

SDMC – HEIGHT LIMIT

In the San Diego Municipal Code there are 3 methods for measuring height, and a building or structure must abide by all the applicable methods at all points in the building, or to put it another way, the building must abide by the MOST restrictive provision at each and every location on the building. This is often accomplished by drawing various height limit lines across a building elevation or section. Some limits result in an angled (or contoured) height limit line, some result in a horizontal height limit line, but it is the designer’s responsibility to keep the building below all of them at all locations in the building.

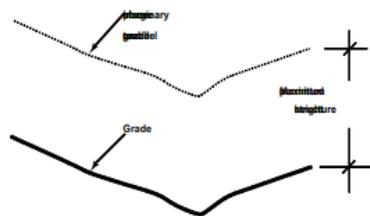
Height Measurement Method 1: “IMAGINARY PLANE” 113.0270(a)(1)

§113.0270 Measuring Structure Height

- (a) *Structure Height of Buildings and Structures (Excluding Fences, Retaining Walls, or Signs)*
- (1) The maximum permitted *structure height* is specified in the applicable zone and defines the upper limits of the *building envelope* for a *premises*. It is measured vertically from the *existing grade* or *proposed grade*, whichever is lower, to form an imaginary plane that is parallel to *grade*, below which all buildings and *structures* must be located, except as otherwise described in 113.0270(a)(4). This is illustrated in Diagram 113-02JJ.

Diagram 113-02JJ

Maximum Permitted Structure Height



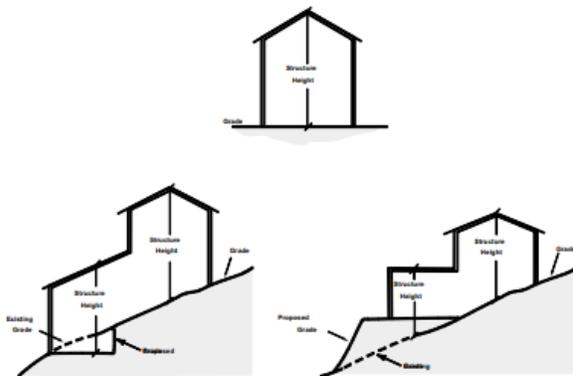
This section basically states that we lay a blanket (imaginary plane) over the **LOWER of existing or proposed grade**, lift that “blanket” up by the height limit specified in the applicable zone and then all buildings and structures must stay below that blanket/plane.

The 30’ height limit imposed on buildings in the Coastal Zone is not measured by this method as it is carved out and described with its own set of rules in “Special Circumstances” 113.0270(a)(4)(D).

Height Measurement Method 1.1: “PLUMB LINE” 113.0270(a)(2)(A)

- (2) A two part calculation is required to measure *structure height* including:
- (A) Plumb line measurement. The *structure height* is measured from all points on top of a *structure* to *existing grade* or *proposed grade*, whichever is lower, directly below each point, except as described in Section 113.0270(a)(4). This measurement is taken vertically through the *structure* at each point where *structure height* is being measured, as shown in Diagram 113-2KK.

Diagram 113-02KK
Measurement of Structure Height



Generally, This is similar to the previous “Imaginary Plane” Method. Again, just like the “Imaginary Plane” heights are taken from the **LOWER of existing or proposed grade**. The height is measured at every point from top of structure to grade immediately below that point. At no point may the number exceed the allowable height for that zone. There is no additional 10’ credit for sloping lots as the measurements are taken at each point along the slope.

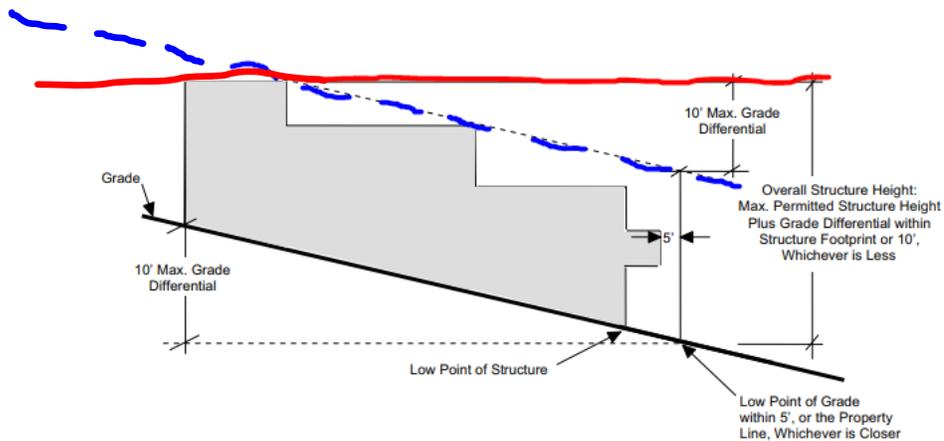
The bottom left drawing above has caused some confusion as it seems to contradict the special circumstance that basements and subterranean areas do not count as grade. According to city staff, this drawing represents a building elevation so it is identifying grade OUTSIDE the building footprint, where as if this were viewed as a building section, the basement is exempt from establishing grade.

Height Measurement Method 2: “OVERALL HEIGHT” 113.0270(a)(2)(B)

- (B) Overall Height Measurement. The overall *structure height* is measured from the lowest point of *existing grade or proposed grade* within 5 feet of the *structure's* perimeter (building wall, balcony, bay window, or similar *architectural projection*) or at the *property line*, whichever is closer, to the highest point of the *structure*, projected horizontally to directly above this lowest point of *grade*. The overall *structure height* shall not exceed the maximum permitted *structure height* of the applicable zone plus an amount equal to either the maximum *grade differential* within the *structure's* footprint or 10 feet, whichever is less. The *structure height* shall not exceed the maximum allowed by the applicable zone at any one point. This is illustrated in Diagram 113-02LL.

Diagram 113-02LL

Overall Structure Height



This section defines the “overall” maximum height for buildings on sloping lots. It measures from the **LOWER of existing or proposed grade**, 5’ away from the Lowest point around the structure. The highest point anywhere on the structure may not exceed the elevation of that low datum by more than the allowable height PLUS the grade differential between the low point of structure and high point of structure, but in such case where the actual grade differential exceeds 10’, only a maximum of 10’ may be added to the max allowable height per the zone. This method forms a horizontal height limit for the building as illustrated by the red line above. The previous “Imaginary Plane” and “Plumbline” limits are illustrated by the blue dashed line above. The building must stay below both lines at all points.

Separating Structures: 113.0270(a)(3)

- (3) *Structure height* is measured separately for each *structure* that is separated from another *structure* on the *premises* by 6 feet or more. Separation between *structures* shall be measured in plan view to account for the *structural envelope* of each *structure*.

The premise is simple although there has been much debate over what sort of improvements constitute a connection between structures nullifying their “separation”. According to staff, if it can be demonstrated that the structures are in fact structurally independent, connections as defined by the items below still allow for separate height measurements.

Does a fence, planter, garden wall, or retaining wall “connect” buildings

Does a concrete walkway or patio “connect” buildings

Does any underground structure “connect” buildings

SPECIAL CIRCUMSTANCES: 113.0270(a)(4)(A,B,andC)

The first 3 special circumstances are relatively straight forward so the original text is not attached. They are all clarifications of how to calculate grade in these special circumstances.

- A. A small hole or mound on the lot “extreme topographic variation” does not constitute grade and grade should be defined by connecting the grade on either side of the variation. The variation must be less than 10% of the footprint of the structure to be discounted by this method.
 - B. Basements or other “subterranean areas” do not define grade for any of the height measurement methods nor does outdoor subterranean space used for ventilation, vehicular or pedestrian access. Just like section A above, grade would be defined by connecting the points of grade on either side of the subterranean areas. Per this code, there is no limit to the size of these spaces to be exempted from measuring grade.
 - C. A swimming pool does not define grade. The relevant grade would be the height of the surrounding patio/coping around the perimeter of the pool. Again, lower of existing or proposed applies, so if the patio/pool is built up above existing grade you still calculate to existing grade. If the top of the pool/coping is built below existing grade, you would calculate to the new proposed patio/coping level, but never to the bottom of the pool.
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SPECIAL CIRCUMSTANCES: Coastal Height Limit 113.0270(a)(4)(D)

Height Measurement Method 3: “Prop-D”

- (D) *Structure Height* of Buildings subject to Coastal Height Limit in accordance with Section 132.0505
- (i) The height of a building is measured to the uppermost point of the *structure* or any appurtenance placed upon the roof thereof, including *signs*, penthouses, mechanical equipment, chimneys, vent stacks, spires, or steeples, or other projections.
 - (ii) The base of the measurement shall be taken from finished grade in accordance with the 1970 Uniform Building Code. The height shall be measured from the highest adjoining sidewalk or ground surface within 5 feet of the *structure*, provided that the height measured from the lowest adjoining surface shall not exceed such maximum height by more than 10 feet.
 - (iii) *Structure height* of buildings subject to the Coastal Height Limit shall also comply with the height measurement calculations for plumb line in Section 113.0270(a)(2)(A) and overall height in Section 113.0270(a)(2)(B).

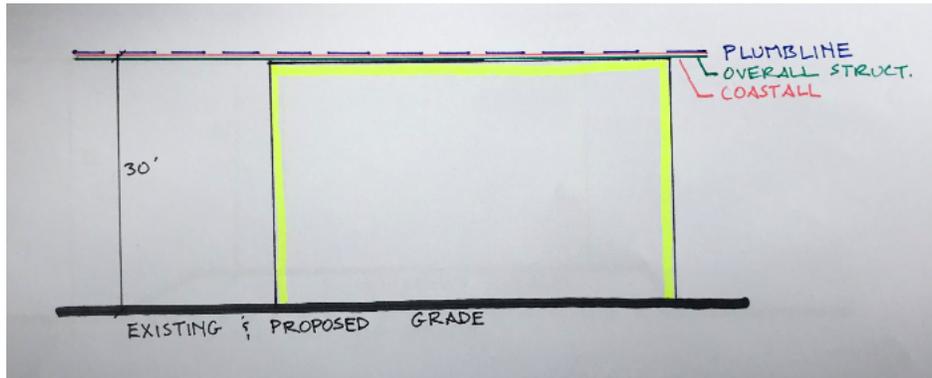
Officially called “Coastal Height Limit” this height limit is also sometimes referred to as the “Prop D” height limit. The Coastal Height Limit is 30’. The height is measured from the HIGHEST adjoining grade within 5’ of the structure provided that the lowest adjoining surface is not more than 10’ below the highest surface. If the grade differential exceeds 10’, Then the 30’ limit is measured from 10’ above the low point. (Resulting in a 40’ overall height limit measured from the low point, or a 30’ overall height limit measured from the high point when the differential is under 10’.) As this height limit is based on a single point (either a high point or a low point) it is not a sloping height limit, but rather a horizontal height limit similar to the “Overall Structure Height”.

Section (ii) also clarifies that for this section (and this section only). Coastal Height is measured using “**FINISHED**” grade. It is not the lower of existing or proposed/finished grade. Section (iii) also clarifies that just because a project is in the Coastal Height Overlay zone and follows these special rules for measuring Coastal Height, It is not exempt from the other Height Limit Measurements required under its other applicable zones.

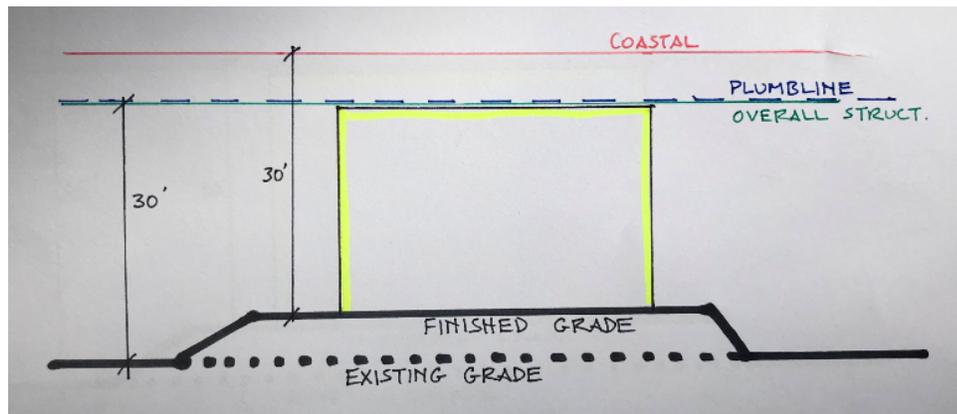
For reference, Section 132.0505 simply defines the boundaries of the Coastal Height Limit Zone. It defines the height limit as 30’, and it reiterates the basis for measurement as finished grade according to the 1970 UBC.

The exhibits below show the 3 different applicable height limits as applied to various different scenarios and the resulting allowable building height (outlined in yellow) that must remain under all 3 lines.

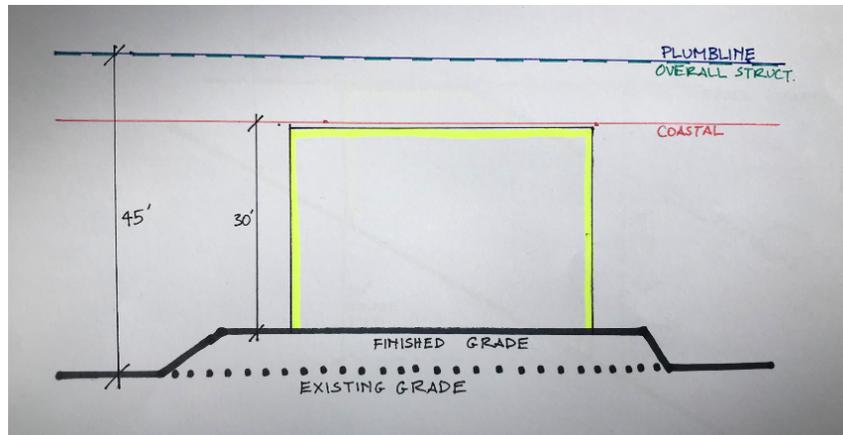
1. A flat lot within a 30' height limit Base zone and the 30' Coastal zone with no change in grade. You will notice on this lot all 3 height limit lines are the same.



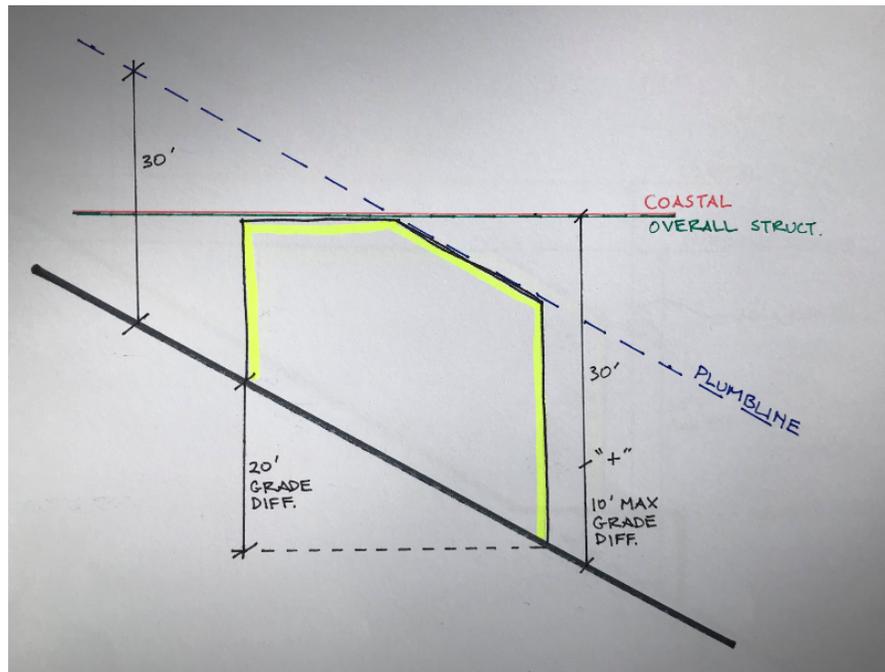
2. A flat lot within a 30' height limit Base zone and the 30' Coastal zone with a proposed increase to the grade. You will notice that the plumbline and overall structure height limit lines are unchanged as they follow the LOWER of proposed or existing grade, but the Coastal height limit line rises with the finished grade. This is however moot as the building must follow the most restrictive limit.



3. A flat lot within a 45' height limit Base zone and the 30' Coastal zone with a proposed increase to the grade. Just like above, the Coastal height limit of 30' follows the new finished grade line, but it is significant as this is the new defining height limit even though the Plumbline and Overall Structure heights follow the lower existing grade, they are measured using the underlying 45' zoning height limit.



4. A steeply sloping lot within a 30' height limit Base zone and the 30' Coastal zone with no change in grade. Notice now because the Coastal Height and Overall Structure Height are measured from a single point on the site, they form a horizontal height limit line. The plumbline is measured 30' up from all points so it is a sloping limit and through the span of the building the allowable building height transitions from horizontal limits on the left to the angled plumbline on the right. The building must stay below the lowest of all 3 lines at every point.



5. A steeply sloping lot within a 30' height limit Base zone and the 30' Coastal zone with a proposed increase in grade. The plumbline and overall structure height limits are exactly the same as the previous case, however the Coastal height limit is raised to follow the lowest

FINISHED grade within 5' of the building. This however is meaningless to the building as the Overall Structure Height and Plumbline (angled) height limits are lower.

