

Modifications to Existing Floodplain Structures

What Projects Require Floodplain Development Permits?

For the purpose of floodplain management, “development” includes any reconstruction, renovation, addition, repair, expansion, or alteration of an existing building. Any time a building permit is required for improvements to an existing floodplain structure, a floodplain development permit is also required.



What Rules Apply?

The construction requirements for changes to existing floodplain buildings depend on when the structure was built (or substantially improved) and the nature of the proposed changes.

Post-FIRM Structures

A floodplain structure is called post-FIRM if it was built (or substantially improved) after the effective date of the community’s first Flood Insurance Rate Map (FIRM). This is the date on which the community began regulating floodplain development. Post-FIRM structures should already be in compliance with floodplain development standards. Any subsequent improvements ***must maintain compliance with the standards that were in effect when the building was built***. Renovations, repairs, or additions to post-FIRM structures are thus regulated as new construction.

Special Circumstances Due to Map or Regulatory Changes

A post-FIRM structure that was in full compliance at the time of construction may not meet current floodplain development standards. This can result from a map revision that expands the regulated floodplain area and/or increases the calculated height of the 100-year flood (Base Flood Elevation). It can also result from enactment of stricter standards for floodplain development. In August 2007, the New York residential and building codes were revised to require flood protection to a level two feet above the Base Flood Elevation, which is two feet higher than previous requirements based on the federal minimum standard.

- If the site of a post-FIRM structure was not mapped as a Special Flood Hazard Area at the time of construction, then repairs or alterations are regulated as though it is a pre-FIRM structure.
- If the required flood protection level for a post-FIRM structure has increased since the time of construction, then minor renovations or additions should comply with the standards that were in effect when the building was built. However, ***any substantial improvements to a post-FIRM structure must meet the requirements of the current ordinance***, which may require elevation of the entire building.

Pre-FIRM Structures

Structures that were built prior to enactment of floodplain development standards are called pre-FIRM. Many of these buildings were constructed without taking the flood hazard into account. The requirements for modifications to these structures depend on the magnitude of the proposed changes. ***It is necessary to determine if the proposed project constitutes a substantial improvement.***

“Substantial improvement”— *Any repair or improvement to an existing floodplain building, the cost of which equals or exceeds 50% of the market value of the structure before the improvement.*

Substantial Improvement Rule

If the cost of improvements exceeds 50 percent of the market value of the building, then the entire structure must be brought up to current floodplain management standards. For many existing buildings, this can require a major investment to elevate the structure, fill the basement, or make other changes to conform to current rules. The “cost of improvements” must include the market value for all materials and labor, even if the out-of-pocket expenditures are less (for example, the owner does some of the labor). The “cost of improvements” does not include the cost of repairs required to remedy existing health, safety, and sanitary code violations. If the project is implemented in stages, FEMA requires that the entire project be counted as one for the purpose of determining whether it constitutes a substantial improvement.

Exception for Some Lateral Additions

When an addition that increases the square footage of a structure is a substantial improvement (i.e. the cost exceeds 50% of the value of the structure), the addition must be elevated or floodproofed in compliance with current standards. However, in non-coastal floodplains, the existing building may not have to be brought into compliance if: (1) no significant improvements are made to the existing structure and (2) the common wall of the existing structure is retained (except for a doorway).

Substantial Damage

If a floodplain structure is damaged by flood, fire, or any other cause and the cost to repair the damage exceeds 50 percent of the market value of the building before the damage occurred, then ***any repairs are considered a substantial improvement***, regardless of the actual repair work performed. The determination of substantial damage is based on the true cost of bringing the building back to its pre-damage condition using qualified labor and materials obtained at market prices. If the owner had flood insurance and the building was substantially damaged by a flood, the Increased Cost of Compliance coverage will help with the extra cost of complying with this requirement.

Exception for Historic Structures

Historic structures¹ are exempt from the substantial improvement requirements, provided that the project maintains the historic status of the structure and incorporates all possible flood damage reduction measures.

Minor Improvements to Pre-FIRM Structures

Modifications to a pre-FIRM structure that do not constitute a substantial improvement still require a floodplain development permit. The project should incorporate methods and materials that ***protect against flood damage “to the greatest extent practical.”*** This can involve the use of flood-resistant materials, location of mechanical and electrical equipment above the flood protection level, and other techniques.

The cost of flood insurance for a substantially improved or substantially damaged building is based on post-FIRM actuarial rates. These rates are extremely high for non-compliant structures in which the first floor (including basement) is below the Base Flood Elevation (100-year flood height).

Additional Resources

- *Substantial Improvement and Substantial Damage*, Unit 8 of FEMA 480 (2005): *National Flood Insurance Program (NFIP) Floodplain Management Requirements: A Study Guide and Desk Reference for Local Officials*, https://www.fema.gov/media-library-data/1481032638839-48ec3cc10cf62a791ab44ecc0d49006e/FEMA_480_Complete_reduced_v7.pdf.
- Substantial Damage Estimator tool and user manual (for estimating building value and repair costs) and *Substantial Improvement/ Substantial Damage Desk Reference*, FEMA P-758 (2010), <https://www.fema.gov/emergency-managers/risk-management/building-science/substantial-damage-estimator-tool>.

¹ Refer to the Local Law for Flood Damage Prevention for the full definition of “historic structure.” The National Register of Historic Places is available at: <https://www.nps.gov/subjects/nationalregister>.