
LEVEL OF SERVICE / COST & REVENUE ASSUMPTIONS

APPENDIX TO THE FISCAL IMPACT ANALYSIS OF PHASE I OF CAROLINA NORTH

*University of North Carolina-Chapel Hill
Town of Chapel Hill, North Carolina
Town of Carrboro, North Carolina
Orange County, North Carolina*

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I. INTRODUCTION AND OVERVIEW

INTRODUCTION

TischlerBise has been retained by the University of North Carolina Chapel Hill (UNC) on behalf of the *Carolina North Fiscal Impact Monitoring Committee*, which consists of the Town of Chapel Hill, the Town of Carrboro, Orange County, and UNC, to conduct a Fiscal Impact Analysis of Phase I of Carolina North. The Monitoring Committee is overseeing the project and providing guidance where necessary on this assignment. The project also includes an economic and fiscal analysis of secondary impacts resulting from Carolina North. In addition, two other elements are part of the work scope—an investigation and analysis of potential financing options available to the two Towns and County and the implementation of the fiscal model at UNC.

Carolina North is anticipated to be a research and mixed-use academic campus planned for 250 acres two miles north of the main campus of UNC-Chapel Hill. The ultimate buildout of the site is anticipated to take approximately 50 years. The first phase of Carolina North is expected to occur over a 15-year period and include university buildings, private office space, retail, and housing. The fiscal analysis is based on the first 15-year development phase.

Two specific development scenarios for Phase I of Carolina North were provided to TischlerBise by UNC to conduct the Fiscal Impact Analysis. Details are provided in the body of this document. All discussions and analysis in this document reflect the first phase of development at Carolina North only (as reflected in the scenario land use assumptions) and do not include any subsequent phases of development.

The *Fiscal Impact Analysis of Phase I of Carolina North* is really three fiscal studies—one for each of the jurisdictions included in the study as well as the two school districts. For each jurisdiction, the fiscal analysis includes all General Fund activities for each of the two development scenarios being evaluated. In addition, the estimates of secondary impacts (e.g., new housing and employment created as a result of development at Carolina North) are used to determine the indirect fiscal impacts on each jurisdiction.

A fiscal impact evaluation analyzes revenue generation and operating and capital costs to a jurisdiction associated with the provision of public services and facilities under a set of assumptions. *A fiscal impact analysis shows direct revenues and costs from new development only and does not include revenues or costs generated from existing development.* The two development scenarios evaluated for the Phase I of Carolina North and indirect impacts of each scenario are represented by numerical projections of nonresidential building area, employment, housing units, and population.

A fiscal analysis essentially looks at revenues and expenditures separately. It does not project expenditures based on revenues available—unlike the annual budget process where a budget is balanced with the resources available. **It is essentially the “cash flow to the public sector.”**

Projections in this analysis are based on a “snapshot approach” in which it is assumed that *current levels of service* will continue through the analysis period. Current level of service is reflected in **the jurisdictions’ budgets, current policies, and current capital facilities**. The “snapshot” approach does not attempt to speculate about how levels of service, costs, revenues and other factors will change over time. Instead, it evaluates the fiscal impact of new growth on the jurisdictions as currently provided under current budgetary structures.

Current service levels, capacities, and associated revenues and costs for this analysis were derived through on-site interviews and follow-up discussions with staff from the three jurisdictions and a review of budgets and other relevant documents. Additionally, our local fiscal experience with North Carolina jurisdictions as well as our national experience conducting over 600 fiscal impact analyses was beneficial. The results of the level of service analysis are used to develop a fiscal impact model to determine the fiscal impact of Phase I of Carolina North. The assumptions are based on current budgets, related documentation, and information provided by staff through interviews, follow-up discussions, and written correspondence.

The information herein establishes the baseline standards on which revenue and cost projections are based for the study. For example, when the methodology calls for projections based on population growth, the *current level of service standard* is based on the current spending divided by the current population in the applicable jurisdiction. Then in this example, future costs are projected based on the projected population for the respective jurisdiction and this per person cost. Revenues and costs are in current dollars.

Furthermore, the fiscal impact analysis and this accompanying Level of Service Document serve as a foundation, baseline evaluation of current levels of service and current revenue sources and structures. It reflects the assumed development scenario and that the resulting spin-off development will follow current trends. The nature of this type of analysis is such that many variables could be subject to debate. For the most part, small changes at the margin will not have much impact overall. However, major policy changes or changes in assumptions may have an effect on the overall results. The provision of the Fiscal Model for use locally will be **beneficial to the community to conduct sensitivity analyses and to test any number of “what if” scenarios**.

MAJOR ASSUMPTIONS AND METHODOLOGY

MAJOR ASSUMPTIONS

This fiscal impact analysis can be regarded as a snapshot of the current budget. Fiscal Year 2008 Budgets for each of the jurisdictions have **been used to represent a “snapshot” of current costs, revenues and levels of service.** In summary, the snapshot approach does not attempt to speculate about how services, costs, revenues and other factors such as productivity will change over time. Instead, it evaluates the fiscal impact to the respective jurisdiction as currently conducted under present budgetary structure.

The following major assumptions regarding the fiscal methodology should be noted.

Variable versus Fixed Costs and Revenues

For this analysis, costs and revenues that are directly attributable to development are included. (Costs and revenues from only *new* development are included.) Some costs and revenues are not expected to be impacted by demographic changes, and may be “fixed” in this analysis. To determine fixed costs and revenues, TischlerBise reviewed in detail FY2008 budgets and all available supporting documentation. Based on this review, preliminary assumptions were developed that were reviewed and discussed with appropriate department representatives.

Examples of budget items that have generally been allocated as fixed, or non-growth related, include: portions of personnel costs (to reflect department heads or other leadership positions that would not be added no matter how much growth occurred), one-time costs for services unrelated to growth and development, and revenue sources that are not growth-related.

Level of Service

The cost projections are based on a “snapshot approach” in which it is assumed the current level of service, as funded in the **jurisdictions’** budgets and as provided in current capital facilities, will continue through the analysis period. The current demand base data (e.g., population, jobs, etc.) was used to calculate unit costs and service level thresholds. Examples of demand base data include population, employment by type, vehicle trips, etc. *In summary, the “snapshot” approach does not attempt to speculate about how levels of service, costs, revenues and other factors will change over time nor whether the jurisdictions will correct existing deficiencies.* Instead, it evaluates the fiscal impact of Carolina North as provided today under the budgets used in this analysis.

Revenue Structure and Tax Rates

Revenues are projected assuming current revenue structures and tax and fee rates, as defined by the jurisdictions' FY2008 budgets. The exception is State sales tax where some aspects of the current taxes are changing and are reflected as such and described in this document where appropriate.

Inflation Rate

The rate of inflation is assumed to be zero throughout the projection period, and cost and revenue projections are in constant 2008 dollars. This assumption is in accord with budget data and avoids the difficulty of speculating on inflation rates and their effect on cost and revenue categories. It also avoids the problem of interpreting results expressed in inflated dollars over an extended period of time. In general, including inflation is complicated and unpredictable. This is particularly the case given that some costs, such as salaries, increase at different rates than other operating and capital costs such as contractual and building construction costs. And these costs, in turn, almost always increase in variation to the appreciation of real estate, thus affecting the revenue side of the equation. Using constant dollars avoids these issues.

GENERAL METHODOLOGY FOR OPERATING COSTS

Annual costs attributable to new development are projected by applying the applicable cost factors to new development. In general, four different methodologies are used to determine how various services are impacted by new development. For example, some services have a clearly defined relationship to a particular land use or have workload measure that indicate different service/cost requirements for specific types of development. Other services have a more general relationship and are impacted proportionately by all types of development. And other services are essentially administrative or are provided in support of other departments and have an indirect relationship to new development. With this in mind, the following cost distribution methods have been used to determine the applicable cost and revenue factors:

- *General Land Use Distribution Method* – Costs are distributed to both residential and nonresidential land use. When it is determined that operating costs are impacted by *general growth*, including both residential and nonresidential land uses, costs are allocated to both population and jobs.
- *Proportionate Share Distribution Method* – Costs are distributed to each type of land use based upon the proportion of total workload or demand for service that is attributable to each land use. This distribution can be based on an analysis of available records or data. Examples include Fire costs that are distributed to land uses based on an analysis of Fire calls for service data by type of land use, where applicable.

- *Direct Relationship Distribution* – Costs are distributed to each land use based upon a known, direct relationship to one or more land uses. An example would be parks and recreation costs distributed directly to residential land uses.
- *Indirect Relationship Distribution* – This method is used for departments that provide services that correlate to overall increases in **other department's services**. An example of this method is a support department such as personnel. Personnel management and administration costs are typically tied to the number of employees within the organization rather than to development.

OPERATING EXPENDITURES IN THE FISCAL MODEL

All variable operating expenditures are projected for each jurisdiction—including personnel and operating costs. Capital expenditures are addressed and discussed separately for each jurisdiction.

In this report, detailed figures are provided for each General Fund department within each **jurisdiction's chapter**. Each figure includes the following information; numbered columns are keyed to the descriptions below:

Figure 1. Operating Expenditure Example

An example of Operating cost inputs, projection approach, and level of service results from the model is provided below, using the Chapel Hill Mayor's Office as an example. Numbers shown are keyed to the descriptions below.

[1]	[2]	[3]	[4]	[5]
MAYOR				LOS Std
Expenditure	Base Year	Project Using	Demand Unit	\$ per
Name	Budget Amount	Which Demand Base?	Multiplier	Demand Unit
Personnel	\$94,085	FIXED	1.00	\$0.00
Operating Costs	\$18,003	CHAPEL HILL POP AND JOBS	1.00	\$0.19

- [1] *Expenditure Name*: Current budget year line item expenditures are shown for: Personnel, operating costs, capital outlay (where applicable), etc. Capital outlay is **generally shown as "FIXED"** because capital expenditures are projected separately and discussed in a subsequent section.
- [2] *Base Year Budget Amount*: FY08 budget amount
- [3] *Project Using Which Demand Base*: Identifies the projection methodology. For example, "POP AND JOBS" means that the expenditure is projected to increase based on the increase in population and employment. For expenditures labeled as "FIXED," it may mean either: (1) expenditures will not be affected by development at Carolina North or

indirectly or (2) expenditures are projected separately; e.g., as a “DIRECT ENTRY” item (sometimes as “SEE BELOW”).

- [4] *Demand Unit Multiplier*: The percentage of the expenditure that is variable (applicable to growth-related expenditures). Most operating expenditures are assumed at “1” or 100 percent. However, for personnel costs, a factor of less than 1 is often assumed due to the impact of growth on staffing and related costs. For example, director and supervisor positions will not likely be added no matter what level of growth occurs, therefore that portion of the personnel budget is assumed to be fixed.
- [5] *LOS Std / \$ Per Demand Unit*: This represents the level of service, or cost per demand factor. This is derived by taking the base year budget amount and dividing it by the applicable demand factor. *This is used to project future costs from growth.* Where expenditures are identified as “FIXED,” the LOS standard is shown as \$0. Where identified as “DIRECT ENTRY” further description is provided.

Taking this example one step farther, the “Cost per Demand Unit” for the Chapel Hill Mayor’s Office is estimated at \$.19 per person and job in the Town. Projected net new population and employment at Carolina North at the end of the 15-year development period (per Scenario 1) is 4,342 persons and jobs. Multiplying the increase in population and jobs by the \$.19 level of service factor, yields a direct cost in year 15 for the Mayor’s Office from Carolina North of approximately \$824. The cumulative cost over the 15-year period taking into account the assumed timing of the development is approximately \$5,851. A summary in 5-year increments is shown below.

Figure 2. Operating Expenditure Output Summary Example

Fiscal Year->	1 2011	5 2015	10 2020	15 2025	Total
OPERATING EXPENDITURES BY DIVISION (\$1,000s)					
Mayor	\$0.047	\$0.254	\$0.467	\$0.824	\$5.851

CAPITAL EXPENDITURES IN THE FISCAL MODEL

Also included, is documentation on capital expenditure assumptions and projections for each jurisdiction. The approach of the Fiscal Impact Analysis is to project future capital needs based on *current levels of service*. No judgment is made as to whether the levels of service are adequate, inadequate, or better than adequate, nor are any assumptions made regarding future changes in levels of service.

Additionally, it should be noted that a fiscal impact analysis, while projecting specific capital facilities, is different from a facility plan. Particularly, the assumptions herein (and the fiscal impact analysis results issued under separate cover) reflect needs due to *new growth only* and are projected based on current levels of service.

Also, in most cases the capital needs projected are prorated based on the needs generated from the development projected in each scenario. That is, this is an incremental approach. Therefore, the demands and costs from Carolina North and the indirect impacts are reflected in the results even though an entirely new facility may not be triggered.

All capital costs included in the analysis are shown as Pay-Go. By showing Pay-Go funding for all capital improvements, the true costs of capital impacts are depicted. If those facilities were bond financed, debt service would continue beyond the last projection year and therefore would not adequately be captured in this analysis.

Below is an example from the Town of Chapel Hill of the Capital level of service information used in the model and the Fiscal Impact Analysis. In this report, detailed figures are provided for **each General Fund department (with capital expenditures) within each jurisdiction's chapter**. Each figure includes the following information; numbered columns are keyed to the descriptions below:

Figure 3. Capital Facility Example

An example of capital facility inputs, projection approach, and level of service from the model is provided below, using the Police Station as an example. Numbers shown are keyed to the below descriptions.

[1] Facility Type	[2] Base Year Inventory	[3] Need For Facility Based On:	[4] LOS by Capital Facility	[5] Current Cost/Unit (\$000's)
Police Station	Square Feet 21,802	CHAPEL HILL POLICE CFS	0.58	\$0.300

- **[1] Facility Type:** The type of capital improvement is shown here (e.g., building, facility, vehicle). **In the example, it's a Police Station.**
- **[2] Base Year Inventory:** The infrastructure unit and current amount in the jurisdiction are shown in this section. For example, the Town of Chapel Hill has Police station square footage of 21,802.
- **[3] Need for Facility Based On:** This is the demand unit on which the need for additional capital improvements are based. In this example, additional Police station space is projected on an increase in Police Calls for Service (CFS) in Chapel Hill.
- **[4] LOS by Capital Facility:** Given the current amount of infrastructure and the current demand, the base year Level of Service (LOS) is calculated. The example here is .58 square feet of station space per Police CFS ($21,802 \text{ SF} / 37,323 \text{ CFS} = .58$). This is the current level of service provided in the Town.
- **[5] Current Cost/Unit (\$000s):** The cost factor for new facilities / improvements is provided here. The factor is current cost per infrastructure units in \$1,000s. For example, cost for new Police station space is \$300 per square foot (in \$1,000s, \$.300).

DEVELOPMENT SCENARIOS

SCENARIOS

Two development scenarios for Phase I of Carolina North are being analyzed. Both scenarios include university development (some of which is a transfer from the main campus to Carolina North), corporate office space, retail and housing. The scenarios differ in the timing of both housing and corporate office development as well as the mix of housing types.

Scenario 1: Phasing Balanced/Housing Early. This development scenario assumes that housing is developed in the first ten years and the corporate office space is phased over the 15 year projection period. (The shaded area of Figure 4 reflects the portion of corporate office space that differs in timing between the two scenarios examined.) Housing is assumed as a mix of graduate housing and workforce housing, with more as graduate units in this scenario when compared to Scenario 2. Development of University space is assumed to occur over the 15-year period and is the same in Scenario 2.

Figure 4. Scenario 1 Development Program Assumptions

SCENARIO 1: Phasing Balanced/Housing Early

Building	Total SF/Units	PHASING (Years)		
		2011-2015	2016-2020	2021-2025
Centers and Institutes I	122,000	122,000		
Centers and Institutes II	100,000		100,000	
Centers and Institutes III	93,000			93,000
Innovation Center	85,000	85,000		
Interdisciplinary Research Center	150,000			150,000
RENCI	170,000		170,000	
School of Law	200,000	200,000		
School of Public Health	155,000		155,000	
UNC Health Care System	200,000			200,000
Carolina North Services Facility	75,000	25,000	50,000	
Subtotal University SF	1,350,000	432,000	475,000	443,000
Corporate Partners I	150,000	150,000		
Corporate Partners II	128,000		128,000	
Corporate Partners III	157,000			157,000
Corporate Partners IV	90,000			90,000
Subtotal Corporate SF	525,000	150,000	128,000	247,000
Services (retail)	100,000	25,000	50,000	25,000
TOTAL SF (excluding housing)	1,975,000	607,000	653,000	715,000
Housing - University*	250 Units	125 Units	125 Units	0 Units
Housing - Private**	167 Units	83 Units	84 Units	0 Units
Total Housing Units	417 Units	208 Units	209 Units	0 Units
Total SF with Housing	2,475,500	856,500	904,000	715,000

*Assumes graduate student housing owned by University and 1,000 square feet per unit

**Assumes average size of 1,500 square feet per unit and 25% can be considered workforce units

Scenario 2: Faster Absorption/Less Graduate Student Housing/Later Housing. This scenario assumes corporate office space is mostly developed over the first ten years, less of the housing square footage is built as graduate housing, and all housing occurs in the last ten of the fifteen years. The University construction program is the same in this scenario as Scenario 1.

Figure 5. Scenario 2 Development Program Assumptions

SCENARIO 2: Faster Absorption/Less Graduate Student Housing/Later Housing

Building	Total SF/Units	PHASING (Years)		
		2011-2015	2016-2020	2021-2025
Centers and Institutes I	122,000	122,000		
Centers and Institutes II	100,000		100,000	
Centers and Institutes III	93,000			93,000
Innovation Center	85,000	85,000		
Interdisciplinary Research Center	150,000			150,000
RENCI	170,000		170,000	
School of Law	200,000	200,000		
School of Public Health	155,000		155,000	
UNC Health Care System	200,000			200,000
Carolina North Services Facility	75,000	25,000	50,000	
Subtotal University SF	1,350,000	432,000	475,000	443,000
Corporate Partners I	150,000	150,000		
Corporate Partners II	128,000		128,000	
Corporate Partners III	97,000			97,000
Corporate Partners IV	150,000		150,000	
Subtotal Corporate SF	525,000	150,000	278,000	97,000
Services	100,000	25,000	50,000	25,000
TOTAL SF (excluding housing)	1,975,000	607,000	803,000	565,000
Housing - University*	125 Units	0 Units	62 Units	63 Units
Housing - Private**	250 Units	0 Units	125 Units	125 Units
Total Housing Units	375 Units	0 Units	187 Units	188 Units
Total SF with Housing	2,475,000	607,000	1,052,500	815,500

*Assumes graduate student housing owned by University and 1,000 square feet per unit

**Assumes average size of 1,500 square feet per unit and 25% can be considered workforce units

The above development programs are converted into demand factors such as population and jobs to be used as inputs to the Fiscal Impact Analysis model. Detail is provided below (see Figure 6).

In addition, for each of the above scenarios, TischlerBise analyzed the fiscal impact of the secondary or spin-off impacts attributable to Carolina North. The Chesapeake Group, a sub-consultant on this assignment, analyzed current economic conditions and the impact of Carolina North to determine multipliers to determine indirect impacts. (The report on indirect impacts of Carolina North is issued under separate cover.) A summary of the indirect spin-off land use assumptions are described below.

Summary of Demand Factors by Scenario

Demand assumptions for Phase I of Carolina North for each scenario are provided in this section. Figure 6 summarizes residential development and Figure 7 summarizes nonresidential.

Figure 6 includes data for the *projected net increases* in housing units, population, and public school students in each scenario. Public school students are projected using student generation rates and the number of housing units projected in each scenario. **The term “student generation rate” refers to** the number of public school students per housing unit in each of the school systems (Chapel Hill-Carrboro City Schools and Orange County Schools) serving development in Orange County. Public school students are a subset of school-aged children, which includes students in private schools and home-schooled children. The units assumed at Carolina North are multifamily units of 1,000 or 1,500 square feet. To project school demand from Carolina North, the rates for Chapel Hill-Carrboro City Schools (CHCCS) for multifamily units are used. (E.g., for Carolina North Scenario 1, the number of multifamily units (417) is multiplied by the student generation rate of .070 public school students per multifamily unit in CHCCS to yield 29 students.). To project demand for the indirect scenarios, the same approach is taken where applicable student generation rates are multiplied by projected units by type of unit in each school district. (See page 96 for student generation rates, and starting on page 115, detailed housing unit assumptions for each scenario.)

Figure 7 provides summaries for nonresidential (employment) portion of the development. The data show total estimated new jobs as well as *net new jobs*. *Net new nonresidential demand is used in most cases to determine the fiscal impact of Carolina North*. Given that some jobs will be moving from the main campus to Carolina North, the impact is due to the net increase in demand. Exceptions to this are noted in this report.

It should be noted that for the **indirect impacts**, “**Other Orange County**” reflects development in Orange County outside the Towns of Chapel Hill and Carrboro. The total County impact on **shown as**, “**Orange County**,” is the sum of Other Orange County, a portion of Chapel Hill (96 percent; 4 percent is assumed located in Durham County), and all of Carrboro.

Figure 6. Scenario Comparisons: Projected Net Increases (15-Year Period) RESIDENTIAL

RESIDENTIAL	SCENARIO 1		SCENARIO 2	
	Direct	Indirect	Direct	Indirect
Housing Units				
Carolina North [1]				
University Housing (multifamily)	250		125	
Private Housing (multifamily)	167		250	
Total Units	417		375	
Estimated Indirect Housing Units by Jurisdiction [2]				
Chapel Hill		1,468		1,468
Carrboro		309		309
Other Orange County [3]		193		193
Orange County [4]		1,911		1,911
Population [5]				
Chapel Hill	751	3,024	675	3,024
Carrboro	0	743	0	743
Other Orange County	0	464		464
Orange County [4]	751	4,110	675	4,110
Public School Students [6]				
CHCCS	29	608	26	608
OCS	0	58	0	58

[1] UNC; located in Chapel Hill and Orange County

[2] The Chesapeake Group; distribution based on current patterns of residences of UNC employees as reported by UNC.

[3] Outside Towns of Chapel Hill and Carrboro

[4] For Indirect impact, 4 percent of total Chapel Hill population is assumed to be outside of Orange County.

[5] Based on average household size by type from Chapel Hill and U.S. Census; see Appendix

[6] Based on student generation rates by type of housing unit from Orange County and TischlerBise; see Appendix.

For example, for Carolina North Scenario 1, the formula is number of units (417 multifamily) x .07 students per multifamily unit = 29 students

Figure 7. Scenario Comparisons: Projected Net Increases (15-Year Period): NONRESIDENTIAL

NONRESIDENTIAL	SCENARIO 1		SCENARIO 2	
	Direct	Indirect	Direct	Indirect
Projected Total Jobs at Carolina North [1]				
University	2,725		2,725	
Corporate Office Jobs	2,100		2,100	
Retail Jobs	333		333	
TOTAL On-Site	5,158		5,158	
Existing UNC Jobs Anticipated to Move to CN	1,567		1,567	
Projected Direct New Jobs at Carolina North [2]	3,591		3,591	
Projected Indirect New Jobs (in Region) [3]		5,027		5,027
Estimated Jobs in Study Jurisdictions				
Chapel Hill		1,106		1,106
Carrboro		251		251
Other Orange County		251		251
Orange County [4]		1,564		1,564

[1] UNC; located in Chapel Hill and Orange County.

[2] Total on-site jobs (5,158) minus relocated jobs (1,567) = Net new jobs (3,591)

[3] The Chesapeake Group; distribution based on current development patterns

[4] For Indirect impact, 4 percent of total Chapel Hill employment is assumed to be outside of Orange County.

Further detail on each scenario is provided in the Appendix.

As noted above, development assumptions for the direct impact of development on Carolina North were provided by UNC. Indirect assumptions were provided as part of the Economic Impact Analysis conducted by The Chesapeake Group. The Economic Impact provided estimates of regionwide indirect impacts that include jurisdictions beyond the scope of this study. Assumptions about future impacts on the study jurisdictions are based on current distributions of impacts from UNC, as currently reported by UNC.

It is noted that the indirect portion of the analysis relies on the assumption that future conditions will mirror current conditions. Obviously, this may not be the case. For example, if housing is not available in the Town of Chapel Hill at price points or type desired by new employees based at Carolina North and/or travel behavior and options change substantially, a larger share of these employees may choose to live in unincorporated Orange County—or outside of the study jurisdictions entirely. These changed assumptions can be tested in subsequent analyses by UNC using the Fiscal Impact Model provided to UNC as part of this **assignment. These “what if” scenarios can be examined with the model developed by TischlerBise** for this project.

ORGANIZATION OF THE REPORT

The remainder of this report is organized by jurisdiction with the following chapters:

- II. Town of Chapel Hill
- III. Orange County (including Chapel Hill-Carrboro Schools and Orange County Schools)
- IV. Town of Carrboro
- V. Demographic and Data Assumptions
- VI. Appendix

Within each jurisdiction's **chapter**, the fiscal impact model assumptions are outlined with detail on Revenues, Operating Expenditures and Capital Expenditures. At the end of the report, supporting documentation is provided in chapter 5, "**Demographic and Data Assumptions**," for all jurisdictions included in the study. The information included in the demographic data chapter includes pertinent base year demographic figures and other demand factors used in the analysis. Finally, an Appendix is provided that includes a summary of expenditure projection methodology and detailed annual development projections for each scenario.

II. TOWN OF CHAPEL HILL

CHAPEL HILL REVENUE FACTORS

This section provides detail on projection methodologies for revenues for the Town of Chapel Hill. Only General Fund and Transit Fund revenues are included in the analysis.

GENERAL FUND REVENUES

An inventory of the General Fund is shown in Figure 8. The table shows revenue category, specific revenue type, base year (FY08) budget amount, projection methodology, demand unit multiplier, and the level of service (LOS) standard, or dollar per demand unit.

For instance, for those categories projected based on “CHAPEL HILL POPULATION,” the current budget amount is divided by the current estimated total population in the Town. For example, Franchise Tax in the amount of \$2,300,000 is divided by current estimated population (55,030) to yield a per person cost factor of \$41.80, which is then used to project future revenue from growth. Further discussion is provided below the figure.

Figure 8. Chapel Hill General Fund Revenues

Revenue Category	Revenue Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	LOS Std \$ per Demand Unit
Property Taxes	Property Taxes (collection at 99.2%)	\$26,017,000	CHAPEL HILL CUM AV	9.90	0.474
	Estimated Prior Year Collections	\$113,000	FIXED	1.00	\$0.00
Other Taxes and Licenses	Other Taxes and Licenses	\$1,524,000	CHAPEL HILL POP AND JOBS	1.00	\$16.07
State-Shared Revenues \$9,528,000 14%	Franchise Tax	\$2,300,000	CHAPEL HILL POPULATION	1.00	\$41.80
	Beer, Wine Tax	\$230,000	CHAPEL HILL POPULATION	1.00	\$4.18
	1% Local Option Sales Tax	\$3,055,000	CHAPEL HILL POPULATION	1.00	\$55.52
	1/2% Local Option Sales Tax (1984)	\$2,400,000	CHAPEL HILL POPULATION	1.00	\$43.61
	1/2% Local Option Sales Tax (1986)	\$2,400,000	CHAPEL HILL POPULATION	1.00	\$43.61
	1/2% Local Option Sales Tax (2002)	\$1,673,000	CHAPEL HILL POPULATION	1.00	\$30.40
	Fuel Tax (Powell Bill)	\$1,460,000	CHAPEL HILL POPULATION	0.75	\$26.53
	State Fire Protection	\$1,064,000	FIXED	1.00	\$0.00
Licenses/Permits/Fines/Forfeitures <i>subsets of total above</i>	Licenses/Permits/Fines/Forfeitures	\$1,604,000	CHAPEL HILL POP AND JOBS	0.48	\$16.91
	Permit Fees	\$836,325	CHAPEL HILL POP AND JOBS	1.00	\$8.82
Grants	Grants	\$415,000	FIXED	1.00	\$0.00
Service Charges <i>subsets of total above</i>	Service Charges (TOTAL)	\$1,664,000	FIXED	1.00	\$0.00
	Development Related	\$458,748	CHAPEL HILL POP AND JOBS	1.00	\$4.84
	PW Fees (Comm Garbage)	\$519,000	CHAPEL HILL JOBS	1.00	\$13.04
	Parks and Rec	\$370,300	CHAPEL HILL POPULATION	1.00	\$6.73
Interest on Investments	Interest on Investments	\$363,000	FIXED	1.00	\$0.00
Other Revenue	Other Revenue	\$134,000	FIXED	1.00	\$0.00
Interfund Transfers	Interfund Transfers	\$1,398,000	FIXED	1.00	\$0.00
Appropriated Fund Balance	Appropriated Fund Balance	\$4,315,000	FIXED	1.00	\$0.00
Transit Fund	Charges for Service	\$507,938	CHAPEL HILL POPULATION	0.26	\$9.23
	Federal Assistance	\$1,115,308	FIXED	1.00	\$0.00
	State Assistance	\$3,475,000	FIXED	1.00	\$0.00
	UNC Contracts	\$5,705,300	FIXED	1.00	\$0.00
	Carrboro Contracts	\$1,015,239	DIRECT ENTRY	1.00	
	Chapel Hill Contribution	\$2,844,215	CHAPEL HILL CUM AV	9.90	\$0.048

NOTES TO TABLE:

CUM AV = Cumulative Assessed Value

Customized/Marginal Calculations

- Property Taxes are projected based on assessed value of real property for each land use type (see below) multiplied by the FY08 Town tax rate of \$.474 per \$100 valuation. Per the budget used in this analysis, collection is assumed at 99 percent. Actual recovery rate may be lower (per Town staff), but the budgeted revenues and costs are used for the baseline analysis reflecting a balanced budget. If one assumed lower revenues, the analysis would begin from an unbalanced position from the outset. (The demand unit multiplier of 9.9 is due to the scale factor in the model of \$1,000s and the assumption of collection at 99 percent.)
- All sales taxes are assumed to continue at the baseline levels including the 2002 ½% Local Option Sales Tax (Article 44) that is scheduled to expire. Per the State, a hold harmless provision is included that is anticipated to maintain local revenues at pre-expiration levels. Per the distribution formula, funds are allocated on a per capita basis. The change to Article 42 in County distribution from a per capita formula to a point of delivery approach does not affect the distribution to municipalities. It should be noted that current economic conditions have decreased sales tax revenue projections and in some cases no growth is projected in the short term. However, this is a long-term analysis (with the first projection year in 2011). The approach taken for sales tax revenues projected on a per capita methodology is such that it is assumed that sales tax revenues will recover to the per capita amounts used in this analysis. For those sales taxes generated on point of sale or delivery, an average sales per square foot figure is used. To the extent that sales tax generation does not recover in the future to the level assumed in this analysis, revenues and overall findings will be affected. Again, the fiscal model that will be provided as part of this work effort will allow sensitivity analyses to test changing market conditions.
- **State Fire Protection funds are considered “FIXED” due to the lack of increase from the State.** That is, no additional revenues from the State for this purpose are assumed.
- License/Permits/Fines/Forfeitures: Permit fees that are development-related have been separated from the total and are projected separately. The result is that approximately 50 percent (.48) are projected on an annual basis on the increase in population and jobs. Permit fees are also assumed to be impacted by residential and nonresidential development, but are one-time fees. Also, due to the model parameters, the multiplier for the Carolina North (Direct) Scenarios is 1.36 to account for the development activity on the site, as opposed to the net increase in jobs in the Town as a whole. The same multiplier is assumed on the expenditure side as well. For the indirect scenarios, no adjustment is made. (Multiplier is shaded in green.)
- Charges for Service: Subcategories of Charges for Services are shown and used in the analysis.
 - Development-related (Planning, Engineering, Inspection) charges are one-time charges using the same approach as permit fees with a 1.36 multiplier to account for approximately 40 percent higher development activity on the Carolina North site, as compared to the number of net new jobs from development located in

Town. The same approach is taken on the expenditure side. That is, both revenues and expenditures are assumed for Carolina North scenarios. For the indirect scenarios, no multiplier adjustment is made—and revenues and expenditures are assumed. (Multiplier is shaded in green.)

- PW Fees for Commercial Garbage (shaded in green) are dependent on Scenario. For the direct impact of Carolina North, it is assumed that UNC (not the Town) provides garbage collection and removal, therefore this revenue factor is FIXED. For the indirect impact scenarios, revenues (and costs) for commercial garbage collection are included (projected on CHAPEL HILL JOBS).
 - Parks and Recreation charges for service are assumed to increase on an annual basis based on population growth.
- Transit Fund:
 - Charges for service are projected using a factor of 26 percent to reflect the amount from *Vehicle License Fees*, which are projected based on an increase in POPULATION in Chapel Hill. The remainder of the revenue in this category is considered fixed.
 - The Chapel Hill Contribution to the Transit Fund is an ad valorem tax, projected on the FY08 rate of \$.048 per \$100 of valuation, which is projected on assumed real property assessed values provided below.
 - State and Federal Assistance is shown as FIXED because Transit expenditures (see Figure 23 on page 32) are based only on the *local share of the costs*.
 - Carrboro's contribution is a "DIRECT ENTRY" and is based on Carrboro's share of the projected Transit expenditures. Transit costs are projected in the Town of Chapel Hill's analysis, Carrboro's share (at 15.84 percent of the projected costs) then becomes a revenue input to the Town of Chapel Hill. The current partner allocation is as follows (but only Carrboro is assumed as revenue to Chapel Hill):
 - Town of Chapel Hill: 45.47 percent
 - UNC: 38.69 percent
 - Carrboro: 15.84 percent
 - Powell Bill funds are distributed from the State based on population (75%) and lane mile increases (25%) for road maintenance. In this analysis, revenues are projected based on an increase in population as the Town does not anticipate adding any lane miles in the future. The demand unit multiplier is .75, meaning the base year budget is multiplied by 75 percent to reflect the portion of funding that is based on population. This results in a \$19.90 per capita amount ($\$26.53 \times 75\%$), which reflects a conservative figure as the last three years' per capita amount has been approximately \$22.

Revenues identified as "FIXED" are not anticipated to increase with new development at Carolina North or off-site as part of the indirect impact, or are unpredictable from one year to the next.

Average Assessed Values

Average assessed values for new development by type in the Town of Chapel Hill (and Orange County) are shown below in Figure 9 for development on the Carolina North site (DIRECT) and in Figure 10 for INDIRECT development in the Town of Chapel Hill.

Figure 9. Average Assessed Values for Carolina North (DIRECT)

DIRECT Carolina North Real Property Tax Base (CH, OC)

Assessed Value Assumptions

<i>Residential:</i>	Avg \$/DU
University Housing	\$0
Private Housing	\$92,000

<i>Nonresidential:</i>	Avg \$/SF
TOTAL INSTITUTIONAL SF	\$0.00
TOTAL CORPORATE OFFICE SF	\$340.00
TOTAL RETAIL SF	\$175.00

Source: The Chesapeake Group; UNC; TischlerBise

Figure 10. Assessed Values in Chapel Hill (INDIRECT)

INDIRECT Real Property Tax Base-CHAPEL HILL

Assessed Value Assumptions

<i>Residential:</i>	Avg \$/DU
Chapel Hill SFD	\$525,000
Chapel Hill SFA	\$280,000
Chapel Hill MF	\$160,000

<i>Nonresidential:</i>	Avg \$/SF
Chapel Hill Retail SF	\$175.00
Chapel Hill Office SF	\$235.00
Chapel Hill Industrial SF	\$60.00

Source: TischlerBise analysis of Orange County Assessor Database (2008)

Note: Assessed values reflect current valuation cycle (2005). Since no inflation is assumed in any part of this analysis and the tax rate used in the analysis is also based on the current valuation cycle, the above values are appropriate to use in this analysis and align with revenue assumptions throughout.

CHAPEL HILL OPERATING EXPENDITURES

All variable operating expenditures for the Town of Chapel Hill are projected—including personnel and operating costs—and discussed in this section. Capital expenditures are discussed in a separate section. Figures are provided detailing each General Fund department in the Town of Chapel Hill on the following pages. Please see the section, “Operating Expenditures in the Fiscal Model,” starting on page 7 in Chapter 1 for further description.

GENERAL GOVERNMENT

The following figures show methodologies for operating and staffing for departments within General Government, which includes Mayor, Council, Manager, Communications and Public Affairs, Human Resources, Finance, Information Technology, and Town Attorney. In general, operating costs are variable on growth in population and jobs along with some personnel costs. As indicated above, “Fixed” expenditures are assumed to not be affected by development.

Figure 11. General Government

MAYOR					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	Demand Unit	\$ per Demand Unit
Personnel	\$94,085	FIXED	1.00		\$0.00
Operating Costs	\$18,003	CHAPEL HILL POP AND JOBS	1.00		\$0.19
TOWN COUNCIL					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	Demand Unit	\$ per Demand Unit
Personnel	\$152,784	FIXED	1.00		\$0.00
Operating Costs	\$96,608	CHAPEL HILL POP AND JOBS	1.00		\$1.02
TOWN MANAGER					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	Demand Unit	\$ per Demand Unit
Personnel	\$834,402	FIXED	1.00		\$0.00
Operating Costs	\$120,224	CHAPEL HILL POP AND JOBS	1.00		\$1.27
COMMUNICATIONS AND PUBLIC AFFAIRS					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	Demand Unit	\$ per Demand Unit
Personnel	\$279,453	FIXED	1.00		\$0.00
Operating Costs	\$154,933	CHAPEL HILL POP AND JOBS	1.00		\$1.63
HUMAN RESOURCES					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	Demand Unit	\$ per Demand Unit
Personnel	\$581,400	FIXED	1.00		\$0.00
Operating Costs	\$273,227	CHAPEL HILL POP AND JOBS	1.00		\$2.88

FINANCE					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit	
Personnel	\$921,825	FIXED	1.00	\$0.00	
Operating Costs	\$264,805	CHAPEL HILL POP AND JOBS	1.00	\$2.79	
INFORMATION TECHNOLOGY					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit	
Personnel	\$623,770	FIXED	1.00	\$0.00	
Operating Costs	\$358,152	CHAPEL HILL POP AND JOBS	1.00	\$3.78	
Capital Outlay	\$68,000	FIXED	1.00	\$0.00	
TOWN ATTORNEY					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit	
Personnel	\$248,595	FIXED	1.00	\$0.00	
Operating Costs	\$36,759	CHAPEL HILL POP AND JOBS	1.00	\$0.39	

DEVELOPMENT

The following figures show methodologies for operating and staffing for Development, which includes Planning, Inspections, and Engineering (in the FY08 budget). In general, operating costs are variable on growth in population and jobs along with some personnel costs. That is, it is assumed that these Town services (Planning, Engineering, Inspections) will be provided at Carolina North.

For some expenditures, the “demand unit multiplier” is greater than 1 (specifically 1.36) due to model parameters to account for the on-site impact of new nonresidential development. As discussed in the first chapter, most impact from nonresidential development is modeled based on *net new employment at Carolina North*. For services that are “location” driven and will be affected by the actual development and construction activity at Carolina North (e.g., building inspections), the model accounts for this in the Demand Unit Multiplier factor. A factor of 1.36 is used and calculated based on the other nonresidential development assumed at Carolina North not captured in the population and jobs factor. (Formula is as follows: (total population and jobs at Carolina North [5,909]-net new population and jobs [4,342]) / net new population and jobs [4,342] = 36%. This is then added to 1 to reflect overall impact. For the indirect scenarios, the multiplier is 1. The multiplier is shown with green shading in the following figures to indicate that it is dependent on the scenario being analyzed.

Figure 12. Planning

PLANNING					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit	
Personnel	\$1,105,986	CHAPEL HILL POP AND JOBS	0.25	\$11.66	
Operating Costs	\$190,985	CHAPEL HILL POP AND JOBS	1.36	\$2.01	

Figure 13. Inspections

INSPECTIONS				
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	LOS Std \$ per Demand Unit
Personnel	\$703,729	CHAPEL HILL POP AND JOBS	1.36	\$7.42
Operating Costs	\$110,200	CHAPEL HILL POP AND JOBS	1.36	\$1.16

Figure 14. Engineering

ENGINEERING - GENERAL DIVISION				
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	LOS Std \$ per Demand Unit
Personnel	\$1,358,428	CHAPEL HILL POP AND JOBS	0.60	\$14.32
Operating Costs	\$806,580	CHAPEL HILL POP AND JOBS	1.36	\$8.51

PUBLIC WORKS

The following divisions are included under Public Works: Administration, Construction, Streets, Drainage, Building Maintenance, Grounds Maintenance, and Solid Waste. Different demand factors are assumed for different functions. Vehicle trips are used for street-related expenditures. (Further detail is provided in the Demographic and Data chapter.) The analysis assumes that no new Town Roads are built as a result of the Carolina North development for which the Town will assume maintenance responsibility. However, incremental maintenance costs are projected due to an increase in vehicle trips on Town roads as a result of the Carolina North development (see PW-Streets).

For Solid Waste, it is assumed that the Town will not provide Solid Waste services to the Carolina North site, therefore for the direct scenarios, those costs are **“FIXED.”** For the indirect scenarios, costs are split between service provided to residential and nonresidential development and projected based on single family units and jobs, respectively. Detail is provided below.

Drainage costs are projected for both the direct (Carolina North) and indirect scenarios based on an increase in population and jobs. (The Drainage division has been moved to the Stormwater Enterprise Fund as of the FY08-09 Budget; this analysis uses the FY07-08 Budget.) Stormwater services are in a separate enterprise fund, which assumes no net impact due to mitigation measures and/or fees paid.

Figure 15. Public Works

PW-ADMINISTRATION					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit	
Personnel	\$592,664	CHAPEL HILL POP AND JOBS	0.30		\$6.25
Operating Costs	\$73,114	CHAPEL HILL POP AND JOBS	1.00		\$0.77
PW-CONSTRUCTION					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit	
Personnel	\$556,831	CHAPEL HILL POP AND JOBS	0.60		\$5.87
Operating Costs	\$279,521	CHAPEL HILL POP AND JOBS	1.00		\$2.95
PW-STREETS					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit	
Personnel	\$824,895	CHAPEL HILL VEHICLE TRIPS	0.70		\$4.16
Operating Costs	\$1,056,283	CHAPEL HILL VEHICLE TRIPS	1.00		\$5.33
PW-DRAINAGE					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit	
Personnel	\$223,797	CHAPEL HILL POP AND JOBS	0.30		\$2.36
Operating Costs	\$106,906	CHAPEL HILL POP AND JOBS	1.00		\$1.13
PW-BUILDING MAINTENANCE					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit	
Personnel	\$681,390	CHAPEL HILL FACILITY SF	0.60		\$1.14
Operating Costs	\$812,286	CHAPEL HILL FACILITY SF	1.00		\$1.35
PW-GROUNDS MAINTENANCE					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit	
Personnel	\$1,441,143	CHAPEL HILL ACRES	0.60		\$1,725.92
Operating Costs	\$528,999	CHAPEL HILL ACRES	1.00		\$633.53

Figure 16. Public Works-Solid Waste, Direct Scenarios

PW-SOLID WASTE					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit	
Personnel	\$1,796,530	SEE BELOW	1.00		\$0.00
Operating Costs	\$1,689,525	SEE BELOW	1.00		\$0.00
Capital Outlay	\$0	FIXED	1.00		\$0.00
Solid Waste-Residential Share	\$1,254,980	FIXED	1.00		\$0.00
Solid Waste-Nonresidential Share	\$2,231,075	FIXED	1.00		\$0.00

Figure 17. Public Works-Solid Waste, Indirect Scenarios

PW-SOLID WASTE					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier		\$ per Demand Unit
Personnel	\$1,796,530	SEE BELOW	1.00		\$0.00
Operating Costs	\$1,689,525	SEE BELOW	1.00		\$0.00
Capital Outlay	\$0	FIXED	1.00		\$0.00
Solid Waste-Residential Share	\$1,254,980	CHAPEL HILL SF UNITS	1.00		\$121.04
Solid Waste-Nonresidential Share	\$2,231,075	CHAPEL HILL JOBS	1.00		\$56.06

PUBLIC SAFETY

Police

In general, Police operating costs are projected based on growth in Police Calls for Service (CFS). As part of this analysis, TischlerBise analyzed current Town of Chapel Hill Police calls for service data and developed factors to project future calls for services. Detail is provided in the Demographic and Data Assumptions chapter.

It is assumed that Chapel Hill Police will not serve Carolina North, so future Town of Chapel Hill calls for service *are not* projected from on-site development. Calls for service are projected, however, on an increase in traffic to and from the site, which is anticipated to impact the Chapel Hill Police.

For the indirect scenarios, future CFS are projected based on future development in the Town (but not on University property). Future CFS are then used to project costs. The need for new Police officers is also projected on an increase in CFS. This section of the model allows for staffing inputs and projects new officers based on an increase in CFS. As indicated above, “Fixed” expenditures are assumed to not be affected by growth. Marginal operating costs shown as “Direct Entry” are discussed below where appropriate.

Figure 18. Police

POLICE-SUPPORT SERVICES					LOS Std
Expenditure	Base Year	Project Using	Demand Unit		\$ per
Name	Budget Amount	Which Demand Base?	Multiplier	Demand Unit	
Personnel	\$1,699,672	CHAPEL HILL POLICE CFS	0.20		\$45.54
Operating Costs	\$629,479	CHAPEL HILL POLICE CFS	1.00		\$16.87
POLICE-OPERATIONS					LOS Std
Expenditure	Base Year	Project Using	Demand Unit		\$ per
Name	Budget Amount	Which Demand Base?	Multiplier	Demand Unit	
Personnel	\$8,231,774	SEE BELOW	1.00		\$0.00
Operating Costs	\$967,496	CHAPEL HILL POLICE CFS	1.00		\$25.92
Open Cost Type 1	\$0	FIXED	1.00		\$0.00
Open Cost Type 2	\$0	FIXED	1.00		\$0.00
Open Cost Type 3	\$0	FIXED	1.00		\$0.00
Open Cost Type 4	\$0	FIXED	1.00		\$0.00
Officer Equipment	\$0	DIRECT ENTRY	1.00		\$6,100
Direct Entry Cost Type 2	\$0	DIRECT ENTRY	1.00		\$0
TOTAL	\$9,199,270				
POLICE-OPERATIONS STAFFING INPUT					Estimated
	Base Year	Project Using	Current Demand		Service
Category	FTE	Which Demand Base?	Units Served		Capacity
	Positions		Per Position		Per Position
Police Major	1.0	FIXED	0		0
Police Captain	3.0	FIXED	0		0
Police Lieutenant	9.0	FIXED	0		0
Police Sergeant	13.0	FIXED	0		0
Senior Forensic and Evidence Specialist	1.0	FIXED	0		0
Forensic and Evidence Specialist	1.0	FIXED	0		0
Police Officer	93.0	CHAPEL HILL POLICE CFS	401		400
Administrative Secretary	0.0	FIXED	0		0
POLICE-SPECIAL EVENTS					LOS Std
Expenditure	Base Year	Project Using	Demand Unit		\$ per
Name	Budget Amount	Which Demand Base?	Multiplier	Demand Unit	
Personnel	\$0	FIXED	1.00		\$0.00
Operating Costs	\$132,600	FIXED	1.00		\$0.00

Fire

It is assumed that the Town Fire Department will be the primary service provider to Carolina North. In general, operating costs are projected based on growth in Fire Calls for Service while staffing costs are a function of a new station and additional apparatus required to serve Carolina North. (Further discussion on Fire Calls for Service is provided in the Demographic and Data section.) As indicated above, “Fixed” expenditures are assumed to not be affected by development. The operating impacts of new Engine and Aerial Companies and one-time training costs are “Direct Entry” items and directly related to development at Carolina North.

The annual operating impact for an Engine Company and Aerial Company to be housed at a new Fire station (needed to serve Carolina North) is estimated at \$723,000 for each, per the Town. This reflects the positions required to staff the required apparatus and supervisory positions (3 supervisors and 12 firefighters). This cost is triggered when the model projects the need for a new Fire station to serve Carolina North. The Fire Station and Engine Company are triggered when development at Carolina North Phase I is approximately 50 percent complete. The Aerial Truck and thus operating impact is triggered at 75 percent completion of Phase I of Carolina North. A one-time equipment and training cost of \$93,000 per company (\$6,200 for each staffing position) is included as well. (The initial and replacement costs for apparatus are included under capital expenditures.)

The indirect scenarios do not project the need for a new station, therefore personnel costs are assume to be fixed. However, operating costs are projected based on the increase in Fire CFS.

Figure 19. Fire

FIRE-ADMINISTRATION					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier		\$ per Demand Unit
Personnel	\$438,456	FIXED	1.00		\$0.00
Operating Costs	\$95,623	CHAPEL HILL FIRE CFS	1.00		\$21.40
FIRE-EMERGENCY OPERATIONS					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier		\$ per Demand Unit
Personnel	\$5,019,833	SEE BELOW	1.00		\$0.00
Operating Costs	\$946,113	CHAPEL HILL FIRE CFS	1.00		\$211.75
Fire Operating Impact-Engine Co	\$0	DIRECT ENTRY	1.00		\$723,000
One-time Equipment/Training Costs (Engine)	\$0	DIRECT ENTRY	1.00		\$93,000
Fire Operating Impact-Aerial Co	\$0	DIRECT ENTRY	1.00		\$723,000
One-time Equipment/Training Costs (Aerial)	\$0	DIRECT ENTRY	1.00		\$93,000
FIRE-LIFE SAFETY					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier		\$ per Demand Unit
Personnel	\$291,452	FIXED	1.00		\$0.00
Operating Costs	\$21,571	CHAPEL HILL FIRE CFS	1.00		\$4.83

LEISURE

Parks and Recreation

Parks and Recreation includes personnel and operating costs as shown and is assumed to be affected by growth in population in Chapel Hill. Personnel costs are assumed to be 60 percent variable on growth in population with the remaining 40 percent fixed, representing management positions that will not be expanded due to new development.

Figure 20. Parks and Recreation

<i>PARKS AND RECREATION</i>				
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	LOS Std \$ per Demand Unit
Personnel	\$1,946,442	CHAPEL HILL POPULATION	0.60	\$35.37
Operating Costs	\$918,649	CHAPEL HILL POPULATION	1.00	\$16.69

Library

Library expenditures include personnel and operating costs as shown and are assumed to be affected by growth in population. Personnel costs are assumed to be 40 percent variable on growth in population with the remaining 60 percent fixed representing management positions that will not be expanded due to new development.

Figure 21. Library

<i>LIBRARY</i>				
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	LOS Std \$ per Demand Unit
Personnel	\$1,676,216	CHAPEL HILL POPULATION	0.40	\$30.46
Operating Costs	\$580,616	CHAPEL HILL POPULATION	1.00	\$10.55

NON-DEPARTMENTAL

Non-Departmental items are assumed to be fixed—with the exception of Operations—because they are either projected elsewhere, as is the case for capital related costs (pay go and debt service) or they are not assumed to increase with growth.

Figure 22. Non-Departmental

NON-DEPARTMENTAL					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier		\$ per Demand Unit
Personnel Services	\$32,894	FIXED	1.00		\$0.00
Operations	\$602,506	CHAPEL HILL POP AND JOBS	1.00		\$6.35
Transfer to Debt Service	\$5,536,025	FIXED	1.00		\$0.00
Transfer to Other Funds	\$1,301,950	FIXED	1.00		\$0.00
Agency Contributions	\$945,000	FIXED	1.00		\$0.00
Economic Development	\$0	FIXED	1.00		\$0.00
Contingency	\$47,816	FIXED	1.00		\$0.00

TRANSIT FUND

The Transit Fund is the budget for the Chapel Hill Transit system that serves and is paid for by the Towns of Chapel Hill and Carrboro and UNC. The full costs are shown within the Town of Chapel Hill results and level of service factors are provided here.

The majority of costs for the system anticipated to increase due to growth are covered under OPERATIONS-FIXED ROUTE and reflected as the direct entry, Transit Operating Impact. The demand base is “Transit Service Hours,” **which is projected based on the system’s current level** of service (1.3 service hours per person and job in the service area; see Demographic and Data Assumptions chapter for calculation) and the projected development for each scenario. That is, Transit Service Hours are projected annually for each scenario.

The cost per service hour of \$66.25 is from the Transit Department and reflects all related *local costs* including administration, special events, etc. (The calculation is \$10,141,870 (budgeted 2008-09 partner local cost) divided by estimated service hours (153,085), per Chapel Hill Transit.) *The cost does not include the cost for UNC’s dedicated routes or state or federal contributions.* The resulting total local share of the projected cost in each scenario is used to **calculate Carrboro’s share (15.84 percent), which is then used as a revenue input for the Town of Chapel Hill.** Equipment Maintenance is also projected based on the increase in Transit Service Hours. Capital expenditures, shown as Fixed in the figure below, are addressed in the Capital expenditures chapter (see page 38).

It should be noted that other analyses related to Transit are ongoing such as the Chapel Hill Long Range Transit Plan, Transit in Lieu Study, and the Carolina North Transportation Impact

Study. These studies will look at options for long-term transit needs including changes to service levels and potential increased infrastructure investment (e.g., Bus Rapid Transit). As these potential changes have not been finalized or adopted, the Fiscal Impact Analysis is based on current levels of service as reflected in the FY08 budget and in the capital assets. As such, the cost estimates are placeholders for purposes of this baseline fiscal analysis and future, more detailed analyses, such as through a TIA and transit plan for Carolina North may result in changes to these assumptions and cost factors. The outputs from other studies reflecting transit operating and capital costs can be directly entered into the fiscal model being transferred to UNC as part of this assignment to determine the fiscal impact.

Figure 23. Transit

ADMINISTRATION					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit	
Personnel	\$430,451	FIXED	0.20	\$0.00	
Operating Costs	\$240,092	FIXED	1.00	\$0.00	
ADMINISTRATION NON-DEPARTMENTAL					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit	
Personnel	\$15,977	FIXED	1.00	\$0.00	
Operating Costs	\$30,029	FIXED	1.00	\$0.00	
OPERATIONS-FIXED ROUTE					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit	
Personnel	\$6,335,971	SEE BELOW	1.00	\$0.00	
Operating Costs	\$2,731,117	SEE BELOW	1.00	\$0.00	
Transit Operating Impact	\$0	TRANSIT SERVICE HOURS	1.00	\$66.25	
OPERATIONS-DEMAND RESPONSE					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit	
Personnel	\$1,076,776	FIXED	1.00	\$0.00	
Operating Costs	\$346,500	FIXED	1.00	\$0.00	
OPERATIONS-SPECIAL EVENTS					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit	
Personnel	\$213,809	FIXED	1.00	\$0.00	
Operating Costs	\$146,740	FIXED	1.00	\$0.00	
EQUIPMENT MAINTENANCE					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit	
Personnel	\$1,674,043	TRANSIT SERVICE HOURS	1.00	\$10.94	
Operating Costs	\$1,421,495	TRANSIT SERVICE HOURS	1.00	\$9.29	
TRANSPORTATION CAPITAL RESERVE FUND					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit	
Personnel	\$0	FIXED	1.00	\$0.00	
Operating Costs	\$0	FIXED	1.00	\$0.00	
Contribution to Capital Grant	\$2,274,500	FIXED	1.00	\$0.00	

OTHER FUNDS

The Fiscal Impact Analysis includes General Fund supported services and facilities, including the Transit Fund, which is supported by the Town of Chapel Hill for its share of the costs by a dedicated property tax. The other funds are not included as they are not General Fund supported, or expenditures are captured within the General Fund categories above.

CHAPEL HILL CAPITAL EXPENDITURES

This section provides further detail on capital cost assumptions for the Town of Chapel Hill used in the fiscal impact analysis. The approach of the Fiscal Impact Analysis is to project future capital needs based on *current levels of service*. No judgment is made as to whether the levels of service are adequate, inadequate, or better than adequate, nor are any assumptions made regarding future changes in levels of service. Additionally, it should be noted that a fiscal impact analysis, while projecting specific capital facilities, is different from a facility plan. Particularly, the assumptions below and the results issued under separate cover reflect needs due to *new growth only* and are projected based on current levels of service. Also, in most cases the capital needs projected are prorated based on the amount of development projected in each scenario. Therefore, the demands and costs from Carolina North and the indirect impacts are reflected in the results even though an entirely new facility may not be triggered.

All capital costs included in the analysis are shown as Pay-Go. By showing Pay-Go funding for all capital improvements, the true costs of capital impacts are depicted. If those facilities were bond financed, debt service would continue beyond the last projection year and therefore would not adequately be captured in this analysis.

Figures are provided detailing each Town of Chapel Hill capital expenditures on the following pages. Please see the section, “**Capital Expenditures in the Fiscal Model,**” **starting on page 8** in Chapter 1 for further description of figures shown in this chapter.

POLICE CAPITAL

Level of service information is provided below for Chapel Hill Police.

Figure 24. Police Capital LOS

Facility Type	Base Year Inventory		Need For Facility Based On:	LOS by Capital Facility	Current Cost/Unit (\$000's)
Police Station	Square Feet	21,802	CHAPEL HILL POLICE CFS	0.58	\$0.300
Patrol Cars	Vehicles	76	DIRECT ENTRY		\$38

- Police station level of services is based on current station square footage and current number of Police calls for service (CFS). The result is .58 square feet per call for service.
- As noted above in the Operating section, it is assumed that Chapel Hill Police will not serve Carolina North, so CFS are not projected from on-site development. CFS are

projected, however, on increase in traffic to and from the site, which will occur within the Town of Chapel Hill and will be served by Chapel Hill Police. (See “Demographic and Data Assumptions” for further information on allocation and calls for service.)

- Town Police will be impacted by indirect development occurring in the Town. Therefore, CFS from indirect development are projected for all types of calls.
- Police Station space is assumed at a cost of \$300 per square foot.
- Also included is the cost for patrol cars at a fully-loaded cost of \$38,000 per car with a useful life of 4 years. Cost for a new car is incurred when the model projects a need for 2 new police officers per the Police department. Costs for replacement vehicles are also included in the model.

FIRE CAPITAL

Level of service information is provided below for Chapel Hill Fire.

Figure 25. Fire Capital LOS

Facility Type	Base Year Inventory	Need For Facility Based On:	LOS by Capital Facility	Current Cost/Unit (\$000's)
Fire Station	Square Feet 23,273	DIRECT ENTRY	5.21	\$1,800
Fire Engine	Vehicle	DIRECT ENTRY		\$400
Fire Aerial Truck	Vehicle	DIRECT ENTRY		\$900

- It is assumed that the Town Fire Department will be the primary service provider to Carolina North.
- Fire capital improvements for the Carolina North Direct scenarios are DIRECT ENTRY elements given the need for a new facility to serve the site, per discussions with Chapel Hill Fire Department. The existing stations do not provide the geographic proximity required for adequate service to the Carolina North site. The Fire Station is triggered when development at Carolina North Phase I is approximately 50 percent complete, per the Chapel Hill Fire Department.
 - Fire Station cost is estimated at \$1.8 million. It is assumed to be an 8,000 square foot facility (per Chapel Hill Fire Department) at an estimated cost of \$225 per square foot. Costs are from Marshall Swift Valuation Service (Class C, Very Good) for the Raleigh area with additional costs for site development and land. The Station space and cost reflect only Fire Station space and not headquarters space, which may be co-located at this facility.
 - The indirect scenarios do not project the need for a new station, however the pro-rata cost for additional space is included in the analysis and the results. This is based on Fire CFS.

- Additional apparatus is also projected to be needed to serve Carolina North.
 - A Fire Engine is projected, at a current cost of \$400,000, when the Fire Station is built.
 - An Aerial Truck is anticipated to be needed, per Chapel Hill Fire, when development of Carolina North is 75 percent completed. The cost is \$900,000.
 - The model allows for replacement vehicle / apparatus purchases once the useful life (12 years) of each is reached.

PARKS AND RECREATION CAPITAL

Capital components are projected based on current level of service for Parks, Trails/Greenways, and Recreation Special Use Facilities. Current levels of service by facility type are shown below.

Figure 26. Parks and Recreation Capital LOS

Facility Type	Base Year Inventory		Need For Facility Based On:	LOS by Capital Facility	Current Cost/Unit (\$000's)
Parks	Acres	247	CHAPEL HILL POPULATION	0.0045	\$84
Trails/Greenways	Miles	12.4	CHAPEL HILL POP AND JOBS	0.0001	\$1,200
Rec Special Use Facilitie	Square Feet	60,500	CHAPEL HILL POPULATION	1.1	\$0.150

Parks and Recreation Special Use Facilities are projected based on an increase in Chapel Hill Population; Trails/Greenways are projected based on an increase in Population and Jobs in Chapel Hill. As noted elsewhere, the pro-rata share of infrastructure is included. For example, for Park development, when the model projects the need for one acre of additional park due to population growth, a cost is incurred. In reality, the Town will not likely develop one acre at a time, but wait and develop a larger Park and incur a higher cost at a later time. However, to capture all related costs in this analysis, a lower threshold is used and costs are incurred incrementally. Components and related costs included in the analysis are as follows.

- Parks: Current level of service is based on developed acres and results in .0045 acres per person (4.5 acres per 1,000). It is assumed that major Park capital expenditures to accommodate new development will be future Park development at existing park properties. Therefore, no land component is included. The cost shown for Town Parks reflects the estimated Town share of the cost. Total costs for recent park development projects have been approximately \$168,000 per acre. Historical funding from the Town has been at 25 percent of the total cost. However, to be **conservative in this analysis, it is assumed that the Town's share will increase and a 50 percent share is used.** Local cost is therefore estimated at \$84,000 per acre.
- Trails/Greenways: The Town has 12.4 miles of developed trails and greenways and anticipates building additional mileage in the future to accommodate growth. The

cost of \$1.2 million per mile shown is the **Town's share** of the cost based on recent projects and the Greenway Master Plan. This represents approximately 65 percent of the total cost for trail/greenway development. Population and jobs is used as the demand factor due to the use of these facilities for transportation purposes.

- Recreation Special Use Facilities: The Town anticipates expanding recreation facilities in the future to accommodate the demands from new development. The need for new facility space is projected based on increase in Chapel Hill population. Costs are estimated at \$150 per square foot.

LIBRARIES CAPITAL

Capital projections are for the Library facility and materials. The Town is expanding its existing library to be a total of 65,000 square feet and is anticipated to serve the Town population to 2025. This level of service is used to determine new development's **share of the cost** for inclusion in the Fiscal Impact Analysis. Also included are materials.

Figure 27. Library Capital LOS

Facility Type	Base Year Inventory		Need For Facility Based On:	LOS by Capital Facility	Current Cost/Unit (\$000's)
Library	Square Feet	65,000	CHAPEL HILL POPULATION	0.70	\$0.356
=====					
Library Materials	Units	170,000	CHAPEL HILL POPULATION	3.09	\$0.025

- Projections for share of the cost for new space are based on level of service of .70 square feet per person.
- Costs are assumed at \$356 per square foot based on the current expansion.
- Library materials' costs are also included in the analysis based on the current level of service of 3.09 units per person at an average cost of \$25 per unit per Library staff. This is projected on population increase.**

TRANSPORTATION CAPITAL

The analysis projects Transportation infrastructure needs and costs from new development for the Town Operations Center, intersection improvements, and sidewalks. It is assumed at this time that all new roads required within the Carolina North development will be non-local roads therefore no costs for new roads are included.

Figure 28. Transportation Capital LOS

Facility Type	Base Year Inventory		Need For Facility Based On:	LOS by Capital Facility	Current Cost/Unit (\$000's)
Town Operations Center	Square Feet	120,000	CHAPEL HILL POP AND JOBS	0.86	\$0.217
Intersection Improvemen	Intersections	100	CHAPEL HILL VEHICLE TRIPS	0.45	\$100
Sidewalks	Linear Feet		FIXED	0.03	\$0.044

- The Town Operations Center is a new facility that has been oversized to accommodate new growth. Level of service is based on 120,000 square feet serving growth over the next 20 years (per Town of Chapel Hill staff), projected by TischlerBise at 140,000 population and jobs. This level of service (.86 square feet per person and job) is then used to determine the fair share of the cost from Carolina North and indirect spin-off development. The cost is \$217 per square foot.
- Intersection improvements are also modeled to account for impact on the Road network in the Town. Current level of service is .45 intersections per 1,000 vehicle trips. Average cost per intersection is \$100,000.
- For sidewalk improvements, it is assumed that the Town will not be responsible for any on-site sidewalk improvements at Carolina North. However, for the indirect scenarios, it is assumed that the Town will incur some sidewalk improvement costs. Levels of service and costs are **based on the Town's** past three years of improvements, which result in .03 linear feet per person and job at a Town cost of \$44 per linear foot.

TRANSIT CAPITAL

Transit capital expenditures are funded in part by the Towns of Chapel Hill and Carrboro, UNC, State of North Carolina, and the Federal government. Total capital costs are shown within the Town of Chapel Hill results. Federal and State funding is assumed at current levels **and is not included in the analysis (i.e., revenues and costs are "fixed")**. Current level of service is shown and based on Transit Service Hours (see Demographic and Data chapter). Capital components included in this analysis are Buses, Park & Ride Facilities (parking spaces), and Transit Shelters. Costs and infrastructure components were provided by Chapel Hill Transit staff.

It should be noted that other analyses related to Transit are ongoing such as the Chapel Hill Long Range Transit Plan, Transit in Lieu Study, and the Carolina North Transportation Impact Study. These studies will look at options for long-term transit needs including changes to service levels and potential increased infrastructure investment (e.g., Bus Rapid Transit). As these potential changes have not been finalized or adopted, the Fiscal Impact Analysis is based on current levels of service as reflected in the FY08 budget and in the capital assets. As such, the cost estimates are placeholders for purposes of this baseline fiscal analysis and future, more

detailed analyses, such as through a TIA and transit plan for Carolina North may result in changes to these assumptions and cost factors. The outputs from other studies reflecting transit operating and capital costs can be directly entered into the fiscal model being transferred to UNC as part of this assignment to determine the fiscal impact.

Figure 29. Transit Capital LOS

Facility Type	Base Year Inventory		Need For Facility Based On:	LOS by Capital Facility	Current Cost/Unit (\$000's)
Transit-Vehicle Cost	Buses	99	TRANSIT SERVICE HOURS	0.0006	\$54
Transit-Park & Ride	Spaces	3,844	TRANSIT SERVICE HOURS	0.0251	\$3.75
Transit-Stations	Shelters	90	TRANSIT SERVICE HOURS	0.0006	\$2.50

- Buses: The need for additional buses is projected on an increase in Transit Service Hours. The cost of \$54,000 reflects the local partner share of the cost, which is 10 percent of the total cost for a 40-foot hybrid bus of \$535,000. The remaining funding is anticipated to come from the State (10%) and Federal government (80%) per current practices (per Chapel Hill Transit). For this analysis, the assumption is future buses will be hybrids (per Town staff). This analysis does not include costs for articulated buses. These may be variables that would be modified in future analyses. The analysis includes costs for replacement vehicles with regard to the buses purchased as a result of growth. When the vehicle reaches the end of its assumed useful life (12 years), a new vehicle is **“purchased” by the model, and the cost is included in the analysis.**
- Park and Ride facility needs are based on the current level of service of 3,844 Park and Ride spaces serving the current demand for Transit service (as expressed by Transit Service Hours). The local partner share of the cost is assumed to be 25% of \$15,000 per space, or \$3,750 per space with the remaining funding from the State (25%) and Federal (50%) governments (per Chapel Hill Transit).
- Transit Stations / Shelters are included as well and also projected on Transit Service Hours. The cost is 25 percent of \$10,000 per shelter. The remaining funding is anticipated to come from the State (25%) and Federal government (50%) per current practices (per Chapel Hill Transit). For purposes of this baseline analysis, it is assumed that local funding is required for future stations.

III. ORANGE COUNTY

ORANGE COUNTY REVENUE FACTORS

This section provides detail on projection methodologies for General Fund revenues in Orange County. All General Fund and Capital revenues (including impact fees) were evaluated.

GENERAL FUND REVENUES

An inventory of the Orange County General Fund is shown in Figure 30. The table shows revenue category, specific revenue type, base year (FY08) budget amount, projection methodology, demand unit multiplier, and the level of service (LOS) standard, or dollar per demand unit.

For instance, for those categories projected based on “ORANGE POPULATION,” the current budget amount is divided by the current estimated total population in the County. For example, Motor Vehicles in the amount of \$8,495,122 is divided by current estimated population in the County (128,764) to yield a per person cost factor of \$65.97, which is then used to project future revenue from growth in population. Discussion and detail provided below the figure.

Figure 30. Orange County General Fund Revenues

Revenue Category	Revenue Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	LOS Std \$ per Demand Unit
Property Taxes	Property Taxes-Real	\$110,055,983	ORANGE CUM AV	10.00	0.95
	Motor Vehicles	\$8,495,122	ORANGE POPULATION	1.00	\$65.97
	Gross Receipts	\$40,000	FIXED	1.00	\$0.00
	Delinquent Taxes	\$610,000	FIXED	1.00	\$0.00
	Interest on Delinquent Taxes	\$350,000	FIXED	1.00	\$0.00
	Late List Penalties	\$40,000	FIXED	1.00	\$0.00
	Animal Taxes	\$140,000	ORANGE POPULATION	1.00	\$1.09
	Beer and Wine	\$215,000	ORANGE POPULATION	1.00	\$1.67
Sales Tax	Article 39 One Cent	\$7,430,000	ORANGE RETAIL SF	1.00	\$2.50
	Article 40 Half Cent	\$4,793,105	ORANGE POPULATION	1.00	\$37.22
	Article 42 Half Cent	\$4,793,105	ORANGE RETAIL SF	1.00	\$1.25
	Article 44 Half Cent	\$3,790,000	FIXED	1.00	\$0.00
Licenses and Permits	Privilege License	\$13,000	FIXED	1.00	\$0.00
	Franchise License	\$275,000	ORANGE POPULATION	1.00	\$2.14
Investment Earnings	Investment Earnings	\$1,620,000	FIXED	1.00	\$0.00
Miscellaneous	Miscellaneous	\$510,045	FIXED	1.00	\$0.00
Charges for Services	Aging and Transportation	\$267,648	FIXED	1.00	\$0.00
	Child Support Enforcement	\$2,400	FIXED	1.00	\$0.00
	Community Planning	\$1,071,300	OTH ORANGE POP AND JOBS	1.00	\$14.55
	Emergency Management	\$1,728,000	FIXED	1.00	\$0.00
	Health	\$1,593,544	ORANGE POPULATION	1.00	\$12.38
	Land Records	\$7,500	FIXED	1.00	\$0.00
	Library	\$21,350	FIXED	1.00	\$0.00
	Recreation and Parks	\$199,045	ORANGE POPULATION	1.00	\$1.55
	Register of Deeds	\$1,948,799	ORANGE POP AND JOBS	1.00	\$10.12
	Sheriff	\$2,893,200	FIXED	1.00	\$0.00
	Tax Collection	\$168,472	FIXED	1.00	\$0.00
	Other	\$825,891	FIXED	1.00	\$0.00
Intergovernmental	Aging and Transportation	\$700,493	FIXED	1.00	\$0.00
	Child Support Enforcement	\$766,000	FIXED	1.00	\$0.00
	Community Planning	\$0	FIXED	1.00	\$0.00
	Emergency Management	\$20,000	FIXED	1.00	\$0.00
	Health	\$570,707	FIXED	1.00	\$0.00
	Human Rights and Relations	\$49,700	FIXED	1.00	\$0.00
	Library	\$127,246	FIXED	1.00	\$0.00
	Lottery Proceeds	\$0	FIXED	1.00	\$0.00
	Recreation and Parks	\$83,276	FIXED	1.00	\$0.00
	Sheriff	\$276,835	FIXED	1.00	\$0.00
	Social Services	\$11,575,691	FIXED	1.00	\$0.00
	Tax Collection	\$42,669	FIXED	1.00	\$0.00
	Other	\$2,120,680	FIXED	1.00	\$0.00
Transfers from Other Funds	Transfers from Other Funds	\$3,393,545	FIXED	1.00	\$0.00

NOTES TO TABLE:

CUM AV = Cumulative Assessed Value

Customized/Marginal Calculations

- Property Taxes are projected based on assessed value of real property for each land use type (see below) multiplied by the FY08 County tax rate of \$.95 per \$100 valuation.
- Sales Taxes:
 - Article 39 One Cent Sales Tax is a point of delivery sales tax and is therefore based on retail square footage located in the County. An average of \$250 sales per square foot is assumed and is from *Dollars & Cents of Shopping Centers / The Score 2006* (Urban Land Institute and International Council of Shopping Centers) for community shopping centers in the South.
 - Article 40 is a half cent sales tax and distributed from the State on a per capita basis.

- Articles 42 and 44: Starting in 2007-08, the State will begin a phase-in of assuming county Medicaid costs and eliminating the Article 44 local sales tax. Article 44 will fully expire as a local sales tax in 2009-10, and is reflected as such in this analysis since the first year of anticipated development is assumed at 2011. At the same time County Medicaid expenses are netted out of the analysis as well. Also as part of the Medicaid swap, Article 42, a half-cent sales tax, is slated to convert from the current per capita basis to point of delivery by 2009-10, and is reflected as such in this analysis. Per the State, a hold harmless provision is included as part of the Medicaid swap to fully fund municipalities at current levels plus growth.
- Charges for Services: Community Planning revenue is projected based on Other Orange County Population and Jobs—growth outside of the Towns of Chapel Hill and Carrboro—for the indirect scenarios. This demand base captures fee revenue for development-related services provided for projected growth in areas of Orange County outside the two Towns included in this analysis. Health revenue is based on growth in Orange Population (and is an offset to Health Department expenditures, which are projected in their entirety).
- Intergovernmental revenue for Social Services is assumed to increase with demand for services. It is assumed that Carolina North development will not impact Social Services—both on the expenditure and revenue sides while it is assumed that spin-off development from Carolina North (Indirect scenarios) will affect both revenues and expenditures for Social Services. Therefore, the model modifies the demand base to reflect which scenario is being analyzed (i.e., FIXED for Carolina North scenarios, ORANGE POPULATION for the indirect scenarios).

Revenues identified as “FIXED” are not anticipated to increase with new development or are unpredictable from one year to the next.

Average Assessed Values

Average assessed values for new development by type in Orange County (and Town of Chapel Hill) are shown below in Figure 9 for development on the Carolina North site (DIRECT) and in Figure 10 for INDIRECT development in the Orange County outside Towns of Chapel Hill and Carrboro.

Figure 31. Average Assessed Values for Carolina North (DIRECT)

DIRECT Carolina North Real Property Tax Base (CH, OC)

Assessed Value Assumptions

<i>Residential:</i>	Avg \$/DU	
University Housing		\$0
Private Housing		\$92,000

<i>Nonresidential:</i>	Avg \$/SF	
TOTAL INSTITUTIONAL SF		\$0.00
TOTAL CORPORATE OFFICE SF		\$340.00
TOTAL RETAIL SF		\$175.00

Source: The Chesapeake Group; UNC; TischlerBise

Figure 32. Average Assessed Values in Orange County (INDIRECT)

INDIRECT Real Property Tax Base-ORANGE COUNTY

Assessed Value Assumptions

<i>Residential:</i>	Avg \$/DU	
Oth Orange SFD		\$238,000
Oth Orange SFA/MF		\$100,000

<i>Nonresidential:</i>	Avg \$/SF	
Oth Orange Retail SF		\$150.00
Oth Orange Office SF		\$150.00
Oth Orange Industrial SF		\$55.00

Source: TischlerBise analysis of Orange County Assessor Database (2008)

Note: Assessed values reflect current valuation cycle (2005). Since no inflation is assumed in any part of this analysis and the tax rate used in the analysis is also based on the current valuation cycle, the above values are appropriate to use in this analysis and align with revenue assumptions throughout.

Chapel Hill-Carrboro City Schools Special District Tax

Also included in the model is revenue from the voter-approved CHCCS Special District Tax, which provides additional revenue to the school district over and above the County's ad valorem tax. Revenues from this tax are projected based on assessed values in the CHCCS district and the FY08 rate of \$.2035 per \$100 of assessed valuation. The revenues generated from this tax are shown separately in the fiscal results.

CAPITAL REVENUES

Also included is revenue from impact fees for each school district in the County. Impact fees are one-time payments at the time of development to help pay for infrastructure to serve growth. Revenue is projected in the fiscal impact analysis based on the rate schedules adopted by Orange County as of December 11, 2008, and projected housing units by type in each district. The County adopted a phasing-in schedule of maximum supportable impact fees for each school district.¹ The phasing-in schedule for each school district is as follows:

- 32% of the Maximum Supportable Impact Fee (MSIF) effective January 1, 2009
- 40% of the MSIF effective January 1, 2010
- 50% of the MSIF effective January 1, 2011
- 60% of the MSIF effective January 1, 2012

Based on the timing of projected development in this analysis, where the earliest year in which housing development is projected to occur is 2013, the rates assumed reflect the adopted amount of 60 percent of maximum supportable rates. Rates by type of unit for each district are shown below under the LOS column. It is assumed that development at Carolina North will pay the impact fees.

Figure 33. Impact Fee Rates

Revenue Category	Revenue Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	LOS Std \$ per Demand Unit
Impact Fees	OCS-Single Family Detached	\$0	OCS SFD UNITS	1.00	\$5,623.00
	OCS-Multifamily	\$0	OCS MF UNITS	1.00	\$1,743.00
	CHCCS-Single Family Detached	\$0	CHCCS SFD UNITS	1.00	\$11,423.00
	CHCCS-Single Family Attached	\$0	CHCCS SFA UNITS	1.00	\$6,609.00
	CHCCS-Multifamily	\$0	CHCCS MF UNITS	1.00	\$1,286.00

NOTES TO TABLE:

OCS= Orange County Schools

CHCCS = Chapel Hill Carrboro City Schools

SFD = Single Family Detached

MF = Multifamily

It should be noted that parts of the County sales tax, Article 40 (1st ½ cent) and Article 42 (2nd ½ cent), are earmarked for County and School capital projects and debt service per the following policies:

- County policy of 60% capital expenditures for Schools; 40% to other County capital
- State law requires 30% of Art 40 and 60% of Art 42 for Schools capital
- **Furthermore, per the County's financial policies, it is the Board's intent to dedicate 4 cents of property tax for Capital—3 cents for schools and one cent for County needs.**

¹ Maximum supportable impact fees were calculated for each school district in Orange County. Fees were calculated in current (2007) dollars. (Note: TischlerBise conducted the Educational Facilities Impact Fees for Orange County.)

ORANGE COUNTY OPERATING EXPENDITURES

All variable operating expenditures are projected—including personnel and operating costs—and discussed in this section. Capital expenditures are discussed in a separate section. Figures are provided detailing each General Fund department on the following pages. For further description of the figures shown, see page 7 (Figure 1. Operating Expenditure Example).

GOVERNING AND MANAGEMENT

Governing and Management covers the following departments: Animal Services, Board of County Commissioners, Budget, Central Services, County Manager, Finance, Non-Departmental, Personnel, Purchasing, and Rents and Insurance. For those that are Countywide services, the demand factor is County population (“ORANGE POPULATION”) or population and jobs (“ORANGE POP AND JOBS”), which encompasses the projected development at Carolina North. For those services that are provided outside the Towns, the demand base reflects “OTH ORANGE ...”

Figure 34. Animal Services

ANIMAL SERVICES				
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	LOS Std \$ per Demand Unit
Personnel Services	\$1,244,813	ORANGE POPULATION	0.60	\$9.67
Operations	\$397,202	ORANGE POPULATION	1.00	\$3.08
Capital Outlay	\$0	FIXED	1.00	\$0.00

Figure 35. Board of County Commissioners

BOARD OF COUNTY COMMISSIONERS				
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	LOS Std \$ per Demand Unit
Personnel Services	\$349,620	FIXED	1.00	\$0.00
Operations	\$134,691	ORANGE POP AND JOBS	1.00	\$0.70
Capital Outlay	\$0	FIXED	1.00	\$0.00

Figure 36. Budget

BUDGET				
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	LOS Std \$ per Demand Unit
Personnel Services	\$254,316	FIXED	1.00	\$0.00
Operations	\$13,563	ORANGE POP AND JOBS	1.00	\$0.07

Figure 37. Central Services

CENTRAL SERVICES				LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit
Personnel Services	\$85,136	FIXED	1.00	\$0.00
Operations	\$2,072,071	OTH ORANGE POP AND JOBS	1.00	\$28.15

Figure 38. County Manager

COUNTY MANAGER				LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit
Personnel Services	\$1,027,774	FIXED	1.00	\$0.00
Operations	\$53,406	ORANGE POP AND JOBS	1.00	\$0.28
Capital Outlay	\$2,000	FIXED	1.00	\$0.00
Open Cost Type 2	\$0	FIXED	1.00	\$0.00
Grant Projects	\$216,431	FIXED	1.00	\$0.00

Figure 39. Finance

FINANCE				LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit
Personnel Services	\$416,323	ORANGE POP AND JOBS	0.30	\$2.16
Operations	\$25,515	ORANGE POP AND JOBS	1.00	\$0.13
Capital Outlay	\$0	FIXED	1.00	\$0.00

Figure 40. Personnel

PERSONNEL				LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit
Personnel Services	\$646,427	ORANGE POP AND JOBS	0.30	\$3.36
Operations	\$134,399	ORANGE POP AND JOBS	1.00	\$0.70
Capital Outlay	\$0	FIXED	1.00	\$0.00

Figure 41. Purchasing

PURCHASING				LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit
Personnel Services	\$301,521	FIXED	1.00	\$0.00
Operations	\$13,230	ORANGE POP AND JOBS	1.00	\$0.07
Capital Outlay	\$0	FIXED	1.00	\$0.00

Figure 42. Rents and Insurance

RENTS AND INSURANCE				LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit
Personnel Services	\$0	FIXED	1.00	\$0.00
Operations	\$423,914	FIXED	1.00	\$0.00
Capital Outlay	\$0	FIXED	1.00	\$0.00

Figure 43. Non-Departmental

NON-DEPARTMENTAL				
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	LOS Std \$ per Demand Unit
Personnel Services	\$0 FIXED		1.00	\$0.00
Operations	\$3,202,454	ORANGE POP AND JOBS	0.35	\$16.63
Capital Outlay	\$0 FIXED		1.00	\$0.00

Non-departmental expenditures are primarily for retiree healthcare and one-time cost of living adjustments. The portion of the expenditure for retiree benefits for County workers (35 percent) is assumed to be affected by growth and projected based on overall growth in County population and jobs.

GENERAL SERVICES

The General Services category includes the following departments: Board of Elections, Information Technologies, Land Records, Non-Departmental, Register of Deeds, Tax Assessor, Tax Collector, and Public Works.

Figure 44. Board of Elections

BOARD OF ELECTIONS				
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	LOS Std \$ per Demand Unit
Personnel Services	\$419,356 FIXED		1.00	\$0.00
Operations	\$208,851	ORANGE POPULATION	1.00	\$1.62
Capital Outlay	\$3,248 FIXED		1.00	\$0.00

Figure 45. Information Technologies

INFORMATION TECHNOLOGIES				
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	LOS Std \$ per Demand Unit
Personnel Services	\$787,984 FIXED		1.00	\$0.00
Operations	\$759,950	ORANGE POP AND JOBS	1.00	\$3.95
Capital Outlay	\$0 FIXED		1.00	\$0.00

For Register of Deeds, revenue from charges for service is projected under General Fund revenue (see Figure 30) and fully covers departmental expenditures.

Figure 46. Register of Deeds

REGISTER OF DEEDS				LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit
Personnel Services	\$829,209	ORANGE POP AND JOBS	1.00	\$4.31
Operations	\$181,834	ORANGE POP AND JOBS	1.00	\$0.94
Capital Outlay	\$650	FIXED	1.00	\$0.00

Figure 47. Tax Assessor

TAX ASSESSOR				LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit
Personnel Services	\$743,757	ORANGE POP AND JOBS	0.30	\$3.86
Operations	\$134,293	ORANGE POP AND JOBS	1.00	\$0.70
Capital Outlay	\$0	FIXED	1.00	\$0.00

Figure 48. Tax Collector

TAX COLLECTOR				LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit
Personnel Services	\$649,715	ORANGE POP AND JOBS	0.30	\$3.37
Operations	\$188,265	ORANGE POP AND JOBS	1.00	\$0.98
Capital Outlay	\$0	FIXED	1.00	\$0.00

Figure 49. Non-Departmental

NON-DEPARTMENTAL				LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit
Personnel Services	\$0	FIXED	1.00	\$0.00
Operations	\$10,000	FIXED	1.00	\$0.00
Capital Outlay	\$0	FIXED	1.00	\$0.00

Public Works

Public Works divisions are provided below—Buildings and Grounds and Motor Pool (Sanitation is included under Solid Waste). Buildings and Grounds expenditures are based on an increase in Orange County government office space to be maintained by the County. This is linked to the fiscal model's projection for capital needs (discussed below); that is, as the model projects the need for additional County office space, the maintenance costs increase commensurately.

Figure 50. Public Works

PUBLIC WORKS - BUILDINGS AND GROUNDS				LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit
Personnel Services	\$1,667,446	ORANGE FACILITY SF	0.80	\$3.06
Operations	\$1,936,695	ORANGE FACILITY SF	1.00	\$3.55
Capital Outlay	\$0 FIXED		1.00	\$0.00
PUBLIC WORKS - MOTOR POOL				LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit
Personnel Services	\$351,595	ORANGE POP AND JOBS	0.60	\$1.83
Operations	\$203,797	ORANGE POP AND JOBS	1.00	\$1.06
Capital Outlay	\$0 FIXED		1.00	\$0.00

COMMUNITY AND ENVIRONMENT

Community and Environment group includes: Economic Development, Environment and Resource Conservation, Non-Departmental, Planning, and Soil and Water. Countywide services are projected based on ORANGE POP AND JOBS; those services provided mostly outside the Towns are based on OTHER ORANGE POP AND JOBS.

Figure 51. Economic Development

ECONOMIC DEVELOPMENT				LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit
Personnel Services	\$225,514	FIXED	1.00	\$0.00
Operations	\$52,894	ORANGE POP AND JOBS	1.00	\$0.27
Capital Outlay	\$0 FIXED		1.00	\$0.00

Figure 52. Environment and Resource Conservation

ENVIRONMENT AND RESOURCE CONSERVATION				LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit
Personnel Services	\$552,507	ORANGE POP AND JOBS	0.30	\$2.87
Operations	\$96,834	ORANGE POP AND JOBS	1.00	\$0.50
Capital Outlay	\$11,700	FIXED	1.00	\$0.00

Figure 53. Planning

PLANNING				LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit
Personnel Services	\$2,281,649	OTH ORANGE POP AND JOBS	0.60	\$31.00
Operations	\$221,589	OTH ORANGE POP AND JOBS	1.00	\$3.01
Capital Outlay	\$0 FIXED		1.00	\$0.00

Figure 54. Soil and Water

SOIL AND WATER				LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit
Personnel Services	\$265,093	ORANGE POP AND JOBS	0.30	\$1.38
Operations	\$12,334	ORANGE POP AND JOBS	1.00	\$0.06
Capital Outlay	\$0	FIXED	1.00	\$0.00

Figure 55. Non-Departmental

NON-DEPARTMENTAL				LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit
Personnel Services	\$0	FIXED	1.00	\$0.00
Operations	\$185,341	FIXED	1.00	\$0.00
Capital Outlay	\$0	FIXED	1.00	\$0.00

HUMAN SERVICES

The Human Services category includes Aging, Health, Social Services, Child Support, Cooperative Extension, Human Rights and Relations, Mental Health, Non-Departmental, and Orange Public Transportation. Most are Countywide services that are driven by an increase in population. It is assumed that the development at Carolina North will have minimal impact on most Human Services and are reflected as “FIXED” (shaded in green). For the indirect scenarios—spin-off development from Carolina North—those services (where indicated by a green-shaded cell) are anticipated to be impacted and the demand base is then modified to “ORANGE POPULATION.”

Aging

Divisions of the Department of Aging are provided below. As indicated above, when cells are shown in green, the demand base changes based on the scenario. For the Carolina North direct impact, it is assumed that Aging costs are fixed. For the indirect scenarios, the demand base changes to “ORANGE POPULATION.” (Direct scenario assumptions are shown below.)

Figure 56. Aging

AGING-ADMINISTRATION				LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit
Personnel Services	\$153,945	FIXED	1.00	\$0.00
Operations	\$42,539	FIXED	1.00	\$0.00
Capital Outlay	\$0	FIXED	1.00	\$0.00

AGING-COMMUNITY BASED SERVICES				LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit
Personnel Services	\$372,697	FIXED	1.00	\$0.00
Operations	\$164,197	FIXED	1.00	\$0.00
Capital Outlay	\$0	FIXED	1.00	\$0.00
AGING-ELDER CARE PROGRAM				LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit
Personnel Services	\$293,844	FIXED	1.00	\$0.00
Operations	\$137,855	FIXED	1.00	\$0.00
Capital Outlay	\$0	FIXED	1.00	\$0.00
AGING-RETIRED SENIOR VOLUNTEER PROGRAM				LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit
Personnel Services	\$118,773	FIXED	1.00	\$0.00
Operations	\$25,938	FIXED	1.00	\$0.00
Capital Outlay	\$0	FIXED	1.00	\$0.00

Health Department

Health Department expenditures are projected on an increase in Population in the County for most services. The exception is the Environmental Division, which includes nonresidential permitting and inspections, and is therefore based on total growth in the County. The Divisions included under the Health Department are: Central Administration Services, Dental, Environmental, Personal, Promotion and Education, and Risk Management and Quality Assurance. Services are provided Countywide.

Figure 57. Health

HEALTH - CENTRAL ADMINISTRATION SERVICES				LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit
Personnel Services	\$823,732	FIXED	1.00	\$0.00
Operations	\$73,936	ORANGE POPULATION	1.00	\$0.57
Capital Outlay	\$0	FIXED	1.00	\$0.00
HEALTH - DENTAL				LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit
Personnel Services	\$537,498	ORANGE POPULATION	0.60	\$4.17
Operations	\$241,213	ORANGE POPULATION	0.60	\$1.87
Capital Outlay	\$3,350	FIXED	1.00	\$0.00
HEALTH - ENVIRONMENTAL				LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit
Personnel Services	\$1,102,345	ORANGE POP AND JOBS	0.55	\$5.72
Operations	\$152,222	ORANGE POP AND JOBS	0.55	\$0.79
Capital Outlay	\$51,350	FIXED	1.00	\$0.00

HEALTH - PERSONAL				LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit
Personnel Services	\$2,504,141	ORANGE POPULATION	0.60	\$19.45
Operations	\$592,741	ORANGE POPULATION	0.60	\$4.60
Capital Outlay	\$0	FIXED	1.00	\$0.00
HEALTH - PROMOTION AND EDUCATION				LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit
Personnel Services	\$374,915	FIXED	1.00	\$0.00
Operations	\$58,787	FIXED	0.90	\$0.00
Capital Outlay	\$0	FIXED	1.00	\$0.00
HEALTH - RISK MANAGEMENT AND QUALITY ASSURANCE				LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit
Personnel Services	\$170,380	FIXED	1.00	\$0.00
Operations	\$21,078	ORANGE POPULATION	0.60	\$0.16
Capital Outlay	\$0	FIXED	1.00	\$0.00

Social Services

The Social Services Department receives funding from the County, State, and Federal governments. It is assumed that development at Carolina North will not impact provision of Social Services but that growth due to the indirect impacts of Carolina North will affect Social Services. Therefore, the analysis reflects the appropriate demand base depending on which scenario is being analyzed. Those line item expenditures that are considered to be fixed for Carolina North but affected by growth in the indirect scenarios are shaded in green. For the indirect scenarios, the demand base changes to “ORANGE POPULATION.” (Direct scenario assumptions are shown below.)

Total costs are shown here regardless of funding source. (On the revenue side, State revenue is projected under General Fund Intergovernmental revenues and also projected based on population growth in the indirect scenarios.) The Social Services Department includes Administration, Child/Family Services, Public Assistance, Economic Services, Skills Development Center, Subsidy, and Veterans’ Services. All services are provided Countywide and where costs are variable, the demand factor is Countywide population. Public Assistance expenditures are adjusted to reflect the State Medicaid swap—74 percent of the costs are provided from the State (\$3.8 million / \$5.1 million), therefore 26 percent is assumed to continue to be County funded.

Figure 58. Social Services

SOCIAL SERVICES - ADMINISTRATION					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit	
Personnel Services	\$1,104,498	FIXED	0.30	\$0.00	
Operations	\$733,886	FIXED	1.00	\$0.00	
Capital Outlay	\$83,600	FIXED	1.00	\$0.00	
SOCIAL SERVICES - CHILD/FAMILY SERVICES					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit	
Personnel Services	\$3,816,358	FIXED	0.50	\$0.00	
Operations	\$817,366	FIXED	1.00	\$0.00	
Capital Outlay	\$0	FIXED	1.00	\$0.00	
SOCIAL SERVICES - PUBLIC ASSISTANCE					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit	
Personnel Services	\$0	FIXED	1.00	\$0.00	
Operations	\$5,109,732	FIXED	0.26	\$0.00	
Capital Outlay	\$0	FIXED	1.00	\$0.00	
SOCIAL SERVICES - ECONOMIC SERVICES					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit	
Personnel Services	\$3,539,371	FIXED	0.80	\$0.00	
Operations	\$571,841	FIXED	1.00	\$0.00	
Capital Outlay	\$0	FIXED	1.00	\$0.00	
SOCIAL SERVICES - SKILLS DEVELOPMENT CENTER					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit	
Personnel Services	\$46,694	FIXED	1.00	\$0.00	
Operations	\$28,469	FIXED	1.00	\$0.00	
Capital Outlay	\$0	FIXED	1.00	\$0.00	
SOCIAL SERVICES - SUBSIDY					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit	
Personnel Services	\$0	FIXED	1.00	\$0.00	
Operations	\$5,594,192	FIXED	1.00	\$0.00	
Capital Outlay	\$0	FIXED	1.00	\$0.00	
SOCIAL SERVICES - VETERANS SERVICES					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit	
Personnel Services	\$59,606	FIXED	1.00	\$0.00	
Operations	\$1,230	FIXED	1.00	\$0.00	
Capital Outlay	\$0	FIXED	1.00	\$0.00	

Other Human Services

The remaining departments under the Human Services umbrella are shown below. Orange County Public Transportation is assumed to be provided outside the Towns therefore the

demand base is Other Orange County Population. Cooperative Extension is funded with non-local funds and is therefore considered fixed.

Figure 59. Child Support

CHILD SUPPORT					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier		\$ per Demand Unit
Personnel Services	\$706,166	ORANGE POPULATION	0.30		\$5.48
Operations	\$142,525	ORANGE POPULATION	1.00		\$1.11
Capital Outlay	\$2,100	FIXED	1.00		\$0.00

Figure 60. Cooperative Extension Services

COOPERATIVE EXTENSION					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier		\$ per Demand Unit
Personnel Services	\$458,010	FIXED	1.00		\$0.00
Operations	\$56,139	FIXED	1.00		\$0.00
Capital Outlay	\$1,475	FIXED	1.00		\$0.00

Figure 61. Human Rights and Relations

HUMAN RIGHTS AND RELATIONS					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier		\$ per Demand Unit
Personnel Services	\$309,132	FIXED	1.00		\$0.00
Operations	\$64,300	ORANGE POPULATION	1.00		\$0.50
Capital Outlay	\$0	FIXED	1.00		\$0.00

Figure 62. Mental Health

MENTAL HEALTH					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier		\$ per Demand Unit
Personnel Services	\$0	FIXED	1.00		\$0.00
Operations	\$1,314,704	ORANGE POPULATION	1.00		\$10.21
Capital Outlay	\$0	FIXED	1.00		\$0.00

Figure 63. Non-Departmental

NON-DEPARTMENTAL					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier		\$ per Demand Unit
Personnel Services	\$0	FIXED	1.00		\$0.00
Operations	\$2,073,662	FIXED	1.00		\$0.00
Capital Outlay	\$0	FIXED	1.00		\$0.00

Figure 64. Orange Public Transportation

ORANGE PUBLIC TRANSPORTATION					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier		\$ per Demand Unit
Personnel Services	\$789,304	OTH ORANGE POPULATION	1.00		\$14.52
Operations	\$264,553	OTH ORANGE POPULATION	1.00		\$4.87
Capital Outlay	\$0	FIXED	1.00		\$0.00

PUBLIC SAFETY

Public Safety group includes Courts, Emergency Medical Services, Sheriff, and Non-Departmental.

Figure 65. Courts

COURTS					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier		\$ per Demand Unit
Personnel Services	\$9,000	FIXED	1.00		\$0.00
Operations	\$145,901	FIXED	1.00		\$0.00
Capital Outlay	\$15,000	FIXED	1.00		\$0.00

Emergency Services

County Emergency Services includes Administration, EMS, Fire, and Telecommunications (911). EMS and 911 services are provided countywide including within the Towns that are included in this study—Chapel Hill and Carrboro. County EMS will respond with the Town of Chapel Hill Fire Department on UNC properties, therefore, costs are projected based on countywide growth. County 911 services are also provided Countywide including for town public safety agencies with the exception of UNC Police. A conservative approach is taken for this component in that some calls from Carolina North may not be handled by County 911. Fire Protection is provided outside the Towns and is projected as such (Other Orange County). Additionally, if a new facility is identified in part to serve Carolina North, marginal operating costs may be incurred.

Figure 66. Emergency Services

EMERGENCY SERVICES - ADMINISTRATION					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier		\$ per Demand Unit
Personnel Services	\$251,744	FIXED	1.00		\$0.00
Operations	\$91,214	ORANGE POP AND JOBS	1.00		\$0.47
Capital Outlay	\$0	FIXED	1.00		\$0.00

EMERGENCY SERVICES - EMERGENCY MEDICAL SERVICES					LOS Std
Expenditure	Base Year	Project Using	Demand Unit		\$ per
Name	Budget Amount	Which Demand Base?	Multiplier	Demand Unit	
Personnel Services	\$2,941,013	ORANGE POP AND JOBS	1.00		\$15.27
Operations	\$516,444	ORANGE POP AND JOBS	1.00		\$2.68
Capital Outlay	\$0	FIXED	1.00		\$0.00
EMERGENCY SERVICES - FIRE PROTECTION					LOS Std
Expenditure	Base Year	Project Using	Demand Unit		\$ per
Name	Budget Amount	Which Demand Base?	Multiplier	Demand Unit	
Personnel Services	\$198,798	OTH ORANGE POP AND JOBS	1.00		\$2.70
Operations	\$48,018	OTH ORANGE POP AND JOBS	1.00		\$0.65
Capital Outlay	\$0	FIXED	1.00		\$0.00
EMERGENCY SERVICES - TELECOMMUNICATIONS					LOS Std
Expenditure	Base Year	Project Using	Demand Unit		\$ per
Name	Budget Amount	Which Demand Base?	Multiplier	Demand Unit	
Personnel Services	\$1,595,508	ORANGE POP AND JOBS	1.00		\$8.29
Operations	\$127,818	ORANGE POP AND JOBS	1.00		\$0.66
Capital Outlay	\$0	FIXED	1.00		\$0.00

Figure 67. Non-Departmental

NON-DEPARTMENTAL					LOS Std
Expenditure	Base Year	Project Using	Demand Unit		\$ per
Name	Budget Amount	Which Demand Base?	Multiplier	Demand Unit	
Personnel Services	\$0	FIXED	1.00		\$0.00
Operations	\$438,426	FIXED	1.00		\$0.00
Capital Outlay	\$0	FIXED	1.00		\$0.00

Sheriff

The Orange County Sheriff's Office provides both civil and criminal services as well as operates the County Jail facility. As with EMS, a conservative approach is taken in that criminal services will not be provided directly to the Carolina North site, however all other services will be impacted by population growth in the County including at Carolina North.

Figure 68. Sheriff

SHERIFF					LOS Std
Expenditure	Base Year	Project Using	Demand Unit		\$ per
Name	Budget Amount	Which Demand Base?	Multiplier	Demand Unit	
Personnel Services	\$7,531,831	ORANGE POPULATION	0.70		\$58.49
Operations	\$1,357,475	ORANGE POPULATION	1.00		\$10.54
Capital Outlay	\$5,700	FIXED	1.00		\$0.00

CULTURE AND RECREATION

The Culture and Recreation group includes Library, Recreation and Parks, Arts Commission, and Non-Departmental.

Library

The County Library system primarily serves population outside of the Town of Chapel Hill but does serve the Town of Carrboro. Therefore, the impact on County Library Services is dependent on the scenario. Costs are assumed to be fixed for development at Carolina North and variable for the indirect scenarios. The demand base for the indirect scenarios is Library service population, which includes Other Orange County population plus Carrboro population.

Figure 69. Library Services

LIBRARY SERVICES				
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	LOS Std \$ per Demand Unit
Personnel Services	\$823,501	FIXED	0.60	\$0.00
Operations	\$263,158	FIXED	0.80	\$0.00
Capital Outlay	\$0	FIXED	1.00	\$0.00

Recreation and Parks

County Recreation and Parks are assumed to serve a countywide demand base and are projected as such. Recreation fee revenue is projected under General Fund revenue using Orange County Population as the demand base as well. Capital expenditures, shown as Fixed in the figure below, are addressed in the Capital expenditures chapter (see page 68).

Figure 70. Recreation and Parks

RECREATION AND PARKS SERVICES				
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	LOS Std \$ per Demand Unit
Personnel Services	\$1,213,035	ORANGE POPULATION	0.80	\$9.42
Operations	\$500,590	ORANGE POPULATION	1.00	\$3.89
Capital Outlay	\$1,414	FIXED	1.00	\$0.00

Other Culture and Recreation

Figure 71. Arts Commission

ARTS COMMISSION					LOS Std
Expenditure	Base Year	Project Using	Demand Unit		\$ per
Name	Budget Amount	Which Demand Base?	Multiplier	Demand Unit	
Personnel Services	\$50,763	FIXED	1.00		\$0.00
Operations	\$61,394	FIXED	1.00		\$0.00
Capital Outlay	\$0	FIXED	1.00		\$0.00

Figure 72. Library and Recreation Municipal Support

LIBRARY AND RECREATION MUNICIPAL SUPPORT					LOS Std
Expenditure	Base Year	Project Using	Demand Unit		\$ per
Name	Budget Amount	Which Demand Base?	Multiplier	Demand Unit	
Library Municipal Support	\$250,033	FIXED	1.00		\$0.00
Recreation Municipal Support	\$125,108	FIXED	1.00		\$0.00
Capital Outlay	\$0	FIXED	1.00		\$0.00

Figure 73. Non-Departmental

NON-DEPARTMENTAL					LOS Std
Expenditure	Base Year	Project Using	Demand Unit		\$ per
Name	Budget Amount	Which Demand Base?	Multiplier	Demand Unit	
Personnel Services	\$0	FIXED	1.00		\$0.00
Operations	\$110,574	FIXED	1.00		\$0.00
Capital Outlay	\$0	FIXED	1.00		\$0.00

EDUCATION

Local expenditures for both the Chapel Hill-Carrboro City Schools (CHCCS) and Orange County Schools (OCS) are included in the analysis and detailed in this section. State and Federal funding is not included. Carolina North is located in the CHCCS district; indirect spin-off development impacts both districts. Most costs will be impacted by an increase in enrollment. As noted in the introduction, additional public school students are projected using student generation rates by type of housing unit. Student generation rates are provided in the Demographic chapter. For Plant Operations and costs related to school space, the demand factor is the increase in Student Seats. As the model projects the need for additional seats, those costs are triggered.

Figure 74. CHCCS Local Operating Expenditures

LOCAL - INSTRUCTIONAL PROGRAMS					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier		\$ per Demand Unit
Regular	\$17,688,951	CHCCS ENROLLMENT	1.00		\$1,547.59
Special	\$4,946,684	CHCCS ENROLLMENT	1.00		\$432.78
Co-Curricular	\$1,211,559	CHCCS ENROLLMENT	1.00		\$106.00
Pupil Support	\$4,110,280	CHCCS ENROLLMENT	1.00		\$359.60
Other	\$6,423,426	CHCCS ENROLLMENT	1.00		\$561.98
LOCAL - SUPPORT SERVICES					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier		\$ per Demand Unit
Instructional Staff Subtotal	\$2,326,252	CHCCS ENROLLMENT	1.00		\$203.52
Administrative Staff Subtotal	\$361,453	CHCCS ENROLLMENT	0.30		\$31.62
School Administration Subtotal	\$2,625,406	CHCCS ENROLLMENT	0.30		\$229.69
Business-Support Services	\$239,080	CHCCS ENROLLMENT	1.00		\$20.92
Business-Fiscal Service	\$512,798	CHCCS ENROLLMENT	1.00		\$44.86
Business-Operations of Plant	\$5,828,898	CHCCS SEATS	1.00		\$514.28
Business-Transportation	\$407,984	CHCCS ENROLLMENT	1.00		\$35.69
Business-Internal Services	\$257,219	CHCCS ENROLLMENT	1.00		\$22.50
Business-Maintenance of Plant	\$1,995,799	CHCCS SEATS	1.00		\$176.09
Central Support Subtotal	\$1,452,522	CHCCS ENROLLMENT	1.00		\$127.08
Other Support Subtotal	\$2,967,320	CHCCS ENROLLMENT	1.00		\$259.61
LOCAL - OTHER SERVICES					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier		\$ per Demand Unit
Community Services	\$369,928	CHCCS ENROLLMENT	1.00		\$32.36
Charter School Funds	\$529,680	CHCCS ENROLLMENT	1.00		\$46.34
Child Nutrition Transfers	\$122,000	CHCCS ENROLLMENT	1.00		\$10.67

Figure 75. OCS Local Operating Expenditures

LOCAL - INSTRUCTIONAL PROGRAMS					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit	
Regular Instructional Programs	\$11,320,236	OCS ENROLLMENT	1.00	\$1,618.10	
Special Population Programs	\$736,948	OCS ENROLLMENT	1.00	\$105.34	
Alternative Programs	\$868,420	OCS ENROLLMENT	1.00	\$124.13	
School Administration - Principal	\$1,812,848	OCS ENROLLMENT	0.30	\$259.13	
Co-Curricular Instruction	\$801,365	OCS ENROLLMENT	1.00	\$114.55	
Student Services	\$1,098,687	OCS ENROLLMENT	1.00	\$157.05	
LOCAL - SUPPORT SERVICES					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit	
Instructional Support Subtotal	\$828,966	OCS ENROLLMENT	1.00	\$118.49	
Technology Support Subtotal	\$226,327	OCS ENROLLMENT	1.00	\$32.35	
Plant Operations-Salary	\$1,032,348	OCS SEATS	1.00	\$123.22	
Plant Operations-Office Equipment	\$236,608	OCS SEATS	1.00	\$28.24	
Plant Operations-Security Services	\$33,296	OCS SEATS	1.00	\$3.97	
Plant Operations-Contracted Services	\$34,000	FIXED	1.00	\$0.00	
Plant Operations-Utility Cost	\$2,528,190	OCS SEATS	1.00	\$301.77	
Plant Operations-Custodial Supplies	\$107,550	OCS SEATS	1.00	\$12.84	
Transportation Subtotal	\$768,654	OCS ENROLLMENT	1.00	\$109.87	
Maintenance-Salary	\$836,070	OCS ENROLLMENT	1.00	\$119.51	
Maintenance-Contracted Services	\$45,300	OCS ENROLLMENT	1.00	\$6.48	
Maintenance-Supplies and Vehicles Maint.	\$254,000	OCS ENROLLMENT	1.00	\$36.31	
Finance Subtotal	\$726,435	OCS ENROLLMENT	1.00	\$103.84	
Central Support Services Subtotal	\$698,455	OCS ENROLLMENT	1.00	\$99.84	
Pupil Support Subtotal	\$13,287	OCS ENROLLMENT	1.00	\$1.90	
Administrative Support Services Subtotal	\$140,131	OCS ENROLLMENT	1.00	\$20.03	
Office of Superintendent Subtotal	\$311,844	OCS ENROLLMENT	1.00	\$44.57	
Auxiliary Services Subtotal	\$56,178	OCS ENROLLMENT	1.00	\$8.03	
Public Relations Subtotal	\$69,831	OCS ENROLLMENT	1.00	\$9.98	
LOCAL - OTHER SERVICES					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit	
Director Supplement	\$9,333	FIXED	1.00	\$0.00	
Transfer to Charter Schools	\$718,572	OCS ENROLLMENT	1.00	\$102.71	

ORANGE COUNTY CAPITAL EXPENDITURES

This section provides further detail on capital cost assumptions for Orange County used in the fiscal impact analysis. The approach of the Fiscal Impact Analysis is to project future capital needs based on *current levels of service*. No judgment is made as to whether the levels of service are adequate, inadequate, or better than adequate, nor are any assumptions made regarding future changes in levels of service. Additionally, it should be noted that a fiscal impact analysis, while projecting specific capital facilities, is different from a facility plan. Particularly, the assumptions below and the results issued under separate cover reflect needs due to *new growth only* and are projected based on current levels of service.

Also, in most cases the capital needs projected are prorated based on the amount of development projected in each scenario, therefore, the demands and costs from Carolina North and indirect impacts will be reflected in the results even though an entirely new facility may not be triggered.

All capital costs included in the analysis are local costs and are shown as Pay-Go. By showing Pay-Go funding for all capital improvements, the true costs of capital impacts are depicted. If those facilities were bond financed, debt service would continue beyond the last projection year and therefore would not adequately be captured in this analysis.

See page 9 of this report (Figure 3. Capital Facility Example) for an example of the Capital expenditure level of service information used in the model and fiscal impact analysis.

SCHOOLS CAPITAL

Orange County is served by two school systems, Orange County Schools (OCS) and Chapel Hill-Carrboro City Schools (CHCCS), and the County funds construction of new schools and other capital needs for both districts. Level of service standards used in this analysis are derived using the adopted standards per the County's Schools Adequate Public Facility Ordinance (SAPFO) and Memorandum of Understanding. The figure below shows current enrollment, current capacity, actual levels of service, the adopted LOS per the SAPFO, and the resulting capacity at the adopted LOS.

Figure 76. Schools Capital LOS

	2007-08 Enrollment	Capacity*	Actual LOS	Adopted LOS**	Capacity @ LOS**
CHCCS Elementary (K-5)	5,173	4,659	111%	105%	4,892
Middle (6-8)	2,622	2,840	92%	107%	3,039
High (9-12)	3,635	3,835	95%	110%	4,219
<i>Total</i>	<i>11,430</i>	<i>11,334</i>	<i>101%</i>		<i>12,149</i>
OCS Elementary (K-5)	3,158	3,694	85%	105%	3,879
Middle (6-8)	1,637	2,166	76%	107%	2,318
High (9-12)	2,201	2,518	87%	110%	2,770
<i>Total</i>	<i>6,996</i>	<i>8,378</i>	<i>84%</i>		<i>8,966</i>

* Reflects current student capacity with Elem class size ratio of 1:21, assumed in SAPFO for both districts by 2011, first year of CN

** Adopted LOS per School Adequate Public Facility Ordinance (SAPFO).

- The fiscal impact analysis includes the incremental cost to serve projected new students from the Carolina North development and the indirect spin-off development. The analysis includes these costs on a *per seat basis*, rather than waiting for a certain threshold to be reached such as the need for a new school or an expansion. In reality, the County would not build one seat at a time, however, to truly reflect the cost of growth, the incremental costs are included.
- Also, it should be noted that at some school levels, there is existing capacity. One approach to this analysis could be that new growth would consume the existing capacity, and costs would not be incurred until the remaining capacity was exhausted. For example, CHCCS Elementary is at capacity and any new growth would trigger the need for new space. But CHCCS Middle schools are below capacity and have 417 seats available to be used by new development. However, a conservative approach is taken in this analysis that shows the capital impact of each new student projected regardless of existing capacity.
- The possible dedication of a school site for CHCCS on the Carolina North property is not factored into this analysis at this time.

- Capital costs are projected by school level (elementary, middle, and high) for each school district in each scenario. Student enrollment projections are discussed in the Demographic and Data Assumption chapter and annual projections are provided in the Appendix.
- Local costs for capital improvements per student are shown below for both school districts. Costs include school building construction, land, support facilities, and bus/vehicles and are from the respective school districts and Orange County via TischlerBise's **impact fee analysis** (2007-08) for Orange County. Details are provided below:

CHCCS

- Elementary School: \$33,100 per student
- Middle School: \$39,700 per student
- High School: \$42,300 per student

OCS

- Elementary School: \$26,400 per student
- Middle School: \$32,700 per student
- High School: \$31,400 per student

GENERAL GOVERNMENT CAPITAL

- The County is undergoing a significant capital improvement program including construction of general government space. The need for future capital facilities are projected on future population and employment growth in the County based on the current level of service. The LOS is assumed to be .47 square feet per person and job in the County.
- Cost factor is \$240 per square foot (shown in \$1,000s).
- The new Animal Shelter is assumed to have adequate capacity through buildout and therefore no capital costs for this facility are included.

Figure 77. General County Facilities Capital LOS

Facility Type	Base Year Inventory	Need For Facility Based On:	LOS by Capital Facility	Current Cost/Unit (\$000's)
General Government	Square Feet	91,300 ORANGE POP AND JOBS	0.47	\$0.240

HUMAN SERVICES CAPITAL

- Two types of facilities are included under Human Services—Senior Centers and Health/Social Services facilities. Future needs are projected based on current levels of service.
- As shown in Figure 78, the County has a current inventory of approximately 45,000 square feet of senior centers, for a LOS of .35 per person in the County. The cost factor is \$235 per square foot based on recent senior center construction.
- Also shown in Figure 78, facilities for Health and Social Service purposes total approximately 75,000 square feet. The LOS is .58 square feet per person in the County at a cost of \$235 per square foot.

Figure 78. Human Service Facilities Capital LOS

Facility Type	Base Year Inventory	Need For Facility Based On:	LOS by Capital Facility	Current Cost/Unit (\$000's)
Senior Centers	Square Feet 45,000	ORANGE POPULATION	0.35	\$0.235
Health/Social Services	Square Feet 75,000	ORANGE POPULATION	0.58	\$0.235

LIBRARY CAPITAL

- Library capital needs are based on current levels of service for County Library facilities serving the service population.
- The County Library system serves outside the Town of Chapel Hill but does serve the Town of Carrboro. Therefore, the impact on County Library Services is dependent on the scenario. Costs are assumed to be fixed for development at Carolina North and variable for the indirect scenarios.
- The demand base for the indirect scenarios is Library service population, which includes Other Orange County population plus Carrboro population. The resulting LOS is .44 square feet per person.
- The cost factor is based on recent Library construction at \$284 per square foot.

Figure 79. Library Capital LOS

Facility Type	Base Year Inventory	Need For Facility Based On:	LOS by Capital Facility	Current Cost/Unit (\$000's)
Library	Square Feet 32,500	ORANGE LIBRARY POP	0.44	\$0.284

RECREATION AND PARKS CAPITAL

- County Recreation and Parks are assumed to serve a countywide demand base.
- The current LOS is based on the acreage of developed parks per person, or .0013 acres per person. The cost factor is \$100,000 per acre to develop new parks
- This analysis reflects the baseline, current conditions in Orange County. The use of the model to test changes to the current situation may be worthwhile. For instance, the County is currently developing additional parks, therefore the level of service could increase in the near future. The County contributes to the Towns of Chapel Hill and Carrboro for park, recreation, and trail development. This could also be tested at varying levels of participation.

Figure 80. Recreation and Parks Capital LOS

Facility Type	Base Year Inventory		Need For Facility Based On:	LOS by Capital Facility	Current Cost/Unit (\$000's)
Parks	Acres	172	ORANGE POPULATION	0.0013	\$100

PUBLIC SAFETY CAPITAL

- Public safety capital facilities are included below: Justice Facility, Detention Facility, Emergency Services facilities, and EMS vehicles.
- The Justice Facility is new and is assumed to have adequate capacity over the development period and is therefore shown as FIXED.
- Detention facility (Jail) serves a countywide demand base with LOS based on current number of jail beds to population, or .001 beds per capita. Future needs are projected on population growth at a capital cost of \$50,000 per bed.
- Emergency Services facilities and vehicles/apparatus are included. Building space is shown with a current LOS of .18 per person and job and a cost of \$77 per square foot, based on recent construction.
- EMS vehicles are also included, with future needs projected on an increase in population and employment in the County, at a cost per vehicle of \$200,000.

Figure 81. Public Safety Capital LOS

Facility Type	Base Year Inventory		Need For Facility Based On:	LOS by Capital Facility	Current Cost/Unit (\$000's)
Justice Facility (Sheriff/Courts)	Square Feet	40,227	FIXED		\$0.277
Detention	Beds	130.0	ORANGE POPULATION	0.0010	\$50
Emergency Services	Square Feet	34,000	ORANGE POP AND JOBS	0.18	\$0.077
EMS Apparatus	Vehicles	9	ORANGE POP AND JOBS	0.00005	\$200

PUBLIC WORKS CAPITAL

- Public works capital expenditures are included below for vehicles and equipment.
- Vehicles (including heavy trucks) are projected based on an increase in population and employment in the County, at an average cost per vehicle of \$50,000.
- Equipment is included based on current level of service serving County population and jobs, at an average cost per unit of \$10,000.

Figure 82. Public Works Capital LOS

Facility Type	Base Year Inventory		Need For Facility Based On:	LOS by Capital Facility	Current Cost/Unit (\$'000's)
County Vehicle Fleet	Vehicles	300	ORANGE POP AND JOBS	0.002	\$50,000
County Equipment	Units	100	ORANGE POP AND JOBS	0.001	\$10,000

SOLID WASTE CAPITAL

- Two types of Solid Waste capital facilities are included in the analysis, the Operations Center and Convenience Centers. The County funds these facilities with General Fund monies.
 - The Operations Center is a new facility and is assumed to serve the County over the projection period.
 - Convenience Centers, solid waste and recycling drop-off locations, will be needed to support future growth in the County. The current LOS is shown as number of sites per person, with the demand base being population outside the Towns. The current cost for a new site is \$1 million.

Figure 83. Solid Waste Capital LOS

Facility Type	Base Year Inventory		Need For Facility Based On:	LOS by Capital Facility	Current Cost/Unit (\$'000's)
Solid Waste Operations Ctr	Square Feet	9,700	FIXED		\$0.224
Convenience Ctrs	Sites	6.0	OTH ORANGE POPULATION	0.0001	\$1,000

IV. TOWN OF CARRBORO

CARRBORO REVENUE FACTORS

This section provides detail on projection methodologies for revenues for the Town of Carrboro. Only General Fund revenues are included in the analysis.

GENERAL FUND REVENUES

An inventory of the General Fund is shown in Figure 84. The table shows revenue category, specific revenue type, base year (FY08) budget amount, projection methodology, demand unit multiplier, and the level of service (LOS) standard, or dollar per demand unit.

For instance, for those categories projected based on “CARRBORO POPULATION,” the current budget amount is divided by the current estimated total population in the Town. For example, Franchise Tax in the amount of \$268,689 is divided by current estimated population (19,363) to yield a per person cost factor of \$13.88, which is then used to project future revenue from growth. Discussion and detail is provided below the figure.

Figure 84. Carrboro General Fund Revenues

Revenue Category	Revenue Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	LOS Std \$ per Demand Unit
Ad Valorem Tax	Prior Year	\$75,000	FIXED	1.00	\$0.00
	Current Year	\$9,830,840	CARRBORO CUM AV	10.00	0.6537
	Penalty and Interest	\$21,000	FIXED	1.00	\$0.00
Local Sales Tax	Local Option Sales Tax 1%	\$1,090,796	CARRBORO POPULATION	1.00	\$56.33
	Local Option Sales Tax 1/2% #1	\$823,411	CARRBORO POPULATION	1.00	\$42.52
	Local Option Sales Tax 1/2% #2	\$817,790	CARRBORO POPULATION	1.00	\$42.23
	Local Sales Tax Reallocation	\$0	FIXED	1.00	\$0.00
	Local Option Sales Tax 1/2% #3	\$609,651	CARRBORO POPULATION	1.00	\$31.49
Other Taxes/Licenses	Motor Vehicle Licenses	\$175,000	CARRBORO POPULATION	1.00	\$9.04
	Motor Vehicle Licenses-Trans Only	\$58,000	CARRBORO POPULATION	1.00	\$3.00
	Privilege Licenses	\$60,000	CARRBORO JOBS	1.00	\$12.56
	Time Warner Franchise	\$165,000	CARRBORO POPULATION	1.00	\$8.52
Unrestricted Intergovernmental	Franchise Tax	\$268,689	CARRBORO POPULATION	1.00	\$13.88
	Piped Natural Gas Tax	\$51,000	CARRBORO POPULATION	1.00	\$2.63
	Wine and Beer	\$84,000	CARRBORO POPULATION	1.00	\$4.34
	Sales Tax-Telecommunications	\$229,281	CARRBORO POPULATION	1.00	\$11.84
	Sales Tax on Video Programming	\$0	FIXED	1.00	\$0.00
	NC DOT Reimbursement	\$4,300	FIXED	1.00	\$0.00
Restricted Intergovernmental	Powell Bill	\$508,396	CARRBORO POPULATION	0.75	\$26.26
	Small Construction Funds	\$0	FIXED	1.00	\$0.00
	NCDOT Bike and Ped Program	\$45,500	FIXED	1.00	\$0.00
	Federal STP-DA Funds	\$0	FIXED	1.00	\$0.00
	NCDEHNR AAT	\$0	FIXED	1.00	\$0.00
	Planning Work Grant	\$25,364	FIXED	1.00	\$0.00
	Forestry Grant	\$0	FIXED	1.00	\$0.00
	Recreation-Municipal Supplement	\$35,898	FIXED	1.00	\$0.00
	Recreation-Arts Comm Grant	\$0	FIXED	1.00	\$0.00
	Dept of Justice Block Grant	\$2,900	FIXED	1.00	\$0.00
	Peace Haven Grant	\$0	FIXED	1.00	\$0.00
	Byrne Grant	\$0	FIXED	1.00	\$0.00
	FEMA Reimbursement Grant	\$0	FIXED	1.00	\$0.00
	Firefighters Grant	\$0	FIXED	1.00	\$0.00
	Homeland Security	\$0	FIXED	1.00	\$0.00
	Econ. Dev. Grant from Orange County	\$0	FIXED	1.00	\$0.00
	Fire Grant for Car Seats	\$0	FIXED	1.00	\$0.00
	Seizures Revenues, State	\$0	FIXED	1.00	\$0.00
	Seizures Revenues, Federal	\$0	FIXED	1.00	\$0.00

Fees and Permits	Misc. Returned Check Fee	\$0	FIXED	1.00	\$0.00
	Time Warner Peg Fee	\$18,000	FIXED	1.00	\$0.00
	Tower Revenue	\$115,633	FIXED	1.00	\$0.00
	Privilege License, Late Fee	\$0	FIXED	1.00	\$0.00
	Intrafund Copier Charges	\$0	FIXED	1.00	\$0.00
	Court Cost Officer Fees	\$3,000	FIXED	1.00	\$0.00
	Parking Violations	\$3,000	FIXED	1.00	\$0.00
	CHCCS-SRO Contract	\$96,208	FIXED	1.00	\$0.00
	Dog Fees	\$5,000	FIXED	1.00	\$0.00
	Animal Violations	\$300	FIXED	1.00	\$0.00
	Fire Dist. Fees	\$390,212	FIXED	1.00	\$0.00
	Fire Permit Fees	\$1,800	FIXED	1.00	\$0.00
	Safety Officer Contact Fees	\$0	FIXED	1.00	\$0.00
	Reports	\$350	FIXED	1.00	\$0.00
	Sign Permits	\$400	FIXED	1.00	\$0.00
	Engineering Fee	\$45,000	CARRBORO POP AND JOBS	1.00	\$1.86
	Development Review Fee	\$45,000	CARRBORO POP AND JOBS	1.00	\$1.86
	Street Inspection Fees	\$1,000	CARRBORO POP AND JOBS	1.00	\$0.04
	Building Permits	\$65,000	CARRBORO POP AND JOBS	1.00	\$2.69
	Electric Permits	\$45,000	CARRBORO POP AND JOBS	1.00	\$1.86
	Mechanical Permits	\$45,000	CARRBORO POP AND JOBS	1.00	\$1.86
	Re-Inspection Fee	\$3,000	FIXED	1.00	\$0.00
	Plumbing	\$45,000	CARRBORO POP AND JOBS	1.00	\$1.86
	Homeowners Recover Fees	\$100	FIXED	1.00	\$0.00
	Recycling Fees	\$5,000	CARRBORO POP AND JOBS	1.00	\$0.21
	Street Cuts	\$0	FIXED	1.00	\$0.00
	Driveway Installation	\$0	FIXED	1.00	\$0.00
	Street Signs	\$0	FIXED	1.00	\$0.00
	Driveway Permit Fees	\$0	FIXED	1.00	\$0.00
	Street Closing	\$500	FIXED	1.00	\$0.00
	Permit ROW Closing Fee	\$0	FIXED	1.00	\$0.00
	Refuse Collection Fees	\$1,400	FIXED	1.00	\$0.00
	Refuse Collection-Dumpster	\$84,940	CARRBORO JOBS	1.00	\$17.78
Sales and Services	Car Seat Sales	\$0	FIXED	1.00	\$0.00
	Recreation Fees	\$180,627	CARRBORO POPULATION	1.00	\$9.33
	Town Center Fess	\$99,773	FIXED	1.00	\$0.00
Investment Earnings	Interest Earned	\$100,000	FIXED	1.00	\$0.00
Other Revenues	Rent-Farmer's Market	\$2,000	FIXED	1.00	\$0.00
	Miscellaneous	\$1,500	FIXED	1.00	\$0.00
	Sales of Cemetery Lots	\$12,000	FIXED	1.00	\$0.00
	Sale/Fixed Assets	\$23,750	FIXED	1.00	\$0.00
	Donations - Art Comm	\$0	FIXED	1.00	\$0.00
	Donations - CD and Memorabilia	\$1,200	FIXED	1.00	\$0.00
	Police Miscellaneous	\$2,500	FIXED	1.00	\$0.00
	Police Salary Reimburse/Worker Comp	\$0	FIXED	1.00	\$0.00
	Fire Miscellaneous	\$607	FIXED	1.00	\$0.00
	Fire Salary Reimburse/Worker Comp	\$0	FIXED	1.00	\$0.00
	Fire Donations	\$0	FIXED	1.00	\$0.00
	Refuse Cart Sales	\$14,540	CARRBORO SF UNITS	1.00	\$3.64
	Yard Waste Containers	\$2,660	CARRBORO SF UNITS	1.00	\$0.67
	Donations - Music Festival	\$7,000	FIXED	1.00	\$0.00
	Donations - Poetry Alive in Carrboro	\$600	FIXED	1.00	\$0.00
	Donations - July 4th	\$1,500	FIXED	1.00	\$0.00
	Donations - Town Commons Shade	\$0	FIXED	1.00	\$0.00
	Donations - Film Festival	\$5,500	FIXED	1.00	\$0.00
	Donations	\$0	FIXED	1.00	\$0.00
	Donations - Friends of Century	\$0	FIXED	1.00	\$0.00
	Planning Miscellaneous	\$0	FIXED	1.00	\$0.00
Other Financing Sources	Installment Financing Proceeds	\$2,248,914	FIXED	1.00	\$0.00
	Fund Balance Appropriated	\$582,553	FIXED	1.00	\$0.00
	Transfer from Capital Reserve Fund	\$342,000	FIXED	1.00	\$0.00
	Transfer from Revolving Loan Fund	\$0	FIXED	1.00	\$0.00
	Transfer from Capital Project Fund	\$0	FIXED	1.00	\$0.00

NOTES TO TABLE:

CUM AV = Cumulative Assessed Value

Customized/Marginal Calculations

- Property Taxes are projected based on assessed value of real property for each land use type (see below) multiplied by the FY08 Town tax rate of \$.6537 per \$100 valuation. (The demand unit multiplier of 10 is due to the scale factor in the model of \$1,000s.)
- All sales taxes are assumed to continue at the current levels including the ½% Local Option Sales Tax #3 (Article 44) that is scheduled to expire. Per the State, a hold harmless provision is included that is anticipated to maintain local revenues at pre-expiration levels plus growth. Per the distribution formula, funds are allocated on a per capita basis. Changes to Article 42 in County distribution from a per capita formula to a point of delivery approach does not affect the distribution to municipalities. It should be noted that current economic conditions have decreased sales tax revenue projections and in some cases no growth is projected in the short term. However, this is a long-term analysis (with the first projection year in 2011). The approach taken for sales tax revenues projected on a per capita methodology is such that it is assumed that sales tax revenues will recover to the per capita amounts used in this analysis. For those sales taxes generated on point of sale or delivery, an average sales per square foot figure is used. To the extent that sales tax generation does not recover in the future to the level assumed in this analysis, revenues and overall findings will be affected. Again, the fiscal model that will be provided as part of this work effort will allow sensitivity analyses to test changing market conditions.
- Powell Bill funds are distributed from the State based on population (75%) and lane mile increases (25%) for road maintenance. In this analysis, revenues are projected based on an increase in population as the Town does not anticipate adding any lane miles in the future. The demand unit multiplier is .75, meaning the base year budget is multiplied by 75 percent to reflect the portion of funding that is based on population. This results in a \$19.70 per capita amount (\$26.26 x 75%), which reflects a conservative figure as the last three years' per capita amount has been approximately \$22.

Revenues identified as “FIXED” are not anticipated to increase with new development or are unpredictable from one year to the next.

Average Assessed Values

Average assessed values for new development by type of land use in the Town of Carrboro are shown below in Figure 85, which are used in the indirect scenario analysis.

Figure 85. Average Assessed Values for the Town of Carrboro (INDIRECT)

INDIRECT Real Property Tax Base-CARRBORO

Assessed Value Assumptions

<i>Residential:</i>	Avg \$/DU
Carrboro SFD	\$435,000
Carrboro SFA	\$240,000
Carrboro MF	\$140,000

<i>Nonresidential:</i>	Avg \$/SF
Carrboro Retail SF	\$160.00
Carrboro Office SF	\$185.00
Carrboro Industrial SF	\$60.00

Source: TischlerBise analysis of Orange County Assessor Database (2008)

Note: Assessed values reflect current valuation cycle (2005). Since no inflation is assumed in any part of this analysis and the tax rate used in the analysis is also based on the current valuation cycle, the above values are appropriate to use in this analysis and align with revenue assumptions throughout.

Also examined (and included in the model) are Carrboro Special Fund revenues. All are considered fixed.

Figure 86. Carrboro Special Fund Revenues

Revenue Category	Revenue Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	LOS Std \$ per Demand Unit
Econom Dev. Inti. Grant Fund	Restricted Intergovernmental	\$198,820	FIXED	1.00	\$0.00
Revolving Loan Fund	Beginning Fund Balance	\$295,697	FIXED	1.00	\$0.00
	Investment Earnings	\$454,625	FIXED	1.00	\$0.00
	Other Revenue (Loan Repayments)	\$525,172	FIXED	1.00	\$0.00
	Other Financing Sources	\$90,000	FIXED	1.00	\$0.00
Capital Reserve Fund	Beginning Fund Balance	\$1,090,025	FIXED	1.00	\$0.00
	Fund Balance Appropriated	\$342,000	FIXED	1.00	\$0.00
Payment in Lieu Reserve Fund	Beginning Fund Balance	\$129,097	FIXED	1.00	\$0.00
Capital Projects Fund	Investment Earnings	\$26,700	FIXED	1.00	\$0.00
	Other Financing Sources	\$6,481,860	FIXED	1.00	\$0.00
	Restricted Intergovernmental	\$338,925	FIXED	1.00	\$0.00
	Other Revenue	\$90,744	FIXED	1.00	\$0.00

CARRBORO OPERATING EXPENDITURES

All variable operating expenditures are projected—including personnel and operating costs—and discussed in this section. Capital expenditures are discussed in a separate section. All expenditures for the Town of Carrboro are due to the indirect, or spin-off, development from Phase I of Carolina North.

Figures are provided detailing each General Fund department on the following pages in this chapter. For further description of the figures shown, see Figure 1. Operating Expenditure Example, starting on page 7.

GOVERNANCE

The following figure shows methodologies for operating and staffing for departments within the Governance category, which includes Mayor and Board of Alderman, Advisory Boards and Commissions, and Governance Support. In general, operating costs are projected based on growth in population and jobs in the Town. **As indicated above, “Fixed” expenditures are assumed to not be affected by growth.**

Figure 87. Governance

MAYOR AND BOARD OF ALDERMAN					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier		\$ per Demand Unit
Personnel	\$102,311	FIXED	1.00		\$0.00
Operations	\$157,465	CARRBORO POP AND JOBS	1.00		\$6.52
Capital Outlay	\$0	FIXED	1.00		\$0.00
ADVISORY BOARDS AND COMMISSIONS					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier		\$ per Demand Unit
Personnel	\$0	FIXED	1.00		\$0.00
Operations	\$12,785	FIXED	1.00		\$0.00
Capital Outlay	\$0	FIXED	1.00		\$0.00
GOVERNANCE SUPPORT					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier		\$ per Demand Unit
Personnel	\$0	FIXED	1.00		\$0.00
Operations	\$207,114	CARRBORO POP AND JOBS	1.00		\$8.58
Capital Outlay	\$0	FIXED	1.00		\$0.00

ADMINISTRATION

The following figure shows methodologies for operating and staffing for departments within the Administration category, which includes Town Manager, Economic and Community Development, Town Clerk, Management Services, Information Technology, and Human Resources. In general, operating costs are projected based on growth in population and jobs in the Town with some personnel costs. As indicated above, "Fixed" expenditures are assumed to not be affected by growth.

TOWN MANAGER'S OFFICE					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit	
Personnel	\$224,530	FIXED	1.00	\$0.00	
Operations	\$24,200	CARRBORO POP AND JOBS	1.00	\$1.00	
Capital Outlay	\$0	FIXED	1.00	\$0.00	
ECONOMIC AND COMMUNITY DEVELOPMENT					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit	
Personnel	\$107,430	FIXED	1.00	\$0.00	
Operations	\$31,165	CARRBORO POP AND JOBS	1.00	\$1.29	
Capital Outlay	\$0	FIXED	1.00	\$0.00	
TOWN CLERK					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit	
Personnel	\$88,575	FIXED	1.00	\$0.00	
Operations	\$15,400	CARRBORO POP AND JOBS	1.00	\$0.64	
Capital Outlay	\$0	FIXED	1.00	\$0.00	
MANAGEMENT SERVICES - MANAGEMENT SERVICES					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit	
Personnel	\$424,222	CARRBORO POP AND JOBS	0.40	\$17.57	
Operations	\$464,861	CARRBORO POP AND JOBS	1.00	\$19.26	
Capital Outlay	\$0	FIXED	1.00	\$0.00	
MANAGEMENT SERVICES - INFORMATION TECHNOLOGY					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit	
Personnel Services	\$151,355	CARRBORO POP AND JOBS	0.40	\$6.27	
Operations	\$493,059	CARRBORO POP AND JOBS	1.00	\$20.43	
Capital Outlay	\$85,680	FIXED	1.00	\$0.00	
HUMAN RESOURCES					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit	
Personnel Services	\$278,366	CARRBORO POP AND JOBS	0.20	\$11.53	
Operations	\$65,870	CARRBORO POP AND JOBS	1.00	\$2.73	
Capital Outlay	\$0	FIXED	1.00	\$0.00	

POLICE

As part of this analysis, TischlerBise analyzed current Town of Carrboro Police calls for service data and developed factors to project future calls for services. (Detail is provided in the Demographic and Data Assumptions chapter.) Future Police personnel and operating costs are projected based on growth in Police Calls for Service (CFS) in the Town due to the indirect development from Carolina North. Future calls for service are projected based on current levels of service and projected growth. Animal control services are projected based on population growth. As indicated above, "Fixed" expenditures are assumed to not be affected by growth.

Figure 88. Police

POLICE - SUPERVISION					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier		\$ per Demand Unit
Personnel	\$103,272	FIXED	1.00		\$0.00
Operations	\$8,050	CARRBORO POLICE CFS	1.00		\$0.44
Capital Outlay	\$0	FIXED	1.00		\$0.00
POLICE - PATROL					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier		\$ per Demand Unit
Personnel	\$1,921,631	CARRBORO POLICE CFS	1.00		\$106.09
Operations	\$192,499	CARRBORO POLICE CFS	1.00		\$10.63
Capital Outlay	\$189,000	FIXED	1.00		\$0.00
POLICE - SPECIAL SERVICES					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier		\$ per Demand Unit
Personnel	\$120,513	CARRBORO POLICE CFS	1.00		\$6.65
Operations	\$13,786	CARRBORO POLICE CFS	1.00		\$0.76
Capital Outlay	\$0	FIXED	1.00		\$0.00
POLICE - INVESTIGATIONS					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier		\$ per Demand Unit
Personnel	\$317,601	CARRBORO POLICE CFS	1.00		\$17.53
Operations	\$32,320	CARRBORO POLICE CFS	1.00		\$1.78
Capital Outlay	\$0	FIXED	1.00		\$0.00
POLICE - ANIMAL CONTROL					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier		\$ per Demand Unit
Personnel	\$43,210	CARRBORO POPULATION	1.00		\$2.23
Operations	\$8,900	CARRBORO POPULATION	1.00		\$0.46
Capital Outlay	\$0	FIXED	1.00		\$0.00

FIRE

Fire personnel and operating costs are projected based on growth in Fire Calls for Service in Carrboro. (Further discussion on Fire Calls for Service is provided in the Demographic and Data section.) As indicated above, “Fixed” expenditures are assumed to not be affected by growth.

Figure 89. Fire

<i>FIRE - SUPERVISION</i>					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit	
Personnel	\$103,285	FIXED	1.00		\$0.00
Operations	\$37,986	CARRBORO FIRE CFS	1.00		\$25.75
Capital Outlay	\$0	FIXED	1.00		\$0.00
<i>FIRE - SUPPRESSION</i>					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit	
Personnel	\$1,577,361	CARRBORO FIRE CFS	1.00		\$1,069.40
Operations	\$175,689	CARRBORO FIRE CFS	1.00		\$119.11
Capital Outlay	\$956,000	CARRBORO FIRE CFS	1.00		\$648.14
<i>FIRE - FIRE PREVENTION</i>					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit	
Personnel Services	\$79,589	CARRBORO JOBS	1.00		\$16.66
Operations	\$5,000	CARRBORO JOBS	1.00		\$1.05
Capital Outlay	\$0	FIXED	1.00		\$0.00
<i>FIRE - SAFETY MANAGEMENT</i>					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit	
Personnel Services	\$0	FIXED	1.00		\$0.00
Operations	\$6,950	CARRBORO FIRE CFS	1.00		\$4.71
Capital Outlay	\$0	FIXED	1.00		\$0.00

PLANNING

The following figure shows methodologies for operating and staffing for Planning. In general, operating costs are projected based on growth in population and jobs in the Town along with some personnel costs. As indicated above, “Fixed” expenditures are assumed to not be affected by growth.

Figure 90. Planning

PLANNING - SUPERVISION					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier		\$ per Demand Unit
Personnel	\$431,529	FIXED	1.00		\$0.00
Operations	\$110,776	CARRBORO POP AND JOBS	1.00		\$4.59
Capital Outlay	\$0	FIXED	1.00		\$0.00
PLANNING-ZONING					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier		\$ per Demand Unit
Personnel	\$293,884	CARRBORO POP AND JOBS	1.00		\$12.17
Operations	\$117,185	CARRBORO POP AND JOBS	1.00		\$4.85
Capital Outlay	\$0	FIXED	1.00		\$0.00
PLANNING-INSPECTIONS					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier		\$ per Demand Unit
Personnel	\$213,799	CARRBORO POP AND JOBS	1.00		\$8.86
Operations	\$17,497	CARRBORO POP AND JOBS	1.00		\$0.72
Capital Outlay	\$0	FIXED	1.00		\$0.00

TRANSPORTATION

This expenditure is the Town of Carrboro’s contribution to the Transit system serving Carrboro, Chapel Hill, and UNC. Transit costs in this analysis projected under the Town of Chapel Hill expenditures **become an input here reflecting Carrboro’s share of the cost (at 15.84 percent per the current FY07-08 cost sharing agreement).**

Figure 91. Transportation

TRANSPORTATION- TRANSIT CONTRIB					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier		\$ per Demand Unit
Personnel	\$0	FIXED	1.00		\$0.00
Operations	\$1,064,150	DIRECT ENTRY	1.00		
Capital Outlay	\$0	FIXED	1.00		\$0.00

PUBLIC WORKS

The following divisions are included under Public Works: Supervision, Streets, Solid Waste Management, Central Services, Fleet Maintenance, and Landscaping and Grounds Maintenance. Different demand factors are assumed for different functions. Vehicle trips are used as the demand indicator for street-related expenditures. (Further detail is provided in the Demographic and Data chapter.) For Solid Waste, costs are split between residential and nonresidential and projected based on single family units and jobs, respectively. Detail is provided below.

Figure 92. Public Works

PUBLIC WORKS - SUPERVISION					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier		\$ per Demand Unit
Personnel	\$260,862	FIXED	1.00		\$0.00
Operations	\$30,689	CARRBORO POP AND JOBS	1.00		\$1.27
Capital Outlay	\$15,000	FIXED	1.00		\$0.00
PUBLIC WORKS - STREETS					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier		\$ per Demand Unit
Personnel	\$475,006	CARRBORO VEHICLE TRIPS	1.00		\$9.69
Operations	\$494,667	CARRBORO VEHICLE TRIPS	1.00		\$10.10
Capital Outlay	\$820,000	CARRBORO VEHICLE TRIPS	1.00		\$16.73
PUBLIC WORKS - SOLID WASTE MANAGEMENT					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier		\$ per Demand Unit
Personnel	\$292,724	SEE BELOW	1.00		\$0.00
Operations	\$471,689	SEE BELOW	1.00		\$0.00
Capital Outlay	\$240,000	SEE BELOW	1.00		\$0.00
Solid Waste-Residential Share	\$843,707	CARRBORO SF UNITS	1.00		\$211.40
Solid Waste-Nonresidential Share	\$160,706	CARRBORO JOBS	1.00		\$33.65
PUBLIC WORKS - CENTRAL SERVICES					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier		\$ per Demand Unit
Personnel Services	\$148,385	CARRBORO POP AND JOBS	0.30		\$6.15
Operations	\$299,841	CARRBORO POP AND JOBS	1.00		\$12.42
Capital Outlay	\$61,000	FIXED	1.00		\$0.00
PUBLIC WORKS - FLEET MAINTENANCE					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier		\$ per Demand Unit
Personnel Services	\$153,390	CARRBORO POP AND JOBS	0.30		\$6.35
Operations	\$42,781	CARRBORO POP AND JOBS	1.00		\$1.77
Capital Outlay	\$15,000	FIXED	1.00		\$0.00

PUBLIC WORKS - LANDSCAPING/GROUNDS				LOS Std
Expenditure	Base Year	Project Using	Demand Unit	\$ per
Name	Budget Amount	Which Demand Base?	Multiplier	Demand Unit
Personnel Services	\$382,876	CARRBORO POP AND JOBS	1.00	\$15.86
Operations	\$227,675	CARRBORO POP AND JOBS	1.00	\$9.43
Capital Outlay	\$77,500	CARRBORO POP AND JOBS	1.00	\$3.21

RECREATION AND PARKS

Recreation and Parks includes personnel and operating costs as shown and assumed to be affected by growth in population in the Town of Carrboro.

Figure 93. Recreation and Parks

RECREATION AND PARKS - SUPERVISION				LOS Std
Expenditure	Base Year	Project Using	Demand Unit	\$ per
Name	Budget Amount	Which Demand Base?	Multiplier	Demand Unit
Personnel	\$97,118	FIXED	1.00	\$0.00
Operations	\$13,669	CARRBORO POPULATION	1.00	\$0.71
Capital Outlay	\$0	FIXED	1.00	\$0.00
RECREATION AND PARKS - PARKS AND PLAYGROUNDS				LOS Std
Expenditure	Base Year	Project Using	Demand Unit	\$ per
Name	Budget Amount	Which Demand Base?	Multiplier	Demand Unit
Personnel	\$0	FIXED	1.00	\$0.00
Operations	\$22,689	CARRBORO POPULATION	1.00	\$1.17
Capital Outlay	\$154,000	CARRBORO POPULATION	1.00	\$7.95
RECREATION AND PARKS - ATHLETICS				LOS Std
Expenditure	Base Year	Project Using	Demand Unit	\$ per
Name	Budget Amount	Which Demand Base?	Multiplier	Demand Unit
Personnel	\$291,153	CARRBORO POPULATION	1.00	\$15.04
Operations	\$99,545	CARRBORO POPULATION	1.00	\$5.14
Capital Outlay	\$0	FIXED	1.00	\$0.00
RECREATION AND PARKS - GENERAL PROGRAMS				LOS Std
Expenditure	Base Year	Project Using	Demand Unit	\$ per
Name	Budget Amount	Which Demand Base?	Multiplier	Demand Unit
Personnel	\$259,448	CARRBORO POPULATION	1.00	\$13.40
Operations	\$192,269	CARRBORO POPULATION	1.00	\$9.93
Capital Outlay	\$0	FIXED	1.00	\$0.00
RECREATION AND PARKS - RECREATION FACILITIES				LOS Std
Expenditure	Base Year	Project Using	Demand Unit	\$ per
Name	Budget Amount	Which Demand Base?	Multiplier	Demand Unit
Personnel	\$295,856	CARRBORO POPULATION	1.00	\$15.28
Operations	\$15,533	CARRBORO POPULATION	1.00	\$0.80
Capital Outlay	\$0	FIXED	1.00	\$0.00

NON-DEPARTMENTAL

Non-Departmental expenditures are assumed to not be affected by growth and therefore are fixed in this analysis.

Figure 94. Non-Departmental

NON-DEPARTMENTAL - NON-DEPARTMENTAL					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit	
Personnel	\$745,743	FIXED	1.00		\$0.00
Operations	\$35,000	FIXED	1.00		\$0.00
Capital Outlay	\$0	FIXED	1.00		\$0.00
NON-DEPARTMENTAL - TRANSFERS					LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit	
Personnel	\$0	FIXED	1.00		\$0.00
Operations	\$350,000	FIXED	1.00		\$0.00
Capital Outlay	\$0	FIXED	1.00		\$0.00

CARRBORO CAPITAL EXPENDITURES

This section provides further detail on capital cost assumptions for the Town of Carrboro used in the fiscal impact analysis. The approach of the Fiscal Impact Analysis is to project future capital needs based on *current levels of service*. No judgment is made as to whether the levels of service are adequate, inadequate, or better than adequate, nor are any assumptions made regarding future changes in levels of service. Additionally, it should be noted that a fiscal impact analysis, while projecting specific capital facilities, is different from a facility plan. Particularly, the assumptions below and the results issued under separate cover reflect needs due to *new growth only* and are projected based on current levels of service. Also, in most cases the capital needs projected are pro-rated based on the amount of development projected in each scenario, therefore, the demands and costs from the indirect impacts from Carolina North will be reflected in the results even though an entirely new facility may not be triggered.

All capital costs included in the analysis are shown as Pay-Go. By showing Pay-Go funding for all capital improvements, the true costs of capital impacts are depicted. If those facilities were bond financed, debt service would continue beyond the last projection year and therefore would not adequately be captured in this analysis.

See page 9 of this document (Figure 3. Capital Facility Example) for an example of the Capital expenditure level of service information used in the model and fiscal impact analysis.

POLICE CAPITAL

Level of service information is provided below for Carrboro Police.

Figure 95. Police Capital LOS

Facility Type	Base Year Inventory		Need For Facility Based On:	LOS by Capital Facility	Current Cost/Unit (\$000's)
Police Station	Square Feet	7,090	CARRBORO POLICE CFS	0.3914	\$0.300
Patrol Cars	Vehicles	41	CARRBORO POLICE CFS	0.0023	\$28

- Police capital costs are projected based on future calls for service (CFS). (See “Demographic and Data Assumptions” for further information on allocation and calls for service.)

- Police station level of services is based on current station square footage and current number of Police calls for service (CFS). The result is .39 square feet per call for service.
- The cost for new station space is estimated at \$300 per square foot.
- Also included is the cost for patrol cars at a fully-loaded cost of \$28,000 per car with a useful life of 6 years. Costs are projected based on CFS. Costs for replacement vehicles are also included in the model.

FIRE CAPITAL

Level of service information is provided below for Carrboro Fire.

Figure 96. Fire Capital LOS

Facility Type	Base Year Inventory		Need For Facility Based On:	LOS by Capital Facility	Current Cost/Unit (\$000's)
Fire Station	Square Feet	20,545	CARRBORO FIRE CFS	13.93	\$0.330
=====	=====	=====	=====	=====	=====
Fire Apparatus	Vehicles	7	CARRBORO FIRE CFS	0.0047	\$350

- Fire capital costs are projected based on future calls for service (CFS). (See “Demographic and Data Assumptions” for further information on allocation and calls for service.)
- Fire Station LOS is approximately 14 square feet per CFS, which includes new Station 2, and is assumed at a cost of \$330 per square foot for a new facility.
- Also included is the cost for additional apparatus at an average cost of \$350,000 per vehicle with a useful life of 12 years. Costs are projected based on CFS.

RECREATION AND PARKS CAPITAL

Capital components are projected based on current levels of service for Parks. Greenways are shown below under Public Works.

Figure 97. Recreation and Parks Capital LOS

Facility Type	Base Year Inventory		Need For Facility Based On:	LOS by Capital Facility	Current Cost/Unit (\$000's)
Parks	Acres	99	CARRBORO POPULATION	0.0051	\$130

- Parks: Current level of service is based on developed acres and results in .0051 acres per person (5.1 acres per 1,000). It is assumed that major Town Park expenditures to serve future development will be Park improvements at existing park properties.

Therefore, no land component is included. The current cost for Town Park development, based on recent projects, is \$130,000 per acre.

- As noted elsewhere, for this analysis, the pro-rated share of infrastructure is included. For example for Park development, when the model projects the need for one acre of additional park due to population growth, a cost is incurred. In reality, the Town will not likely develop one acre at a time, but wait and develop a larger Park and incur a higher cost at a later time. However, to capture all related costs in this analysis, a lower threshold is used and costs are incurred incrementally.

PUBLIC WORKS CAPITAL

The analysis includes the Town's major capital expenditures for Sidewalks and Greenways using an average cost approach based on increase in population and jobs in the Town. This amount is included as an annual expenditure to capture the ongoing level of investment by the Town. This may be a conservative approach in that future annual expenditures may be lower than the FY 08 budget. However, this provides an expenditure level assumption for these types of improvements in absence of trend data.

Figure 98. Sidewalk and Greenways Capital LOS

CAPITAL PROJECTS FUND				LOS Std
Expenditure Name	Base Year Budget Amount	Project Using Which Demand Base?	Demand Unit Multiplier	\$ per Demand Unit
Capital Projects Fund	\$3,811,573	FIXED	1.00	\$0.00
GO Sidewalk & Greenways Fund	\$3,126,656	CARRBORO POP AND JOBS	1.00	\$129.53

Also included is major Solid Waste equipment that is funded by the General Fund. Shown below is the current LOS, based on population and employment in the Town, and the average cost per vehicle of \$217,000.

Figure 99. Solid Waste Capital LOS

Facility Type	Base Year Inventory	Need For Facility Based On:	LOS by Capital Facility	Current Cost/Unit (\$000's)
=====	=====	=====	=====	=====
Solid Waste Equipment	Vehicles	7 CARRBORO POP AND JOBS	0.0003	\$217

V. DEMOGRAPHIC AND DATA ASSUMPTIONS

INTRODUCTION

This chapter details the major demographic and data assumptions used in the Fiscal Impact Analysis to derive level of service factors. Included are:

- Base year demographic estimates,
- Household sizes,
- Student generation rates,
- Employee density factors,
- Vehicle trips,
- Police calls for service
- Fire calls for service, and
- Transit service levels.

All figures are for the base year 2008.

BASE YEAR DEMOGRAPHIC ESTIMATES

The figure below summarizes estimates of the base year population, housing units, employment, nonresidential space, and facility factors for all jurisdictions included in the analysis. These estimated figures are used to determine the cost and revenue factors used in the analysis. All figures are estimates for 2008.

Figure 100. Base Year Input Data: All Jurisdictions

	Year->	Base Estimates 2008
<i>Population</i>	CHAPEL HILL POPULATION	55,030
	CARRBORO POPULATION	19,363
	ORANGE POPULATION	128,764
	OTH ORANGE POPULATION	54,371
<i>Population and Jobs</i>	CHAPEL HILL POP AND JOBS	94,830
	CARRBORO POP AND JOBS	24,139
	ORANGE POP AND JOBS	192,576
	OTH ORANGE POP AND JOBS	73,607
<i>Housing Units by Type</i>	CHAPEL HILL SFD	8,525
	CHAPEL HILL SFA	1,843
	CHAPEL HILL MULTIFAMILY	10,375
	CHAPEL HILL TOTAL UNITS	20,743
	CARRBORO SFD	3,413
	CARRBORO SFA	578
	CARRBORO MULTIFAMILY	5,064
	CARRBORO TOTAL UNITS	9,055
	ORANGE SFD	36,072
	ORANGE SFA	2,734
	ORANGE MULTIFAMILY	16,824
	ORANGE TOTAL UNITS	55,630
	OTH ORANGE SFD	24,134
	OTH ORANGE SFA	313
	OTH ORANGE MULTIFAMILY	1,385
	OTH ORANGE TOTAL UNITS	25,832

<i>Jobs by Type</i>	CHAPEL HILL RETAIL JOBS	5,661
	CHAPEL HILL OFFICE JOBS	14,571
	CHAPEL HILL INDUSTRIAL JOBS	1,190
	CHAPEL HILL INSTITUTIONAL JOBS	18,378
	CHAPEL HILL JOBS	39,800
	CARRBORO RETAIL JOBS	1,820
	CARRBORO OFFICE JOBS	1,867
	CARRBORO INDUSTRIAL JOBS	708
	CARRBORO INSTITUTIONAL JOBS	382
	CARRBORO JOBS	4,776
	ORANGE RETAIL JOBS	12,485
	ORANGE OFFICE JOBS	22,889
	ORANGE INDUSTRIAL JOBS	5,552
	ORANGE INSTITUTIONAL JOBS	22,886
	ORANGE JOBS	63,812
	OTH ORANGE RETAIL JOBS	5,004
	OTH ORANGE OFFICE JOBS	6,451
	OTH ORANGE INDUSTRIAL JOBS	3,655
	OTH ORANGE INSTITUTIONAL JOBS	4,126
	OTH ORANGE JOBS	19,236
<i>Vehicle Trips</i>	CHAPEL HILL RESIDENTIAL TRIPS	160,755
	CHAPEL HILL NONRES TRIPS	255,008
	CHAPEL HILL VEHICLE TRIPS	415,764
	CARRBORO RESIDENTIAL TRIPS	69,421
	CARRBORO NONRES TRIPS	38,080
	CARRBORO VEHICLE TRIPS	107,501
	ORANGE RESIDENTIAL TRIPS	472,100
	ORANGE NONRES TRIPS	419,835
	ORANGE VEHICLE TRIPS	891,936
	OTH ORANGE RESIDENTIAL TRIPS	241,924
	OTH ORANGE NONRES TRIPS	126,747
	OTH ORANGE VEHICLE TRIPS	368,671
	TRANSIT SERVICE HOURS	153,085

<i>Police Factors</i>	CHAPEL HILL RES POLICE CFS	23,306
	CHAPEL HILL NONRES POLICE CFS	6,961
	CHAPEL HILL TRAFFIC/OTHER POLICE	7,056
	CHAPEL HILL POLICE CFS	37,323
	CARRBORO RES POLICE CFS	16,404
	CARRBORO NONRES POLICE CFS	1,710
	CARRBORO POLICE CFS	18,114
<i>Fire Factors</i>	CHAPEL HILL FIRE CFS	4,468
	CARRBORO FIRE CFS	1,475
<i>Schools</i>	CHCCS ELEM	5,173
	CHCCS MS	2,622
	CHCCS HS	3,635
	CHCCS ENROLLMENT	11,430
	CHCCS SEATS	11,334
	OCS ELEM	3,158
	OCS MS	1,637
	OCS HS	2,201
	OCS ENROLLMENT	6,996
	OCS SEATS	8,378

Notes to Figure:

SFD = Single Family Detached unit

SFA = Single Family Attached unit

CFS = Calls for Service

CHCCS = Chapel Hill-Carrboro City Schools

OCS = Orange County Schools

Sources: Town of Chapel Hill, Town of Carrboro, Orange County, North Carolina State Demographer, Chapel Hill-Carrboro City Schools, Orange County Schools, and TischlerBise.

HOUSEHOLD SIZE

Household size is used to project population over the projection period. The following section provides household size assumptions by type of unit for each jurisdiction in the study.

Figure 101. Household Size: Town of Chapel Hill

	<i>Units</i>	<i>Persons</i>	<i>Persons per Hsg Unit</i>
SFD*	7,742	19,838	2.56
SFA*	1,510	2,840	1.88
MF**			1.80

* Source: Census 2000

** Source: Town of Chapel Hill

Figure 102. Household Size: Orange County

	<i>Units</i>	<i>Persons</i>	<i>Persons per Hsg Unit</i>
SFD	26,413	65,905	2.50
SFA/MF	17,673	31,202	1.77

Source: Census 2000

Figure 103. Household Size: Town of Carrboro

	<i>Units</i>	<i>Persons</i>	<i>Persons per Hsg Unit</i>
SFD	2,661	6,621	2.49
SFA	438	1,067	2.44
MF	4,978	8,649	1.74

Source: Census 2000

STUDENT GENERATION RATES

Student Generation Rates are provided for both Districts (Chapel Hill-Carrboro City Schools and Orange County Schools) and are from Orange County and updated by TischlerBise as part of a 2007-08 impact fee analysis for Orange County. Demand for additional school capacity will come from new residential development. To determine the level of this demand, student generation rates are used. The term “student generation rate” refers to the number of public school students per housing unit in the each of the school systems serving development in Orange County. Public school students are a subset of school-aged children, which includes students in private schools and home-schooled children.

TischlerBise obtained student generation rate information for each school system in the County from Orange County. The student generation rates provided by Orange County Planning are from an analysis conducted in 2005 and were provided by housing unit type and by school level—elementary, middle, and high. As part of the impact fee analysis, TischlerBise calibrated the rates to current housing unit and enrollment data (2006-07) in each school system provided by the County. The results are student generation rates by type of unit by school level for each school district. Detail is provided below.

Figure 104. Student Generation Rates: Chapel Hill-Carrboro City Schools

	Elementary	Middle	High	All Grades
Single Family Detached	0.263	0.143	0.197	0.603
Single Family Attached	0.158	0.077	0.115	0.350
Multifamily	0.038	0.015	0.017	0.070

Source: Orange County and TischlerBise, 2007-08 Orange County impact fee analysis

Figure 105. Student Generation Rates: Orange County Schools

	Elementary	Middle	High	All Grades
Single Family Detached	0.168	0.09	0.126	0.384
All Other	0.066	0.022	0.034	0.122

Source: Orange County and TischlerBise, 2007-08 Orange County impact fee analysis

EMPLOYEE DENSITY FACTORS

Square feet of nonresidential space per employee (employee density factors) are used to project the amount of future nonresidential floor area in the jurisdictions as a result of the indirect impact from Carolina North. This information is also used to project vehicle trips from new development (discussed below). Projected employment in each scenario is converted to nonresidential square footage by type of development using the employee density figures shown in Figure 106. The land uses shown reflect prototypical future nonresidential development in the jurisdictions used in the analysis. (Also shown are trip rates, which will be used in the analysis and documented below.) Projected nonresidential floor area by scenario is shown in the detailed tables in the Appendix.

Figure 106. Floor Area per Employee

Land Use	Wkdy Trip Ends Per 1,000 Sq Ft [1]	Wkdy Trip Ends Per Employee [1]	Emp Per 1,000 Sq Ft	Sq Ft Per Emp [2]
<i>Commercial / Shopping Ctr (820)</i>				
50K gross leasable area	86.56	na	2.86	350
<i>General Office (710)</i>				
25K gross floor area	18.35	4.43	4.14	241
<i>Industrial</i>				
Warehousing (150)	4.96	3.89	1.28	784

[1] Trip Generation, Institute of Transportation Engineers, 2003.

[2] Square feet per employee calculated from trip rates except for Shopping Center data, which are derived from the Urban Land Institute's Development Handbook and Dollars and Cents of Shopping Centers.

VEHICLE TRIPS

Vehicle trips are used to project some operating and capital expenditures in the fiscal impact analysis. **Town of Chapel Hill and UNC's transportation consultant** (Martin, Alexiou, Bryson) provided trip estimates and assumptions for the Town as a whole and for Carolina North (Phase I). Average Weekday Vehicle Trip Ends by type of development (or trip generation rates) are from the reference book, *Trip Generation, 7TH Edition (2003)*, published by the Institute of Transportation Engineers (ITE), and confirmed with the Town of Chapel Hill and UNC.

A “trip end” represents a vehicle either entering or exiting a development (as if a traffic counter were placed across a driveway). Trip rates have not been adjusted by type of land use to (shown in the following figures as a factor of 100%). Instead the figures provide trip estimates for all trips on the system regardless of whether they are pass-by trips or whether a reduction for alternative modes may be appropriate. The same set of trip generation assumptions is used for base year data as well as for the projected development at Carolina North and indirect impacts. Adjustments and other modified assumptions may be appropriate for subsequent analyses, for example once a traffic impact analysis is conducted for Carolina North.

For nonresidential land uses, trip rates are per 1,000 sf for all uses *except institutional*, due to data availability from ITE. The demand unit for institutional development, in this case UNC, is “employees” and the trip rate shown is per employee.

Trip rates factors are shown in the following figures for the base year of the analysis. Using trips generated from single family detached units as an example, the formula is as follows: 8,525 units x 9.57 vehicle trips per unit = 81,584. Detail is shown in the following figures for Chapel Hill and Carrboro. Vehicle trips are not used for any cost or revenue projections for Orange County. These same trip rates and adjustment factors are also used to project future trips for each scenario in the analysis.

Figure 107. Chapel Hill Base Year Vehicle Trips

Residential Vehicle Trips on an Average Weekday (2008)

Residential Demand Base (Housing Units)

Chapel Hill SFD

Chapel Hill SFA

Chapel Hill Multifamily

*Average Weekday Vehicles Trip Ends Per Unit**

Chapel Hill SFD

Chapel Hill SFA

Chapel Hill Multifamily

8541

Assumptions	
	8,525
	1,843
	10,375
Trip Rates	Trip Adj Factor
9.57	100%
5.86	100%
6.59	100%

Residential Vehicle Trip Ends on an Average Weekday

Chapel Hill SFD

Chapel Hill SFA

Chapel Hill Multifamily

81,584

10,800

68,371

TOTAL RESIDENTIAL TRIPS

160,755

Nonresidential Vehicle Trips on an Average Weekday (2008)

*Nonresidential Demand Base***

Chapel Hill Retail 1,000 SF

Chapel Hill Office 1,000 SF

Chapel Hill Industrial 1,000 SF

Chapel Hill Institutional-Employees

Assumptions	
1,981	1,000 sf
5,226	1,000 sf
933	1,000 sf
11,300	employees
Trip Rates	Trip Adj Factor
44.32	100%
11.01	100%
6.97	100%
9.13	100%

*Average Weekday Vehicle Trip Ends per Demand Unit**

Chapel Hill Retail 1,000 SF

Chapel Hill Office 1,000 SF

Chapel Hill Industrial 1,000 SF

Chapel Hill Institutional-Employees

87,798

57,538

6,503

103,169

TOTAL NONRESIDENTIAL TRIPS

255,008

TOTAL TRIPS

415,764

* Trip rates are from the Institute of Transportation Engineers(ITE) Trip Generation Manual (2003), and confirmed with Town of Chapel Hill, and Martin, Alexiou, Bryson.

** Floor area estimates are from employee density factors and current job estimates

Figure 108. Carrboro Base Year Vehicle Trips

Residential Vehicle Trips on an Average Weekday (2008)

Residential Units

Carrboro SFD

Carrboro SFA

Carrboro Multifamily

Assumptions		
	3,413	
	578	
	5,064	
Trip Rates	Trip Adj Factor	
	9.57	100%
	5.86	100%
	6.59	100%

*Average Weekday Vehicles Trip Ends Per Unit**

Carrboro SFD

Carrboro SFA

Carrboro Multifamily

Residential Vehicle Trip Ends on an Average Weekday

Carrboro SFD 32,662

Carrboro SFA 3,387

Carrboro Multifamily 33,372

TOTAL RESIDENTIAL TRIPS 69,421

Nonresidential Vehicle Trips on an Average Weekday (2008)

*Nonresidential Demand Base***

Carrboro Retail 1,000 SF

Carrboro Office 1,000 SF

Carrboro Industrial 1,000 SF

Carrboro Institutional 1,000 SF

Assumptions		
	637	
	451	
	555	
	92	
Trip Rates	Trip Adj Factor	
	44.32	100%
	11.01	100%
	6.97	100%
	11.01	100%

*Average Weekday Vehicle Trip Ends per 1,000 Sq. Ft.**

Carrboro Retail 1,000 SF

Carrboro Office 1,000 SF

Carrboro Industrial 1,000 SF

Carrboro Institutional 1,000 SF

Nonresidential Vehicle Trips on an Average Weekday

Carrboro Retail 28,235

Carrboro Office 4,961

Carrboro Industrial 3,868

Carrboro Institutional 1,015

TOTAL NONRESIDENTIAL TRIPS 38,080

TOTAL TRIPS 107,501

* Trip rates are consistent with assumptions for Town of Chapel Hill and are from ITE

Trip Generation Manual (2003), Town of Chapel Hill, and Martin, Alexiou, Bryson.

** Floor area estimates are from employee density factors and current job estimates

POLICE CALLS FOR SERVICE

Police calls for service are used to project a number of Police expenditures, both operating and capital, for Chapel Hill and Carrboro. Further detail on approach and methodology is provided below for each of the Towns.

TOWN OF CHAPEL HILL

Proportionate Share Factors

First, Police costs need to be allocated between residential and non-residential development. To do so, proportionate share factors are used. The Police Department does not currently track calls by land use at this time. In lieu of calls for service by land use data, TischlerBise determined proportionate share factors based on demand by type of land use using “person hours,” thus reflecting residential versus non-residential activities. The non-residential component does not include estimated UNC employees because UNC provides its own police services, therefore this allocation of demand reflects the Town’s services. As shown below, residential demand accounts for 77 percent and non-residential 23 percent.

Figure 109. Chapel Hill Police Proportionate Share

	<i>Demand Units in 2000</i>	<i>Demand Hours/Day</i>	<i>Person Hours</i>	<i>Proportionate Share</i>
Residential				
Estimated Residents [1]	46,019			
Residents Not Working [2]	22,476	24	539,424	
Workers Living in Town [3]	23,543			
Town Residents Working in Town [3a]		13,753	16	220,048
Town Residents Working outside of Town [4]		9,790	16	156,640
Residential Subtotal			916,112	77%
Nonresidential				
Jobs Located in Town [5]	33,479			
Town Residents Working in Town [3a]		13,753	8	110,024
Non-Resident Workers [6]		19,726	8	157,808
Nonresidential Subtotal			267,832	23%
TOTAL			1,183,944	100%

[1] US Census, 2000 (corrected)

[2] Residents minus Workers Living in Town

[3] U.S. Census, 2000, PHC-T-40. Estimated Daytime Population and Employment-Residence Ratios 2000 (Table 3) [col. 5]

[3a] U.S. Census, 2000, PHC-T-40. Estimated Daytime Population and Employment-Residence Ratios 2000 (Table 3) [col. 9]

[4] Workers Living in Town minus Town Residents Working in Town

[5] U.S. Census, 2000, PHC-T-40. Estimated Daytime Population and Employment-Residence Ratios 2000 (Table 3) [col.4] minus estimated UNC jobs

[6] Jobs Located in Town minus Town Residents Working in Town

Police Calls for Service Projection Factors

To project future Police calls for service, the above data is used to determine a call per person, a call per nonresidential trip, and a call per total vehicle trip. Town Police provided calls for service data delineating between traffic calls and all other.

To derive the call per demand unit factor, total non-traffic calls are multiplied by the proportionate share factor then divided by the respective number of base year demand units. For example, the formula for calls per capita is $30,267$ [non-traffic calls for service] \times 77 percent [residential share] / $55,030$ [base year population] = .424 calls per capita. Calls per nonresidential trip are used to project demand for services from new nonresidential development in Town, and calls per total vehicle trip is used to project future traffic calls. The same approach is used for these call factors. Note: For the Direct impact of Carolina North, only *traffic calls* are projected as the assumption is that UNC will provide Police services and Town of Chapel Hill would not provide services at Carolina North.

Figure 110. Chapel Hill Police Calls for Service Projection Factors

Police Calls for Service Data (1)

<i>Land Use</i>	<i>2007</i>	<i>Percent</i>
Residential	23,306	77%
Nonresidential	6,961	23%
Traffic/Other	7,056	
TOTAL CALLS FOR SERVICE	37,323	100.0%

Calls for Service Projection Factors

Current Population	55,030
Current Nonres Trips (served by CH Police)	151,839
Current Vehicle Trips	415,764

Calls per Capita	0.424
Calls per Nonres. Trip	0.046
Calls per Total Veh Trip	0.017

(1) Based on information provided by the Police Department.

TOWN OF CARRBORO

Proportionate Share Factors

As described above, Police costs need to be allocated between residential and non-residential development. To do so, proportionate share factors are used. The Carrboro Police Department does not currently track calls by land use at this time. In lieu of calls for service by land use

data, TischlerBise determined proportionate share factors based on demand by type of land use using “person hours,” thus reflecting residential versus non-residential activities. As shown below, residential demand accounts for 91 percent and non-residential 9 percent.

Figure 111. Carrboro Public Safety Proportionate Share

	<u>Demand Units in 2000</u>	<u>Demand Hours/Day</u>	<u>Person Hours</u>	<u>Proportionate Share</u>
Residential				
Estimated Residents [1]	16,782			
Residents Not Working [2]	6,716	24	161,184	
Workers Living in Town [3]	10,066			
Town Residents Working in Town [3a]		1,354	16	21,664
Town Residents Working outside of Town [4]		8,712	16	139,392
Residential Subtotal			322,240	91%
Nonresidential				
Jobs Located in Town [5]	4,199			
Town Residents Working in Town [3a]		1,354	8	10,832
Non-Resident Workers [6]		2,845	8	22,760
Nonresidential Subtotal			33,592	9%
TOTAL			355,832	100%

[1] US Census, 2000 (corrected)

[2] Residents minus Workers Living in Town

[3] U.S. Census, 2000, FHC-T-40. Estimated Daytime Population and Employment-Residence Ratios 2000 (Table 3) [col. 5]

[3a] U.S. Census, 2000, FHC-T-40. Estimated Daytime Population and Employment-Residence Ratios 2000 (Table 3) [col. 9]

[4] Workers Living in Town minus Town Residents Working in Town

[5] U.S. Census, 2000, FHC-T-40. Estimated Daytime Population and Employment-Residence Ratios 2000 (Table 3) [col.4]

[6] Jobs Located in Town minus Town Residents Working in Town

Police Calls for Service Projection Factors

To project future Police calls for service, the above data is used to determine a call per person and a call per nonresidential trip. Town Police provided calls for service data; traffic calls were not able to be separated out.

To derive the call per demand unit factor, total calls are multiplied by the proportionate share factor then divided by the respective number of base year demand units. For example, the formula for calls per capita is 18,114 [calls for service] x 91 percent [residential share] / 19,363 [base year population] = .847 calls per capita. The call per nonresidential trip factor is used to project demand for services from new nonresidential development in Town.

Figure 112. Carrboro Police Calls for Service Projection Factors

Police Calls for Service Data (1)

<i>Land Use</i>	<i>2008</i>	<i>Percent</i>
Residential	16,404	91%
Nonresidential	1,710	9%
TOTAL CALLS FOR SERVICE	18,114	100.0%

Calls for Service Projection Factors

Current Population	19,363
Current Nonresidential Vehicle Trips	38,080

Calls per Capita	0.847
Calls per Nonres. Trip	0.045

(1) Based on information provided by the Police Department. Includes only calls that can be classified by land use.

FIRE / RESCUE CALLS FOR SERVICE

Fire / Rescue calls for service are used to project a number of Fire expenditures, both operating and capital, for Chapel Hill and Carrboro. Further detail on approach and methodology is provided below for each of the Towns.

TOWN OF CHAPEL HILL

Fire costs need to be allocated between residential and non-residential development as well as for traffic-related calls and service to UNC. Chapel Hill Fire Department provided calls for service data for calendar year 2007. Call data was provided for (1) residential, (2) nonresidential, (3) traffic (streets/highways), and (4) UNC. These figures were used to derive projection factors for calls per capita (residential), per nonresidential vehicle trip (nonresidential), per vehicle trip (traffic), and per UNC person and job (UNC demand). To derive the call per demand unit factor, the number of calls by type is divided by the applicable demand base units. For example, calls per capita is 1,815 [residential CFS] / 47,030 [base year population (off-campus)] = .033 calls per capita. The same approach is used for the other call factors. University-related calls are captured in the call per UNC population and job factor of .057.

Figure 113. Chapel Hill Fire Calls for Service Projection Factors

Fire/Rescue Calls for Service Data [1]

Land Use	2007	Percent
Residential Land Uses	1815	41%
Nonresidential Land Uses	561	13%
Traffic/Other	314	7%
UNC	1091	24%
Non-Classifiable	687	15%
TOTAL CALLS FOR SERVICE	4,468	100%
Calls for Service Projection Factors		
Current Population (off-campus)		47,030
Current Nonresidential Vehicle Trips (off-campus)		151,839
Current Vehicle Trips		415,764
Current UNC Pop and Jobs [2]		19,300
Calls per Capita		0.039
Calls per Nonres. Trip		0.004
Calls per Total Veh Trip		0.001
Calls per UNC Pop and Job		0.057

[1] Based on information provided by ToCH Fire Dept

[2] Estimated number of UNC resident students and jobs

TOWN OF CARRBORO

Proportionate Share Factors

The same approach is taken for Carrboro Fire with costs allocated between residential and non-residential development. To do so, proportionate share factors are used. The Carrboro Fire Department does not currently track all calls by land use at this time. In lieu of calls for service by land use data, TischlerBise determined proportionate share factors based on demand by type of land use using “person hours,” thus reflecting residential versus non-residential activities. As shown above in Figure 111, residential demand accounts for 91 percent and non-residential 9 percent.

Fire Calls for Service Projection Factors

Most Fire costs are projected using calls for service factors. This info is used to determine a call per person and a call per non-residential trip to then project future calls for service from new development. The Town Fire Department provided total calls for service data for Fire and Rescue services; traffic calls were not able to be separated out.

To derive the call per demand unit factor, total calls are multiplied by the proportionate share factor then divided by the respective number of base year demand units. For example, the formula for calls per capita is $1,475 \text{ [calls for service]} \times 91 \text{ percent [residential share]} / 19,363 \text{ [base year population]} = .069 \text{ calls per capita}$. The call per nonresidential trip factor is used to project demand for services from new nonresidential development in Town.

Figure 114. Chapel Hill Fire Calls for Service Projection Factors

Fire/Rescue Calls for Service Data [1]			
Land Use	2007		Percent
Residential Land Uses	1,336		91%
Nonresidential Land Uses	139		9%
TOTAL CALLS FOR SERVICE	1,475		100.0%
Calls for Service Projection Factors			
Current Population		19,363	
Current Nonresidential Vehicle Trips		38,080	
Calls per Capita			0.069
Calls per Nonres. Trip			0.004

[1] Based on information provided by Carrboro Fire Department

TRANSIT SERVICE LEVELS

Transit costs are projected for each scenario in this analysis based on the current level of service provided by the Chapel Hill Transit system. The system is a partnership among Chapel Hill, Carrboro, and UNC. To project future demand based on current levels of service, a demand factor is used that reflects the amount of demand/usage today (reflected by number of service hours) serving population and employment base of Chapel Hill, Carrboro, and UNC (service area population and jobs.) Service area population and jobs is the total of population and jobs in Chapel Hill and Carrboro, which includes UNC demand base located within the two jurisdictions.

Figure 115. Transit Demand Factor

2007-08 Service Hours [1]	153,085
Service Area Population and Jobs [2]	118,969
Service hours per capita and job	1.3

[1] Chapel Hill Transit

[2] Chapel Hill and Carrboro population and jobs (includes UNC)

It should be noted that other analyses related to Transit are ongoing such as the Chapel Hill Long Range Transit Plan, Transit in Lieu Study, and the Carolina North Transportation Impact Study. These studies will look at options for long-term transit needs including changes to service levels and potential increased infrastructure investment (e.g., Bus Rapid Transit) and may result in a different approach to project costs. To date, these potential changes have not been finalized or adopted, therefore the Fiscal Impact Analysis is based on current levels of service as reflected in the FY08 budget, current demand, and capital assets. As such, the cost estimates are placeholders for purposes of this baseline fiscal analysis and future, more detailed analyses, such as through a TIA and transit plan for Carolina North may result in changes to these assumptions and cost factors.

VI. APPENDIX

APPENDIX A: EXPENDITURE PROJECTION MATRIX

A summary of expenditure projection assumptions is provided below.

Figure 116. Expenditure Assumptions Summary Matrix (All Jurisdictions)

	Chapel Hill		Orange County		Carrboro	
	Direct	Indirect	Direct	Indirect	Direct	Indirect
General Government	X	X	X	X		X
Planning/Community Development	X	X		X		X
Public Works						
Streets	X	X				X
Building and Grounds Maint	X	X		X		X
Engineering	X	X				
Inspections	X	X				
Solid Waste/Sanitation		X		X		X
Public Safety						
<i>Chapel Hill and Carrboro</i>						
Police	X (traffic)	X	See Sheriff	See Sheriff		X
Fire/EMS	X	X				X
<i>Orange County</i>						
Courts	na	na	X	X	na	na
Emergency Services-EMS	na	na	X	X	na	na
Emergency Services-Other	na	na		X	na	na
Sheriff	na	na	X	X	na	na
Parks/Recreation	X	X	X	X		X
Library	X	X		X		
Transportation/Transit	X	X				X
Human Services						
Aging	na	na		X	na	na
Health	na	na	X	X	na	na
Social Services	na	na		X	na	na
Other	na	na		X	na	na
Schools			X (CHCCS)	X (CHCCS & OCS)		

Note: "X" means there is an assumed impact on those services/facilities.

APPENDIX B: SCENARIO DETAIL

Further detail for each scenario is provided below. First, indirect assumptions are provided that includes estimates of total impacts region-wide and by jurisdiction at buildout of Phase I of Carolina North. This is followed by annual detail for each scenario that shows timing and projected demand factors (population, jobs, student enrollment, etc.) for all scenarios.

Figure 117. Indirect Impacts Assumptions

ASSUMPTIONS		Scenario 3 (Indirect Impacts of Scenario 1)			Scenario 4 (Indirect Impacts of Scenario 2)		
		2015	2020	2025	2015	2020	2025
Net New Jobs: Direct and Indirect	8,618 [1]	2,312	4,086	8,618	2,312	4,596	8,618
Residential Multiplier	0.45 HU to Job						
Projected Number of New Housing Units	3,863 [1]	1,155	2,239	3,863	1,155	3,048	3,863
Nonresidential Multiplier	1.4						
Direct New Jobs at Carolina North	3,591	965	1,707	3,591	964	2,307	3,591
Indirect Jobs	5,027	1,347	2,379	5,027	1,348	2,289	5,027

[1] The Chesapeake Group

Figure 118. Indirect Impacts Inputs (Residential)

RESIDENTIAL

Distribution by Jurisdiction				Distribution by Type*			Population		
Housing Units		% of total Units 2025		% new units		# of Units 2025	PPH		2025
Estimated number of new housing units	3,863	Chapel Hill	38%	1,468	SFD	32%	470	2.56	1,204
					SFA	20%	294	1.88	552
					MF	48%	705	1.80	1,268
TTL HOUSING UNITS	1,155	2,239	3,863	Total (check)	100%	1468			3,024

Carrboro		% of total Units 2025		% new units		# of Units 2025	PPH		2025
		8%	309	SFD	74%	229	2.49	569	
				SFA	16%	49	2.44	120	
				MF	10%	31	1.74	54	
				Total (check)	100%	309		743	

Other Orange County		% of total Units 2025		% new units		# of Units 2025	PPH		2025
		5%	193	SFD	87%	168	2.50	419	
				SFA/MF	13%	25	1.77	44	
				Total (check)	100%	193		464	

TOTAL (for study jurisdictions)	51%	1,970	1,970	4,231
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* Distribution of new units based on distribution from 2000-08 (provided by Orange County Planning for all jurisdictions)

School Impacts		CHCCS		Units		SGR-CHCCS				
				SFD	724	EL	MS	HS	2025	
				SFA	343	0.26	0.14	0.20	43	
				MF	736	0.16	0.08	0.12	12	
				Total	1802	0.04	0.02	0.02	5	
									60	
						SGROCS				
						EL	MS	HS	2025	
				SFD	143	0.17	0.09	0.13	5	
				SFA/MF	25	0.07	0.02	0.03	5	
				Total	168				5	

Note: Indirect impacts of Scenario 1 are shown above; buildout totals are same for indirect impacts of Scenario 1 and 2. (Annual detail is provided below.)

Figure 119. Indirect Impacts Inputs (Nonresidential)

NONRESIDENTIAL

Jobs		Distribution by Jurisdiction		Distribution by Type*		Nonresidential SF			
Estimated total number of Indirect JOBS			% of total	Jobs 2025		% new Jobs	Jobs 2025	SF/emp	2025
		Chapel Hill	22%	1,106	RETAIL	26%	288	350	100,635
					OFFICE	68%	752	241	181,545
					INDUSTRIAL	6%	66	784	52,039
					Total (check)	100%	1106		
		Carrboro	5%	251	RETAIL	41%	103	350	36,067
					OFFICE	43%	108	241	26,091
					INDUSTRIAL	16%	40	784	31,539
					Total (check)	100%	251		
		Other Orange County	5%	251	RETAIL	36%	90	350.00	31,668
					OFFICE	35%	88	241.42	21,237
					INDUSTRIAL	29%	73	784.27	57,164
					Total (check)	100%	251		
TO TAL (for study jurisdictions)		32%	1,609	1,609					

* Distribution of new jobs based on current distribution of non-institutional jobs.

* Distribution of new jobs based on current distribution of non-institutional jobs.

Note: Indirect impacts of Scenario 1 are shown; buildout totals are same for indirect impacts of Scenario 1 and 2. (Annual detail is provided below.)

Figure 120. Scenario 1 Annual Detail (cumulative)

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Increase
		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	
	University Population	0	0	75	150	225	270	306	334.8	357.84	450	450	450	450	450	450	450
	Private Population	0	0	50	125	149	180	204	223	239	301	301	301	301	301	301	301
	POPULATION	0	0	125	275	374	450	510	558	597	751	751	751	751	751	751	751
RESIDENTIAL UNIT PROJECTIONS																	
	Assessed Values (per unit)																
	\$0 University Housing	0	0	42	83	125	150	170	186	199	250	250	250	250	250	250	250
	\$92,000 Private Housing	0	0	28	69	83	100	113	124	133	167	167	167	167	167	167	167
	TOTAL UNITS	0	0	69	153	208	250	283	310	331	417	417	417	417	417	417	417
UNIVERSITY NONRESIDENTIAL SQUARE FOOTAGE PROJECTIONS																	
	Jobs	Assessed Values	INSTITUTIONAL														
419	\$0.00	Centers and Institutes I	0	0	0	122,000	122,000	122,000	122,000	122,000	122,000	122,000	122,000	122,000	122,000	122,000	122,000
321	\$0.00	Centers and Institutes II	0	0	0	0	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
100	\$0.00	Centers and Institutes III	0	0	0	0	0	0	0	0	93,000	93,000	93,000	93,000	93,000	93,000	93,000
249	\$0.00	Innovation Center*	85,000	85,000	85,000	85,000	85,000	85,000	85,000	85,000	85,000	85,000	85,000	85,000	85,000	85,000	85,000
150	\$0.00	Interdisciplinary Research Center	0	0	0	0	0	0	0	0	0	0	0	150,000	150,000	150,000	150,000
65	\$0.00	RENCI	0	0	0	0	0	0	170,000	170,000	170,000	170,000	170,000	170,000	170,000	170,000	170,000
112	\$0.00	School of Law	0	0	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000
400	\$0.00	School of Public Health	0	0	0	0	0	0	0	0	155,000	155,000	155,000	155,000	155,000	155,000	155,000
813	\$0.00	UNC Health Care System*	0	0	0	0	0	0	0	0	0	0	0	0	0	200,000	200,000
96	\$0.00	Carolina North Services Facility*	0	0	0	0	25,000	25,000	25,000	25,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000
	\$0.00	TOTAL INSTITUTIONAL SF	85,000	85,000	285,000	407,000	432,000	532,000	532,000	702,000	702,000	907,000	1,000,000	1,000,000	1,150,000	1,150,000	1,350,000
CORPORATE NONRESIDENTIAL SQUARE FOOTAGE PROJECTIONS																	
	Assessed Values (per SF)	CORPORATE OFFICE															
	\$340.00	Corporate Partners I	0	0	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000
	\$340.00	Corporate Partners II	0	0	0	0	0	128,000	128,000	128,000	128,000	128,000	128,000	128,000	128,000	128,000	128,000
	\$340.00	Corporate Partners III	0	0	0	0	0	0	0	0	0	0	157,000	157,000	157,000	157,000	157,000
	\$340.00	Corporate Partners IV	0	0	0	0	0	0	0	0	0	0	0	0	90,000	90,000	90,000
	\$340.00	TOTAL CORPORATE OFFICE SF	0	0	150,000	150,000	150,000	150,000	278,000	278,000	278,000	278,000	278,000	435,000	435,000	525,000	525,000
	RETAIL																
	\$175.00	Services	0	0	0	0	25,000	25,000	25,000	75,000	75,000	75,000	75,000	75,000	100,000	100,000	100,000
	\$175.00	TOTAL RETAIL SF	0	0	0	0	25,000	25,000	25,000	75,000	75,000	75,000	75,000	100,000	100,000	100,000	100,000
		GRAND TOTAL	85,000	85,000	435,000	557,000	607,000	707,000	835,000	1,055,000	1,055,000	1,260,000	1,353,000	1,510,000	1,685,000	1,775,000	1,975,000
JOBS PROJECTIONS																	
	On-Site	Institutional Jobs	249	249	361	780	812	1,133	1,133	1,198	1,198	1,662	1,762	1,762	1,912	1,912	2,725
		Corporate Office Jobs	0	0	600	600	600	600	1,112	1,112	1,112	1,112	1,112	1,740	1,740	2,100	2,100
		Retail Jobs	0	0	0	0	83	83	83	250	250	250	250	333	333	333	333
		TOTAL JOBS	249	249	961	1,380	1,495	1,816	2,328	2,560	2,560	3,024	3,124	3,752	3,985	4,345	5,158
	Net New	*New Institutional	249	249	249	249	281	281	281	281	345	345	345	345	345	1,158	1,158
		New Corporate Ofc	0	0	600	600	600	600	1,112	1,112	1,112	1,112	1,740	1,740	2,100	2,100	2,100
		New Retail	0	0	0	0	83	83	83	250	250	250	250	333	333	333	333
		TOTAL NEW	249	249	849	849	965	965	1,477	1,643	1,643	1,707	1,707	2,335	2,419	2,779	3,591
TRIPS																	
		Residential Trips	0	0	457	1,006	1,371	1,646	1,867	2,043	2,184	2,748	2,748	2,748	2,748	2,748	2,748
		Nonresidential Trips	2,276	2,276	5,299	9,125	10,524	13,455	15,162	17,972	17,972	22,206	23,119	25,213	27,691	28,891	36,314
		TOTAL TRIPS	2,276	2,276	5,756	10,131	11,895	15,101	17,029	20,015	20,156	24,954	25,867	27,961	30,439	31,639	39,062

Figure 121. Scenario 2 Annual Detail (cumulative)

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Increase
University Population		0	0	0	0	0	0	0	37.2	74.4	111.6	134.28	156.96	179.64	202.32	225	225
Private Population		0	0	0	0	0	0	0	75	112	225	270	315	360	405	450	450
POPULATION		0	0	0	0	0	0	0	112	187	337	404	472	540	607	675	675
RESIDENTIAL UNIT PROJECTIONS																	
Assessed Values (per unit)																	
\$0	MF-University Housing	0	0	0	0	0	0	0	21	41	62	75	87	100	112	125	125
\$92,000	MF-Private Housing	0	0	0	0	0	0	0	42	62	125	150	175	200	225	250	250
TOTAL UNITS		0	0	0	0	0	0	0	62	104	187	225	262	300	337	375	375
UNIVERSITY NONRESIDENTIAL SQUARE FOOTAGE PROJECTIONS																	
Jobs	Assessed Values																
419	\$0.00	Centers and Institutes I	0	0	0	122,000	122,000	122,000	122,000	122,000	122,000	122,000	122,000	122,000	122,000	122,000	122,000
321	\$0.00	Centers and Institutes II	0	0	0	0	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
100	\$0.00	Centers and Institutes III	0	0	0	0	0	0	0	0	0	93,000	93,000	93,000	93,000	93,000	93,000
249	\$0.00	Innovation Center	85,000	85,000	85,000	85,000	85,000	85,000	85,000	85,000	85,000	85,000	85,000	85,000	85,000	85,000	85,000
150	\$0.00	Interdisciplinary Research Center	0	0	0	0	0	0	0	0	0	0	0	150,000	150,000	150,000	150,000
65	\$0.00	RENCI	0	0	0	0	0	0	170,000	170,000	170,000	170,000	170,000	170,000	170,000	170,000	170,000
112	\$0.00	School of Law	0	0	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000
400	\$0.00	School of Public Health	0	0	0	0	0	0	0	0	155,000	155,000	155,000	155,000	155,000	155,000	155,000
873	\$0.00	UNC Health Care System	0	0	0	0	0	0	0	0	0	0	0	0	0	200,000	200,000
96	\$0.00	Carolina North Services Facility	0	0	0	0	25,000	25,000	25,000	25,000	25,000	75,000	75,000	75,000	75,000	75,000	75,000
TOTAL INSTITUTIONAL SF		85,000	85,000	285,000	407,000	432,000	532,000	532,000	702,000	702,000	907,000	1,000,000	1,000,000	1,150,000	1,150,000	1,350,000	1,350,000
CORPORATE NONRESIDENTIAL SQUARE FOOTAGE PROJECTIONS																	
Assessed Values (per SF)																	
CORPORATE OFFICE																	
\$340.00	Corporate Partners I	0	0	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000
\$340.00	Corporate Partners II	0	0	0	0	0	0	128,000	128,000	128,000	128,000	128,000	128,000	128,000	128,000	128,000	128,000
\$340.00	Corporate Partners III	0	0	0	0	0	0	0	0	0	0	0	97,000	97,000	97,000	97,000	97,000
\$340.00	Corporate Partners IV	0	0	0	0	0	0	0	0	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000
\$340.00	TOTAL CORPORATE OFFICE SF	0	0	150,000	150,000	150,000	150,000	278,000	278,000	428,000	428,000	428,000	525,000	525,000	525,000	525,000	525,000
RETAIL																	
\$175.00	Services	0	0	0	0	25,000	25,000	25,000	75,000	75,000	75,000	75,000	75,000	100,000	100,000	100,000	100,000
\$175.00	TOTAL RETAIL SF	0	0	0	0	25,000	25,000	25,000	75,000	75,000	75,000	75,000	75,000	100,000	100,000	100,000	100,000
GRAND TOTAL		85,000	85,000	435,000	557,000	607,000	707,000	835,000	1,055,000	1,205,000	1,410,000	1,503,000	1,600,000	1,775,000	1,775,000	1,975,000	1,975,000
JOBS PROJECTIONS																	
On-Site																	
249	Institutional Jobs	249	249	361	780	812	1,133	1,133	1,198	1,198	1,662	1,762	1,762	1,912	1,912	2,725	2,725
0	Corporate Office Jobs	0	0	600	600	600	600	1,112	1,112	1,712	1,712	1,712	2,100	2,100	2,100	2,100	2,100
0	Retail Jobs	0	0	0	0	83	83	83	250	250	250	250	250	333	333	333	333
TOTAL JOBS		249	249	961	1,380	1,495	1,816	2,328	2,560	3,160	3,624	3,724	4,112	4,345	4,345	5,158	5,158
Net New																	
249	New Institutional	249	249	249	249	281	281	281	281	281	345	345	345	345	345	1,158	1,158
0	New Corporate Ofc	0	0	600	600	600	600	1,112	1,112	1,712	1,712	1,712	2,100	2,100	2,100	2,100	2,100
0	New Retail	0	0	0	0	83	83	83	250	250	250	250	250	333	333	333	333
TOTAL NEW		249	249	849	849	964	964	1,476	1,643	2,243	2,307	2,307	2,695	2,778	2,778	3,591	3,591
TRIPS																	
Residential Trips		0	0	0	0	0	0	0	411	683	1,232	1,480	1,728	1,976	2,223	2,471	
Nonresidential Trips		2,276	2,276	5,299	9,125	10,524	13,455	15,162	17,972	19,973	24,207	25,120	26,414	28,891	28,891	36,314	38,785
TOTAL TRIPS		2,276	2,276	5,299	9,125	10,524	13,455	15,162	18,382	20,656	25,439	26,600	28,142	30,867	31,115	38,785	38,785

Figure 122. Indirect Scenarios: Indirect of Scenario 1 Annual Detail (cumulative)

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Increase
POPULATION																	
	CHAPEL HILL POPULATION			301	603	904	1,074	1,244	1,413	1,583	1,753	2,007	2,261	2,516	2,770	3,024	3,024
	CARRBORO POPULATION			74	148	222	264	306	347	389	431	493	556	618	681	743	743
	OTH ORANGE POPULATION			46	92	139	165	191	217	243	269	308	347	386	425	464	464
	ORANGE POPULATION			410	819	1,229	1,459	1,690	1,921	2,151	2,382	2,728	3,073	3,419	3,764	4,110	4,110
RESIDENTIAL UNIT PROJECTIONS																	
Assessed Values (per unit)																	
CH	\$525,000 Chapel Hill SFD			47	94	140	167	193	220	246	272	312	351	391	430	470	470
	\$280,000 Chapel Hill SFA			29	59	88	104	121	137	154	170	195	220	244	269	294	294
	\$160,000 Chapel Hill MF			70	140	211	250	290	329	369	408	468	527	586	645	705	705
	CHAPEL HILL TOTAL UNITS			146	293	439	521	604	686	768	851	974	1,098	1,221	1,345	1,468	1,468
CARR	\$435,000 Carrboro SFD			23	46	68	81	94	107	120	133	152	171	190	209	229	229
	\$240,000 Carrboro SFA			5	10	15	18	20	23	26	29	33	37	41	45	49	49
	\$140,000 Carrboro MF			3	6	9	11	13	14	16	18	21	23	26	28	31	31
	CARRBORO TOTAL UNITS			31	62	92	110	127	144	162	179	205	231	257	283	309	309
OTHER OC	\$238,000 Oth Orange SFD			17	33	50	60	69	79	88	97	112	126	140	154	168	168
	\$100,000 Oth Orange SFA/MF			3	5	8	9	10	12	13	15	17	19	21	23	25	25
	OTH ORANGE TOTAL UNITS			19	39	58	69	79	90	101	112	128	144	161	177	193	193
OC TOTAL	\$0 ORANGE SFD			84	169	253	301	349	396	444	491	563	634	705	776	848	848
	\$0 ORANGE SFA/MF			106	212	318	378	437	497	557	617	706	795	885	974	1,064	1,064
	ORANGE TOTAL UNITS			190	381	571	679	786	893	1,001	1,108	1,269	1,429	1,590	1,751	1,911	1,911
ENROLLMENT PROJECTIONS																	
CHCCS	CHCCS ELEM			27	54	81	97	112	127	143	158	181	204	227	250	272	272
	CHCCS MS			14	28	42	50	58	66	74	82	94	105	117	129	141	141
	CHCCS HS			19	39	58	69	80	91	102	113	129	145	162	178	195	195
	CHCCS ENROLLMENT			61	121	182	216	250	284	318	352	403	455	506	557	608	608
OCS	OCS ELEM			3	5	8	9	11	12	13	15	17	19	21	23	26	26
	OCS MS			1	3	4	5	6	6	7	8	9	10	11	12	13	13
	OCS HS			2	4	6	7	8	9	10	11	13	14	16	17	19	19
	OCS ENROLLMENT			6	12	17	21	24	27	30	34	38	43	48	53	58	58

Figure 123. Indirect Scenarios: Indirect of Scenario 1 Annual Detail (cont'd)

EMPLOYMENT PROJECTIONS																
CH	Chapel Hill Retail	26	51	77	89	101	112	124	136	166	197	227	257	288	288	
	Chapel Hill Office	67	134	202	232	263	294	325	356	435	514	594	673	752	752	
	Chapel Hill Industrial	6	12	18	21	23	26	29	31	38	45	52	59	66	66	
	CHAPEL HILL TOTAL JOBS	99	198	296	342	387	433	478	523	640	756	873	989	1,106	1,106	
CARR	Carrboro Retail	9	18	28	32	36	40	45	49	60	70	81	92	103	103	
	Carrboro Office	10	19	29	33	38	42	47	51	63	74	85	97	108	108	
	Carrboro Industrial	4	7	11	12	14	16	17	19	23	28	32	36	40	40	
	CARRBORO TOTAL JOBS	22	45	67	78	88	98	109	119	145	172	198	225	251	251	
OTHER OC	Oth Orange Retail	8	16	24	28	32	35	39	43	52	62	71	81	90	90	
	Oth Orange Office	8	16	24	27	31	34	38	42	51	60	69	79	88	88	
	Oth Orange Industrial	7	13	20	23	26	29	32	34	42	50	58	65	73	73	
	OTH ORANGE TOTAL JOBS	22	45	67	78	88	98	109	119	145	172	198	225	251	251	
OC TOTAL	Orange Retail	42	84	126	145	164	184	203	222	272	321	371	420	470	470	
	Orange Office	82	164	246	284	321	359	397	434	531	628	725	821	918	918	
	Orange Industrial	16	32	47	55	62	69	76	84	102	121	140	158	177	177	
	ORANGE TOTAL JOBS	140	280	419	484	548	612	676	740	905	1,070	1,235	1,400	1,564	1,564	
NONRESIDENTIAL SF PROJECTIONS																
Assessed Values																
CH	\$175 Chapel Hill Retail SF	8,992	17,983	26,975	31,104	35,234	39,363	43,493	47,622	58,226	68,830	79,433	90,037	100,641	100,641	
	\$235 Chapel Hill Office SF	16,221	32,442	48,663	56,112	63,562	71,011	78,461	85,910	105,039	124,168	143,297	162,426	181,555	181,555	
	\$60 Chapel Hill Industrial SF	4,650	9,299	13,949	16,084	18,220	20,355	22,490	24,626	30,109	35,592	41,075	46,558	52,042	52,042	
	CHAPEL HILL TOTAL SF	29,862	59,724	89,586	103,301	117,015	130,729	144,444	158,158	193,374	228,590	263,806	299,021	334,237	334,237	
CARR	\$160 Carrboro Retail SF	3,223	6,445	9,668	11,148	12,628	14,107	15,587	17,067	20,868	24,668	28,468	32,268	36,069	36,069	
	\$185 Carrboro Office SF	2,331	4,662	6,994	8,064	9,135	10,205	11,276	12,347	15,096	17,845	20,594	23,343	26,092	26,092	
	\$60 Carrboro Industrial SF	2,818	5,636	8,454	9,748	11,042	12,336	13,630	14,925	18,248	21,571	24,894	28,217	31,540	31,540	
	CARRBORO TOTAL SF	8,372	16,743	25,115	28,960	32,805	36,649	40,494	44,339	54,211	64,084	73,956	83,829	93,702	93,702	
OTHER OC	\$150 Oth Orange Retail SF	2,830	5,659	8,489	9,788	11,088	12,387	13,687	14,986	18,323	21,660	24,996	28,333	31,670	31,670	
	\$150 Oth Orange Office SF	1,897	3,795	5,692	6,564	7,435	8,307	9,178	10,050	12,287	14,525	16,763	19,000	21,238	21,238	
	\$55 Oth Orange Industrial SF	5,108	10,215	15,323	17,668	20,014	22,360	24,705	27,051	33,074	39,097	45,121	51,144	57,167	57,167	
	OTH ORANGE TOTAL SF	9,835	19,669	29,504	34,020	38,537	43,053	47,570	52,087	63,684	75,282	86,880	98,477	110,075	110,075	
OC TOTAL	Orange Retail SF	14,684	29,368	44,052	50,796	57,540	64,283	71,027	77,771	95,087	112,404	129,721	147,037	164,354	164,354	
	Orange Office SF	19,801	39,602	59,402	68,496	77,589	86,683	95,777	104,870	128,221	151,571	174,922	198,273	221,623	221,623	
	Orange Industrial SF	12,389	24,778	37,167	42,857	48,547	54,237	59,926	65,616	80,226	94,837	109,447	124,057	138,667	138,667	
	ORANGE TOTAL SF	46,874	93,748	140,622	162,149	183,676	205,203	226,730	248,257	303,535	358,812	414,089	469,367	524,644	524,644	
VEHICLE TRIPS																
	CHAPEL HILL RES TRIPS	1,082	2,165	3,247	3,856	4,466	5,075	5,685	6,294	7,207	8,120	9,033	9,946	10,859	10,859	
	CHAPEL HILL NONRES TRIPS	610	1,219	1,829	2,108	2,388	2,668	2,948	3,228	3,947	4,666	5,384	6,103	6,822	6,822	
	CHAPEL HILL TOTAL TRIPS	1,692	3,384	5,075	5,965	6,854	7,743	8,633	9,522	11,154	12,786	14,418	16,049	17,681	17,681	
	CARRBORO RES TRIPS	267	535	802	952	1,103	1,253	1,404	1,554	1,780	2,005	2,231	2,456	2,682	2,682	
	CARRBORO NONRES TRIPS	188	376	564	651	737	824	910	996	1,218	1,440	1,662	1,884	2,106	2,106	
	CARRBORO TOTAL TRIPS	455	911	1,366	1,603	1,840	2,077	2,314	2,551	2,998	3,446	3,893	4,340	4,788	4,788	

Figure 124. Indirect Scenarios: Indirect of Scenario 2 Annual Detail (cumulative)

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Increase
POPULATION																	
	CHAPEL HILL POPULATION			301	603	904	1,201	1,497	1,793	2,090	2,386	2,514	2,641	2,769	2,897	3,024	3,024
	CARRBORO POPULATION			74	148	222	295	368	441	514	586	618	649	680	712	743	743
	OTH ORANGE POPULATION			46	92	139	184	229	275	320	366	385	405	424	444	464	464
	ORANGE POPULATION			410	819	1,229	1,632	2,034	2,437	2,840	3,243	3,416	3,590	3,763	3,937	4,110	4,110
RESIDENTIAL UNIT PROJECTIONS																	
Assessed Values (per unit)																	
CH	\$525,000 Chapel Hill SFD			47	94	140	186	233	279	325	371	390	410	430	450	470	470
	\$280,000 Chapel Hill SFA			29	59	88	117	145	174	203	232	244	256	269	281	294	294
	\$160,000 Chapel Hill MF			70	140	211	280	349	418	487	556	586	615	645	675	705	705
	CHAPEL HILL TOTAL UNITS			146	293	439	583	727	871	1,014	1,158	1,220	1,282	1,344	1,406	1,468	1,468
CARR	\$435,000 Carrboro SFD			23	46	68	91	113	136	158	180	190	200	209	219	229	229
	\$240,000 Carrboro SFA			5	10	15	20	24	29	34	39	41	43	45	47	49	49
	\$140,000 Carrboro MF			3	6	9	12	15	18	21	24	26	27	28	30	31	31
	CARRBORO TOTAL UNITS			31	62	92	123	153	183	214	244	257	270	283	296	309	309
OTHER OC	\$238,000 Oth Orange SFD			17	33	50	67	83	100	116	133	140	147	154	161	168	168
	\$100,000 Oth Orange SFA/MF			3	5	8	10	12	15	17	20	21	22	23	24	25	25
	OTH ORANGE TOTAL UNITS			19	39	58	77	96	115	133	152	161	169	177	185	193	193
OC TOTAL	\$0 ORANGE SFD			84	169	253	337	420	503	586	669	705	740	776	812	848	848
	\$0 ORANGE SFA/MF			106	212	318	422	527	631	735	839	884	929	974	1,019	1,064	1,064
	ORANGE TOTAL UNITS			190	381	571	759	946	1,133	1,321	1,508	1,589	1,669	1,750	1,831	1,911	1,911
ENROLLMENT PROJECTIONS																	
CHCCS	CHCCS ELEM			27	54	81	108	135	162	188	215	226	238	249	261	272	272
	CHCCS MS			14	28	42	56	70	84	97	111	117	123	129	135	141	141
	CHCCS HS			19	39	58	77	96	115	134	153	162	170	178	186	195	195
	CHCCS ENROLLMENT			61	121	182	241	301	360	420	480	505	531	557	582	608	608
OCS	OCS ELEM			3	5	8	10	13	15	18	20	21	22	23	25	26	26
	OCS MS			1	3	4	5	7	8	9	11	11	12	12	13	13	13
	OCS HS			2	4	6	7	9	11	13	15	16	16	17	18	19	19
	OCS ENROLLMENT			6	12	17	23	29	34	40	46	48	51	53	55	58	58

Figure 125. Indirect Scenarios: Indirect of Scenario 2 Annual Detail (cont'd)

EMPLOYMENT PROJECTIONS															
CH	Chapel Hill Retail	26	51	77	88	99	109	120	131	162	194	225	256	288	288
	Chapel Hill Office	67	134	202	230	258	286	314	342	424	506	588	670	752	752
	Chapel Hill Industrial	6	12	18	20	23	25	28	30	37	45	52	59	66	66
	CHAPEL HILL TOTAL JOBS	99	198	296	338	379	421	462	504	624	745	865	985	1,106	1,106
CARR	Carrboro Retail	9	18	28	31	35	39	43	47	58	69	81	92	103	103
	Carrboro Office	10	19	29	33	37	41	45	49	61	73	85	96	108	108
	Carrboro Industrial	4	7	11	12	14	15	17	18	23	27	31	36	40	40
	CARRBORO TOTAL JOBS	22	45	67	77	86	96	105	114	142	169	197	224	251	251
OTHER OC	Oth Orange Retail	8	16	24	28	31	34	38	41	51	61	71	81	90	90
	Oth Orange Office	8	16	24	27	30	33	37	40	50	59	69	78	88	88
	Oth Orange Industrial	7	13	20	22	25	28	30	33	41	49	57	65	73	73
	OTH ORANGE TOTAL JOBS	22	45	67	77	86	96	105	114	142	169	197	224	251	251
OC TOTAL	Orange Retail	42	84	126	143	161	179	196	214	265	316	367	418	470	470
	Orange Office	82	164	246	280	315	349	384	418	518	618	718	818	918	918
	Orange Industrial	16	32	47	54	61	67	74	81	100	119	138	158	177	177
	ORANGE TOTAL JOBS	140	280	419	478	537	595	654	712	883	1,053	1,224	1,394	1,564	1,564
NONRESIDENTIAL SF PROJECTIONS															
Assessed Values															
CH	\$175 Chapel Hill Retail SF	8,992	17,985	26,977	30,747	34,517	38,287	42,057	45,827	56,789	67,750	78,712	89,674	100,635	100,635
	\$235 Chapel Hill Office SF	16,222	32,444	48,667	55,468	62,269	69,070	75,871	82,672	102,447	122,221	141,996	161,771	181,545	181,545
	\$60 Chapel Hill Industrial SF	4,650	9,300	13,950	15,899	17,849	19,798	21,748	23,697	29,366	35,034	40,702	46,371	52,039	52,039
	CHAPEL HILL TOTAL SF	29,865	59,729	89,594	102,114	114,635	127,155	139,676	152,197	188,601	225,006	261,410	297,815	334,220	334,220
CARR	\$160 Carrboro Retail SF	3,223	6,446	9,668	11,020	12,371	13,722	15,073	16,424	20,353	24,281	28,210	32,138	36,067	36,067
	\$185 Carrboro Office SF	2,331	4,663	6,994	7,972	8,949	9,926	10,904	11,881	14,723	17,565	20,407	23,249	26,091	26,091
	\$60 Carrboro Industrial SF	2,818	5,636	8,455	9,636	10,818	11,999	13,181	14,362	17,797	21,233	24,668	28,103	31,539	31,539
	CARRBORO TOTAL SF	8,372	16,745	25,117	28,627	32,137	35,647	39,157	42,667	52,873	63,079	73,285	83,491	93,697	93,697
OTHER OC	\$150 Oth Orange Retail SF	2,830	5,660	8,489	9,676	10,862	12,048	13,235	14,421	17,871	21,320	24,770	28,219	31,668	31,668
	\$150 Oth Orange Office SF	1,898	3,795	5,693	6,489	7,284	8,080	8,875	9,671	11,984	14,297	16,611	18,924	21,237	21,237
	\$55 Oth Orange Industrial SF	5,108	10,216	15,324	17,465	19,607	21,748	23,890	26,031	32,258	38,484	44,711	50,937	57,164	57,164
	OTH ORANGE TOTAL SF	9,835	19,671	29,506	33,630	37,753	41,876	46,000	50,123	62,112	74,102	86,091	98,080	110,069	110,069
OC TOTAL	Orange Retail SF	14,685	29,371	44,056	50,213	56,369	62,526	68,683	74,839	92,740	110,642	128,543	146,444	164,345	164,345
	Orange Office SF	19,802	39,605	59,407	67,709	76,011	84,313	92,615	100,917	125,056	149,195	173,334	197,473	221,612	221,612
	Orange Industrial SF	12,390	24,780	37,170	42,365	47,559	52,754	57,948	63,143	78,246	93,350	108,453	123,557	138,660	138,660
	ORANGE TOTAL SF	46,878	93,756	140,633	160,287	179,940	199,593	219,246	238,899	296,043	353,186	410,330	467,473	524,617	524,617
VEHICLE TRIPS															
	CHAPEL HILL RES TRIPS	1,082	2,165	3,247	4,311	5,375	6,440	7,504	8,568	9,026	9,485	9,943	10,401	10,859	10,859
	CHAPEL HILL NONRES TRIPS	610	1,219	1,829	2,084	2,340	2,595	2,851	3,106	3,849	4,593	5,336	6,079	6,822	6,822
	CHAPEL HILL TOTAL TRIPS	1,692	3,384	5,075	6,395	7,715	9,035	10,355	11,675	12,876	14,077	15,278	16,480	17,681	17,681
	CARRBORO RES TRIPS	267	535	802	1,065	1,328	1,590	1,853	2,116	2,229	2,342	2,456	2,569	2,682	2,682
	CARRBORO NONRES TRIPS	188	376	564	643	722	801	880	959	1,188	1,418	1,647	1,876	2,106	2,106
	CARRBORO TOTAL TRIPS	455	911	1,366	1,708	2,050	2,392	2,733	3,075	3,417	3,760	4,103	4,445	4,788	4,788