APPENDIX K: Financial Model Updates and Other Plan Changes

Updates to Financial Model

Below is a detailed description of proposed updates to the draft *Wake County Transit Plan's* financial model (November 2011). Summaries of the Core and Enhanced Transit Plans are included in **Appendix G.**

Global Assumptions

1. **Capital Expenditure Assumptions**—Capital inflation was changed from "1.5 percent through FY16 and 3.1 percent thereafter" to 3.5 percent for all future years, replicating assumptions used by Wake County for capital planning and CIP development. The change in dollars impact revenues and expenditures that are listed below.
2. **Operating Assumptions**—Operating inflation was changed from "1.5 percent through FY16 and 3.1 percent thereafter" to 2.5 percent for all future years. The selected value is equivalent to the average CPI Southern Urban annual percent change during the 12 most recent actual years. The change in dollars impact revenues and expenditures that are listed below.

Revenues

3. **Sales Tax Base**—The prior draft transit plan assumed 1 percent growth in FY12 ($54.0 million). Based on current year trends, the base assumption was increased to 2.5 percent growth ($54.8 million) in FY12 resulting in additional revenue in all future years.

Revenue Changes by Plan (FY13 to FY40)

Core: + $31.7m	Enhanced: +$31.7m

4. **Vehicle Registration Fee Base (Triangle Transit and Wake County)** —For both vehicle registration fees, the base was adjusted to reflect Triangle Transit Annual Financial Statements through FY11 (previously FY08), modifying the FY11 base.

   For County vehicle registration revenues only, Wake County staff included a distribution formula to allocate a portion of the proposed County vehicle registration revenues to existing services providers (i.e., CAT, C-Tran, and Triangle Transit), supporting the continuation of existing services. The use of County vehicle registration revenues was moved to expenditures rather than reducing revenues (also see #13).

   The base adjustment increases projected revenues by $1.9 million from FY13 to FY40. By moving the use of County vehicle registrations from revenues to expenditures, total revenues are increased by $97.3 million from FY13 to FY40. The combined adjustments total a $99.2-million increase in revenues.

Revenue Changes by Plan (FY13 to FY40)

Core: + $99.2m	Enhanced: +$99.2m

5. **Vehicle Rental Tax Base**—Wake County staff adjusted the base projection down to reflect Triangle Transit Annual Financial Statements through FY11 (previously FY08). Using prior year history, staff reduced the revenue projection from two percent to one percent annual growth in future years.

Revenue Changes by Plan (FY13 to FY40)

Core: – $28.3m	Enhanced: –$28.3m

6. **Farebox Revenues**—Farebox recovery assumptions were calculated to reflect the following for each mode: unlinked trips, operating costs (inflated), and average fare per unlinked trip. The revenues are phased in over a four-year period as passengers respond to new and expanded services. As a result, farebox recovery percentages when fully operational are projected to be approximately 15 for bus and 20 for commuter and light rail. The farebox revenue adjustments reduce projected farebox revenues.

Revenue Changes by Plan (FY13 to FY40)

Core: – $13.7m	Enhanced: – $48.4m

7. **Federal Revenues-FTA 5309 Discretionary Grants (Bus and Bus Facilities Program and Rail New Starts)**—For the bus and bus facilities program, Wake County staff reduced federal cost shares from 50 percent to 40 percent for discretionary grant awards related to new services (also see #10, assumption change results in increased debt principal). Direct federal capital support for bus and bus facilities after FY18 and vehicle replacements are not anticipated in the updated plan. The plan may request a higher percentage amount; however,

the assumption change is intended to demonstrate that the Core and Enhanced Plans are achievable with less federal discretionary support and improve the competiveness of the region's application for discretionary funding. For rail "New Starts" applications, federal discretionary grant support remains at 50 percent.

After combining adjustments to the bus and rail programs, and coupled with inflation cost assumptions, the net impact to the model from FY13 to FY40 was a decrease in the Core Transit Plan of $86.9 million in revenue and an increase to the Enhanced Transit Plan of $20.0 million.

Revenue Changes by Plan (FY13 to FY40)

Core:	– $86.9m	Enhanced:	+$20.0m

8. **Federal Revenues—FTA 5307 & 5309 Formula Funds**—Wake County staff removed the "fund-driven allocation" method used in the model in the draft plan and added formula calculations (i.e., commuter rail floor, commuter incentives, fixed guideway modernization). Apportionment values were added for each formula beginning in FY99 through FY11 and staff updated input variables (i.e., revenue miles, route miles and estimated passenger miles) based on the "Capital Area Bus Transit Development Plan," "Alternatives Analysis," or "Minimum Operable Segment Evaluation." Wake County staff anticipates apportionment values will grow at rates lower than prior year averages and, in many cases, less than inflation.

Revenue Changes by Plan (FY13 to FY40)

Core:	+ $157.2m	Enhanced:	+ $195.1m

9. **State Revenues**—Wake County staff removed state operating support for the light rail service in the Enhanced Transit Plan based on current state policy. No other changes were recommended for state cost share assumptions. In the Core Transit Plan, dollar changes are due primarily to capital and operating inflation assumption revisions.

Revenue Changes by Plan (FY13 to FY40)

Core:	– $23.5m	Enhanced:	– $20.2m

10. **Transit Bonds—Also see #7.** The updated model increased principal in the Core Plan from $170 million to $245 million and from $150 million to $210 million in the Enhanced Plan due to lower assumptions for federal discretionary grant awards in the bus components and changes to capital inflation assumptions. The assumption change maintains recommended debt service coverage ratios.

Revenue Changes by Plan (FY13 to FY40)

Core:	+ $75.0m	Enhanced:	+ $60.0m

11. **Total Revenues**—Based on changes identified in #3 through #10, the net change in revenues are as follows:

Revenue Changes by Plan (FY13 to FY40)

Core:	+ $217.0m	Enhanced:	+ $330.5m

** Dollar amounts are rounded and may cause slight differences in computations.*

Bus Components

12. **Existing Services**—Wake County staff added financial and performance data for existing service providers using the National Transit Database. Information includes: unlinked/one-way trips, revenue hours, passenger miles, operating and capital dollars. For future capital costs, staff assumed routine/regular replacement of existing vehicle fleet. Future operating costs are based on FY10 data and increase annually using common operating assumptions. Capital and operating revenues assume continuation of similar federal and state financial support.

    The addition of existing services has no impact to the financial model as the plan is not intended to replace the full costs of current services..

Revenue Changes by Plan (FY13 to FY40)

Core:	No change	Enhanced:	No change

13. **Existing Service Allocations (Portion of County vehicle registration revenues)**—Also see #4. The use of County vehicle registration revenues was moved from revenues to expenditures in the updated plan. Wake County staff included a distribution formula to allocate a portion of the County vehicle registration revenues to existing service providers (i.e., CAT, C-Tran, and Triangle Transit) supporting the continuation of existing services. The funds are intended to offset some, but not all, inflation costs.

Revenue Changes by Plan (FY13 to FY40)			
Core:	+ $98.0m	Enhanced:	+ $98.0m

14. **Increased Services (Capital & Operating)**—County staff implemented several changes, including:
    a. Specified bus acquisitions by bus type (i.e., 40-foot bus, 40-foot Hybrid, 30-foot bus, intercity bus and ADA vehicles) and clarified provisions for spare vehicle coverage.
    b. Modified replacement cycles based on vehicle type (12 years for 40-foot, 40-foot Hybrid, and Intercity buses; 10 years for 30-foot buses, and five years for ADA vehicles).
    c. Modified bus acquisition cost based on vehicle type and included additional bus upfit costs (i.e., automatic vehicle locators, automatic passenger counters and bike racks).
    d. Modified the average revenue hours based on vehicle type.
    e. Assumed an 18-month lag from capital appropriation to operation start date for all new peak vehicles.
    f. Forecast unlinked trips based on targeted boardings developed in the "Capital Area Bus Transit Development Plan" for each vehicle type. This projection is subject to future changes due to results of an anticipated ridership study by CAMPO.
    g. Phased-in forecast unlinked trips using 40 percent of estimated ridership and increasing in a straight-line progression over four years for each individual peak vehicle acquired and put into new service.

Revenue Changes by Plan (FY13 to FY40)			
Core:	+ $173.7m	Enhanced:	+ $173.7m

15. **Bus Facilities & Infrastructure**—Allocated and funded specific capital projects (i.e., Maintenance Facility, park-and-ride lot by location, sidewalks, others). Cost increases are primarily due to changes to capital inflation assumptions.

Revenue Changes by Plan (FY13 to FY40)			
Core:	+ $52.2m	Enhanced:	+ $52.2m

Rail Components

16. **Commuter Rail Capital**—Wake County staff specified and detailed all project costs (i.e., tracks, bridges, stations, professional services, contingencies and project reserves). All costs align with the "Alternatives Analysis" cost projections. Clearly identified contingencies and project reserves at 30.6 percent. Cost increases are due primarily to changes in capital inflation assumptions.

Revenue Changes by Plan (FY13 to FY40)			
Core:	+ $34.2m	Enhanced:	+ $34.2m

17. **Commuter Rail Operating**—Cost decreases are due primarily to operating inflation assumption modifications.

Revenue Changes by Plan (FY13 to FY40)			
Core:	– $14.2m	Enhanced:	– $14.2m

18. **Light Rail Capital**—Wake County staff specified and detailed all project costs (i.e., tracks, bridges, stations, professional services, contingencies and project reserves) and aligned costs projections with the "Alternatives Analysis" and "Minimum Operable Segment Evaluation." Staff also clearly identified contingencies and project reserves at 31.2 percent. Cost increases are due to changes in capital inflation assumptions.

Revenue Changes by Plan (FY13 to FY40)			
Core:	No change	Enhanced:	+ $179.6m

19. **Light Rail Operating**—Wake County staff reduced annual operating cost projection to align with "Minimum Operable Segment Evaluation." Cost decreases are due to operating inflation assumption modifications.

Revenue Changes by Plan (FY13 to FY40)			
Core:	No change	Enhanced:	– $74.6m

20. **Grade Separation Local Funding Match**—Wake County staff created a revenue reserve for potential participation in rail grade separation projects using transit funds that were not identified in the "Alternatives Analysis." The use of funds may be subject to a set of guidelines developed by CAMPO and will require other funding commitments.

Revenue Changes by Plan (FY13 to FY40)			
Core:	+ $16.0m	Enhanced:	+ $16.0m

21. **Debt Service Payments**—Also see #10. Due to increased transit bonds, increased debt service payments are anticipated.

Revenue Changes by Plan (FY13 to FY40)			
Core:	+ $110.8m	Enhanced:	+ $64.7m

22. **Total Expenditures**—Based on changes identified in #12 through #21, the net change in expenditures are as follows:

Revenue Changes by Plan (FY13 to FY40)			
Core:	+ $470.7m	Enhanced:	+ $529.7m

** Dollar amounts are rounded and may cause slight differences in computations.*

Fund Balance

23. **Fund Balance**—Based on all changes made to the November 2011 draft Wake County Transit Plan identified above, the Core Transit Plan fund balance in FY40 is projected to decrease from $684.1 million to $430.4 million and from $298.1 million to $98.9 million in the Enhanced Transit Plan. The net change amounts in fund balance are as follows:

Add Revenue Changes by Plan	+ $217.0m	+$330.5m
Less Expenditure Changes by Plan	– $470.7m	–$529.7m
Net Change by Plan*	**Core: – $253.7m**	**Enhanced: –$199.2m**

** Dollar amounts are rounded and may cause slight differences in computations.*

Plan Content Changes and Modifications

24. Removed commuter rail employment node table from p. 18 due to errors. Although each of the municipalities along the corridor still anticipates significant employment growth in these locations, up-to-date projections are not available.

25. Added detail regarding the relationship of existing bus services to ridership (p. 20). This information is used as a baseline to determine how the public may react to increased service.

26. Added narrative and links to the detailed engineering studies and analysis used to derive elements of the Wake County Transit Plan. The studies include information that is too detailed for inclusion in the Wake County Transit Plan (p. 16).

27. Added more detailed information on Commuter Rail capital costs **(Appendix D)** and Commuter Rail operations **(Appendix E).** These appendices provide more information on what is proposed on the Commuter Rail project.

28. Added clarification on how the airport will be served in the plan. This was shown in an appendix in the November draft but is now in the main body of the report (p. 25).

29. Added more detailed information on the existing transit providers, costs of providing service, ridership and amount of service provided **(Appendix L).**

30. Developed a model based future years with existing services only **(Appendix L)**. This model shows the possible costs, using the same assumptions used in the Core Plan and Enhanced Plan, associated with operating the existing services over the length of the plan.

31. Included a discussion of how and why it is likely that existing service will be able to be continued in future years (p. 21).
32. Added definitions on transit terms used as a central element in the plan (p. 21).
33. Clarified the purpose of the items shown in the Core Plan (p. 23). The purposes include to expand service geographically, increase service, provide supporting capital, allow evolving technology and introduce a new type of service.
34. Aligned the transit tables separated by municipality with original bus plan developed by CAT and CAMPO (pps. 31–45).
35. Clarified the "under-promise and over-deliver" approach to the Transit Plan (p. 3). This approach prioritizes things that are very likely to be attainable over more speculative elements. When the early projects are implemented correctly, the area will be in a better position to implement future projects.
36. Clarified the relationship between population and employment growth, congestion and transit (p. 9). If population and employment growth continue as reasonable projections suggest, congestion and delay will increase even with all new expected road projects. Transit provides users a choice to avoid delay or use delay time differently.