

MEMORANDUM

To: Roger Waldon; Planning Director  
From: Bruce Heflin, Public Works Director  
Subject: Revised Development Ordinance (2<sup>nd</sup> Draft)  
Date: September 17, 2001

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We have reviewed the revised Development Ordinance and have the following comments and questions:

- 2.1.1 The applicability table indicates that Commercial Retrofit development is exempt from the Town's landscaping provisions. We believe that all development should meet the Town's parking lot screening and shading requirements and it is unclear whether the revised ordinance exempts certain development from this requirement (note: parking lot landscaping standards are found in section 5.9.5 "Parking Design Standards" not section 5.6 "Landscaping, Screening and Buffering").
- The applicability table indicates that Conservation Subdivision development is exempt from the Town's tree protection provisions. We recommend that this exemption be removed.
- The applicability table indicates that listed development types other than subdivisions are exempt from the Town's buffer provisions. We support this in the Town Center and in the interior of Planned Developments but do not understand why this exemption should apply elsewhere.
- 2.3.7c What is a "Conservation Access Street"?
- 2.3.8d This section indicates that "woodlands" shall be designated as Primary Conservation Areas in a Conservation Subdivision. It is unclear whether all woodlands, regardless of age and type, shall be so designated and if so what this would imply about the value of this zoning designation on a fully wooded tract. Also, by removing the 35% land area requirement for the Primary Conservation Areas there no longer appears to be any value in distinguishing between primary and secondary areas.
- 2.4.9 This section appears to require that all parking lots be located to the rear of buildings and that they not be located adjacent to parks

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in a TND. We believe there may be some advantage to a less rigid wording to permit parking lots to be located other than at the rear of a building if that location will require excessive grading or other site disturbance. We also believe that parking adjacent to a park can be desirable, notably for park users, especially if they are handicapped.

Table 2.4-4 This table is a simplified compilation of typical street sections from NCDOT's Traditional Neighborhood Development (TND) guidelines that omits important details and descriptions included in the actual NCDOT guidelines. It is also confusing because the typical roadway widths stated are measured from the face of curb rather than the back of curb as is conventionally done and is misleading because the curb dimension is not accounted for in the total cross-section width. We strongly recommend that this table be omitted from the ordinance. If it is to be included, we believe it will be necessary to revise it to accurately depict the detailed street sections the Town is recommending. Suggested revisions include:

- 1) Indicate the type of curb and gutter proposed for each section. The NCDOT guidelines indicate curb and gutter on all sections other than the trail and alley but propose an 18" C&G section on the "Lane" section. We prefer a standard 30" C&G for all sections and recommend at a minimum that 24" C&G be required for the narrowest street sections.
- 2) Indicate whether the proposed section will be publicly maintained. The NCDOT guidelines indicate that the proposed alley section cannot be included in the State system. We believe that any alley constructed as shown in the proposed section would not be eligible for Powell Bill maintenance reimbursement and if permitted should be privately maintained and used for private access only. We oppose the construction of private streets and do not believe that this alley section can accommodate service vehicles and so believe that it should be omitted from the list of recommended street sections.
- 3) Retitle the "Lane" section to "Public Alley and One-way Street with On-Street Parking" and increase the f-f width from 18' to 19' (20' b-b with 24" C&G and 16' of asphalt). This would be consistent with the carefully developed sections used for the narrowest streets in Meadowmont.
- 4) Reduce the width of the standard "Street" section from 28' f-f to 26' f-f (27' b-b with 30" C&G and 22' of asphalt).

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- 5) Indicate whether on-street parking is permitted for each classification.
  - 6) Expand the proposed planting strips to a minimum of 7' in width.
  - 7) Expand the right-of-way to 1' behind the sidewalk to accommodate future sidewalk maintenance work.
  - 8) Include NCDOT's recommended 15' minimum curb radii for all public street sections. This is particularly important for the narrower sections to avoid trucks and other vehicles routinely driving over the curb at intersections.
- 2.5.3 Remove the word "any" from line two (typo).
- 2.5.9 We believe that the detailed architectural standards in this section are better suited to the design manual rather than being requirements of the Development Ordinance
- 2.7.1 We are concerned that the graphic example provided does not include any service and loading areas for the proposed commercial buildings. We think this is significant because the need for service areas generally results in one side of a commercial building being poorly suited for full public view and often generates a site plan that calls for screening this "service side". We believe that the omission of a service area makes the idealized example provided unrealistic. We believe that the need for a service area may also conflict with the concept of requiring public parking behind buildings in some situations.
- 2.7.6 As noted above, we are concerned that several development types appear to be exempt from the Town's buffer requirements. We believe it is particularly noteworthy that "Commercial Centers" are proposed to be exempt.
- 2.7.11.a.3 Who is the "Director"?
- 3.3.1.b.2 Does this section mean that every Town Center development activity that does not conform to the design guidelines in the revised ordinance would need an SUP? It seems plausible that minor modifications to existing buildings and parking lots that do not currently conform to the guidelines may need an SUP if this interpretation is correct.
- 3.6.3.b.4.B How is aquatic and/or water loving vegetation identified? Do we currently use this standard or do we generally require the presence

of water and invertebrates with exoskeletons to determine an RCD? If vegetation is to be considered should additional detail about specific plant types be provided to assure that RCD delineations are done consistently?

Table 3.6.3-2 The uses in this table include many descriptions that are not clearly defined and are likely to lead to confusion. For example outdoor plant nurseries and horticulture are permitted in the Stream Side Zone while gardens are not. The list appears to be based in part on the use of fertilizers and pesticides in certain zones and implies that such use may be restricted. We note that there are “organic” fertilizers and pesticides that perhaps could be permitted and we have concerns about how pesticide restrictions could be enforced. We recommend that the list be simplified and references to the controversial and often misunderstood technicalities of “pesticides and fertilizers” eliminated.

We recommend that the use of fences be permitted in sections of the RCD above the 100 year floodplain elevation.

The three classifications (Stream Side, Managed Use and Upland) are based on an RCD cross-section that does not appear typical of many stream systems in the Chapel Hill area. Using the horizontal dimensions provided it appears that some RCD areas defined as “Upland” may actually be below the 100 year flood elevation (for example part of the Little Creek flowage easement would be “Upland”). We suggest that if three classifications are used that the classification titles be changed. Alternatively, the RCD could be divided into two sections; perhaps 30’ from the stream bank and/or above the 100 year floodplain elevation whichever is farther from the stream bank. We believe a system that considers elevation would provide a more realistic basis for development regulation and a two tier system would be simpler to use than a three tier system.

Land disturbing activities associated with a single-family dwelling, including utilities and gardens, appear to be restricted from the Stream Side Zone. We note that many of these uses currently exist (the Lake Forest neighborhood has many good examples) and are concerned that regulating the details of land uses on private residential lots may be difficult to implement. Specifically, we believe that it may not be reasonable to prohibit gardening adjacent to perennial creeks on private residential property, and we believe that it will be difficult to differentiate between gardening and other presumably permitted activities (horticulture, removal of exotic invasive species, forestry etc.).

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3.6.3.e Why does the dimensional requirements table include two categories for Impervious Surface Ratio (sewered areas)?

It appears that essentially none of the permitted uses from the previous table can be constructed in the Stream Side Zone if it has a disturbed area ratio of .01. How will disturbed area calculations be established for activities, like private residential trails and gardens, where no site plan is developed?

The Managed Use Area has a disturbed area ratio of .010 (equal to the .01 in the Stream Side Zone). Isn't this suppose to be .10? Even at the higher .10 ratio, it does not seem likely that this relatively large area will be able to accommodate even the least disruptive permitted uses (trails and greenways for example). We believe that quantifying disturbed area and enforcing these very tight dimensional requirements on all RCDs, especially those on private residential property, will be very difficult.

As currently proposed it appears that it would not be possible to construct a 5' cleared path (disturbed area) paralleling the stream channel in the combined Stream Side Zone and Managed Use Zone due to the disturbed area ratio, or a 10' paved greenway anywhere in the RCD due to the impervious surface area ratio. We believe that the proposed dimensional requirements may be unrealistic and will negatively impact greenway improvements and other public purposes.

3.6.3.f This section states that local streets which cross the Stream Side or Managed Use portions of the buffer shall utilize swales. We recommend that this provision be eliminated. As was discussed in the review of the recent Cross Creek subdivision there are alternatives to swales, such as level spreaders out of the public right-of-way, that may provide a better solution.

3.6.4.f.3 This section indicates that all stream buffers in the Watershed Protection District shall be fully vegetated and that any disturbed areas shall be replanted in accordance with a Landscape Plan to be approved by the Town Manager. We are concerned that this provision, like the disturbed area ratios for the RCD, will be difficult to enforce, especially on single family residential properties.

4.7.1.b.2 The phrase "or 10 parking spaces, whichever is greater" was deleted from the SUP exemptions in section 4.5.4.b.4 and in order to make the Ordinance consistent should probably be deleted here as well.

- 5.2.7.a "And" should be "an" (typo).
- 5.5.5.c.1 "Stte" should be "State" (typo).
- 5.6.8 This section indicates that an alternative buffer shall "afford a degree of buffering and screening equivalent to or exceeding that provided by the above requirements". Although in principle this seems desirable, there are situations where, due to utility conflicts (Homestead Station, for example) or security issues (bank ATM's), this requirement cannot reasonably be met. We recommend that the wording be revised to accommodate special cases at the discretion of the Community Design Commission.
- 5.7 This section is variously referred to as an "article" and a "section" in the text. It appears that section should be substituted wherever the term article is used.
- 5.7.2.c This section indicates that all permits be clearly displayed. In the large majority of cases a ZCP is the permit that is issued that allows for tree removal. The Town has not traditionally required that a ZCP be posted at a construction site but the language in this section would suggest that this be considered. We believe it would be reasonable to delete this section. Alternatively the Town could consider printing ZCP's on card stock and requiring that they be posted.
- 5.7.4.e.1 Delete the words "and examination" and "and have received a Landscape Protection Certificate" from the description of a Landscape Protection Supervisor.
- 5.7.6.a.1 Substitute 18 inches or more for the existing 24 inches or more in the definition of a specimen tree. This is a substantive change from the current ordinance which will result in more trees needing to be shown on Landscape Protection plans. We have discussed this with the Planning staff previously and recommend that it be considered at this time.
- 5.7.7f Delete this revision provision as it refers to a time period that has already elapsed (ie. it's irrelevant).
- 5.9.5.n.3 This section deals with the impact of residential parking on trees. We are concerned that in reality parking likely does cause tree damage but that it cannot readily be measured and therefore this section would seem to be unenforceable. We would recommend that references to tree damage be eliminated.

- 5.9.6.d This is the parking lot shading standard that calls for 35% shaded area at noon on August 21. We believe that this standard is odd, arbitrary, difficult for designers to respond to and unnecessarily complicated. We would be glad to work with the Planning staff on replacement language to make the Ordinance easier to use and enforce.
- 5.11.4 We are concerned that the specific 0.3 foot candle limitation on off-site illumination may be difficult to measure and enforce and may impact some public facilities. We note that downtown sidewalks are lit to a considerably higher 0.9 foot candle design standard, which is not particularly bright, and that the 0.3 foot candle level may be unrealistically limiting. It is also unclear whether streetlights and neighborhood security lights are included in this restriction and it seems likely that properties adjacent to essentially any streetlight will have some areas with more than 0.3 foot candle illumination. We recommend that the references to specific permitted foot candles be deleted from the Ordinance or that the exact levels be studied more carefully and exemptions be provided for street, sidewalk and some security lighting.
- 6.15.h What is a Water Quality Critical Area District? Is it the same as the Watershed Protection district?
- Appendix A **Impervious Surface** – Are permeable pavers and gravel considered impervious surfaces? This definition may merit more detail.
- Landscape Protection Certificate** – We recommend that this definition be deleted along with references to it in section 5.7.4.e.1 as noted above.
- Landscape protection Supervisor** – Delete the phrase “and acquired a Landscape Protection Certificate”
- Tree** – The proposed definition indicates that a tree is not a tree unless it has a dbh of 6”. We don’t think this definition is needed or helpful and recommend that it be deleted.

Please let me know if you need any additional information.

**Roger Waldon**

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**From:** Bruce Heflin  
**Sent:** Monday, September 17, 2001 11:13 AM  
**To:** Roger Waldon  
**Cc:** Curtis Brooks  
**Subject:** Development Ordinance

Roger,

In addition to our earlier comments, sent by Curtis, I note that the Draft Ordinance has a section that applies specific standards to street lighting illumination values. Street lighting levels have never been a part of the development ordinance and we believe they should not be now. The apparent issue that the consultant was trying to address has to do with "spill-over" lighting onto individual properties. We don't think these standards should apply to street lighting. If there has to be some reference to street lighting, at most it should be a reference to separate street lighting standards and policies. The latter have long been a Council prerogative.

Let me know if you want to discuss.

Bruce