

APPLICATION FOR AMENDMENT TO BRIAR CHAPEL
CONDITIONAL USE PERMIT
FEBRUARY 16, 2012

I. EXPLANATION OF REQUESTED AMENDMENT

NNP-BRIAR CHAPEL, LLC (“Applicant”) hereby files its application for limited amendments to the conditional use permit for Briar Chapel, which permit was originally approved on or about February 15, 2005 (the “CUP”) and for an amendment to the master plan and sketch plan for the as yet un-platted portions of the development. Pursuant to Section 17.3 of the applicable Chatham County Zoning Ordinance, Applicant sets forth the following in support of the requested amendments. Section 17(B) requires the following to be submitted:

1. All appropriately sized maps have been submitted with this Application.
2. A legal description of the land is also submitted with this Application.
3. No error in the Ordinance is alleged. However, certain changes are necessary based on practical application of the original terms of the Conditional Use Permit as is set forth in detail below.
4. The changed and changing circumstances in the County and in the area which make the proposed changes necessary for the promotion of the public health, safety and general welfare are also set out below and are to be addressed in the public hearing in this matter and in all documents submitted for the record of the same.
5. The proposed amendments, just as the original approved permit, will carry out the intent of the adopted and applicable Land Development Plan. See the original “Statement of Justification for Rezoning and Reference to Existing County Plans” set forth as Section 5 under the originally submitted General Application Requirements.
6. Applicant incorporates by reference all other reasons set forth in this Application, to be set forth in the public hearing and in the record of this matter in support of this Application.
7. All information required on the applicable County forms has been submitted.

Seven years have passed since the original approval. Development of the Briar Chapel project has proceeded during the intervening years. Applicant has never previously requested any amendment to the CUP. Many years of working and developing under the CUP and coordinating the same with the Chatham County staff, have brought to light certain changes that are necessary to the language of the conditional use permit so as to reflect the working realities under the permit. In addition, the Applicant believes that the master plan amendment will allow the flexibility needed to increase the efficiency with which the Applicant can deliver lots to the market to the benefit of the Applicant and the County alike. All requested changes promote the public health, safety and welfare.

The requested changes are limited in scope and intent. The requested amendments fall into the following two categories:

1. Amendments to the language of the CUP itself to (a) acknowledge requirements of the permit that have already been completely fulfilled; (b) clarify certain ambiguities that exist in the language in accordance with the practice and procedure of working under the terms of the conditional use permit over the course of the last seven years; and (c) and modify the terms of the library site contribution.

2. An amendment to the site plan to afford more flexibility.

Applicant submits that the requested changes, all of which have been carefully considered by Applicant based on its more than half decade experience developing this one and only Chatham County Compact Community, are necessary for the promotion of the public health, safety and general welfare. Briar Chapel is an unmatched economic engine in Chatham County at this time. It is one of the top selling communities in the entire Triangle Region. All of the changes requested are intended to facilitate continued traction in the local market for the benefit of the County as a whole as well as for the benefit of the Applicant.

II. CORNERSTONES OF C.U.P. ARE NOT CHANGING

It is important to note at the outset that the Applicant seeks to maintain, unchanged, the following cornerstones of the original CUP requirements:

- A. The application does not seek to revise the total number of residential units, 2,389, originally approved under the CUP.
- B. The application does not seek to reduce the total amount of open space reserved under the original conditional use permit.
- C. The application does not seek to change or reduce the buffers originally approved under the conditional use permit.
- D. The application does not seek to change the total percentage of impervious surface maximum approved under the original conditional use permit.
- E. The application does not seek to reduce the total amount of trails or recreational features approved under the original conditional use permit.
- F. The application does not seek to reduce or eliminate any of Applicant's obligations with regard to wetlands or environmental conditions addressed in the original conditional use permit.

III. REQUESTED AMENDMENTS TO CONDITIONAL USE PERMIT

A. Amendments to the language of the CUP. Applicant seeks to amend the language of the conditional use permit in accordance with the modifications shown in the amended conditional use permit **attached hereto as EXHIBIT III-1.**

B. Amendment to approved site plan. As to the portions of the development that have not yet been platted, Applicant seeks to amend the original master plan (sketch design) in accordance with the amended master plan **attached to the Application as EXHIBIT D**. The purpose and intent behind this amendment is to allow it to both conform to the existing Chatham County ordinances and also to apply certain “smart code” planning tools to the approved master plan. The intent and purpose of the smart code planning tools are to create flexibility with respect to the precise lot size and configuration of lots so as to allow the Applicant to respond to market conditions while still conforming to all of the minimum and maximum requirements of the permit. Attached **to the Application as EXHIBIT D** is the proposed revised site plan that Applicant seeks to have the Chatham County Board of Commissioners adopt as the official site plan for the balance of the development at Briar Chapel which will also be adopted as and constitute the approved sketch plan under the subdivision ordinance.

In connection with the requested amendment, the Applicant has engaged Colin Green, a renowned and respected land planner with The HOK Planning Group in Washington, D.C. Mr. Green has conferred with planning staff in advance of this filing and will be made available for testimony and presentation at the public hearing to describe the value and validity of the smart code approach to the site plan revision for Briar Chapel.

IV. SUBMISSION MATERIALS CHECKLIST:
Application for Conditional Use Permit (2012 Amendment)

Applicant adopts and incorporates by reference as if fully set out herein the original submission materials checklist responses. In particular, without limitation, Applicant adopts the information and evidence submitted in connection with the original five affirmative findings and incorporates herein by reference the written text submitted with the original application, as well as all of the evidence taken and in the record with respect to approval of the original conditional use permit. For reference, a copy of the original materials outlining compliance with the five findings required under the Chatham County zoning ordinance are attached hereto as **EXHIBIT IV-1** and incorporated herein by reference. The passage of time and intervening events since the original approval date have rendered some of the information within the **EXHIBIT IV-1** either no longer accurate or possibly outdated. Applicant has undertaken an updating review of the original checklist submission. Applicant adopts **EXHIBIT IV-1** along with the following changes and updates:

1. Location: Unchanged.
2. Project Description: Unchanged.
3. Site Plans and Drawings (Appendix A to original application):
 - FIGURE 1 (Township Maps): **Unchanged**
 - FIGURE 2A (Area Regional Map): **Unchanged**
 - FIGURE 2B (Area Neighborhood): **Unchanged, except that Dollar parcels not purchased. See revised Site Plan, EXHIBIT D to Application.**
 - FIGURE 3 (Aerial Photo): **Unchanged, except that Dollar parcel not purchased. See revised Site Plan, EXHIBIT D to Application**
 - FIGURE 4 (Historic Structures/Cemeteries): **Unchanged**
 - FIGURE 5 (Existing Vegetation): **Unchanged except to the extent of development to date**
 - FIGURE 6 (Drainage): **Unchanged except to the extent of development to date**
 - FIGURE 7 (Soils Map): **Unchanged except to the extent of development to date**
 - FIGURE 8 (Slope Analysis Map): **Unchanged except to extent of development to date**
 - FIGURE 9 (Development Suitability Map): **Unchanged except to extent of development to date**
 - FIGURE 10 (Master Plan, as revised on September 30, 2004): **Changed with this Amendment. See revised masterplan, Exhibit D.**
 - FIGURE 11 (Affordable Housing Map, as revised September 30, 2004): **Unchanged except to the extent of development to date.**
 - FIGURES 12A – 12E (Landscape Master Plans, as revised September 30, 2004): **Changed with this amendment (excludes Dollar tract; general landscaping parameters are unchanged)**
 - FIGURES 13A-13E (Illustrative site plans): **Replaced with EXHIBIT D to Application. Note: With regard to the commercial areas adjacent to Herndon**

Woods subdivision (SD West and SD North) and Fearington Village (SD East), all originally approved buffers and uses are unchanged with this amendment.

The revised masterplan for these areas simply creates flexibility as to building/parking arrangement within the developable footprint in these areas.

FIGURE 14 (Open Space Map, as revised September 30): Unchanged except minor revisions as to specific locations of “pocket parks” and other active open spaces as installed)

FIGURE 15 (Buffer Re-Vegetation Detail): Unchanged

FIGURE 16 (Landscape Master Plan): Unchanged except minor revisions as to specific locations of “pocket parks” and other active open spaces as installed)

FIGURE 16A (Landscape Plant List): Unchanged

FIGURES 17A – 17E (Landscape Master Plan Legend): Unchanged

Greenway Map, as revised September 30: Unchanged except as to development to date.

4. Start and Completion Projections: Because of the delays in approval and the significant market shift since approval, the start and completion projections (which were always, explicitly subject to market and economic conditions) must be modified. The project is now well underway with over 600 lots platted. The revised, estimated completion date is in approximately 2021. Absorption rates are very difficult to predict.
5. Statement of Justification for Rezoning and Reference to Existing County Plans: Unchanged.
6. Five Affirmative Findings: See addendum (**Exhibit IV-2, attached hereto**) by Lucy Gallo of DPFG, Inc. regarding Fiscal Impact and Economic Impact (original Appendix E); the addendum (**Exhibit IV-3, attached hereto**) by Kimley Horne with respect to Transportation Impact Assessment (original Appendix F); and the addendum (**Exhibit IV-4, attached hereto**) by Wetland and Natural Resources Consultants, Inc with respect to Environmental Impact Assessment (original Appendix G) . Otherwise the materials regarding the Five Affirmative Findings remains unchanged.

V. PROJECT DESCRIPTION

The project description is changed to the extent set out in this application and, in particular, in Exhibit D to the Application (revised masterplan). In addition, the community may or may not include a church. The Chapel in the Pines Presbyterian Church, with easement assistance from Applicant, has located off site immediately adjacent to Great Ridge Parkway. Otherwise, the Project Description is unchanged except to the extent of the actual development to date.

VI. COMPLIANCE WITH COMPACT COMMUNITIES ORDINANCE

See Attached **Exhibit VI-1** for updated responses to CCO.

VII. BRIAR CHAPEL GREENWAY TYPES AND BENEFITS (Appendix B to original application): Unchanged

VIII. DESIGN GUIDELINES FOR BRIAR CHAPEL (Appendix C to original application): Unchanged except to the extent of additional flexibility allowed by revised site plan with “smart code” elements.

IX. GREEN BUILDING (Appendix D to original application):

Deleted and replaced with Briar Chapel Residential Green Building Info Packet, attached as **Exhibit IX-1**.

X. FISCAL IMPACT (Appendix E to original application): See addendum by DPFG (Lucy Gallo) attached hereto as **Exhibit IV-2**

XI. TRANSPORTATION IMPACT ASSESSMENT (Appendix F to original application): See addendum by Kimley-Horn and Associates, Inc. (Richard Adams) attached hereto as **Exhibit IV-3**

XII. ENVIRONMENTAL IMPACT ASSESSMENT (Appendix G to original application): See addendum by Wetland and Natural Resource Consultants, Inc. (Chris Huysman) attached hereto as **Exhibit IV-4**.

XII. Original Appendices H through O (plus the Preliminary Reuse Water Spray Areas Map): The projections set forth in all of these exhibits continue to be valid. Actual implementation of the projections is in process with any required modifications being regulated by applicable North Carolina agencies.

CONCLUSION

Applicant respectfully requests that the Chatham County Board of Commissioners adopt the revised language of the conditional use permit as attached hereto as **Exhibit III-1**, adopt the requested revision to the master plan (sketch plan) for the balance of the Briar Chapel project that has yet to be developed, and incorporate in the revised Conditional Use Permit all changes set forth herein, all applicable evidence tendered during the course of the proceedings associated with this requested amendment and any additional conditions agreed to by applicant and set forth in the revised and approved Conditional Use Permit.

Respectfully submitted, this 17th day of February, 2012.

**A RESOLUTION APPROVING AN AMENDED APPLICATION FOR A
CONDITIONAL USE PERMIT
~~FOR A REQUEST BY MITCH BARRON ON BEHALF~~
~~OF NEWLAND COMMUNITIES~~ FOR BRIAR CHAPEL
PLANNED RESIDENTIAL DEVELOPMENT**

WHEREAS, Mitch Barron on behalf of Newland Communities, ~~has~~ applied to Chatham County for a conditional use permit for a certain tract or parcel of land containing approximately 1,589 acres in the vicinity of US 15-501 N., Mann's Chapel Road and Andrews Store Road for use as a Planned Residential Development ~~as indicated in the~~; and

WHEREAS, Said application and permit were approved by Resolution #2005-15 on or about February 15, 2005; and

WHEREAS, NNP-Briar Chapel, LLC (the "Applicant") and the County have worked closely together for seven (7) years to ensure a uniform and orderly scheme of development with respect to Briar Chapel;

WHEREAS, over the course of the past six years the Applicant has come to practical conclusions regarding desirable and helpful adjustments to the orderly development pattern that will enhance the efficiency and flexibility of development while simultaneously maintaining the safeguards of the original Conditional Use Permit;

WHEREAS, the Applicant has filed an Application to Amend the Conditional Use Permit so as to adopt changes consistent with the current enhanced practical understanding as to how to administer the Conditional Use Permit;

WHEREAS, Applicant has, among other things, (1) donated a water tower site and has constructed at its expense and donated to the County a 1,000,000 gallon water tower, (2) donated a site to Chatham County for the Margaret Pollard Middle School that is now open, (3) donated a site to The Woods Charter School that is now operating on the site, and (4) constructed a 66 acre recreational and park facility that will soon be donated to the County;

WHEREAS, a public hearing on the proposed amendment has been held in accordance with the applicable ordinance provisions

WHEREAS, the Chatham County Board of Commissioners has previously found and does, having taken into account the Application and all of the evidence in the record with respect to the same, does hereby find~~s~~ as follows:

1. The uses requested are among those listed as eligible conditional uses in the district in which the subject property is located or is to be located.
2. The requested conditional use permit is either essential or desirable for the public convenience or welfare.
3. The requested permit will not impair the integrity or character of the surrounding or adjoining districts, and will not be detrimental to the health, safety or welfare of the community.
4. The requested permit is consistent with the objectives of the Land Development Plan and the Compact Community Ordinance.
5. Adequate utilities, access roads, storm drainage, recreation, open space, and other necessary facilities have been or are being provided consistent with the County's plans, policies and regulations.

NOW, THEREFORE, BE IT RESOLVED BY THE CHATHAM COUNTY BOARD OF COMMISSIONERS as follows:

That ~~the a~~ Conditional Use Permit be, and it hereby is, amended as follows:~~approved for the reasons hereinabove stated subject to the additional stipulations and conditions set forth hereinafter;~~ and

BE IT RESOLVED FURTHER that the Chatham County Board of Commissioners hereby approves the amendment application for the conditional use permit in accordance with the Briar Chapel Master Plan Revised, February 2012 plan of Briar Chapel dated June 29, 2004 attached hereto and incorporated herein by reference (the "Master Plan") with specific conditions as listed below:

Stipulations Specific to the Development

1. Construction Deadlines. This permit shall automatically expire on the second anniversary of its issuance unless (a) construction has commenced; or (b) a timely filed application for an extension of time has been approved by the County. This permit shall automatically expire on the ~~twentieth~~^{fifteenth} anniversary of its issuance unless the construction of all required improvements has been completed or extended by the County upon request prior to the expiration of the term.

2. Land Use Intensity. This special use permit approves:

Gross Land Area	1589 acres
Max Impervious surface area	24%
Maximum Number of Dwelling Units	2389

3. Watershed Management. A detailed watershed protection plan for the entire project area, ~~which shall include~~^{ing} impervious surface calculations, ~~as well as a monitoring plan for each phase as it is submitted for plat approval, to assure compliance with the maximum impervious surface area allowed herein for the entire project, shall be~~ ^{has been} approved by the Planning Department, ~~prior to issuance of a Zoning Determination Permit.~~ Prior to ~~approval of a final plat for a phase~~^{issuance of a Certificate of Occupancy}, the ~~developer~~^{Applicant} shall submit evidence satisfactory to the Planning Department of compliance with the approved plan.

4. Storm Water Management. A storm water management plan shall be approved by the Planning Department prior to ~~approval~~^{issuance} of a ~~preliminary plat Zoning Determination Permit~~ for each phase of the project. Such plan shall include final construction drawings for storm water management control measures and an impervious surface calculation sheet for that phase. The ~~developer~~^{Applicant} shall construct storm water management control measures sufficient to serve each phase of the project area prior to issuance of a Certificate of Occupancy.

5. Fire flow. A fire flow report indicating adequate design be approved by the Chatham County Fire Marshal and Planning department prior to issuance of a Zoning Determination Permit. Adequate fire flow shall be demonstrated prior to issuance of a certificate of occupancy. Any final plan shall indicate adequate access for pumper trucks.

6. Lighting Plan Approval. All area lighting shall meet County standards and not adversely affect adjoining residential areas.

7. Utility and Access Easements. Easement documents as required by the County for any public utilities used or furnished to the project area ~~have been recorded~~^{shall be recorded prior to issuance of a Zoning Determination Permit}.

8. Unity of Development. ~~Prior to issuance of a Zoning Determination Permit,~~
Guidelines for the future development of the project as a unified whole have been ~~shall be~~
 approved by the Planning Department and are available on the County website.

~~Such guidelines shall delineate architectural elements relating to building materials, roof treatments, and low impact from water runoff and water quality. More particularly, such guidelines shall specify the following at a minimum:~~

~~(a) The dominant building material or combination of materials;~~

~~(b) The means by which the materials or combination is dominant;~~

~~(c) The dominant color or pattern of colors;~~

~~(d) The means by which the colors or pattern of colors is dominant and the use of color on the facades of any structures;~~

~~(e) If selected, the dominant architectural feature or combination of features;~~

~~(f) Architectural features such as roof treatments including style, materials, and color, façade treatments including fenestration patterns and ornamentation; and building form including overhangs, canopies, protected exterior walkways, and entrance treatments; and to the extent practicable, such features shall be consistent with the existing businesses in the area.~~

~~(g) Provisions for the guidelines to be made applicable and binding upon all development within the project including all outparcels.~~

Stipulations Regarding State and Federal Government Approvals

9. Permits. Any required State or Federal permits or encroachment agreements, including a commercial driveway permit(s) from NC DOT shall be obtained and copies submitted to the County prior to approval of a preliminary plat for each phase~~the issuance of a Zoning Determination Permit.~~

10. Improvements. Off-site improvements required by N.C. DOT or any other agency shall be constructed at no cost to the County including the traffic improvements as stated in the most recent TIA and others as ultimately deemed warranted by the NCDOT following its analysis. ~~The County shall forward to NCDOT its peer review comments and request consideration thereof.~~

Stipulations Regarding Required Improvements

11. Parking and off-street loading areas. Parking and off-street loading areas shall be installed in accordance with the ordinances and policies of the County. Future submittals for preliminary subdivision plat approval will designate park-and-ride parking spaces (such as additional spaces in proposed parking lots above the minimum number required for retail or office uses) and transit stops, pedestrian and bicycle facilities, and traffic calming devices, as reasonable and necessary to accommodate then-existing multi-modal transit needs at those locations.

12. Streets. Roads will be stubbed-out and/or areas will remain underdeveloped as reasonably necessary to allow for future connections with currently undeveloped parcels, so long as such access takes into account physical features and other access points and are no more than necessary, and with the understanding that future connecting roads will be designed and constructed to approximately the same standards as the connecting roads in Briar Chapel. Where roads are constructed they will be built to required standards up to the perimeter buffer. The exact location of said roads may be determined during preliminary plat review. Signs shall be posted on the property advising of the future extension of said roads.

13. Utilities.

(a) ~~_____ (a) _____~~ The ~~developer~~Applicant shall demonstrate availability of adequate water and wastewater supplies to serve the property and plans for provision of the same shall be approved by the Planning Department prior to issuance of a preliminary plat Zoning Determination Permit for each phase. Such plans shall be in conformity with any County policies then in effect and the ~~developer~~Applicant shall pay all fees and charges associated with the project, including then current utility fees, review and inspection charges, prior to issuance of ~~the a Zoning Determination Permit for~~ final subdivision plat approval for each phase, ~~which ever is earlier~~. The entire cost of extending public utility services if desired or required under County regulations shall be borne by the ~~developer~~Applicant.

(b) ~~Adequate water service may include the provision of an above ground storage facility at a site satisfactory to the County if necessary. In order~~ to adequately provide fire flow pressures for the project and surrounding area, Applicant has provided and the County has accepted an above ground storage facility.

(c) Adequate wastewater treatment service for the entire project area shall be designed and approved by the appropriate regulatory agency prior to issuance of a preliminary plat for each phase~~Zoning Determination Permit~~ and constructed at no cost to the County. Adequate facilities for the spray irrigation of treated effluent from each phase of the project shall be designed, approved by the appropriate regulatory agency, and constructed at no cost to the County prior to issuance of a Certificate of Occupancy for any building within that phase of the project.

(i) Equipment such as pumps and blowers ~~have been~~will be appropriately insulated or buffered to ensure that no motor noise from them will be noticeable on a typical day at the boundary of the wastewater plant lot.

(ii) ~~An water circulation or~~ aeration system ~~and/or a surface floating intake has been installed~~will be installed in the 110-day holding ponds.

14. Public Facilities.

~~(a) — A fire station/EMC building site will be donated to Chatham County, but relocated and oriented to the entrance road to Briar Chapel, and a natural buffer will be undisturbed along the south side of Mann's Chapel Road at that location.~~

~~(b) — The applicant shall donate suitable sites for a water storage facility, library, charter and public schools, recreation facility acceptable to the County or the public body intended to benefit thereby, not substantially inconsistent with the approximate location and size as set forth in the master plan attached to the conditional use permit application and below. The applicant will cooperate with the County in the exact location and area of said facilities. Future maintenance of any public recreation facility shall be acceptable to the County. The school site shall be sufficient for an elementary or middle school facility up to 34 acres in area. The library facility, including parking and site work, shall be constructed by the developer, with input from the County, subject to satisfactory leaseback arrangements with the County or its assignee.~~

(a) Water Storage Tank Site: Applicant has constructed and donated to the County a 1 million gallon capacity water storage tank which is in use and fully operational at this time. The water storage tank and site have been conveyed to the County. This obligation has been fully satisfied.

(b) Public School Site: Applicant has deeded the public school site to the County and the school is open and operational. This obligation has been fully satisfied.

(c) Charter School Site: Applicant has deeded the charter school site to the Woods Charter School entity and the school is constructed and operational. This obligation has been fully satisfied.

(d) Fire Station/EMS Site: Applicant is prepared to deed an approximately three (3) acre site immediately. The fire department and the County are presently working through the details. Once the County has resolved open issues with respect to fire department and EMS, Applicant will deed the property.

(e) Park Site: Park site has been constructed and is in process of being deeded to County.

(f) Library: The County has determined that, in lieu of contributing and preparing a library site within the development, the Applicant shall be required to make an

\$80,000 in lieu payment to the County to allow the County the flexibility as to how to use that resource. Said payment shall be made within forty-five (45) days of final, unappealable approval of this amendment.

Upon completion of the items listed in paragraphs 14 (d) through (f), Applicant shall be deemed to have fully discharged all of its responsibilities with respect to the Public Facilities originally required for the Briar Chapel development.

Stipulations Related to Landscape Elements

15. Landscaping/Screening. All required screening and buffers shall be in place prior to issuance of a certificate of occupancy. Existing vegetation may be used to fully or partially fulfill the landscaping and buffer requirements of the County. The extent to which the same can be used shall be determined by the Planning Department prior to issuance of the ~~Zoning Determination~~ certificate of zoning compliance.

(a) ~~At the time of construction of the road entering Briar Chapel next to the Tripp property, A~~ a six-foot opaque fence has been ~~shall be~~ erected along the east side of the Ms. Tripp's property, consistent with NCDOT regulations, and landscaped on the side facing Ms. Tripp's property to the extent allowed by Ms. Tripp and landscaped with 6-8 foot tall trees on the east side of the fence. To the extent practicable, the ~~developer~~ Applicant shall meet and consult with Ms. Tripp to try to resolve any issues relating to the exact location and timing of the road in light of the stream buffer requirements and design criteria of the Compact Community ordinance as well as the requirements of NCDOT. Applicant has satisfied all obligations with respect to the Tripp property.

(b) Applicant has satisfied the obligation to construct ~~There shall be constructed~~ a pedestrian bridge and trail over Pokeberry Creek to connect Briar Chapel to Polks Landing Subdivision.

Miscellaneous Stipulations

16. Archaeological Survey. All archeological survey requirements set forth in the original Conditional Use Permit have been satisfied. A preliminary field reconnaissance archaeological survey to determine the existence or absence of any site of likely archaeological significance will be performed by a professional archaeologist (as listed on the NC Dept. of Cultural Resources website). The reconnaissance survey shall be performed in areas of ground disturbance which would adversely impact potential sites, such as areas of future roadways, active recreation areas to be graded, and lots to be developed (i.e. not including buffers, open space or irrigation areas). Areas determined by the NC Department of Cultural Resources, Archaeology/Historic Preservation Section as a low probability of likely significant sites are not required to be surveyed. Any site identified with likely archaeological significance shall have an intensive survey to determine significance. If a site is determined as a candidate for nomination to the "National Register of Historic Places" it shall be preserved or documented prior to preliminary plat submission. Any recommended intensive survey shall be performed prior to ground disturbing activity in the area of concern. The surveys shall be performed at Newland's expense.

17. Solid Waste Management Plan. A, ~~approved~~—~~detailed~~ solid waste management plan, including residential curbside recycling and solid waste pick-up, management for construction debris, and non-residential solid waste removal by a licensed contract removal company is in place and has been, shall be approved by the Planning Department, prior to the issuance of a Zoning Determination Permit. The final plans shall include a detail of proposed service. Solid waste services shall be at least comparable to County provided services, or make arrangements for differences in services.

18. Detailed Site Plan. The revised Master Plan attached hereto as Exhibit A (Exhibit D to the Application) and incorporated herein by reference is hereby approved as the applicable sketch plan in substitution for and replacement of the original master plan approved with the Conditional Use Permit. With regard to each phase, as it is submitted for preliminary plat approval, A ~~a final~~ detailed site plan, grading plan, utility/lighting plans, storm water management plan with hydraulic calculations, moderately priced dwelling plan and landscape plan for ~~said phase~~ the entire project area as a unified development shall be reviewed by Planning Staff for conformity with the Master Plan and the terms of this Amended Conditional Use Permit approved by the Planning Department before the issuance of any Zoning Determination Permit and such plans shall conform to the plans approved in the application and demonstrate compliance with all applicable conditions hereof and of the County's ordinances. Applicant must submit to the Planning Staff an updated Master Plan every two years from and after the approval date of this Amendment to reflect completed portions of the Master Plan and projected future portions of the Master Plan. Non-residential subdivision of the project area shall also require the ~~developer~~ Applicant to comply with the site plan requirements of the County's subdivision regulations, including approval thereof by the Board of Commissioners. Such subdivision review may allow modification of the ~~Mmaster site P~~ plan approved hereunder so long as not substantially inconsistent with this Amended permit.

19. Stages. If desired, the applicant may construct the project in stages or phases. Each such stage shall be subject to approval by the County pursuant to its subdivision regulations. No final plat of a stage or phase of the development shall be approved if there is any uncorrected violation of any provision of this permit. Upon subdivision review of each phase, the applicable Recreation and Open Space, Community Facilities, Community Design, including housing, standards of the Compact Community Ordinance provisions shall be satisfied. Such subdivision review may allow mutually agreeable modification of the standards referred to therein so long as not substantially inconsistent therewith. ~~For each phase, a "Zoning Determination Permit," as used elsewhere in this resolution, shall be issued by the Planning Department on a phase by phase basis, prior to the issuance of any building permit for structures in that phase.~~

20. Moderate Income Housing. With the consent of the Applicant, and as an approximately equivalent alternative to and in lieu of the housing standards for Moderate Income persons set forth in Option A of the Compact Community Ordinance, the developer shall contribute 2.5% of the approved lots in the overall development, or each phase if developed in stages, for ultimate sale as directed by the County to persons or families whose income is 80% or less of the Area Median Family Income standard by family size and shall contribute \$1,100,000.00 to the County for the purpose of ameliorating the housing needs of Chatham County citizens. Said contribution shall be payable to Chatham County on a prorated basis upon final subdivision plat approval of each phase of the development. Such contribution represents the approximate value of 2.5% of the approved lots in said overall development or phase thereof as applicable.

21. Environment. The lots on Bennett Mountain shall be relocated to lessen the impact of the development on the primary and secondary environmental areas as described in the Natural Areas Inventory. The Bennett Mountain areas will be one of the last areas for line installation and spray irrigation. If future regulatory changes, and/or approved system flow reductions, will ultimately result in this area not being needed for irrigation, lines will not be installed in this area unless otherwise required by the State. Before any lines are installed in the Bennett Mountain area, Newland will seek further flow reduction approval or other necessary state permission under the then existing applicable regulations so as not to be required to install irrigation lines in this area in order to comply with permit requirements and the then existing applicable regulations.

22. Erosion Control. If applicable, an erosion and sedimentation control plan be approved by the North Carolina Department of Environmental Health and Natural Resources or other authorized governmental entity and submitted to the Planning Department prior to the issuance of a Zoning Determination Permit.

23. Silt Control. The applicant shall take appropriate measures to prevent and remove the deposit of wet or dry silt on adjacent paved roadways.

24. Appeal. In the event it becomes necessary for the County to respond to or defend any action, cause of action, claim, or appeal involving this resolution or the decision taken herein, the applicant, its successors or assigns shall indemnify and hold the County harmless from all loss, cost or expense, including reasonable attorneys fees, incurred in connection with the defense of or response to any and all actions, causes of action, claims, demands, damages, costs, loss, expenses, and compensation, either known and unknown, resulting to or from this decision.

25. Fees. Applicant shall pay to the County all required fees and charges attributable to the development of its project in a timely manner, including, but not limited to, utility, subdivision, zoning, building inspection, recreation and impact fees established from time to time.

In addition to any fees or charges otherwise required by the County, the applicant shall pay or cause to be paid to the County as a voluntary contribution the sum of \$2,000.00 per dwelling unit upon the sale of each lot or unit.

26. Continued Validity. The continued validity and effectiveness of this approval was expressly conditioned upon the continued compliance with the plans and conditions listed above.

27. Non-Severability. If any of the above conditions is held to be invalid, this approval in its entirety shall be void.

28. Non-Waiver. Nothing contained herein shall be deemed to waive any discretion on the part of the County as to further development of the applicant's property and this permit shall not give the applicant any vested right to develop its property in any other manner than as set forth herein.

BE IT FURTHER RESOLVED that the Board of Commissioners of the County of Chatham hereby approves the application for an amendment to the conditional use permit in accordance with the plans and conditions listed above.

Adopted this the 15th day of February, 20~~12~~05, and signed the 21st day of March, 20~~12~~05.

BRIAR CHAPEL – General Application Requirements

1. LOCATION

Briar Chapel is located in northeastern Chatham County on US 15-501 just 5 miles south of Chapel Hill. The 1,589-acre site lies predominantly on the west side of US 15-501, which is currently being improved to four-lane divided highway status. In addition to the US 15-501 frontage, access to the site is provided by Taylor Road, Hubert Herndon Road, Andrews Store Road, and Manns Chapel Road. These multiple access points will ensure smooth traffic circulation to and from the development.

The site is within Baldwin and Williams Townships in the vicinity of some of the County's most intense land development located outside of the incorporated municipalities. This level of development is in conformance with the *Chatham County Land Development and Conservation Plan*, and reflects a regional trend of market demand and resulting increased growth on the perimeter of the larger employment centers of the greater Triangle region. The property currently is zoned RA-40, and it is believed that no conditional use permit has been granted previously for the property. The site is located within the WS-IV Protected Area of the reservoir watershed, allowing for up to 36% impervious surface (maximum of up to 24% in the Compact Communities zoning District).

Currently, the site consists primarily of forested land that has been farmed and timbered in the recent past. Several rural homesteads are on the property. The site topography is typical of the rolling hills of the North Carolina piedmont. Pokeberry and Wilkerson Creeks create the major drainage patterns through the property. Bennett Mountain, one of the areas identified in the *Inventory of the Natural Areas and Wildlife Habitats of Chatham County, North Carolina (1992)*, is located on the edge of the property near Pokeberry Creek.

A Duke Power easement runs east-west through the site. A smaller power easement runs through the site near Hubert Herndon Road. A natural gas pipeline easement runs through the western edge of the property.

Nearby and adjacent developments include Polk's Landing, Fearington Village, Chatham Subdivision, Cole's Plaza, Chatham Crossing, and Twin Lakes Golf Course.

2. PROJECT DESCRIPTION

See Preceding Section

3. SITE PLANS AND DRAWINGS

Site Plans and Drawings attached in Appendix A

BRIAR CHAPEL – General Application Requirements (cont.)

4. START AND COMPLETION PROJECTIONS

A compact community such as Briar Chapel will take a number of years to develop and for the market to absorb. During the span of years that the community is being developed, changes in the economy may cause the phasing projections to alter.

Market research performed for the Briar Chapel project indicates that after the initial year market absorption will reach at least 300 units per year, and this number is used to project the development schedule for the community.

It is anticipated that site development will begin in late 2005.

The first phase would consist of:

- The entrances off US 15-501 and Andrews Store Road
- Basic infrastructure for about 1100 dwelling units (to be developed in sub phases related to the 300 unit/yr absorption)
- Wastewater treatment facilities
- Recreation center
- Residential development in neighborhood clusters

First residential occupancy would occur in late 2006.

There presently is a need for additional commercial enterprises and businesses in northeastern Chatham County, and this need will continue to increase with the completion of the improvements to US 15-501 and the build-out of Briar Chapel. However, it is expected that the commercial areas of Briar Chapel will be developed only after initial phases of residential development have been occupied. The actual timing of the commercial phases ultimately will be determined by market demand; however, in accordance with the Compact Community Ordinance at least 25% of the total planned commercial area will be developed before 75% of the total allowed dwelling units have received final plat approval, and at least 50% of the total planned commercial area will be developed before 90% of the total allowed dwelling units have received final plat approval.

Property set aside for the school, elevated water tank and other county facilities will be available as soon as the roads to their proposed locations are constructed.

To summarize, it is projected that development of the project will span approximately 9 to 10 years, and will be completed in about 2014; subject to market and economic conditions.

BRIAR CHAPEL – General Application Requirements (cont.)

5. STATEMENT OF JUSTIFICATION FOR REZONING and REFERENCE TO EXISTING COUNTY PLANS

The proposed rezoning of the Briar Chapel property to the Compact Community Conditional Use District with a Conditional Use Permit to allow a compact community is in conformance with the *Chatham County Land Development and Conservation Plan*, and is in compliance with the recently adopted Compact Communities Ordinance, which includes the subject property within the area identified as eligible for the Compact Community District designation. There is no alleged error in the Zoning Ordinance.

Development of the property is permitted under the present zoning classification and would result in hundreds of septic tank lots with no commercial businesses, no local road improvements, no civic spaces, no public open space, no stormwater management, no buffers, no recreational amenities, no trail system, no new school or other County facilities, and most importantly, no sense of cohesive community. Compared with what can happen under the existing zoning, the proposed development offers a very positive impact to the vicinity and the health, safety and welfare of the community.

[See also the references to the Land Development Plan set forth in item #6: Five Affirmative Findings, Finding #1, Section 2.]

For explanation of compliance with each section of the Chatham County Compact Community Ordinance, please refer to the Ordinance Compliance Response section of this submittal document.

BRIAR CHAPEL – General Application Requirements (cont.)

6. FIVE AFFIRMATIVE FINDINGS

Briar Chapel is designed in accordance with the requirements of the Chatham County Compact Communities Ordinance, and consequently meets the five affirmative findings that are necessary to grant approval of a Conditional Use Permit.

The following is offered in positive affirmation of the five findings.

Affirmative Finding #1: The proposed land use is among those listed as an eligible conditional use in the district in which the subject property is located or is to be located.

1. Validation of Use in Zoning Ordinance –

The requested conditional use permit is eligible for the proposed site, in that:

- A compact community is a permitted use in the Compact Communities Conditional Use District.
- An application to rezone the site to the Compact Communities Conditional Use District is filed concurrently with the Conditional Use Permit.

2. Land Development Plan References –

The proposed Briar Chapel development is consistent with the *Chatham County Land Conservation and Development Plan* (the *Plan*) in a number of respects:

- A) The *Plan* identifies a land use category called “compact communities” and states: “To respect the traditional development patterns that are part of Chatham County’s heritage and character [small towns, mill villages, and crossroads communities], to reduce the need for costly infrastructure, to protect farmland and open space, to facilitate travel on foot, by bike, and by transit, and to promote a greater sense of community, the *Plan* supports development in compact communities.”
- The proposed Briar Chapel development is a “compact community” as described in the *Plan*.
 - The development is clustered into a central dense core with surrounding neighborhoods.

- Each neighborhood is within easy walking distance to a community center, public gathering space, improved open space, or some other focal point in order to promote social interactions, community spirit, pedestrian activities, and quality of life.
 - The development consists of a wide variety of land uses, including single-family homes, townhomes, apartments/condominiums, offices, retail and service establishments, restaurants, schools, public safety facilities, a library, public recreational facilities, neighborhood community centers, parks, trails and greenways, and preserved open space.
 - Homes in the community vary not only by type, but also by price and level of affordability.
 - Commercial development in the community is human-scale, not “strip development”.
 - The street pattern is an interconnected network resulting from a “grid” pattern being projected on the site’s existing topography. The “grid” is modified in order to preserve the site’s existing landforms, streams, and vegetation.
 - Sidewalks are to be along all streets, and a network of paths and trails will be woven throughout the open space to provide a thoroughly walkable and pedestrian friendly community. The pedestrian network is to include many paths that are also appropriate for use by bicyclists.
 - The “view from the road” is preserved with viewshed buffers, as well as through the implementation of lighting and signage standards that ensure the community will not be visually intrusive on adjacent roadways or neighboring properties.
 - A minimum 100-foot buffer is provided along the site’s perimeter edges that do not front streets.
 - The community’s location and availability of commuter parking supports the extension of public transit into the U.S. 15-501 corridor.
- B) The site is within the area identified in the *Plan* as appropriate for a compact community.
- C) Briar Chapel supports the policy objectives pertaining to compact communities as detailed in the *Plan*:
- *“Encourage development that includes a mix of uses.”*
 - Briar Chapel includes a wide variety of both residential and non-residential uses.
 - *“Site commercial uses along major highways in clusters at specific, designated locations; design these commercial sites to retain a rural crossroads or village character; and integrate these uses with other nearby development.”*
 - The largest commercial components of Briar Chapel are located along 15-501 near other development.

- The public infrastructure and population mass in the Briar Chapel vicinity make it an ideal location for commercial neighborhood activity centers.
- The design of the Briar Chapel commercial activity centers maintains the rural “view from the road”.
- *“Site commercial clusters/compact communities so that they might be able to be served by transit in the future, especially along 15-501 north of Pittsboro.”*
 - Briar Chapel’s concentration of residential density and commercial development adjacent to the highway will encourage the extension of mass transit into the U.S. 15-501 corridor.
- *“Site commercial clusters so that they extend up side roads off main thoroughfares rather than as strips along main thoroughfares.”*
 - While Briar Chapel’s major commercial centers are located adjacent to 15-501, they are oriented away from the highway and extend up side streets.
- *“Include consideration of housing diversity.”*
 - Briar Chapel includes a wide variety of housing types and ranges of affordability.
- *“Cluster new development near school sites and reserve future school sites in concentrated development areas.”*
 - Briar Chapel is located near existing and proposed school sites, and includes a new public school site and charter school site within the development.

D) Briar Chapel conforms with applicable major recommendations of the *Plan*:

- Major Recommendation #11--- *“Encourage shops and offices in Neighborhood Activity Centers within compact community corridors.”*
 - Briar Chapel includes a Village Center, a Village Market, and a Town Center in the US 15-501 compact community corridor. All three areas consist of a mix of uses, including shops and offices.
- Major Recommendation #17--- *“Implement a comprehensive plan and management framework for assuring water and wastewater systems viability so that development patterns, subdivision designs, and designation of economic development are based on sound soil and hydrologic science.”*
 - Briar Chapel will be a significant customer of the Chatham County water system, and will extend the public system infrastructure. Waterlines will be looped through the development to increase water pressure. A watertank site is to be provided within the community.

- The development will build a wastewater treatment and water reuse system to serve Briar Chapel and Herndon Woods. The system will utilize traditional tertiary treatment methods. Design and operation of the system meets current State requirements for wastewater treatment and management.
- Major Recommendation #19--- *“Evaluate the benefits and costs of establishing a county-wide Sediment and Erosion Control Ordinance.”*
 - The developer of Briar Chapel intends to utilize the strictest erosion control measures required by the State. The developer will have on-site construction management personnel dedicated to ensuring the control devices function at the highest level of efficiency. The development may serve as a prototype for the County to use in evaluating benefits and costs of sediment and erosion control measures elsewhere in the County’s jurisdiction.
- Major Recommendation #20--- *“Develop a program to promote water conservation and reuse measures.”*
 - Briar Chapel’s wastewater treatment system includes water conservation and reuse measures
- Major Recommendation #22 --- *“Integrate schools into neighborhoods, ensuring good road access, safety, and utility availability, and encourage new growth nearby.”*
 - A public school site and a charter school site are included within the Briar Chapel community. The sites have access onto Andrews Store Road, as well as direct connections to the County water system and the Briar Chapel community sewer system.
- Major Recommendation #23--- *“Use impact fees, impact taxes on new development, public dedication, adequate public facilities ordinances, and other strategies to help fund community facilities and programs, including schools, farmland protection and recreational and cultural facilities. Our goal is to ensure that new development pays for itself.”*
 - The Briar Chapel proposal includes the provision of land and infrastructure for two school sites, library site, recycling and refuse station, watertank site, satellite Sheriff’s office, and fire station and EMS location.
 - The County’s existing school impact fee of \$1,500 per dwelling unit will generate \$3.6 million for school construction by the project’s buildout.
 - In addition, Newland Communities has committed to pay a voluntary school impact fee of an additional \$2,000 per dwelling unit. These voluntary fees will generate an additional \$4.5 million by the project’s completion.
 - Altogether The Briar Chapel Community will provide a total of over \$8.1 million in capital funding for new school construction or expansion of existing schools.

- The Fiscal Impact Assessment for Briar Chapel indicates that the development will “pay for itself.”
 - Major Recommendation #25--- *“Plan for transit service, especially along the US 15-501 corridor.”*
 - Concentration of residential density and commercial activity at Briar Chapel will support future extension of public transit service down the 15-501 corridor.
 - Major Recommendation #26--- *“Review roadway design standards and revise as needed to ensure that the standards are the best match for the different types of development proposed in this plan, including support for pedestrian and bicycle travel, where appropriate and desired.”*
 - All Briar Chapel streets will include sidewalks. Paths, appropriate for both pedestrians and bicyclists, will be provided throughout the community’s open space.
 - Street designs will meet the NCDOT Traditional Neighborhood Development Standards, except in those outlying neighborhoods that are designed to feature a more rural character.
 - Major Recommendation #27--- *“Use site-based planning as a means of preserving the precious resources of Chatham County. Require that developers inventory the community resources existing on major proposals including botanical, historical, and water resources.”*
 - Botanical, historical, and water resources of Briar Chapel have been inventoried.
 - No federally protected plants or animals, or their habitats, have been found on-site.
 - A stream and wetland survey resulted in the identification of major streams and smaller tributaries. Perennial, intermittent, and ephemeral streams are to be buffered as required by the Compact Communities Ordinance. Wetlands are to be protected as required by federal law.
 - The locations of cultural and natural features included in the County inventory, as well as other features of interest, are mapped. As a result, the Briar Chapel development will preserve the portion of Bennett’s Mountain located on-site, a stone cistern, all cemeteries, specimen trees, significant landforms, and those historic structures (many are in ruins) that can be moved successfully to suitable locations on- or off-site.
- E) The *Plan* specifically recommends many of the land uses proposed for Briar Chapel as examples of uses to permit in compact communities. Those uses are single-family houses on small lots, townhouses, apartments, convenience stores, schools and other public facilities, offices, and shopping centers.
- F) Briar Chapel supports the value-based Goals identified in the *Plan*:

- *“More intensive land uses, e.g. commercial, high-density residential and industrial, are concentrated in or near Chatham County’s existing towns, in designated economic centers and in clustered and mixed use developments.”*
 - Briar Chapel is a clustered, mixed-use development between Pittsboro and Chapel Hill on the improved, four-lane Highway 15-501.
- *“An increased proportion of land is preserved as open space in areas under development.”*
 - Nearly 50% of Briar Chapel is preserved dedicated open space.
- *“A wide variety of housing options (categories, densities, locations, and prices) is available.”*
 - As a compact community, Briar Chapel sets a new standard for residential development in Chatham County, as well as increasing the diversity of housing type, price, and density.
- *“The County’s land use planning emphasizes clustered and mixed use development.”*
 - Briar Chapel is a clustered, mixed-use development.
- *“Chatham County’s natural resources are identified, conserved, and protected.”*
 - The design process for Briar Chapel included the identification of on-site natural resources. As a result, streams are buffered and preserved; low impact stormwater management and intensive erosion control measures are to be utilized; existing landforms and natural vegetation are to be preserved; 938 acres of open space are to be provided; and the wastewater treatment system includes reuse irrigation.
- *“Chatham County’s surface and underground water resources are effectively protected.”*
 - No septic tank systems will be used at Briar Chapel. The adjacent Herndon Woods neighborhood, now on septic systems, will be allowed to be connect to the Briar Chapel sewer system.
 - The reuse water of the Briar Chapel wastewater treatment system is to be treated as required by State law to minimize or eliminate potential pollutants, and will be applied in a manner that will not impact the groundwater system.

- *“Natural scenic areas are preserved.”*
 - Viewshed and perimeter buffers are provided to maintain existing views into the site from adjacent properties and roadways.
 - Bennett’s Mountain and other significant topographic features on the property are to be preserved.
 - 838 acres are to be maintained as unimproved open space.
- *“The County supports high quality, community-based schools and develops the financial wherewithal to fund them.”*
 - Briar Chapel includes both a public school site and a charter school site.
 - In addition to the \$3.6 million in mandated school impact fees, the developer also will voluntarily pay additional funds at a rate of \$2000 per unit (\$4.5 million) for new school construction or expansion of existing schools.
 - (Please refer to Appendix E, Fiscal Impact Assessment, for additional information related to schools.)
- *“Preserved open space and improved recreational opportunities are provided.”*
 - 938 acres of open space are provided within Briar Chapel. A network of trails and paths connects the various areas and promote pedestrian and bicyclist activities.
 - Briar Chapel is to include a variety of both indoor and outdoor recreational facilities that are scattered throughout the community.
 - Briar Chapel includes a County Park facility.
- *“Historic assets are preserved.”*
 - Briar Chapel includes the preservation of existing cemeteries and those historic structures (many are in ruins) that can be moved successfully to suitable locations on- or off-site.
- *“Long-term transportation, water supply, wastewater, and solid waste facilities are provided to accommodate desired development and support environmental goals.”*
 - The Briar Chapel proposal includes a number of off-site street improvements (detailed later in this section), extension and “looping” of the County water supply system, the provision of a watertank site, the service of a private solid waste contractor and a wastewater treatment facility.
 - Briar Chapel will provide curbside trash & recycling services eliminating the need for residents to carry their trash to a pickup center.

If approved, the proposed Briar Chapel conditional use rezoning clearly will carry out the intent of the *Chatham County Land Conservation & Development Plan*. In doing so, the development will help to achieve the four Desired Outcomes stated in the *Plan*:

- *Balanced Growth* --- by clustering higher density residential and appropriate commercial development in areas of existing infrastructure in conformance with the Compact Communities Ordinance.
- *An Adequate and Diverse Housing Supply* ---by providing a wide range of housing types and prices, including affordable units.
- *Conserved and Protected Natural Resources* ---by preserving 838 acres of unimproved open space of a total 938 acres of open space, streams and their buffers, and natural vegetation; by utilizing low impact stormwater management measures; by employing water reuse technology; and by recycling construction waste and utilizing recycled building materials to the extent possible.
- *Commercial Endeavors* ---by incorporating a wide-range of commercial establishments at various locations within the development.

Affirmative Finding #2: The requested conditional use permit is either essential or desirable for the public convenience or welfare.

1. Need and Desirability

- The need and desirability of the proposed compact community is evidenced by the *Chatham County Land Conservation and Development Plan* identification of compact communities as a development goal.
- Briar Chapel is designed to meet the requirements of the Compact Communities Ordinance, which was adopted to implement the *Plan*.
- Market surveys, as well as the success of other residential developments within the County, demonstrate the demand and need for a compact community in northeast Chatham County such as that proposed by this application.

2. Survey of Similar Uses

- Briar Chapel is the first compact community proposed in Chatham County, and so there is no similar use. However, there are other planned residential communities (i.e. The Preserve, Governor's Club, Fearrington Village) that have been successfully developed in the County.

3. *Public Provided Improvements* – Briar Chapel will provide the following:

- A public park and recreational facilities.
- A Chatham County Board of Education public school site and a charter school site.
- Locations are to be reserved for a Sheriff satellite office, a fire station, and an EMS station.
- The public water system will be extended through the development and “looped” to increase fire-fighting capability. Stormwater and other holding ponds will be available to the fire department for pumping.
- A community wastewater treatment facility will be constructed to serve the development.
- Off-site road improvements will be constructed as described in Finding #3.
- Over 50% of the site will be dedicated open spaces, including Bennett’s Mountain and areas along Pokeberry and Wilkerson creeks.
- Solid waste removal and recycling will be by a private contractor.
- Construction waste and clearing debris will be recycled as possible.

In addition to the above list of gifts and improvements, Newland Communities will continue to explore ways to reduce public service demands with Chatham County officials.

4. *Tax Considerations* – Please refer to Appendix E, Fiscal Impact Assessment.

5. *Employment*

Briar Chapel will create employment opportunities 1) during the construction phase, 2) through the inclusion of the non-residential uses within the development, and 3) by the introduction of additional businesses and new jobs in the community that will be created to serve the residents. Per the economic impacts shown in appendix E herein, approximately 1400 new construction jobs and 2400 permanent jobs will be created through the development of Briar Chapel.

Affirmative Finding #3: The requested permit will not impair the integrity or character of the surrounding or adjoining districts, and will not be detrimental to the health, safety, or welfare of the community.

Chatham County strategic plans have encouraged and guided the many changes which have occurred in northeastern Chatham County. This is detailed in the “Statement of Justification” section of this report, and specific references to the Plan are made in Section 2 of Affirmative Finding #1. Briar Chapel is compatible with these changing conditions, and will in fact integrate the various components of change (a four-lane highway, upgraded water supply system, and isolated pockets of suburb development) into a community.

Development of the property is permitted under the present zoning classification and would result in hundreds of septic tank lots with no commercial businesses, no local road improvements, no civic spaces, no public open space, no stormwater management, no buffers, no recreational amenities, no trail system, no new school or other County facilities, and most importantly, no sense of cohesive community. Compared with what can be developed under the existing zoning, the proposed development offers a very positive impact to the vicinity and the health, safety and welfare of the community.

Most importantly, however, the proposed Briar Chapel development is consistent with the newly adopted Compact Communities Ordinance and supports the goals of the *Chatham County Land Conservation and Development Plan*. (See Finding #1 above.)

1. Emergency Services

- The public water system is to be extended and “looped” to provide better fire-fighting capability. Additionally, the project’s reuse water holding ponds and stormwater ponds will be available to the fire department for pumping.
- Locations are to be reserved for a Sheriff satellite office, a fire station, and an EMS station.
- (Please refer to Appendix E, Fiscal Impact Assessment, for funding of additional sheriff’s deputies, fire protection services, etc.)

2. Traffic Impact (Please see Appendix F, Transportation Impact Assessment – Excerpt. The full report is submitted as an addendum to this application, and incorporated here by reference. Copies are available in the Chatham County Planning Office.)

Briar Chapel is designed to disperse traffic through several access points in order to minimize potential negative impacts to the existing road network. As recommended by the Transportation Impact Assessment, performed by Kimley-Horn, Newland Communities will make the following phased road improvements, to the extent allowed and approved by the North Carolina Department of Transportation:

- US 15-501 and Mann’s Chapel Road - add northbound and southbound through lanes on US 15-501, extend the dual left turn lanes on Mann’s Chapel Road to provide 500 feet of full-width storage
- Lystra Road and Jack Bennett Road - add northbound right turn lane on Jack Bennett Road, install traffic signal when warranted
- Lystra Road and Farrington Road – add southbound right turn lane on Farrington Road (needed currently), modify signal phasing to split phase for Lystra Road

- US 15-501 and Vickers (Project Entrance) – construct separate left and thru/right lanes eastbound, install a traffic signal with pedestrian signals when warranted
- US 15-501 and Taylor Road – construct separate left and thru/right lanes eastbound and westbound, install traffic signal with pedestrian signals, when warranted extend northbound left turn storage on US 115-501 to provide 350 feet of full-width storage
- US 15-501 and Andrews Store Road - construct separate left and thru/right lanes eastbound and westbound, install traffic signal with pedestrian signals when warranted
- US 115-501 and Mt. Gilead Church Road - add westbound right turn lane on Mt. Gilead Church Road (needed for background traffic)
- Hamlet's Chapel Road and River Forest Road - install four-way stop
- Mann's Chapel Road and Andrews Store Road – extend right turn lane to provide 150 feet of full-width storage on Mann's Chapel Road
- Andrews Store Road and Project South Entrance – construct separate left and right turn lanes southbound, construct left turn and right turn lanes on Andrews Store Road, install traffic signal with pedestrian signals when warranted
- Andrews Store Road and Project Secondary South Entrance - construct separate left and right turn lanes southbound, construct left turn and right turn lanes on Andrews Store Road
- Mann's Chapel Road and Project North Entrance – construct separate left/thru and right turn lanes northbound, install four-way stop, install traffic signal with pedestrian signals when warranted

3. *Impact to surrounding Land Values*

As the compact community is deemed to be a desirable form of development in the *Chatham County Land Conservation and Development Plan*, and Briar Chapel is designed to conform to the Chatham County Compact Communities Ordinance, the development should have no negative impact to surrounding land values.

4. *Visual Impact & Screening*

- Briar Chapel is to have viewshed and perimeter buffers that conform to the Compact Communities Ordinance. With the buffers in place, the community will have little visual impact on adjacent properties and roadways.

- Briar Chapel Design Guidelines incorporate the proposed Chatham County Lighting Ordinance and the Planning Board adopted Commercial and Industrial Design Guidelines for Signage. These standards ensure that the development will have no negative visual impact on adjacent properties and roadways.

5. *Lighting*

- Briar Chapel Design Guidelines incorporate the proposed Chatham County Lighting Ordinance. (Please refer to Appendix C, Design Guidelines.)

6. *Noise*

- Restrictive Covenants will limit the times of deliveries and trash removal to normal daytime business hours (7 a.m. to 7 p.m.).
- Normal noise generated by the development is anticipated to be within reasonable decibel limits.

7. *Chemicals, Biological, and Radioactive Agents*

- The only chemicals to be used at Briar Chapel will be lawn fertilizers, which will be used in appropriate amounts as specified in the detailed agronomy report in appendix J herein. In the case of the landscape maintenance within common areas, these will be monitored carefully so as not to increase nitrogen loading in the streams. No radioactive materials will be utilized at this site.

8. *Signs*

- Briar Chapel Design Guidelines incorporate the Planning Board adopted Commercial and Industrial Design Guidelines for Signage. (Please refer to Appendix C, Design Guidelines.)

Affirmative Finding #4. The requested permit will be consistent with the objectives of the Land Development Plan.

1. *Nodal Development Considerations*

Briar Chapel is within the Compact Communities area designated in the *Chatham County Land Conservation & Development Plan*.

2. *Land Development Plan Reference* -- Please refer to Finding #1.

3. *Watershed Considerations*

The site lies in the WS-IV-PA district, which is a protected watershed of the Jordan Reservoir.

- Briar Chapel maximum impervious surface limitation meets the 24% allowed within Compact Communities.
- Streams are to be buffered as required in Compact Communities, and stormwater management will include low impact facilities. (Please refer to Appendix H, Stormwater.)

Affirmative Finding #5. Adequate utilities, access roads, drainage, sanitation and/or other necessary facilities have been or are being provided.

1. Water Source and Requirements

Briar Chapel will be served by extension (at developer's cost) of the Chatham County water system. In addition Briar Chapel will be constructing a plus or minus million gallon water tank to supplement the county's system.

2. Wastewater Management

Briar Chapel is to be served by an on-site tertiary wastewater treatment plant, and a reuse irrigation system. The system will be provided by the developer, operated by a licensed private company, and regulated by the North Carolina Utilities Commission and the Division of Water Quality of the North Carolina Department of Environment and Natural Resources. (Please refer to Appendix L, Reclamation Facility and Appendix M, Spray Irrigation, for a more complete description of the wastewater treatment system.)

3. Access Roads

Access to Briar Chapel will be provided primarily by two connections directly to US 15-501, which currently is being widened to a four-lane divided highway by NCDOT. Secondly, access will be provided by one connection to Mann's Chapel Road, and four connections to Andrews Store Road. All internal roads will be designed and constructed to NCDOT standards, and will be turned over to DOT for public maintenance. Please see Finding #2 for a list of proposed off-site road improvements.

4. Stormwater Runoff

Please refer to Appendix H, Stormwater. The design of Briar Chapel will protect existing drainage patterns and comply with the Compact Communities Ordinance requirements, which exceed all applicable watershed protection regulations. (Please see Finding #4.)

February 12, 2012

Mr. Lee Bowman
Newland Communities
16 Windy Knoll Circle
Chapel Hill, NC 27516

Subject: Briar Chapel Fiscal Analysis

Dear Mr. Bowman,

In conjunction with the application to amend the original Briar Chapel Conditional Use Permit (CUP), you requested Development Planning & Financing Group (DPFG) prepare a technical memorandum regarding the fiscal analysis prepared by Miley, Gallo & Associates, LLC and dated June 8, 2004.

The Government Finance Officers Association (GFOA)¹ outlines the most common methods for estimating service costs in fiscal impact analysis as: average cost, marginal cost, comparisons to other governments and econometric modeling.

- **Average Cost** assumes the current cost of serving residents and businesses will equal the cost of serving the new development. The average cost method provides a rough estimate of both direct and indirect costs associated with development. However, this method does not account for demographic change, existing excess capacity or potential economies of scale in service delivery. Methods of calculating average cost include per capita costs, service standard costs and proportional valuation costs.
- **Marginal Cost** uses site-specific information to determine services costs for a proposed development. A case study approach is typically necessary to gather detailed information about the existing capacity within public services and infrastructure to accommodate growth from a development project. This method assumes that information about local service levels and capacity is more accurate than standards based on average data.
- **Comparable Governments** incorporate the experience by similar governments with comparable development projects. Studying other governments before and after specific projects can provide useful information in determining additional costs and the increase in costs over a long period of time.
- **Econometric Modeling** uses complex econometric models and is best used for estimating impacts from large projects that create many indirect effects on the existing community such as a utility plant or an entertainment center.

¹ Michael J. Mucha, "An Introduction to Fiscal Impact Analysis for Development Projects," (white paper, Government Finance Officers Association, 2007), www.gfoa.org



The 2004 Briar Chapel fiscal impact analysis was prepared using a modified per-capita, case study approach. The assumptions, methodologies and conclusions were ratified in the peer review report prepared by Tischler & Associates, Inc. and dated August 20, 2004.

The application to modify the Briar Chapel CUP does not contemplate a change in total residential units or commercial square footage. The modifications primarily relate to the relocation of existing, approved land uses to respond to evolving market trends. As such, the validity of the original fiscal impact analysis remains intact. However, we share the following observation.

Development of the public school student generation rate (SGR) assumption was of significant importance to the 2004 fiscal analysis. Based on an extensive county-specific study, an SGR of 0.40 students per housing unit was assumed in 2004. According to the Chatham County Schools, the actual SGR for Briar Chapel today is 0.20 and is calculated by dividing 44 Chatham County public school students divided by 224 occupied homes. The result indicates the SGR experienced thus far in Briar Chapel is 50 percent of the original estimate, which is unquestionably favorable to Chatham County.

In comparison, the current countywide SGR is 0.32 public school students per housing unit indicating Briar Chapel's SGR is trending almost 40 percent less than the countywide average.

Please let us know if you have any questions or comments.

Sincerely,

A handwritten signature in cursive script that reads "Lucy L. Gallo".

Lucy L. Gallo
Principal

GENERAL AND LIMITING CONDITIONS

Every reasonable effort has been made to ensure that the data contained in this report are accurate as of the date of this study; however, factors exist that are outside the control of DPFG and that may affect the estimates and/or projections noted herein. This study is based on estimates, assumptions and other information developed by DPFG from its independent research effort, general knowledge of the industry, and information provided by and consultations with the client and the client's representatives. No responsibility is assumed for inaccuracies in reporting by the client, the client's agent and representatives, or any other data source used in preparing or presenting this study.

This report is based on information that was current as of February 2012, and DPFG has not undertaken any update of its research effort since such date.

Because future events and circumstances, many of which are not known as of the date of this study, may affect the estimates contained therein, no warranty or representation is made by DPFG that any of the projected values or results contained in this study will actually be achieved.

Possession of this study does not carry with it the right of publication thereof or to use the name of DPFG in any manner without first obtaining the prior written consent of DPFG. No abstracting, excerpting or summarization of this study may be made without first obtaining the prior written consent of DPFG. Further, DPFG has served solely in the capacity of consultant and has not rendered any expert opinions. This report is not to be used in conjunction with any public or private offering of securities, debt, equity, or other similar purpose where it may be relied upon to any degree by any person other than the client, nor is any third party entitled to rely upon this report, without first obtaining the prior written consent of DPFG. This study may not be used for purposes other than that for which it is prepared or for which prior written consent has first been obtained from DPFG. Any changes made to the study, or any use of the study not specifically prescribed under agreement between the parties or otherwise expressly approved by DPFG, shall be at the sole risk of the party making such changes or adopting such use.

This study is qualified in its entirety by, and should be considered in light of, these limitations, conditions and considerations.



Kimley-Horn
and Associates, Inc.

February 15, 2012

■
P.O. Box 33068
Raleigh, North Carolina
27636

Mr. Lee Bowman
Newland Communities
16 Windy Knoll Circle
Chapel Hill, North Carolina 27516

Re: Briar Chapel CUP Amendment
Chatham County, North Carolina

Dear Mr. Bowman:

Kimley-Horn and Associates, Inc. has reviewed the traffic generation potential of the proposed changes to the Conditional Use Permit (CUP) for the Briar Chapel development in Chatham County, North Carolina. It is our understanding that the proposed changes would allow for more flexibility in the mix of uses in the Village Center [called the "Traditional Neighborhood" in the *Briar Chapel Transportation Impact Assessment* (TIA) dated June 2004] as well as in the Village Market [a.k.a. "North Garden"] and the Town Center [a.k.a. "Southern Mixed-Use Village"] on US 15-501.

Village Center

While the June 2004 TIA included 12,000 square feet (SF) of specialty retail space in this neighborhood, the existing Briar Chapel CUP actually only allows for up to 10,000 square feet of retail space. Table 1 shows the trip generation potential of the Briar Chapel development from the June 2004 TIA and the updated trip generation with only 10,000 SF of retail space in the Traditional Neighborhood.

It is our understanding that with the amended CUP, little to none of the permitted retail space in the Traditional Neighborhood may actually be developed. Table 1 also shows the trip generation potential of the site if none of this retail space is constructed.

Table 1 shows that the land uses in the existing CUP generate approximately 62 fewer net new external daily trips, 10 fewer net new external AM peak hour trips (5 fewer in, 5 fewer out), and 3 fewer net new external PM peak hour trips (1 fewer in, 2 fewer out) than what was analyzed in the June 2004 TIA. It also shows that if none of the approved Traditional Neighborhood retail space is constructed, the trip generation potential of Briar Chapel would be reduced by 400 net new external daily trips, 175 net new external AM peak hour trips (84



fewer in, 91 fewer out), and 36 net new external PM peak hour trips (15 fewer in, 21 fewer out). Therefore, the anticipated trip generation for the Village Center with the proposed CUP amendment would be the same or less than the trips generated for the same area in the June 2004 TIA. Detailed trip generation spreadsheets are attached.

Table 1 ITE Trip Generation Comparison							
Scenario	Daily Total	AM Peak Hour			PM Peak Hour		
		Total	In	Out	Total	In	Out
June 2004 TIA - Total Net New External Trips	31,491	3,317	1,523	1,794	3,191	1,704	1,488
Approved CUP (10,000 SF Retail in Village Center)	31,429	3,307	1,518	1,789	3,188	1,703	1,486
Difference vs. June 2004 TIA	-62	-10	-5	-5	-3	-1	-2
With No Retail in Village Center	31,091	3,142	1,439	1,703	3,155	1,689	1,467
Difference vs. June 2004 TIA	-400	-175	-84	-91	-36	-15	-21

Village Market and Town Center

While the June 2004 TIA included 240,000 SF of retail space (200,000 SF of general retail and 40,000 SF of specialty retail) and 270,000 SF of office space between the Village Market at US 15-501 and Briar Chapel Parkway and the Town Center at US 15-501 and Taylor Road, the existing Briar Chapel CUP actually only allows for 230,000 SF of retail space and 270,000 SF of office space in these parcels. Table 2 compares the trip generation potential of the approved CUP uses to the trip generation of the commercial land uses assumed for these parcels in the June 2004 TIA.

Table 2 shows that the commercial land uses in the Village Market and Town Center approved in the existing CUP generate approximately 428 fewer daily trips, 49 fewer AM peak hour trips (24 fewer in, 25 fewer out), and 24 fewer PM peak hour trips (11 fewer in, 13 fewer out) than what was analyzed in the June 2004 TIA.



Table 2 Village Market & Town Center Trip Generation Comparison								
Land Use	Size	Daily Total	AM			PM		
			Total	In	Out	Total	In	Out
June 2004 TIA								
General Office	270,000 s.f.	2,866	415	365	50	381	65	316
Specialty Retail	40,000 s.f.	1,749	312	150	162	117	52	65
General Retail	200,000 s.f.	10,656	237	145	92	989	475	514
Subtotal		15,271	964	660	304	1,487	592	895
Approved CUP								
General Office	270,000 s.f.	2,866	415	365	50	381	65	316
Specialty Retail	30,000 s.f.	1,321	263	126	137	93	41	52
General Retail	200,000 s.f.	10,656	237	145	92	989	475	514
Subtotal		14,843	915	636	279	1,463	581	882
Difference vs. June 2004 TIA		-428	-49	-24	-25	-24	-11	-13

Based on the analyses presented herein, none of the proposed changes to the Briar Chapel CUP are expected to result in an increase in the trip generation potential or overall traffic impact from the approved June 2004 TIA.

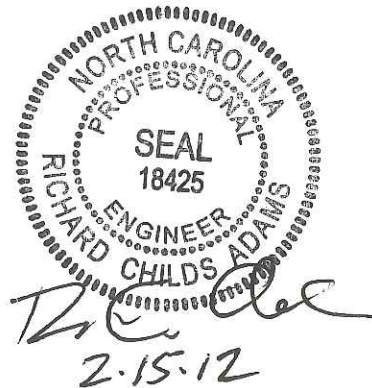
If you have any questions concerning our analysis, please do not hesitate to contact me at (919) 677-2131 or Travis Fluitt at (919) 653-2948.

Sincerely,

KIMLEY-HORN AND ASSOCIATES, INC.

Richard Adams, P.E.
Vice President

RCA/tf





Wetland and Natural Resource
Consultants, Inc.



February 10, 2012

Nicolas P. Robinson
Bradshaw & Robinson, LLP
128 Hillsboro St.
Pittsboro, NC 27312

Dear Mr. Robinson,

The purpose of this letter is to render my professional opinion, after review of the relevant and applicable documentation, that the findings of the Environmental Impact Assessment (September, 2004) for the Briar Chapel development will not change as a result of the proposed redistribution of approved lots presented in the current Briar Chapel CUP Amendment. Further, the redistribution of the approved lots honors all preserved stream buffers, wetlands and openspace.

I have reviewed the following documents and their amendments:

- Environmental Impact Assessment, Briar Chapel (June 2004)
- Environmental Impact Assessment, Briar Chapel (September 2004)
- NC Division of Water Quality 401 Water Quality Certification
- US Army Corps of Engineers 404 Wetland Permit
- Approved stream buffer plats

The proposed CUP modification does not change Newland's pre-existing commitment to specific mitigative measures and practices identified in the approved Environmental Impact Assessment (September 2004, Section 7). Measures that mitigate impacts include but are not limited to the following:

- Stream Buffer Preservation
- Wetland Preservation required by Corps and NC DWQ
- Openspace Preservation
- Stormwater Management
- Sediment and Erosion Control

There will be no additional adverse environmental impacts so long as the approved stormwater management strategies and the wetland and stream buffers are maintained. In fact, minor adjustments that result in lower density development being adjacent to openspace and buffered areas could arguably improve wildlife habitat because these areas will have increase vegetative cover and less run-off.

A handwritten signature in black ink, reading 'Chris Huysman'.

Chris Huysman
336 / 406.0906

BRIAR CHAPEL – Amended (February 2012) Ordinance Compliance Response

Chatham County - Compact Communities Ordinance

SECTION 3. PURPOSE

This ordinance is found to be necessary and appropriate in order to:

- A. Help implement the *Chatham County Land Conservation and Development Plan*;
- B. Protect Chatham County's rural character by adequately buffering compact communities from neighboring properties and roadways;
- C. Promote new communities that support mixed-use development, anchored by a village center composed of commercial, civic, and residential uses that add to Chatham County's tax base, help residents meet their daily needs, and preserve Chatham County's small-town atmosphere;
- D. Allow for compact village-style development surrounded by protected green space, at a size that is easily walkable and bikable by residents of all ages;
- E. Help meet the need for community facilities such as schools, stations for police, fire and EMS, recreation facilities, solid waste/recycling collection centers, libraries, and community centers on sites that are physically integrated into the community;
- F. Ensure sustainable water provision and wastewater treatment in a way that does not create a future economic burden for the taxpayers of Chatham County;
- G. Protect Chatham County's water quality and water resources, minimize its energy use, reduce household transportation costs, and protect its air quality;
- H. Establish a grid network of streets that provides multiple connections to different destinations, includes safe places for pedestrians and bicyclists to travel throughout the community, and allows for efficient transit service when and if it becomes available;
- I. Include a mix of housing types that are architecturally consistent, designed to promote safe, walkable neighborhoods, and affordable to a range of residents in Chatham County;
- J. Include neighborhood parks, active recreation areas, and larger open spaces throughout the community that are linked together by sidewalks and trails;
- K. Provide greater environmental, economic, and social benefits to Chatham County when compared with conventional development.

Response: As set forth in detail in the narrative description of the development, and specifically the offered, positive affirmations of the five findings, as well as in the information provided demonstrating compliance with each section of the Ordinance, Briar Chapel is consistent with and furthers the goals of this Ordinance.

No change.

SECTION 4. JURISDICTION

The provisions of this ordinance shall be applicable in all zoned areas of Chatham County, exclusive of the municipalities located therein and their extraterritorial jurisdictions, subject to the location provisions contained in Section 6.1 of this ordinance.

*Response: Acknowledged. **No change.***

SECTION 6. LOCATION AND SIZE

6.1 Location

Compact communities shall only be allowed in areas that meet all of the following conditions:

A. Currently zoned for RA-40 Residential-Agricultural;

Response: The subject property is zoned RA-40. No change.

B. Designated as either:

- WSIII – BW (Balance of Watershed)
- WS IV – PA (Protected Area)
- Local Watershed Area (LWA)

Response: The subject property is located within the WS IV-PA (Protected Area) of the Lake Jordan Watershed. No change.

C. Have at least one access point that is within one (1) mile from a four-lane principal or minor arterial, as measured along the centerline of area roadways; and

Response: The subject property has three access points within one mile of a four-lane principal arterial, as measured along the centerline of area roadways. No change.

D. Are located within the portion of Northeast Chatham County that is:

- Bounded by U.S. 15-501 on the east, Andrews Store Road on the south, and Mann's Chapel Road on the west and north; and/or
- Within 1,700 feet of U.S. 15-501 on its eastern side, and is south of the U.S.15-501 intersection with Mann's Chapel Road, and north of the U.S. 15-501 intersection with Andrews Store Road; and/or
- Within one-half mile of Andrews Store Road on its southern side, and is east of the intersection with Andrews Store Road and Mann's Chapel Road, and is west of the intersection of Andrews Store Road and U.S. 15-501.

Response: A text amendment included herein or submitted separately, but at the same time, is requested in order to clarify the language of Section 6.1.D and to affirm conclusively that subject property lies within the boundaries described above. No change.

6.2 Maximum Size

No compact community shall include more than two thousand five hundred (2,500) dwelling units.

Response: 2,389 dwelling units are proposed within the Briar Chapel community. No change.

6.3 Residential Density (Maximum and Minimum)

Each compact community shall be allowed a maximum overall residential density of no more than two (2) dwelling units for each acre of gross land area in the project. Accessory units shall count as one half (1/2) a dwelling unit for the purposes of this calculation. Spray fields located off the project area shall not count as part of the project for the purposes of the maximum residential density calculation.

The minimum net residential density shall be at least five (5) units per net acre as measured by the total number of residential units divided by the total area excluding community facilities, street rights of way, buffers, open space, and non-residential areas .

Reponse: 1.5 dwelling units per each acre of gross land area are proposed. 6.64 minimum net density is proposed. No change.

6.4 Maximum Built-upon Area

To maintain a base level of watershed protection, the overall maximum built-upon or impervious area for a compact community shall be no greater than twenty-four percent (24%) of the total project area.

Response: The overall project maximum impervious surface area will be no greater than 24% (to be monitored throughout the construction process) and will likely be considerably less than 24%. No change.

6.5 Minimum Commercial Area

Each compact community shall include not less than one hundred thousand (100,000) square feet of commercial development.

At least twenty-five percent (25%) of the total planned commercial area) shall be developed before seventy-five percent (75%) of the maximum allowable dwelling units shall receive final subdivision plat approval.

At least fifty percent (50%) of the total planned commercial area) shall be developed before ninety percent (90%) of the maximum allowable dwelling units shall receive final plat approval.

Response: 252,000 square-feet of commercial development is proposed. The commercial components of the project will be developed in accordance with the Ordinance requirements.

SECTION 7. WATER AND WASTEWATER

*All requirements of this section will be satisfied as demonstrated by the maps and reports enclosed with this application. **No change.***

7.1 Water Provision

Each compact community shall be served by public water provided by Chatham County that is adequate to serve the reasonable needs of the community and that complies with all applicable regulations of the County.

Response: The Briar Chapel Community will be served by public water provided by Chatham County and will be designed in accordance with the Chatham County Public Works Water System Specifications and Details. The water system design will incorporate design parameters recommended by Mr. Steve Talbert, Chatham County Public Works Director during a meeting on April 5, 2004. More details regarding these recommendations are included in Appendix O.

*As part of the Briar Chapel water system, a water tank has been ~~will be~~ constructed by Briar Chapel in accordance with the recommendations of the water supply study conducted for Chatham County. Finally, in an effort to abide by the Green Building Guideline for Compact Communities in Chatham County that encourages water conservation and reuse, the Briar Chapel community will incorporate water conserving fixtures and wastewater will be reclaimed and spray irrigated within the community as described in greater detail in Appendix M. **Other than as indicated, no change.***

7.2 Wastewater Treatment

General Design Standards

The following are general wastewater options available for compact communities:

Off-site: Send wastewater to existing municipal treatment plants or construct new centralized wastewater treatment facilities;

*Response: There is no known off-site public wastewater treatment system in Chatham County, in the vicinity of the proposed Briar Chapel community, that has the capacity to accept the projected 750,000 gallons per day of flow to be generated. **No change.***

Hybrid: Treat wastewater on-site and pipe treated water to an existing municipal treatment plant or new centralized wastewater treatment facilities; or

*Response: For the same reason cited above for off-site treatment, delivering partially treated flow would not be a viable option since there is no known off-site public wastewater treatment system in Chatham County, in the vicinity of the proposed Briar Chapel community, that has the capacity to accept the projected 750,000 gallons per day of flow to be generated. **No change.***

On-site: Treat wastewater on-site and distribute treated water onto the land surface via irrigation system(s).

*Response: This selected alternative not only eliminates the need for an off-site treatment facility but also promotes water reclamation and reuse as recommended by the Triangle J Council of Governments' High Performance Guidelines meets the division of water quality's preferred disposal method. This option was not selected until an investigation was undertaken to determine that the use of a spray irrigation system was a viable alternative. Based on the land plan developed for the property, the project site will contain sufficient open lands and common areas to provide ample area for irrigating the reclaimed water. Furthermore, the site investigations performed found that the application of the reclaimed water will meet the requirements of the Environmental Management Commission's regulations governing reclaimed water irrigation systems. **No change.***

Wastewater collection, treatment, distribution and storage systems for compact communities must apply technologies approved by the State of North Carolina, with facilities and operating programs approved by the State of North Carolina, and with operations that are effectively monitored by the State.

Response: The collection, treatment, and distribution/disposal systems planned for the Briar Chapel community will employ proven, state-of-the-art technology as described below.

Wastewater Collection

The Briar Chapel community will consist of a wastewater collection system that includes both gravity sewer and low-pressure sewer. Gravity sewer systems are the traditional system of choice for areas where the topography allows such collection and are commonly approved by the State of North Carolina. Low-pressure sewer systems are not only an approved collection alternative in North Carolina but also offer a number of advantages over conventional systems. For example, similar to water force mains, low-pressure sewage collection force mains are buried at a minimal depth thereby minimizing maintenance difficulties by minimizing the extent of gravity sewer that is buried deeply. In addition, low-pressure sewer systems are not vulnerable to either inflow from overland storm flow that typically enters sanitary sewers through leaks around manhole covers or infiltration from groundwater entering through leaking pipe joints and manholes. More details regarding the wastewater collection system are included in Appendix N.

Wastewater Treatment

<i>The reclamation facility will utilize the Division of Water Quality (DWQ) required components to achieve a level of treatment necessary for "reclaimed water system" spray irrigation. The following treatment levels will be required based on current State regulations: Daily Maximum</i>		<i>Monthly Average</i>	
<i>BOD₅</i>	<i>15 mg/l</i>	<i>10 mg/l</i>	
<i>Total Suspended Solids</i>	<i>10 mg/l</i>	<i>5 mg/l</i>	
<i>Ammonia</i>	<i>6 mg/l</i>	<i>4 mg/l</i>	
<i>Fecal Coliform</i>	<i>25/100 ml</i>	<i>14/100 ml (geometric mean)</i>	
<i>Turbidity</i>	<i>10 NTU</i>	<i>10 NTU</i>	

As required by Administrative Code Section 15A NCAC 2H:.0200 regulation, the reclamation facility will produce a tertiary effluent. In order to achieve these levels, the facility will consist

of a conventional extended aeration plant with tertiary filters and dual disinfection systems. Furthermore, the treatment process will include phosphorus removal. Please see the Briar Chapel Reclamation Facility System Report included in Appendix L for a complete description of the treatment processes.

Storage and Spray Irrigation Systems

*Spray irrigation is a proven and acceptable means of disposing of reclaimed water in North Carolina. These systems have been approved for a number of communities in North Carolina including several in the Piedmont region. The storage and spray irrigation system will be designed with considerable redundancy and ease of operation in order to ensure successful utilization of these facilities. To that end, the reclaimed water system will be divided into essentially (3) redundant operating systems within the project. These systems are referred to as the Central, West Side, and East Side Reuse Districts. A description of each of these districts is provided in the Briar Chapel Community, Chatham County Reclaimed Water Storage and Utilization report included in Appendix M. In general, each district will include one of three inclement weather storage ponds. The irrigation pump stations located within each district will be capable of delivering irrigation supply to the sprayable acreage within that district as well as to the storage facilities located in the adjacent districts. A central maintenance and operations facility will also be located adjacent to the water reclamation facility. This location will house a project irrigation management office with central management software. An on-site weather station providing continuous monitoring of weather conditions, rainfall events, evapo-transpiration (ET), etc. will be located adjacent to the operations center. **No change.***

Location, Ownership, and Sizing of Wastewater Facilities and Spray Fields

Compact communities shall be served by wastewater collection, treatment, distribution and storage systems that are adequate to serve the reasonable needs of the community and comply with all applicable regulations. Compact communities shall:

- Locate the wastewater treatment facilities and infrastructure within the project boundaries;
- Show the location of all spray fields needed for the compact community at build out in the sketch design submitted to Chatham County;

***Response:** The reclamation facility will be located entirely within the project boundary and situated adjacent to the major powerline easement and adjacent undeveloped land to the north. This location was selected based on its centralized location, its distance away from existing developed area, its separation from areas to be developed, and its topography. The spray fields will be located throughout the community for the purpose of spray irrigating common areas, ball fields, and road right-of-ways and thereby reducing the dependence on potable water for irrigation purposes. The map included in the Briar Chapel Community, Chatham County Reclaimed Water Storage and Utilization report found in Appendix M,*

*provides a schematic of the reclamation facility and spray fields within the proposed community. **No change.***

In the determination of adequacy, the County may consider any alternatives that provide reserve capacity in the wastewater system above the state required minimum, including but not limited to the following:

- Increasing the amount of wet weather storage to provide reserve capacity;
- Setting aside additional open space acreage for future spray irrigation to provide reserve capacity; and/or
- Limiting spray irrigation on a certain portion of open space acreage during specified times in order that the remaining capacity of the acreage to accept wastewater spray results in reserve capacity

Response: Additional land suitable for irrigation is available within the project (landscaped areas within commercial and non-residential areas) and may be utilized once definitive site plans are completed. Total inclement weather storage is planned to exceed 110 days at the permitted rate. This far exceeds minimal requirement of DWQ. **No change.**

Wastewater Treatment System Operation and Management

Wastewater collection, treatment, distribution and storage systems for compact communities shall be managed by an operator appropriately licensed by the State of North Carolina.

Provisions shall be made for sludge management and odor control that eliminates to the maximum extent possible adverse impacts to the compact community's residents and neighbors.

Response: Maintenance of the wastewater collection system, reclamation facility, and spray irrigation system will be accomplished by highly trained and appropriately licensed personnel. Their combined expertise will be fully enabled by state-of-the-art equipment that will provide them with the information and means necessary to anticipate potential problems in advance to the extent possible and react quickly and efficiently to correct such situations or problems that may arise. A description below provides an overview of the maintenance operations for the collection, treatment, and spray irrigation infrastructure. **No change.**

Wastewater Collection System Management

The wastewater collection system will be licensed operators and experienced personnel employed by, or contracted with Briar Chapel Utilities LLC, which has been approved by the North Carolina Utilities Commission (see approval letter in Appendix N). Briar Chapel Utilities LLC's primary objective for the collection system will be to ensure the overall viability of the conveyance system by maintaining system integrity, limiting exfiltration and its potential for groundwater contamination and other negative environmental impacts, and reducing the

amount of infiltration/inflow (I/I) into the system. In order to achieve these goals, information on the condition of the system will be obtained routinely through two distinct practices: flow monitoring and physical condition assessment. Please see the Briar Chapel Wastewater Collection System Report included in Appendix N for a complete description of the collection system maintenance.

Reclamation Facility

Per DWQ regulations, the reclamation facility will be operated by properly Certified Operators, who will be on 24-hour call, visit the plant daily, and be available to direct the spray operations. In addition, the facility will be monitored regularly by Certified Laboratory personnel with results reported to the Division of Water Quality. Sludge management will involve hauling off-site by a sludge contractor and both on-site and off-site options will be considered for sludge odor control. Also, odor control will likely be necessary at the point of entrance of the influent pipes. The most likely measure to be implemented at the reclamation facility is addition of odor-neutralizing additives at the pump station. This method is an odor control measure that has proven successful in preventing odors that tend to accumulate in long force mains. For more details regarding the monitoring requirements, which will be specified in the non-discharge permit and the sludge management and odor control measures, see the Briar Chapel Reclamation Facility Treatment System Report in Appendix L.

Spray Irrigation and Storage Facilities

A licensed irrigation reuse operator will manage the spray irrigation and storage facilities for the community. The operator will work in conjunction with the water reclamation plant operator daily. A full time grounds crew and management team will be employed to operate and maintain the system. Maintenance staff will be on property at all times that the reuse irrigation system is in operation. Flow monitoring equipment will be installed throughout the system to measure transmission rates in comparison to actual programmed rates. Any variances will automatically be identified at the central programming unit in the operations center. The operator will have substantial flexibility in determining daily limits of spray application and appropriate spray locations. Records will be kept to identify daily activities. Spray application times will be limited to periods when maintenance staff is present on the project. All irrigation facilities will be visually inspected daily and through out periods of irrigation operation. Additional details regarding the operations of the spray irrigation can be found in the Briar Chapel Community, Chatham County Reclaimed Water Storage and Utilization report included in Appendix M.

A key component of the reuse management program will be proper management of the various crops to receive the reclaimed water. An agronomic analysis was performed in part to develop recommendations for grounds keeping including cropping scenarios, species/system selection, fertilizer recommendations, vegetation establishment and management, and vegetation

harvesting regimes. Details regarding these recommendations can be found in Section 7 of the Agronomist Report included in Appendix J.

*Spray times on active recreation fields shall be coordinated around times of activity. Spray times will be posted at such locations. **No change.***

Financial Guarantee

A financial guarantee shall be required if final subdivision plat approval is requested prior to completion. Any such financial assurance shall satisfy the requirements of the subdivision regulations.

*Response: If final subdivision plat approval is requested prior to construction, the developer will post a performance guarantee for any uncompleted items associated with the reclamation facility. **No change.***

Public Filing of Wastewater Documents

To allow for ongoing public review, the developer of each proposed compact community shall furnish Chatham County an as-built copy of the plans and specifications for wastewater treatment facilities, infrastructure, and disposal or irrigation system, including all documents related to the location, sizing, ownership, and management of the disposal and irrigation sites used for the compact community, as well as any operational performance reports and data for water quality monitoring conducted for the treatment, disposal, and irrigation facilities and receiving waters surrounding them prior to final plat approval. The developer shall require the operator of such systems to furnish the County with copies of any approved plans modifying said systems and to notify the county and the residents of the compact community of any violations or citations issued in connection with the operation within 30 days thereof.

*Response: Upon completion of the reclamation facility construction, as-built plans will be submitted to the County. If any modifications to the facility are made, copies of the approved plan modifications will be submitted to the County. Furthermore, operational performance reports and water quality monitoring reports generated prior to final plat approval shall be submitted to the County. Finally, if any violations or citations are issued regarding the facility operations, the County will be notified within the required permit timeframe. **No change.***

SECTION 8. STORMWATER

*All requirements of this section will be satisfied as demonstrated by the maps and reports enclosed with this application. Refer to Appendix H for further detail. **No change.***

8.1 Guiding Principles

Compact communities are strongly encouraged to use low impact development design techniques as part of the stormwater management system. Low impact development design

techniques emphasize the use of many smaller integrated stormwater controls that are distributed throughout the site, near the source of each impact. Some references for how to learn more about low impact development design are included in Attachment A.

A compact community shall not discharge stormwater received during and after development at a rate or volume greater than that discharged prior to development in order that adjacent properties shall not be unreasonably burdened with surface waters as a result of the development. Likewise, compact communities shall not unreasonably impede the natural flow of surface waters from adjacent properties across the development, thereby unreasonably causing substantial damage to such properties.

Response: The Briar Chapel stormwater management plan uses many of the principles of Low Impact Development design. Stormwater management for the site is accomplished via small, upland stormwater management basins or, in the case of those lots and areas that will bypass the identified stormwater management basin areas; stormwater runoff will be treated at the source to the extent reasonable and practical. In areas where stormwater runoff is treated at the source, treatment options will include: cisterns, bioretention areas, infiltration trenches, grassed swales, and hydrodynamic separators. The actual device used will be based upon the actual physical characteristics of the area to be treated.

Stormwater runoff flow rates and volumes are to be controlled as a minimum to the extent required by this ordinance in section 8.3. More stringent stormwater management controls are provided as described later in section 8.3. No change.

8.2 Stormwater Management Plan

The developer for each proposed compact community shall have a Stormwater Management Plan approved by Chatham County prior to approval of a final subdivision plat. This plan shall include the information specified in the Stormwater Management and Maintenance Plan Requirements displayed in Attachment A of this ordinance. The plan shall be certified to be in conformity with the North Carolina Stormwater BMP Manual by a North Carolina registered stormwater professional.

Response: Prior to approval of a final subdivision plat, the Briar Chapel project will have an approved Stormwater Management Plan meeting all requirements of this ordinance and Chatham County. The main resource for design of the stormwater management facilities will be the NC Division of Water Quality Stormwater Best Management Practices Manual. If other resources are to be used for design, approval from the County will be obtained as to their use. All plan components will be designed and certified by an engineer registered to practice in the State of North Carolina. No change.

8.3 Stormwater Controls

Engineered stormwater management controls required in the approved Stormwater Management Plan shall be designed and constructed in order to satisfy the following requirements:

- Control and treat the first inch of stormwater runoff from the project site and from any offsite drainage routed to an on-site control structure;
- Ensure that the draw down time for this treatment volume is a minimum of forty eight (48) hours and a maximum of one hundred and twenty (120) hours; and
- Maintain the discharge rate for the treatment volume at or below the pre-development discharge rate for the 1-year, 24-hour storm.

Response: The Briar Chapel stormwater management plan meets all of the performance requirements of this section of the ordinance. In addition to these performance standards, the Briar Chapel stormwater management plan exceeds ordinance requirements by:

- ***Detention will be provided for all commercial areas draining directly to offsite residential areas such that peak flow rates in the one-, two-, five-, ten-, and twenty-five year, 24-hour duration storm events after development do not exceed those computed for the pre-development condition in the same return period storm events. This is in recognition that most of the concentrated impervious surface within the Briar Chapel development will be located in the commercial areas, and the residential areas immediately adjacent to those commercial areas are most at risk for flooding as a result of this project.***
- ***All of the stormwater management basins identified as areas 1-37 on the stormwater management plan for the site will provide water quality controls such that at least 85% of the total suspended solids (TSS) and at least 25% of the nitrogen in incoming stormwater runoff will be removed prior to exiting the facility. **No change.*****

8.4 Maintenance and Upkeep of Stormwater Controls

The developer for each proposed compact community shall have a Stormwater Operation and Maintenance Plan approved by Chatham County prior to approval of a final subdivision plat. This plan shall include the information specified in the Stormwater Management and Maintenance Plan Requirements in Attachment A of this ordinance. Maintenance and upkeep of stormwater controls shall be consistent with Stormwater Best Management Practices as documented by the State of North Carolina.

The developer of each compact community and all subsequent owning entities and parties responsible for the stormwater management system shall have an annual maintenance inspection conducted by a certified professional engineer on each control structure in the compact community. The maintenance inspection shall assess whether the structure is functioning according to its design specifications, and recommend any repairs needed to ensure that it meet these specifications. The maintenance inspection report shall detail any functional deficiencies in

each control structure and how they are to be fixed, along with any other relevant information. The professional engineer shall submit a copy of each maintenance inspection report to Chatham County within thirty (30) days after the inspection is completed.

Response: The maintenance, repairs, or reconstruction recommended in the maintenance inspection report shall be made within thirty (30) days of the completion of the report. A professional engineer shall submit a maintenance repair report to Chatham County within thirty (30) days after the repairs are made.

An operation and maintenance / inspection plan will be developed for each of the stormwater management facilities that is proposed in the final stormwater management plan for Briar Chapel. The plan will meet all of the requirements for inspections and maintenance of the stormwater management facilities as set forth in this section of the ordinance. No change.

8.5 Posting of Financial Guarantee

All engineered stormwater controls shall be conditioned upon adequate financial assurance in favor of the compact community's property owner's association for the purpose of maintenance, repairs or reconstruction necessary for adequate performance of the control structures for not less than ten (10) years after completion that shall be satisfactory to the County Attorney and approved by the Board of Commissioners.

Response: Acknowledged. No change.

8.6 Public Filing of Stormwater Documents

To allow for ongoing public review, the developer of each proposed compact community shall submit to Chatham County a copy of the final version of the Stormwater Management Plan, Stormwater Operation and Maintenance Plan, Stormwater Operation and Maintenance Agreement, and stormwater control designs used in the compact community. These documents shall be submitted in electronic and hard copy format to the Chatham County Public Works Department prior to final plat approval for the project. In addition, the developer and all subsequent owning entities and responsible parties of the stormwater management system shall submit any updates to these documents within thirty (30) days of when the documents are updated.

Response: The developer of Briar Chapel will submit to Chatham County all required items under this section of the Ordinance. No change.

SECTION 9: BUFFERS

All requirements of this section will be satisfied. The maps and reports enclosed with this application, and the specific responses below, further explain the means by which Briar Chapel's community design will satisfy these requirements. No change.

9.1 Riparian Buffers

In all residential, commercial, and civic areas in each compact community, vegetative buffers of the following widths shall be permanently protected along each side of the following streams:

- At least one hundred (100) feet along all perennial streams;
- At least fifty (50) feet along all intermittent streams;
- At least fifty (50) feet along all ephemeral streams shown on the Soil Survey maps and having a drainage area of more than twenty-five (25) acres;
- At least thirty (30) feet along all ephemeral streams shown on the Soil Survey maps and having a drainage area of between ten (10) acres and twenty-five (25) acres.

Response: Vegetative buffers will be provided In accordance with the Compact Communities Ordinance. Stream buffers will be provided along each side of the stream bank as follow:

A minimum 100-foot buffer along all perennial streams

At minimum 50-foot buffer along all intermittent streams

A minimum 50-foot buffer along all ephemeral streams shown on the Soil Survey maps and having a drainage area of 25 acres or more

A minimum 30-foot buffer along all ephemeral streams shown on the Soil Survey maps and having a drainage area of between 10 and 25 acres

No change.

Uses Within the Buffer

No new development is allowed in the buffer area except for the following:

- Water dependent structures;
- Other structures such as flag poles;
- Signs and security lights which result in only diminutive increases in impervious area;
- Projects such as road crossings and greenways where no practical alternative exists;
- Desirable artificial stream bank or shoreline stabilization, as determined by Chatham County.

These activities should minimize built-upon surface area, direct runoff away from the surface waters (except sheet flow directed into a buffer), and maximize the utilization of stormwater best management practices.

Response: No new development is proposed in the buffer area except for the following:

.. Road, greenway, and utility crossings that have no practical alternatives.

.. Signs, security lights, and other incidental features that may be necessary for roads, greenways, etc.

.. Stream bank stabilization efforts that are determined to be desirable by Chatham County.

These limited development activities will minimize impervious area, direct runoff away from surface waters (except for sheet flow directed into a buffer), and maximize the utilization of stormwater best management practices. No change.

To avoid a loss of effectiveness in protecting streams, the stream buffer shall remain in natural undisturbed vegetation, except as provided below.

Clearing, grading or other land disturbing activities that would reduce the effectiveness of the buffer shall be revegetated.

Buildings and other features that require grading and construction shall be set back at least ten (10) feet from the edge of the buffer.

Crossings by streets, driveways, culverts, railroads, recreational features, intakes, docks, utilities, bridges or other facilities shall be designed to minimize the amount of intrusion into the buffer.

Response: Stream buffers are to remain vegetated in a natural undisturbed state. Where limited development activity occurs (activities outlined in above section), the facilities will be designed to minimize impact, and the buffers are to be re-vegetated with native species.

Buildings and other similar features shall be set back a minimum of 10 feet from stream buffers.

Crossings by streets, driveways, culverts, recreational features, intakes, docks, utilities, bridges or other facilities shall be designed to minimize the amount of intrusion into the buffer.

No change.

The following are prohibited within riparian buffers:

- Wastewater treatment, disposal, and reuse components, including any wastewater sprayfields. Water and sewer lines are allowed to cross the buffer if no available alternative exists, provided that they are designed to minimize disturbance to the buffer (e.g. by running under bridges or crossing at right angles to the extent possible).
- Receiving areas for toxic or hazardous waste or other contaminants;

- Hazardous or sanitary waste landfills;
- Stormwater features, except in limited circumstances in buffers along ephemeral streams if the developer implements low impact development design techniques and/or other stormwater controls that meet or exceed the stormwater treatment and management performance provided by fully functioning ephemeral stream buffers in that location.

Response: No prohibited uses are proposed within the buffers. No change.

Stream buffers can be used for passive recreational activities with very low impact walking trails, with no impervious surface. Highly erosive activities such as use by bicycles should be discouraged. The service facilities for such activities, including but not limited to parking, picnicking and sanitary facilities, shall be located outside the buffer.

Horses and motorized all terrain vehicles are prohibited within the buffer, except for maintenance vehicles, emergency vehicles, and motorized wheel chairs for disabled persons.

Unpaved trails running parallel to the stream shall be located at least thirty (30) feet from the edge of the stream.

Paved trails up to eight (8) feet in width are allowed along any streams provided they are at least fifty (50) feet from the edge of perennial and intermittent streams, and provided that the buffer as a whole is extended a distance equal to the width of the trail. Bicycles are expressly allowed on paved trails.

Response: The extensive trail system within the Briar Chapel community includes a limited amount of unpaved trails running within the stream buffer. Trails running within the buffer are located more than 30 feet from the stream edge. Except for stream crossings, there are no paved trails within stream buffers, unless an equal width is added to the stream buffer or the trail is a raised boardwalk. Signage will be posted to guide trail users, and to direct bicyclists to

Appropriate trails. (Please refer to Appendix B, Greenways.) No change.

Water oriented recreational facilities, such as boat or fishing piers shall require an approved use permit from the Watershed Administrator.

Response: Acknowledged. No change.

Clearing and re-vegetating the stream buffer for the purposes of improving its pollutant removal efficiency may be permitted, except within thirty (30) feet of a stream.

Response: Acknowledged. No change.

Invasive species listed by the North Carolina Botanical Garden may be removed from the buffer.

Natural regeneration of forest vegetation and planting of trees, shrubs, or ground cover plants to enhance the riparian buffer shall be allowed provided that soil disturbance is minimized. Plantings shall consist primarily of native species.

Response: Stream buffers may be cleared of invasive species. Replanting in stream buffers will be restricted to native species. No change.

Tracked or wheeled vehicles are not permitted within the riparian buffer, except for the purpose of maintaining utility corridors and providing emergency services. Bicycles are expressly allowed on paved trails.

Response: Buffers will be posted with signage prohibiting unauthorized vehicles. No change.

9.2 Perimeter Buffer

Perimeter buffers shall be utilized to minimize the impacts of each compact community on adjacent properties along the entire perimeter of the compact community. Table 9.2 lists the minimum buffer width allowable, depending on the proposed land use along the edge of the compact community and the existing land use in the adjacent property at any point along the perimeter.

Chatham County may allow a reduction in the perimeter buffer width required by this ordinance of up to fifty percent (50%) if it determines that the impact of the compact community is adequately mitigated by community design or topography.

Table 9.2 Width of Vegetative Perimeter Buffers

Land Use Adjacent to Compact Community Perimeter							
Residential 1 – large lot	Residential 1 – small lot	Commercial		Recreational		Agricultural ²	
Compact Community Perimeter Land Use	Residential- large lot	0 feet	0 feet	0 feet	0 feet	0 feet	
	Residential - small lot	100 feet	100 feet	0 feet	0 feet	100 feet	
	Commercial	200 feet	200 feet	0 feet	200 feet ³	200 feet	
	Recreational	200 feet	200 feet	200 feet ³	0 feet	200 feet	
	Agricultural ²	0 feet	0 feet	0 feet	0 feet	0 feet	

1 The perimeter buffer requirements only apply to areas along the boundary of the compact community where no public road exists. In areas where a public road forms the boundary of the compact community, then the viewshed buffer requirements specified in Section 9.3 apply instead.

2 Any bona fide farming operation, including land enrolled in the use value assessment program for agricultural, horticultural, forest, or conservation purposes, or part of a Voluntary Agricultural District.

3 A barrier that assures the safety of recreational activity participants in the compact community may be substituted for a buffer at the discretion of Chatham County.

Response: Perimeter buffers are provided which meet the Ordinance requirements. In allmost instances the perimeter buffer meet or exceeds the minimum width requirement.

Dedication of the Buffer

The perimeter buffers required in this section only apply to areas along the boundary of the compact community where no public road exists. In areas where a public road forms the boundary of the compact community, then the viewshed buffer requirements specified in Section 9.3 apply instead. Once the perimeter buffer has been delineated, a deed restriction satisfactory to the County Attorney shall be filed with the Chatham County Register of Deeds that permanently protects this land as a buffer and identifies the maintenance responsibility that rests with the homeowners association.

Response: The perimeter buffer will be protected through a deed restriction approved by the Chatham County Attorney and filed with the County Register of Deeds. The restrictions include permanent protection of the land as a buffer and identification of the maintenance responsibility that rests with the property owners/homeowners' association. No change.

Perimeter Buffer Vegetation and Land Uses

To the extent practicable, existing native forest vegetation shall be utilized for the perimeter buffer. Farms, pastures, and other traditional rural land uses owned by the developer or protected with a permanent conservation easement may be used to meet this requirement. Topographic features such as hills, valleys, and planted berms owned by the developer may also be used to meet this requirement.

Vegetative plantings in the buffer shall produce the effect of a natural forested area, using native species. The planting does not have to be opaque, but should function to significantly soften the visual impact of buildings, both initially and in the longer term. The visual buffering provided by vegetative plantings shall be effective in all seasons.

*Response: To the maximum extent practicable, existing native forest vegetation will comprise the perimeter buffer. Where the buffer must be replanted, or augmented, native plant species will be utilized to create a visual screen effective in all seasons. **No change.***

9.3 Viewshed Buffers

Viewshed buffers shall be utilized in order to minimize the impacts of compact communities on pre-development roadway views.

The developer shall map all roadway views into the project and delineate a continuous buffer of at least one hundred (100) feet in width. The buffer shall be measured at right angles to the edge of the roadway right of way into the compact community.

The Chatham County Board of Commissioners may allow a reduction in the viewshed buffer width required by this ordinance of up to fifty percent (50%) if it determines that the impact of the compact community is adequately mitigated by community design, topography, and/or guidelines for outdoor lighting such as those included in the proposed Chatham County lighting ordinance.

Response: One hundred-foot viewshed buffers are provided along the following road frontages:

US Hwy 15-501, Andrews Store Road and Manns Chapel Road.

Fifty-foot viewshed buffers are provided along Taylor Road and Hubert Herndon Road off US Hwy 15-501, and accordingly a 50% reduction of the buffer is requested. The following is provided in support of the requested reduction:

The roads are both minor roads within the NCDOT road network hierarchy, but are the primary access ways into the Briar Chapel community and its main commercial areas. These commercial areas need to be visible in order for them to be commercially viable and visible from the access roads.

The proposed Chatham County Lighting Ordinance is included in its entirety within the Briar Chapel Design Guidelines.

These reductions will not significantly affect the viewshed from US Hwy 15-501 which will remain 100 feet.

Dedication of the Buffer

Once the viewshed buffer has been delineated, a deed restriction satisfactory to the County Attorney shall be filed with the Chatham County Register of Deeds that permanently protects this land as a buffer and identifies the maintenance responsibility that rests with the homeowners association.

Response: As with the perimeter buffers, the viewshed buffers will be protected through a deed restriction approved by the Chatham County Attorney and filed with the County Register of Deeds. The restrictions include permanent protection of the land as a buffer and identification of the maintenance responsibility that rests with the property owners/homeowners association. No change.

Viewshed Buffer Vegetation and Land Uses

To the extent practicable, existing native forest vegetation shall be utilized for this buffer. Farms, pastures, and other traditional rural land uses owned by the developer or protected with a permanent conservation easement may be used to meet this requirement. Topographic features such as hills, valleys, and planted berms owned by the developer may also be used to meet this requirement.

Vegetative plantings in the buffer shall produce the effect of a natural forested area, using native species. The planting does not have to be opaque, but should function to significantly soften the visual impact of buildings, both initially and in the longer term. The visual buffering provided by vegetative plantings shall be effective in all seasons.

Response: To the maximum extent practicable, existing native forest vegetation will comprise the viewshed buffer. Where the buffer must be replanted, or augmented, native plant species will be utilized to create a visual screen effective in all seasons. (See Appendix A: Figure 15 Buffer Revegetation Plan.) No change.

SECTION 10. RECREATION AND OPEN SPACE

All requirements of this section will be satisfied. The maps and reports enclosed with this application, and the specific responses below, further explain the means by which Briar Chapel's community design will satisfy these requirements. No charge.

10.1 Passive Open Space

Amount of Open Space Required

Each compact community shall permanently protect a minimum of thirty percent (30%) of the gross project area as open space in order to maintain rural character and provide for passive recreation.

All of the land in neighborhood parks, active recreation, perimeter buffer, viewshed buffer, streams, wetlands, natural buffers, and major below-ground utility easements such as underground pipe lines may be counted toward meeting this requirement. Major aboveground utility easements such as high-tension power lines cannot be counted toward meeting this requirement.

Response: Briar Chapel provides over 50% of the gross project area in open space that will be permanently protected by deed restrictions and maintained by the property owners/homeowners association. No change.

Use of Local and Regional Open Space Plans

Priority for protection as open space shall be given to lands identified in the Chatham County Inventory of Natural Areas and Wildlife Habitats, Chatham County Parks and Recreation Master Plan, and the Triangle GreenPrint Regional Open Space Assessment. Nonalluvial wetlands including seeps, bogs, and vernal pools shall also be systematically inventoried in each proposed compact community, and shall be given priority for conservation.

Response: Briar Chapel's open space includes Bennett Mountain (the one area within the site that is included in the Chatham County Inventory of Natural Areas and Wildlife Habitats), inventoried wetlands, a 66-acre County Park facility, all inventoried cemeteries and graves, streams, and their buffers, and other significant natural features. (Triangle Greenprint Regional Open Space Assessment does not identify any areas within the Briar Chapel site.) No change.

The Chatham County Planning Director and the Chatham County Parks & Recreation Director shall be consulted when making the determination as to which lands in the compact community are shown in the plans and inventories listed above, and which lands shall be protected.

Response: The Chatham County Planning Director and Parks and Recreation Director were consulted during the open space planning process. No change.

If the developer thinks that any of the lands identified in these documents that are found in the compact community cannot be protected, he/she shall provide a written technical justification to the Chatham County Planning Board from an appropriately certified professional as to why not, and propose that they not be included as open space.

Response: There are no disagreements with the features listed. No change.

Open Space Plan

At the time of submission of an application for sketch design, the developer shall submit an open space plan showing the network of passive open space, recreational facilities, and neighborhood parks in the compact community.

Response: A plan showing the network of open space, paths/trails, recreational facilities, and neighborhood parks is included in the conditional use permit application package. No change.

Ownership and Maintenance of Open Space

All lands designated as open space land shall not be further subdivided, and shall include no permanent buildings or structures, except in connection with uses permitted thereon. In addition, all of these lands shall be:

- A. Deeded to an incorporated property owners association for permanent protection as open space; or
- B. Granted to a non-profit land trust or other qualified conservation overseer for permanent protection as open space; or
- C. Conveyed to Chatham County for permanent protection as open space, provided that the land is accepted by Chatham County.

If open space is granted to an incorporated property owners association or to Chatham County, a deed restriction satisfactory to the County Attorney shall be filed with the Chatham County Register of Deeds that permanently restricts the use of the land to passive open space. If granted to a non-profit land trust or other qualified conservation overseer, a conservation easement shall be granted that protects the land in perpetuity as open space.

When the open space is transferred from the developer to one of the three types of recipients listed above, the transfer shall include specific contractual arrangements to provide for the ongoing maintenance of these lands.

Response: All of Briar Chapel's open space will be deeded to an incorporated property owners association for permanent protection as open space. The County Park facility will be dedicated to Chatham County through an easement agreement that allows the Briar Chapel property owners association to control the design and maintenance of the facility. No change.

Open Space Uses

To protect water quality and help ensure that passive recreational uses can be maintained on open space in the compact community even in wetter years, developers must select one of the following two options:

- A. Designate twenty percent (20%) of the open space in the compact community as unsprayable with wastewater or reclaimed water. The location of this area can be rotated so that all areas can be irrigated as necessary to keep them healthy, but the sprayfield must be sized with this assumption so that even in wetter years there is always dry, open land appropriately located and suitable for passive recreational uses such as throwing a football or playing catch. Wetlands and riparian buffers designated in this ordinance cannot be counted toward meeting this twenty percent (20%) requirement; or
- B. Base the size of all irrigation ponds and wet weather storage ponds used in the wastewater or reclaimed water irrigation system on a mass water balance based upon the following data:

- Monthly precipitation from the 80th percentile year or greater for a recent 25-year period;
- Potential evapotranspiration; and
- Soil drainage.

These data must be taken from, or representative of, the proposed site for the compact community.

Response: Option B is the selected alternative for this project. To that end, a detailed water balance and wet-weather storage analyses of the Briar Chapel site, consistent with this Ordinance requirement, were completed in order to provide recommended volume for storage of reclaimed water when irrigation is not possible or desirable during wet weather periods. The study was undertaken as required by 15A NCAC 2H .0200 and conforms to the criteria outlined in 15A NCAC 2H.0219(k)(1)(A)(vii). The requirements of 15A NCAC 2H .0219 are that a water balance be computed using average monthly climactic data for a 25-year period. The results of these analyses were based on 98 years of local climactic data that extends from 1902 to 2000. The conclusion of the study is that the recommended wet weather storage is 235 acre-feet or 102 days at a design flow rate of 750,000 gallons per day. As discussed in the Briar Chapel Community, Chatham County Reclaimed Water Storage and Utilization report included in Appendix M, the total inclement weather storage to be provided will exceed 110 days at the permitted rate. Therefore, the wet-weather storage proposed for this community will exceed that required by the compact community ordinance. For more details regarding the water balance and storage study, please see the Water Balance and Wet-Weather Storage Analyses report found in Appendix K. . No change.

To help eliminate any potential conflicts between irrigation of reclaimed water and use of active recreational areas in the compact community, a management plan shall be developed for all active recreational areas that includes the following:

- A spray schedule for any reclaimed water used to irrigate it; and
- A public education program that includes written brochures, permanent postings in prominent public locations, and/or other appropriate means determined by Chatham County to educate potential users about the proper uses of reclaimed water and to notify them that the water is not potable.

The use of recreational motorized vehicles such as motorcycles or all-terrain vehicles shall be prohibited within open space.

Response: As described in Section 7.2, a central maintenance and operations facility will be located adjacent to the water reclamation facility. This maintenance facility will house a project irrigation management office with central management state-of-the-art software that will provide a high level of automation and control. This management software will be able to

*control all spray schedules to avoid conflicts with irrigation and public fields use. A detailed spray management program will be developed as the spray irrigation system is designed. At all times, the requirements of this section of the Ordinance will be met or surpassed. **No change.***

10.2 Active Recreational Facilities

Land dedication and fees in lieu of dedication for active recreational facilities shall be provided in accordance with the applicable Chatham County regulations.

The County shall consult with the Chatham County Parks & Recreation Director and the Chatham County Planning Director before selecting which option to use in meeting these requirements.

Any land proposed for dedication for active recreation shall be physically integrated into the design of the community and be easily and safely accessible by pedestrians.

Response: The 66-acre Briar Chapel Park facility is to be deeded ~~by easement~~ to Chatham County. Design, construction and maintenance will be the responsibility of the Developer and, in the future, the property owners/homeowners' association. See Appendix A: Figure 13 for a plan of Briar Chapel's open space, which indicates the extensive network of trails, recreational facilities and neighborhood parks.

SECTION 11. COMMUNITY FACILITIES

Enclosed in the application package are the impact assessments required by this section of the Ordinance.

11.1 Impact Assessment

The developer of each compact community shall conduct each of the following impact assessments:

A. Fiscal impact assessment. This shall address all fiscal impacts on the county including those related to schools, police protection, fire protection, emergency medical services, and all other county services.

B. Transportation impact assessment.

C. Environmental impact assessment. Where potential negative impacts have been identified, it shall be the responsibility of the developer to provide plans and methods of how such impacts may be alleviated or minimized to the satisfaction of the Board of County Commissioners.

Chatham County shall provide study parameters and criteria to be used. Chatham County shall also require the developer to pay for a consultant(s) selected by Chatham County to conduct a peer review of each impact assessment.

All impact assessments by the developer shall be completed and submitted with sketch plan submission for each proposed compact community.

The peer review results shall be available prior to the Planning Board's deliberations.

Response: The economic analysis titled "A Fiscal Impact Analysis of The Briar Chapel Development" conducted by Miley & Associates, Inc. and Thomas, Knight, Trent, King and Company clearly demonstrates that Briar Chapel will have a positive net fiscal impact on Chatham County government and the Chatham County School Board. The analysis demonstrates that Briar Chapel meets and exceeds the requirements as outlined in Section 11 – Community Facilities (11.1 & 11.2 Impact Assessment & Mitigation) of Chatham County's CCO. As shown in the report, the net present value of the stream of annual surpluses at expanded service levels is \$2.8 million at a discount rate of 6.0%.

The following summary of revenues and expenditures at the time of the Briar Chapel's buildout also clearly shows the net positive fiscal impacts of the proposed development on Chatham County and the Chatham County Board of Education.

Summary Table 21

Annual General Fund Fiscal Impacts Of Briar Chapel at Buildout

Incremental Revenues

Property Taxes \$5,511,286

Sales Taxes 923,217

Total Incremental Revenues \$6,434,503

Incremental Expenditures

County \$ 1,911,333

Schools:

Operating 2,046,982

Debt Service 818,779

Total Incremental Expenditures \$3,958,315

Annual Incremental Benefit at Existing Service Levels \$1,657,409

Additional County Expenditures with Expanded Services 751,554

Annual Incremental Benefit, Expanded Service Levels \$ 905,855

See updated letter from Lucy Gallo, dated February __, 2012 and submitted with the amendment application.

=====

11.2 Impact Mitigation

The developer of each compact community shall satisfy the impacts created by the development for adequate public facilities and identified in the assessments required in Section 11.1 above. These impacts may be satisfied by providing fees or dedicating land sufficient to offset the impact of the development on schools, parks, recreational facilities, police protection, fire protection, emergency services, libraries, community centers, recycling and waste collection centers, and/or other public facilities.

Any land proposed for dedication shall be physically integrated into the design of the community and be easily and safely accessible by pedestrians.

*Response: The plan for Briar Chapel was carefully designed to compensate for potential impacts resulting from the development. To that end, the proposal includes land for schools, parks, a library, fire station, water tank, a 911 provider; building space for a Sheriff's office; off-site road improvements; and a significant amount of preserved open space. All of the public facilities are well integrated into the community and easily accessible via the pedestrian network of sidewalks and greenway paths. (Please also refer to the responses in the Project Description; Affirmative Finding #2, Section 3; and Affirmative Finding #3, Sections 1 and 2; Master Plan in Appendix A and the Impact Assessments included as Appendices.) **No change.***

SECTION 12. COMMUNITY DESIGN

12.1 Performance Standards

The intent of this ordinance is to encourage a vibrant mix of residential, civic, retail, office, and open space uses that adhere to the following performance standards:

Performance Standards:

Town center. Each project shall include an identifiable town center (not necessarily located in the geographic center of the project) -- a square, a green, and/or transit stop with shops, retail, and offices that are connected to the mix of residential uses in a practical way.

Response: Briar Chapel is anchored by a mixed-use Town Center at the intersection of Taylor Road and U.S. Highway 15/501. The Town Center uses include office; retail; residential apartments over retail and/or office over retail; and adjacent residential apartments. The Town Center is oriented around a pedestrian friendly street with a transit stop location to be provided at the direction of an authorized transit authority. A mixed-use Village Center will be

located north of Andrews Store Road, and will include office and retail establishments, a recreation center, a library and other civic uses arranged around a village green. No change.

Housing mix and development pattern. Each project shall provide a mix of three housing types: single-family detached dwellings; single-family attached dwellings such as duplexes and townhouses; and multi-family dwellings such as apartments. The inclusion of rental housing as part of the multi-family component is strongly encouraged. The three housing types shall be fully integrated into the overall project design, with the highest residential densities occurring adjacent to civic-commercial uses, extending to lower residential densities at the periphery of the development. The use of a grid pattern of streets for the majority of the development is required to the extent feasible, based on topographic considerations.

Response: Briar Chapel includes a mix of three housing types: single-family detached dwellings; single-family attached dwellings such as duplexes and townhouses; and multi-family dwellings such as condominium/apartments. Rental housing will be provided within the Town Center adjacent to the retail and office uses. No change.

The different housing types are well integrated within the community, and the various neighborhoods are interconnected with each other through the public street and sidewalk system as well as the open space network of greenway paths and trails. The highest densities occur adjacent to the project's civic and commercial uses, with the neighborhoods transitioning to lower densities near the periphery of the development. No change.

The street system is an organic grid pattern that follows the contours of the land (~~See Appendix A: Figures 10 & 12A-E).~~

Commercial component. Each project shall include a commercial area or areas to serve the community, with establishments that are less than ten thousand (10,000) square feet in size allowed inside the community, and larger establishments allowed on the periphery in proximity to a four-lane principal or minor arterial. All commercial establishments shall be pedestrian-accessible to community residents.

Response: The Briar Chapel Community provides several commercial components at different levels of intensity. All will be accessible via public sidewalks and greenway paths/trails.

The Town Center commercial area is located at the intersection of U. S. 15-501 and Andrews Store Road. The Town Center will consist of offices; retail establishments; residential apartments over retail and/or office over retail; and adjacent residential apartments. No change.

The Village Market is located north of the intersection of U. S. 15-501 and Hubert Herndon Road. The Village Market will include offices and/or retail. No change.

The Village Center is located north of the intersection of Andrews Store Road and Parker Herndon Road, and ~~may will~~ civic uses (such as parks and plazas and schools) as well as possible ~~consist of~~ offices; retail establishments; office over retail; and adjacent civic uses ~~such as a library, recreation center and school~~. The Village Center commercial establishments, if any, will be less than 10,000 square feet in size.

Community/neighborhood gathering points. All residential units shall be within walking distance of a neighborhood gathering point, such as an active recreational facility, community center, school, or neighborhood park.

*Response: All residential units are within walking distance of a neighborhood gathering point, such as an active recreational facility, community center, school, or neighborhood park, and are connected via a system of interconnected sidewalks and greenway paths and trails. **No change.***

Open Space. The design must, to the extent possible, preserve and protect prominent and/or significant natural features and, where appropriate, utilize them as areas for passive recreation. In addition, open space must be integrated into the plan for development, and include some flat dry land that is appropriate for passive recreational activities such as playing catch and throwing a football. To the extent practicable, the open space shall also be designed to connect with existing or planned open space on adjacent parcels to help form a connected network of open space throughout the county.

*Response: Open space within the Briar Chapel community preserves prominent and significant natural features, some of which are utilized as passive recreation. The community also includes a number improved open space areas designed for passive recreational activities, such as parks and dry flat fields that may be used for a variety of activities. To the extent practicable, the open space has been designed as an interconnected network of preserved natural areas and improved parks accessible via the community's streets, sidewalks and pedestrian paths. The open space also has been planned to connect with existing or possible future open space on adjacent parcels to help form a connected network of open space throughout the county. **No change.***

Passive and active recreational opportunities. Each project shall include the provision of both passive and active recreational opportunities. Small playgrounds and neighborhood parks shall be scattered throughout the community within walking distance of most homes.

*Response: Briar Chapel is designed to provide passive and active recreational opportunities via the interconnected network of natural areas and improved parks within walking distance of the community's homes. **No change.***

Interconnectivity. Residential units, the town center, and community gathering points must be interconnected not only by roadways, but also through a network of pedestrian and bicycle

pathways. At least thirty-three percent (33%) of these pathways must be completed before final plat approval of the final fifty percent (50%) of the maximum allowable dwelling units in the compact community are built. One hundred percent (100%) of the pathways must be completed before final plat approval of the final ten percent (10%) of maximum approved dwelling units in the compact community.

Response: *In the Briar Chapel community, the residential units, Village Center, Village Market, Town Center, recreation centers, Schools and other civic spaces, and community gathering points will be interconnected by streets, sidewalks and pedestrian paths. In accordance with the Ordinance requirements, at least 33% of the pathways will be completed before final plat approval of the final 50% of the maximum allowable dwelling units. 100% of the pathways will be completed before final plat approval of the final 10% of maximum allowable dwelling units. **No change.***

Narrow streets. Streets shall be relatively narrow, with trees. Pedestrian walkways may be required on both sides of the street.

Response: *The streets within the Briar Chapel community will be relatively narrow. With the exception of the peripheral neighborhood streets, the street will be designed in accordance with the North Carolina Department of Transportation Traditional Neighborhood Development Street Guidelines. The peripheral neighborhood streets may be designed to NCDOT subdivision roads standards. Sidewalks will be provided along both sides of all streets with residences or other buildings fronting on them. Sidewalks or paths will be provided along one side of all other streets that provide connections within the community but do not serve as building frontage. Street trees, either planted or preserved, will be provided along all streets.*

*(See Design Guidelines in Appendix C.) **The original CUP, the CCO and the Responses thereto provide approval of the Traditional Neighborhood Design Street Guidelines, since the original approval. The Board of Commissioners has also endorsed the Applicant's set of internal street guidelines for subdivision approval purposes. Otherwise, no change.***

Transit. Park-and-ride spaces shall be set aside and identified in parking lots in the commercial center(s).

Response: *Locations for park-and-ride spaces and transit stops will be located within or near the Town Center, the Village Center and the Community Center ~~and~~/or where any authorized transit authority may determine necessary.*

Botanical preservation and diversity. A landscape master plan shall be submitted with initial application for development. The developer shall be required to identify and retain major trees, and to identify and preserve natural areas, to the extent practicable.

Response: *The Landscape Master Plan (Appendix A: Figure 16) indicates significant trees and areas of natural vegetation that will be preserved. The Landscape plant list and the Buffer*

Revegetation Detail also provides a list of the landscape plant materials to be used for streets, parking areas and buffer re-vegetation. No change.

12.2 Streets and Other Specifications

Streets

All streets shall be public and constructed to North Carolina Department of Transportation (NCDOT) standards. Upon completion, the streets shall be offered for dedication to the NCDOT for maintenance. In exceptional circumstances, a very limited number of private roads may be allowed as dead-end minor residential streets for lengths not more than one thousand (1,000) feet in order to address topographic characteristics of a site.

Developers are strongly encouraged to use NCDOT's Traditional Neighborhood Development Guidelines displayed in Exhibit B of this ordinance when designing the street system.

Alleys and private roads shall be dedicated to the incorporated property owners association or equivalent entity for the compact community.

Response: Except for the less dense peripheral neighborhood streets, public streets will conform to the NCDOT Traditional Neighborhood Development Street Design Guidelines, and as described in the Briar Chapel Street Design Guidelines in Appendix C, Design Guidelines. The Peripheral streets will conform to the NCDOT subdivision roads standards. The original CUP, the CCO and the Responses thereto provide approval of the Traditional Neighborhood Design Street Guidelines, since the original approval. The Board of Commissioners has also endorsed the Applicant's set of internal street guidelines for subdivision approval purposes. Otherwise, no change.

Private streets and alleys will conform to the NCDOT Traditional Neighborhood Development Street Design Guidelines and as described in the Briar Chapel Street Design Guidelines in Appendix C, Design Guidelines. Private streets and alleys will be dedicated to the property owners/homeowners' association where applicable. The original CUP, the CCO and the Responses thereto provide approval of the Traditional Neighborhood Design Street Guidelines, since the original approval. The Board of Commissioners has also endorsed the Applicant's set of internal street guidelines for subdivision approval purposes. Otherwise, no change.

~~As shown in the Briar Chapel Master Plan, a~~ A very limited number of dead-end streets are provided in order to address topographical or property boundary characteristics. No dead-end street will be is more than 1,000 linear feet in length.

Building Height

No building in the compact community shall have a height greater than sixty (60) feet. Chatham County may require buildings to have a lower height if it deems appropriate to help preserve the small town character of the development.

Response: No non-residential building in the compact community will have a height greater than 60'. No residential building will have a height greater than 50'. No change.

Additional Guidelines

Additional guidelines and options for how to meet the standards in this section are included in the Compact Community Design Guidelines contained in Attachment C of this ordinance.

Response: Please refer to Appendix C for Briar Chapel Design Guidelines, which incorporate the concepts described in the Compact Community Guidelines. No change.

12.3 Housing

Construction Standards

Manufactured homes built to the U.S. Department of Housing and Urban Development Code are not permitted in compact communities. Factory-built modular homes constructed to the standards of the North Carolina Building Code are permitted, provided that the site and building design, and exterior finishes and materials are compatible with surrounding dwellings.

Response: There are no “manufactured homes” proposed to be in Briar Chapel. No change.

Accessory Dwellings

Accessory dwellings are encouraged on lots containing single-family detached housing.

Each accessory dwelling shall count as one half (½) a dwelling unit toward the maximum allowable number of dwelling units for the project.

There may be not more than one accessory dwelling unit per lot.

The accessory dwelling unit may be attached or detached.

Each accessory dwelling unit shall not exceed one thousand (1,000) square feet or two-thirds (2/3) of the heated space in the principal dwelling unit, whichever is more limiting.

Accessory dwellings shall be designed to be harmonious with the primary dwelling on the same lot and with neighboring dwellings.

Response: Acknowledged. No change.

Moderately Priced Dwellings

All compact communities shall provide housing for low and moderate-income households. These shall be designated as “Moderately Priced Dwellings.”

Each compact community shall provide one of the following options for Moderately Priced Dwellings:

A. A minimum of five percent (5%) of the total residential units in the development shall be held by and be affordable to buyers whose household incomes are no greater than sixty percent (60%) of the Area Median Family Income by family size if title to the lots so designated is donated to a nonprofit community agency designated by the County whose mission is to expand and preserve housing for low-income households. The designated agency (ies) will hold title to the land in perpetuity and lease it to qualifying households. The agency (ies) have a right of first refusal to purchase any home constructed by the qualifying family at any time the owner decides to sell it.

B. A minimum of ten percent (10%) of the total dwellings in the development shall be sold and affordable to buyers whose household incomes are no greater than sixty percent (60%) of the Area Median Family Income by family size. The sale price and incomes of buyers shall remain limited according to the terms of this ordinance for at least thirty (30) years.

C. Upon approval of Chatham County, the developer may meet this provision through an alternative means, provided that it does both of the following at a minimum:

- Ensure the development and sale of moderately priced dwellings in a manner equivalent to that in Option A or Option B above; and
- Ensure that at least 5% of the total dwellings in the compact community are affordable housing.

Response: Option A has been selected to satisfy this requirement 120 moderately priced dwelling units have been identified on the master plan. Several different unit types have been planned and units/buildings have been mixed within the community among market rate dwelling units. Refer to map 11 in Appendix A for further details. No change.

Compliance

The subdivision preliminary and final plats for each compact community shall designate the lots for Moderately Priced Dwellings, and the developer, builder(s), and purchaser(s) shall be bound by this restriction according to the terms of this ordinance.

Upon final plat approval, the applicant shall execute and record a deed restriction satisfactory to the County Attorney binding the applicant and all other parties that receive title to the property on all lots for dwellings designated as “Moderately Priced.”

Moderately Priced Dwelling unit lots shall be incorporated into the compact community in proportion to the development of dwelling unit lots without affordable housing restrictions.

Subsequent final residential subdivision phase plats shall not be approved until such time as completion of at least 90% of the affordable units in preceding residential phases.

Response: Acknowledged. No change.

12.4 Appearance

All standards in the Chatham County Design Guidelines for Commercial, Industrial, and Conditional Use Projects shall apply to compact communities.

As part of the project review process, the developer of each compact community shall submit integrated Architectural Guidelines and Contextual Guidelines for review by Chatham County.

Utilities shall be placed underground in order to improve sight lines, open up sidewalks, and minimize the danger of interruptions in utility service during inclement weather.

Storage areas and loading areas reached by rear alleyways in storefront neighborhoods shall be opaquely screened.

Response: The Chatham County Design Guidelines for Commercial, Industrial, and Conditional Use Projects and other architectural and landscape appearance issues for the compact community are incorporated into the Briar Chapel Design Guidelines. (Please refer to Appendix C, Design Guidelines.)

Utilities will be placed underground in order to improve sight lines, open up sidewalks, and minimize the danger of interruptions in utility service during inclement weather as well as to avoid the unsightly effects of utility lines strung across neighborhoods.

Storage areas and loading areas reached by rear alleyways in storefront neighborhoods will be opaquely screened. No change.

12.5 Green Building

Energy Conservation and Renewable Energy

No compact community development shall deny or prohibit the installation of solar panels, either electric or thermal.

Additional guidelines for energy conservation and green building are included in the Green Building Guidelines contained in Attachment C of this ordinance.

Response: Newland Communities is committed to developing Briar Chapel so as to maximize energy conservation, minimize adverse impacts to the project site and surrounding areas, and develop facilities that are designed with low life-cycle costs. This will be achieved through careful planning, design, construction, maintenance and operations, and reuse where practical. More specifically, Newland will utilize the Triangle J Council of Governments' High

*Performance Guidelines as a basis for action throughout this project. Please refer to Appendix D, Green Building. **No change.***



Briar Chapel Residential Green Building Info Packet

Welcome to Briar Chapel! Southern Energy Management is excited to be your Development Partner, providing the technical assistance and 3rd Party verification services required to achieve the Energy Star and Green Building certifications required for the Briar Chapel Community.

As a new builder in the Briar Chapel community, you will need to incorporate standards into your construction process to achieve Energy Star and Bronze Level Green Home Builders of the Triangle certifications. Southern Energy Management provides the consultation, technical assistance, testing, and documentation for builders in Briar Chapel to achieve Energy Star and Green certificates for their homes.

Overview

There are 3 main steps to complete prior to construction start in Briar Chapel:

1. Schedule your Green Building Orientation meeting with Southern Energy Management.
2. Finalize Green Building criteria for your product(s) and complete SEM paperwork
3. Submit your plans and paperwork to Southern Energy Management minimum of 2 weeks prior to construction start

At your Green Building Orientation meeting, Southern Energy Management will review the Energy Star and Green Building programs with specific attention to your construction design and needs. A specific proposal for services will be developed to achieve the specific Energy Star and Green Building goals and certifications for your product.

All input forms provided during the orientation meeting must be turned in *at minimum* 2 weeks prior to construction start. Plans should be submitted to SEM as soon as they have received approval from the Briar Chapel ARB. Continue with permitting as you would in standard construction.

Resources

Provided in this packet are a few reference documents to introduce you to Energy Star and green building. Please feel free to review this reference material prior to your Green Building Orientation Meeting.

Energy Star Program: Green Begins with Energy Star Blue, SEM Inspection Process Details

Green Building Starter: Benchmarking tool to see how close you may already be to Bronze Level Green Building Certification. Note that this list is only ONE example of the many ways and strategies you can choose to achieve a Bronze Level Certificate.

Thanks and we look forward to working with you!

The Southern Energy Management Team



A Green Home Begins with ENERGY STAR Blue

Homebuilders and homebuyers across the country are increasingly interested in green building. But what exactly makes a home green?

Green building means improving the way that homes and homebuilding sites use energy, water, and materials to reduce impacts on human health and the environment. Building a green home means making environmentally-preferable and sustainable decisions throughout the building process—decisions that will minimize the environmental impact of the home while it is being built and over the many years it will be lived in.

Did you know that a typical home can cause twice the greenhouse gas emissions of the typical car?

There are nearly 50 regional and national green home labeling programs around the country. While each program approaches green building a little differently, each incorporates important elements such as:

- Energy-efficient construction techniques and products.
- Improved indoor environments through environmentally-preferable materials and building practices.
- Water-efficient products and processes.
- Renewable energy options, when feasible.
- Waste reduction and recycling during the construction process.
- Smart growth and sustainable land development practices.

What should homebuyers look for first in a green home?

Energy efficiency is the place to start. That's because the energy used in homes often comes from the burning of fossil fuels at power plants, which contributes to smog, acid rain, and risks of global climate change. So, the less energy used, the less air pollution generated. And the easy way to make sure a new home is energy efficient is to look for the blue ENERGY STAR mark, the government-backed symbol for energy efficiency.

ENERGY STAR qualified homes are independently verified to meet strict guidelines for energy efficiency set by the U.S. Environmental Protection Agency. These homes save money on utility bills, provide a more comfortable living environment with better indoor air quality, and help protect the environment.

Typical features to look for in ENERGY STAR qualified homes include:

- **An Efficient Home Envelope**, with effective levels of wall, floor, and attic insulation properly installed, comprehensive air barrier details, and high-performance windows;
- **Efficient Air Distribution**, where ducts are installed with minimum air leakage and effectively insulated;
- **Efficient Equipment** for heating, cooling, and water heating;
- **Efficient Lighting**, including fixtures that earn the ENERGY STAR; and
- **Efficient Appliances**, including ENERGY STAR qualified dishwashers, refrigerators, and clothes washers.

Each **ENERGY STAR qualified home** can keep 4,500 lbs of greenhouse gases out of our air each year. And because homes have such long life-spans, this environmental benefit lasts for many, many years.

These energy efficiency improvements save homeowners money—about \$200 to \$400 per year on utility bills. More importantly, monthly energy savings can easily exceed any additional mortgage cost for the energy efficiency improvements, resulting in a positive cash-flow from the first day of home ownership. As a result, the cost-effectiveness of ENERGY STAR improvements can help offset additional costs associated with other green home features.

What comes after energy efficiency?

Homebuyers can also look for the ENERGY STAR Indoor Air Package label—a new specification developed by EPA to address the indoor environment component of green building. Homes that achieve this level of excellence are first qualified as ENERGY STAR, and then also incorporate more than 60 additional home design and construction features to control moisture, chemical exposure, radon, pests, ventilation, and filtration. Together, these features help protect qualified homes and their residents from mold, chemicals, combustion gases, and other airborne pollutants.

Completing the green home picture

Through ENERGY STAR qualified homes and the ENERGY STAR Indoor Air Package, homebuyers can address two critical green home elements. Then, look to the wide variety of available green home programs to complete the picture with water-efficient products, renewable energy technologies, waste reduction, recycling, and sustainable land development practices.



Southern Energy Management is a full service Energy Star certification company that provides plan reviews, value engineering, training and technical assistance, marketing support, quality assurance inspections and final processing of your Energy Star home. To give you an idea of how it works, here's a brief overview of what you can expect from the Southern Energy Management Team and the Energy Star certification process:

1. SEM will use a set of plans you provide to perform a detailed computer analysis, which will help us identify the most cost-effective ways to maximize efficiency and achieve Energy Star certification.
2. SEM will communicate the results of our analysis and help you choose the best options for your product and customers.
3. SEM will provide detailed Energy Star specifications for you and your sub-trades including framing, insulation, and HVAC.
4. SEM will perform on-site inspections and performance testing throughout the building process to ensure the quality and efficiency of the finished home. Our goal is to work as your partner to educate and inform all members of your team so you are fully prepared for your inspections. Should a home fail an inspection, a re-inspection may be needed prior to issue of certification for the home. The inspection process includes:
 - a. **Initial Framing Walk** --- not a required inspection, SEM offers new Energy Star builders a pre-inspection framing walk of the home to enable builders to transition smoothly into the Energy Star process.
 - b. **Insulation Inspection** (pre-sheetrock) – required inspection; An SEM Building Science Technician will meet you on site to verify the home has met all criteria as indicated by the Energy Star Thermal Bypass Checklist. A written report is provided to you at this time indicating the home has passed or identifying any items that need attention before sheetrock can be installed. A re-inspection or documentation of items will be required for any items not passing at time of inspection. Duct testing may be performed if any HVAC systems are installed at this time.
 - c. **Final Inspection** (after HVAC start-up) –required inspection; Diagnostic testing of air infiltration (blower door), duct leakage testing, exhaust fan flow testing, room pressure testing, fresh air flow inspection and data collection on equipment and Energy Star criteria are performed at this time. A written report is provided at the end of the final inspection indicating if the home has passed or identifying any issues to be addressed.
5. SEM will issue an Energy Star certificate within a week of the final inspections and contact the utilities provider to inform them that the home has qualified for any available Energy Star discounts. Many electric utilities, including Duke and Progress Energy provide discounts to customers for energy Star homes.

SEM has many great sales tools and will work with your sales and marketing team to create personalized and powerful sales tools that will SELL homes and increase your bottom line. From plan review to final inspection, we'll be right there with you every step of the way, making sure you achieve all the benefits building your homes to the Energy Star standards.

Southern Energy Management
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Green Building Starter List



The following list, created by Southern Energy Management, is an example list of items selected from the National Green Building Standards to achieve Bronze Level Certification for a home. This list is intended as a benchmarking tool for Southern Energy Management Energy Star Builder Partners to provide a quick assessment of how close your project may be to achieving green certification.

DIRECTIONS: Circle any items you are already doing. Have a lot of items circled? Contact Southern Energy Management to begin the process of enrolling your home in a green certification program.

Note: Following this list does not guarantee a home will achieve certification.

GREEN BUILDING PRACTICES	Points Available	Comments
502 PROJECT TEAM, MISSION STATEMENT AND GOALS		
502.1 A knowledgeable team & mission statement.	4	
503 LOT DESIGN		
503.3 Soil disturbance and erosion are minimized by one or more of the following: (also see 504.3)		
(1) Construction schedule minimizes soil exposure	5	
(3) Clearing/grading limits shown on the plan	5	provide plans per subdivision
503.5 A landscape plan limits water & energy use & preserves/enhances the natural environment.		
(2) Native or regionally appropriate grass, vegetation, & trees are used	4	
504 LOT CONSTRUCTION		
504.1 On-site supervision provided during clearing, grading, paving, & utility installation to ensure specified green practices are followed. (See 503.3)	4	
(1) Limits of clearing/grading are staked out	5	
(3) Sediment/erosion controls are installed	5	
(6) Disturbed areas stabilized within 14 days	3	
505.2 Heat island mitigation. Heat island mitigation. Any combination of the following strategies are provided for a minimum of 50 percent of the horizontal surface area of the hardscape:		
(2) Horizontal hardscaping has solar reflectance index of 29 or greater	4	Horizontal hardscaping has solar reflectance index of 29 or greater (reference "Solar Reflectance of Concretes for LEED Sustainable Sites Credit: Heat Island Effect" study by the Portland Cement Association)
600 RESOURCE EFFICIENCY		
601.1 Conditioned floor area, is limited.		
(5) greater than 4,000 square feet (For every 100 square feet over 4,000 square feet, one point is to be added in Table 303, Category 7.)	Mandatory	<input type="checkbox"/> Square footage = _____
601.2 Structural systems/advanced framing techniques optimize material usage.	3 Points each MAX PTS. = 9	floor roof ext. Walls int. Walls single top plate right sized headers no headers in non-bearing walls ladder blocking at wall intersections 2 stud corners

601.3 Building Dimensions/layouts designed to reduce material cuts & waste.		
(1) floor area	3	
(2) wall area	3	
(3) roof area	3	
(4) cladding or siding area	3	
601.4 Detailed framing/structural plans, material lists, on-site cut lists for framing/structural materials	4	
601.5 Precut/preassembled components, panelized, or precast assemblies are utilized for a minimum of 90% of that construction (601.5 MAX PTS. = 13)		
(3) roof system	4	trusses qualify for points
601.7 Building materials/assemblies do not require additional site applied material for finishing. (MAX PTS. = 12)		
(1) 90 percent or more of material (Points awarded for each material or assembly.)	5 each*	pigmented, stamped, decorative, or final finish concrete or masonry trim not requiring paint or stain window, skylight, and door assemblies not requiring paint or stain on exterior and/or interior surfaces
(2) 50 percent to less than 90 percent of material (Points awarded for each material. 4 mt'ls max.)	2 each*	wall coverings or systems not requiring paint or stain or other type of finishing application
602 ENHANCED DURABILITY AND REDUCED MAINTENANCE		
602.1 Entries at exterior door assemblies are covered (MAX PTS. = 5)		
(1) main entrance door	3	silver option
(2) additional covered door assembly	1 each	
602.3 Foundation drainage.		
602.3.1 Where required by the ICC IRC or IBC for habitable and usable spaces below grade, exterior drain tile is installed	Mandatory	non applicable for slab on grade
602.5 Gutter/downspout/splash blocks grading carry water a minimum of 5' from perimeter foundation.	4	
602.6 Finish grade at all sides is sloped a minimum of 6 inches (150 mm) of fall within 10 feet	Mandatory	
602.9 Where required by the ICC IRC or IBC, a water-resistive barrier and/or drainage plane system is installed behind exterior veneer and/or siding.	Mandatory	housewrap qualified
602.10 When ice damming is a problem, ice barrier at roof eaves extends at a min. of 24" inside the ext. wall.	Mandatory	
604 RECYCLED CONTENT BUILDING MATERIALS		
604.1 Building materials w/ recycled content are used.	Points per material.	List major mat'ls: carpet pad, fiberglass insulation, maybe concrete with flyash, maybe drywall, etc;
605 RECYCLED CONSTRUCTION WASTE		
605.3 Recycled construction materials are recycled offsite. (MAX PTS. = 6)	3 pts for 2 materials; 1 for each additional type	Wood Cardboard Metal Drywall vinly siding Plastic Shingles Concrete
607 RESOURCE-EFFICIENT MATERIALS		
607.1 Products containing fewer materials are used to achieve the same end-use requirements as conventional products, (3 points awarded for each material.)	MAX PTS. = 9	lighter, thinner brick with bed depth less than 3 inches and/or brick with coring of more than 25 percent engineered wood or engineered steel products roof or floor trusses

608 INDIGENOUS MATERIALS

608.1 Indigenous materials are used for major elements of the building (harvested, processed, and manufactured within 300 miles of site).

2 pts per material

List mat'ls:

700 ENERGY EFFICIENCY

701.1.3 Alternative Bronze Level compliance. Any ENERGY STAR Qualified Home achieves the Bronze Level for Chapter 7.

800 WATER EFFICIENCY

801.2 Energy Star or equivalent water conserving appliances are installed.

(1) dishwasher

2

801.5 Faucets.

801.5.1 Water-efficient lavatory faucets with 1.5 gpm (5.68 L/m) or less maximum flow rate when tested at 60 psi (414

(1) a bathroom (*Points awarded per bathroom*)

1
MAX = 3

(2) all lavatory faucets

2

801.7 Irrigation systems.

801.7.4 The irrigation system(s) is controlled by a smart controller

(3) No irrigation installed, landscape plan per 503.5

15*

900 INDOOR ENVIRONMENTAL QUALITY

901.1.2 Air handling/return ducts not in the garage, unless in isolated, air-sealed room w/ outside air source

5

901.2.1 Fireplaces and natural draft fuel-burning appliances (except cooking appliances, clothes dryers, water heaters and furnaces) are code compliant, vented to the outdoors, and have adequate combustion and ventilation air provided to minimize spillage or back-drafting, in accordance with the following, as applicable.

(1) Natural gas & propane fireplaces with power or direct vented have permanent fixed glass fronts or gasketed doors per CSA Z21.88a/ 2.33a or Z21.50/ 2.22

Mandatory

901.3 Garages are in accordance with the following:

(1) Attached garage

(a) Door between garage & conditioned space is tightly-sealed and gasketed

Mandatory

(b) A continuous air barrier is provided between walls & ceilings separating the garage from the conditioned living spaces

Mandatory

901.4 Wood materials. A minimum of 85 percent of material within a product group (i.e., wood structural panels, countertops, composite trim/doors, custom

(1) Structural use plywood per PS 1 or PS 2. OSB per PS 2. All marked Exposure 1 or Exterior

Mandatory

901.5 Carpets are in accordance with the following:

(1) Wall-to-wall carpeting is not installed adjacent to water closets and bathing fixtures.

Mandatory

(2) A minimum of 85 percent of installed carpet area, padding, or adhesives per CDPH 01350, as certified by a third-party program, such as the CRI *Green Label Plus Indoor Air Quality Program*.

(a) carpet

6

(b) carpet cushion

2

(c) carpet adhesives

2

901.8 At least 85% of site applied interior architectural coatings per either 901.8.1 or 901.8.2		
901.8.1 Site-applied interior products: VOC limits in accordance with: (a) 50 grams/liter flat (b) 100 grams/liter non flat (c) 350 grams/liter clear wood varnish (d) 550 grams/liter clear wood lacquer	5 *	
901.10 At least 85% of kitchen & bath vanity cabinets per one of the following. (Where more than one of the following practices is used, the practice with the fewer number of points is awarded.)		
(1) Kitchen and bath vanity cabinets in accordance with KCMA ESP 01, or equivalent, are installed	2*	
902 POLLUTANT CONTROL		
902.0 Intent. Pollutants generated in the building are controlled.		
902.1 Spot ventilation.		
902.1.1 Spot ventilation is in accordance with the following:		
(1) All bathrooms are vented to the outdoors - rate = 50 cfm or 20 cfm if continuous operation	Mandatory	
(2) Clothes dryers are vented to the outdoors	Mandatory	
902.1.3 All Kitchen, bath & laundry fans verified to 902.1.1	8	must successfully pull at least 50cfm when tested to receive points
902.2 Building ventilation systems.		
902.2.1 Whole building ventilation system is implemented per ASHRAE 62.2		
(1) exhaust or supply fan(s) for continuous operation	8 *	
902.4 One of the following HVAC system protection measures is performed.		
(1) HVAC supply registers, return grilles, & rough-ins covered during construction to prevent dust and other pollutants from entering the system, OR	3 *	
(2) Prior to occupancy, HVAC supply registers, return grilles, & duct terminations inspected & vacuumed. Coils are inspected/cleaned & the filter is replaced.		
902.6 The living space is sealed to prevent unwanted contaminants.		
(1) Attic access, knee wall door, caulked, gasketed, or otherwise sealed.	2	
(2) All penetrations, (e.g., top plates, HVAC register boots, recessed can lights), are sealed:		
(a) attic/ceiling	2	
(b) wall	2	
903 MOISTURE MANAGEMENT: VAPOR, RAINWATER, PLUMBING, HVAC		
903.1 Tile backing under tile in wet areas per ASTM C1178, C1278, C1288, or C1325.	Mandatory	
903.2.1 A capillary break and vapor retarder are installed at all concrete slabs in accordance with Sections 903.2.1(1) or		
(1) 4-inch of ½-inch aggregate w/ poly	Mandatory	
(2) 4-inch of sand w/ geotextile matting plus poly		
(3) Modification:		
(a) On Group 1 certified soils a gravel bed or geotextile matting is not required		
(b) In Dry locations, per Figure 6(1), poly not required unless for radon resistance (902.3)		
903.2.2 Capillary break on footing.	3	

903.3.1 Crawl space vapor retarder per the following, as applicable. Joints overlap 6 inches & are taped.		
(2) Damp-proof walls provided below finished grade	Mandatory	
903.4.1 Moisture control measures are in accordance with the following:		
(1) No building materials with visible mold.	2	sem inspects no visible mold on lumber at insulation inspection
(2) Walls are not enclosed (e.g. with drywall) if the insulation has a high moisture content.	Mandatory	
903.6 All HVAC ducts, plenums, & trunks in unconditioned attics, basements, and crawl spaces are:		
(1) insulated to a minimum of R-6	Mandatory	NA
1001 BUILDING OWNERS' MANUAL FOR ONE- AND TWO-FAMILY DWELLINGS		
1001.1 An building owner's manual is provided that includes the following, as available and applicable. (1 point awarded per two items. Points awarded for both mandatory and non-mandatory items.)		
(1) A green building certificate or placeholder	Mandatory	y
(2) List of green building features	Mandatory	y
(3) Mfg's manuals or product data for equipment, fixtures, & appliances. If data sheet is in manual, product manual may be attached to the appliance	Mandatory	y
(4) Information on local recycling programs		
(5) Info on utility purchasing renewable energy		
(6) Benefits of energy efficient lighting systems (e.g., CFL bulbs, LEDs) in high usage areas		
(7) A list of practices to conserve water and energy		
(8) Local public transportation options		
(9) A diagram of safety valves & controls		
(10) Applicable info on Frost Protected Shallow Foundations (see VRG)		
(11) Local providers for service & maintenance to assure proper performance of equipment & structure		
(12) Clearly labeled photos (prior to insulation) of framing with utilities installed		
(13) Maintenance checklist		
(14) List of hazardous materials often used in the building & instructions for proper handling/disposal		
(15) Information on organic pest control, fertilizers, deicers, and cleaning products		
(16) Information on native landscape materials and/or those that have low-water requirements.		
(17) Information on maintaining the building's relative humidity in the range of 30% to 60%		
(18) Instructions for inspecting for termite infestation		
(19) Instructions for maintaining gutters/downspouts & importance of diverting water 5' from foundation		
(20) Importance of maintenance and operation in retaining the attributes of a green building		