

Municipality of Anchorage

MEMORANDUM

DATE: October 10, 2016

TO: Planning and Zoning Commission

THRU: Hal H. Hart, AICP, Planning Department Director

FROM: Terry Schoenthal, Current Planning Division

SUBJECT: Case 2016-0151, Text Amendment to Anchorage Municipal Code, Title 21, Establishment of Base Grade and Building Design Standards on Steep Slopes.

This proposed text amendment to Anchorage Municipal Code Title 21, addresses impacts of building height restrictions for residences constructed on steep slopes and modifies the means of establishing base grade for determining height.

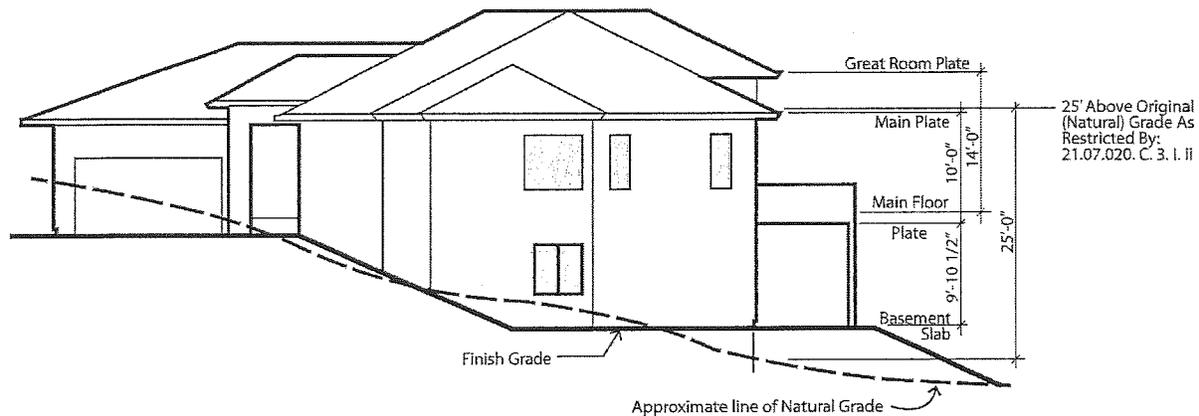
The new requirements, found in Title 21, for construction on steep slopes, originate in the Hillside District Plan, adopted April 13, 2010. A principal concern of the plan is drainage. Over many years of development on the hillside, natural drainage patterns have been altered, impervious surfaces have increased, and surface flow of stormwater runoff across property lines has resulted in erosion, minor landslides, and glaciation. The Hillside District Plan makes a number of recommendations to address these circumstances and many of those recommendations have been codified in new Title 21.

In addition to addressing drainage issues by limiting site disturbance and a balance of cut and fill, new Title 21 significantly impacted the ability to build homes on steep slopes of a height consistent with their zoning standards. Many of these homes are located in either R-5 or R-6 zoning districts. The allowed building height in these districts is 30-feet and 35-feet respectively. That height is measured to the mid-point of a sloped roof from an established base grade. By contrast, a home in the same zoning district, constructed on a slope of 20% or greater can only have a height of 25-feet above existing grade at any given point. Unlike the standard measure, that height is measured from the established base grade to the top of the peak of the house. The result of this combination of height impacts is that it is nearly impossible to construct even a simple ranch-style home with a walk-out basement on slopes of 20% or greater.

The premise of this code change is that building height is not related to impacts on site drainage and provided that new requirements for site disturbance and grading are maintained, there will be no detrimental impacts on site drainage as a result of this change.

The Hillside District Plan addresses protection of views and building height in Policy 14-P, which is intended to establish standards for ridgetop development. As this policy was expressed in new Title 21, however, all homes on slopes greater than 20% are subject

to the 25-foot height restriction above grade. A majority of all homes constructed on the hillside, to date, could not meet this standard.



Example of Ranch-Style Home with Walk-Out Basement on a Steep Slope

The example above shows a generous ranch-style home with a walk-out basement that might typically be found on a large hillside lot. The home steps down with the grade, as deemed desirable in the Hillside District Plan, but cannot come close to meeting the requirements of the height restrictions. A more modest ranch-style home would be equally impacted.

Establishment of Base Grade

New Title 21 establishes base grade for the purpose of measuring building height by determining the average of existing grade or finish grade (whichever is lower) around the perimeter at exterior walls. Because of confusion for how to determine this, the Planning Director developed a six-page policy guide for how to identify 10 points around the perimeter of the structure as a means of determining the average.

This policy has resulted in the need in most cases to obtain a topographical survey, which was not required previously. For many new residences, this added cost is in the range of one-thousand dollars. In addition, this method of determining base grade results in a more complicated and time-consuming review of projects. For almost all homes in Anchorage, this method of measurement results in a lower base grade for determining height. On level or near level ground, it has little impact. On steeper slopes, however, the impact is significant.

The alternative proposed in this change would simply identify the lowest point and the highest point within five-feet of the building perimeter. If the difference between the lowest and highest point is less than 10 feet, the highest point within five feet of the

building serves as the base grade. If the difference is greater than 10-feet, the base grade is 10-feet above the lowest point. For most residences, this allows two stories with a walk-out basement on steeper slopes.

This method of measurement simplifies both design and review of new buildings and maintains the general fabric of construction that has existed and has been successfully implemented for decades under old Title 21.

Building Height on Steep Slopes

Because of builder concerns about allowable height of buildings on steeper slopes the new provisions of Title 21 identified in subsection 21.07.020. C. 3. i. were rescinded by Assembly Ordinance 2016-34S. That ordinance sunsets on December 31, 2016. The Municipal Planning Department has been working with the Alaska Homebuilder's Association and an Assembly representative to identify a permanent solution. The proposed change in this ordinance will make that change permanent.

The Municipal Planning Department finds that there are many new slope development protections found in new Title 21 that did not exist in old Title 21. These include:

- Establishment of a site-disturbance envelope for new development
- Limits on cutting, grading, and filling;
- Requirements prohibiting modification of natural grade to establish a favorable basis of grade plane;
- Restrictions on retaining walls; and
- Requirements to maintain natural drainage patterns.

These protections are far more important to meeting the goals of the Hillside District plan for slope protection than height restrictions imposed by new Title 21.

Submitted by: Chair, at the Request of the Mayor
Prepared by: Planning Department
For reading:

ANCHORAGE, ALASKA
AO NO. 2016-

AN ORDINANCE OF THE ANCHORAGE MUNICIPAL ASSEMBLY AMENDING ANCHORAGE MUNICIPAL CODE (NEW CODE) SUBSECTION 21.06.030 D. 4, ESTABLISHMENT OF GRADE PLANE FOR BUILDING HEIGHT AND 21.07.020. C. 3. I. STEEP SLOPE BUILDING DESIGN STANDARDS, TO ESTABLISH A SIMPLIFIED METHOD FOR DETERMINING BASE GRADE AND TO ALLOW CONSTRUCTION IN STEEP SLOPE AREAS TO THE SAME HEIGHT STANDARDS AS THE UNDERLYING ZONING DISTRICT ALLOWS.

(PLANNING AND ZONING COMMISSION CASE 2016-0151)

WHEREAS, unintended consequences of the new Title 21 prevent building a home style recommended for steep slopes in the Hillside District Plan; and

WHEREAS, limits on home height leads to a larger footprint to attain the desired home size in contradiction to preferred practices on steep slopes; and

WHEREAS, new Title 21 generally requires a topographical site survey to establish the base grade for measurement of building height; and

WHEREAS, review of site information for approval of site plans has proven to be difficult and time consuming for plan reviewers; and

WHEREAS, there is a simpler measurement solution that does not require a topographic survey and reduces the effort of review, while meeting the special needs for steep slope development; and

WHEREAS, new Title 21 has significant protections for steep slope development compared with old Title 21 that include: 21.06.030D. 5. a, Establishment of Grade, Existing Grade, 21.07.020 C. 3. c, Steep Slope Development Standards, Site Disturbance Envelope, 21.07.020 C. 3. e, Steep Slope Development, Standards, Raising or Lowering Natural Grade, and 21.07.020 C. 3. g, Steep Slope Development, Standards, Natural Drainage Patterns.

WHEREAS, the building standards for steep slope development, identified in new Title 21, were rescinded by AO No. 2016-34S, As Amended, and that ordinance will sunset on December 31, 2016; and

WHEREAS, the Municipal Planning Department in conjunction with local designers, builders, and homeowners has developed a permanent solution that supports the Hillside District Plan goals of protecting steep slopes, while allowing building heights consistent with underlying zoning;

1 **THE ANCHORAGE ASSEMBLY ORDAINS:**
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3 **Section 1.** Anchorage Municipal Code (new code) Section 21.05.010 is hereby amended to
4 read as follows (the remainder of the section is not affected and therefore not set out):
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6 **21.06 DIMENSIONAL STANDARDS AND MEASUREMENTS**
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8 *** **

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10 **21.06.030 D. HEIGHT**
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14 **4. Grade Plane**

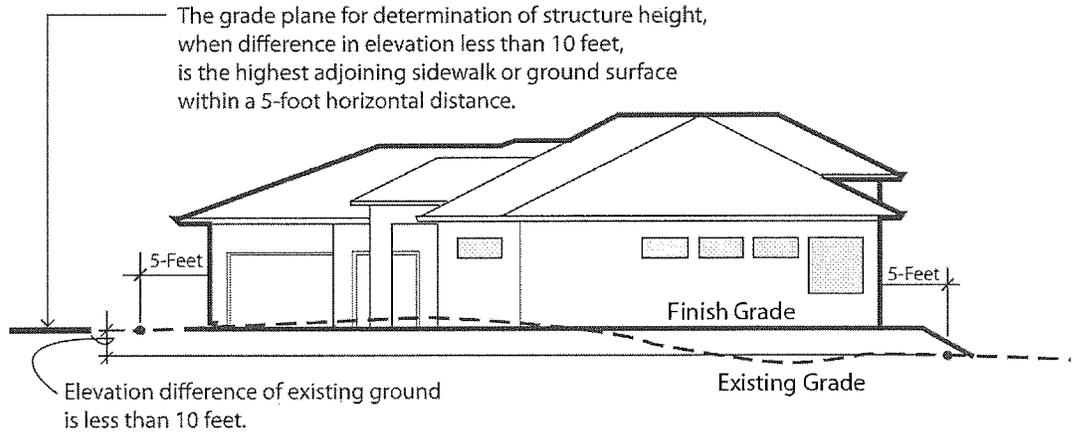
15 [THE GRADE PLANE FOR DETERMINATION OF STRUCTURE
16 HEIGHT SHALL BE THE AVERAGE OF EXISTING OR FINISHED
17 GRADE, WHICHEVER IS LOWER, ABUTTING THE STRUCTURE AT
18 EXTERIOR WALLS. WHERE THE GRADE SLOPES AWAY FROM THE
19 EXTERIOR WALLS, THE GRADE PLANE SHALL BE ESTABLISHED
20 BY THE LOWEST POINTS WITHIN THE AREA BETWEEN THE
21 BUILDING AND THE LOT LINE, OR, WHERE THE LOT LINE IS MORE
22 THAN SIX FEET FROM THE BUILDING, BETWEEN THE BUILDING
23 AND A POINT SIX FEET FROM THE BUILDING.]

24 The grade plane for determination of allowable height shall be selected by
25 either of the following, as determined by site topography:

26 a. The elevation of the highest adjoining sidewalk or ground surface
27 within a five-foot horizontal distance from the exterior wall of the
28 building when such a sidewalk or ground surface is not more than
29 ten feet above the lowest grade. (See diagram below)

30 b. An elevation ten feet higher than the lowest grade when the
31 sidewalk or ground described in subsection 4.a., above is more
32 than ten feet above the lowest grade. (See diagram below)
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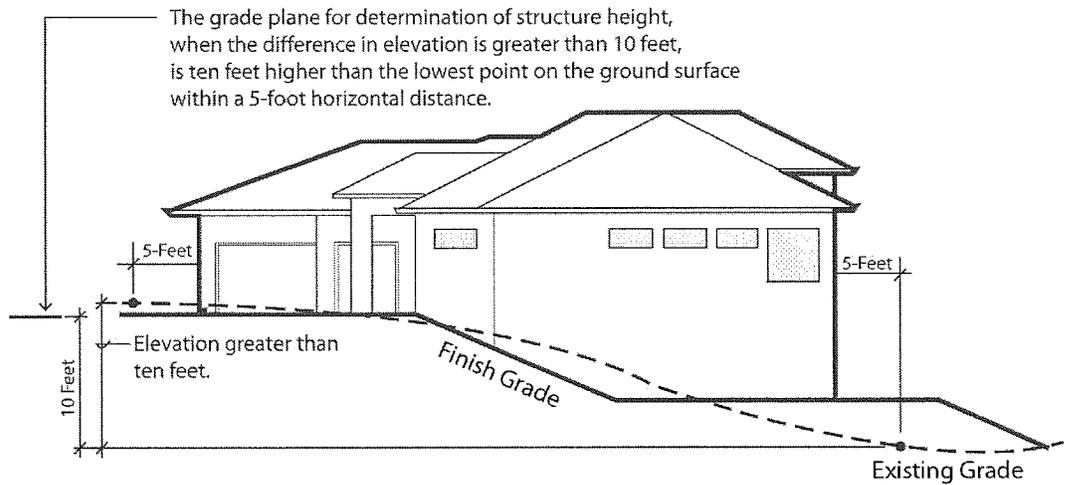
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Example a.

Basis of height measurement when the difference between the low point and the high point is less than 10 feet.

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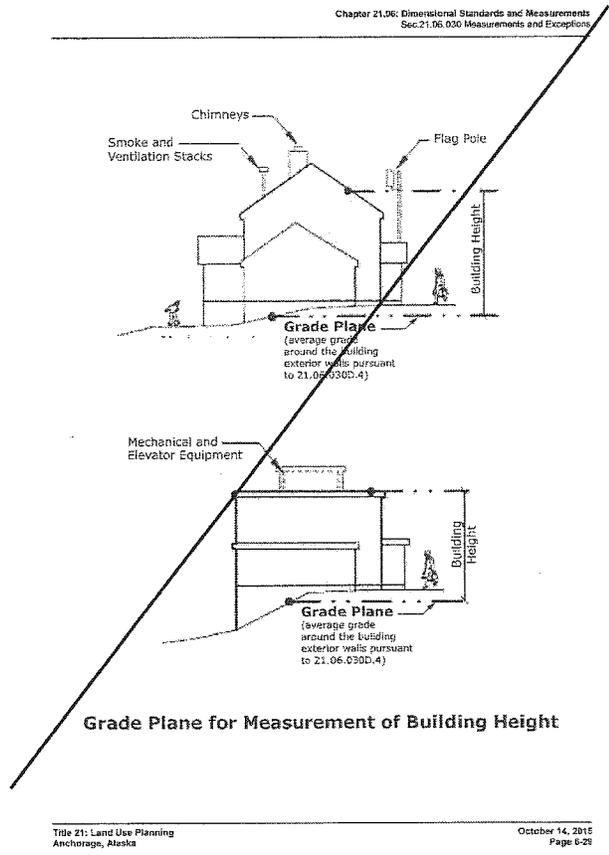


Example b.

Basis of height measurement when the difference between the low point and the high point is greater than 10 feet.

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1 **DELETE FIGURES FOR “GRADE PLANE FOR MEASUREMENT OF BUILDING HEIGHT”,**
2 **PAGE 6-29**
3



4 **Section 2.** Anchorage Municipal Code (new code) Section 21.07.020. C. 3. is hereby
5 amended to read as follows (the remainder of the section is not affected and therefore not set
6 out):

7 *** *** ***

- 8
- 9
- 10 **[I. BUILDING DESIGN STANDARDS**
- 11 **THE PURPOSE OF THE BUILDING DESIGN STANDARDS IS TO**
- 12 **MINIMIZE SITE DISTURBANCE, AVOID EXTREME GRADING**
- 13 **REQUIRED BY LARGE BUILDING PADS ON STEEP SLOPES, AND**
- 14 **REDUCE THE RISK OF DAMAGE FROM NATURAL HAZARDS.**
- 15 **i. ALL BUILDINGS AND STRUCTURES SHALL HAVE A**
- 16 **FOUNDATION WHICH HAS BEEN DESIGNED BY A**
- 17 **PROFESSIONAL ENGINEER, ARCHITECT, OR OTHER**
- 18 **QUALIFIED PROFESSIONAL.**

