



By Rebecca Quinn, CFM

Time for another grab bag of topics. There are a lot of questions and topics that don't take a full column to answer, so this month I'll share a few of those with you. As usual, let me know your take on these topics.

Reusing foundations. I'm all for recycle and reuse, but sometimes the concept just doesn't work. Consider a building in a Special Flood Hazard Area that is so damaged it cannot be repaired and the owner has to take it down to the foundation (similarly, an owner may elect to demolish an old building). Can the foundation be reused? Perhaps, but two key questions must be answered. I used to say the first question is whether the foundation is sound. But these days, I think that's the second question. These days, as more and more communities are getting revised Flood Insurance Rate Maps, I think the first answer you need is about flood zone and Base Flood Elevation. If the remaining foundation is acceptable for the current flood zone and BFE – or it can be modified to satisfy the foundation and the elevation requirements – then you can pursue the second question.

The second question, whether the foundation is sound enough to support a new building, can best be answered by the owner engaging a structural engineer or architect. And by the way, there's no need to do a Substantial Improvement/Substantial Damage determination. A new building built on an existing foundation is just that – new. And it must comply with all of the requirements for new construction. See Section 6.2.2 in [Substantial Improvement / Substantial Damage Desk Reference](#) (FEMA P-758).

Relocating buildings. Wouldn't we all like to see more buildings relocated OUT of SFHAs? Sure, but we need to keep in mind that there are plenty of communities that are entirely in SFHAs, and many that have large areas that are mapped SFHA. Recently, I was asked a question about a home that was being moved to a new site that's in the SFHA. The question was whether the cost of physically moving the building has to be added to the cost of the improvement when making the Substantial Improvement determination. I was puzzled because the new foundation is a new structure – and it should already have to comply with the requirements based on the flood zone where it's located. That means an SI/SD determination isn't needed. This is reinforced by the International Existing Building Code, which has a separate chapter on relocated or moved buildings. A specific provision specifies that relocated or moved buildings shall comply with the flood requirements – and the requirement is not triggered by SI/SD.

Openings in interior walls of enclosures below elevated buildings. This comes up from time to time, often from people who have large homes who want multiple enclosed areas (that is, multiple rooms) below the elevated building. My first thought is always ... "so just how many storage rooms do you need?" Remember enclosures below elevated building are limited to those used for parking of vehicles, storage, and building access. I've seen plenty of local floodplain management ordinances that do not permit partitions. And I've had local officials tell me they don't approve plans that show partitions creating multiple rooms. Load-bearing walls, sure. Separation of a garage to meet fire safety requirements, sure. And maybe a closet at the bottom of the stairwell. They also require that each area be identified as to its intended use.

The merit of this is if owners make modifications to enclosed areas in the future, it's clear from the permit record that they did so in violation of the conditions of the approved permit.

But let's go back to the question about openings in interior walls. The NFIP regulations require openings to "automatically equalize hydrostatic flood forces on exterior walls." Given that, why does the question about openings in interior walls come up? Sometimes openings in interior walls, especially load-bearing walls, should be provided to ensure a path for water to enter all enclosed areas, even enclosures that do not have an exterior wall. Sometimes, such as when townhomes are built into sloping sites, openings in interior walls may be necessary for water to reach all enclosed areas. If you ever see this, keep in mind that the net open area of openings in interior walls should not be counted towards the total needed to satisfy building code and NFIP requirements for openings in exterior walls. See NFIP Technical Bulletin 1, [Openings in Foundation Walls and Walls of Enclosures](#).

Can you accept an affidavit from a Registered Design Professional as evidence of compliance? Some states have a provision that allows local building officials to accept affidavits attesting that submitted plans meet the requirements of the building code. Does that mean local officials don't have to do anything when it comes to determining compliance with flood provisions of the codes that apply in SFHAs? From my reading of the NFIP regulations, communities are responsible for ensuring compliance. To me, that means an affidavit isn't enough. Remember that allowing noncompliant construction not only affects an individual building, but can affect the community's participation in the NFIP.

Compensatory storage: equal volume or equivalent function? A number of states and communities with riverine bodies of water (those that flow downhill under the force of gravity) adopt requirements related to preserving the capacity of floodplains to store and convey floodwaters. At first glance, it may seem simple: if someone wants to bring in 100 cubic yards of fill they have to remove an equal volume of dirt. If the floodplain was a "bathtub," that might work. But riverine floodplains are dynamic systems. The effects of encroaching in one place may cause the water surface elevation to go up and it may increase velocities. Encroaching in another place may have little or no measureable effect. Simply digging a hole of equal volume doesn't automatically mean those adverse effects will be offset. While I won't dispute that requiring some excavation may offset some of those effects, it takes a hydraulic analysis to determine whether excavating a compensatory storage area at a specific location will provide equivalent function to offset the effects of a specific encroachment. Currently in revision, [CRS Credit for Higher Regulatory Standards](#), has an explanation of compensatory storage, but your best bet is to talk with an engineer who is familiar with open channel hydraulics.

Submit your own items or suggestions for future topics to column editor Rebecca Quinn, CFM, at rcquinn@earthlink.net. Comments welcomed!

Floodplain Management Training Calendar

For a full nationwide listing of chapter, state and partner training opportunities, visit [ASFPM Online Calendar](#). Looking for training opportunities to earn CECs for your CFM? Check out our web calendar with LOTS of training opportunities listed for 2014! Search the calendar by state using the directions below, or use the category drop down menu to search by category.

Go to the calendar and click on the search feature icon at the top of the calendar. Type your state's initials in parenthesis (for example "(WI)") into the search field and it will pull all the events (training, conferences, etc.) that are currently listed on the calendar for your state. The only events without a state listed in the event title are EMI courses, which are all held in Emmitsburg, Md.