

FACILITATED SMALL AREA PLAN FOR CARRBORO'S NORTHERN STUDY AREA

Joint Planning Area resolutions incorporating this plan were adopted by three governing bodies to agreement as follows:

Adopted by:
Carrboro Board of Aldermen; May 26, 1998

Adopted by:
Chapel Hill Town Council; June 08, 1998

Adopted by:
Orange County Board of Commissioners; February 02, 1999

ACKNOWLEDGMENTS

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(Seated Board at the inception of the Plan, 10/06/92)

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(Seated Board at the inception of the Plan, 10/06/92)

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FOREWORD

This document provides a Small Area Plan for the future use of the land within Carrboro's northern growth area, referred to as the Northern Study Area. This plan is unique insofar as the process undertaken to produce a policy document in keeping with the needs and desires of the Town of Carrboro, Citizens of Carrboro, and the Residents of the unincorporated areas. The first draft of this plan was presented to the town in February of 1996 by the 31-member "Small Area Planning Work Group" created by the Carrboro Board of Aldermen in 1992. As a result of concerns registered by some residents, particularly residents of the unincorporated portions of the northern study area, the Carrboro Board of Aldermen referred the plan to a two day facilitated planning conference. The two day meeting provided an open forum to afford citizens, property owners, and residents the opportunity to participate in the planning for future of the northern study area. This two day meeting was jointly sponsored by all three members to the 1987 Joint Planning Agreement, namely: Carrboro, Chapel Hill, and Orange County. The Orange County Dispute Settlement Center facilitated the meeting and Randall Arendt, a planner with the Natural Lands Trust, provided professional planning assistance.

The first of the two day meeting process was held on April 19, 1997 at the McDougle Middle School in Carrboro. The first half of this meeting focused on providing participants with an insight on current planning issues associated with the study area, a review of zoning concepts and enabling legislation, projections on future growth and development, and background information regarding the people and history of the study area. The second half of the meeting was devoted to the identification of values, interests, and concerns about the future development of the study area. The participants, numbering almost 150 people, divided into 13 small work groups to articulate their values, interests, and concerns with the assistance of group facilitators. After meeting for almost two hours the breakout groups reconvened as a full group to present their lists of values, interests, and concerns. These reports were refined by the full group and along with a visual preference survey were presented to Randall Arendt to draft a plan for the study area which would be the focus of the second meeting.

The second meeting, held on May 31, 1997, was devoted to receiving the plan from Randall Arendt and reaching consensus on a Small Area Plan for the Northern Study Area's growth over the next 20 years. People attending this meeting, broke into small groups, reported their conclusions to the full group, and produced a list of planning policies and principals on which consensus by the full group was reached. This document incorporates the consensus of the two-day facilitated conference into a revised small area plan for further consideration and adoption by the Town of Carrboro, the Town of Chapel Hill, and Orange County under the terms of the 1987 Joint Planning Agreement.

ACKNOWLEDGMENTS *i*
FOREWORD *iv*

TABLE OF CONTENTS

SECTION 1 **THE SMALL AREA PLANNING PROCESS** **1**

INTRODUCTION 1
CARRBORO’S SMALL AREA PLANNING WORK GROUP CHARGE 1
FACILITATED SMALL AREA PLAN 2
GOALS & OBJECTIVES 3
 Street Connections 3
 Greenway Corridors & Parks 3
 Agriculture 3
 Mixed-Use Village Centers 4
 Housing Availability 4
 Property Tax Assessment 5
STUDY AREA BOUNDARIES 5
 Rogers Road 5
MAPS 5
 Context Maps 5
 Structure Maps 5
 Mapping Accuracy 5
 Conservation Lands 5
LAND USE ORDINANCE CHANGES 6
 Update Land Use Ordinance 6
PROCESS 6
 Review Process 6
CARRBORO’S JOINT PLANNING TRANSITION AREA 6

SECTION 2 EXISTING AND EMERGING CONDITIONS **10**

INTRODUCTION 10
EXISTING CONDITIONS 10
 Boundaries of the Study Area 10
NATURAL FEATURES 10
 General Description 10
 Unique Natural Areas 11
 Water Resources 11
 Soils and Slopes 11
 Primary and Secondary Conservation Areas 11
DEMOGRAPHIC FEATURES -- TOWN OF CARRBORO POPULATION TRENDS AND PROJECTIONS 15
1960-2010 POPULATION AND PROJECTIONS 15
 Population Composition by Age and Sex 16
 Population by Race 18
 Migration Patterns 19
 Income 19
 Transportation to Work 20
 Place of Work: 20
 Travel Time: 21
 Economy 23
HOUSING AFFORDABILITY 25
 Development Features 25
 Land Uses 25
 Horace Williams Tract 25
 Duke Forest 26
 Transportation Network 26

Utilities.....	26
Municipal Parks	26
Schools.....	27
Historical and Archeological Properties.....	27
EMERGING CONDITIONS	28
<i>Demographic Change</i>	28
Transportation to Work	28
<i>Future Development</i>	28
Horace Williams Tract	28
Transportation Network	28
Community Facilities	29
SECTION 3 GENERAL PRINCIPLES	31
INTRODUCTION.....	31
DEVELOPMENT PRINCIPLES	31
<i>Small-Town Character (Objective 2.40, Carrboro’s Year 2000 Task Force Policies)</i>	31
<i>Housing for a Diverse Population (Objective 2.50, Carrboro’s Year 2000 Task Force Policies)</i>	31
<i>Citizens Concern and Participation (Objective 2.70, Carrboro’s Year 2000 Task Force Policies)</i>	32
<i>Preservation of the Natural Environment (Objective 2.20, Carrboro’s Year 2000 Task Force Policies)</i>	32
<i>Attractiveness of Developed Environment (Objective 2.30, Carrboro’s Year 2000 Task Force Policies)</i>	32
<i>Economic Development (Goal 3.0, Carrboro’s Year 2000 Task Force Policies)</i>	33
<i>Diverse Housing Types, Sizes and Costs</i>	34
<i>Transportation (Goal 4.0, Carrboro’s Year 2000 Task Force Policies)</i>	34
<i>Roadway Network</i>	35
<i>Public Transit (Bus)</i>	35
<i>Bicycle and Pedestrian Travel</i>	36
<i>Established Routes</i>	36
<i>Transportation Requirements for Developers</i>	37
<i>Public Services and Amenities</i>	37
<i>Recreation and Parks</i>	37
<i>Police, Fire, Public Works</i>	38
PLANNING CONCEPTS.....	38
<i>Conservation of Natural and Environmentally Sensitive Areas</i>	38
<i>Patterns of Development</i>	38
Neo-Traditional/Mixed Use Village Concept.....	38
Cluster/Open Space/Neighborhood Developments	40
Sustainable Development.....	41
GOALS AND OBJECTIVES - CARRBORO’S NORTHERN STUDY AREA.....	41
SECTION 4 THE RECOMMENDED SMALL AREA PLAN.....	46
INTRODUCTION - PUTTING IT INTO PERSPECTIVE	46
STUDY AREA LAND USE PLAN	47
<i>FLOATING ZONES – Residential</i>	47
<i>FLOATING ZONES - Commercial</i>	50
<i>PUBLIC FACILITIES</i>	50
<i>PARKS, GREENWAYS, AND NATURAL AREAS</i>	50
IMPACT ASSESSMENT AND PLAN EVALUATION	51
INVOLVED PARTIES	51
State of North Carolina	51
Orange County/Chapel Hill.....	52
University of North Carolina.....	52
Orange Water and Sewer Authority (OWASA)	53
SECTION 5 IMPLEMENTATION	55
INTRODUCTION.....	55
IMPLEMENTATION MEASURES	55

REFERENCE MAPS.....68

A-1 DEVELOPMENT PATTERNS..... 68

A-2 HYDROLOGY..... 68

A-3 TOPOGRAPHY..... 68

A-4 AREAS WITH WATER & SEWER..... 68

A-5 TRANSIT ROUTES..... 68

A-6 NATURAL AREAS..... 68

A-7 PARKS & GREENWAYS..... 68

A-8 CONSTRAINED SOILS..... 68

A-9 UTILITIES & RAIL ROADS..... 68

A-10 VEGETATION PATTERNS..... 68

APPENDICES.....69

APPENDIX A: FUNDING AND REVENUE SOURCES..... 70

APPENDIX B: THE CONNECTOR ROADS PLAN FOR THE NORTHERN AREA..... 75

APPENDIX C: INVENTORY OF HISTORICAL AND ARCHAEOLOGICAL SITES WITHIN CARRBORO’S JURISDICTION ... 79

APPENDIX D: GLOSSARY OF TERMS..... 90

REFERENCE MATERIAL.....93

SECTION 1 THE SMALL AREA PLANNING PROCESS

INTRODUCTION

A small area plan is a detailed plan for the growth and development of a sub-area of a town or city. Usually, small area plans are components of a town's overall comprehensive plan. Most comprehensive plans include several small area plans, depending upon the size of the town's planning area. For example, Chapel Hill expects to produce three (3) small area plans; Durham has fifteen (15) small area plans.

The small area planning process can have several important benefits. Small area plans include thorough descriptions of the environmental constraints to development. This information can allow developers to propose and the Board of Aldermen to evaluate and approve desirable and sensitive land development proposals. Small area plans also give the community a sense of the costs of major public facilities that will eventually be needed. This information gives the Aldermen better control over the timing of development and related facilities, so that needed public facilities are coordinated with land uses and provided in a timely and cost-efficient manner. Small area plans are developed with significant citizen input, enabling residents of the small area and citizens of the town to have an active voice in how the small areas develop at the outset; thus avoiding the situation where citizens only react to development proposals after the fact.

CARRBORO'S SMALL AREA PLANNING WORK GROUP CHARGE

The work of the Small Area Planning Work Group was guided by the Board of Aldermen's charge to the committee. On October 6, 1992, the Board of Aldermen adopted the following charge for the Carrboro Small Area Planning Work Group:

At a minimum, the Small Area Planning Work Group was to address the following issues:

1. Patterns of growth and their impacts.
2. Efficient provision of Town services.
3. Conservation of farmland, natural areas, and environmentally sensitive areas.
4. Providing a diverse range of housing types and costs.
5. Provision of adequate transportation routes including public, private, mass transit, automobile, bicycle, and pedestrian.
6. Provision of publicly accessible parks and recreation facilities.
7. Maintenance of the Town character and preservation of existing neighborhoods.
8. Encouragement of pedestrian scale.
9. Protection of the character and natural beauty of the area

In the case of the Small Area Planning Work Group (SAPWG), the 31-member committee devoted over two years of research and deliberation to the formation of this small area plan. Public meetings were held periodically throughout that time. The SAPWG's effort

culminated with a public hearing conducted by the Board of Aldermen on February 6, 1996. As a result of the public hearing the Aldermen voted on March 19, 1996 to:

1. Authorize the establishment of the facilitation steering committee to consist of:
 - * Two (2) members of the Orange County Board of Commissioners,
 - * Up to two (2) members of the Chapel Hill Town Council,
 - * Three (3) members of the Carrboro Board of Aldermen,
 - * Representatives from the neighborhoods located within the Study Area,
 - * One (1) member from the Small Area Planning Work Group.
2. That the Orange County Board of Commissioners, Chapel Hill Town Council, and Carrboro Small Area Planning Work Group be requested to nominate individuals to serve on the committee;
3. That the Town of Carrboro pay the Public Disputes Coordinator with the Orange County Dispute Settlement Center to assist the Facilitation Steering Committee;
4. Charge the committee to:
 - * Meet and agree on the goals of an inclusive process for the facilitated meeting;
 - * Plan a facilitated meeting by consensus;
 - * Prepare a budget recommendation that addresses the issue of sharing the costs for the facilitated meeting with the jurisdictions having an interest in the planning process;
 - * Coordinate the logistics of scheduling and setting up the facilitated meeting;
 - * Review the time-line for adoption of the small area plan;
 - * That the committee identify specific groups or individuals affected by the small area plan.

On October 22, 1996 the Board of Aldermen adopted a resolution commending the work of the Small Area Planning Work Group and officially dissolving that work group.

FACILITATED SMALL AREA PLAN

The Town of Carrboro, the Town of Chapel Hill, and Orange County jointly sponsored a two day open forum held on April 19 and May 31, 1997. The two-day meeting was held to provide an opportunity for interested citizens to participate in the planning of future development of the Northern Study Area. The goal of the meeting was to reach consensus on a Small Area Plan for the area's growth over the next twenty (20) years. The two meetings were facilitated by the Orange County Dispute Settlement Center and Randall Arendt with the Natural Land Trust served as the "expert" planner.

This plan represents the consensus gained through the efforts of the two day open forum. Overall, the recommendation was to accept the Draft Plan as a reasonable starting point for a revised plan that builds and incorporates the following ideas:

GOALS & OBJECTIVES

Street Connections

1. EUBANKS ROAD: Re-examine policy to extend Eubanks Road as a vehicular thoroughfare in the location shown on official documents, which might be more appropriate as a rustic trail. Do not locate the extension of Eubanks Road as proposed by the Draft Small Area Plan but preserve the idea of connectivity in the General vicinity without undue disturbance to existing residents or areas of high resource value.
2. ROAD WIDENING: Adopt policy to encourage shifting rights-of-way to save distinctive features of the landscape (such as a line of shade trees) where ever feasible.
3. STREET CONNECTIONS BETWEEN LAKE HOGAN FARM & THE HIGH SCHOOL: Such street connections should not be through existing subdivisions because an alternative route is feasible, linking Lake Hogan Farm with Homestead Road across several largely undeveloped properties on a northwestern/southeastern axis. Bike route connections using existing neighborhood streets are recommended in this area. The town should proactively contact the owners of properties needed for the above mentioned alternative street connection to explore the possibility of pre-planning such a route, possibly utilizing the approach known as the “landowner compact.”

Greenway Corridors & Parks

1. COMPLETING THE LOOP: Extend the proposed greenway trail link westwards from the North Community Park generally along the line currently shown in the Draft Plan as a Eubanks Road extension and then southerly to connect ultimately with a tributary of Bolin Creek. This trail and others closer to population centers in Carrboro should be considered for accessibility by the physically handicapped.
2. CONNECT HOMESTEAD ROAD AT LAKE HOGAN FARMS WITH THE BOLIN CREEK GREENWAY: Implement this connection along a drainage channel or stream bed running through several existing subdivisions, as a long term goal.
3. SUBSIDIARY GREENWAY TRAILS: Require developers of new subdivisions to lay out and construct neighborhood trails through their new developments in such a way that they will connect with and extend the Town’s more formal greenway network.
4. HORACE WILLIAMS TRACT: The Town should aim for more than a small 10-acre park on this large tract by proactively encouraging the owner to think more creatively and to plan to accommodate all the permitted density to be situated east of the creek, where the land is actually much more suitable for development. A defacto density bonus could be offered by agreeing to calculate the density to be transferred from west of the creek to the eastern area on the basis of gross acreage on the western bank, rather than on net developable land. (A realistically drawn “Yield Plan” for the western area would probably show that its actual developability is constrained by the numerous drainage ways that dissect it.)
5. EXPERIMENTAL TRAILS: New trails should be designated as “experimental” with a defined period for evaluation and abandonment, in situations where abutters register concern about litter, vandalism, privacy loss, etc..

Agriculture

1. COUNTY COORDINATION: Work with the County to encourage the preservation of active farmland, and to limit the conversion of farmland to developed uses outside the Study Area, as a trade-off for accommodating new development within the Study Areas.
2. ENCOURAGE “METRO-FARMING”: Encourage the conservation of active farmland within new conservation subdivisions and elsewhere in the Study Area, with emphasis on nontraditional crops or uses (high-value vegetables, pick-your-own berries, apples, etc.) and community-supported agriculture (community gardening, wholesale nurseries, commercial stables, etc.). Metro-farming should be promoted by a special committee that would look into ways to make Use Value Assessments more common and frequently applied.
3. ENCOURAGE “LANDOWNER COMPACTS”: Actively promote the concept of two or more adjoining landowners combining their properties to increase the possibility of significant conservation set aside on one parcel by shifting part or all the density to the other parcel(s), with pro-rata sharing of proceeds by the various participating landowners.
4. EXPLORE THE ROLE OF PDR’S: Recognizing the limited availability of public and private funds with which to purchase development rights from farmers, and also the relatively high cost of such purchases where farmland is zoned for densities of one or more dwellings per acre, the Town should nevertheless explore this option as one additional way of preserving all or part of a farm within the Study Area.

Mixed-Use Village Centers

1. VILLAGE FLOATING ZONE: Amend policy proposal in Draft Plan for a Mixed-Use Village Center along Old 86 to a policy endorsing the concept of a “floating zone” for future residential village developments in the Transition Area.
2. FLOATING MIXED-USE CENTER: Amend policy proposal in the Draft Plan for a Mixed-Use Center along Homestead Road to a policy endorsing the concept of a “floating zone” for mixed-use villages with very modest retail components at appropriate locations in the Transition Areas.
3. REHABILITATE AND DENSIFY EXISTING SHOPPING CENTERS AND OTHER SITES IN CARRBORO: Modify zoning (parking requirements, setbacks, floor-area ratios, etc.) to encourage existing shopping centers to add new floorspace along front edges and eventually to be redeveloped into multi-story mixed-use centers, especially those located along transit routes. Such developments could provide locations for new student rental housing, in addition to shopping centers such as Carrboro Plaza, other sites such as the public works property and the asphalt plant could eventually be redeveloped for mixed-use centers, or at least higher density residential.

Housing Availability

1. OFFER PAIRED BONUSES: Increased density incentives not only to reduce land cost per dwelling but also to offset additional cost of designing, building, and landscaping new affordable housing so that it looks like a market-rate product rather than a government project. Such housing should be integrated physically into new subdivisions through design standards for building design and for neighborhood layout.
2. APPROPRIATE DENSITIES: Cap densities for market-rate housing at 3 dwelling units per acre so that bonus densities of 4 to 5 dwelling units per acre could be offered while

still allowing for a minimum of 40 percent of the developable land being designated as open space (connected with the Town-wide greenway network).

Property Tax Assessment

1. PROPERTY TAX ASSESSMENT: Amend the Draft Plan to include a short section describing ways that landowners can lower their property tax liability through Use Value Assessments, conservation easements, etc.

STUDY AREA BOUNDARIES

Rogers Road

1. ROGERS ROAD COMMUNITY: The Rogers Road community should not be split between Carrboro and Chapel Hill, but should become part of one town or the other. In making this decision, community preferences shall be seriously weighed.

MAPS

Context Maps

Two maps should be prepared showing the context of the Transition Area with respect to:

1. The County’s Plan for new land use and transportation elements (specifically locations for higher density residential and new/expanded commercial uses).
2. The two Transition Areas being planned by Carrboro and Chapel Hill, especially regarding locations for higher density residential and new expanded commercial uses.

Structure Maps

1. NATURAL FEATURES: The Green Infrastructure: Hydrologic features, topography, soil suitability, vegetation patterns, unique natural area, and wildlife habitats/travel corridors.
2. HISTORICAL MAN-MADE STRUCTURES AND FEATURES: Older buildings, ruins, cellar holes, stone walls, abandoned roads, trails, bridle path, military earthworks, and public viewsheds across all fields and meadows adjacent to existing roads.
3. CONTEMPORARY AND FUTURE MAN-MADE FEATURES: Existing and future roads, proposed street connections, transit routes, parks and greenway corridors, water/sewer lines and service areas (existing and proposed), new public facilities and buildings, existing development patterns, “social neighborhoods,” and eased properties.

Mapping Accuracy

1. MAPPING ACCURACY: Improve the accuracy of the town’s computer-generated maps by specifically inviting public comment and feedback on perceived errors to the Planning Department staff.

Conservation Lands

1. CONSERVATION LANDS: Prepare Study Area map showing two kinds of potential conservation lands - Primary Conservation Areas (wetlands, floodplains and slopes >25

percent); and Secondary Conservation Areas (noteworthy features such as mature deciduous woodland; prime farmland in fields, meadows or pastures; wildlife habitats/travel corridors, historic/cultural features; scenic viewsheds from public roads across existing fields/meadows/pastures, etc.). This would be similar to the county-wide map of these features produced by Orange County Planning Department, but would be at a more useful scale. Care should be taken so that features of lesser importance do not dominate the map visually.

LAND USE ORDINANCE CHANGES

Update Land Use Ordinance

1. **REFINE METHOD OF COMPUTING DENSITY:** At least in the Study Area, density calculations should be based on the usable land rather than on gross acreage, or the “Yield Plan” approach should be utilized to demonstrate a realistic build-out potential.
2. **IMPROVED QUANTITY/QUALITY OF CONSERVATION LAND:** Aim for a higher percentage of conservation lands in the Study Area comprised of lands that are not severely constrained by flooding, wetness or steepness. Accomplish this by setting standards for conservation lands in addition to wetlands and steep slopes, and by offering a range of densities with rise in relation to the percentage of land which is to be conserved.
3. **REQUIRE CONSERVATION LAND TO INTER-CONNECT:** Establish design standards for the open space in new subdivisions so they will eventually coalesce to create an interconnected network of protected lands as greenway corridors.
4. **DESIGN AND MANAGEMENT OF CONSERVATION LANDS:** Add provisions addressing layout and maintenance issues pertaining to conservation lands in new subdivisions, with detailed standards for managing different types of open space (woodlands, meadows, grassed areas, etc.)

OVERALL RECOMMENDATION: Ensure that residents will be adequately protected from the negative impacts of new development through the adoption and strict enforcement of “good neighbor” performance standards.

PROCESS

Review Process

1. **UPDATE PROCEDURES FOR PROCESSING SUBDIVISIONS:** Adopt new language pertaining to sketch plans, site visits, voluntary sketch plans, two-stage preliminary plans (conceptual and detailed) when no sketch is submitted, and four-step design approach to identify all potential conservation lands at the outset.

OVERALL RECOMMENDATION: Give very strong consideration to establishing an “Advisory Planning Board to the planning board for the Transition Areas” comprised of Transition Area residents themselves.

CARRBORO’S JOINT PLANNING TRANSITION AREA

On September 22, 1987, an intergovernmental working group made up of eight elected officials from Orange County, Carrboro, and Chapel Hill endorsed an agreement to establish a

method for coordinated and comprehensive planning in areas north of the two towns. The Joint Planning Agreement sets forth a method for planning and regulation of future development in the Joint Planning Areas by all three parties.

The Joint Planning Area is defined in Orange County's Joint Planning Land Use Plan and Map in two sections: Carrboro's Joint Planning Area and Chapel Hill's Joint Planning Area. Carrboro's Joint Planning Area is located generally between the northern extraterritorial planning area limits boundary and Duke Forest. Under the terms of the Agreement, Carrboro's Joint Planning Area is divided into two sections: Joint Planning Transition Area I and Transition Area II. The Orange County Joint Planning Land Use Plan provides for residential development at a density between two and five dwelling units per acre in the area nearest the town, and provides for residential development at a density no greater than one dwelling unit per acre in the area farther out. The Agreement stipulates that Transition Area I must be 75 percent developed before Transition Area II may be rezoned for densities higher than one dwelling unit per acre. The Joint Planning Land Use Plan also defines a Rural Buffer Area outside the town's Joint Planning Area. In the Rural Buffer Area allowable densities do not exceed one dwelling unit per two acres.

Carrboro's Joint Planning Area includes approximately 4 square miles of land lying within the Bolin Creek drainage basin, and bounded on the west by Old NC 86, Dairyland Road and Union Grove Church Road. Bolin Creek serves as the general boundary between Transition Area I and Transition Area II. Transition Area I is located directly north of the town's northern extraterritorial planning area limits and Transition Area II is generally north of the Buckhorn Branch of Bolin Creek and south of Duke Forest.

INSERT JOINT PLANNING AREA MAP CARRBORO'S NORTHERN TRANSITION AREA
AND CHAPEL HILL'S NORTHWEST TRANSITION AREA

INSERT LARGE AREA MAP HERE, SHOWING TRANSITION AREAS I AND II, CARRBORO TOWN LIMITS, AND NEIGHBORING PARTS OF CHAPEL HILL

SECTION 2 EXISTING AND EMERGING CONDITIONS

INTRODUCTION

Demographic and geographic information relating to Carrboro and the Study Area has been reviewed in order to gain an understanding of the nature of current developments and activities in the Study Area. Additionally, various town departments, such as planning, recreation and parks, fire, police, and public works have been consulted in order to better understand the types and sizes of facilities needed to accommodate projected development and population growth in the Study Area. This section is divided into two sub-sections. The first sub-section, *Existing Conditions*, describes natural features, development characteristics, and demographic features which currently exist in Carrboro and the Study Area. The second sub-section, *Emerging Conditions*, describes anticipated changes that would affect natural features, the form and character of development, and demographic features in Carrboro and the Study Area.

EXISTING CONDITIONS

Boundaries of the Study Area

The boundaries of the study area are Carrboro's joint planning jurisdiction line to the north, and Carrboro's Town Limits to the south. The Carrboro/Chapel Hill joint planning jurisdiction line serves as the boundary to the east. It begins north of Eubanks, follows Rogers Road to Homestead, then proceeds southwest on Homestead Road to High School Road and finally turns south and east to the railroad right-of-way. A primary ridge line serves as the northwest boundary line just east of Union Grove Church Road down to Dairyland Road, where the road serves as the boundary heading southeast until it intersects, and Old 86 serves as the boundary then turning southeast and running along Hillsborough Road to Greensboro Street.

NATURAL FEATURES

General Description

The Study Area is fairly rural and undeveloped, although there are several established neighborhoods in the area. It is a typical rural landscape in the Piedmont area of North Carolina, with rolling hills covered by a mixture of heavily wooded areas and open meadows and pastures. The area contains many steep slopes along numerous streams and creeks that flow into the Bolin Creek watershed. Bolin Creek meanders through and generally bisects the study area from the northwest to the southeast.

Carrboro's planning jurisdiction is approximately 12 square miles (7,747 acres) in size and consists of several subareas described in the following table (Table 2-1):

TABLE 2-1 Carrboro Planning Jurisdiction Subareas in Square Miles & Acres

Sub Area	Square Miles	Acres	percent
City Limits	4.3	2,780	36
University Lake Watershed	2.7	1,709	22
Transition Area 1	2.0	1,333	17
Transition Area 2	2.3	1,475	19
ETJ	0.7	450	6
TOTAL	12.0	7,747	

Unique Natural Areas

Unique natural areas are places with an unusual or exemplary biological habitat, geologic feature, or hydrological location. One such location is Meadow Flats, a wetland which reaches from the north into a small portion of Carrboro. Wetlands perform many important functions, such as recharging groundwater, naturally filtering pollutants, and providing cover for wildlife development. Other biologically significant fauna and flora sites in the study area can be found at the northern end of Lake Hogan Farm Road and north of Calvander on Old NC 86. The primary environmentally sensitive area in the study area is the Bolin Creek floodplain. The most environmentally sensitive areas are found along Bolin Creek, its tributaries, and associated floodplains.

Water Resources

The major stream corridor in the study area is Bolin Creek, which continues through Chapel Hill, ultimately flowing into Jordan Lake. Bolin Creek and the numerous smaller stream beds in the study area will significantly constrain development. There are three primary drainage basins in Carrboro: the Study Area is within the Bolin Creek Basin, Central and Southern areas of Carrboro are within the Morgan Creek Basin, and the Upper Morgan Creek basin flows into the University Lake watershed. The Upper Bolin Creek basin is classified by the State as a protected water supply watershed.

Soils and Slopes

Most of the area contains soils that are suitable for development or have moderate constraints. A majority of the study area contains slopes of less than 8 percent, making it quite suitable for development. Slopes of 8 to 15 percent pose moderate development constraints. These slopes are found primarily along Bolin Creek and its tributaries. Slopes between 15 and 25 percent, which are considered to have severe development constraints, are relatively isolated. A few slopes in excess of 25 percent exist in the study area. These slopes are essentially undevelopable. Elevations in the study area range from 500 to 630 feet, with Big Hill (elevation 630 feet), being the highest peak wholly contained within Carrboro's jurisdiction.

Primary and Secondary Conservation Areas

Primary Conservation Areas consist of places identified as regulated wetlands, floodplains and slopes with a grade greater than 25 percent (a 25-foot vertical change or rise for every 100 feet of horizontal run).

Secondary Conservation areas include elements of natural landscape that deserve to be separated from clearing, grading, and development such as: Mature deciduous woodland, prime farmland in fields, meadows and pastures, wildlife habitats/travel corridors, historic/cultural features and scenic viewsheds from public roads across existing fields/meadows/pastures.

The Primary Conservation Area is shown on Map #3 and the Secondary Conservation Area is shown on Map #4. The following table provides the approximate amount and percentage in each conservation area.

TABLE 2-2 Primary & Secondary Conservation Areas

Small Area Planning	Total Acres	Developed Acres	Undeveloped Acres	Percent Undeveloped
Northern Study Area	3787.05	1645.73	2141.32	57%
* Study Area Primary	423.19	154.91	268.28	13%
Transition Area 1 - Primary	218.23	102.41	115.82	15%
Transition Area 2 - Primary	115.93	25.14	90.79	9%
Study Area in City and ETJ Primary	89.03	27.36	61.67	18%
**Study Area Secondary	1649.39	746.54	902.85	42%
Transition Area 1 - Secondary	593.02	275.17	317.86	40%
Transition Area 2 - Secondary	704.29	299.70	404.59	40%
Study Area in City and ETJ Secondary	352.08	171.68	180.40	52%
*Primary conservation areas consist of: wetlands, flood plains and ground slopes of 25 percent or greater.				
**Secondary conservation areas consist of: mature hardwood forest, prime farm land in fields, meadows, pastures and wildlife habitats and corridors.				
T1 Combined Conservation Areas	811.25	377.58	433.67	55%
T2 Combined Conservation Areas	820.22	324.84	495.38	50%
Study Area in City and ETJ – Combined	441.11	199.04	242.07	70%

SOURCE: Town of Carrboro, Planning Department & Orange County Land Records, 1997

PRIMARY CONSERVATION MAP # 3

SECONDARY CONSERVATION AREA MAP # 4

DEMOGRAPHIC FEATURES -- TOWN OF CARRBORO POPULATION TRENDS AND PROJECTIONS

An analysis of demographic characteristics and trends concerning the town of Carrboro’s population, including age, sex, and income, is essential for quantifying needs of the community. Population statistics applied in the plan are based on 1990 U.S. Census Bureau data, Office of State Planning data, and data from the Town of Carrboro Planning Department.

1960–2010 POPULATION AND PROJECTIONS

Carrboro’s population has steadily increased from the 1960s into the 1990s. During the previous decade the town grew from a 1980 population of 8,118 to a population of 12,136 in 1990. The additional 4,017 residents constituted a 49 percent increase in Carrboro’s population within that decade, a 4.1 percent annual growth rate. (See Table 2-1). Based on these trends, Carrboro is expected to continue growing at this moderate rate into the 21st century. By the year 2000 the population is expected to increase from the 1992 population of 12,786 to 16,872. The projected population at the end of the planning period is 23,917 in the year 2010. Table 2-1 illustrates the changes in Carrboro’s population and projects the estimated population based on these trends.

The build-out of the Northern Study Area is primarily dependent upon the rate of growth and the density of the development. A low density such as one unit per acre coupled with a high growth rate will result in a quick build-out of the study area; whereas a low growth rate and a higher density will result in a prolonged build-out. Chart 2-1 shows the density-growth rate relationship for the build-out of the net developable acreage (undeveloped land without primary conservation areas and only 20 percent of the secondary conservation areas less 10 percent for roads; amounting to approximately 1,000 acres). This chart provides a comparison of net densities ranging from 1 unit per acre to 6 units per acre at rates ranging from 1 percent per year to 6 percent per year with development at current zoning densities (approximately 2900 units at roughly 1.4 units per acre).

Table 2-3 1960-2010 Population and Projections

TOWN OF CARRBORO, NORTH CAROLINA 1960 - 2010 POPULATION AND PROJECTIONS							
1960	1970	1980	1990	1992	1994	2000 PROJECTED	2010 * PROJECTED
1,997	5,058	8,118	12,136	12,786	13,048	16,874	23,917

Source: 1960-1990 U.S. Census/NC Department of Administration
1992-2010 Carrboro Planning Department

* The Town of Carrboro is expected to reach its total build-out population by the year 2010.

NORTHERN STUDY AREA BUILD-OUT BY GROWTH RATE, DENSITY & YEAR

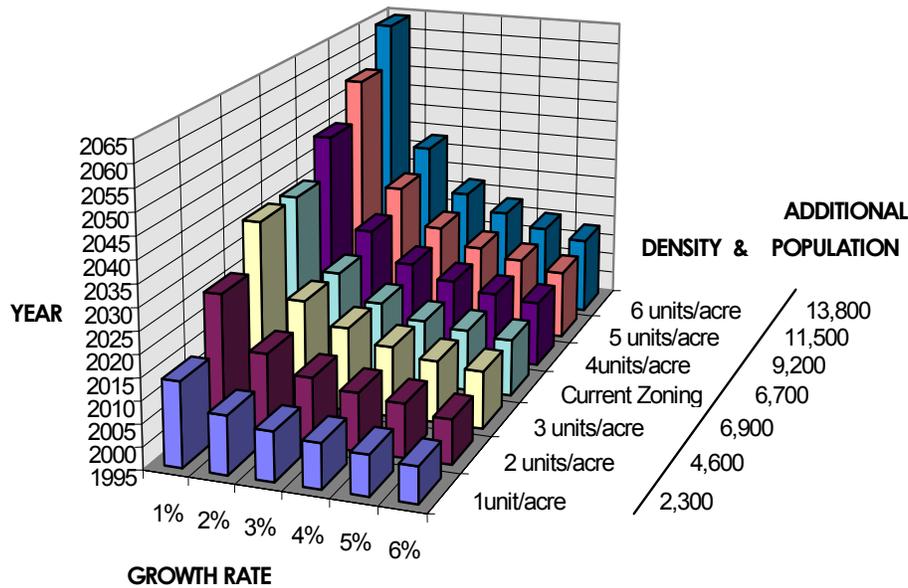


TABLE 2-4 Northern Study Area Build-Out by Year

		G R O W T H R A T E					
		1%	2%	3%	4%	5%	6%
DENSITY & POPULATION		Y E A R O F B U I L D O U T					
1 unit/acre	2,300	2014	2008	2006	2005	2004	2003
2 units/acre	4,600	2026	2014	2010	2008	2007	2005
3 units/acre	6,900	2036	2019	2014	2011	2009	2008
Current Zoning	6,700	2036	2019	2013	2010	2009	2008
4 units/acre	9,200	2045	2023	2016	2013	2011	2010
5 units/acre	11,500	2054	2028	2019	2015	2013	2011
6 units/acre	13,800	2064	2033	2022	2018	2015	2013

Population Composition by Age and Sex

A 1990 breakdown of Carrboro’s population into age categories shows that 18-24 year-olds constitute the largest group, reflecting the high number of university students who live in Carrboro. The second largest age group, 25-29 year-olds, may be accounted for by the large population of young professionals attracted to this region. Table 2-2, “Population By Age and Sex,” breaks down Carrboro’s 1990 population into age and sex categories.

STUDY AREA ZONING MAP # 5

Table 2-5 Population by Age and Sex

TOWN OF CARRBORO, NORTH CAROLINA				
AGE GROUP	MALE	FEMALE	TOTAL	PERCENT
0-4	290	239	529	4
5-17	626	375	1,001	9
18-24	1,590	2,070	3,660	32
25-29	1,041	965	2,006	17
30-34	734	731	1,465	13
35-39	424	411	835	7
40-44	351	290	641	6
45-64	387	564	951	8
65+	196	269	465	4
TOTAL	5,639	5,914	11,553	100%

Source: 1990 Census, U.S. Bureau of the Census

Population by Race

The following table, "Population by Race 1970-1990" provides statistics on changes that have occurred in the town's population by race since 1970. The numbers provided in the table were extrapolated from the original census which was corrected for each census period. In general the table indicates that Carrboro's white population changed from 77 percent in 1970 to 78 percent in 1990 and Carrboro's black population changed from 23 percent in 1970 to 17 percent in 1990. The Other races, which primarily includes Asian people, increased from 2 percent in 1980 to almost 5 percent in 1990.

TABLE 2-6 Population by Race: 1970 - 1990

TOWN OF CARRBORO, NORTH CAROLINA						
	1970		1980		1990	
RACE	#	%	#	%	#	%
WHITE	3,874	76.59	6,566	80.88	9,522	78.47
BLACK	1,184	23.41	1,417	17.45	2,028	16.71
OTHER	NA		136	1.68	585	4.82
TOTAL	5,058		8,118		12,134	

Source: US Census, U.S. Bureau of the Census

NOTE: The 1970 population by race was extrapolated from a total of 3,472; 1980 from a total of 7,337; and 1990 from 11,553.

Migration Patterns

Table 2-3 shows the results of a 1989 study of the migration patterns of Carrboro residents. The study shows that a minority of Carrboro's residents had lived in the Orange County area four years previously, in 1985. Only 17 percent of Carrboro's residents had lived in the same house in 1985 as the one where they resided in 1989. Carrboro's residents have been highly mobile in the recent past, but it is less clear whether this trend will be as strong among new residents of the Study Area.

TABLE 2-7 Migration Patterns of Carrboro's Residents, 1985-1989

Place of Residence, 1985	Number of People	Percent
Same House	1870	17
Different House (in County)	2620	24
Different House (in State)	3197	29
Out-of-State	2852	26
<i>Northeast *</i>	<i>951</i>	<i>9</i>
<i>Midwest *</i>	<i>570</i>	<i>5</i>
<i>South *</i>	<i>1045</i>	<i>9</i>
<i>West *</i>	<i>286</i>	<i>3</i>
Foreign Country	485	4
Total	11,024	100

*Regional Totals for "Out-of-State" appear in *italics* (Persons under 5 years of age were not included in this sample.)

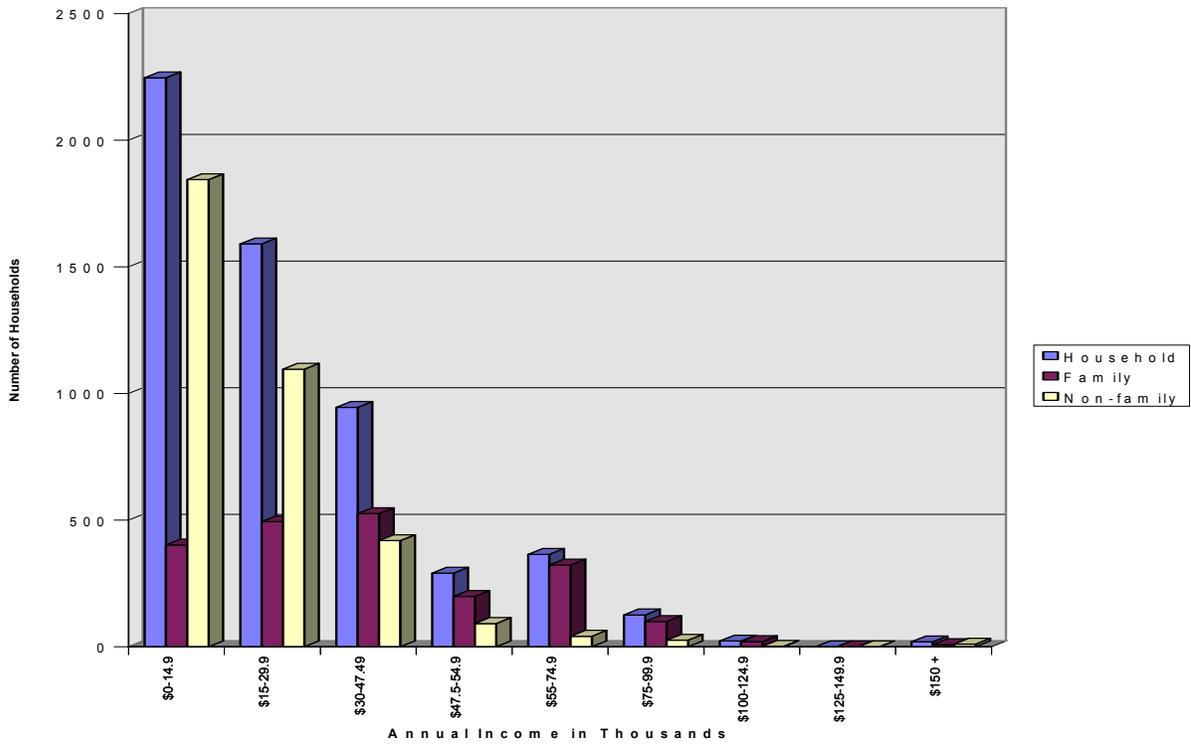
Source: 1990 Census, U.S. Bureau of the Census

Income

Graph 2-1 illustrates the 1989 distribution of income for Carrboro households, families, and non-families. The U.S. Bureau of the Census defines a household as all persons who occupy a housing unit such as a house or apartment. A family is distinguished from a household in that it is defined as a householder and one or more persons who are related by birth, marriage, or adoption. Non-family includes any household member not related to the householder by birth, marriage, or adoption. Together, family and non-family are the two components of the household income category.

A close look at the chart shows that in 1989 there were a large number of Carrboro residents who earned less than \$15,000 per year, especially in the general household category and the non-family category. This reflects the large number of college students who live in Carrboro. The presence of large numbers of college students in Carrboro makes income figures for the town somewhat deceptive, since student incomes are often not wholly indicative of their ability to pay for housing and other necessities. There is also a surprising lack of households or families in the \$125,000 to \$149,000 income category. This could be due in part to a lack of housing for persons in that income bracket.

Graph 2-2 1989 Carrboro Household, Family, and Non-Family Income



Transportation to Work

The results of a 1990 study of Carrboro residents’ trips to work are reported below. They show that the majority of residents spent less than 20 minutes traveling to work, with the mean travel time being 18 minutes. Table 2-4 shows the relative concentration of Carrboro commuters in terms of the time lengths of their commutes. Chart 2-1 shows the different types of transportation modes used by those surveyed.

Place of Work:

Work in Orange County	5,289
Work Outside of Orange County	1,868
Work in Virginia	25
Work in Raleigh-Durham-Chapel Hill Metropolitan Statistical Area:	
Downtown Raleigh, Durham, or Chapel Hill	5,305
Outside of Downtown Areas	1,530
Work in other metropolitan statistical area (i.e. Greensboro, Winston-Salem):	
Downtown	74
Outside of Downtown	70
Work outside any metropolitan statistical area:	203

Travel Time:

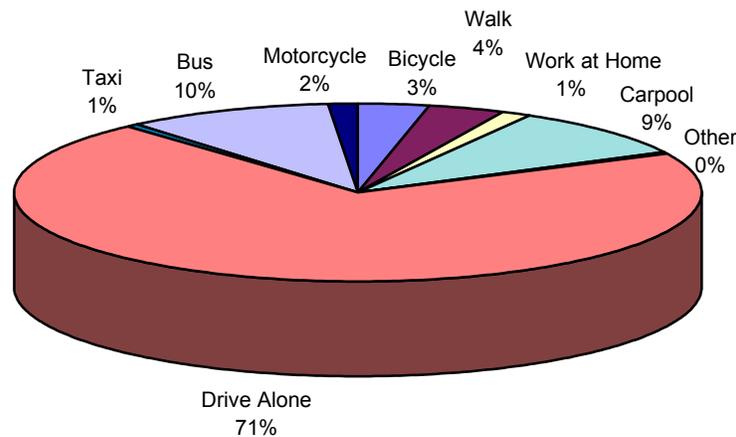
Table 2-8 1989 Travel Time to Workplaces

Travel Time to Work in Minutes	Number of Workers	Percent of Total
0-4	254	3.59
5-9	836	11.80
10-14	1,677	23.67
15-19	1,509	21.30
20-24	1,050	14.82
25-29	435	6.14
30-34	688	9.71
35-39	117	1.65
40-44	180	2.54
45-59	253	3.57
60-89	55	0.78
90 +	30	0.43
Total	7,084	100

(Persons under 16 years of age were not included in this sample.)

GRAPH 2-3 Means of Transportation to Work

Chart 2-1 Means of Transportation to Work



(Source: Town of Carrboro Population and Employment Characteristics, 1993)

TOWN OF CARRBORO ROADS PLAN MAP # 6

Economy

Chapel Hill and Carrboro generally function as a single economic trade area within the Research Triangle Region. Because of this, many Carrboro residents are employed in Chapel Hill. The major employers for the area include retail foods, education, health care, utilities, government, and support services. The largest employers are the University of North Carolina and UNC Hospitals. As a part of the Research Triangle Region, the economy of Carrboro is influenced by employment opportunities in the Research Triangle Park, Durham, and Raleigh. Additionally, Orange County's designation of an area at the intersection of Old 86 and Highway 40 as an economic development area could have significant traffic and economic impacts on residents in the Study Area. The economic development area is approximately ten miles north of the Study Area on Old NC 86. Currently, commercial activity within the Study Area is limited to an existing lot with an auto repair business.

TABLE 2-9 Major Employers in Orange County (1993)

EMPLOYER	TYPE OF BUSINESS	NUMBER OF EMPLOYEES
University of North Carolina	Educational Services	8,014
UNC Hospitals	Health Services	4,667
Blue Cross/Blue Shield of NC	Insurance	1,620
Chapel Hill/Carrboro Schools	Educational Services	1,147
General Electric Co.	Manufacturing	901
Orange County Board of Education	Educational Services	865
Town of Chapel Hill	Town Government	502
Orange County Government	County Government	497
Home Health Agency of Chapel Hill	Health Care	350

TABLE 2-10 Major Employers in the Chapel Hill/Carrboro Area (1993)

EMPLOYER	TYPE OF BUSINESS	NUMBER OF EMPLOYEES
University of North Carolina	Educational Services	8,014
UNC Hospitals	Health Services	4,667
Blue Cross/Blue Shield of NC	Insurance	1,620
Chapel Hill/Carrboro Schools	Educational Services	1,147
Town of Chapel Hill	Town Government	502
Home Health Agency	Health Care	350
Harris-Teeter, Inc.	Food Store	328
Village Companies	Publishing	324
Marriott Educational Services	Food Services	305
Allen and O'Hara, Inc.	Property Management	280

TABLE 2-11 Major Employers in Carrboro (1993)

EMPLOYER	TYPE OF BUSINESS	NUMBER OF EMPLOYEES
Harris-Teeter, Inc.	Retail Foods	130
OWASA	Utility	106
Residential Services, Inc.	Disabled Group Home	100
Town of Carrboro	Town Government	99
Chapel Hill/Carrboro City Schools	Public Education	85
Triem, Inc.	Manufacturing	65
Weaver Street Market	Retail Natural Foods	55
Food Lion	Retail Foods	50
Burger King	Fast Food	39
International Project Assistance Services	International Women's Health Care	35

* These figures indicate total numbers of employees. The number of full-time equivalent employees may be less.

(Source: Town of Carrboro Population and Employment Characteristics, 1993)

HOUSING AFFORDABILITY

In recent years the diversity of housing opportunities in the Orange County area has been reduced due to the diminishing availability of housing for low and moderate income residents. The median family income for a family of four in the Raleigh-Durham-Chapel Hill Metropolitan Statistical Area, which includes Orange County, is \$46,800, while the median value of a new home in the area is \$147,577. Because of this imbalance, many residents cannot afford to buy a home within the county limits. The availability of basic rental units is also a major concern of Orange County residents, especially in the Chapel Hill/Carrboro area. Many University of North Carolina students have the financial means to compete with area low income households for the least expensive housing. The size of rental units is also a major concern. The scarcity of large-sized rental units (three bedrooms or more) in Orange County makes it difficult for the average family of four to find rental housing to suit their needs.

(Source: Consolidated Plan for Housing and Community Development Programs in Orange County, NC, 1995)

Development Features

The recent history of the study area can best be characterized by tremendous growth pressures. A 1987 rezoning of many of the parcels in Chapel Hill and Carrboro's Transition Areas served to decrease allowable densities in those areas. A great deal of large-lot single family residential development has been constructed in the area since that time. The majority of this new residential development could be classified as moderately sized subdivisions with conventional site designs. These conventional site designs utilize large pieces of land adjacent to the town's limits. Objection to this "cookie cutter" approach to design (which is permissible under the current land use ordinance) was illustrated by the Board of Aldermen's objections to the Hogan Farm application. The Hogan Farm property is located almost in the center of the transition area and is quite large (410 acres) in comparison with other Carrboro developments.

Land Uses

Current land uses in the study area are residential development in subdivisions or on large individual lots, very limited commercial activities, and large undeveloped tracts. Refer to the Development Status Map for details.

Horace Williams Tract

In the study area there are two tracts of land owned by the University of North Carolina that are part of the Horace Williams property. The larger tract lies in both Carrboro and Chapel Hill's planning jurisdictions. The rail line serves as the boundary between the two jurisdictions on this property. The rail line runs through downtown Carrboro before it terminates at the University's Power Plant on Cameron Avenue. The portion of the Horace Williams property located entirely within Carrboro's planning jurisdiction is currently undeveloped. The UNC Board of Trustees formally accepted a land use plan for the Horace Williams properties on January 24, 1997. This plan proposes 33 acres of housing and 24 acres of natural areas for the 57-acre Homestead tract. On the 306-acre Horace Williams Tract in Carrboro's planning area, the plan proposes a 60-acre University Village centered around the railroad, a 60-acre independent use area west of the village, a 60-acre housing district west and south of Bolin creek, and 126 acres of natural areas primarily along Bolin Creek.

Duke Forest

Immediately northeast of the study area is the Blackwood Division of Duke Forest. Duke University owns the forest lands and uses them for scientific and ecological studies. Although the University has no plans for more intensive uses of the area in the near future, a portion of the area has been identified as a potential site for a new landfill to serve Chapel Hill and Carrboro.

Transportation Network

Existing and proposed arterial and connector roads in the northern transition area are based on the Connector Roads Plan Concept Map as recommended by the Transportation Advisory Board.

Existing Arterials include Homestead Road, Old 86, and Rogers Road.

Existing Connectors include Pathway Drive and Stratford Drive.

A bus system serves the town of Carrboro and has the highest ridership in the state; however, there are currently no bus routes serving the Study Area. Carrboro also has a well-established bikeway system, as well as a pedestrian system, from the downtown area to neighborhoods within the current city limits. A Southern Railway line runs from north of Carrboro into the town station, then to a spur serving the UNC Power Plant. UNC's Horace Williams Airport is located slightly outside Carrboro's town limits to the northeast.

Utilities

Portions of the Study Area are currently served by the Orange Water and Sewer Authority. OWASA has gravity flow sewage lines along Bolin Creek. Since the entire area is within the Bolin Creek drainage basin, future development may be served by extensions to the existing system.

Duke Power and Piedmont Electric currently maintain high intensity power lines which run through the study area. Piedmont Electric's line runs generally east-west in the northern portion of the area. Duke Power's line runs from the upper northeast corner of the area through Carrboro's southern boundary. The Public Service Gas Company also maintains a natural gas line which runs east-west through the center of the study area.

Municipal Parks

Two municipal parks currently serve the study area residents. Carrboro Community Park, located along Highway 54, is a 55-acre park that includes: basketball and tennis courts, baseball/softball fields, horseshoe pits, multi-purpose open fields, trails, a picnic shelter, and a playground. The onsite lake drains into Morgan Creek and the University Lake watershed. The Community Park is designed to serve residents within a one-mile radius that includes the southwestern portion of the Study Area.

Wilson Park is a 8.5-acre neighborhood park that serves neighborhoods located along North Greensboro Street and the southeastern portion of the Study Area. This park includes: tennis/volleyball courts, a baseball/softball field, a picnic shelter, and a playground.

Schools

There are a total of four schools within or adjacent to the study area. Schools located adjacent to the eastern boundary of the study area include the Chapel Hill High School and Seawell Elementary School which are just east of Homestead Road. Two schools, McDougle Elementary and McDougle Middle School, are located adjacent to the southwestern boundary of the Study Area along Old Fayetteville Road.

Historical and Archeological Properties

Historic buildings within the study area or within Carrboro include: The Barnstable, the Blackwood House, Elm Grove School, Nunn's Chapel Baptist Church, Union Grove United Methodist Church, and the Weaver House. Additionally, there are a number of archeological sites in the Carrboro area. The exact locations of these sites are not publicly known due to their sensitive characteristics. Additional information about these historic and archeological sites may be found in Appendix C.

EMERGING CONDITIONS

Demographic Change

Transportation to Work

The average time Carrboro residents spend traveling to work will likely increase, given the increased distance of the study area from most major area employers. The economic development area proposed by Orange County at the intersection of Old 86 and Highway 40 and the development of the Horace Williams Tracts would be exceptions to this pattern. Study area residents would be quite close to both centers.

Additional residents could also add to traffic congestion, thereby further lengthening the time all residents spend traveling to work. Currently no new major employers have plans to locate in the Carrboro area; therefore, it seems likely that trips in and out of the Study Area to current major employment centers will increase. (Reference “Transportation to Work”, “Place of Work”, and Table 2-5 Major Area Employers)

Future Development

Horace Williams Tract

Carrboro requested the University of North Carolina to dedicate of a small portion of the Horace Williams tract as a public park, which would possibly be operated jointly by Chapel Hill and Carrboro. The University did show in its Land Use Plan adopted on January 24, 1997, an 18-acre passive recreation area located south of Bolin Creek and north of the Fair Oaks Subdivision.

The development of some type of satellite campus is expected on at least one of the two parcels at some point in the future. Although University planners are sensitive to the transportation impacts of such a development and have expressed their desires to locate facilities and programs on the Horace Williams Tracts which will not require extensive trips between the main campus and the new campus, there is no doubt that a new satellite campus will have significant traffic impacts on the area.

The establishment of commuter rail service between the main campus and the Horace Williams property, along the existing rail line, would have significant impacts on Carrboro traffic patterns, especially at the intersection of Main Street and the rail line.

Transportation Network

The Connector Roads Plan identifies transportation improvements to be made to Carrboro’s roadway network. Recommendations from the Connector Roads Plan for roads within the study area are as follows:

- Proposed Arterial include the Seawell School Road/Homestead Road Connector
- Planned Connectors include Tripp Farm Road, Pathway Drive, and the Cates Farm Connector
- Proposed Connectors include the Lake Hogan Farm Road Extension and an East/West Connector

(For definitions of the different types of roadways, see Appendix D.)

Extension of bus service to the study area would only be feasible if the area is developed at higher densities than those currently found in the Study Area. Carrboro's excellent bikeway and pedestrian system should be extended into the Study Area, but an extension would be less feasible with lower density development.

Community Facilities

A number of new community facilities will be needed to serve new residents in the Study Area. By law, the Town of Carrboro must provide the same levels of service to involuntarily annexed areas that it provides to areas already within the town limits. However, the Study Area's demand for services may differ significantly from Carrboro's current demand. Housing types, densities, roadways, the number of housing units, and the amount of developable acreage in the Study Area will all affect the area's demand for services. The impact assessment process described in Section 4 is one way of evaluating the area's need for services. However, the results of this type of analysis are somewhat dependent on the assumptions of the computer model that is used and should be compared with other sources for assessing projected needs.

Various town agencies have identified the need for new or expanded facilities to accommodate anticipated population growth in the Study Area. Although some agencies, such as the police department, do not expect to need a new facility in the Study Area, it should be understood that growth in the Study Area will necessitate additional staffing, facilities, and equipment costs for all Town agencies. Following is a tentative listing of needed facilities in the study area:

Recreation and Parks

The Recreation and Parks Master Plan identifies the need for several new parks in the study area and suggests appropriate locations for them.

- ⇒ North Community Park -- about 65 acres in size. In the area where Old 86 and Eubanks Road intersect.
- ⇒ Bolin Creek Park -- about 10 acres in size. The Town hopes to obtain this land from UNC's Horace Williams Tract along Seawell Road.
- ⇒ Homestead Road Park -- about 10 acres in size. In the area where Homestead Road and the proposed Lake Hogan Farm Road Extension would intersect.
- ⇒ Union Grove Church Road Park -- about 10 acres in size. In the area along Union Grove Church Road north of Dairyland Road.
- ⇒ Pathway Drive Park -- a mini-park to serve the Pathway Drive neighborhood.
- ⇒ Bolin Creek Greenway -- develop a bicycle and pedestrian trail system along portions of the Bolin Creek buffer zone.

Fire

In order to maintain reasonable fire response times and to maintain the Town's current fire insurance rating, a new fire substation, of about 2 acres in size, should be constructed in a central location in the Study Area. The station should be approximately 1½ miles from any jurisdictional boundary line.

Public Works

An estimated 15-acre public works service center should be located in the Study Area within the next nine to ten years (2006 or 2007).

The Town's Capital Improvements Budget proposes to locate a new facility on property with sufficient buffers in the vicinity of Homestead road. The 1997-98 budget recommends that the land for the new facility be purchased in fiscal year 1999-2000.

Schools

Although no new school facilities are currently planned in the Study Area, it is clear that new schools will be needed to accommodate new students in the Study Area. The new high school on Weaver Dairy Road in Chapel Hill, and both the new McDougle Middle School and McDougle Elementary School south of the Study Area along Old Fayetteville Road will help to accommodate some of the new students in the area.

SECTION 3 GENERAL PRINCIPLES

INTRODUCTION

When the Board of Aldermen created the Small Area Planning Work Group in 1992, they asked the committee to, “at a minimum,” address nine issues (see Small Area Planning Work Group Charge, in Section I). The Small Area Planning Work Group used these nine concerns as key issues to orient its discussions of desired land uses and land use patterns in the Study Area. Through the course of the Work Group’s work it has explored a number of planning concepts and decided upon a number of development principles as most suitable to guide the form of development in the Study Area. These concepts and principles, organized by topic, are briefly explained below. Relevant Carrboro policy documents are cited in parentheses to illustrate the relationship between these principles and existing Town policies. “Goals and Objectives for Carrboro’s Northern Study Area” as modified by the Facilitated Conference distills these development principles and planning concepts into a list organized to address each of the nine concerns of the Board of Aldermen.

DEVELOPMENT PRINCIPLES

Small-Town Character (Objective 2.40, Carrboro’s Year 2000 Task Force Policies)

Development in the study area should be consistent with the preservation of Carrboro’s small-town character. Policies such as limiting roads to two lanes, encouraging plantings along roads, preserving historic areas and scenic vistas, and retaining unspoiled open spaces and other natural resources, will help to ensure that the features which make Carrboro an attractive community in which to live will continue to enhance the quality of life in the area in the future.

Village-type development in the study area should be encouraged. This type of development blends residential and commercial opportunities, is easily negotiated by pedestrians, and includes focal points such as parks and other types of open space. In addition to preserving the small-town character of Carrboro and preserving a pedestrian-scale orientation, village-type development improves the Town’s ability to provide services efficiently and would likely reduce the traffic impacts of new development.

Housing for a Diverse Population (Objective 2.50, Carrboro’s Year 2000 Task Force Policies)

Carrboro needs neighborhoods with a mixture of housing opportunities designed for a diverse population. Due to the growing attractiveness of the area to new area residents, and the resulting upward pressure on housing costs, steps should be taken which would ensure that Carrboro continues to provide housing opportunities for people from diverse backgrounds and from all income levels. In addition to the public provision of such housing opportunities, strategies should be explored for providing incentives to the private sector to incorporate this variety in the development of new housing units.

Citizens Concern and Participation (Objective 2.70, Carrboro's Year 2000 Task Force Policies)

In making development decisions, the Town should strike a fair balance between the rights of property owners, neighbors, other affected citizens, and the community as a whole. To further this goal, every effort should be made to involve a broad base of Carrboro's population in the formulation of land use policies within the jurisdiction.

Preservation of the Natural Environment (Objective 2.20, Carrboro's Year 2000 Task Force Policies)

One of the attractions of the study area is the beauty of the land itself, with its open fields, wooded streams and rolling hills. If development leads to the destruction or alteration of these features, they cannot be reconstructed. Before we decide how best to guide development in the midst of this landscape, we should first decide what we are willing to preserve. In some cases it may be necessary for the town to purchase land outright in order to ensure that it is not despoiled. Other methods for land acquisition, such as the purchase of development rights and tax incentives for "gifting land" can also be used.

Particular topographical features within the study area should be designated in advance as areas which are to be left undisturbed, unless public health and safety factors dictate otherwise. Such features include stream buffers, steep slopes, flood plains and designated wooded areas. Protection of these locations would yield valuable benefits to the community, including partial protection of plant and animal habitats, preservation of the aesthetic beauty of the land, maintenance of buffers between developments, improved water quality and reduced drainage problems.

In areas where development is allowed to occur, land use ordinances should strongly encourage designs and methods that result in the minimal destruction of native vegetation, particularly of wooded areas. For example, the use of wooded buffers and undisturbed vegetation to provide transitions between natural and developed landscapes should be required.

The adoption and execution of major provisions of the Carrboro Recreation and Parks Comprehensive Master Plan would result in the presence of additional open space in the study area in the form of a large community park and three smaller neighborhood parks. However, goals for the preservation of natural areas and for the development of active recreation areas are not always harmonious.

Attractiveness of Developed Environment (Objective 2.30, Carrboro's Year 2000 Task Force Policies)

The town should adopt town-wide design standards, including architectural controls and landscaping requirements, in order to improve the appearance of residential and commercial areas.

Incentives for attractive development should also be created. New development which blends single family and multi-family units should be carefully designed and landscaped to ensure aesthetic compatibility. New development should also be designed to be compatible with

existing development. The privacy and scenic views that current residents enjoy from their homes should not be ruined by careless development.

Carrboro also has a number of scenic roadway vistas that should be preserved. Vistas are an important part of the community's identity. They are often the first and most lasting impression visitors receive of a Town. Additionally, they reinforce residents' "sense of place." The Work Group has identified a number of roadway vistas which should receive special protection from encroaching development:

- The white plank fencing along parts of Homestead Road and Old NC 86.
- The view upstream where Homestead Road crosses Bolin Creek.
- The pond and entrance at Wexford.
- Huge specimen trees in front of established homes on Homestead and Hillsborough Roads.
- The mature hardwood forests on the UNC tracts.

Economic Development (Goal 3.0, Carrboro's Year 2000 Task Force Policies)

When commercial development (retail and office) occurs, it occurs either simultaneously with population increases, or shortly after residential development has occurred. Since the population of Carrboro will continue to increase significantly in the Study Area, new commercial development will be needed. Routine commercial service needs should be met by neighborhood centers.

If the trend of reduced Federal money continues, a greater share of the tax burden will fall on those who pay ad valorem taxes. Ad valorem taxes are taxes on the value of properties, such as the property tax and the automobile tax. If additional commercial and industrial development does not occur, the net effect may be an increase in the ad valorem tax burden on citizens. Increases in these kinds of taxes might make it more difficult for middle-income and low-income people to live in Carrboro.

Principles regarding economic development of both commercial and industrial types are as follows:

- Strip development along major roads should not be permitted. This type of development makes people dependent upon automobiles for their transportation needs, isolates citizens without access to automobiles, and creates additional negative traffic impacts on the community.
- Convenience stores do serve a need. The number and location of these businesses should be controlled, so as to avoid the creation of strip shopping areas, traffic problems, and incompatible usages.
- Consideration should be given to the creation of a well-designed business area, if the uses do not create significant negative environmental, quality of life, or traffic impacts. Consideration should be given to business development which would create jobs that are available to people without professional degrees. A business area should

- be located with convenient access to major connector roads in the Study Area, as well as to pedestrian and bicycle routes.
- Neighborhood/residential service activities, such as corner stores, dry cleaners, and day care centers, should be located in neighborhood service centers near intersections of local and collector roads and should be restricted to uses that serve adjacent neighborhoods.
 - Auto-service related activities should be located in commercial/service centers near intersections on major roads.
 - New office, retail, and other commercial development should be encouraged in order to diversify the tax base. This objective should be achieved in ways that are consistent with the rest of this plan.

Diverse Housing Types, Sizes and Costs

The provision of affordable housing should:

- Promote affordable housing that looks like market-rate housing, using the same materials, exterior facade styles, and forms. Affordable housing should never be segregated or built in high concentrations of units. A good ratio for the provision of affordable housing is 1 to 10: 1 affordable home to 10 market rate homes.
- Permit housing above retail establishments.
- Encourage detached buildings behind houses, in the form of garage apartments or backyard cottages.

Transportation (Goal 4.0, Carrboro's Year 2000 Task Force Policies)

Providing for the adequate flow of bus, auto, bicycle, and pedestrian traffic within Carrboro and to adjoining areas is an essential part of the Town's efforts to preserve its small-town character and to create attractive pedestrian-scale neighborhoods. Additionally, Town services such as police, fire, and public works may be adversely affected if poor traffic patterns exist. A good traffic flow would likely decrease the costs of providing these services. Development must necessarily have an impact on traffic flow, but possible negative impacts can be avoided or minimized with sound transportation design and effective planning. Economic development and population growth are both less disruptive if their effects on transportation are taken into account. Although transportation enhancements can facilitate travel between areas, they can also seriously damage neighborhoods, natural areas, and other areas of concern. The relative priority of smooth traffic flow should be weighed against negative impacts in other areas.

The goal of a transportation plan for the study is a network of facilities that provide safe and reasonably efficient movement of people within the Study Area itself, or to and from significant destinations outside of the Area.

This network, including not only roadways, but also sidewalks, bicycle lanes and off-road easements for cyclists and pedestrians, should be designed to give higher priority to human beings themselves rather than focusing strictly upon traffic engineering, which is often accompanied by excessive destruction of natural features and construction of barriers to easy pedestrian movement and social interaction.

The adoption of a comprehensive transportation plan by the Town in advance of further development, rather than in a piecemeal reaction to individual development proposals, should yield a coherent network allowing more efficient and possibly lower cost provision of bus, fire, police, and public works services. Furthermore, a pre-established transportation network would help alleviate political disputes arising with developers as well as with residents when new development occurs adjacent to existing neighborhoods.

Roadway Network

The Connector Roads Plan Concept, adopted by the Board of Aldermen in February, 1994, serves as the basis for the roadway network in the Study Area. This concept utilizes a grid-like network design which connects new and existing developments with one another, disperses automobile traffic among multiple routes, and allows efficient access for public transit and Town service vehicles. The presence of multiple routes would reduce the pressure on any one roadway, thereby eliminating the need for multi-lane facilities which would fracture the Study Area. Coordination of transportation planning with Chapel Hill, the University of North Carolina, Orange County and the Triangle Transit Authority may help to ensure adequate facilities for travel to and from destinations beyond the limits of the Study Area.

Other principles regarding the development of the transportation system in the Study Area are as follows:

- The Town should endorse a transportation plan that includes undeveloped areas and takes into account future land uses and projected growth in the Study Area.
- The implementation of Carrboro's Connector Roads Plan will help to address anticipated transportation impacts from new development in the Study Area.
- The Town should encourage cooperative transportation modeling throughout the Durham-Chapel Hill-Carrboro Metropolitan Planning Area, especially in collaboration with Orange County and Chapel Hill. Carrboro should recognize that it cannot effectively plan for future transportation needs by itself. Due to the highly interdependent and interconnected nature of transportation networks in the area, the Town should continue to endorse regional transportation planning for the Triangle Area.

Public Transit (Bus)

The bus system provides a vital service for many of the citizens of Carrboro, including college students, the elderly, the disabled, and many citizens who choose transit as their

preferred mode of public transportation. The Town should endorse a continuation of cost-effective service in order to encourage non-single occupant vehicle travel and to reduce congestion on existing roads.

Development of new transit routes and the location of higher density development zoning near such routes should be encouraged. The zoning ordinance and map should be used to facilitate the use of the transit system by the greatest number of people. Carrboro currently supports the only revenue-sustaining bus line in North Carolina. Continued transit-friendly development will allow more revenue-sustaining bus lines to be developed, which would provide efficient service to major employment centers, such as the University of North Carolina, and would significantly reduce additional traffic congestion from new development. The proximity of the Study Area to Interstate 40 and the University's Horace Williams property lends greater urgency to the provision of public transportation service to the area, since both can be expected to generate significant traffic.

The Town currently supports transportation services for citizens with disabilities through the EZ Rider program, and should explore options for providing human service transportation in the transition area.

The Town should ensure that the cost of public transit service is equitably shared with Chapel Hill and the University.

Bicycle and Pedestrian Travel

The transportation plan for the Study Area must provide for safe and accessible cyclist and pedestrian movement to further reduce reliance upon automobiles. Bike route connections using existing neighborhood streets are recommended in this area. Bicycle travel reduces traffic congestion, air pollution, and parking demand. Carrboro's outstanding bicycle path system should be extended into the Study Area. All residential and commercial developments, parks and other public facilities should be designed for easy bicycle and pedestrian access and with good internal circulation. The Town should give special emphasis to bicycle paths connecting relatively high density residential areas with primary destination points throughout town. Pedestrian and bicycle easements should be provided along major roadways, as well as between adjacent neighborhoods and commercial developments, even when topographical, environmental or political constraints prevent direct thoroughfare connections. The Town should encourage the development of bikeways and pedestrian paths by providing a plan showing the entire bicycle/pedestrian network and a schedule for improving the links not likely to be dedicated by new development.

Established Routes

In accordance with existing Town policy, the choice of widening existing roads should be carefully considered and implemented only when such a decision is consistent with the overall plan, following full consideration of all other alternatives. (Policy 4.31, Carrboro's Year 2000 Task Force Policies) Whenever possible, the integrity of existing neighborhoods should be maintained and protected. Encourage shifting rights-of-way to save distinctive features of the landscape (such as a line of shade trees) wherever feasible as an integral part of the roadway widening design process.

Transportation Requirements for Developers

New development should be strongly encouraged to install sidewalks and bicycle paths along collector and arterial roads adjacent to their developments. The Town should also require an internal circulation plan that provides for pedestrian/bicycle paths, transit routes and/or stops, and roads.

The Town should carefully supervise construction to preserve trees and buffers along connector and arterial roads. (Policy 4.52, Carrboro’s Year 2000 Task Force Policies)

New developments should support the additional costs of connector and arterial roadways in their areas in proportion to the impacts of the new developments on the roadways. (Policy 4.53, Carrboro’s Year 2000 Task Force Policies)

Public Services and Amenities

Carrboro is currently enjoying well-deserved recognition as a community which constitutes more than simply the sum of its parts. Because of its excellent recreation and parks programs and facilities, its reputation as a center for the performing and creative arts, and its small town charm, many in the Triangle region choose Carrboro as their place of residence. These highly regarded attributes, as well as the less-recognized, but crucially important services such as public works, police and fire protection, deserve a high level of attention and support from the Town. Care must be taken to ensure that Carrboro is not ruined by its own popularity. Existing recreation and park facilities, creative and performing arts centers, and other public service facilities should not be allowed to become overcrowded and overburdened by Carrboro’s new residents. Because of this expected growth, the Town and community organizations will need to plan new facilities, acquire land, and expand current facilities and services.

Recreation and Parks

The Town should encourage and support the development of greenways or park lands along streams and easements dedicated to public use. While allowing these types of uses, these areas should be preserved as much as possible in their natural state. In addition to requiring greenways along major drainage ways, the Town should also consider requiring the following:

- **SUBSIDIARY GREENWAY TRAILS:** Require developers of new subdivisions to lay out and construct neighborhood trails through their new developments in such a way that they will connect with and extend the Town’s more formal greenway network.
- **EXPERIMENTAL TRAILS:** New trails should be designated as “experimental” with a defined period for evaluation and abandonment, in situations where abutters register concern about litter, vandalism, or privacy loss.

The Town should proceed with the plan for land acquisition for smaller neighborhood parks and recreation space in addition to that required for developments.

To support the neighborhood parks plan, the Town should supplement the developers fee-in-lieu funds to provide for better equipped and better maintained parks.

Police, Fire, Public Works

Service provision currently is considered to be generally satisfactory, but new facilities will be needed in the future, which implies the need for significant capital outlays. Funding mechanisms for these new facilities should be investigated.

PLANNING CONCEPTS

In addition to the development principles described above, the Small Area Planning Work Group explored a number of planning concepts, and identified several which they believe are especially suitable in guiding the forms of development in the Study Area. The following concepts represent the Small Area Planning Work Group's proposal as revised through the facilitated planning conference process:

Conservation of Natural and Environmentally Sensitive Areas

The issue of appropriate buffer widths along streams, creeks, and lakes involves many variables depending on the characteristics of the particular water corridor.

In addition to providing access to pedestrians and cyclists, linear open space corridors may be designed to filter stormwater run-off from adjacent development. These corridors often function as traps for pollutants and nutrients. Leaf litter and ground cover can also slow down storm run-off, thereby reducing soil erosion and stream sedimentation. The minimum width for water quality buffering depends on factors such as soil permeability, steepness of the slope, and the amount and type of plant material.

Wider corridors are generally needed for wildlife habitat. The value of providing buffers for wildlife and water quality concerns has been well demonstrated. However, width requirements range dramatically depending on their purposes. Many variables should be considered and flexibility should be applied when determining the optimal corridor widths. A conservation overlay zone could be established that would base the establishment of the appropriate widths of stream and open space corridors on the consideration of site-specific conditions.

Patterns of Development

Neo-Traditional/Mixed Use Village Concept

Proponents of neo-traditional town planning see it as an answer to the problems of suburban sprawl (Duany, 1991). Simply put, its aim is to encourage the development of land in the pattern of traditional neighborhoods built prior to 1945.

The "Traditional Neighborhood" has the following basic design principles:

- The Neighborhood is limited in size so that a majority of the population is within a 5-minute or 1/4 mile walking distance from the center.
- The streets are laid out as a network so there are alternate routes to every destination.
- There is a full hierarchy of streets that are relatively narrow and are well-defined by the buildings along them.
- The buildings are limited in size.

- A mixture of uses in addition to traditional residential uses are encouraged in these types of developments. Such permitted uses might be neighborhood-scale commercial, office, or institutional.
- There are public squares or centers which contain shops, civic buildings, and offices, as well as apartments and open space.

The positive results of the Traditional Neighborhood pattern include:

- Independence of movement is made possible. By bringing most of the activities of daily living, including dwelling, shopping and working, within walking distance, the elderly and the young gain independence of movement.
- Small town atmosphere is created. Human-scaled and pedestrian oriented developments make possible neighborhoods with small town character.
- Negative impacts from automobile traffic are minimized. Traffic congestion, the expense of road construction, and atmospheric pollution are all significantly reduced by reducing the number and length of automobile trips.
- Bus service is facilitated. By providing appropriate building densities and concentrations, public transit becomes a viable alternative to the automobile.

Important neo-traditional design features include:

- Buildings aligned along streets and squares, creating effective spatial definition.
- Functional and public open space.
- Trees aligned along streets.
- Parking located along streets and/or to the rear of buildings. A row of parked cars buffers the pedestrian from traffic. Parking lots must be placed to the rear of buildings to avoid gaps on the building line which destroy pedestrian continuity. Providing higher density housing (lots under 50 feet wide) with alleys eliminates garage doors from becoming the dominant feature of the facade.

Cluster/Open Space/Neighborhood Developments

Cluster developments are primarily residential homes separated from other types of uses. The distinguishing site design feature is how the homes are situated on their lots and how the lots are grouped together to take advantage of available developable land. Cluster development allows steep slopes, stream buffers, floodplains, wetlands, knolls, and views to be permanently preserved as common open space for neighborhood use. The open spaces may serve as visual and physical focal points around which streets and building lots are arranged. Under the cluster/open space development pattern, the provision of attractive and useable open space is one of the primary design considerations, unlike the predominant current development technique, which is to determine open space areas after buildings and roads have been located. Open space in this type of development is intended to serve as the focus of the community that is created. To accomplish this:

- standards should be set for conservation lands in addition to wetlands and steep slopes;
- a range of densities should be offered in relation to the percentage of land which is to be conserved;
- density calculations should be based on the useable land rather than on gross acreage (the “Yield Plan” approach should be utilized to demonstrate a realistic build-out potential);
- establish design standards for the open space in new subdivisions, so they will eventually coalesce to create an interconnected network of protected lands as greenway corridors; and
- add provisions addressing layout and maintenance issues pertaining to conservation lands in new subdivisions, with detailed standards for managing different types of open space (woodlands, meadows, grassed areas, etc.)

Figure 3-1

Sustainable Development

The concept of sustainable development borrows from the ecological idea of “carrying capacities.” In the field of ecology, a carrying capacity is defined as the amount of disruption an ecological system is able to sustain while continuing to function as a system. Ecological systems are able to absorb certain levels of impacts without breaking down; however, when the system’s carrying capacity is reached and exceeded, the system will begin to deteriorate.

Advocates of sustainable development argue that current patterns and forms of development are not environmentally sustainable in the long run because they are based on unsustainable patterns of activity. One example of this is the residential commuter suburb, which is based on the use of the single-occupant automobile. In these types of developments, cars are needed for nearly all transportation needs because workplaces, stores, and even schools are not within walking or bicycling distance and transit cannot effectively function in such low density areas. Automobiles depend on the continued operation of a highly complex, limited-supply, environmentally-damaging petroleum extraction and refining system. Because of this, these types of communities are not as sustainable as types of development which are less dependent on the single-occupancy automobile.

Sustainable development advocates support a variety of measures, such as the use of alternative energy systems, energy efficient building designs, and pedestrian-oriented communities, to further the long-term sustainability of human development. Carrboro should encourage the consideration of long-term sustainability issues in assessing the forms and locations for development in the study area.

GOALS AND OBJECTIVES – CARRBORO’S NORTHERN STUDY AREA

Based on the principles and concepts described above, goals and objectives formulated by the Small Area Work Group and the Facilitated Conference link each of the Work Group’s nine goals (given to them by the Board of Aldermen) to methods for attaining those goals.

GOAL 1. PATTERNS OF GROWTH WHICH MINIMIZE NEGATIVE IMPACTS AND MAXIMIZE POSITIVE IMPACTS ON THE COMMUNITY.

OBJECTIVES:

- 1.A. Require neighborhood residential development which is clustered.
- 1.B. Encourage the concept of a “floating zone” for future residential village developments in the Transition Area.
- 1.C. Endorse the concept of a “Floating Zone” for mixed-use villages with very modest retail components at appropriate locations in the Study Area.
- 1.D. Continue policy of providing Town services to newly developed areas concurrent with the attainment of minimum service level standards.
- 1.E. Pursue objectives listed under transportation, service provision, and environmental quality goals listed below.
- 1.F. Provide for modest community-scale commercial and office uses in mixed-use areas.
- 1.G. Encourage appropriately-scaled economic development in mixed-use areas with very modest retail components at appropriate locations.

- 1.H. Prohibit land uses and activities which would use large quantities of water; include stringent performance standards.

GOAL 2. PATTERNS OF GROWTH WHICH ALLOW FOR THE EFFICIENT PROVISION OF TOWN SERVICES.

OBJECTIVES:

- 2.A. Restructure impact fees to reflect true current and future costs of new development to the community, with the exception of assessing impact fees which conflict with Goal 4.
- 2.B. Investigate and implement various mechanisms for the acquisition of land for the purposes of providing open space, creating trail and bikeway linkages, and preserving environmentally sensitive areas.
- 2.C. Encourage development in patterns described under Goal 1.
- 2.D. Begin the process of land acquisition for a fire substation, a public works service center, and other needed public facilities in the Study Area.

GOAL 3. CONSERVATION OF NATURAL AND ENVIRONMENTALLY SENSITIVE AREAS, AND THE PROTECTION OF ENVIRONMENTAL QUALITY.

OBJECTIVES:

- 3.A. Use conservation overlay zone standards to determine appropriate streamway buffer widths for new development.
- 3.B. Prohibit development of natural and environmentally sensitive areas through the creation of a resource conservation district or open space conservation district.
- 3.C. Identify strategies for various types of acquisition or dedication that would protect important natural areas, including Bolin Creek.
- 3.D. Mitigate potential impacts of development on streams and creeks. (e.g. erosion, sedimentation, pollution)
- 3.E. Identify Primary Conservation Areas (wetlands, floodplains, & Slopes >25 percent) and Secondary Conservation Areas (mature deciduous woodland, prime farmland in fields, meadows, pastures, wildlife habitats/travel corridors, historic/cultural features, scenic viewsheds from public roads across existing fields/meadows/pastures, etc.).

GOAL 4. A VARIETY OF HOUSING TYPES AND PRICE LEVELS.

OBJECTIVES:

- 4.A. Explore options for establishing a legal basis for inclusionary zoning.
- 4.B. Provide strong incentives for new development to dedicate a proportion of new housing units to renters or prospective home buyers in specified income levels.
- 4.C. Explore community land trust options for the provision of affordable housing.
- 4.D. Promote village development patterns as described under Goal 1.
- 4.E. Increase density incentives not only to reduce land cost per dwelling but also to offset additional cost of designing, building, and landscaping new affordable housing so that it looks like a market-rate product rather than a government project. Such housing should be integrated physically into new subdivisions through design standards for building design and for neighborhood layout.

GOAL 5. A VARIETY OF TRANSPORTATION ROUTES, WHICH ALLOW FOR BUS, AUTOMOBILE, BICYCLE, AND PEDESTRIAN MODES OF TRANSPORTATION.

OBJECTIVES:

- 5.A. Plan for the extension of east/west and north/south connector roads without creating undue disturbance to existing residents or areas of high resource value.
- 5.B. Extend the Tripp Farm Road, Pathway Drive, Cates Farm, and East/West Connectors as recommended in the Connector Roads Plan for the Northern Area.
- 5.C. Implement the Carrboro Bikeways Plan.
- 5.D. Follow required sidewalk policy in Land Use Ordinance.
- 5.E. Coordinate transportation planning for the Study Area with Chapel Hill.
- 5.F. Promote coordination between developers for the planning of bicycle, pedestrian, transit, and automobile transportation routes.
- 5.G. Coordinate transportation corridor (rail) planning with Chapel Hill, if commuter rail service is planned for the area.
- 5.H. Incorporate transportation concepts which would support mixed-use development.
- 5.I. Require developers to follow the Connector Roads Plan.
- 5.J. Provide strong incentives for the creation of multi-modal transportation facilities.
- 5.K. Support the creation of mass transit connections to the Research Triangle Park via Interstate 40, along with the provision of a new park-and-ride facility on Eubanks Road or the enhancement of the existing facility.
- 5.L. Re-examine the policy to extend Eubanks Road as a vehicular thoroughfare. Note that this extension might be more appropriate as a rustic trail.
- 5.M. Street connections between Lake Hogan Farm & the High School should not be through existing subdivisions because an alternative route is feasible, linking Lake Hogan Farm with Homestead Road across several largely undeveloped properties on a northwestern/southeastern axis. Bike route connections using existing neighborhood streets are recommended in this area. The Town should proactively contact the owners of properties needed for the above mentioned alternative street connection to explore the possibility of pre-planning such a route, possibly utilizing the approach known as the “landowner compact.”
- 5.N. For road widening projects encourage the shifting of rights-of-way to save distinctive features of the landscape (such as a line of shade trees) wherever feasible.

GOAL 6. ADEQUATE PROVISION OF PUBLICLY ACCESSIBLE PARKS AND RECREATION FACILITIES.

OBJECTIVES:

- 6.A. Follow recommendations of Carrboro’s Recreation and Parks Comprehensive Master Plan.
- 6.B. Provide or increase incentives for developers to dedicate land or facilities for public park and recreational use.
- 6.C. Provide for neighborhood-scale community centers
- 6.D. Completing the loop - Subject to the purchase of park land by the Town, extend the proposed greenway trail link westwards from the North Community Park generally along the line currently shown in the Draft Plan as a Eubanks Road extension and then southerly to connect ultimately with a tributary of Bolin Creek. This trail and others

- closer to population centers in Carrboro should be considered for accessibility by the physically handicapped.
- 6.E. CONNECT HOMESTEAD ROAD AT LAKE HOGAN FARMS WITH THE BOLIN CREEK GREENWAY: Implement this connection along a drainage channel or stream bed running through several existing subdivisions, as a long term goal.
 - 6.F. SUBSIDIARY GREENWAY TRAILS: Require developers of new subdivisions to lay out and construct neighborhood trails through their new developments in such a way that they will connect with and extend the Town's more formal greenway network.
 - 6.G. HORACE WILLIAMS TRACT: The Town should aim for more than a small 10-acre park on this large tract by proactively encouraging the owner to think more creatively and to plan to accommodate all the permitted density to be situated east of the creek, where the land is actually much more suitable for development. A defacto density bonus could be offered by agreeing to calculate the density to be transferred from west of the creek to the eastern area on the basis of gross acreage on the western bank, rather than on net developable land. (A realistically drawn "Yield Plan" for the western area would probably show that its actual developability is constrained by the numerous drainage ways that dissect it.)
 - 6.H. EXPERIMENTAL TRAILS: New trails should be designated as "experimental" with a defined period for evaluation and abandonment, in situations where abutters register concern about litter, vandalism and privacy loss.

GOAL 7. CONTINUATION OF CARRBORO'S SMALL-TOWN CHARACTER AND PRESERVATION OF ITS EXISTING NEIGHBORHOODS.

OBJECTIVES:

- 7.A. Limit potential traffic, noise, lighting, and aesthetic impacts of new development on existing neighborhoods.
- 7.B. Through the encouragement of cluster development and village-scale development, foster the creation of new pedestrian-scaled neighborhoods to enhance the variety and character of Carrboro's neighborhoods.

GOAL 8. A PEDESTRIAN-SCALE COMMUNITY.

OBJECTIVES:

- 8.A. Require cluster and traditional-style village development.
- 8.B. Provide for adequate commercial space such that citizens are able to conduct commercial transactions within walking distance of their homes.
- 8.C. Provide adequate walkways, sidewalks, and pedestrian networks to enable people to walk to nearby residences, parks, schools, and neighborhood commercial centers.

GOAL 9. CONTINUATION OF THE CHARACTER AND NATURAL BEAUTY OF THE STUDY AREA.

OBJECTIVES:

- 9.A. Implement objectives identified under Goal 3.
- 9.B. Preserve important vistas in the Study Area.
- 9.C. Implement town-wide design guidelines to ensure that new development does not degrade the aesthetic character of the Study Area.

GOAL 10. ENCOURAGE ACTIVE FARMLAND PRESERVATION.

OBJECTIVES:

- 10.A. COUNTY COORDINATION: Work with the County to encourage the preservation of active farmland, and to limit the conversion of farmland to developed uses outside the Study Area, as a trade-off for accommodating new development within the Study Area.
- 10.B. ENCOURAGE “METRO-FARMING”: Encourage the conservation of active farmland within new conservation subdivisions and elsewhere in the Study Area, with emphasis on nontraditional crops or uses (high-value vegetables, pick-your-own berries, apples) and community-supported agriculture (community gardening, wholesale nurseries, commercial stables, etc.). Metro-farming should be promoted by a special committee that would look into ways to make Use Value Assessments more common and frequently applied.
- 10.C. ENCOURAGE “LANDOWNER COMPACTS”: Actively promote the concept of two or more adjoining landowners combining their properties to increase the possibility of significant conservation set aside on one parcel by shifting part or all the density to the other parcel(s), with pro-rata sharing of proceeds by the various participating landowners.
- 10.D. EXPLORE THE ROLE OF PDR’S: Recognizing the limited availability of public and private funds with which to purchase development rights from farmers, and also the relatively high cost of such purchases where farmland is zoned for densities of one or more dwelling unit(s) per acre, the Town should nevertheless explore this option as one additional way of preserving all or part of a farm within the Study Area.
- 10.E. PROPERTY TAX ASSESSMENTS: Residents who actively engage in the commercial production of livestock, crops, trees, or fruits/vegetables and are concerned that their local property taxes might rise significantly due to surrounding development activity, should consider contacting the Orange County Tax Assessor’s Office to see if they can qualify for a tax value based on current use as agriculture, horticulture, or forestlands and not on the potential value according to current zoning. Property owners may also wish to consider reducing the potential use value of their property by perpetually dedicating portions or all of their property as conservation or open space easements.

SECTION 4 THE RECOMMENDED SMALL AREA PLAN

INTRODUCTION – PUTTING IT INTO PERSPECTIVE

Any land use plan for an area within North Carolina’s Triangle region must acknowledge the reality of the explosive population growth in the region over the past twenty years. Due to the success of The Research Triangle Park; the proximity of The University of North Carolina at Chapel Hill, Duke University, and North Carolina State University; the general attractiveness of life in the area; and the great variety of business opportunities to be found in the region, new residents are flocking to the area. This immigration bodes well for the future economic prospects of the region, but poses problems for many current residents, who fear that the qualities of the area which they enjoy will be trampled underfoot by the crush of new development. This dilemma is becoming increasingly evident in Carrboro, which is expected to double in population within the next fifteen years.

The charge given to the members of the Small Area Planning Work Group (SAPWG) was to formulate a plan for development in the Northern Transition Study Area which would accommodate a large share of Carrboro’s anticipated growth while seeking to preserve the natural, social, aesthetic, and economic qualities that make it a desirable place in which to live. Carrboro’s ability to expand is severely limited by a number of constraining factors: to the east, Carrboro shares a border with the Town of Chapel Hill; to the south and west, Orange County has established rural buffer zones which serve to preserve the water quality of the University Lake Watershed, the source of much of the area’s drinking water. The size of the Study Area is also constrained to the north by portions of Duke Forest. This leaves Carrboro with the Northern Study Area to accommodate the bulk of expected growth. Carrboro currently has an agreement with Orange County and Chapel Hill which will allow the annexation of the Transition Areas. Clearly, the Study Area is of primary importance to the future of Carrboro. To successfully accommodate anticipated growth while maintaining its small town heritage and enhancing the quality of life for all of its citizens, Carrboro must ensure that the land in the Study Area is not squandered through the exclusive development of high-priced, large-lot, single family housing.

This Small Area Plan describes the SAPWG’s and the Facilitated Conference’s proposed land uses in the Study Area. Over the two years of meetings by the Work Group, and two days of facilitated meetings by area residents, careful attention was paid to balancing the interests of landowners in the Study Area with the interests of all Carrboro’s citizens. The resulting plan clusters residential development; encourages “village-scale” developments; accommodates the need for open space, conservation, and park land; and creates neighborhood and community-scale commercial centers. These measures are designed to minimize the negative impacts on environmental quality, transportation, taxation, and neighborhoods that can result from new development. The plan will also serve to preserve Carrboro’s small town character by discouraging a “sprawled” and uniform pattern of monotonous development and creating instead new neighborhood-scale communities.

STUDY AREA LAND USE PLAN

FLOATING ZONES – Residential

Mixed-Use Village Centers - Mixed-use village centers provide for planned village developments on larger tracts of land. These village centers will be allowed in a newly created floating zone that in addition to basic acreage requirements will impose “good neighbor” performance standards designed to protect existing residents from negative impacts generally associated with new development.

Proposed uses in the Village Floating Zone include: residential, neighborhood-scale commercial, and neighborhood-scale office. In order to ensure that village-style development is internally consistent, it should be developed as one project, by one developer. Acceptable site plans require integration of neo-traditional design ideas to create a neighborhood-scale, pedestrian friendly development. Park land and open space within the development should be plentiful and readily accessible to all residents without need for automobile travel. All residential sites should be within one quarter mile of a village center, where commercial and office establishments are located. Streets within the development should be laid out in a pattern that provides for multiple routes to destinations and disperses traffic among many streets. The village should also be served by a network of bicycle and pedestrian paths which connect with pathways along the Bolin Creek greenway. An acceptable site design will also include provision for transit facilities and transit access.

The overall target densities for the mixed use area is 5 dwelling units per acre. The overall target density for the entire Study Area is approximately the same as the current density of Carrboro: 2.1 dwelling units per acre. A portion of the developable land area will be dedicated to commercial and office uses, with the possibility of increasing commercial acreage with higher residential densities. Areas for open space, parks, and conservation will be determined either through the recently passed open space ordinance or through the use of performance-based criteria for these types of uses. The village mixed-use areas will host a variety of housing types, styles, and prices, including single family residences, townhouses, and rental apartments. Cap densities for market-rate housing at 3 dwelling units per acre so that bonus densities of 4 to 5 dwelling units per acre could be offered while still allowing for a minimum of 40 percent of the developable land being designated as open space (connected with the townwide greenway network).

Neighborhood Mixed-Use - New housing developments in neighborhood mixed-use areas will be clustered in order to preserve sensitive environmental features and provide open space to residents. Some commercial uses will be allowed in these zones, subject to “good neighbor” performance standards relating to impacts from traffic, noise, hours of operation, lighting, and aesthetics. New collector roads in these areas should be built on a grid pattern. Bicycle and pedestrian pathways to provide access and recreation should be developed as well. A mixture of housing types, styles, and prices will be encouraged in these areas. Within neighborhood mixed-use zones, larger-scale commercial facilities will be allowed with higher residential densities. Higher residential densities, in turn, will be allowed with the provision of

publicly-beneficial development features, such as affordable housing, parks and open space, and so on. Performance standards relating to environmental, traffic, noise, and other impacts will determine the maximum appropriate scale for development in these areas. Subject to these performance standards, additional village mixed-use areas could be allowed in the neighborhood mixed-use zone.

Figure 4-1 Mixed-Use Development Concept

Figure 4-2 Community Mixed Use

FLOATING ZONES - Commercial

Business/Office/Assembly - Certain non-obtrusive types of office and light manufacturing will be allowed in this area. These uses will be subject to strict performance standards relating to lighting, noise, building and facilities design, traffic generation, and hours of operation to ensure that they do not create negative impacts on neighbors.

PUBLIC FACILITIES

Prospective locations for public facilities have been located on the Land Use Plan Map. The site of a combined public works facility and fire station has been located east of the intersection of Homestead Road and Lake Hogan Farm Road. This provides a central location for the provision of emergency fire services and public works services.

A school site has also been tentatively located west of the intersection of the proposed Lake Hogan Farm Road Extension and Eubanks Road. This site would allow access to the school from the mixed-use village neighborhoods to the south without necessitating the crossing of any major roads.

PARKS, GREENWAYS, AND NATURAL AREAS

The Land Use Plan Map indicates potential locations for four new parks in the Study Area, as recommended in the Recreation and Parks Master Plan. The largest, identified in the Recreation and Parks Comprehensive Master Plan as the Northern Community Park, is located near the proposed school site along Eubanks Road. The three other parks, each about ten acres in size, are located so as to be accessible from the proposed Bolin Creek greenway. One is located in the northwestern portion of the Study Area, with access from Union Grove Church Road. Another is located near the proposed site for the fire and public works facility. The third is located on UNC's Horace Williams Tract. The Town should aim for more than a small 10 acre park on this large tract by proactively encouraging the owner to think more creatively and to plan to accommodate all the permitted density to be situated east of the creek, where the land is actually much more suitable for development. A defacto density bonus could be offered by agreeing to calculate the density to be transferred from west of the creek to the eastern area on the basis of gross acreage on the western bank, rather than on net developable land.

With the development of hiking trails and possible bike paths along the proposed Bolin Creek greenway, pedestrian, and bicycle travel between the Horace Williams Park and the park near Union Grove Church Road will be possible. Short segments could be added to this system that would allow greenway access to the two other parks as well. If the parklands become available then the Town should extend the proposed greenway trail link westwards from the North Community Park generally along the line currently shown in the Draft Plan as a Eubanks Road extension and then southerly to connect ultimately with a tributary of Bolin Creek.

Connect Homestead Road at Lake Hogan Farms with the Bolin Creek greenway. Implement this connection along a drainage channel or stream bed running through several existing subdivisions, as a long term goal.

Require developers of new subdivisions to lay out and construct subsidiary neighborhood trails through their new developments in such a way that they will connect with and extend the Town's more formal greenway network.

These trails and others closer to population centers in Carrboro should be considered for accessibility by the physically handicapped.

Natural areas along the Bolin Creek Basin, in the Meadow Flats area, and in other areas will either be preserved or strictly limited, with all forms of development subject to performance standards described in a Conservation Area policy. For a review of sensitive environmental areas identified in the Study Area, refer to the Environmental Constraints Map in Section 2.

IMPACT ASSESSMENT AND PLAN EVALUATION

Utilizing the Urban Land Institute's Development Impact Preview Model, potential economic, land use, and environmental impacts can be evaluated for different types of development. This allows decision makers to assess the relative pros and cons of different development scenarios on various aspects of their communities. This model will be used to assess two potential development types that could occur in the Study Area:

- Build out based on existing policies and zoning designations.
- Build out based on the recommendations of the Small Area Land Use Plan.

A technical paper entitled, "Impact Assessment of the Small Area Plan," dated September 1995, showing the results of these impact analyses, is available from the Carrboro Planning Department.

INVOLVED PARTIES

In addition to Carrboro's authority in the Study Area, other jurisdictions and institutions will have significant effects upon the ultimate form of development in the Study Area. Carrboro must closely coordinate its planning efforts in the Study Area with the interests and plans of other involved parties.

State of North Carolina

The State of North Carolina granted cities and towns the authority to adopt zoning ordinances in 1923, and gave counties the same ability in 1959. It is this authority which allows Carrboro, Chapel Hill, and Orange County to collectively resolve land use issues in the Joint Planning Area.

Orange County/Chapel Hill

Through the Joint Planning Agreement, Orange County, Carrboro, and Chapel Hill will collectively decide land uses in the Joint Planning Area. That area is essentially broken down into a transition area which Chapel Hill is expected to annex, a transition area that Carrboro is expected to annex (a portion of the Study Area), and a rural buffer zone outside of those areas. Development in the rural buffer zone is currently allowed at densities not to exceed one dwelling unit per two acres. The buffer zone serves to preserve outlying areas from the negative impacts of more intensive development and to protect environmental resources such as the University Lake Watershed. Allowed uses in that zone are not expected to change in the near future.

In order for Chapel Hill and Carrboro to administer their respective land use ordinances in their transition areas both municipalities along with Orange County must maintain a jointly adopted land use plan. The zoning of land in each municipality's transition area must be consistent with the Joint Planning Area Land Use Plan and the zoning changes must be adopted via a joint public hearing by the respective municipality and by Orange County. Carrboro's transition area is further divided into two transition areas referred to as Transition Area I and Transition Area II. The line splitting the two areas generally follows Bolin Creek and Buckhorn Branch. Under the agreement, Carrboro's second transition areas cannot be zoned for more than one unit per acre until at least 75 percent of the gross land area of the first transition area is developed. An increase in residential density will require an amendment to the Joint Planning Area Land Use Plan which can be amended to incorporate this Small Area Plan by reference provided that all three governing boards, through the Joint Public Hearing process, jointly adopt the change.

University of North Carolina

The University's development of its Horace Williams Properties, part of which straddles the border between Chapel Hill and Carrboro, will have significant impacts on the Study Area. Carrboro's interests in the development include the possible acquisition of park land from the parcel, as well as ensuring that development does not create negative impacts on traffic, neighborhoods, and environmental quality.

On January 24, 1997 the UNC Board of Trustees formally accepted the Land Use Plan for the Horace Williams and Mason Farm properties.

The Town in its review of the Horace Williams Tract, supports the designation of Bolin Creek, its flood plain, adjacent steep slopes, and associated hardwood areas as "Non-Buildable Areas." The northwest corner of the Horace Williams Tract, is particularly well suited for preservation since it is one of the few remaining stands of hardwood forest in the Chapel Hill-Carrboro area. The Town continues with its earlier position that the northwest corner be redesignated as "Non-Buildable" and included as a part of the Bolin Creek Natural Area Corridor. Additional issues associated with the Bolin Creek Corridor that warrant further discussion include public access, appropriate types of bike/pedestrian facilities, and systematic linkages with public places such as parks, schools, and related facilities. To advance the discussion of these issues the Town of Carrboro has proposed a process to plan for the preservation of the Bolin Creek corridor and for the potential use of this area as a natural area

Within Carrboro's jurisdiction the "UNC Outlying Properties Land Use Plan" proposes the following general land use categories:

- Horace Williams Homesite (57-acre tract located north of Homestead road)
 - ⇒ Natural Areas proposed along the Bolin Creek flood plain (15 acres);
 - ⇒ Natural Buffer along the edge of the natural area (9 acres);
 - ⇒ Housing as a primary use for the remainder of the parcel (33 acres) and disposition listed as a secondary use.
- Horace Williams Property (973 total acres with approximately 306 acres in Carrboro's jurisdiction)
 - ⇒ University Village District (60 acres or 20 percent of Carrboro's portion of the tract). This district forms the core of the Horace Williams site and includes a variety of uses that can contribute to and benefit from a pedestrian oriented, human scale "Village" atmosphere and convenient transit to central campus. Uses may include University graduate and professional academic units, administrative functions, University or corporate research facilities, incubator facilities, convenience commercial and service uses, and housing.
 - ⇒ Independent Uses (60 acres or 20 percent of Carrboro's portion of the tract). This district includes uses which do not contribute to and benefit from a pedestrian oriented setting and which can be developed as free-standing developments. Uses may include, for example, large space consuming facilities, major research facilities, incubator facilities for technology transfer, independent academic units or schools, library special collections or technical facilities, institutional records, storage facilities, and some physical plant shops.
 - ⇒ Housing District (60 acres or 20 percent of Carrboro's portion of the tract). Component uses may include lower density housing for university faculty, staff and students; and fraternity/sorority housing.
 - ⇒ Passive Recreation, Buffers, Airport Approach Zone & Natural Area District (126 acres or 40percent of Carrboro's portion of the tract). These areas typically include undeveloped natural areas or minimally improved green areas. The flood plain and buffer along Bolin Creek account for 68 acres, the passive recreation area south of Bolin Creek is 18 acres, and the 100-foot buffer, street rights-of-way and airport approach zone consumes the remaining 40 acres.

Orange Water and Sewer Authority (OWASA)

The limits of the Study Area were determined in part based on the ability of OWASA to serve the area with a gravity-flow sewage system. OWASA is expected to provide water and sewer service to all areas within the Study Area, although such provision will necessarily grow over time and not occur all at once.

MAP #7 SMALL AREA PLAN MAP

SECTION 5 IMPLEMENTATION

INTRODUCTION

The implementation section is perhaps the most crucial section of any land use plan. It is a blueprint of how to get to a desired state. The goals identified by the Board of Aldermen in their charge to the Small Area Planning Work Group have necessitated a thorough and far-reaching vision of the desired forms and patterns of development in the Study Area. Ensuring that development in the area occurs in the desired fashion will be no easy task, but with the support of a committed, forward-looking citizenry, Carrboro can grow while remaining true to its small town character and progressive reputation.

This implementation section describes the measures that will be needed to carry out the plan of the Small Area Planning Work Group and the Facilitated Conference. It groups steps to be taken under each of the nine goals given by the Board of Aldermen. In some cases, one action will serve to further a number of goals. Appendix A includes a listing of funding and revenue sources to support the Town's efforts in acquiring land, developing facilities, and improving services in the Study Area. Adequate funding is critical to the success of the Plan.

IMPLEMENTATION MEASURES

GOAL 1: PATTERNS OF GROWTH WHICH MINIMIZE NEGATIVE IMPACTS AND MAXIMIZE POSITIVE IMPACTS ON THE COMMUNITY AND THE NATURAL ENVIRONMENT.

MEASURES:

1.1 Set standards for conservation lands in addition to wetlands and steep slopes, and by offering a range of densities with rise in relation to the percentage of land which is to be conserved.

Density calculations as proposed by Randall Arendt and as endorsed by the Facilitated Conference should be based on the usable land rather than on gross acreage; or the "Yield Plan" approach should be utilized to demonstrate a realistic build-out potential. The following approach to calculating density is recommended:

STEP 1

Identify the acreage of constrained lands such as floodways, wetlands, extensive rock outcroppings, steep slopes exceeding 25 percent, transmission line rights-of-way (69kV or higher), floodplains, moderate slopes between 15percent and 25 percent, underground utility line rights-of-way (outside of streets).

STEP 2

Multiply each category of constrained acreage by the following percentage to determine the acreage of constrained land that can be used in calculating density:

Constraint	Acres	Factor	Density Acres
Floodways		0.01	
Wetlands		0.05	
Rock Outcrops		0.10	
Slopes > 25 percent		0.20	
Electric Transmission		0.25	
Floodplains		0.50	
Slopes > 15 percent & < 25 percent		0.60	
Underground Utility		0.70	
Total Acres from Constraints for determining density=			

STEP 3

Subtract the total number of constrained acres provided by the second column in the table above from the total acres to determine the total unconstrained acres;

STEP 4.

Add the total density acres from constraints (bottom of last column in the step 2 table) to the remaining unconstrained acres (step 3) and divide this sum by the number of units allowed per acre to determine the net allowable density for the tract. (The number of units allowed on an unsewered parcel will be further restricted by the septic suitability of the soils available on the unconstrained portion of the tract to determine the total yield)

The practical effect of this standard will be to allow full development density on land that is not wet, flood prone, or steep and to limit the number of new homes on parcels containing significant physical and environmental constraints. From a simple fairness perspective, it seems only equitable that parcels which are not constrained should be permitted to have full density, and that other parcels containing a substantial amount of land that is inherently unfit for development should not be permitted the same number of housing units.

1.2 Open Space Standards

The Work Group has endorsed the proposal of the Planning Board to adopt a more flexible open space ordinance. The details of that more flexible ordinance are as follows:

- Require that all primary conservation areas be protected and designated as open space, regardless of the percentage of the development this encumbers, unless the strict provisions required to obtain a variance apply to a particular piece of property.
- The Carrboro Land Use Ordinance should be amended to provide various density incentives and disincentives so that conservation subdivisions (with substantial open space) will be encouraged, and that new development with little or no open space will be actively discouraged. Open space density incentives will apply to the net developable portions of the land or those portions of the property not encumbered

with primary constraints. A ratio of open space should be established such as the one recommended by Randall Arendt.

The ordinance should require that priority be given to ranked categories of land (secondary constraints) such as:

- ⇒ contiguous wooded areas
- ⇒ pleasing open vistas (seen either from a road or within a development)
- ⇒ historically or archaeologically significant areas (even if structures or graves are located there)

1.3 Create a “floating zone” for future residential village developments

In order to encourage mixed-uses, the Town is encouraged to amend the Land Use Ordinance to create a “floating zone” for future residential village developments in the Study Area. Carrboro can foster a neo-traditional style of village-sized mixed-use development by including a number of performance standards with incentives for mixed-use development proposals. Mixed-use village centers should provide for planned village developments on tracts of land with a net developable area greater than 25 contiguous acres in size. These village centers will be allowed in a newly created floating zone that in addition to basic acreage requirements will impose “good neighbor” performance standards designed to protect existing residents from negative impacts generally associated with new development.

One of the crucial aspects of neo-traditional development is that to create village character, residences should be no more than a quarter of a mile from the village center. This enables residents to easily walk to most areas within the village. This will help to create pedestrian-scaled neighborhoods rather than auto-dependent suburbs. It is important not to allow subdivision of these parcels. In order for neo-traditional developments to work, they must be built so that all elements of the village are harmonious.

Another crucial aspect of neo-traditional development is a mixture of uses in the development. Carrboro could require that a certain percentage of the development be allocated to commercial and office uses. These mixed use areas should be capable of supporting very modest retail components at appropriate locations in the Study Area. New mixed-use classifications could be developed by integrating current B3, R2 or R3, and O zoning classifications and adding some new elements.

Additional elements, such as street and building design standards, should be incorporated into the new mixed-use area(s), but Carrboro should be careful not to over-regulate the form of development. Street and building design standards should be a part of any good neo-traditional-style development, and these elements can be approved through the site plan review process.

Neighborhood mixed-use areas are intended to be predominantly residential. Flexibility should be allowed in the amount of commercial space permitted in these areas. A baseline figure for allowable commercial development should be set, but higher commercial densities should be permitted with the provision of publicly-beneficial development features such as parks, bicycle

paths, and affordable housing. Strict guidelines pertaining to site design and performance standards for commercial development should be a part of this type of new land use designation.

1.4 Attract developers who have successfully built mixed-use and clustered developments.

A number of developments in the area have successfully incorporated some, if not all, elements of these two styles of development. Some examples are Chapel Hill's Southern Village, Fearington Village south of Chapel Hill, and the proposed University Station development in Hillsborough. Developers of these mixed-use, village style areas, as well as other potential developers, could be approached by Carrboro officials. This would allow direct communication of the type of development sought in the Study Area and the assessment of the interest of the development community in such projects.

1.5 Provide incentives to commercial and office businesses that locate in neo-traditional developments.

One of the frequent stumbling blocks of neo-traditional development is catalyzing business interest in these areas. This difficulty is not due to the lack of profit incentives in these areas, but to the inherent conservatism of businesses and financial institutions. By providing incentives, such as tax breaks, higher allowed densities, or an expedited permitting process, businesses will overcome their reluctance to locate in these new types of developments and find that there are many advantages to a neo-traditional location. Once there is enough evidence that neo-traditional location is good for business, financial institutions and new businesses will readily support and pursue neo-traditional locations.

1.6 Create a new business/office/assembly area that would allow certain types of light manufacturing, flex space, and office uses subject to performance standards.

Although commercial and office uses in mixed-use areas within the Study Area will help to offset the tax burden on residences within Carrboro, larger-scale employers would have greater impacts on changing the overall balance of taxation. Additionally, the location of larger-scale employers in the Study Area would help to defray traffic impacts by enabling more people who live in Carrboro to work in Carrboro. Performance standards can be applied to these types of uses, and impact assessment evaluation can be employed to ensure that they do not create undue negative impacts on neighbors.

1.7 Prohibit land uses and activities which would use large quantities of water.

As part of the permitting process for residential, commercial, and other types of development, measures should be added to assess water usage impacts and restrict potential large water uses from the area.

1.8 Encourage development in the desired forms by making Town guidelines clear and providing a consistent vision of what new developments should look like.

If Carrboro desires greater influence over the appearance of new development and wants to ensure that developers and their designers “get the picture,” Carrboro should consider following the example set by Mannheim Township, in Lancaster County Pennsylvania. The design standards for Planned Residential Development (PRD) are heavily illustrated land use regulations with the express purpose of conveying to the developers the intent of the ordinance.

1.9 The contents of plans submitted for review should be required to provide greater detail about the natural and cultural features occurring on the proposed development site and--to a lesser extent--on any adjoining undeveloped properties. The Town should consider incorporating the following site plan requirements as a part of the Land Use Ordinance:

- Site Context Maps - Show the relationship of the site to patterns of existing development and/or natural features on other properties within 1000 to 2000 feet (to be aware of possible incompatibilities and to identify the potential for creating interconnected networks of streets, trails, and greenway lands).
- Existing Resources/Site Analysis Plans - Incorporate a map as a part of the Land Use Ordinance that locates both “primary conservation areas” and “secondary conservation areas.” Require applicants to accurately verify and locate these areas as a part of their site plan.

1.10 The Town should consider the following site plan review procedures as an integral part of its site plan review and approval process:

- Pre-Sketch Conference: An informal discussion between the applicant, the site designer, and Town officials to ensure that all parties understand the process, the sequence of events, the contents of each kind of document to be submitted, and the overall “big picture” goals which the Town is trying to accomplish in terms of harmonious development patterns and interconnected open space network protection.
- Site Visit: The applicant should arrange and coordinate a site visit of the property for the review boards, Town Planning Staff to review first-hand an Existing Resources and Site Analysis Plan and to discuss how the applicant proposes to develop the site so that everyone will be able to understand exactly how the site features relate to one another.
- Voluntary Sketch Plan: The Sketch Plan is a conceptual plan that broadly demonstrates how the applicant will protect the site’s sensitive resources (as

- identified on the Existing Resources and Site Analysis Plan and during the site visit). The sketch plan should be submitted before the formal review of the complete preliminary plan package and after the site visit.
- 4-Step Design Process: The following 4-step design process should be utilized by applicants as an approach to designing their proposed development:
 - ⇒ Identify “primary conservation areas” and identify “secondary conservation areas”;
 - ⇒ Locate house sites;
 - ⇒ Align streets and trails;
 - ⇒ Draw in the lot lines.

1.11 Provide “model” standards for the layout and maintenance of conservation areas within new subdivisions

GOAL 2: PATTERNS OF GROWTH WHICH ALLOW FOR THE EFFICIENT PROVISION OF TOWN SERVICES.

MEASURES:

2.1 Continue the current policy of providing Town services concurrent with the attainment of minimum service level standards.

Carrboro’s current policy of providing Town services to newly developed areas only when minimum service levels are attained helps to minimize the financial burden of new development on the community. Under the current system, roads, sewer and water systems, and other necessary components of new development are built by developers and dedicated to the Town, or simply built and maintained by the developer. This eliminates any Town obligation for construction of such facilities and guarantees that the provision of Town services will happen only when these systems are constructed to meet or exceed Carrboro’s service level standards.

2.2 Authorize study of true current and future costs of new development to the community.

Despite the policy mentioned above, new development does place additional burdens on the community. Since Carrboro is a small town with limited resources, the annexation of the Study Area (an area which will virtually double the size of the Town) will entail significant costs to the community. In addition to new facilities, such as parks, a fire substation, and a public works facility, existing facilities will need to be expanded and services will need to be enhanced. The findings of a study of the financial impacts of new development would give the Town the legal basis to impose impact fees or other funding mechanisms on new development to reflect additional costs to the community.

2.3 Explore other funding mechanisms.

Once the results of a cost/impact study are completed, staff should identify the most equitable and efficient means for recovering Town costs.

2.4 Explore all methods for acquisition and development of land needed for park space, community facilities, open space, and trail and bikeway linkages. Particularly, explore methods other than fee simple purchase of land in order to most efficiently acquire needed land.

There are a number of strategies available for land acquisition. These strategies are explained in Appendix A under the heading, "Methods for Acquisition and Development." The Town should give a high priority to acquiring land or public easements for the Bolin Creek Greenway.

2.5 Begin the process of land acquisition for a fire station, a public works facility, and other needed public facilities in the Study Area.

Land needed for public facilities in the Study Area should be acquired as soon as possible. Land prices continue to rise in the area and increasing development there could price land out of the reach of Carrboro. Budgeting for land to house a new fire station, public works facility, and park has been included in the proposed 1995 budget. Potential sites should also be evaluated for their suitability for these and other facilities.

GOAL 3: CONSERVATION OF NATURAL AND ENVIRONMENTALLY SENSITIVE AREAS, AND THE PROTECTION OF ENVIRONMENTAL QUALITY.

MEASURES:

3.1 Amend streamway buffer ordinance to incorporate new information concerning the effect of buffer widths on water quality.

New information concerning the relation of streamway buffer widths to water quality indicates that rather than imposing one standard buffer width for all stream corridors, buffer widths should vary based on site characteristics. This knowledge should be used to modify the existing streamway buffer ordinance.

3.2 Create Conservation Overlay District.

The current conservation district restricts types of development in the University Lake Watershed. Planning staff is currently developing a more broad-based conservation overlay district zone which would impose differing development restrictions based more closely on site characteristics. The most environmentally sensitive areas would be zoned for preservation, but in primary and secondary conservation areas some types of development would be allowed, subject to design guidelines and other criteria. This ordinance would be applicable throughout Carrboro but would be especially important in preserving environmental quality in the Study Area.

3.3 *In addition to acquisition strategies outlined under Goal 2, measure 4 above, encourage the active participation of land trusts in conserving environmentally sensitive areas in the Study Area.*

Land trusts increasingly are playing an important role in preserving important natural areas. The involvement of local land trusts or formation of a new land trust focused upon the preservation of land in the Study Area should be actively encouraged.

3.4 *Support statewide enabling legislation to allow the transfer of development rights.*

If statewide enabling legislation for the practice of transferring development rights were passed, the Town would have a mechanism for preserving environmentally sensitive lands while ensuring that landowners are able to realize the value of their land. Under the practice of the transfer of development rights, landowners who own environmentally sensitive land that should not be developed are compensated by the municipality with transferable development rights that allow higher densities on developable land. These rights can be used by the landowner or sold to other landowners, thereby allowing a reasonable return on land that should not be developed. The town should express its support for this type of legislation.

GOAL 4: A VARIETY OF HOUSING TYPES AND PRICE LEVELS.

MEASURES:

4.1 *Actively pursue enactment of legislation for inclusionary zoning.*

Currently Carrboro is reluctant to require new developments to include a proportion of housing units which are affordable to low income persons. Statewide enabling legislation would allow the Town to do this, which would help ensure that current residents are not priced out of the area.

4.2 *Provide density bonuses for developers who include affordable housing units in their developments.*

Density bonuses allow developers to develop more units than would normally be allowed under zoning regulations. This increases the profits of developers and provides an incentive for the provision of affordable housing. Before this measure is enacted, the attractiveness of this incentive to developers should be more closely assessed.

- **OFFER PAIRED BONUSES:** Increased density incentives not only to reduce land cost per dwelling but also to offset additional cost of designing, building, and landscaping new affordable housing so that it looks like a market-rate product rather than a government project. Such housing should be integrated physically into new subdivisions through design standards for building design and for neighborhood layout.
- **APPROPRIATE DENSITIES:** Cap densities for market-rate housing at 3 dwelling units per acre that bonus densities of 4 to 5 dwelling units per acre could be offered

while still allowing for a minimum of 40 percent of the developable land being designated as open space (connected with the Town-wide greenway network).

4.3 Support community land trust efforts for the provision of affordable housing.

In line with the recommendations of Carrboro’s Community Land Trust Study, the formation of a local community land trust should be actively supported by the Town. In addition to approaching potential local non-profit housing agencies, Carrboro should support the dedication of, or simply designate, a portion of the area’s affordable housing budget to the support of such a land trust.

GOAL 5: A VARIETY OF TRANSPORTATION ROUTES, WHICH ALLOW FOR PUBLIC, PRIVATE, BICYCLE, AND PEDESTRIAN MODES OF TRANSPORTATION.

MEASURES:

5.1 Implement the Connector Roads Plan Concept.

See Appendix B for plan details.

EUBANKS ROAD: Re-examine policy to extend Eubanks Road as a vehicular thoroughfare in the location shown on official documents, which might be more appropriate as a rustic trail. Do not locate the extension of Eubanks Road as proposed by the Draft Small Area Plan but preserve the idea of connectivity in the general vicinity without undue disturbance to existing residents or areas of high resource value.

ROAD WIDENING: Adopt policy to encourage shifting rights-of-way to save distinctive features of the landscape (such as a line of shade trees) where ever feasible.

STREET CONNECTIONS BETWEEN LAKE HOGAN FARM & THE HIGH SCHOOL: Such street connections should not be through existing subdivisions because an alternative route is feasible, linking Lake Hogan Farm with Homestead Road across several largely undeveloped properties on a northwestern/southeastern axis. Bike route connections using existing neighborhood streets are recommended in this area. The Town should proactively contact the owners of properties needed for the above mentioned alternative street connection to explore the possibility of pre-planning such a route, possibly utilizing the approach known as the “landowner compact”

5.2 Implement the Carrboro Bikeways Plan.

5.3 Follow required sidewalk policy in the Land Use Ordinance.

5.4 Coordinate transportation planning for the Study Area with Chapel Hill and other relevant agencies.

With the concurrent development of Chapel Hill’s Northwest Area, the University’s Horace Williams tract, and Carrboro’s Study Area, one can expect significant changes in traffic levels and patterns in the area within the next 15 years. To ensure that transportation planning in

the area takes “the big picture” into account, Carrboro should strongly encourage the coordination of transportation planning in the area with other involved parties. Carrboro should also continue to actively participate in regional transportation planning efforts. If commuter rail service is planned for the area at some point in the future, the service should be closely coordinated by involved parties.

5.5 *Promote coordination between developers for the planning of bicycle, pedestrian, transit, and automobile transportation routes.*

Incentives should be provided to developers for linking these transportation routes. Emphasis should be placed on making these routes publicly accessible. Currently developers are awarded points for the provision of facilities such as tennis courts and swimming pools in their developments. The points awarded for the provision of bicycle and pedestrian pathways should be increased, with even higher points awarded to pathways that connect to other networks. The findings of the American Lives Survey indicate that consumers highly rank natural open space, as well as walking and bicycle paths, in their preferences for development amenities. (Source: “American Lives Survey Analysis”, prepared by Diane Schrauth, January 16, 1995.)

5.6 *Incorporate transportation concepts which support mixed-use development.*

Provision for the traditional mode of transportation by automobile should be balanced with provision for other modes, such as bus, pedestrian, and bicycle travel. Automobile access should not preclude the uses of other modes of transportation. This can be controlled by locating automobile access in the rear of buildings, revising roadway design standards, and limiting the provision of parking spaces while providing for convenient bicycle, pedestrian, and transit access to buildings. Mixed-use style development should ensure that distances between residences and commercial, office, and civic centers will not require the use of automobiles in all instances.

GOAL 6: *ADEQUATE PROVISION OF PUBLICLY ACCESSIBLE PARKS AND RECREATION FACILITIES.*

MEASURES:

6.1 *Follow the recommendations of the Recreation and Parks Comprehensive Master Plan.*

6.2 *Provide or increase incentives for developers to dedicate land or facilities for public park and recreational use.*

Incentives such as density bonuses, awarding points, and tax incentives that would encourage the dedication of land and/or facilities for public use should be explored.

6.3 *REQUIRE CONSERVATION LAND TO INTER-CONNECT: Establish design standards for the open space in new subdivisions, so they will eventually coalesce to create an interconnected network of protected lands as greenway corridors.*

6.4 *COMPLETING THE LOOP: Extend the proposed greenway trail link westwards from the North Community Park generally along the line currently shown in the Draft Plan as a Eubanks Road extension and then southerly to connect ultimately with a tributary of Bolin Creek. This trail and others closer to population centers in Carrboro should be considered for accessibility by the physically handicapped.*

6.5 *CONNECT HOMESTEAD ROAD AT LAKE HOGAN FARMS WITH THE BOLIN CREEK GREENWAY: Implement this connection along a drainage channel or stream bed running through several existing subdivisions, as a long term goal.*

6.6 *SUBSIDIARY GREENWAY TRAILS: Require developers of new subdivisions to lay out and construct neighborhood trails through their new developments in such a way that they will connect with and extend the Town’s more formal greenway network.*

6.7 *HORACE WILLIAMS TRACT: The Town should aim for more than a small 10-acre park on this large tract by proactively encouraging the owner to think more creatively and to plan to accommodate all the permitted density to be situated east of the creek, where the land is actually much more suitable for development. A defacto density bonus could be offered by agreeing to calculate the density to be transferred from west of the creek to the eastern area on the basis of gross acreage on the western bank, rather than on net developable land.*

6.8 *EXPERIMENTAL TRAILS: New trails should be designated as “experimental” with a defined period for evaluation and abandonment, in situations where abutters register concern about litter, vandalism, privacy loss, etc..*

GOAL 7: CONTINUATION OF CARRBORO’S SMALL-TOWN CHARACTER AND PRESERVATION OF ITS EXISTING NEIGHBORHOODS.

MEASURES:

7.1 *Require new development to mitigate impacts from traffic, noise, lighting, and other sources on existing neighborhoods, to the extent practicable.*

As part of the development review process, development impact assessment modeling should be required of new development and unacceptable impacts should be mitigated.

7.2 *Adopt town-wide design guidelines to ensure that new development is harmonious with the attractive features of existing development.*

Town-wide design guidelines related to parking, tree preservation, site design, and architectural character, as proposed in the 1993 Draft Townwide Design Guidelines, would help to preserve the visual qualities and pedestrian-scale orientation of Carrboro.

7.3 *Develop a process for dialogue between developers and existing residents.*

The Town should facilitate communication between existing residents and developers concerning the desired form of developments. To be meaningful, dialogue should begin before designs are prepared.

7.4 *New residential areas in the Study Area should be developed on a neighborhood-scale.*

By requiring clustered development and providing for mixed-use areas in the Study Area, Carrboro's existing neighborhood scale character will be enhanced by the presence of new neighborhoods. As part of this emphasis on neighborhoods, strip commercial and large regional commercial centers should be prohibited in the Study Area.

GOAL 8: A PEDESTRIAN-SCALE COMMUNITY

MEASURES:

8.1 *Previously discussed measures, such as promoting cluster and traditional style development, providing for neighborhood-scale commercial uses in residential areas, and developing pedestrian and bicycle networks, will all serve to foster a pedestrian scale community.*

GOAL 9: CONTINUATION OF THE CHARACTER AND NATURAL BEAUTY OF THE STUDY AREA.

MEASURES:

9.1 *Measures to preserve important vistas in the Study Area should be explored and implemented.*

Short of outright acquisition, it would be difficult to prohibit development of a scenic vista area. However, measures could be devised, such as the purchase of development rights or tax incentives, which would serve to encourage or ensure the preservation of important view corridors.

9.2 *Measures identified under Goal 3 will help to further this goal as well.*

9.3 *Adopt town-wide design guidelines to ensure that new development is harmonious with the attractive features of existing development.*

Town-wide design guidelines related to parking, tree preservation, site design, and architectural character, as proposed in the 1993 Draft Townwide Design Guidelines, would help to preserve the character and natural beauty of the Study Area.

9.4 *Farmland Preservation: Work with the County to encourage the preservation of active farmland, and to limit the conversion of farmland to developed uses outside the Transition Areas, as a trade-off for accommodating new development within the Transition Areas. Examine the implementation of the following farmland preservation techniques:*

- “METRO-FARMING”: Encourage the conservation of active farmland within new conservation subdivisions and elsewhere in the Study Area, with emphasis on nontraditional crops or uses (high-value vegetables, pick-your-own berries, apples, etc.) and community-supported agriculture (community gardening, wholesale nurseries, commercial stables, etc.).
- Establish a committee to look into changing use value taxing to promote metro-farming.
- count community gardening, and farming; as open space in subdivisions.
- ENCOURAGE “LANDOWNER COMPACTS”: Actively promote the concept of two or more adjoining landowners combining their properties to increase the possibility of significant conservation set aside on one parcel by shifting part or all the density to the other parcel(s), with pro-rata sharing of proceeds by the various participating landowners.
- EXPLORE THE ROLE OF PDR’S: Recognizing the limited availability of public and private funds with which to purchase development rights from farmers, and also the relatively high cost of such purchases where farmland is zoned for densities of one or more dwelling per acre, the Town should nevertheless explore this option as one additional way of preserving all or part of a farm within the Study Area.

REFERENCE MAPS

MAPS

- A-1 DEVELOPMENT PATTERNS
- A-2 HYDROLOGY
- A-3 TOPOGRAPHY
- A-4 AREAS WITH WATER & SEWER
- A-5 TRANSIT ROUTES
- A-6 NATURAL AREAS
- A-7 PARKS & GREENWAYS
- A-8 CONSTRAINED SOILS
- A-9 UTILITIES & RAIL ROADS
- A-10 VEGETATION PATTERNS

APPENDICES

APPENDIX A	FUNDING AND REVENUE SOURCES
APPENDIX B	THE CONNECTOR ROADS PLAN FOR THE NORTHERN AREA
APPENDIX C	INVENTORY OF HISTORICAL AND ARCHAEOLOGICAL SITES WITHIN CARRBORO'S JURISDICTION
APPENDIX D	GLOSSARY OF TERMS

APPENDIX A: FUNDING AND REVENUE SOURCES

The following is a listing of potential funding revenue sources that the Town of Carrboro will need to consider in financing the proposals and recommendations of this Plan:

General Tax Revenues

General tax revenues traditionally provide the principal sources of funds for services such as fire, police, public works, planning, and recreation and parks. Assessed valuation of real and personal property provides the framework for the major portion of the tax base for the Town.

General Obligation Bonds

General tax revenues for Town services are usually devoted to current operation and maintenance of existing facilities. In view of the recommended capital improvements suggested in this Plan, borrowing of funds to acquire new lands and develop facilities will be necessary. The State of North Carolina gives local governments the authority to accomplish this borrowing of funds for a variety of purposes through the issuance of bonds not to exceed the total cost of improvements (including land acquisition). For the purpose of paying the debt on these bonds the municipality is empowered to levy a special tax.

The real value of a municipality's bonding authority and capacity is not necessarily the funds made available for capital improvement program alone (in terms of local moneys). Bonding allows the municipality to utilize local funds to match federal grant-in-aid moneys. General obligation bonds are still the greatest source utilized to fund park projects in North Carolina. In 1978, the citizens of Carrboro passed a \$1.5 million recreation bond referendum for the development of Community Park and segments of the bikeway system.

Federal Assistance

Federal funding sources necessary to help finance the Recreation and Parks Master Plan have been historically available from the U.S. Park Service's Land and Water Conservation Fund. Potential funding through the U.S. Department of Housing and Urban Development's Community Development Block Grant Program is also available given certain conditions. Other potential sources for recreational funding are available through the National Foundation of Arts and Humanities.

In 1991 the Intermodal Surface Transportation Efficiency Act was passed by Congress which provides \$3.3 billion in Federal Highway Funds for local enhancement related projects. Greenways are eligible for this program. The Fund is administered through the North Carolina Department of Transportation.

Increasingly, fewer federal dollars are available to aid local communities in providing needed services. In the current political climate, Town officials should not assume that federal funds from any source will necessarily be provided in the future.

State Assistance

The North Carolina State Legislators recently passed a bill creating a consistent source of funds for parks and recreation in the state. The Parks and Recreation Trust Fund will provide money for capital improvements, repairs, renovations and land acquisition in state and local parks. Revenues from the state's portion of the real estate deed transfer tax supports the Fund and is estimated to be \$13 million annual. Of the funds allocated, 75percent will go to the state parks system, 20percent will provide matching grants to local governments and the remaining 5percent will go to the Coastal and Estuarine Water Beach Access Program.

The State of North Carolina maintains all major roads in the Study Area and is expected to continue doing so. Additionally, the State shares gas tax revenues with localities through Powell Bill Funds. These funds are used to maintain local roadways and will be used to maintain such roadways in the Study Area after they are dedicated to the Town by developers.

Fees and Charges

Fees and charges for some services are recognized as an acceptable source of revenue. Fees are currently charged for some recreation and parks programs and could be implemented for use of recreational facilities. However, it is important to keep fees and charges from being so high that they restrict access to programs and facilities for low-income persons.

Orange County has increased their school impact fee from the original charge of \$750 to \$3000 per new dwelling unit. This will help to provide funds for the needed acquisition of properties and construction of new schools in the area. Similar impact fees can be assessed for other purposes, such as roadway impacts. However, in creating such fees a jurisdiction must be careful to illustrate that the assessed fee relates directly to the impacts of new development. It is also important that these fees do not serve to inhibit the provision of affordable housing in the area.

The Orange Water and Sewer Authority (OWASA) currently levies acreage fees on new developments. These fees are essentially impact fees and are used by OWASA for capital improvements.

Contributions/Foundations/Land Trusts/Conservancies

The influence of non-public (nongovernmental) sources of revenue on the provision of publicly accessible or publicly beneficial land is growing. Increasingly, park space and facilities, natural areas, and even affordable housing is provided to the public or set aside for public benefit by non-public agencies. Gifts of land and/or facilities from individuals and foundations make valuable contributions to publicly available park and open space. Conservation land trusts and conservancies set aside special and/or sensitive natural areas which are often publicly accessible. Community land trusts increase the provision of affordable housing in their communities. The efforts of these non-public agencies should be actively supported in the Study Area.

Partnership Structures

All types of partnerships can be formed with local public, private, or quasi-public entities. To get started a direct request should be made of an organization to meet and evaluate the mutual benefits possible through a partnership. Eventually a concrete description of responsibilities will be needed, but the important step is to make an initial contact and promote interest which can solidify an agreement to provide services for the community.

Partnerships with the private sector can be beneficial to all participants. Typically, a private developer can use private funds to develop a facility on town property with the town leasing it to the developer on a long-term basis. During the period of the lease the developer returns a portion of the revenues to the town and at the end of the lease the facility reverts to town ownership. This type of arrangement would be appropriate for an improvement to a special use facility requiring a large capital investment.

METHODS FOR ACQUISITION AND DEVELOPMENT

Methods available to Carrboro for acquiring land and developing facilities as recommended in the Plan include the following:

Fee Simple Purchase

The outright purchase is perhaps the most widely used method of obtaining land, though this method is the most difficult to reconcile with limited public resources. Fee simple purchase has the advantage of being relatively simple to administer and to explain to the general public in terms of justifying a particular public expenditure.

Fee Simple With Lease-Back or Resale

This technique of land acquisition allows the town to purchase land to either lease or sell to a prospective user with deed restrictions that would protect the land from abuse or development. This method is used by governments who impose development restrictions severe enough that the owner considers himself to have lost the major portion of the property's value and it is more economical for him to sell with a leaseback option.

Long-Term Option

A long-term option is frequently used when a particular piece of land is seen as having potential future value though it is not desired or affordable to the Town at the time. Under the terms of a long-term option, the town agrees with the landowner on a selling price for the property and a time period over which the town has the right to exercise its option. The first benefit of this protective method is that the land use of the property is stabilized because its future is in doubt and an expenditure of money in the property would be lost in the previously agreed upon selling price. Secondly, the town does not have to expend large sums of money until the land is purchased. Thirdly, the purchase price of the land is settled upon. The disadvantage of this method lies in that for every right given by the property owner, a price must be paid. In this case, the cost of land use stabilization and a price commitment comes in the form of the cost of securing the option.

First Right of Purchase

This approach to acquiring park land eliminates the need for fixing the selling price of a parcel of land yet alerts the town of any impending purchase which might disrupt the park land acquisition goals. The town would be notified that a purchase is impending and would have the right to purchase the property before it is sold to the party requesting the purchase.

Local Gifts

A significant and yet most often untapped source of providing funds for acquisition and development of land for public use is through a well organized local gifts program. The pursuit of land, money, construction funds or donated labor can have a meaningful impact on the development of a well rounded system.

The most frequently used type of gift involves the giving of land (through a full gift of agreed upon below market value sale) to be used for park space, open space, or a community facility. A still familiar use of gifts involves donated labor or materials which become part of an improvement project and help to reduce project costs. The value of the services or materials can also be used to match non-local grant funds. When not tied into a grant, such donations (land, labor, or materials) still can play an important role in reducing the demand for local capital expenditures.

Some towns have developed a gifts catalog as a tool for emphasizing an organized gifts program. Such a publication should explain the role and importance of the gifts program, describe its advantages, define the tax advantages that may occur to the donor, and identify various gifts (land, labor, play equipment, materials, trees, etc.) that are needed to meet local program needs. The gifts catalog should be prepared in a format that can be distributed effectively and inexpensively, and should employ a clear statement of needs, typical costs associated with various gifts, and be readily available.

To aid this type of gift program, a strategy for contacting potential donors (individuals, businesses, foundations, service clubs, and the like) should be developed. An important part of

this strategy should include contacting the local Bar Association, trust departments of lending institutions, and the Probate Court to make sure these groups are aware of the potential for an individual to include a gift to a recreation department.

Life Estate

A life estate is a deferred gift. Under this plan, a donor retains use of his land during his lifetime and relinquishes title to such land upon his death. In return for this gift, the owner is usually relieved of the property tax burden on the donated land.

Easement

The most common type of less-than-fee interest in land is an easement. Since property ownership may be envisioned as a bundle of rights, it is possible for the town to purchase any one or several of these rights. An easement seeks either to compensate the landholder for the right to use his land in some way, or to compensate him for the loss of one of his privileges to use the land. One advantage, of this less-than-fee interest in the land, is the private citizen continues to use the land while the land remains on the tax records continuing as a source of revenue for a town. Perhaps the greatest benefit lies in the fact that the community purchases only those rights which it specifically needs to execute its land objectives. By purchasing only rights that are necessary to the system and on the land itself, the town is making more selective and efficient use of its limited financial resources.,

Zoning/Subdivision Regulations/Mandatory Dedication

Zoning ordinances, subdivision regulations, and mandatory dedications may be utilized to create new public land at no cost to the community. This, however, must be approved through special state legislation in Raleigh.

Subdivision regulations can be revised to contain written provisions making allowance for both cluster and planned unit development. Design standards relating to tree cover, drainage-ways and other natural features can be instrumental in the preservation of the natural setting. Regulations can require that land be dedicated and/or compensation in lieu be made to the town for the development of park lands. Carrboro currently has a land use ordinance which allows for park land dedications.

APPENDIX B: THE CONNECTOR ROADS PLAN FOR THE NORTHERN AREA

URBAN CORRIDORS

Planning and Design of Connector Roads within the Carrboro Northern Transition Area

Introduction

The Northern Transition Area of the Towns of Carrboro and Chapel Hill is being developed at a rapid pace. Current developments within Carrboro's northern area include construction of the Wexford and Camden Subdivisions, as well as continued construction at the Highlands Subdivision. Furthermore, the Hogan property has been rezoned to R-20 as approved by the Orange County Board of Commissioners. The Town of Chapel Hill is currently constructing low-income housing off of Airport Road; and Chapel Hill Transit and the Federal Transit Administration recently had a 400 spaced park/ride on Eubanks Road completed. These facilities and other plans for the northern transition area require that corridor planning must be expedited as soon as possible.

Candidate Routes

An aerial photograph is being used to show the extent of the Carrboro planning jurisdiction, the boundaries of the University Lake Watershed, and possible scenarios for road development. The boundaries of the Carrboro Planning Jurisdiction are shown by the black dash lines. The boundary of the University Lake Watershed and its relationship to the Carrboro Planning Jurisdiction is shown as the light blue line. The roads within these boundaries have been defined by various color classifications with respect to possible routes and use. The roads colored in white represent current arterials in the planning jurisdiction; which are Homestead Road, and Old 86. The yellow lines indicate possible routes on existing roads, which may be upgraded as connector roads and/or major thoroughfares. These roads are Eubanks Road and Lake Hogan Farm Road. Union Grove Church Road and Dairyland Road were not included due to their proximity to the University Lake Watershed. These roads, however, can be improved to serve additional motor vehicle and bicycle traffic; but should never be used to serve as springboards for future development.

Road Design

Preliminary results show a public desire to design future connector roads within the northern transition area as two lane corridors with wide shoulders. All of these connector roads will not only serve residential districts; but commercial development will occur along these roads as well. Such items as sign control measures, screening and landscaping standards, pedestrian amenities and streetscape improvements, architectural standards, community entryways will be important factors concerning future road design. These items will not be discussed within this report, however, there are certain goals and objectives that should guide development. These goals are: (1) to promote development that is compatible with the function, capacity, and design of connector roads that do not place burdens on the roads that render them unsafe; (2) to provide transportation service for the desired land use while minimizing disruption

to the natural and human environment; (3) to relate available or nearby natural recreational and social opportunities to the interurban road system; (4) to engender in our citizens and decision makers a heightened awareness of the environment's relationship to our urban corridors and, thereby, provide a basis for their participation in enhancing and maintaining the image of Carrboro as seen from traveled paths; and (5) to help create, along the connector roads, an urban environment that displays the highest quality private and public-sector development.

Connector Roads In Carrboro (Definition, and Design Level)

Connector roads as defined by the Carrboro Land Use Ordinance is, "A street whose principle function is to carry traffic between minor, local, and subcollector streets and arterial streets but that may also provide direct access to abutting properties. It serves or is designed to serve, directly or indirectly, more than one hundred dwelling units and is designed to be used or is used to carry more than eight hundred trips per day". Some of the roads within this report will be classified at a higher status than connector road status. Some of the roads, in fact would serve as major or minor arterials within the Planning Jurisdiction as noted by the Durham-Chapel Hill-Carrboro Thoroughfare Plan. These roads include: Old 86, Homestead Road, Eubanks Road, a Eubanks Road extension, and a proposed Homestead Road/Seawell School Road connector. The connector roads as defined by the Carrboro Land Use Ordinance would include: Cates Farm Road, a Cates Farm Road/Stratford Drive connector, Pathway Drive, Stratford Road, Tripp Farm Road, Farm House Drive, Lake Hogan Farm Road, a Lake Hogan Farm Road/Old NC 86 connector, and Hogan Road.

The design level of each road will be defined in terms of density, which is passenger vehicle per lane per mile. Some of the existing arterial roads may inevitably be constructed to a multi-lane capacity. Most of the roads, however, will be designed for two-lane capacity. The connector roads within this study will continue to be designed at the current level as defined within the service level that currently exist in the Carrboro Land Use Ordinance.

Goals of the Connector Roads Plan

The purpose of the map is to show where the major streets within the area over a time-frame of the next twenty years. The map is based on a "best guess" of the local staff and officials as to where, when, and what type of growth will occur in the area. Planning will be a guide for future development to ensure that future streets are built properly and in the best places. A well planned thoroughfare and neighborhood connector roads system allows both local and through traffic to have alternative routes to travel. Planned streets and planned development along those streets make for a more pleasant community; which means: less air pollution, less traffic congestion, and well planned areas for street trees, bike paths, and sidewalks.

Roadways In The Northern Transition Area Listed According To Categories And Routes

I. EXISTING ARTERIALS -

These roads are currently listed within the Durham-Chapel Hill-Carrboro Thoroughfare Plan.

Homestead Road - From the Calvander Community eastward through the Chapel Hill Planning Jurisdiction to its terminus at Airport Road (NC 86).

Old NC 86 - From the intersection of Old Fayetteville Road/Hillsborough Road northward to the Carrboro Planning Jurisdiction line.

Eubanks Road - From its intersection at Old NC 86 to Airport Road (NC 86) in Chapel Hill.

II. EXISTING NEIGHBORHOOD CONNECTORS

Pathway Drive - From its current starting point just west of Cobblestone Drive to a point approximately 1200 ft east of its intersection with Robert Hunt Drive

Stratford Drive - Southward from Homestead Road within the Wexford Subdivision.

Tripp Farm Road - Currently terminates between private property and UNC property, and has an intersection at Pathway Drive.

Cates Farm Road - From its intersection with Hillsborough Road extending approximately 2100 feet with its 5 terminus at the Pollitzer property.

III. PROPOSED ARTERIALS

Seawell School Road/Homestead Road Connector - Eastward from Homestead Road to a connection with Seawell School Road.

*Note - Road currently exists within the Durham-Chapel Hill-Carrboro Thoroughfare Plan.

IV. PROPOSED NEIGHBORHOOD CONNECTORS

Tripp Farm Road - Northward from Hillsborough Road to its intersection with the proposed Seawell School/Homestead Road Connector.

Pathway, Drive - Westward from its intersection with Cobblestone Drive to an intersection with the Cates Farm Connector Road. Eastward from its current terminus to Seawell School Road.

Cates Farm Connector - Westward from Cates Farm Road to a connection with Stratford Drive in the Wexford Subdivision.

Lake Hogan Farm Road - From its intersection with Homestead Road and continuing northward through the Lake Hogan Farm subdivision. The road will be extended northward to a terminus with Eubanks Road.

Farm House Drive - From its intersection with Old NC 86 and continuing northward to its logical terminus at Homestead Road.

East/West connector between the proposed Lake Hogan Farm Road to Old 86.

Hogan Road - Currently a sixty (60) foot easement that exists at Homestead Road near High School Road. The road would continue westward to a logical terminus at Lake Hogan Farm Road.

There will be “minor” neighborhood connectors identified on the Connector Roads Plan. Such connectors are noted particularly within the Lake Hogan Farm subdivision as stubouts. These roads *may* continue through the UNC properties and connect with a stubout proposed within the Lake Hogan Farm subdivision.

APPENDIX C: INVENTORY OF HISTORICAL AND ARCHAEOLOGICAL SITES WITHIN CARRBORO'S JURISDICTION

HISTORIC BUILDINGS WITHIN CARRBORO'S JURISDICTION

THE BARNSTABLE

110 WATTERS RD.

The central board and batten house was a barn on the Weaver House property that was deeded to Charlotte Thomas, a sister of Sara Thomas Watters. Ms. Thomas, an interior decorator, collected old materials to transform into a home of rustic quality. Upon its completion, the house was sold to the Thompson family. In 1965, the home was bought by Mr. and Mrs. Wallace Kurault, who have continued to enhance the home.

BLACKWOOD HOUSE

NEW HOPE CHURCH RD.

A mid-nineteenth century one-and-one-half story frame house featuring a three bay shed dormer on the front facade and a large stone chimney.

ELM GROVE SCHOOL

OLD 86

A granite marker notes the sign of the school which was open from 1854 to 1932.

MCDUFFIE MEMORIAL BAPTIST CHURCH

EUBANKS RD.

The congregation and the building were established in 1922. A cemetery is adjacent to the church.

NUNN'S CHAPEL BAPTIST CHURCH

EUBANKS RD.

Organized in 1938, this church was abandoned after a destructive fire in 1974. Only the foundation and the entrance steps remain as well as a few graves near the church.

UNION GROVE UNITED METHODIST CHURCH

UNION GROVE CHURCH RD.

Established in 1846, the present church building was constructed in 1946. The cemetery to the north of the building is surrounded by a low stone wall dating to the 1860's.

WEAVER HOUSE
116 WATTERS RD.

The oldest surviving structure in Carrboro, this home predates the settlement of the Town. According to tradition, a one-and one half story log house stood on the site. During the 18th century, the building was originally a tavern on the Hillsborough Wagon Road. The first known owner is Thomas Bubberly, a farmer, who bought the property in 1811. The Weaver Family then bought the home and lived in the house for over a hundred years. The one-and-one-half story building features exposed rafters and an entrance of narrow double doors with a transom and single panels on the side. The front portion dates to 1861 built to accommodate family members left behind during the Civil War.

In 1910, the house was sold to Alexander and Leta Hogan and then to Sara Thomas Watters in 1941. Mrs. Watters altered much of the house particularly in the front portion. She is also credited for installing modern amenities such as running water, bathrooms, and electricity. In 1950, the house was sold to Prof. and Mrs. Edison Adams who have carefully preserved the property. In the late 1950's, Mrs. Watters front portion was removed and replaced with the existing shed dormer and hip-roofed porch.

ARCHEOLOGICAL SITES WITHIN CARRBORO'S JURISDICTION

Due to the sensitive nature of these archeological sites the exact locations are not listed here. For further information, contact the State of North Carolina.

Site	310r222
Site	310r191
Site	310r7
Site	310r16, 310r53
Site	310r13
Site	310r184
Site	310r43, 310r44, 310r185, 310r186, 310r187, 310r188, 310r194, 310r224, 310r310
Site	310r15

South Chapel Hill

Site	310r31, 310r25
Site	310r4A, 310r4B, 310r4C
Site	310r51, 310r271, 310r218
Site	310r45*, 310r46*
Site	310r29, 310r37, 310r234
Site	310r28
Site	310r5, 310r9, 310r21, 310r27
Site	310r4E

**SITES LISTED IN THE ORANGE COUNTY HISTORICAL INVENTORY
WHICH ARE UNDER CARRBORO'S JURISDICTION IN
THE NORTHERN TRANSITION AREA**

A. CEMETERY SITES -- SOUTHERN CHAPEL HILL TOWNSHIP

LLOYD FAMILY CEMETERY

NC 54 WEST

Family cemetery of one of Carrboro's oldest families.

BUCK TAYLOR GRAVE SITE

Family grave site in Cates Farm Subdivision

B. BIOLOGICALLY SIGNIFICANT SITES

1. FAUNA

Black vulture (*Coragyps atratus*)

The northern end of Lake Hogan Farm Rd. serves as an annual winter roost for approximately thirty birds.

Thorey's Grayback (*Thauctopteryx thoreyi*)

A common species from May to June.

2. FLORA

Gray Dogwood (*Cornus racemosa*)

Endangered in the area north of Calvander on Old 86 in a poorly drained thicket.

3. ENVIRONMENTALLY SENSITIVE AREAS

Bolin Creek Natural Areas

A scenic stream valley in the Chapel Hill quadrant of Orange County. The site is currently in good condition but is subject to extreme development pressure. This narrow upland stream is one of the few remaining stream corridors and thus serves as an important greenway in a highly developed area.

During the last ten years, this relatively narrow upland stream valley has been encroached upon by development at an ever-increasing pace. Nonetheless, it remains wooded throughout its length, with some areas remaining in fairly good condition. The forest cover is composed primarily of mixed hardwoods

along the narrow bottomland and lower slopes, grading into dry-mesic oak-hickory forest on areas farther above the stream. The boundary drawn for this natural area encompasses the stream bottom to the confluence with the unnamed tributary from Calvander, along, with an area of upland oaks in the northeast corner. This area has been popular with local hikers for years, and is well-known as one of the most attractive walking areas within the Chapel Hill-Carrboro limits. This site is the best remaining area natural area along Bolin Creek. One of the most outstanding aesthetic features is the small bluff just upstream from the Southern Railway trestle, where the stream takes a 90 degree bend. Above this rocky bend, the forest is dominated by beech trees (*Fagus grandifolia*) and other hardwoods which descend the creek. Devil's bit (*Chamaelirium luteum*), trillium (*Trillium catesbei*), dwarf-crested iris (*Iris cristata*), spring beauty (*Claytonia caroliniana*), windflower (*Thalictrum thalictroides*), and bluets (*Houstonia caerulea*) are some of the wildflowers that can be seen here in the spring. A trail continues uphill from here, passing through relatively mature mixed mesic hardwood forest. Species seen along this bottom are tulip poplar (*Liriodendron tulipifera*), cherrybark oak (*Quercus falcata* var., *pagodaefolia*), white oak (*Q. alba*), red oak (*Q. rubra*), willow oak (*Q. phellos*), sweetgum (*Liquidambar styraciflua*), pignut hickory (*Carya glabra*), and mocknut hickory (*C. tomentosa*). On the small upland area in the northeast corner of the site, dry oaks, including post oak (*Quercus stellata*) and blackjack oak (*Q. marilandica*) dominate the canopy.

The Bolin Creek area had been used by UNC zoologists for years as a salamander research site, especially a large deep pool located along a tributary. It was here that the four-toed salamander (*Hemidactylium scutatum*) was found, along with the spotted salamander (*Ambystoma maculatum*), marbled salamander (*A. opacum*), and several other species of amphibians (Stenhouse, 1984). Unfortunately, this pool has been destroyed by the construction of a sewer-line, as has much of the adjoining bottomland required for foraging by the adults of this species. Many additional species normally associated with mature hardwoods may also have disappeared, particularly such low-nesting birds as the ovenbird (*Seiurus aurocapillus*), hooded warblers (*Oporornis formosus*). All of these are sensitive to the effects of forest fragmentation. Deer sign is also noticeably missing, although this species usually does well in disturbed habitats (the abundant dog tracks suggest a possible explanation).

On the positive side, many animals do still occur here, particularly those that occur in younger or more open forest. These include the flicker (*Colaptes auratus*), great crested flycatcher (*Myiarchus crinitus*), phoebe (*Sayornis phoebe*), brown-headed nut-hatch (*Sitta pusilla*), pine warbler (*Dendroica pinus*), rufous-sided towhee (*Pipilo erythrophthalmus*), and goldfinch (*Carduelis tristis*). Even barred owls (*Stryx varia*) and hairy woodpeckers (*Picoides villosus*) persist since they are species which require extensive woodlands. Several smaller animals may be capable of surviving into the

future so long as some minimum of the mature mesic hardwoods remains uncut. The regionally rare purseweb spider is a good example of this group of animals.

University Lake Watershed

Located to the southwest of Carrboro and the University Lake and its watershed contain a number of significant features including a marshy area to the south where royal fern and crested fern can be found. Other varieties of fern can be found along the shoreline as well as north of the lake along Phils Creek. Also of significance is the sensitivity of the watershed to stormwater runoff and eutrophication. (NOTE: When the Northern Transition Area boundaries were drawn, land within the University Lake Watershed was deliberately excluded from the study area.)

C. OWNERS OF SITES

OWASA, UNC University Lake Slopes

University Lakes Marsh

UNC Henry Horace Williams Property

Duke University (Duke Forest) New Hope Creek Rhododendron Bluffs

A BRIEF HISTORY OF CARRBORO

Prior to the early 1880's, the area that was to become the Town of Carrboro was composed of small farms, fields, streams and woods, as was most of rural North Carolina. The residences were too scattered to constitute a community. One mile to the east lay the village of Chapel Hill, the site selected for the University of North Carolina in 1792. After 1882, Carrboro was the site of the railroad depot which served the nearby university. The construction of this railroad spur line combined with the growth of various industries, primarily textile mills, located near the depot were responsible for the emergence of Carrboro as a town.

As early, as 1869, the University sought to extend the railroad closer to Chapel Hill, beyond the terminus at University Station ten miles to the north. However, the University of North Carolina trustees' belief that students should maintain some distance from "city temptations" prevailed and the line was not approved. Finally in 1873, a charter for the construction of a spur line to Chapel Hill was obtained from the North Carolina General Assembly. The hard economic times that prevailed during the Reconstruction Era left no public funds available for railroad construction. A lack of operating funds even forced the University to close its doors from 1870-1875.

In 1880 a group of private investors in Chapel Hill, led by Robert F. Hoke, sought a method of shipping locally mined iron ore to furnaces in Pennsylvania. This group formed Hoke's Iron Mountain Company and issued subscriptions for the necessary materials and labor to build a railroad line. Among the subscribers was Julian S. Carr, for whom Carrboro would later be named.

The end of the new railroad spur was located one mile from the school, the minimum distance the trustees would allow. In the spring of 1882, the spur of the Richmond and Danville Railroad (later Southern Railway) was opened from University Station to the spot one mile west of the post office in Chapel Hill. That terminus soon became known as West End, later Venable, and finally, Carrboro. When the price of iron ore fell sharply in the early 1880's, the mining venture became unprofitable. The mine soon closed and the name of the railroad corporation was changed from Hoke's Iron Mountain Company to the State University Railroad Company.

For almost two decades, the new railroad station was simply a boxcar, and until well into the twentieth century, the depot had a sign saying "Chapel Hill Station". The impact of the new depot was far greater than its provision of easy access to the university. Passenger traffic was ancillary to the Richmond and Danville Railroad's main service of transporting goods.

The leader of the development spurred by the extension of the railroad to West End was Thomas F. Lloyd, whose ancestors had helped settle Orange County. After service in the Confederate Army, Lloyd returned to the family farm located on the outskirts of Chapel Hill. In a 1947 article about Carrboro, Louis Graves wrote about Lloyd: "His remarkably keen mind, and his natural-born gift for trading enabled him to become the richest man in Chapel Hill despite the handicap of having had no schooling. He could neither read nor write until he was well along in years. Then he learned to write his name so that he could sign checks and business documents".

An astute businessman, Lloyd increased his fortunes through small farm-related enterprises. In the early 1880's, attracted to the commercial potential of the property adjacent to the new railroad facility at West End, he built a steam-powered cotton gin and grist mill with William Pritchard. These mills were located in two-story frame buildings directly north of the station. In 1886 Lloyd purchased Pritchard's share of the business and added a flour mill to the small complex. His industries thrived, and in 1898, when he was almost sixty years old, Lloyd sought a new enterprise in which to invest his profits. Considering the convenience of the depot to his property and the availability of labor and cotton, the field of textiles was enticing. In spite of his lack of any manufacturing experience. Lloyd issued \$75,000 worth of capital stock to begin a cotton mill. The construction and potential success of the mill initiated the settlement of West End as a real town.

Lloyd's latest enterprise was timely. The cotton textile manufacturing industry in the United States had begun to experience a dramatic geographic relocation around 1880 from New England to the Cotton Belt states. This geographic shift was the result of a number of factors, including a series of technological changes in textile manufacturing that rendered older facilities less competitive and encouraged the construction of new mills. Many manufacturers were attracted to the South where wages and taxes were low, labor plentiful, labor unions rare, and cotton readily available.

The North Carolina textile industry was largely concentrated in the Piedmont region of the state. New mills were often built on the outskirts of the region's principal towns and cities which included Charlotte, Concord, Greensboro, Burlington and Durham. Some, like Carrboro's, were built in suburban villages located near an existing town. Wherever they were built, all three essential ingredients -- abundant supplies of raw materials, labor, and convenient transportation routes to markets -- were at hand. In 1880 there were approximately 52 one-industry towns in North Carolina; by 1910, there were an estimated 125, and all were cotton textile manufacturing centers. Most of these 125 towns were mill villages that had grown up around a textile mill. The mills attracted immigrants from nearby rural areas who sought improved economic conditions and an escape from the hard work and uncertainties of farming. They hoped that the mill village would preserve the general conditions of rural life while adding some of the comforts of the city.

By the spring of 1899, Lloyd's factory, named the Alberta Cotton Mill, was ready to begin operation. The two-story brick factory was located about 150 yards northwest of the depot. (For a full discussion the Alberta Cotton Mill, see the 1975 National Register of Historic Places nomination). Lloyd's factory prospered and in 1909 he sold his factory to the owners of the Durham Hosiery Mills, established and operated by Julian S. Carr, one of Durham's leading industrialists and financiers. Carr made his fortune first in tobacco manufacturing and then invested his enormous profits in textile companies. In 1884, Carr founded the Durham Cotton Manufacturing Company, Durham's first textile company. In 1898, the same year he sold his Bull Durham Tobacco Company to the Duke Family's American Tobacco Company Trust for three million dollars, Carr merged the Golden Belt Hosiery Company and the Durham Hosiery Company as the Durham Hosiery Mills Corporation. In 1901, Carr built his first factory and adjoining mill village in Durham. Through the establishment and acquisition of spinning and

knitting mills during the next few years, Durham Hosiery Mills became one the largest hosiery operations in the world, a position it maintained throughout much of the first quarter of the twentieth century.

Much of Carr's expansion of the Durham Hosiery Mills was by acquisition of small, privately owned textile mills such as the Alberta Mill. When Carr purchased Lloyd's factory, he incorporated the operation as Durham Hosiery, Mills Number 4. A steady demand for cotton hosiery in the early part of this century enabled Carr to almost double the size of Lloyd's original mill.

The sale of the Alberta Cotton Mill did not signal Thomas Lloyd's retirement. In February 1910, in partnership with his brother, Lueco Lloyd, Isaac W. Pritchard, and W. S. Roberson, he organized the Thomas F. Lloyd Manufacturing Company, capitalized at \$200,000. The March 1911 series of the Sanborn Insurance Maps for Chapel Hill depicts the new mill, exclusively for the spinning of cotton yarn, under construction. Located about one block south of his original mill, this brick building (now destroyed) was a large one-story rectangular block with a two-story tower on its east elevation and a gabled roof terminating in a six-foot-tall monitor along its crest. Construction of the new mill was completed close to the time of Lloyd's death in May, 1911. Prior to February 1913, Durham Hosiery Mills acquired this factory and renamed it Mill No. 7 in the steadily expanding chain that would grow to include sixteen mills from Goldsboro to High Point, North Carolina. By the early 1920's, Mill No. 7 employed 81 workers operating 10,080 spinning spindles.

The village that developed around the mills was in many ways typical of a company town. Suburban location, dependence on immigrants from surrounding farms for labor, initial local ownership of the mills, and the construction of mill-owned housing for workers were features shared with scores of other mill villages in North Carolina. A number of the mill houses which surrounded the Alberta Mill have been torn down or severely altered. In contrast, a significant number of the mill houses constructed for workers at Lloyd's second mill survive are largely intact.

The 1911 series of the Sanborn Insurance Maps indicates six completed houses on West Carr Street and Maple Avenue, just west of the Thomas F. Lloyd Manufacturing Company mill. These houses, and several others on Maple Avenue and Roberson (now South Greensboro) Street not portrayed in the 1911 map series, have always been associated with Carrboro's second mill and undoubtedly were built by its owners when they began construction of their factory in 1910. (Maps were usually drawn sometime earlier than the date of printing. Thus, some of the houses built in the initial phase of construction may have been completed in 1910 after the map was drawn but before it was published in 1911). This later area of development was distinguished by townspeople as "New Hill," a reference to the terrain that frequently characterized mill village sites. This fairly intact group of mill houses is composed of frame one story, one room deep structures with rear ells. Most of them have triple-A roof lines with a decorative cutwork vent in the front gable, and hip-roofed porches, some with sawn spandrels ornamenting the chamfered posts. All of the houses were built with a single front door leading to a center hall separating the two rooms in the main block. A chimney serving two fireplaces was contained in the wall separating the main block and the ell.

Durham Hosiery Mills continued to add to Carrboro's housing stock, both on the adjoining acreage included in the factory transactions and on the other small tracts acquired during the 1910's and early 1920's. By the early 1920's, the mill village core of Carrboro was almost completely developed. Much of the filling out during the 1910's and 1920's was the result of several of the mill workers building their own houses. Mill-owned housing was not the only source of shelter for Carrboro's mill workers. Unlike many of the isolated and holistic mill villages, in which all of the buildings, services and amenities were owned and provided by the textile company, many of Carrboro's dwellings inhabited by the textile workers were privately owned. Much of the land near the mills belonged to area farmers and businessmen who began selling parcels or developing the land with houses for speculative sale or rental. It is virtually impossible to distinguish these owner-occupied houses from those built by the mills. They are all basic house types -- usually one story and one room deep with a rear ell and gable roof, or one story and two rooms deep with a rear ell or shed and a hipped roof. Generally, the one story, one room deep houses built by the mills were smaller than those built privately.

Relatively few builders have been positively associated with specific houses built in Carrboro between 1899 and the early 1920's. Early carpenters remembered by long-time area residents are John Squires, who built Durham Hosiery Mills' last group of houses on South Greensboro Street, and a Mr. Ray (whose first name is unknown) who worked with other members of his family as carpenters on the construction of the Thomas F. Lloyd Manufacturing Company.

Durham Hosiery Mills owned many acres along South Greensboro Street, extending to Morgan Creek. Known as the "company pasture," part of this land was fenced for the employee's cows. There was also room for hog pens, the repository of most of the town's garbage. Durham Hosiery Mills cultivated a large portion of its land as a peach orchard with widely spaced rows of trees in between which the mill workers could plant family garden plots. The company also planted trees and bushes along streets and yards. Employees were provided with flower seeds and bedding plants, and mowers were available for cutting lawns. After Durham Hosiery Mills built its last group of houses along South Greensboro Street, Lombardy Poplars were planted on both sides of the street, lending this thoroughfare its early name of Poplar Street; the street was renamed after the trees became diseased and were cut down in the 1930's.

Although Durham Hosiery Mills did not employ a doctor full-time, Carrboro had a well-respected physician. In 1913, Dr. Brack Lloyd, a relative of Thomas F. Lloyd, hired Chapel Hill contractor Charles Martindale to build the large one story bungalow at 406 South Greensboro Street, the town's first house to have a central heating system. The site chosen by Dr. Lloyd is the highest land on South Greensboro Street. At the time it was constructed, this house was the southernmost house on South Greensboro Street.

By the end of the 1920's, the prosperity of Durham Hosiery Mills began to decline. For many years, after silk hosiery was introduced in the mid 1910's, the demand for cotton hosiery waned. The sharp drop in sales that followed the 1929 stock market crash which marked the advent of the Great Depression dealt a severe blow to Durham Hosiery Mills, and in 1930 the

company closed Mill No. 4 (the former Alberta Mill). With the rising popularity of synthetics, particularly nylon which was less expensive to produce than cotton, Durham Hosiery Mills continued to suffer. On June 22, 1938, after just one week's notice, the last yarn was shipped from Mill Number 7 and its doors were closed. In 1939 the company sold much of its Carrboro property at auction. Most of the company's houses were sold for about \$500, many to their occupants. In 1942 the National Munitions Corporations converted Mill Number 7 into a shell loading plant and many of the former mill workers became assemblers of anti-aircraft ammunition. This plant closed in 1945 and the former Mill Number 7 and Mill Number 4 were purchased by Pacific Mills, one of the country's largest wool manufacturing companies. By the time the woolen mills closed in the mid 1950's, Carrboro was no longer dependent upon the textile industry to sustain itself. The University of North Carolina and a variety of businesses in the surrounding area were experiencing a period of rapid growth that provided work for Carrboro's residents in a wide range of occupations and locations.

During the 1960's the buildings which formed the Thomas F. Lloyd Manufacturing Company were destroyed and the site is now occupied by a large parking lot. The former Alberta Cotton Mill has been "adaptively" reused as a shopping mall. During the past several decades, the former mill houses have been the focus of preservation and restoration efforts by individual owner-occupants and real estate investors.

SOURCES

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Orange County, N.C. An Inventory of Sites of Cultural, Historical, Recreational, Biological, and Geological Significance in the Unincorporated Portions of Orange County. 1986.

Town of Carrboro, NC. Architectural and Historic Resources. undated.

Town of Carrboro Planning Department. Design Guidelines for the Carrboro Neighborhood Preservation District. 1992

Town of Carrboro Planning Department. Significance Report for Carrboro.

APPENDIX D: GLOSSARY OF TERMS

AFFORDABLE HOUSING

For the purposes of the Small Area Plan, there are two distinct types of affordable housing. One is housing that is affordable to low income households. A number of criteria have been used to identify these types of households. Most are based on households which make some percentage of poverty-level income. Generally, these households are not student households, since student income levels are often not indicative of their ability to pay for housing.

The other type of affordable housing relevant to the Small Area Plan is housing for first-time home buyers. As mentioned in Section 2, there is a lack of housing in the \$125,000 to \$150,000 range in Carrboro. Many new homes in the Study Area sell for much higher prices. Less expensive housing would encourage new long-term residents to move to Carrboro.

TYPES OF STREETS

MINOR STREET

A street whose sole function is to provide access to abutting properties. It serves or is designed to serve 9 or less dwelling units, and carries up to 75 trips per day.

LOCAL STREET

A street whose sole function is to provide access to abutting properties. It serves or is designed to serve at least 10, but not more than 25 dwelling units, and carries between 75 and 200 trips per day.

SUBCOLLECTOR STREET

A street whose principle function is to provide access to abutting properties, but can also be used to connect minor or local streets with collector or arterial streets. They serve or are designed to serve at least 26, but not more than 100 dwelling units, and carry between 200 and 800 trips per day.

COLLECTOR/CONNECTOR STREET

A street whose principle function is to carry traffic between minor, local, and subcollector streets and arterial streets. These types of streets may also provide direct access to abutting properties. They serve or are designed to serve, directly or indirectly, more than 100 dwelling units and to carry more than 800 trips per day.

ARTERIAL STREET

A major street in the town’s street system that serves as an avenue for the circulation of traffic into, out, or around the town and carries high volumes of traffic. In the Study Area arterial streets are: Dairyland Road, Eubanks Road, Greensboro Street, Homestead Road, Old Highway 86, and Old Fayetteville Road.

DEVELOPED *

- 1) Lots containing one (1) acre or less;
- 2) Residential developments approved at a density of at least one (1) unit per acre;
- 3) Streets, roads, and utility easements located outside of lots containing one (1) acre or less;
- 4) Lots or tracts of land that are used for commercial, industrial, institutional, or governmental purposes; and
- 5) Tracts that are owned by the University of North Carolina or other non-profit entities and that are not available for private development.

UNDEVELOPED

- 1) Residential lots or tracts of land containing more than one (1) acre; or
- 2) Residential developments approved at a density less than one (1) unit per acre.

TYPES OF RESIDENTIAL AREAS

RURAL RESIDENTIAL AREAS *

Low density areas consisting of single-family homes situated on large lots two (2) acres in size or greater.

SUBURBAN RESIDENTIAL AREAS

Transition areas consisting of a range of housing types from single-family homes to duplexes to multi-family dwellings with housing densities ranging from one (1) to five (5) dwelling units per acre. Areas located where land is changing from rural to urban, suitable for urban densities, and to be provided with public utilities and services.

URBAN RESIDENTIAL AREAS *

Higher density areas consisting of a range of housing types from single-family homes to duplexes to multi-family dwellings with higher housing densities ranging from six (6) to thirteen (13) dwelling units per acre. Areas located where land is suitable for higher densities, and to be provided with public utilities and services.

FLOATING ZONES

Floating zones are unmapped zoning districts where all the zone requirements are contained in the ordinance. The zone is placed on the map only when an application for development, meeting all the zone requirements, is approved. The plan includes three types of floating zones.

NEIGHBORHOOD MIXED-USE

These areas are intended to be predominantly residential, but allow for some appropriately-scaled commercial activities. However, commercial activities in these areas are subject to design and performance standards to ensure that they do not create negative impacts on neighbors. Residential developments in these areas are clustered to preserve sensitive environmental areas and public open space.

MIXED USE VILLAGE CENTERS

Modeled after the ideas of Andres Duany and Elizabeth Plater-Zyberk, these areas are pedestrian scaled, mixed-use communities. Each village area is no more than one-half mile across so that residents are able to walk to destinations within the village. In the denser central areas of these developments there is a mixture of commercial, office, and residential uses. Commercial activities in these areas are intended to serve only the residents of the community and should not attract a large number of consumers from outside of the village.

BUSINESS/OFFICE/ASSEMBLY

These areas are to contain certain non-obtrusive types of office and light manufacturing activities. The uses will be subject to strict performance standards to ensure that they do not negatively affect neighbors.

***Definitions based on the Joint Planning Land Use Plan Adopted 10-13-86 & last amended 2-01-93**

REFERENCE MATERIAL

The following documents were consulted in the formulation of the Small Area Plan:

TOWN OF CARRBORO

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Draft, Townwide Design Guidelines, 1993
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