104 (f) PI, Local 20%	
15- Section 104 (f) P I FHWA 80%	
16- Section 5303 Local 10%	
17- Section 5303 NCDOT 10%	
18- Section 5303 FTA 80%	
19- Section 5307 Transit - Local 10%	375
20- Section 5307 Transit - NCDOT 10%	375
21- Section 5307 Transit - FTA 80%	3,000
22- Additional Funds - Local 100%	

I- MPO	Town of Chapel Hill
2- FTA Code	442700
3- Task Code	III-D-3
4- Title	Special Studies

5- Task Objective	To prepare special studies to support ongoing transit operations.
6- Tangible Product Expected	Downtown Transit Transfer Center Feasibility Study assessment.
7- Expected Completion Date of Products	June-07
8- Previous Work	Ongoing monitoring
9- Prior FTA Funds	\$0
10- Relationship	This project supports the development of the 2035 Regional Plan.
11- Agency	Town of Chapel Hill Transit and Planning Departments
12- HPR - Highway - NCDOT 20%	
13- HPR - Highway - F11WA 80%	
14- Section 104 (f) PI, Local 20%	
15- Section 104 (f) P I FHWA 80%	
16- Section 5303 Local 10%	
17- Section 5303 NCDOT 10%	
18- Section 5303 FTA 80%	
19- Section 5307 Transit - Local 10%	6,875
20- Section 5307 Transit - NCDOT 10%	6,875
21- Section 5307 Transit - FTA 80%	55,000
22- Additional Funds - Local 100%	

1- MPO	Town of Chapel Hill
2- FTA Code	442200
3- Task Code	III-D-4
4- Title	Regional or Statewide Planning
5- Task Objective	To support regional and statewide planning projects.
6- Tangible Product Expected	
7- Expected Completion Date of Products	June-07
8- Previous Work	Seamless transit effort.
9- Prior FTA Funds	\$2,000
10- Relationship	This project supports the development of the 2035 Regional Plan.
11- Agency	Town of Chapel Hill Transit and Planning Departments
12- HPR - Highway - NCDOT 20%	
13- HPR - Highway - F11WA 80%	
14- Section 104 (f) PI, Local 20%	
15- Section 104 (f) P I FHWA 80%	
16- Section 5303 Local 10%	625
17- Section 5303 NCDOT 10%	625
18- Section 5303 FTA 80%	5,000

19- Section 5307 Transit - Local 10%	625
20- Section 5307 Transit - NCDOT 10%	625
21- Section 5307 Transit - FTA 80%	5,000
22- Additional Funds - Local 100%	

I- MPO	Town of Chapel Hill
2- FTA Code	442100
3- Task Code	III-E
4- Title	Management and Operations
5- Task Objective	To support various transit planning activities.
6- Tangible Product Expected	Ongoing.
7- Expected Completion Date of Products	June-07
8- Previous Work	Management of transit planning program.
9- Prior FTA Funds	\$70,000
10- Relationship	Supports all other transit planning activities.
11- Agency	Town of Chapel Hill Transit and Planning Departments
12- HPR - Highway - NCDOT 20%	
13- HPR - Highway - F11WA 80%	
14- Section 104 (f) PI, Local 20%	
15- Section 104 (f) P I FHWA 80%	
16- Section 5303 Local 10%	4,750
17- Section 5303 NCDOT 10%	4,750
18- Section 5303 FTA 80%	38,000
19- Section 5307 Transit - Local 10%	5,243
20- Section 5307 Transit - NCDOT 10%	5,243
21- Section 5307 Transit - FTA 80%	41,944
22- Additional Funds - Local 100%	

### Attachment # 7 Anticipated DBE Contracting Opportunities for FY07

Name of MPO:    Durham-Chapel Hill-Carrboro   

Person Completing Form:    David Bonk   

Telephone Number: 986-2888 ext. 347

Prospectus Task Code	Prospectus Description	Name of Agency Contracting Out	Type of Contracting Opportunity (Consultant, etc.)	Federal Funds to be Contracted Out	Total Funds to be Contracted Out
III-D-3	Special Studies	Chapel Hill	Consultant	\$50,000	\$62,500

Sample Entry:

II-C-11	Transit Plan Evaluation	Big City Planning Department	Consultant	\$48,000	\$60,000
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**Note: This form must be submitted to NCDOT-PTD even if you anticipate no DBE Contracting Opportunities. Note “No contracting opportunities” on the table if you do not anticipate having any contracting opportunities.**



**Orange County  
Task Funding Table  
Orange County Narratives  
Consulting Services Breakdown**

Orange County		Durham-Chapel Hill-Carrboro Urban Area FY 2006-2007 Unified Planning Work Program Proposed Funding Source Tables													Orange County 4/20/2006 10:52			
		SPR Highway		Sec. 104(f) & 133(b)(3)(7)		Section 5303 Highway/Transit			Section 5307 Transit			Section 5309 Transit			Task Funding Summary			
		NCDOT 20%	FHWA 80%	Local 20%	FHWA 80%	Local 10%	NCDOT 10%	FTA 80%	Local 10%	NCDOT 10%	FTA 80%	Local 25%	NCDOT 25%	FTA 50%	Local	NCDOT	Federal	Total
<b>II A</b>	<b>Surveillance of Change</b>																	
II A	1 Traffic Volume Counts			0	0										-	-	-	-
	2 Vehicle Miles of Travel														-	-	-	-
	3 Street System Changes														-	-	-	-
	4 Traffic Accidents														-	-	-	-
	5 Transit System Data			0	0										-	-	-	-
	6 Dwelling Unit, Pop. & Emp. Change														-	-	-	-
	7 Air Travel														-	-	-	-
	8 Vehicle Occupancy Rates														-	-	-	-
	9 Travel Time Studies			0	0										-	-	-	-
	10 Mapping			0	0										-	-	-	-
	11 Central Area Parking Inventory														-	-	-	-
	12 Bike & Ped. Facilities Inventory														-	-	-	-
	13 Bike & Ped. Counts			0	0										-	-	-	-
<b>II B</b>	<b>Long Range Transp. Plan</b>																	
B	1 Collection of Base Year Data			0	0										-	-	-	-
	2 Collection of Network Data			0	0										-	-	-	-
	3 Travel Model Updates														-	-	-	-
	4 Travel Surveys														-	-	-	-
	5 Forecast of Data to Horizon year			0	0										-	-	-	-
	6 Community Goals & Objectives														-	-	-	-
	7 Forecast of Future Travel Patterns														-	-	-	-
	8 Capacity Deficiency Analysis														-	-	-	-
	9 Highway Element of the L RTP														-	-	-	-
	10 Transit Element of the L RTP														-	-	-	-
	11 Bicycle & Ped. Element of the L RTP														-	-	-	-
	12 Airport/Air Travel Element of L RTP														-	-	-	-
	13 Collector Street Element of L RTP														-	-	-	-
	14 Rail, Water or other mode of L RTP														-	-	-	-
	15 Freight Movement/Mobility Planning														-	-	-	-
	16 Financial Planning														-	-	-	-
	17 Congestion Management Strategies			0	0										-	-	-	-
	18 Air Qual. Planning/Conformity Anal.			1,410	5,640										1,410	-	5,640	7,050
<b>II C</b>	<b>Short Range Transit Planning</b>																	
1	Short Range Transit Planning														-	-	-	-
<b>III-A</b>	<b>Planning Work Program</b>			0	0										-	-	-	-
<b>III-B</b>	<b>Transp. Improvement Plan</b>			0	0										-	-	-	-
<b>III-C</b>	<b>Cvl Rgts. Cmp./Otr .Reg. Reqs.</b>																	
1	Title VI														-	-	-	-
2	Environmental Justice			0	0										-	-	-	-
3	Minority Business Enterprise														-	-	-	-

Orange County		Durham-Chapel Hill-Carrboro Urban Area FY 2006-2007 Unified Planning Work Program Proposed Funding Source Tables													Orange County 4/20/2006 10:52			
Task Description	SPR Highway		Sec. 104(f) & 133(b)(3)(7)		Section 5303 Highway/Transit			Section 5307 Transit			Section 5309 Transit			Task Funding Summary				
	NCDOT 20%	FHWA 80%	Local 20%	FHWA 80%	Local 10%	NCDOT 10%	FTA 80%	Local 10%	NCDOT 10%	FTA 80%	Local 25%	NCDOT 25%	FTA 50%	Local	NCDOT	Federal	Total	
	4	Planning for the Elderly & Disabled													-	-	-	-
5	Safety/Drug Control Planning													-	-	-	-	
6	Public Involvement			0	0									-	-	-	-	
7	Private Sector Participation													-	-	-	-	
<b>III-D</b>	<b>Incidental Png./Project Dev.</b>													-	-	-	-	
1	Transportation Enhancement Png.													-	-	-	-	
2	Enviro. Analysis & Pre-TIP Png.													-	-	-	-	
3	Special Studies			0	0									-	-	-	-	
4	Regional or Statewide Planning																	
<b>III-E</b>	<b>Management &amp; Operations</b>													-	-	-	-	
1	Management & Operations	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
<b>Totals</b>		\$0	\$0	\$1,410	\$5,640	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,410	\$0	\$5,640	\$7,050	

## 2006-2007 UPWP Task Narrative Summary

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

Orange County, Chapel Hill and Carrboro are undertaking a joint effort to address greenhouse gas (GHG) emissions. The three jurisdictions have awarded a contract to the International Council of Local Environmental Initiatives (ICLEI) Energy Services (IES) of Toronto, Canada to complete an inventory of greenhouse gas emissions in Orange County and develop an action plan to effect reductions in greenhouse gas emissions. ICLEI approximates 39% of the inventory and local action plan work is for transportation-related sources. Orange County's Environment and Resource Conservation Department is serving as the project coordinator. Cost shares and responsibilities are outlined in the Memorandum of Agreement (MoA) approved by the governing boards of the three jurisdictions.

IES will conduct this project in the first half of calendar year 2006, with an anticipated completion date in July 2007. The consultant will work with an appointed Air Quality Advisory Committee (AQAC) and a joint staff work group to:

1. Inventory GHG emissions during a selected base year;
2. Forecast emissions over a selected planning period, up to the target year of 2025;
3. Develop an Emissions Reduction Target;
4. Identify actions that local governments, business, industry and the community could take to reduce GHG emissions through 2025; and
5. Develop a GHG Emissions Reduction Action Plan based on the above actions.

#### **Objectives:**

1. To identify existing measures and propose additional measures to reduce GHG emissions in Orange County; and
2. To create an inventory of sources and emissions of greenhouse gases in the county in order to:
  - Forecast GHG emissions for future years
  - Have a base year for comparison of future GHG emissions

#### **Previous Work:**

The consultant has met with the Air Quality Advisory Committee and has:

1. Met with key data providers
2. Established a project team list serve
3. Obtained community inventory and documentation
4. Collected base year community inventory data and information
5. Collected historic GHG reduction measures data and information
6. Simulated unavailable data
7. Transposed paper records
8. Categorized and cumulated data
9. Confirmed and clarified data

10. Entered data into ICLEI modeling software
11. Identified and modeled future measures to reduce GHG emissions
12. Worked with the Advisory Group to determine a GHG emissions reduction target

**Proposed Activities:**

1. Create scenarios based on future measures
2. Work with Advisory Group to select potential measures and reductions
3. Prepare draft report
4. Obtain comments from reviewers
5. Revise draft into final report

**Products:**

1. Data collected in this project and summarized data made available to the client through the ICLEI software.
2. Presentations to Advisory Group, Transportation Advisory Committee & Governing boards –will be made available to the client for future use and adaptation.
3. Electronic and hard copies of the final GHG Emissions Inventory and Reduction Local Action Plan (LAP).

**Relationship to Other Plans and MPO Activities:**

The project uses future population and employment projections from the DCHC MPO LRTP. Measures/ strategies identified in the LAP to reduce transportation-related GHG emissions will coordinate with those considered in the LRTP. IES is coordinating the development of the GHG Emissions Inventory and Reduction Local Action Plan with the Chapel Hill-Carolina Environmental Program Carbon Reduction Project.

**Completion Date:**

IES anticipates completion of the project in July 2006.

**Proposed Budget and Level of Effort (Staff or Consulting):**

Tasks will be undertaken by the consultant. The following payment schedule shows the FY 2006-2007 payment including the breakdown for transportation related costs in **bold print**.

Phase of Project	Anticipated Invoice Date	Percentage	Total	Transportation-Related Costs	Eligible for Reimbursement
Start-up	21-Dec-05	15%	\$6,750	\$2,644	\$2,115
Mid-point	20-Mar-05	45%	\$20,250	\$7,931	\$6,345
<b>Completion</b>	<b>20-Jul-05</b>	<b>40%</b>	<b>\$18,000</b>	<b>\$7,050</b>	<b>\$5,640</b>
Total	-	100%	\$45,000	\$17,625	\$14,100

### Funding Commitments from Other Entities:

Orange County, Chapel Hill and Carrboro have adopted a Memorandum of Agreement to fund the project as shown in the following table. Funds to be paid in FY 2006-2007 are shown in bold print for each jurisdiction.

	Memorandum Of Agreement	Total for Project	(40% to be Invoiced FY 2006-2007) – (amount eligible for FHWA reimbursement) = (\$18,000 - \$5,640)	Per MoA
<b>Orange County</b>	44.6%	\$13,781	\$12,360	<b>\$5,513</b>
<b>Chapel Hill</b>	41.2%	\$12,731	\$12,360	<b>\$5,092</b>
<b>Carrboro</b>	14.2%	\$4,388	\$12,360	<b>\$1,755</b>
Total	100.0%	\$30,900		\$12,360

Durham-Chapel Hill-Carrboro Urban Area FY 2006-2007 Unified Planning Work Program Consulting Services Breakdown													
Orange County													
	Task Description	STP-DA 133(b)(3)(7)						Section 104(f) - PL					
		Staff		Consulting		Total STP-DA		Staff		Consulting		Total PL	
		Local	FHWA	Local	FHWA	Local	FHWA	Local	FHWA	Local	FHWA	Local	FHWA
		20%	80%	20%	80%	20%	80%	20%	80%	20%	80%	20%	80%
II A	<u>Surveillance of Change</u>												
II A	1 Traffic Volume Counts	0	0	0	0	0	0	0	0	0	0	0	0
	2 Vehicle Miles of Travel	0	0	0	0	0	0	0	0	0	0	0	0
	3 Street System Changes	0	0	0	0	0	0	0	0	0	0	0	0
	4 Traffic Accidents	0	0	0	0	0	0	0	0	0	0	0	0
	5 Transit System Data	0	0	0	0	0	0	0	0	0	0	0	0
	6 Dwelling Unit, Pop. & Emp. Change	0	0	0	0	0	0	0	0	0	0	0	0
	7 Air Travel	0	0	0	0	0	0	0	0	0	0	0	0
	8 Vehicle Occupancy Rates	0	0	0	0	0	0	0	0	0	0	0	0
	9 Travel Time Studies	0	0	0	0	0	0	0	0	0	0	0	0
	10 Mapping	0	0	0	0	0	0	0	0	0	0	0	0
	11 Central Area Parking Inventory	0	0	0	0	0	0	0	0	0	0	0	0
	12 Bike & Ped. Facilities Inventory	0	0	0	0	0	0	0	0	0	0	0	0
	13 Bike & Ped. Counts	0	0	0	0	0	0	0	0	0	0	0	0
II B	<u>Long Range Transp. Plan</u>												
II B	1 Collection of Base Year Data	0	0	0	0	0	0	0	0	0	0	0	0
	2 Collection of Network Data	0	0	0	0	0	0	0	0	0	0	0	0
	3 Travel Model Updates	0	0	0	0	0	0	0	0	0	0	0	0
	4 Travel Surveys	0	0	0	0	0	0	0	0	0	0	0	0
	5 Forecast of Data to Horizon year	0	0	0	0	0	0	0	0	0	0	0	0
	6 Community Goals & Objectives	0	0	0	0	0	0	0	0	0	0	0	0
	7 Forecast of Future Travel Patterns	0	0	0	0	0	0	0	0	0	0	0	0
	8 Capacity Deficiency Analysis	0	0	0	0	0	0	0	0	0	0	0	0
	9 Highway Element of th LRTP	0	0	0	0	0	0	0	0	0	0	0	0
	10 Transit Element of the LRTP	0	0	0	0	0	0	0	0	0	0	0	0
	11 Bicycle & Ped. Element of the LRTP	0	0	0	0	0	0	0	0	0	0	0	0
	12 Airport/Air Travel Element of LRTP	0	0	0	0	0	0	0	0	0	0	0	0
	13 Collector Street Element of LRTP	0	0	0	0	0	0	0	0	0	0	0	0
	14 Rail, Water or other mode of LRTP	0	0	0	0	0	0	0	0	0	0	0	0
	15 Freight Movement/Mobility Planning	0	0	0	0	0	0	0	0	0	0	0	0
	16 Financial Planning	0	0	0	0	0	0	0	0	0	0	0	0
	17 Congestion Management Strategies	0	0	0	0	0	0	0	0	0	0	0	0
	18 Air Qual. Planning/Conformity Anal.	0	0	0	0	0	0	0	0	1,410	5,640	1,410	5,640
II C	<u>Short Range Transit Planning</u>												
II C	1 Short Range Transit Planning	0	0	0	0	0	0	0	0	0	0	0	0
III-A	<u>Planning Work Program</u>	0	0	0	0	0	0	0	0	0	0	0	0

Durham-Chapel Hill-Carrboro Urban Area FY 2006-2007 Unified Planning Work Program Consulting Services Breakdown													
Orange County													
	Task Description	STP-DA 133(b)(3)(7)						Section 104(f) - PL					
		Staff		Consulting		Total STP-DA		Staff		Consulting		Total PL	
		Local	FHWA	Local	FHWA	Local	FHWA	Local	FHWA	Local	FHWA	Local	FHWA
		20%	80%	20%	80%	20%	80%	20%	80%	20%	80%	20%	80%
III-B	Transp. Improvement Plan	0	0	0	0	0	0	0	0	0	0	0	0
III-C	Cvl Rgts. Cmp./Otr .Reg. Reqs.												
1	3 Title VI	0	0	0	0	0	0	0	0	0	0	0	0
2	Environmental Justice	0	0	0	0	0	0	0	0	0	0	0	0
3	Minority Business Enterprise	0	0	0	0	0	0	0	0	0	0	0	0
4	Planning for the Elderly & Disabled	0	0	0	0	0	0	0	0	0	0	0	0
5	Safety/Drug Control Planning	0	0	0	0	0	0	0	0	0	0	0	0
6	Public Involvement	0	0	0	0	0	0	0	0	0	0	0	0
7	Private Sector Participation	0	0	0	0	0	0	0	0	0	0	0	0
III-D	Incidental Png./Project Dev.												
1	Transportation Enhancement Png.	0	0	0	0	0	0	0	0	0	0	0	0
2	Enviro. Analysis & Pre-TIP Png.	0	0	0	0	0	0	0	0	0	0	0	0
3	Special Studies	0	0	0	0	0	0	0	0	2,327	9,306	2,327	9,306
4	Regional or Statewide Planning	0	0	0	0	0	0	0	0	0	0	0	0
III-EE	Management & Operations												
1	Management & Operations	0	0	0	0	0	0	0	0	0	0	0	0
Totals		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,737	\$14,946	\$3,737	\$14,946

N.C. Department of Transportation  
Task Funding Table

NCDOT		Durham-Chapel Hill-Carrboro Urban Area FY 2006-2007 Unified Planning Work Program Proposed Funding Source Tables													NCDOT 4/20/2006 10:50			
		SPR		Sec. 104(f) & 133(b)(3)(7)		Section 5303			Section 5307			Section 5309			Task Funding Summary			
		Highway		Local 20%	FHWA 80%	Highway/Transit			Transit			Transit			Local	NCDOT	Federal	Total
NCDOT 20%	FHWA 80%	Local 10%	NCDOT 10%			FTA 80%	Local 10%	NCDOT 10%	FTA 80%	Local 25%	NCDOT 25%	FTA 50%						
II A	<b>Surveillance of Change</b>																	
II A	1 Traffic Volume Counts	0	0												-	-	-	-
	2 Vehicle Miles of Travel	0	0											-	-	-	-	
	3 Street System Changes	0	0											-	-	-	-	
	4 Traffic Accidents	0	0											-	-	-	-	
	5 Transit System Data	0	0											-	-	-	-	
	6 Dwelling Unit, Pop. & Emp. Change	0	0											-	-	-	-	
	7 Air Travel	0	0											-	-	-	-	
	8 Vehicle Occupancy Rates	0	0											-	-	-	-	
	9 Travel Time Studies	0	0											-	-	-	-	
	10 Mapping	0	0											-	-	-	-	
	11 Central Area Parking Inventory	0	0											-	-	-	-	
	12 Bike & Ped. Facilities Inventory	0	0											-	-	-	-	
	13 Bike & Ped. Counts	0	0											-	-	-	-	
II B	<b>Long Range Transp. Plan</b>																	
II B	1 Collection of Base Year Data	0	0											-	-	-	-	
	2 Collection of Network Data	0	0											-	-	-	-	
	3 Travel Model Updates	2,100	8,400											-	2,100	8,400	10,500	
	4 Travel Surveys	0	0											-	-	-	-	
	5 Forecast of Data to Horizon year	0	0											-	-	-	-	
	6 Community Goals & Objectives	0	0											-	-	-	-	
	7 Forecast of Future Travel Patterns	0	0											-	-	-	-	
	8 Capacity Deficiency Analysis	0	0											-	-	-	-	
	9 Highway Element of th LRTP	0	0											-	-	-	-	
	10 Transit Element of the LRTP	0	0											-	-	-	-	
	11 Bicycle & Ped. Element of the LRTP	0	0											-	-	-	-	
	12 Airport/Air Travel Element of LRTP	0	0											-	-	-	-	
	13 Collector Street Element of LRTP	200	800											-	200	800	1,000	
	14 Rail, Water or other mode of LRTP	0	0											-	-	-	-	
	15 Freight Movement/Mobility Planning	0	0											-	-	-	-	
	16 Financial Planning	0	0											-	-	-	-	
	17 Congestion Management Strategies	800	3,200											-	800	3,200	4,000	
	18 Air Qual. Planning/Conformity Anal.	200	800											-	200	800	1,000	
II C	<b>Short Range Transit Planning</b>																	
II C	1 Short Range Transit Planning	0	0											-	-	-	-	
III-A	<b>Planning Work Program</b>	400	1,600											-	400	1,600	2,000	
III-B	<b>Transp. Improvement Plan</b>	400	1,600											-	400	1,600	2,000	
III-C	<b>Cvl Rgts. Cmp./Otr .Reg. Reqs.</b>																	
III-C	1 Title VI	0	0											-	-	-	-	
	2 Environmental Justice	0	0											-	-	-	-	
	3 Minority Business Enterprise	0	0											-	-	-	-	

NCDOT		Durham-Chapel Hill-Carrboro Urban Area FY 2006-2007 Unified Planning Work Program Proposed Funding Source Tables													NCDOT 4/20/2006 10:50			
Task Description	SPR Highway		Sec. 104(f) & 133(b)(3)(7)		Section 5303 Highway/Transit			Section 5307 Transit			Section 5309 Transit			Task Funding Summary				
	NCDOT 20%	FHWA 80%	Local 20%	FHWA 80%	Local 10%	NCDOT 10%	FTA 80%	Local 10%	NCDOT 10%	FTA 80%	Local 25%	NCDOT 25%	FTA 50%	Local	NCDOT	Federal	Total	
4	Planning for the Elderly & Disabled	0	0											-	-	-	-	
5	Safety/Drug Control Planning	0	0											-	-	-	-	
6	Public Involvement	0	0											-	-	-	-	
7	Private Sector Participation	0	0											-	-	-	-	
<b>III-D Incidental Png./Project Dev.</b>																		
1	Transportation Enhancement Png.	100	400											-	100	400	500	
2	Enviro. Analysis & Pre-TIP Png.	1,000	4,000											-	1,000	4,000	5,000	
3	Special Studies	1,000	4,000											-	1,000	4,000	5,000	
4	Regional or Statewide Planning	2,100	8,400												2,100	8,400	10,500	
<b>III-E Management &amp; Operations</b>																		
1	Management & Operations	4,000	16,000											-	4,000	16,000	20,000	
<b>Totals</b>		<b>\$12,300</b>	<b>\$49,200</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$12,300</b>	<b>\$49,200</b>	<b>\$61,500</b>



**Triangle Transit Authority (TTA)**  
**Task Funding Table**  
**Task Description and Narrative**  
**TTA Transit (FTA) Narrative**  
**Consulting Services Breakdown**  
**FTA Disadvantaged Business Contracting Opportunities Form**

Triangle Transit Authority (TTA)		Durham-Chapel Hill-Carrboro Urban Area FY 2006-2007 Unified Planning Work Program Proposed Funding Source Tables													TTA 4/20/2006 10:53			
		STP-DA 133(b)(3)(7)		Sec. 104(f) PL		Section 5303 Highway/Transit			Section 5307 Transit			Section 5309 Transit			Task Funding Summary			
		Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 10%	NCDOT 10%	FTA 80%	Local 10%	NCDOT 10%	FTA 80%	Local 25%	NCDOT 25%	FTA 50%	Local	NCDOT	Federal	Total
<b>II A</b>	<b>Surveillance of Change</b>																	
II A	1 Traffic Volume Counts			0	0				0	0	0				-	-	-	-
	2 Vehicle Miles of Travel			0	0				0	0	0				-	-	-	-
	3 Street System Changes			0	0				0	0	0				-	-	-	-
	4 Traffic Accidents			0	0				0	0	0				-	-	-	-
	5 Transit System Data			0	0				0	0	0				-	-	-	-
	6 Dwelling Unit, Pop. & Emp. Change			0	0				0	0	0				-	-	-	-
	7 Air Travel			0	0				0	0	0				-	-	-	-
	8 Vehicle Occupancy Rates			0	0				0	0	0				-	-	-	-
	9 Travel Time Studies			0	0				0	0	0				-	-	-	-
	10 Mapping			0	0				0	0	0				-	-	-	-
	11 Central Area Parking Inventory			0	0				0	0	0				-	-	-	-
	12 Bike & Ped. Facilities Inventory			0	0				0	0	0				-	-	-	-
	13 Bike & Ped. Counts			0	0				0	0	0				-	-	-	-
<b>II B</b>	<b>Long Range Transp. Plan</b>																	
B	1 Collection of Base Year Data			0	0				0	0	0				-	-	-	-
	2 Collection of Network Data			0	0				0	0	0				-	-	-	-
	3 Travel Model Updates			0	0				12,500	12,500	100,000				12,500	12,500	100,000	125,000
	4 Travel Surveys			0	0				1,250	1,250	10,000				1,250	1,250	10,000	12,500
	5 Forecast of Data to Horizon year			0	0				0	0	0				-	-	-	-
	6 Community Goals & Objectives			0	0				0	0	0				-	-	-	-
	7 Forecast of Future Travel Patterns			0	0				0	0	0				-	-	-	-
	8 Capacity Deficiency Analysis			0	0				0	0	0				-	-	-	-
	9 Highway Element of the LRTP	0	0	0	0				0	0	0				-	-	-	-
	10 Transit Element of the LRTP	0	0	0	0				0	0	0				-	-	-	-
	11 Bicycle & Ped. Element of the LRTP			0	0				0	0	0				-	-	-	-
	12 Airport/Air Travel Element of LRTP			0	0				0	0	0				-	-	-	-
	13 Collector Street Element of LRTP			0	0				0	0	0				-	-	-	-
	14 Rail, Water or other mode of LRTP			0	0				0	0	0				-	-	-	-
	15 Freight Movement/Mobility Planning			0	0				0	0	0				-	-	-	-
	16 Financial Planning			0	0				0	0	0				-	-	-	-
	17 Congestion Management Strategies	31,250	125,000	0	0				0	0	0				-	31,250	125,000	156,250
	18 Air Qual. Planning/Conformity Anal.			0	0				0	0	0				-	-	-	-
<b>II C</b>	<b>Short Range Transit Planning</b>																	
1	Short Range Transit Planning			0	0				121,250	121,250	970,000				121,250	121,250	970,000	1,212,500
<b>III-A</b>	<b>Planning Work Program</b>			0	0				0	0	0				-	-	-	-
<b>III-B</b>	<b>Transp. Improvement Plan</b>			0	0				0	0	0				-	-	-	-
<b>III-C</b>	<b>Civil Rgts. Comp./Otr. Reg. Reqs.</b>																	
1	Title VI			0	0				0	0	0				-	-	-	-
2	Environmental Justice			0	0				0	0	0				-	-	-	-
3	Minority Business Enterprise			0	0				0	0	0				-	-	-	-
4	Planning for the Elderly & Disabled			0	0				0	0	0				-	-	-	-
5	Safety/Drug Control Planning			0	0				0	0	0				-	-	-	-
6	Public Involvement			0	0				0	0	0				-	-	-	-
7	Private Sector Participation			0	0				0	0	0				-	-	-	-

Triangle Transit Authority (TTA)		Durham-Chapel Hill-Carrboro Urban Area FY 2006-2007 Unified Planning Work Program Proposed Funding Source Tables												TTA 4/20/2006 10:53				
		STP-DA 133(b)(3)(7)		Sec. 104(f) PL		Section 5303 Highway/Transit			Section 5307 Transit			Section 5309 Transit			Task Funding Summary			
	Task Description	Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 10%	NCDOT 10%	FTA 80%	Local 10%	NCDOT 10%	FTA 80%	Local 25%	NCDOT 25%	FTA 50%	Local	NCDOT	Federal	Total
<b>III-D</b>	<b>Incidental Plng./Project Dev.</b>														-	-	-	-
1	Transportation Enhancement Plng.			0	0				0	0	0				-	-	-	-
2	Enviro. Analysis & Pre-TIP Plng.			0	0				0	0	0				-	-	-	-
3	Special Studies			0	0				12,500	12,500	100,000				12,500	12,500	100,000	125,000
4	Regional or Statewide Planning			0	0				5,625	5,625	45,000				5,625	5,625	45,000	56,250
<b>III-E</b>	<b>Management &amp; Operations</b>														-	-	-	-
1	Management & Operations	0	0	0	0				0	0	0							
<b>Totals</b>		\$31,250	\$125,000	\$0	\$0	\$0	\$0	\$0	\$153,125	\$153,125	\$1,225,000	\$0	\$0	\$0	\$153,125	\$184,375	\$1,350,000	\$1,687,500

**Task II-B-17: Congestion Management Strategies / Regional Transportation Demand Management Program**

The MPO is contracting with the Triangle Transit Authority to support travel demand management activities with a benefit to our planning area. This year the activities in Durham and Orange counties will continue to be conducted through a regional approach to travel demand management.

**Objectives:**

1. Assist Durham County employers to comply with Durham Commute Trip Reduction Ordinance. Achieve 90% compliance among Durham employers subject to ordinance; increase number of employees participating in TDM survey by 5%.
2. Provide incentives for employees in Wake, Durham and Orange counties to try commute alternatives through the SmartCommute Challenge. Increase the number of people who take the Challenge by 10% to 13,700. Increase the percentage of pledgers who stick with their new commute at least occasionally by 5% to 10% of total pledgers = 68,500 fewer SOV trips.
3. Work closely with NCSU and UNC to promote alternative transportation to college and university students. Raise awareness of public transportation, ridesharing, and cycling to students at UNC, NCSU, Duke, NCCU, Shaw, Meredith and two additional universities. Prompt 100 students to register for ridematching. Prompt 650 new off-campus students to use public transportation = 65,000 fewer SOV trips.
4. Encourage employers to offer commuter benefits to their employees and to attain at least 14% alternative mode usage. Build relationships with 10 new organizations with an eye toward becoming BWCs. Deliver personal service and training to employee transportation coordinators and TCAs to raise awareness of commute alternatives. Increase alternative mode use at 10 new employers by 5%. Increase alternative mode usage by 5 percentage points at the 6 BWCs outside of RTP that did not reach 14% alternative mode use last year. Raise awareness and incentives for commute alternatives to a target of at least 10,000 employees at these organizations. If we increase the alternative mode commute use for these employers by 5 percentage points, then there will be 200,000 fewer SOV trips.
5. Provide information about public transportation and ridesharing services to new hires at area employers. Increase number of new hire brochures distributed by 10% to 2,200. Prompt 200 new hires to use commute alternatives at least once per week. 20,000 fewer SOV trips.
6. Work closely with CAMPO and DCHC Bike/Ped. Groups, NCSU, and UNC to raise awareness of bike/ped commuting options. Prompt 100 previously SOV drivers to use a bike/ped commute at least twice per week. Distribute bike lights to 100 cyclists. 20,000 fewer SOV trips.
7. Increase community awareness of commute alternatives. Communicate directly with 500 Triangle residents at community events.

**Previous Work:**

During the first half of FY2006, the MPO's investment in the regional travel demand management program resulted in the following outcomes.

1. SmartCommute Challenge, which ran from August 15th through September 30th. During the Challenge, 12,071 people pledged to try a commuting option, of which 64% reported that they had previously always driven alone to work. (43.7% of pledges were associated with RTP employers, 11.7% of pledges were from other Durham employers outside of RTP, and 8% were from Orange County employers.) During the Challenge, 3,127 Triangle residents attempted carpool matches, and 9 new vanpools were started. In the follow-up survey, one month after the Challenge, 40% of respondents indicated that they were still using an alternative mode.
2. The "Redefine the Way You Travel" campaign aimed at increasing transit use, biking, and carpooling among university students at UNC, NCCU, NCSU, and Shaw was launched in August with advertisements, PR, and on-site activities.. Staff conducted two successful Bus Tours at UNC and NC State; organized a Hip Hop Show at Shaw; and partnered with NCSU parking to imprint our website on all traffic tickets. Since the program launch, NCSU U-PASS ridership (students and employees combined) grew 238%, or 230 trips per day, over last year for the 4-month period between September and December. At UNC, regional pass usage increased from 371 trips by students in March 2005 to 1,937 trips by students in November 2005, an increase of over 400%.
3. Since July, 313 employees have registered for the regional Emergency Ride Home program, 25 for whom driving alone had been their primary mode. We have continued to promote the Emergency Ride Home program through TTA's website.
4. Nearly two-thirds of large- and medium-sized employers in Durham County have surveyed their employees in compliance with the Durham CTR ordinance. The second wave of surveys will begin in February. All will begin completing their annual reports following the receipt of survey results.

**Proposed Activities:**

Key activities will include the 2006 SmartCommute Challenge campaign, continuation of the "Redefine the way you travel" campaign targeted at university students, continuation of the regional Emergency Ride Home program, providing targeted information and incentives to newly hired employees, administering the Durham CTR ordinance, and supporting employers in efforts to increase their percentage of employees biking, carpooling, vanpooling, telecommuting, or riding the bus to work.

**Products:**

Quarterly progress reports. There are a variety of marketing products that will be developed in the course of meeting these objectives, but they are for consumption by the target audience, and not the MPO.

**Relationship to Other Plans and MPO Activities:**

None

**Completion Date:**

SmartCommute Challenge will be conducted during August and September. All other activities will occur throughout the year.

**Proposed Budget and Level of Effort (Staff or Consulting):**

Tasks will largely be undertaken with through three staff at the Triangle Transit Authority. Two interns will also be hired to assist with the Redefine Travel campaign. Contractors will be hired for specialized tasks.

Staff effort – Three full-time staff and two interns (full-time during summer, 10 hours per week during academic year)

**Funding Commitments from Other Entities:**

CAMPO will provide \$75,000 in federal and local funds. Durham CTR fees will generate \$13,800. We anticipate private sponsorship to generate \$10,000. NCDOT will match all funds 50/50.

Durham-Chapel Hill-Carrboro Urban Area FY 2006-2007 Unified Planning Work Program Consulting Services Breakdown													
TTA													
	Task Description	STP-DA 133(b)(3)(7)						Section 104(f) - PL					
		Staff		Consulting		Total STP-DA		Staff		Consulting		Total PL	
		Local	FHWA	Local	FHWA	Local	FHWA	Local	FHWA	Local	FHWA	Local	FHWA
		20%	80%	20%	80%	20%	80%	20%	80%	20%	80%	20%	80%
II A	<b>Surveillance of Change</b>												
II A 1	Traffic Volume Counts	0	0	0	0	0	0	0	0	0	0	0	0
2	Vehicle Miles of Travel	0	0	0	0	0	0	0	0	0	0	0	0
3	Street System Changes	0	0	0	0	0	0	0	0	0	0	0	0
4	Traffic Accidents	0	0	0	0	0	0	0	0	0	0	0	0
5	Transit System Data	0	0	0	0	0	0	0	0	0	0	0	0
6	Dwelling Unit, Pop. & Emp. Change	0	0	0	0	0	0	0	0	0	0	0	0
7	Air Travel	0	0	0	0	0	0	0	0	0	0	0	0
8	Vehicle Occupancy Rates	0	0	0	0	0	0	0	0	0	0	0	0
9	Travel Time Studies	0	0	0	0	0	0	0	0	0	0	0	0
10	Mapping	0	0	0	0	0	0	0	0	0	0	0	0
11	Central Area Parking Inventory	0	0	0	0	0	0	0	0	0	0	0	0
12	Bike & Ped. Facilities Inventory	0	0	0	0	0	0	0	0	0	0	0	0
13	Bike & Ped. Counts	0	0	0	0	0	0	0	0	0	0	0	0
II B	<b>Long Range Transp. Plan</b>												
II B 1	Collection of Base Year Data	0	0	0	0	0	0	0	0	0	0	0	0
2	Collection of Network Data	0	0	0	0	0	0	0	0	0	0	0	0
3	Travel Model Updates	0	0	0	0	0	0	0	0	0	0	0	0
4	Travel Surveys	0	0	0	0	0	0	0	0	0	0	0	0
5	Forecast of Data to Horizon year	0	0	0	0	0	0	0	0	0	0	0	0
6	Community Goals & Objectives	0	0	0	0	0	0	0	0	0	0	0	0
7	Forecast of Future Travel Patterns	0	0	0	0	0	0	0	0	0	0	0	0
8	Capacity Deficiency Analysis	0	0	0	0	0	0	0	0	0	0	0	0
9	Highway Element of th LRTP	0	0	0	0	0	0	0	0	0	0	0	0
10	Transit Element of the LRTP	0	0	0	0	0	0	0	0	0	0	0	0
11	Bicycle & Ped. Element of the LRTP	0	0	0	0	0	0	0	0	0	0	0	0
12	Airport/Air Travel Element of LRTP	0	0	0	0	0	0	0	0	0	0	0	0
13	Collector Street Element of LRTP	0	0	0	0	0	0	0	0	0	0	0	0
14	Rail, Water or other mode of LRTP	0	0	0	0	0	0	0	0	0	0	0	0
15	Freight Movement/Mobility Planning	0	0	0	0	0	0	0	0	0	0	0	0
16	Financial Planning	0	0	0	0	0	0	0	0	0	0	0	0
17	Congestion Management Strategies	31,250	125,000	0	0	31,250	125,000	0	0	0	0	0	0
18	Air Qual. Planning/Conformity Anal.	0	0	0	0	0	0	0	0	0	0	0	0
II C	<b>Short Range Transit Planning</b>												
II C 1	Short Range Transit Planning	0	0	0	0	0	0	0	0	0	0	0	0
III-A	<b>Planning Work Program</b>	0	0	0	0	0	0	0	0	0	0	0	0

<b>III-B</b>	<b>Transp. Improvement Plan</b>	0	0	0	0	0	0	0	0	0	0	0	0
<b>III-C</b>	<b>Cvl Rgts. Cmp./Otr .Reg. Reqs.</b>												
1	3 Title VI	0	0	0	0	0	0	0	0	0	0	0	0
2	Environmental Justice	0	0	0	0	0	0	0	0	0	0	0	0
3	Minority Business Enterprise	0	0	0	0	0	0	0	0	0	0	0	0
4	Planning for the Elderly & Disabled	0	0	0	0	0	0	0	0	0	0	0	0
5	Safety/Drug Control Planning	0	0	0	0	0	0	0	0	0	0	0	0
6	Public Involvement	0	0	0	0	0	0	0	0	0	0	0	0
7	Private Sector Participation	0	0	0	0	0	0	0	0	0	0	0	0
<b>III-D</b>	<b>Incidental Plng./Project Dev.</b>												
1	Transportation Enhancement Plng.	0	0	0	0	0	0	0	0	0	0	0	0
2	Enviro. Analysis & Pre-TIP Plng.	0	0	0	0	0	0	0	0	0	0	0	0
3	Special Studies	10,000	40,000	0	0	10,000	40,000	0	0	0	0	0	0
4	Regional or Statewide Planning	0	0	0	0	0	0	0	0	0	0	0	0
<b>III-E</b>	<b>Management &amp; Operations</b>												
1	Management & Operations	0	0	0	0	0	0	0	0	0	0	0	0
Totals		\$41,250	\$165,000	\$0	\$0	\$41,250	\$165,000	\$0	\$0	\$0	\$0	\$0	\$0

**FY 2007  
UNIFIED PLANNING WORK PROGRAM (UPWP)**

TCC 4/26/06 Attachment 5A

**Table 5. ANTICIPATED DBE CONTRACTING OPPORTUNITIES FOR FY06-07**

Section 5307

Name of MPO: Durham Chapel Hill Carborro

Person Completing Form: Barbara Weigel

Telephone No: 919-485-7509

Prospectus Task Code	Prospectus Description	Name of Agency Contracting Out	Type of Contracting Opportunity (Consultant, Printing, etc.)	Federal Funds to be Contracted Out	Total Funds to be Contracted Out
Task II B 4	Travel Surveys	TTA	Consultant	\$42,421	\$53,025



Triangle J Council of Governments (TJCOG)  
Task Funding Table  
Task Description and Narrative  
Consulting Services Breakdown

Triangle J COG <span style="margin-left: 200px;">Durham-Chapel Hill-Carrboro Urban Area</span> <span style="float: right;">TJCOG</span> <span style="margin-left: 200px;">FY 2006-2007 Unified Planning Work Program</span> <span style="float: right;">4/20/2006 10:53</span> <span style="margin-left: 200px;">Proposed Funding Source Tables</span>																		
	Task Description	STP-DA 133(b)(3)(7)		Sec. 104(f) PL		Section 5303 Highway/Transit			Section 5307 Transit			Section 5309 Transit			Task Funding Summary			
		Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 10%	NCDOT 10%	FTA 80%	Local 10%	NCDOT 10%	FTA 80%	Local 25%	NCDOT 25%	FTA 50%	Local	NCDOT	Federal	Total
II A	<b>Surveillance of Change</b>																	
II A	1 Traffic Volume Counts																	
	2 Vehicle Miles of Travel																	
	3 Street System Changes																	
	4 Traffic Accidents																	
	5 Transit System Data								0	0								
	6 Dwelling Unit, Pop. & Emp. Change																	
	7 Air Travel																	
	8 Vehicle Occupancy Rates																	
	9 Travel Time Studies																	
	10 Mapping																	
	11 Central Area Parking Inventory																	
	12 Bike & Ped. Facilities Inventory																	
	13 Bike & Ped. Counts																	
II B	<b>Long Range Transp. Plan</b>																	
B	1 Collection of Base Year Data																	
	2 Collection of Network Data																	
	3 Travel Model Updates																	
	4 Travel Surveys	0	0	0	0													
	5 Forecast of Data to Horizon year	0	0	2,881	11,522										2,881	-	11,522	14,403
	6 Community Goals & Objectives																	
	7 Forecast of Future Travel Patterns																	
	8 Capacity Deficiency Analysis																	
	9 Highway Element of th LRTP																	
	10 Transit Element of the LRTP			9,250	37,000										9,250	-	37,000	46,250
	11 Bicycle & Ped. Element of the LRTP	0	0	0	0													
	12 Airport/Air Travel Element of LRTP																	
	13 Collector Street Element of LRTP			0	0													
	14 Rail, Water or other mode of LRTP																	
	15 Freight Movement/Mobility Planning																	
	16 Financial Planning																	
	17 Congestion Management Strategies																	
	18 Air Qual. Planning/Conformity Anal.	0	0	602	2,408										602	-	2,408	3,010
II C	<b>Short Range Transit Planning</b>																	
	1 Short Range Transit Planning																	
III-A	<b>Planning Work Program</b>																	
III-B	<b>Transp. Improvement Plan</b>																	
III-C	<b>Cvl Rgts. Cmp./Otr .Reg. Reqs.</b>																	
	1 Title VI																	
	2 Environmental Justice																	
	3 Minority Business Enterprise																	

Triangle J COG		Durham-Chapel Hill-Carrboro Urban Area FY 2006-2007 Unified Planning Work Program Proposed Funding Source Tables														TJCOG 4/20/2006 10:53			
		STP-DA		Sec. 104(f)		Section 5303			Section 5307			Section 5309			Task Funding Summary				
		133(b)(3)(7)		PL		Highway/Transit			Transit			Transit			Local	NCDOT	Federal	Total	
		Local 20%	FHWA 80%	Local 20%	FHWA 80%	Local 10%	NCDOT 10%	FTA 80%	Local 10%	NCDOT 10%	FTA 80%	Local 25%	NCDOT 25%	FTA 50%					
4	Planning for the Elderly & Disabled														-	-	-	-	
5	Safety/Drug Control Planning														-	-	-	-	
6	Public Involvement														-	-	-	-	
7	Private Sector Participation														-	-	-	-	
<b>III-D Incidental Png./Project Dev.</b>															-	-	-	-	
1	Transportation Enhancement Png.														-	-	-	-	
2	Enviro. Analysis & Pre-TIP Png.														-	-	-	-	
3	Special Studies	0	0	0	0				0	0	0	0	0	0	-	-	-	-	
4	Regional or Statewide Planning	0	0	0	0										-	-	-	-	
<b>III-E Management &amp; Operations</b>																			
1	Management & Operations	0	0															-	
Totals		\$0	\$0	\$12,733	\$50,930	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$12,733	\$0	\$50,930	\$63,663	

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

TJCOG will work with DCHC MPO, CAMPO and RPOs in the Triangle Ozone Non-Attainment area on future year forecasts to be used in regional transportation modeling.

**Objectives:**

1. To prepare consistent, documented future year forecasts methods and data.
2. To provide information and support on data sources and guidance totals related to regional population, dwelling unit and employment totals.

**Previous Work:**

1. Preliminary planning and meetings with planners have occurred during the current fiscal year on methods to be used

**Proposed Activities:**

1. Work with planners on a methodology, timeline and responsibilities for developing forecasts.
2. Collect and disseminate information on data sources, assumptions and guidance totals for population, dwelling unit and employment forecasting.
3. Develop GIS layers and attributes related to the forecasting effort.
4. Prepare memos and reports documenting activities.
5. Work with individual MPO members as needed on forecasting tasks.

**Products:**

1. Memos and reports related to preparation of future year forecasts.
2. GIS layers and related attributes associated with forecasts.
3. Clear documentation of all methods, assumptions and data.

**Relationship to Other Plans and MPO Activities:**

Future year forecasts will be important components of air quality conformity analyses.

**Completion Date:**

This phase of work will be completed during the FY06-07 fiscal year.

**Proposed Budget and Level of Effort (Staff or Consulting):**

Tasks will be undertaken by existing TJCOG staff.

**Funding Commitments from Other Entities:**

This is a cooperative project with CAMPO, which is also providing funding. TARPO funding for TJCOG staff time is also allocated to this task.

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

TJCOG will work with DCHC MPO, CAMPO and RPOs in the Triangle Ozone Non-Attainment area on air quality issues related to the 2007-13 TIP, SIP motor vehicle emission budgets, and conformity issues affecting the next round of LRTPs.

**Objectives:**

1. To prepare a unified conformity report for the 2007-13 TIP.
2. To provide information and support on conformity issues and SIP motor vehicle emission budgets.

**Previous Work:**

1. Unified conformity reports for the entire Non-attainment area covering all or portions of 3 MPOs and 3 RPOs were prepared for the 2030 LRTPs and the 2006-12 TIP.
2. Information was provided to all partners on the development of SIP motor vehicle emission budgets.
3. The triangleair.org website was created as a vehicle to share information.

**Proposed Activities:**

1. Work with partners on developing unified conformity report for 2007-13 TIPs.
2. Collect and disseminate information on conformity issues and ensure that conformity concerns are represented in transportation planning and modeling efforts.
3. Prepare memos and reports documenting activities.
4. Work with individual MPO members as needed on air quality issues.

**Products:**

1. Memos and reports related to conformity and motor vehicle emission budget issues.
2. A unified report for 2007-13 TIP.
3. Clear documentation of all methods, assumptions and data.

**Relationship to Other Plans and MPO Activities:**

Air quality conformity is a requirement for TIPs and LRTPs

**Completion Date:**

This phase of work will be completed during the FY06-07 fiscal year.

**Proposed Budget and Level of Effort (Staff or Consulting):**

Tasks will be undertaken by existing TJCOG staff.

**Funding Commitments from Other Entities:**

This is a cooperative project with CAMPO, which is also providing funding. TARPO funding for TJCOG staff time is also allocated to this task.

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

TJCOG will work with DCHC MPO, CAMPO, TTA, NCDOT and other partners to develop a Regional Transit Blueprint for the Triangle that describes future transit corridors and any major planned or potential transit infrastructure investments in the corridors.

**Objectives:**

The objectives are to provide decision-makers and the public with information to understand transit corridors and investments and set realistic priorities among them:

1. show the location of transit corridors and type of major planned and proposed transit investments, including assumed alignment, technology, stations and service characteristics for analysis purposes
2. clearly articulate the mobility and community development purposes that transit investments in each corridor could serve (purpose and need of transit investments in each corridor)
3. track the status of transit investments in the planning and funding process
4. show how current and projected land use relates to transit infrastructure investments in corridors
5. provide clear, transparent, consistent information related to the cost of investments, the components of these costs, and the assumptions used in developing the costs
6. analyze travel results in the transit corridors (trip types, origins and destinations, characteristics, etc.; facilities can be modeled if specific investment scenarios are developed)
7. document how travel results and infrastructure costs relate to eligibility for specific funding sources, particularly federal “new starts” or “small starts” funding, and what can be paid for with current revenue streams vs. what would require new or increased revenues.

**Previous Work:**

1. This project will build on past LRTPs, transit elements of CTPs, project-specific studies, and individual community plans.

**Proposed Activities:**

1. Project Coordination and Documentation (TJCOG coordinate)
  - Establish technical team and advisory team – technical team consists of people who will be responsible for specific tasks or inputs; advisory team includes staff from participating agencies and their member communities
  - Arrange meetings of teams
  - Establish geographic extent of the project (e.g. area currently covered by 2 MPOs plus authorized TTA service area)
  - Document all activities and decisions
  - Prepare any interim and final reports
  - Coordinate with GIS/web staff/printers
  - Meet with/give updates to partner and community boards and committees

## 2. Corridor and Infrastructure Descriptions (TJCOG coordinate)

- Work with advisory team to define major transit corridors and infrastructure projects based on technological and service characteristics and phase based on different status of timing, funding, or planning stage.
- Identify projects meeting the characteristics and define project phases
- Create and continually update master spreadsheet of major transit infrastructure, including (where known):
  - a. Location/alignment
  - b. Technology/type of service (e.g. commuter rail, regional rail, LRT, BRT, Enhanced Bus)
  - c. Planning Status (e.g. CTP, LRTP, TIP, Corridor Study, Sketch Plan, Concept)
  - d. Cost (see #5 below)
- Map all corridors and major transit infrastructure at large format size and 11x17 size over most recent aerial photography, showing:
  - a. Corridor width
  - b. ROW (where known or assumed)
  - c. Station locations (where known or assumed)
  - d. Structures (where known or assumed)
- Summarize all transit services that don't meet the criteria for major transit infrastructure, including local bus, express bus, feeder services, ADA services, community rural and human service agency transportation
- Establish criteria for a "bus baseline" scenario to apply to corridors, if appropriate

## 3. Corridor Land Use Descriptions (TJCOG coordinate)

- Develop brief overview document summarizing growth and development and travel characteristics in the region today and into the future, and how they relate to corridors
- Work with advisory team to define corridors of interest based on distance from infrastructure or other criteria
- Map parcel level land use based on the land use codes to be used in the SE data forecasts
- Based on local plans and TTA's station development guidelines and corridor market study, highlight areas already planned for transit-supportive development and additional areas that could be transit supportive based on clear criteria
- Create and apply development "templates" based on familiar developments within the region and potential future types of development from similar regions

## 4. Travel Analysis (TTA coordinate)

- Develop brief overview document summarizing the nature of travel and how analysis techniques handle travel
- Apply a "bus baseline" methodology for each corridor based on factors similar to what is used in new starts planning

- Use the Triangle Regional Model to analyze travel in the corridors (either generation/distribution only, or full model runs for scenarios)
5. Cost Analysis (TTA coordinate)
    - Develop unit costs for all the components for all types of infrastructure investments based on local and national experience, including line segments, structures, vehicles, station/stop facilities, etc. Use FTA-endorsed methods (e.g. Booz-Allen-Hamilton cost model)
    - Develop and apply a methodology for ROW acquisition cost estimates based on available information in each infrastructure investment corridor
    - Clearly document the reference sources, assumptions, and methodologies used in developing cost estimates, including the step-by-step application of methodologies for each infrastructure project and phase.
    - Develop and document a methodology for stating costs in both constant dollar and inflated (year-of-expenditure) dollar terms
    - Develop and document a methodology for comparing pay-as-you go financing with bond/borrowing financing
  6. Corridor GIS mapping/Website (TJCOG coordinate)
    - Undertake GIS mapping for tasks described previously
    - create project web site and post all information
    - explore options for creating a scenario builder on web site
  7. Final Report and Maps Printing (TJCOG coordinate)
    - Format final report and maps, get quotes from printers, supply printed copies to funding partners and advisory team members, create pdfs of all documents and maps and post to website.

**Products:**

1. Reports and maps related to each of the major work tasks.
2. A transit infrastructure investment cost estimation tool.
3. GIS layers and related attributes associated with the project.
4. A project web page.
5. Clear documentation of all methods, assumptions and data.

**Relationship to Other Plans and MPO Activities:**

Many of the activities can provide valuable information for (and could constitute initial steps of) the next round of Long Range Transportation Plan (LRTPs), lowering the eventual cost and/or improving the quality of the work undertaken in preparing the LRTPs:

- the corridor and infrastructure descriptions will provide a universe of potential transit projects for consideration in the LRTP
- the corridor land use descriptions will provide valuable information on land use and socioeconomic conditions and trends in the transit corridors

- the travel analysis will provide an early overview of travel patterns for consideration in developing LRTP alternatives
- the cost analysis (level of detail still to be scoped) will provide consistent and transparent information for LRTP fiscal constraint considerations

**Completion Date:**

This phase of work is expected to be completed during the FY06-07 fiscal year.

**Proposed Budget and Level of Effort (Staff or Consulting):**

Tasks will be undertaken by existing TJCOG and TTA staff; limited intern or contract support within the existing budget may be engaged for specialized expertise.

**Funding Commitments from Other Entities:**

This is a cooperative project with CAMPO, NCDOT and TTA, all of which are also providing funding and staff support.

Durham-Chapel Hill-Carrboro Urban Area FY 2006-2007 Unified Planning Work Program Consulting Services Breakdown													
TJCOG													
	Task Description	STP-DA 133(b)(3)(7)						Section 104(f) - PL					
		Staff		Consulting		Total STP-DA		Staff		Consulting		Total PL	
		Local	FHWA	Local	FHWA	Local	FHWA	Local	FHWA	Local	FHWA	Local	FHWA
		20%	80%	20%	80%	20%	80%	20%	80%	20%	80%	20%	80%
II A	<u>Surveillance of Change</u>												
II A	1 Traffic Volume Counts	0	0	0	0	0	0	0	0	0	0	0	0
	2 Vehicle Miles of Travel	0	0	0	0	0	0	0	0	0	0	0	0
	3 Street System Changes	0	0	0	0	0	0	0	0	0	0	0	0
	4 Traffic Accidents	0	0	0	0	0	0	0	0	0	0	0	0
	5 Transit System Data	0	0	0	0	0	0	0	0	0	0	0	0
	6 Dwelling Unit, Pop. & Emp. Change	0	0	0	0	0	0	0	0	0	0	0	0
	7 Air Travel	0	0	0	0	0	0	0	0	0	0	0	0
	8 Vehicle Occupancy Rates	0	0	0	0	0	0	0	0	0	0	0	0
	9 Travel Time Studies	0	0	0	0	0	0	0	0	0	0	0	0
	10 Mapping	0	0	0	0	0	0	0	0	0	0	0	0
	11 Central Area Parking Inventory	0	0	0	0	0	0	0	0	0	0	0	0
	12 Bike & Ped. Facilities Inventory	0	0	0	0	0	0	0	0	0	0	0	0
	13 Bike & Ped. Counts	0	0	0	0	0	0	0	0	0	0	0	0
II B	<u>Long Range Transp. Plan</u>												
II B	1 Collection of Base Year Data	0	0	0	0	0	0	0	0	0	0	0	0
	2 Collection of Network Data	0	0	0	0	0	0	0	0	0	0	0	0
	3 Travel Model Updates	0	0	0	0	0	0	0	0	0	0	0	0
	4 Travel Surveys	0	0	0	0	0	0	0	0	0	0	0	0
	5 Forecast of Data to Horizon year	0	0	0	0	0	0	2,881	11,522	0	0	2,881	11,522
	6 Community Goals & Objectives	0	0	0	0	0	0	0	0	0	0	0	0
	7 Forecast of Future Travel Patterns	0	0	0	0	0	0	0	0	0	0	0	0
	8 Capacity Deficiency Analysis	0	0	0	0	0	0	0	0	0	0	0	0
	9 Highway Element of th LRTP	0	0	0	0	0	0	0	0	0	0	0	0
	10 Transit Element of the LRTP	0	0	0	0	0	0	9,250	37,000	0	0	9,250	37,000
	11 Bicycle & Ped. Element of the LRTP	0	0	0	0	0	0	0	0	0	0	0	0
	12 Airport/Air Travel Element of LRTP	0	0	0	0	0	0	0	0	0	0	0	0
	13 Collector Street Element of LRTP	0	0	0	0	0	0	0	0	0	0	0	0
	14 Rail, Water or other mode of LRTP	0	0	0	0	0	0	0	0	0	0	0	0
	15 Freight Movement/Mobility Planning	0	0	0	0	0	0	0	0	0	0	0	0
	16 Financial Planning	0	0	0	0	0	0	0	0	0	0	0	0
	17 Congestion Management Strategies	0	0	0	0	0	0	0	0	0	0	0	0
	18 Air Qual. Planning/Conformity Anal.	0	0	0	0	0	0	602	2,408	0	0	602	2,408
II C	<u>Short Range Transit Planning</u>												
II C	1 Short Range Transit Planning	0	0	0	0	0	0	0	0	0	0	0	0
III-A	<u>Planning Work Program</u>	0	0	0	0	0	0	0	0	0	0	0	0

Durham-Chapel Hill-Carrboro Urban Area FY 2006-2007 Unified Planning Work Program Consulting Services Breakdown													
TJCOG													
	Task Description	STP-DA 133(b)(3)(7)						Section 104(f) - PL					
		Staff		Consulting		Total STP-DA		Staff		Consulting		Total PL	
		Local	FHWA	Local	FHWA	Local	FHWA	Local	FHWA	Local	FHWA	Local	FHWA
		20%	80%	20%	80%	20%	80%	20%	80%	20%	80%	20%	80%
III-B	Transp. Improvement Plan	0	0	0	0	0	0	0	0	0	0	0	0
III-C	Cvl Rgts. Cmp./Otr .Reg. Reqs.												
1	3 Title VI	0	0	0	0	0	0	0	0	0	0	0	0
2	Environmental Justice	0	0	0	0	0	0	0	0	0	0	0	0
3	Minority Business Enterprise	0	0	0	0	0	0	0	0	0	0	0	0
4	Planning for the Elderly & Disabled	0	0	0	0	0	0	0	0	0	0	0	0
5	Safety/Drug Control Planning	0	0	0	0	0	0	0	0	0	0	0	0
6	Public Involvement	0	0	0	0	0	0	0	0	0	0	0	0
7	Private Sector Participation	0	0	0	0	0	0	0	0	0	0	0	0
III-D	Incidental Png./Project Dev.												
1	Transportation Enhancement Png.	0	0	0	0	0	0	0	0	0	0	0	0
2	Enviro. Analysis & Pre-TIP Png.	0	0	0	0	0	0	0	0	0	0	0	0
3	Special Studies	10,000	40,000	0	0	10,000	40,000	0	0	0	0	0	0
4	Regional or Statewide Planning	0	0	0	0	0	0	0	0	0	0	0	0
III-EE	Management & Operations												
1	Management & Operations	0	0	0	0	0	0	0	0	0	0	0	0
Totals		\$10,000	\$40,000	\$0	\$0	\$10,000	\$40,000	\$12,733	\$50,930	\$0	\$0	\$12,733	\$50,930

## MEMORANDUM

**TO:** Transportation Coordinating Committee (TCC)  
DCHC MPO

**FROM:** DCHC Lead Planning Agency Staff

**DATE:** April 26, 2006

**RE:** US 15-501 Transit Corridor – Memorandum of Agreement (MOA)

---

### Background

The Transportation Advisory Committee (TAC) of the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (DCHC MPO) adopted a modified alignment for the US 15-501 Transit Corridor at its September 14, 2005 meeting, and requested that a letter be sent to the four affected jurisdictions to make formal notification of the adopted alignment modification and to advise that a Memorandum of Agreement (MOA) will soon follow. The TAC approved a proposed MOA to be considered by Chapel Hill, Durham County, Durham City and the Triangle Transit Authority (TTA), at its October 12, 2005 meeting. In summary, the MOA states that each signatory shall include modified alignments in transportation plans and adopt supportive land uses along the corridor and at proposed transit stations. In addition, the parties agree to defer development decisions requiring a change in the transit corridor alignment until the TAC has had an opportunity to review and comment on analysis associated with the proposed alignment change. The Durham County Board of County Commissioners approved the MOA at its December 12, 2005 meeting, but the MOA has not moved forward in the other jurisdictions. In its consideration of the MOA, the City of Durham identified several issues that needed to be resolved before it can act on the MOA.

In its consideration of the MOA, the City of Durham identified several issues that needed to be resolved and these issues were presented to the TAC at their April 12, 2006 meeting.

### TAC Request

The TAC made two requests after discussing the MOA. The TAC requested that the TCC modify the MOA to resolve any jurisdictional issues and present a recommended MOA to the TAC. In addition, the TAC was uncertain whether the MOA, which the TAC approved on October 12, 2005, officially changes the corridor in the MPO's long-range transportation plan. Three different perspectives were presented to the TAC:

- 1) The Memorandum of Understanding (MOU) that establishes the DCHC MPO and the TAC, which was signed by the member jurisdictions and agencies, grants the authority to the TAC for approving transportation plans. And, in many cases,

local comprehensive plans reference, and grant authority to, the DCHC MPO Long Range Transportation Plan (LRTP). As such, local ratification is not necessary. The TAC approval of the MOA on October 12, 2005 officially modified the US 15-501 Transit Corridor in the long-range transportation plan.

- 2) The project corridors in the LRTP are generalized alignments that basically identify a general type of transportation service or facility that is to run between Point A and Point B. As the feasibility and environmental studies for those projects are completed, it is expected that the corridors will become more refined. The TAC approval of the MOA does modify the corridor in the LRTP, but instead provides an expected corridor refinement that directs future actions related to the Transit Corridor such as the reservation and dedication of right-of-way and ridership estimates.
- 3) The TAC is required to follow a specific process and take a specific action to change the US 15-501 Transit Corridor in the LRTP. The Major Investment Study (MIS) that established the Transit Corridor in the LRTP was already a refined alignment. Any changes to this refined alignment require a specific process and action.

### **Attachments**

Attachment 6A briefly describes the issues that need to be resolved for adopting the MOA among all the jurisdictions, and, provides some general suggestions for changing the current language. The TAC received this same information as a memorandum for their April 12, 2006 meeting.

Attachment 6B is a modified copy of the MOA showing suggested changes.

### **TCC Action**

The TCC needs to: 1) Review and discuss the MOA, recommend changes, and forward those recommendations to the TAC; and, 2) Establish the status of US 15-501 Transit Corridor changes and report this to the TAC.

## **US 15-501 Memorandum of Agreement (MOA) Issues and Proposed Changes**

### **Background**

The TAC approved a proposed Memorandum of Agreement for the US 15-501 Transit Corridor to be considered by Chapel Hill, Durham County, Durham City and the Triangle Transit Authority (TTA), at its October 12, 2005 meeting. The City of Durham identified several issues that needed to be resolved before it can act on the MOA.

### **Purpose of this Memorandum**

The purpose of this document is to:

- Briefly describe the issues raised by the City of Durham concerning the Memorandum of Agreement for the US 15-501 Transit Corridor:
- Suggests changes to the MOA.

The contents of this document are the same as those presented in a memorandum to the TAC for their April 12, 2006 meeting.

### **Local Approval Not Required**

#### Issue

Part A (“Modify Corridor Alignment”) and Part B (“Include Modified Alignment in Transportation Plans”) of the MOA state that the parties will adopt the modifications to the corridor that have already been approved by the TAC. However, there is no need for local governments to take an additional “ratifying” step. The original Memorandum of Understanding (MOU), processed in 1994, that established the DCHC MPO provides clear authority to the TAC to make the final decisions regarding the Comprehensive Transportation Plan. Thus, the original MOU does not anticipate that local governments will each make additional “ratifying” decisions regarding every change to an adopted plan. This adoption process is the responsibility of the MPO.

#### Suggested Changes

Part A and Part B should be eliminated since they are not needed to adopt the modified US 15-501 Transit Corridor. In addition, in order to make that authority, originally established in the 1994 Agreement, clearer, it is suggested that certain “Whereas” clauses be modified to refer to the MPO’s authority to adopt plans,

## **Binding Future Legislative Discretion**

### Issue

In Part C, the MOA seeks to bind the local jurisdictions to several development review actions that would support transit development in the US 15-501 Transit Corridor. These actions include: seeking right-of-way dedication, rather than reservation, to preserve the corridor; and, maximizing high density, mixed use, and transit supportive design near the transit stations. This type of contractual arrangement would impermissibly and illegally bind the future legislative discretion of the local elected bodies. Long-standing precedent clearly establishes that local governing bodies, such as a town or city council, cannot have their ability to legislate, i.e., to pass ordinances and to take other similar actions, constrained by contract. Contracts can create conditions that will make it in the elected body's best interest to legislate in a particular way, or require that the elected body consider certain ordinance changes. However, a contract can't compel the Council to pass or deny a proposed development action.

### Suggested Changes

The MOA can request local jurisdictions to get right-of-way dedication and transit supportive uses and designs to the extent possible when consistent with applicable ordinances of each jurisdictions and constitutional constraints. In a further step, the MOA could request that local jurisdictions change local ordinances to maximize opportunities for transit supportive uses and designs.

To the extent possible, the plans and practices of the City of Durham and Durham County have supported transit development with respect to right-of-way and transit supportive uses. Since the adoption of the US 15-501 Transit Corridor, the City and County have either dedicated or reserved right-of-way in development proposals that involved transit corridor tracts. The "Durham Comprehensive Plan," adopted February 28, 2005, has designated higher density residential and commercial future land uses around all the proposed transit stations on the US 15-501 Transit Corridor.

## **MPO Determine and Conduct Studies**

### Issue

In Part D, the MOA seeks to require that any development application proposing a shift in the US 15-501 Transit Corridor alignment or designated station locations include an analysis that meets or exceeds a certain standard. In addition, the MOA requires that analysis be promptly supplied to the DCHC MPO technical staff and that staff be consulted on the analysis.

An initial problem with this requirement is that the MOA does not provide the needed level of specificity regarding what is considered a major shift so as to impose the new required study from developers. A process for determining what is a major corridor shift needs to be determined.

An additional problem is that a requirement that developers do additional studies in certain circumstances needs to be imposed through ordinance, and cannot be “indirectly” imposed through a Memorandum of Agreement. To compare this potential new requirement to something that already exists in Durham, the proposed requirement is similar to that of a transportation impact analysis (TIA), which existed in Durham’s previous zoning ordinance and was carried forward and strengthened in the new Unified Development Ordinance (UDO). Similar ordinance requirements would be necessary to require developers to undertake the studies described in the MOA.

#### Suggested Changes

Given the importance of conducting an analysis study to ascertain the impacts of moving the transit corridor, the MPO should formalize this process through the MOA or an MPO-adopted policy. One option to consider is to identify professional staff, e.g., MPO and local government, who will determine – 1) if a shift is major, and therefore requires a study, and 2) identify a study depth that is commensurate with the impact of the proposed shift. This determination could be based on a defined process that considers the following factors: Cost; Environmental; Community; Land Use Plans; Transportation Plans; Ridership; and, Operations. In addition, the determination might require TAC approval.

### **Local Governments Consider Ordinance Change to Defer Development Decisions**

#### Issue

In Part E, the MOA seeks to defer local approval of zoning, site plan and other development cases until the TAC has had adequate time to review and comment on the studies and analysis described in the previous section. Again, as described in the previous section, these types of delays must be written into the development regulations of the participating jurisdictions. They cannot be imposed through an interlocal agreement.

#### Suggested Changes

It is important that major changes to the US 15-501 Transit Corridor occur with the appropriate impact analysis and input from the TAC. Therefore, one option is for the MOA to provide that each jurisdiction consider ordinance amendments that: 1) require notification to the MPO staff regarding all proposed development actions that impact any roadway or transit corridor in the MPO’s long-range plans; 2) allow the MPO to determine if the proposed corridor change (including station changes) is major and therefore requires a defined deferral and further study; 3) provide adequate time within the development review process for a study to be completed and presented; and, 4) if desired, require that the developer fund the study.

The ordinance could defer to the identified professional staff to determine if a proposed corridor change (including station changes) is major and therefore requires a defined study. Meanwhile, the same professional staff will work with the MPO to define the depth of the required analysis study and ensure that the

study results are available for TAC review to afford adequate time to report to the relevant local jurisdiction.

Besides the US 15-501 Transit Corridor, there are likely other situations in which the public interest would be served if proposed roadway and transit corridor changes were appropriately deferred to permit the TAC adequate review and input. Therefore, the MOA should request that any ordinance changes that are presented to the various governing bodies not only address the US 15-501 Transit Corridor specifically, but also provide broader, more general language to permit an appropriate deferral and review process for any proposed changes to the roadway and transit corridors included in the DCHC MPO's long-range transportation plan and Comprehensive Transportation Plan.

**MEMORANDUM OF AGREEMENT**

~~NORTH CAROLINA~~

~~DURHAM-CHAPEL HILL-CARRBORO  
METROPOLITAN PLANNING ORGANIZATION~~

Regarding

THE US 15-501 TRANSIT CORRIDOR

~~Between~~Among

TOWN OF CHAPEL HILL, CITY OF DURHAM, COUNTY OF DURHAM,  
~~TRIANGLE TRANSIT AUTHORITY,~~ AND THE DURHAM-CHAPEL HILL-  
CARRBORO METROPOLITAN PLANNING ORGANIZATION

~~October 12, 2005~~

WHEREAS, the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (DCHC MPO) was created in 1994 through a Memorandum of Understanding signed by the Town of Chapel Hill, the City of Durham, the County of Durham (herein, the "local government parties"), other member governments in the region, and the State of North Carolina, through the Governor and Department of Transportation;

WHEREAS, the DCHC MPO, under the authority of federal and state law, and the 1994 Memorandum of Understanding, is recognized as the body is actively involved in, and responsible for, coordinating the transportation planning ~~process~~ in the Planning Area defined by the Metropolitan Area Boundary (MAB) of the Durham-Chapel Hill-Carrboro Urban Area Metropolitan Planning Organization and the North Carolina Department of Transportation (NCDOT), and the MAB; which includes all of Durham County and portions of Orange County and Chatham County; and

WHEREAS, the Transportation Advisory Committee ("TAC"), created by the 1994 Memorandum of Understanding, is the duly recognized transportation decision-making body of the DCHC MPO, as required by 23 CFR Part 134; and

WHEREAS, the ~~Transportation Advisory Committee~~TAC consists of elected officials of member governments in the DCHC Planning Area, including the local government parties, and a representative of the North Carolina Board of Transportation; and

WHEREAS, the TAC has the authority to adopt a Comprehensive Transportation Plan under the authority of federal and state law, and the above Memorandum of Understanding; and

WHEREAS, the Memorandum of Understanding ~~(dated September 10, 1993), which established the DCHC MPO and is signed by the participating local governments,~~ states that:

- “Transportation policy decisions within the Planning Area are the shared responsibility of the Transportation Advisory Committee... and participating governments.”
- “The continuing transportation planning process will be a cooperative one, and all planning discussions will be reflective and responsive to... the comprehensive plans for growth and development of the Municipalities of Durham, Chapel Hill, Carrboro, and Hillsborough; and the Counties of Durham, Orange, and Chatham.”
- “The subscribing local governments shall coordinate zoning and subdivision approvals within its jurisdiction in accordance with the adopted Comprehensive Transportation Plan and mutually adopted Thoroughfare Plan.”

and

WHEREAS, ~~the US 15-501 Transit Corridor Plan is part of the DCHC MPO has adopted a Comprehensive Transportation Plan, called the Long Range Transportation Plan (LRTP), and, in addition, has adopted as part of that plan the US 15-501 Transit Corridor Plan; of the DCHC MPO, or Comprehensive Transportation Plan,~~ and

WHEREAS, the following studies have established and directly addressed the status of the US 15-501 Transit Corridor:

1. The “US 15-501 Major Investment Study, Phase I Report (Draft),” prepared by HNTB North Carolina, P.C., was completed on August 6, 1998;
2. The “US 15-501 Major Investment Study, Phase II Report,” prepared by HNTB North Carolina, P.C., was completed in December 2001;
3. In 2003, concerned that the right-of-way preservation and land use occurring in the US 15-501 transit corridor might be detrimental to future transit development, the DCHC MPO requested that the Triangle Transit Authority (TTA) conduct a follow-up~~on~~ study of the status of the corridor and make recommendations, as appropriate;

4. This follow-up study made the following recommendations to the DCHC MPO for preserving right-of-way and land use in the US 15-501 transit corridor:

- Evaluate alternatives and choose a preferred alignment through Southwest Durham;
- Local and regional authorities adopt the alignment;
- Analyze land use in and near the transit corridor;
- Require cost, community/environmental, ridership and operational analysis of any future alignment changes; and,
- Request that the Triangle Transit Authority (TTA) facilitate a strategy for transit service implementation in the corridor consistent with the memorandum of agreement between the TTA and DCHC MPO;

WHEREAS, the “US 15-501 Major Investment Study (MIS)” established an alignment for the transit corridor, called the 15-501 Corridor Alignment, and that alignment was approved by the TAC and is a part of the DCHC MPO’s adopted Comprehensive Transportation Plan; in addition, the 15-501 Corridor Alignment was approved by the affected local governments, notwithstanding that legally, under the Memorandum of Understanding creating the DCHC MPO, it did not have to be so approved; and

WHEREAS, and since the initial establishment of the 15-501 Corridor Alignment, at time, three modifications have been made to, or recommended for, the 15-501 Corridor Alignment by action of one or more of the local government parties and/or the TAC, which including the following modifications that are depicted on the attached map:

1. The modified alignment near the former South Square Mall in the City of Durham;
2. A possible alternative modified alignment near Glenwood Elementary School in Chapel Hill; and,
3. A modified alignment The preferred alignment through Southwest Durham, moving the alignment away from Creekside Elementary School in the County of Durham, and closer to I-40, as recommended by the US 15-501 Corridor Alignment Analysis, and adopted by the TAC.DCHC MPO.

WHEREAS, actions taken on the 15-501 Corridor Alignment have created confusion regarding the following issues: what changes to the 15-501 Corridor Alignment are significant; what input the local government parties and TAC should have regarding changes to the Corridor Alignment; and what analysis, if any, should occur prior to certain changes in alignment being

considered;

WHEREAS, it is important for the local government parties affected by the 15-501 Corridor Alignment to establish clearer understandings and procedures regarding the above issues, and to affirm their general support for using land use policies and regulations within their jurisdictions in support of the adopted Comprehensive Transportation Plan, including the 15-501 Corridor Alignment ;

NOW THEREFORE, in consideration of the above premises and the common objective of planning for and implementing a high quality transit corridor between the City of Durham and Town of Chapel Hill, the parties hereto ~~desire to cooperate and mutually~~ agree to the following: ~~terms:~~

**A. Changes to Modify Corridor Alignment; Definition of “Major Change”**

The parties to this Agreement (“the parties”), which are the including the DCHC MPO (through the TAC), the Town of Chapel Hill, the City of Durham, and the County of Durham Triangle Transit Authority (TTA) and participating local governments, will recognize that under the authority of the 1994 Memorandum of Understanding, the DCHC MPO, through its official body, the TAC, has been delegated the authority to make decisions regarding the adopted Comprehensive Transportation Plan, and that the Comprehensive Transportation Plan includes the 15-501 Corridor Alignment. The parties hereby agree that the modify the transit corridor alignment in the “US 15-501 Major Investment Study (MIS)” to include the three modifications identified above are appropriate modifications to the 15-501 Corridor Alignment and the Comprehensive Transportation Plan, without further separate action by the TAC. The parties’ ratification of these changes shall not be interpreted to require that in the future, individual local government parties, through individual actions or memoranda of understanding, must approve changes to the 15-501 Corridor Alignment outside their land use jurisdiction. In addition, the parties’ ratification shall not be interpreted as an understanding that the three described changes are “major changes” as further defined in this Agreement.

In the future, a “major change” to the 15-501 Corridor Alignment shall be described as a change that ~~XXXXXXXXXXXXXXXXXXXXXXXXXXXXX (needs definition by TCC or by TAC staff. This definition should also address whether the station locations are considered as set in stone as the corridor location. Note that I took out the reference to the station locations in part D below, with the assumption that the degree of their protection would be defined in the concept of “major change.”)~~ Such major changes shall be brought to the TAC for consideration and action in order to be adopted as an approved change to the 15-501 Corridor Alignment by the DCHC MPO, and included as an adopted part of the Comprehensive Transportation Plan.

**B. Include Modified Alignments in Transportation Plans**

The parties agree that three changes described above and future changes to the 15-501 Corridor Alignment approved by the TAC shall be reflected in to this Agreement, including the DCHC MPO, Triangle Transit Authority (TTA) and participating local governments, will include the modified alignment identified above, and future alignment modifications to the “US 15-501 Major Investment Study (MIS)”, into local and regional transportation plans. - In addition, upon notification by the local government with jurisdiction over the matter, minor changes to the 15-501 Corridor Alignment shall be shown on local and regional transportation maps maintained and updated by the TAC. by reference, and the DCHC MPO will consider the alignment modifications in the following update to the Long Range Transportation Plan (LRTP).

### **C.C. Consideration of Adopt Supportive Land Uses**

The parties shall seek right-of-way dedication for the 15-501 Corridor Alignment, is corridor, rather than reservation, where possible, through their development review process, consistent with applicable ordinances of each jurisdiction and constitutional constraints. In addition, the parties shall consider recommended changes to use the provisions of their comprehensive plans and development ordinances that maximize the opportunities for high densities and mixed uses, and that require transit supportive design in proximity to planned station locations along the 15-501 Corridor Alignment.

In particular, the parties to this Agreement will consider means of encourage development in proximity to the US 15-501 Transit Corridor and stations, through local zoning and development ordinances, consistent with the guidelines set forth in the document “Station Area Development Guidelines for the Regional Transit Stations” (Triangle Transit Authority, December 1997). It should be noted that the Guidelines state:

“As individual local governments prepare plans for their regional transit station areas, they will select and refine the elements most appropriate for each station area and they will determine the extent to which these elements may be encouraged, discouraged, avoided or required.”

### **D. Require Analysis of Proposed Changes to Alignment**

The parties ~~to this Agreement~~ agree to consider adoption of ordinance revisions that will require that any development application proposing a major change, as defined above, shift in the adopted US-15-501 Transit Corridor Alignment shall first require consideration and recommendation by the TAC as the official decision-making body of the DCHC MPO.

The parties understand that requirements for studies and analysis may be imposed by the DCHC MPO on parties seeking to make a major change, which requirements may include: or designated station locations 1) include an analysis that meets or exceeds the technical level of corridor analysis in the current, or subsequently amended, “Chapel Hill-Durham Transit Corridor: Southwest Durham Alignment Evaluation” and that includes

the impacts identified below.; 2) preparation of such analysis in consultation with the ~~The parties to this Agreement further agree that~~ DCHC MPO technical staff and compliance with will be consulted for current guidelines prepared by the staff; 3) review of prior to the preparation of any such analysis, and that the completed analysis will be supplied promptly to by the DCHC MPO staff.; and 4) addressing the impacts below in such analysis: for technical review. ~~The analysis will include impacts on the following characteristics:~~

1. Cost – capital costs for building alignment and stations, and vehicle operations costs (developed in consultation with TTA); and,
2. Environmental – extent of negative environmental impacts including wetlands and stream crossings; and,
3. Community – extent of negative impacts including residential and business relocations, and street crossings; and,
4. Land Use Plans – consistency of existing and future land use and development with comprehensive plans, and,
5. Transportation Plans – consistency with local and regional transportation plans, including the Long Range Transportation Plan of the DCHC MPO; and,
6. Ridership – potential ridership estimates from TTA, based on housing and employment projections within one-quarter and one-half mile of proposed stations; and
7. Operations – feasibility of operations, and service quality impacts (developed in consultation with TTA).

**E. ~~Defer Development Decisions for DCHC MPO Board~~ Action Recommendations by the TAC**

The parties to this Agreement agree to consider adoption of ordinance changes that require or allow deferral of approval of zoning, site plan and other development cases in which analysis of a major change is required under Paragraph D of this Agreement, until the Transportation Advisory Committee (TAC) of the DCHC MPO has had adequate time to review and comment on the analysis and make a recommendation on the proposed change. The TAC agrees to complete its review in an expeditious and timely fashion, upon submission of the required analysis by the applicants proposing the major change and to make a recommendation on the proposed major change. In addition, each local government party agrees to notify the TAC of all proposed actions on development that would constitute a change to the 15-501 Corridor Alignment, whether major or minor, and to include in materials going to the decision-making body of the local government all recommendations and supporting materials regarding such change submitted by the TAC for consideration.-

**F. Action Subsequent to TAC Recommendation**

In the event that the TAC recommends approval of the proposed major change to the 15-501 Corridor Alignment, and the local government party approves the land use decision embodying such change, the parties agree that the change may be included in the 15-501 Corridor Alignment and the Comprehensive Transportation Plan without further action by the TAC.

**G. Information from Local Government Parties**

Upon request by the TAC, the local government parties will furnish timely information to the TAC regarding current and proposed land use development and decisions that affect the 15-501 Corridor Alignment. Such information shall include but not be limited to: copies of development approvals for development in proximity to the Corridor; relevant policies in plans adopted by the party, such as comprehensive plans; development actions that result in changes that do not constitute “major changes” under this MOU; relevant ordinance requirements that serve to further this MOU or the protection of the Corridor; and identification of land that has been protected through reservation or dedication for the Corridor.

**H. Local Government Legislative Discretion.**

Nothing in this MOA shall be construed to limit or impair the authority of the governing bodies of the local government parties from exercising or performing any legislative or governmental powers or functions pursuant to applicable law, or to bind the future legislative or governmental discretion of such governing bodies.

**I. Additional Conditions of Agreement:**

This Memorandum of Agreement:

1. Shall become effective when signed by all the parties and shall continue in force until terminated by any party;
2. May be terminated thirty (30) days after written notification by any party;
3. May be amended by mutual consent of the parties, which consent shall not be unreasonably withheld;
4. Shall be in addition to any specific agreements between the parties presently in place establishing specific practices for planning and implementing the US 15-501 Transit Corridor;
5. Shall not require any party to implement a practice or policy that is not in compliance with local ordinances or State statutes.

NOW, THEREFORE, BE IT RESOLVED that this Agreement is hereby formally approved by the City/Town Council of the City of Durham and Town of Chapel Hill, the Board of County Commissioners of Durham County, the Board of Directors of the Triangle Transit Authority, and the Mayor/Board Chairs and Clerk of these municipalities

and county are hereby empowered to sign and execute the Agreement among these parties.

**DURHAM-CHAPEL HILL-CARRBORO METROPOLITAN PLANNING ORGANIZATION (DCHC MPO)**

By \_\_\_\_\_  
CLERK

By \_\_\_\_\_  
CHAIR

**CITY OF DURHAM**

By \_\_\_\_\_  
CLERK

By \_\_\_\_\_  
MAYOR/CITY MANAGER

**TOWN OF CHAPEL HILL**

By \_\_\_\_\_  
CLERK

By \_\_\_\_\_  
MAYOR

**DURHAM COUNTY**

By \_\_\_\_\_  
CLERK

By \_\_\_\_\_  
BOARD CHAIR

~~TRIANGLE TRANSIT AUTHORITY~~

~~By \_\_\_\_\_  
CLERK~~

~~By \_\_\_\_\_  
BOARD CHAIR~~

**MEMORANDUM**

**TO:** Technical Coordinating Committee (TCC)  
DCHC MPO

**FROM:** DCHC Lead Planning Agency Staff

**DATE:** April 26, 2006

**RE:** Southwest Durham/Southeast Chapel Hill Collector Street Plan

---

**Background**

The DCHC MPO began developing a collector street plan for the Southwest Durham County and Southeast Chapel Hill area in August 2005. The Lead Planning Agency (LPA) formed a Technical Steering Committee (TSC) to provide project direction, composed of transportation and planning staff from local governments and the NCDOT, hired Kimley-Horn Associates to provide project support, and identified \$50,000 in STP-DA funding to finance the project activities. The TSC conducted three public workshops and met on several occasions to develop the draft Southwest Durham/Southeast Chapel Hill Collector Street Plan report and network map, and to make final recommendations to the TCC. This collector street project is to serve as a technical and process basis for completing a subsequent project to develop a collector street plan for the entire DCHC MPO planning area.

**Purpose**

The purpose of the memorandum is to:

1. Present the TSC recommendations to the TCC;
2. Present the reasoning for these recommendations; and,
3. Identify additional information on attachments.

**Technical Steering Committee (TSC) Recommendation**

The TSC met on April 4<sup>th</sup> to discuss the draft collector street plan and the citizen input from the 3<sup>rd</sup> public workshop. The TSC made the following recommendation to the TCC:

1. Defer Plan Adoption  
The TCC and TAC defer plan adoption until issues related to needed improvements in the NC 54 corridor have been resolved.

## 2. Initiate Transportation Study

The MPO should join stakeholders together, e.g., DCHC MPO, NCDOT, local governments, and interested developers, to finance and initiate a study of the NC 54 corridor in this area to resolve the capacity and access issues of the arterial and interstate road system. At a minimum, this comprehensive study would address the design of the NC 54 corridor, I-40 interchanges at NC 54 and Farrington Road, and the location of the Southwest Durham Drive.

The key reasons for making this recommendation include the following:

### Citizen Opposition

There is considerable citizen opposition to the collector street plan. However, most of this opposition is caused by issues outside the scope of the collector street plan. For example, approximately one-half of the workshop participants oppose the plan because the Southwest Durham Drive is to connect to the existing Meadowmont Lane, which is a residential neighborhood. The Southwest Durham Drive corridor is designated in the 2030 Long Range Transportation Plan (LRTP) and therefore the collector street plan can not change that corridor designation. In addition, many other citizens oppose the plan because proposed collector streets would connect to existing “stub outs” in residential areas such as the Oaks (Nottingham Drive), Devonshire (Randall Road) and Eastview Woods (Celeste Circle). The Durham Unified Development Ordinance (UDO) requires a “stub out” to be connected to adjacent subdivisions, and therefore the connection will be made whether or not a collector street plan exists.

The educational portion of the public workshop process has emphasized that the Southwest Durham Drive is part of the LRTP and that the “stub out” connections do not depend on the adoption of a collector street plan. Nonetheless, the strong opposition to the plan persists.

### Arterial Network in Flux

The collector street plan is to provide efficient and effective access between the residential and small commercial streets and the arterial road network. However, much of the arterial road network in the study area is in flux, thereby making a definitive collector street network difficult to design:

- NC 54 – The future design of, and connections to, NC 54 are unknown. The NCDOT has planned some short-term design changes to address the congestion in this corridor. However, the corridor needs an in-depth study to provide the location and type (e.g., right-in/right-out only; superstreet roundabout, etc.) of arterial and collector street intersections in the corridor.
- I-40 Interchanges – Currently, additional access capacity to I-40 is very much needed in the study area to reduce congestion and address safety issues. As the residential and commercial development in this area continues to grow, this access capacity issue will become critical. A new interchange at I-40 and Farrington Road and/or an expanded interchange at I-40 and NC 54 will impact the collector street system.

- Southwest Durham Drive – There are several reasons to believe that the Southwest Durham Drive corridor could be modified. There is substantial opposition to the current corridor because it connects to Meadowmont Lane, which is a residential neighborhood, and it divides the Creekside Elementary School property, which might be the site of an additional school building. Furthermore, the proposed connection site of the Southwest Durham Drive and Meadowmont Lane is a steep grade and wetland area that will likely require prohibitively expensive bridging structures.

A transportation study centered around the NC 54 corridor in this area that considers the entire arterial and interstate transportation system is needed to define the location and type of arterial network for this area before the collector street network can be advanced with any certainty.

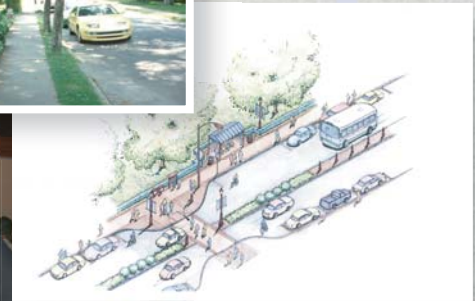
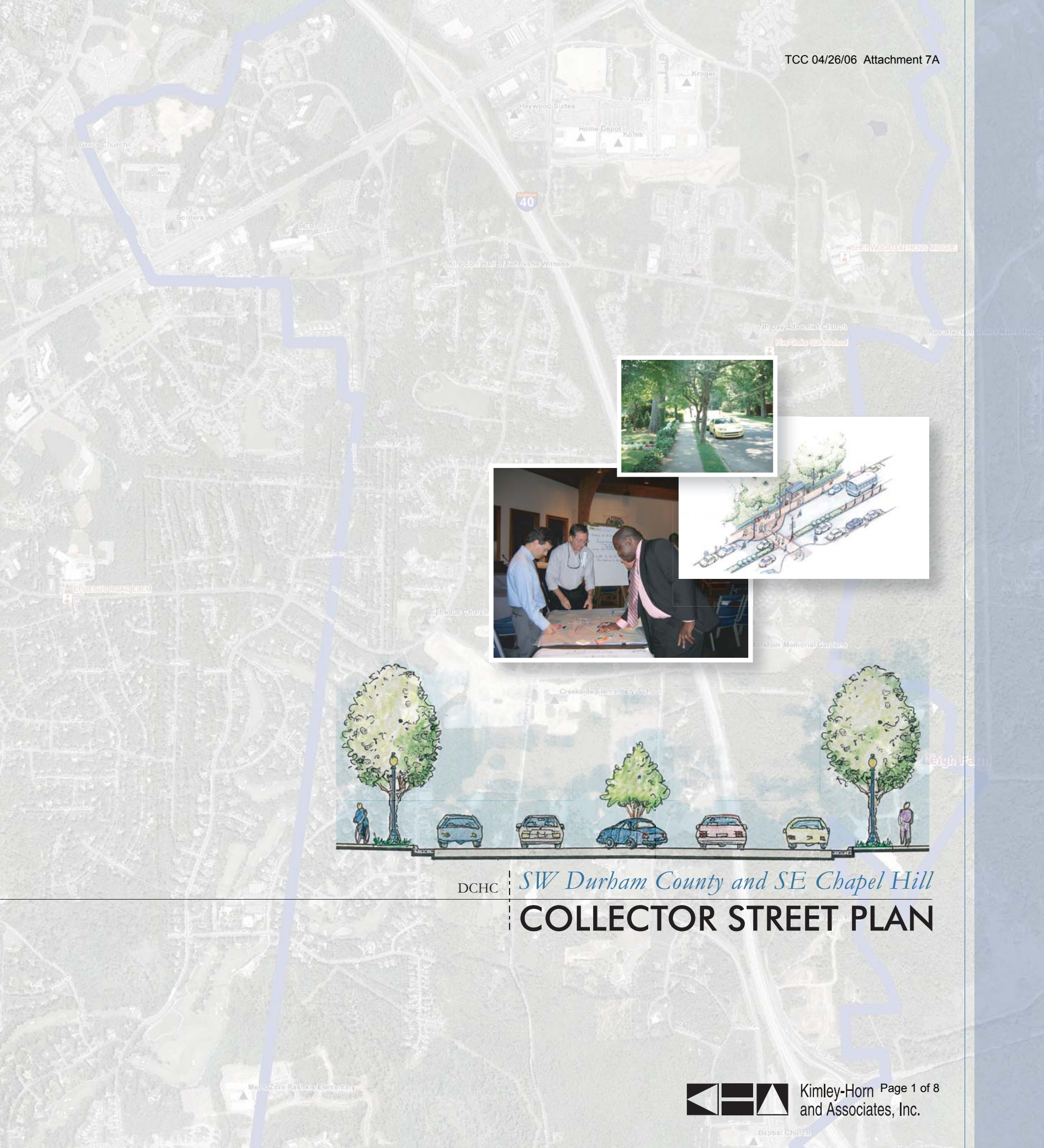
**Requested TCC Action:**

Receive Technical Steering Committee (TSC) recommendation, discuss the recommendation, and provide a recommendation to the TAC.

**Attachments**

The recommended plan and several documents that provide public input from the 3<sup>rd</sup> Public Workshop are attached:

- Attachment 7A: *Recommended Southwest Durham/Southeast Chapel Hill Collector Street Plan* (Figure 4.5, or page 4-18, is the collector street network map) – *Full and abridged versions of Att 7A posted online*
- Attachment 7B: *Survey Comments Part 1 – What Do You Like About the Recommended Collector Street Network?*
- Attachment 7C: *Survey Comments Part 2 – What Don't You Like About the Recommended Collector Street Network that Would Cause You to Actively Oppose Adoption of the Plan?*
- Attachment 7D: *Survey Comments Part 3 -- How Was This Workshop Helpful? What Workshop Improvements Would You Recommend?*
- Attachment 7E: *Survey Summary*
- Attachment 7F: *General Comments*
- Attachment 7G: *Citizen Letter #1*
- Attachment 7H: *Citizen Letter #2*
- Attachment 7I: *Citizen Letter #3*



DCHC

*SW Durham County and SE Chapel Hill*

# COLLECTOR STREET PLAN



## Executive Summary

Who wouldn't want a 5-mile commute to Research Triangle Park or any of the other great job opportunities nearby? This prospect is only part of what makes southwest Durham and southeast Chapel Hill a great location. And being a great location is the primary reason why land in this area is the target of development interests.

With this natural interest and growth, however, come challenges. To ensure that the increasing developments and people moving to southwest Durham and southeast Chapel Hill are linked with the rest of the area through proper transportation infrastructure and services, the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (DCHC MPO) initiated a study of collector streets (shown on **Figure 1.1**). The study is intended to develop plans and policies that can be adopted and implemented by local governments as land development applications are received.

This study is specific to collector streets and utilizes currently adopted plans as its basis. For example, the plan to build a new arterial – Southwest Durham Drive – connecting Meadowmont Lane with the Farrington Road bridge over I-40 was established as early as 1991 by DCHC in the Regional Transportation Plan and again in the late 1990s when the Meadowmont development was approved by the Town of Chapel Hill. While outside the scope of the collector street plan, the alignment of this arterial was evaluated during the planning process. A large public response indicated significant concern that alternative alignments were not considered for Southwest Durham Drive to avoid connecting with Meadowmont Lane. It is recommended that public concerns be addressed in a follow-up study by DCHC. Another assumption evaluated includes the future of the NC 54 corridor between the interchange at I-40 and the signalized intersection at Meadowmont Lane. Despite years of studies, the North Carolina Department of Transportation (which is the agency responsible for maintenance of NC 54) is still considering several options for improving safety and mobility along this important transportation corridor.

While specific concerns such as these will inevitably appear during any collector street study, it is imperative to view the collectors within the context of the greater arterial network. The two systems are intended to work together to provide acceptable transportation options to the traveling public. Even though they were not focused directly on the collector streets in southwest Durham and southeast Chapel Hill, several



broad public policy questions surfaced during the course of the collector street study, including the following:

- a.) Is Southwest Durham Drive still needed?
- b.) If so, is Southwest Durham Drive needed as an arterial or a collector?
- c.) If an arterial, does it still make sense to connect Southwest Durham Drive to Meadowmont Lane or to consider an alternate route to NC 54?
- d.) If signalized intersections are the source of existing motorist delay on NC 54, does it make sense to add more signals, even ones spaced far enough apart to achieve synchronization of green lights?
- e.) Would unsignalized intersections along NC 54 with special median crossovers (called "left-overs") achieve sufficient access to secondary streets, knowing they provide substantial safety and mobility benefits?
- f.) Can an alternate to Farrington Road be identified that would be acceptable to citizens so that the signals at the intersection of Farrington Road and NC 54 can be eliminated, thus providing mobility benefits to motorists on NC 54 and safety benefits to motorists who are vulnerable to rear-end and side-swipe crashes on I-40 as they queue up to exit to NC 54?
- g.) What are the likely impacts and potential benefits of building a partial interchange (ramps to and from the east only) on I-40 at the existing Farrington Road interchange? (This last issue was raised during the collector street study public workshops; a formal response was postponed because the topic was "outside the scope" of the plan, but needs to be provided promptly.)

These questions present important decisions regarding broad public policy issues. Because these issues are critical to being able to address the goal of the study — to develop plans and policies that can be adopted and implemented by local governments — it is recommended that DCHC delay the process of adopting the collector street plan until such time as the above issues are considered further by staff.

Following the adoption of this collector street plan, local governments will have the opportunity to make sure that an interconnected system of collector streets is built incrementally as development occurs. This strategy has the added advantage of timing the transportation infrastructure so that it coincides with the creation of transportation demand. This collector street plan recommends specific connections be made to improve connectivity and congestion. *It is important to*



*note that the maps in this plan address potential connections but do not reflect the actual location or alignment of a proposed facility.*

The following document addresses the existing conditions, public involvement, recommended network development, and design considerations that were used during this planning process. The document also provides general policy recommendations and an action plan to assist local decision makers and planning staff in the implementation of the *Southwest Durham County and Southeast Chapel Hill Collector Street Plan*. As shown in the collector street plan, an interconnected network of well designed collector streets can help develop safe, attractive, pedestrian-friendly neighborhoods — a worthwhile goal for any great location.



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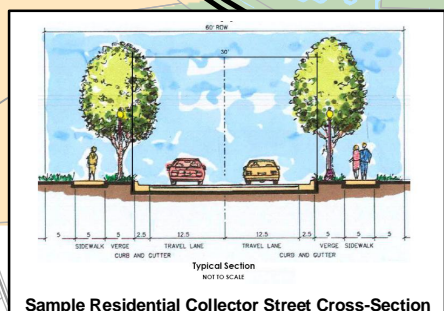
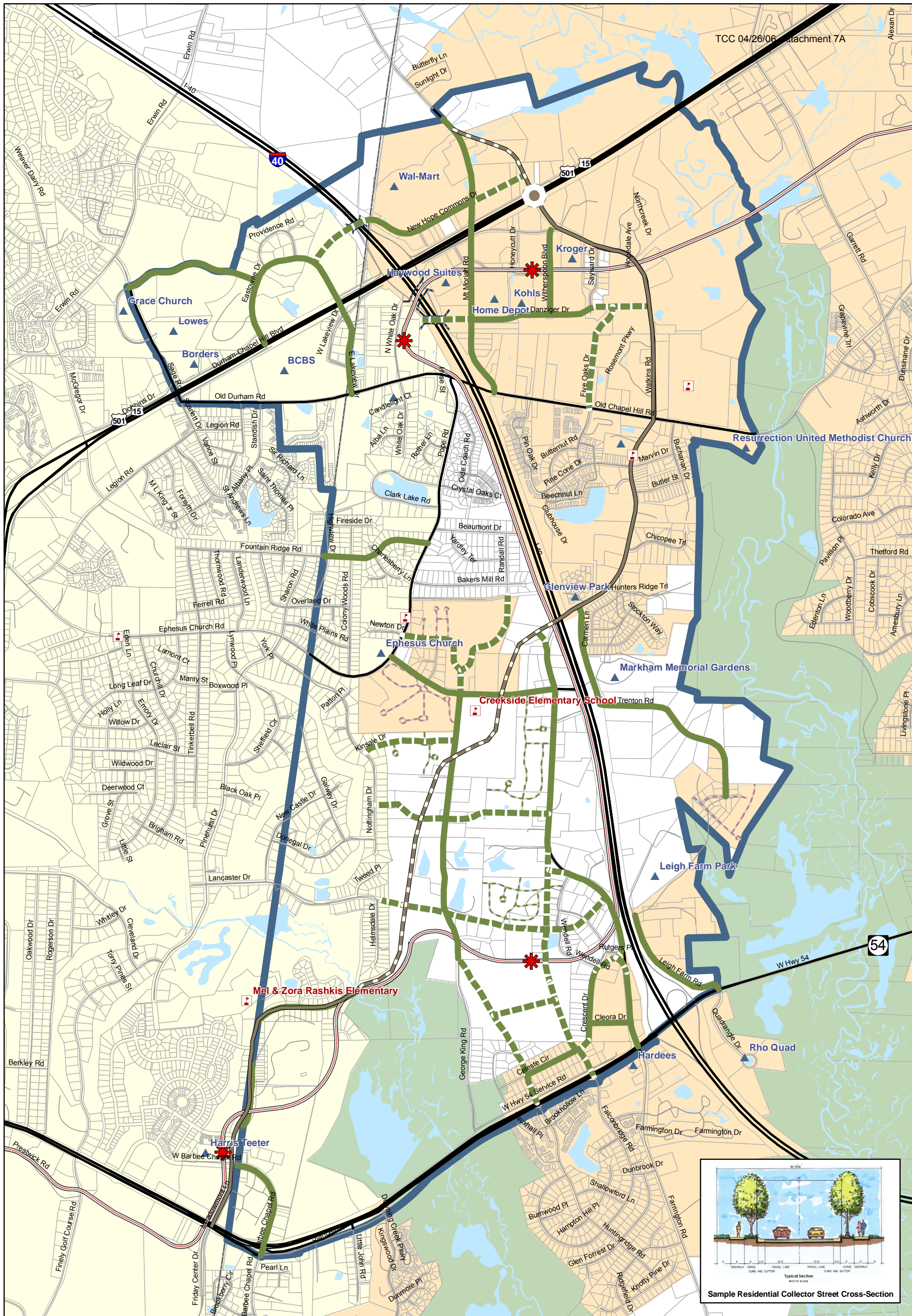
**Figure 4.6 — Existing and Future Transit Facilities**

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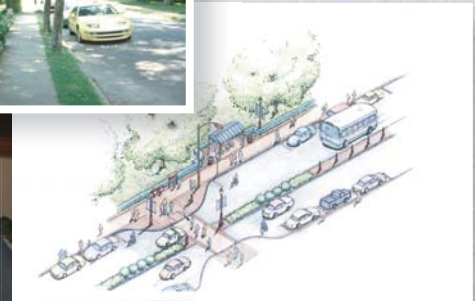
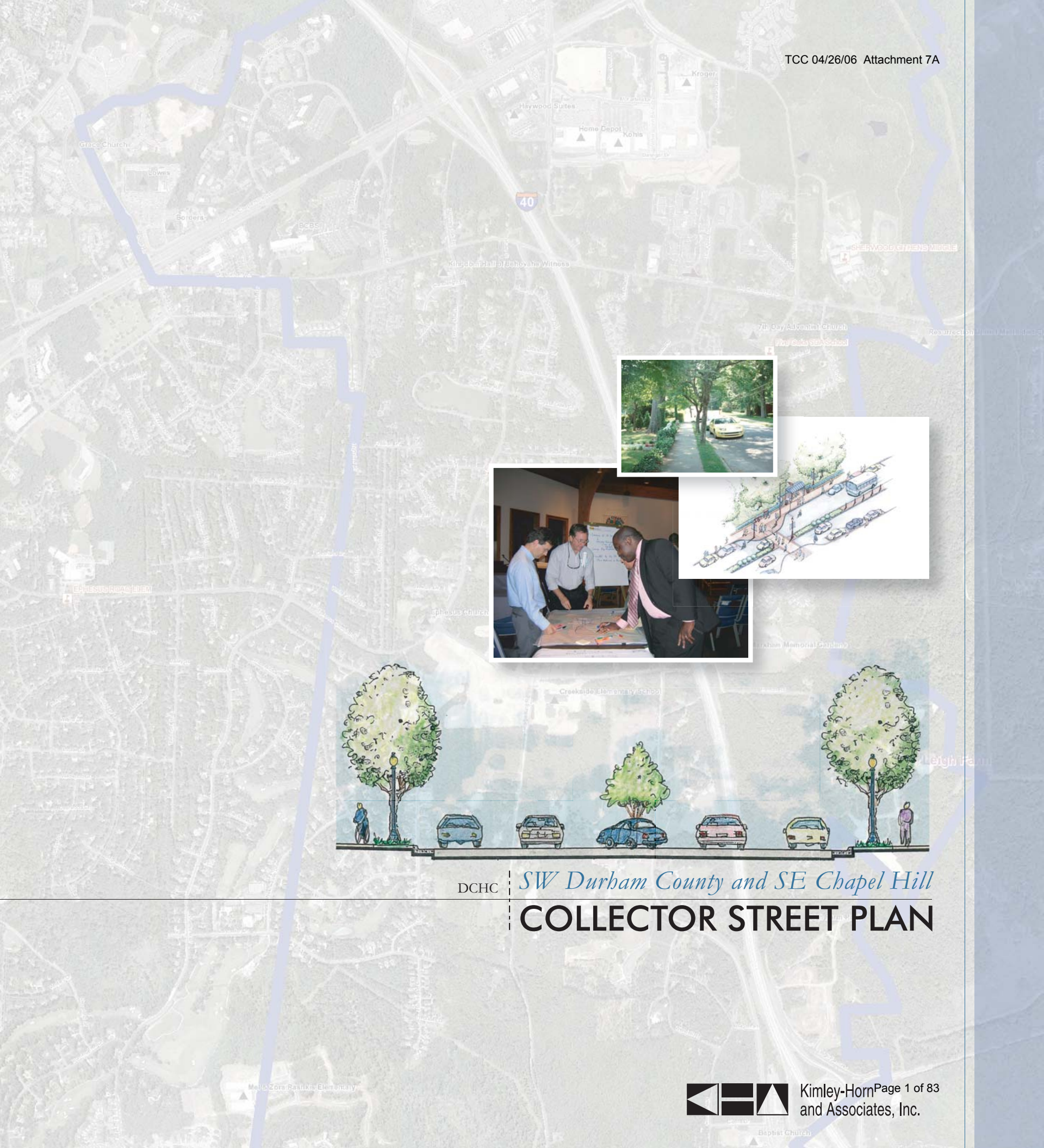
**Figure 5.1 — Future Land Use Plan**

**Figures 5.2 – 5.7 — Collector Street Cross-Sections**



Southwest Durham - Southeast Chapel Hill Collector Street Plan  
**Figure 4.5 - Recommended CSP Network**

	Study Area County Boundary Durham City Limits Chapel Hill Town Limits	Corps of Engineers Land Lakes, Rivers, Streams and Creeks Destination Points Schools	Approved SW Durham Drive Alignment <b>Recommended Collector Street</b> Existing Collector Streets to be Included in Plan* Proposed New Collector Streets	Existing Higher Classification Facilities Proposed Higher Classification Facilities Overpass Proposed Interchange	Highways Proposed Transit Alignment Proposed Transit Stations	Approved Internal Neighborhood Street Proposed Internal Neighborhood Street Proposed Development Approved Development
	COLLECTOR STREET PLAN <small>Source: SW Durham County and SE Chapel Hill</small>	<p>* Inclusion in the plan may refer to an upgrade or facility rehabilitation, whether addition of sidewalks, bicycle lanes, or landscaping (not necessarily widening).</p>	<p>Page 8 of 8</p>	<p>0 0.125 0.25 0.5 Miles</p>		



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*SW Durham County and SE Chapel Hill*

# COLLECTOR STREET PLAN



## Acknowledgements

### DCHC MPO, City of Durham, Town of Chapel Hill, and NCDOT Staff

Andy Henry  
Felix Nwoko  
Mark Ahrendsen  
Jim Dunlop

### Technical Steering Committee Members

David Bonk  
Jeremy Raw  
Lori Cove  
Bill Judge  
Ben Upshaw  
Pete Nicholas  
Kumar Neppalli  
Mike Taylor

### Consultants

Jennifer Dennis  
Sherrie Wilder  
Janet Doughty  
Roger Henderson  
Mark Dunzo  
Brett Wood  
Allison Lockwood  
Natalie Smusz Mengelkoch



## Executive Summary

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Following the adoption of this collector street plan, local governments will have the opportunity to make sure that an interconnected system of collector streets is built incrementally as development occurs. This strategy has the added advantage of timing the transportation infrastructure so that it coincides with the creation of transportation demand. This collector street plan recommends specific connections be made to improve connectivity and congestion. *It is important to*



*note that the maps in this plan address potential connections but do not reflect the actual location or alignment of a proposed facility.*

The following document addresses the existing conditions, public involvement, recommended network development, and design considerations that were used during this planning process. The document also provides general policy recommendations and an action plan to assist local decision makers and planning staff in the implementation of the *Southwest Durham County and Southeast Chapel Hill Collector Street Plan*. As shown in the collector street plan, an interconnected network of well designed collector streets can help develop safe, attractive, pedestrian-friendly neighborhoods — a worthwhile goal for any great location.



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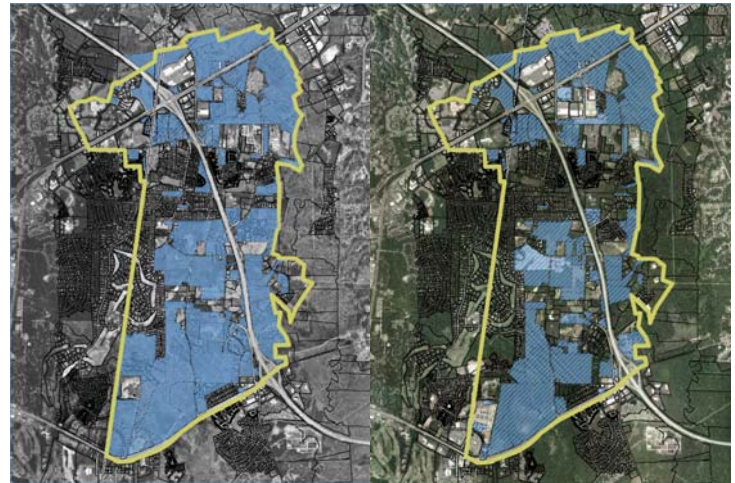
# Chapter 1 – Introduction

The *Southwest Durham County and Southeast Chapel Hill Collector Street Plan* has been developed to provide the community with a tool to plan and provide appropriate connectivity throughout the study area such that vehicular, pedestrian, bike, and transit traffic would be dispersed more evenly, reducing the congestion and giving the citizens a better quality of life.

## History and Background

The study area is bounded by the New Hope Creek wetlands and U.S. Army Corps of Engineer property, NC 54, US 15-501, and the Durham/Orange County line as can be seen in **Figure 1.1**. Historically, this area has been farmland and still retains much of its natural environment within the central portion of the study area.

However, this area is under study because it is experiencing significant growth that is expected to continue. The study area is currently not fully developed and its location and proximity to the Research Triangle Park, downtown Raleigh, Chapel Hill, and Durham is extremely attractive to developers and citizens. In addition, long-range plans exist for a fixed guideway regional corridor within the study area.



1999 Undeveloped Land  
in blue

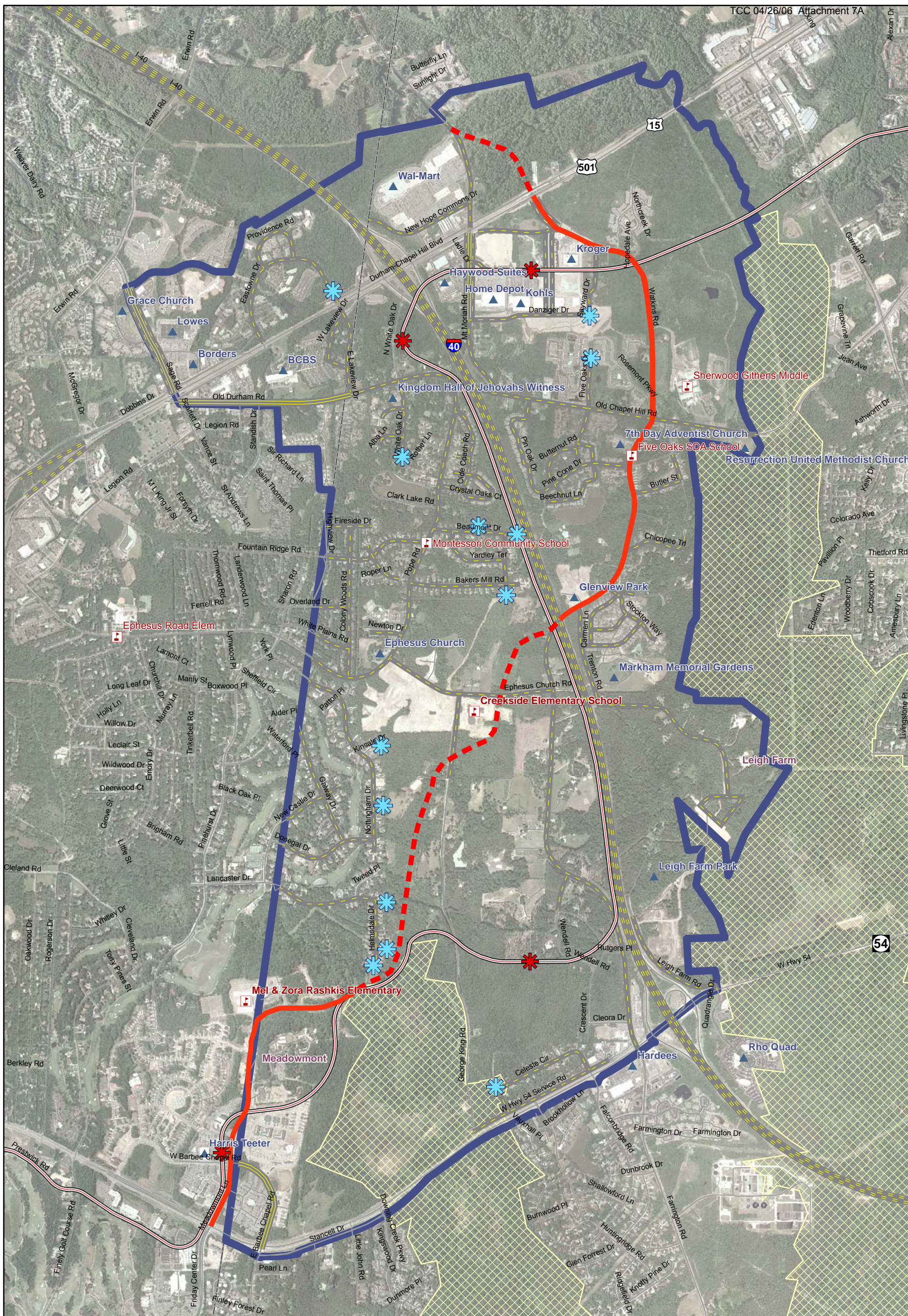
2004 Undeveloped Land  
in blue

Given the forecasted increases in population and development within the study area and surrounding area, many plans have been developed and have been considered through this planning process. Recent planning efforts include:

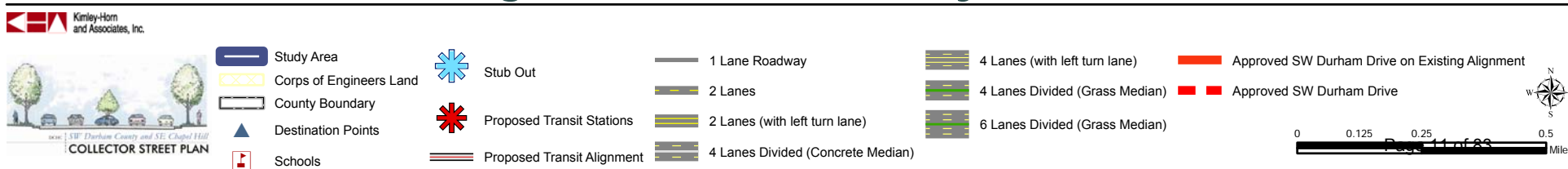
- Durham Comprehensive Plan (2005)
- Land Use Plan (2005)

- Unified Development Ordinance (2005)
- Thoroughfare Plan (1991) – Durham and Chapel Hill
- 2030 Long Range Transportation Plan (LRTP) (2005)
- 2006-2012 Transportation Improvement Program (TIP) (2005)
- The US 15-501 Corridor Master Plan (1994)
- The US 15-501 Fixed Guideway Feasibility Study
- Triangle Transit Authority (TTA) Regional Rail Plan

With these plans in mind, the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (DCHC MPO) embarked on the development of the *Southwest Durham County and Southeast Chapel Hill Collector Street Plan* (CSP), to provide the community with a planning tool.



Southwest Durham - Southeast Chapel Hill Collector Street Plan  
 Figure 1.1 - Study Area



## Plan Purpose

The purpose of the *Southwest Durham County and Southeast Chapel Hill Collector Street Plan* is to **inventory** the existing collector street network and **develop a plan, standards, and policies** that will **promote future connectivity** by creating an efficient network and accommodation for automobiles, transit, pedestrians, and bicycles as collector streets are constructed. It is the intent of this plan to provide city, town, and county staff with the necessary tools to encourage the construction of the collector street network as development occurs; it is not the intent of this plan to suggest that the local governments seek to fund and construct the network through property condemnation and land acquisition.

A Technical Steering Committee (TSC) was formed for this study, and the goals and objectives for the plan include the following:

- Prepare map showing existing and proposed interconnected streets
- Facilitate multimodal transportation options
- Recommend endorsement by MPO, then adoption and implementation by local governments

The collector street network will serve and provide benefits to the community throughout the immediate and surrounding areas. An effective interconnected collector street network can provide numerous benefits including:

- Reduced reliance on major arterials (thoroughfares) for short trips
- Reduced travel times without travel speed increases (improved connectivity) for pedestrians, bicyclists, city buses, school buses, cars, refuse collection, mail delivery, and newspaper delivery
- Compatible connections between complementary land uses
- Encouragement for mixed-use developments, resulting in the opportunity to bike or walk to local destinations
- More direct emergency response access
- Improvements to the non-vehicular transportation system (i.e., pedestrian and bicycle system improvements)
- Delay or avoid widening of major arterials beyond four lanes

While the collector street plan includes a map which depicts existing and future streets, it is important to note that the map is more qualitative than quantitative. ***The maps are not precise and do not reflect the actual location or alignment of a proposed facility.*** Location decisions can only be made after careful consideration and evaluation of a given facility, the specific constraints related to its construction,

and proposed land use changes. The map associated with the CSP is intended to identify the general location of future collector streets and the desired level of connectivity.

It is also important to note that the proposal for collector streets assumes that development exists (or will exist at some future date) at a scale to warrant the construction of a collector street. To this end, the plan would not generally support the construction of collector streets in the absence of development. That is, the City of Durham and the Town of Chapel Hill do not intend to build collector streets in this study area. Instead, they intend to require developers to build collector streets as one condition of approval for any new development that is approved by the City Council in Durham or Town Council in Chapel Hill.



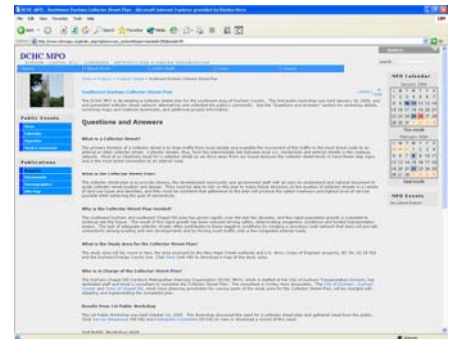
*Typical Collector Street*

This document was created to reflect the previous planning efforts, the mission and purpose, goals and objectives, and public vision. It should help guide the planning, construction, and maintenance of a collector street system in the study area.

## Chapter 2 – Public Engagement

A critical component of a successful collector street plan is engaging members of the public who live, work, and travel within the study area. These are the people who understand the transportation system as well as the shortcomings of the existing network. Beyond the intimate knowledge obtained from the public, it is ultimately these people who will live and work with the proposed future network. Therefore, they have a vested interest and responsibility to encourage their idea of the vision and function of their community for the future.

With this interest in mind, public engagement began early and continuously throughout the planning process. A project website ([www.dhcmmpo.org/](http://www.dhcmmpo.org/)) was maintained to inform the public of plan progress and upcoming events. Three public workshops were held and public input was obtained, summarized, and used as a guide in the development of the collector street proposal. A complete record of written public input can be found in the Appendix.



In addition to the general public outreach, a Technical Steering Committee was formed with local staff to represent the City and Town needs and interests. This committee met on a regular basis and was involved extensively throughout the process. The committee contributed technical knowledge, institutional understanding, and community familiarity. The Committee was heavily relied upon when developing the network and policy issues.

This public involvement process was developed to gain valuable knowledge and input from the community as well as build awareness and support for the collector street plan. It is hoped that the *Southwest Durham County and Southeast Chapel Hill Collector Street Plan* will be supported and promoted by the public.



## Public Workshop #1

The first public workshop was held on Tuesday, October 11, 2005 as a drop-in session from 5pm to 8pm at Resurrection Methodist Church, located within the study area. Addresses inside of and adjacent to the study area were mailed a postcard invitation to this workshop and the MPO

website provided an invite as well. Thirty-seven citizens attended and participated in the workshop activities. A PowerPoint presentation was presented and discussed at the beginning of the workshop and then played continuously throughout the evening. A complete record of workshop materials and public responses can be found in the Appendix.

Participants were asked to submit their responses to several questions, including "What is your vision for the study area in 20 years? What things are important to you?" A summary of all responses are included in the Appendix. Some of the responses included:

*My 20 year vision would include "High density housing, large green belts between developed areas – bike and ped[istrian] paths everywhere. No more cookie-cutter subdivisions!"*

*"Protect ponds and open space. Maintain wildlife corridors."*

*My 20 year vision would include "Varied housing types, including some low-density development (with more rural character); more pedestrian-friendly areas."*

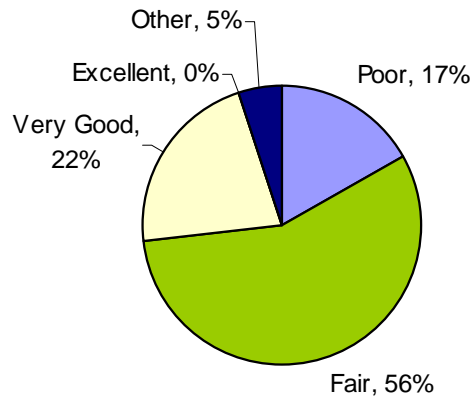
*My 20 year vision would include a "Well-planned, dense transit village."*

DO YOU LIVE OR WORK NEAR SW DURHAM OR SE CHAPEL HILL?	
<p>If you do, you will want to attend the upcoming <b>public workshop</b> to offer your ideas and comments about developing a <b>Collector Street Plan</b> in this area.</p> <ul style="list-style-type: none"> <li>▪ We need you — bring your ideas!</li> <li>▪ Drop by any time between <b>5pm-8pm</b> <ul style="list-style-type: none"> <li>▪ Meet one-on-one with staff</li> </ul> </li> </ul>	
<p><b>Tuesday, October 11, 2005</b> Resurrection United Methodist Church 4705 Old Chapel Hill Road Durham, NC 27707</p> <p><small>Sponsored by <a href="http://www.dchcmo.org">www.dchcmo.org</a></small></p>	<p>To continue to receive future Collector Street Plan Study information, send your name, street address, and/or e-mail address to:</p> <p>e-mail: <a href="mailto:andrew.henry@durhamnc.gov">andrew.henry@durhamnc.gov</a> -or- Telephone: Andy Henry, (919) 560-4366</p>

Public Workshop #1 – Direct Mail Postcard

Participants also were presented with a survey that asked for their input on the condition of the current transportation network. Some of the questions and responses asked at the first public survey included:

- Overall, how would you rate your experience traveling in the SW Durham/SE Chapel Hill area?



- If you had \$100 to spend on transportation improvements, how would you spend it? *You can spend it all on one thing or spread it around.*



In addition to answering surveys and questionnaires, the public attendees were asked to review maps of the study area and give comments and concerns about existing and future problems and solutions. An extensive set of maps were available that clearly showed the location of existing homes, neighborhoods, stores, churches, wetlands, and other key items. The participants were encouraged to draw future collector street networks that they would like to see. These maps were then used to develop draft network alternatives.



*Public Workshop #1 – Workmap Exercise*

## Public Workshop #2

The second public workshop was held on Tuesday, January 10, 2006, as another drop-in session from 5pm to 8pm at Resurrection Methodist Church. Prior to this public workshop, draft alternative

collector street networks, that were developed based on response from the first public workshop and engineering principles were sent out to study area residents. More than 140 attendees were present at the second workshop. A PowerPoint presentation was presented and discussed at the beginning of the workshop and was played continuously throughout the remainder of the evening. During the presentation, several questions and concerns were brought up and discussed. A complete record of workshop materials and public responses can be found in the Appendix.

Surveys and maps of the Draft Network Alternatives were distributed and the public was asked for their input on the alternatives. Some of the comments that were received are shown below.

### In reference to Alternative "A":

*"This plan seems to be the most sensible."*

*"Good connection to transit stop and Hwy 54.  
Good alignment of SW Durham Drive"*

**SW DURHAM-SE CHAPEL HILL COLLECTOR STREET PLAN**  
Public Workshop Invitation

At the first public workshop we gathered input from the public to help us draft collector street alternatives.

- Come view the alternatives and give us your feedback.
  - Drop by any time between **5pm-8pm**
- If you missed the first public workshop, it's not too late to get involved.

---

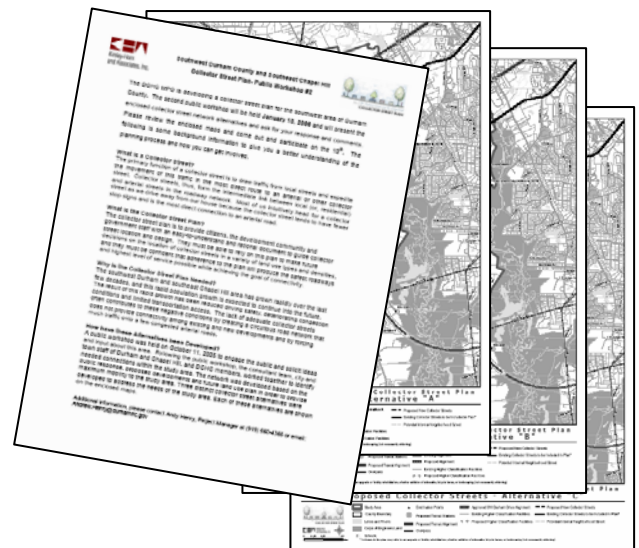
**Tuesday, January 10, 2006**  
Resurrection United Methodist Church  
4705 Old Chapel Hill Road  
Durham, NC 27707

Sponsored by [www.dchcmpo.org](http://www.dchcmpo.org)

**For more information and maps of the alternatives:**

- SGo to the Web site: [www.dchcmpo.org](http://www.dchcmpo.org)
- Send an e-mail: [andrew.henry@durhamnc.gov](mailto:andrew.henry@durhamnc.gov)
- Telephone Andy Henry: (919) 560-4366

*Public Workshop #2 – Direct Mail Postcard*



*Public Workshop #2 – Direct Mail Maps with CSP Proposed Alternatives*

*"Dislike the direct connection of Lancaster to Highway 54."*

*"The present proposal will destroy the character of the Oaks neighborhood."*

**In reference to Alternative "B":**

*"Seems to distribute traffic more evenly. Don't make Lancaster the main road for Pinehurst residents heading to I-40 east."*

*"Good alignment of SW Durham Drive since it uses an existing road."*

*"Randall/Beaumont cannot support increased traffic."*

*"Do not turn Celeste Circle into a collector street."*

**In reference to Alternative "C":**

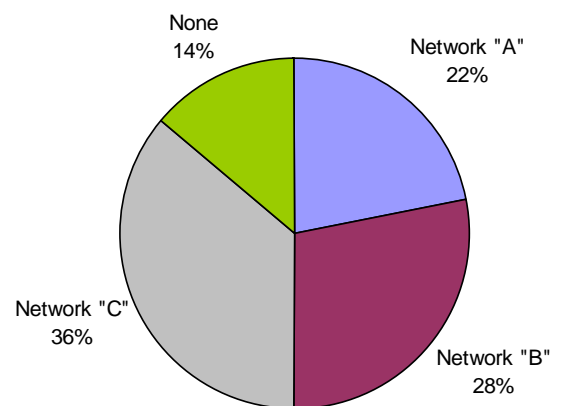
*"Want Alternative C so less traffic. Buses are ruining the road, and kids are playing there, which isn't safe."*

*"Better direct connection from BCBS area and Meadowmont commercial area."*

*"Alterations need to made to the existing streets so that they are more pedestrian and bike friendly."*

*"Do not put a median at Farrington Road. There would be no logical way to get back on 54 going east."*

Overall, the public participants responded in favor of Network Alternative "C" by 36%.



## Public Workshop #3

The third public workshop was held on Tuesday, March 21, 2006, as another drop-in session from 5pm to 8pm at Resurrection Methodist Church. Prior to this public workshop, the recommended collector street network was developed based on public input from the previous workshops and engineering principles. Information about the plan and the recommended collector street network map were sent out to study area residents.

More than 125 attendees were present at the third workshop. A PowerPoint presentation was presented and discussed at the beginning of the workshop and was played continuously throughout the remainder of the evening.

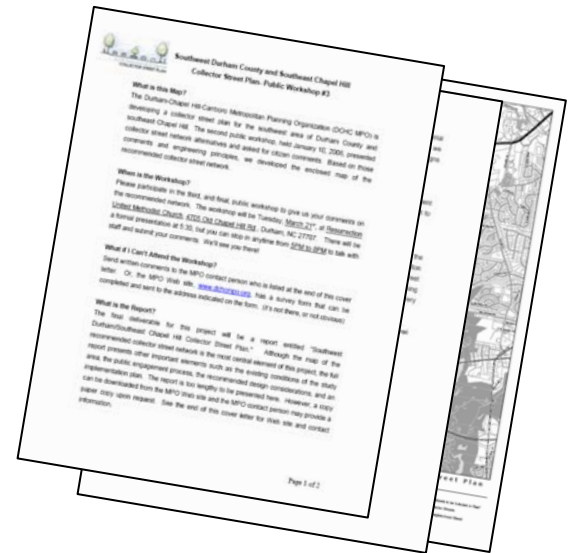
There was much public concern and comment pertaining to the Southwest Durham alignment and Highway 54 intersections within the study area. The public expressed concern and stated the following would cause them to actively oppose the adoption of this plan:

*"SW Durham Drive unnecessarily connects into Meadowmont Lane."*

*"The SW Durham drive needs to be realigned before any further discussion on collector streets continues."*

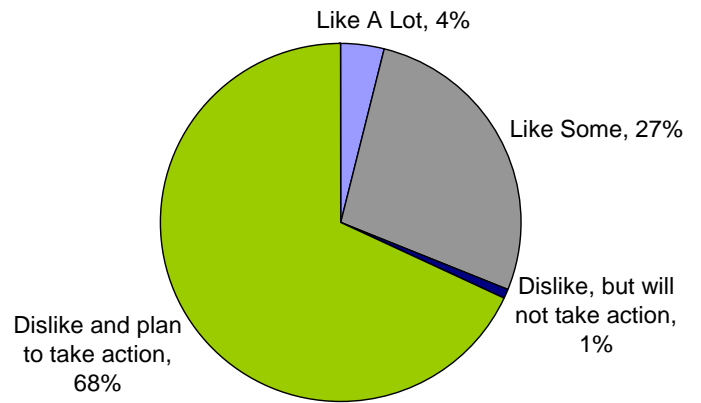
*"The lack of study on Hwy 54...it really does not make sense to study potential development without looking at the whole picture."*

While these issues are important, it is out of the scope of this project to address these larger issues. However, several citizens mentioned that they could not support the plan until these issues were addressed.



Public Workshop #3 – Direct Mail Maps with Recommended Collector Street Network

Seventy-eight (78) participants responded to a survey distributed at the public workshop. Of those participants, 68% stated that they disliked the plan and intended to take action. One (1) percent said they disliked the plan, but would not take action. Twenty-seven (27) percent of the participants said they somewhat liked the plan and 4% said they liked the plan a lot.



Based on the feedback from the third public workshop, minor changes were made to the recommended collector street plan. However, due to the lack of support of the recommended collector street plan and the relating outstanding issues, it is recommended that the Southwest Durham Drive alignment, Highway 54 intersections, and potential interchange at I-40 be studied further, before adoption is sought.

A complete record of workshop materials and public responses can be found in the Appendix.

## Chapter 3 – Existing Conditions

Chapter 1 mentions the significant growth that the study area is undergoing and identifies goals for the *Southwest Durham County and Southeast Chapel Hill Collector Street Plan (CSP)*. Even though the community is changing, it is important to identify the current conditions in order to better understand the recommendations presented in this plan. A field investigation was completed at the onset of this project. **Figure 3.1** depicts the resulting data collected. Some of the influential factors that have helped shape this report include plans that have already been developed, the traffic and safety conditions, existing development, demographics, and environmental features.

### Existing Plans

- Comprehensive Plan (2005) – The *Durham Comprehensive Plan* contains guidance for land use, housing, economic development, conservation, transportation, water/wastewater, solid waste, parks and recreation, schools, public safety, libraries, and capital improvements.
- Land Use Plan (2005) – The current land use plan was adopted as part of the *Durham Comprehensive Plan*. The plan proposes a flexible approach to the interaction of land uses, while limiting intensities and densities depending on the location.
- Unified Development Ordinance (2005) – This ordinance represents the first major overhaul of the development regulations in Durham in nearly 30 years. This ordinance, along with the *Comprehensive Plan*, provides Durham’s development regulations.
- Thoroughfare Plan (1991) – Since its completion, the Durham County population has increased 23% (increasing from 181,835 to 223,314), and it contains some roads that are no longer in the 2025 Long Range Transportation Plan (LRTP).
- 2030 Long Range Transportation Plan (LRTP) (2005) – This contains highway, transit, fixed-guide way, bicycle, and other types of transportation projects that are planned through 2030.
- 2006-2012 Transportation Improvement Program (TIP) (2005) – This plan contains funded projects in the feasibility, scoping,



environmental analysis, design, right-of-way acquisition, and construction phases.

A challenge to the process for developing a collector street plan is the existence of collector street, corridor, and fixed-guideway plans that cover areas within or adjacent to the study area. The contents of these plans will need to be incorporated and considered in a DCHC MPO collector street plan. The existing plans include:

#### Collector Street Plans

- Town of Chapel Hill Design Manual (2005) – The Chapel Hill Design Manual provides guidance for the design and construction of collector streets as well as street standards for collector street classification.
- CORE Collector Street Plan – The Triangle J Council of Governments (TJCOG) is developing a collector street plan in the Center of the Region Enterprise (CORE) area. Upon completion of the plan, the City and County of Durham shall evaluate the plan and consider amending the *Durham Comprehensive Plan* to incorporate the collector street plan.
- City of Durham NC 54/I-40 Corridor Study (2005) – This identifies the general location for some connector streets. Connector streets are similar to collector streets, as they provide a connection between local streets.
- In addition, the City of Durham “Public Works Reference Guide” provides design standards and guidelines for infrastructure construction, including street design standards.

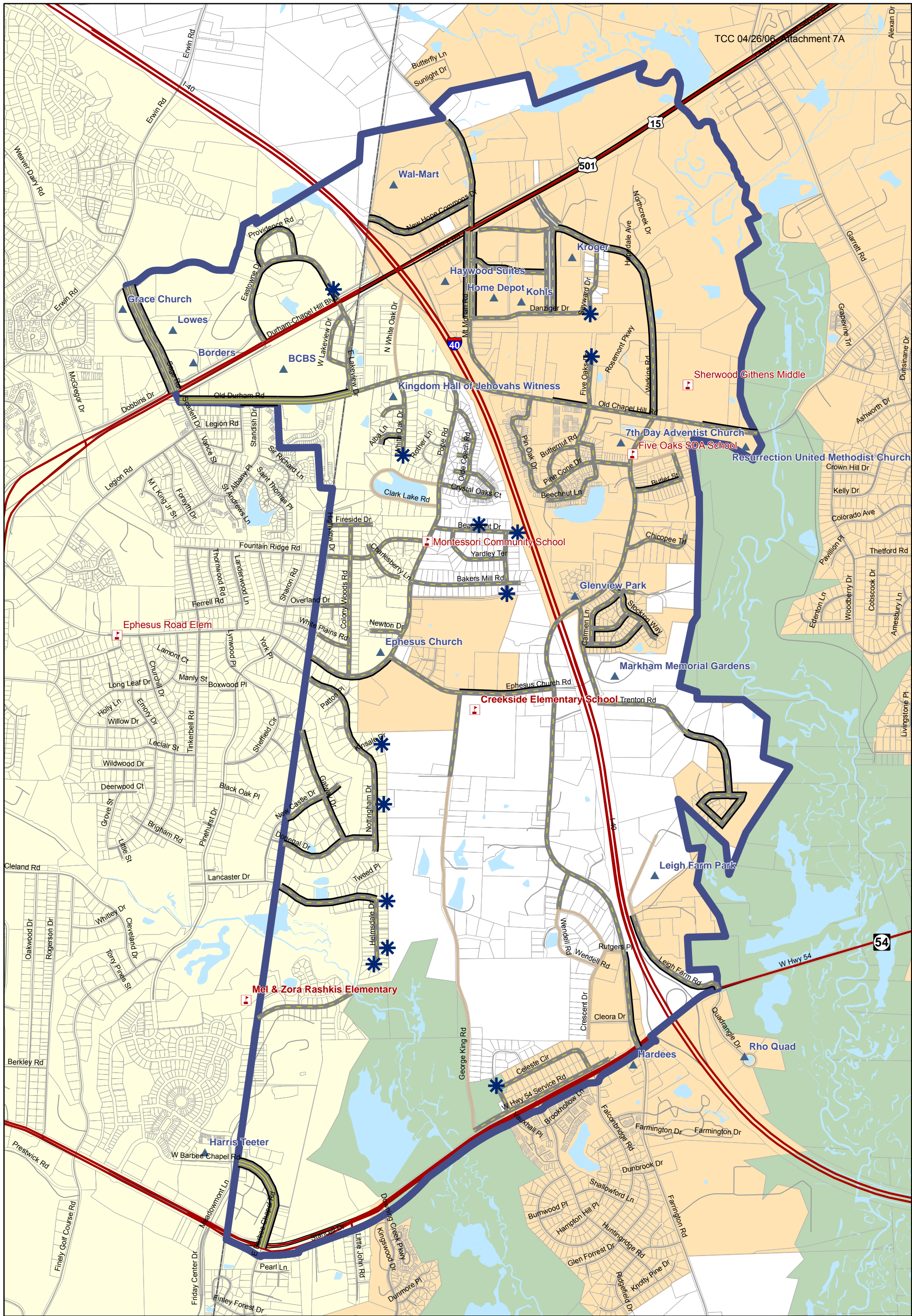
#### Corridor Plans

- US 15-501 Corridor Master Plan (1994) – This evaluated several potential transit technologies and alignments.
- A group of citizens participated in a charrette to produce a transit oriented development (TOD) in the southwest area of Durham County to plan for the 15-501 fixed-guideway alignment.
- The DCHC MPO is implementing the “next steps” in the 15-501 fixed-guideway study that includes local decisions on alignment and proposed station changes, corridor protection and

development characteristics, and the use of impact studies for proposed corridor changes.

#### Fixed-Guideway Plans

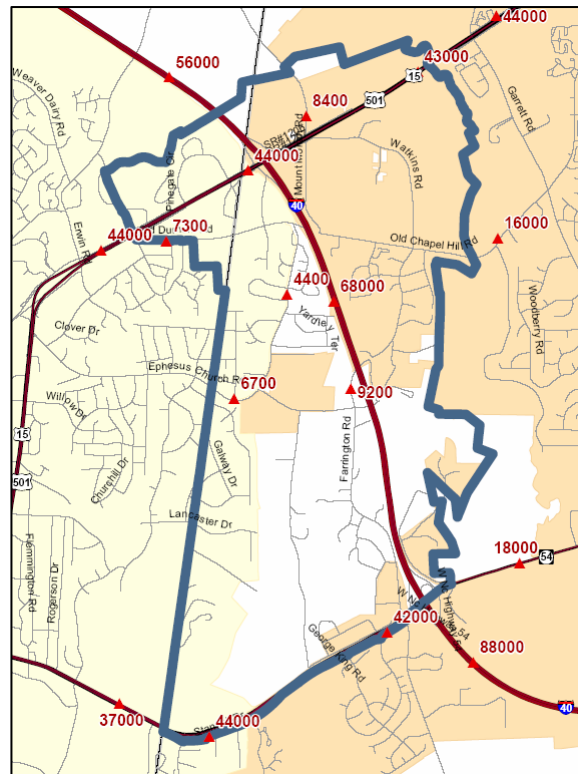
- The US 15-501 Fixed-Guideway Feasibility Study
- Triangle Transit Authority (TTA) Regional Rail Plan



Southwest Durham - Southeast Chapel Hill Collector Street Plan  
**Figure 3.1 - Existing Conditions**

## Traffic

The *Southwest Durham County and Southeast Chapel Hill Collector Street Plan (CSP)* study area has many higher classified facilities (such as major thoroughfares, minor thoroughfares, and interstates) that are heavily traveled. Although it was not the intent of this plan to suggest any improvements to facilities other than collector streets, it is important to study the entire roadway network to understand the existing traffic patterns and areas of concern. Non-collector street facilities of key concern that exist in the study area include I-40, US15-501, NC 54, the proposed transit fixed-guideway corridor, and the proposed Southwest Durham Drive.



2004 Average Daily Traffic Volumes

Interstate 40 is currently a six-lane interstate that runs north/south, bisecting the study area. It is divided with a grass median and the speed limit is 65 mph. This facility carries daily commuters and regional traffic. I-40 currently carries an average daily traffic (ADT) volume of 68,000 vehicles.

NC 54 has three distinct cross sections along its routing through the southern portion of the study area. West of I-40, NC 54 is a four-lane divided thoroughfare with a grass median. As the facility crosses I-40, the median narrows to a four foot concrete island. East of Leigh Farm Road, NC 54 narrows to two lanes. Between Leigh Farm Road and Farrington Road, the signal spacing is approximately 1,000 feet between signals at Farrington Road and the I-40 ramps. Between Leigh Farm Road and the I-40 ramps, the signal spacing is reduced to approximately 500 feet. During the peak periods, heavy congestion occurs at these signals, backing up onto the I-40 ramps and even onto I-40 itself. The congestion is due to commuter traffic to and from UNC at Chapel Hill and people who live or work in RTP, Chapel Hill, and Durham. NC 54 serves as the southern boundary of the study area and carries an ADT volume of approximately 44,000 vehicles.



Highway 54

US 15-501 is a four-lane, grass median divided boulevard within the study area. US 15-501 has a distinct commercial character, surrounded by retail areas and various businesses. This facility is also heavily traveled and is often congested during peak hours. This facility carries an ADT volume of 44,000 vehicles.

Farrington Road is currently a two-lane undivided arterial. This facility is typically congested during peak hours, especially at the intersection of NC 54. This facility currently carries 9,200 vehicles per day.

Old Durham/Chapel Hill Road is a two-lane undivided arterial. This facility runs east/west through the study area and is often congested near signalized intersections. This facility carries an ADT volume of 16,000 vehicles.

Mt. Mariah Road is currently a three-lane road with a two-way left-turn lane. This facility serves the newly developed retail areas in the northern section of the study area. Mt. Mariah Road typically serves 8,400 vehicles per day.

Ephesus Church Road is a two-lane undivided arterial that is centrally located within the study area. New development has recently occurred in the vicinity of this facility and is expected to continue. Ephesus Church Road currently has an ADT volume of 6,700 vehicles.

## Safety

Six corridors within the study area were analyzed using crash data obtained from the North Carolina Department of Transportation over a three-year period (March 30, 2002 to March 30, 2005). **Table 3.1** shows the corridor crash rates, corridor length, severity index, majority causational factor, and the statewide average crash rate for each type of facility. A crash “rate” is defined as the number of crashes per 100 million vehicle miles traveled. It should be noted that the NCDOT splits the statistics at the county line and therefore the table reports the rates by county.

**Table 3.1 - Crash Statistics**

Corridor (County)	Crash Rate (per 100 MVMT*)	Corridor Length (miles)	Severity Index**	Majority Crash Type	Statewide Average Crash Rate***
Watkins Rd	1130	1.16	6.55	Rear-end	347.58
Old Durham Rd (Orange)	71	0.64	5.93	Rear-end	178.42
Old Durham Rd (Durham)	1007	2.46	3.72****	Rear-end	178.42
NC 54 (Orange)	168	0.63	3.47	Rear-end	150.3
NC 54 (Durham)	250	1.98	2.96****	Rear-end	150.3
Farrington Rd	229	2.51	6.52	Rear-end	178.42
Ephesus Church Rd (Orange)	831	0.14	2.23	Rear-end	178.42
Ephesus Church Rd (Durham)	61	0.32	1	Left-turn	178.42
US 15/US 501 (Orange)	460	0.77	3.6	Rear-end	236.68
US 15/US 501 (Durham)	529	1.63	2.66	Rear-end	236.68

Source: North Carolina Department of Transportation

\* MVMT = million vehicle miles traveled

\*\* Severity Index =  $(76.8*(F+A) + 8.4*(B+C) + PDO)/TOTAL\ CRASHES$

\*\*\* State averages for comparable roadway types (based on lanegae and route type)

\*\*\*\* Fatal crash occurred

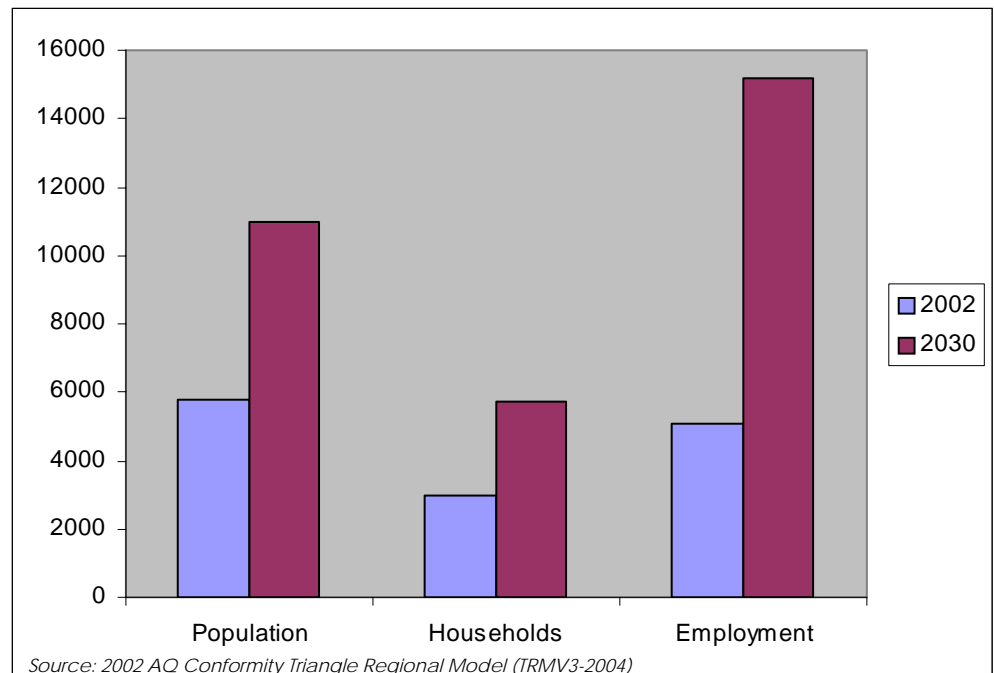
This analysis was used to help identify existing safety issues as a consideration in placing proposed collector street intersections with these facilities. As would be expected, the most heavily traveled facilities are experiencing the greatest number of crashes and the majority of those crashes are caused by rear-end collisions. The input from public workshops reinforced the safety problems identified by NCDOT data.

The adoption of a collector street plan in southwest Durham and southeast Chapel Hill may be an effective countermeasure for these crash patterns. The collector streets may reduce the volume of traffic on the major arterial routes, thereby reducing the total number of

crashes occurring on these facilities. In addition, the low speed of the collector streets themselves should create a safer driving environment.

## Existing Development

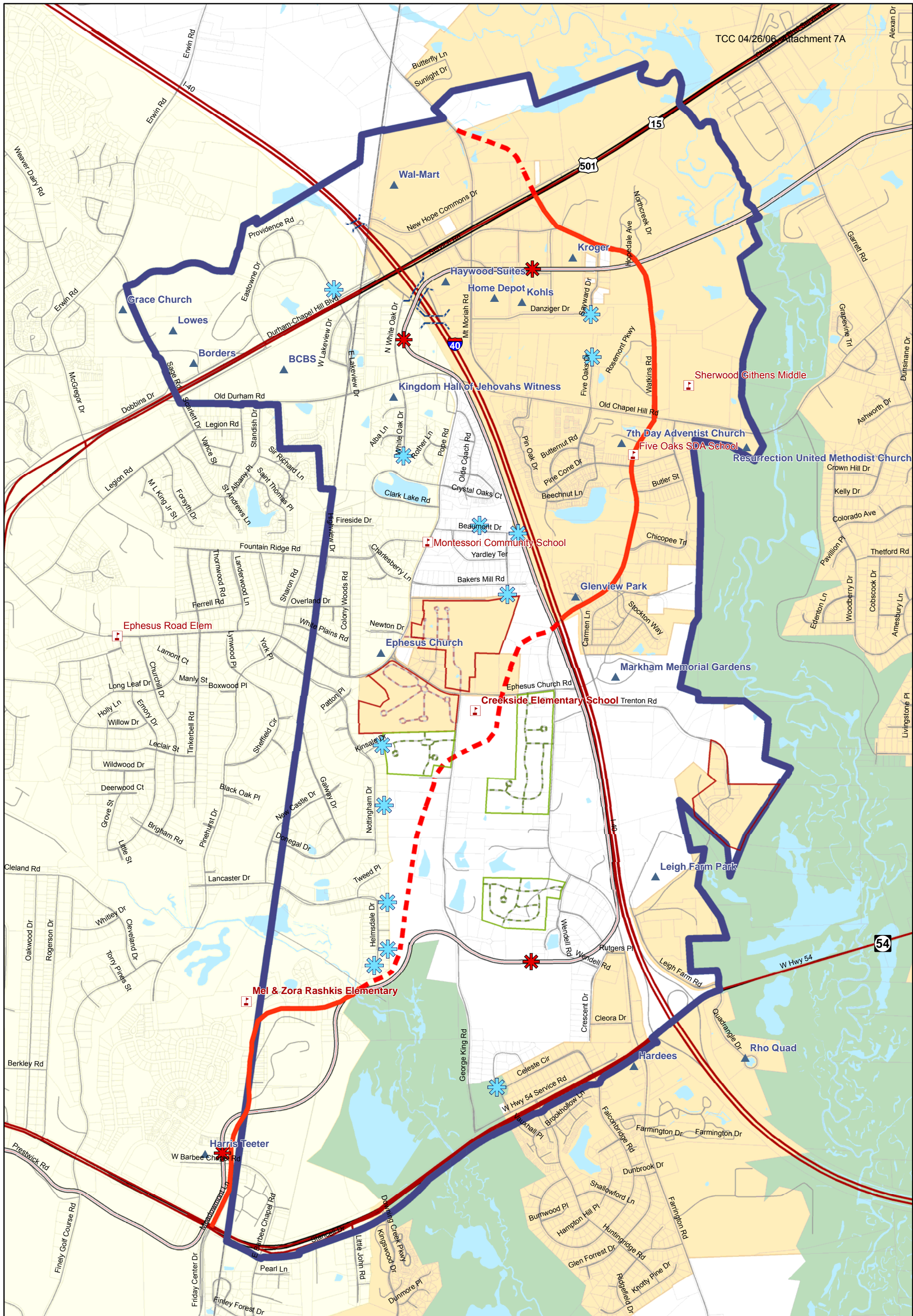
As mentioned previously, development has been taking place in the study area and is expected to increase in the near future. The chart below indicates the expected growth in population, households, and employment. One factor in this growth is the regional rail corridor that is projected to be built. It will provide citizens with convenient travel options and thus has the potential to attract more citizens to the area.



2002 vs. 2030 Study Area Statistics

The northern portion of the study area has experienced significant growth over the past couple of years with the development of shopping centers (including stores such as Wal-Mart, Home Depot, Kohl's, and Kroger) along US 15-501 and Mt. Mariah Road. Undeveloped land in the central portion of the study area is currently being developed as residential communities. This is illustrated in **Figure 3.2**.

It is expected that parcels throughout this study area will continue to be developed and redeveloped. Therefore, it is imperative that the *Durham County and Southeast Chapel Hill Collector Street Plan* be completed and adopted so that the future development will be supported by an appropriate infrastructure.



Southwest Durham - Southeast Chapel Hill Collector Street Plan  
**Figure 3.2 - Approved & Proposed Developments**

	Study Area	Chapel Hill Town Limits	Stub Out	Approved Internal Neighborhood Street	Approved SW Durham Drive
	County Boundary	Durham City Limits	Highways	Proposed Internal Neighborhood Street	Approved SW Durham Drive on Existing Alignment
Lakes, Rivers, Streams and Creeks	Schools	Proposed Development	Proposed Transit Alignment	Overpass	
Corps of Engineers Land	Destination Points	Approved Development	Proposed Transit Stations		

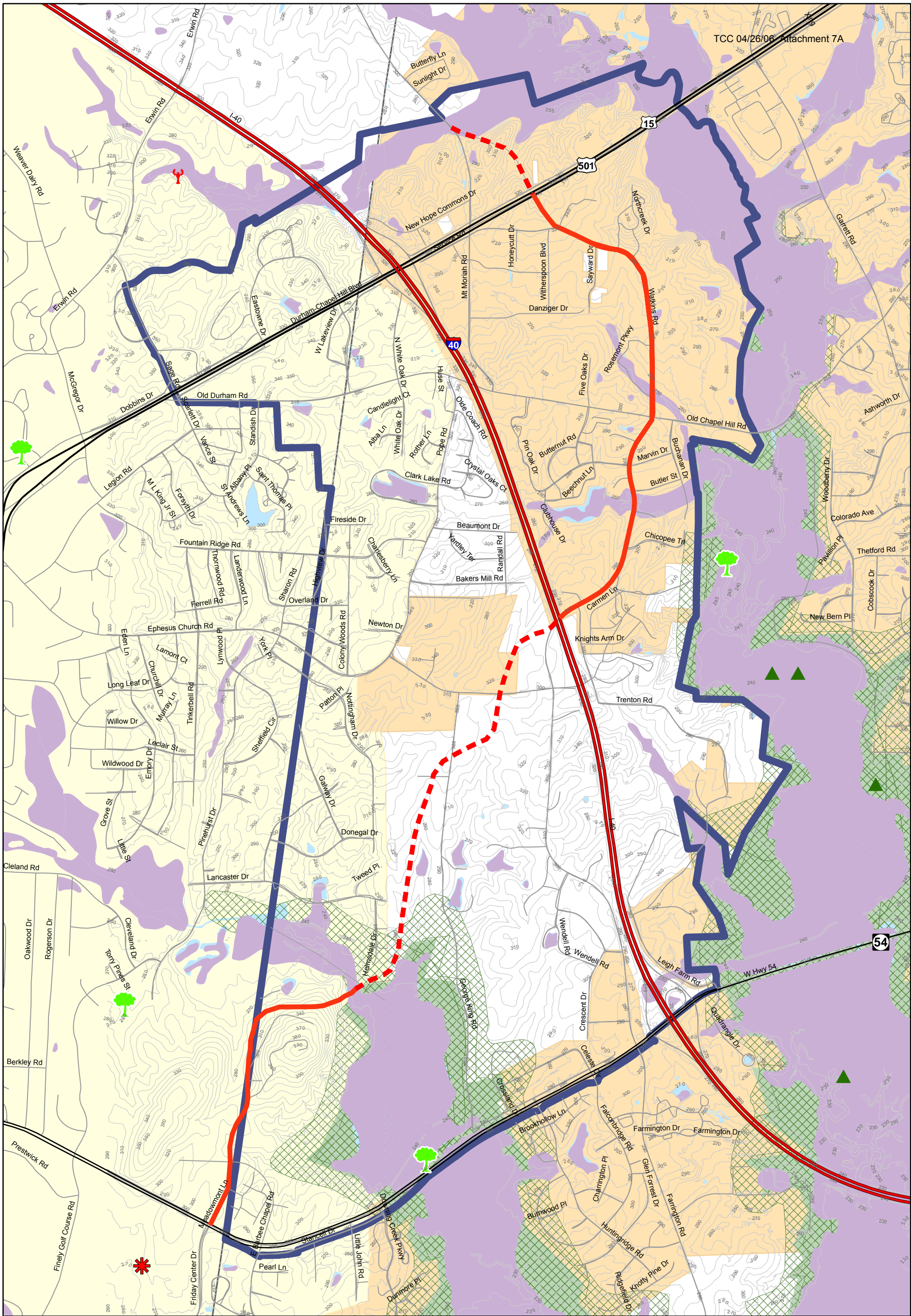
0 0.125 0.25 0.5 Miles

## Environmental Resources

Because the land within the study area will continue to develop, awareness regarding the impacts to the surrounding environment have become heightened. It is imperative to manage and minimize these impacts to continue to serve this area with clean air and water and unpolluted land.

**Figure 3.3** illustrates important environmental resources within the study area. Wetlands and U.S. Army Corps of Engineers land in the southern and eastern portions of the study area have forced street planning activities to the edges of these environmental resource areas.

The collector street network was developed in a way to minimize impacts to the wetlands. Potential wetlands crossings should be recommended at the smallest geographic locations. It was extremely important to be sensitive to the natural environment while developing this plan so that the potential impacts would be minimal while making sure that the plan would be reasonable and feasible.



Southwest Durham - Southeast Chapel Hill Collector Street Plan  
**Figure 3.3 - Environmental Features**



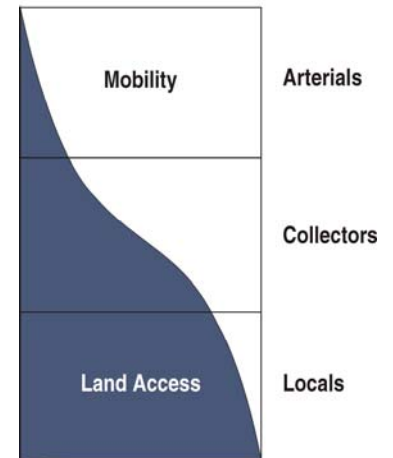
- Study Area
- Corps of Engineers Land
- Vascular Plant
- Approved SW Durham Drive on Existing Alignment
- County Boundary
- Chapel Hill Town Limits
- Approved SW Durham Drive
- Wetlands
- Durham City Limits
- Invertebrate Animal
- 10-Foot Elevation Contours
- Gamelands
- Lakes, Rivers, Streams and Creeks
- Natural Community
- Water Treatment Facility



# Chapter 4 – Recommended Network

## Introduction

The focus of the *Southwest Durham County and Southeast Chapel Hill Collector Street Plan* is transportation; however, integration of the transportation system into the overall community fabric necessitates a discussion about urban design and land use issues. These must be considered in order to reinforce the local character of the community and create the “sense of place” desired within these public rights-of-way. In many cases, collector streets are not considered in long-range transportation plans which are oriented toward “regional” transportation. However, it is the case in many situations that collector streets serve as the backbone for local mobility, property access, and non-vehicular transportation modes. Without adequate interconnected collector streets, regional routes bear the burden of both access and mobility, becoming overcrowded with the combination of local and regional traffic.



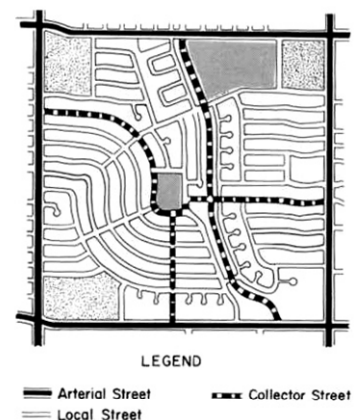
*Relationship of Classification to Service*

The *Southwest Durham County and Southeast Chapel Hill Collector Street Plan* looks holistically at the hierarchy of streets within the community and identifies policies, guidelines, and recommendations for reinforcing the community vision with the collector street system – taming traffic, providing mobility options, and reinforcing community character.

## Defining the Network

### Functional Classification

Roadways are categorized into functional classification groups according to the character of service they provide. The functional classification groups for urban areas are freeways/controlled access facilities,



principal and minor arterials, collectors, and local streets. The extent and degree of access control is a significant factor in defining the functional classification of a roadway. Regulated limitation of access is necessary on arterials to enhance their primary function of mobility, while the primary function of local streets is to provide access to adjacent land use. Collector streets must strike an appropriate balance of moving local traffic at safe reasonable speeds.

The existing thoroughfare plans as well as quantitative and qualitative classification criteria were used to develop the hierarchy of streets within the study area transportation system. This hierarchy was necessary to focus our efforts toward developing recommended collector street design standards.

#### *Roadway Classification*

Functional classifications for roadways are defined in *A Policy on Geometric Design of Highways and Streets* (American Association of State Highway and Transportation Officials, 2004) and summarized below.

**Freeways** – “Freeways are arterial highways with full control of access. They are intended to provide for high levels of safety and efficiency in the movement of large volumes of traffic at high speeds. Control of access refers to the regulation of public access rights to and from properties abutting the highway. With full control of access, preference is given to through traffic by providing access connections with selected public roads only and by prohibiting crossings at grade and direct private driveway connections.” Interstate I-40 is an example of a freeway.

**Principal Arterials** – “Principal arterials serve major centers of activity and carry the highest volume of traffic for urbanized areas. Principal arterials typically serve longer distance trips. Although principal arterials constitute a small percentage of the total roadway network, they carry a high proportion of total urban traffic. The principal arterial system also carries most of the trips entering and leaving the urban area. Service on principal arterials is normally continuous with relatively high traffic volumes, long average trip lengths and high operating speeds. Service to abutting land is typically subordinate to



*Highway 54*

major traffic movements. Typical principal arterials include interstates, freeways and other limited access facilities.”

Examples of principal arterials within the project study area include Highway 54 and US 15-501.

**Minor Arterials** – These interconnect and support the principal arterial system. They accommodate trips of moderate length at a lower level of mobility than provided on principal arterials. Minor arterials provide continuity among communities and may also carry local bus routes. The spacing of minor arterials is typically not much greater than two miles in most urbanized areas.



*Mt. Moriah Road*

Examples of minor arterials within the project study area include Mt. Moriah Road and Old Durham/Chapel Hill Road.

**Collector Streets** – These provide vehicular access to and mobility within residential neighborhoods as well as commercial and industrial areas. They differ from the arterial system in that they provide connection to neighborhoods and distribute trips from arterials to their ultimate destinations. Conversely,



*Lancaster Drive*

collectors also transition vehicular traffic from local streets onto the arterial system.

The collector street system may carry local bus routes, bicycles, and pedestrians. Examples of collector streets within the project study area include Barbee Chapel Road and Lancaster Drive.

**Local Streets** – These comprise all roadways not in one of the higher classifications. They provide direct access to abutting land uses and connections to the higher order systems. They offer the lowest level of vehicular mobility and usually contain no bus routes. Service to through traffic is often discouraged on local streets. Local streets usually have



*Celeste Circle*

relatively low average traffic volumes, short average trip length, no through traffic movements, and high land access for abutting property. Examples of local streets within the project study area include Clark Lake Road and Meetinghouse Lane.

### Classification Criteria

The following criteria were used to evaluate new collector streets to develop the *Southwest Durham County and Southeast Chapel Hill Collector Street Plan*.

#### *Quantitative Measures*

- Traffic volume
- Posted speed limit
- Number of travel lanes
- Points of access (per mile)
- Roadway capacity

#### *Qualitative Measures*

- Adjacent land use
- Access function
- Mobility function
- Transit routing
- School locations
- Bicycle facilities
- Median treatment
- Presence of on-street parking

These criteria were developed based on federal, state, and local guidelines in addition to the existing street inventory database.

The Town of Chapel Hill defines their collector streets in the following way:

*“Collector streets penetrate neighborhoods, public service areas, and districts. They are intended to provide both through-traffic and land-access services in relatively equal proportions, often linking the local street system to the arterial street system.”*  
*(Town of Chapel Hill Design Manual, 2005, Appendix 4-A)*

The City of Durham does not explicitly give a definition of their collector streets; however, specifications for residential collectors are given.

**Table 4.1** displays a portion of Chapel Hill and Durham’s street standards. Full text pertaining to Chapel Hill and Durham’s collector streets can be found in the Appendix.

**Table 4.1 - Collector Street Standards**

	<b>Chapel Hill</b>	<b>Durham</b>
Design Volume (ADT)	1,000 - 7,500	2,500 - 4,000
Design Speed	25 - 35 mph	35 mph
Number of Travel Lanes	2 typical	2 typical
Intersection Spacing	400' minimum	
<i>Source: Town of Chapel Hill Design Manual, 2005, Table 4-A-1 and City of Durham Reference Guide for Development, 2003, Section 9</i>		

The collector street planning process must have a degree of flexibility to accommodate exceptions; therefore, final classifications assigned to the street network were made collectively through a process of consensus building.

## Collector Street Network Development

Designating a collector street network is a process of respecting what present and future conditions exist, what the public wants for the future, and what network will offer the most benefits to balance connectivity, access, mobility, safety and the natural environment. **Figure 4.1** gives a visual of some of the key components of this process and the order in which they occurred in this study.

### Designating the Network

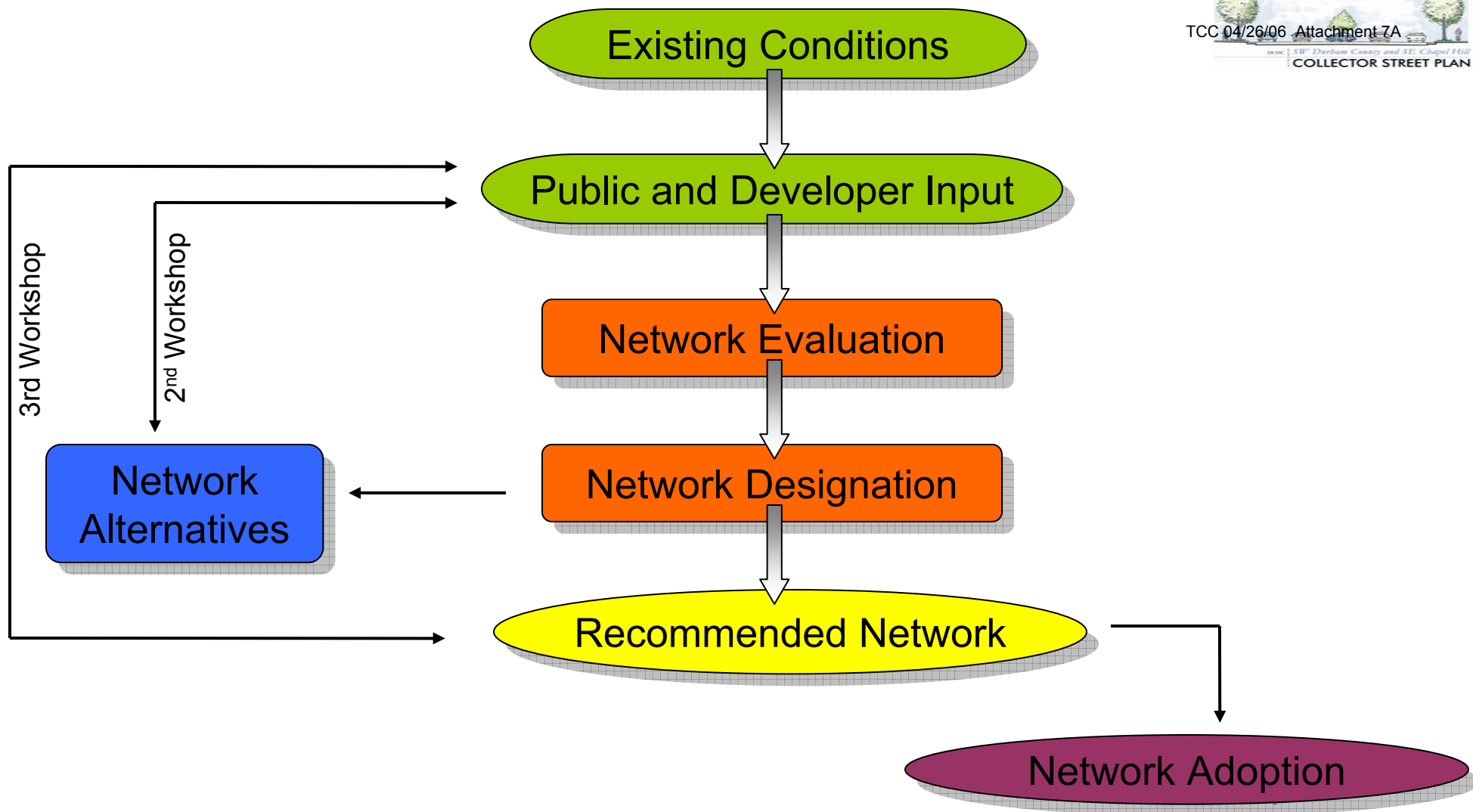
At the onset of the *Southwest Durham County and Southeast Chapel Hill Collector Street Plan* project, a Technical Steering Committee (TSC) was formed with County and City of Durham, Town of Chapel Hill, and North Carolina Department of Transportation (NCDOT) staff. These committee members met on a regular basis with the consultant team to help identify key issues and needs within the study area and to represent their communities from a technical background. Together, the TSC and the consultant team identified existing conditions (outlined in Chapter 3) to be used in the development of this plan.



*Public Workshop #1*

In an effort to build consensus, a public workshop was held in the early stages of the project to obtain public and developer input and vision.

As mentioned previously in Chapter 2, surveys were distributed and participants were asked to state their vision for the future of the study area. Developers also participated in the workshop and shared their vision plans for the area. In addition, participants used markers to depict their vision on poster maps.



**Figure 4.1 – Collector Street Planning Process**

A project work-session was held following the first public workshop with a subset of the TSC. During the work-session, participants used the following general resources to develop network alternatives.

- Recent aerial photo
- Planimetric mapping (including parcels, right-of-way, and buildings)
- Environmental and social features (including rivers, streams, lakes, buffers, protected lands, open space, protected species, severe topography, railroads, and historic districts)
- Planned development (adopted)
- Land use/zoning
- Future roads and projects (including TIP, CIP, and enhancement projects)
- ADTs
- Crash data
- Existing plans (including thoroughfare, greenways, comprehensive, and water and sewer extension plans)
- Existing policy (e.g., street design standards and subdivision ordinance)

Factors unique to this study area that played an important role in network development include:

- Avoidance of U.S. Army Corps of Engineers Land and Leigh Farm Park Historic Site
- Access to Highway 54
- Access to US 15-501
- Southwest Durham Drive alignment
- Future land use plan
- Future transit corridor and station locations
- Approved and proposed development
- Existing bus network
- Street spacing guide to support likely development densities
- Impact on existing streets & neighborhoods

**Table 4.2** gives general “rules of thumb” that were used to guide when it was appropriate to cross natural or manufactured barriers.

**Table 4.2 - Crossing Barriers - Rules of Thumb**

Freeways Considerations	Consider grade separated crossings between interchanges Collectors may need to parallel the facility
Stream Crossings	Parallel the stream at a distance sufficient to avoid water quality impacts
	When necessary, space a minimum of 2,500-3,000 feet apart
Railroad	Must close 3 existing at-grade crossings to build 1 new at grade crossing
	Let NCDOT study dictate which crossings to close
	A parallel arterial system supports good circulation

*It should be noted that participants from the first public workshop were very concerned with the idea of a new interchange on Interstate 40 between NC 54 and US 15-501. Some participants were adamantly against a new interchange while others were in strong support; however, a new interchange is not in the scope of this project and should be studied further at a later date. To determine if a new interchange is a solution to some of the circulation issues in the study area is beyond the scope of a plan focused at the collector street. However, based on the public response to this issue, further focused study of this should be pursued.*

The consultant team, staff from the City of Durham and the Town of Chapel Hill, and DCHC members collectively developed three distinct collector street network alternatives based on public input, environmental and existing constraints, and engineering principles. Each alternative has similar networks in the northern portion of the study area. However, the networks differ in the assumed alignments of Southwest Durham Drive and the southern portion of the study area. **Table 4.3** gives a general Alternative comparison of specific areas of interest.

**Table 4.3 - Network Alternative Comparison**

	<b>Alternative "A"</b>	<b>Alternative "B"</b>	<b>Alternative "C"</b>
<b>NC 54/ Falconbridge Road</b>	Left-Over	Left-Over	Signal
<b>NC 54/ Huntingridge Road</b>	Signal	Signal	Left-Over
<b>NC 54/ Farrington Road</b>	Eliminate Signal	Eliminate Signal	Eliminate Signal
<b>NC 54/ Vauxhall Road</b>	Signal	Right-In/Right-Out	Right-In/Right-Out
<b>George King Road</b>	Re-Routed	Retained and Emphasized	Re-Aligned
<b>Southwest Durham Drive Alignment</b>	Revised Alignment between I-40 and NC 54	Portion Aligns with Farrington Road	Adopted Alignment

During this phase of the project each proposed network alternative considered intersection configurations along Highway 54 and these were presented to the public at the second public workshop. However, the signal configurations were not recommended as part of the recommended collector street network.

Each proposed network alternative (A, B, C) assume different intersection locations and configurations. The intersection configurations (e.g. signalized, right-in/right-out, left-over, etc.) are beyond the scope of this project. The intersection configuration and access along Highway 54 will need to be determined after further study by or in conjunction with NCDOT. NCDOT has recently initiated a Highway 54 corridor study; however, conclusions will not be available prior to the completion of this project.

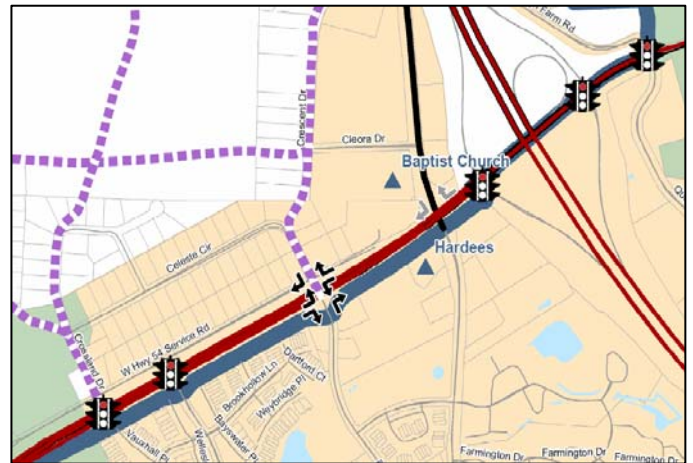
**Proposed Network Alternative "A"**

Alternative "A" was developed considering moderate (when compared with Alternative "B" and Alternative "C") density in the southern portion of the study area.

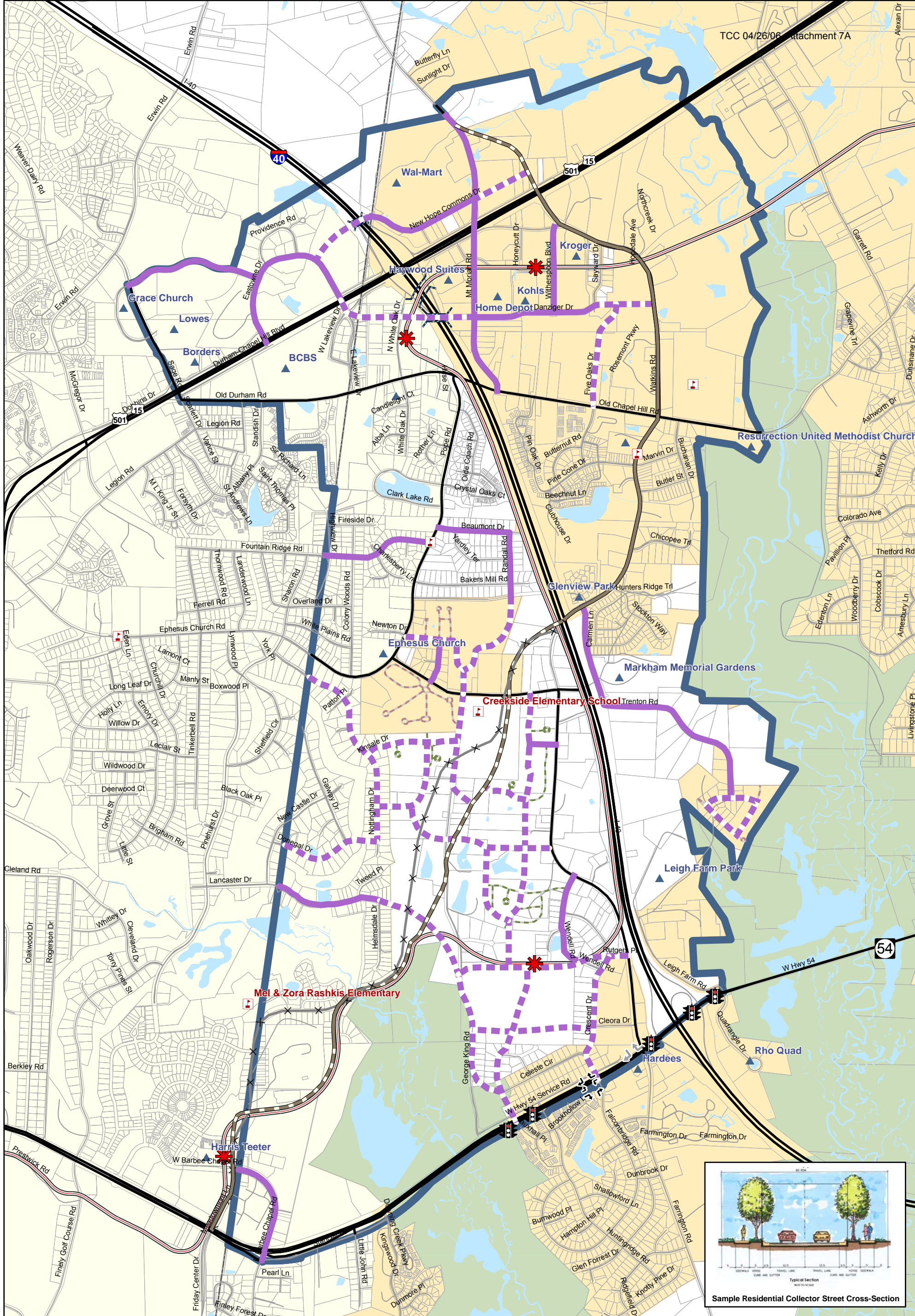
This alternative recognizes the future fixed-guideway alignment and supports the proposed transit station by providing an east/west parallel collector street. This would provide convenient access to those citizens using the proposed transit station.

Alternative "A" makes use of existing George King Road alignment by using two discontinuous sections of the existing alignment as a proposed collector street. However, this alternative proposes a shift in alignment of the George Kind Road and NC 54 intersection in an effort to minimize environmental impacts to the Army Corps land.

Alternative "A" recommends signals at Crossland Drive, Huntingridge Road, I-40 ramps, and Quadrangle Drive; right-ins/right-outs and a left-over at Falconbridge Road/Crescent Drive; and a right/in-right-out at Farrington Drive.



Alternative A (NC 54 Recommendations)



Southwest Durham - Southeast Chapel Hill Collector Street Plan  
**Figure 4.2 - Alternative "A"**

	Study Area County Boundary Durham City Limits Chapel Hill Town Limits	Corps of Engineers Land Lakes, Rivers, Streams and Creeks Destination Points Schools	<b>Proposed SW Durham Drive Alternative A</b> Existing Alignment Proposed Alignment Approved SW Durham Drive Alignment	Proposed New Collector Streets Existing Collector Streets to be Included in Plan* Existing Higher Classification Facilities Proposed Higher Classification Facilities	Overpass Highways Proposed Transit Alignment Proposed Transit Stations	Approved Internal Neighborhood Street Proposed Internal Neighborhood Street Proposed Development Approved Development
		<p>Page 45 of 83</p>				

\* Inclusion in the plan may refer to an upgrade or facility rehabilitation, whether addition of sidewalks, bicycle lanes, or landscaping (not necessarily widening).

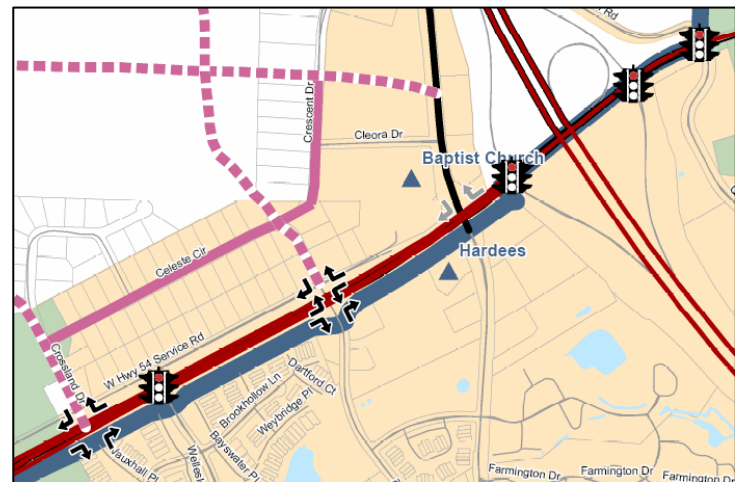
**Proposed Network Alternative "B"**

Alternative "B" shows a significant shift to the adopted Southwest Durham Drive alignment and was created considering the least dense future development in the southern portion of the study area when compared with the other network alternatives.

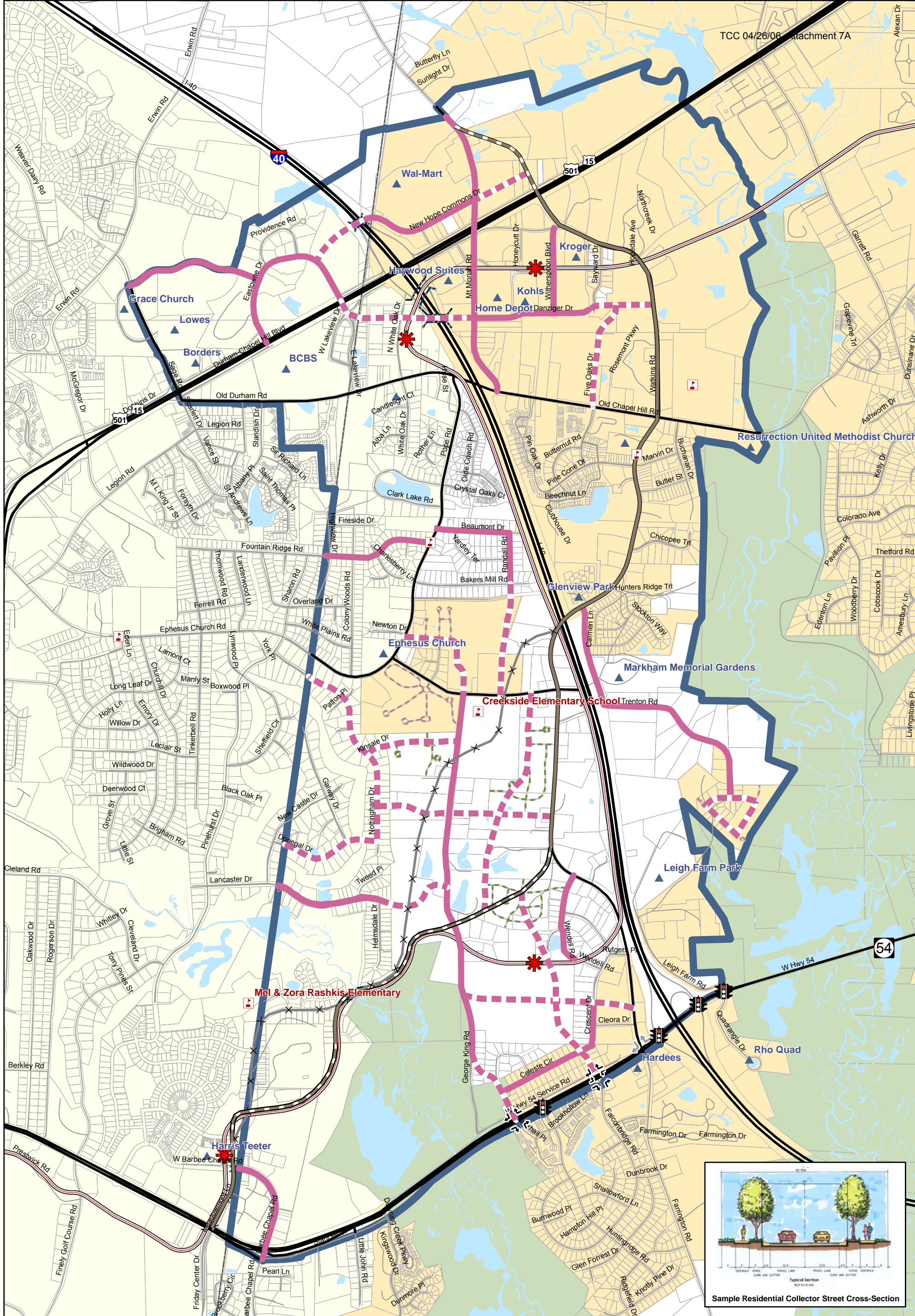
This alternative does not directly serve the proposed future fixed-guideway alignment.

Alternative "B" makes significant use of the existing George King Road alignment. This alternative proposes a collector street to be built on the existing George King Road alignment; however, the proposal includes a shift in alignment at the intersection of NC 54 in an effort to minimize environmental impacts to the Army Corps land.

Alternative "B" recommends signals at Huntingridge Road, I-40 ramps, and Quadrangle Drive as well as right-ins/right-outs and a left-over at Falconbridge Road/Crescent Drive; right-ins/right-outs at Crossland Drive/Vauxhall Place; and a right-in/right-out at Farrington Drive.



*Alternative B (NC 54 Recommendations)*



Southwest Durham - Southeast Chapel Hill Collector Street Plan  
**Figure 4.3 - Alternative "B"**

	Study Area County Boundary Durham City Limits Chapel Hill Town Limits	Corps of Engineers Land Lakes, Rivers, Streams and Creeks Destination Points Schools	<b>Proposed SW Durham Drive Alternative B</b> Existing Alignment Proposed Alignment Approved SW Durham Drive Alignment	Proposed New Collector Streets Existing Collector Streets to be Included in Plan* Existing Higher Classification Facilities Proposed Higher Classification Facilities	Overpass Highways Proposed Transit Alignment Proposed Transit Stations	Approved Internal Neighborhood Street Proposed Internal Neighborhood Street Proposed Development Approved Development
	COLLECTOR STREET PLAN <small>Source: SW Durham County and SE Chapel Hill</small>	* Inclusion in the plan may refer to an upgrade or facility rehabilitation, whether addition of sidewalks, bicycle lanes, or landscaping (not necessarily widening).		Page 47 of 83 0 0.125 0.25 0.5 Miles		

*Proposed Network Alternative "C"*

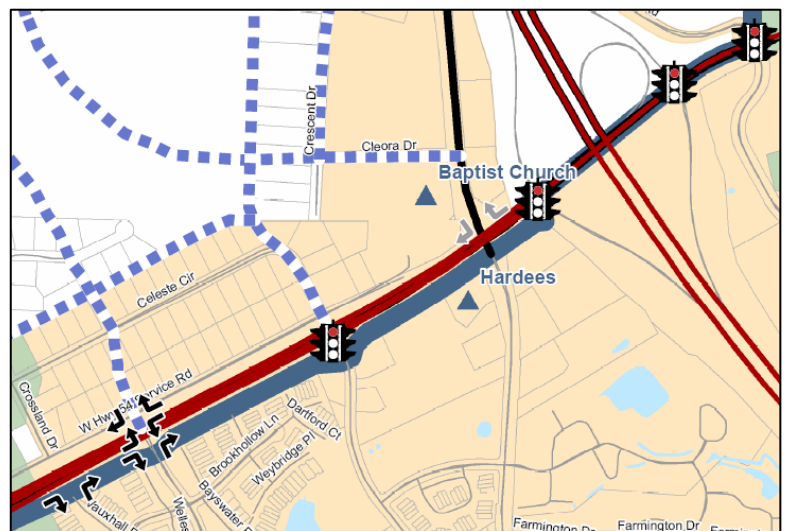
Alternative "C" shows the currently approved Southwest Durham Drive alignment and was developed considering a denser development pattern in the southern portion of the study area in anticipation of a future transit station in this area.

This alternative recognizes the future fixed-guideway alignment and supports the proposed transit station by providing an east/west parallel collector street. In addition, this alignment provides excellent circulation around the proposed transit station. This would provide convenient access to those citizens using the proposed transit station.

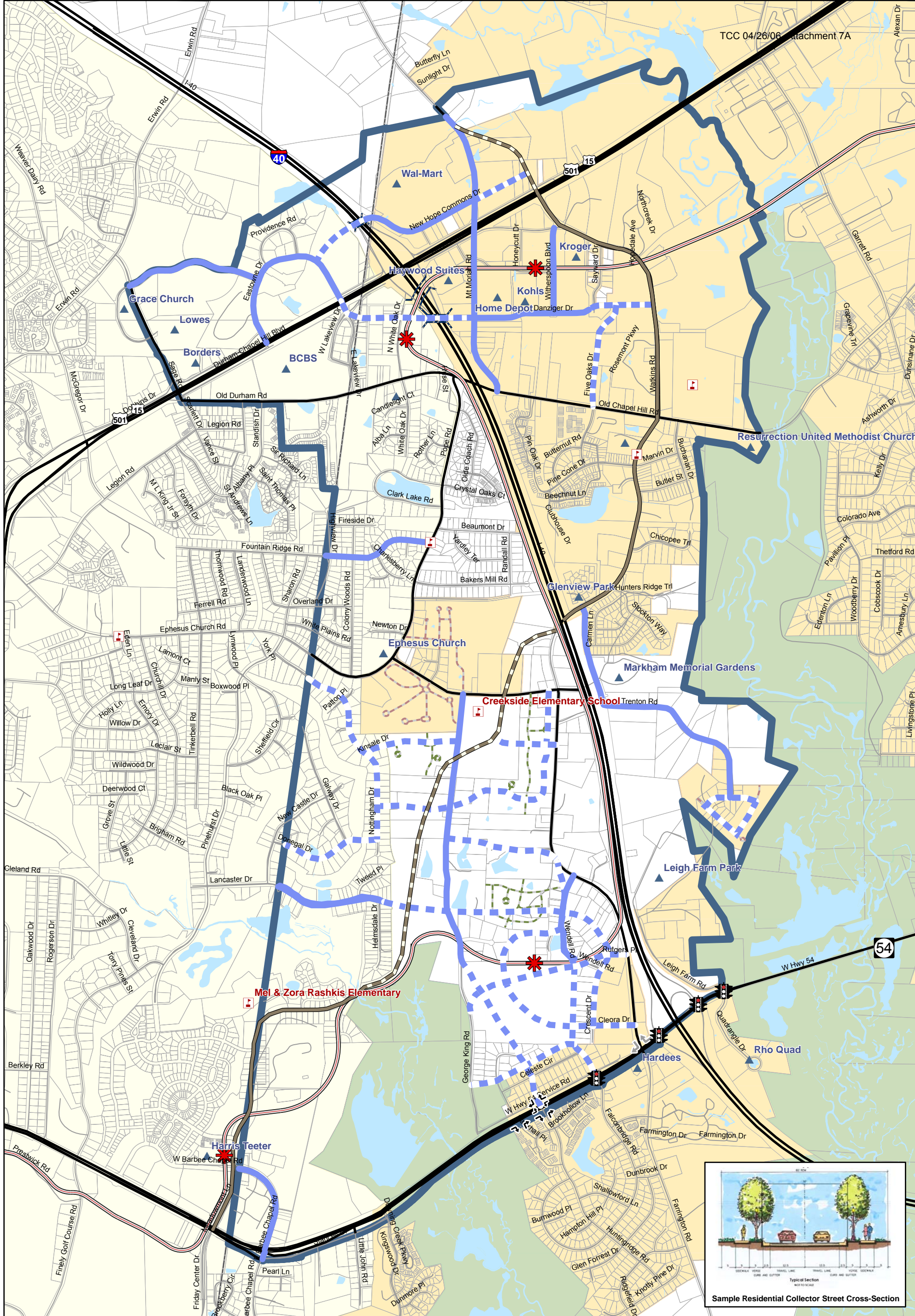
The Southwest Durham Assemblage (prepared by Coulter Jewell Thames), Southwest Durham Transit Opportunities Small Area Plan Study (prepared by The Farrington/George King Neighborhoods & Durham Area Designers), and the SW Area Rd Durham Plan (prepared by Chas. H. Sells, Inc. and Land Planning Solutions) were used as well as feedback from citizens and developers in the development of this alternative. Each of these plans considers the proposed fixed-guideway transit network.

Alternative "C" makes significant use of existing George King Road alignment. This alternative proposes a collector street to be built on the existing George King Road alignment; however, the proposal includes a shift in alignment at the intersection of NC 54 in an effort to completely avoid environmental impacts to the Army Corps land and to align the intersection with Wellesley Place.

Alternative "C" recommends signals at Falconbridge Road, I-40 ramps, and Quadrangle Drive as well as right-ins/right-outs and a left-over at Huntingridge Road; right-in/right-out at Vauxhall Place; and a right-in/right-out at Farrington Drive.



*Alternative C (NC 54 Recommendations)*



Southwest Durham - Southeast Chapel Hill Collector Street Plan  
**Figure 4.4 - Alternative "C"**

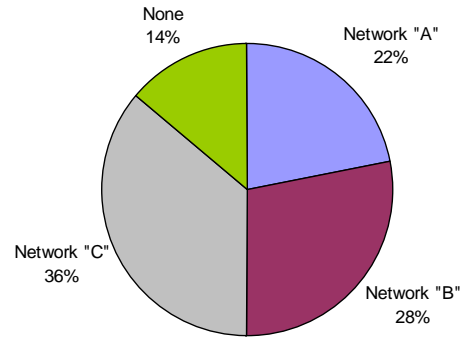

COLLECTOR STREET PLAN \* Inclusion in the plan may refer to an upgrade or facility rehabilitation, whether addition of sidewalks, bicycle lanes, or landscaping (not necessarily widening).

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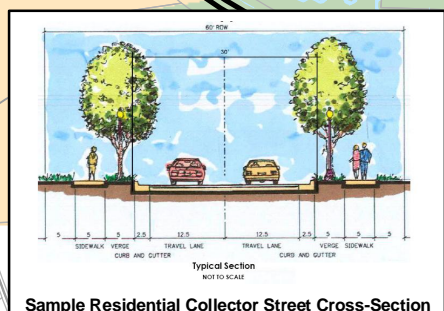
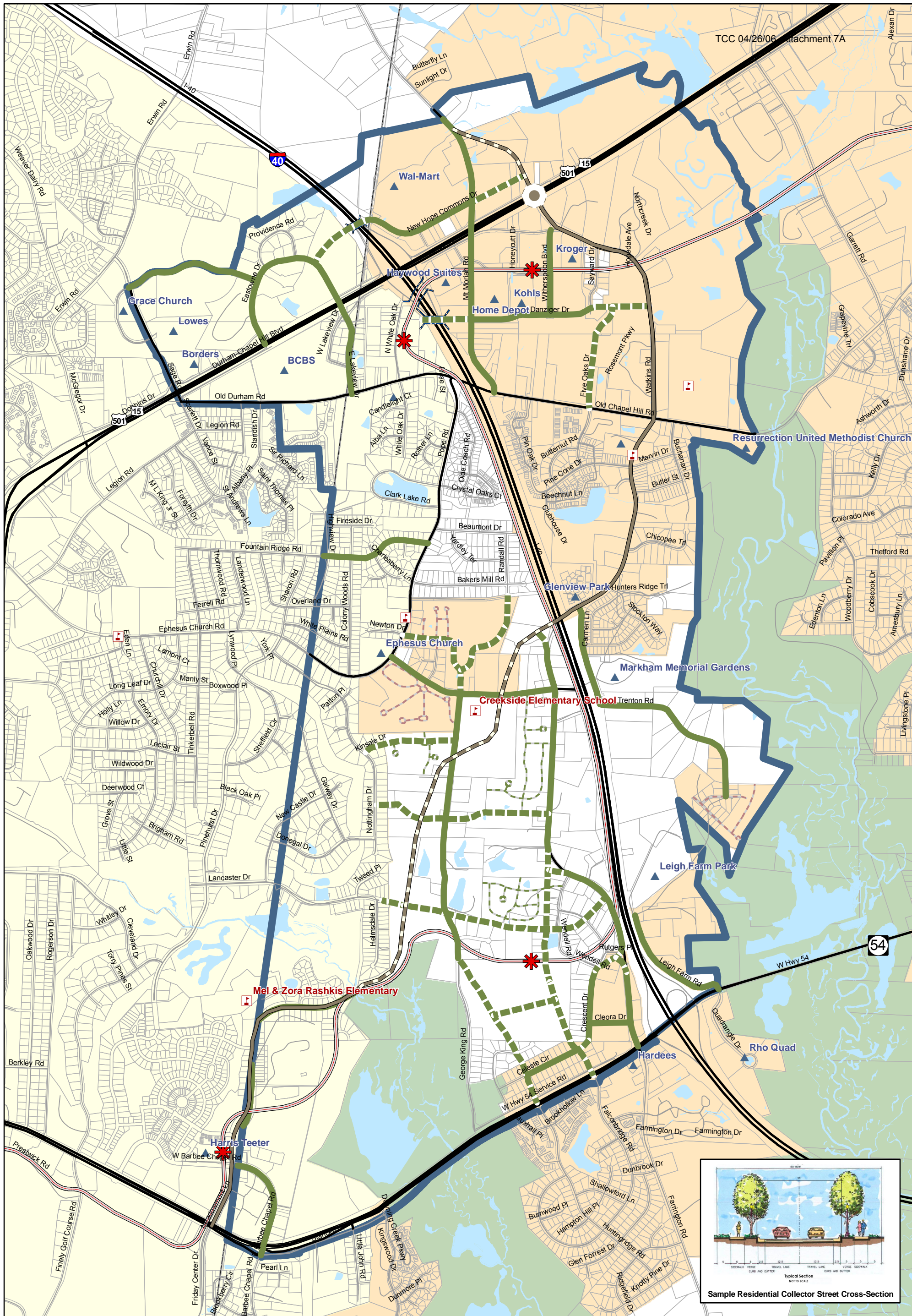
0 0.125 0.25 0.5 Miles

## Recommended Collector Street Plan

The three Network Alternatives were then presented for public review and response at a second public workshop. Prior to the workshop, maps of each alternative were mailed to those within the study area. The alternatives were not presented in an all-or-nothing manner; that is, participants were asked which things they liked and disliked about each alternative. It was explained that a recommended collector street plan would be developed based on the input received from this workshop. Overall, participants said they preferred Alternative "C" by 36%, followed by Alternative "B" (28%), Alternative "A" (22%), and None (14%).



Following the second public workshop, another work-session was held with a subset of the Technical Steering Committee (TSC). Collectively, the consultant team, staff from the City Durham and Town of Chapel Hill, and DCHC members developed the Recommended Collector Street Plan based on the public input received at the public workshop #2 which can be seen in **Figure 4.5**. In addition to the public workshop input, transit circulation was considered closely to provide proper connectivity and access to the existing and future transit networks.



**Southwest Durham - Southeast Chapel Hill Collector Street Plan**  
**Figure 4.5 - Recommended CSP Network**

	Study Area County Boundary Durham City Limits Chapel Hill Town Limits	Corps of Engineers Land Lakes, Rivers, Streams and Creeks Destination Points Schools	Approved SW Durham Drive Alignment <b>Recommended Collector Street</b> Existing Collector Streets to be Included in Plan* Proposed New Collector Streets	Existing Higher Classification Facilities Proposed Higher Classification Facilities Overpass Proposed Interchange	Highways Proposed Transit Alignment Proposed Transit Stations	Approved Internal Neighborhood Street Proposed Internal Neighborhood Street Proposed Development Approved Development
	COLLECTOR STREET PLAN <small>Source: SW Durham County and SE Chapel Hill</small>	* Inclusion in the plan may refer to an upgrade or facility rehabilitation, whether addition of sidewalks, bicycle lanes, or landscaping (not necessarily widening).	Page 51 of 83 0 0.125 0.25 0.5 Miles			

## Transit Circulation

During the development process of the recommended collector street plan, existing and future transit facilities were again considered more closely. The future success of the transit system within the study area is dependant on the circulation and ease of use in the area. It is important that the existing bus stops and future transit stations be accessible and safe. By providing better connectivity in and around existing and future facilities, citizens will have better accessibility to the services themselves.

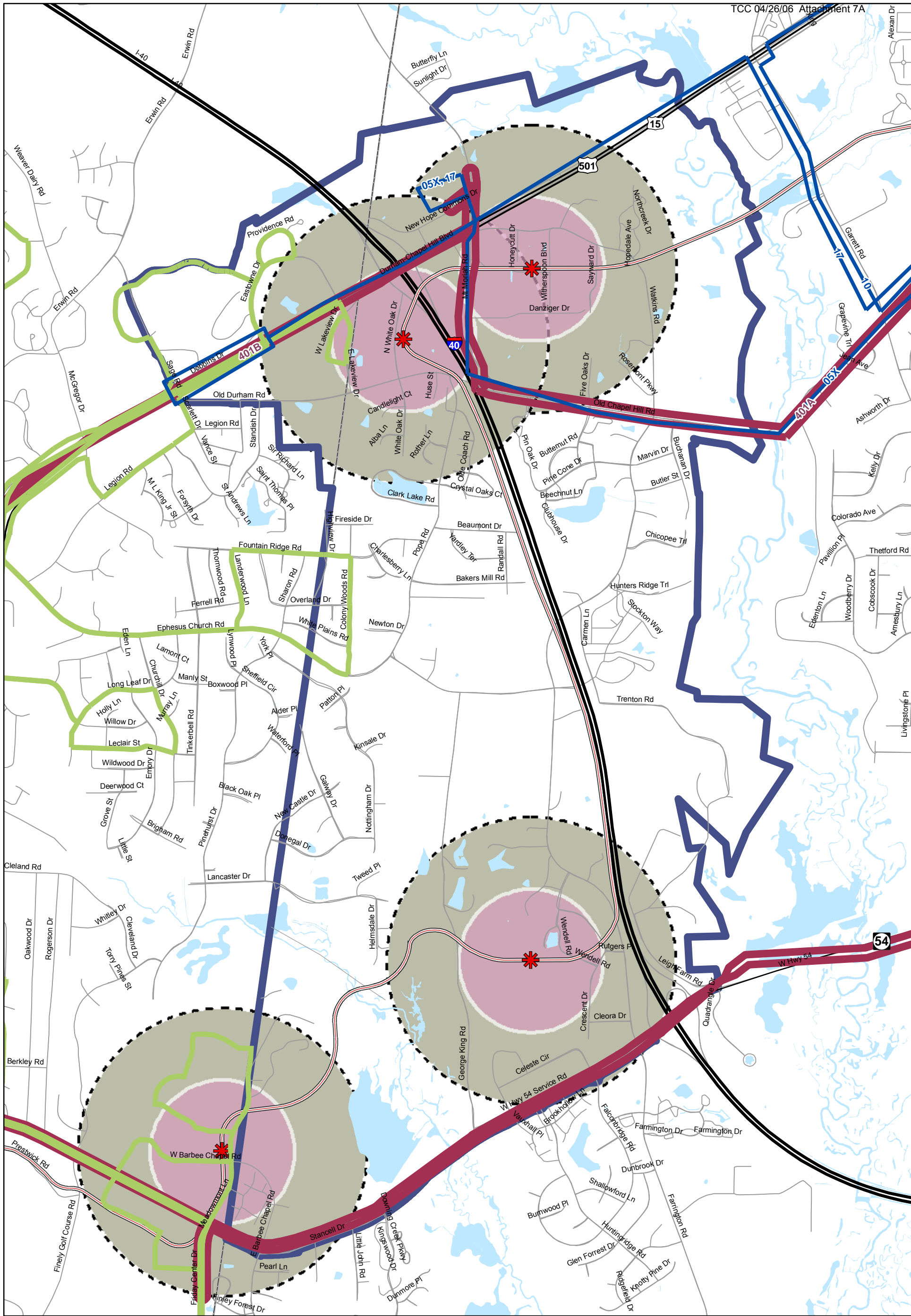
**Figure 4.6** shows the existing and proposed future transit facilities. It is expected that the denser development will center near the proposed transit stations, providing more mode choices for those close to this area. In addition, **Figure 4.6** shows a ¼-mile and ½ -mile radius from the location of the proposed transit stations. This is the distance found to be most reasonable by those willing to walk to access transit facilities.

In addition to providing better access to the transit stations, potential bus route changes could be implemented to better serve those within the study area.

**Figure 4.7** displays potential bus route changes that could occur in the interim if the recommended collector streets and Southwest Durham Drive are built before the proposed fixed guideway and transit stations are constructed. These potential bus changes would utilize the collector street system to serve those areas that have developed and redeveloped as transit oriented developments based on the future land use plan.

**Figure 4.8** displays potential bus route changes that could occur assuming that the collector streets and Southwest Durham Drive have been constructed and that the fixed guideway and transit stations are functional. Phase II potential bus route changes utilize the recommended collector street plan to support the transit stations and serve the study area with feeder routes.

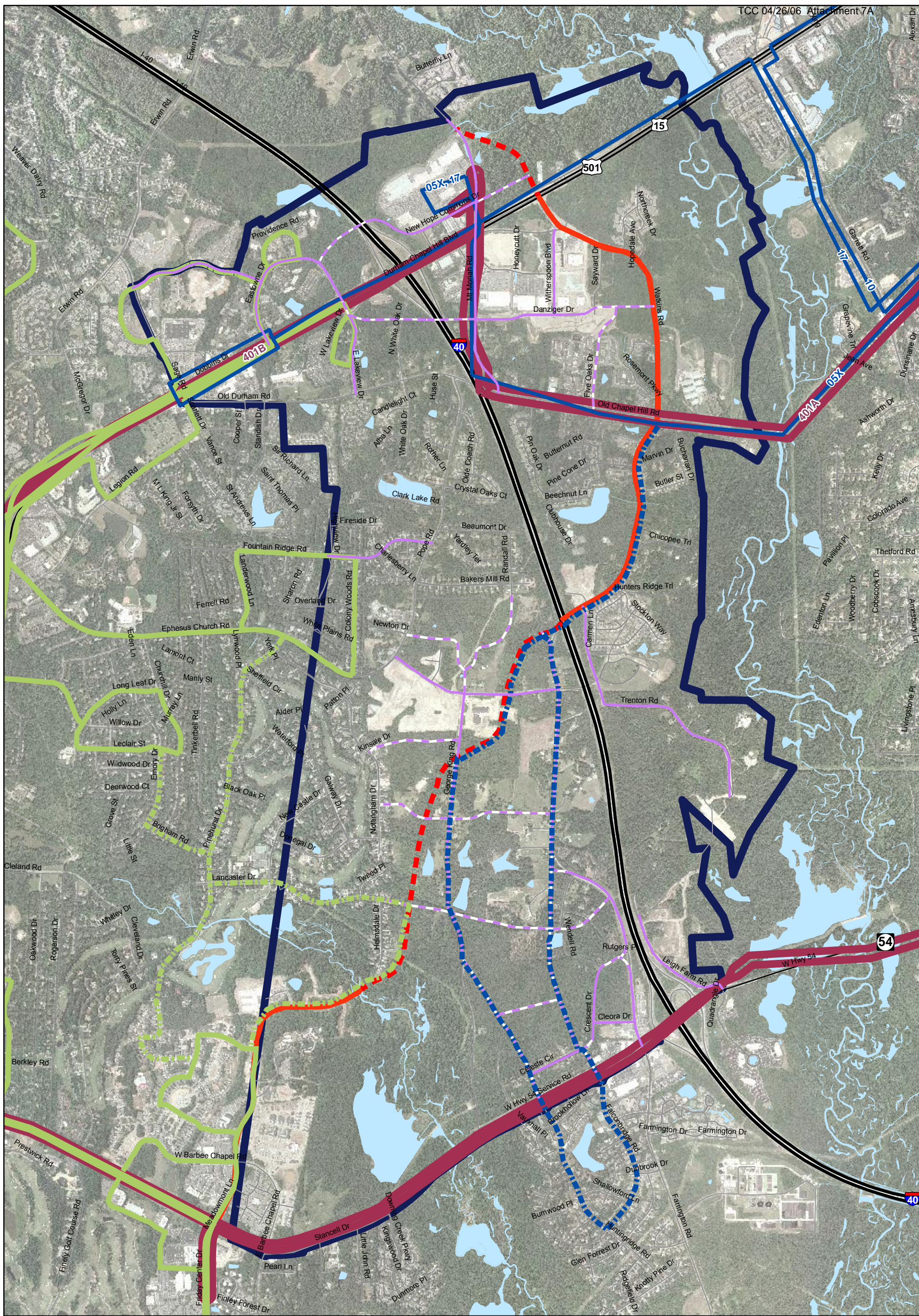
The collector street plan will provide better access for all mode choices. Citizens will have safer and more efficient options available to reach transit facilities with the implementation of this collector street plan.



**Southwest Durham - Southeast Chapel Hill Collector Street Plan**  
**Figure 4.6 - Existing/Future Transit**



- Study Area
- Quarter Mile Buffer
- Existing Durham Area Transit Authority (DATA)
- Proposed Transit Alignment
- County Boundary
- Half Mile Buffer
- Existing Chapel Hill Transit
- Proposed Transit Stations
- Lakes, Rivers, Streams and Creeks
- Existing TTA



**Southwest Durham - Southeast Chapel Hill Collector Street Plan**  
**Figure 4.7 - Potential Bus Route Changes - Phase I**

Phase I assumes that the proposed fixed guideway and transit stations have not been constructed, but that all recommended collector streets and approved SW Durham Drive have been constructed.

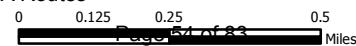


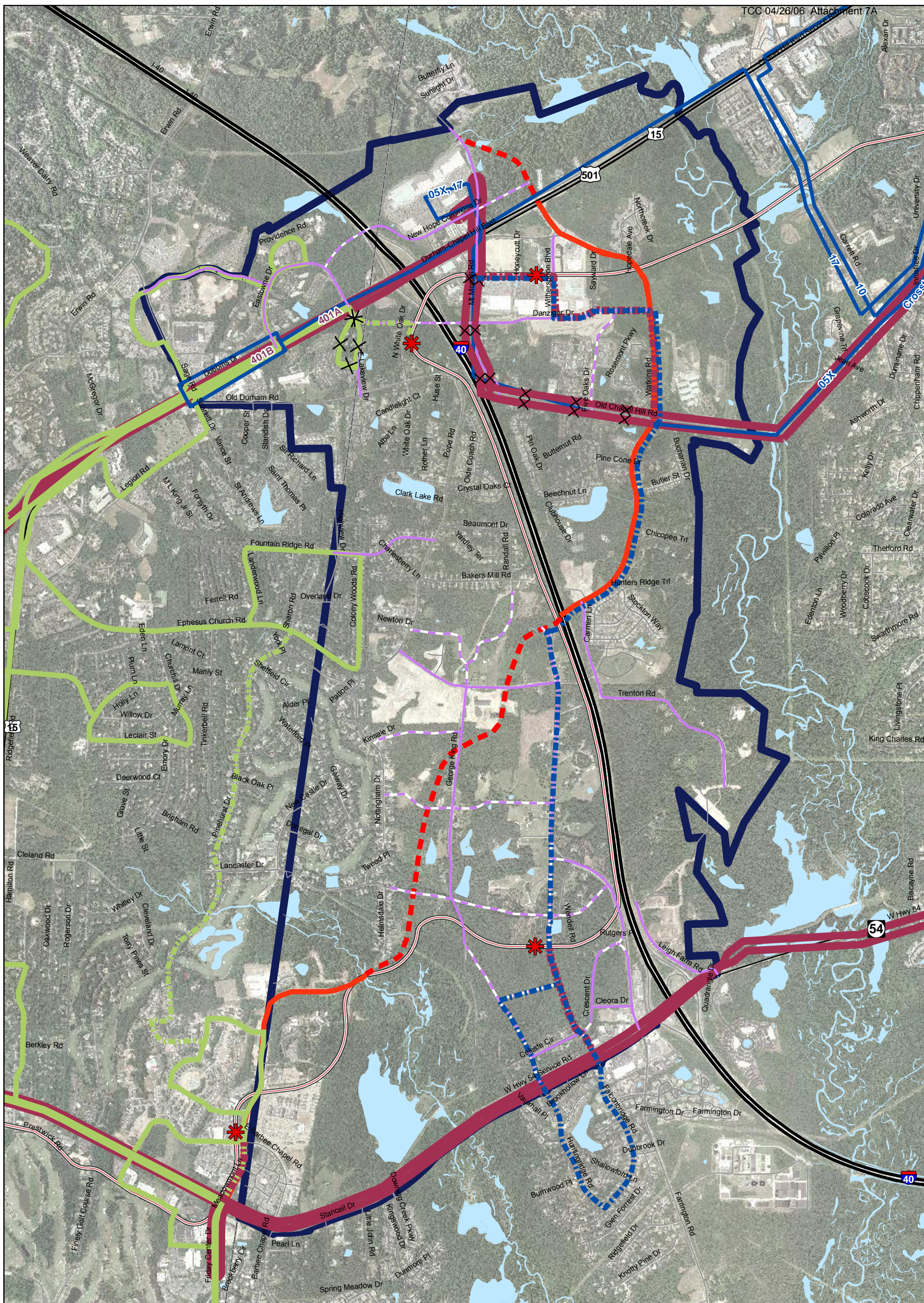
DATE: SW Durham County and SE Chapel Hill  
 COLLECTOR STREET PLAN

- Approved SW Durham Drive on Existing Alignment
- Approved SW Durham Drive
- Durham Area Transit Authority (DATA)
- Chapel Hill Transit

- Existing TTA
- Recommended Collector Street Network**
- Existing
- - - Proposed

- Potential Bus Changes - Phase I**
- - - Potential Chapel Hill Transit Routes
- - - Potential DATA Routes





**Southwest Durham - Southeast Chapel Hill Collector Street Plan**  
**Figure 4.8 - Potential Bus Route Changes - Phase II**

Phase II assumes that the proposed fixed guideway and transit stations as well as all recommended collector streets and approved SW Durham Drive have been constructed.

	Approved SW Durham Drive on Existing Alignment	Approved SW Durham Drive	Durham Area Transit Authority (DATA)	Chapel Hill Transit	Existing TTA
	TTA Transit Proposed Deletion	Potential TTA Routes	Existing Collector Street Network	Potential Chapel Hill Transit Routes	Proposed Collector Street Network
Potential DATA Routes	Potential Chapel Hill Transit Routes	Existing Collector Street Network	Proposed Collector Street Network		0 0.125 0.25 0.5 Miles

# Chapter 5 – Recommended Design Considerations

## Policy and Guidelines

General street spacing and connections into the existing transportation hierarchy will be monitored by local officials when reviewing new development plans proposed for the community. They will make sure that a sustainable system is maintained. Special policies and guidelines that the City of Durham and the Town of Chapel Hill may want to consider for amending their development review process are summarized below.

### Street Spacing and Access

Local officials should consider street spacing guidelines to promote efficient development of an expanding transportation system. Ultimately, these street spacing guidelines could be used as “rules of thumb” during the development review process. Spacing guidelines recommended for collector streets are summarized below.

Land Use/Type of Collector Street	Intensity	Access Function	Approximate Street Spacing
Low Intensity Residential	Less than 2 dwelling units per acre	High	3,000 to 6,000 ft apart
Medium Intensity Residential	2 to 4 dwelling units per acre	High	1,500 to 3,000 ft apart
High Intensity Residential	More than 4 dwelling units per acre	High	750 to 1,500 ft apart
Activity Center	Mixed-use residential/commercial	Medium	750 to 1,500 ft apart

In addition to these recommendations, it is desirable to provide all driveway access on collector and local streets. In some cases, however, it may be warranted to provide property access from an arterial roadway.



## Design Elements

As the public realm, streets need to reflect the values of the community and reinforce a unique 'sense of place' to be enjoyed by citizens – whether in urban, suburban, or rural contexts. This is especially true for a collector street system in that it serves as the backbone for local mobility, property access, and non-vehicular transportation modes.

In recent years, municipalities across the country have started implementing “**complete streets**” as one way to transform their transportation corridors from vehicle-dominated roadways into community-oriented streets that safely and efficiently accommodate all modes of travel – not just motor vehicles. The complete street movement does not advocate for one size fits all; a complete street in an urban area may look quite different from a complete street in a more rural area. However, both facilities are designed to balance mobility, safety, and aesthetics for everyone using the travel corridor. Furthermore, design considerations supportive of complete streets include elements in both the traditional travel corridor (i.e., the public realm) as well as adjacent land uses (i.e., the private realm) for reinforcing the desired 'sense of place.'

The following design considerations serve to create the foundation for implementing complete streets:

- Travel lane width
- Pedestrian circulation
- Bicycle circulation
- Transit accommodations
- On-street parking
- Median treatments
- Street lighting
- Street trees
- Pedestrian crossings
- Stream crossings

Each of these design elements is discussed in more detail below.

### Travel Lane Width

Motorists typically drive at a speed which they perceive to be safe. Therefore, one of the primary design elements for managing vehicle travel speeds is lane width. This is typically measured between the yellow centerline of a street and the outside white lane line or edge of gutter. Over the last 50 years, communities across the country have

studied the range of recommended travel lane widths published by the American Association of State Highway and Transportation Officials (AASHTO) and adopted their maximum range from these guidelines (i.e., 12 feet) as their minimum design standard.

Today, excessive travel speeds are one of the top concerns for citizens and elected officials alike. The use of other travel modes within the corridor is often discouraged because of safety concerns associated with excessive travel speeds. One solution for addressing these excessive travel speeds is traditional traffic calming; these spot improvements, however, sometimes only shift the problem to other streets.

A second solution gaining momentum among design professionals across the country is to incorporate varying minimum travel lane width standards into local rules and regulations that offer some flexibility to better relate design speed and posted speed limit. Forthcoming publications by the Institute of Transportation Engineers (ITE) and the Congress for New Urbanism (CNU) recommend the following general relationships between travel lane width and anticipated travel speeds:

- 10' travel lane = 20 MPH
- 11' travel lane = 25 MPH
- 12' travel lane = 35 MPH

The application of varying travel lane width standards for the collector street system would allow design officials the flexibility to reinforce a 'constant' travel speed (by design) that is supportive of more livable, complete streets. The City of Durham currently requires an eighteen foot travel lane with a 35 mph speed. The Town of Chapel Hill currently requires an eleven foot travel lane with a recommended speed limit of 25 to 35 mph.

### **Pedestrian Circulation**

The pedestrian realm is present and should be provided for in all developed areas. In urban areas, this means the provision of a sidewalk on each side of the street, often accompanied by shade trees and places of rest. In more suburban areas, a two-way shared-

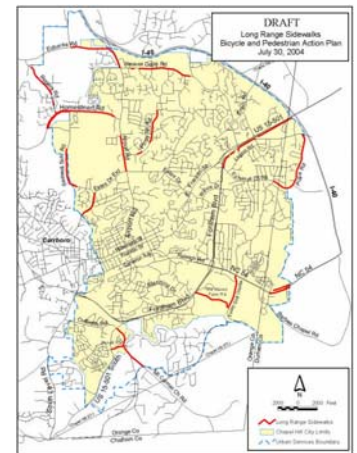


use path can substitute for sidewalk. In the rural to natural environment, the multi-use paths may meander away from the street system and converge into a trail system with great success. In all

developments, including those of low density near the rural realm, sidewalks or paths should be provided. Similar to other features of street design, provisions for pedestrian circulation are unique to each context. The pedestrian realm should provide for recreational and functional activity, and should be a safe and inviting environment both day and night. A successful pedestrian environment is a place where people gather to interact, observe, linger, and pass through, and is beneficial to commerce, the safety of the community, and to the development of transit. Both the City of Durham and the Town of Chapel Hill provide regulations that incorporate sidewalks on both sides of the street. It is recommended that Durham's design standards reference the pedestrian plan to ensure that the correct facility type (i.e. sidewalk, shared-use path, etc.) is being specified.

### Bicycle Circulation

Bicycling provides both transportation and recreational opportunities for citizens, employees, and visitors alike. Bicycle facilities can range from wide outside lanes with no striping to marked bicycle lanes to off-road bicycle paths (i.e., shared-use paths/greenways). The target user for each application and the unique circumstances of the particular roadway help to determine the bicycle treatment that is most appropriate. For example, experienced bicyclists often feel comfortable riding in mixed-flow traffic with no specific bicycle facilities provided. Marked bicycle facilities or adjacent bicycle paths are desirable for cyclists with basic or beginning skills.



*Chapel Hill Bicycle and Pedestrian Plan*

In transportation planning, bicyclists are often separated into three levels of bicycling ability. An improvement deemed adequate for one group may not be suitable for another group. Therefore, user profiles are established to help local officials target appropriate bicycle improvements. Three profile user groups for bicyclists are:

- **Experienced** riders can handle most traffic conditions. Some experienced riders travel mainly for recreation while others use the bicycle for primary transportation. This group is comfortable riding on collector streets and is best served by direct access to destinations via the existing street system. Requirements include sufficient width on the roadway for an on-street bicycle lane or

wide shoulder so that neither the motorist nor the bicyclist needs to change positions when passing.

- **Basic** riders comprise the majority of adult or teenage riders in the United States. This group uses bicycles too infrequently to develop advanced cycling skills and prefers comfortable direct access to destinations via low volume streets or designated bicycle facilities. Most basic riders ride for recreation; however, for some members of this group bicycles may be the primary means of transportation to work or school.
- **Children** riders lack experience mixing with vehicular traffic and their bicycle use is primarily for recreation and may be monitored by their parents. This group prefers residential streets with low motor vehicle speed limits and traffic volumes. Well-defined separation of bicycles and motor vehicles on collector streets should be required as a minimum. Ideally, separate bike paths would be provided as part of a greenway system.

In addition to user groups, the 'toolbox' established by transportation professionals for implementing bicycle improvements across the country usually contains at least four design elements or alternatives – wide travel lanes, on-street bicycle lanes, shared multi-use paths (i.e. greenways), and bicycle routes. These applications are generally characterized by:

- **Wide Travel Lanes** — These facilities allow a motorist to safely pass a bicyclist while remaining within the same lane of travel. This improvement is considered a significant benefit and improvement for experienced and basic cyclists. The typical recommendation is 14 feet for the width of a wide travel lane meant for use by both motorists and bicyclists. Continuous stretches of pavement wider than 15 feet may encourage speeding on the undesirable operation of two motor vehicles in one lane.
- **On-Street Bicycle Lanes** — These form the portion of the roadway that has been designated by striping, signing, and pavement markings for the preferential or exclusive use by bicyclists. Bicycle lanes make the movement of both motorists and bicyclists more predictable. State and national



design manuals for the construction of on-street bicycle lanes generally recommend a minimum of 4 feet in width measured from the edge of gutter for a bicycle lane and a minimum of 5 feet in width when adjacent to on-street parking. Collector streets create good places to stripe bicycle lanes.

- Shared-Use Paths** — These facilities can serve bicycles and pedestrians in one “non-motorized” transportation corridor either adjacent to or completely independent of (e.g., a greenway) the street system. One path usually accommodates two-way travel and is constructed up to 12 feet in width to facilitate passing and mixing of modes. These facilities are typically separated from a motor vehicle travel lane by 5 feet or more. One drawback to shared-use paths is the number of safety conflicts at intersections and driveways presented by having a two-way facility on only one side of the street. The location of destinations along the path may also lead to additional street crossings in order to access homes and businesses opposite the path.
- Bicycle Routes** — In some instances, a portion of the community’s existing street system may be fully adequate for efficient bicycle travel with conventional signing, making striping unnecessary. The most common example of these types of streets is in residential neighborhoods where low traffic volumes and low travel speeds allow bicyclists to comfortably mix with traffic. Typically, the posted speed limit on these streets should be 25 miles per hour or less for these unmarked facilities. Where appropriate, trail-blazing signage may be installed to designate ‘bicycle routes’ on some of these streets to alert bicyclists to certain advantages of the particular route over other routes.



The most appropriate bicycle network for the southwest Durham and southeast Chapel Hill area is a combination of the four design elements mentioned above. With an emphasis on the needs of the “basic user,” certain design elements will be preferred to provide comfortable direct access to destinations. The preference among the four design treatments for any one street segment will be a function of traffic volumes, travel speeds, right-of-way constraints, adjacent land uses, and route directness.

## Transit

As single-occupancy auto transportation is met with the challenges of rising fuel prices and heavy traffic congestion, attention is increasingly paid to various forms of transit. Transit is ideally situated along collector and arterial corridors with urban or higher density suburban. Transit benefits from a dense interconnected street pattern, preferably mixed in land use to support good ridership.

Areas targeted for enhanced transit service, such as the study area, should be supported through land use and zoning policies that support transit-oriented development and reflect the benefits of increased access to alternative modes of travel. Examples include appropriate densities and intensities for supporting transit use, parking ratios that reflect reduced



reliance on the automobile, and setback and design guidelines that result in pedestrian supportive urban design. In addition, potential transit service identified for transportation corridors within the community should take into consideration the land use, density/intensity, and urban design characteristics of the surrounding environment before selecting proposed technologies or finalizing services plans. A challenge for this study area is how to attract transit-supportive development densities before the higher frequency of transit service is actually provided. City and Town development policies should be oriented to encourage transit-supportive development near future transit stations and along high-frequency bus routes.

## On-Street Parking

On-street parking is essential to support pedestrian-oriented retail. It is also beneficial to the comfort and safety of pedestrians. Although important, on-street parking reduces the capacity of a street by as much as 30%. When planning where on-street parking will be located, it is important to consider traffic and access as well as future land use potential. Future land use — rather than existing land use alone — should be considered to prevent future parking retrofits due to a lack of adequate planning.

## Medians

Medians provide for pedestrian refuge, control access, reduce vehicular conflicts, increase safety, and enhance the street environment. As desired by the community, medians can be incorporated into collector street designs. When medians are landscaped, the preferred width is 10 feet. A minimum 6-foot width is acceptable at intersections. This is especially true of existing streets that will be connected to new development, e.g. Lancaster.



## Lighting

Pedestrian-level lighting should be provided on collectors. At intersections and mid-block pedestrian crosswalks, conventional cobra-style street lights illuminate the roadway and increase motorist awareness of conflicts. On collector streets, street lights should illuminate the sidewalk and alert drivers to the presence of pedestrians in crosswalks. Pedestrian-scale street lights should be lower than conventional street lights and provide more illumination on the sidewalk. Typical light spacing is between 50 feet and 80 feet; this varies, however, depending on light type, illumination intensity, and fixture height.



## Street Trees

Street trees should be provided along collector streets and spaced such that they create a continuous canopy. Small species of trees can be spaced as closely as 30 feet apart. Larger species will need to be placed 40 to 50 feet apart. A few examples of street trees recommended for use include: Red Maples, Allee Chinese Elm, Bosque Chinese Elms, and Ginkgo.



## Pedestrian Crossings

Collector streets can be attractive places to walk. At intersections and mid-blocks where pedestrians frequently cross the street, crosswalks and appropriate refuges (minimum of 6 feet wide) should be provided.

In all cases, ADA (Americans with Disabilities Act) accessible curb ramps should be provided at each crossing. At unsignalized intersections, AASHTO, state, and local guidelines should be consulted to determine sight distance triangles before striping a crosswalk. A curb extension at crosswalks helps pedestrians.



### **Stream Crossings**

Street patterns are affected by natural features. Streams and other bodies of water present challenges to creating interconnected street networks. Without significantly compromising water quality, stream crossings should be pursued for vehicular connections every 2,500 feet to 3,000 feet. As a rule of thumb, the North Carolina Division of Water Quality discourages more than one street crossing a stream between branch locations (locations where the stream branches out into two or more waterways).

## **Traffic Calming**

Unfortunately, there are instances when even the most well-designed collector streets experience prevailing travel speeds well in excess of posted speed limits. The inclusion of traffic calming measures in these affected areas may mitigate these issues.

### **Overview**

Traffic calming is quickly becoming a common term for addressing citizen concerns of traffic speeds. The Institute of Transportation Engineers has identified and published 'best practices' for traffic calming. Individual communities, including Durham and Chapel Hill, typically develop policies and protocols specific to their local traffic conditions and citizen expectations. Specific policies and protocols generally include definitive 'warrants' and a 'toolbox' of preferred traffic calming solutions to assist local officials with the design and implementation flexibility to best represent the values and vision of the community.

### **Measures**

Various traffic calming measures incorporated throughout the United States are grouped into three types of categories – passive, vertical deflection, and horizontal deflection. These general categories are summarized below.

**Passive** traffic calming measures continuously alter a driver's perception of the travel corridor and include gateway treatments, street trees, sidewalks, bicycle lanes, pavement marking/textures, and signage. Together, these design elements signify to the driver that they

have entered into a 'livable' street in which all travel modes are afforded equal access to the travel corridor.



**Passive** —Use of contrasting materials to clearly define crosswalks

**Vertical** traffic calming measures represent features that drivers must navigate over to proceed on their desired travel path and may include treatments such as speed humps, speed tables, raised crosswalks, and raised intersections.



**Vertical**— Raised crosswalk using a contrasting paving pattern

**Horizontal** traffic calming measures represent features that drivers must navigate around to proceed on their desired travel path and, in some cases, may divert drivers to other travel routes altogether. Typical treatments include chokers, bulb-outs, medians, traffic circles, roundabouts, realigned intersections, and chicanes.



**Horizontal**—Bulb-out at an intersection

### Toolbox

Traffic calming measures described below are commonly found in the traffic calming 'toolboxes' of communities all across the country. They are included for the City of Durham's and Town of Chapel Hill's consideration.

**Speed Humps** – Speed humps are commonly referred to as the 'sleeping policemen' in the roadway. These vertical devices typically measure between 3 and 4 inches in height at their center and extend the full width of the travel lanes before tapering at the outside



lane line to allow unimpeded bicycle travel. Speed humps should not be confused with speed bumps typically found in shopping mall parking lots. Spacing of successive speed humps along a roadway determines the speed at which motorists travel between devices.

Installation of speed humps typically costs between \$2,000 and \$5,000, depending on materials incorporated into the design.

### Speed Table/Raised Pedestrian

**Crosswalk** – A speed table is a very long, broad speed hump that can be either parabolic or trapezoidal in design. Trapezoidal speed tables could accommodate raised pedestrian crosswalks on the flat portion of the device for mid-block crossings when designed to a sufficient width — typically 10 feet or greater. These devices also are more appropriate for streets with larger vehicle traffic (i.e., bus and fire trucks).



Installation of a speed table is slightly more expensive than a speed hump with prices ranging between \$2,000 and \$15,000, depending on materials incorporated into the design.

**Intersection Bulb-Out** – Bulb-outs extend the sidewalk or curb line out into the parking lane of a street to effectively reduce the street width. These measures greatly improve pedestrian crossings by reducing the crossing distance and improving the ability for pedestrians and motorists to see each other. Curb extensions also can help reduce turning speeds at an intersection and provide additional space for curb ramps and/or level sidewalk landings where space is limited. Bulb-outs are only appropriate where on-street parking exists and curb extensions should never reach into travel lanes, bicycle lanes, or shoulders.



Installation of bulb-outs typically cost between \$2,000 and \$20,000 per corner; cost can greatly increase, however, when drainage improvements and/or utility pole relocation is necessary.

**Choker** – A choker intentionally extends the curb line along a street into the travel lanes, usually designed with a wide sidewalk or landscape area, to create a ‘pinch point’ for vehicle movement. Chokers can be created by extending both curbs into the travel lane, or they can be created more dramatically by widening only one side at a mid-block location. They can also be used at intersections to create a gateway effect when entering a street. These devices have a dramatic effect on travel speed by requiring motorists to yield to each other or slow down. This treatment is usually only appropriate for low-volume, low-speed streets.



Installation of a choker typically costs between \$5,000 and \$20,000, although major drainage improvements associated with implementation could significantly raise project costs.

**Raised Center Median** – Raised center medians are islands along the centerline of a street that narrow the real and perceived travel lane width. Raised medians help achieve speed reduction by creating a horizontal shift and blocking along view of the road ahead. A raised center median may be enhanced aesthetically and provide neighborhood identify by adding landscaping.



Installation of raised medians varies greatly among desired applications; however, short ‘gateway’ center medians typically cost between \$10,000 and \$20,000 depending on length, landscaping, and irrigation considerations.

**Neighborhood Traffic Circle** – A neighborhood traffic circle is a raised circular island constructed in the center of a local residential street intersection. These devices reduce vehicle speeds by forcing motorists to maneuver around them and are sometimes used instead of stop signs. Neighborhood traffic circles are commonly landscaped (i.e., bushes,



flowers, or grass) to enhance aesthetics. Yield signs, not stops signs, should be used with neighborhood traffic circles.

The occasional larger vehicle passing through an intersection with a neighborhood traffic circle (i.e., fire truck or moving van) could be accommodated at the intersection by creating a mountable curb in the outer portion of the circle. Studies show no significant impact on left or right turns for these vehicles; left turns can be made across the front of the circle just as with standard intersections.

Installation of a neighborhood traffic circle typically costs between \$15,000 and \$20,000, including landscaping.

**Raised Intersection** – Raised intersections are flat, raised areas covering entire intersections with ramps on all approaches. These intersections may include brick or other textured materials on the flat sections to delineate pedestrian crosswalks. The longer flat fields plus ramps, which may be more gently sloped than speed humps, enable slightly higher design speeds that may be suitable for slowing speeds on higher volume streets. The brick or other textured materials improve the appearance of raised intersections, draw attention to these traffic calming devices, and may further enhance speed reduction.

Installation of a raised intersection typically costs between \$50,000 and \$150,000 with limited texture paving. This cost greatly increases for signalized intersections.

**Chicane** – Chicanes are curb extensions on otherwise straight streets that cause travel lanes to bend one way and then back the other way to the original alignment of travel. Chicanes achieve speed reductions for forcing a horizontal shift and blocking long views of the road ahead. Landscaping may be provided in the curbed island created by the chicane to enhance the aesthetics.



Installation of a chicane typically costs between \$5,000 and \$15,000, including landscaping.

### Application of Measures

Several communities across the country have developed neighborhood traffic calming programs (NTCP) to implement traffic calming judiciously and efficiently in order to meet citizen concerns. As

Durham and Chapel Hill considers the installation of traffic calming measures on its streets, the evaluation process should reflect the following steps (Durham has formal application and evaluation process):

- **Problem Identification/Needs Assessment** – Most successful traffic calming programs include a petition process that allows neighborhoods to request an evaluation of traffic characteristics. The evaluation should be designed to assess the degree of complaint and may include license plate surveys, speed studies, field observations, and traffic volume counts. Thresholds or ‘warrants’ may be developed that would designate a street as eligible for traffic calming.
- **Establish Traffic Calming Toolbox** – Local officials should establish a set of preferred traffic calming measures that address cut-through or speeding problems; including pros/cons associated with each measure and a typical design for implementation.
- **Plan Selection/Course of Action** – The most important element for creating a successful traffic calming program is to involve impacted residents, the general public, and stakeholders such as city staff and emergency response agencies when developing a course of action. Some communities establish official traffic calming committees that review all citizen requests and studies to ensure consistency with decision-making. It is also recommended that a minimum approval rate for locally-affected residents be established before implementing any traffic calming improvements to ensure their acceptance.
- **Implementation/Installation** – Timely installation of warranted traffic calming measures is important for a traffic calming program to maintain integrity. Intended funding mechanisms should be clearly documented including the roles and responsibilities for the city or town and petitioning neighborhood residents. This may include options for neighborhood transportation assessments and participation requirements for construction and maintenance.
- **Monitoring/Evaluation** – Studies should be completed after implementation of traffic calming measures to evaluate the effectiveness of the solution. Based on the study, minor adjustments may be required for the traffic calming measure to achieve the desired outcome.

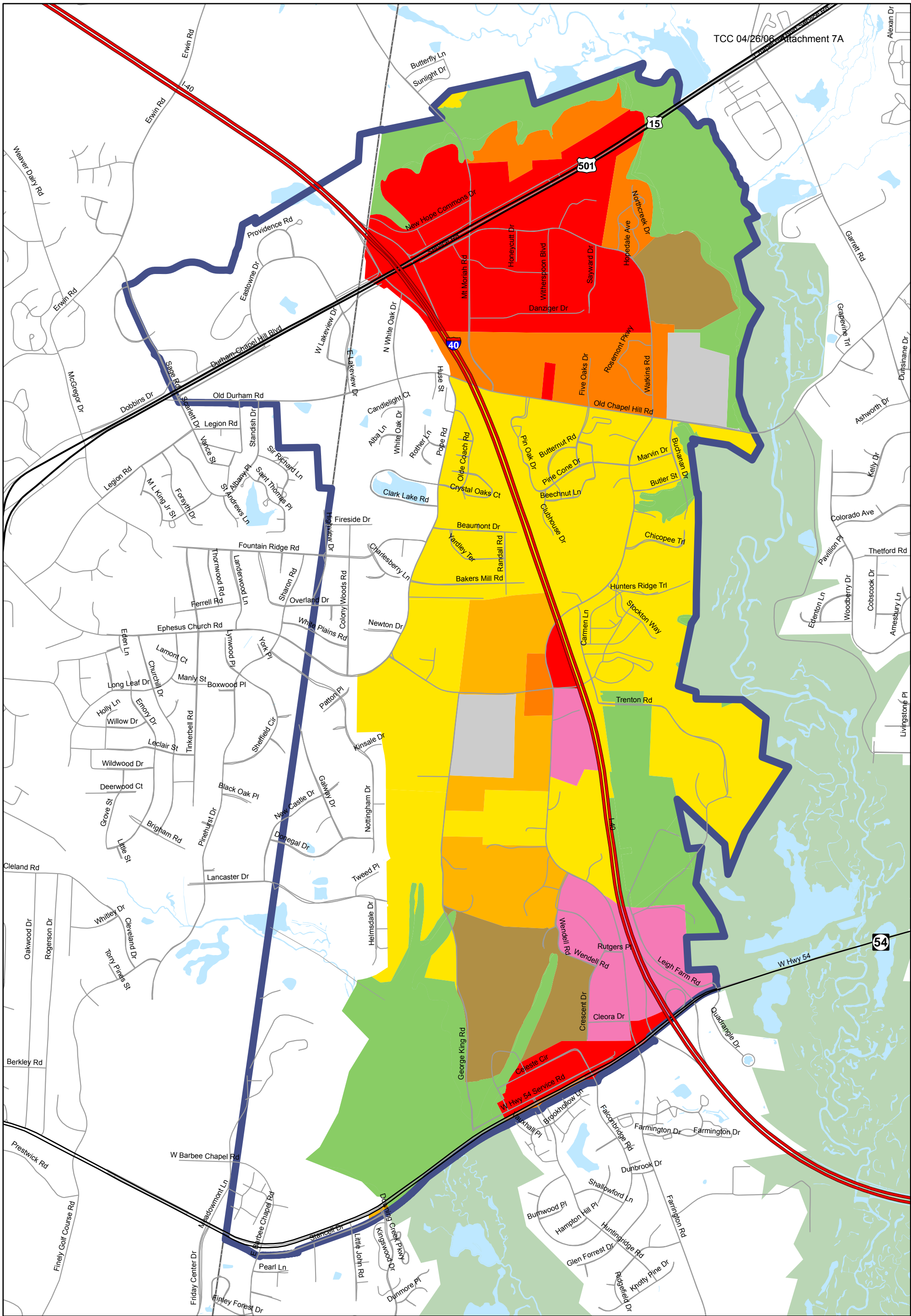
## Land Use Coordination

Land use plans describe desired patterns of land use for the study area. For the most part, areas that are currently undeveloped will allow all types of land use in the future. **Figure 5.1** shows the future land use plan within the study area. **Table 5.1** provides a correlation between land use and collector street spacing.

**Table 5.1—Land Use and Street Function**

Land Use/Type of Collector Street	Mobility Function	Access Function	Approximate Street Spacing	Natural Feature Impacts
<b>Residential</b>	Medium	High	1,500-2,000 ft	Low
<b>Commercial</b>	High	High	1,500-2,000 ft	Low
<b>Industrial</b>	High	High	½-1 mile	High

Collector streets connect to one another, to local streets, and to arterials. They have the potential to offer multiple routes to citizens as neighborhood units are formed. Commercial and industrial collectors have the potential to form the outer or inner boundaries of these activity centers. They have higher capacities and provide for a higher level of mobility compared with residential collector streets. Residential collectors are likely to be key interior streets. They provide the same level of access and will be spaced at more frequent intervals depending on the density such that citizens are provided multiple routes to their destination.



Southwest Durham - Southeast Chapel Hill Collector Street Plan  
**Figure 5.1 - Future Land Use Plan**

## Street Design

The illustrations that follow represent sample typical collector street cross sections that could be incorporated into the development review process. Their application to a specific development scenario will depend largely on the adjacent land use, access control, and the type of facility that it is connecting.

The typical cross sections and plan view illustrations capture a range of rights-of-way from 50 feet to 75 feet. The travel lane widths shown in these illustrations are sometimes narrower than the standard 12 feet now provided by the North Carolina Department of Transportation. It is important to note that proposed collector street standards incorporated into this report for roadways that are maintained by the North Carolina Department of Transportation must receive design approval prior to their implementation. NCDOT does allow narrower streets in "Traditional Neighborhood" developments.

The *Southwest Durham County and Southeast Chapel Hill Collector Street Plan* recommends three general categories for collector streets within the community: residential, commercial, and industrial. Each of these is discussed below.

### Residential Collectors

Residential collector streets serve primarily residential land uses and associated traffic. These streets are potentially popular for functional and recreational walking and bicycling and could be incorporated into comprehensive community pedestrian and bicycle plans. Context sensitive street design is essential for residential collectors to prevent excessive travel speeds. Design elements recommended to reinforce the residential character of these streets include:

- Pedestrian facilities both sides of the street (i.e., sidewalk or multiuse path)
- Street trees
- Lighting (i.e., pedestrian scale)
- Left-turn lanes at major intersections
- Traffic calming (as necessary)
- Small curb radii at intersections (15 to 20 feet)
- Ten- or eleven-foot travel lanes
- Striped bicycle lanes

Although roadway capacity is not a primary focus for residential collector streets, appropriate intersection treatments are important to

the overall functionality of the street. Exclusive left-turn lanes should be considered where residential collector streets intersect arterial roadways. Mini-roundabouts should be considered at collector-collector intersections. Intersections with local streets generally would not require exclusive left turn lanes. All decisions for providing left turn lanes should be made on a case-by-case basis by the local Engineer.

It is recommended that a 60 to 70-foot right-of-way continue to be protected for future residential collector streets. Typical cross sections and plan view illustrations are provided in **Figure 5.2 Residential Collector – Type A**, **Figure 5.3 Residential Collector – Type B**, and **Figure 5.4 Residential Collector – Type C** at the end of this chapter.

### Commercial Collectors

Commercial collector streets primarily serve commercial/office land uses; however, the recommended street design standards for commercial collector streets may be appropriate for areas transitioning between residential and non-residential land uses. It is recommended that the City of Durham incorporate commercial collector design standards into their Reference Guide for Developers standards. These streets have the potential to attract moderate traffic volumes and could experience excessive travel speeds. Context sensitive street design is essential for commercial collectors to prevent these streets from becoming popular cut-through traffic routes, resulting in an increase in concerns associated with excessive travel speeds. Design elements recommended to reinforce the commercial character of these streets include:

- Pedestrian facilities (i.e., sidewalk or multiuse path)
- Curb and gutter drainage system
- Street trees
- Street lighting (i.e., vehicle and pedestrian scale)
- On-street parking (where appropriate)
- Left-turn lanes at major intersections
- Traffic calming (as necessary)
- Small curb radii at intersections (15 to 25 feet)
- Intersection bulb-outs
- Centerline striping

It is recommended that a 70- to 75-foot right-of-way be protected for future commercial collector streets. Typical cross sections and plan view illustrations are provided in **Figure 5.5 Commercial Collector – Type A** and **Figure 5.6 Commercial Collector – Type B** at the end of this chapter.

## Industrial Collectors

Industrial collector streets serve primarily light and heavy industrial land uses and uses that have a high potential for attracting high volumes of heavy vehicle traffic. Design elements recommended to reinforce the industrial character of these streets include:

- Pedestrian facilities (case-by-case basis)
- Street trees
- Street lighting (case-by-case basis)
- Left-turn lanes at major intersections
- Large curb radii at intersections (>25 feet)
- Intersection bulb-outs
- Centerline striping

It is recommended that a 60-foot right-of-way be protected for future industrial collector streets. Although the study area does not include industrial uses, it is recommended that the City of Durham and Town of Chapel Hill include industrial collector street design standards in their regulations for other areas beyond the study area. Typical cross sections and plan view illustrations are provided in **Figure 5.7 Industrial Collector** at the end of this chapter.

In some cases, the application of classification criteria (i.e. residential, commercial, or industrial) will result in a street being included in more than one category. In these situations, consensus building may be necessary to appropriately classify the street.

**Figure 4.6** in Chapter 4, illustrates the recommended collector street plan for the southwest Durham and southeast Chapel Hill area based on classification criteria, spacing and access guidelines, street connectivity guidelines, and quantitative/qualitative characteristics for the existing and proposed transportation system. The new facilities identified in the figure show general alignment and intersections; however, the ultimate placement of new collector streets depicted in this plan should be flexible enough to account for unique social, environmental, and constructability issues associated with these corridors.

## Chapter 6 – Implementation

### Introduction



Transportation plans are successful only if they are implemented. Likewise, funding and consistent policies are required to fully realize the benefits of a collector street plan. When public funding is the sole source of financing used to build a system of streets, the result tends to be a fragmented and extremely slow execution of much needed infrastructure. The competition for public funds continues to escalate with each passing year and the planning, design, and construction of publicly-funded transportation projects typically take 10 years (sometimes even longer in environmentally-sensitive areas). One of the advantages of a collector street plan that is reinforced by supporting local policies is that most of these roads can be built by developers. The majority of collector streets should be no more than two-lane roads that can easily be incorporated into the development plans of the private sector. With this in mind, the City of Durham and Town of Chapel Hill have proactively conducted this study to demonstrate the benefits of an interconnected system of collector streets as well as a strategy to see them built incrementally as development occurs. This strategy has the added advantage of ensuring the timing of transportation infrastructure so that it coincides with the creation of transportation demand.

This chapter provides general policy recommendations and an action plan to assist local decision makers and planning staff in the implementation of the *Southwest Durham County and Southeast Chapel Hill Collector Street Plan*. As shown in the collector street plan, an interconnected network of well designed collector streets can help develop safe, attractive, pedestrian-friendly neighborhoods.

### General Recommendations

Although specific recommendations are discussed in Chapters 4 and 5, the following general policy recommendations are offered for consideration:

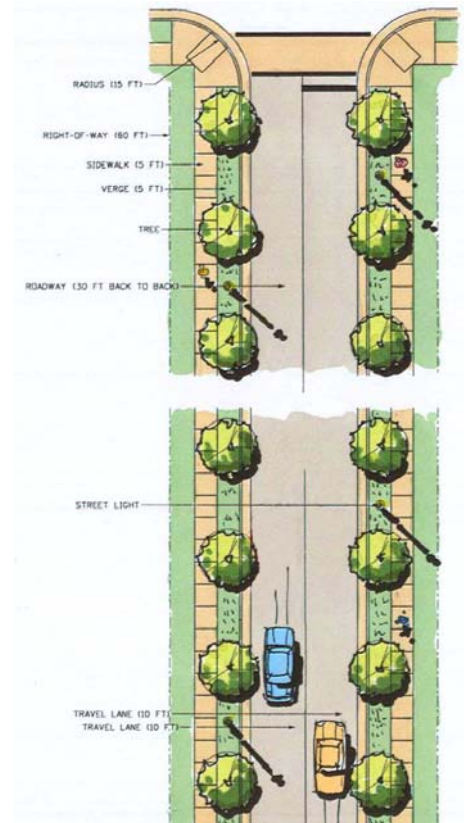
#### General Policy

- Update modal plans for bikeways, greenways, and transit networks with the *Collector Street Plan* to create overlapping and internally consistent plans for an interconnected multimodal network

- Avoid and/or minimize impacts to environmentally sensitive areas to preserve the natural environment. Proactively pursue permits from the U.S. Army Corps of Engineers to build both the Southwest Durham Drive and the short extension of George King Drive. The alignments have been shown to skirt the edges or barely penetrate environmentally sensitive areas.

## Collectors

- Increase the number of collector streets to better facilitate travel between local streets and arterials
- Integrate design standards (page 5-2) and provisions for residential and commercial collector streets through the development process
- Amend the *Collector Street Plan* as necessary to include new streets as they are identified during the development review process
- Work with the development and real estate community to increase public awareness of future collector street connections through enhanced signage
- Provide temporary turnaround accommodations for collector street stub-outs to allow access by maintenance and emergency vehicles; right-of-way needed for turnaround would revert back to property owners once connection is made
- Use the plan as a tool to review proposed development projects and plans as they locate and design future collector streets
- Local jurisdictions should consider dedicating collector streets as public right-of-way to allow proper design and maintenance of facility
- Require that new developments reserve right-of-way for, and in some cases construct, future collector streets




## Action Plan

To firmly establish *Collector Street Plan* principles into the normal course of business, several amendments to current policies are recommended, including the following:

1. **Collector Street Plan** — The Durham – Chapel Hill – Carrboro – Metropolitan Planning Organization (DCHC MPO) should adopt the *Collector Street Plan* (map) as a part of the state-mandated Comprehensive Transportation Plan (CTP). The City of Durham and the Town of Chapel Hill should consider adopting the Collector Street Plan as an element of their respective Comprehensive Plans, the *Durham Comprehensive Plan* and *Planning for Chapel Hill's Future: The Comprehensive Plan*. The City and Town should consider all available strategies to obtain rights-of-way, ensure connectivity, review requested variations, and secure funding agreements.
 

*“Work toward a balanced transportation system” – Planning for Chapel Hill's Future: The Comprehensive Plan*

*“Promote the creation and enhancement of a livable, safe and beautiful community for all Durham citizens.” – Durham Comprehensive Plan*
2. **Revise local ordinance** – Both Durham and Chapel Hill should evaluate their current ordinance for any inconsistencies and develop code that accurately communicates the collector street design and construction requirements of their respective jurisdictions.
3. **Street Spacing and Access** — Consider adopting the street spacing guidelines (page 5-1) to promote efficient development of an expanding transportation system. These street spacing guidelines could be used as “rules of thumb” during the development review process.
4. **Street Standards** — The City and County of Durham should consider revisions to the street standards for public and private streets described in the table of Minimum Design Requirements for Public and Private Residential Streets. The current standards lead to speeding issues in residential neighborhoods. Neighborhood quality of life may be improved by narrowing the total pavement width of collector streets to match illustrations contained in the Collector Street Plan. Other street design requirements in the above referenced table should be reviewed and updated as well.

5. **Sidewalks** — The City of Durham and Town of Chapel Hill should continue subdivision ordinances to require that sidewalks be built on both sides of all new residential and commercial collector streets. Sidewalks should be a minimum of 5 feet wide along residential, commercial, and industrial collectors. A verge width of at least 4.5 feet (wider verge is preferred) should separate the edge of pavement from the edge of sidewalk. The City of Durham and Town of Chapel Hill should also require that their pedestrian plans be consulted to provide the correct facility type (i.e. sidewalk or shared-use path).
  
6. **Bicycle Plan** — The Town of Chapel Hill currently has a bicycle plan and the City of Durham is developing a bicycle plan which will identify an interconnected system of signed bicycle routes, striped bike lanes, and off-street bike paths that serve popular bicycling destinations such as schools, parks, libraries, community centers, shopping areas, and downtown areas. The plan should take advantage of low-volume, low-speed residential local and collector streets to the extent possible. It is recommended that Durham's street design standards be modified to require that bike lanes be built on those collectors that are specified by the plan. Chapel Hill's design manual already requires this.
 
  
7. **Streetscape** — To induce self-enforcing speed limits on residential and commercial collector streets, the Town, City, and counties should develop streetscape guidelines for application by the Town or City (on publicly-funded projects) and developers (on privately-funded street projects). Streetscapes can narrow the visual field perceived by motorists without compromising safety. For example, on streets with posted speed limits of 35 mph or less, street trees that create a canopy effect will naturally cause most drivers to travel slower than on streets with wide open vistas. Streetscape enhancements include landscaped medians or median islands for pedestrian refuge at intersections, pedestrian-scale street lighting, street trees, benches and other street furniture, bus shelters, and highly visible crosswalks.

8. **Traffic Calming** — The local jurisdictions should consider enhancements to existing traffic calming programs to offer more than speed humps. An update of the policy may be warranted to ensure that it relates to developer requirements as new residential streets are built. The intent of the policy should be to eliminate the need for retrofits on future streets as the area continues to grow and build new residential neighborhoods.
9. **Southwest Durham Drive Study** — Based on public input, it is recommended that further study be conducted pertaining to the alignment of Southwest Durham Drive. The public response indicated a strong opposition to the current alignment of this facility.
10. **Farrington Road Interchange Study** — Based on public input, both for and in opposition, it is recommended that further study be conducted on a potential interchange on Interstate 40 at the existing Farrington Road bridge over I-40.
11. **Highway 54 Corridor Study** — NCDOT has begun studying the Highway 54 corridor. It is recommended that further study be conducted to assess the safety, traffic congestion, and access management issues along this corridor.



## Funding and Phasing Concepts

One of the primary purposes of the *Southwest Durham County and Southeast Chapel Hill Collector Street Plan* is to consider recent trends, anticipated growth, and the relationship between growth and the street network. The Plan communicates the framework for the future street network. It should be noted that the future collector streets proposed as part of the Plan do not depict specific alignments, instead they communicated desired connections. This practice ensures flexibility and allows local developers to adapt their development plans in a manner that is homogenous with their desired development vision. Simply stated, the exact alignment is not nearly as important as ensuring that the connection is made. The Plan conveys a concept of a system of collector streets that work together to provide interconnectivity. Only through the adoption of local policies and procedures can the incremental construction of the collector street network effectively occur. With this in mind, it is recommended that the development review process include consideration of the future collector street network. Just as with the Comprehensive Transportation Plan (CTP), development should be required to proceed in such a way that it is responsive to and consistent with the proposed future year street network. Identification of the future street connections should also be given consideration during the zoning and review process.

Because collector streets generally are maintained by the City/Town and not by NCDOT, the implementation of this plan can be achieved either by private development through the plan approval process or through public/private partnerships. The collector streets proposed as part of the *Southwest Durham County and Southeast Chapel Hill Collector Street Plan* generally fall into one of three categories: (1) new collector streets to be constructed as land is developed, (2) proposed connections to eliminate a discontinuity along another existing collector street, or (3) the extension of an existing collector street to another existing collector street or an existing arterial. For the most part, the responsibility for funding and constructing a collector street will depend on its category.

### Routine Development

Under current practice, new collector streets that are constructed as land is developed will remain the responsibility of the developer. Newly proposed cross-sections for residential collector streets include additional landscaping, street level lighting, and sidewalk.

In certain situations it may be beneficial for the City/Town to partner with a developer to extend a collector street beyond his/her project or phase line. This may prove advantageous where an extension is necessary to improve access and emergency response services within a given area or to avoid further burdening the existing local street network due to the lack of a reasonable and convenient outlet to the arterial system. In these situations, the City/Town may consider participating in the cost of constructing the collector street and extending it to a logical or more desirable terminus. In general, such an investment by the City/Town would not exceed the cost of extending the collector street at some future date once the developer has completed his/her project.

### **Elimination of Existing Discontinuities or Dead Ends**

In situations where a collector street is needed either as an extension that would connect to an arterial or as a missing link, the City/Town may initiate the improvement by funding it in the Capital Improvement Program and then building the street subject to assessment of the cost to the abutting properties.



*Randall Road Stub-out*

### **Economic Development Projects**

The construction of collector streets may also be used as a tool to promote economic development. While this concept could apply in residential, commercial, or industrial zones, it is most likely to be used to promote either commercial or industrial development.

In terms of funding, such projects would typically be incorporated into the City/Town's Capital Improvement Program and funded with Powell Bill or general fund revenues.

## Alternative Funding Measures

It is evident that Powell Bill and general fund revenues alone will not be sufficient to fund a systematic program of constructing collector streets within the City/Town. Alternate funding measures that other jurisdictions have used for street system improvements include:

- Transportation Bonds
- Impact Fees
- Enhancement Grants

### Transportation Bonds

Transportation bonds have been instrumental in the strategic implementation of local roadways throughout North Carolina. Voters in communities both large and small regularly approve the use of bonds in order to improve their transportation system. Projects that have historically been funded include sidewalk projects, roadway extensions, new road construction, and streetscape enhancements.

### Impact Fees

Developer impact fees and system development charges are another funding option for communities looking for ways to pay for collector streets and associated infrastructure. They are most commonly used for water and wastewater system connections or police and fire protection services but they have recently been used to fund school systems and pay for the impacts of increased traffic on existing roads. Impact fees place the costs of new development directly on developers and indirectly on those who buy property in the new developments. Impact fees free other taxpayers from the obligation to fund costly new public services that do not directly benefit them. Only a handful of communities in North Carolina have approved the use of impact fees (e.g. Cary). The use of impact fees requires special authorization by the North Carolina General Assembly.

### Enhancement Grants

State and Federal Grants can play an important role in implementing strategic elements of the transportation network. A number of grants have multiple applications including, Transportation Enhancement Grants as well as State and Federal Transit Grants. The Enhancement Grant program was established by Congress in 1991 through the Intermodal Surface Transportation Efficiency Act (ISTEA) as a means of ensuring that a variety of projects — most not typically associated with the road-building mindset — were implemented. While the construction of roads is not the intent of the grant, the construction of

bicycle, pedestrian, and streetscape improvements are a few of many enhancements that the grant targets and could play an important role in enhancing the pedestrian safety and connectivity in the City of Durham and Town of Chapel Hill. For more information on the Enhancement Grant Program see the following web page link: [www.ncdot.org/planning/development/Enhancement/enhancement/enhancement.htm](http://www.ncdot.org/planning/development/Enhancement/enhancement/enhancement.htm)

## Collector Street Plan Public Comments - Public Workshop #3

### Question 6: What do you like about the Recommended Collector Street Network?

Category	Date	Source	Input	Input Revlevance
Question 6	3/21/06	Public Workshop #3	There is very little clear thought - not much confidence in the study.	General Theme
	3/21/06	Public Workshop #3	Remove SW Drive arterial connector. Why is this needed? Why can't this drive go thru undeveloped property to East of Meadowmont.	General Theme
	3/21/06	Public Workshop #3	Anticipates growth and tries to address it.	General Theme
	3/21/06	Public Workshop #3	Increase traffic flow.	General Theme
	3/21/06	Public Workshop #3	Increased access.	General Theme
	3/21/06	Public Workshop #3	Like emphasis on George King Road.	George King Road
	3/21/06	Public Workshop #3	Some intersections will be an improvement.	General Theme
	3/21/06	Public Workshop #3	I like the possibility of the transit stations.	Transit Stations
	3/21/06	Public Workshop #3	Nothing.	General Theme
	3/21/06	Public Workshop #3	I like that you have taken a human-scale approach and include progressive planning measures.	General Theme
	3/21/06	Public Workshop #3	New Farrington Road and George King as major N-S connector.	Farrington and George
	3/21/06	Public Workshop #3	It does spread the traffic out somewhat.	General Theme
	3/21/06	Public Workshop #3	Getting transit since no amount of additional roads (no matter how much it goes into neighborhoods streets) is going to handle the traffic.	General Theme
	3/21/06	Public Workshop #3	The idea of connecting neighborhoods and making it easier to get to desired locations without using major roads.	General Theme
	3/21/06	Public Workshop #3	Cuts through our house. Requires moving away from the mosquito prone "waterfowl impoundment" swamp.	Celeste Circle
	3/21/06	Public Workshop #3	Not sure because the man explaining the collectors did not let me ask my question but he answered all other people questions.	General Theme
	03/21/06	Public Workshop #3	Very little. Many recent Meadowmont residents maintain that there has been significant misrepresentation on this issue. People have spent significant sums of money and were told Meadowmont Lane would not change.	Meadowmont Lane
	3/21/06	Public Workshop #3	Traffic alternatives that provide more than one way to get through the area are good if they don't destroy the character of the neighborhoods.	General Theme
	3/21/06	Public Workshop #3	Connecting Highway 54 and 15/501. I like connector road rather than cul de sacs.	General Theme
	3/21/06	Public Workshop #3	Very little.	General Theme
	3/21/06	Public Workshop #3	Not much.	General Theme
	3/21/06	Public Workshop #3	Nothing.	General Theme
	3/21/06	Public Workshop #3	Nothing.	General Theme

Category	Date	Source	Input	Input Relevance
Question 6	3/21/06	Public Workshop #3	I like the connector street plan at the residential level. I strongly dislike the volume of traffic specified for Meadowmont Lane.	General Theme
	3/21/06	Public Workshop #3	Nothing. You need to start over and consider a connector east of Meadowmont Lane.	Meadowmont Lane
	3/21/06	Public Workshop #3	New Farrington Road. New George King Road.	Farrington and George Road
	3/21/06	Public Workshop #3	Not much -save \$ and don't tax! Some limited collector street.	General Theme
	3/21/06	Public Workshop #3	I think it works fine.	General Theme
	3/21/06	Public Workshop #3	Better access to other areas.	General Theme
	3/21/06	Public Workshop #3	It is a step toward reducing traffic on arterials. As long as one puts in sidewalks and bike paths, I am in favor of as many collector streets as possible.	General Theme
	3/21/06	Public Workshop #3	Good for local residents.	General Theme
	3/21/06	Public Workshop #3	Durham collectors, but not Meadowmont Lane.	General Theme
	3/21/06	Public Workshop #3	Will help with traffic congestion.	General Theme
	3/21/06	Public Workshop #3	Great!	General Theme
	3/21/06	Public Workshop #3	Nothing.	General Theme
	3/21/06	Public Workshop #3	I like the notion of planning ahead. Also, theoretically, the increased connectedness as a way to facilitate travel and reduce arterial flow, is appealing although I do not know that in reality it will be beneficial.	General Theme
	3/21/06	Public Workshop #3	Good information.	General Theme
	3/21/06	Public Workshop #3	The grid style of the network.	General Theme
	3/21/06	Public Workshop #3	George King Road should be the collector between 15-501. It's undeveloped and houses can be planned further back unlike houses on Meadowmont Lane. Also save money because no bridge needed through wetlands.	George King Road
	3/21/06	Public Workshop #3	Nothing.	General Theme
	3/21/06	Public Workshop #3	Connectivity.	General Theme
	3/21/06	Public Workshop #3	Nothing.	General Theme
	3/21/06	Public Workshop #3	Using existing streets.	General Theme
	3/21/06	Public Workshop #3	The connectivity of Hwy 54 and Hwy 15-501 which will relieve traffic nightmare of Hwy 54 and Farrington Road intersection.	General Theme
	3/21/06	Public Workshop #3	Nothing.	General Theme
	3/21/06	Public Workshop #3	Nothing.	General Theme
	3/21/06	Public Workshop #3	Nothing.	General Theme
	3/21/06	Public Workshop #3	Safety.	General Theme
	3/21/06	Public Workshop #3	Question 6. □Faster access to 15/501; opens more avenues to Durham	General Theme
	3/21/06	Public Workshop #3	Will be paid for by developers.	General Theme
	3/21/06	Public Workshop #3	I support location of SW Durham Drive.	SW Durham Drive
	3/21/06	Public Workshop #3	Unfortunately, I don't believe the plan will accomplish what it wants to accomplish.	General Theme
	3/21/06	Public Workshop #3	It defrays traffic from Farrington and directs it elsewhere.	General Theme

## Collector Street Plan Public Comments - Public Workshop #3

### Question 7: What don't you like about the Recommended Collector Street Network that would cause you to actively oppose the adoption of this plan?

Category	Date	Source	Input	Input Relevance
Question 7	3/21/06	Public Workshop #3	I am very concerned about proposed roads that "carve" up the Celeste Circle neighborhood.	Celeste Circle
	3/21/06	Public Workshop #3	Current Farrington Road need access to I-40 (interchange where Farrington crosses).	Farrington Road
	3/21/06	Public Workshop #3	Burden to existing neighborhoods when open land is available.	General Theme
	3/21/06	Public Workshop #3	The guy is right - this doesn't solve traffic on how to get thru bottleneck of trying to get onto I-40. I was out jogging on Pope Road at 8AM yesterday and had to wait for 10 cars to pass to get across street. Why would I want more traffic? What is the number of cars/hr. at 8AM on "normal day"? Or on a day with I-40 stopped up? I just see this as a way to make an undesirable neighborhood and driving development west of here trying to get through this area and making like miserable here (impossible to go out of my driveway with a continous parade of cars on my street). Does the traffic tool look in detail at things like traffic snarls at schools; what happens at intersections? By making segment of Farrington N. of Ephesus Church Road local it complicated any decision to make new interchange on I-40 between 15-501 and 54. It complicated commercial zone proposed there. It really will tie off large number of people going south on Farrington to get to I-40. Let's get a market-based solution to this. Developers who build homes that feed traffic flow thru an area bid on what they will pay us each year for inconvenience they will cause. We should get rebates on our property taxes since your saved money comes at our expense. Devonshire has had 40 years of being perfectly happy with their access - it doesn't sound like this is really good for them.	General Theme
	3/21/06	Public Workshop #3	The curve on George King Road that turns onto Celeste Circle.	George King Road
	3/21/06	Public Workshop #3	Need new I-40 intersection with Farrington - this should be a priority. Eliminate Wendell as connector - too close to second connector.	General Theme
	3/21/06	Public Workshop #3	Non-gridlike pattern of streets.	General Theme

Category	Date	Source	Input	Input Revlevance
Question 7	3/21/06	Public Workshop #3	The SW Durham drive needs to be realigned before any further discussion on collector streets continues. The environmental impact to wetlands. The added noise and traffic through an existing quiet residential area. The fact you've chosed to impact existing communities instead of going through less developed areas that would serve the same purpose as collector streets. We have more then enough walking trails in our community. They are currently very safe. We don't want more traffic throughout our quiet neighborhoods. We don't want the expense of unwanted streets, that we end up paying for with additional taxes.	General Theme
	3/21/06	Public Workshop #3	It has not been explained plainly. I actively oppose.	General Theme
	3/21/06	Public Workshop #3	Collector Streets will run though the middle of my neighborhood - Eastpark, destoying a pocket of affordable housing. I'm afraid the government will condemn my neighborhood to develop a commercial area with a higher tax base.	Eastpark neighborhood
	3/21/06	Public Workshop #3	The road that is shown along the south line fo the Arboretum property.	General Theme
	3/21/06	Public Workshop #3	I would prefer no one property be divided.	General Theme
	3/21/06	Public Workshop #3	SW Durham Drive unnecessarily connects into Meadowmont Lane. Meadowmont development has nothing to do with Durham's development plans.	Meadowmont Lane
	3/21/06	Public Workshop #3	Increased traffic on Meadowmont lane.	Meadowmont Lane
	3/21/06	Public Workshop #3	Increased traffic in front of my home and Elementary school.	General Theme
	3/21/06	Public Workshop #3	I do not believe that the roads follow natural landscape features nor have you taken in to consideration the disruption of stream corridors.	General Theme
	3/21/06	Public Workshop #3	Do not want to de-emphasize or atrophy the NC 54/Farrington Rd intersection.	General Theme
	3/21/06	Public Workshop #3	Use of Meadowmont Lane as a collector. Any extension of Meadowmont Lane is unsafe to people and hazardous to the environment.	Meadowmont Lane
	3/21/06	Public Workshop #3	Should go on property line and not divide our large property tract. Should go east of school so as not to disrupt school bus traffic.	General Theme
	3/21/06	Public Workshop #3	change Meadowmont Lane to a collector street nto an arterial street. Reduce number of cars allowed.	Meadowmont Lane
	3/21/06	Public Workshop #3	Too close to my backyard. Traffic will build up on the streets in the future. Please don't do it!	General Theme
	3/21/06	Public Workshop #3	It carves up residential property. There will be backups of traffic from main arterials to collector streets and then back to all streets. The gridlock will not be everywhere. Neighborhood quality will be destroyed.	General Theme

Category	Date	Source	Input	Input Revlevance
Question 7	3/21/06	Public Workshop #3	Does not deal with distribution of small neighborhoods. Poorly uses George King Road right of way in place of destroying Celeste Circle. Increases congestion at Ephesus Church and Pinehurst. Ads heavy traffic load to Oaks area.	General Theme
	3/21/06	Public Workshop #3	Same problem as last time - plan will cause excessive traffic on Nottingham Drive as 15/501 traffic on Ephesus Church Road accesses high density housing lack of Nottingham via Kinsale and Kilkenny collectors.	General Theme
	3/21/06	Public Workshop #3	Connecting 15-501 to 54 via Meadowmont Lane would hugely impact this dense development. There are many unsafe factors - elementary school, senior development - its planned as a walking community would become unsafe for walkers, young and elderly.	Meadowmont Lane
	3/21/06	Public Workshop #3	The homes on Meadowmont Lane are so close to the street, more as a "Lane" should be, not to accommodate the volume of a collector street, in terms of liveability.	Meadowmont Lane
	3/21/06	Public Workshop #3	Too imposing on the East of Helmsdale.	General Theme
	3/21/06	Public Workshop #3	I don't like the road going down Meadowmont Lane because of the schools.	Meadowmont Lane
	3/21/06	Public Workshop #3	Traffic calming devices of all kinds are not wanted.	General Theme
	3/21/06	Public Workshop #3	Safety; environment.	General Theme
	3/21/06	Public Workshop #3	10,000-14,000 (approx. 1/3 of Franklin Street) is excessive for a neighborhood. Particularly for homes on Meadowmont Lane.	Meadowmont Lane
	3/21/06	Public Workshop #3	If Kilkenny and Kinsale are cut through to Nottingham, it will function as a collector stret even if it is not labeled that on the plan. There is already a problem with high speed traffic on this residential street.	General Theme
	3/21/06	Public Workshop #3	Nothing.	General Theme
	3/21/06	Public Workshop #3	Children at risk of being hit by car. Noise. Pollution, Greenway issues.	General Theme
	3/21/06	Public Workshop #3	The point where the Collector Road jogs from Farrington to Ephesus Church - runs through my old neighborhood and family cemetery. It also eliminates the value of the corner of my property.	General Theme
	3/21/06	Public Workshop #3	The curve at Ephesus Church/Farrington. We are working on the project on the corner and this curve will greatly adversely affect this project as there is already constraining items such as a stream buffer and a cemetery. The current property owner will also feel a hike this is a taking of valuable property on a corner of two thoroughfares. The collector at the south property line also worries me because if the lie is taken at face value, this will also affect the project as well. There needs to be definitive language in the report that talks about how these lines are dynamic and can be moved around based on continuing development.	Ephesus Church/Farrin

Category	Date	Source	Input	Input Revlevance
Question 7	3/21/06	Public Workshop #3	Should direct through currently vacant land.	General Theme
	3/21/06	Public Workshop #3	I do not like the prospect of increased traffic flow on Celeste Circle. As a consequence of the following, much of Celeste Circle could become an arterial during adoption of the Collector street plan: 1. "Rule of Thumb" handout item #5, the atrophy of the Farrington/NC54 intersection, 2. the new path of Farrington Rd. through the NE end of Celeste, 3. the likelihood that the Celeste/Falconbridge/NC54 intersectin will not permit left turns onto NC54, 4. the proposed light at the Huntington Ridge/NC54 intersectino which likely will permit left turns onto NC 54, 5. the proposed extension of Huntington Ridge across NC54 to connect with Celeste Cir. As a consequence of i-5, the current path of heavy traffic that goes from the Watkins Road end of Farrington Road to I-40, NC 54 east and Farrington Road east will travel down much of Celeste Cir, making it an artery. The SW Durham Drive/George King route might alleviate this situation but there is considerable opposition to the SW Durham Drive by Meadowmont residents. A more "doable" remedy would direct Farrington Rd traffic to Geoge King/NC 54. The current Collector Street Plan shows new road access through Corps of Engineers land so use of George Kind should be possible. Less favorable but possible would be access through the Crossland Drive stub-out. An alternative to reduce the heavy flow on Farrington Rd would be to enable Farrington Rd traffic to flow on the NE side of I-40 from approximately Tenton Road/Farrington intersection (Glenview Park area) to Leigh Farm Road/NC 54 intersection. Lots of commercial development is happening on parts of this latter route which is within the collector street plan area. This route would enhance connectivity and be within the spirit of the Collector Street Plan.	General Theme
	3/21/06	Public Workshop #3	Connection of Meadowmont Lane via bridge over wetlands - creating significant traffic near school zone and increased expenses. Prefer alternatives that are less impactful and integrated with core objectives of safety. I would like to see SW Durham Drive and Meadowmont reconsidered as collector streets with slower speeds rather than arterials. Next time, get elected town/city representatives to attend workshop. Refine plan for George King to connect directly to 54. Send complete proposals or make complete proposals available to constituents/citizens.	General Theme
	3/21/06	Public Workshop #3	Creekside Elem. School.	General Theme

Category	Date	Source	Input	Input Relevance
Question 7	3/21/06	Public Workshop #3	The proximity of SW Durham Drive to the Oaks development. I think it would be better served closer to I-40 for many reasons (residential neighborhood, noise pollution, harmful to current & future tax values). Please consider alternative plans A or B. Why not run George King Road to Hwy 54? Would that not save money & have less environmental impact?	Oaks Development
	3/21/06	Public Workshop #3	Will allow traffic to use and disrupt neighborhood safety of residents.	General Theme
	3/21/06	Public Workshop #3	Potential for heavy traffic on Meadowmont Lane.	Meadowmont Lane
	3/21/06	Public Workshop #3	It will become a busy shortcut from 15-501 to 54, used by drivers who do not live in abutting developments Meadowmont Lane and Barbee Chapel already are.	General Theme
	3/21/06	Public Workshop #3	Probably nothing; however I am opposed to any traffic calming devices. I believe if you have good sidewalks and bike paths, you don't need traffic calming. People and bikes should have a safe place to walk and ride. Cars should be able to go quickly along the roads provided for them.	General Theme
	3/21/06	Public Workshop #3	I own the property bounded by Farrington Road, Cleora, Creasant and Rutgers. The plans shows a takingof roughly two acres of my property by new roads.	General Theme
	3/21/06	Public Workshop #3	Traffic! Too high a speed limit.	General Theme
	3/21/06	Public Workshop #3	A collector street in Meadowmont does not fit in the residential community that we live in. The added traffic would be dangerous to small children and the elderly at the Cedars.	Meadowmont Lane
	3/21/06	Public Workshop #3	It send traffic by Rashkin & down Meadowmont Lane. Would be unsafe for the children walking to school. Residents from Cedar's would have a difficult time navigating enter/exit.	General Theme
	3/21/06	Public Workshop #3	As a resident of Celeste Circle, currently a quiet, family, walker friendly neighborhood, drawing two collector roads through current properties rather than fully utilizing George King, which is already a road, does not make sense and ruining the quiet nature of our nieghborhood in the process. If the purpose of collector roads is indeed to just join neighborhoods while preserving the slow nature of a neighborhood, taking the two collector streets that run straight through (no turns or curves to slow down traffic) would not work as well as George King, already winding and "curvy" , naturally slowing traffic. This would also save money.	Celeste Circle
	3/21/06	Public Workshop #3	Mainly, that it proposes a major arterial roadway that passes within 100 feet of both an elementary school and a retirement community. With a proposed flow of >12,000 vehicles/day, when an alternative route through undeveloped land clearly exists (George King Road).	Meadowmont Lane

Category	Date	Source	Input	Input Relevance
Question 7	3/21/06	Public Workshop #3	The lack of study on Hwy 54. I understand the "lack of jurisdiction" but it really does not make sense to study potential development without looking at the whole picture.	General Theme
	3/21/06	Public Workshop #3	Collector road extension of Kinsale. Extension of New Hope drive across I-40 in Eastowne area. Lack of collector roads to and thru Maida Vale.	General Theme
	3/21/06	Public Workshop #3	Lack of collector roads in Maida Vale. Potential of traffic back up on Nottingham, Pinehurst, Ephesus Church. Possible need for traffic light in Pinehurst - Ephesus intersection. Cut through Kinsale and KilKenny - these roads were never designed to be collector streets.	General Theme
	3/21/06	Public Workshop #3	Developers must be controlled in their final implementation plans.	General Theme
	3/21/06	Public Workshop #3	The extension of Lancaster Drive as drawn. It will become a "raceway" between 54 Fearrington Rd. & Ephesus Church/Old Chapel Hill Rd. You need to deal with 54/I40 intersection before you develop anything NORTH of 54.	Lancaster Drive
	3/21/06	Public Workshop #3	Endangering wetlands. Creating dangerous traffic pattern near elementary school. We were not told of this when we purchased our home; in fact, we specifically were told development would never happen.	General Theme.
	3/21/06	Public Workshop #3	In number 6, the 2nd option. Number 5.	General Theme
	3/21/06	Public Workshop #3	Traffic on gravel road; dust & pollution problem. Are we paving George King Road.	General Theme
	3/21/06	Public Workshop #3	It entirely destroys the Meadowmont concept. It is dangerous to our children. It hurts property values. We were lied to about prospects of development - by Meadowmont.	Meadowmont Lane
	3/21/06	Public Workshop #3	Noise and air pollution. Careless drivers. Traffic congestion.	General Theme
	3/21/06	Public Workshop #3	Proposed alignment of SW Durham Dr. extension of Lancaster Dr.	General Theme
	3/21/06	Public Workshop #3	Use of Meadowmont Lane as a main artery (Southwest Durham Pkwy).	Meadowmont Lane
	3/21/06	Public Workshop #3	It is not clear why it is needed. Numbers related to traffic patterns and growth are needed to make proposal seem necessary.	General Theme
	3/21/06	Public Workshop #3	It cleared up a few issues - that unless this area is developed the roads won't be built.	General Theme

## Collector Street Plan Public Comments - Public Workshop #3

Question 8: How was this workshop helpful? What workshop improvements would you suggest?

Category	Date	Source	Input	Input Revlevance
Question 8	3/21/06	Public Workshop #3	I now understand that this is a plan and developers will build them. Great idea!	General Theme
	3/21/06	Public Workshop #3	No new information was presented, therefore useless. No political representatives available.	General Theme
	3/21/06	Public Workshop #3	I'm afraid the workshop is to pacify the public, but not sure the interests of the public.	General Theme
	3/21/06	Public Workshop #3	Yes- but try not to answer questions during the presentation.	General Theme
	3/21/06	Public Workshop #3	The workshop has shown that much more planning is necessary.	General Theme
	3/21/06	Public Workshop #3	I think neighborhood input was listened to and taken into consideration.	General Theme
	3/21/06	Public Workshop #3	It was nice meeting people who live in the area and Durham planners and developers.	General Theme
	3/21/06	Public Workshop #3	I am much clearer on why I don't like this.	General Theme
	3/21/06	Public Workshop #3	None- if 54 is out of study, it is worthless.	General Theme
	3/21/06	Public Workshop #3	Not particularly helpful. Too many important questions were unanswered. Too little traffic analysis actually done. Pretty charts, little information. Overall poorly rationalized study.	General Theme
	3/21/06	Public Workshop #3	I would suggest publishing a very specific description of who the decision makers are and how the decision will be made about this plan.	General Theme
	3/21/06	Public Workshop #3	Yes. Can you distribute the copies of information discussed next time?	General Theme
	3/21/06	Public Workshop #3	Need better control of the crowd.	General Theme
	3/21/06	Public Workshop #3	There is some sincerity in presentation. However, the process was giving residents a false sense of participation, while trying to defuse the anger.	General Theme
	3/21/06	Public Workshop #3	Representatives from town; consultant spent too much time defining terms - should have explained maps better. Showing street names to orient people.	General Theme
	3/21/06	Public Workshop #3	Lots of good information and explanation.	General Theme
	3/21/06	Public Workshop #3	Not helpful.	General Theme
	3/21/06	Public Workshop #3	This plan is absurd. This workshop was not helpful.	General Theme
	3/21/06	Public Workshop #3	Very clear presentation. Very useful maps. There is no doubt about what is being planned.	General Theme
	3/21/06	Public Workshop #3	Yes, helpful.	General Theme
	3/21/06	Public Workshop #3	Not really.	General Theme

Category	Date	Source	Input	Input Relevance
Question 8	3/21/06	Public Workshop #3	Public input has been insufficient. Little/no advance notice to Chapel Hill residents. SW Durham drive as an arterial has not been publicly vetted. Meadowmont Lane is residential, has an elementary school, and is full of children walking and playing. An arterial would destroy the only existing model of a walkable neighborhood - which your workshop input indicated that everyone wants.	Meadowmont Lane
	3/21/06	Public Workshop #3	It did answer a few questions. At least the maps were large enough to see.	General Theme
	3/21/06	Public Workshop #3	It was not that much helpful because they were partisan in explaining it to Blacks.	General Theme
	3/21/06	Public Workshop #3	Please consider an alternative route to the east of the Army Corps of Engineers Wetlands area - In order to avoid 12,000 cars daily using Meadowmont Lane. Use George King Road as access to 54.	General Theme
	3/21/06	Public Workshop #3	Educational.	General Theme
	3/21/06	Public Workshop #3	Helpful people.	General Theme
	3/21/06	Public Workshop #3	it was very informative. It was also instructive to hear public sentiment, which was rude, ignorant and abusive. Sorry you had to put up with that.	
	3/21/06	Public Workshop #3	More analytical, less "hi, I'm Mr. Friendly."	General Theme
	3/21/06	Public Workshop #3	Better control of questioners. Repeat questions for all to hear. Use of a PA system and portable mikes so all don't try to talk at once.	General Theme
	3/21/06	Public Workshop #3	Learned a lot.	General Theme
	3/21/06	Public Workshop #3	Could not stay for workshop.	General Theme
	3/21/06	Public Workshop #3	Very informative.	General Theme
	3/21/06	Public Workshop #3	The report shows a picture of a stub-out and the Figure legend calls it the Celeste Circle stub-out. There is no Celeste Circle stubout and this should be corrected. Probably it meant to say the Crossland Drive Stubout. Also, my comments submitted after workshop #2 were not included in the report.	General Theme
	3/21/06	Public Workshop #3	Many showed up.	General Theme
	3/21/06	Public Workshop #3	Good information; learned a bit more about the process.	General Theme
	3/21/06	Public Workshop #3	Yes, but it doesn't make me feel any better about proposal.	General Theme
	3/21/06	Public Workshop #3	Maps and plan, timeline helpful.	General Theme
	3/21/06	Public Workshop #3	Provides some insights into the future development of the area I live in and helps me plan on the disposition of my property in the near future (1-2 years).	General Theme
	3/21/06	Public Workshop #3	Bigger picture of plan. I would suggest that Roger be more clear and arrange slide in more cohesive manner. Address upfront his role in the plan & what is belonging to others.	General Theme
	3/21/06	Public Workshop #3	My first information source on the plan.	General Theme
	3/21/06	Public Workshop #3	Report the results of these comments sheets so citizens can access the depth and range of support or objection to these plans.	General Theme

Category	Date	Source	Input	Input Revlevance
Question 8	3/21/06	Public Workshop #3	Yes. Provide list of website, elected officials, contact info, and any future meetings, plus projected timelines.	General Theme
	3/21/06	Public Workshop #3	Bring the relevant elected officials!	General Theme
	3/21/06	Public Workshop #3	I thought Meadowmont Lane was going to become a collector road. Now it sounds like Meadowmont is already a collector that will be connected to an arterial which would make Meadowmont more or less an arterial road. Meadowmont reality lied to all of us about the plan of this road.	Meadowmont Lane
	3/21/06	Public Workshop #3	Provide real data about how traffic would be changed. It is not clear from presentation how widening 54 or I-40 would not be easier and would avoid arterial.	General Theme
	3/21/06	Public Workshop #3	Not really helpful. Consultant only presented topics as fix accomplishments- cost and practicability. No interactive discussion on new alternative CSP. Rude handling of questions. Recommend more structure, time and Q&A process. Communication was vague and general rather than specific. Style was inappropriate. Structure was poorly managed.	General Theme
	3/21/06	Public Workshop #3	Perhaps the speakers should be better informed and our representatives should be present.	General Theme
	3/21/06	Public Workshop #3	More info should be in the newspaper for those who cannot attend. Great information.	General Theme



## Southwest Durham County and Southeast Chapel Hill Collector Street Plan – Public Workshop #3 Summary of Survey Responses

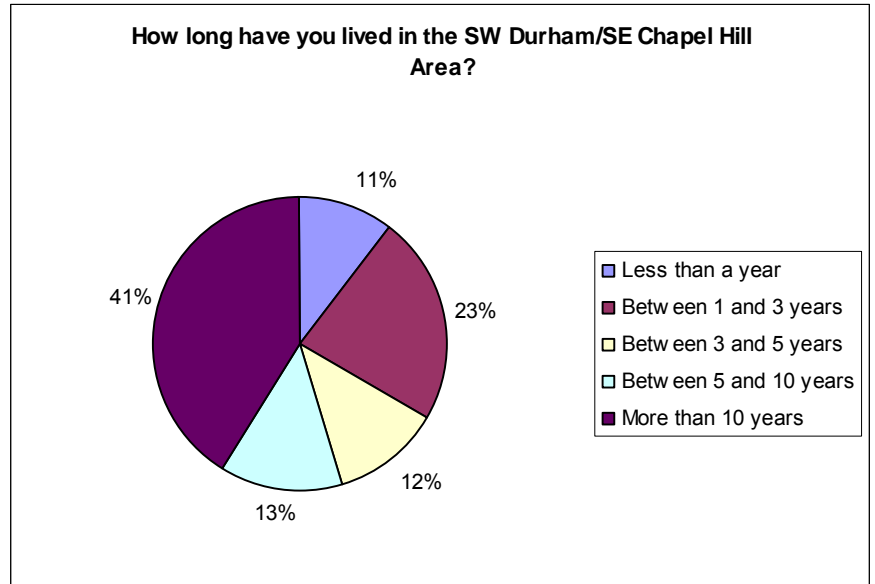
### 76 Participants

*What is your (home) street name?*

Arboretum Drive  
Celeste Circle (6)  
Crescent Drive (3)  
Ephesus Church Road (5)  
Falkner Drive  
Farrington Road (5)  
Fountain Ridge (2)  
George King Road (3)  
Grandale Drive  
Helmsdale Drive (6)  
Little Branch Trail  
Longwood Drive  
Marcella Court  
Meadowmont Lane (9)  
Nelson Highway (2)  
New Castle Place  
Newton Drive  
Nottingham Drive (3)  
Old Chapel Hill Road  
Oval Park Place  
Park Bluff Drive North (2)  
Parkridge Avenue (2)  
Pinafore Drive  
Pinehurst Drive  
Ridgefield Drive  
Rutgers Road  
Saint Marks Road  
Simerville Road (3)  
Springdale Way (3)  
Sprunt Street  
St. Andrews Place (2)  
Tweed Place  
Weaver Mine Trail  
Yardley Terrace

*How long have you lived in the SW Durham/SE Chapel Hill area?*

- 8 (11%) - Less than a year – 11%
- 17 (23%) - Between 1 and 3 years
- 9 (12%) - Between 3 and 5 years
- 10 (13%) - Between 5 and 10 years
- 31 (41%) - More than 10 years



*Did you attend either of the previous Public Workshops for this project?*

- 2 (3%) - Public Workshop #1 Only– Oct. 11<sup>th</sup>
- 24 (32%) - Public Workshop #2 Only– Jan. 10<sup>th</sup>
- 11(14%) Both Workshop #1 and Workshop #2
- 39 (51%) - Was not able to attend

*Do you feel like your input has been used in this planning process?*

- 2 (3%) - Yes
- 11 (15%) - Somewhat
- 33 (48%) - No
- 24 (34%) - Did not provide input

*How would you rate your satisfaction with Recommended Collector Street Network?*

- 3 (4%) - Like a lot
- 19 (27%) - Like some
- 1 (1%) - Dislike, but will not take action
- 48 (68%) - Dislike and plan to take action

# Collector Street Plan Public Comments - Public Workshop #3

## General Comments:

Category	Date	Source	Input	Input Relevance
Email	3/21/06	Public Workshop #3/Email	<p>We had an opportunity to speak briefly during the third collector street information session. At your request I am attaching a copy of the petition outlining significant concerns of the Meadowmont Community relative to the SW Durham Collector Street Plan. To date, nearly 600 signatures have been collected including 100% of Phase I, II, and III Meadowmont Lane residents residing in Durham and Orange counties.. A large majority of the Durham County based Cedars' residents have also signed as have residents throughout the Meadowmont Community. A hard copy of the signed petition will be mailed to your office. As most residents only recently became aware of the impact the collector/arterial street plans will have on the community, signatures are still being collected.</p> <p>Beyond the areas of concern noted on the attached request, we are attempting to determine why many residents were not aware of the Collector Street Plan in time to attend the October public session.. As we mentioned to you a few weeks ago, the Meadowmont Community Association first became aware of the public information session in January of this year.</p> <p>At a separate information session, the Chapel Hill MPO representative acknowledged that the plan on file in the city differs from the plan presented to Meadowmont residents via the development office. Given that the neighborhood has been in existence only a few years might help put the high emotions in perspective.</p> <p>For all of the above reasons, and for the very real concern expressed on the attached petition, I add my voice to those asking that Kimley-Horn and Associates' recommendation not be forwarded to the MPO or any other agency until some of these concerns are addressed. We realize that the Meadowmont community is more impacted by the arterial street plan that has been under discussion for several years. We implore you, as the City of Durham's Transportation Planner, to do everything in your power to take a fresh look at the Southwest Durham Parkway alignment that was presented as a key link to the Collector Street Plan. There appear to be numerous alternatives to the alignment such that it will not have such a major impact on neighborhood schools, the retirement center, and residents.</p>	Meadowmont

<b>Category</b>	<b>Date</b>	<b>Source</b>	<b>Input</b>	<b>Input Revlevance</b>
Email	3/21/06	Public Workshop #3/Email	As a resident of Meadowmont Lane in Chapel Hill, I must express my strong objections to the proposed collector street plan currently under consideration. The quality of life in this quiet neighborhood will dramatically decline if this plan is enacted, and residents, young school children, and many retirement-age citizens will be threatened by the enormous increases in proposed traffic volumes along this street. I ask you, with all earnestness, to please explore all other available options. Of course, I would be happy to answer any questions that might arise.	Meadowmont

Category	Date	Source	Input	Input Relevance
Email	3/21/06	Public Workshop #3/Email	<p>To: The Chapel Hill-Carrboro-Durham Metropolitan Planning Organization; the City of Chapel Hill; the counties of Orange and Durham; the North Carolina Department of Transportation; and all agencies and individuals associated with the Southwest Durham Collector Street Plan:</p> <p>We, the residents of the Meadowmont Community, petition the above agencies and individuals to remove all streets within the boundaries of the Meadowmont development from any consideration pertaining to the Southwest Durham Collector or Arterial Street Plan.</p> <p>We, as residents, consider any collector or arterial road system connecting Highways 15/501 to Highway 54 via the Meadowmont Community to be in direct conflict with the real or implied promotion of the neighborhood as a safe, pedestrian friendly and environmentally sensitive development.</p> <p>More specifically, we as residents believe there are alternative and less costly road systems that will not:</p> <ul style="list-style-type: none"> <li>• <input type="checkbox"/> jeopardize the safety and welfare of children in the Meadowmont Community, many of whom walk to a neighborhood based elementary school.</li> <li>• <input type="checkbox"/> jeopardize the safety and welfare of the Meadowmont based Cedars Retirement community members who walk along, or drive through, the narrow tree lined community streets.</li> <li>• <input type="checkbox"/> jeopardize the safety and welfare of Meadowmont community homeowners and their families as they walk or drive through a high density neighborhood.</li> <li>• <input type="checkbox"/> generate noise and sound pollution associated with significantly increased traffic flow through narrow streets with relatively close, front yard set backs along community streets.</li> <li>• <input type="checkbox"/> have a negative environmental impact on county, city and developer promoted wetlands, greenways, walking trails, and wildlife preserves in the Meadowmont Community</li> <li>• <input type="checkbox"/> create a complex bridge and roadway system through creek, swamp, and green areas when less complicated and intrusive infrastructure is possible.</li> </ul> <p>As residents of the Meadowmont Community, the town of Chapel Hill and the Counties of Durham and Orange, we encourage the above agencies to consider placing any connecting, or arterial roads through less developed areas of Durham County and to remove all streets in the Meadowmont Community from any proposed connector or arterial plan.</p>	Meadowmont

Category	Date	Source	Input	Input Relevance
			<p>Respectfully Submitted,</p> <p>The signatures on the attached pages are intended to be an integral part of this document.</p>	
	3/21/06	Public Workshop #3/Email	<p>I live at 103 Springdale Way in Meadowmont. I'm sending you this e-mail to voice my concern over the proposed "cut-through" to Meadowmont Lane. My wife and I moved here from Los Angeles in March of last 2005 in search of a quite family oriented place to raise our daughter. Meadowmont is perfect! There is very little traffic; it's quiet, safe, clean and peaceful – with the exception of new house construction. The collector street would reverse everything I just mentioned. Safety would be a big concern with people flying down our streets. Residents of Meadowmont and The Oaks are just about the only people who obey the posted speed limit signs. This collector street would practically encourage people to blast down our streets at high speeds. If I can manage to keep from getting hit while walking my daughter to the park or riding my bike pulling the Burley Buggy, in the bike lane, to the Carolina Café, we still have to contend with the dirt and noise that is produced from 12,000 cars per day rolling down our streets.</p> <p>Criminals look for easy access. Having a house in phase III of Meadowmont discourages break-in's due to the limited escape route. This weekend a car window was smashed and a wallet taken at The Chapel Hill Country Club. Giving criminals an easier access, like the collector street, is simply unacceptable. We made a choice to live in Meadowmont for all the aforementioned reasons – Meadowmont Realty promised that the "Protected Wetlands" at the end of Meadowmont lane would "NEVER" be developed. That is why we own a house here – as do many others on Meadowmont Lane and Phase III.</p>	Meadowmont

Category	Date	Source	Input	Input Revlevance
Email	3/21/06	Public Workshop #3/Email	<p>I am a resident of Meadowmont, in what is known as the Phase III development. My home sits at the corner of Meadowmont Lane and Park Bluff N. Drive, sitting squarely next to the stubbed section of road that now (as of Oct 2005) is marked with signs noting "Road Subject to Future Expansion". My wife and I have followed the recent collector street planning meetings, having attended the second and third public hearings.</p> <p>We want to go on record and be clear that we are opposed to having Meadowmont Lane designated an arterial connecting road within the overall plan. We feel that the increased traffic, resultant noise, and increased pollution will pose significant and real risks to public safety. We are not opposed to the overall collector plan, but prefer expanded consideration of the use of George King Road as a connector to highway 54 .</p> <p>We are not supportive of a bridge being built across the wetlands area from Meadowmont Lane to other parts of SW Durham.</p>	Meadowmont

Category	Date	Source	Input	Input Relevance
Email	3/24/06	Public Workshop #3/Email	<p>Thank you for the presentation at the recent Collector Street Plan□Public Workshop #3 on the evening of March 21, 2006. I was pleased to see that some attention had been paid to my earlier requests that the Arboretum on George King Road be preserved. Following the meeting I still had four major concerns:</p> <ol style="list-style-type: none"> <li>1. The road along the southern boarder of the Arboretum appears to travel across the dam that was constructed in the 1950's to form the lake on the Arboretum property. A number of valuable trees were planted along this dam. The dam is currently the entrance to the property and is a single lane driveway. If this were to become a road, as shown on the map distributed for the March 21st meeting, not only would it require considerable construction costs, but also for the Arboretum there would be three unfortunate consequences:               <ol style="list-style-type: none"> <li>a. The plantings along the dam would be destroyed.</li> <li>b. The pond would be accessible to the public because the edge of the pond would be within the right-of-way. Anyone who wanted to launch a boat from this edge of the pond would have the right to do so.</li> <li>c. The road would cut through and largely destroy the northeastern corner of the Arboretum.</li> </ol> </li> <li>2. The plan shows a collector road that stops abruptly at the eastern boundary of the property. Early in the presentation portion of the meeting I understood that such roads were envisioned to continue through at some time in the future. In this case, a road that is planned (but not shown on the map) would cross directly through the Arboretum. Again, this would involve very serious damage to the plantings.</li> <li>3. If constructed at the expense of the Arboretum, the widening and paving of George King Road would remove an extensive portion of the property along the entire western boundary, and it would sacrifice a valuable buffer from the traffic along this thoroughfare.</li> </ol> <p>Thank you very much for your willingness to consider these efforts to conserve this valuable Arboretum and to make it available to the North Carolina Botanical Garden as a resource for future generations.</p>	General Theme
	3/22/06	Public Workshop #3/Email	See letter from Ed Kaiser.	General Theme

Category	Date	Source	Input	Input Revlevance
Email	3/21/06	Public Workshop #3/Email	<p>I live on Lancaster Drive and was unable to come to the meeting tonight. I think it is an awful idea to have more traffic on our street. Some of the cars that travel this road now, particularly nonresidents, already are driving too fast due to the wide street. To add additional, nonresidential traffic to our street without traffic calming devices in place is a BAD idea.</p> <p>Why do you want to turn a nice residential neighborhood into a raceway?</p> <p>BAD MOVE! Funnel the traffic elsewhere!</p>	Lancaster Drive
	3/22/06	Public Workshop #3/Email	<p>Mr. Henry, just a note to let you know I attended the collector street meeting last night. I was so sorry to see the verbal abuse that "Roger" sorry can't remember his last name, took from some of the crowd. You know the old saying, "don't kill the messenger", I don't think it is right how some people took out their frustrations on him during the presentation. I appreciate the hard work that has been put into this and the fact that we have been asked our opinion. Please let "Roger" know that some of us appreciate his knowledge and help.</p>	Roger
	3/08/06	Public Workshop #3/Email	<p>I see that there is not any improvements along the Watkins/Farrington Road section connecting to the new major thoroughfare, "SW Durham Drive"...Today there is an inordinate amount of traffic using these two roads and the existing Farrington Road is deteriorating very rapidly. They were not designed to carry the heavy truck traffic now using this corridor. When we moved to our home 17 years ago there was a weight limit on Farrington Road. Now heavily laden trucks of all sorts are using this road as a "bypass".</p> <p>Why are these two roads not included in the upgrade program?</p>	Farrington Road
	3/08/06	Public Workshop #3/Email	<p>i'm writing on behalf of my husband and myself to express our opposition to the proposed plan to make the fearrington road intersection a right-turn only network. having a kindergartner at creekside elementary, as well as another younger son who will be attending creekside, and living in sw durham, we need to go straight through that intersection or turn left to get home from school. with the knowledge that we will be traversing this intersection at least twice a day for the next eight years at least makes it a very pressing concern for us that we'd be re-routed and have to backtrack to get home.</p>	Farrington Road

Category	Date	Source	Input	Input Relevance
Email	2/24/06	Public Workshop #3/Email	<p>I reside at 157 Celeste Circle and was out of town during the last public workshop #2 held on January 10th. In talking to my neighbor Mrs.. Walker, she told me that one of the plans calls for a new connector road to go though where my house is. In looking at Alternative "C" it appears that she is correct. Can you confirm this?</p> <p>As of now, what plan is most likely to be considered, Plan A, B or C and what is the time table to start the project? Is it 1-3 years or 3-5 years away? I suppose for obvious reasons I would prefer plan A or B</p> <p>I moved here from Virginia 5 years ago and love the neighborhood but am very concern about how this project will increase traffic as well as future commercial development.</p>	Celeste Circle
	3/26/06	Public Workshop #3/Email	<p>I attended the last meeting 21 March and was very disappointed with the presentation.</p> <p>The consultant had not done his homework-ie.. did not know that Chapel Hill will be installing 6 speed bumps on Pankhurst Dr and 4 bumps on Nottingham Dr. and 1 on Lancaster Dr. He said the one connector off Nottingham did not have a name yet. Well I have correspondence from 2003 that has Kilkenney named.</p> <p>The scope of the study area is too limited. It should include the impact of the new developments on 54. The offices on the South side of 54 have impacted traffic through the Oaks.</p> <p>The latest version of the arterial seems to adversely effect more people than earlier versions. When asked why the new road doesn't follow George King, the consultant did not have a good answer " its not paved." Why go through an established neighborhood when you can direct the road through sparsely populated areas?</p> <p>As the current head of the Oaks III HOA, my neighbors see no need to cut through Kinsale now since it does not connect to the arterial road. East West Partners can use George King and leave us alone.</p>	General Theme
VoiceMail	3/23/06	Public Workshop #3/VoiceMail	<p>Gary Barnes contacted Andy Henry on March 23, 2006 to: 1) voice support for the collector plan to reduce traffic that comes through the Meadowmont area; 2) let it be known that the community association did not sign the petition brought forward by a group of homeowners; 3) request information on the project number of vehicle trips on Southwest Durham Drive; 4) ask if George King Road could become an arterial road; and, 5) ask if any of the road connectors to the Oaks will be taken out of the recommended collector street network.</p> <p>Mr. Barnes leads the Meadowmont Community Association and is a member of the Chapel Hill Transportation Board.</p>	General Theme

<b>Category</b>	<b>Date</b>	<b>Source</b>	<b>Input</b>	<b>Input Revlevance</b>
VoiceMail	3/23/06	Public Workshop #3/VoiceMail	Arthur Deberry, resident of the Cedars, left a voicemail for Andy Henry on March 23, 2006. Mr. Deberry stated that he supported the opening of the road through the backside of Meadowmont that goes to US 15-501. He believes this outlet is important to reduce the congestion on NC 54, and the road opening would be a benefit for everybody.	General Theme

100 Tweed Place  
Chapel Hill, NC 27517  
March 22, 2006

Andrew Henry, Planner  
Durham Transportation Department  
101 City Hall Plaza  
Durham, NC 27701

Dear Andy:

This letter is to express my concerns to you and other members of the TAC and MPO staff about the Southwest Durham County and Southeast Chapel Hill Collector Street Plan. I divide my comments into two main parts—comments about the plan and comments about the workshops.

I have three concerns about the proposed plan. Though stressing “connectivity,” the plan exhibits disturbing disconnections that mar what is basically a good and innovative planning effort. The first disconnection is between the collector street lattice-work design and the proposed Southwest Durham Drive alignment. If one looks at the recommended plan, there is no escaping the conclusion that the collector street grid, with spacing between collectors roughly determined by proposed residential densities, is completely independent of the SW Durham Drive alignment. If this were a painting, it is as if two separate artists drew on the same canvass, or the artist’s child drew an arbitrary SW Durham Drive line on the collector street design. In other words, the SW Durham Drive was completely ignored in the collector street design, and vice versa. The SW Durham Drive was even declared “off-limits” for discussion in the workshops—outside the scope of the contract. Is it because no one believes the Drive will be built? Is it shown merely because the alignment has already been “approved” by local governments, but now is deemed outside the scope of a transportation plan collector street plan for the same area, all part of the same transportation system? It makes no planning sense not to address the alignment of that arterial and not to integrate it with the collector street plan, perhaps realigning it with George King Road or Fearington Road. There is a similar issue with the transit line, though the uncertainty surrounding future rail transit makes that less troubling.

A second disconnect is in implementation strategy, between proposed future streets and existing neighborhood streets. The proposed plan shows only the proposed future streets in bold lines, and discusses (vaguely) how to implement that part of the collector street system through development regulations. That seems reasonable so far as it goes, except that those streets are only part of the collector street system. In actuality, the plan and the resulting traffic pattern includes existing streets in Chapel Hill to which the new collectors connect. How do we implement comparable retrofitting of those existing streets? They do not meet the standards properly proposed for new streets in the plan. It is doubtful that local governments will be able to require developers to build the necessary off-site improvements under development regulations. Retrofitting almost

certainly requires a capital improvement program by local governments, particularly in the already built-up Chapel Hill portion of the area. Who will pay for and implement traffic calming measures, bike lanes, sidewalks, landscaping, and the like to make the collector streets work properly in the existing adjacent neighborhoods? Does Chapel Hill agree to take on that responsibility? The proposed plan ignores this issue. I surely hope we are not satisfied with a plan that merely “dumps” new traffic onto existing neighborhood streets that were not designed to the same desirable standards as the proposed new collectors.

The third disconnect is in the emphasis placed on accommodating traffic. The plan holds out the concept of “complete streets,” which not only accommodate cars, bikes, and pedestrians, but also become “part of the neighborhood environment.” In fact, however, the plan emphasizes the transportation aspect—accommodating cars, bikes, and pedestrians. That is an appropriate concern, but designing and retrofitting streets so that they also work as “part of the neighborhood environment” is equally important to those of us living on those streets.

Now, as to the public participation workshops... The last presentation, on March 21, was the most disappointing of the three workshops. The presentation was almost entirely devoted to generalities about transportation planning principles that repeated earlier meetings and mostly irrelevant photos of streets and highways (e.g., photos showed no cars on the streets that are proposed to become collectors and be loaded with traffic). There was no explanation of the proposed plan, how it followed the general planning principles espoused earlier, how it would achieve objectives, why it was the best alternative, and how exactly it would be implemented. Then the presenter cut off discussion when many of us had our hands raised since the beginning of the commentary period. He did so by, remarking to the last speaker that he had expressed commentary instead of asking a question. Since when is a workshop limited to asking questions? I realize that workshops are difficult to manage and are now water under the bridge, and that we all need to move on, but you should just realize that a number of participants were disappointed. This should not reflect on the MPO staff who maintained easy and wide contact with residents throughout the process; it was the consultant who ran the workshops.

Lastly, let me commend you on undertaking the innovative approach of going beyond thoroughfare planning. I believe you can address flaws in the proposed collector street plan. It still holds the promise of an improvement over the ad hoc, piecemeal, assembly of a collector system, one subdivision or development proposal at a time, which virtually all local governments have been utilizing until now.

Sincerely,



Edward J. Kaiser  
Resident of the Southwest Durham Planning Area,  
Professor emeritus of planning at UNC-CH

**This letter is being sent to: Mayor William Bell, Chair; Alice Gordon, Vice-chair; Mayor Kevin Foy; Durham County Commissioner, Becky Heron; Chapel Hill Council Person, Ed Harrison; and Andrew Henry and David Bonk, staff planners.**

Mary B. Ruvane  
110 Tweed Place  
Chapel Hill, NC 27517

April 10, 2007

Andrew Henry, Sr. Planner  
City of Durham, Transportation Department  
101 City Hall Plaza  
Durham, NC 27701

RE: Concerns with SW Durham Collector Street Plan

Dear Andy,

I support, in theory, the value of collector streets for improving traffic flow from within and between adjacent neighborhoods. As development progresses in the currently undeveloped land supported by Ephesus Church Road to the north, Farrington Road to the east, Route 54 to the south, and 15/501 to the west these new neighborhoods clearly will need access via collectors to major arterials. With that said, I have several concerns regarding the currently proposed transportation plan within this region.

First, the collector street plan appears to rely on an ad hoc implementation and seems disconnected from the overall transportation plan. It overlooks the need to preserve a hierarchal relationship (e.g., arterial, collector, local) between existing and future road networks as development progresses, an essential piece in the puzzle when considering how and when to link new connectors into established neighborhood infrastructures. If congestion and safety on the more major routes are already a problem, ignoring these issues will surely encourage the unintended use of new collector streets as "cut-through" routes by non-residents. Upgrades to the surrounding arterials and major collectors should be planned in conjunction with any new development, to insure increased traffic volumes are accommodated and prevent neighborhood collector streets from becoming interim thoroughfares.

Second, the "approved" SW Durham alignment seems to be untenable. The route appears to require substantial construction through environmentally sensitive wetlands and looks to be perilously close, if not within, land designated by FEMA as a 100-year floodplain. Additionally, numerous properties would be adversely impacted by increased noise, traffic, and pollution generated from this major route cutting directly behind or through established neighborhoods (e.g., Oaks III, Oaks Villas, Meadowmont). Many residents of Meadowmont and the Oaks communities have begun to voice objections to this "approved" alignment. It also seems unlikely the route will ever reach fruition, considering the adverse environmental impact and lack of funding. These issues suggest a more practical and less costly solution should be considered before further development reduces the alternatives available.

Third, funding for upgrades to existing roads, designated as links to new collector streets, has not been addressed. Many of these are in quiet established residential neighborhoods, which currently lack amenities to address pedestrian safety and maintain community aesthetics

essential to mitigate the result of increased traffic. This is especially important for existing roads that pass through popular recreational facilities, such as the Chapel Hill Country Club and trail access to Meadowmont Park, or by school sites and residential properties with little frontage.

Fourth, supporting documentation seems lacking, which makes it difficult to follow the logic behind many of the decisions made to date. For example, why would upgrades to George King Road require such disruption through the Eastwood Park neighborhood? There appears to be undeveloped land just to the north of this community that could allow an eastward connection to Farrington, as well other options that should be considered to avoid this situation. Also absent are current and projected traffic volumes for both the existing and proposed roads, and anticipated future increases as development progresses. Additionally, for the public to fully understand the context of the transportation plan, larger scale maps (e.g., < 1:2500) would be helpful. These ideally should be provided in print format upon request, and illustrate property lines, street names, administrative responsibilities, and destination points (e.g., shopping, businesses, schools, churches, recreational facilities, etc.) in relation to the major roads surrounding the study area (e.g., 15-501, I-40, Rte. 54, Farrington Rd., Pope Rd., Ephesus Church Roads).

I appreciate your time in listening to my concerns and recognize the hard work that the DCHC MPO and related organizations have put into this transportation planning effort. These comments are submitted in good faith to point out some of my concerns, which hopefully can be addressed in future discussions.

Respectfully,

A handwritten signature in cursive script that reads "Mary Ruvane". The signature is written in black ink and extends to the right with a long horizontal flourish.

Mary B. Ruvane  
Resident of SW Durham Planning Area

**April 4, 2006**

**To: The Chapel Hill-Carrboro-Durham Metropolitan Planning Organization; the City of Chapel Hill; the counties of Orange and Durham; the North Carolina Department of Transportation**

**Re: Southwest Durham Drive Arterial connection through the Meadowmont Community**

**Dear Mr. Henry and Mr. Wood,**

**I am a resident of the Meadowmont Community. I would like to respectfully register my strong disagreement with the current proposed alignment of the Southwest Durham Drive artery that traverses the Greenways, walking trailways, Army Core of Engineer wetlands and wildfowl impoundment lands on its way through the heart of the Meadowmont community.**

**I am specifically opposed to the alignment for the following financial, environmental, and safety reasons:**

- 1. The bridge and elevated road system required to span the creeks and swamp areas over the Army Core land will cost the DOT millions of unnecessary dollars of investment. Rather, there are already existing roads to the East of the Core land that can address the desire to have arterial connection from 15-501 to highway 54. Consideration of these alignment alternatives is fiscally responsible.**
- 2. Reading your web pages, it is clear that there are major tenets and directives in the Durham, Chapel Hill, and MPO planning charter that call for maintenance of green spaces and the rapidly dwindling wildlife areas. Routing arterial traffic through precisely this type of terrain seems to defy logic and established decision making mandates, especially when the alternatives for arterial flow East of the Core property achieve the same traffic flows from Southwest Durham and do not impact environmentally sensitive areas.**
- 3. The Meadowmont community is a pedestrian friendly and environmentally sensitive development. There are bikeways adjacent to both sides of Meadowmont Lane. There is a school and retirement center directly adjacent to Meadowmont Lane. Dumping a traffic volume of twelve to fifteen thousand cars a day down this village street would**
  - jeopardize the safety and welfare of children in the Meadowmont Community, many of whom walk to the neighborhood based elementary school.**
  - jeopardize the safety and welfare of the Meadowmont based Cedars Retirement community members who walk along, or drive through, the narrow tree lined community streets.**

**As a resident of the Meadowmont Community, the town of Chapel Hill and Durham county, I strenuously urge you and the above agencies to move the Southwest Durham Drive alignment to the East of the Army Core of Engineers property and to remove Meadowmont Lane and the Meadowmont Community from any proposed arterial traffic plan.**

**Respectfully Submitted,**

**Eric Teagarden**

 <p>Triangle J Council of Governments</p>	<h1>Motor Vehicle Emission Budgets</h1>	
	<p>State Implementation Plan for the Triangle Ozone Non-Attainment Area</p>	<p>April 19, 2006 DRAFT</p>

### *What is the issue?*

The NC Division of Air Quality (DAQ) is proposing to develop a “maintenance” State Implementation Plan (SIP), rather than the originally envisioned “attainment” SIP. A letter from Laura Boothe of DAQ describes important differences between the two, including the longer time frame and potential use of safety margins associated with Motor Vehicle Emission Budgets (MVEBs). Because of these differences, DAQ is allowing additional comment by MPOs on the establishment of the MVEBs.

Comments from local and regional organizations could address such issues as:

1. Whether to recommend a multi-county, MPO-centered Motor Vehicle Emission Budget (Durham, Orange, Chatham, Person) or recommend separate budgets for each of these four areas.
2. Whether to recommend the inclusion of “safety margins” in any budgets (either multi-county or separate budgets). Safety margins are additional emission levels above the modeled motor vehicle amount that would be allowed in order to account for such factors as faster than anticipated growth under existing plans, delays in the construction of anticipated facilities to relieve congestion, or changes in modeling techniques.
3. Whether to recommend the inclusion of voluntary mitigation measures or mandatory Transportation Control Measures (TCMs) in the Triangle SIP. Voluntary mitigation measures are activities that could be pursued if emission budget levels may be exceeded, but they have no special status in the event of a budget lapse. TCMs are *required* actions described in the SIP (and which may continue in the event of a budget lapse). For example, the construction of a transit facility or the expansion of specific Transportation Demand Management activities could be included in a SIP as either voluntary mitigation measures or as Transportation Control Measures.

### *What have the TACs done previously?*

At its January 11, 2006 meeting, the DCHC TAC voted to endorse the recommendation of the TCC from its December meeting and support separate budgets for each of the counties within DCHC MPO (Chatham, Durham and Orange). The DCHC TAC has not considered any voluntary mitigation measures or Transportation Control Measures. The TAC has not addressed the issue of safety margins for the motor vehicle emission budgets because safety margins were not an option for “attainment” SIPs, but are now an option for the “maintenance SIP.”

At its January 18, 2006 meeting, the CAMPO TAC voted to endorse a single multi-county, MPO-centered budget for the four counties that are CAMPO members: Franklin, Granville, Johnston and Wake. This decision was also supported by the Kerr-Tar RPO and the Upper Coastal Plain RPO, and was not opposed by NCDOT.

***Why might the DCHC TAC want to reconsider previous decisions?***

There are several possible reasons that the TAC may want to reconsider its stance on motor vehicle emission budgets and consider requesting safety margins. Some are listed below.

1. The MVEBs will be in place for a longer time and the budgets would be established for longer-term dates. Whereas the original “attainment SIP” was expected to only be in force for a couple of years before it was replaced by a “maintenance SIP,” now that a maintenance SIP is being prepared there will not be an opportunity to revisit the issue in the near term. The attainment SIP would also have set a budget for 2008, only a couple of years into the future, whereas the maintenance SIP will have budgets stretching out to 2017.
2. This extended period can exacerbate any errors in growth forecasts or facility availability. With a 2008 budget, there is greater confidence in growth forecasts and facility completion dates, which are what is modeled to develop the budgets. With a 2017 budget, especially if budgets are set for individual counties, errors in growth forecasts or facility completion date estimates could pose problems. An initial examination of the growth forecasts developed back in 2002 for the 4 townships in Chatham County in the non-attainment area, for example, suggest that growth may have been significantly underestimated based on projects already existing, approved or under consideration in NE Chatham County.
3. Significantly different tools will be used to develop the budgets, then compare future plans to the budgets. The “old” version of the Triangle Regional Model, running in TranPlan software and without the recent TTA model enhancements, will have to be used to develop the budgets, since the “new” TransCAD version of the model with the TTA enhancements won’t be available for use until later in 2006. But the newer version of the model will then be used to compare future versions of the Long Range Transportation Plan to the motor vehicle emission budgets. If these two models produce different results, there is the possibility that meeting budgets, especially for individual counties, could be difficult. (See the document *VMT Sources for Air Quality Modeling in the Triangle* for greater detail).
4. Additional MPO members may wish to participate in the discussions and decisions, and members may wish to spend more time on the implications of different choices. Because the issue was addressed over the December-January holiday period, some member communities may not have had the opportunity for adequate participation. Chatham County, Orange County and Hillsborough staff – 3 of the 7 MPO communities -- were not able to attend the December 21 TCC meeting. Similarly, the Chatham County, Hillsborough and Carrboro representatives were unable to attend the January 11, 2006 TAC meeting where the issue was briefly addressed. TCC members from local and regional organizations at the December 21 meeting were divided on the recommendation for 4 separate budgets for Chatham, Durham, Orange and Person counties vs. a single MPO-centered budget for the same 4 counties. Chapel Hill, Carrboro, TTA and 2 Durham staff members supported 4 separate county-level budgets and TJCOG and 2 Durham staff members supported a single MPO-centered budget. NCDOT staff voted 3-1 in favor of four separate county-level budgets.

***What are some of the major implications of 4 county-level budgets vs. a single multi-county, MPO-centered budget covering Chatham, Durham, Orange and Person Counties?***

The motor vehicle emission budget decision is complex and subject to much uncertainty. Although a single regionwide budget for all eight counties in the non-attainment area is not currently being considered, it is important to recognize that planning or budget lapses in one MPO can affect the other MPOs and rural areas if they are not resolved in a timely fashion. Documents listed later in this report provide greater detail, but a few points may be worth emphasizing:

1. The responsibilities that MPOs and NCDOT/RPOs have are the same under either option:
  - Each MPO and NCDOT must adopt growth forecasts for its areas of responsibility.
  - Each MPO and NCDOT must adopt LRTPs and TIPs for new facilities/services for its areas.
  - Each MPO (within its Metropolitan Area Boundary) and NCDOT (for rural areas) must make a conformity finding for its LRTPs and TIPs.
2. The total amount of motor vehicle emissions (air pollution from cars and trucks) allowed to be emitted, and how these emissions are calculated, are the same under either option.
3. The consequences and the timing of these consequences are the same under either option if the DCHC MPO has an LRTP or TIP that expires (a *planning* lapse) or an emissions budget is exceeded that includes Chatham, Durham or Orange County (a conformity *budget* lapse); the timing of consequences could be different for a Person County budget lapse under the MPO-centered option.

***What other information is available?***

The following background material is being posted on the Triangle Air Quality Partnership website on the State Implementation Plan Motor Vehicle Emissions Budget page ([www.triangleair.org](http://www.triangleair.org)):

***Options & Implications*** -- a summary that shows maps of the original options and includes a table summarizing their major implications.

***What if?*** -- a matrix containing details on the consequences if a Long Range Transportation Plan (LRTP) or Transportation Improvement Program (TIP) expires in any MPO or rural county in the non-attainment area, or if a LRTP or TIP causes an emissions budget to be exceeded under either option.

***Cases for Different Options*** -- a document summarizing the arguments that have been put forward for choosing one or the other of the options.

***Motor Vehicle Emission Budgets FAQs*** -- a document that tabulates questions and responses as they develop.

***Division of Air Quality Letter*** -- a letter explaining the development of the maintenance SIP.

***VMT Sources for Air Quality Modeling in the Triangle*** -- a document that summarizes how the amount of travel is reflected in air quality modeling.

***Who can I contact for more information about these issues?***

For information on the development of the State Implementation Plan (SIP) and its Motor Vehicle Emission Budgets (MVEBs), contact:

Mike Abraczinskas  
Division of Air Quality  
NC Department of Environment and Natural Resources  
1641 Mail Service Center  
Raleigh, NC 27699-1641  
P: 919-715-3743  
[michael.abraczinskas@ncmail.net](mailto:michael.abraczinskas@ncmail.net)

For information on transportation air quality conformity requirements, contact

Edward J. Dancausse  
Air Quality Specialist  
FHWA NC Division  
310 New Bern Avenue, Suite 410  
Raleigh, NC 27601-1418  
919-856-4330 x112  
[edward.dancausse@fhwa.dot.gov](mailto:edward.dancausse@fhwa.dot.gov)

For information on MPO roles and decisions, contact:

Felix Nwoko  
City of Durham  
Public Works/Transportation Division  
101 City Hall Plaza  
Durham, NC 27701  
919-560-4366  
[felix.nwoko@durhamnc.gov](mailto:felix.nwoko@durhamnc.gov)

Edison H. Johnson, Jr., PE  
Director, N.C. Capital Area Metropolitan Planning Organization  
127 W. Hargett St. - Suite 406  
Raleigh, NC 27601  
Telephone: 919.807.8511  
E-Mail: [ed.johnson@ci.raleigh.nc.us](mailto:ed.johnson@ci.raleigh.nc.us)

For information on regional coordination of MVEB and conformity issues, contact:

John Hodges-Copple, Planning Director  
Triangle J Council of Governments  
P.O. Box 12276  
Research Triangle Park, NC 27709  
[johnhc@tjcog.org](mailto:johnhc@tjcog.org)  
Telephone: 919-558-9320

## VMT Sources for Air Quality Modeling in the Triangle

Prepared by John Hodges-Copple, Triangle J Council of Governments, April 17, 2006 version

There are three main modeling efforts, and each uses somewhat different techniques or inputs, although efforts are made to make them consistent:

- Attainment demonstration modeling – combines motor vehicle emissions with emissions from all other sources to model ozone levels at the monitoring sites during selected weather episodes.
- SIP MVEB setting modeling – uses only motor vehicle emissions to set the budgets that will be included in the State Implementation Plan.
- Conformity modeling – uses only motor vehicle emissions to compare the emissions from a long range plan or TIP to the budgets established during the SIP MVEB modeling.

For *attainment modeling* and *SIP MVEB modeling*, the forecast VMT amount is increased by 30% in counties where the NCDOT Universe File/HPMS (Rural Spreadsheet Model) is used to develop the VMT forecast, but where the county is already in or may be brought into, a travel demand model in the future. This factoring is based on observations showing that Universe File/HPMS VMT tend to under-report modeled VMT by 30% in counties where Universe File/HPMS and travel demand model VMT can be compared. This factor can be thought of as an “equivalency” factor to ensure that rural spreadsheet VMT is essentially equivalent to travel demand model VMT as the county is brought into the regional travel demand model.

An additional factor may be used in both *attainment modeling* and *SIP MVEB modeling* to try and reflect especially large anticipated growth in counties on the edge of fast growing metropolitan regions, recognizing that past VMT growth (as reflected in the regression equation used to forecast future VMT) may under-represent what is to come. These “growth” factors are arrived at through discussions among the state and local agency staffs involved in transportation and air quality planning. After soliciting input from these partners, DAQ will apply an additional 10% growth factor in Johnston County and an additional 20% growth factor in Franklin County over and above the 30% “equivalency” factor described in the previous paragraph.

For *conformity modeling*, VMT from a regional travel demand model must be used where it is available. In rural areas not covered by the regional travel demand model, *unfactored* NCDOT rural spreadsheet model VMT is used. In these rural areas, the 30% “equivalency” factor essentially serves as an additional cushion for the VMT comparison, since the MVE budget was developed with the factor, but the emissions developed for a long range plan or TIP that are compared to the budget are developed without the factor. The table below summarizes the source of VMT by county that DAQ is using for each of the three modeling efforts, *given the current coverage* and projected evolution of the Triangle Regional travel demand Model:<sup>1</sup>

VMT source	Chatham	Durham	Franklin	Granville	Johnston	Orange	Person	Wake
Attainment	RSM x 1.3	old TRM	RSM x 1.5	RSM x 1.3	RSM x 1.4	RSM x 1.3	RSM	old TRM
SIP MVEB	old TRM	old TRM	RSM x 1.5	RSM x 1.3	RSM x 1.4	RSM x 1.3	RSM	old TRM
Conformity	new TRM	new TRM	TRM/RSM	TRM/RSM	TRM/RSM	new TRM	RSM	new TRM

RSM means NCDOT Rural Spreadsheet Model; TRM means Triangle Regional travel demand Model; “old” means the unrevised TranPlan model; “new” means the TransCAD model with TTA revisions.

TRM/RSM means the TRM is used in the part of the county covered by the TRM; RSM is used in rest of county.

1.3 means a 30% equivalency factor is applied; 1.4 or 1.5 means an additional 10% or 20% growth factor is applied.

<sup>1</sup> Although both Orange County and the four townships of Chatham County in the non-attainment area are covered by the Triangle Regional travel demand Model (TRM), DAQ discussions with NCDOT have resulted in a recommendation to use factored Rural Spreadsheet Model (RSM) VMT in the attainment demonstration modeling for both counties and also in the SIP budget setting modeling for Orange County. In Chatham County, this is so consistently generated emissions can be used for the entire county in the large geographic area used in the Community Multiscale Air Quality model for attainment modeling. In Orange County, this is because TRM VMT was observed to be only 1% more than RSM VMT, which was judged to indicate possible problems with the TRM VMT; using factored RSM VMT was judged to provide more of a cushion in estimating mobile source emissions both in the attainment modeling and the SIP budget modeling.

**Chapel Hill STP-DA Amendment for April 26, 2006 TCC**

**Existing**

TIP #	Location	Description	Total Cost	FY 06	FY 07
C-4726F	03-04 bike allocation	Chapel Hill Sidewalks	\$250,000	\$200,000	
U-4726P	07 bike/ped allocation	Culbreth Rd: 15501-Culbreth Park Dr. sidewalk	\$135,000		\$108,000

**Amendment**

TIP #	Location	Description	Total Cost	FY 06	FY 07
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DURHAM • CHAPEL HILL • CARRBORO METROPOLITAN PLANNING ORGANIZATION

Member Governments

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

**Application for Non-voting Membership to the  
Durham-Chapel Hill-Carrboro  
Metropolitan Planning Organization  
Transportation Advisory Committee**

Thank you for your interest in membership in our organization. Please fill out the following application and return it to DCHC MPO staff.

1. Name of organization:

**North Carolina Turnpike Authority**

2. What is the mission of your organization?

**To help meet the state’s critical highway needs by providing a state-of-the-art turnpike system that will improve mobility, reduce congestion, enhance economic prosperity, save motorists time, deliver key projects sooner, protect investors and enrich our citizen’s quality of life.**

3. Describe the history of your organization. When and how was it established?

**The North Carolina Turnpike Authority was created in 2002 by the North Carolina General Assembly to study, develop, construct, operate and maintain up to nine (9) toll roads in the state. The Authority's charge is to determine if and where toll roads may be constructed to provide options to existing heavily congested roadways. The NCTA will assist the Department of Transportation in its ongoing congestion-fighting efforts and will provide more transportation facilities than the department could otherwise afford.**

4. What geographic area does your organization serve or represent?

**The state of North Carolina**

5. Is your organization involved in the administration of transportation regulations? If so, how?

**No.**

6. Does your organization independently fund transportation services or the construction of transportation facilities? If so, what types of services or facilities?

**The NCTA, in conjunction with NCDOT, fund and construct roadway facilities.**

7. Does your organization own or provide transportation services or facilities? If so, are these services or facilities open to the general public? How are the services or facilities funded?

**The NCTA does not current own or operate any transportation facilities.**

8. Who would serve as your TAC member? Mr. Robert D. Teer, Jr.

**What is their position in your organization? Mr. Teer is a member of the North Carolina Turnpike Authority Board of Directors**

9. Why should your organization be represented on the TAC?

**The NCTA is currently considering two projects within the Triangle Region: I-540 Western and Southern Wake Outer Loop and the Triangle Parkway. These roadways are important facilities for improving mobility for the citizens of Wake, Durham and Orange Counties. However, the construction of these roadways as toll roads or as freeways is not the silver bullet. Congestion is not a static problem that can be solved, it is an ongoing problem that must be managed, and will require municipal and county to continually explore new concepts and ideas for improving transportation alternatives. The NCTA is a partner with the NCDOT, the cities of Durham and Chapel Hill, and Wake and Orange Counties in providing the citizens of the Triangle Region with an alternative to driving on our congested freeways.**

10. How will your organization contribute to the decisions and discussions of the TAC?

**The NCTA will provide the MPO and the NCDOT with an alternative funding solution for expediting needed transportation projects currently not programmed for construction in the state or municipal TIP.**

## **Policy for Non-voting membership to the DCHC MPO TAC**

The TAC approved the following policy on March 8, 2006.

1. The organization shall send a request to the LPA.
2. The LPA staff will send the organization an application for membership (see attached application).
3. LPA staff will review the answers to these questions and make a recommendation to the TCC. In general, TAC non-voting members should have the following characteristics:
  - The representative on the TAC should be a board member or executive of the organization.
  - The organization should be responsible for any of the following:
    1. Independent funding of transportation services or the construction of transportation facilities that could be included in the LRTP or TIP.
    2. Ownership or direct provision of transportation facilities or services open to the general public within the MPO.
  - The organization should not be a unit of an existing MPO member or be a contractor of an existing MPO member.
4. LPA staff will present their recommendation to the TCC. The TCC will review and make a recommendation to the TAC.
5. The TAC will receive the recommendation of the TCC and will vote on the request.

**Priority #10**  
**Holloway Street – sidewalks**

Project Description: construct 5ft sidewalk

Project Limits: Junction Road to Lynn Road; Miami Boulevard to US 70. Approximately 6,500 linear feet.

Local Agency Sponsor: City of Durham

Estimated Cost: \$325,000

Relationship to other local and regional plans: Included in the Durham Comprehensive Pedestrian Plan



## ***Priority #11 Hillsborough Road – sidewalks***

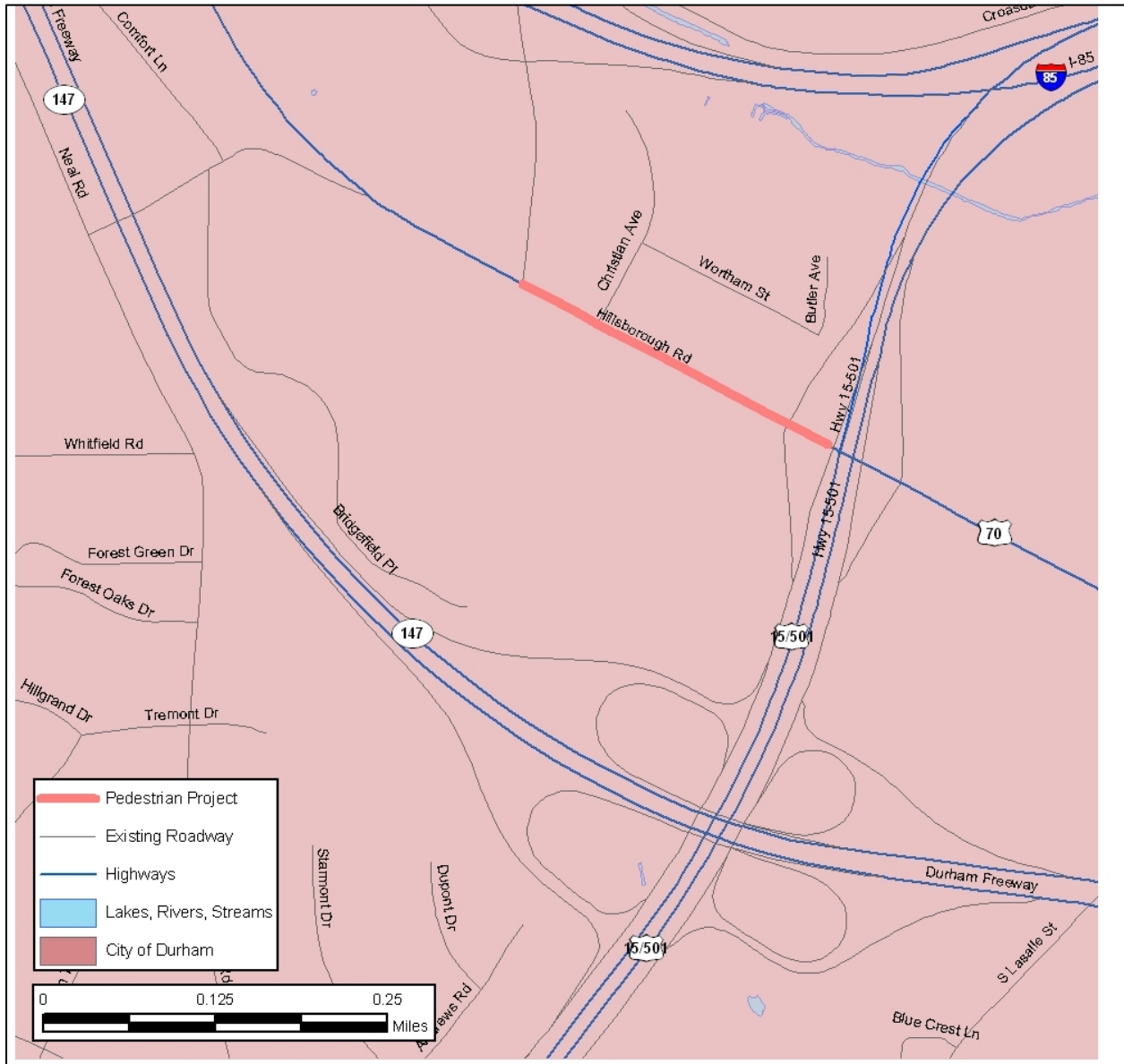
Project Description: construct 5ft sidewalks

Project Limits: US 15-501 to Cole Mill Rd. Approximately 3,500 linear feet.

Local Agency Sponsor: City of Durham

Estimated Cost: \$67,500

Relationship to other local and regional plans: Included in the 2006 Durham Comprehensive Pedestrian Plan



**Priority #14**  
**Old Durham-Chapel Hill Road – bicycle and pedestrian improvements**

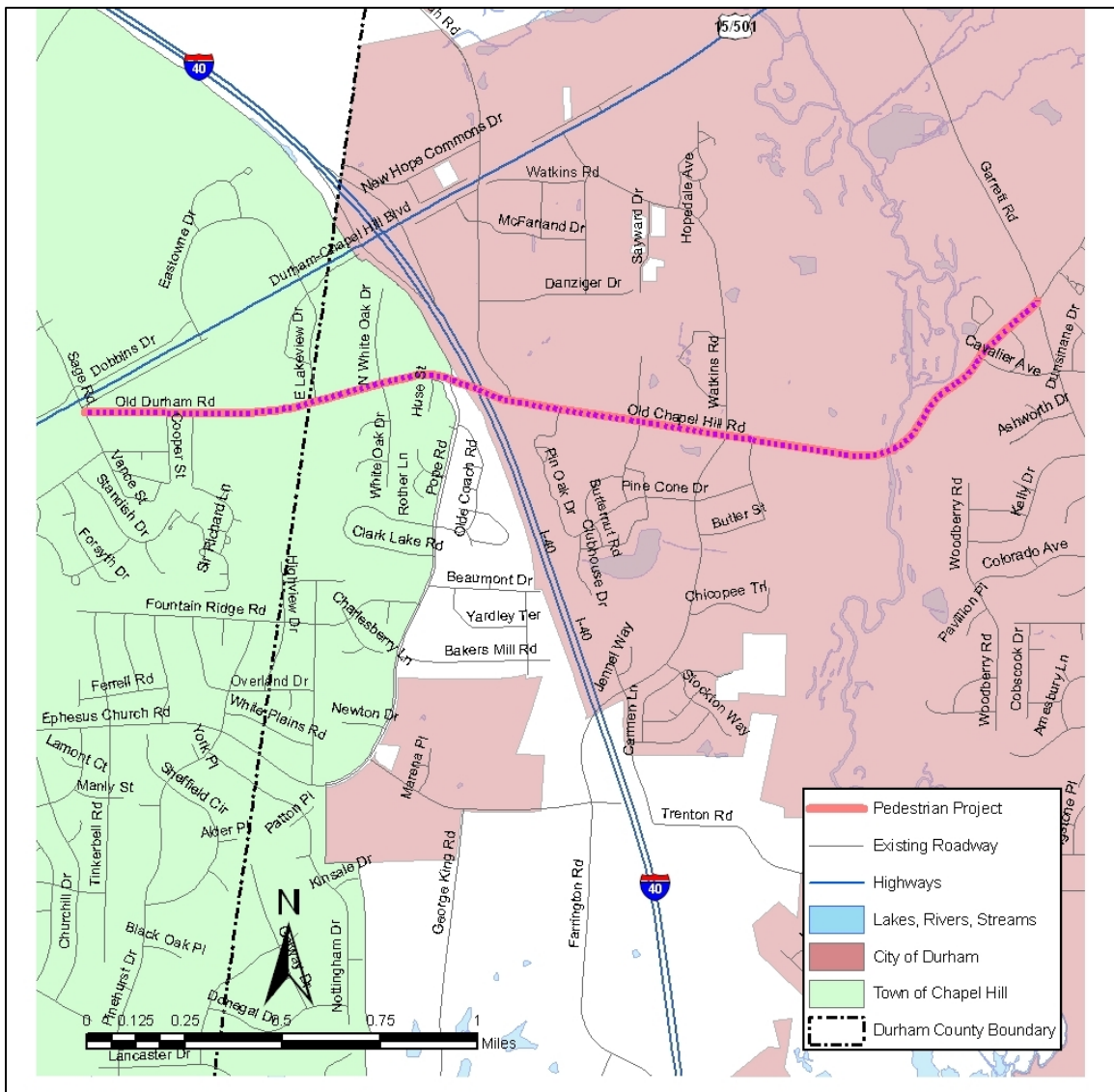
Project Description: bicycle and pedestrian improvements between Garrett Road and US 15-501, including connectivity between residential areas, Githens Middle School, and the existing greenway and trail systems

Project Limits: US 15-501 (CH) to Garrett Rd (D)

Local Agency Sponsor: City of Durham

Estimated Cost: \$3,800,000

Relationship to other local and regional plans: Improvements recommended in the 1993 Regional Bicycle Plan; included in the 2006 Durham Comprehensive Pedestrian Plan Project. Feasibility study completed in November 2005; project included in the 2030 LRTP.



### Priority #17 American Tobacco Trail Phase E – greenway trail

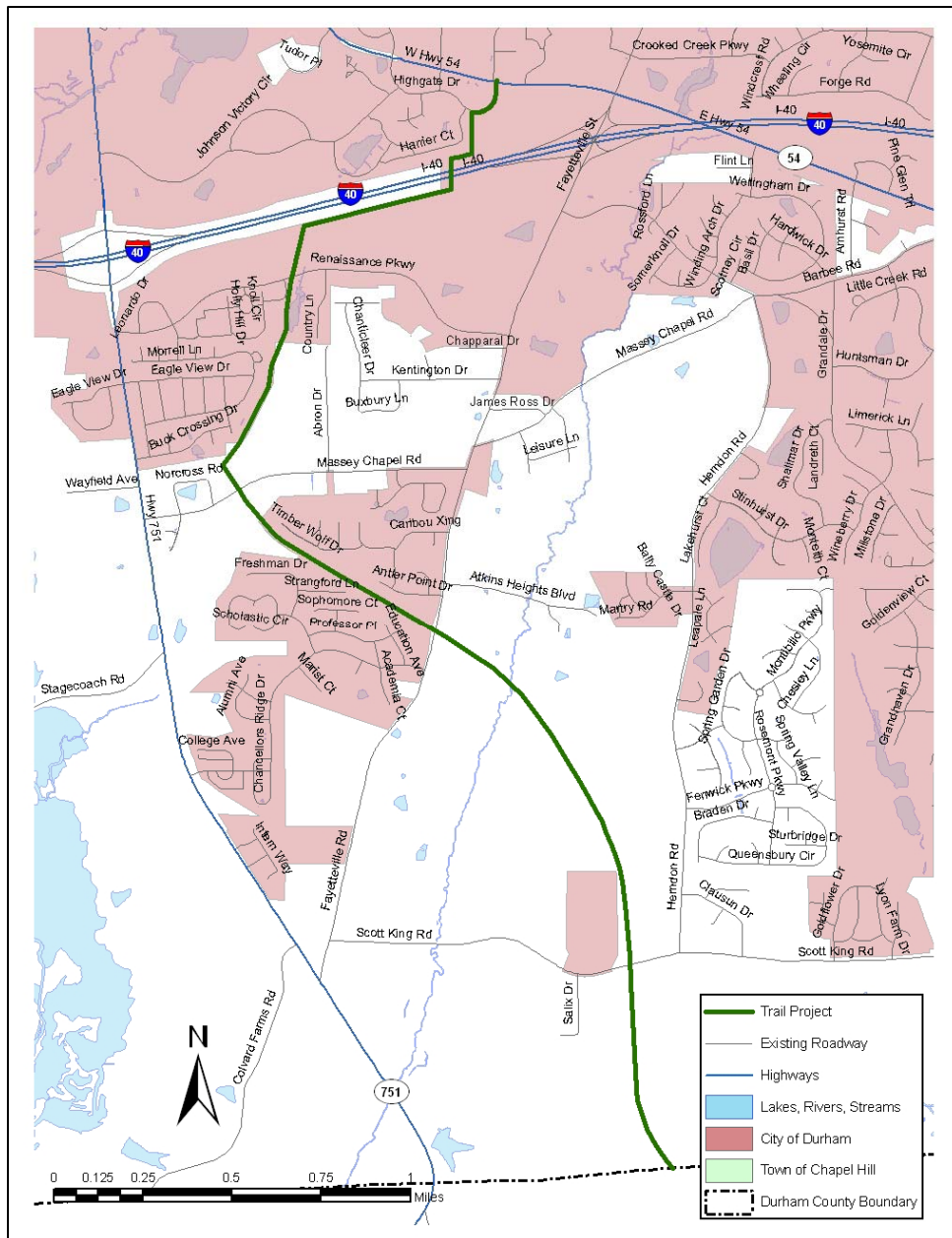
Project Description: construct 10ft rail-trail and bike/pedestrian bridge over I-40

Project Limits: NC 54 to Chatham County Line. Approximately 23,760 linear feet.

Local Agency Sponsor: City of Durham

Estimated Cost: \$4,591,200

Relationship to other local and regional plans: Phase E is included in the American Tobacco Trail Master Plan, completed in October 1992; project included in the 2030 LRTP.



# Priority #19 Bicycle/Pedestrian Connectivity to Regional Rail

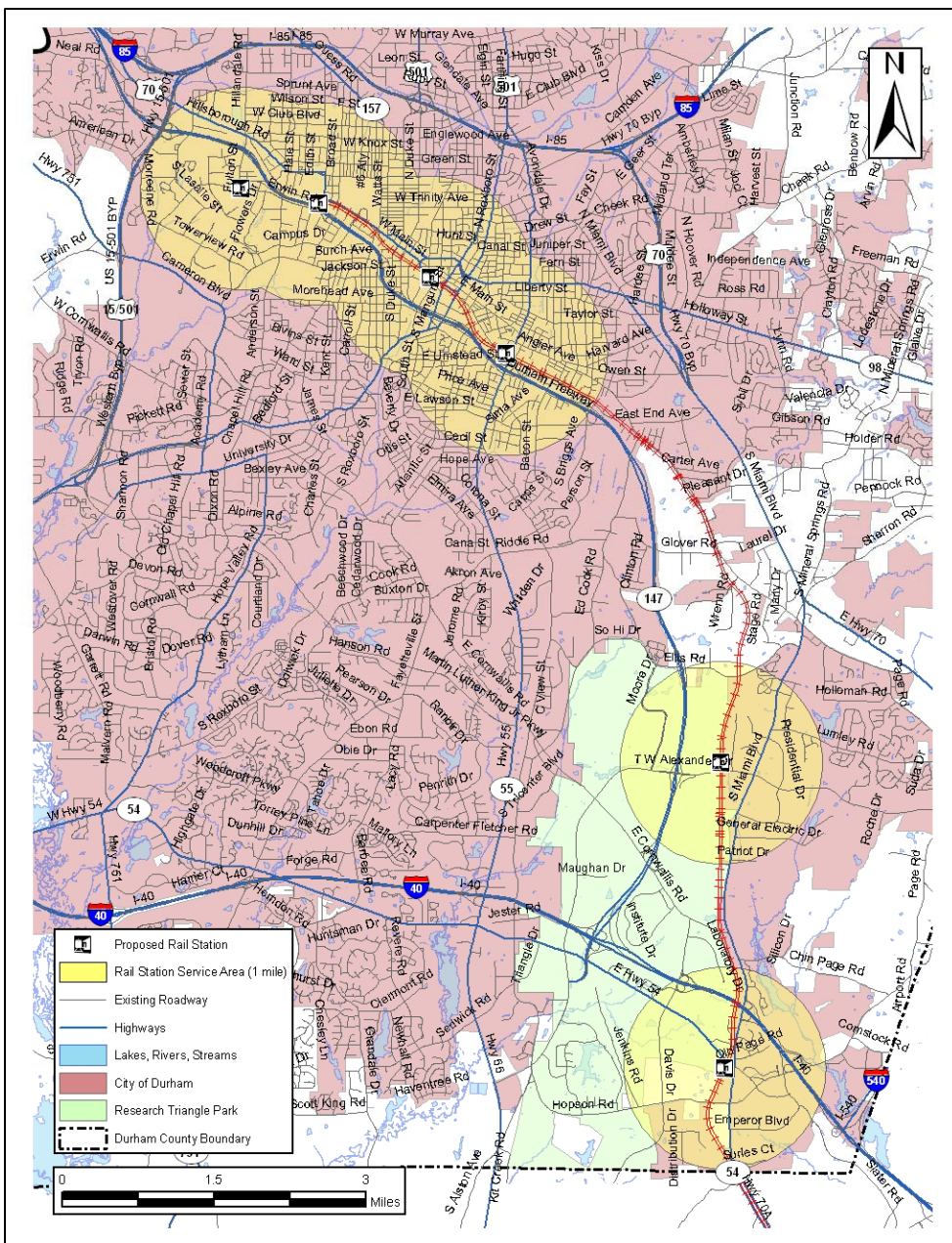
Project Description: provide bicycle/pedestrian connectivity within 1 mile of planned Phase I rail stations

Project Limits: Duke University/Durham to UNC/Chapel Hill

Local Agency Sponsor: City of Durham

Estimated Cost: N/A

Relationship to other local and regional plans: Recommended elements suggested in Triangle Transit Authority's Station Area Guidelines, completed in December 1997.



## Priority #22 Hope Valley Road – bicycle and pedestrian improvements

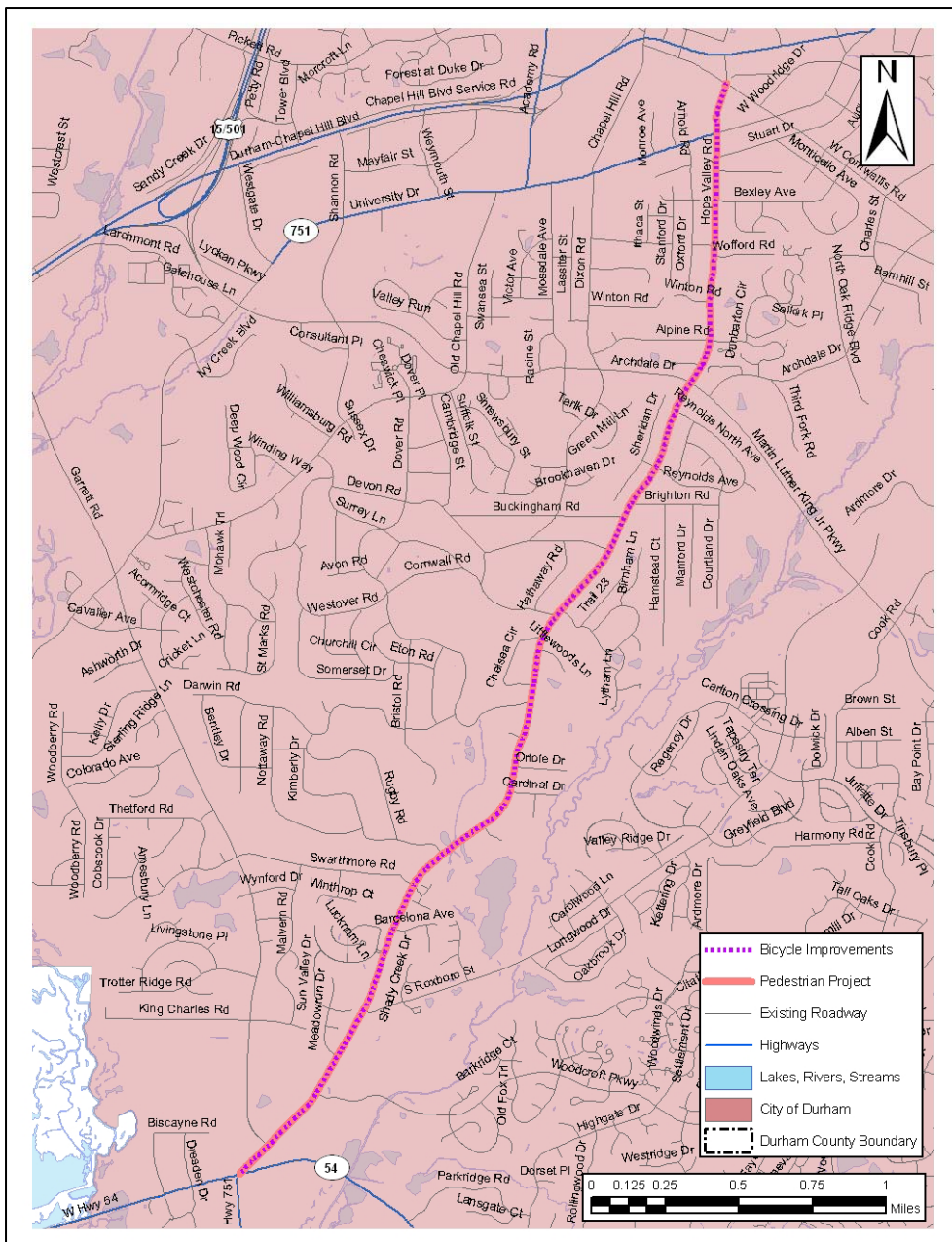
Project Description: construct bicycle and pedestrian enhancements

Project Limits: University Dr to NC54. Approximately 22,500 linear feet.

Local Agency Sponsor: City of Durham

Estimated Cost: \$3,002,100

Relationship to other local and regional plans: Improvements recommended in 1993 Regional Bicycle Plan and in the 2006 Durham Comprehensive Pedestrian Plan project included in the 2030 LRTP.



## ***Priority #23*** ***Hillandale Road – sidewalks***

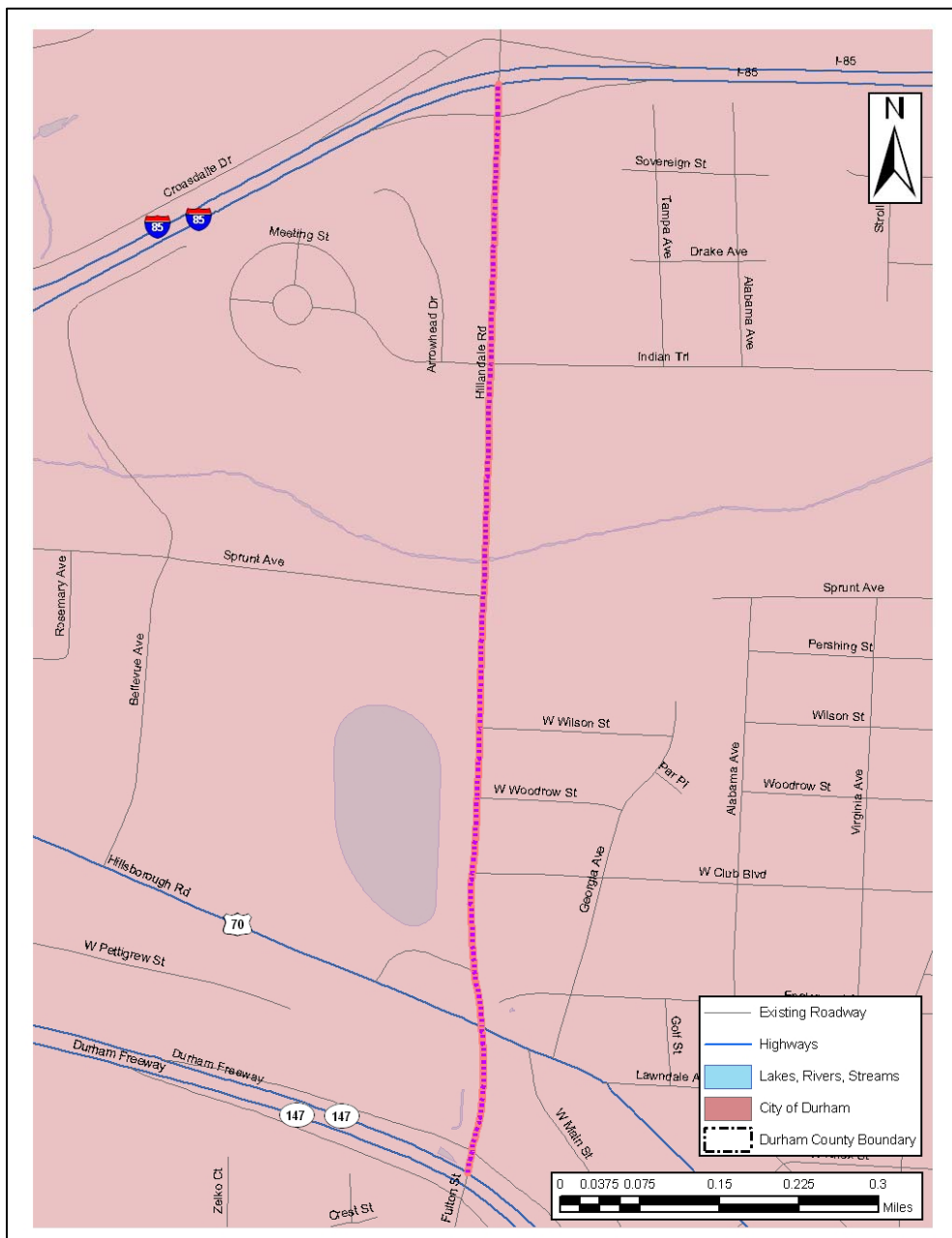
Project Description: construct sidewalk

Project Limits: I-85 to Club Boulevard and Club Boulevard to NC147. Approximately 5,500 linear feet.

Local Agency Sponsor: City of Durham

Estimated Cost: \$550,000

Relationship to other local and regional plans: Included in the 2006 Durham Comprehensive Pedestrian Plan.



# Priority #28 Erwin Road – bicycle improvements

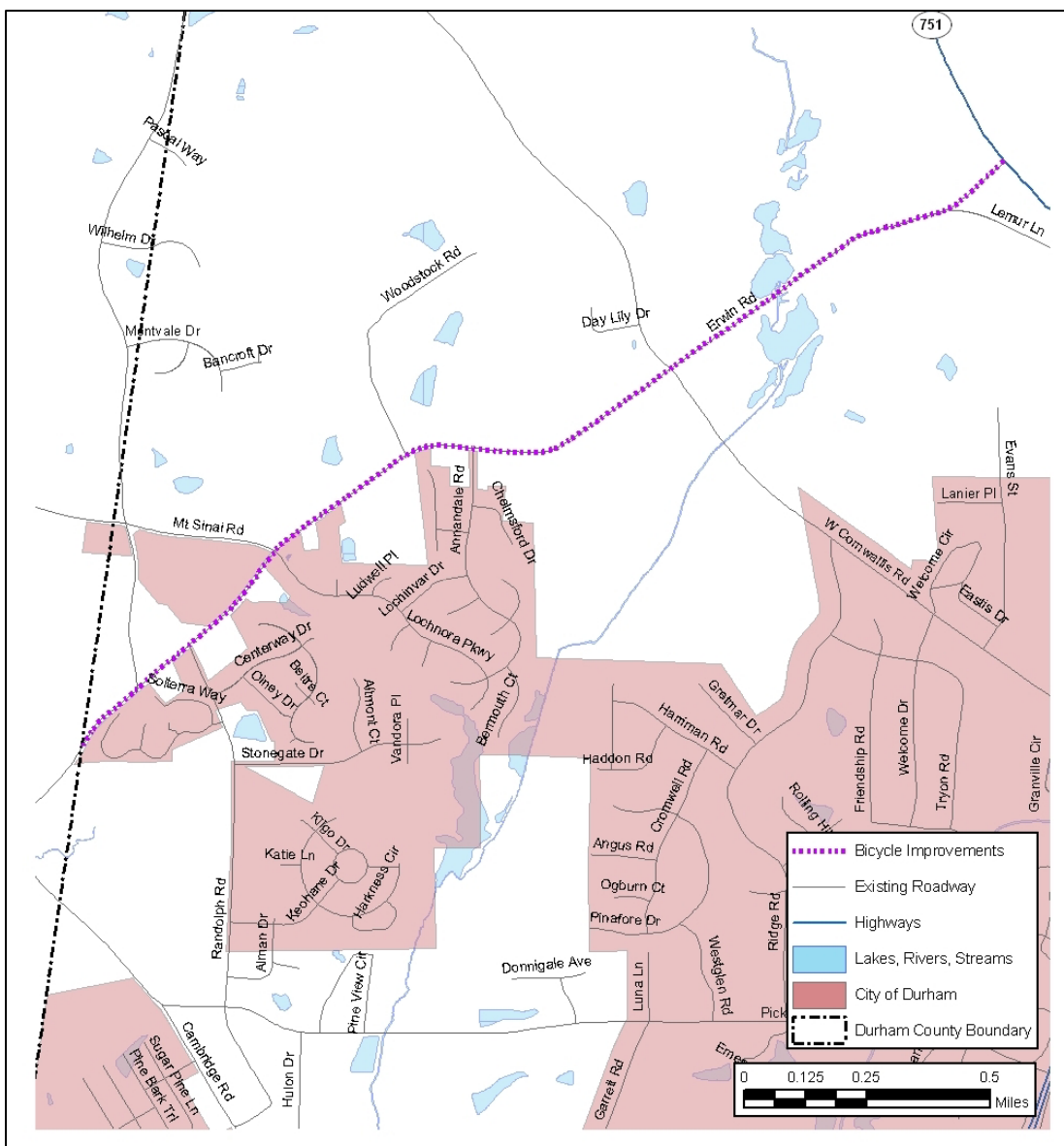
Project Description: bicycle improvements

Project Limits: NC 751 to Orange County Line. Approximately 12,250 linear feet.

Local Agency Sponsor: City of Durham/Durham County

Estimated Cost: \$425,734

Relationship to other local and regional plans: Improvements recommended in the 1993 Regional Bicycle Plan; project included in the 2030 LRTP.



***Priority #29***  
***Carpenter Fletcher Rd – bicycle improvements***

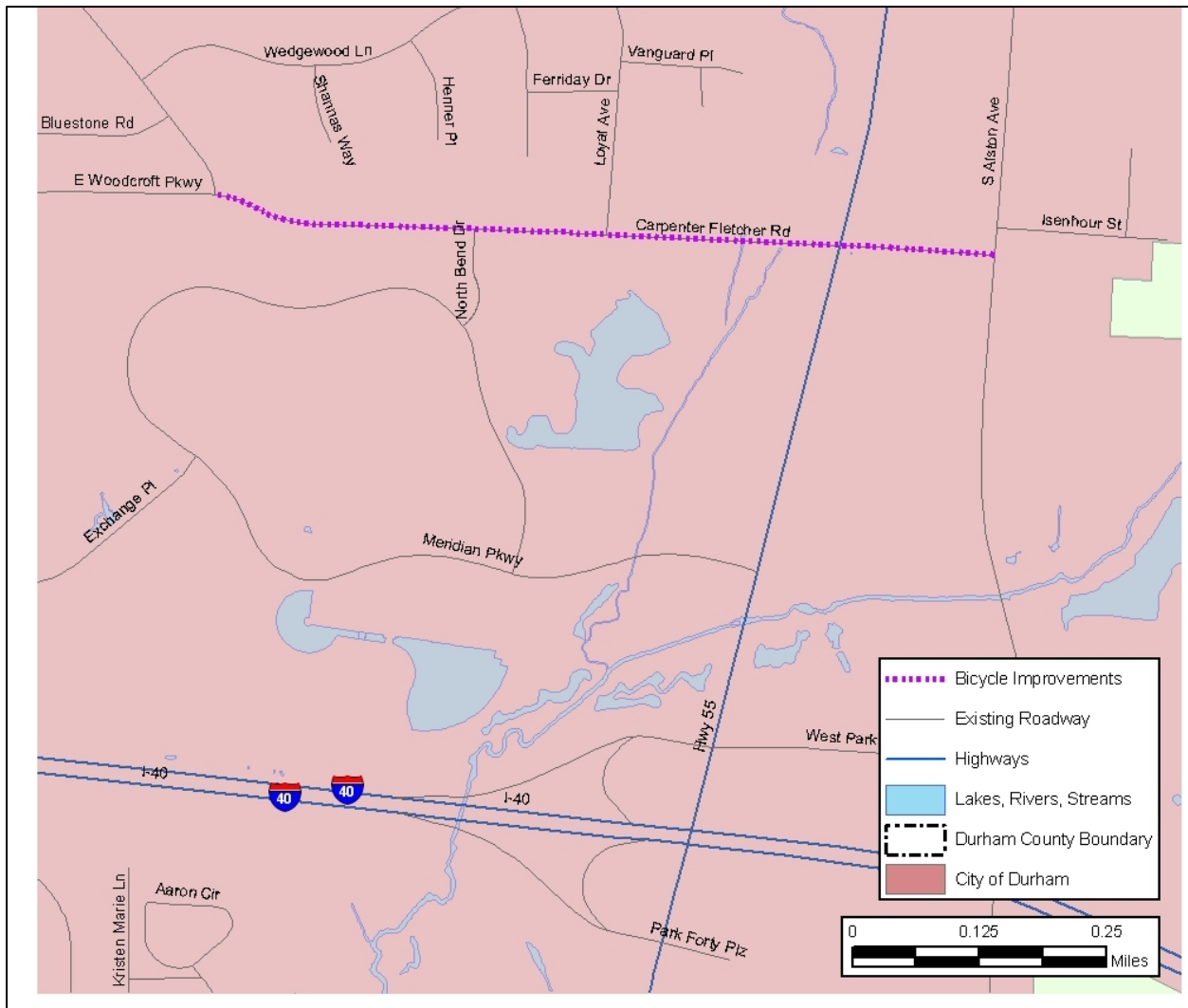
Project Description: bicycle improvements

Project Limits: Woodcroft Pkwy to Alston Ave. Approximately 4,100 linear feet.

Local Agency Sponsor: City of Durham

Estimated Cost: \$130,800

Relationship to other local and regional plans: Project included in the 2030 LRTP.



***Priority #31***  
***Barbee Chapel Road – bicycle improvements***

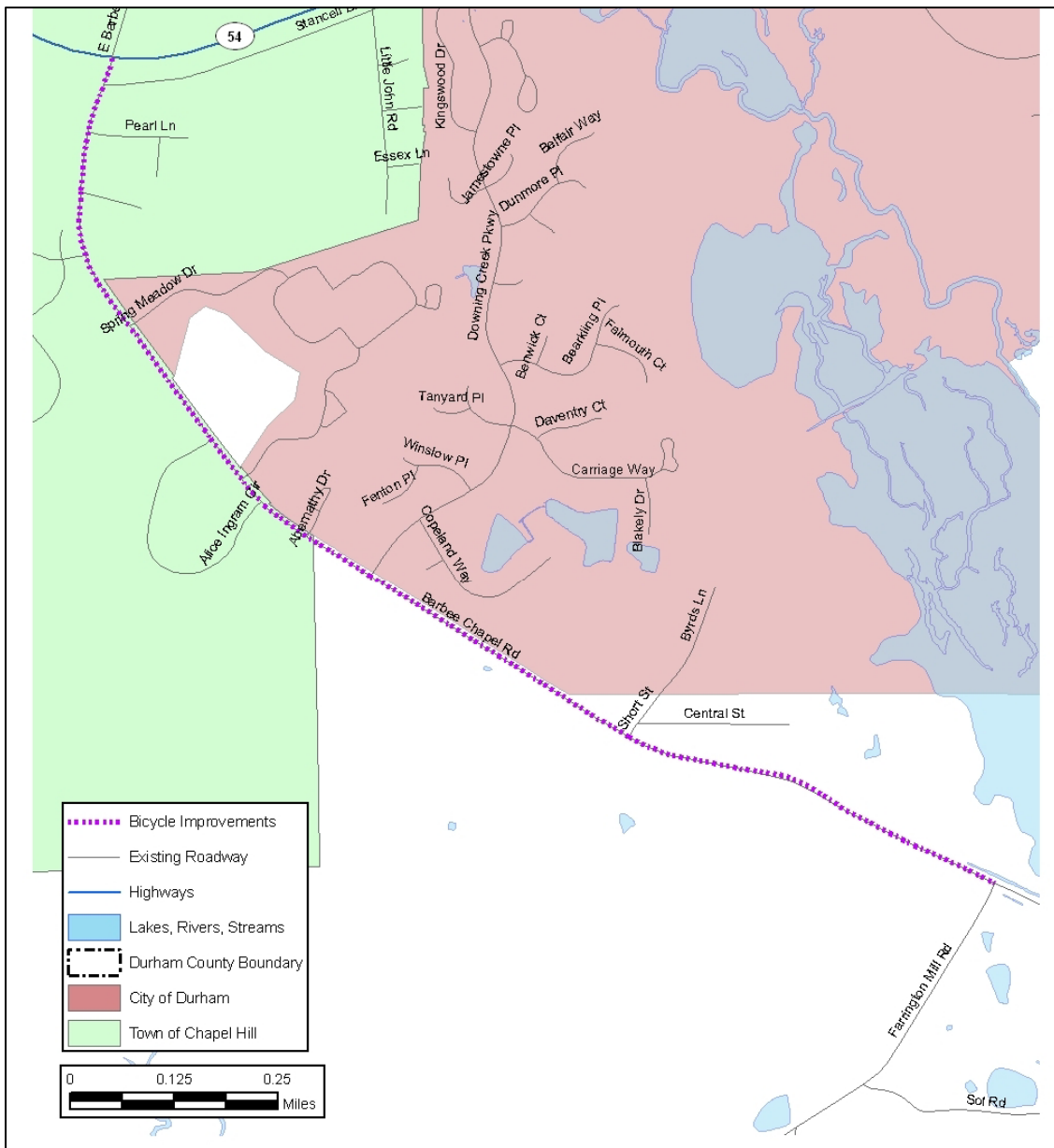
Project Description: construct bicycle lanes

Project Limits: Farrington Road to NC54

Local Agency Sponsor: City of Durham, Town of Chapel Hill, Durham County

Estimated Cost: \$283,400

Relationship to other local and regional plans: Improvements recommended in the 1993 Regional Bicycle Plan; project included in 2030 LRTP.



### ***Priority #35 LaSalle Street – pedestrian improvements***

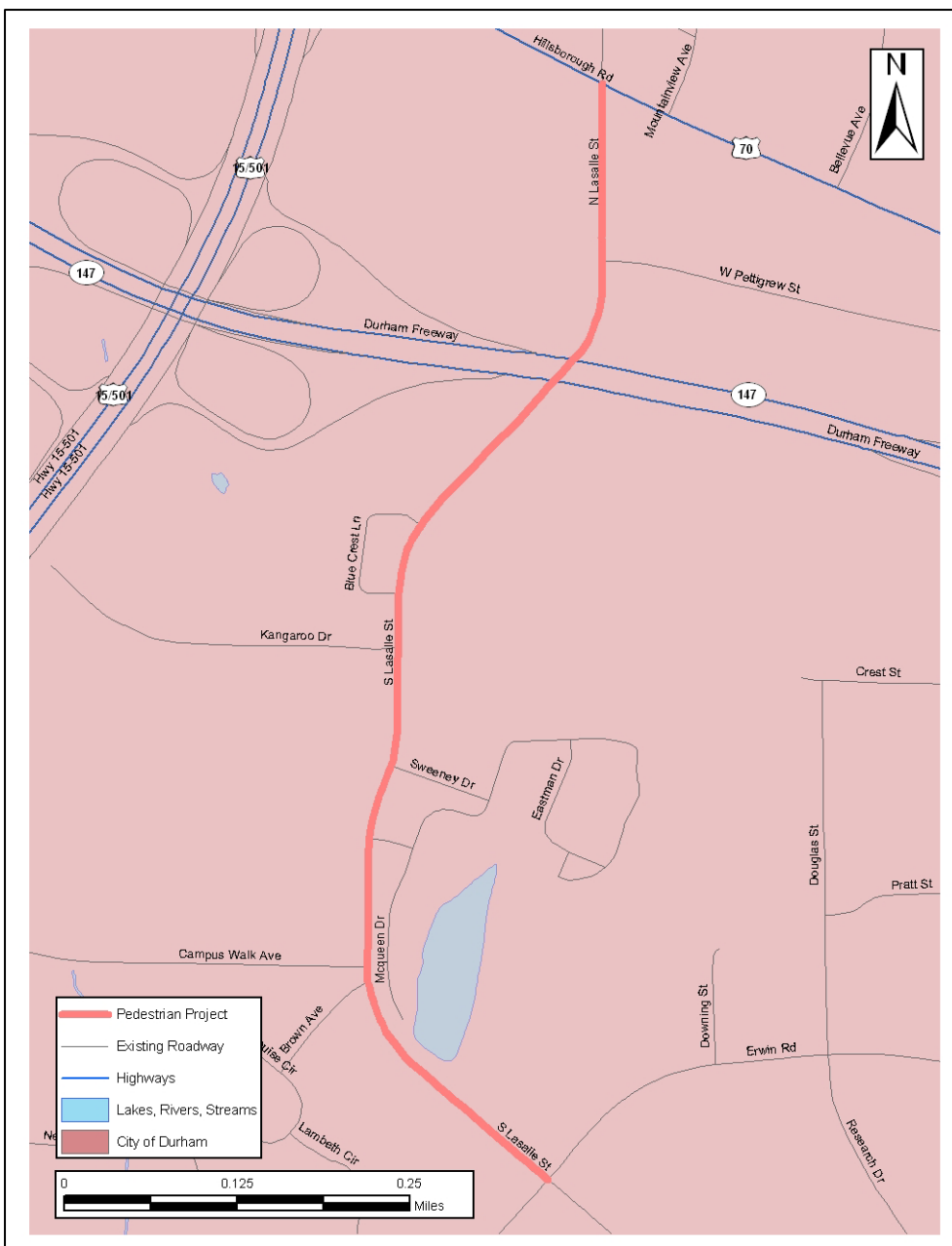
Project Description: construct 5ft sidewalks

Project Limits: Erwin Road to Hillsborough Road. Approximately 4,800 linear feet.

Local Agency Sponsor: City of Durham

Estimated Cost: \$ 480,000

Relationship to other local and regional plans: Included in the 2006 Durham Comprehensive Pedestrian Plan.



### ***Priority #36*** ***Chapel Hill Road – bicycle and pedestrian improvements***

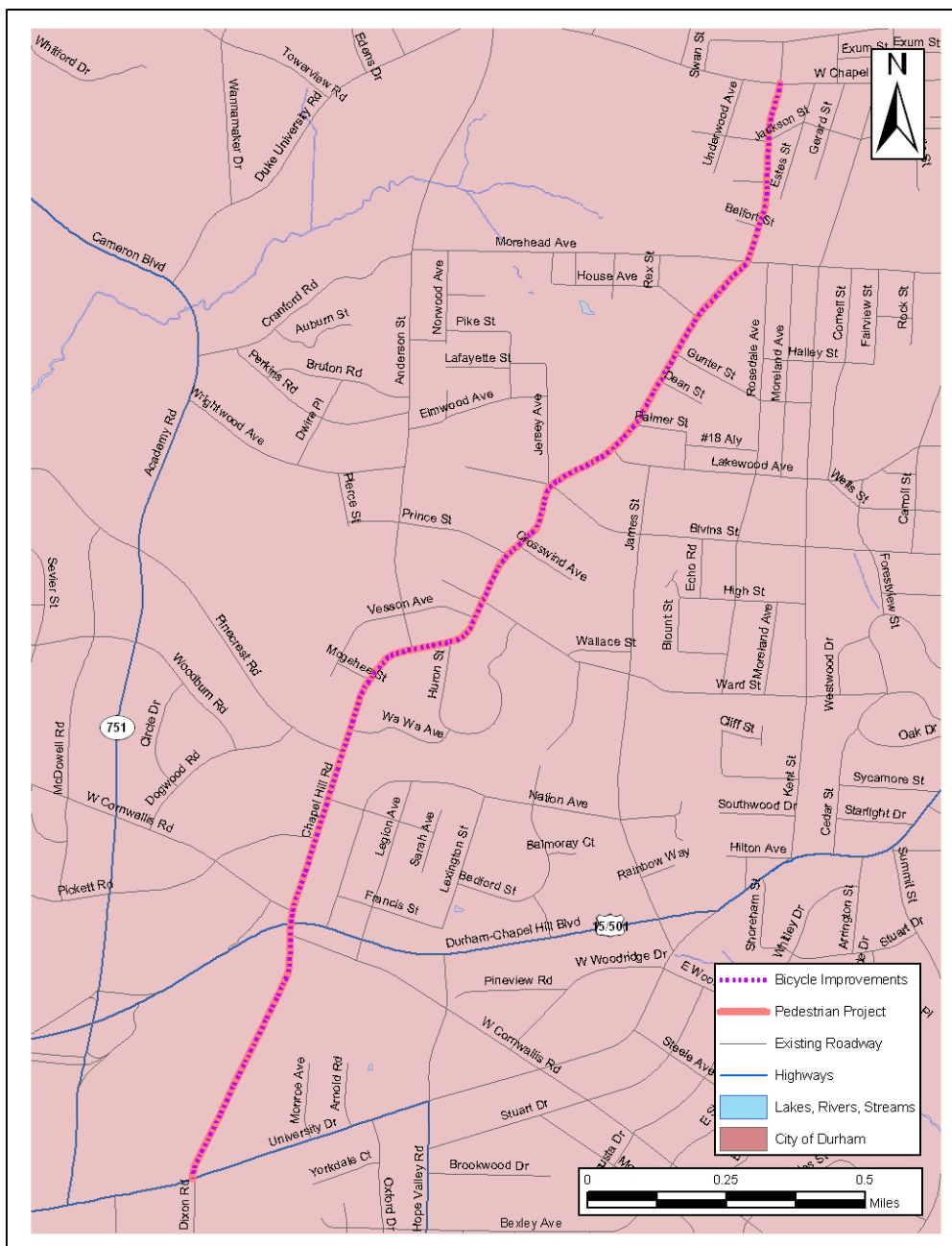
Project Description: bicycle and pedestrian facilities

Project Limits: University Drive to Duke University Drive. Approximately 12,500 linear feet.

Local Agency Sponsor: City of Durham

Estimated Cost: \$1,000,000

Relationship to other local and regional plans: Included in the 2006 Durham Comprehensive Pedestrian Plan.



### ***Priority #37*** ***Dearborn Drive – bicycle and pedestrian improvements***

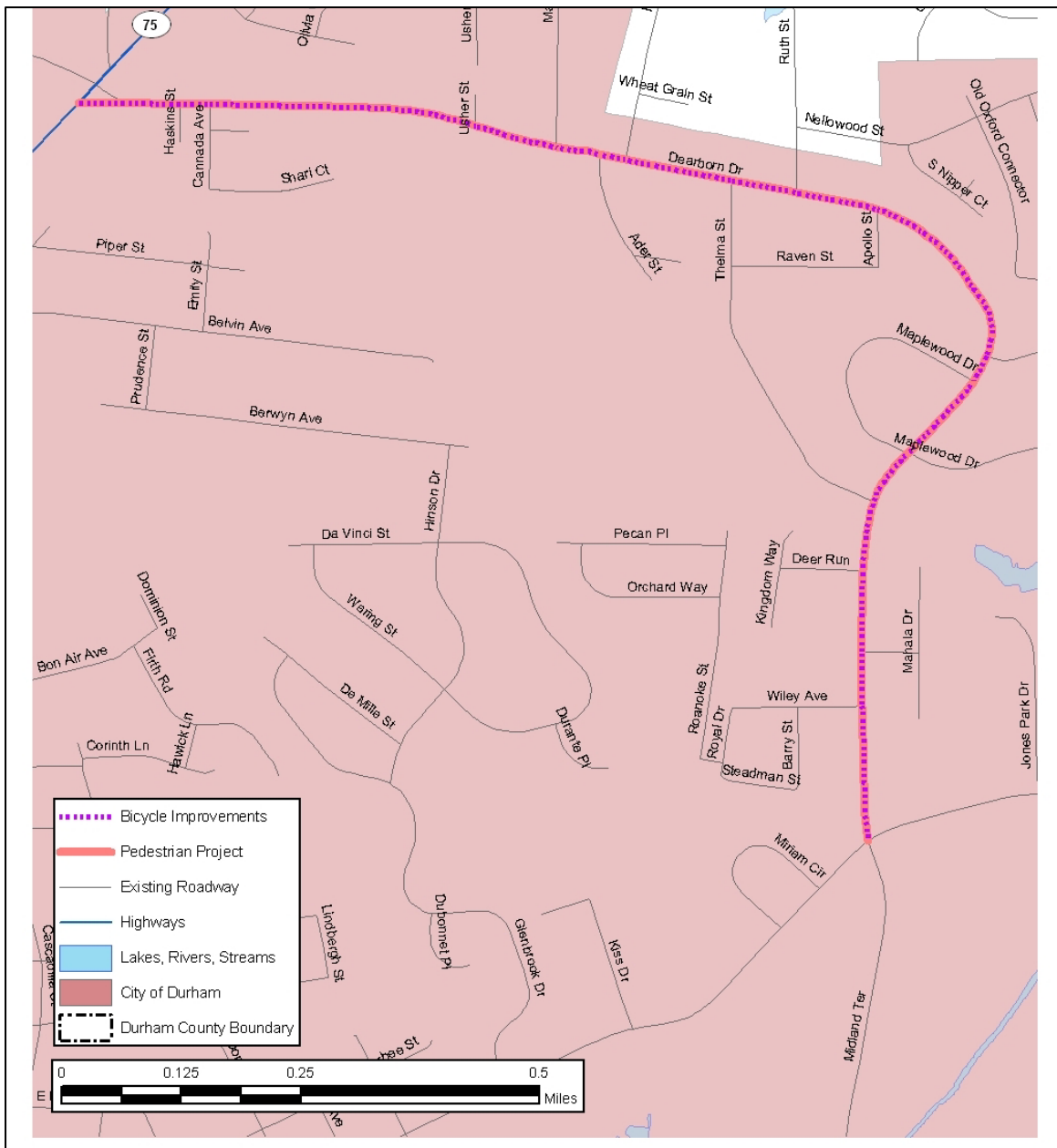
Project Description: bicycle and pedestrian facilities

Project Limits: East Club Boulevard to Old Oxford Road. Approximately 8,600 linear feet.

Local Agency Sponsor: City of Durham

Estimated Cost: \$860,000

Relationship to other local and regional plans: Included in the 2006 Durham Comprehensive Pedestrian Plan.



**Priority #38**  
**Morreene Road – bicycle and pedestrian improvements**

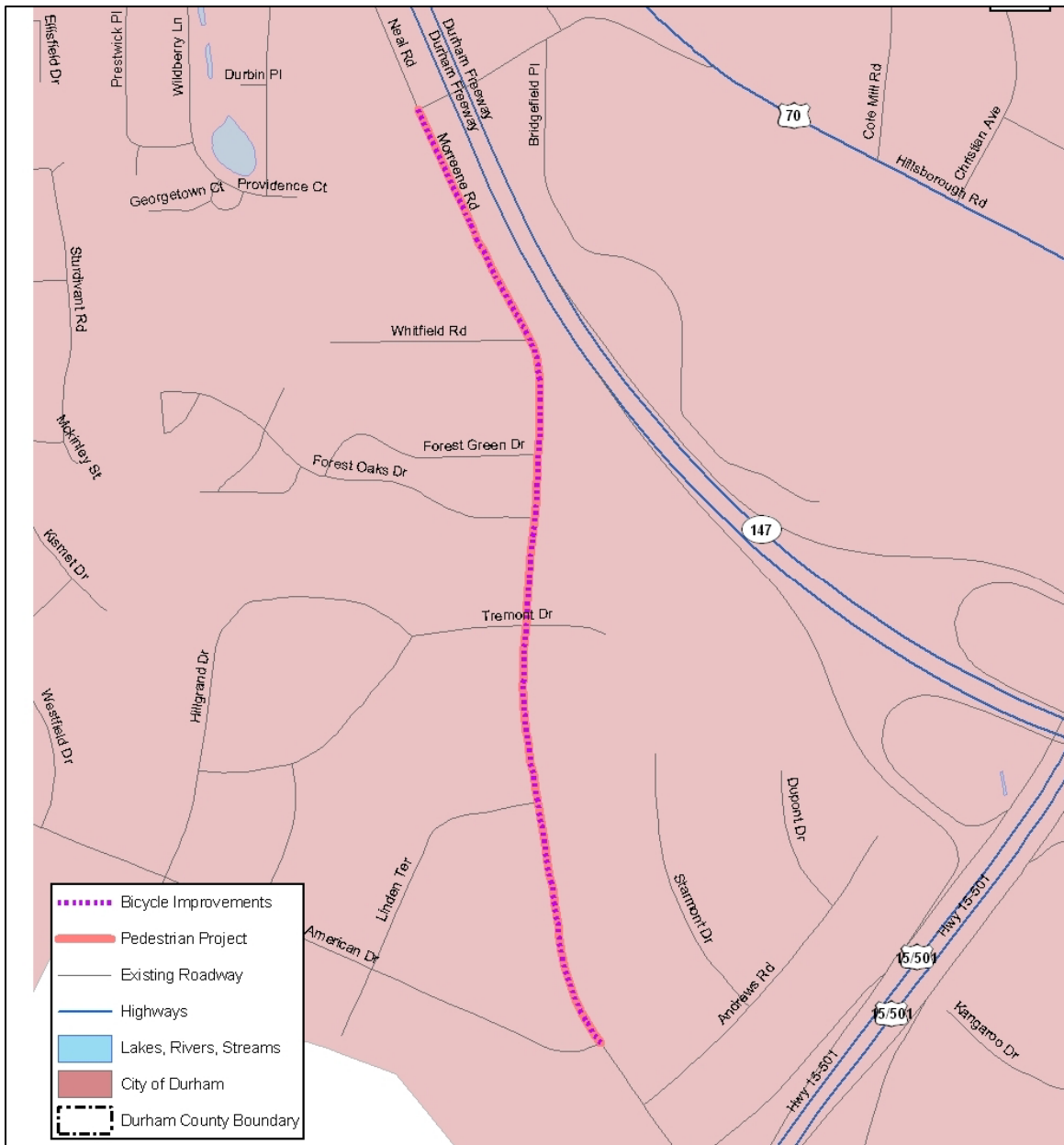
Project Description: bicycle and pedestrian facilities

Project Limits: American Drive to Neal Road. Approximately 3,500 linear feet.

Local Agency Sponsor: City of Durham

Estimated Cost: \$445,000

Relationship to other local and regional plans: Included in the 2006 Durham Comprehensive Pedestrian Plan. Project will connect to CMAQ-funded project along Morreene, from Erwin Rd to American Dr.



## ***Priority #40 Cole Mill Road – bicycle improvements***

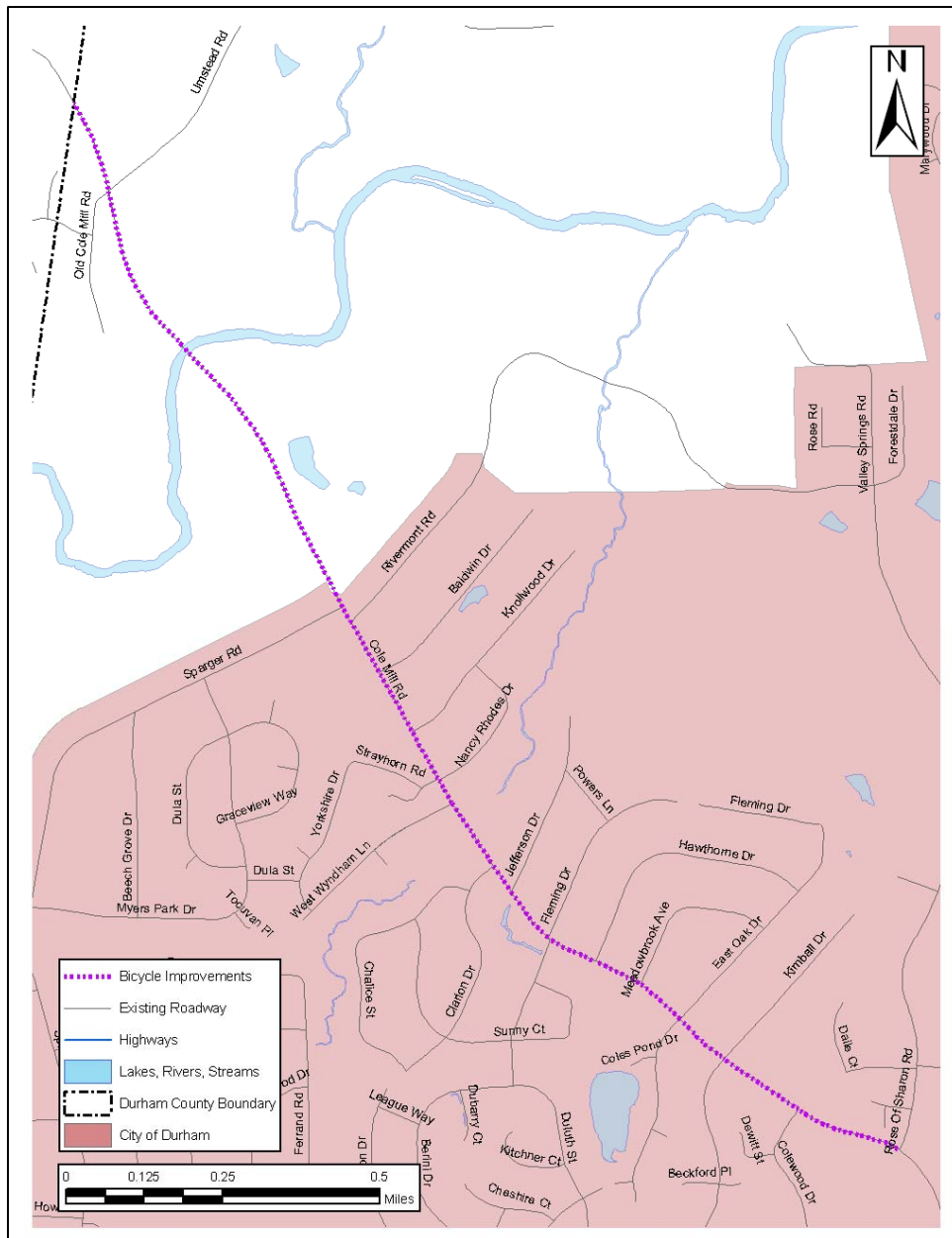
Project Description: bicycle facilities

Project Limits: Rose of Sharon Road to Orange County line. Approximately 11,700 linear feet.

Local Agency Sponsor: City of Durham

Estimated Cost: \$367,000

Relationship to other local and regional plans: Improvements recommended in the 1993 Regional Bicycle Plan; project included in the 2030 LRTP.



**Priority #41**  
**Cornwallis Road – bicycle and pedestrian improvements**

Project Description: curb-n-gutter, bicycle and pedestrian improvements

Project Limits: South Roxboro to Chapel Hill Road. Approximately 6,200 linear feet.

Local Agency Sponsor: City of Durham

Estimated Cost: \$900,000

Relationship to other local and regional plans: Improvements recommended in the 1993 Regional Bicycle Plan, the 1999 Triangle Area Bicycle Facilities Needs Study, and the 2006 Durham Comprehensive Pedestrian Plan. Project included in the 2030 LRTP.



***Priority #43***

***Parkwood to American Tobacco Trail – greenway trail*** (submitted by citizen)

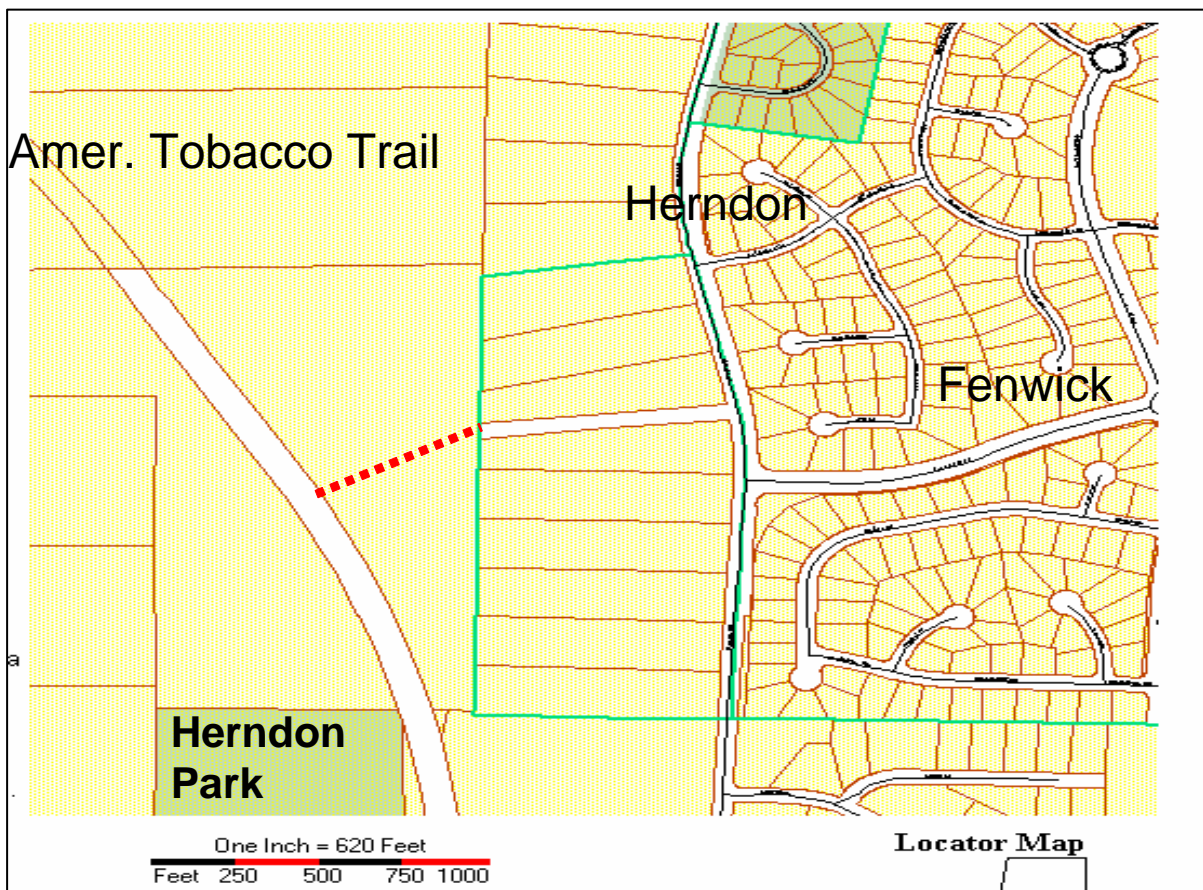
Project Description: Construct connector trail from neighborhood to greenway

Project Limits: Fenwick Rd to American Tobacco Trail

Local Agency Sponsor: City of Durham

Estimated Cost: \$350,000

Relationship to other local and regional plans: N/A



### Priority #44

## ***Bicycle Improvements to Sedwick Rd. and Alston Ave.*** (submitted by citizen)

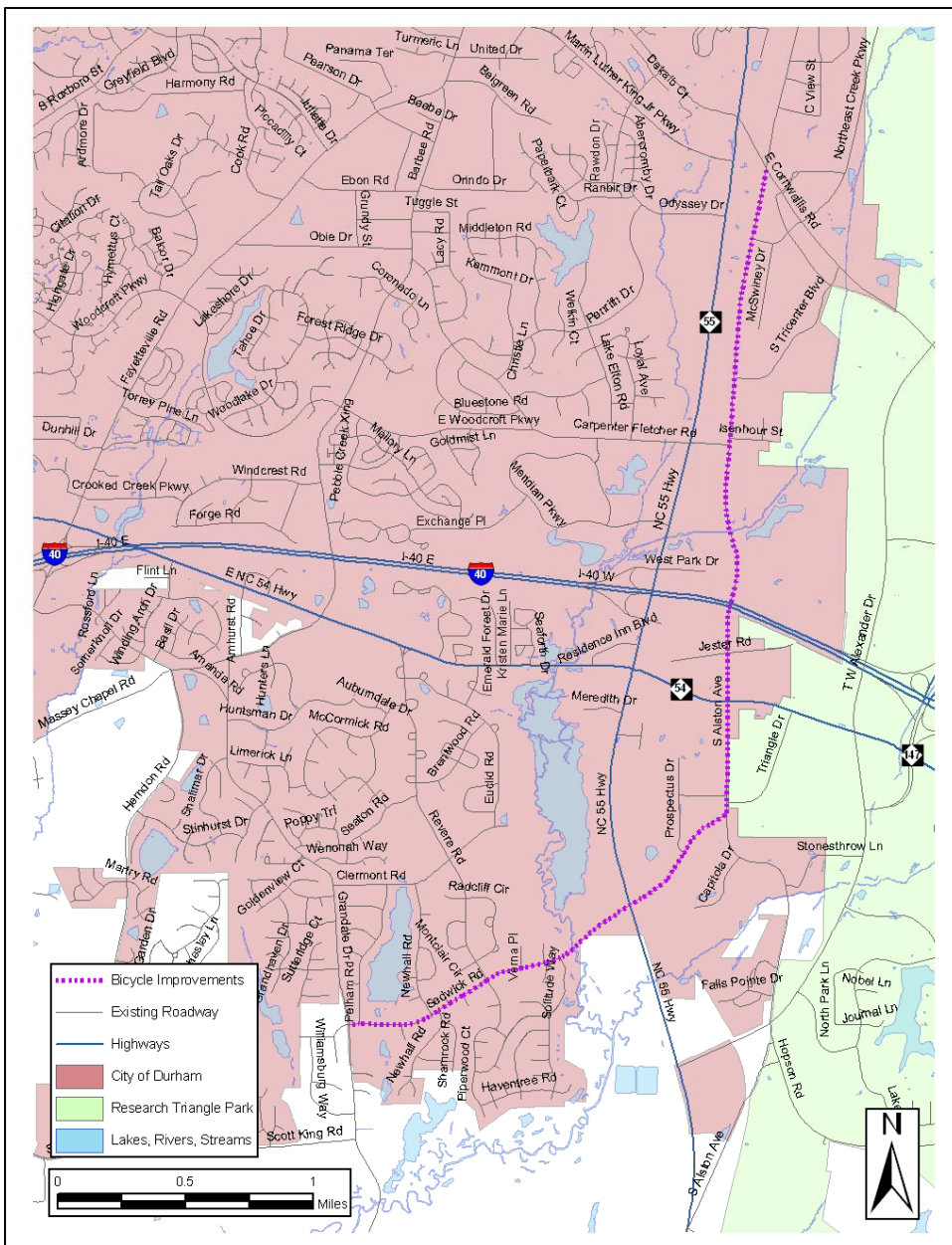
Project Description: provide bicycle lanes or paved shoulders on Sedwick Rd and Alston Ave, in order to better connect with the American Tobacco Trail.

Project Limits: Sedwick Rd, from Granddale to Alston; Alston Ave, from Cornwallis to Sedwick

Local Agency Sponsor: City of Durham

Estimated Cost: \$650,000

Relationship to other local and regional plans: Alston Ave improvements recommended in the 1993 Regional Bicycle Plan and 1999 Triangle Area Bicycle Facilities Needs Study; both projects included in the 2030 LRTP. Sedwick Rd bike improvements included in the 2001 Parkwood Traffic Calming Study.



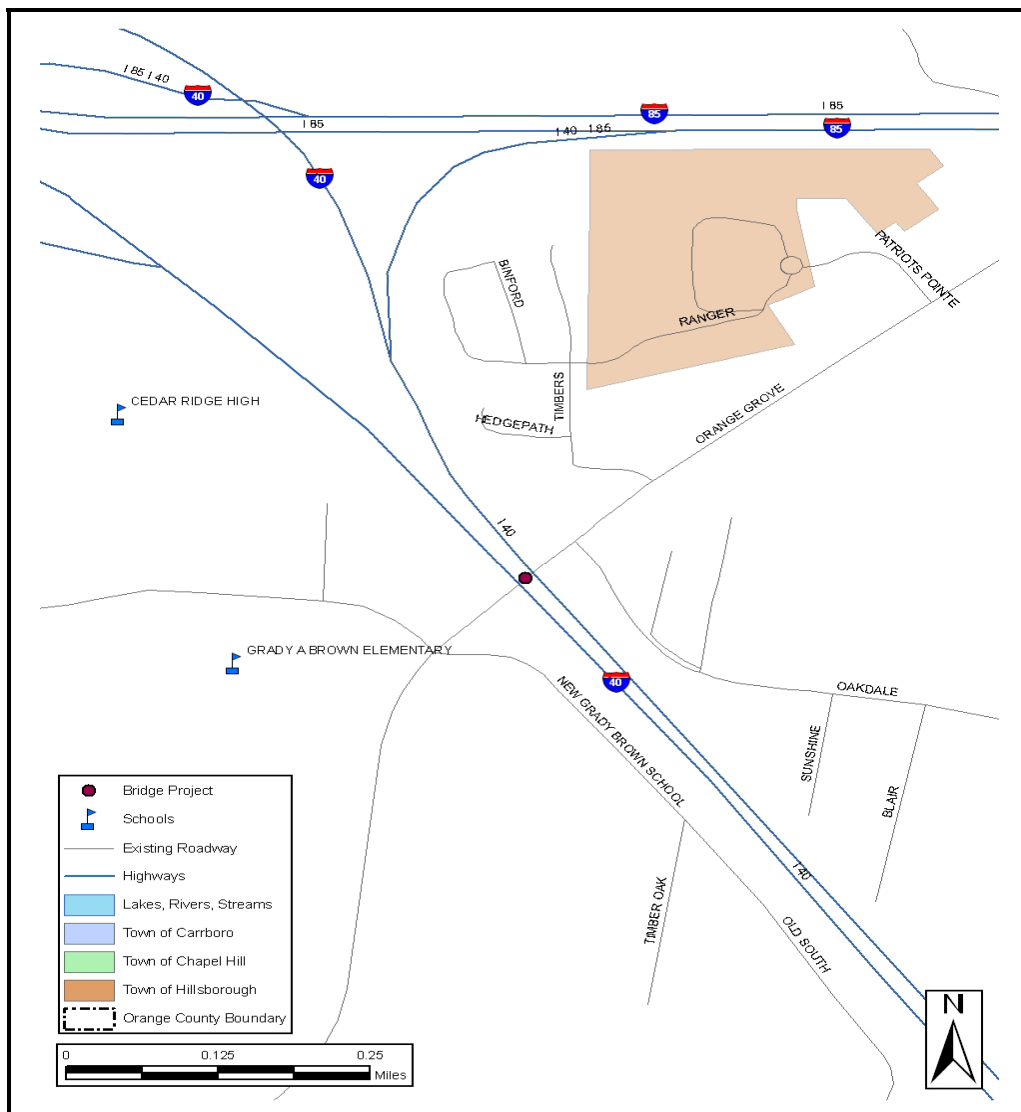
# Priority #1 Orange Grove Rd (SR 1006) – Pedestrian Bridge

Project Description: SR 1006, Orange Grove Road, at Interstate 40: Construct a pedestrian bridge over I-40.

Estimated Cost: \$1,500,000

Local Agency Sponsor: Orange County

Relationship to other local and regional plans: This project is a recommendation of the “Orange Grove Access Awareness Project Report”, adopted by both Orange County and the Town of Hillsborough. The Town of Hillsborough’s Transportation Plan –Bicycle Plan and Orange County’s Bicycle Transportation Plan include this part of Orange Grove Road.



**Priority #3**  
***Estes Drive (Phase I) – bicycle and pedestrian improvements***

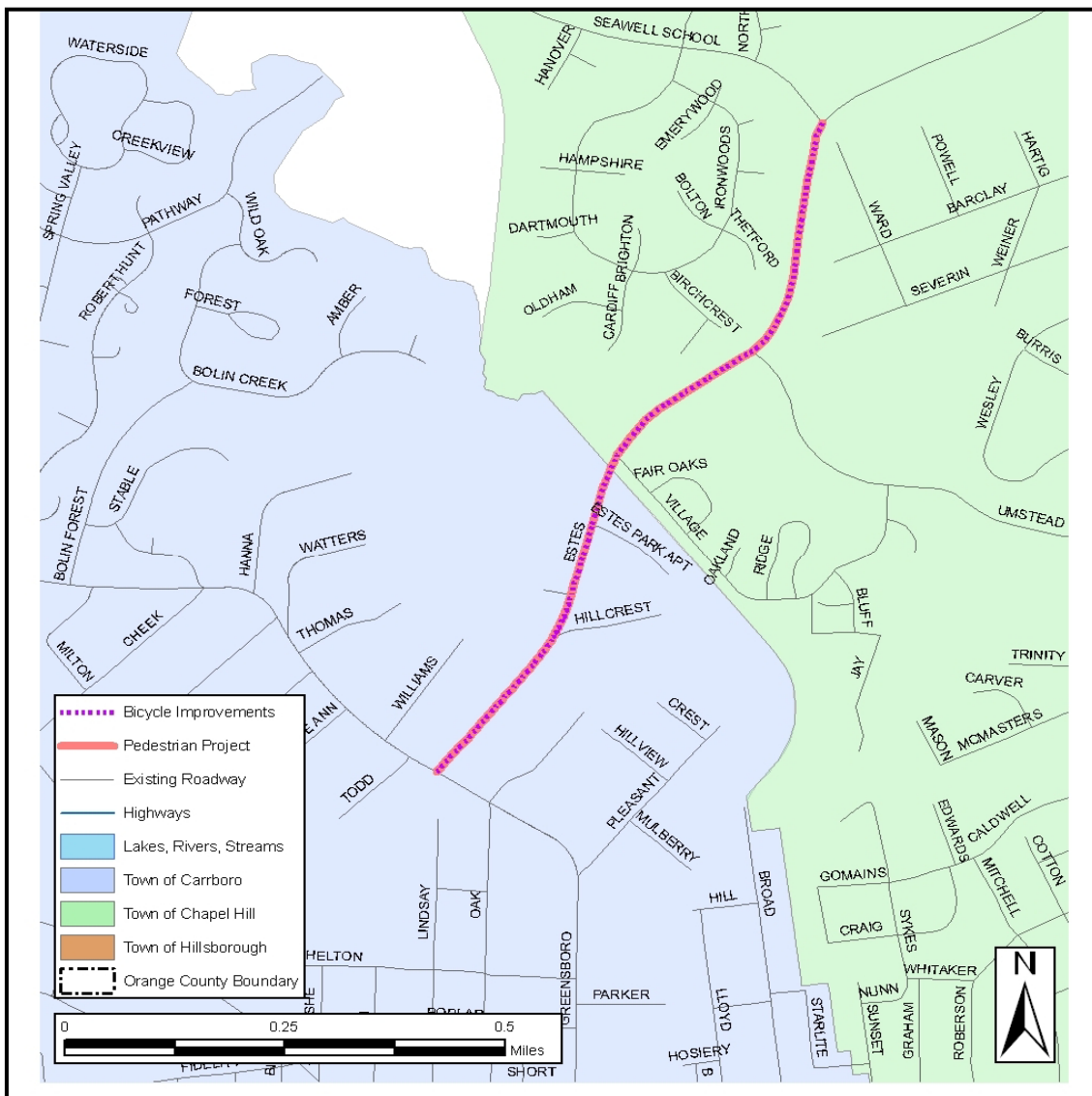
Project Description: Add bike lanes, sidewalks, and transit accommodations on both sides of the road

Project Limits: Greensboro Street to Seawell School Rd. Approximately 5,000 linear feet.

Estimated Cost: \$1,200,000

Local Agency Sponsor: Town of Carrboro, Town of Chapel Hill

Relationship to other local and regional plans: The project is included in the DCHC MPO 2030 LRTP, as well as in the Town of Carrboro’s Bicycle Policy and Sidewalk Policy documents.



**Priority #6**

***Homestead Rd (SR 1777) – bicycle and pedestrian improvements***

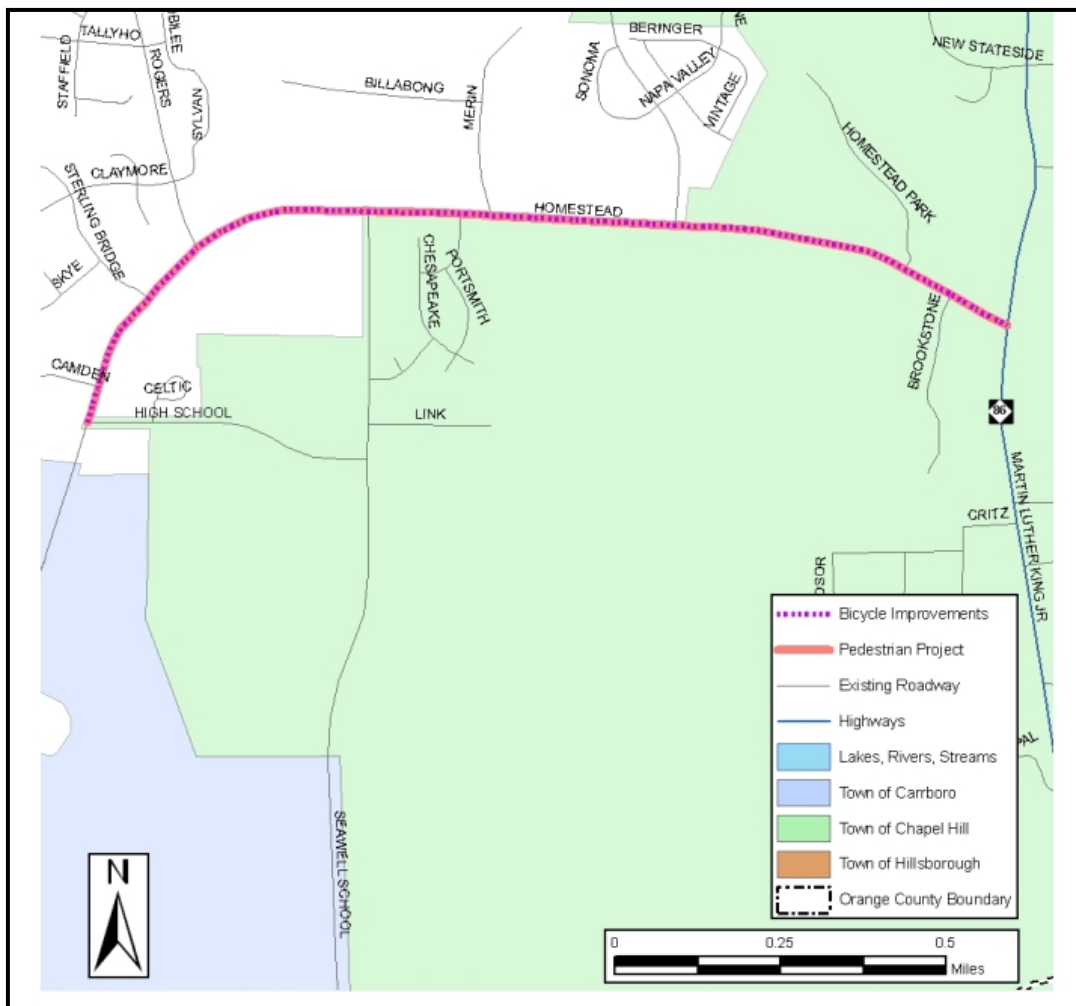
Project Description: U-2805, Homestead Road (SR 1777) Improvements: Improve Homestead Road from SR 1834, High School Road to NC 86.

Project Limits: High School Rd (SR1834) to NC86. Approximately 8,300 linear feet.

Estimated Cost: \$2,000,000

Local Agency Sponsor: Town of Chapel Hill, Town of Carrboro, Orange County

Relationship to other local and regional plans: Improvements recommended in the 1993 Regional Bicycle Plan; project included in the DCHC MPO 2030 LRTP, as well as in the Town of Carrboro’s Bicycle Policy and Sidewalk Policy documents.



**Priority #9**

***Old Fayetteville Road – bicycle and pedestrian improvements***

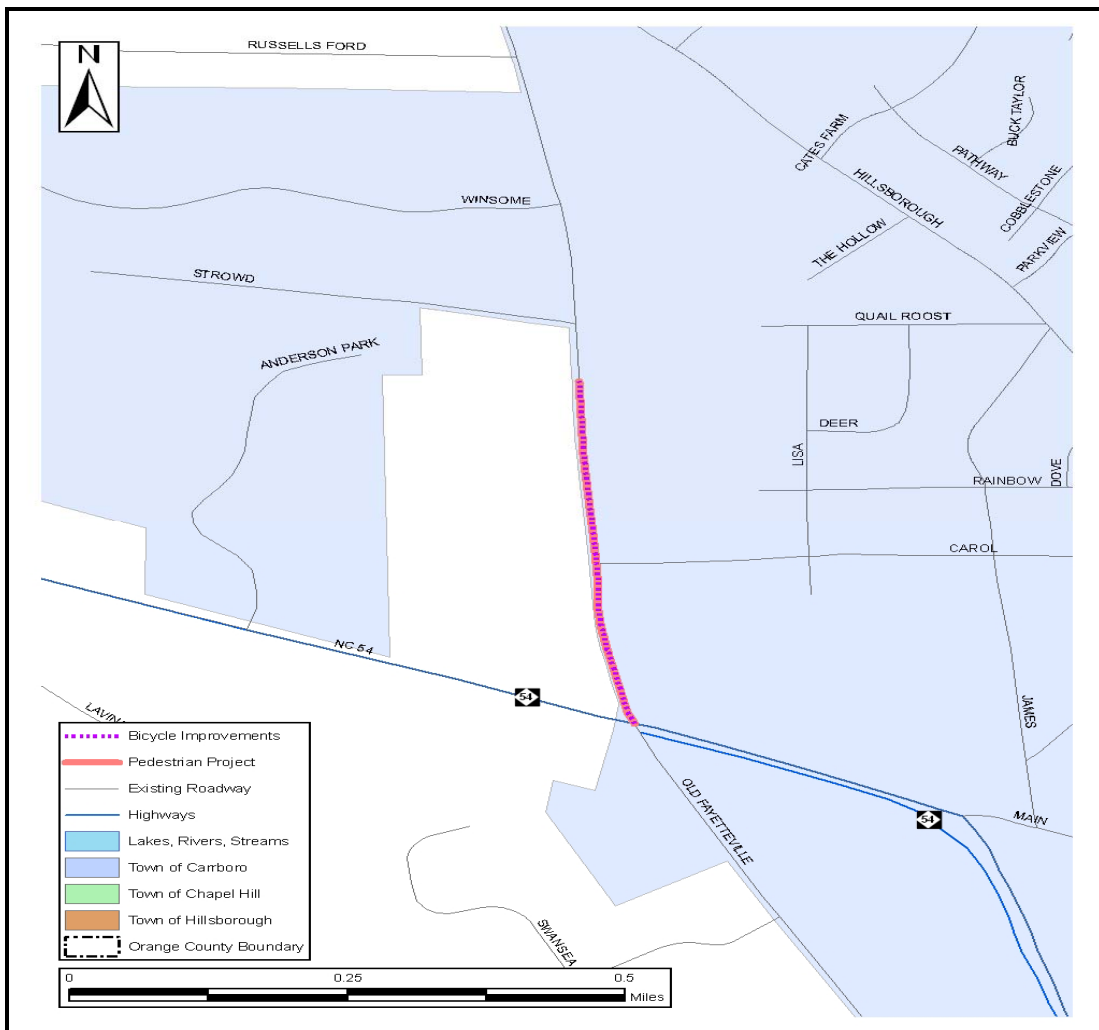
Project Description: Add bike lanes and transit accommodations on both sides of the road and sidewalk on the east side

Project Limits: McDougle Middle School to NC 54. Approximately 2,500 linear feet.

Estimated Cost: \$342,000

Local Agency Sponsor: Town of Carrboro

Relationship to other local and regional plans: Project included in the DCHC MPO 2030 LRTP, as well as in the Town of Carrboro’s Bicycle Policy and Sidewalk Policy documents.



**Priority #11**  
***Seawell School Road – bicycle and pedestrian improvements***

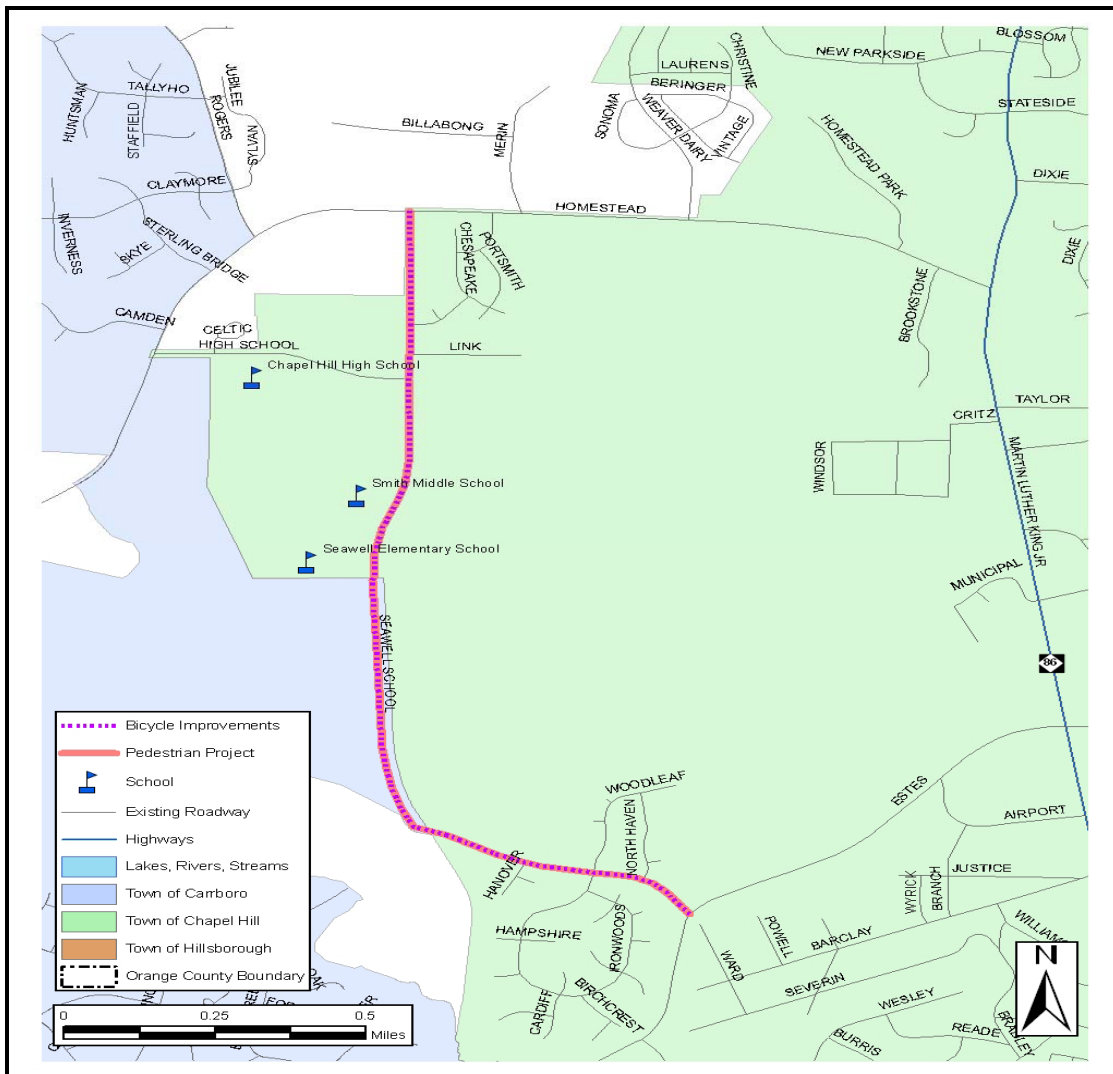
Project Description: add turn lanes, bike lanes, sidewalks and transit accommodations

Project Limits: Homestead Rd to Estes Dr Extension. Approximately 10,000 linear feet.

Estimated Cost: \$772,500

Local Agency Sponsor: Town of Chapel Hill

Relationship to other local and regional plans: Project included in the DCHC MPO 2030 LRTP, as well as in the Town of Carrboro’s Bicycle Policy and Sidewalk Policy documents.



**Priority #13**  
**MLK Blvd Corridor – bicycle and pedestrian improvements**

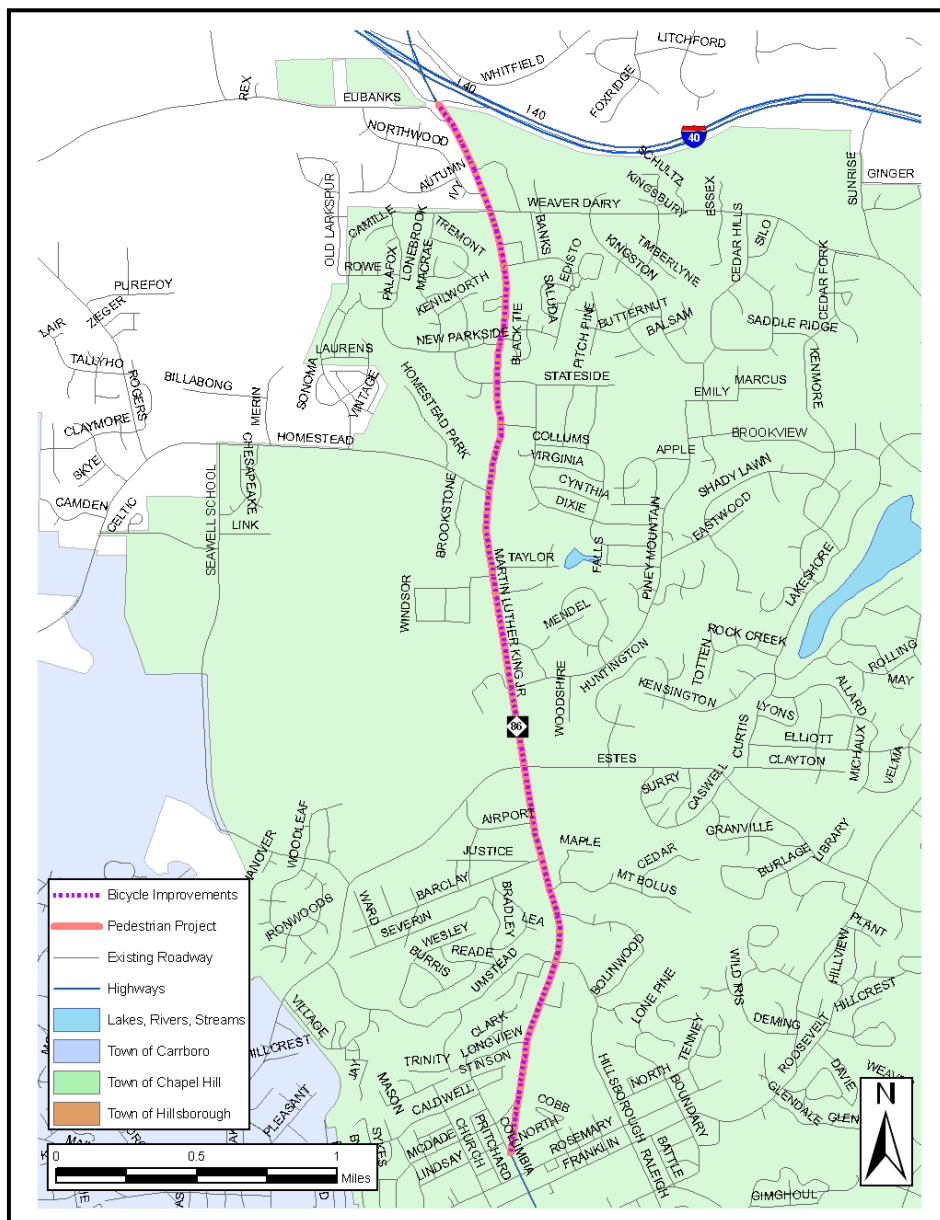
Project Description: bicycle and pedestrian improvements between I-40 and North St, in order to create connectivity between a variety of residential and commercial land uses along Martin Luther King, Jr Blvd, as well as provide access to and from the UNC campus.

Project Limits: I-40 to North St.

Estimated Cost: \$2,100,000

Local Agency Sponsor: Town of Chapel Hill

Relationship to other local and regional plans: Included in 1993 Regional Bicycle Plan



**Priority #14**  
**Old Durham-Chapel Hill Road – bicycle and pedestrian improvements**

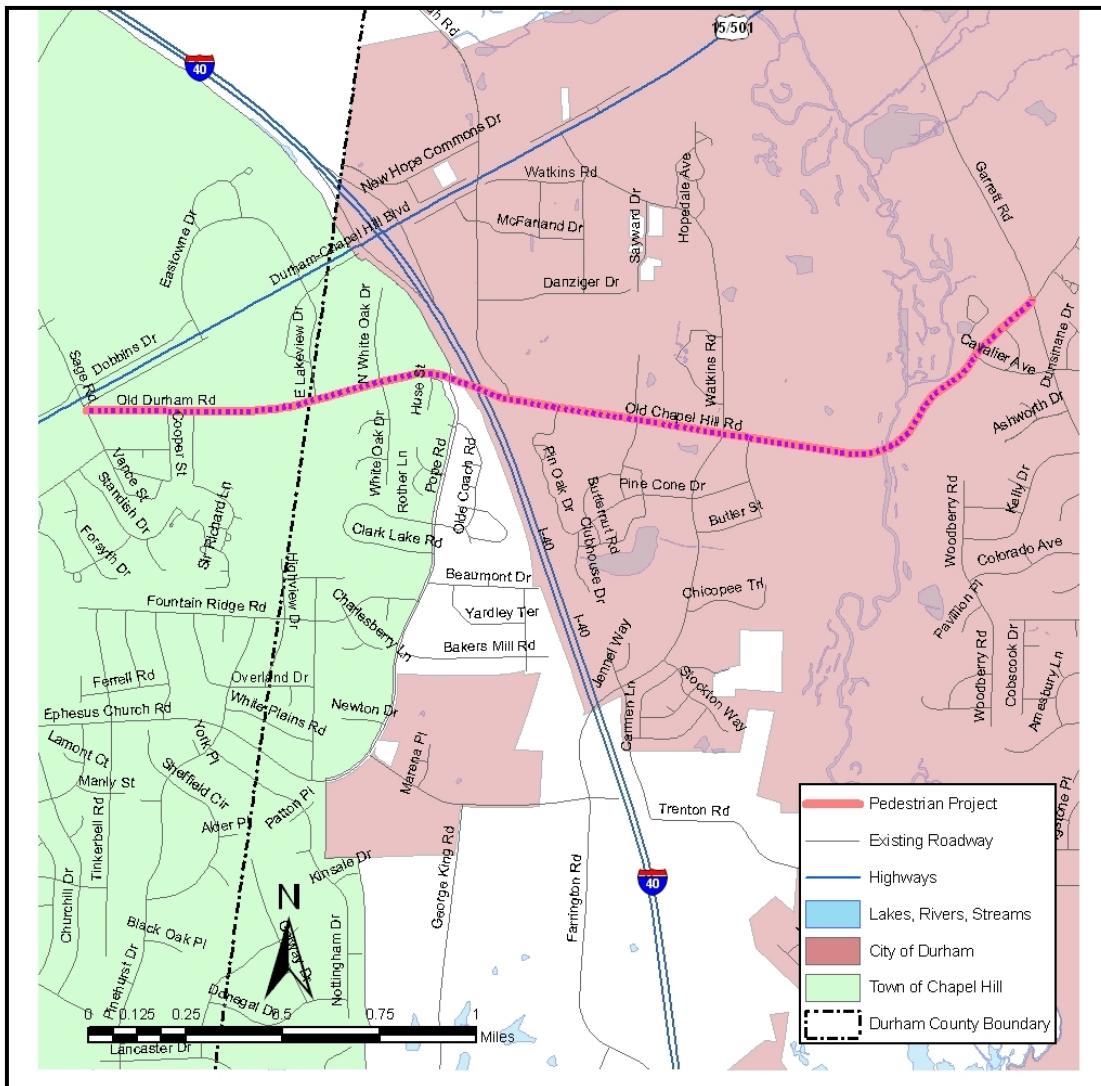
Project Description: bicycle and pedestrian improvements between Garrett Road and US 15-501, including connectivity between residential areas, Githens Middle School, and the existing greenway and trail systems

Project Limits: Sage Rd (in Chapel Hill) to Garrett Rd (in Durham). Approximately 16,000 linear feet.

Estimated Cost: \$3,800,000

Local Agency Sponsor: Town of Chapel Hill, City of Durham, Durham County

Relationship to other local and regional plans: Included in 1993 Regional Bicycle Plan; Project feasibility study completed in November 2005; Project included in the DCHC MPO 2030 LRTP.



**Priority #15**  
**Homestead Rd – bicycle and pedestrian improvements**

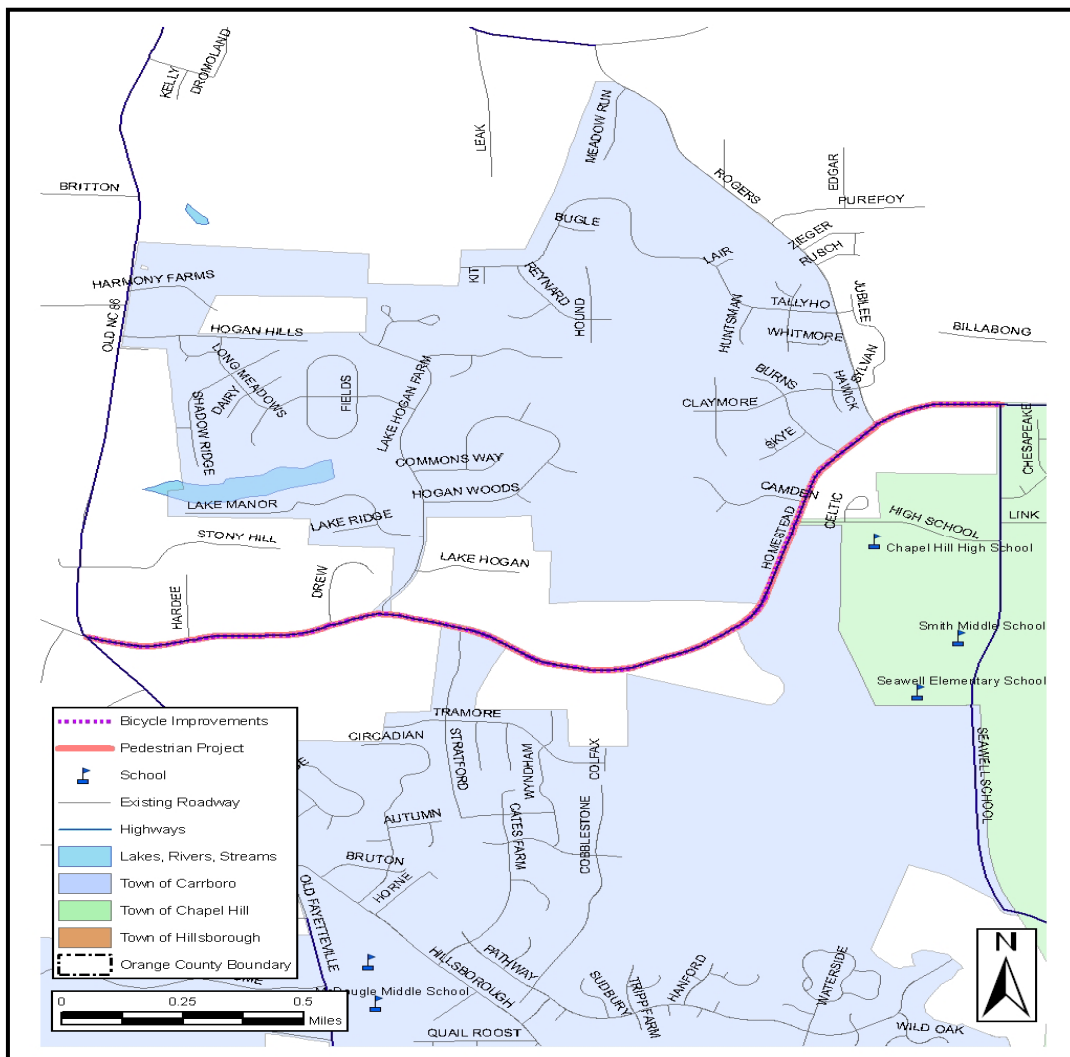
Project Description: Add bike lanes, sidewalks, and transit accommodations on both sides of the road

Project Limits: Seawell School Road to Old NC 86

Estimated Cost:

Local Agency Sponsor: Town of Chapel Hill, Town of Carrboro, Orange County

Relationship to other local and regional plans: Improvements recommended in the 1993 Regional Bicycle Plan; Project included in the DCHC MPO 2030 LRTP, as well as in the Town of Carrboro’s Bicycle Policy and Sidewalk Policy documents.



## Priority #16 Old NC 86 (SR 1009) – bicycle improvements

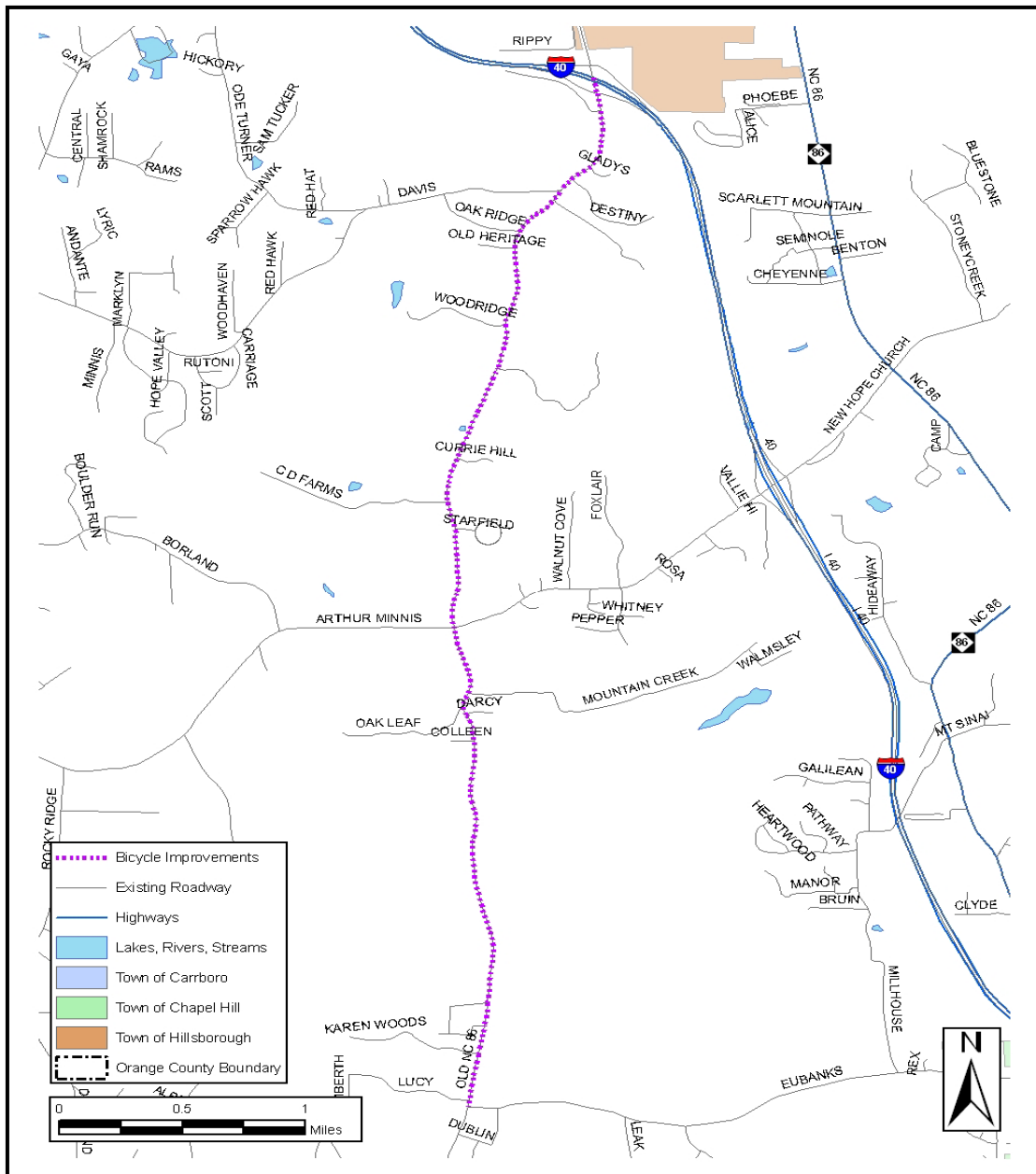
Project Description: construct 4ft paved shoulders for bicycles

Project Limits: Eubanks Rd (in Carrboro) to I-40 (in Hillsborough)

Estimated Cost: \$830,100

Local Agency Sponsor: Town of Carrboro, Orange County

Relationship to other local and regional plans: Project included in the DCHC MPO 2030 LRTP, as well as in the Town of Carrboro's Bicycle Policy document.



**Priority #17**  
**NC 86 – bicycle improvements**

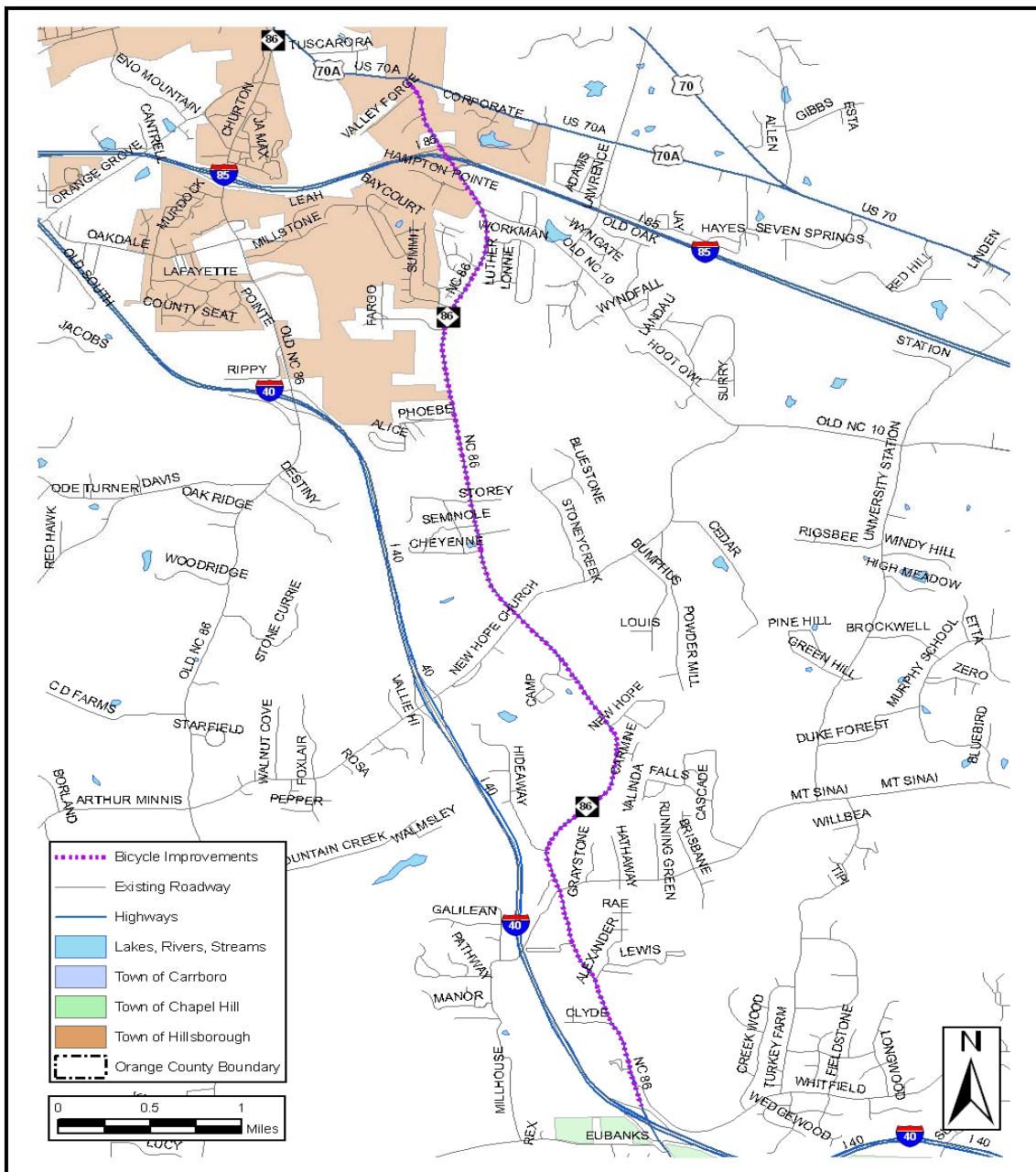
Project Description: construct 4ft paved shoulders for bicycles

Project Limits: Whitfield Rd (in Chapel Hill) to US 70 Business (in Hillsborough)

Estimated Cost: \$1,242,600

Local Agency Sponsor: Town of Chapel Hill, Town of Hillsborough, Orange County

Relationship to other local and regional plans: Improvements recommended in the 1993 Regional Bicycle Plan; project included in the 2030 LRTP.



**Priority # 19**  
**South Greensboro Street – sidewalks**

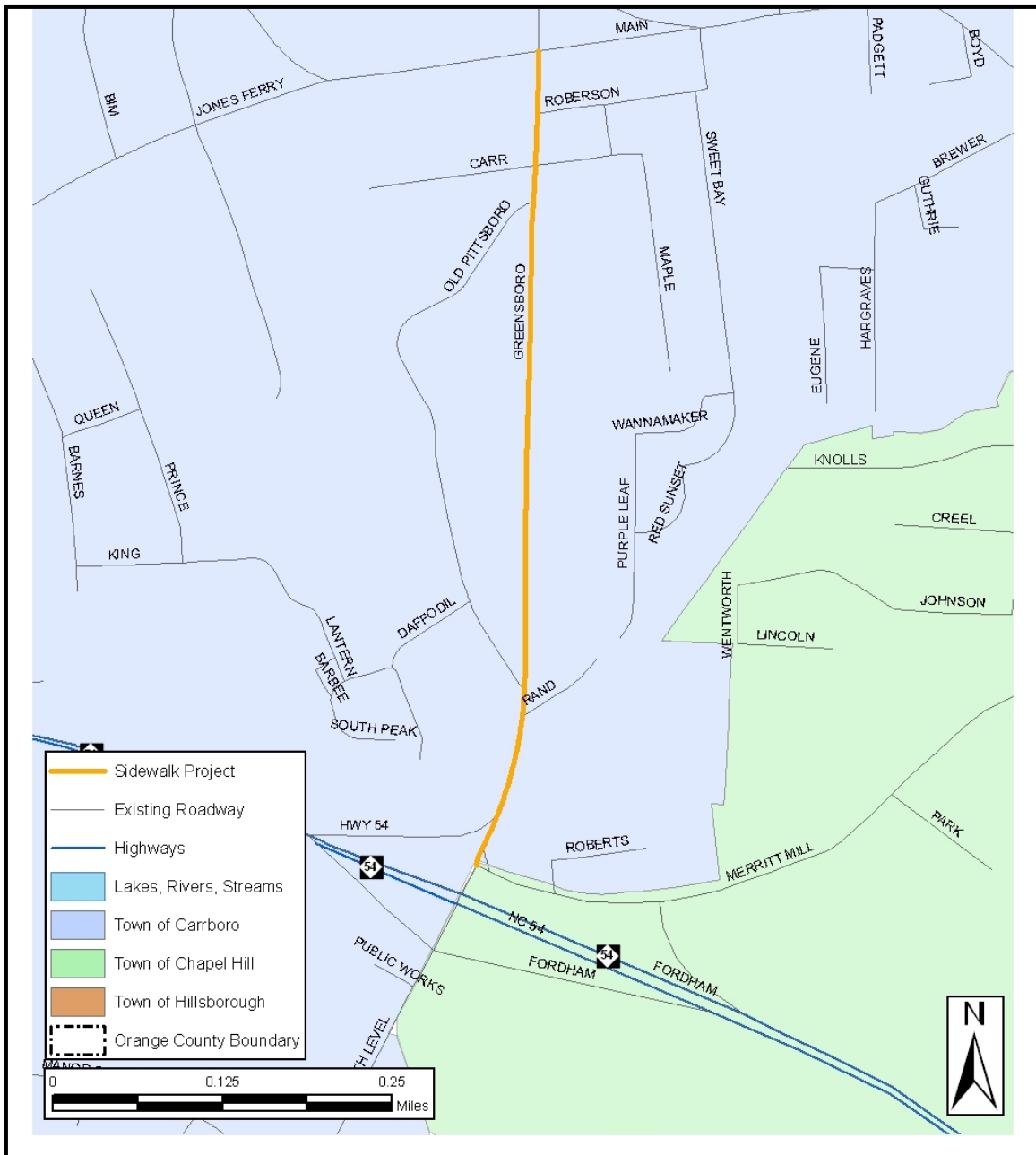
Project Description: Add sidewalks and transit accommodations on both sides of the road

Project Limits: Main Street to Merritt Mill Road.

Estimated Cost:

Local Agency Sponsor: Town of Carrboro

Relationship to other local and regional plans: This project is included in the Town of Carrboro’s Sidewalk Policy document.



**Priority #22**

***BPW Club Rd-Westbrook Dr Multi-Use Path – Feasibility Study***

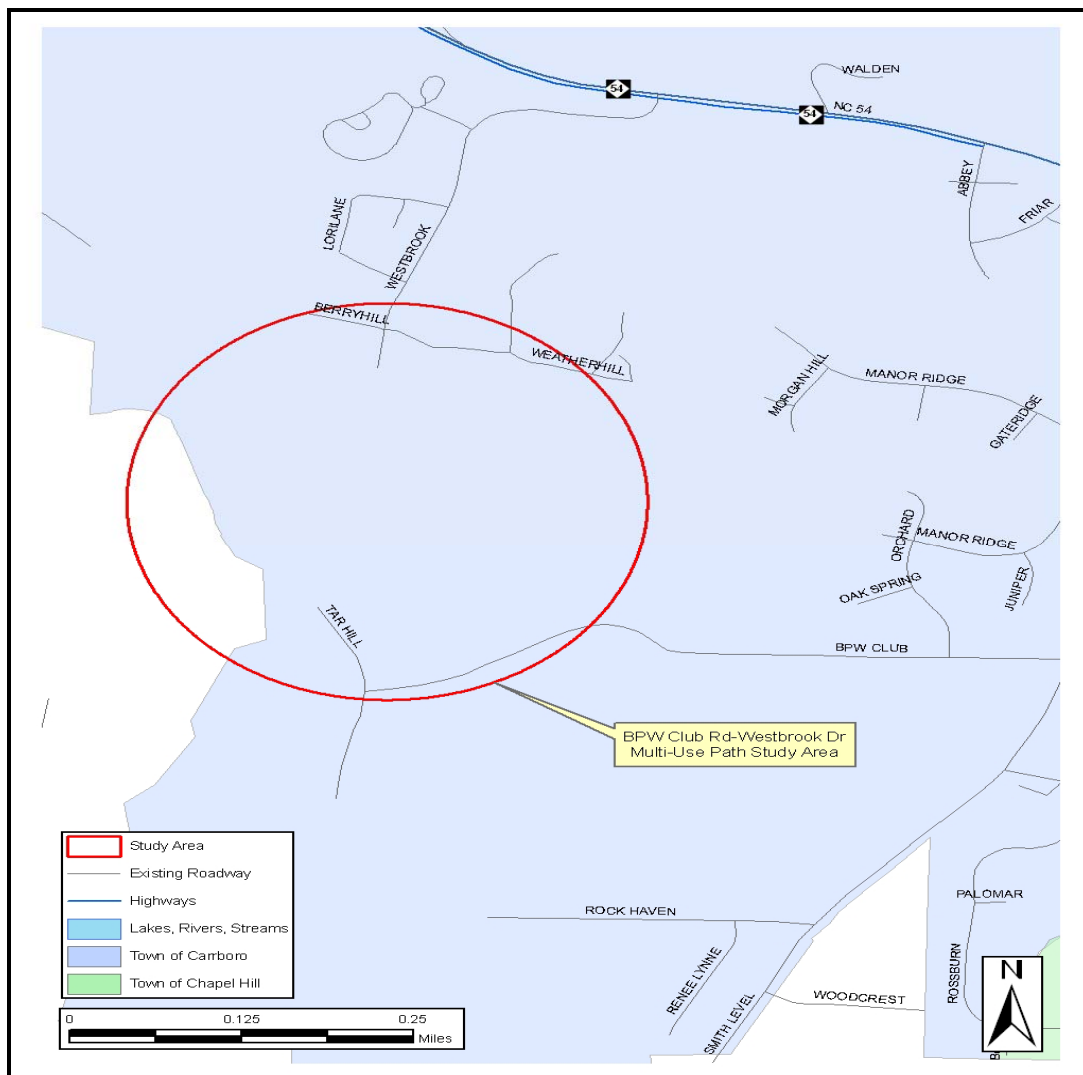
Project Description: Provide pedestrian and bicycle access from the BPW Club Road area to the Westbrook Drive area by building a pedestrian/bicycle path and creek crossings behind the Sterling Bluff Apartments

Project Limits: To be determined by the feasibility study

Estimated Cost:

Local Agency Sponsor: Town of Carrboro

Relationship to other local and regional plans: Bicycle/pedestrian improvement project included in the DCHC MPO 2030 LRTP, as well as in the Carrboro Recreation and Parks Master Plan.



### Priority #25

### Estes Drive (Phase II) – bicycle and pedestrian improvements

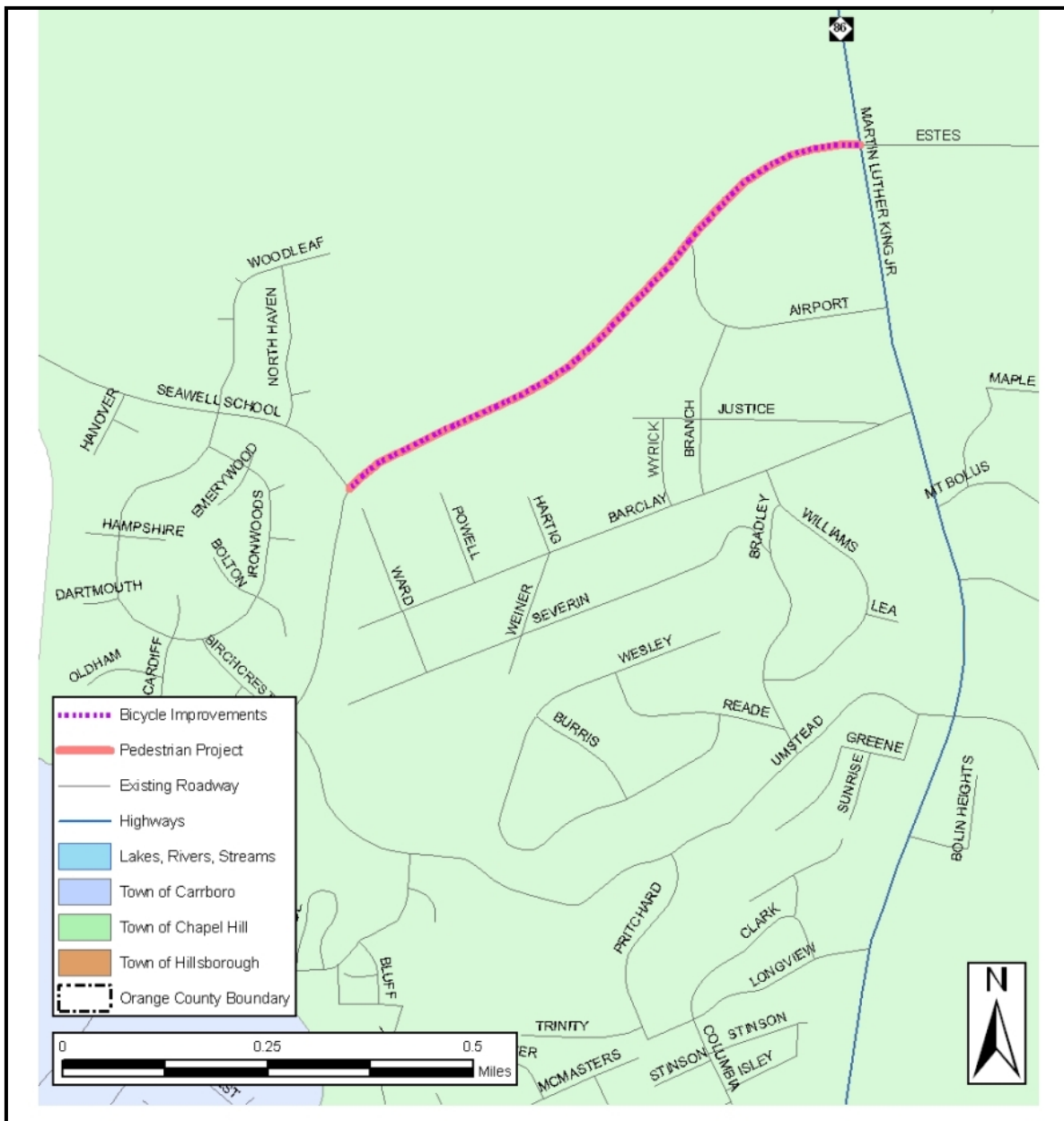
Project Description: Add sidewalks and transit accommodations on both sides of the road

Project Limits: Seawell School Rd to Airport Rd. Approximately 4,600 linear feet.

Estimated Cost: \$460,000

Local Agency Sponsor: Town of Chapel Hill

Relationship to other local and regional plans: Improvements recommended in the 1993 Regional Bicycle Plan; project included in the DCHC MPO 2030 LRTP.



**Priority #26**  
**Old NC 86 – bicycle and pedestrian improvements**

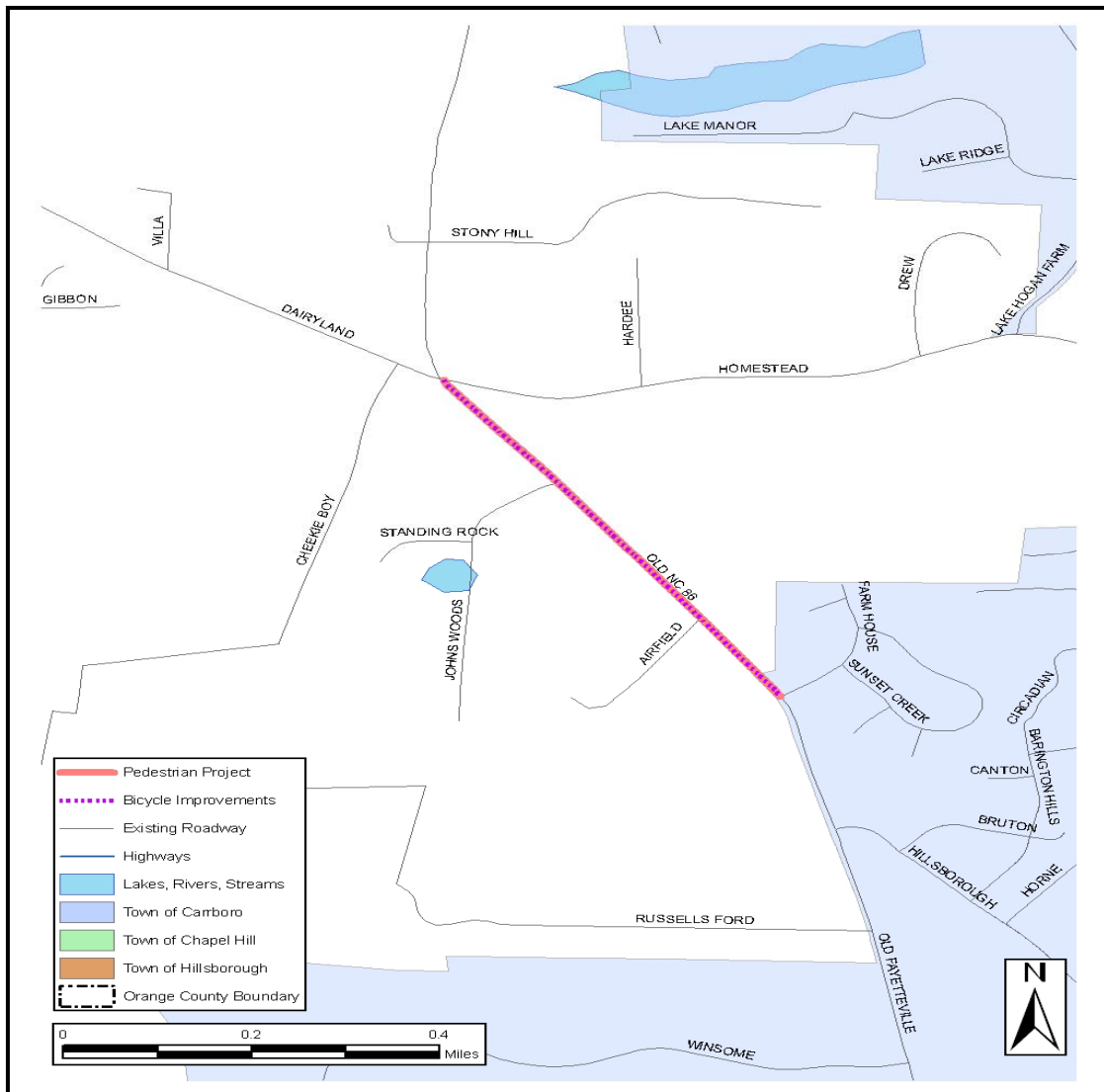
Project Description: Add bike lanes and transit accommodations on both sides of the road, and sidewalk on the east side

Project Limits: Farm House Road to Homestead Road.

Estimated Cost:

Local Agency Sponsor: Town of Carrboro, Orange County

Relationship to other local and regional plans: Project included in the DCHC MPO 2030 LRTP, as well as in the Town of Carrboro’s Bicycle Policy and Sidewalk Policy documents.



## ***Priority #27*** ***Community Center to Willow Dr. – greenway trail***

Project Description: build bike and pedestrian connection

Project Limits: Community Center to Willow along Estes Dr. Approximately 1,600 linear feet.

Estimated Cost: \$280,000

Local Agency Sponsor: Town of Chapel Hill

Relationship to other local and regional plans: N/A



\*NOTE: Barrett Road is mislabeled; it should be called Community Center Drive

### Priority #28 Old NC 86 – bicycle and pedestrian improvements

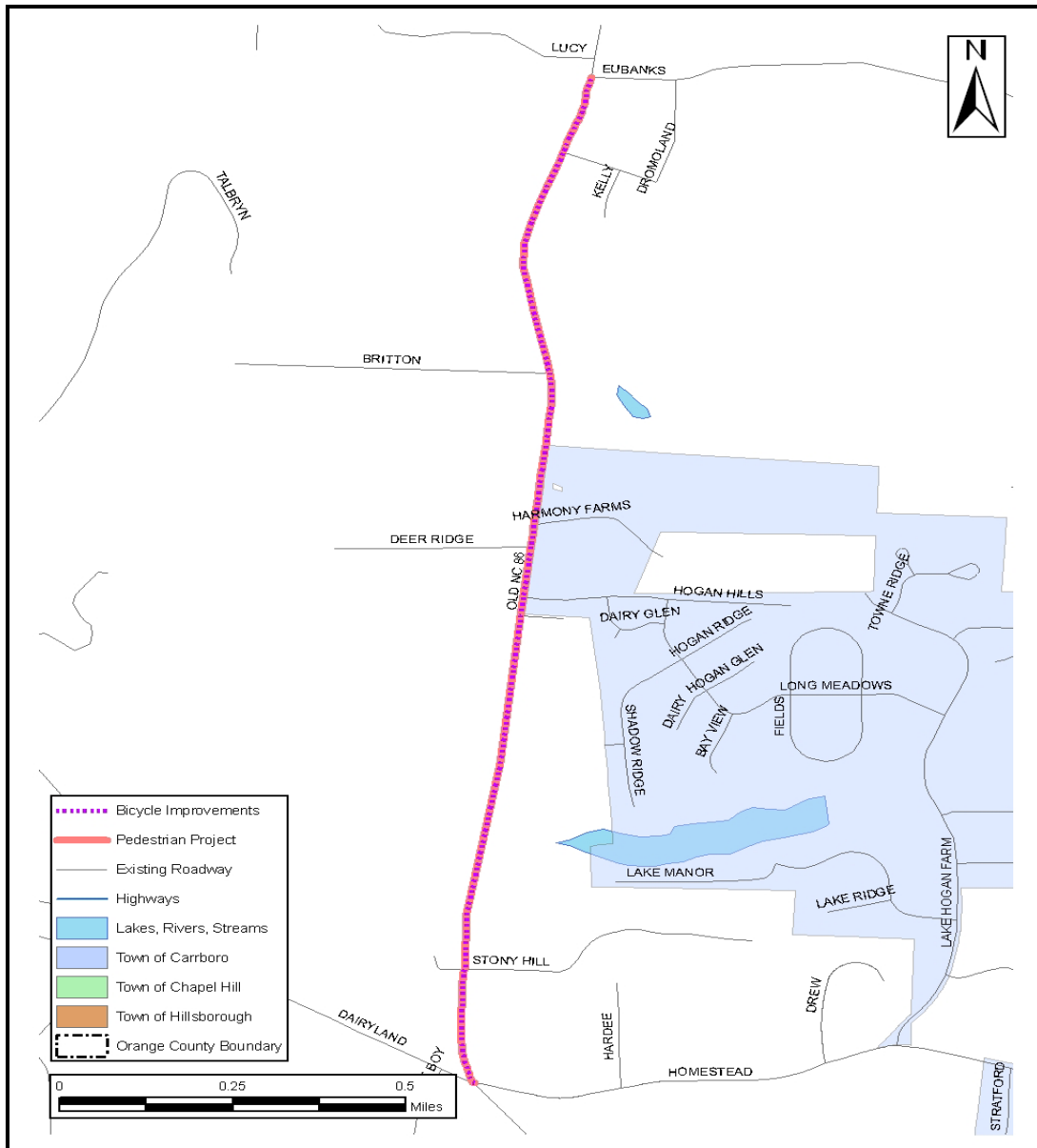
Project Description: Add bike lanes, sidewalks, and transit accommodations on both sides of the road

Project Limits: Homestead Road to Eubanks Road.

Estimated Cost:

Local Agency Sponsor: Town of Carrboro, Orange County

Relationship to other local and regional plans: Project included in the DCHC MPO 2030 L RTP, as well as in the Town of Carrboro’s Bicycle Policy document.



### ***Priority #30*** ***Franklin St/Bolin Creek Greenway – greenway trail***

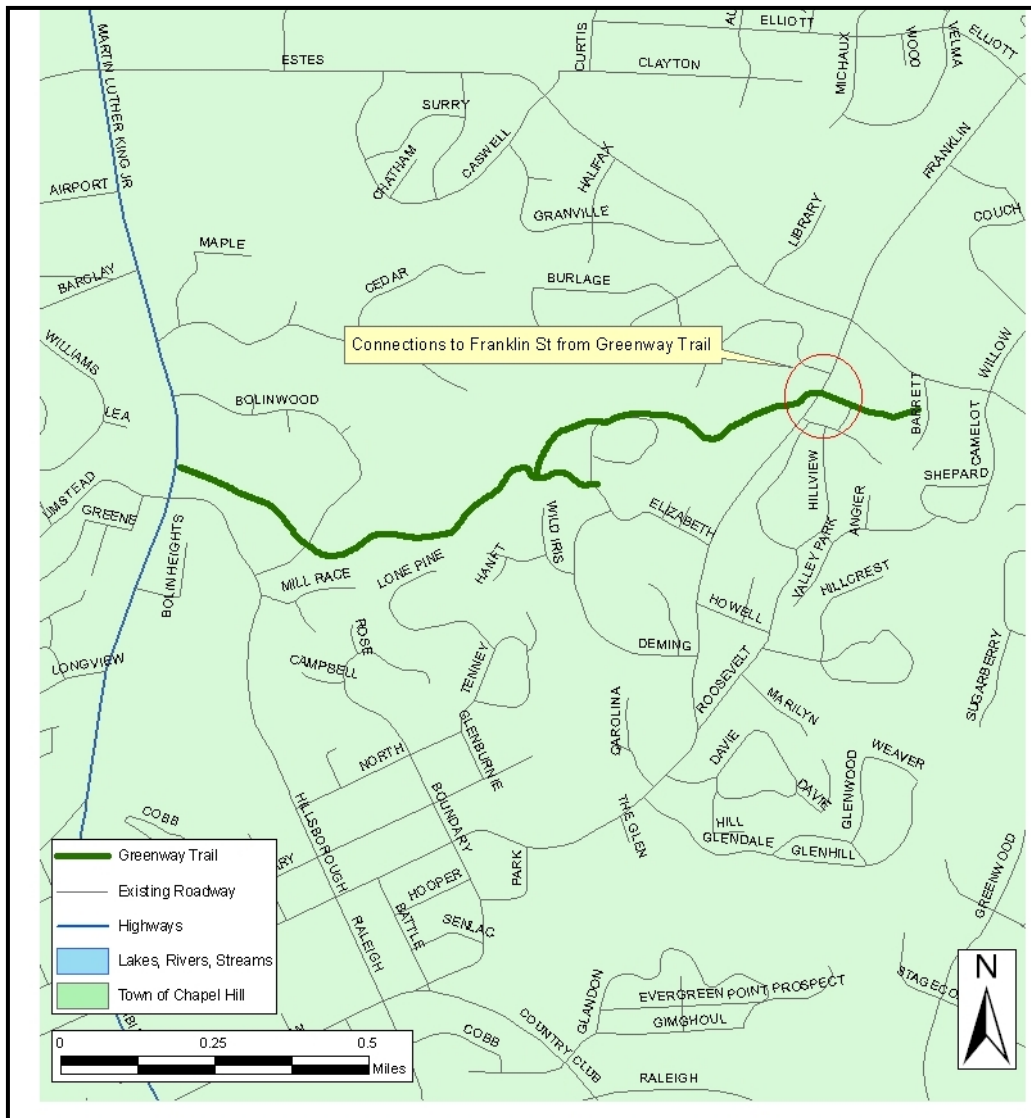
Project Description: construct bicycle and pedestrian access from Franklin Street to the Bolin Creek greenway trail

Project Limits: Franklin St at CHPD to Community Center

Estimated Cost: \$250,000

Local Agency Sponsor: Town of Chapel Hill

Relationship to other local and regional plans: Project included in the 2030 LRTP.



\*NOTE: Barrett Road is mislabeled; it should be called Community Center Drive

**Priority #31**  
***Eubanks Rd – bicycle and pedestrian improvements***

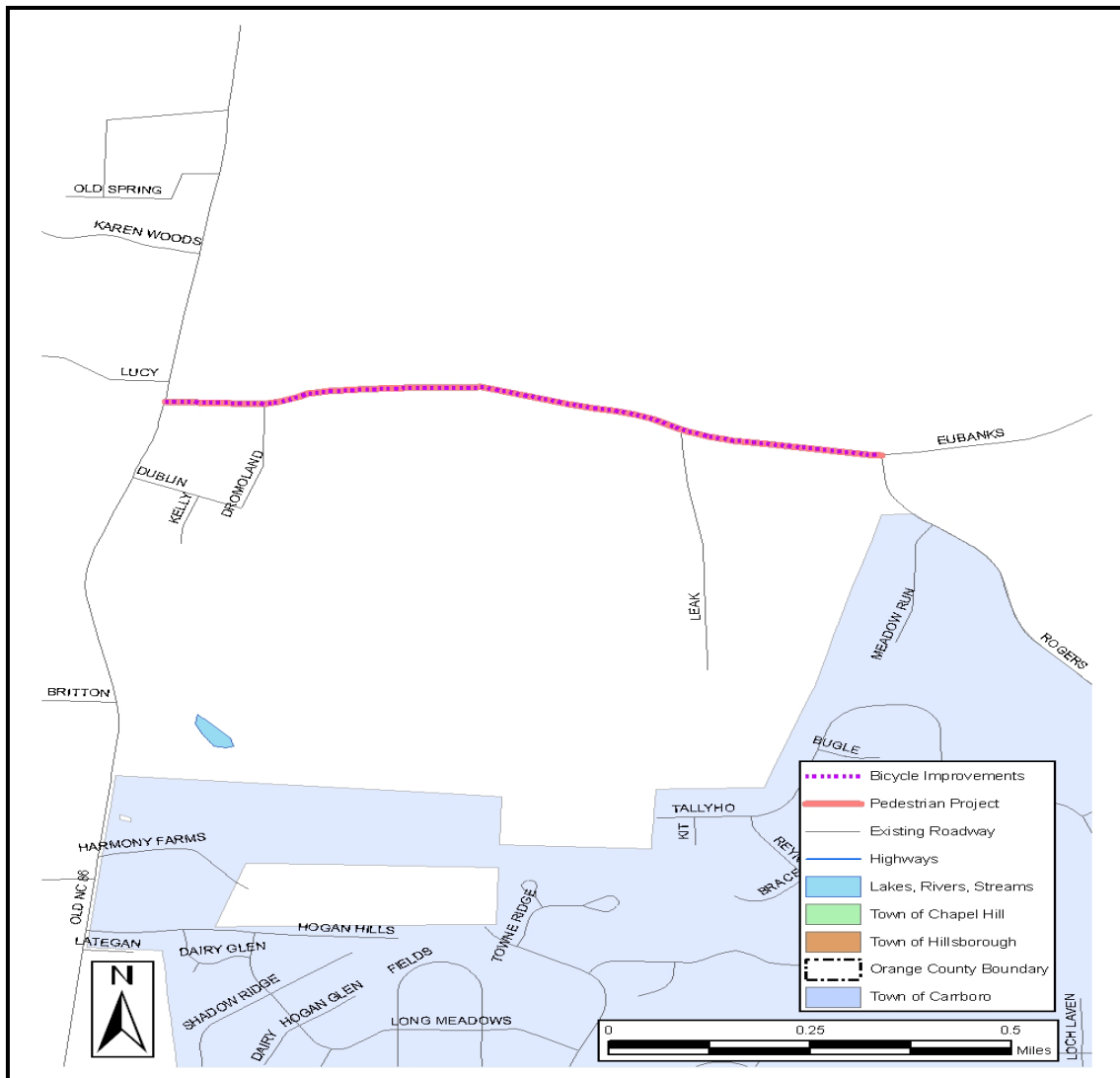
Project Description: Add bike lanes, sidewalks, and transit accommodations on both sides of the road

Project Limits: Old NC 86 to Rogers Road

Estimated Cost: \$468,700

Local Agency Sponsor: Town of Carrboro, Orange County

Relationship to other local and regional plans: Project included in the 2030 LRTP.



***Priority #33***  
***Estes Drive – sidewalks***

Project Description: add sidewalk and pedestrian signal at Chapel Hill Library

Project Limits: Curtis Rd to Franklin St. Approximately 3,300 linear feet.

Estimated Cost: \$375,000

Local Agency Sponsor: Town of Chapel Hill

Relationship to other local and regional plans: N/A



**Priority #34**  
***Bolin Creek Greenway – greenway trail***

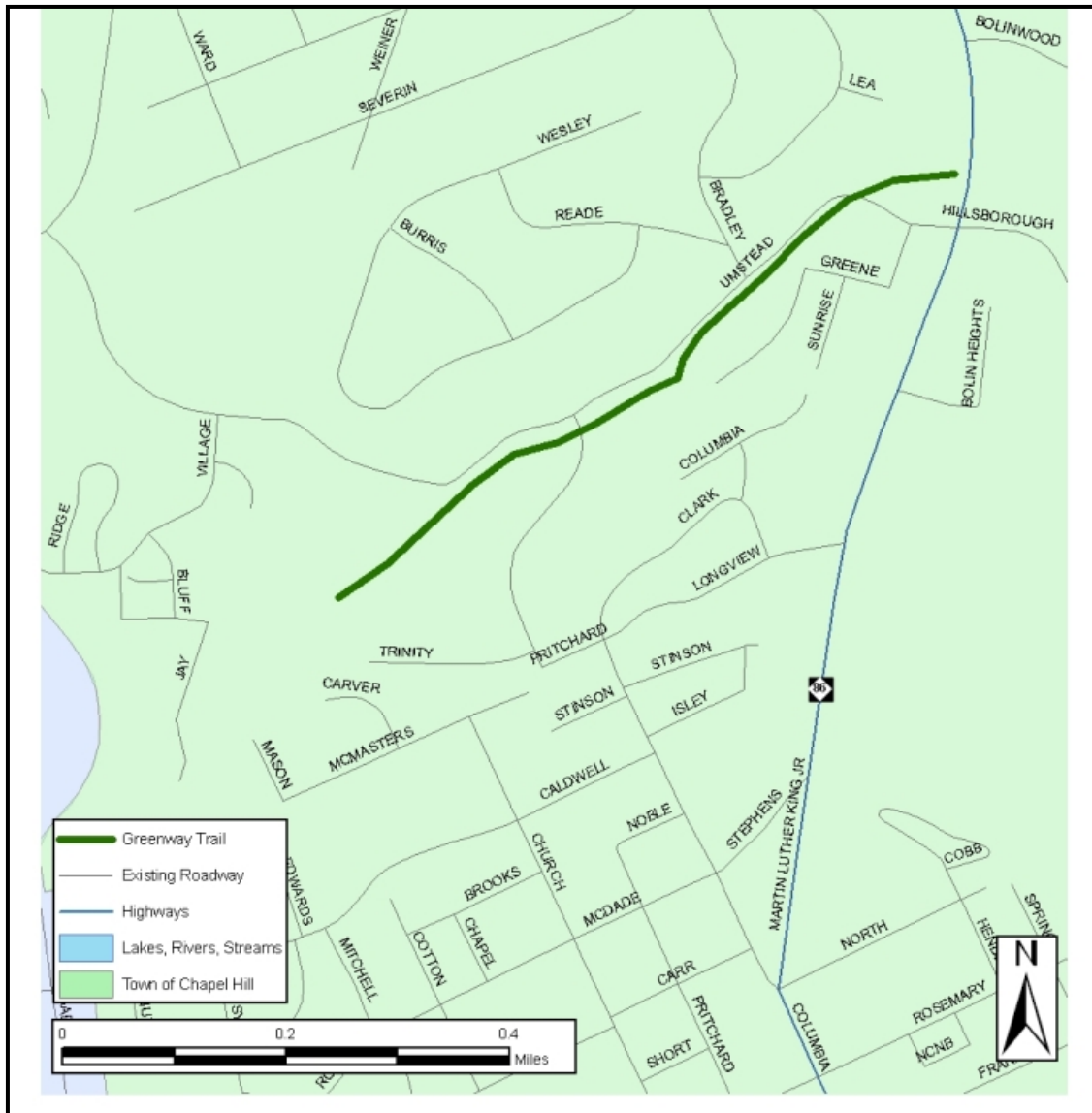
Project Description: build greenway trail including NC86 underpass.

Project Limits: MLK Blvd. to Umstead Park. Approximately 3,000 linear feet.

Estimated Cost: \$2,000,000

Local Agency Sponsor: Town of Chapel Hill

Relationship to other local and regional plans: Project included in the 2030 LRTP.



**Priority #36**  
**Barbee Chapel Rd – bicycle and pedestrian improvements**

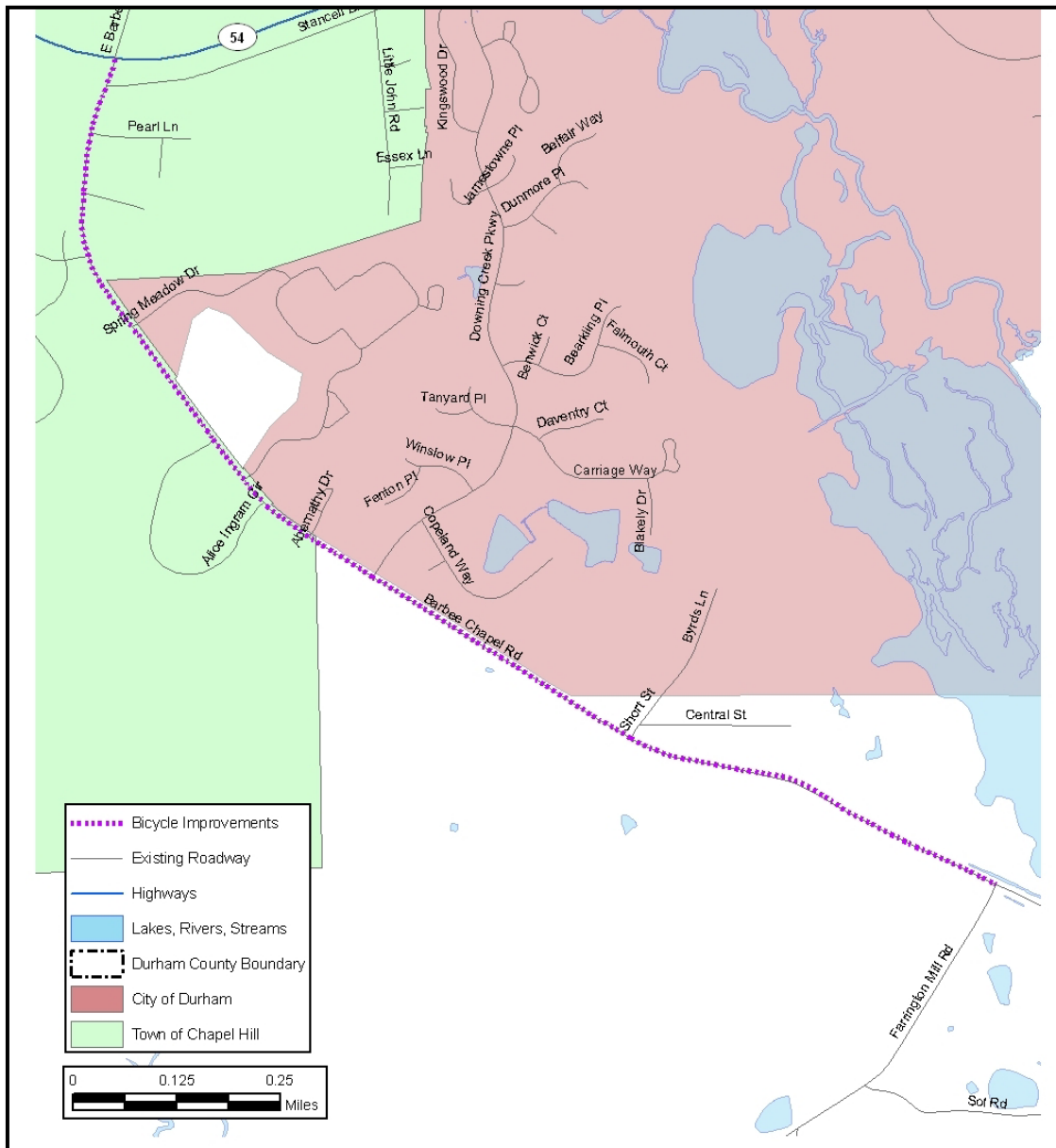
Project Description: add sidewalks and bike lanes

Project Limits: NC54 to Downing Creek Pkwy. Approximately 4,000 linear feet.

Estimated Cost: \$520,000

Local Agency Sponsor: Town of Chapel Hill, City of Durham, Durham County

Relationship to other local and regional plans: Improvements recommended in the 1993 Regional Bicycle Plan; project included in 2030 LRTP.



### ***Priority #37 Southern Railroad Greenway (Horace Williams Trail)***

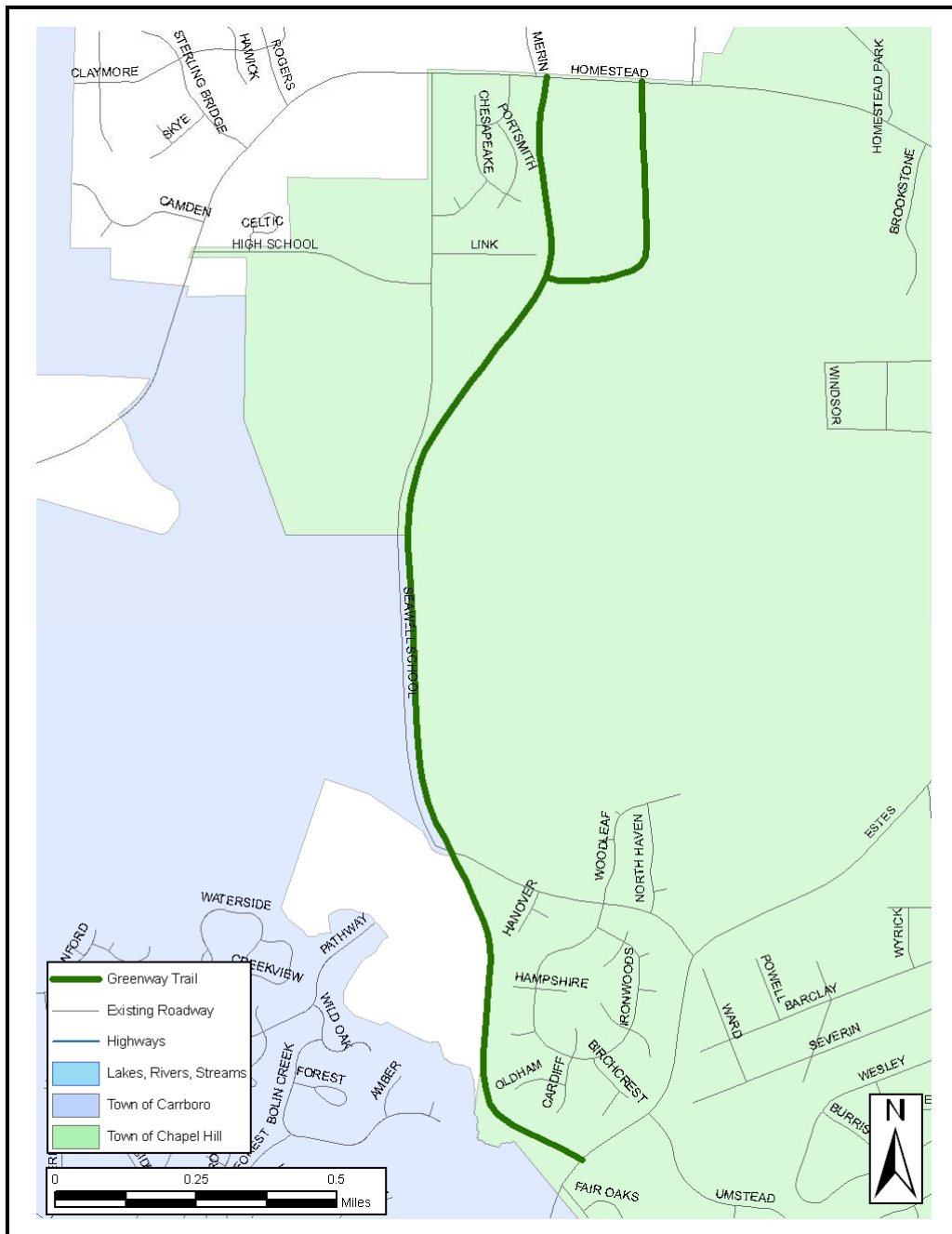
Project Description: construct a greenway trail

Project Limits: Estes Drive to UNC Horace Williams Property along Southern Railroad right of way. Approximately 10,000 linear feet.

Estimated Cost: \$2,000,000

Local Agency Sponsor: Town of Chapel Hill

Relationship to other local and regional plans: Project included in the 2030 LRTP.



### ***Priority #38 Pope Rd-Ephesus Church Rd – bicycle lanes***

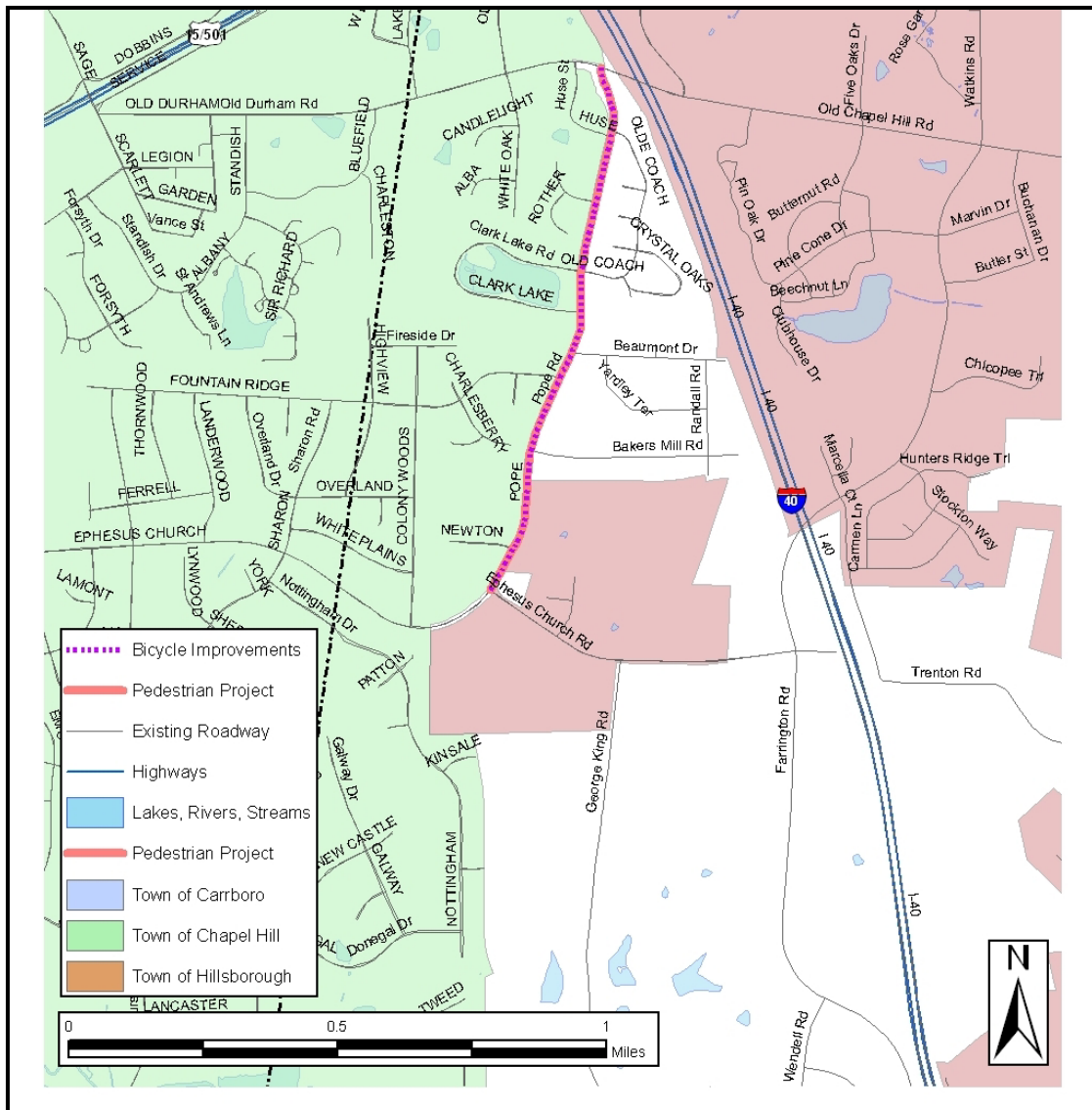
Project Description: add 5ft bike lanes on both sides of Pope Rd

Project Limits: Ephesus Church Rd to Old Chapel Hill Rd. Approximately 5,300 linear feet.

Estimated Cost: \$185,300

Local Agency Sponsor: Town of Chapel Hill

Relationship to other local and regional plans: Project included in the 2030 LRTP.



**Priority #39**  
***Piney Mountain Rd – bicycle and pedestrian improvements***

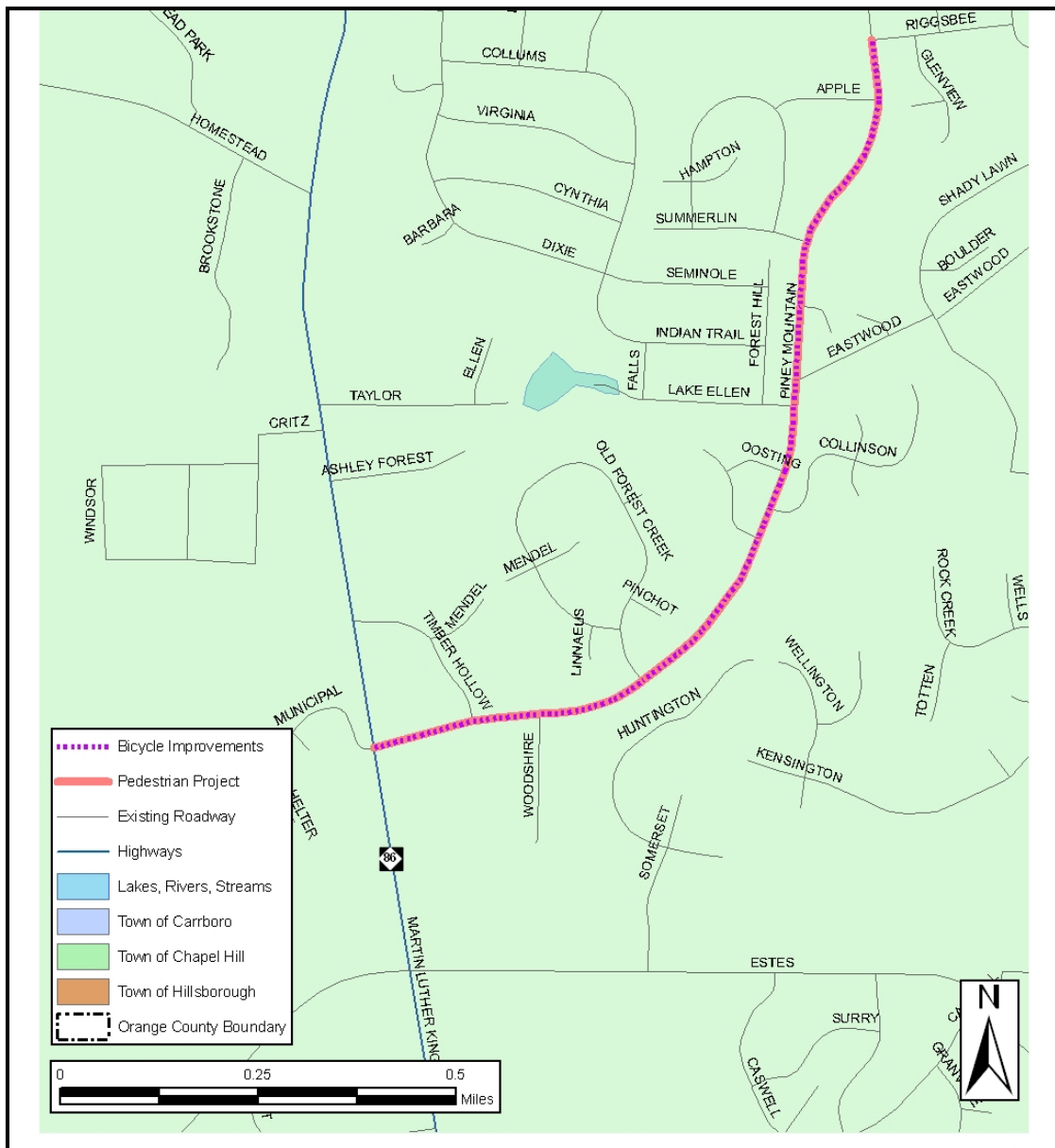
Project Description: add turn lanes, sidewalks, bike lanes and transit accommodations

Project Limits: NC86 to Riggsbee Rd. Approximately 7,300 linear feet.

Estimated Cost: \$1,025,000

Local Agency Sponsor: Town of Chapel Hill

Relationship to other local and regional plans: Improvements recommended in the 1993 Regional Bicycle Plan; project included in the 2030 LRTP



**Priority #40**

**Mount Carmel Church Rd – bicycle and pedestrian improvements**

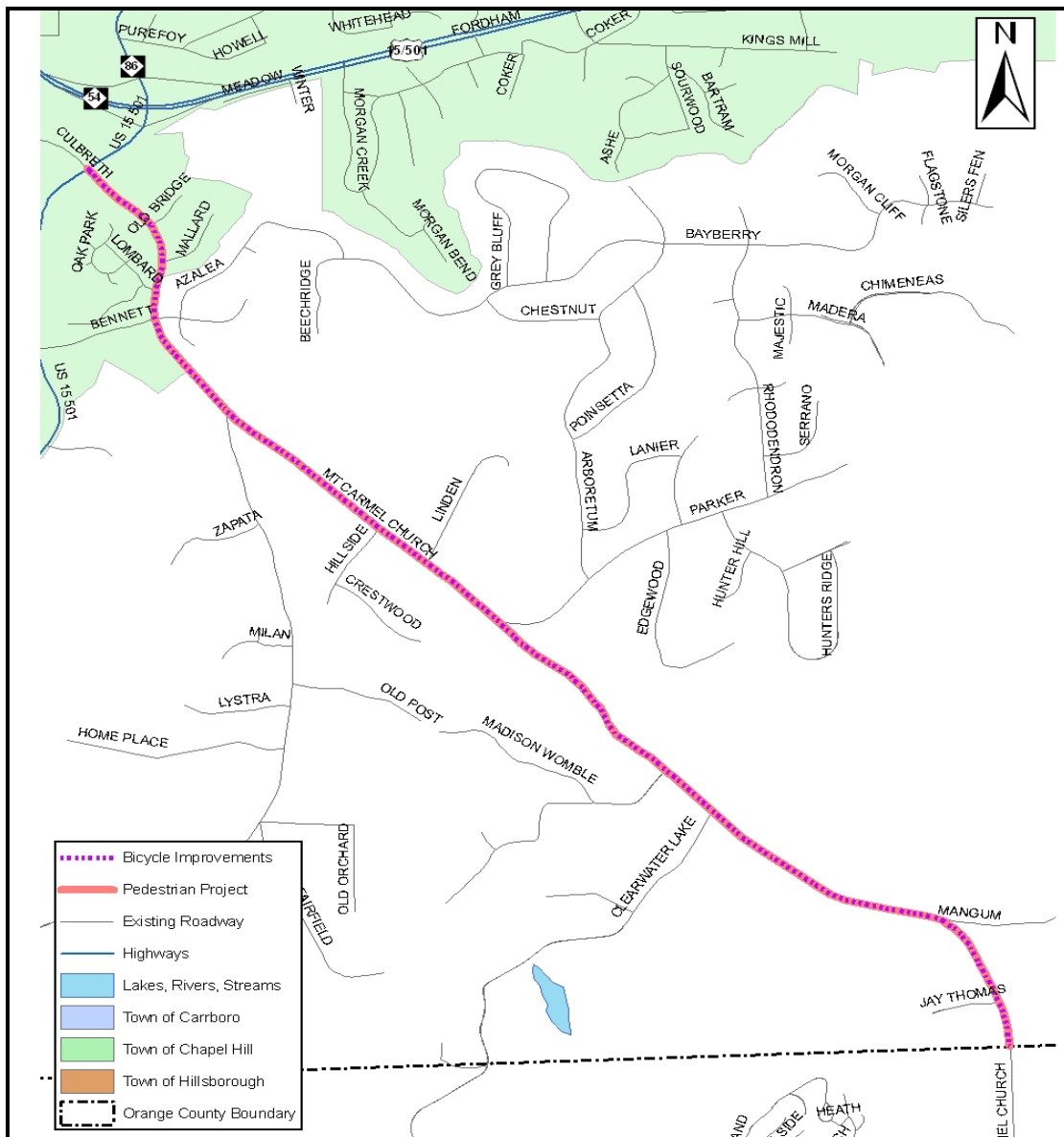
Project Description: add bike lanes, sidewalks, transit and safety improvements

Project Limits: US 15-501 South to Chatham County. Approximately 15,000 linear feet.

Estimated Cost: \$2,850,000

Local Agency Sponsor: Town of Chapel Hill, Orange County

Relationship to other local and regional plans: Project included in the 2030 LRTP.



## ***Priority #41 Country Club Rd – sidewalks***

Project Description: construct sidewalk on east side of Country Club Rd

Project Limits: Gimghoul Rd to Raleigh St. Approximately 2,000 linear feet.

Estimated Cost: \$200,000

Local Agency Sponsor: Town of Chapel Hill

Relationship to other local and regional plans: N/A



### ***Priority #42*** ***Fordham Boulevard – multi use path***

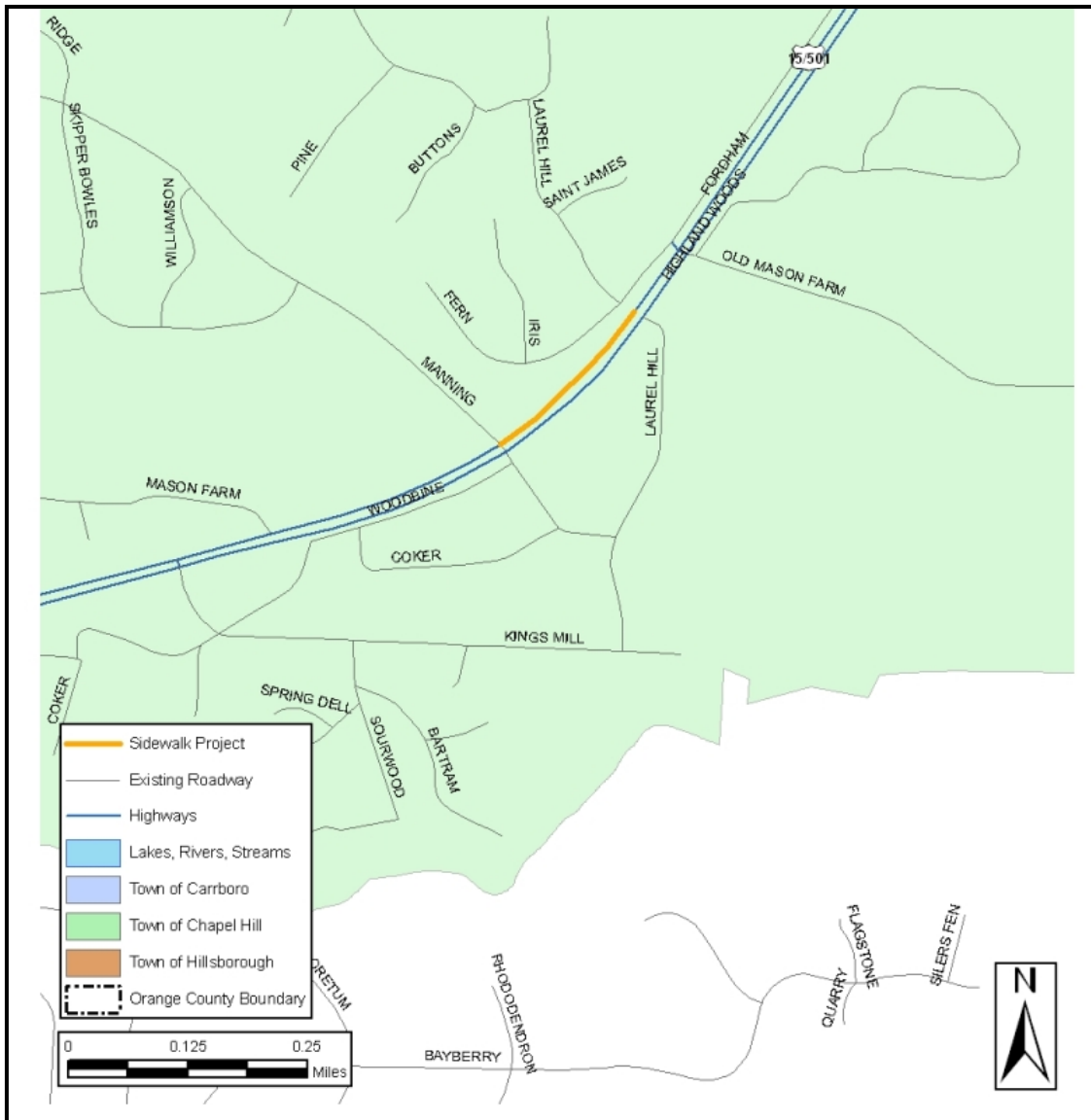
Project Description: construct multi use path along north side of Fordham Blvd

Project Limits: Manning Dr to Carmichael St. Approximately 700 linear feet.

Estimated Cost: \$140,000

Local Agency Sponsor: Town of Chapel Hill

Relationship to other local and regional plans: N/A



### ***Priority #43 Bolin Creek/Little Creek Greenway – greenway trail***

Project Description: build greenway trail with underpass

Project Limits: Chapel Hill Community Center to Pinehurst Dr. Approximately 7,000 linear feet.

Estimated Cost: \$2,400,000

Local Agency Sponsor: Town of Chapel Hill

Relationship to other local and regional plans: Project included in the 2030 LRTP.



\*NOTE: Barrett Road is mislabeled it should be called Community Center Drive

**Priority #44**

***Old Mason Farm/Finley Golf – bicycle and pedestrian improvements***

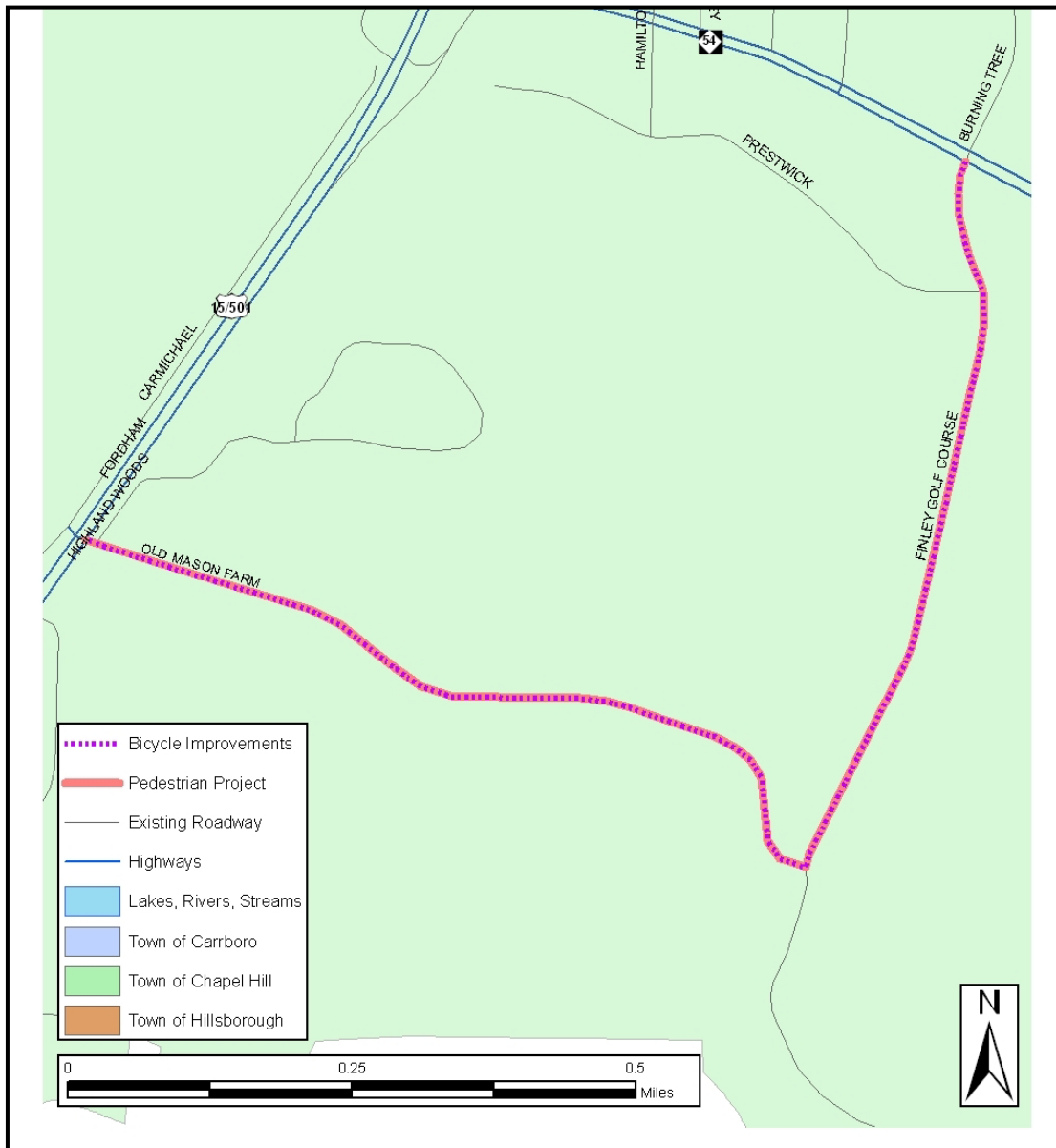
Project Description: add bike lanes, sidewalk

Project Limits: S Columbia St to NC 54. Approximately 7,300 linear feet.

Estimated Cost: \$1,000,000

Local Agency Sponsor: Town of Chapel Hill

Relationship to other local and regional plans: Improvements recommended in the 1993 Regional Bicycle Plan; project included in the 2030 LRTP.



**Priority #45**  
***Erwin Rd – bicycle and pedestrian improvements***

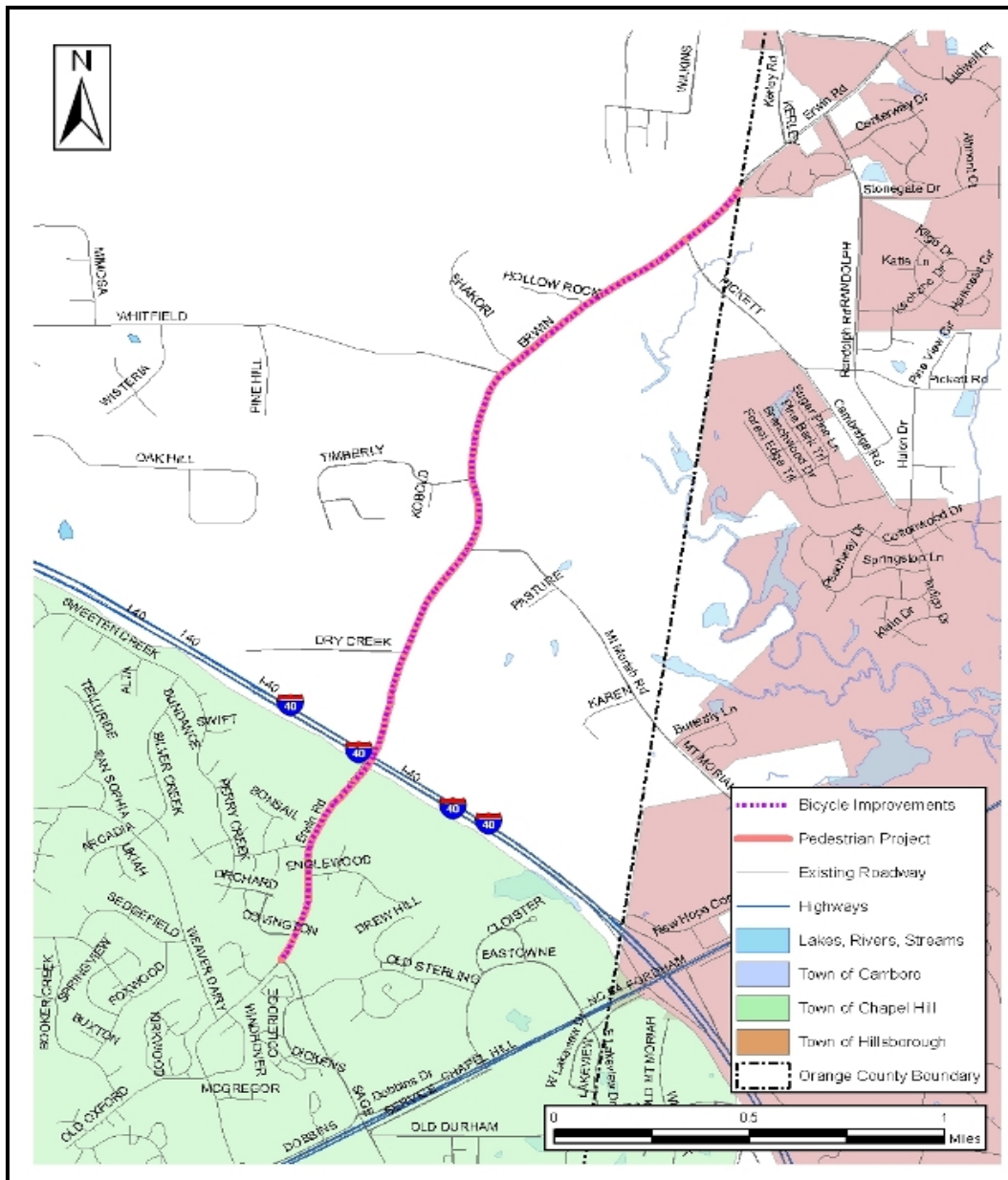
Project Description: add bike lanes, sidewalks and safety improvements

Project Limits: from Sage Rd to Durham County line. Approximately 3,300 linear feet.

Estimated Cost: \$325,000

Local Agency Sponsor: Town of Chapel Hill, Orange County

Relationship to other local and regional plans: Improvements recommended in the 1993 Regional Bicycle Plan.



**Priority #46**  
**Fordham Boulevard Corridor - bicycle and pedestrian improvements**

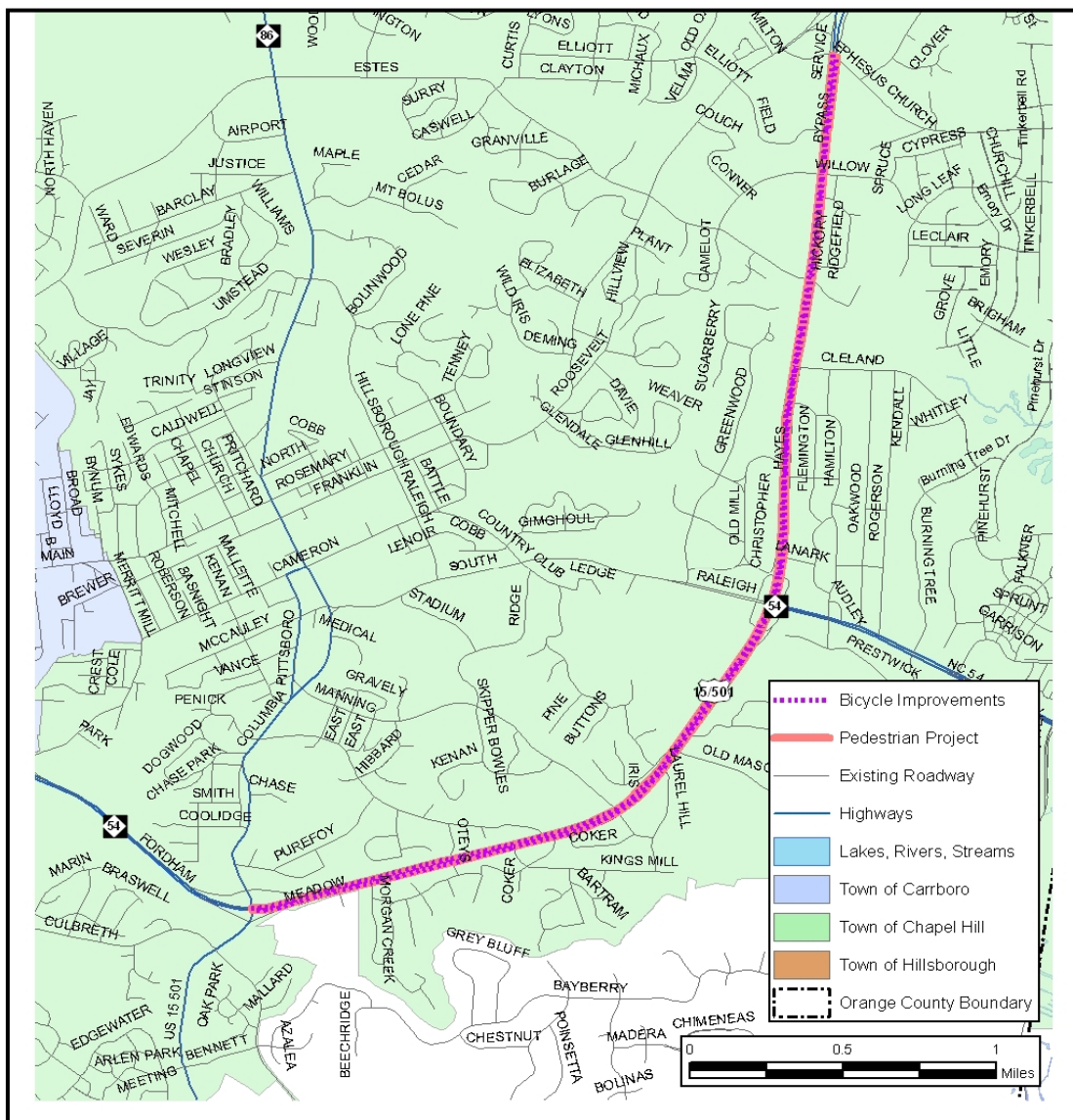
Project Description: add bike, pedestrian and transit improvements

Project Limits: US 15-501 South to Ephesus Church Rd. Approximately 22,000 linear feet.

Estimated Cost: \$3,000,000

Local Agency Sponsor: Town of Chapel Hill

Relationship to other local and regional plans: Improvements recommended in the 1993 Regional Bicycle Plan; project included in the 2030 LRTP.



**Priority #47**  
**NC 54 Corridor – bicycle and pedestrian improvements**

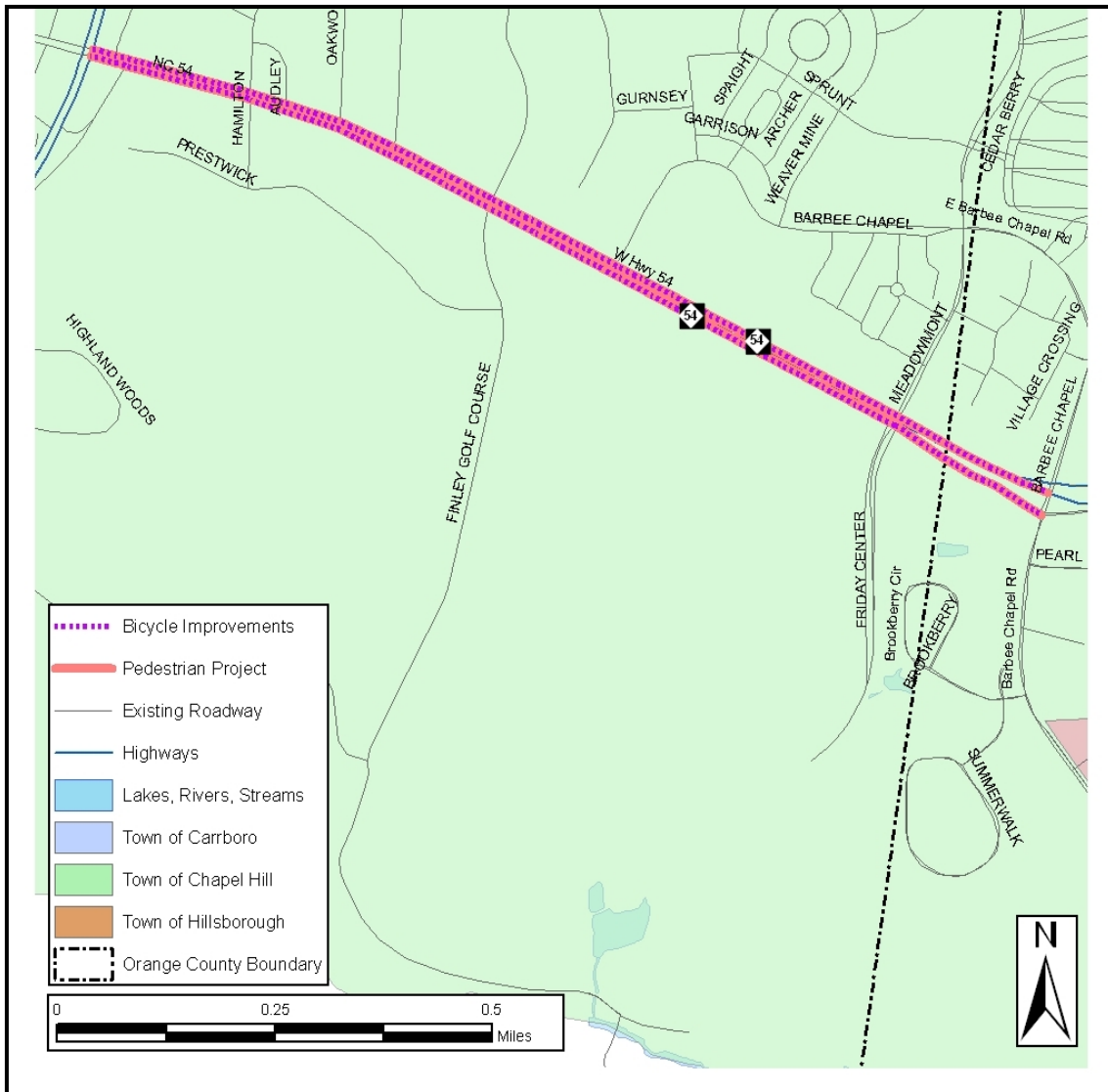
Project Description: add bike, pedestrian and transit improvements

Project Limits: Fordham Blvd to Barbee Chapel Rd

Estimated Cost: \$425,000

Local Agency Sponsor: Town of Chapel Hill

Relationship to other local and regional plans: N/A



# Priority #1 American Tobacco Trail Phase F – greenway trail

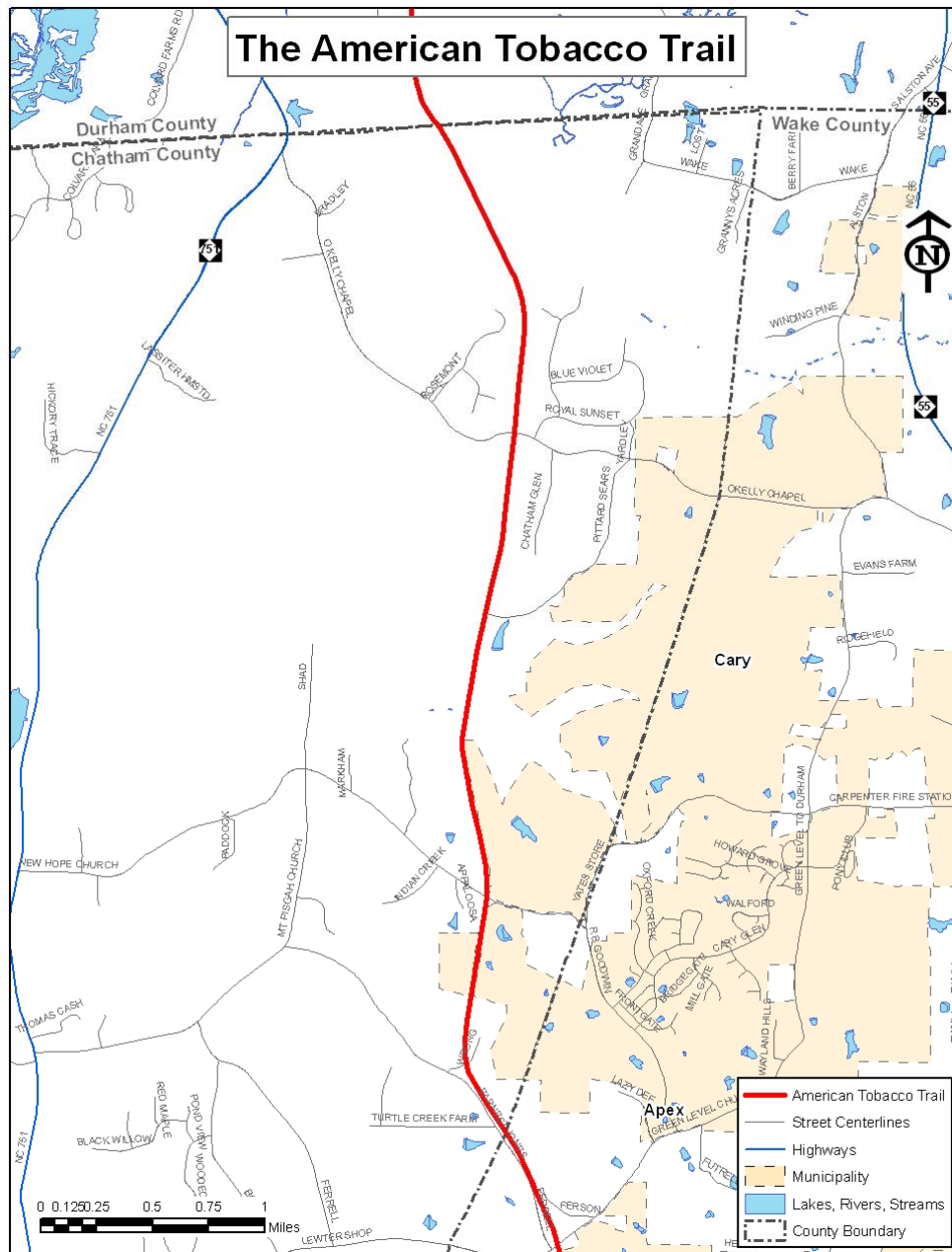
Project Description: construct 10ft rail-trail and bike/pedestrian bridge over I-40

Project Limits: NC 54 to Chatham County Line

Local Agency Sponsor: City of Durham

Estimated Cost: \$2,337,039

Relationship to other local and regional plans: Phase E is included in the American Tobacco Trail Master Plan, completed in October 1992; project included in the 2030 LRTP.



## MEMORANDUM

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

**From:** DCHC MPO Lead Planning Agency

**Date:** April 12, 2006

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

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This memorandum provides a summary status of tasks for projects in the FY 2005-2006 Unified Planning Work Program.

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

### **2005-06 Unified Planning Work Program (UPWP) Emphasis Projects**

#### **Collector Street Plan**

- ✓ First public workshop, October 11, 5PM to 8PM.
- ✓ Draft current and future collector street network to be completed in November 2005.
- ✓ Evaluation of draft network to be completed in December 2005.
- ✓ Public workshop conducted on January 10, 2006
- ✓ Draft collector street network and report complete by March 8.
- ✓ Final public workshop set for March 21.
- Final Plan likely to be ready in late April.
- Plan adoption (City of Durham, Durham County, Town of Chapel Hill and TAC) in June.

#### **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-April 2006.
- Data Analysis and Projection likely to be completed in April 2006.

- Determine and quantify historic and existing measures likely to be completed in April 2006.
- Identify new measures to be completed in April 2006.
- Identify GHG target and model reduction targets anticipated to be completed in May 2006.
- Criteria Air Pollutant (CAP) Analysis anticipated to be completed in May 2006.
- Formulate Action Plan anticipated to be completed in June 2006.
- Recommend reduction targets, strategies and action plan anticipated to be done by June 2006.
- Draft Report likely to be done in June 2006.
- Final Plan anticipated to be finalized in July 2006.
- Plan Adoption (Carrboro, Chapel Hill, Durham City, Durham County, Orange County and TAC) anticipated occurring during the months of July and August 2006.

#### **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 to commence in early November. Temporary staffing hired for the data collection effort.
- Data Collection and field inventory to be completed by fall 2006.
- Level of Service analysis anticipated to be completed by fall 2006.
- Development of CMS performance measures and guidelines likely to be completed in June 2006.
- Evaluation of congestion management strategies and development of cost-effective mitigation measures expected to be done by fall 2006.
- Draft CMS State of System Report likely to be done in spring 2007.
- Public Comment and local review in spring 2007.
- Adoption anticipated in spring 2007.

#### **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 currently underway.
- ✓ Migration of model from Tranplan to TransCad has been completed.
- ✓ Phase 1 (TTA new start model revision) completed in October 2005.
- Phase II TTA New Start model converted to TransCad in April 2006.
- Calibration of 2002 model in TransCad anticipated to be completed in June 2006.
- Validation of 2002 model against 2005 count data anticipated to be completed in December 2006

**Travel Behavior (household) Survey**

- ✓ Consultant has been selected for the survey.
- ✓ Scoping and contract negotiations have been completed.
- ✓ Public involvement planning meeting on November 14, 2005
- ✓ Pilot and pre-test field data gathering completed.
- ✓ Pre-test statistical analysis and data summary to be finalized in December 2005.
- Survey is underway with completion expected in Summer 2006.

**Transit On-Board Survey**

- ✓ Consultant has been selected for the survey.
- ✓ Scoping and contract negotiations have been completed.
- Pilot and pre-test expected to be done in spring of 2006.
- Survey to take place in Fall of 2006.

**Transit Boarding and Alighting Counts**

- ✓ Survey counts to be done in-house by the Lead Planning Agency (LPA) and MPO Transit operators.
- ✓ Counts have been completed by all agencies.
- Data entry is being completed, with analysis and tabulation expected to be completed in May 2006

**Travel Time Survey/Speed Study**

- ✓ Consultant has been selected for the survey.
- ✓ Scoping and contract negotiations completed.
- Field reconnaissance and data collection has been delayed and now expected to commence in February 2006.
- Survey to be completed in Spring of 2006.

**Data Automation and Integration**

- LPA staff is developing work scope and Request for Proposal (RFP).
- Consultant's solicitation is expected in May 2006.

**Land-use Model development**

- LPA staff is developing work scope and Request for Proposal (RFP)
- Consultant's solicitation is expected in May 2006

**Non-Motorized Model development**

- LPA staff is developing work scope and Request for Qualifications (RFQ)
- Consultant's solicitation is expected in May 2006
- First phase of project to be complete in parallel with validated Triangle Regional Model (December 2006)

### **Comprehensive Pedestrian Plan for Durham**

- ✓ Comprehensive sidewalk inventory currently underway
- ✓ Five (5) public workshops held July 11-22.
- ✓ Website established for the study – [www.durhamwalks.org](http://www.durhamwalks.org)
- ✓ Fifth stakeholder meeting held on December 8.
- ✓ First newsletter released
- ✓ Policy and program review completed
- ✓ Pedestrian facility inventory 100% complete
- ✓ Analysis of existing codes and standards 100% complete.
- ✓ Focus group meetings scheduled held November 2005 – January 2006.
- ✓ Feedback compiled for project prioritization process; method of project prioritization completed in January 2006; refinement of prioritization in February and March (with new comments, etc)
- ✓ Analysis and evaluation of ancillary programs anticipated to be completed in March 2006.
- ✓ Draft Pedestrian Plan available online
- ✓ Funding analysis expected to be finalized by March 2006.
- ✓ Intersection and corridor studies scheduled for completion by March 2006
- Final Plan will be presented to Council for adoption on May 1, 2006.

### **Comprehensive Bicycle Plan for Durham County**

- ✓ Consultant selected for the study
- ✓ Contract has been executed.
- ✓ Steering committee formation has been completed.
- ✓ Kick off meeting held on November 16, 2005.
- ✓ Review of existing data, including GIS base mapping, completed in February 2006.
- ✓ Analysis and evaluation of existing codes and policies completed in March 2006.
- Four advisory committee meetings planned for the study.
- Three (3) public open house meetings planned. First public workshop held on January 31. Second public workshop held for March 23, 4-8pm. Third public workshop to be held in May.
- Three Newsletters planned. First newsletter distributed in November, second newsletter distributed in February/March.
- Bicycle facility guideline draft to be completed by April 2006.
- Bicycle route network plan anticipated to be completed in May 2006.
- Draft Comprehensive Bicycle Master Plan anticipated to be completed in June 2006.
- Final Plan, presentation and adoption likely to occur in the months of July/August 2006.

### **Old Durham-Chapel Hill Road Bicycle and Pedestrian Feasibility Study**

- ✓ Technical analysis and evaluation of alternatives are completed
- ✓ Draft report being reviewed by the technical team and TCC.

- ✓ Meeting held between NCDOT and LPA staff to discuss project recommendations.
- ✓ LPA staff working to gather comments on the draft Plan from NCDOT, local jurisdictions and policy committee.
- ✓ Draft report has been reviewed by local governments.
- ✓ TCC Bicycle and Pedestrian subcommittee refined project scope and details, referred to TIP subcommittee to make final funding recommendation for the TCC.
- ✓ TAC approval anticipated in February 2006.

#### **ITS Deployment Plan**

- LPA working on the project scope
- Triangle regional stakeholder meeting scheduled to review scope and next steps.

### **2005-06 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 provided to the TAC in the fall 2006.

#### **Update of the MPO Public Involvement Policy**

- Suggested by the federal Certification Team
- To incorporate changes (public dissemination process) approved by the TAC at its June 2006 meeting.
- Draft to be ready for September 2006 TAC meeting.

#### **MPO Expansion for the next LRTP Update**

- Initiated dialogue with Person County, Granville County, Butner, Roxboro and Pittsboro
- Scheduling meeting with governing bodies of these jurisdictions.
- 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 about 90% complete.
- ✓ Received project schedule and time line from NCDOT.

### **Project proposed to be undertaken in the 2006-07 Work Program**

## **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

**NCDOT PROJECTS UNDER CONSTRUCTION IN DURHAM COUNTY - 4/1/2006**

County	TIP #	Route	Location Description	Contract Amount	Length	Contractor Name	Resident Engineer	RE Ph. #	Contract Completion	Scheduled Progress	Actual Progress	Estimated Completion
Durham	2006-RESURF	US-70	1 SECTION OF US-70, AND 27 SECTIONS OF SECONDARY ROADS (2006-DURHAM)		23.42 miles		Phillip R. Johnson, PE, PLS	(919) 678-0444				
Durham, Chatham	B-2963	STAGECOACH RD	BRIDGE ON STAGECOACH RD OVER NEW HOPE CREEK	\$ 2,012,486.60	0.528 miles	C C Mangum Company LLC	Phillip R. Johnson, PE, PLS	(919) 678-0444	9/27/2005	100%	99.1%	3/31/2006
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) 560-6857	12/31/2006	91.0%	78.1%	12/31/2006
Durham	I-306DB	I-85	WIDENING OF I-85 FROM WEST OF BROAD STREET TO WEST OF CAMDEN AVE.	\$ 73,297,064.77	4.093 km	Granite Construction Company	Aaron V. Earwood, PE	(919) 560-6857	12/31/2004	93%	94.1%	6/30/2006
Durham	I-3306B	I-40	WIDENING OF I-40 FROM ORANGE CO LINE TO DURHAM FREEWAY.	\$ 44,790,284.74	10.837 miles	Granite Construction Company	Phillip R. Johnson, PE, PLS	(919) 678-0444	12/14/2003	100%	99.9%	08/24/2006
Durham, Wake	R-2000AB/AC	I-540	CONSTRUCTION OF I-540 FROM RESEARCH TRIANGLE PARK EAST LIMITS TO I-40.	\$ 68,368,301.43	5.346 km	The Lane Construction Corp.	Phillip R. Johnson, PE, PLS	(919) 733-9499	08/01/2007	66%	68.6%	08/01/2007
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	Phillip R. Johnson, PE, PLS	(919) 678-0444	06/01/2006	86%	70.4%	11/30/2006
Durham, Gran, Pers, Wake	R-4404	US-64	DIVISIONWIDE GUARDRAIL - US-15 / 501, US-64, US-70, US-158 & NC-147.	\$ 1,138,560.10	28.5 miles	Elderlee Inc	Phillip R. Johnson, PE, PLS	(919) 733-9499	6/6/2006	34%	37.2%	6/26/2006
Durham	R-4752	RED MILL RD	WIDENING AND RESURF OF RED MILL RD FROM SOUTH OF I-85 TO TEKNIKA PKWY.	\$ 1,787,196.00	4.37 miles	Rea Contracting, LLC	Aaron V. Earwood, PE	(919) 560-6857	12/12/2005	100.0%	93.1%	4/5/2006
Durham	U-3309B	ALEXANDER DR	WIDENING AND RESURF OF ALEXANDER DR FROM EAST OF DURHAM FWY TO MIAMI BLVD.	\$ 3,065,281.82	0.78 miles	W. E. Garrison Co., Inc.	Bob Shultes	(919) 840-0914	10/15/2003	100%	98.5%	3/30/2006
Durham	U-4446	DURHAM FRWY	ITS WORK ON DURHAM FREEWAY FROM I-40 TO I-85.	\$ 1,245,283.29	22 miles	Viasys Services, Inc	Bob Shultes	(919) 840-0914	10/15/2005	100%	76.8%	5/15/2006

**NCDOT PROJECTS FOR LET NEXT 12 MONTHS IN DURHAM COUNTY - 4/1/2006**

County	TIP #	Route	Location Description	Contract Estimate	Length	Contact Engineer	Phone #	Contract Let Date
DURHAM	B-4110	BAHAMA ROAD	BRIDGE NO. 5 OVER MOUNTAIN CREEK ON BAHAMA ROAD	\$ 1,200,000.00	0.152 miles	C. HOUSER	(919) 250-4016	4/18/2006
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	\$ 33,100,000.00	5.7 miles	D. TAYLOR	(919) 250-4016	7/18/2006
DURHAM	U-4010	NC 98	WIDENING OF NC 98 (HOLLOWAY ST) FROM EAST OF US 70 TO EAST OF JUNCTION ROAD	\$ 2,700,000.00	0.369 miles	J. MOORE	(919) 250-4016	11/21/2006
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	\$ 17,100,000.00	1.708 miles	C. HOUSER	(919) 250-4016	2/20/2007

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: <http://apps.dot.state.nc.us/constructionunit/proglocreport/ProgLocSearch.aspx>

ACTIVE NCDOT PROJECTS LOCATED IN ORANGE COUNTY - 1/30/06

County	TIP #	Route	Location Description	Contract Amount	Length	Completion Date	Revised Completion Date	Scheduled Progress	Estimated Completion Date	Remarks
Orange		US-70	US-70 FROM ALAMANCE COUNTY TO NC-86 AT HILLSBOROUGH.	\$ 3,235,518.45	9.79 miles	11/15/2006		54%	11/15/2006	
Orange		NC-86	2 SECTIONS OF NC-86 AND 9 SECTIONS OF SECONDARY ROADS.	\$ 1,321,891.11	16.424 miles	09/15/2006				Work to Begin April 2006
Orange	R-942	US-15	Us-15/501 from SR 1599 in Chatham Co to SR 1008 in Orange Co	\$ 41,884,597.59	20.49 km	5/31/2006		100%	5/31/2006	
<b>NCDOT PROJECTS IN ORANGE COUNTY CURRENTLY IN 12 MONTH LETTING LIST</b>										
County	TIP #	Route	Location Description	TIP Estimate	Length	Est. Let Date				
Orange	U-4008	US 15-501	Super Street Project @ Erwin Road	\$ 3,700,000.00	0.392 miles	5/16/2006				

# The Chapel Hill News

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Published: Apr 11, 2006

## Roses & Raspberries

**Roses** to the N.C. Department of Transportation -- yes, you read that right -- for its response to citizens' concerns about pedestrian safety at a Carrboro intersection.

Residents who live in the area around McDougle School told the town that too many motorists were failing to stop for pedestrians at the intersection of Hillsborough Road and Old Fayetteville Road. Given that many of those pedestrians are children on their way to and from school, that was an unacceptable situation.

The residents and the town talked to NCDOT, which explored the matter, determined that there was indeed a need for additional measures, and installed electronic signals to address the situation.

What's encouraging about this is that nobody -- not the parents, not the town and not DOT -- was complacent. Something needed doing, and everybody worked together to get it done.

If you have a comment on today's Roses & raspberries, or if you have suggestions for Roses or Raspberries, please contact Dave Hart, associate editor, at 932-8744 or [dhart@nando.com](mailto:dhart@nando.com)

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## Towns, UNC-CH differ on road aims

**MATT DEES, Staff Writer**

At the end of "Back to the Future," Doc Brown utters the immortal line: "Roads? Where we're going, we don't need roads."

Not to paint them as wild-eyed time-machine inventors, but that line nearly captures Chapel Hill and Carrboro leaders' stance on the future of transportation for their area.

Roads may not become obsolete in the future, but town officials don't want them to become any wider either.

Instead, they want buses, bikes and feet to carry more commuters, curbing traffic congestion and air pollution.

UNC-Chapel Hill officials say they want the same, but they aren't ready to rule out road widening as a possibility.

At a meeting Monday, Carolyn Elfland, associate vice chancellor for campus services, asked that a transportation consultant the towns and university are hiring study road widening as well as transit improvements.

But town leaders want the consultant's plan to focus solely on upgrading bus, bike and pedestrian systems, possibly to include a new trolley service.

"The university is well aware that both Chapel Hill and Carrboro are not interested in road widening but are interested in promoting alternative transportation, getting people out of their cars," new Carrboro Alderman Dan Coleman said. "To have the university come in at what is essentially the 11th hour on this study and say they wanted

to expand the scope in this way was pretty shocking to me."

But Elfland maintains that the tens of thousands of additional commuters that will be generated by the university's planned Carolina North research campus might need some extra traffic lanes, even if many of them catch buses.

"I think everybody's concerned about road widening, and everybody is interested in promoting transit," she said. "That includes the university. We've got a huge track record of promoting transit. It wasn't that roads were supposed to trump transit. It was that we need to look at it with an open mind."

Jim Ward, a Chapel Hill council member, doesn't want roads widened any more than Coleman but says studying the possibility doesn't mean that would happen.

"The plan is to look at the current systems: what ways can we best meet our future demands of where people are and where do they need to go, and pair that up with road capacity and what kind of transit capacity we can plan for," Ward said. "I don't see that a modification of this sort jeopardizes the information we're going to get."

Coleman disagrees.

He noted that early Carolina North plans called for 17,000 parking spaces. Town leaders and residents revolted loudly, and the university agreed to the transit study to help calm the furor. (Parking equals additional car trips, town leaders say.)

Now the university seems to be taking a step back from its cooperative stance, Coleman said.

Studying how to fit more cars on local roads misses the point, he said.

"We could study how to fly to the moon from Carolina North and it wouldn't get done," he said. "It wouldn't be a good use of our resources."

The transit plan committee will meet again at 10:30 a.m. April 21 in Chapel Hill Town Hall.

It hopes to advertise soon for firms to submit their qualifications for the study.

Staff writer Matt Dees can be reached at 932-8760 or [matt.dees@newsobserver.com](mailto:matt.dees@newsobserver.com).

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## Transportation types hate to say they goofed

BRUCE SICELOFF, Staff Writer

Everybody makes mistakes. But some folks find it really, really hard to admit that things didn't work out as promised.

Take the state Department of Transportation. Take three of its biggest Triangle projects:

\* Interstate 40, Durham County. For the next few weeks, three lanes of I-40 traffic will squeeze into one lane each night while road crews seek to contain the damage caused by a mistake in the original work to widen I-40.

In contracts and in daily inspections while the paving was under way, DOT engineers failed to require that expansion joints be cut the full 3-inch depth of the top concrete layer. The joints were needed to keep the layers bonded together as temperatures shifted between winter and summer.

Tests in 2005 indicated that concrete poured in 2003 and 2004 had quickly separated in some places. The DOT's consultant recommended ripping out and replacing all of the suspect concrete: 3 inches deep, two lanes wide in each direction, for 10.6 miles.

But the DOT is trying to salvage the work. This month, the contractor began sawing a few thousand joints to the correct depth. This work comes too late where the layers have separated. But DOT engineers hope to find later this year that they limited the spread of the damage.

And they hope to prove that it wasn't their fault, after all.

In an uncharacteristic burst of breast-beating, DOT chiefs apologized profusely last fall for cracks and potholes that had begun appearing on I-40. The self-abuse stopped when they found evidence that they had discussed the 3-inch saw cuts once, in an April 2003 meeting with the contractor.

"It is our determination that we gave proper instructions to the contractor to saw full depth," Len Sanderson, the DOT highway administrator, told legislators in November.

If the DOT wins its argument that this conversation was sufficient, the contractor will have to eat all repair costs. If not, it will go down as a cost overrun that could drain millions of dollars from future Triangle highway allocations.

Lawyers, and probably a judge, will decide.

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## **Personal touch aids transit use**

BRUCE SICELOFF, Staff Writer

If I show you where the bus stops near your house, and where it goes in your part of town, will you consider giving your car a rest?

No way? OK.

Yes? Cool. Here's a tourist map of your neighborhood. It shows bus routes, and trails for biking and walking. It's peppered with parks, banks, shops and other destinations.

See how many places you can go without your car?

With exchanges like this one -- at first by mail and later by phone and in person -- the Triangle Transit Authority zeroed in on hundreds of households in west-central Durham neighborhoods. The targets were residents interested in learning how to cut back on their driving in favor of more bus, bike and shoe trips.

This personal approach is called individualized marketing. It has delivered promising results in Germany, Australia, Sweden, Oregon -- and now, in Durham.

Instead of flooding the public with material that most people will ignore, or waiting for a few people to seek answers by phone or online, the idea is to find and focus on those folks who are interested in what you have to say.

The Federal Transit Administration picked Durham and three other U.S. cities for trials of individualized marketing.

The TTA surveyed the Durham residents about their travel habits and interests. Car drivers who expressed curiosity about new options received personalized information by mail, by phone and even in person.

Later, the TTA checked back to see whether the new maps and info made a difference. They did.

The personal approach didn't quite turn the sky blue and the city green overnight, but it produced a healthy boost in the use of environmentally friendly alternatives to the automobile.

Compared to a control group that did not receive individualized information, Durham's target group of 900 households cut car trips by 7 percent and car mileage by 11 percent, the Federal Transit Administration reported.

If these numbers were multiplied out to 12 months' worth of changed habits, the 900 families would average only 801 car trips per person -- down from 858 trips otherwise. Their car mileage would be reduced by a combined 530,000 miles per year.

Not bad.

The results were similar after pilot tests in Sacramento, Cleveland, and Bellingham, Wash., the FTA said. Local and federal officials called the project a success.

"We're very encouraged," said John Tallmadge, TTA commuter resources director.

The TTA is sharing the results this week with local planning and government agencies. The TTA wants to start a discussion about whether this marketing approach would help the Triangle get more value out of taxpayers' investment in transit services, bicycle facilities and other automobile alternatives.

"This is a technique that looks like it actually drives people to use those facilities in greater numbers," Tallmadge said.

What looks especially appealing to me is that dandy tourist map they prepared for people who live in these Durham neighborhoods. It looks like something a savvy traveler would pick up in London or Athens. It shows you where to find the nearest public transportation and which bus you need to get to a hospital, shopping center, hotel or theater.

A presentation on the individualized marketing study is scheduled from 2:30 to 4 p.m. today at the Morehead Planetarium in Chapel Hill. For information call Kathleen Herr at the TTA, 485-7463, or read the study results online at [www.ridetta.org/Individualized\\_Marketing/](http://www.ridetta.org/Individualized_Marketing/).

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## **Pedestrian, bicycle safety among ideas for Churton Street**

By Emily Coakley, The Herald-Sun  
April 2, 2006 6:22 pm

**HILLSBOROUGH** -- Imagine, for a moment, a Churton Street where someone could walk or bicycle safely all the way from Interstate 40 north to N.C. 57.

It's a vision the Churton Street Corridor Committee is working to turn into a reality. The committee has been presenting preliminary recommendations to the town's various advisory boards, and will be looking for the public's thoughts in the next few months.

The committee is also looking for ideas to bring the recommendations to fruition, said Anne Morris, Community Development Planner with the state Division of Community Assistance, who has been lending her expertise.

The Churton Street corridor, according to the committee, starts just south of the Interstate 40 interchange and extends north to N.C. 57.

While the southern edge of the corridor seems quiet now, work has begun on Waterstone, the 337-acre retail and residential development just north of Interstate 40 between Old 86 and N.C. 86.

Besides making things safer for pedestrians and bicyclists, the committee is also looking for ways to make the entrances to Hillsborough more inviting and attractive.

"We want to create a good impression of our town for everyone," said Cathleen Turner, who is working with the committee and is executive director of the Alliance for Historic Hillsborough.

Last year, the committee asked the public to vote on ideas during some Last Friday events. There are similar plans in the works for this year.

Improving conditions for pedestrians was one idea citizens agreed with, according to the committee's progress report. Other ideas popular with the public included reducing sign clutter and making signs more reflective of the town.

"We did all this public involvement, and the plan is really built on what the public has said are its priorities," Morris said.

The committee took the public's input and worked to develop recommendations which will address the streetscape and signs, revitalize the Churton corridor and improve parks and open space, Turner said.

Some recommendations are to bury utility lines, add decorative light poles and turn some parts of Churton Street into a boulevard, complete with trees in the medians, according to the progress report.

This is one of three studies focusing on Hillsborough. A committee is also working on a strategic growth plan. Last week the town board endorsed a plan to conduct an economic development study of U.S. 70 on the north side of town around the N.C. 86 intersection east to Lakeside Drive.

In discussing the study, Eric Hallman, a town board member, told other board members the U.S. 70 group would coordinate with the Churton Street group.

Turner would like to see the recommendations and implementation ideas written down so residents would have an idea of what's expected along the street.

The public may get to see and comment on the committee's recommendations at the May 26 Last Friday event and on June 3 at the Walkable Hillsborough Day, Morris said.

The committee will also meet again April 17 and May 15. Meetings start at 7 p.m. at the Town Barn, and the public is welcome, Morris said.

URL for this article: <http://www.heraldsun.com/orange/10-719811.html>

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## Two groups to launch rent-a-bike program

By BETH VELLIQUETTE, The Herald-Sun  
April 2, 2006 6:56 pm

CARRBORO -- Imagine checking out a bicycle like a book from the library.

Two community service groups are rebuilding bicycles and working out arrangements so that people in the community would be able to check out a bicycle to run an errand, take a ride around town or head to lunch downtown.

They hope to have the bike program called "Yellow Bikes" up and running by the end of summer. The idea behind "Yellow Bikes" is to offer people an alternative

to jumping in their cars for every little trip they need to make. Instead, people could check out a bicycle and make a quick trip without having to use a single ounce of gasoline or clog up the streets and parking lots with their vehicle.

For example, employees at UNC might live too far away from campus to ride a bicycle to work, but once they're on campus, they could check out a bicycle and ride it to Carrboro for lunch. Or they may participate in the Park & Ride program and don't have access to their cars during the day, so they'd be able to check out a bike to run an errand or ride across campus for a meeting.

The Recyclery, a group of volunteers who fix up old bicycles to give away and who teach people how to repair their own bicycles, and the local Students United for Responsible Global Environment group are joining to start a "Yellow Bikes" program in Chapel Hill, Carrboro and on UNC's campus. Their program is based on similar programs in Montana, Oregon and Minnesota.

"We're trying to build a program that works best for here, taking little bits and pieces from those places," said Heather Debethizy, a student intern at SURGE.

One of the first little changes they'll make to the so-called yellow bike program is to paint the bicycles Carolina blue," said Chris Richmond, volunteer coordinator for The Recyclery.

"We're going to do it like a lending library," Richmond said. "Folks will be members for \$10 a year, and they are entitled to check out bikes from a hub."

The bicycles will have baskets and locks, and the rental will include helmets.

The locations of the hubs have not been determined, but the groups plan to have at least one each in Carrboro, in Chapel Hill and on campus. "We may have more, but the idea is at least three," Richmond said.

Organizers hope to enlist government, campus officials or private businesses in serving as the librarians, so to speak, in providing a place for the bicycles and checking them in and out, Debethizy said. "Like the Carrboro Century Center; we'd love to work with them," she said. "They already check out things like basketballs, and it would be really easy for them to switch over. Or maybe some volunteer business that would love to see this program succeed."

The organizers' first goal is to put together 30 five-speed bicycles and have them ready for the initiation of the program. After that, "We would definitely like to expand as much as possible," Debethizy said.

Each Sunday afternoon, The Recyclery, located at the corner of Old Pittsboro Road and Daffodil Lane in Carrboro, holds workshops for people wanting to help out or who are interested in learning how to fix their own bicycles in exchange for their labor in fixing up old bicycles for the Recyclery.

Burdock Callaway has been a regular volunteer since he moved to the area last November. Fixing up an old but good quality bicycle often results in a better quality bike than going out and buying a cheap new bike, he said. "When I'm not helping other people fix their bikes, I've been working on little kids' bikes, which is pretty fun," he said.

The Recyclery, located in an old barn hidden from public view, collects and accepts donations of old bicycles, and then volunteers strip them down and replace old rusting parts with new ones. The ones that won't be used for the

community bike loan program are given away to children who can't afford their own bicycles.

One of the group's next events, although the date has not yet been set, will be helping kids in the Ridgefield neighborhood on South Estes Drive fix up their bicycles and give bicycles away to those who don't have one.

The Recyclery is always looking for volunteers, but people don't have to know how to fix a bicycle to volunteer, Richmond said. That's part of the fun, learning to fix up bicycles using the tools and equipment available at The Recyclery.

The Recylery, a charitable organization which has Internal Revenue Section 501(c)(3) status, is always looking for volunteers, bicycle parts, tools and cash, Richmond said.

URL for this article: <http://www.herald-sun.com/orange/10-719845.html>

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## **New ways to fund roads proposed**

### **Group calls for local control on tolls**

BRUCE SICELOFF, Staff Writer

Local governments should be given the power to levy taxes, fees and tolls to help North Carolina pay for badly needed road and transit improvements, a statewide advocacy group said Tuesday.

Bill Carstarphen of Charlotte, co-chairman of NC Go, outlined a string of transportation finance proposals, starting with a billion-dollar bond issue.

"We are simply not appropriating the funds that are needed to keep the system moving forward," Carstarphen told reporters before a meeting with legislators in Raleigh. NC Go represents road builders, transit agencies and other transportation interests.

He said North Carolina must find new approaches to close an expected \$30 billion shortfall in funds that will be needed to pay for the state's mobility needs over the next 25 years.

Alluding to a recent proposal to finish Wake County's Interstate 540 Outer Loop as a toll road, Carstarphen said local and regional governments should have the option to collect tolls on existing loops and freeways.

"This could represent a source of revenue ... that could generate funds that would be used in that locality for transportation purposes only," he said.

Some southern and western Wake residents resent a proposal to collect tolls on the new part of I-540 while northern loop drivers ride for free. Apex Mayor Keith Weatherly was glad to hear about the idea of collecting tolls on the northern half, too.

"That would make it go down quite a bit better," he said.

But Joe Bryan of Knightdale, a county commissioner and chairman of the Wake area's transportation planning agency, said it would be unfair for state or local government to extract tolls from drivers on a road that had been paid for with gas tax revenue.

"I can't imagine that statement about tolling existing roads will have any legs," Bryan said.

Legislative leaders flanked Carstarphen at a news conference and said they are open to all suggestions for shoring up the state's transportation finances. But they did not endorse any details, and the legislative committee spent only a few minutes on the proposals.

### **'Past critical'**

"Our situation with transportation in North Carolina is critical -- it's probably past critical," said Sen. Clark Jenkins of Edgecombe County.

Some North Carolinians want to cut the state gas tax, which grew by nearly 3 cents in January to 29.9 cents per gallon. Another increase is possible in July, because a portion of the tax rises and falls with wholesale gas prices.

Carstarphen said gas taxes are crucial now but should be cut back in the future. Instead of a tax that will provide less money as automobile fuel economy improves, transportation costs should be covered by user fees based on how much each resident uses road and transit networks, he said.

Sen. Neal Hunt, a Raleigh Republican on the committee, said he was not ready to see a heavy emphasis on toll roads. He agreed with a proposal to stop using Highway Trust Fund money for non-transportation purposes.

Hunt and Bryan said Wake County deserves a bigger share of the state's available transportation money.

"We need to adjust the formula for distributing funds to the urban areas," Hunt said in an interview. "We've done some research, and Wake County has only been collecting between 50 cents and 60 cents on every dollar we've contributed to the Department of Transportation over the past 15 years."

Staff writer Bruce Siceloff can be reached at 829-4527 or [bruce.siceloff@newsobserver.com](mailto:bruce.siceloff@newsobserver.com).

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## **Tolls ahead?**

### **User fees could pave the way for two long-delayed highway projects in the Triangle**

BRUCE SICELOFF, Staff Writer

Toll roads seemed obsolete across most of the United States 50 years ago, after Congress began collecting a federal gas tax to pay for a modern network of interstate highways.

The gas tax is losing its purchasing power today as transportation needs accelerate across the nation. In Washington and most state capitals, the idea of raising the gas tax is a political nonstarter.

Dozens of states have turned to tolls as a more palatable source -- politicians like to call them "user fees" -- for money to build bridges, tunnels, urban freeways and more of those interstate highways.

Are toll roads a good idea for North Carolina?

Triangle motorists will likely be the first to learn the answer. Two local projects are at the front of a line of six toll candidates, worth an estimated \$2.22 billion to \$3.88 billion, across the state. The Triangle projects are:

\* The Triangle Parkway, a four-mile extension of N.C. 147 through Research Triangle Park. The parkway, estimated to cost between \$94 million and \$252 million, was part of the early plans for RTP. But it never rated high enough among road needs to win state and federal construction money.

\* The western and southern sections of Interstate 540 in Wake County. The Western Wake Freeway would extend 12.4 miles from Morrisville to Holly Springs and cost an estimated \$378 million to \$680 million. The Southern Wake Freeway would run 16.5 miles from Holly Springs to Interstate 40 in Garner, with an estimated cost of \$350 million.

The N.C. Turnpike Authority, the agency in charge of toll roads, says toll financing would make it possible to open the Triangle freeways 10 to 15 years sooner than the state's most optimistic timetables using traditional tax funding. With toll financing, the Triangle Parkway and Western Wake Freeway could open in 2011, with the Southern Wake Freeway following in 2016.

Q. Why do we need toll roads?

A. Drivers pay a federal tax of 18.4 cents and a state tax of 29.9 cents on each gallon of gas. Gas tax revenue provides about two-thirds of the nation's road-building money. Even with a recent 2.8-cent increase in the state tax, these revenues have not kept pace with transportation costs.

Traffic volumes are increasing about 40 percent faster than the population. In the Triangle, relentless growth means more cars and trucks on our roads every year. Improved fuel economy means less gas sold and less tax money collected for every mile of pavement wear-and-tear.

"As people drive more miles using less gas, they're putting more demand on the system but paying less in taxes to take care of it than they did 20 or 30 years ago," said Edison H. Johnson Jr., who heads Wake County's transportation planning agency.

Road-building costs are rising faster than inflation. The tab for paving one lane of asphalt highway in North Carolina increased from \$170,000 per mile in 2002 to \$225,000 last year, or 32 percent.

Q. What is the shortfall in North Carolina?

A. The state Board of Transportation predicts that North Carolina will have only \$55.5 billion to pay for \$84.6 billion in transportation needs over the next 25 years, a gap of nearly \$30 billion.

Triangle planners pegged the local shortfall at \$8 billion a couple of years ago. That was before the state began slowing the flow of transportation dollars to the region and delaying construction of the Western Wake Freeway and other big projects.

Q. Who decides which roads will have tolls?

A. The N.C. Turnpike Authority, created by the General Assembly in 2002, and its nine-member board will decide. The authority considers only toll projects recommended by local elected officials or planning boards.

When it receives a request to consider a project for tolls, the authority board can reject the idea out of hand or order studies of how much traffic the road would handle and how much of its construction cost could be covered with tolls. The turnpike authority has ordered such studies of the Triangle Parkway and the I-540 extensions.

The turnpike authority will sell bonds on Wall Street to finance most of the construction up front, repaying the debt later with toll revenue.

The assessment of Wall Street lenders is crucial. They won't lend money for construction unless they are confident that the turnpike authority will collect more than enough in tolls, even if the economy goes sour, to repay the debt on time.

Before a project can proceed, the turnpike board and local leaders will have to agree on how to pay for the costs not covered by toll revenues.

Q. How will toll rates be set?

A. The turnpike authority will try to set tolls high enough to pay the bills but not so high that too many drivers choose alternative routes. Competing interests will be at play as the authority searches for middle ground.

A preliminary financial study expected this spring will provide the first estimates of how high to set tolls on the Western and Southern Wake Freeways.

The turnpike authority is considering a \$1 toll for the Triangle Parkway.

A consultant, Wilbur Smith Associates, initially suggested a toll of 75 cents for the Triangle Parkway. Authority director David W. Joyner and Lyndo Tippett, the state transportation secretary and chairman of the turnpike board, asked the consultant to run the numbers again with the \$1 toll.

For commuters, there would be a big difference between the two rates. A 75-cent toll for the daily round trip adds up to \$7.50 in a five-day work week. Adding 25 cents, or 33 percent, to the toll makes it \$10 per week.

The difference would be smaller for the turnpike authority itself. The consultant predicted that in 2030, daily traffic on the Triangle Parkway would reach 55,800 cars with a toll starting at 75 cents -- or 51,600 with a \$1 toll. Both forecasts factored in future toll increases.

Even with fewer drivers, a \$1 toll would raise about \$4 million more than a 75 cent toll toward the total construction cost -- a relatively small sum on a project estimated to cost up to \$252 million.

If these numbers hold up through future studies, state and local leaders and Wall Street lenders will have to decide:

Do we charge \$1 and raise an extra \$4 million?

Or do we charge 75 cents, save money for drivers and serve a few thousand extra cars and trucks that otherwise would be crowding the "free" roads every day?

Q. Will the tolls fully pay for the roads, or will tax money be used, too?

A. Tolls rarely cover the entire cost.

Building the Triangle Parkway would cost an estimated \$38 million more than the tolls would generate. That means other funds must be found to cover 15 percent to 40 percent of the cost. Corresponding figures for the I-540 extensions in southern Wake County will be available in a few weeks.

The turnpike authority and Triangle leaders, who will be working together for the first time, must decide how to fill the funding gaps. Turnpike officials have listed possible sources including federal loans, state funds and contributions of money or right-of-way from private or local government sources.

This could be the toughest part of the decision process. State law sharply limits the ability of local governments to pay for transportation projects.

Q. Can Interstate 540 be made entirely a toll road?

A. Some Wake residents say it would be unfair to charge tolls on the western and southern sections of I-540 unless drivers on the northern stretch also pay tolls. But state law would not permit this. It allows the collection of tolls only on a new road, to pay for construction of that road.

Taxpayers already have paid for the 31-mile northern loop with their state and federal gas taxes and other fees. The northern section will reach from RTP to Knightdale in 2007.

Q. What about tolls on I-95?

A. I-95 needs new bridges, new pavement and new lanes as it passes through Eastern North Carolina, but the work has never made it high enough on the state's priority list.

On orders from the General Assembly, the state Department of Transportation has applied to the federal government for a spot in a pilot program that would allow tolls on an existing interstate for the purpose of improving it.

If the federal government says yes, the General Assembly will consider amending a state law that bars tollbooths on existing roads.

Q. What are other states doing?

A. Motorists in 30 states now pay tolls on 5,200 miles of roads, bridges and tunnels, and highway builders plan tolls on hundreds more miles over the coming decade.

While North Carolina retains one of the most heavily state-centralized systems in the nation for road-building and transportation funding, other states have seen the spread of city and regional turnpike authorities controlling toll roads at the local level.

The Hampton Roads area of southeast Virginia is struggling to wrest this power from legislators in Richmond.

In Texas, projects proposed by state and local agencies and private investors would produce 4,000 miles of new toll roads costing about \$180 billion over the next 50 years.

Private investors are getting into the game in several states. Chicago and Indiana stand to make billions of dollars by selling private investors the rights to collect money from drivers on two toll roads: the eight-mile Chicago Skyway and the 157-mile Indiana Toll Road.

Also picking up speed in other states: toll lanes for trucks only and tolls on fast lanes previously reserved for buses and carpoolers.

Q. How will the technology work so drivers don't get jammed up at tollbooths?

A. "People object more to stopping to pay a toll than they object to the toll itself," Joyner said. "Today with new technology, we don't have to stop and pay tolls any more."

Other states use several technologies to provide "open road tolling" -- the option to pay tolls electronically while keeping the car at highway speeds.

E-Z Pass is the most popular brand. Motorists open an account with E-Z Pass and place a tag high inside the windshield, with a microchip that identifies the driver and the car.

A few states are trying a different approach: photographing the license plate and using that information to identify and bill the owner of the car.

Coin collection is unpopular with many drivers and expensive for turnpike agencies. Joyner, the turnpike authority director, hopes to collect tolls electronically from at least 75 percent of North Carolina turnpike users.

Q. What do opponents say about North Carolina's plans for toll roads?

A. Some critics say tolls would not be necessary if DOT learned to spend road money more efficiently and if the General Assembly would stop using some gas tax revenues to pay for non-transportation needs.

The turnpike authority and its six projects have not drawn any organized opposition yet.

That could change when specific proposals are floated -- for example, when the turnpike authority announces how much drivers would have to pay each day to drive on western and southern I-540, and where the extra money would be found to cover the gap between toll revenues and project costs.

Q. Will the tolls be permanent, or will they go away?

A. North Carolina law specifies that toll collection must cease as soon as the road is paid for.

Some southern Wake residents, unhappy about the prospect of tolls on I-540, worry that future legislators -- looking for a cash cow -- will change the law and collect tolls until the end of time.

Staff writer Bruce Sicheloff can be reached at 829-4527 or [bruce.sicheloff@newsobserver.com](mailto:bruce.sicheloff@newsobserver.com).

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## Turnpikes would get us moving again

JOE MILAZZO II

*Joe Milazzo II is executive director of the Regional Transportation Alliance.*

As anyone driving through the Research Triangle can attest, whether we like it or not, we're already paying a toll -- a "congestion toll" -- to get from here to there. Unless we take action, congestion will take an increasing toll on Triangle travelers in the years ahead.

The Regional Transportation Alliance -- the regional business leadership group that focuses on relieving traffic congestion and enhancing mobility -- supports the accelerated completion of Interstate 540 and Triangle Parkway. These critical stoplight-free roadways are years behind schedule, and they stand decades from completion under current funding scenarios.

Construction estimates for the Western Wake Freeway [the western section of the I-540 Outer Loop] have doubled to more than a half-billion dollars. With N.C. Highway Trust Fund loop funds largely depleted, the resources to complete I-540 and loops in nine other cities are simply not available, and increases in state dollars are unlikely. Triangle Parkway, which has languished on transportation plans for a half century, is currently ineligible for loop funding. Tolls are being considered for Triangle Parkway and the western and southern sections of I-540 because there are no other viable funding alternatives.

Turnpike authorities in Austin, Orlando, Fla., Greenville, S.C., Dallas and other fast-growing regions are investing billions of dollars in modern toll roads to provide alternatives to gridlock. The N.C. Turnpike Authority study currently under way will help determine if tolls can accelerate freeway construction here. If the Western Wake Freeway and Triangle Parkway were built as toll roads, existing parallel roads would remain as nontoll options, just as they are today.

Today, our region is paying a "congestion toll" and getting nothing in return. We owe it to families and businesses in southern Durham and southwestern Wake counties -- and surrounding areas -- to carefully consider a "user pays" funding mechanism that could help speed construction of these desperately needed freeways by 10 to 20 years.

*For more information about the Regional Transportation Alliance, go to [www.letsgetmoving.org](http://www.letsgetmoving.org).*

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## **In a jam, tolls may be way to go**

JANE RUFFIN, Staff Writer

*David W. Joyner serves as executive director of the N.C. Turnpike Authority. The agency is responsible for selecting, designing and building up to nine toll roads and bridges in the state.*

*Highway builders would borrow the construction money up front by selling bonds to private investors. Money from the tolls would repay this bond debt.*

Q. What makes you believe that people in North Carolina are ready for tolls?

A. I think that part of our challenge is to help people understand that there aren't sufficient funds available to build roads through traditional sources unless they are willing to wait an extremely long period of time for when the funds are available.

Toll construction is really a form of financing highways and infrastructure. When you need them today, when congestion builds to a point of almost breaking, something's got to be done. But tolls are not for everyone, and they are not for everywhere. There's got to be a definite time savings associated with people's willingness to pay the tolls.

Q. Toll won't pay the entire cost of a road, so where would the money come from to pay the difference?

A. That's called the gap, and we won't know what the gap is for Western Wake [the section of the I-540 Outer Loop from N.C. 55 near Morrisville to Holly Springs] until these studies come back. But once they come back, then we'll have to put our heads together with the Department of Transportation and leaders of the community and other people and see how much money is required.

There is a federal program [under the Transportation Infrastructure Finance and Innovation Act] that takes subordinated debt to help with construction costs of projects like this, and we're hopeful that we can bond a large portion of the gap through these TIFIA loans.

Q. Toll funds would go to repay that as well?

A. Yes.

Q. What would happen if you built a toll road and people didn't use it enough to generate the tolls you were expecting?

A. Then you got troubles. You got real problems. That's the reason these traffic and revenue studies are so important. It's much more of a science than it is an art at estimating traffic use.

The bond grade studies on these projects, for example, take up to a year to conduct and in some cases cost more than a million dollars. The studies that we are doing now are preliminary studies, and they are pretty thorough. However, the bond grade studies are much, much more thorough. That's what Wall Street requires, and they rely on them heavily for the revenue estimates [from tolls].

These are the critical components, and it's not dissimilar to a mortgage on your house. You've got to have the revenue in order to get the loan, and so the revenue is everything -- revenue and costs.

Q. At what point would the toll on a road be lifted?

A. It depends on the term of the bond. Most of them are 30-year bonds today.

Q. So we could expect the tolls to remain for 30 years?

A. Yeah. However, these traffic and revenue studies are usually fairly conservative. And if the project does a lot better than anticipated -- if growth is higher, and revenue is higher, the usage is higher than anticipated -- then you can pay them off earlier, just like you can pay off a mortgage sooner if you want to make a higher principal payment.

Q. How common do you think toll roads will become in North Carolina?

A: I think toll roads will only be used in areas of severe congestion. It's a numbers game, it's a business, and you've got to have sufficient revenue to pay your debt. Otherwise, there's no reason to build them.

In rural areas where the traffic doesn't sustain the debt or the cost of building the project, they will not be built. In places where they do, then it's an option for the locals to consider.

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## Old and new issues still plague transit corridor

BY GREGORY PHILLIPS, The Herald-Sun  
April 12, 2006 8:14 pm

DURHAM -- Old issues and new concerns stymied any progress Wednesday as regional transportation planners tried to resolve concerns over how best to guide development in a proposed transit corridor connecting Durham and Chapel Hill.

The corridor will incorporate buses, trains or both in a network not yet determined. It is probably two decades from development. For now, the concept is supposed to guide development decisions along the corridor made by the local governments involved -- the city and county of Durham, Orange County and Chapel Hill.

All four governments had been asked to agree to incorporate in their planning a corridor realignment approved by the regional Transportation Advisory Committee last October. The plan is to shift a stretch of the corridor from the Creekside Elementary School property to a route following Interstate 40 in southwest Durham.

Durham County is the only body so far to approve the agreement. The pact calls for tighter control over development in the corridor and for governments to pursue easements for eventual transit routes and stations. City of Durham attorneys raised concerns that language in the agreement, designed to bind governments to supporting transit development in the corridor, could illegally constrain their legislative discretion.

Transportation staff's suggested amendments include adding the words "to the extent possible" in verbiage addressing governments' obligation to support transit-friendly development.

Some committee members called the Durham-requested changes minor. But Ed Harrison, a commissioner in Chapel Hill, where the land-use plan gives the town more authority over development than in Durham, said Durham needs "to find some way to get transit-supporting design in zoning ordinances." Without that, "you simply won't get a system in place," Harrison said.

No action was taken and staff members were directed to report back to the committee next month.

The discussion was laden with other issues that divided Durham and Chapel Hill delegations on the realignment before the committee approved it last year.

Durham delegate Becky Heron, a county commissioner, was fiercely protective of the Creekside school property, where the county plans a second school.

"Right now the alignment, in my opinion, is where it should be," Heron said. "We don't need a corridor going through our school property."

Bill Strom, a Chapel Hill commissioner and the Triangle Transit Authority delegate, brought up the higher potential cost of acquiring property along the realigned corridor, which he said could be anywhere from \$16 million to \$30 million at a glance.

"It ain't getting any cheaper," Strom said.

Durham officials say the cost would be lower than Strom's estimate and that acquiring land along I-40 would be cheaper because regulations forbid its development.

Durham County Chairwoman Ellen Reckhow said one landowner has said he'd donate land along the interstate for the corridor because he can't build on it.

More important than cost estimates, according to TTA staffer Barbara Weigel, is community and local government support, without which "the project just won't move," Weigel said.

URL for this article: <http://www.herald-sun.com/durham/4-723779.html>

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# Cyclists

In North Carolina, bicyclists have the same rights and duties as motorists. For a complete list of NC bike laws, visit [www.ncdot.org/transit/bicycle](http://www.ncdot.org/transit/bicycle)

## Ride on the right

- Always ride in the same direction as traffic
- Ride as far to the right as practicable

## Follow traffic laws

- Obey all traffic control devices, such as stop signs
- Always use hand signals when turning

## Always wear a properly fitting helmet

- Children below the age of 16 are required by NC law to wear a helmet
- Make sure that the helmet fits snugly on top of the head, not tipped back
- Replace your helmet after any crash or impact

## Ride predictably

- Ride in a straight line and don't swerve between parked cars
- Check for traffic before entering any street or intersection
- Give an audible warning to pedestrians before approaching from behind on a multi-use path

## Be visible

- Wear brightly colored clothing
- At night, the law requires cyclists to use a white front light and a red rear light or reflector
- Make eye contact with motorists

# Motorists

In North Carolina, bicyclists have the same rights and duties as motorists. For a complete list of NC bike laws, visit [www.ncdot.org/transit/bicycle](http://www.ncdot.org/transit/bicycle)

## Drive cautiously

- Reduce speed when encountering cyclists
- Give cyclists extra trailing and passing room in potentially dangerous situations

## Yield to cyclists

- Cyclists are vehicles and should be given the appropriate right of way
- Cyclists may take the entire lane

## Be considerate

- Scan for cyclists in traffic and at intersections, and watch for passing cyclists before opening a car door
- Do not blast your horn in close proximity to cyclists

## Pass with care

- NC law requires 2 feet of passing room when overtaking a vehicle moving in the same direction; giving at least 3 feet of passing room is courteous when passing a cyclist
- Wait until traffic conditions allow you to pass safely
- Check over your shoulder after passing a cyclist before moving back to normal position

## Watch for children

- Children on bicycles are often unpredictable—expect the unexpected and slow down

# BASIC BIKE COMMUTING



A guide for getting started









# Why Bike?

The average American spends 55 minutes a day behind the wheel of an automobile and over \$7,500 a year on transportation costs. Bicycles, however, cost less than \$300, and have very little yearly maintenance cost and far fewer effects on the environment. Bicycling is a healthy, fun way to start and end a work day, and allows you to incorporate exercise into your daily routine. With the rising cost of gasoline, increasing traffic congestion and worsening air quality, why not try bike commuting?



## Benefits of Bicycling:

-  Stay in shape
-  Save money
-  Save the environment
-  Reduce stress
-  Use your time productively
-  Enjoy the outdoors

## Getting Started:

- 1) The Bike.....p. 3
- 2) Quick Check.....p. 4
- 3) Choosing a Route..... p. 6
- 4) Gear Up.....p. 7
- 5) Bus & Bike.....p. 8
- 6) Rules of the Road..... p.10
- 7) Safety & Maintenance.....p.11

# The Bike

Most commuters choose a mountain bike or “hybrid.” These bikes are versatile, strong enough to carry lots of goods, hardy enough to handle all the bumps in the road, and allow the bicyclist to ride in an upright position for increased comfort.

If you are buying a new bike, ask for a fitting. If you are using an old bike, adjust the seat so that your leg is only slightly bent when the pedal is in its bottom-most position. More extension will provide you with better power and fewer knee problems.

Take some time to consider what equipment you might need for your bike commute.

## Common Commuter Equipment



Rear rack



Front or rear basket



Pannier bags



Fenders



Chain guard



Kick stand



Lights



Air pump



Tool bag

Next, ensure your bike is in good working order...



# ABC Quick Check

A basic safety inspection to perform before riding.

## **A** is for Air

- Inflate tires to pressure listed on sidewall of tire
- Use a pressure gauge to insure proper pressure
- Check for damage to tire tread and sidewall; replace if damaged

## **B** is for Brakes

- Inspect pads for wear; replace if there is less than 1/4"
- Make sure brake pads do not rub tire or dive into spokes
- Check brake levers; there should be at least 1" between handlebar and lever when applied

## **C** is for Chain, Cranks and Cassette

- Check your chain for wear, rust and grime; lubricate your chain if dry to avoid skipping, locking or breaks
- If your chain skips on your cassette, you may need another
- Make sure crank bolts are tight and pedals spin freely

## Quick is for Quick Release

- Make sure the quick release levers are tightened and flush against forks

## Check is for Final Check Over

- Lift the bike a few inches off the ground, drop it and listen for loose parts
- Try your brakes as you ride off



# ABC Quick Check



**Air – Brakes – Chain, Cranks, Cassette**



**Quick Release Levers**

# Choosing a Route

The route you use to get to and from work in your car might not be the best route by bicycle. If you are just getting started, pick a couple of routes and try them on the weekend. Then, choose the best one for you based on ease, enjoyment and timing.



## **Find a pleasant route you enjoy**

Even an expert cyclist would probably prefer a more scenic ride with less traffic. Consider using minor streets with lower traffic volumes. For a bicycle suitability map of Durham roadways, visit [www.ncdot.org/transit/bicycle](http://www.ncdot.org/transit/bicycle)



## **Are you comfortable biking in traffic?**

If not, try to find off-road trails and residential streets to use until you are ready for more. For a map of Durham trails, visit [www.durhamnc.gov](http://www.durhamnc.gov)



## **Remember to ride with, and never against, the flow of traffic.**



## **Consider roadway conditions when choosing a route.**

If possible, you may want to pick streets that are in good condition. Potholes, drainage grates and road debris can present hazards to cyclists.



What you wear will depend largely on what makes you the most comfortable. Consider how long your commute is, what the weather is like, if there are shower and/or locker facilities at work, and how formal your work setting is, then dress accordingly.

Here are some tips on useful gear and equipment:

## Common Commuter Clothing & Accessories

- Helmet
- Ankle bracelet (for pant leg)
- Eyewear/sunglasses
- Waterproof windbreaker
- Rain pants
- Pannier bag (on-bike) OR Messenger bag
- U-Lock

## Commuter Tips

- Wear bright and/or retro-reflective clothing for higher visibility
- Carry a plastic bag for a seat cover in case of rain
- Avoid clothing that holds in moisture, instead wear special “wicking” materials, found in clothing from most sports stores.
- When shopping for rainwear, look for waterproof & breathable.



# What about the Weather?

The choice to ride in “poor” weather really depends on the tolerance level of the cyclist. If you are miserable in rain or high heat, choose another mode for the day.

One option is the bus. Many cyclists rely on public transit to supplement cycling, and now that all local buses have bike racks on the front, it's easy to combine biking and busing.

## Eight Steps for Using the Bus Bike Rack:

**Step 1:** Before the bus arrives at your stop, please make sure that bike pumps and water bottles are secure so that they do not fall off during the bus trip.

**Step 2:** When the bus arrives at your stop, indicate to the driver that you will be loading your bicycle onto the rack. Remember to look closely before stepping off the curb to load and unload your bike.



**Step 3:** To release the rack, squeeze the center handle and slowly lower it. If the rack is already lowered and a bike is in position, use the other available bike wheel well. If the bike rack is full, please wait for the next available bus.

**Step 4:** After lowering the rack, lift your bicycle into the available wheel well, making sure that the front wheel is placed on the side labeled “front wheel.” If only one bike is being loaded, use the position nearest the bus, handlebars toward the curb.



# What about the Weather?



**Step 5:** Pull out and up on the support arm and hook the arm securely over the top of your front wheel. A spring pulls the arm back and holds the bike securely in place.

**Step 6:** When you reach your destination, notify the driver that you will be unloading your bicycle and use the front door to exit the bus. Raise the support arm off the tire and return it to its original position.

**Step 7:** Lift your bike out of the bike rack. If the bike rack is empty, please return the rack to its upright position.

**Step 8:** Step away from the bus and onto the curb with your bike. Indicate to the Operator that you are clear of the bus.



# Rules of the Road

It is important to understand that bicycles are legally defined as vehicles in the state of North Carolina. This means that bicyclists have the same rights and responsibilities on the roadway as the drivers of other vehicles.

Following are some of the most important rules to follow in order to stay safe and within the law.



Ride on the right in the same direction as other traffic.



Obey all traffic signs and signals.



Use hand signals to communicate intended movements.



When riding at night, use lights; front lamp must be visible from 300 feet and rear reflector visible from a distance of 200 feet.



Bicycling on Interstate or fully controlled highways (such as beltlines) is prohibited unless signed otherwise.



There is no law that requires bicyclists to ride single file, nor is there a law that gives cyclists the right to ride two or more abreast. It is important to ride responsibly and courteously, so that cars may pass safely.



There is no law that prohibits wearing headphones when riding a bicycle; however, it is not recommended.



Bicyclists under 16 years of age must wear a bicycle helmet; adults are advised to do so, as well.



Child passengers must be seated and secured in a child seat or a bicycle trailer.



# Bike Safety & Maintenance

To keep your bike in the best working order, it is important to provide some routine maintenance. Keep your tires pumped and chain lubed, and make sure your brakes work well. Never perform work that you do not feel comfortable doing, instead take a maintenance class or bring your bike to a local bike shop for regular check-ups.



## Durham Bike Shops:

### The Bicycle Station

682-8845

### The Bicycle Chain

639 Broad Street

919-286-2453

### REI Bicycle Shop

6911 Fayetteville Road,  
Suite 109

919-806-3442

## Other Safety Tips



Bike with a buddy while you are learning, to help you with skills development and a higher on-road comfort level



Durham trails close at 10PM; remember to find an alternative late night route



Always lock your bike and remove loose parts (lights, helmets, etc) to avoid theft



Lock bike to bicycle rack with a u-lock through the front wheel and frame to best avoid theft

## For more information, contact:

Durham Bicycle & Pedestrian Coordinator  
919-560-4366

TTA Commuter Resources Representative  
919-485-7470

Durham One Call Center  
919-560-1200  
(24-hour customer service center)

## Or visit:

Bicycle & Pedestrian Advisory Commission  
[www.bikewalkdurham.org](http://www.bikewalkdurham.org)

NCDOT Bike/Ped Division  
[www.ncdot.org/transit/bicycle](http://www.ncdot.org/transit/bicycle)

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*Courtesy is contagious*

**SHARE THE ROAD**

**[www.bikewalkdurham.org](http://www.bikewalkdurham.org)**



# DURHAM

is a large community, with lots of people — all on the go. Pedestrians, bicyclists, in-line skaters, transit users, and motorists all share our roadways.

Whichever mode you choose, it is important to understand the rules of the road, and respect the rights of others.

## For more information:

### Durham Bicycle & Pedestrian Advisory Commission

[www.bikewalkdurham.org](http://www.bikewalkdurham.org)

### Public Works/Transportation

919-560-4366

[www.durhamnc.gov](http://www.durhamnc.gov)

[www.dchcmpo.org](http://www.dchcmpo.org)

### NC Dept of Transportation Bicycle & Pedestrian Division

919-715-2350

[www.ncdot.org/transit/bicycle](http://www.ncdot.org/transit/bicycle)



# SHARE THE ROAD




A  
Motorist's  
Guide  
to  
Bicycle  
Safety



# Bicycle Laws

In North Carolina, the *bicycle has the legal status of a vehicle*. This means that bicyclists have full rights and responsibilities on the roadway and are subject to the same regulations governing the operation of a motor vehicle.

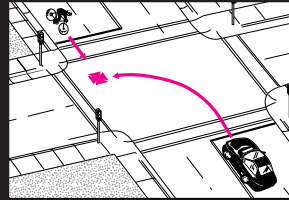
## Did you know?

-  Bicyclists may take full use of a travel lane as necessary.
-  Motorists are required by law to provide two feet of passing distance when overtaking another vehicle.
-  Motorists should yield the right-of-way to oncoming vehicles, including bikes, before turning left at intersections or driveways.

# Common Crash Types

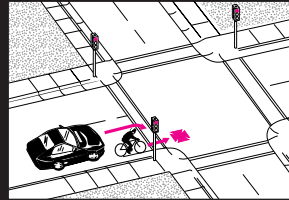
## “Left Hook”

Avoid this crash by looking for and yielding to oncoming bicyclists at intersections.



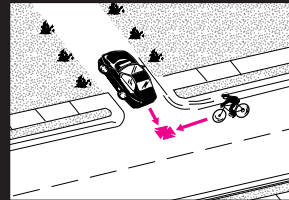
## “Right Hook”

Avoid this crash by waiting for a cyclist to clear an intersection before making a right turn.






## “Uppercut”

Avoid this crash by being aware of cyclists on the roadway, especially as you exit driveways and alleys.





# Safety Tips

## On Adult Bicyclists:

-  Riding on the road is actually safer for adult cyclists than riding on sidewalks, and it's legal.
-  It is often hazardous for cyclists to ride too far to the right of the road; often this edge area contains debris, drainage grates, and other hazards.
-  Honking at a cyclist on the roadway could startle him/her and cause loss of control of the bicycle.

## On Children:

-  Most children don't have adequate knowledge of traffic laws, and are often unpredictable on bicycles—expect the unexpected and slow down.
-  Children are harder to see because they are typically smaller than adults—be aware when passing through neighborhoods or school zones where child cyclists may ride.



## Overview

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), passed by Congress in 2005, provides new provisions and expands previous legislation that support bicycle and pedestrian programming, planning and funding. The new provisions provide increased opportunities to enhance pedestrian and bicycle safety and mobility, and create more complete transportation systems that foster healthier, more livable communities. Many creative approaches are underway across the nation, involving both transportation professionals and non-traditional partners such as health professionals, educators and advocates.

The purpose of this live, three-hour broadcast is to highlight the key provisions and administrative efforts underway to implement the new law. FHWA headquarters personnel will focus on the new bicycle and pedestrian provisions and will also discuss changes and enhancements to provisions of the previous transportation bills. In addition, a panel of stakeholders will discuss successful programs and initiatives undertaken at the federal, state and local levels. Programs implemented since the passage of SAFETEA-LU as well as some developed under the provisions of the previous ISTEA and TEA-21 bills will be featured. A special focus will be on the new Safe Routes to School initiative. These presentations are intended to provide insight into the broad range of activities and initiatives that are supported by the SAFETEA-LU provisions and to offer guidance on implementing the programs in communities across the country.

*CTE is a national university transportation center funded in part by the U.S. Department of Transportation. For more information, please visit <http://cte.ncsu.edu>*

FIRST CLASS

Center for Transportation and the Environment  
NC State University  
Centennial Campus  
Box 8601  
Raleigh, NC 27695-8601

## CTE National Teleconference Series



### Bicycle/Pedestrian Planning Strategies: From SAFETEA-LU to Safe Routes to School

May 4, 2006  
1:00 - 4:00 pm, EDT

*Live via satellite & Internet simulcast*

*Presented By*

Center for Transportation  
and the Environment  
NC State University

A USDOT University Transportation Center

## Should You Attend?

- Are you a manager or technical staff member in a state, regional or local transportation, planning or community development agency responsible for enhancing multi-modal transportation?
- Are you a bicycle or pedestrian specialist concerned with program development and project funding?
- Are you a health professional or educator concerned with making the school trip safer for young bicyclists and pedestrians?
- Are you an elected official, decision-maker or advocate who wants to create more livable communities? If so, you are encouraged to attend.

## How to Participate

View the live broadcast by going to one of the satellite downlink sites or by watching it on the web with Real-Media or Windows Media Player. You can also interact with the panel by phone, fax or email.

**By Satellite.** Participating satellite downlinks are found at [http://cte.ncsu.edu/CTE/TechTransfer/Teleconferences/downlink\\_info.asp](http://cte.ncsu.edu/CTE/TechTransfer/Teleconferences/downlink_info.asp). If one of these sites is near you, please contact the site coordinator to confirm its availability and to reserve a space for viewing this broadcast.

**Via Web:** Visit [http://cte.ncsu.edu/CTE/TechTransfer/Teleconferences/web\\_participate.asp](http://cte.ncsu.edu/CTE/TechTransfer/Teleconferences/web_participate.asp) to access registration for the webcast and login, live webstream, tech support, and other resources.

## Satellite Downlink Registration

This program will be received by EPA's Air Pollution Distance learning Network and is also available via satellite on C Band (see URL above for list of participating downlinks). If you wish to open your facility for this broadcast, please complete the enclosed form and mail or fax it to: Walt Thomas, CTE, NC State University, Box 8601, Raleigh, NC 27695-8601. Fax: (919) 515-8898.

## Program Materials

The program handout, including a bibliography of print/Web resources, and the panelists' PowerPoint slides are available in PDF format from CTE's web site at least one week prior to the broadcast date. Please have these in hand during the live program.

## Meet the Panel



### CTE National Teleconference Series

May 4, 2006  
1:00 - 4:00 pm, EDT

### Bicycle/Pedestrian Planning Strategies: From SAFETEA-LU to Safe Routes to School

**Mary Meletiou** (Moderator), Bicycle and Pedestrian Program Manager, Institute for Transportation Research and Education, NC State University, Raleigh, NC

**Cindy Burbank** (Opening Remarks), Assoc. Administrator for Planning, Environment and Realty, FHWA, Washington, DC

**Larry Anderson**, Planning Oversight & Stewardship Team Leader, FHWA Office of Planning, Washington, DC

**Tim Arnade**, Safe Routes to School Program Manager, FHWA, Washington, DC

**John Fegan**, Bicycle & Pedestrian Program Manager, FHWA, Washington, DC

**Lee Kokinakis**, Ph.D., Director, Active School Environments and Safe Routes to School, Michigan Fitness Foundation, Lansing, MI

**Thomas Norman**, Director, Div. of Bicycle and Pedestrian Transportation, NCDOT, Raleigh, NC

**Candace Rutt**, Ph.D., Div. of Nutrition and Physical Activity, Centers for Disease Control and Prevention, Atlanta, GA

**Charlie Zegeer**, P.E., Assoc. Director for Engineering & Planning; Director, Pedestrian & Bicycle Information Ctr., Highway Safety Research Center, Chapel Hill, NC

## Need More Information?

Visit  
<http://cte.ncsu.edu>

## Satellite Downlink Registration

"Permanent" CTE downlinks are already pre-registered and need not submit this form, unless to indicate changed information.

### Bicycle/Pedestrian Planning Strategies: From SAFETEA-LU to Safe Routes to Schools May 4, 2006 (1:00 – 4:00 pm EDT)

#### Downlink Site Location Information:

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**PLEASE NOTE:** Please contact us if you do not have web access and need to receive CTE teleconference handouts by mail.

Join CTE broadcast mailing list:

\*Downlink site coordinators typically promote the teleconference locally, register people for the site, duplicate the CTE teleconference handout for distribution to registered participants, and assist people as needed during the teleconference. For more information, contact Walt Thomas at 919-515-8893 or by email at [wthomas@ncsu.edu](mailto:wthomas@ncsu.edu).