

MEMORANDUM

TO: Chapel Hill Planning Commission

FROM: Mary Jane Nirdlinger, Planning and Sustainability
John Richardson, Planning Manager for Sustainability
Eric Feld, Planner II

SUBJECT: Review of Two Proposed Text Amendments for Phase 1 of the Land Use Management Ordinance Update – Parking Lot Landscaping and Water Quality

DATE: August 18, 2015

PURPOSE

Following on the introductory information provided at the [July 21st Planning Commission meeting¹](#), tonight's agenda item focuses on two of the six text amendments (listed below) that have been proposed for Phase 1 of the [Land Use Management and Ordinance \(LUMO\) Update²](#) project.

- [Parking Lot Landscaping³](#)
- [Water Quality⁴](#)

As part of tonight's review, the staff seeks additional feedback from the Commission as we prepare a recommendation for the September 1st Planning Commission meeting. To support your discussion this evening, drafts of the two text amendments are attached (Attachment 1), along with a summary of the proposed changes (Attachment 2). A copy of the project schedule is presented in the third attachment.

In addition to the attachments, a current listing of online public comments for each of the six drafts can be viewed on the [OpenComment website⁵](#). The online comment period closed August 15, 2015. See Attachment 4 for more details. All comments will be provided in summary form as part of the September 1st agenda item.

¹ <http://www.townofchapelhill.org/home/showdocument?id=28723>

² <http://www.townofchapelhill.org/town-hall/departments-services/design-chapel-hill/lumo-update>

³ <http://www.townofchapelhill.org/town-hall/departments-services/design-chapel-hill/lumo-update/lumo-update-parking-lot-landscaping>

⁴ <http://www.townofchapelhill.org/town-hall/departments-services/design-chapel-hill/lumo-update/lumo-update-stormwater-and-resource-conservation-district>

⁵ <https://codestudio.opencomment.us/lumo-topics>

NEXT STEPS

In keeping with the project schedule, we will return to the Planning Commission on the September 1st to present a staff recommendation for all six text amendments.

RECOMMENDATION

That the Planning Commission receive the information associated with tonight's agenda item and consider providing additional feedback to help inform the staff's recommendation that will be presented at the September 1st, 2015 Planning Commission meeting.

ATTACHMENTS

1. Proposed Text Amendments for Two Topic Areas (19 pages)
2. Summary of Proposed Changes (1 page)
3. Updated Project Meeting Schedule (2 pages)
4. Basics of the OpenComment Website (1 page)



Chapel Hill LUMO Topic Revisions

Sec. 5.9. Parking and Loading

5.9.9. Parking Landscaping

A. General Provisions

1. Purpose Statement

It is the intent of this Section to protect and promote the public health, safety, and general welfare by requiring the landscaping of parking areas which will serve to:

- a. Reduce radiant heat from surfaces;
- b. Reduce wind and air turbulence;
- c. Reduce noise;
- d. Reduce the glare of automobile lights;
- e. Mitigate and ameliorate stormwater drainage problems; and
- f. Protect and preserve the appearance, character and value of adjacent properties.

2. Applicability

a. New Construction

- i. All new surface parking lots with more than 10 spaces shall provide parking lot landscaping in accordance with this subsection.
- ii. Multiple platted lots contained on a single site plan, and any separate parking areas connected with drive aisles, are considered a single parking area.

b. Additions

- i. An existing parking lot may be renovated or repaired without providing additional landscaping, provided there is no increase in the area of the parking lot.
- ii. When an existing parking lot is increased in area, landscaping is required for the new parking area only.
- iii. When an existing parking lot is increased in area by more than 50%

cumulatively, landscaping is required for both the existing parking lot and the new parking area.

Except for one- or two-family dwellings, all parking facilities, unless located entirely underground, shall meet the following minimum landscaping requirements:

3. Multifunctional Landscaping

Nothing in this Section is intended to prevent the applicant from using landscaped areas for stormwater mitigation purposes, including landscape, screening, sidewalk and streetscape areas. Where low impact stormwater management features are incorporated, grading and edge treatments for landscaping and screening areas must allow stormwater inflow. In such cases, no berming or curbs are necessary. The Town Manager may modify the landscaping standards of this subsection or the Design Manual to achieve this end.

B. Design Standards

1. Entrance Drives

Entrance drives into parking facilities shall be bordered by a landscaped buffer strip a minimum of 8 feet in width, which shall be landscaped in accordance with Town landscaping standards.

2. Surface Parking Lots

a. Foundation Buffer Strip Planting

Parking facilities, unless located on or within a structure, shall Ground-level parking facilities and the ground level of parking structures must be separated from the exterior wall of a structure (exclusive of paved pedestrian and bicycle entrance ways or loading areas) by a landscaped buffer strip at least 5 feet in width, which shall be landscaped in accordance with Town landscaping standards.

b. Perimeter Screening

All surface parking lots (of any size) with frontage on any portion of a public street (not including an alley) shall be screened with the following:

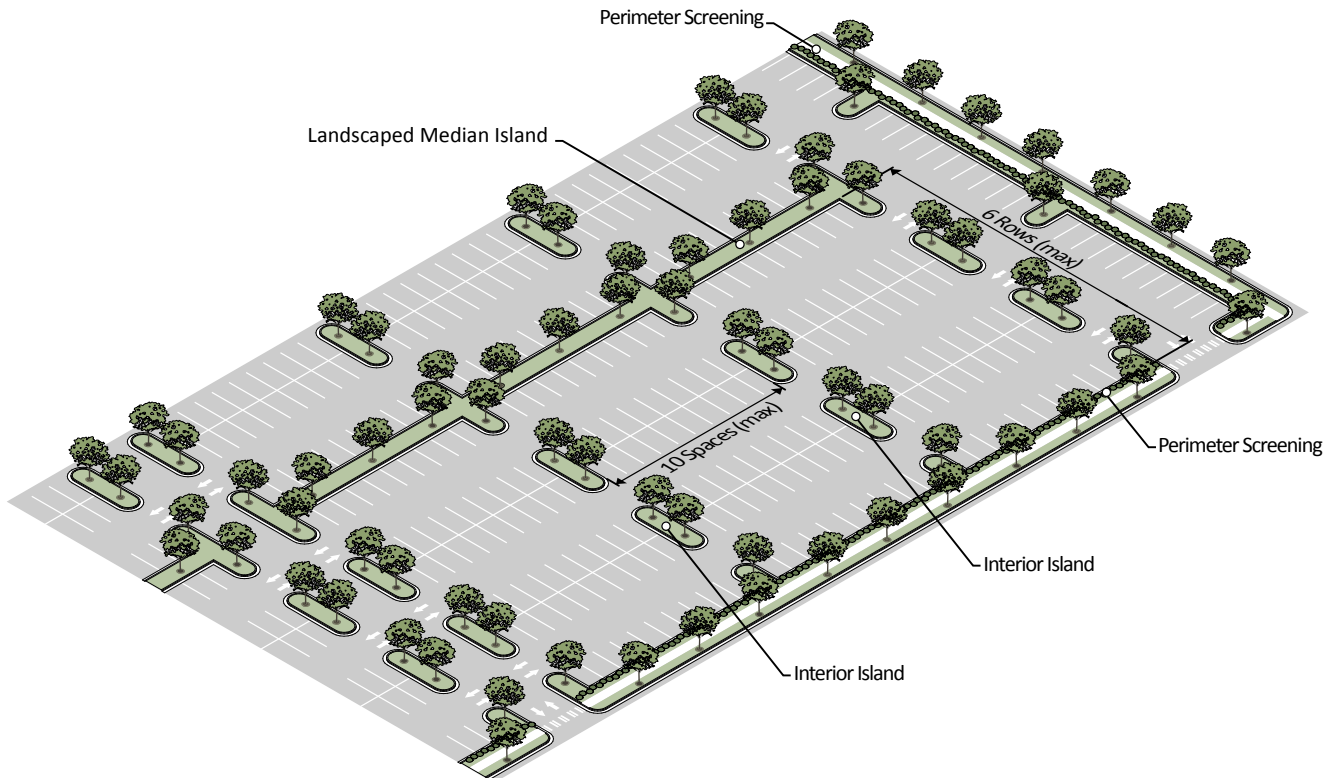
- i. A minimum 5-foot wide, landscaped area with a continuous row of shrubs between the street and parking lot. Shrubs must be a minimum of 18 inches in height when planted and must reach a minimum size of 36 inches in height within 3 years of planting. OR
- ii. A 36-inch wall may be substituted for the 5-foot wide landscaped area with a continuous row of shrubs.
- iii. Breaks for pedestrian and vehicle access are permitted.

c. Interior Islands

- i. A landscaped interior island must be provided every 10 parking spaces in excess of 20 spaces. Interior islands

must be distributed evenly throughout the parking area. Interior islands may be consolidated or intervals may be expanded in order to preserve existing trees.

- ii. An interior island abutting a single row of parking spaces must be a minimum of 8 feet in width and 150 square feet in area. Each island must include 1 canopy tree.
- iii. An interior island abutting a double row of parking spaces must be a minimum of 8 feet in width and 300 square feet in area. Each island must include 2 canopy trees.
- iv. Interior islands may be installed below the level of the parking lot surface to allow for runoff capture if included as part of an approved stormwater management plan.



Vegetation shall be provided within and adjacent to ground-level parking areas which will, in the opinion of the Town Manager, be sufficient to achieve shading of at least 35% of the parking area surface on noon on August 21 when the vegetation matures.

d. **Median Islands**

- i. A landscaped median island must be provided between every 6 single parking rows. Intervals may be expanded in order to preserve existing trees.
- ii. A landscaped median island shall be a minimum width of 8 feet, as measured from back of curb to back of curb.
- iii. Landscaped median islands may be installed below the level of the parking lot surface to allow for runoff capture if included as part of an approved stormwater management plan.
- iv. Any trees planted in landscaped median islands must be canopy trees unless the median is designed as a bioretention basin.

e. **Pedestrian Access**

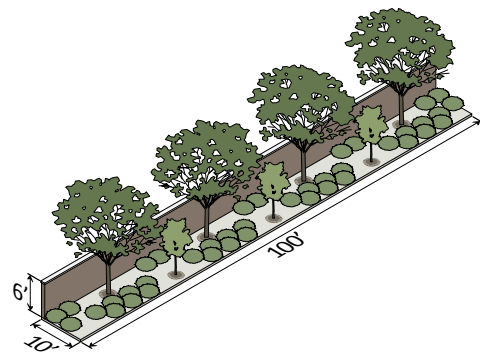
- i. Well-marked, ADA-compliant pedestrian access must be provided.
- ii. Access perpendicular to the main entrance from the parking area should be provided, whenever possible,
- iii. Where a sidewalk is added to a median, additional median width equal to the sidewalk width must be provided.

f. **Trees**

No parking space shall be farther than 75 feet from the trunk of a tree.

3. **Parking Adjacent to Residential Zoning**

Ground-level parking facilities and the ground level of parking structures must be screened from any adjacent residentially property zoned property residential with the following buffer. by means of an effective screening device which is at least 6 feet in height above the grade of the edge of the parking area. Appropriate screening devices may include solid decorative brick walls, wood fences, berms, tight evergreen hedges which shall reach the required height within 2 years of planting, or any combination of the above.



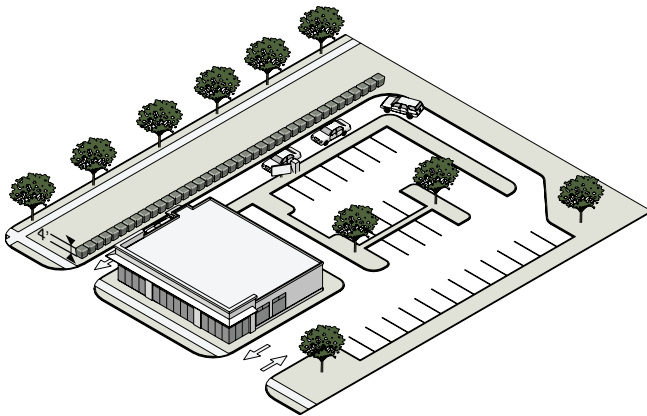
Depth (min)	10'
Wall Height (min/max)	6'/8'
Fence Height (min/max)	not allowed
Shade Trees (min per 100')	4
Understory Trees (min per 100')	3
Shrubs (min per 100')	40
Shrub Height (min)	4'

4. **Drive-Thru Screening**

- a. Where drive-thru windows and lanes are permitted to be placed between a public street (not including an alley) or ground floor residential use and the associated building, the entire length of the drive-thru lane, including but not limited to menu boards, stacking lanes, trash receptacles, ordering box, drive up windows, and other objects associated with the drive-thru must be screened.
- b. Screening must be a continuous compact evergreen hedge or a screening wall. At the time of installation, a hedge must be at least 3 feet in height and reach a height of 4 feet within 3 years of planting. A screening wall must be a minimum height of 4 feet. The wall must be compatible with the principal building in terms of texture, quality, material and color.

C. **Plant Installation and Maintenance**

- 1. Where vehicles hang over medians or islands, shrubs and trees must be planted a minimum of 3 feet from back of the curb or wheel stop.
- 2. All plants and trees must be maintained and installed in accordance with in the Town of Chapel Hill Design Manual. The applicant shall be responsible for maintaining such vegetation in a safe and sanitary condition.
- 3. In providing the vegetation required in this subsection herein, the retention of existing significant vegetation must ~~may be retained~~ where, in the opinion of the Town Manager, the vegetation is significant and can ~~it is feasibly be preserved.~~ to retain the existing vegetation.





Chapel Hill LUMO Topic Revisions

[NOTE: The issue of Water Quality is regulated in a variety of places in the LUMO, including the Watershed Protection District (WPD), in the Impervious Surface Ratios of the Dimensional Matrix, and in the environmental performance standards for Steep Slopes.]

Sec. 3.6. Overlay Districts

3.6.4. Watershed Protection District (WPD)

A. Intent

1. The watershed protection district (herein sometimes WPD) is intended to be applied to a portion of the New Hope Watershed draining to Jordan Lake in order to ensure long-term water quality of the Jordan Lake Reservoir, to protect possible future sources of drinking water for the town and surrounding localities, and to control pollution sources affecting water quality.

~~Watershed protection regulations are applied by the Town of Chapel Hill pursuant to North Carolina General Statutes, Chapter 143, Article 21, Watershed Protection Rules, and implementing regulations of the North Carolina Environmental Management Commission, or its successor statutes and regulations. [NOTE: Consolidated under "Authority" below.]~~

2. In the interpretation and application of this Article, all provisions shall be:
 - a. Considered as minimum requirements;
 - b. Strictly construed in favor of the public interest and community benefit; and
 - c. Deemed neither to limit nor repeal any other powers provided by Town ordinance or state statute.

B. Authority

This ~~section~~ article is established pursuant to the authority vested in the Town of Chapel Hill by the Session Laws and the General Statutes of North Carolina, particularly North Carolina General Statutes Chapter 143, Article 21, the authority referenced in section 1.2 of this ordinance, and implementing regulations of the North Carolina Environmental Management Commission or successor statutes and regulations (Administrative Code Section 15 NCAC

28, .0100, .0200, and .0300), hereafter referred to as "state watershed regulations."

[NOTE: Portions moved from another section.

Elements referring to local zoning authority added for completeness.]

C. Establishment of Watershed Protection District

1. The watershed protection district is established for certain lands within the New Hope Watershed as a district that overlays other zoning districts established in ~~article~~ Section 3. All development within the watershed protection district shall comply with the requirements of this ~~section~~ article. In addition, all development within the watershed protection district shall comply with the requirements of any additional overlay districts and the underlying zoning district.
2. The area of the district shall be defined generally as an area extending 5 miles from the normal pool elevation of the Jordan Lake Reservoir, or to the ridge line of the watershed, whichever is less.
3. The specific location of the watershed protection district shall be set by ridge lines, identifiable physical features such as highways, or property lines, and shall be shown on the official zoning atlas.

D. ~~Development in the Watershed Protection District~~ Applicability

This ~~Article~~ section shall apply to development and land-disturbing activities within the WPD after the effective date (July 1, 1993) of this ~~section~~ article with the following exemptions: unless exempted by this section, or permitted by section 3.6.4(d), or allowed pursuant to a variance authorized by this article and approved by the board of adjustment.

1. ~~Application of Watershed Protection District to~~ Continued Use, Operation or

Maintenance of Development Existing on July 1, 1993

- i. This ~~section~~ article shall not apply to the continued use, operation or maintenance of any development existing, or for which construction had substantially begun, on or before July 1, 1993. In addition, this ~~Section~~ article shall not apply to existing development which has established a vested right under North Carolina zoning law as of July 1, 1993, based on the following criteria:
 - ii. Substantial expenditure of resources (time, labor, money) based on a good faith reliance upon having received a valid approval to proceed with the project;
 - iii. Having an outstanding valid building permit; or
 - iv. Having expended substantial resources (time, labor, money) and having an approved site specific development plan pursuant to section 20.4 of the Development Ordinance.
- a. With respect to the requirements of this section, such development shall not be considered as nonconforming within the meaning of Section 7 of this Appendix.

~~Multiple lots under single ownership as of July 1, 1993 are not subject to the provisions of this ordinance if vested rights have been established in accordance with North Carolina law. If no vested rights are established, then owners must comply with the provisions of this ordinance. Compliance may include requiring the recombination of lots.~~

[NOTE: The multiple lots, single owner language isn't interpreted from the original state regulations correctly. See below for better interpretation.]

- 2. **New Development Not Requiring an Erosion and Sedimentation Control Permit**
New development activities that do not require an erosion and sedimentation control permit under State law or approved local government

program shall be exempt from the provisions of this section.

3. ~~Application To Existing New Single Family Development on Lots Existing as of July 1, 1993, and Two-Family Lots~~

~~This article shall not apply to Single family and two-family development constructed or to be constructed on existing single family lots created prior to July 1, 1993. This exemption is not applicable to multiple lots under single ownership. For purposes of constructing a single family or two-family dwelling, lots of record as of July 1, 1993 which are established through a duly approved and properly recorded final plat shall be exempt from the provisions of this ~~section~~ appendix. [NOTE: The Town currently requires development activity of every size to go through WPD review. This language is an exemption allowed by the State that the Town does not currently offer.]~~

[NOTE: All exceptions in the state regulations refer only to single residential units, which excludes duplexes.]

4. Existing Lots That Do Not Meet Intensity Requirements

- a. Lots of record as of July 1, 1993 that do not meet the intensity requirements in subsection 3.6.4(f) and that are not contiguous to any other lot owned by the same party are exempt from the provisions of this section if it is developed for single family residential use.
- b. Lots of record as of July 1, 1993 that do not meet the intensity requirements in subsection 3.6.4(f) and that are contiguous to any other lot owned by the same party must be recombined in order to establish a lot or lots that meet or nearly meet the intensity requirements for the intended type of development.

[NOTE: This is what was intended by limitations on "multiple lots owned by the same owner" – to reduce nonconforming lots (for example, lots too small to meet the intensity regulations).]

5. ~~Application of the Watershed Protection District to the Redevelopment~~

**or Expansion of Development:
Redevelopment**

~~Redevelopment is allowed under the provisions of this article if the redevelopment activity that does not have a net increase of built-upon area, redevelopment of lawfully established single family residences, or redevelopment that meets other exemption criteria of this section is exempt from the provisions of this section. Redevelopment activity that does have a net increase of built-upon area must provide equal or greater stormwater control than the previous development, subject to the performance standards in subsection 3.6.4(g), except that there are no restrictions on lawfully established single family and two family residential redevelopment.~~

6. Expansions to Existing Development

Expansions to existing development as of July 1, 1993 must meet the requirements of this ~~section~~Article; however, the built-upon area of existing development is not required to be included in density and impervious surface area calculations, and there are no restrictions on expansion of lawfully established single family and two family development.

7. Reconstruction of Buildings or Built-Upon Areas

~~Any building or built-upon area existing prior to July 1, 1993 not meeting the restrictions of this ordinance that has been damaged or removed may be repaired and/or reconstructed, provided:~~

- a. ~~Repair or reconstruction is initiated within 12 months and completed within 2 years of such damage or removal.~~
- b. ~~The total amount of space devoted to built-upon area may not be increased unless stormwater control that equals or exceeds the previous development is provided, subject to the performance standards in subsection 3.6.4(g).~~
- c. ~~Reconstruction of buildings or built-upon area initially constructed on or after July 1, 1993 must meet the requirements of this section.~~

- d. ~~Reconstruction of single family residential development is exempt from these requirements.~~

[NOTE: This concept added from model ordinance.]

E. Permitted Uses within the Watershed Protection District

- 1. The requirements or permitted uses indicated in the underlying zoning district, or any applicable overlay zone, apply in the watershed protection district, provided the standards of sections 3.6.4(f) and 3.6.4(g) are met.
- 2. ~~Agriculture, subject to the provisions of the Food Security Act of 1985 and the Food, Agricultural, Conservation and Trade Act of 1990.~~
- 3. ~~Silviculture, subject to the provisions of the Forest Practices Guidelines Related to Water Quality (15 NCAC 11.0101 - .0209).~~

F. Intensity Regulations

- 1. ~~Land Use Intensity Regulations~~The intensity regulations are those generally applicable to the underlying zoning district, or any applicable overlay zone, except as modified below.
- 2. ~~Additional Intensity Regulations~~In order to prevent an excessive amount of stormwater runoff from damaging the water quality of the reservoirs, it is desirable to require as much infiltration as possible of runoff from hard surfaces onto land areas which can absorb and filter runoff. [NOTE: Overlaps and belongs with Intent, rather than this subsection.]
- 3. Any development in the watershed protection district shall be subject to ~~the following options~~one of two options, or a combination of options, to control non-point source and stormwater pollution, as described in Table 3.6.4-1. ~~All options must meet the applicable performance standards in subsection 3.6.4(g).~~

Table 3.6.4-1: Development Options

Options	Land Use
Low-Density	Development activities shall not exceed 2 dwelling units per acre (gross land area) or 24% built-upon area (impervious surface area) of gross land area.
High Density	Development activities which exceed the low density option requirements must control the runoff from the first inch of rainfall. In addition, the built-upon area may not exceed 50% of gross land area for residential development or 70% for development with a non-residential component. All development under the high density option must meet the applicable performance standards of section 3.6.4(g).

Options	Land Use	Drainage / Stormwater Requirements	Standards
Low Density	Single-family residential	With curb and gutter	Development shall not exceed 2 dwelling units per acre on a project basis. No residential lot shall be less than 1/2 acre or 20,000 square feet excluding roadway right-of-way, except within and approved cluster development.
		Without curb and gutter	Development shall not exceed 3 dwelling units per acre on a project basis. No residential lot shall be less than 1/3 acre, except within an approved cluster development.
	Other residential and non-residential	With curb and gutter	Development shall not exceed 24% built-upon area on a project basis.
		Without curb and gutter	Development shall not exceed 36% built-upon area on a project basis.
High Density	Single-family residential	Use stormwater control measures	Development shall not exceed 50% built-upon area on a project basis.
	Other residential and non-residential	Use stormwater control measures	Development shall not exceed 70% built-upon area on a project basis.

F. Stream Buffer Requirements

All development shall comply with the provisions of section 3.6.3, resource conservation district. In addition, the following standards for stream buffers shall apply to all perennial streams in the watershed protection district, in the event the resource conservation district is less restrictive than the following:

1. For developments choosing the low density option, the required stream buffer is 30 feet.
2. For developments choosing the high density option, the required stream buffer is one 100 feet.
3. For all developments, no new development is allowed within the stream buffer area; water-dependent structures, and public projects such as road crossings and greenways may be allowed where no practicable alternative exists; these activities shall minimize built-upon

area, divert runoff away from surface waters and maximize the use of best management practices.

All stream buffers shall be a natural or vegetated area through which stormwater runoff flows in a diffuse manner so that the runoff does not become channelized and which provides for infiltration of the runoff and filtering of pollutants. If clearing, grading, or other land-disturbing activities have occurred and have reduced the effectiveness of the buffer, the buffer shall be replanted in accordance with a landscape plan to be approved by the town manager.

A stream buffer shall be measured landward from the normal pool elevation of impounded structures and from the bank of each side of perennial streams or rivers.

[NOTE: Requirement for this was removed by passage of Jordan Rules in 2009. RCD currently provides similar protection for developments that need to meet WPD.]

G. Performance Standards

The following standards and criteria shall apply to any portion of a development or, as appropriate, to any land disturbance within the Watershed Protection District.

1. Hazardous Materials

Any proposed development which uses and stores hazardous materials shall prepare an emergency contingency plan as part of its development application. The emergency contingency plan shall be prepared in accordance with the requirements of the Superfund Amendments and Reauthorization Act (SARA), the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), or Section 311 of the Clean Water Act, as amended. The plan shall identify buildings and the locations of points of storage and use of hazardous materials and shall be updated annually. The plan shall be approved by the town manager.

Any container or tank used to store hazardous materials shall be equipped with leak detection devices and shall be double-walled or have other secondary containment features to be approved by the town manager.

Points of storage or use of hazardous materials shall be protected by a corrosion-resistant dike, sized to handle the maximum amount of hazardous material to be stored or used.

All floor drains that could collect hazardous materials shall be connected to a corrosion resistant tank or catch basin sized to handle the maximum amount of hazardous material to be stored or used. These floor drains shall not be open to the site's natural drainage system.

2. Solid Waste Minimization

All development shall submit a plan to be approved by the town manager which minimizes solid waste and promotes the recycling of materials in accordance with Section 5.13 of the Development Ordinance.

3. Ownership, Design, and Maintenance of Engineered Stormwater Controls

~~Unless otherwise approved, ownership of the engineered stormwater controls shall remain~~

~~with the property owner or a property owner's association.~~

~~Development activities which exceed the low density option requirements must control and treat stormwater runoff. Engineered stormwater controls~~ Stormwater control measures shall be designed and constructed in accordance with standards and specifications established by the town manager, and designed to control and treat runoff from the first 1 inch of ~~stormwater precipitation and remove 85% of the Total Suspended Solids~~ using wet detention ponds, or using other ~~methods~~ measures accepted by the state.

Unless otherwise approved, ownership of the ~~engineered stormwater controls~~ stormwater control measures shall remain with the property owner or a property owner's association.

The property owner shall post a performance bond or other surety instrument satisfactory to the town manager, in an amount approved by the town manager to assure maintenance, repair, or reconstruction necessary for adequate performance of the ~~engineered stormwater controls~~ stormwater control measures.

~~The establishment of a stormwater utility by the Town of Chapel Hill shall be deemed adequate financial assurance.~~

4. Construction Standards

~~The construction of new roads, bridges, residential and non-residential~~ New development shall minimize built-upon area, minimize stormwater runoff impact to the receiving waters, minimize concentrated stormwater flow, maximize the use of sheet flow through vegetated areas, maximize the flow length through vegetated areas, divert stormwater away from surface water supply waters as much as possible, and employ best management practices to minimize water quality impacts. **[NOTE: Modified to match state regs.]**

5. Cluster Provisions

The clustering of development ~~superseding general cluster development requirements of in accordance with~~ section 3.8.8, where they conflict, of the Development Ordinance is

encouraged, subject to the following additional standards:

- a. ~~Minimum lot sizes are not applicable to single family cluster development projects; however, the~~ overall density of the project meets the associated density ~~or and~~ drainage/stormwater control requirements of section 3.6.4~~(e) for all land use types;~~
- b. ~~Areas of concentrated development are located in upland areas and away, to the maximum extent practicable, from surface waters and drainageways;~~
- c. Built-upon areas are designed and sited to minimize stormwater runoff impact to the receiving waters and minimize concentrated stormwater flow; and
- d. The remainder of the tract shall remain in a vegetated or natural state. The title to this area shall be conveyed to an incorporated property owners association, a local government for preservation as a park or open space, a conservation organization, or placed in a permanent conservation or farmland preservation easement. Where a property association is not incorporated, a maintenance agreement shall be filed with the property deeds.

[NOTE: Town's cluster provisions in 3.8.8. differ from state regulations. Details here based on state model ordinance.]

H. Variances from the Board of Adjustment

1. Application

An owner of property who alleges that carrying out the strict letter of the provisions of this article would create practical difficulties or unnecessary hardships may apply for a variance. Applications shall meet the following requirements:

- a. An application for a variance from the board of adjustment shall be filed with the town clerk in accord with the provisions of section 4.12.1. In addition to materials required by that section, the application must also comply with applicable submittal requirements.

~~On receipt of a complete application, the town manager shall cause an analysis to be made by appropriate town staff based on the findings required in section 4.12.2. Within a reasonable period of time, the town manager shall submit the application and a report of his or her analysis to the board of adjustment.~~

2. Burden of Proof

- b. Any owner of property applying to the board of adjustment for a variance from the provisions of this article shall have the burden of establishing that such variance should be granted by the board.

3. Referral

~~The board of adjustment, before taking final action on an application for a variance, may refer such application to town advisory boards or commissions.~~

- c. For all proposed variances, the town manager shall notify in writing all other local governments having jurisdiction within the watershed area governed by the state regulations and the entity using the water supply for consumption. A reasonable comment period shall be allowed for local governments to submit comments to the board of adjustment prior to a decision by the board.

2. Minor Variances

~~This article is established pursuant to North Carolina General Statutes Chapter 143, Article 21, and implementing regulations of the North Carolina Environmental Management Commission (Administrative Code Section 15-NCAC 28-.0100, .0200, and .0300), hereafter referred to as "state watershed regulations". A request for a variance from any requirement of this article that does not conflict with any provision in state watershed regulations as amended, may be considered by the board of adjustment of the Town of Chapel Hill.~~

3. Major Variances

- a. A request for a variance from any requirement of this article that conflicts with any provision in state watershed regulations, as amended, constitutes a major variance ~~of a more significant nature. A request for such a variance may only be~~

~~granted in unique circumstances when necessary to accommodate important social and economic development.~~ A request for such a variance shall be considered by the board of adjustment and referred to the North Carolina Environmental Management Commission or its successor agency, in accordance with the following procedures:

- b. If the board of adjustment decides in favor of granting the variance, the board of adjustment shall prepare a preliminary record of the hearing with all deliberate speed and send it to the Environmental Management Commission. The preliminary record of the hearing shall include:
 - i. The variance application;
 - ii. The hearing notices;
 - iii. The evidence presented;
 - iv. Motions, offers of proof, objections to evidence, and rulings on them;
 - v. Proposed findings and exceptions; and
 - vi. The proposed decision, including all conditions proposed to be added to the permit.
- c. If the Environmental Management Commission approves the variance as proposed, approves the variance with additional conditions, or denies the variance, the commission shall prepare a decision and send it to the board of adjustment. The board of adjustment shall prepare a final decision in accordance with the commission’s decision.

~~An application for a variance from the board of adjustment shall be filed with the town clerk in accord with the provisions of section 4.12.1. In addition to materials required by that section, the application must also comply with applicable submittal requirements.~~

~~On receipt of a complete application, the town manager shall cause an analysis to be made by appropriate town staff based on the findings required in section 4.12.2. Within a reasonable period of time, the town manager shall submit the application and a report of his or her analysis to the board of adjustment.~~

2.—Burden of Proof

~~Any owner of property applying to the board of adjustment for a variance from the provisions of this article shall have the burden of establishing that such variance should be granted by the board.~~

3.—Referral

~~The board of adjustment, before taking final action on an application for a variance, may refer such application to town advisory boards or commissions.~~

~~For all proposed variances, the town manager shall notify and allow a reasonable comment period for all other local governments having jurisdiction within the watershed area governed by the state regulations and the entity using the water supply for consumption.~~

I. Correction of Violations

The owner of any land within the watershed protection district shall be presumed responsible for any violation of this articlesection committed on his or her property. The owner of any land within the watershed protection district shall be responsible for correcting any activity undertaken therein in violation of this articlesection. In addition, any other person found in violation of this article shall be liable as provided by law. The town may institute any appropriate action to restrain or prevent any violation of this articlesection or to require any person who has committed any such violation to correct the violation or restore the conditions existing before the violation. The town manager shall enforce this section as provided for in articlesection 4.13 of this appendix.

J. Other Approvals Required

No permit or approval required to be issued by the town under the provisions of this articlesection shall be valid until all other permits or variances for the same proposal required by any other ordinance of the town or Orange or Durham Counties or statute of the State of North Carolina or the United States have been received from those agencies from which such permits or variances are required.

K. Records and Filings

- 1. The town manager shall maintain records of all development permits, approvals, or variances regarding development within the watershed

protection district. Such records shall include all actions on applications for such permits, approvals, or variances, as well as any conditions attached thereto.

2. The town manager shall submit annually a description of each project receiving a variance and the reasons given by the board of adjustment for granting the variance to the North Carolina Environmental Management Commission.
3. The town manager shall maintain records of annual inspections of engineered stormwater management controls.
4. The town manager shall notify any applicant in writing of the decision on any application for any permit, approval, or variance with respect to property within the watershed protection district and shall file a copy of it with the town's planning department.
5. The applicant shall record any variance with the Orange County Register of Deeds within sixty (60) days after written notice of approval of such variance by the board of adjustment.

Sec. 3.8. Dimensional Standards

Table 3.8-1: Dimensional Matrix

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)
Zoning District	Lot Size (min)	Density (max)	Frontage (min)	Lot Width (min)	Building Height, Primary (max)	Building Height, Secondary (max)	Street Setback (min)	Interior Setback (min)	Solar Setback (min)	Impervious Surface Ratio (max)*	Floor Area Ratio (max)
R-LD5	217,800	0.2	200	250	29	35	30	16	20	.24 5/7	.025
RT	100,000	0.4	160	200	29	35	30	16	20	.24 5/7	.031
R-LD1	43,560	1.0	100	125	29	35	30	16	19	.24 5/7	.047
R-1A	25,000	2.0	80	100	29	38	29	15	18	.24 5/7	.062
R-1	17,000	3.0	64	80	29	40	28	14	17	.24 5/7	.076
R-2A	14,500	3.5	56	70	29	50	27	10	12	.24 5/7	.087
R-2	10,000	4.0	52	65	29	50	26	11	13	.24 5/7	.093
R-3	5,500	7.0	40	50	29	60	24	8	11	.24 5/7	.162
R-4	5,500	10.0	40	50	34	60	22	8	9	.24 5/7	.230
R-5	5,500	15.0	40	50	39	60	20	6	8	.24 5/7	.303
R-6	5,500	15.0	40	50	39	60	20	6	8	.24 5/7	.303
R-SS-C	N/A	N/A	N/A	N/A	39	60	10	0	N/A	.24 5/7	1.10"
TC-1	N/A	N/A	12	15	44	60	0	0	0	N/A	1.97
TC-2	N/A	N/A	12	15	44	90	0	0	0	N/A	1.97
TC-3	N/A	N/A	12	15	44	120	0	0	0	N/A	4.00
CC	5,500	15.0	40	50	34	60	22	8	9	.24 5/7	.429
N.C.	5,500	10.0	40	40	34	60	24	8	11	.24 5/7	.264
OI-1	5,500	10.0	40	50	29	60	24	8	11	.24 5/7	.264
OI-2	5,500	15.0	40	40	34	60	22	8	9	.24 5/7	.264
OI-3	2,000	N/A	15	15	N/A	N/A	0	0	0	.24 5/7	.566
OI-4	2,000	N/A	12	15	N/A	N/A	0	0	0	N/A	N/A
I	17,000	N/A	64	80	26	50	26	11	13	.24 5/7	.071
MH	100,000	N/A	160	200	29	35	30	16	20	.24 5/7	.019
MU-OI-1	N/A	N/A	N/A	N/A	44	90	0	0	0	.24 5/7	.264
MU-R-1	N/A	N/A	N/A	N/A	29	90	0	0	0	.24 5/7	.076
MU-V arterial	5,500	20.0	80	62	70	114	0	0	20	.24 5/7	1.2
MU-V collector	5,500	15.0	40	50	44	90	0	0	20	.24 5/7	.500
MU-V local	5,500	15.0	70	40	32	40	0	0	17	.24 5/7	.500

* Impervious Surface Ratio within the Watershed Protection District is further regulated in Table 3.6.4-1: Development Options. [NOTE: .24 Impervious Surface Ratio deleted from this Town-wide Table. Requirement remains in place in the Watershed Protection District (WPD).]

Rules for Interpretation of Table 3.8-1:

Column (K): ~~For areas located within the watershed protection district, impervious surface is regulated under the provisions of section 3.6.4 of this appendix. For areas not located in the watershed protection district, the following impervious surface restrictions apply to all new development except single-family and two-family dwellings constructed or to be constructed on existing lots created prior to January 27, 2003 (or for which a preliminary plat has been approved by the town council prior to that date):~~

The maximum amount of ~~new~~ impervious surface on a lot, including building footprints and paved parking areas, is derived by multiplying the gross land area of the lot by the ratio established in Column (K). The ~~maximum~~ impervious surface ratio is ~~0.50 for residential development, 24 under a low density option, as defined in Table 3.6.4-1. For residential development under a high density option, as defined in Table 3.6.4-1, the impervious surface ratio is .50. For development with a non-residential component, under a high density option as defined in Table 3.6.4-1, the maximum~~ impervious surface ratio is .70. Impervious surface restrictions shall not apply to town center zoning districts.

~~Lakes/ponds shall not be considered to be impervious surfaces.~~

~~Existing impervious surface on a lot as of January 27, 2003, shall not be included in impervious surface calculations, and shall not be considered to be a nonconforming feature.~~

~~For lots outside of the Watershed Protection District smaller than 10,000 square feet, the maximum amount of impervious surface under the low density option shall be 40%.~~

Sec. 5.3. Critical Areas and Environmental Performance Standards

5.3.1. Erosion and Sedimentation Control

All developments shall comply with the provisions of applicable soil erosion and sedimentation control regulations (article 5 of chapter 5 of the town code of ordinances). Certification of compliance with or exemption from the requirements of such regulations shall be submitted to the town manager prior to issuance of any zoning compliance permit for the development. No engineering construction permit or building permit shall be issued until certification of the completion of control measures and facilities required for all associated land-disturbing activity has been submitted to the town manager.

5.3.2. Steep Slopes

A. Purpose and Intent Statement

The purpose of this subsection is to minimize the grading and site disturbance of steep slopes by restricting ~~impervious surfaces and~~ land disturbance ~~in such areas on steep slopes~~, and by requiring special construction techniques in ~~for development on steeply slopes and areas in order to~~ These provisions are intended to:

1. Protect water bodies (streams and lakes) and wetlands from the effects of erosion on water quality and water body integrity,
2. Protect the plant and animal habitat of steep slopes from the effects of land disturbance, and
3. Preserve the natural beauty and economic value of the town's wooded hillsides.

B. Definitions

For purposes of this section, "slope" means the ratio of elevation change to horizontal distance, expressed as a percentage. Slope is computed by dividing the vertical distance ("rise") by the horizontal distance ("run"), and multiplying the ratio by 100.

~~A "steep slope" is equal to or steeper than 15%. For purposes of this section, a "slope" shall include only those areas of size 400 square feet or greater. ThreeFour different categories of slopes are established in this section, as described in Table 5.3-1. The construction and development restrictions~~

~~are established in Table 5.3-1 for each category of slopes.~~

~~"Cut and fill slopes" include all slopes graded by excavating part of a higher area, raising the surface of a lower area, or combining the two methods of construction.~~

C. Applicability

~~For purposes of this section, a "steep slope" shall include only those areas of size 400 square feet or greater. Three different categories of steep slopes are established in this section, as described in Table 5.3-1.~~

Steep slope regulations contained in this section shall not apply to single family dwelling units or two-family/accessory apartment dwelling units on lots lawfully created prior to January 27, 2003, or lots created pursuant to a preliminary plat approved by the town manager prior to January 27, 2003.

D. Contents of Application Application Requirements

The following information shall be provided for any application proposing development on a lot or parcel that includes a ~~steep~~ slope ~~of at least 15%~~ 10%:

1. A slope and topographic map ~~for both existing and proposed conditions~~ based on a ~~certified boundary~~ survey depicting contours at an interval of 5 feet or less. The map shall indicate, through cross-hatching or separate colors, all areas within each slope category ~~described above. Slope determinations shall be made upon areas with a size of 400 square feet or greater in the categories~~ described in Table 5.3-1, below. ~~An analysis of the direction, rate and volume of stormwater runoff leaving each area within a slope category described above.~~
2. ~~A map showing t~~The location of any existing swales, streams, or ~~other watercourses~~ areas of concentrated flow.
3. A map showing current land use cover type or ground cover on steep slopes.
4. A map showing soil types for the whole site, and providing from the county soil survey the names of the soil types and depths to bedrock for each type.

- 5. Additional information may be required if steep slopes will be impacted by development.
- 2. The following information shall be provided for any application proposing development on a lot or parcel that includes a slope greater than 15%:
 - a. A detailed site analysis of soil conditions;
 - b. A detailed site analysis of hydrology;
 - c. A detailed site analysis of bedrock conditions; and
 - d. A detailed site analysis of any other engineering and environmental considerations as may be required by the town manager in order to determine whether the proposed development will create a threat to the public health, safety and general welfare or cause land subsidence, erosion, or increases in the rate of volume of stormwater entering adjoining properties.

E. Design Requirements

- 1. All cut and fill slopes must not exceed a 3 (horizontal) to 1 (vertical) ratio, equivalent to a slope of 33%. Steeper slopes may be conditionally approved by the Town Manager upon certification by a licensed soil or geotechnical engineer or geologist, stating that the slope will remain stable under foreseeable conditions. The certification must delineate any specific stabilization measures deemed necessary by the soils engineer or geologist. As a condition of approval, a designated state certified person on the grading crew shall be employed by the developer to determine soil stability on all cut and fill slopes and take appropriate measures where unstable soils are encountered.
- 2. Land disturbance shall not exceed 25% of the combined area containing slopes of 25% or greater unless a variance is granted by the Board of Adjustment.

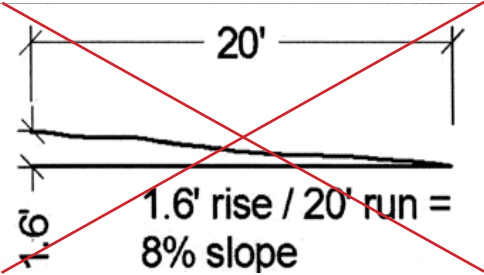
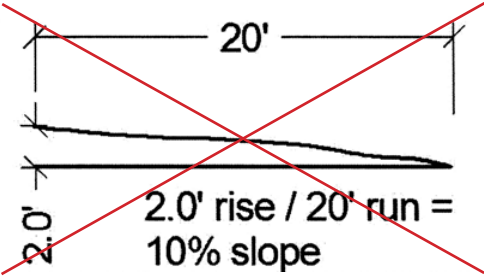
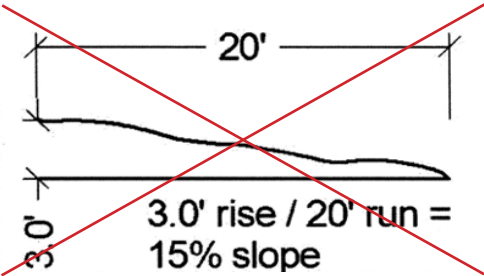
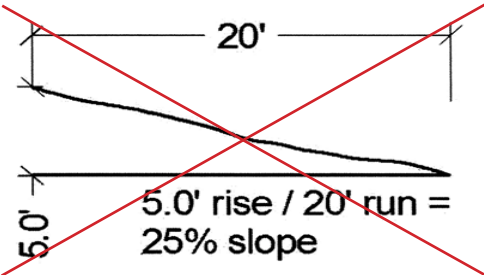
F. Construction Techniques

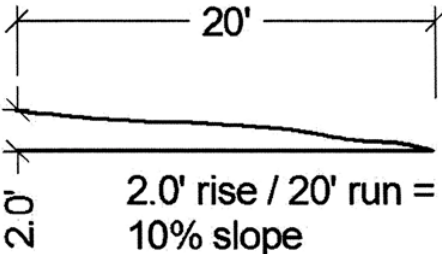
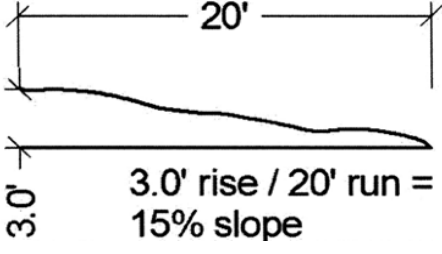
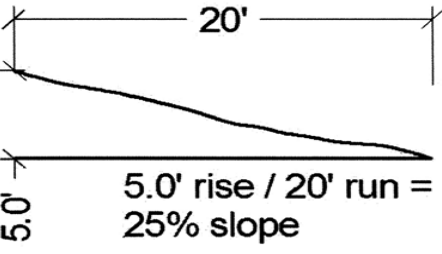
- 1. Construction activities on slopes greater than 15% shall comply with the following:
 - 1. All perimeter dikes, swales, ditches, perimeter slopes; all slopes 2:1 or steeper; all slopes between 2:1 and 3:1 and greater than 10 feet

in length; and all slopes between 3:1 and 4:1 and greater than 50 feet in length and all slopes steeper than 3:1 shall be provided temporary or permanent stabilization with ground cover sufficient to restrain erosion as soon as practicable but in any event within 7 calendar days of any phase of gradingthe last land-disturbing activity.

- 2. All other dDisturbed areas shall be provided temporary or permanent stabilization with ground cover sufficient to restrain erosion as soon as practicable but in any event within must be stabilized within 14 calendar days of termination or completion of any phase of grading. by a temporary or/ permanent ground-cover sufficient to restrain erosion.Exposed soil that is not under continuous construction for a period of morth than 15 calendar days shall be revegetated with temporary or permanent vegetation so that the soil is not left exposed following issuance of a certificate of occupancy; vegetation shall be reestablished.
- 3. When any given area of construction is completed, it must have a permanent, stabilizing ground cover applied within the specified time period above. If irrigation is not provided, then the exposed soil shall be planted with species which can survive without irrigation. Vegetative cover or any alternative cover (rock, masonry, etc.) shall be maintained in perpetuity.
- 2. Disturbed areas on Sslopes greater than 25% = 14 days but it depends...
 - b.2. All cut and fill slopes shall not exceed a 3 (horizontal) to 1 (vertical) by the town manager uponNo construction shall take place without certification, by a qualifiedlicensed soils or geotechnical engineer or geologist, stating that the slope will remain stable under foreseeable conditions. The certification must delineate any specific stabilization measures deemed necessary by the soils engineer or geologist.
- 2. No cut and fill slopes shall exceed a 3 (horizontal) to 1 (vertical) ratio, equivalent to a slope of 33%, without the Town Engineer's.

Table 5.3-1: Slope Construction Restrictions and Requirements

Slope Category	Illustration	Development Restrictions
<10%	 <p>20'</p> <p>1.6'</p> <p>1.6' rise / 20' run = 8% slope</p>	No additional building restrictions pursuant to this Section.
10 to 15%	 <p>20'</p> <p>2.0'</p> <p>2.0' rise / 20' run = 10% slope</p>	Site preparation techniques shall be utilized which minimize grading and site disturbance.
Greater than 15%, less than 25%	 <p>20'</p> <p>3.0'</p> <p>3.0' rise / 20' run = 15% slope</p>	Building and site preparation may occur upon demonstration of specialized site design techniques and approaches as described in subsection (d).
25% or higher.	 <p>20'</p> <p>5.0'</p> <p>5.0' rise / 20' run = 25% slope</p>	Generally unsuitable for development. Land disturbance shall not exceed 25% of the area containing 25% or greater slopes unless a variance is granted by the Board of Adjustment. For disturbed areas, building and site preparation shall utilize specialized site design techniques and approaches as described in subsection (d).

Slope Category	Illustration	Development Restrictions
<u>Less than 15%</u>	 <p>20'</p> <p>2.0'</p> <p>2.0' rise / 20' run = 10% slope</p>	<p>No additional application requirements, design requirements, construction requirements, or land disturbance limitations pursuant to this Section</p>
<u>15% or greater, but less than 25%</u>	 <p>20'</p> <p>3.0'</p> <p>3.0' rise / 20' run = 15% slope</p>	<p>See D. above for application requirements.</p> <p>See E. above for design requirements.</p> <p>See F. above for construction requirements.</p>
<u>25% or greater</u>	 <p>20'</p> <p>5.0'</p> <p>5.0' rise / 20' run = 25% slope</p>	<p>See D. above for application requirements.</p> <p>See E. above for design requirements.</p> <p>See F. above for construction requirements.</p>

Appendix A. Definitions

...

Gross land area: All area within the boundaries of a zoning lot (net land area) plus half of the following areas located within or adjoining the lot: (1) publicly-owned or otherwise permanently dedicated open space, such as parks, recreation areas, water bodies, cemeteries and the like, and (2) public streets; provided that the total amount of credited open space and public streets shall not exceed 10% of the net land area of the zoning lot.

Net land area. All area within the boundaries of a development project.

Development project. A project in which one or more lots, tracts, or parcels of land are to be developed or redeveloped as a coordinated site for a complex of uses, units, or structures, including, but not limited to, planned development and/or cluster development for residential, commercial, institutional, recreational, open space, and/or mixed uses as provided for in this zoning code.

[NOTE: New supporting definitions (net land area, development project) that enable the proposed changes to the WPD standards.]

SUMMARY OF PROPOSED CHANGES

Parking Lot Landscaping	
<p><i>The proposed changes are designed to: (1) allow multifunctional landscaping for stormwater mitigation, (2) simplify tree canopy calculations, (3) improve screening and (4) reinforce Americans with Disabilities Act (ADA) accessibility requirements.</i></p>	
Proposed Changes:	Goals:
<ul style="list-style-type: none"> • Add tables and illustrations to help describe the standards • Add a provision to permit multifunctional landscaping for stormwater mitigation • Add clearer standards for tree canopy and improved screening • Add provisions to reinforce ADA accessibility requirements 	<ul style="list-style-type: none"> • Illustrate and clarify current standards • Allow for stormwater management in conjunction with landscaping • Improve parking, drive-thru screening
Water Quality	
<p><i>The proposed changes are designed to: (1) align local Watershed Protection District regulations to match State requirements and exemptions, (2) remove redundant stream buffer text, (3) clarify development options, (4) modify the dimensional matrix to reflect Town-wide standards based on 2013 Council action, and (5) make the steep slopes ordinance easier to read and use.</i></p>	
Proposed Changes:	Goals:
<ul style="list-style-type: none"> • Update Watershed Protection District to: match State requirements and exemptions, remove redundant stream buffer text, and clarify development options • Modify Dimensional Matrix (of Section 3.8 Dimensional Standards) to reflect Town-wide standards based on 2013 Council action for single-family lots • Improve steep slopes ordinance readability 	<ul style="list-style-type: none"> • Improve clarity, eliminate overlap • Amend Watershed Protection District to align with State law (model ordinance) and recent Council actions (clarifying exemption for single family lots) • Maintain that 0.24 Low Density Option of Watershed Protection District still applies • Impervious surface ratio: align dimensional table with Council action for single family exemption, clarify table notes • Amend steep slopes to clarify design requirements



Meeting Schedule



Summer 2015

June*

15th – Zoning Fair for Public Drafts of



- Midday session 1:00-2:30pm
- Evening session 5:00-6:30pm

16th – Zoning Fair for Public Drafts of



- Midday session 12:00-1:30pm
- Evening session 6:00-7:30pm

23rd – Community Design Commission reviews



July*

14th – Historic District Commission reviews



14th – Environmental Stewardship Advisory Board reviews




21st – Planning Commission is introduced to **ALL** topics


28th – Stormwater Management Advisory Board reviews



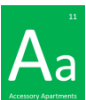



**Boards meet as necessary to develop recommendations for Planning Commission and Council*


August*

3rd – Public Information Meeting 

11th – Housing Advisory Board reviews 

13th – Planning Commission reviews    

18th – Planning Commission reviews  

31st – Public Information Meeting 

**Boards meet as necessary to develop recommendations for Planning Commission and Council*

Fall 2015

September

1st – Planning Commission makes a recommendation on **ALL** topics

28th – Council Public Hearing for **ALL** topics

October

26th – Council Business Meeting for possible action on **ALL** topics

November

23rd – (*Tentative*) Council Business Meeting for possible action on **ALL** topics

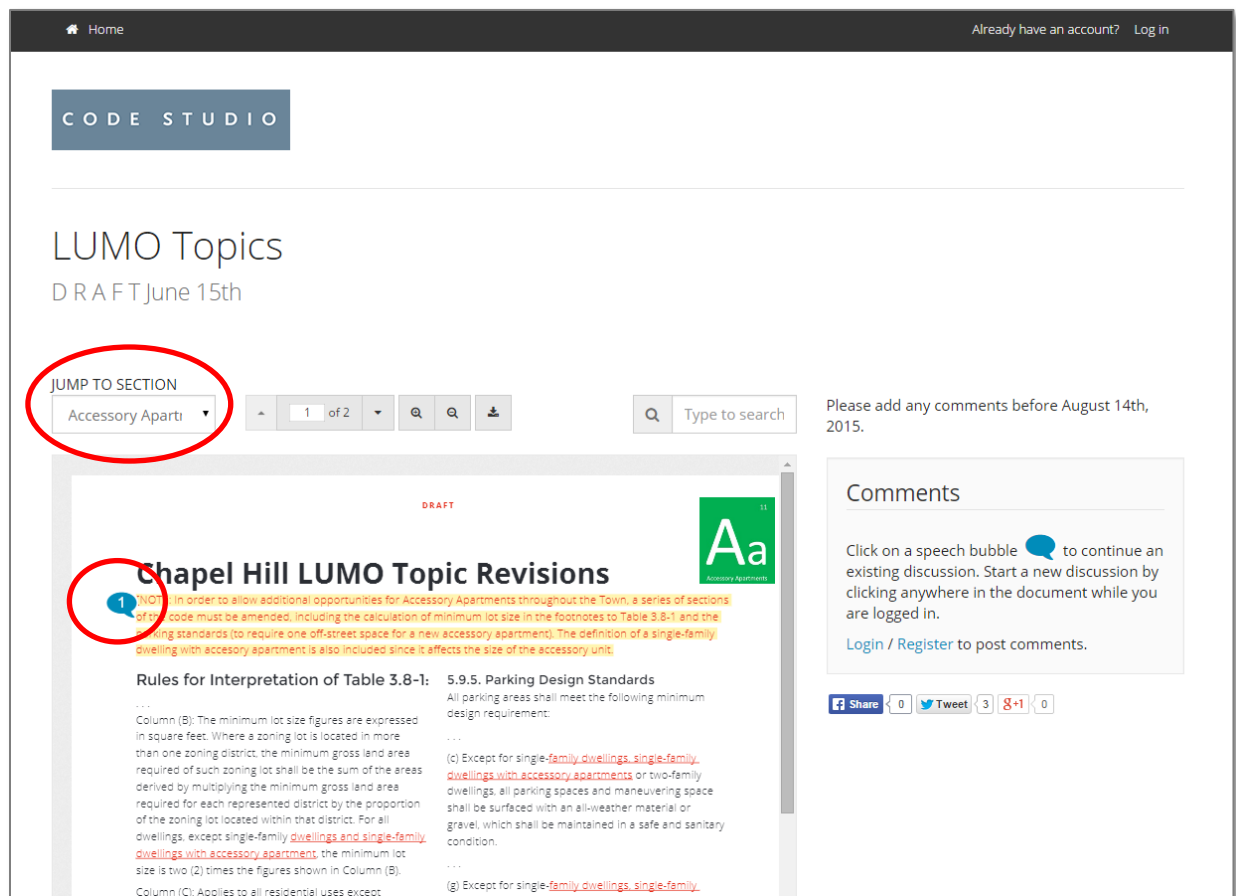
ATTACHMENT 4

(p. 1)

OPEN COMMENT WEBSITE

A current listing of online public comments for each of the six drafts can be viewed on the [OpenComment website](#)¹. A screenshot of the portal appears below. Topic area drafts can be selected by using the “JUMP TO SECTION” dropdown menu located just above the draft. Click on the comment bubbles to read what information has been posted. The number in the comment bubble indicates the number of comments that have been made for that particular item.

For more details and step-by-step guidance on how to register and use the OpenComment tool, [please click here](#)². Note: some web browsers may need to be updated in order to achieve the full functionality of the website.



¹ <https://codestudio.opencomment.us/lumo-topics>

² <http://www.townofchapelhill.org/Home/ShowDocument?id=28673>