



By Rebecca Quinn, CFM

Zoning Height Limits and Building Elevations in Floodplains

Disclosure: I know that zoning, broadly speaking, regulates allowed uses, building height limits, and building setbacks. I also know that courts have held that zoning limitations can be legitimate uses of the government's police power to protect public health and safety. Beyond those basics, please keep in mind I'm a flood geek, through and through!

I often describe various planning tools that communities use, including zoning, to guide what will be built and where it'll be built. And once those decisions are made, then we turn to building codes to figure out how to build. Communities that don't use building code have other rules that accomplish some of the same things, including their floodplain management regulations.

Let's start with the term "building height." There are many ways to determine building height, some depend on whether an area is relatively level or sloping. I turned to the International Codes, where the definition is deceptively simple: "the vertical distance from grade plane to the average height of the highest roof structure." I'll spare you the details of what is "grade plane" and how to figure out "average height." The point is some requirements depend on building height.

Zoning codes usually include specific height limits for different zoning districts. Why? To answer that, I turned to Planopedia on www.planetizen.com, which suggests height limits are typically justified for the following reasons:

1. Protection from fire hazards
2. Protection against aviation accidents
3. Protection of view
4. Protection of the character of the neighborhood
5. Protection of light and air

A community's reasons for height limits may be well-founded. But so are elevation requirements in flood hazard areas, which are solidly based on property protection and public safety. So, let's take a look at some complications that may arise when dealing with both zoning height limits in flood hazard areas:

- What happens when meeting flood hazard area elevation requirements causes buildings to exceed the height limit? One of my favorite answers was "build a flat roof" to lower the height. That was offered by someone who didn't know why buildings in snowy regions have pitched roofs. Plus, depending on the architecture of surrounding buildings, a flat-roof might look out of place.
- What happens if the typical home in the community is three stories, which is within the local height limit (on the order of 35 feet), but a permit applicant wants a 3-story home and has to elevate the lowest floor several feet above grade to comply with flood rules, and that exceeds the zoning height limit?
- What happens if an owner elects to raise their floodplain building several feet higher than the minimum, perhaps high enough to park their RV underneath? Those of us who have promoted freeboard for years usually encourage owners to do this, in part because we understand the damage-avoided benefits of building higher.

A step an owner faced with those scenarios might take is to request a variance to the flood elevation requirements (especially if the community has freeboard above the NFIP minimum base flood elevation). Mind you, I'm not suggesting that any of those scenarios presents what I consider valid reasons for granting variances. But I expect many of us have had applicants submit requests for elevation variances, which they think are justified based on those types of situations. But, in most communities, deliberations and decisions about variances are not the immediate responsibility of the floodplain administrator. Variance requests often are handled by an appointed board or the elected council or commission.

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What's a floodplain administrator to do with an elevation variance request?

First, open [FEMA P-993](#), Floodplain Management Bulletin: Variances and the National Flood Insurance Program. This publication might not already be on your bookshelf, in part because variances to flood requirements should be rare. It's worth scanning as a refresher (it's only about 30 pages). Do keep in mind that it was published in 2014, which means the information about NFIP flood insurance implications of variances does not reflect Risk Rating 2.0.

When it comes to requests for flood elevation variances, here's the nugget: "Variance requests that deal with maximum height or setbacks are usually related to aesthetic concerns, and may affect property values. Variances from floodplain management criteria are not related to aesthetics, but rather may affect the safety and protection of the public, the environment, and the flood risk of a community."

The Bulletin notes that while the NFIP does not "set forth an absolute criterion" for variances, the regulations do provide the basis for determining whether variance requests should be granted. Take a look at 44 CFR § 60.6(a) and you'll find some pretty specific criteria (your local regulations should have the same). One general principle of zoning is cited: "that variances pertain to a piece of property and are not personal in nature." The Bulletin goes on to talk about unique characteristics of a specific parcel that are not common to or shared with adjacent parcels. Plus, it's not about the "inhabitants or the property owners."

After refreshing their understanding of variances, floodplain administrators can question the premise that the other height limitations should be preserved, rather than the flood elevation requirement. Which requirement is based on public safety and property protection? That should prompt discussion with those in charge of zoning to either consider variances to zoning limitations, or maybe it's time to look at a more permanent solution.

A more permanent solution: change zoning height limits in mapped flood hazard areas.

I know a number of communities that modified their zoning height limits to accommodate the importance of flood elevation requirements. There may be other approaches, but this is very straightforward: measure building height starting at the base flood elevation (or BFE plus freeboard), rather than the ground.

[Understanding and Managing Flood Risk: A Guide for Elected Officials](#)

ASFPM published this guide in 2020. I encourage you to download it or view online, if you haven't looked at it yet, or haven't looked at it recently. Talk to your city or county manager about circulating it to elected officials and appointed board.

Volume I covers the essentials: flooding and flood risk; preparing for and recovering from floods; and communicating with citizens.

Volume II moves beyond the basics: why do communities manage floodplains, basics of NFIP insurance; what makes an effective local program; and strengthening local programs. **NOTE: Question #40** is "What options do I have when a property owner asks for relief from the floodplain management requirements?" It notes that one of the more common requests is to waive or reduce elevation requirements.

Volume III shares the success stories of eight communities. [Access the guide](#)

Please send your suggestion to me at Rebecca@rcquinnconsulting.com and help keep the Notebook useful for floodplain managers. Explore back issues of the [Floodplain Manager's Notebook](#).

By Ray Carroll, MAI, SRA, CFM

Why is ACV the Best Valuation Method for SI/SD Determinations?

It was September 2020 when I first wrote about the challenges associated with estimating the market value used in making NFIP-required substantial improvement and substantial damage determinations. The first time I mentioned Actual Cash Value (ACV) appeared in the November 2020 *Insider* Market Value Supplement, in which I wrote about values associated with use and occupancy. By now, I'm sure readers have noticed that I'm a proponent of the AVC appraisal method. I've talked to many Florida floodplain managers over the years, and I've learned a lot. In this issue I'll make the argument for ACV clearly and emphatically.

"Market Value" discussed here is the market value that is in the NFIP definitions of substantial improvement and substantial damage.

FEMA P-758, Substantial Improvement/Substantial Damage Desk Reference, has been the go-to resource since 2010. After stating that property appraisals prepared by a professional appraiser according to standard practices of the profession are the most accurate and reliable method for determining market value, it says, "In most situations, ACV is a reasonable approximation of market value."

In truth, ACV is a much better valuation method than implied, because:

- The ACV method works for all building types.
- ACV considers only the building, which means there are no complicated assumptions necessary to subtract the value of land and improvements.
- ACV is the best method when tax assessments aren't available or can't be used (e.g., government owned buildings).
- ACV is the only method for buildings owned as condominiums or cooperatives (see January 2021 *Insider*).
- ACV reports are direct, uncomplicated, easy to understand, and easier for local officials to review.
- ACV is a calculated estimate requiring very little subjective judgement.
- ACV usually yields a higher building value than the adjusted tax assessment method.
- ACV does not depend on the availability of comparable sales.
- ACV completely avoids the value associated with use and occupancy.

Points 1-4 can't be said for the traditional, whole-property appraisals that most floodplain administrators are used to seeing. Some building types just never sell (thus no comparables); there might not be recent sales of raw land (complicating subtraction of land value); tax assessment values have shortcomings (some described in P-758); and when it comes to condos, the sale of a unit has no bearing on the value of the whole buildings.

Points 5-6 above are related. It is relatively easy to develop and explain the uncomplicated ACV appraisal process. Most traditional, whole-property appraisals are reported on forms with information in tiny boxes. The form reports are hard to read, they don't contain all the analyses required to help a floodplain manager, and most of those reports contain lots of extraneous material, yet often lack the supporting documentation floodplain administrators need.

Those pesky form appraisal reports were created for mortgage loan underwriting, so it not surprising that they don't work well for SI/SD determinations.

Point 7 should not be surprising given that ad valorem tax assessments are usually not at market value. While convenient, these assessments were never intended to be used for floodplain administration.

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Points 8 and 9 emphasize weaknesses of traditional, whole property appraisals during times of rapidly changing or stagnated markets or when the property or building is unusual.

The website www.FloodPointUSA.com was launched in the Summer of 2022. It is an educational website for floodplain administrators and professional appraisers who are hired to prepare ACVs for use in SI/SD determinations (I call them "50 Percent Rule" appraisers). On that website, available as free downloads, are tools and publications to help appraisers and floodplain administrators iron out terminology misunderstandings and establish best practices.

- The Local Official ACV Appraisal Checklist, which is helpful in evaluating appraisal reports.
- The Physical Life Calculator tool, which assists appraisers in developing depreciation estimates.
- The ACV Guidebook, a practical book explaining 50 Percent Rule appraisal assignment characteristics, with detailed how-to discussion of the depreciation process.

About a year and a half ago, the State of Florida Division of Emergency Management developed a revised definition for "market value" (see sidebar). The definition specifies ACV as the primary appraisal methodology. As of this writing, almost 40% of Florida's NFIP-participating communities have adopted the revised definition, and the state reports many others are preparing ordinance amendments to make the same change.

Conditions are excellent for appraisers and floodplain administrators everywhere to embrace Actual Cash Value, the best 50 Percent Rule valuation method.

Your questions and feedback are helpful and always appreciated. Contact Ray Carroll through www.FloodPointUSA.com, or Rayman4454@gmail.com.

Florida's Recommended Definition for Market Value.

The value of buildings and structures, excluding the land and other improvements on the parcel. Market value is the Actual Cash Value (like-kind replacement cost) depreciated for age, wear and tear, neglect, and quality of construction) determined by a qualified independent appraiser, or tax assessment value adjusted to approximate market value by a factor provided by the property appraiser.

[fdem-sfmo_guidance_market-value_2-22-22.pdf](https://www.floridadisaster.org/fdem-sfmo_guidance_market-value_2-22-22.pdf)
(floridadisaster.org)

Engineering With Nature: Call for Projects

Engineering With Nature (EWN) seeks projects to include in the upcoming book, *Engineering With Nature: An Atlas, Volume 3*. This is an opportunity to showcase your engineering projects that demonstrate partnership with nature, delivering solutions with a diverse range of economic, environmental and social benefits.

The EWN Atlas series is a unique collection of projects that highlight the importance of partnering with nature to achieve sustainable engineering solutions. With his book, we aim to inspire engineers, planners, and decision-makers to consider nature-based solutions in their practice.

To be considered for inclusion in Volume 3 of the EWN Atlas, you are invited to submit your project in the [online submission form](#). **The deadline for entry is May 15, 2023.** If you have questions, please contact Michelle Bourne (michelle.bourne@usace.army.mil) or Zelini Hubbard (zhubbard@anchoragea.com).

For more information about the EWN Atlas series, and to access the eBooks for Volumes 1 and 2, please visit, <https://ewn.erdc.dren.mil/atlas-series/>