

# Michigan Substantial Damage Determinations

## Background of NFIP State Coordination

Over 1,000 communities in Michigan participate in the National Flood Insurance Program (NFIP). The NFIP provides flood insurance to anyone in a participating community. As a requirement for participation in the NFIP, communities must adopt a local floodplain ordinance meeting the minimum NFIP criteria. In Michigan, these ordinances typically reference the Michigan building codes. The Michigan building codes contain substantial damage (SD) requirements that meet the minimum NFIP requirements.

In addition to meeting building code and NFIP requirements, substantial damage and substantial improvement can have significant impacts on flood insurance premiums. The standard flood insurance policy also contains additional funds to assist owners in meeting SD/Substantial Improvement (SI) requirements. Additional details on insurance premiums are provided below.

## Community Responsibility

It's the community's responsibility to determine if a structure within the Federal Emergency Management Agency (FEMA) mapped floodplain has been substantially damaged during a flooding event. If structures are substantially damaged, they must be brought into compliance with the local floodplain ordinance and Michigan Building Codes (MBC). Practically speaking, this means that they must be protected from future flooding to at least one foot above the base flood elevation (BFE). Substantially damaged residential buildings and manufactured homes must either be raised to at least one foot above the BFE, or they must be relocated outside the floodplain. Non-residential structures can be flood-proofed or elevated to one foot above the BFE. The local floodplain administrator and/or building official is usually the person responsible for complying with the requirements of the community's floodplain ordinance and evaluating reconstruction after a disaster.

Section 104.2.1 of the MBC requires the building official to evaluate for SD. "For applications for reconstruction, rehabilitation, repair, alteration, addition or other improvement of existing buildings or structures located in flood hazard areas, the building official shall determine if the proposed work constitutes substantial improvement or repair of substantial damage. Where the building official determines that the proposed work constitutes substantial improvement or repair of substantial damage, and where required by this code, the building official shall require the building to meet the requirements of Section 1612."

The code defines *Substantial Damage (SD)* as "Damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition



would equal or exceed 50 percent of the market value of the structure before the damage occurred.”

*Substantial Improvement (SI)* is defined as: Any repair, reconstruction, rehabilitation, alteration, addition or other improvement of a building or structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the improvement or repair is started. If the structure has sustained substantial damage, any repairs are considered substantial improvement regardless of the actual repair work performed. The term does not, however, include either:

Any project for improvement of a building required to correct existing health, sanitary or safety code violations identified by the building official and that are the minimum necessary to assure safe living conditions.

Any alteration of a historic structure provided that the alteration will not preclude the structure's continued designation as a historic structure.

Section R105.3.1.1 of the Michigan Residential Code (MRC) has identical requirements to the MBC.

### **Understanding Substantial Damage: “The 50% Rule”**

Substantial damage is damage of any origin (fire, earthquake, flood, damaging winds, vandalism, etc.) sustained by a structure whereby the cost of restoring the structure to its pre-damaged condition would equal or exceed 50% of the market value of the structure before the damage occurred. The market value of the structure does not include the land the structure is located on. A substantially damaged structure must be brought into compliance with a community’s floodplain regulations.

### **The Formula:**

$$\frac{\text{Cost to repair (back to a pre-damaged condition)}}{\text{Market value of the building (prior to the damage)}} = \% \text{ damage}$$

### **Market Value**

Market value refers to the price that a seller of real property can expect to receive from a buyer in a fair and open negotiation. For SI/SD determinations, only the market value of the building/ manufactured home is important (land and accessory structures are excluded). In addition, the market value must be based on the condition of the structure before the improvement is undertaken or before damage occurred. If structures have not been maintained and have deteriorated over time, then the pre-improvement or pre-damage market values are the values as of the date applications for permits are submitted.

Many communities require permit applicants to obtain appraisals of market value prepared by qualified, licensed professionals. Other methods can be used to estimate market value such as:

- Values developed for property tax assessment purposes, adjusted to approximate market value
- Estimates of a structure's actual cash value, including depreciation.

### **Items that should be included in the cost of improvements or repairs**

Items that must be included in the costs of improvement are those directly associated with the work being done on a building. The costs of repairs must include all work necessary to restore a structure to its pre-damage condition. Whether determining costs of improvement or costs of repairs, the determination must include costs associated with complying with any other regulation or code requirement that is triggered by the work. The following list characterizes the types of costs that must be included:

- Materials and labor, including the estimated value of donated or discounted materials and owner or volunteer labor.
- Site preparation related to the improvement or repair, such as foundation excavation or filling in basements.
- Demolition and construction debris removal.
- Labor and other costs associated with demolishing, moving, or altering structure components to accommodate improvements, additions, and making repairs.
- Costs associated with complying with other requirements and codes that may be triggered by the work.
- Construction management and supervision.
- Contractor's overhead and profit.
- Sales taxes on materials.
- Structural elements and exterior finishes, including foundations, bearing walls, tie beams, trusses, joists, beams, subflooring, framing, ceilings, Interior non-bearing walls, exterior finishes, windows and exterior doors, roofing, gutters, and downspouts, hardware, attached decks and porches.
- Interior finish elements, including floor finishes, bathroom tiling and fixtures, wall finishes, built-in cabinets, interior doors, interior finish carpentry, built-in bookcases and furniture, hardware, insulation.
- Utility and service equipment, including: heating, ventilation, and air conditioning (HVAC) equipment plumbing fixtures and piping, electrical wiring, outlets, and switches, solar panels and equipment, light fixtures and ceiling fans, security and fire, smoke, and CO<sub>2</sub> warning systems, built-in appliances, central vacuum systems, water filtration, conditioning, and recirculation systems.

### **Items that can be excluded from the cost of improvements or costs of repairs**

Items that can be excluded are those that are not directly associated with the structure. The following list characterizes the types of costs that may be excluded:

- Clean-up and trash removal.
- Costs to temporarily stabilize a structure so that it is safe to enter to evaluate and identify required repairs.

- Costs to obtain or prepare plans and specifications.
- Land survey costs.
- Permit fees and inspection fees.
- Carpeting and re-carpeting installed over finished flooring, such as wood or tile.
- Outside improvements, including landscaping, irrigation, sidewalks, driveways, fences, yard lights, swimming pools, pool enclosures, and detached accessory structures (e.g., garages, sheds, gazebos).
- Costs required for the minimum necessary work to correct existing violations of health, sanitary, or safety codes.
- Plug-in appliances, such as washing machines, dryers, and stoves.

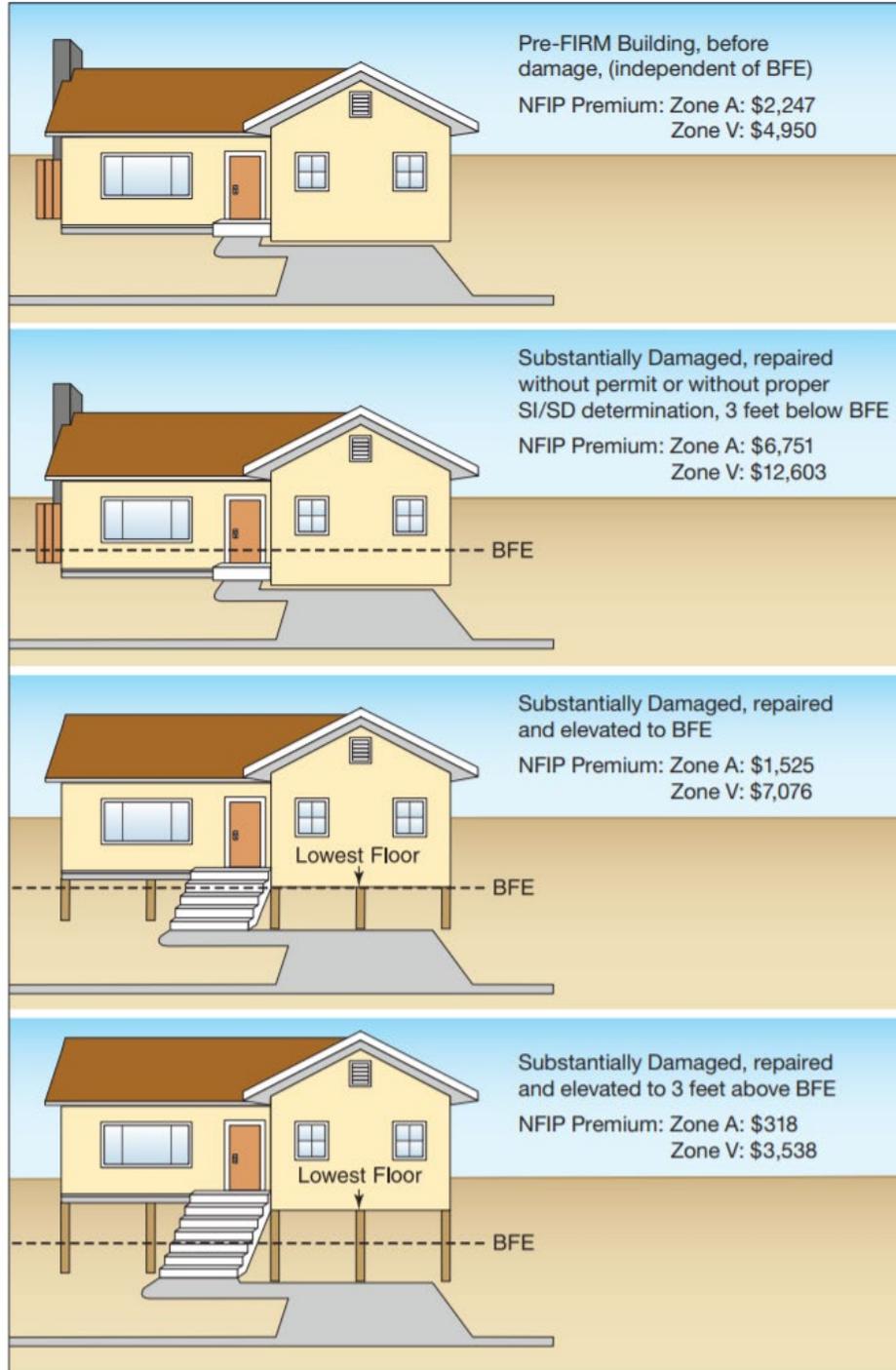
## **Flood Insurance Premiums**

When a building or manufactured home in the floodplain is substantially improved or substantially damaged, the NFIP flood insurance policy for that structure will be rated using risk-based premium rates that depend on the surveyed elevation of the lowest floor relative to the BFE. Risk based premium rates take into account the risk of flood damage. When a structure is elevated and brought into compliance with the requirements for new construction, the cost of an NFIP flood insurance policy generally will be lower than the premium calculated based on discounted rates used for buildings built before communities joined the NFIP, called pre-FIRM(Flood Insurance Rate Map) (see illustration below). Communities require permittees to submit as-built surveyed lowest floor elevations as a condition of permits for new construction and SI/SD.

If a building or manufactured home is substantially improved, or if a substantially damaged building or manufactured home is repaired or rebuilt, and it is not brought into compliance, it is in violation of the NFIP and Michigan building code requirements, and the cost of an NFIP flood insurance policy may be very high. The annual premium could be more than 3 times the premium paid before the structure was improved or repaired. When questions arise concerning how a proposed improvement might affect an NFIP flood insurance policy, property owners should obtain cost estimates from qualified insurance agents. The NFIP may deny flood insurance coverage for specific buildings if communities cite violations and owners refuse to comply with the floodplain management requirements.

The standard FEMA flood insurance policy contains additional money to assist owners in meeting additional criteria imposed by SD/SI. This is referred to as Increased Cost of Compliance (ICC). Property owners can receive up to an additional \$30,000 to help cover the cost of bringing the structure into compliance, such as elevating the structure.

The cost of an NFIP flood insurance policy varies depending on how a substantially damaged building is repaired. The example illustrated is for a one-story, single-family home without basement or enclosure. Premiums shown are based on \$250,000 building coverage with \$2,000 deductible (rates as of April 2018), without fees and surcharges. This figure is for comparison purposes only.



## **Additional Resources**

Questions about substantial damage can be directed to the NFIP Coordinator, Matthew Occhipinti at [OcchipintiM@Michigan.gov](mailto:OcchipintiM@Michigan.gov) or 616-204-1708. The following publications also provide additional information.

FEMA P-758, Substantial Improvement/Substantial Damage Desk Reference (2010)  
[www.fema.gov/media-library/assets/documents/18562](http://www.fema.gov/media-library/assets/documents/18562)

FEMA 213, Answers to Questions About Substantially Improved/Substantially Damaged Buildings (2018) [www.fema.gov/media-library/assets/documents/169099](http://www.fema.gov/media-library/assets/documents/169099)

FACT SHEET: “Substantial Damage” – What Does it Mean? - [www.fema.gov/news-release/2019/12/02/4466/fact-sheet-substantial-damage-what-does-it-mean](http://www.fema.gov/news-release/2019/12/02/4466/fact-sheet-substantial-damage-what-does-it-mean)

FEMA P-784, Substantial Damage Estimator (SDE) Tool (2017) -  
[www.fema.gov/es/media-library/assets/documents/18692](http://www.fema.gov/es/media-library/assets/documents/18692)

Flood insurance to help pay for Increased Cost of Compliance (ICC) –  
[www.fema.gov/increased-cost-compliance-coverage](http://www.fema.gov/increased-cost-compliance-coverage)