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Board of Commissioners Policy

### **Interpretative Policy Relating to the Definition of "Substantial Improvement" in Section 6.08 (Flood Damage Prevention) of the Town's Code of Ordinances**

(Adoption Date: April 6, 1992)  
(Updated June 4, 2003)

It is the policy of The Town of Nags Head that the term, "substantial improvement", as set forth in the Town's Code of Ordinances, shall be interpreted in the manner set forth in the attached letter to Mr. Mike Adams, Deputy Director, Planning Division, City of Huntington Beach, California, dated March 8, 1988, from Mr. Frank Thomas, Assistant Administrator, Office of Loss Reduction, FEMA, Washington, D.C. Therefore, the Planning Department shall use the referenced letter as a guideline in making its own interpretation of the Town's ordinance.



# Federal Emergency Management Agency

Washington, D.C. 20472

MAR 2 1988

Mr. Mike Adams  
Deputy Director, Planning Division  
Department of Community Development  
City of Huntington Beach  
2000 Main Street  
Huntington Beach, California 92648

Dear Mr. Adams:

This is in response to your letter of January 25, 1988 regarding various aspects of the substantial improvement definition (44 CFR s.59.1) as it relates to the regulations of the National Flood Insurance Program (NFIP). Thank you for giving the Federal Emergency Management Agency (FEMA) an opportunity to respond to your inquires. I apologize for the delayed response, but some of the situational examples and questions you posed required an indepth look into new areas of the substantial improvement definition. Below, I have attempted to address each question in the order in which you posed them.

Floodplain management requirements for substantially improved structures under s.60.3(c) of the NFIP regulations differentiates between residential and non-residential structures. Section 60.3(c)(2) "requires that all new construction and substantial improvements of residential structures within Zones A1-30, AE and AH zones on the community's FIRM have the lowest floor (including basement) elevated to or above the base flood level, unless the community is granted an exception by the Administrator for the allowance of basements in accordance with s.60.6(b). Section 60.3(c)(3) "requires that all new construction and substantial improvements of non-residential structures within Zones A1-30, AE and AH on the community's firm (i) have the lowest floor (including basement) elevated to or above the base flood level or, (ii) together with attendant utility and sanitary facilities, be designed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy."

In answering your inquiries, I have made the assumption that all structures in question are pre-FIRM (existing) residential and, therefore, subject to the provision for substantially improved structures in s.60.3(c)(2). In addition, I have assumed that the residential structures "adjacent to the Santa Ana River" are not in a designated floodway.

### ADDITIONS / RECONSTRUCTIONS / REHABILITATIONS

You requested a definition and explanation of the difference between "reconstruction" and "additions". You also requested a clarification as to when each is considered a substantial improvement, thereby requiring compliance with s.60.3(c)(2). The substantial improvement definition actually impacts, not two, but three general types of alteration: (a) additions, (b) reconstruction (repair due to damage), and (c) rehabilitation.

The first general category, additions, is defined as an alteration to an existing structure which results in any increase in its floor area. That is, under the present definition of "substantial improvement", if an existing structure in the floodplain is physically enlarged and the cost of the enlargement equals or exceeds 50% of the market value of the structure before enlargement, then the existing structure is considered to have been substantially improved and is subject to NFIP requirements (i.e., elevation). However, if the area of enlargement (the addition) complies with NFIP regulations (i.e., is elevated to or above BFE), the existing portion of the structure does not have to be elevated. Also, actuarial insurance rates will not apply to the addition, and the entire structure will retain its pre-FIRM (subsidized) rates.

The second category, reconstruction (repair of damaged structures), is constituted by the rebuilding of an existing structure which has been partially or completely destroyed by any cause (e.g., fire, wind, flood, etc.), without increasing the floor area of the structure. Under the definition of "substantial improvement", if a partially destroyed structure is reconstructed and the cost of the reconstruction equals or exceeds 50% of the market value of the structure before the damage, then the rebuilt structure is considered a "substantial improvement" and is subject to NFIP requirements (i.e., elevation) and actuarial

(cost-FIRM) insurance rates. By previous FEMA policy, the "cost of repair" in the substantial improvement definition means repair of all damages sustained and, therefore, cannot reflect a level of repairs which is less than the amount of damages suffered. Thus, a building which sustains damages exceeding 50% of its market value will be subject to the substantial improvement rule, even if the actual cost of repair is reduced below the 50% threshold.

The third category, rehabilitation, includes any improvements and repairs which are made to the interior and exterior of an existing structure, but which do not result in any increase in the floor area of the structure. According to the present definition of "substantial improvement", any rehabilitation of an existing structure, the cost of which equals or exceeds 50% of the market value of the structure, is subject to the same floodplain management requirements as new construction (i.e., elevation) and actuarial insurance rates.

It must be recognized that there are cases where the three abovementioned types of improvements are combinations thereof. For example, when an additional room is affixed onto an existing structure, but the adjacent room or rooms in the existing structure are simultaneously rehabilitated to match the interior of the addition. Or, in the case of reconstruction after damage, when an additional room or rooms are simultaneously built.

In the case where two types of alterations are combined to constitute a substantial improvement, the more restrictive category should be used to apply floodplain management and insurance provisions. For example, when there is an alteration that combines a rehabilitation and an addition, the entire alteration is considered a rehabilitation, and the whole structure must be elevated. Obviously, the question of degree arises. What degree of improvement attributable to rehabilitation would constitute the entire alteration being considered a rehabilitation? In expanding a residence with another room, if the "absolute minimum" alteration of the existing structure occurs, then the improvement is considered an addition and only it has to be elevated. The "absolute minimum" occurs when the exterior wall dividing the addition from the existing structure is not demolished, and only an entrance (i.e., doorway) to the addition is constructed in the wall. If the exterior wall is demolished, then the alteration is considered a rehabilitation, not an addition, and the entire structure must be elevated.

Cases involving combinations of reconstructions (repair due to damage) and additions are always considered reconstructions and the entire structure must be elevated. Determinations in cases involving combinations of reconstructions and rehabilitations are not necessary since the floodplain management and insurance implications are identical for both.

In the first set of questions, you also asked about the rule on a freestanding structure built immediately adjacent, but not connected, to an existing (pre-FIRM) structure located in the floodplain. There are two types of detached ("freestanding") structures: Accessory structures and all other structures. Detached structures which comply with certain performance standards can be considered "accessory structures" by a community and do not necessarily have to be elevated (see the discussion on detached garages and accessory structures below for these performance standards). All other detached structures which do not meet these standards are subject to the same requirements as post-FIRM (new) construction and the lowest floor must be elevated to or above the BFE.

Your next question, "If the addition is attached to a pre-FIRM structure but elevated and built to the floodplain standards, is the addition subject to the 50% substantial improvement rule", was answered in the paragraph above which defined "additions".

"If not, when is an improvement which is elevated and meets floodplain regulations subject to the 50% rule?". If the cost of an improvement equals or exceeds 50% of market value, it is considered a substantial improvement. When this happens, the pre-FIRM structure becomes subject to the same requirements as post-FIRM (new) construction and the lowest floor must be elevated to or above the BFE. As stated above, in cases of rehabilitation and reconstruction this applies to the entire structure. With additions, only the expansion has to be elevated.

### SECOND STORY ADDITIONS

Your next set of questions concerns adding a second story to a pre-FIRM structure. A second story "addition" is interpreted as

a rehabilitation since it would normally involve tearing off the existing roof (removal of the dividing exterior wall in the case of a lateral addition also constitutes a rehabilitation, as previously described). If the cost of constructing the second story, including removal of the roof, is equal to or greater than 50% of the market value of the existing structure before the alteration, the entire structure must be elevated to or above BFE and actuarial flood insurance rates will be assessed. The issue at hand is the dependence of the second story on the walls of the existing structure for support. Because these walls are susceptible to structural damage and collapse by direct contact of water, and possibly by current, waves and transported debris, the second story is also considered to be at risk and, therefore, not exempt from substantial improvement.

In the case of second story additions, you asked if floodproofing rather than elevation is considered as an option to attain compliance. As previously stated, under (s.60.3(c)(2)) dry or watertight floodproofing of "residential" structures is not considered an acceptable alternative for compliance. Implementation of floodproofing measures to a residential structure in lieu of elevation requires issuance of a variance (s.60.3(a)) by the community. For insurance purposes, a floodproofed residential structure is still rated actuarially according to its first floor elevation, and thus the owner may pay much higher annual premiums than for an elevated structure. Therefore, without a variance, only elevation, not floodproofing, of the first floor of a substantially improved existing structure is permissible.

#### ATTACHED GARAGE/DETACHED GARAGES and OTHER ACCESSORY STRUCTURES

You ask when additions that are not in conflict with NFIP regulations included in the total "cost of repair" for determining substantial improvement. You provide as an example, an addition to an existing garage which is not habitable and not required to be elevated above BFE. You ask if the addition to the garage is exempt or required to be floodproofed.

There are generally two types of garages: Detached garages are in no way connected to the frame of the existing structure and can be constructed such that they are considered accessory structures; Attached garages are connected to the existing structure, and for floodplain management purposes are treated as enclosures below the BFE.

#### Attached Garages

In cases of new (post-FIRM) construction, a garage attached to the main structure is exempt from the elevation requirement in s.60.3(c)(3) if it is used solely for parking, building access, or storage and if it meets the following requirements:

- 1) No machinery or equipment which service a building such as furnaces, air conditioners, heat pumps, hot water heaters, washers, dryers, elevator lift equipment, electrical junction and circuit breaker boxes, and food freezers, are permitted below the base flood elevation; and
- 2) All interior wall, floor and ceiling materials located below the base flood elevation must be unfinished and resistant to flood damage; and
- 3) The walls of any enclosed area below the base flood elevation must be constructed in a manner to prevent flotation, collapse, and lateral movement of the structure, and meet the openings requirement in s.60.3(c)(5).

However, even if an addition [rehabilitation, reconstruction] to an attached garage complies with the abovementioned conditions such that it is consistent in design and use with the existing garage (which also meets these conditions), the cost of the addition must still be counted toward the "cost of the improvement" for the entire structure.

#### Detached Garages and Other Accessory Structures

In cases of new (post-FIRM) construction, a garage detached from an existing structure is exempt from the elevation requirement in s.60.3(c)(3) if it constitutes a minimal investment, is used only for parking and limited storage, and if, at a minimum, the following conditions are met (note that these conditions are applicable to all accessory structures):

- 1) Use of the garage must be restricted to parking and limited storage.
- 2) The garage must be built using unfinished and flood damage resistant materials.
- 3) The garage must be adequately anchored to prevent flotation, collapse, or lateral movement of the structure and meet the opening requirements in s.60.3(c)(5).
- 4) Any mechanical and utility equipment in the garage must be elevated to or above the BFE or floodproofed.
- 5) The garage must comply with floodway encroachment provisions at s.60.3(c)(10) or (d)(3).

If feasible, the Office of Loss Reduction would recommend that detached garages and other detached accessory structures be elevated to or above the BFE to minimize damage to the structure and to vehicles and to other stored contents. However, it is the discretion of the community whether to require or encourage the elevation of accessory structures.

For determining substantial improvement, accessory structures are treated entirely separate from the main existing structure. Therefore, the cost of an addition to a detached garage is compared to the market value of that garage to determine if it has been substantially improved. Nonetheless, if an addition [reconstruction, rehabilitation] to a garage meets the above mentioned conditions such that it is consistent in design and use with the garage (which also meets these conditions), then the addition can be considered to be in compliance with NFIP regulations.

In order to permit detached garages or any type accessory structure which is not elevated or dry floodproofed, the community would have to include conditions, equivalent to those listed above, in its ordinance or require the issuance of variances (s.60.6(a)).

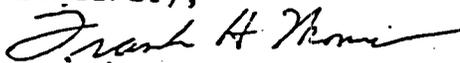
MARKET VALUE

It appears that essentially you are addressing the detached garage/accessory structure issue with your first two questions in section four: "When is a garage included in determining the value of the structure? Is it considered to be non-residential or exempt?". When a garage is attached to the building it is to be used in calculating the market value for the entire structure. Accessory structures, including detached garages, are not used in market value determinations for the main existing structure, because, as stated above, an accessory structure is considered a separate building having its own market value.

Your last question asks, "are floodplain regulations applicable to washer-dryer locations?" Laundry equipment or a workshop placed in an attached or detached garage (or any accessory structure) of a new (post-FIRM) structure would not be permitted since it would change the use of the garage to something besides limited storage, building access, or parking (previously stated use conditions for detached garages and accessory structures).

I hope that these policy and regulation interpretations have adequately answered your questions on substantial improvement. If you have any questions about specific items in this letter, please contact Todd Davison of my staff (202/646-3448). If you should experience cases in the field that do not exactly fall under the scenarios and conditions herein described, please contact the FEMA Regional Natural & Technological Hazards Division, in your case Region IX in San Francisco.

Sincerely,



Frank H. Thomas,  
Assistant Administrator  
Office of Loss Reduction