



Nice Matters!

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DATE: September 18, 2017
TO: Planning Board Members
CC: Frank A. Rush, Jr., Town Manager
FROM: Josh Edmondson, CZO, Town Planner
SUBJECT: **Review of Process to Determine Building Height**

Reviewing the process of determining building height's, was requested to be placed on the September agenda by Board member Paul Schwartz. The board supported this request at its August meeting. The Town of Emerald Isle currently limits the mean roof height of all structures to 35' for flat/low slope roofs less than 4/12 pitch and 40' for high slope roofs greater than 4/12 pitch. The mean roof height is determined by measuring from the grade plane to the mean roof height.

Grade plane and mean roof height are defined as follows as found in the Unified Development Ordinance:

GRADE PLANE

A reference plane representing the average of the finished ground level adjoining the building at all exterior walls.

MEAN ROOF HEIGHT

The average of the roof eave height and the height to the highest point on the roof surface, except that eave height shall be used for roof angles of less than or equal to ten (10) degrees.

It is also important to note there are differences in the way mean roof height is calculated for residential, multifamily and commercial structures. These are found in note 6, 7 and 8 of the Density Table as seen below:

6. The height of a flat roof is to be measured from the grade plane to the mean roof height. The height of a building with a low slope roof in the R2, RMF, MH and Eastern End Oceanfront Overlay Zoning Districts is to be measured from the grade plane to the mean roof height. Buildings with flat roofs and buildings with low slope roofs in the R2, RMF, MH and Eastern End Oceanfront Overlay Zoning Districts may have a roof parapet not exceeding 3 feet in height. Buildings with flat roofs and buildings with low slope roofs in the B, C, G, VE, VW and MV Zoning Districts may have a roof parapet not exceeding 5 feet in height exclusive of elevator shafts, air conditioning and other necessary mechanical equipment, none of which shall exceed 10 additional feet in height, for a total of fifteen (15) feet. The additional 15 feet cannot be used for habitation.

7. Height shall be measured from the grade plane to the mean roof height. One- and two-family dwellings are limited to three (3) stories plus an attic story. The attic story is defined as per the NC Building Code, as amended.

8. Commercial buildings or mixed use structures with a roof pitch of 3/12 or less shall have a maximum wall height of 40 feet measured from the lowest finish grade level immediately adjacent to the building or pilings to the exterior wall load-bearing top plate, with a maximum of 5 foot roof top parapet exclusive of elevator shafts, air conditioning and other necessary mechanical equipment, none of which shall exceed 10 additional feet in height, for a total of fifteen (15) feet. The additional 15 feet cannot be used for habitation. Commercial buildings and mixed use structures with larger roof pitch shall have a

maximum mean height of 40 feet and the mean roof height is determined from the lowest finish grade level immediately adjacent to the building foundation or pilings, to the mean roof height of the highest roof ridge.

I have included an example of a single-family residence for us to discuss the process of determining the mean roof height. In the example, the highest point on the roof ridge is 44'11" and the lowest eave is 35' 1". This puts the mean roof height right at the 40' mark. Because we allow a mean roof height instead of an actual roof height, you will have instances where the roof ridge is over 40'.

This regulation has been in place for a long time. Topography of the Town, wastewater requirements, CAMA regulations, the number of stories allowed and the 2' freeboard standards for development in the floodplain are contributing factors to using the mean roof height. This can lead to structures having a smaller footprint and building more vertical. The mean roof height calculation is a key factor for development and one I believe meets the values and goals outlined in the Town's Landuse Plan.

I look forward to discussing this with you at your September 25, 2017 meeting.