

STAFF REPORT

Amendments to the Unified Development Ordinance

September 7, 2023 Planning Committee Meeting



Request: Provide a “Cary-style ordinance banning mass grading”

Comparison of Cary and Apex requirements:

Density*	Cary (LDO 14.4.3)	Apex (UDO 7.2.5)	Use*
Single-Unit Residential (≤ 3 units/acre)	No mass grading** Disturb only land to install infrastructure (roads, utilities, stormwater, greenways, similar). Each lot disturbed when building permit issued.	≤ 20 acres at a time Add 5% RCA	Single-Family Residential (Mass Grading)
Medium Density Residential (>3 and ≤ 8 units/acre)	≤ 25 acres at a time***	≤ 20 acres at a time	Single-Family Residential (Staged Grading)
> 8 units/acre; non-residential	No limit	No limit	Townhomes, Multi-family/apartments, Condos, Non-residential, Agriculture, TNDs

*Gross density thresholds only apply to Cary; Apex is based on type of use

**Exceptions to grade upon a lot prior to the issuance of a building permit may be granted as a modification to the original plan approved by Cary, if there is sufficient justification (e.g., problematic drainage issues and/or severe topographic issues).

***Exceptions to this requirement may be granted as a modification to the original plan approved by Cary if compliance is not practicable due to physical site constraints, such as topography, presence of stream buffers or other natural features, or lot dimensions; or due to presence of existing development or infrastructure.

Discussion points from Planning/Water Resources staff:

- Most of the national builders build at higher densities/smaller lot sizes (and a prohibition on mass grading of larger lots will likely just encourage them to do all small lots). It is harder to preserve existing trees on smaller lots.
- For efficiency in use of dirt and cost of grading, multiple lots need to be cleared together. This amendment may increase cost of development in some circumstances (especially if building permits are not pulled on multiple adjacent lots in the same time frame). Requiring one lot at a time grading may not result in the most efficient type of ultimate grading, possibly increasing the likelihood of retaining walls.
- Erosion control at the perimeter on a lot by lot basis is not as effective as mass grading.
- Of all townhome developments in Apex, only 4 involve disturbance of more than 20 acres:
 - Villages of Apex South
 - West Village South
 - Hempstead at Beaver Creek
 - Westford Townhomes
- There is no requirement to preserve trees on lots once a building permit is issued. The Town’s

Local Act permits the town to adopt ordinances to regulate tree preservation but any ordinance must exclude property to be developed for single-family or duplex residential uses and for normal forestry activities.

- To match Cary's standards, the UDO would have to prohibit mass grading in the RA, RR, and LD zoning districts and PUD-CZ when the density is less than 3 units/acre.
- Potential to have larger buffers along perimeter roadways to reduce visibility of tree clearing. This may need to be considered only on a case by case basis at rezoning due to the context of each site.
 - Town of Cary requires a 30' buffer along collector streets. A 50' buffer along thoroughfares is required, but buffer may be averaged with a minimum of 30' width. Some exceptions to required buffer/buffer width apply (historic areas, mixed-use areas); certain encroachments are allowed with buffers including SCMs in some instances which Apex does not allow.

UDO Sections affected by proposed change:

7.2.5 Single-Family Residential Grading

A) *General Grading Standards*

- 1) As required by the North Carolina Building Code Appendix J *Grading*, no grading shall be performed without first having obtained a permit from the Building Official.
- 2) Grade changes in existing public utility easements and public rights-of-way consisting of a cut of greater than one (1) foot in elevation or fill greater than two (2) feet in elevation must be approved by the Town of Apex Water Resources Director.
- 3) After rough grading of a subdivision is completed, the grade of any single-family residential lot shall not be raised or lowered more than six (6) feet at any point, except the grade may be raised or lowered up to 12 feet to accommodate foundation walls incorporated into the principal structure for walk-out basements.

B) *Single-Family Residential Subdivision Mass Grading*

Mass grading of single-family residential subdivisions shall be allowed provided all provisions of Sec. 7.2.5.B are met.

- 1) Grading activities shall be staged; prior to proceeding to another stage the developer shall stabilize the present stage with adequate ground cover sufficient to restrain erosion and have all infrastructure installed.
- 2) In no case shall mass grading exceed 20 acres per stage, including grading necessary for on-site infrastructure.
- 3) Mass graded acreage in single-family residential subdivisions must retain at least 80% of the pre-development drainage areas within their natural basins.

- 4) A land disturbing and sedimentation & soil erosion control plan shall be submitted for Master Subdivision Plan approval that shows:
 - a) How stormwater will be handled within the subdivision to meet Sec. 6.1 *Watershed Protection Overlay District* requirements;
 - b) Existing and proposed grades of site based on topography verified by a professional land surveyor or topography generated latest LiDAR data acquired by the Town of Apex, as updated from time to time. Topographic coverage may be obtained from the Town of Apex;
 - c) Required sedimentation and erosion control measures;
 - d) The limits of disturbance;
 - e) Offsite drainage;
 - f) Stockpile areas and maximum heights;
 - g) Debris piles and maximum heights; and
 - h) Clearly identified borrow and/or waste areas on-site and/or off-site if located in Town of Apex's corporate limits or ETJ.
- 5) Grading activities shall be done in accordance with all applicable federal, state, and local laws, rules, and regulations, including those pertaining to air and water pollution.
- 6) When an owner of any parcel shall raise, lower, or alter the level of existing grade of a site by a fill or excavation, the owner shall bear the expense to protect all adjoining property, with the exception of off-site easement areas, from encroachment by such fill or from danger of collapse due to such excavation either by erection of engineered retaining wall(s) or by sloping the sides of such fill or excavation entirely within the confines of the development including off-site easement areas in a manner approved by the Town of Apex. (See Secs. 8.1.4 *Development Restrictions on Steep Slopes* and 8.1.6 *Retaining Structures*.)
- 7) Each lot 8,000 square feet in size or greater shall be supplemented with a minimum of four (4) shrubs and two trees, to be provided in the front, side, or rear yard.
- 8) An additional five (5%) percent Resource Conservation Area (RCA) shall be set aside. This requirement is added to the standard RCA percentage requirement found in Sec. 8.1.2.C *Size of the RCA*.

C) ***Single-Family Residential Subdivision Staged Grading***

Staged grading shall be allowed provided that the following standards are met:

- 1) Grading activities shall be staged; prior to proceeding to another stage the developer shall stabilize the present stage with adequate ground cover sufficient to restrain erosion and have all infrastructure installed.

- 2) In no case shall staged grading exceed 20 acres per stage, including grading necessary for on-site infrastructure.
- 3) Stage graded acreage in single-family residential subdivisions must retain at least 80% of the pre-development drainage areas within their natural basins.
- 4) A land disturbing and sedimentation & soil erosion control plan shall be submitted for Master Subdivision Plan approval that shows:
 - a) How stormwater will be handled within the subdivision to meet Sec. 6.1 *Watershed Protection Overlay District* requirements;
 - b) Existing and proposed grades of site based on topography verified by a professional land surveyor or topography generated latest LiDAR data acquired by the Town of Apex, as updated from time to time. Topographic coverage may be obtained from the Town of Apex;
 - c) Required sedimentation and erosion control measures;
 - d) The limits of disturbance;
 - e) Offsite drainage;
 - f) Stockpile areas and maximum heights;
 - g) Debris piles and maximum heights; and
 - h) Clearly identified borrow and/or waste areas on-site and/or off-site if located in Town of Apex's corporate limits or ETJ.
- 5) Grading activities shall be done in accordance with all applicable federal, state, and local laws, rules, and regulations, including those pertaining to air and water pollution.
- 6) When an owner of any parcel shall raise, lower, or alter the level of existing grade of a site by a fill or excavation, the owner shall bear the expense to protect all adjoining property from encroachment by such fill beyond off-site easement areas or from danger of collapse due to such excavation either by erection of engineered retaining wall(s) or by sloping the sides of such fill or excavation entirely within the confines of the development including off-site easement areas in a manner approved by the Town of Apex. (See Secs. 8.1.4 *Development Restrictions on Steep Slopes* and 8.1.6 *Retaining Structures*.)

D) Exemptions

- 1) The following shall be exempt from the provisions of Sec. 7.2.5 *Single-Family Residential Grading*:
 - a) Grading in emergency situations involving immediate danger to life or property or substantial fire hazards.

- b) Agricultural activities on bona fide farms.
- c) Routine maintenance activities, including tree removal required to control vegetation on public roads and public utility rights-of-way.
- d) Traditional Neighborhood Developments (TNDs).
- e) Attached and detached townhomes, multi-family/apartments, condominiums, and non-residential developments.

8.2.4.A Building Landscaping Requirements, General Landscaping Standards

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4) *Single-Family Residential Subdivisions*

All single-family residential subdivisions shall install at least one (1) small ornamental type tree and two (2) shrubs per lot, to be located in the front, side, or rear yard of the individual single-family lot. This Section shall not apply to those single-family residential subdivisions that provide landscaping per UDO Sec. 7.2.5.B.7 *Single-Family Residential Subdivision Mass Grading*.

12.2 Terms Defined

Single-Family Residential Subdivision Mass Grading

The movement of earth by mechanical means to alter the gross topographic features of a development site, including elevation and slope, in preparation for construction of infrastructure and 50% or more of the subdivision lots prior to the first plat in a single-family residential subdivision. Subdivision lots that are graded no more than 10 feet from the right-of-way solely for the installation of infrastructure shall not be considered when calculating the number of graded lots. Grading completed after the plat is recorded shall be considered individual lot grading subject to Sec. 7.2.5.A.3 *General Grading Standards*.

Single-Family Residential Subdivision Staged Grading

The movement of earth by mechanical means to alter the gross topographic features of a development site, including elevation and slope, in preparation for construction of infrastructure and less than 50% of the subdivision lots prior to the first plat in a single-family residential subdivision. Subdivision lots that are graded no more than 10 feet from the right-of-way solely for the installation of infrastructure shall not be considered when calculating the number of graded lots. Grading completed after the plat is recorded shall be considered individual lot grading subject to Sec. 7.2.5.A.3 *General Grading Standards*.