

AGENDA
CARRBORO BOARD OF ALDERMEN
WEDNESDAY, DECEMBER 16, 1998
7:30 P.M., TOWN HALL BOARD ROOM

Approximate Time*

7:30 - 7:40 A. REQUESTS FROM VISITORS AND SPEAKERS FROM THE FLOOR

7:40 - 7:45 B. CONSENT AGENDA

 (1) **Approval of Minutes of Previous Meeting: December 8, 1998**

 (2) **Appointment to Steering Committee to Review the B-2 Zoning District**

 The Mayor and Board of Aldermen are requested to appoint a property owner representative to serve on the steering committee to review the B-2 zoning district.

 (3) **Grant Application/Funding for Alternative Fuel Vehicle**

 The purpose of this item is to authorize the Town Manager to submit a grant application to the North Carolina Department of Environment and Natural Resources. The grant will provide funds for a summer camp for high school students in Orange County to learn to convert a gasoline power vehicle to an electric car. At the camp the students will actually convert a vehicle that will be used by Orange County and/or the Town of Carrboro.

7:45 - 7:55 C. RESOLUTIONS, PROCLAMATIONS AND CHARGES

 D. PUBLIC HEARING

7:55 - 9:30 (1) **Land Use Ordinance Text Amendments to Implement the Facilitated Small
P/15 Area Plan for the Northern Study Area**

 The Mayor and Board of Aldermen will receive public comment on the ordinance that has been drafted to implement the Facilitated Small Area Plan for Carrboro's Northern Study Area.

9:30 - 9:35 E. MATTERS BY TOWN CLERK

9:35 - 9:45 F. MATTERS BY TOWN MANAGER

9:45 - 9:55 G. MATTERS BY TOWN ATTORNEY

9:55 - 10:05 H. MATTERS BY BOARD MEMBERS

*The times listed on the agenda are intended only as general indications. Citizens are encouraged to arrive at 7:30 p.m. as the Board of Aldermen at times considers items out of the order listed on the agenda.

ITEM NO. B-2

MEETING DATE: Wednesday, December 16, 1998

DEPARTMENT: PLANNING	PUBLIC HEARING: YES __ NO <u>X</u>
ATTACHMENTS: Applications for participation in the B-2 Steering Committee	FOR INFORMATION CONTACT: Patricia McGuire -- 968-7714
THE FOLLOWING INFORMATION IS PROVIDED:	
(X) Purpose	() Analysis
(X) Action Requested	(X) Summary

**Board of Aldermen
Planning Board
Downtown Development Commission
Business community
Property owner**

At the meeting on September 8, the Board selected Alex Zaffron as the Aldermen representative. During their meeting on October 1, 1998, the Planning Board selected Susan Rodemeir as representative. A copy of the staff report was distributed to the DDC on September 10, 1998. The commission selected chair, Marianna Fiorentino as their representative. Staff met with CBA, a recently formed group of Carrboro businesspeople, on September 14, 1998. The Planning subcommittee of that group met the following week and selected Julie Tomkovick of the Artscenter as their representative.

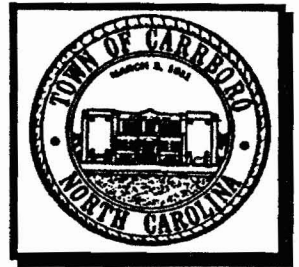
On October 27, 1998, the Board directed staff to post notice in the B-2 neighborhoods advertising the "property owner" seat on the steering committee and that an ad be placed in the newspaper on the cable television bulletin board station. The Board also requested that staff send letters to those individuals listed on the October 27 agenda abstract, asking if any of those individuals would be interested in serving on the committee.

These steps have been taken and three applications for the "property owner" seat have been received. Copies of those applications are attached.

ACTION REQUESTED

That the Board of Aldermen appoints one of the three applicants to the "property owner" seat on the B-2 steering committee.

TOWN OF CARRBORO



Application for Membership on Advisory Board

NAME: Robbin Snider DATE: 12/5/98
ADDRESS: 607 Shelton Street

IS THIS ADDRESS LOCATED WITHIN THE CORPORATE LIMITS OF THE TOWN OF CARRBORO? yes

TELEPHONE: [HOME] 942-4047 [BUSINESS] 929-2102 DATE OF BIRTH: 1/18/64

RACE: W SEX: F OCCUPATION: office manager

ARE YOU A REGISTERED ORANGE COUNTY VOTER? Y LENGTH OF RESIDENCE IN ORANGE COUNTY: 8 yr TOWN OF CARRBORO 8 yr

COMMUNITY ACTIVITIES/ORGANIZATIONAL MEMBERSHIPS:

I wish to be considered for appointment to the following advisory board(s):

<input type="checkbox"/> Board of Adjustments	<input type="checkbox"/> Planning Board
<input type="checkbox"/> Appearance Commission	<input type="checkbox"/> Transportation Advisory Board
<input type="checkbox"/> Cable T.V. Committee	<input type="checkbox"/> Recreation & Parks Commission
<input type="checkbox"/> Human Services Commission	<input type="checkbox"/> Cemetery Commission
<input type="checkbox"/> OWASA Board of Directors	<input type="checkbox"/> Downtown Development Commission
<input type="checkbox"/> Orange County Econ. Devel. Com.	<input type="checkbox"/> Environmental Advisory Board
<input type="checkbox"/> Budget Review Committee	<input type="checkbox"/> Arts Committee
	<input checked="" type="checkbox"/> Other <u>B-2 zoning</u>

If you apply for membership on more than one advisory board, please indicate your preference by number, with "1" being your first choice (please limit your selection to two (2) boards). Please note that membership is limited to one advisory board at a time. You shall not be considered for appointment to another board unless you resign before filing an application or you are in the last six months of your current term.

EXPERIENCE TO AID YOU IN WORKING ON THESE ADVISORY BOARDS:

Worked with the Shaping Orange County Task Force
Involved in neighborhood concerns

REASON(S) YOU WISH TO BE APPOINTED:

Interested in participating with the town process as it
reviews the B-2 zone in conjunction with its comprehensive plan

HAVE YOU EVER SERVED ON ANY TOWN OF CARRBORO ADVISORY BOARD? IF "YES", WHICH ONE(S) NO

TOWN OF CARRBORO



Application for Membership on Advisory Board

NAME: Clay Carmichael DATE: December 1, 1998

ADDRESS: 100 Hillsborough Road, Carrboro, NC 27510-1332

IS THIS ADDRESS LOCATED WITHIN THE CORPORATE LIMITS OF THE TOWN OF CARRBORO? yes

TELEPHONE: [HOME] _____ [BUSINESS] 942-8058 DATE OF BIRTH: _____

RACE: _____ SEX: _____ OCCUPATION: Children's Book writer/illustrator

ARE YOU A REGISTERED ORANGE COUNTY VOTER? Y LENGTH OF RESIDENCE IN ORANGE COUNTY: 43 yrs TOWN OF CARRBORO 20+ years

COMMUNITY ACTIVITIES/ORGANIZATIONAL MEMBERSHIPS:

I wish to be considered for appointment to the following advisory board(s):

<input type="checkbox"/> Board of Adjustments	<input type="checkbox"/> Planning Board
<input type="checkbox"/> Appearance Commission	<input type="checkbox"/> Transportation Advisory Board
<input type="checkbox"/> Cable T.V. Committee	<input type="checkbox"/> Recreation & Parks Commission
<input type="checkbox"/> Human Services Commission	<input type="checkbox"/> Cemetery Commission
<input type="checkbox"/> OWASA Board of Directors	<input type="checkbox"/> Downtown Development Commission
<input type="checkbox"/> Orange County Econ. Devel. Com.	<input type="checkbox"/> Environmental Advisory Board *
<input type="checkbox"/> Budget Review Committee	<input type="checkbox"/> Arts Committee Other <input checked="" type="checkbox"/>

If you apply for membership on more than one advisory board, please indicate your preference by number, with "1" being your first choice (please limit your selection to two (2) boards). Please note that membership is limited to one advisory board at a time. You shall not be considered for appointment to another board unless you resign before filing an application or you are in the last six months of your current term.

EXPERIENCE TO AID YOU IN WORKING ON THESE ADVISORY BOARDS:

REASON(S) YOU WISH TO BE APPOINTED:

HAVE YOU EVER SERVED ON ANY TOWN OF CARRBORO ADVISORY BOARD? IF "YES", WHICH ONE(S) _____

* wish to attend planning board meeting on B-2 zoning district.
Please advise me when it is. Thank you.

TOWN OF CARRBORO



Application for Membership on Advisory Board

NAME: Carmen Mayer DATE: 12-7-98
ADDRESS: 107 Lindsay St.
IS THIS ADDRESS LOCATED WITHIN THE CORPORATE LIMITS OF THE TOWN OF CARRBORO? yes
TELEPHONE: [HOME] 933-1149 [BUSINESS] _____ DATE OF BIRTH: 10-28-32
RACE: W SEX: F OCCUPATION: retired social worker
ARE YOU A REGISTERED ORANGE COUNTY VOTER? yes LENGTH OF RESIDENCE IN ORANGE COUNTY: 29 yrs. TOWN OF CARRBORO 9 yrs.
COMMUNITY ACTIVITIES/ORGANIZATIONAL MEMBERSHIPS:

I wish to be considered for appointment to the following advisory board(s):

<input type="checkbox"/> Board of Adjustments	<input type="checkbox"/> Planning Board
<input type="checkbox"/> Appearance Commission	<input type="checkbox"/> Transportation Advisory Board
<input type="checkbox"/> Cable T.V. Committee	<input type="checkbox"/> Recreation & Parks Commission
<input type="checkbox"/> Human Services Commission	<input type="checkbox"/> Cemetery Commission
<input type="checkbox"/> OWASA Board of Directors	<input type="checkbox"/> Downtown Development Commission
<input type="checkbox"/> Orange County Econ. Devel. Com.	<input type="checkbox"/> Environmental Advisory Board
<input type="checkbox"/> Budget Review Committee	<input type="checkbox"/> Arts Committee
	<input checked="" type="checkbox"/> Other

If you apply for membership on more than one advisory board, please indicate your preference by number, with "1" being your first choice (please limit your selection to two (2) boards). Please note that membership is limited to one advisory board at a time. You shall not be considered for appointment to another board unless you resign before filing an application or you are in the last six months of your current term.

EXPERIENCE TO AID YOU IN WORKING ON THESE ADVISORY BOARDS:

resident near B-2 zoning district

REASON(S) YOU WISH TO BE APPOINTED: a concerned citizen to wish to review B-2 zoning plan for Weaver St.

HAVE YOU EVER SERVED ON ANY TOWN OF CARRBORO ADVISORY BOARD? IF "YES", WHICH ONE(S) no

RECEIVED DEC 7 1998

BOARD OF ALDERMEN

ITEM NO. B(3)

AGENDA ITEM ABSTRACT

MEETING DATE: December 16, 1998

SUBJECT: Grant Application for Electric Car Camp

DEPARTMENT: Manager's Office	PUBLIC HEARING: YES ____ NO <u>x</u>
ATTACHMENTS: Resolution in Support of the Grant Application, cover letter and application, support documents for grant. There is also an article concerning Lynn Moody that will be included and a letter of support from the County Commissioners (pending their meeting on Dec. 15) but these two items could not be included in this abstract due to time constraints.	FOR INFORMATION CONTACT: David Durham, Information and Communications Specialist, 968-7706

PURPOSE

The purpose of this item is to have the board formally support the grant application to sponsor an Electric Car camp this summer by voting to adopt a resolution.

ANALYSIS

The Town of Carrboro Board of Aldermen voted previously, on Jan. 6, 1998 to support an application for this grant. That grant was not won by the group submitting from Carrboro, but they are resubmitting a request this year, albeit for a different project.

This project will provide an Electric Car Camp for 10 Orange County high school students to learn how to convert cars to electric power. The camp will also provide Recharge Stations in the Towns of Carrboro and Hillsborough. This camp is to be assisted by the Town of Carrboro, the Orange County Commissioners and the Orange County Public Schools.

The converted car will be rotated through the fleets of these three entities in order to determine its best use. The Town of Carrboro could potentially learn this conversion skill and begin putting it to use in the Town's fleet of vehicles.

ACTION REQUESTED

It is requested that the Board vote in support of the attached resolution.

**A RESOLUTION AUTHORIZING THE TOWN OF CARRBORO,
IN COOPERATION WITH THE ORANGE COUNTY COMMISSIONERS
AND ORANGE COUNTY PUBLIC SCHOOLS
TO SUBMIT AN APPLICATION FOR FUNDING FROM
THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES,
DIVISION OF AIR QUALITY TO PROVIDE AN ELECTRIC CAR CAMP
FOR STUDENTS IN ORANGE COUNTY
Resolution No. 21/98-99**

WHEREAS, the Town of Carrboro understands the need to improve air quality and reduce air pollution from cars and other motor vehicles; and

WHEREAS, the Town of Carrboro seeks to raise public consciousness of the value of alternatively fueled vehicles

NOW THEREFORE, THE [BOARD OF ALDERMEN OF THE TOWN OF CARRBORO RESOLVES:

Section 1. The Board of Aldermen hereby directs Town staff to submit a grant application to the North Carolina Department of Environment and Natural Resources, Division of Air Quality for funding an Electric Car Camp.

Section 2. This resolution shall become effective upon adoption.

Mobile Source Emissions Reduction Grant Application Cover Sheet

Project Title: Electric Car Camp for high school students of Orange County

Project Coordinator: Marty Mandell

Address: 116 Pine Street

City: Carrboro **County:** Orange **Zip:** 27510

Telephone: 919-967-9646 **FAX:** 919-968-7737

Email: carrboro@ncdial.net

Alternate Contact Person/Telephone: Lynn Moody, 919-732-6271, ext. 243,
FAX - 919-732-6727

Amount Requested: \$9,200

Amount of Matching Funds: *Capital* \$0 *In-Kind* \$9,940

Project Summary: An Electric Car Camp for 10 Orange County students to learn conversion on a Ford Escort and to provide Recharge Stations in the Towns of Carrboro and Hillsborough, assisted by the Town of Carrboro, Orange County Commissioners and Orange County Public Schools.

The Town of Carrboro hopes to learn the process during the Electric Car Camp and begin applying it to the Town's vehicles, thereby responding to the need to improve air quality and reduce air pollution from motor vehicles.

Orange County Commissioners will promote the need for alternatively fueled vehicles to raise public awareness of their value. They will work toward offering electric conversion classes to the general public through the new Skills Development Center.

Elected officials and school personnel can use this project to help prepare the public for the next century and zero vehicle emissions requirements.

Electric Car Camp for high school students of Orange County

a Project of the Town of Carrboro, Orange County Commissioners and Orange High School

contact: Marty Mandell, 116 Pine Street, Carrboro, NC

(919) 967-9646; fax: (919) 968-7737; e-mail to: carrboro@ncdial.net

N.C. Department on Environment and Natural Resources

Division of Air Quality, Mobile Sources Compliance

P.O. Box 29580

Raleigh, N.C. 27626-0580

To the Grant Review Committee:

This past summer - 1998 - Orange County registered the second highest ozone "Code Orange" reading in the United States! ...only Los Angeles was worse. This shocking ozone level is a serious health issue for us. Our lives are at stake until we get rid of these harmful exhaust pollutants. Most of the pollutants come from the huge increases in commuters, especially in the Research Triangle Park, using gasoline-fueled automobiles and trucks, clogging routes 40, 86 and 15-501.

The solution we offer is an immediate move to remedy the problem and is affordable for most of our population.

PROJECT PROPOSAL: to establish a summer Electric Car Camp for 10 Orange County high school students to learn electric car conversion to increase their environmental awareness and to apply physics to real world situations. The students will become promoters of alternative fuels and improved air quality in Orange County and the greater Triangle area.

GRANT REQUEST: \$9,200

\$6,500	Conversion Kit for a manual shift Ford Escort (will get 40 - 60 miles per charge and recharge overnight at 110 volts.)
\$2,400	120 hours instruction - David Ronco, Director of Automotive Instruction at Durham Technical Community College, \$20 per hour, 6 hours per day, 1 month.
\$300	Paint: Colors - decided by the students.
<hr/>	
\$9,200	Total

BUDGET ADMINISTRATION AND FINANCIAL REPORTS: Bingham Roenigk, Assistant Manager for the Town of Carrboro.

CAMP LOCATION: Orange County Public Works, a safe and protected work environment with 220 volts available to recharge batteries and a Spray Booth for painting vehicles.

PARTICIPANTS selected by Pat Rhodes, Lynn Moody, and Steve Halkiotis of Orange County Schools: 10 Orange County high school students working toward completing elective course credit in service learning for a non-profit organization. Priority will be given to students who have expressed an interest in pursuing the automotive industry as a future career pathway.

INSTRUCTION: delivered by the Automotive Systems Technology Staff of Durham Technical Community College.

VOLUNTEER INSTRUCTION: Triangle Electric Automobile Association, with 22 members; technical assistance from Rhett George, Electrical Engineering Professor at Duke University; Ralph Goodwin, CP&L and organizer of the Carolina Electric Vehicle Coalition; and Bob Zickefoose, AEC.

WORK ASSISTANCE: Pete White, Head of Fleet Maintenance for the Town of Carrboro, who will assist while learning to do future conversions on selected vehicles in the Town's Fleet.

SCHEDULE: Daily for 6 hours per day, July 5 - July 30, 4 weeks.

RECHARGE STATIONS:

Free recharge for cars

- 110, 120 and 220 volts, overnight recharge

Carrboro: Recharge Stations and parking - available at Town Hall and the new Community Center.
Orange County: Recharge Stations and parking - available at Orange County High School and Orange County Public Works.

- 208 - 240 volts, 40 amps circuit - meets GM's charging standards

requested by Carrboro to be included in CP&L's Grant Proposal

Future recharge for vans and buses

- 440 volt INDUCTIVE Paddle recharge - quick recharge, safe, no danger to use, available to the public in 5 years.

Orange High School has 440 volts available **now**.

IN-KIND CONTRIBUTIONS: \$9,940

\$800	T&T Automotive in Hillsborough - donated vehicle.
\$400	20 regular work hours for Pete White from the Town of Carrboro.
\$2,000	Use of the Public Works facilities from the Orange County Commissioners.
\$3,500	\$350 per student x 10 students - normal certificate fees donated by Orange County Schools.
\$2,000	Volunteers - Triangle Electric Automobile Association; Rhett George, Electrical Engineering Professor at Duke University; Ralph Goodwin, CP&L and organizer of Carolina Electric Vehicle Coalition; and Bob Zickefoose, AEC.
\$1,000	Pat Rhodes, principal of Orange High, Lynn Moody, director of Work First Development; and Steve Halkiotis, Director of auxiliary services for Orange County Schools for recruitment, selection, scheduling and certification of students.
\$175	decals and signs - Carrboro Public Works.
\$65	orientation and commissioning services for the vehicle.
<hr/>	
\$9,940	Total

USES: The vehicle will be used to benefit Orange County and Carrboro Governments and receive maximum exposure to the community. It will rotate through government departments, employees, services and individuals.

It will be part of the Orange County Schools' annual "**Truck and Tool Time**" event (article enclosed); part of the **Triangle Electric Car Awareness Day**; and will be entered by the students in the **Electric Vehicle Challenge**.

The 10 high school students and members of the community involved in the Project will learn about an alternative fuel system, the mechanical aspects of an actual conversion and the issues of improving air quality in the Triangle.

EVALUATIONS: The Project Planning Group will prepare formal reports evaluating the first Electric Car Camp and deciding on future plans. Reports will be made to:

- Town of Carrboro Board of Aldermen
- Orange County Commissioners
- Orange High School students, faculty and staff
- Division of Air Quality, Mobile Source Compliance Branch and the Grant Review Committee.
- Others, upon request.

PROJECT PLANNING GROUP:

Bob Zickefoose, AEC, Technical Assistance
Mike Nelson, Mayor, Town of Carrboro
Margaret Brown, Chair, Orange County Commissioners
Steve Halkiotis, Orange County Commissioners and former Principal of Orange High
Lynn Moody, Director, Orange County Work Force Development
Pete White, Head of Fleet Maintenance, Town of Carrboro
David Ronco, Automotive Systems Technology Instructor at Durham Technical Community College
Jane Sharp, Orange County Environmental Group
Marty Mandell, citizen activist

FUTURE OPTIONS: Orange High School currently offers instruction in engine repair, but has no facility for automotive work though it is frequently requested, particularly by Spanish speaking parents. The idea of an alternative electric vehicle is new to many of the students and elected officials and staff involved in this project, but the need for change is extremely clear. The success of the summer camp will decide if Orange High School participates in the camp only or establishes a conversion program on the high school campus. They are eligible for funds under the Huskins Bill to work with Durham Technical Community College on courses not currently offered to 16 year old juniors and seniors.

The Town of Carrboro hopes to learn the process during the Electric Car Camp and begin applying it to the Town's vehicles, thereby responding to the need to improve air quality and reduce air pollution from motor vehicles.

Orange County Commissioners will promote the need for alternatively fueled vehicles to raise public awareness of their value. They will work toward offering electric conversion classes to the general public through the new Skills Development Center.

Elected officials and school personnel can use this project to help prepare the public for the next century and zero vehicle emissions requirements.

Sincerely,

Marty Mandell, Contact Person

Public Perception of Electric Vehicle Conversion

State Senator Ellie Kinnaird, former Mayor of Carrboro- “This project reaffirms Carrboro’s long commitment to environmental progress. We are proud to again be leaders in environmental protection.”

State Senator Howard Lee, Chapel Hill- “It is extremely exciting. I’ve been pushing North Carolina for years to convert State vehicles to alternative fuels. I see this Project setting the tone which might encourage other government units to step forward early and demonstrate the value of such conversions.”

Performance Automobile Agency Chevrolet Sales Manager Scott Rossi- “Great idea! I have been watching new legislation by the government on the manufacture of better emission systems in new vehicles. Conversion in Orange County helps the public learn.”

Carrboro Mechanics:

Auto Logic, Gene Sull- “Sounds like a great idea! I don’t know much about it. Student and government interest help make it more commercially viable- manufacturers should pay attention. Automation, Tim Matthews- “I’ve personally been working on this idea for years- from internal combustion to electric- but it costs too much for me personally. I would like to know how- I’ll help.”

Al’s Garage, Al- Electric doesn’t work. Electric is not going to pull it off. It’s more practical to use hybrid.”

Butler’s, Mr. Butler- “Great idea, cuts down on pollution. Yes, I might like to be involved, learn how to do it.”

F & F, Cleve- “Don’t know much about it. Sounds like a fairy tale. GM are the smartest people in the world and they don’t have one going well yet. I’d have to see it to believe it. May help!”

Chapel Hill Tire, Todd Ward- “Good idea! Like to see how it works. Have a test run. Good idea.”

Orange County Commissioner Margaret Brown- “It is an excellent idea whose time should have come years ago. I think it is very important that Carrboro’s initiative should be followed with everything that the County can do to further this proposal.”

Chapel Hill Town Council member and EPA official Julie Anderson- “Terrific idea! I’d like to see a major revolution in the kind of cars we drive. I’d like to see everybody drive an electric vehicle to work.”

Sierra Club, Greg Gangi- “I think the project is marvelous. It is a good example of where we might be going in the future.”

Sierra Club, Trish Rafalow- “Love it. I want one.”

Greens Club member and community activist, Mark Marcoplos- “I know about EVs. They are the wave of the future. We will watch as the students institute an EV project and know that it is going to be a national trend. This puts us ahead of that movement.”

Mayor of Carrboro Mike Nelson- “It is a really exciting project. The sort of thing that we can do and do well.”

Carrboro Board of Aldermen member and Executive Director of Pesticide Education and Agricultural Resources Allen Spalt- “Conversions will allow us to start working on our own vehicles again.”

Triangle Land Conservancy, Livy Ludington- “We are all aware that as traffic increases in this area, our air quality is rapidly deteriorating. Our commitment to protect the environment is demonstrated by this project.”

Orange County Board of Education
RANDY BRIDGES, SUPERINTENDENT
Hillsborough, NC 27278

BOARD MEMBERS
DELORES SIMPSON, CHAIR
SUSAN DOVENBARGER, VICE CHAIR
ROBERT H. BATEMAN
KEITH COOK
RICHARD KENNEDY
DAVID KOLBINSKY
BRENDA STEPHENS

200 EAST KING STREET
HILLSBOROUGH, NC 27278
TELEPHONE: 919-732-8126
FAX: 919-732-8120

December 9, 1998

North Carolina Department of Environment and Natural Resources
Mobile Source Emissions Reduction Grants
c/o Ms. Shelley Miller
Division of Air Quality, Mobile Sources Compliance Branch
P. O. Box 29580
Raleigh, North Carolina 27626-0580

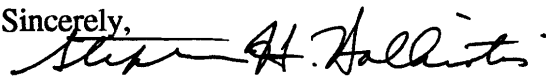
Dear Ms. Miller:

This letter is to confirm that the Orange County School System is excited about the possibility of working with the Town of Carrboro in its efforts to secure a grant aimed at converting vehicles to electric power.

I have described the grant proposal to Orange County Schools Superintendent Randy Bridges and Orange High School Principal G. Patrick Rhodes and they are enthusiastic about such a prospect. Principal Rhodes is investigating credit opportunities for the proposed 10 high school students who would be accepted into the program to learn about alternative fuel systems, the mechanical aspects of an actual conversion, and the issues of improving air quality in the triangle area.

Ms. Lynn Moody, Director of Workforce Development for the Orange County School System, has proposed the establishment of an **"Electric Car Camp"** that would provide a total of 120 contact hours during the month of July, 1999. A possible location for this camp could include sites on property belonging to the Orange County Board of Education, the Public Works Facility belonging to Orange County Government located in Hillsborough, and the Public Works Facility belonging to the Town of Carrboro. The Orange County School System would make an in kind contribution of scholarships to students, possible space and welding facilities as needed, and technical assistance from any and all employees that we have in our employ. Mrs. Moody and I will work with Mr. Rhodes to finalize the plan with respect to student involvement.

Sincerely,



Dr. Stephen H. Halkiotis, Director of Auxiliary Services, Orange County Schools

cc: Randy Bridges, Superintendent
Lynn Moody, Director of Workforce Development
G. Patrick Rhodes, Principal, Orange High School

BOARD OF ALDERMEN

ITEM NO. D(1)

AGENDA ITEM ABSTRACT

MEETING DATE: Wednesday, December 16, 1998

SUBJECT: PUBLIC HEARING: Land Use Ordinance Amendment to Implement the Recommendations of the Facilitated Small Area Plan for the Northern Study Area.

DEPARTMENT: PLANNING	PUBLIC HEARING: YES <u>X</u> NO <u> </u>
ATTACHMENTS: Draft ordinance and attachments Advisory Board Recommendations	FOR INFORMATION CONTACT: Patricia McGuire -- 968-7714 Mike Brough -- 929-3905
THE FOLLOWING INFORMATION IS PROVIDED: (X) Purpose (X) Analysis (X) Summary () Action Requested (X) Recommendation	

PURPOSE

To receive public comment on the ordinance that has been drafted to implement the Facilitated Small Area Plan for Carrboro's Northern Study Area.

SUMMARY

In September 1998, a first draft of the NSA implementation ordinance was distributed for review. During the month of October, members of the Board of Aldermen received presentations on the components of the ordinance, an analysis of the consistency of the elements with the Facilitated Plan and recommendations from staff. During this same time, members of the Ordinance Drafting Committee reviewed the draft, noting incomplete or missing components. In late October, three sections (18, 19, and 21) were referred to subcommittees for further review. Changes to sections 19 and 21 were completed by mid-November. The subcommittee's review of Section 18 was completed during the second week of December, but the ordinance drafting of the changes has not yet been completed. The specific revisions to Section 18 are expected to be available by December 14 and will be distributed that evening. The ordinance now consists of four components: 33 pages of textual changes to the Town's Land Use Ordinance, Appendix J, "Vernacular Architectural Standards for Village Mixed use and Affordable Housing," and the Northern Transition Area Stream Buffer Map. Copies of these materials are attached.

The Orange County Board of County Commissioners is to finalize its review of the proposed amendments to the Joint Planning Area Land Use Plan and Joint Planning Agreement on December 15 at the Southern Human Services Center on Homestead Road. The County Commissioners are also expected to review the draft ordinance in accordance with the requirements of Subsection 2.6 C. of the Joint Planning Agreement. The outcome of this review will be presented during the public hearing.

The ordinance was presented to the Joint Review Advisory Boards on November 19. All three boards elected to delay their votes on the ordinance until December 3, in order to allow additional time for review of the materials.

The advisory boards completed their reviews of the ordinance and supporting materials that evening. Due to the magnitude and complexity of the ordinance, as well as other issues, the advisory boards chose to develop more detailed comments and recommendations than are typically submitted. Copies of the advisory board's comments and recommendations are attached. Representatives of each of the advisory boards/commissions are expected to be in attendance on the 16th to provide additional explanation, if needed. Staff met with the Home Council, a committee made up of housing staff from Orange County, Chapel Hill, Hillsborough, and Carrboro, on December 2, 1998 to discuss the affordable housing provision included in the draft ordinance.

Public informational meetings on the Facilitated Plan and ordinance provisions were held at the Homestead Community Center on December 2 and December 9, 1998. Thirty-two persons, residents of the Town, study area, and Rural Buffer, attended the meetings.

ANALYSIS

The 32-page draft ordinance includes 26 additions and revisions to the town's Land Use Ordinance. These sections address eight major issues identified in the plan: density, conservation areas, conditional use districts, environmental protection, mitigation of non-residential development impacts, subdivision design in accordance with natural/significant features, design guidelines, and advisory board representation by Transition Area residents.

As was noted in the analysis presented on October 27, 1998, the policy origin for nearly all of the work items and ordinance components can be clearly demonstrated. In a few cases, such as design standards, the plan did not include specific design features or criteria. In these instances, the ordinance drafting committee identified the design components or provisions that are included in the ordinance. The Joint Planning Area Land Use Plan and Joint Planning Agreement amendments are another example, as the plan does not include specific proposals for changes. However, early in the course of the committee's work, it became evident that some changes to the JPA would be needed in order to implement certain recommendations of the plan.

The ordinance is clearly a comprehensive document, addressing all the major changes envisioned in the plan that could be implemented through the land use ordinance – net density calculations, mandatory protection of primary conservation areas, and affordable housing density bonuses. Further, the specific design elements and features have been compiled by the citizen, elected official and staff participants in the ordinance drafting process.

During the Orange County Planning Board review, some concern was noted regarding the lack of any limit on the spacing or number of office/assembly conditional use districts. A distance limit on the spacing of storefront use areas has been included in the design standards to limit the number of village mixed-use districts. As an additional assurance to the community that a proliferation of O/A CU districts is neither anticipated nor desired, the Board may wish to consider a spacing requirement of one-half mile from the edge of one O/A CU district to the edge of any other.

RECOMMENDATION

The Administration recommends that the Board of Aldermen consider "An ordinance amending the Carrboro Land Use Ordinance to implement the recommendations of the Facilitated Small Area Plan for Carrboro's Northern Study Area."

The following ordinance was introduced by Alderman and duly seconded by Alderman .

**AN ORDINANCE AMENDING THE CARRBORO LAND USE ORDINANCE TO IMPLEMENT
THE RECOMMENDATIONS OF THE FACILITATED SMALL AREA PLAN FOR
CARRBORO'S NORTHERN STUDY AREA**

WHEREAS, on August 19, 1997, the Board of Aldermen unanimously accepted the modified plan for the Northern Study Area produced by a facilitated planning conference held on April 19 and May 31, 1997; and

WHEREAS, the Small Area Plan Ordinance Drafting Committee appointed by the Board of Aldermen has recommended a series of ordinance amendments to implement the recommendations of the plan; and

WHEREAS, the amendments proposed by the committee are intended to achieve the following objectives:

1. To conserve open land, including those areas containing unique and sensitive natural features such as woodlands, steep slopes, streams, floodplains and wetlands, by setting them aside from development;
2. To provide greater design flexibility and efficiency in the siting of services and infrastructure, including the opportunity to reduce length of roads, utility runs, and the amount of paving required for residential development;
3. To reduce erosion and sedimentation by the retention of existing vegetation, and the minimization of development on steep slopes;
4. To provide for a diversity of lot sizes, building densities, and housing choices to accommodate a variety of age and income groups, and residential preferences, so that the community's population diversity may be restored and enhanced;
5. To implement adopted policies to conserve a variety of irreplaceable and environmentally sensitive resource lands as set forth in the Town's Land Use Ordinance including provisions for reasonable incentives to create an interconnected and continuous greenway system for the benefit of present and future residents;
6. To implement adopted land use, transportation, and community policies, as identified in the Town's Land Use Ordinance;
7. To protect areas with productive agricultural soils for continued or future agricultural use for specialty crops or other intensive, small-scale operations;
8. To create neighborhoods with direct visual access to open land, with amenities in the form of neighborhood open space, and with a strong neighborhood identity;

9. To provide for the conservation and maintenance of open land to achieve the above-mentioned goals and for active or passive recreational use by residents;
10. To provide multiple options for landowners in order to minimize impacts on environmental resources (sensitive lands such as wetlands, floodplain, and steep slopes) and disturbance of natural or cultural features (such as mature woodlands, hedgerows and tree lines);
11. To provide standards reflecting the varying circumstances and interests of individual landowners, and the individual characteristics of their properties;
12. To conserve scenic views and elements of the area's character, and to minimize perceived density, by minimizing views of new development from existing roads; and
13. To preserve Carrboro's unique architectural sense of place and in new construction maintains a close and strong visual reference to the existing architectural vernacular specific to Carrboro and its surroundings.

NOW THEREFORE, THE BOARD OF ALDERMEN OF THE TOWN OF CARRBORO ORDAINS:

SECTION 1. The article and section references contained in this ordinance are to the Carrboro Land Use Ordinance.

SECTION 2. Article XII is amended by adding a new Section 15-182.3 to read as follows:

Section 15-182.3 Residential Density of Major Developments in Certain Districts.

(a) Notwithstanding the provisions of Section 15-182, when any tract of land within the R-10, R-15, R-20, and RR districts is developed under circumstances requiring the issuance of a special or conditional use permit, the maximum number of dwelling units that may be placed on that tract shall be determined in accordance with the provisions of this section.

(b) If the development is to be served by OWASA owned water and sewer lines, then the maximum number of dwelling units for any type of residential development other than an architecturally integrated subdivision shall be determined by dividing the adjusted tract acreage (calculated in accordance with the provisions of subsection (c) below) by the "minimum square feet per dwelling unit" associated with the zoning district of the property to be developed as set forth in Section 15-182. If the development is an architecturally integrated subdivision, then the maximum density shall be determined by dividing 85% of the adjusted tract acreage by the "minimum square feet per dwelling unit" associated with the zoning district of the property.

(c) The adjusted tract acreage shall be calculated by deducting from the gross acreage of the tract the sum total of each of the following areas that may be located within the tract in question. If an area within the tract qualifies under more than one of the following categories, then that area shall be included only within the one category that involves the most restrictive (i.e. the greatest) deduction.

- (1) Floodways: multiply the area within a floodway by a factor of 1.0.
- (2) Wetlands: multiply the area of designated wetlands by a factor of 0.95.
- (3) Major Rock Formations: multiply the area of major rock formations by a factor of 0.90.
- (4) Steep Slopes: multiply the area of land with natural ground slopes exceeding 25 percent by a factor of 0.80.
- (5) Land traversed by high-tension electrical transmission lines (69kv or higher): multiply the area within the power easement by a factor of 0.75.
- (6) Floodplains: multiply the 100-year floodplain by a factor of 0.5.
- (7) Moderately steep slopes: multiply the area with natural ground slopes of between 15 and 25 percent by a factor of 0.4.
- (8) Land traversed by underground utility lines (not within a street right of way): multiply the area within the easement (or if no easement exists, the area within ten feet on either side of the line) by a factor of 0.3.

(d) If the development is not to be served by OWASA owned water and sewer lines, then the maximum number of dwelling units shall be determined in reference to an actual yield plan prepared by the developer in accordance with the provisions of this subsection. The yield plan shall be a conceptual layout of a single family residential subdivision (containing proposed lots that meet the minimum lot size requirements of the district where the property is located, streets, easements, and other pertinent features) that could be developed within the tract in question in accordance with the provisions of this chapter. Although the yield plan must be drawn to scale, it need not reflect any great degree of site engineering. However, it must be a realistic layout reflecting a development pattern that could reasonably be expected to be implemented, taking into account the topography of the land and natural constraints, existing easements and encumbrances, and the applicable provisions of this chapter, particularly those relating to open space, recreational facilities, and street rights of way. In addition, the yield plan shall be prepared under the assumption that each lot will be served with an individual septic tank located on the same lot as the house it serves. The applicant shall submit evidence (in the form of a preliminary soils evaluation from Orange County or comparable information from a qualified source) that there appears to be sufficient suitable soil within each of the proposed lots to support a septic tank system serving at least a three-bedroom house. When a yield plan meeting the requirements of this subsection has been submitted, the zoning administrator shall confirm this in a letter to the developer, which letter shall indicate the maximum number of dwelling units that can be developed on the tract in accordance with this subsection.

SECTION 3. Section 15-198 is amended by making the following changes:

- (a) Subsection 15-198(b) is amended by adding two new subsections as follows:

(4) The term "primary conservation areas" shall mean:

- a. Areas containing slopes greater than 25%
- b. Hardwood areas identified on the Carrboro Natural Constraints Map
- c. Wetlands as defined pursuant to Section 404 of the Clean Water Act
- d. Floodplains
- e. With respect to streams designated on the adopted Stream Classification Map of Carrboro, those areas within an average perpendicular distance of sixty feet from the edge of the floodway of the stream, if the floodway is designated on the "Flood Boundary and Flood Map" prepared by the U.S. Department of Housing and Urban Development, or sixty feet from the centerline of the stream where the floodway is not designated on this map.
- f. Lakes and ponds;

(5) The term "secondary conservation areas" shall mean:

- a. Areas containing slopes greater than 15% but not more than 25%;
- b. Wooded areas other than hardwood areas identified on the Carrboro Natural Constraints Map;
- c. Vistas along entranceways to the town;
- d. Other areas containing unusual natural features (such as major rock formations);
- f. Other environmentally, historically or archaeologically significant or unique areas.

(b) The first line of subsection 15-198(d) is amended by changing the phrase "50 lots" to "25 lots". Subdivision (3) of this same subsection is also amended by adding thereto the following new sentence: "The play fields required by this subsection shall be located such that 90% of the lots or dwelling units within any development that is required to install such play field are within 1,500 feet of a play field installed to meet the requirements of this subsection, unless the developer demonstrates by clear and convincing evidence that adherence to this requirement would not be feasible."

(c) Subsections 15-198(e) and (f) are repealed. Subsection 15-198(f) shall be shown as "Reserved," and a new subsection 15-198(e) shall provide as follows:

(e) Subject to subsection (g), if a tract where a residential development is proposed contains any of the areas defined above as primary conservation areas, then such

1 areas shall be designated as open space.

2
3 (d) Subsection 15-198(g) is amended to read as follows:

4
5 (g) A developer shall not be required to set aside as open space under the
6 provisions of subsections (d) and (e) more than the minimum required percentage of open
7 space set forth in subsection (c). If the sum total of open space otherwise required under the
8 provisions of subsections (d) and (e) exceeds forty percent of the development tract (twenty
9 percent in the R-2 district), then the permit issuing authority shall allow the developer to set
10 aside a smaller area of open space under subsections (d) and (e), individually or collectively,
11 so that the developer is not required to preserve as open space more than forty percent of the
12 development tract (twenty percent in the R-2 district). However, if areas that constitute
13 primary conservation areas have not been set aside as open space, then the development plans
14 shall otherwise provide for the preservation of such areas even though they may be located
15 within privately owned lots (e.g. by specifying buildable areas within individual lots).

16
17 (e) Subsection 15-198(h) is amended to read:

18
19 (h) If the area of open space required to be preserved under subsections (d) and
20 (e) does not exceed forty percent (40%) of the area of the development tract (20% in the R-2
21 district), then the permit issuing authority may require that the developer set aside from
22 among the areas that constitute secondary conservation areas as defined above an amount of
23 open space equal to the difference between the amount of open space preserved under
24 subsections (d) and (e) and forty percent (40%) of the development tract (20% in the R-2
25 district).

26
27 (f) Subsection 15-198(b)(3) is amended by adding a new subsection "c" to read as follows:

28
29 (c) Areas used for the growing of crops, such as hay, corn, or vegetables, if and to
30 the extent that such uses occur within an area that is subject to the control of a homeowners
31 association and such uses are approved by the homeowners association.

32
33 **SECTION 4.** Article IX, Part I, is amended by adding a new Section 15-141.2 to read as follows:

34
35 **Section 15-141.2 Village Mixed Use District Established**

36
37 (a) There is hereby established a Village Mixed Use (VMU) district. This district is established
38 to provide for the development of rural new villages at a scale intended to continue Carrboro's small town
39 character as described in its Year 2000 Task Force Report and to promote a traditional concept of villages.
40 The applicant for rezoning to this district must demonstrate that its planning, design and development will
41 achieve, but not necessarily be limited to, all of the following specific objectives:

- 42
43 1. The preservation of open space, scenic vistas, agricultural lands and natural resources
44 within the Town of Carrboro and its planning jurisdiction and to minimize the
45 potential for conflict between such areas and other land uses;

2. The creation of a distinct physical settlement surrounded by a protected landscape of generally open land used for agricultural, forest, recreational and environmental protection purposes.
3. Dwellings, shops, and workplaces generally located in close proximity to each other, the scale of which accommodates and promotes pedestrian travel for trips within the village.
4. Modestly sized buildings fronting on, and aligned with, streets in a disciplined manner.
5. A generally rectilinear pattern of streets, alleys and blocks reflecting the street network in existing small villages which provides for a balanced mix of pedestrians and automobiles.
6. Squares greens, landscaped streets and parks woven into street and block patterns to provide space for social activity, parks and visual enjoyment.
7. Provision of buildings for civic assembly or for other common purposes that act as visual landmarks and symbols of identity within the community.
8. A recognizable, functionally diverse, but visually unified village focused on a village green or square.
9. Development of a size and scale, which accommodates and promotes pedestrian travel rather than motor vehicle trips within the village.
10. Compliance with the policies embodied in this chapter for the development of a village mixed use.

(b) The VMU district shall be a conditional use district authorized under N.C.G.S. 160A-382. As such, property may be placed within this district only in response to a petition by the owners of all the property to be included.

(c) As indicated in the Table of Permissible Uses, the only permissible use within a VMU district is a village mixed use development, and a village mixed use development is only permissible within a VMU district.

(d) Property may be rezoned to the VMU district only when the property proposed for such rezoning:

- (1) Comprises at least fifty, but not more than two hundred, contiguous acres. For purposes of this subsection, acreage is not "contiguous" to other acreage if separated by a public street or connected only at a point less than one hundred feet in width; and
- (2) Is so located in relationship to existing or proposed public streets that traffic

generated by the development of the tract proposed for rezoning can be accommodated without endangering the public health, safety, or welfare; and

(3) Will be served by OWASA water and sewer lines when developed;

(e) Nothing in this section is intended to limit the discretion of the board of aldermen to deny an application to rezone property to a VMU district if it determines that the proposed rezoning is not in the public interest.

(f) When a VMU rezoning application is submitted (in accordance with Article XX of this ordinance), the applicant shall simultaneously submit either (i) a conditional use permit application for a village mixed use development in accordance with the provisions of Section 15-176.1 of this chapter, or (ii) an application for approval of a master plan for the proposed village mixed use development, in accordance with the following provisions.

(1) The master plan shall show, through a combination of graphic means and text (including without limitation proposed conditions to be included in the conditional use permit for the proposed development):

- a. The location, types, and densities of residential uses;
- b. The location, types, and maximum floor areas and impervious surface areas for non-residential uses;
- c. The location and orientation of buildings, parking areas, recreational facilities, and open spaces;
- d. Access and circulation systems for vehicles and pedestrians;
- e. How the development proposes to satisfy the objectives of and comply with the regulations applicable to a village mixed use development as set forth in Section 15-176.1 of this chapter;
- f. How the development proposes to minimize or mitigate any adverse impacts on neighboring properties and the environment, including without limitation impacts from traffic and stormwater runoff; and
- g. How the development proposes to comply with the town's "Village Mixed Use Vernacular Architectural Standards."

(2) The planning board, Northern Transition Advisory Committee, Appearance Commission, Environmental Advisory Board, Transportation Advisory Board (and other advisory boards to which the board of aldermen may refer the application) shall review the proposed master plan or conditional use permit application at the same time it considers the applicant's rezoning request. In response to suggestions made by the planning board (or other advisory boards), the applicant may revise the master

plan or conditional use permit application before it is submitted to the board of aldermen.

(3) If the applicant submits a proposed master plan (rather than a conditional use permit application) with the VMU rezoning application, then:

a. The rezoning application and master plan proposal shall be reviewed concurrently by the board of aldermen according to the same procedures and in accordance with the same standards applicable to other zoning amendments; and

b. The Board may not approve the VMU rezoning application unless it simultaneously approves the master plan for the development of the property, subject to such reasonable modifications and conditions as the Board may impose in the exercise of its legislative discretion.

(4) If the applicant submits a conditional use permit application (rather than a proposed master plan) with the VMU rezoning application, then:

a. The rezoning application and conditional use permit application shall be reviewed concurrently by the board of aldermen according to the same procedures and in accordance with the same standards applicable to other conditional use permit applications; and

b. The Board may not approve the VMU rezoning application unless it simultaneously approves the conditional use permit application for the development of the property, which conditional use permit may be approved subject to reasonable conditions and requirements as set forth in Section 15-59.

(5) If a VMU rezoning application is approved with a master plan (rather than a conditional use permit), approval of the master plan under this section does not obviate the need to obtain a conditional use permit for the village mixed use development in accordance with the provisions of Section 15-176.1 of this chapter.

a. In addition to other grounds for denial of a conditional use permit application under this chapter, a conditional use permit for a village mixed use development may be denied on the basis that the application is inconsistent with the approved master plan. However, if the conditional use permit is approved, the board of aldermen shall be deemed to have amended the master plan to bring it into conformity with the conditional use permit.

b. No conditional use permit for a village neighborhood mixed use development may be denied for reasons set forth in Subsection 15-54(c)(4) if the basis for such denial involves an element or effect of the development that has previously been specifically addressed and approved in the master plan

1 approval process, unless (i) it can be demonstrated that the information
2 presented to the board of aldermen at the master plan approval stage was
3 materially false or misleading, (ii) conditions have changed substantially in a
4 manner that could not reasonably have been anticipated, or (iii) a basis for
5 denial for reasons set forth in Subsection 15-54(c)(4) is demonstrated by clear
6 and convincing evidence.

- 7
8 (6) Subject to Subsection 15-141.2(f)(5), a master plan approved under this section may
9 only be amended in accordance with the provisions applicable to a rezoning of the
10 property in question.
11

12 **SECTION 5.** Article XI, Part II is amended by adding a new Section 15-176.2 to read as follows:

13
14 Section 15-176.2 Village Mixed Use Developments
15

16 (a) In a village mixed use development, a maximum of ten percent of the total gross acreage of
17 the tract, or five acres, whichever is less, may be used for purposes permissible in the B-3T or OA districts,
18 subject to any conditions or limitations (including limitations on the types of permissible uses) contained in
19 the remaining provisions of this section, the Master Plan, or the conditional use permit that authorizes the
20 development in question.
21

- 22 (1) Within the portion of the tract developed for commercial purposes, the regulations
23 (other than use regulations, which are governed by the provisions immediately above)
24 applicable to property zoned B-3T shall apply except as otherwise provided in this
25 section or as otherwise allowed by the board of aldermen in the approval of the
26 Master Plan or conditional use permit for the development.
27
28 (2) The commercial portions of the village mixed use development shall be contained
29 within a "storefront use area." This area shall be designed to provide a variety of
30 retail shops and services to support the day-to-day needs of village residents and other
31 local residents, complemented by other compatible business, civic and residential
32 uses in commercial-type buildings in a manner consistent with a small downtown of
33 or central market place in the community.
34
35 (3) Storefront use areas shall be located so they are easily accessible by pedestrians from
36 as much of the residential areas as possible (preferably within 1,500 feet – a five-
37 minute walk). Nonresidential uses that are intended or expected to serve an area
38 beyond the development itself shall be located to the extent practicable to permit
39 vehicular access from outside the development without passing through residential
40 streets.
41
42 (4) Storefront use areas shall be located at least 200 feet from an arterial street and at least
43 one-half mile from the nearest edge of another commercial center.
44
45 (5) Parking areas that serve commercial facilities shall be screened with a Type A screen
46 from the view of public streets located outside the development.

1
2 (6) If and to the extent that dwelling units are constructed above commercial uses in
3 commercial areas, the additional vehicle accommodation area required to
4 accommodate such residential uses shall not be treated as commercial area for
5 purposes of the "cap" on commercial areas established by this section.
6

7 (7) Commercial areas shall surround or be located adjacent to or across the street from a
8 public park, green, or square, which area may be credited as part of the open space
9 required of the development.
10

11 (8) Within the commercial areas authorized under this section, buildings shall be
12 designed and constructed so that each individual enterprise occupies (whether as
13 tenant or owner occupant) an area of not more than 2,000 square feet per floor.
14

15 (b) Portions of the tract not developed in accordance with the provisions of subsection (a) above
16 may be developed in accordance with the provisions of this chapter applicable to property that is zoned R-
17 10, except as those provisions are modified by the provisions of this section or the Master Plan or conditions
18 imposed by the board of aldermen in the issuance of the conditional use permit.
19

20 (1) The number of dwelling units permissible within the entire tract shall be determined
21 in accordance with the provisions of Section 15-182.3 (as adjusted by density bonuses
22 awarded for providing affordable housing under Section 15-182.4), subject to the
23 following:
24

25 a. Areas used for commercial purposes shall *not* be subtracted from the adjusted
26 tract acreage before determining permissible density;
27

28 b. All dwelling units constructed above commercial uses in commercial areas
29 (e.g. a second story apartment located above a first floor retail store or office)
30 shall be permissible *in addition* to the number of dwelling units otherwise
31 authorized under this section.
32

33 (2) The residential portions of the development shall contain a mixture of housing types
34 that are generally reflective of the housing types in Carrboro and ownership/rental
35 options so that the development provides housing opportunities for persons within as
36 broad a range of income levels as is feasible. Different housing types and price
37 ranges shall be intermixed rather than segregated.
38

39 a. The development shall contain an area known as a "townhouse use area."
40 This area shall be designed to provide for a variety of housing opportunities,
41 including residential buildings such as townhouses and/or apartments in close
42 proximity to the storefront area, and to provide for the flexible use of such
43 buildings to accommodate compatible business and civic uses which
44 supplement the storefront area. The townhouse use area shall be a designated
45 geographic unit generally located along neighborhood streets and adjacent to
46 the storefront area. In approving a conditional use permit for a Village Mixed

1 Use Development, the Board may approve the following uses not generally
2 authorized in an area zoned R-10, subject to such restrictions and conditions
3 relating to locations, use classifications, and other matters as the Board may
4 provide:

- 5
- 6 1. Personal or business services
- 7 2. Office
- 8 3. Private club
- 9 4. Restaurant
- 10 5. Artist studio
- 11 6. A maximum of 4 guestrooms for lodging
- 12 7. Medical clinic or facility
- 13 8. Retail sales, if in conjunction and on the same lot as a home
14 occupation
- 15

- 16 b. The development shall also contain a "single-family detached residential use
17 area" designed to provide for single-family detached homes in a residential
18 neighborhood environment. In approving a conditional use permit for a
19 Village Mixed Use Development, the Board may approve the following uses
20 not generally authorized in a single family detached residential area zoned R-
21 10, subject to such restrictions and conditions relating to locations, use
22 classifications, and other matters as the Board may provide:
- 23

- 24 1. Office, as an accessory use, or for not more than 2 full-time employee
25 equivalents.
- 26

- 27 c. In addition to other applicable use regulations as provided above, lots within the following
28 areas may not be used for the purposes indicated below:
- 29

- 30 (1) Storefront use areas:
- 31

- 32 a. auto related uses
- 33 b. drive-in or through windows
- 34 c. uses requiring loading or unloading during non-daylight hours.
- 35

- 36 (d) In approving a conditional use permit for a village mixed use development, the board of
37 aldermen shall ensure, by approval of a condition, phasing schedule, or otherwise, that the nonresidential
38 portions of the development are occupied only in accordance with a schedule that relates occupancy of such
39 nonresidential portions of the development to the completion of a specified percentage or specified number
40 of phases or sections of the residential portions of the development. The purpose and intent of this provision
41 is to ensure that the approval process for a village mixed use development is not used, intentionally or
42 unintentionally, to create nonresidential uses in areas generally zoned for residential uses except as part of an
43 integrated and well-planned primarily residential development.
- 44

- 45 (e) The open space provided within a village mixed use development pursuant to Section 15-198
46 shall include areas known as "village conservancy use areas " and "greens, parks, and squares."

- (1) Conservancy use areas are areas designed to create a visual and physical distinction between the development, the surrounding countryside, and any neighboring developments.
- (2) Greens, parks and squares are spatially defined and distributed open spaces within the village mixed use development designed to serve a variety of outdoor leisure and assembly needs of village residents and to enhance the form and appearance of the development.
- (3) There shall be a main village green, which shall be centrally located in close proximity to the storefront area as described in subsection (a)(2). Other, smaller greens shall be dispersed throughout the remainder of the village center in such a way that no lot is more than a walking distance of 1,320 feet from a green, square or park. The main village green shall be designed to a pedestrian scale and shall be no less than 30,000 square feet in size, while the other, smaller greens, squares and parks shall be no less than 10,000 square feet in size.
- (4) Open space areas set aside in accordance with this section may be used to satisfy the forty percent requirement of subsection 15-198(c). If the areas the developer is required to set aside as open space under Section 15-198 together with the areas required to be set aside under this subsection exceed forty percent of the mixed use development, then the board of aldermen shall allow the developer to set aside less than the one or more of the categories of open space otherwise required under Section 15-198 or this subsection so that the developer is not required to preserve as open space more than forty percent of the development tract.

(f) Village Mixed Use Developments shall meet the following objectives with regard to land use arrangement and design criteria:

- (1) Overall Form.
 - a. Open space should be designed to follow the natural features whenever possible and to provide for an agricultural, forest and undeveloped character of the land.
 - b. The core of the village shall be distinguished from the peripheral, contiguous open space by a well-defined "hard edge" of dwellings in contrast with the open, largely agricultural, forest and undeveloped character of the open space.
 - c. The village should be sited so as to best preserve natural vistas and the existing topography.
 - d. The village should be designed in a generally rectilinear pattern of blocks and interconnecting streets and alleys, defined by buildings, street furniture, landscaping, pedestrian ways and sidewalks.

(2) Spatial Relationships of Various Use Areas and Open Space.

- a. The common, peripheral open space shall surround the village unless explicitly modified upon a finding that unique topographical or other natural features or preexisting boundary conditions require an alternative arrangement.
- b. Village storefront use and townhouse use areas shall be surrounded by the residential use area or, where applicable, by a combination of residential and civic use areas.
- c. Higher density residential lots should be generally located between the designated commercial area and lower density residential lots.
- d. The transition between uses shall be blended to avoid a distinct visual segregation.

(3) Block Design

- a. Blocks of a generally rectangular shape should be the main organizing feature of the village. While topography, existing vegetation, hydrology and design intentions should influence block shape and size, the maximum length for a block is to be four hundred and eighty (480) feet with an allowance for blocks up to six hundred (600) feet when mid-block pedestrian paths or ways are provided. No less than one eight-foot pedestrian alley or way must be provided for every two-hundred (200) feet of road frontage in the storefront use area.
- b. The blocks of the village may be subdivided into lots, having frontage on a street, whose generally rectangular shape should respond to environmental factors, the proposed use and design intentions.
- c. Village lots should minimize front and side yards, garage aprons and entrances and blank walls, and should generally have as narrow a width as is practical to encourage pedestrian movement.
- d. Each block which includes storefront and narrow frontage townhouse lots shall be designed to include an alley or small clusters of parking, with service access in the rear. Blocks of wide frontage townhouse lots need not be designed to include an alley and rear parking.
- e. Similar land use types shall generally front one another while dissimilar land use types shall generally abut along alleys or rear parking.
- f. Lot layout, path and sidewalk design shall ensure pedestrian access to each

lot.

- g. The build-up line specifies a cornice height that establishes the prominent visual dimension of a building and defines its proportion in relation to the street. It should vary, with no more than sixty (60) consecutive feet of the build-up line having a similar cornice or roofline, and be between one and two and one-half stories in height. A two-story build-up line can range from 20 to 25 feet above average ground level.

(4) Storefront and Townhouse use Area Design Components

- a. New multi-family and commercial buildings in storefront and townhouse use areas shall be subject to a maximum front setback (the "build-to" line) in order to maintain a strong sense of streetscape. Such buildings shall generally be of two-story construction (to the so-called "build-up" line) and shall be designed in accordance with the design standards of this chapter and any other applicable standards. To create a defined edge to the village's public space, new multi-family or commercial buildings should conform to a consistent setback from the street. Porches for multi-family or townhouse construction can extend beyond the build-to line. In addition, building faces, as well as a majority of the roof ridgelines should be parallel to the street.
- b. Maximum height regulations are 35 feet and two and a half stories.
- c. Minimum street frontage is 25 feet.
- d. Setback regulations are as follows: Front = no minimum required; maximum is 15 feet; Rear = 20 feet minimum; Side = Zero minimum lot lines are allowed, except at block ends or adjacent to alleys or pedestrian walks as required under block design requirements.
- e. Parking within this area shall be subject to the other parking requirements of this chapter as well as the following:
1. Non-residential off-street parking shall generally be to the side or the rear, or located within internal parking areas not visible from the street.
 2. On-street parking spaces along the front property line of a lot (except where there are driveway curb cuts) shall be counted toward the minimum number of parking spaces required for the use on that lot.
 3. On-street parking space shall be designed as either parallel to the curb on both sides of the street, or diagonal to the street on the storefront side with landscaped breaks serving the pedestrian alleyways.

- 1
2
3
4
5
6
7
8
9
4. Off-street parking may be located within 60 feet (measured along a publicly accessible route) from the lot containing the use to which the parking is accessory, if the lot containing the parking is owned or leased to the owner of the principal use, or if the lot containing the parking is dedicated to parking for as long as the use to which it is accessory shall continue, and it is owned by an entity capable of assuring its maintenance as accessory parking.

10 f. All public sidewalks and walkways shall:

- 11
12
13
14
15
16
17
18
1. Be constructed of brick, or concrete with brick borders.
 2. Be no less than six feet in; and
 3. Create a completely interconnected network of pedestrian walkways throughout the storefront use and townhouse use areas.

19 g. All storefront and townhouse use areas shall contain the following:

- 20
21
22
23
24
25
26
27
1. At least one trash can of approved design in each block;
 2. Public benches of approved design at bus stops, green spaces, and at intervals of no greater than 50 feet on each block; and
 3. At least one bike rack on each block.

28 h. All new construction shall be of similar scale and massing to small-scale, historic buildings in downtown Carrboro.

29
30
31
32
33
34

i. All roofs shall be topped with low-pitched roofs with articulated parapets and cornices, or pitched roofs where fascias are emphasized and any roof dormers are functional.

35 j. Storefront buildings shall:

- 36
37
38
39
40
41
42
43
44
45
46
1. Include show windows on the ground level. Storefront windows are to be large and traditional in appearance and are to include low sills and high lintels.
 2. Articulate the line between the ground and upper levels with a cornice, canopy, balcony, arcade, or other visual device.
 3. Include lighting in show windows, which is in conformance with other lighting regulations, herein;

11/19/98 DRAFT COPY OF PROPOSED NSA ORDINANCE

4. Project lighting on the sidewalk from about eight feet in conformance with other lighting regulations herein;
5. Present the principal entrance of the to the sidewalk. Alternatively, if the principle entrance faces onto an interior courtyard, the entrance to the courtyard must be presented to the sidewalk.
- k. The façade of storefront buildings may be separated from the sidewalk surface by a landscaped strip of no greater than three feet, except as necessary to accommodate open-air, food service establishments.
- l. The construction of open colonnades over a sidewalk adjoining storefront buildings may be permitted subject to an appropriate easement over the public right-of-way.
- m. Materials in the exterior of buildings surrounding the greens shall be limited to a diversity of brick textures and colors, with wood being subject to the approval of the Appearance Commission. Awnings are encouraged. Commercial grade windows and doors shall be used. with wood encouraged, and other materials being subject to the approval of the Appearance Commission.
- n. All signage shall:
 1. Be affixed to building façade, canopy, or arcade;
 2. Be located within the first story limit;
 3. Be visible to both pedestrians and drivers;
 4. Contain visual street numbers for each building; and
 5. Utilize lighting conforming to applicable regulations.
- o. Storefront buildings shall have at least 60 percent of their front facade parallel to the street.
- p. The principal entrance shall be from the front sidewalk.
- q. Storefront buildings fronting on the same street and located on the same block shall be attached, except as necessary to accommodate pedestrian ways.
- r. The street treescape shall require:
 1. The planting of species which branch above 8 feet to facilitate viewing of storefronts and signage.

2. The planting of trees every 30 feet to 50 feet depending on size so as to create a regular pattern of street trees through the area.

(5) Residential uses within the single family detached residential use area shall conform to the following requirements:

- a. Lots shall generally be located along local streets and around the perimeter of the combined storefront and townhouse areas and between those areas and the village conservancy district.
- b. The minimum lot width at the building line shall be 40 feet;
- c. Variations in the principal building position and orientation shall be encouraged, but the following minimum standards shall be observed: Front yard: 15 feet minimum (but 8 feet to front porches or steps) and 25 feet maximum; Rear yard: 30 feet minimum for principal buildings and 5 feet for accessory buildings; Side yard: 20-foot separation for principal buildings, with no side yard less than 5 feet.
- d. The maximum impervious coverage shall be 50 percent on each lot.
- e. The maximum height of buildings shall be 35 feet.
- f. Residential structures shall be designed to reflect Carrboro's vernacular building tradition in accordance with the design standards described in Section 15-141.2 of this chapter.
- g. Accessory dwelling units shall be architecturally integrated as follows:
 - 1. Accessory dwellings or outbuildings shall be designed to harmonize with the Carrboro vernacular architecture described above.
 - 2. There shall be a maximum of one accessory dwelling unit (ADU) per lot of less than ten (10) acres.
 - 3. The gross floor area in the ADU shall not exceed 900 square feet.
 - 4. Exterior fire-exit stairs are prohibited on any side of ADUs except at their rear.
 - 5. All off-street parking for ADUs shall be located to the side or rear and shall be visually screened from adjoining properties and from all streets.

(6) Roads and Streets.

11/19/98 DRAFT COPY OF PROPOSED NSA ORDINANCE

- a. Street patterns within the village mixed use shall be a rectilinear network of streets, interconnected with clear, direct, understandable patterns, with variations as needed for topographic and environment and other valid design consideration.
 - b. Streets shall be designed generally to:
 1. Parallel and preserve existing fence lines, tree lines, hedgerows and stone walls.
 2. Minimize alteration of natural site features.
 3. Secure the view to prominent natural vistas.
 4. Minimize the area devoted to vehicle travel.
 5. Promote pedestrian movement so that it is generally more convenient to walk short distances than to drive.
 6. Be aligned so that the "terminal vista" is of open space features, either man-made (greens, commons), natural (meadows, large trees in distance), or a community structure of significance.
 - c. With the exception of loop roads, all neighborhood and local streets shall terminate at other streets within the village proper and shall provide connections to existing or proposed through streets or collectors outside the village proper where practical. Loop roads, as defined in this chapter, are specifically allowed.
 - d. Sidewalks shall be provided as required in Article XIV of this chapter.
 - e. Sidewalk widths shall be at least six feet in retail/commercial areas, and at least four feet in residential, as well as townhouse, areas.
 - f. A plan for sidewalks and footpaths shall be designed to connect all houses with any of the village's greens and parks.
- (7) Parking.
- a. Off-street parking lots and areas shall generally be located at the rear of buildings.
 - b. No off-street parking shall be permitted in the front yards of buildings located in the storefront townhouse, nor shall off street parking be the principal use of corner lots in these areas.

- 1
- 2 c. Any off street parking space or parking lot in a storefront, townhouse, or civic
- 3 area which abuts a street right-of-way shall be buffered from the right-of-way
- 4 by a landscaped area no less than 4 feet wide in which is located a continuous
- 5 row of shrubs no less than 3 1/2 feet high, or by a wall no less than 4 feet and
- 6 no more than 6 feet high.
- 7
- 8 d. Off street parking in the storefront and narrow frontage townhouse areas shall
- 9 generally be accessible from an alley only.

10

11 (8) Landscaping

12

- 13 a. The applicant shall submit a comprehensive landscape master plan for all
- 14 areas of the village, and village conservancy areas, identifying the location
- 15 and size of both existing vegetation to be retained and proposed new
- 16 vegetation, typical planting materials, the phasing of landscape installation
- 17 and planting methods.
- 18
- 19 b. Shade trees shall be provided along each side of all streets, public or private,
- 20 existing or proposed. Shade trees shall also be massed at critical points, such
- 21 as at focal points along a curve in the roadway. In locations where healthy
- 22 and mature shade trees currently exist, the requirements or new trees may be
- 23 waived or modified.
- 24
- 25 c. Parking lots larger than 19 spaces and/or 6,000 square feet in size shall have
- 26 internal landscaping as well as buffering landscaping on the edge of the lot.
- 27
- 28 d. Trees and other plants should be chosen with reference to the list set forth in
- 29 Appendix E.
- 30
- 31 e. Trees and other public landscaping shall be protected by means of suitable
- 32 barriers.
- 33
- 34 f. The method and means for providing quality street trees and other community
- 35 landscaping such as in village greens, parks, and squares shall be addressed.
- 36
- 37 g. The developer shall be required to post a suitable performance bond to ensure
- 38 that any tree that dies within eighteen (18) months of planting shall be
- 39 replaced with the same species and size, and that any tree shall be well
- 40 maintained, i.e., irrigated and fertilized, for a total of thirty-six (36) months
- 41 from time of planting. If trees are removed, they shall be replaced with trees
- 42 of similar size and function.
- 43

44 **SECTION 6.** Article XII is amended by adding a new Section 15-182.4 to read as follows:

45

46 Section 15-182.4 Residential Density Bonuses for Affordable Housing

1
2 (a) For purposes of this section, an affordable housing unit means a dwelling unit (i) that is
3 offered for sale at a price that does not exceed two and a half times an amount equal to eighty percent of
4 the annual median income level for a family of four in the Raleigh-Durham-Chapel Hill Metropolitan
5 Statistical Area, and (ii) with respect to which the developer has entered into an arrangement with a non-
6 profit land trust or other non-profit entity to ensure that such dwelling contains to remain affordable as
7 described herein, and (iii) that conforms to the town's "Design Standards for Affordable Housing"
8

9 (b) The maximum residential density permissible within a development whose maximum density
10 would otherwise be determined in accordance with the provisions of subsection 15-182.3(b) shall be
11 increased by two dwelling units for every one affordable housing unit included within the development, up
12 to a maximum of 150% of the density otherwise allowable. To illustrate, if the maximum density of a tract
13 would be 100 dwelling units considering only the provisions of subsection 182.3(b), a developer who chose
14 to construct 10 affordable housing units as part of the development of that tract would be allowed to
15 construct 10 additional dwelling units that did not satisfy the "affordability" criteria set forth in subsection
16 (a), for a total density of 120 dwelling units. In this illustration, the maximum possible density that could be
17 achieved would be 150 dwelling units if the developer constructed at least 25 affordable housing units.
18

19 (c) Within any development that provides affordable housing units, the minimum area that must
20 be set aside as open space to satisfy the requirements of Section 15-198 may be reduced by an amount equal
21 to twice the land area consumed by all such affordable housing units, subject to a maximum reduction of 10
22 percent in the amount of open space otherwise required.
23

24 (d) Affordable housing units constructed in accordance with this section shall be interspersed
25 throughout the development rather than isolated in one area and segregated from the other dwellings that do
26 not satisfy the "affordability" criteria set forth in subsection (a).
27

28 (e) density bonus provisions of this section, the permit issuing authority shall ensure, by
29 approval of a condition, phasing schedule, or otherwise, that affordable housing units are actually provided
30 in accordance with the provisions of this section. Without limiting the generality of the foregoing, the permit
31 issuing authority may impose a condition specifying that units may not be issued until the corresponding
32 affordable housing units are constructed and offered for sale for an amount that is consistent with definition
33 set forth in subsection (a).
34

35 **SECTION 7.** Section 15-146 (Table of Permissible Uses) is amended by adding a new classification
36 32.000 entitled "Village Mixed Use Development" and by adding the following language across the table
37 opposite this use classification: "Permissible only in Village Mixed Use Districts (See Section 15-141.2)
38 pursuant to a conditional use permit."
39

40 **SECTION 8.** Section 15-136 is amended by adding a new subsection (11) to read as follows:
41

42 (11) O/A CU Office/Assembly Conditional Use. This district is identical to the O/A district
43 shall be subject to all regulations applicable to the O/A district (including but not limited to
44 the performance standards set forth in Part 1 of Article XI) except as follows:
45

46 a. This district shall be a conditional use district authorized under N.C.G.S. 160A-382.

As such, property may be placed within this district only in response to a petition by the owners of all the property to be included.

b. There shall be no minimum size for this district and no single, contiguous tract in excess of five (5) acres may be rezoned to a O/A CU district.

c. As indicated in the Table of Permissible Uses, the only permissible use within an O/A CU district is an office/assembly planned development, and an office/assembly planned development is permissible only in an O/A CU district.

1. The applicant for an office/assembly planned development conditional use permit shall specify which of the use classifications generally permissible with an O/A district the applicant wants to make permissible within the proposed O/A CU district.

2. Once a conditional use permit authorizing an office/assembly planned development has been issued, then individual tenants or occupants of the spaces or properties covered by the permit may occupy or use such individual spaces or properties without need for additional zoning, special use, or conditional use permits, so long as such use or occupancy is consistent with the approved conditional use permit including limitations on permissible use classifications approved pursuant to subsection 1 above or other conditions or limitations imposed as conditions pursuant to Section 15-59.

3. Uses within the O/A CU district shall be limited to those where loading and unloading occurs during daylight hours only.

d. When an O/A CU rezoning petition is submitted (in accordance with Article XX of this chapter), the applicant shall simultaneously submit a conditional use permit application for an office/assembly planned development.

1. The rezoning and conditional use permit applications shall be processed and reviewed concurrently.

2. The board of aldermen shall simultaneously conduct a public hearing on the rezoning and conditional use permit applications, in accordance with the procedures applicable to other conditional use permit applications.

3. If the Board concludes in the exercise of its legislative discretion that the proposed rezoning would not be consistent with the public health, safety, or welfare, it may deny the application in accordance with the same procedures applicable to any ordinance amendment request.

4. The Board may not approve the rezoning application unless it simultaneously approves a conditional use permit for an office/assembly planned development, which permit may be issued subject to reasonable conditions

and requirements set forth in Section 15-59.

e. Buildings within the O/A CU district shall comply with the following standards:

1. Exterior walls shall be constructed of materials commonly used on the exterior walls of single-family residences (such as brick, stone, wood or fabricated residential lap siding made of hardboard or vinyl).
2. The pitch of the roof shall have a minimum vertical rise of one foot for every two feet of horizontal run.
3. Windows shall be of a type commonly used in single-family residences.

SECTION 9. Section 15-146 (Table of Permissible Uses) is amended by adding a new classification 33.000 entitled "Office/Assembly Planned Development" and by adding the following language across the table opposite this use classifications: "Permissible only in Office/ Assembly Conditional Use Districts (see Subsection 15-136(11) pursuant to a conditional use permit)."

SECTION 10. The first sentence of Subsection 15-325(1) is amended to read as follows: "Except when the request is to rezone property to a conditional use district, the Board shall not consider any representations made by the petitioner that, if the change is granted, the rezoned property will be used for only one of the possible range of uses permitted in the requested classification."

SECTION 11. The title of Part I of Article XI is amended to read "Non-Residential Performance Standards," and Section 15-161 is rewritten to read as follows:

Section 15-161 "Good Neighbor" Performance Standards for Non-Residential Uses.

The provisions of this part are designed to provide performance standards by which applications for non-residential development will be evaluated by the town and by which the actual performance of those operations and uses will be monitored by the town for compliance. The purposes of these performance standards are to protect the town in general, and abutting and neighboring landowners in particular, from any potential negative impacts that new nonresidential uses may have on the physical environment and on the quality of life currently enjoyed by the residents of Carrboro's planning jurisdiction.

SECTION 12. Section 15-162 is rewritten to read as follows:

Section 15-162 Smoke, Dust, Fumes, Vapors, Gases, and Odors.

(a) Emission of smoke, dust, dirt, fly ash, or other particulate matter, or of noxious, toxic or corrosive fumes, vapors, or gases in such quantities as to be evident or perceptible at the property line of any lot on which a use is conducted, or which could be injurious to human health, animals, or vegetation, or which could be detrimental to the enjoyment of adjoining or nearby properties, or which could soil or stain persons or property, at any point beyond the lot line of the commercial or industrial establishment creating that emission shall be prohibited.

(b) No use shall be permitted to produce harmful, offensive, or bothersome odors, scents, or aromas (such as, but not limited to, those produced by manufacturing processes, food preparation, food processing, fish sales, rendering, fermentation processes, decaying organic matter, and incinerators) perceptible beyond the property line of the lot where such use is located either at ground level or any habitable elevation.

(c) The location and vertical height of all exhaust fans, vents, chimneys, or any other sources discharging or emitting smoke, fumes, gases, vapors, odors, scents or aromas shall be shown on the application plans, with a description of the source materials.

SECTION 13. Section 15-165 (Odors) is repealed and replaced with a new Section 15-165 to read as follows:

Section 15-165 Ground Water Supply.

(a) All outdoor storage facilities for fuel, chemical, or industrial wasters, and potentially harmful raw materials, shall be located on impervious pavement, and shall be completely enclosed by an impervious dike high enough to contain the total volume of liquid kept in the storage area, plus the accumulated rainfall of a fifty (50) year storm. This requirement is intended to prevent harmful materials from spilling and seeping into the ground, contaminating the groundwater.

(b) Non-corrosive storage tanks for heating oil and diesel fuel, not exceeding two hundred seventy five (275) gallons in size, may be exempted from the requirements of this section provided that there is no seasonal high water table within four (4) feet of the surface, and that rapidly permeable sandy soils are not present.

SECTION 14. Section 15-243 (Excessive Illumination) is rewritten to read as follows:

Section 15-243 Excessive Illumination.

(a) Outdoor lighting (not including sign lighting) shall be controlled in both height and intensity as provided in this section.

(b) No development shall be permitted to produce a strong light or reflection of that light beyond its lot lines onto neighboring properties, or onto any street so as to impair the vision of the driver of any vehicle upon such street.

(c) Light fixtures may not exceed fifteen (15) feet in height, and luminaries shall be shielded or configured to cast the light downward and to prevent light from shining beyond the lot lines into neighboring properties or public ways. The permit issuing authority may by condition impose additional requirements as necessary to prevent adverse impacts to adjoining properties and residents.

(d) Under no circumstances may the light level at the lot line exceed 0.2 foot-candles, measured at ground level.

SECTION 15. Subsection A-6 (b)(15) is amended to read as follows: "Outdoor illumination with

lighting fixtures sufficiently identified to demonstrate compliance with Sections 15-242 and 15-243.”

SECTION 16. Section 15-163 (Noise) is amended by adding the following two sentences at the end of subsection (a): “Noises that exceed the levels set forth below shall be deemed annoying or disruptive. Low frequency noises shall be considered annoying and disruptive if they exceed the decibel levels set forth below when measured without using an A-weighted filter, or if such noises generate a perceptible vibration within structures located beyond the boundaries referenced above.”

SECTION 17. Section 15-50 is rewritten to read as follows:

Section 15-50 Site Planning Procedures for Major Subdivisions

(a) Before submitting an application for a conditional or special use permit for a major subdivision, the applicant shall comply with the requirements of this section.

(b) The applicant shall submit a site analysis plan drawn approximately to scale (1inch = 100 feet) that contains the following information:

- (1) The name and address of the developer;
- (2) The proposed name and location of the subdivision
- (3) The approximate total acreage of the proposed subdivision;
- (4) Topographic lines based on maps published by the U.S. Geological Survey; and
- (5) The location of all primary and secondary conservation areas as defined in subsections 15-198(b)(4) and (5).

(c) After the site analysis plan has been submitted, the planning staff shall schedule a mutually convenient date to walk the property with the applicant and the applicant’s site designer. Designated members of the Planning Board, Northern Transition Advisory Committee, Transportation Advisory Board, and Appearance Commission, shall be notified of the date and time of this “on-site walkabout.” The purpose of this visit is to familiarize town officials with the property’s special features and to provide an informal opportunity for an interchange of information as to the developer’s plans and the town’s requirements.

(d) Prior to the submission of a conceptual preliminary plan as described in subsection (e), the staff shall meet with the developer to discuss how the four-step approach to designing subdivisions described below could be applied to the subject property. This conference may be combined with the on-site walkabout.

(e) Following completion of the steps described in subsections (b), (c), and (d), the developer shall submit a conceptual preliminary plan of the proposed subdivision, prepared in accordance with the four-step process described in subsection (f). This plan shall be a preliminarily engineered sketch plan drawn to illustrate initial thoughts about a conceptual layout for open space, house sites, and street alignments. This is the stage where drawings are tentatively illustrated, before heavy engineering costs are

1 incurred in the design of any proposed subdivision layout. The planning staff shall review this plan and
2 provide comment to the developer on the overall pattern of streets, houselots, open space, and the treatment
3 of primary and secondary conservation areas in light of the applicable requirements of this chapter.

4
5 (f) Each conceptual preliminary plan shall be prepared using the following four-step design
6 process:

7
8 (1) During the first step, all primary and secondary conservation areas are identified (and
9 shown on the site analysis plan described in subsection (b)).

10
11 (2) During the second step, potential sites are tentatively located. House sites should
12 generally be located not closer than 100 feet from primary conservation areas and 50
13 feet from secondary conservation areas.

14
15 (3) The third step consists of aligning proposed streets to provide vehicular access to each
16 house in the most reasonable and economical way. When lots and access streets are
17 laid out, they shall be located in a way that avoids or at least minimizes adverse
18 impacts on primary and secondary conservation areas. To the greatest extent
19 practicable, wetland crossings and streets traversing existing slopes over 15% shall be
20 strongly discouraged. Street connections shall comply with the provisions of Section
21 15-214.

22
23 (4) The fourth step is to draw in the lot lines.

24
25 (g) The conceptual preliminary plan shall demonstrate that the proposed development will satisfy
26 the following objectives, as more particularly described in the remaining provisions of this chapter:

- 27
28 1. Protects and preserves all floodplains, wetlands, and steep slopes from clearing,
29 grading, filling, or construction (except as may be approved by the Town for
30 essential infrastructure or active or passive recreation amenities).
- 31 2. Preserves and maintains mature woodlands, existing fields, pastures, meadows, and
32 orchards, and creates sufficient buffer areas to minimize conflicts between
33 residential and agricultural uses. For example, locating houselots and driveways
34 within wooded areas is generally recommended, with two exceptions. The first
35 involves significant wildlife habitat or mature woodlands which raise an equal or
36 greater preservation concern, as described in # 5 and # 8 below. The second
37 involves predominantly agricultural areas, where remnant tree groups provide the
38 only natural areas for wildlife habitat.
- 39 3. If development must be located on open fields or pastures because of greater
40 constraints in all other parts of the site, dwellings should be sited on the least prime
41 agricultural soils, or in locations at the far edge of a field, as seen from existing
42 public roads. Other considerations include whether the development will be
43 visually buffered from existing public roads, such as by a planting screen consisting
44 of a variety of indigenous native trees, shrubs and wildflowers (specifications for
45 which should be based upon a close examination of the distribution and frequency
46 of those species, found in a typical nearby roadside verge or hedgerow).

4. Maintains or creates an upland buffer of natural native species vegetation of at least 100 feet in depth adjacent to wetlands and surface waters, including creeks, streams, springs, lakes and ponds.
5. Designs around existing hedgerows and treelines between fields or meadows. Minimizes impacts on large woodlands (greater than five acres), especially those containing many mature trees or a significant wildlife habitat, or those not degraded by invasive vines. Also, woodlands of any size on highly erodible soils with slopes greater than 10 percent should be avoided. However, woodlands in poor condition with limited management potential can provide suitable location for residential development. When any woodland is developed, great care shall be taken to design all disturbed areas (for buildings, roads, yards, septic disposal field, etc) in locations where there are no large trees or obvious wildlife areas, to the fullest extent that is practicable.
6. Leaves scenic views and vistas unblocked or uninterrupted, particularly as seen from public roadways. (For example, in open agrarian landscapes, a deep, "no-build, no-plant" buffer is recommended along the public roadway where those views or vistas are prominent or locally significant. In wooded areas where the sense of enclosure is a feature that should be maintained, a deep "no-build, no-cut" buffer should be respected, to preserve existing vegetation.
7. Avoids siting new construction on prominent hilltops or ridges, by taking advantage of lower topographic features.
8. Protects wildlife habitat areas of special species listed as endangered, threatened, or of special concern by the state or federal government.
9. Designs around and preserves sites of historic, archaeological, or cultural value, and their environs, insofar as needed to safeguard the character of the feature, including stone walls, spring houses, barn foundations, cellar holes, earthworks, burial grounds, etc.
10. Protects rural roadside character and improves public safety and vehicular carrying capacity by avoiding development fronting onto existing public roads. Establishes buffer zones along the scenic corridor of rural roads with historic buildings, stone walls, hedgerows, etc.
11. Landscapes common areas (such as community greens), and both sides of new streets with native specie shade trees and flowering shrubs with high wildlife conservation value.
12. Provides active recreational areas in suitable locations offering convenient access by residents, and adequately screened from nearby houselots.
13. Includes a pedestrian circulation system designed to assure that pedestrians can walk safely and easily on the site, between properties and activities or special features within the neighborhood open space system. All roadside footpaths should connect with off-road trails, which in turn should link with potential open space on adjoining undeveloped parcels (or with existing open space on adjoining developed parcels, where applicable).
14. Provides open space that is reasonably contiguous, and whose configuration is in accordance with the guidelines contained in the *Design and Management Handbook for Preservation Areas*, produced by the Natural Lands Trust. For example, fragmentation of open space should be minimized so that these resource

1 areas are not divided into numerous small parcels located in various parts of the
2 development. To the greatest extent practicable, this land shall be designed as a
3 single block with logical, straightforward boundaries. Long thin strips of
4 conservation land shall be avoided, unless the conservation feature is linear or
5 unless such configuration is necessary to connect with other streams or trails. The
6 open space shall generally abut existing or potential open space land on adjacent
7 parcels, and shall be designed as part of larger, contiguous, and integrated
8 greenway systems, as per the policies in the Open Space and Recreation section of
9 the Town's Ordinance.

10
11 **SECTION 18.** Subsection 15-263(a)(2) is amended to read as follows:

- 12
13 (a) All developments shall be constructed and maintained so that they do not cause damage to
14 other properties with their surface waters. To achieve this objective, the potential impacts
15 on surface water quantity and quality from all proposed developments requiring special use
16 or conditional use permits shall be identified and evaluated by the town engineer, staff and
17 the environmental advisory board. The developer shall implement mitigation measures as
18 are determined to be necessary, based upon the results of this evaluation, to prevent or
19 lessen the predicted impacts. Potential impacts to be evaluated may include, but are not
20 limited to, backwater effects on upstream properties, increased volumes or rates of
21 stormwater flow, offsite sedimentation, erosion and/or ground-cover loss downstream,
22 increased scouring of any downstream streambed, lowered quality of water due to the
23 pollutants carried in runoff, or any damage that materially injures the value of adjoining or
24 abutting property. The area of study is *not* limited to the property being developed.

25
26 The Town will develop general technical criteria for the study of development impacts and
27 the implementation of mitigation measures to be used for the evaluation of proposed
28 development. The criteria will be updated periodically, as deemed appropriate.

29
30 **SECTION 19.** Article XVI is amended by adding a new Section 15-269 to read as follows:

31
32 Section 15-269 Buffers in Northern Transition Area

- 33
34 (a) The Board finds that:
35 (1) Soil and pollutants carried overland, primarily from roads, trails and land
36 disturbing activities, can be effectively trapped by leaving a relatively
37 undisturbed strip of vegetation parallel and adjacent to the watercourse.
38 (2) Properly managed overland water flow can be directed into this buffer in a
39 manner that will reduce velocity and cause dispersion of the water.
40 (3) Sediments and associated pollutants carried by the water will settle out as a
41 result of this slowing and dispersion process.
42 (b) For purposes of this section, the Transition Area portion of the Carrboro Joint
43 Development Area as identified in the Joint Planning Agreement dated November

2, 1987, shall be regarded as an overlay zoning district ("Transition Area Overlay") within which the buffer requirements set forth in this section shall apply.

- (c) Development on lots within the Transition Area Overlay shall, if any of the watercourses identified below are located in whole or in part within the lots so developed, contain a designated buffer area adjacent to such watercourses. The buffer area boundaries shall be demarcated by a line connecting the points on either side of the watercourse located as follows:

- (1) Bolin Creek and Tributaries (permanent streams flowing into Bolin Creek) as shown on the Northern Transition Area Stream Buffer Map on file in the Carrboro Planning Department, which map is incorporated herein by reference. Measure along a line running perpendicular to the edges of the floodplain (or if no floodplain has been demarcated, the center of the stream) one hundred (100) feet from the edge of the floodplain (or if no floodplain has been demarcated, from the edge of the water) plus an additional distance equal to

$$4 \times \text{slope} \times 100$$

where slope is expressed as a percentage derived from dividing by 100 the rise of elevation between the floodplain boundary line (or if no floodplain has been demarcated, the edge of the water) and a point one hundred (100) feet from that point along the perpendicular line described above.

- (2) Intermittent streams flowing into Bolin Creek and its tributaries as shown on the Northern Transition Area Stream Buffer Map. Measure along a line running perpendicular to and sixty (60) feet from the center of the intermittent stream.
- (3) Minor intermittent streams as shown on the Northern Transition Area Stream Buffer Map. Measure along a line running perpendicular to and thirty (30) feet from the center of the minor intermittent stream.

- (d) Subject to subsection (e), the existing natural vegetation in a buffer area designated in accordance with this section shall not be disturbed in any way that would reduce the buffer area's effectiveness in achieving the objectives set forth in subsection (a). In addition, buffer areas from which the vegetative cover does not exist, has been removed, or is inadequate shall be planted or otherwise provided with vegetative cover or devices, sufficient to allow the buffer area to accomplish the objectives set forth in subsection

- (e) Notwithstanding the foregoing provisions, the permit issuing authority may authorize the crossing of a designated buffer area by a street, bikeway, sidewalk, water or sewer line or pump station under the circumstances specified in Subsection 15-184(g). In addition, the permit issuing authority may authorize sewer lines to be

constructed within buffer areas designated under this section under circumstances where such location is practicably unavoidable if the subject property is to be served under the provisions of Section 15-238(c) and an alternate design would result in greater damage to the environment, so long as such sewer line is located to the extent practicable at least twenty-five feet from the edge of any stream bank.

SECTION 20. Subsection 316(c) is deleted and the following subsection (c) is inserted in lieu thereof:

(c) There shall be no clearcutting in any development within the Transition Area portion of the Carrboro Joint Development Area as identified in the Joint Planning Agreement. The term "clearcutting" shall refer to the large-scale, indiscriminate removal of trees, shrubs, and undergrowth with the intention of preparing real property for nonagricultural purposes.

SECTION 21. Article XIX is amended by adding a new Section 15-312 to read as follows:

Section 15-312 Protective Buffer Along Major Roads

Notwithstanding the provisions of Section 15-308, an undisturbed protective buffer shall be maintained along Old N.C. 86, Dairyland Road, Union Grove Church Road, Homestead Road, Eubanks Road and Smith Level Road south of Ray Road that will help preserve the scenic views and elements of this area. This buffer shall be established by measuring along a line perpendicular to the right-of-way of these roads one hundred (100) feet. If the buffer area does not provide the equivalent of a Type 'A' screen, the developer shall provide a Type 'A' screen on the development's side of the buffer (one hundred (100) feet from the right-of-way).

SECTION 22. Appendix E is amended by deleting subsection E-10 (D)(9) ("Wintergreen Barberry") and subsection E-10 (F)(10) ("Japanese Barberry").

SECTION 23. Appendix E is amended by adding a new Section E-17 to read as follows:

E-17 List of Invasive Plant Species

The following plant species shall be prohibited when complying with the shading and landscaping provisions of this chapter.

Akebia quinata	Chocolate vine
Acer ginnala	Amur Maple
Acer platanoides	Norway Maple
All Berberis species including	
Berberis julianae	Wintergreen Barberry
Berberis thunbergii	Japanese Barberry
All Cotoneaster species including	
Cotoneaster microphyllus	Littleleaf Cotoneaster

Cotoneaster horizontalis	Rockspray Cotoneaster
Crataegus monogyna	Singleseed Hawthorn
Crataegus laevigata	English Hawthorn
All Cytisus scoparius	Scotch Broom
Eleagnus angustifolia	Russian Olive
Eleagnus umbellata	Autumn Olive
Euonymus alatus	Winged Euonoymus, Burning Bush
Euonymus japonicus	Japanese Euonymus
Hedera helix	English Ivy
All Ligustrum species including	
Ligustrum japonicum	Japanese Privet
Ligustrum lucidum	Waxleaf Privet
Ligustrum vulgare	European Privet
Ligustrum sinense	Chinese Privet
Ligustrum x vicari	Golden Vicary Privet
Lonicera maackii	Bush Honeysuckle
Lonicera nitida	Boxleaf Honeysuckle
Lonicera tatarica	Tatarian Honeysuckle
Miscanthus sinensis	Eulalia, Maiden Grass
Taxus cuspidata	Japanese Yew
Viburnum opulus	European Cranberrybush Viburnum
Vinca major	Large Periwinkle
Vinca minor	Common Periwinkle

SECTION 24. Article III is amended by adding a new Section 15-27 to read as follows:

Section 15-27 Northern Transition Area Advisory Committee

(a) There shall be a Northern Transition Area advisory committee consisting of five members appointed by the board of aldermen. All members shall be residents of the Northern Transition Area. For the purposes of this section, the Northern Transition Area shall include those unannexed portions of the Northern Study Area. The Northern Study Area is defined as follows:

The boundaries of this 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 Road, 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 NC 86 serves as the boundary then turning southeast and running along Hillsborough Road to Greensboro Street.

(b) Members of the committee shall be appointed for three year staggered terms, but members may continue to serve until their successors have been appointed. Initially, the terms of all membership seats on the committee shall expire on January 31, 1999. Thereafter, two members shall be appointed for three-

1 year terms, two members shall be appointed for terms of two years, and one member shall be appointed for a
2 term of one year. All members shall thereafter be appointed for terms of three years.

3
4 (c) The same provisions that govern the removal of planning board members (Subsection 15-
5 21(e)) shall apply to committee members.

6
7 (d) The committee shall establish a regular meeting schedule. Minutes shall be kept of all
8 meetings.

9
10 (e) A quorum for the committee shall consist of three members. A quorum is necessary for the
11 committee to take official action.

12
13 (f) All actions of the committee shall be taken by majority vote, a quorum being present.

14
15 (g) The committee shall designate one of its members to serve as chair and one member to serve
16 as vice-chair. These officers shall be selected annually at the committee's first regular meeting in February
17 and shall serve for terms of one year unless their terms of appointment to the committee sooner expire.
18 Vacancies shall be filled for the unexpired terms only. The chair and vice-chair may take part in all
19 deliberations and vote on all issues.

20
21 (h) The committee shall have the following powers and duties:

22
23 (1) Review zoning amendment requests and special and conditional use permit
24 applications for developments within the Northern Transition Area and make
25 recommendations on the same to the board of adjustment or board of aldermen,
26 respectively.

27
28 (2) Initiate studies related to the special character of the Northern Study Area.

29
30 a) Inventory of areas of cultural, archaeological, or historical significance.

31
32 b) Inventory of open space character and scenic qualities.

33
34 c) Inventory of agricultural uses

35
36 1. Land in Use Value

37 a. Horticultural

38 b. Agricultural

39 c. Timber

40
41 2. Farming as business

42 a. Large field crops

43 b. Metro farms, specialty crops

44
45 d. Inventory of biological value
46

1. Tree species diversity, exceptional tracts of forest land
2. Rare occurrences (i.e. Upland Depression Swamp)
3. Wildlife
 - a. Audubon annual bird count
 - b. Deer population

- (3) Use the studies above as the basis of its development of, and recommendations for, additional policies, objectives, goals, plans, ordinances, and administrative actions that will preserve and enhance that special character, and relate to its growth.
- (4) Develop and recommend to the Board of Aldermen policies, ordinances, administrative procedures and other means for carrying out plans in an efficient and coordinated manner.
- (5) Track and review other studies and plans that will have an impact on the Northern Study Area – including those of the Chapel Hill Town Council, The Orange County Board of County Commissioners and their appointed committees – and give feedback to the originating governing body.
- (6) Meet annually with the Carrboro Planning Board for a joint planning session.
- (7) Perform other duties as assigned by the Board of Aldermen.

SECTION 25. Article XVIII is amended by adding a sentence to Section 15-291(f) as follows:

“In addition, the Board of Aldermen may authorize a reduction of up to 25 percent in the parking requirement when approving a Village Mixed Use Master Plan or Conditional Use Permit or an Office/Assembly development Conditional Use Permit. Land necessary to meet the full, presumptive, parking requirement must be identified during the plan approval process and must be reserved should the need for additional parking arise in the future.”

SECTION 26. A new appendix (J) is added to the Land Use Ordinance. This appendix provides examples of noise-generators.

SECTION 27. A new section is added to Article XI, Supplementary Use Regulations, as follows:

Section 15-177 Architectural Standards for Major Subdivisions

(a) The following standards shall apply to all subdivisions of 5 or more units and shall pertain to 90% of the dwelling units in the subdivision.

- (1) Porches shall span 80% of the front façade.
- (2) Roofs shall be as follows:
 - a. Main roof pitch – 10/12 to 12/12
 - b. Lower roof pitches – 3/12 to 4/12
 - c. Roofs shall have a minimum overhang of sixteen (16) inches on all eaves and gables.

- 1
2 (3) Clapboard or shingle siding shall have a four and a half to five and a half-inch
3 exposure.
4
5 (4) Windows shall have a vertical to horizontal proportion of not less than two to one.
6
7 (5) Trim details – Columns, vents, gables, and other details should reflect details in the
8 Carrboro Vernacular Architectural Standards (Section 15-141.2).
9
10 (6) Any chimney must be located within the body of the house.
11
12 (7) Garage doors shall be nine (9) feet wide or under. Door shall not face the street.
13

14 **SECTION 28.** All provisions of any town ordinance in conflict with this ordinance are hereby
15 repeals.
16

17 **SECTION 29.** This ordinance shall become effective upon adoption.
18

19 **THE FOREGOING ORDINANCE, HAVING BEEN SUBMITTED TO A VOTE, RECEIVED THE FOLLOWING VOTE**
20 **AND WAS DULY ADOPTED THIS DAY OF , 1998.**
21

22 **AYES:**

23 **NOES:**

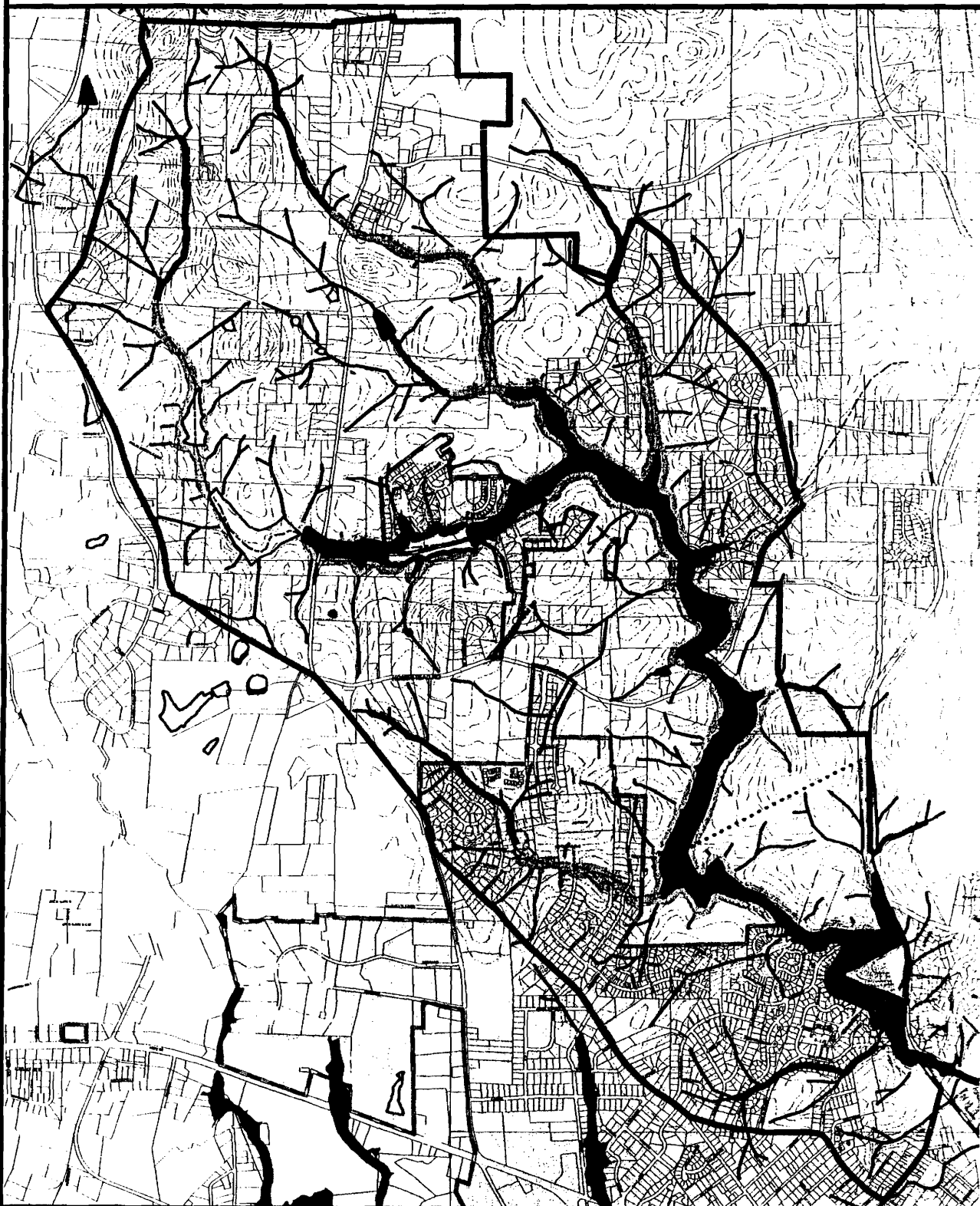
24 **ABSENT/EXCUSED:**

Appendix J

Noise Levels (dB (A)) for Common Indoor and Outdoor Sounds

Outdoor Sounds	dB(A)	Indoor Sounds
	110	Rock Band
Large, passenger jet landing 370 feet away		
	100	Inside subway train (NYC)
Large, passenger jet taking off 1000 feet away		
Gas lawn mower, 3 feet away		
	90	Food blender 3 feet away
Diesel truck 50 feet away		
	80	Garbage disposal 3 feet away Shouting - 3 feet away
Noisy urban area (day)		
	70	Vacuum cleaner 10 feet away Normal speech 3 feet away
747 taking off 1000 feet away Commercial area		
	60	Large business office
	50	Dishwasher, next room
Quiet urban area (day)		
	40	Small theatre/Large conference room (background) Library
Quiet urban area (night) Quiet suburban area (night)		
	30	Bedroom at night Concert hall (background)
Quiet rural area (night)		
	20	Broadcast and Recording Studio
	10	Threshold of hearing
	0	

NORTHERN TRANSITION AREA STREAM BUFFER MAP



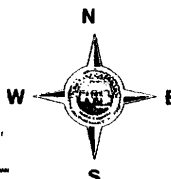
NC State Plane Coordinate System (feet)
North American Datum 1927

Scale NTS

"THIS MAP IS NOT A CERTIFIED
SURVEY AND NO RELIANCE MAY
BE PLACED ON ITS ACCURACY"

THOMAS G. LARSEN, JR.
PLANNING & DESIGN
201 W. MAIN STREET
CAROLINA, NC 27510
Phone 919/886-1114

Print Date: November 2, 1988
By: Craig W. Thompson



This map was prepared with the aid of the State of North Carolina's Department of Transportation. The Department of Transportation has provided the necessary information and data for the preparation of this map. The Department of Transportation is not responsible for the accuracy or completeness of the information or data provided by the State of North Carolina's Department of Transportation. The State of North Carolina's Department of Transportation is not responsible for the accuracy or completeness of the information or data provided by the State of North Carolina's Department of Transportation.

- BUFFER AREAS**
- Flood Plain
 - Floodway with 60' Buffers
 - Major Streams & Flood Plain 100' + 4' % Slope Buffers
 - Intermittent Streams - 60' Buffers
 - Minor Intermittent Streams - 30' Buffers
 - Road Right-of-Way 100ft Buffer

Legend

- OTHER FEATURES**
- Topographic Lines
 - Property Lines
 - Small Area Plan Study Area
 - ETJ Line

D R A F T C O P Y

TOWN OF CARRBORO

**VERNACULAR ARCHITECTURAL STANDARDS
FOR
VILLAGE MIXED USE & AFFORDABLE HOUSING**

referenced in:

(Draft) SECTIONS 15-141.2, 15-177, 15-182.4

of the:

TOWN OF CARRBORO LAND USE ORDINANCE

Review by:

BOARD OF ALDERMEN

on:

NOVEMBER 17, 1998

I N T R O D U C T I O N

This booklet has been prepared to illustrate the architectural principles specified in the Town of Carrboro's Land Use Ordinance, Sections 15-141.2, 15-182.4, and 15-177. This document presents Carrboro's vernacular architecture and its detail and is to be used as a set of guidelines for new residential construction. The information that follows is not meant to be copied, but to provide an architectural language to ensure that the new residential structures in Carrboro have reference to Carrboro's history. This in turn will continue to provide Carrboro with an architecturally unique sense of place that distinguishes it from "anyplace U.S.A."

PURPOSE OF THE GUIDELINES

This booklet serves as a companion to the architectural and site design elements included in the town's Land Use Ordinance, and illustrates the architectural standards that are to be executed in new residential construction in villages, major subdivisions, or affordable housing units in Carrboro. The booklet provides the visual and written text to give structure to the concept of a village vernacular. The guidelines themselves have been selected to achieve several purposes, including:

1. Celebrating the historical events that defined the Town of Carrboro and are reflected in the built environment.
2. Provide a diversity of housing types, sizes, within a range of styles characteristic of mill-era architecture.
3. Maintain the scale of residential development in keeping with the historical precedent.
4. Reference traditional building forms and materials.
5. Provide a sense of place.

SUMMARY OF FOUR BUILDING STYLES

The illustrations represent the vernacular architecture of the Town of Carrboro and its environs during the period when mills were the defining features of the Town. It was in this era, roughly from 1890 to 1950, that the form of the community was established. These forms resulted from economics, topography, convention, craftsmanship and materials.

In Carrboro, four building styles comprise most of the architectural form for that period. These styles are presented below in chronological order. A brief commentary concerning their function in the community follows.

MILL HOUSE, *one-story* – These wood frame structures date to the earliest period of occupation that is directly associated with the mill operation in the Carrboro vicinity. These buildings are truly representative of Carrboro's earliest rental housing, built as they were to house the many individuals and families who migrated into this small town from outlying areas. As is typical of early industrial housing throughout the state, the houses are one-room deep, usually with a rear ell. The houses

were placed on lots large enough to include a garden plot, approximately 7,000 square feet. Simple, gable roofs, minimal decoration, and full, or nearly full, front porches, are typical features. Slightly more decorative elements are also found, including triple-A gables with shingles and vents, and sawn spandrels and chamfered porch posts. The main block usually contains a center hall and two rooms, although one type does have a separate entry for each of the two rooms.

MILL HOUSE, *two-story* – Dating to the same era are the two-story, mill houses. Including both the L-shaped houses, and the one-room deep versions, which typically included a one-story, rear ell. These structures are also of wood frame construction and served both as rental housing and private residences. Some of the larger structures were operated as boarding houses for unmarried laborers. The one-room deep variety can be seen with or without the dormer.

FOURSQUARE – The large spaces in the attics of these handsome houses provided extra space, primarily for families, and most were privately built. Dating to the earliest decades of the twentieth century, these two- or three-room deep, center hall plan, houses provide some variety in the Carrboro vernacular. These houses are found plain, or with gables or dormers. Most have three-quarter, or full, front porches.

CRAFTSMAN – The first of the four building types that can be considered to represent a national style, rather than the local vernacular, these structures are found in wood, as well as brick and stone. The one to one-and-a-half story structures were usually built as private residences.

SHARED OR COMMON ELEMENTS

Although the construction era for the four building styles spans nearly five decades, a number of characteristics are common to all. These characteristics include construction materials and practices, such as the use of wood for framing, sheathing, and decoration. The structures were almost always balloon framed and supported on masonry piers.

Finished floor elevations are usually minimal, ranging from 18 to 24 inches. The building facades are characterized by balanced or ordered fenestration; with window and door openings placed symmetrically and regularly spaced. Entry porches are commonly found with the main façade porch spanning between 80 and 100 percent of the main façade. Exterior lighting is minimal. Garages and other accessory structures are detached and usually set back behind the lot's principal building.

Of the many architectural features, seven elements have been identified as necessary in order to achieve the objectives noted above. These elements include:

1. Porches that span 80 percent of the front façade.
2. Roof characteristics, as follows:
 - Main roof pitch between 10/12 and 12/12
 - Lower roof pitch between 3/12 and 4/12
 - Minimum roof overhang of 16 inches on all eaves and gables.
3. Clapboard or shingle siding with a four and a half to a five and a half-inch exposure.
4. Windows shall have a vertical to horizontal proportion of not less than two to one.

5. Columns, vents, gables and other details shall reflect those presented in this booklet.
6. Chimneys are to be located within the body of the house.
7. Garage doors shall be nine feet wide or under. Garage doors shall not face the street.

HOW TO USE THE MANUAL

This guide contains photographs, sketches, and text that depict residential structures from the four building styles. The information presented here is organized along four principal topic areas. Some repetition, in light of the shared elements among the building styles, may be noted.

Construction materials are to reflect antecedents. Metal roofs, brick foundations, and wood siding are to be used, wherever appropriate. Other materials may be acceptable if designed to maintain traditional proportions.

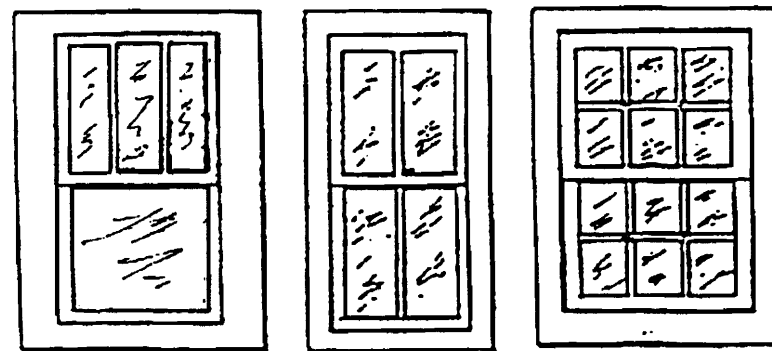
Information on the structure of the four building styles is presented in seven categories, building form, exterior materials, façade treatment, fenestration, gables and vents, porch trim and eaves. General descriptions are included for each category. There are exceptions or variations within each category, and even some architectural examples that are not included. The illustrations have been selected as they highlight the most common, or signature, elements of each building style.

The descriptions and details presented here will assist an applicant or designer to conform with the seven architectural elements described above as acceptable features and proportions are noted. The array of elements selected,

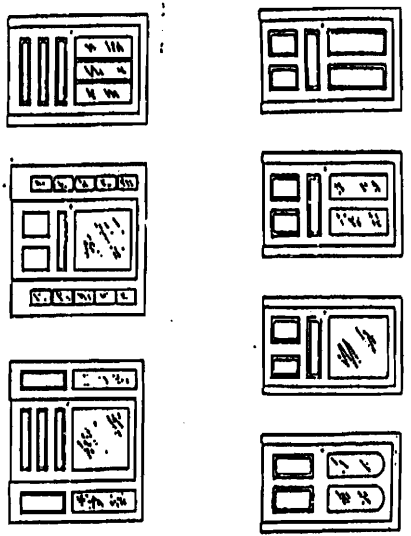
however, should occur within a particular style, with the exception of shared or common elements.

GUIDE TO TRIM AND FINISHING DETAILS

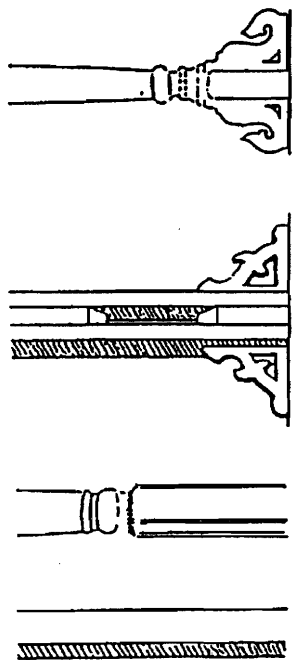
Sketches of five trim and finishing details, including windows, doors, columns, gables and vents, presented below provide simple illustrations of these building details.



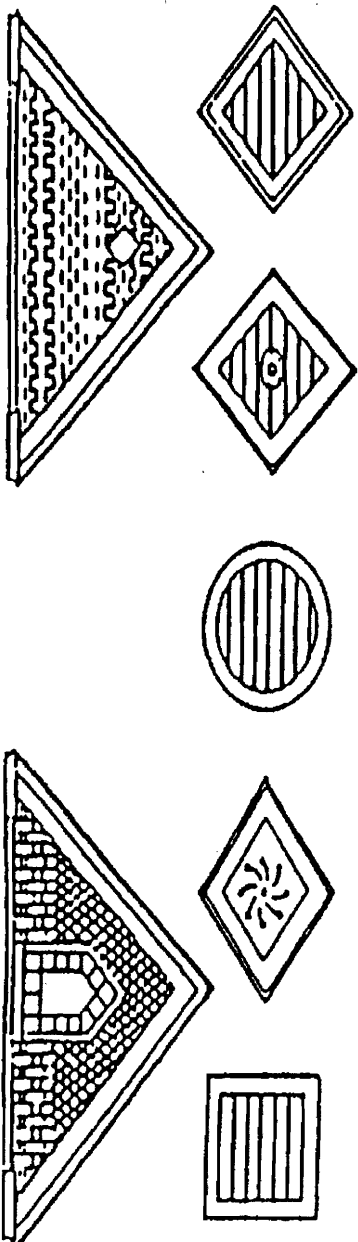
WINDOWS



DOORS



COLUMNS



GABLES & VENTS

{This page is purposely blank.}

BUILDING FORM

MILL HOUSE: ONE-STORY

MASSING

- ◆ One- to One-and-a-half story
- ◆ One room deep with rear ell
- ◆ 800 – 1,000 square feet

ROOF

- ◆ Side gable
- ◆ Triple 'A' or cross-gable
- ◆ Porch roof – shed or hipped
- ◆ Boxed eave and gable end returns or open eave



MILL HOUSE: TWO-STORY

MASSING

- ◆ Two stories
- ◆ One room deep with rear ell
- ◆ I-house or Gable-and-wing
- ◆ 1,400 – 1,700 square feet

ROOF

- ◆ Side gable
- ◆ Triple 'A' or Cross gable
- ◆ Porch roof – shed or hipped
- ◆ Boxed eave and gable end returns or open eave



BUILDING FORM

FOURSQUARE

MASSING

- ◆ One- to One-and a-half story
- ◆ Two rooms deep with center hall
- ◆ 1,200 – 1,600 square feet

ROOF

- ◆ High hipped
- ◆ Plain, or Triple 'A' with dormer
- ◆ Porch roof –hipped or recessed



CRAFTSMAN

MASSING

- ◆ One- to One-and a-half story
- ◆ Two or three rooms deep
- ◆ Center hall or modified L-plan
- ◆ 1,200 – 1,800 square feet

ROOF

- ◆ Front gable
- ◆ Side gable with dormer(s)
- ◆ Porch roof –shed and integrated with main roof or recessed



EXTERIOR MATERIALS

MILL HOUSE: ONE-STORY

WALLS

- ◆ Lapped siding with 4 - 5-inch reveal
- ◆ Plain trim boards, 4 to 6 inches in width surround doors and windows
- ◆ Wood

ROOF

- ◆ Moderate overhang (10 - 18 inches)
- ◆ Tin or shingle
- ◆ Open eave with fascia, but no soffit



MILL HOUSE: TWO-STORY

WALLS

- ◆ Lapped siding with 4 - 5-inch reveal
- ◆ Plain boards, 4 to 6 inches in width surround doors and windows
- ◆ Wood

ROOF

- ◆ Moderate overhang (10- 18 inches)
- ◆ Boxed eave
- ◆ Tin or shingle



EXTERIOR MATERIALS

FOURSQUARE

WALLS

- ◆ Lapped siding with 4 – 5-inch reveal
- ◆ Plain boards, 4 to 6 inches wide surround doors and windows
- ◆ Wood

ROOF

- ◆ Moderate overhang (10 – 18 inches)
- ◆ Boxed eave
- ◆ Tin or shingle



CRAFTSMAN

WALLS

- ◆ Lapped siding with 4 – 5-inch reveal
- ◆ Occasionally german siding, novelty board, or brick.
- ◆ Plain boards, 4 to 6 inches in width surround doors and windows
- ◆ Wood

ROOF

- ◆ Wide overhang (24 – 28 inches deep)
- ◆ Rafter ends exposed or false rafter ends
- ◆ Tin or shingle



F A Ç A D E T R E A T M E N T

MILL HOUSE: ONE-STORY

FENESTRATION

- ◆ Double-hung windows
- ◆ Symmetrical, three- or four-bay façade
- ◆ One or two front doors centered on façade

PORCH

- ◆ Centered on main façade
- ◆ At least 80 percent of the length of the façade
- ◆ Six to eight feet deep



MILL HOUSE: TWO-STORY

FENESTRATION

- ◆ Double-hung windows
- ◆ Symmetrical, one window per bay

PORCH

- ◆ Porches on I-house same as one-story
- ◆ Porches on L-plan are either wrap-around or corner porches at entry
- ◆ Six to eight feet deep



FAÇADE TREATMENT

FOURSQUARE

FENESTRATION

- ◆ Double-hung windows
- ◆ Symmetrical, one window per bay
- ◆ Multiple in dormers and occasionally in front

PORCH

- ◆ Porches are centered and run about 80 percent of the façade. Entry porches are also found.
- ◆ Six to eight feet deep



CRAFTSMAN

FENESTRATION

- ◆ Double-hung,
- ◆ Usually two or more windows per bay,

PORCH

- ◆ Continuous porch found on bungalow style. Recessed or hip (centered) on front-gable type. Wraparound also found.
- ◆ Porch railings commonly found.
- ◆ Six to eight feet deep



FENESTRATION

MILL HOUSE: ONE-STORY

WINDOWS

- ◆ Double-hung
- ◆ Light pattern, 2/2, 4/4, 6/6
- ◆ Minimum vertical to horizontal proportion of two to one

DOORS

- ◆ Single entry doors
- ◆ Multi-paneled, wood
- ◆ With or without glazing in upper half of door



MILL HOUSE: TWO-STORY

WINDOWS

- ◆ Double-hung
- ◆ Light pattern, 2/2, 4/4, 6/6
- ◆ Minimum vertical to horizontal proportion of two to one

DOORS

- ◆ Single entry doors
- ◆ Multi-paneled, wood
- ◆ With or without glazing in upper half of door



FENESTRATION

FOURSQUARE

WINDOWS

- ◆ Double-hung
- ◆ Light pattern, 2/2, 4/4, 6/6
- ◆ Minimum vertical to horizontal proportion of two to one

DOORS

- ◆ Single entry doors
- ◆ Multi-paneled, wood
- ◆ With or without glazing in upper half of door
- ◆ Sidelights and transoms



CRAFTSMAN

WINDOWS

- ◆ Double-hung
- ◆ Light pattern, 3/1, 4/1
- ◆ Minimum vertical to horizontal proportion of two to one

DOORS

- ◆ Single entry doors
- ◆ Multi-paneled, wood
- ◆ With or without glazing in upper half of door
- ◆ Sidelights



GABLES AND VENTS

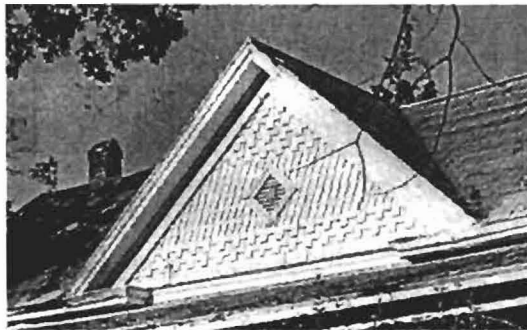
MILL HOUSE: ONE-STORY

GABLES

- ◆ Triple – 'A' or cross gable on main façade, centered above door
- ◆ Often decorated with scalloped, sawtooth, or split shakes

VENTS

- ◆ Used in triple-A gable or gable ends
- ◆ Diamond-shaped
- ◆ Horizontal louvers or pinwheel cutout



MILL HOUSE: TWO-STORY

GABLES

- ◆ Triple – 'A' or cross gable on main façade
- ◆ Cross gable often decorated with scalloped, sawtooth, or split shakes

VENTS

- ◆ Used in triple-A gable or gable ends
- ◆ Diamond-shaped
- ◆ Horizontal louvers or pinwheel cutout



GABLES AND VENTS

FOURSQUARE

GABLES

- ◆ Cross gable on front or side
- ◆ Small, functional windows



CRAFTSMAN

GABLES

- ◆ No true gables but large, projecting dormers typically found

VENTS

- ◆ Half-circle, diamond, or square vents with louvers in front gable type.



PORCH TRIM

MILL HOUSE: ONE-STORY

SPANDRELS AND COLUMNS

- ◆ Turned spindles with decorative spandrels or chamfered post
- ◆ Porch railings



MILL HOUSE: TWO-STORY

SPANDRELS AND COLUMNS

- ◆ Turned spindles with decorative spandrels or chamfered post
- ◆ Porch railings



PORCH TRIM

FOURSQUARE

SPANDRELS AND COLUMNS

- ◆ Turned spindles with decorative spandrels
- ◆ Chamfered posts
- ◆ Square or tapered posts on brick piers



CRAFTSMAN

SPANDRELS AND COLUMNS

- ◆ Paired box posts on brick plinths
- ◆ Chamfered posts
- ◆ Square or tapered posts on brick piers



EAVES

MILL HOUSE: ONE-STORY

16" – 18" wide, in two designs:

- ◆ Boxed eave with horizontal soffits, frieze board, mitered eave returns on gable end.
- ◆ Exposed rafter with visible rafter tails and minimal trim.



MILL HOUSE: TWO-STORY

16" – 18" wide, in two designs:

- ◆ Boxed eave with horizontal soffits, frieze board, mitered eave returns on gable end. Contains rake and frieze board
- ◆ Exposed rafter with visible rafter tails and minimal trim.



EAVES

FOURSQUARE

18" – 24" overhang

- ◆ Boxed eave
- ◆ 8" – 10" rake and frieze board



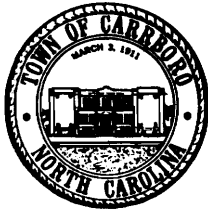
CRAFTSMAN

18" 24" overhang

- ◆ Open eaves
- ◆ Exposed rafters
- ◆ Decorative brackets added under eaves



EAVES



TOWN OF CARRBORO

NORTH CAROLINA

TRANSPORTATION ADVISORY BOARD COMMENTS/RECOMMENDATIONS

December 3, 1998

The Transportation Advisory Board did not make an overall recommendation to the Board of Aldermen on the Northern Study Area Ordinance. The Tab only discussed transportation issues as they related to the Northern Study Area Ordinance. The TAB did make a series of recommendations and comments regarding policies and text changes as follows:

TAB Comments: expressed concerns about the application of Minor Subdivision regulations. The regulations for minor subdivisions should not be able to impede the Village Mixed-Use concept.

Motion: "In approving minor subdivisions, that the staff be required to see that the ability to interconnect roads is maintained, using as a reference Section 15-217, subsection (a) of the Land Use Ordinance; and co-reference Section 2, subsection 6(c) of the draft Northern Study Area Ordinance".

Moved: Ms. Shirley Marshall

Second: Ms. Ellen Perry

VOTE: Ayes (Elliott, Lane, Marshall, Mochel, Perry, Robinson), Noes (None).

TAB Comments: The bicycling mode is rarely mentioned. The pages and sections that include vehicular and pedestrian travel should be amended to include the bicycle mode as well. Clarification throughout the document regarding automobiles and vehicles must be made.

Motion: "The TAB recommends that the draft copy of the Northern Study Area Ordinance include the word bicycle within any references to the promotion of pedestrian and vehicular/automobile traffic throughout the document".

Moved: Mr. Seth Elliott

Second: Mr. William Robinson

VOTE: Ayes (Elliott, Lane, Marshall, Mochel, Perry, Robinson), Noes (None).

TAB Comments: Sidewalks with brick borders are not amenable to handicapped accessibility.

Motion: "All public sidewalks and walkways will be constructed of concrete, and shall not be traversed by brick borders".

Moved: Ms. Ellen Perry

Second: Ms. Shirley Marshall

VOTE: Ayes (Elliott, Lane, Marshall, Mochel, Perry, Robinson), Noes (None).

Additional TAB Comments: Page 12, line 46 – Add the term "bicycle facilities".

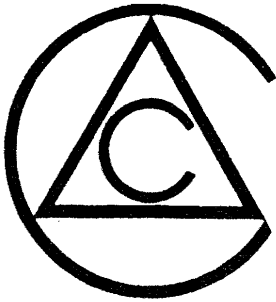
Page 14, lines 44-46 – Such a design is dangerous for bicycles

Neal S. Mochel

TAB Chair

12, 10, 1998

DATE



THURSDAY, DECEMBER 3, 1998

Proposed Ordinance Amending the Carrboro Land Use Ordinance to Implement the Recommendations of the Facilitated Small Area Plan for Carrboro's Northern Study Area.

Lacking a quorum, the majority of the Appearance Commission members had the following comments for the Board of Aldermen regarding the proposed Ordinance. Mary Tippens and Richard Taylor were the only members present on December 3rd, but their recommendations summarize the commission's discussions over this material during the last several meetings. The Appearance Commission began their review of the Facilitated Small Area Plan on October 1, 1998 and continued with staff presentations on October 19 and November 19 (Joint Review).

[The Appearance Commission's recommended changes/additions to the proposed ordinance are highlighted with Italics.]

SECTION 4

Section 15-141.2 Village Mixed Use District Established

(f)(1)

- (g.) How the development proposes to comply with the town's "Village Mixed Use Vernacular Architectural Standards," *to include examples of proposed house designs.*
- (h.) *A proposed design scheme for the commercial area demonstrating a reference to the scale and massing of historic buildings in downtown Carrboro.*

(f)(4)

- (c.) *The applicant shall be required to show, through a combination of graphic means and text items (a) through (h) specified under provision (f)1) of this section.*

SECTION 5.

Section 15-176.2 Village Mixed Use Developments

- (b)(2) The residential portions of the development shall contain a mixture of housing types that are generally reflective of the housing types in Carrboro and ownership/rental options so that the development provides housing opportunities for persons *within a broad a range of income levels*. Different housing types and price ranges shall be intermixed, *within individual streets for single family houses and within individual blocks for townhouses*, rather than segregated.

(f.)(1) Overall Form.

- (d.) The village should be designed in a generally rectilinear pattern of blocks and interconnecting streets and alleys, defined by buildings, street furniture, landscaping, pedestrian ways, sidewalks, *and bicycle lanes/paths where indicated by traffic volume.*

(f.)(4) Storefront and Townhouse use Area Design Components

- (n.) All signage shall:

6. *To avoid the visual clutter freestanding group (or multi-message) signs shall be encouraged for informational and directional street signs and for commercial identification signs. Where possible group signs shall be located at the entrance to commercial areas or at the intersections of major roads within the development.*

(f.)(6) Roads and Streets.

- (f.) *A plan for sidewalks, footpaths, and where applicable bicycle lanes/ paths shall be designed to connect all houses with any of the village's greens and parks and when possible, other villages or developments. Where the vehicular traffic volume is high enough to create a hazard for bicyclists there should be a separate facility for them; developers should demonstrate accommodations for safe bicycling and pedestrian traffic both within the complex and to neighboring communities.*

SECTION 15.

15-242 Lighting Requirements

- (a.) (1) *All street lights shall have underground wiring, except those attached to primary electric pole lines.*
- (2) *Decorative metal or fiber glass street light poles (with totally enclosed wiring) are encouraged. In those cases where salt or creosote treated wooden poles must be used for street lights, the wiring arrangement shall be such to enclose the termination between the underground feeder cable/conduit to the lighting structure pigtail in a suitable plastic conduit junction box, or the pole mounted conduit shall run directly into the lighting fixture base with termination inside. The new Duke Power/Piedmont Electric standard for street lighting with conduits on the front of poles shall be used rather than on the current standard with conduits on the rear. The current free-standing, hanging wire splice shall not be used.*

SECTION 27.

Section 15-177 Architectural Standards for Major Subdivisions

- (b) *The developer shall submit examples of proposed house designs during the Conditional Use Permit or Special Use Permit review process to ensure a reference to the Architectural Standards.*

(Village Mixed Use) (Affordable Housing) Vernacular Architectural Standards

Sections 15-141.2, 15-177, 15-182.4

Comments:

- The Appearance Commission shares staff concerns that the architectural standards, if used as requirements, might limit creativity. This could be resolved by revising and expanding the section on how to apply the standards. Users of the standards should be encouraged to incorporate vernacular building characteristics in new designs, rather than to replicate historic building types. Thus the intent of these standards is not to impose a particular architectural style, but to encourage harmonious design.
- The building "styles" referred to are actually building "types." The word "types" should be substituted for "style" throughout.

- The term foursquare is not appropriate for the buildings described. A foursquare refers to a two-story house, two rooms deep with a pyramidal or hipped roof. The single story houses in Carrboro are best described as pyramidal or hipped-roof houses or cottages.
- Because the different types of buildings share a common set of design principles, the illustrated sections repeat much of the same information for each house type. It would be simpler to include a single list of characteristics under each topic (particularly exterior materials, façade treatment, fenestration, gables and vents, porch trim, and eaves), and show examples from the different building types. The section on building form could remain broken down by type.
- The term I-house should be defined, such as "a two-story, center hall dwelling, one room deep with a side gable roof."
- The difference between decorative gables and dormers should be clearly defined.
- It appears that the "Craftsman" houses are really bungalows with some Craftsman-style detailing. Including more examples of Craftsman-influenced front-gable houses may help clarify this description.

[This section recommends amendments to Article XV of the Town of Carrboro Land Use Ordinance. These items are not included as part of the NSA Facilitated Plan.]

15-247 Utilities To Be Consistent With Internal and External Development

- (1) Utility markers shall be of uniform design clustered together near sign stakes, fences, utility poles or other ground structures, and stand no more than three-feet high. Stand alone markers shall be discouraged.
- (2) Utility pedestals and underground enclosures for all wired utilities shall be tightly clustered together to avoid visual clutter. Where possible, underground utility pedestals and enclosures shall be located behind properties or in backyard easements.
- (3) Utility entrance and termination apparatus (telephone/cable TV interface and terminal boxes electrical meter bases and gas meters) shall be located on the rear of commercial structures with attention given to aesthetic arrangement and alignment. Utility devices and enclosures shall be screened as much as possible.
- (4) Utility entrance and termination apparatus (telephone/cable TV interface and terminal boxes electrical meter bases and gas meters) shall be located on the rear, or if not possible side, of residential structures with attention given to aesthetic arrangement and alignment. Gas meters, heat pumps and/ or air conditioning compressors, and all other utility devices and enclosures shall be screened as much as possible. Utility enclosures shall be shown on architectural drawings and subject for review.

Members present—two (2) Richard Taylor, Mary Tippens; Noes—zero (0); Absent/Excused—four (4) Debbie Bevin, Cara Crisler, Sophie Piesse, Wendy Wenck.

Christina R. Moon for Mary Tippens
Appearance Commission Vice Chair

December 4, 1998
Date



TOWN OF CARRBORO

PLANNING BOARD

301 West Main Street, Carrboro, North Carolina 27510

R E C O M M E N D A T I O N

December 03, 1998

LAND USE ORDINANCE TEXT AMENDMENT: FACILITATED AREA PLAN FOR CARRBORO'S NORTHERN STUDY AREA

MOTION WAS MADE BY M.C. RUSSELL AND SECONDED BY TOY CHEEK THAT THE PLANNING BOARD SUBMITS THE FOLLOWING MEMORANDUM TO THE BOARD OF ALDERMEN AS ITS COMMENTS REGARDING THE ORDINANCE ENTITLED "AN ORDINANCE AMENDING THE CARRBORO LAND USE ORDINANCE TO IMPLEMENT THE RECOMMENDATIONS OF THE FACILITATED SMALL AREA PLAN FOR CARRBORO'S NORTHERN STUDY AREA":

MEMORANDUM

TO: Board of Aldermen, Town of Carrboro

FROM: Andrew B. Cohen
Chair, Carrboro Planning Board

DATE: December 3, 1998

RE: Planning Board Comments on Proposed Northern Study Area Ordinance

The Planning Board believes, by consensus, that the Proposed Northern Study Area Ordinance or something very close to the proposed ordinance should be adopted by the Board of Alderman. We recognize that the current ordinance represents the work of many people over a period of more than six years since the Small Area Planning Work Group was given its initial charge by the Board of Alderman in October, 1992. The plan proposed by the Small Area Planning Work Group was modified and improved in many respects by the Facilitated Meeting process in the Spring of 1997. The draft plan developed at the Facilitated Meeting has now been put into ordinance form through the work of the Ordinance Drafting Committee.

As time passes, the need for a land use ordinance in the Northern Study Area increases. In the absence of a plan which reflects the best efforts and vision of the community, development pressures will make it impossible to enact any meaningful plan at all. It appears that the Town may have reached the point at which any further delays in the hope of improving the ordinance may be counterproductive.

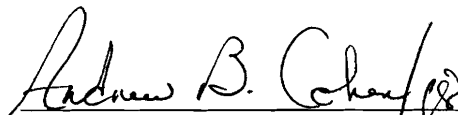
We therefore believe that the current proposed ordinance should be adopted as drafted, if the alternative would be to delay the enactment of an ordinance for the Northern Study Area. We would not want any comments or constructive criticism by the Planning Board to have the unintended result of causing the community compromise reached at the

Facilitated Meetings to unravel. However, in the event that the Board of Alderman has the opportunity to make minor modifications in the draft ordinance, without threatening the timetable for enactment, we have set forth a number of concerns and suggestions raised by members of the Planning Board during our discussions. Each of the comments and suggestions listed below was shared by more than one Planning Board member, but none of the suggestions represents a full consensus of the Planning Board.

1. Regarding commercial space in the village mixed use zone, there is a concern that the commercial areas allowed may not be viable in light of the overall five acre limitation and the 2,000 square foot per floor limitation. There is also a concern that the 200 foot setback requirement may preclude commercial areas from being placed in areas where they are the most visible and therefore have the greatest chance of success.
2. There is a concern about the overall number of village mixed use zones and office assembly zones that will be permitted under the ordinance. The Board of Alderman may want to consider placing a limitation on either the number of such zones or on the overall acreage which may be included in such zones.
3. There was a concern expressed by some members of the Planning Board that the architectural vernacular standards are too constraining and will not allow a sufficient diversity of housing design. There was also a concern expressed that the architectural standards would detrimentally affect the goal of affordable housing, particularly to the extent that the standards preclude the use of more affordable exterior elements and materials.
4. In order to assure that neighbors are aware of development plans and can express their views to developers at an early stage, some members of the board felt that neighbors should be included in the walkabout at the conceptual design phase.
5. A suggestion was made that deed restrictions should be added as an option for maintaining long-term affordability of the affordable housing stock.

To reiterate, the above suggestions and comments should not detract from the overall consensus of the Planning Board that it is important to enact an ordinance for the Northern Study Area as quickly as possible. Those who worked on the draft ordinance should be commended for developing an ordinance which will be a positive influence on the future of the Northern Study Area.

VOTE: AYES 8 (Russell, Rodemeir, Searing, Cohen, Cheek, Presler, Babiss, Poulton); NOES 0; ABSENT/EXCUSED 2 (Bateson, Marshall).

 12/4/98
ANDREW B. COHEN, Chairman (date)

MEMORANDUM

TO: Carrboro Mayor and Board of Aldermen

FROM: Michael B. Brough *MBS*

DATE: December 16, 1998

RE: Proposed Revision to Section 18 of the Northern Study Area Ordinance

Following a meeting with Alderman Spalt, Jay Bryan, Giles Blunden and Roy Williford, I have drafted the attached proposed revision to Section 18 of the NSA ordinance, which revises the standard in the existing ordinance relating to stormwater management. The above-referenced committee has not had the opportunity to review this draft, but I believe it reflects our discussion. One matter that was not discussed, however, was whether the "no damage" principle would apply only to storms up to the ten year level, or to all storms. The standard that is presently incorporated into the ordinance is the ten year storm (except for drainage facilities that cross streets, in which case those facilities must be designed to handle the 25 year storm). I therefore made explicit in this draft that the "no damage" rule applies to the ten year event.

The enclosed draft removes the concerns I had previously expressed about Section 18 of the proposed ordinance by spelling out that, after a specified period (two years in the enclosed draft) the ordinance is not open to an interpretation that a developer (or successor homeowner's association) can be required to modify existing or install new drainage facilities so long as the original facilities were installed in accordance with approved plans.

Section 18. Subsection 15-263(a) is rewritten to read as follows:

(a) All developments shall be constructed and maintained so that they do not cause stormwater related damage to upstream or downstream properties from any storm event up to a one hundred (100) year storm. Compliance with this standard shall be determined in reference to storm events up for the 100 years storm for upstream properties and up to the ten year storm for downstream properties, except that effects on downstream drainage facilities within street rights-of-way shall be evaluated for storm events up to the twenty-five year storm.

- (1) To achieve this objective, the potential impacts on surface water quantity and quality from all proposed developments requiring special use or conditional use permits shall be identified and evaluated by the developer and reviewed by the town engineer, staff and the environmental advisory board. The developer shall implement mitigation measures as are determined to be necessary, based upon the results of this evaluation, to prevent or lessen the predicted impacts. Potential impacts to be evaluated may include, but are not limited to, backwater effects on upstream properties, increased volumes or rates of stormwater flow, offsite sedimentation, erosion and/or ground-cover loss downstream, increased scouring of any downstream streambed, lowered quality of water due to the pollutants carried in runoff, or any damage that materially injures the value of adjoining or abutting property. The area of study is *not* limited to the property being developed.
- (2) Prior to consideration by the permit issuing board, the developer shall, through a qualified professional, submit a statement specifically identifying and quantifying any potential negative stormwater effects the proposed development may have on upstream or downstream properties or water quality. If the permit issuing authority issues a permit without requiring modifications to the stormwater control system to eliminate any of the potential effects identified in such statement, then such negative effects shall not thereafter be regarded as “damage” for purposes of subsequent enforcement of this section.
- (3) Except as provided in subdivision (2) above, approval by the town of a developer’s stormwater control plans, and construction by the developer of the facilities as shown in such plans, shall not relieve the developer of the responsibility of satisfying the “no damage” standard set forth above. If at any time prior to two years following the issuance of a certificate of occupancy (for an unsubdivided development) or the approval of a final plat (for a subdivision) the town determines that the stormwater facilities planned to be installed or actually installed to meet the requirements of this section are inadequate, the town may require the submission of revised plans and the installation of new, altered, or additional facilities to bring the development into compliance. Prior to issuance of a certificate of occupancy or approval of

a final plat, the town may require the developer to post a performance bond or other sufficient surety to guarantee compliance with this section.

- (4) Except as set forth in subdivision (3) above, this section shall impose no obligation on a developer (or any successor to the developer) to modify or alter stormwater facilities installed in accordance with approved plans or to construct new or additional facilities. However, stormwater facilities shall be properly maintained so that they continue to perform as they were designed to perform.

The foregoing ordinance, having been submitted to a vote, received the following vote and was duly adopted this ____ day of _____, 1998.

Ayes:

Noes:

Absent or Excused:

	DECK	GARAGE	HEATED	FRONT PORCH
3 BEDROOM \ 2-1/2 BATH	192	352	1780	32
JOB COST PHASES				TOTALS
IMPACT ALLOWANCE				\$3,000.00
SITEWORK ALLOWANCE				\$4,000.00
OWASA FEES				\$2,000.00
CARPET/ \$18.00/YD.bedrms/upstrhall				\$2,088.00
VINYL ALLOWANCE /baths/wash-dry				\$450.00
HARDWARE / BATHROOM ACCESSORIES ALLOWANCE				\$1,000.00
WOOD FLOOR ALLOWANCE				\$3,675.00
ELECTRICAL FIXTURE ALLOWANCE				\$1,500.00
CABINETRY ALLOWANCE				\$6,000.00
PAINT				\$5,436.00
CONCRETE				\$3,850.00
WATERPROOFING / DRAINTILE				\$800.00
FIREPLACE AND MANTLE	ENERGY EFFICIENT FIREPLACE INSERT			\$4,100.00
MASONRY				\$3,900.00
ROUGH CARPENTRY				\$41,819.00
FINISH CARPENTRY				\$8,900.00
STAIRS / OAK				\$2,500.00
WINDOWS/ EXTERIOR DOORS				\$6,000.00
DRYWALL				\$4,464.83
ELECTRICAL WIRING/ SERVICE	200AMPS			\$5,200.00
PLUMBING				\$6,300.00
H.V.A.C.				\$6,200.00
INSULATION-NEW CABO CODE				\$2,300.00
GUTTERS				\$750.00
APPLIANCES				\$1,500.00
ROOFING // FLASHING				\$3,200.00
TERMITE BARRIER				\$400.00
SUPERVISION AND LAYOUT / FIELD COSTS				\$11,000.00
INSURANCES/ MISC. ADMIN COSTS / PERMIT				\$1,707.50
CLEAN UP/LANDFILL/RENTAL				\$1,260.00
SUBTOTAL COSTS				\$142,300.33
MARK UP (10%)				\$14,230.03
TOTAL AS PER PLANS AND SPECS.	\$87.94			\$156,530.37
			(COST PER HEATED SQ. FT.)	
			LOT	\$45,000.00
				\$201,530.37
	\$119.33	W/REALTOR'S FEES		\$212,413.01

To : The Mayor and Carrboro Board of Aldermen
Carrboro Town Hall
301 West Main Street
Carrboro, N.C. 27510

From: Thomas Whisnant and Glen Greenstreet

December 15, 1998

Re: Concerns about how the new ordinance may increase housing costs in Carrboro

We appreciate all of the hard work and effort that has gone that has gone into the development of the new zoning ordinance for the Northern Study Area of the Town of Carrboro. We understand that many people have devoted much effort in order to create this proposed new ordinance over that past six years.

We support the overall goals of the plan to allow Carrboro to have good, thoughtful land use plans as well as to attempt to encourage more housing options for our community. We hope that the proposed ordinance changes can accomplish these goals.

However, we have some concerns as to the methods which are being used to try to attain these goals. We feel that in general, there is much misunderstanding about the actual costs of both lot development as well as home construction in our area. Therefore, we have developed an open letter, addressed to you and anyone else who may wish to read it, to better explain these costs. This letter is attached.

Before this ordinance is enacted, we urge you to consider what the economic impact will be on the cost of a new home. As is shown in our open letter regarding home costs, these prices are already high. We ask that an economic impact study be undertaken which would show how the proposed changes will affect buyers of new homes built in the Northern Study Area under the new ordinance. We are concerned that this ordinance will add additional expenses to the already high cost of construction and development of new homes.

As members of the real estate business, we all feel that this ordinance may greatly increase the cost of both new an existing housing. This could happen in the following five ways:

1. **The requirements of the new ordinance will require extensive up-front expenditures for development of plans for a proposed project.** The additional costs associated with this could easily add thousands of dollars per-home to the during the application phase alone. These costs which then must be carried throughout the build out time of the project may increase the cost of a home as much as ten thousand dollars ,or more per housing unit created, than would be the case under the existing ordinance.

Some of the specific design requirements, such as side-loaded garages may, if implemented also increase new home costs.

2. **Increased Land Cost.** While the new ordinance will preserve more land as open space, this cost must be built into the price of the homes that are created. Unless land owners are willing to reduce the price of their land, housing cost will need to rise to absorb this increased land acquisition expense.
3. **We are concerned that the new ordinance will slow new development activity in an already strong real estate market.** This could well mean more buyers for fewer homes. This could not only serve to increase the cost of new homes, but also put upward pressure on the prices of existing homes that are re-sold in Carrboro.
4. **Increased Property Taxes.** As prices rise, real property taxes will also rise. This will increase the costs to own a home for new and existing home owners. These increases are especially hard to those on a fixed income.
5. **If the amount of new construction slows, rental prices will also increase.** Again, supply and demand will put upward prices on not only new home prices, but rents for both new and existing housing.

In conclusion, we support all of the good effort and hard work that has gone into the creation of the new section of the ordinance. We all share the overall goal of making our town a great place to live now as well as into the future. The good planning work which is now being done is essential to insure this occurs, and that development happens in a thoughtful, well defined manner.

As you develop this and other ordinance changes we urge you to carefully assess the economic impact that these changes may have as carefully as you have other areas of this document.

Sincerely,

Thomas Whisnant and Glen Greenstreet

To: The Mayor and Carrboro Board of Aldermen
Carrboro Town Hall
301 West Main Street
Carrboro, N.C. 27510

An open letter to the Carrboro Board of Aldermen and citizens of Carrboro to address the often asked question.....

Why do houses cost so much in Carrboro?

Prepared by Glen Greenstreet, licensed contractor and Thomas Whisnant, Realtor-Developer in Carrboro. December 1998.

Dear Mayor, Members of the Carrboro Board of Aldermen and Concerned Citizens:

As members of the residential real estate development and construction business, working in Carrboro, we personally share the goal of the creation of affordable housing . We believe that there should be many home ownership options available in Carrboro. Many people in our business would also like to see affordable homes being built. However, in practice this is very difficult to accomplish. This is true because like any industry we can only make a living by doing what is economically feasible. It is very hard to build a small home and sell it at a price level which would even come close to breaking even.

The creation of affordable housing is indeed a challenge. To understand why this is true, we would like to share our knowledge of why housing costs are where they are now. In order to do this, we have compiled a profile of the actual costs which comprise the price of a new home. We hope that this information will help foster meaningful understanding about our business and increase awareness of all of the many forces at work in the marketplace which determine the type, quantity and quality of homes which are built in Carrboro.

Our home cost profile shows the typical costs associated with the construction of a 1,000 square foot, two bedroom , two bath home as well as the construction of a two-story, four-bedroom, two bath home which has 2,000 heated square feet. These costs are based upon actual market information as of December, 1998. These costs were prepared by Glen Greenstreet, a licensed contractor who based these numbers on actual costs of construction found in our town.

In order to determine the costs of a typical residential lot, actual costs for Andrews Heights, a ten-lot subdivision in Carrboro were analyzed . This analysis was done by Tom Whisnant, one of the developers of this subdivision. These numbers show why a typical lot in Carrboro can easily cost \$60,000 or more. Even without land cost, or profit the cost to develop a lot to the standards now required can be in the mid-forties. These numbers are also based upon actual costs of site construction and land acquisition cost as well as other typical development expenses.

After these costs were compiled we concluded that even if a builder pays \$50,000 for a single family lot, this builder would lose \$37,629 by building a 1,000 square foot home in Carrboro and lose \$15,454 on the larger 2,000 square foot home. This assumes that these homes would sell at a price of \$110 dollars per square foot. This sales price is very typical of the price per foot of new homes in Carrboro.

The actual costs on the following three pages will support our analysis and we hope help increase knowledge about actual real estate and building costs.

We think that as the town tries to we look to encourage more housing options a clear understanding of these costs is essential and hope that our sharing this information will be helpful. We appreciate your good efforts towards this end and support you in this endeavor.

Sincerely,

Thomas Whisnant and Glen Greenstreet

Total Cost- Site Improvements			\$ 64,480		\$ 107,380
Site Costs-Per Sq Foot			\$ 64.48		\$ 53.69
Lot			\$ 50,000		\$ 60,000
Total Hard Costs			\$ 114,544		\$ 167,434
Water & sewer fee	1 ea		\$ 2,500		\$ 3,000
Survey	1 ea		\$ 1,200		\$ 1,200
Impact fee	1 ea		\$ 3,000		\$ 3,000
Property Tax	1 ea		\$ 300		\$ 300
Permit	1 ea		\$ 500		\$ 600
Plans	1 ea		\$ 400		\$ 400
Utilities and toilet	1 ea		\$ 600		\$ 600
Loan Origination & Legal fees	1 ea		\$ 1,500		\$ 1,900
House closing	1 ea		\$ 150		\$ 300
Realtor fee	ea		\$ 5,500		\$ 11,000
Interest	1 ea		\$ 2,400		\$ 4,500
Property Insurance			\$ 300		\$ 350
Total Soft Costs			\$ 18,350		\$ 27,150
Soft Costs - Per Foot			\$ 18.35		\$ 13.58
Total			\$ 132,894		\$ 194,584
Sale Price			\$ 110,000		\$ 200,000
\$110 (\$100) per foot					
Gross Profit (Loss)			\$ (22,894)		\$ 5,416
Site Supervision			\$ 6,000		\$ 8,000
Office Expenses (Home Office)			\$ 1,500		\$ 2,150
15K per Year/10 (7) Units					
General Equipment Expense			\$ 375		\$ 570
16K / 4 Yr Life / 10 (7) Units					
Transportation Expense			\$ 880		\$ 1,040
20 miles x .40 x 110 (130) days					
General Liability Insurance			\$ 280		\$ 560
Total Labor Cost x 0.8%					
Worker's Compensation Insurance			\$ 700		\$ 1,400
Total Labor Cost x 2.0%					
Total Administrative Expenses			\$ 9,735		\$ 13,720
Net Profit			\$ (32,629)		\$ (8,304)
Officers Salary			\$ 5,000		\$ 7,150
50K / 10 (7) units per year					
Return on Investment (Loss)			\$ (37,629)		\$ (15,454)

Sheet1

PROJECT:	Sample, Affordable Housing Model				
Description:	Two (four) bedroom, single family home with two baths. Basic finish materials, no upgrades, no garage, no plantings.				
			1 Story		(2 Story)
SQUARE FEET:			1000		2000
ITEM	NUMBER	UNIT	TOTAL	NUMBER	TOTAL
Clearing/Excavation	1	house	\$ 2,000	1	\$ 2,800
backfill	1	house	\$ 600	1	\$ 700
Final rough grade	1	house	\$ 600	1	\$ 600
Footing, materials	140	running foot	\$ 700	140	\$ 900
Footing, labor			\$ 800		\$ 1,000
Foundation, block wall	650	block	\$ 3,080	650	\$ 3,680
Waterproof	1	house	\$ 600	1	\$ 600
Stucco foundation	512	square foot	\$ 1,000	512	\$ 1,000
Porch-Masonry	1	house	\$ 300	1	\$ 500
Porch-Framing and Siding	1	house	\$ 800	1	\$ 1,200
Drive	600	square foot	\$ 1,500	600	\$ 1,500
Framing Material	1000	square foot	\$ 7,000	2000	\$ 12,500
Framing Labor	1000	square foot	\$ 4,000	2000	\$ 8,000
Siding Material	1000	square foot	\$ 2,200	2000	\$ 4,400
Siding Labor	1000	square foot	\$ 2,000	2000	\$ 4,200
Decks	100	square foot	\$ 1,300	200	\$ 2,600
Windows & Doors					
regular windows	9	ea	\$ 1,350	18	\$ 2,700
metal door-single	2	ea	\$ 400	3	\$ 600
Grills and screens	9		\$ 350	18	\$ 700
Roofing-labor	13	square	\$ 520	15	\$ 600
Roofing-materials	13	square	\$ 390	15	\$ 450
Gutters	1	house	\$ 500	1	\$ 700
Plumbing w/ fixtures	2	bath	\$ 4,500	2 1/2	\$ 6,200
Waste/Water Line	50	foot	\$ 800	50	\$ 800
HVAC (1 zone)	1000	square foot	\$ 4,000	2000	\$ 6,800
Electrical	1000	square foot	\$ 2,000	2000	\$ 4,000
Light fixtures	1	house	\$ 1,000	1	\$ 1,800
Insulation	1000	square foot	\$ 1,400	2000	\$ 2,400
Sheetrock	1000	square foot	\$ 2,400	2000	\$ 4,800
Cabinets & Tops (All)			\$ 4,000		\$ 5,800
Door Hardware					
Interior	12	door	\$ 240	20	\$ 400
Exterior	2	door	\$ 200	3	\$ 300
Trim- Material	1000	square foot	\$ 1,200	2000	\$ 2,200
Trim-Labor	1000	square foot	\$ 900	2000	\$ 2,200
Trim-Closet & Bath Acces's		house	\$ 250		\$ 400
Paint	1000	square foot	\$ 3,500	2000	\$ 7,000
Carpet & Vinyl	1000	square foot	\$ 2,000	2000	\$ 4,200
Appliances			\$ 1,400		\$ 1,500
Landscape			\$ 750		\$ 750
Trash	1000	square foot	\$ 700	2000	\$ 1,400
Cleaning	1000	square foot	\$ 250	2000	\$ 500
Misc	1000		\$ 1,000	2000	\$ 2,000

Carboro 10 Lot Subdivision
Estimate of Development Costs

<u>Item</u>	<u>Amount</u>
Clearing, Grading and Erosion Control	\$ 29,075
Storm Drainage	28,660
Sanitary Sewer	20,975
Water Distribution	18,950
Curb, Stone Base, Paving, and Sidewalk	40,900
General and Miscellaneous	10,000
Contingency Items	19,150
Survey Work	10,000
Town of Carboro Engineering Consultant	2,500
Land Costs	125,000
Civil Engineering for Roads and Utilities	50,000
Payment in lieu of Open Space	38,376
Payment in lieu of Recreation Facilities	14,480
Miscellaneous Legal Fees	2,500
Finance Charges for 3 Years	62,500
	<u>\$ 473,066</u>
Developer's Overhead (10%) and Profit (10%)	94,613
	<u>\$ 567,679</u>
Sales and Marketing @ 10%	60,000
Total Cost for 10 Lots	<u>\$ 627,679</u>
Cost per Lot	<u>\$ 62,768</u>
Cost before Profit	<u>\$ 520,372</u>
Cost per Lot before Profit	<u>\$ 52,037</u>