## Cumulative Substantial Improvement – local technical code amendments CCR Title 24 (Part 2 building, Part 10 existing building, Part 2.5 residential) and floodplain management ordinance text changes

Submit draft ordinances amending the flood provisions of the building code (in <track changes>) for review well in advance of first reading to [DWR\_NFIP@water.ca.gov](mailto:DWR_NFIP@water.ca.gov) or [FEMA-NFIP-R9@fema.dhs.gov](mailto:FEMA-NFIP-R9@fema.dhs.gov). Please put community name in subject line.

**Before you start:** Review the General Instructions for Amending the California Building Standards Code (CCR Title 24) to Adopt Higher Standards for Buildings and Development Located in Flood Hazard Areas.

**Description[[1]](#footnote-1):** One objective of the NFIP is to reduce the long-term exposure of buildings to flood damage. To achieve this objective, the NFIP requires that existing buildings be brought into compliance if improvements, including additions and repairs, are determined to be Substantial Improvement. If the cost of proposed improvements equals or exceeds 50 percent of the market value of the building before the improvements are started, the building must be brought into compliance with the requirements for new construction. The building code and existing building code have the same definition for Substantial Improvement and the same requirements.

**NFIP Community Rating System Credits.** Adoption and enforcement of this higher standard may qualify for CRS points (credits). Communities should review the [*CRS Coordinators Manual*](https://www.fema.gov/media-library/assets/documents/8768)and consult with their CRS Resource Specialists. FEMA/ISO determines which provisions qualify for points.

Communities can further reduce flood losses over the long term by adopting a requirement that all improvements and repairs be tracked over time and counted toward the Substantial Improvement determination. Adopting “cumulative Substantial Improvement” means that buildings would be brought into compliance sooner than if the community administers the basic Substantial Improvement requirement, which applies to each separate application for improvements and repairs. Generally, periods of 10 or 15 years, or the life of the structure, are selected by communities committed to long-term resiliency.

Another benefit of adopting a cumulative Substantial Improvement requirement is it reduces the likelihood that property owners will deliberately phase improvements sequentially for the specific purpose of avoiding the compliance requirement. Generally, periods of 1 to 5 years are selected when this is a community’s primary objective.

See separate instructions for “repetitive flood loss” if your community’s objective is to reduce the number of nonconforming buildings subject to repetitive, low-level flooding.

A good system for recording and accessing records is necessary to administer a cumulative Substantial Improvement provision. Each time an owner applies for a permit to make improvements or repairs, the records for that building must be checked. For more guidance, see FEMA P-758,[*Substantial Improvement /Substantial Damage Desk Reference*](https://www.fema.gov/media-library/assets/documents/18562) (2010).

**How Part 2 (building) and Part 10 (existing building) Specify Substantial Improvement (and Substantial Damage):** Part 2 (building) and Part 10 (existing building) both include the basic, NFIP-consistent definitions for the terms Substantial Improvement and Substantial Damage. Using these basic definitions means the SI/SD determination is done by the local official for each individual permit application for work (improvements, alterations, additions, repairs), even if more than another application is submitted after the first one is closed out. The SI/SD determination requires the local official to compare the cost of work to the market value of the building. This is outlined in the duties of the Floodplain Administrator, Model Ordinance Section 103-5 Substantial improvement and substantial damage determinations.

**INSTRUCTIONS**

Implementing cumulative substantial improvement requires modification of the definition of “substantial improvement” that appears in three places: Part 2 (building), Part 10 (existing building), and the community’s floodplain management ordinance. The floodplain management ordinance should also be modified where duties of the floodplain administrator are specified.

**Step 1.** **Select the period of accumulation.**Communities must select the period of time over which they will maintain records to accumulate the cost of improvements and repairs. Where this **{number of years}** appears in the following texts, insert the period your community uses. There are pros and cons for selecting longer periods (such as 10-years or the life of the structure) and for selecting shorter periods (such as 1-year or 5-years). The period of time also determines whether cumulative substantial improvement qualifies for Community Rating System points. Also see FEMA P-758 to consider how market values changing over time can be handled. Communities that adopt this provision should have written administrative procedures in place.

To alert the public and those who use the regulations about this time-dependent requirement, where this **{see Note}** appears in the following text, insert the date based on one of the following:

* If this is the first time the community has adopted a cumulative substantial improvement provision, **{insert the actual date identified by month, day, year, on which this ordinance will be effective}**.
* If the community has previously adopted a cumulative substantial improvement provision, **{insert the effective date of the first ordinance that adopted that provision}**.

**Step 2. Amend Part 2 (all buildings except 1- and 2-family dwellings and townhouses less than three stories).** Add a section to the ordinance that adopts local technical amendments to Part 2. To make the changes discernable, maintain strikethrough and underlining.

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| *CCR Title 24, Part 2, Section 104.2.1 is hereby amended as follows:*  **104.2.1 Determination of substantially improved or substantially damaged existing buildings and structures in flood hazard areas.** 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 where the proposed work constitutes substantial improvement or repair of substantial damage. The substantial improvement determination requires evaluation of previous permits issued for improvements and repairs as specified in the definition of “substantial improvement.” 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.  *CCR Title 24, Part 2, Section 202 is hereby amended as follows:*  **SUBSTANTIAL IMPROVEMENT.** Any one or more or any combination of repair, reconstruction, rehabilitation, alteration, addition or other improvement of a building or structure taking place during a **{see Notes}**–year period, the cumulative cost of which equals or exceeds 50 percent of the market value of the structure before the improvement or repair is started. For each building or structure, the **{see Notes}**–year period begins on the date of the first permit issued for improvement or repair of that building or structure subsequent to **{see Notes}**. 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:   1. 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. 2. Any alteration of a historic structure provided that the alteration will not preclude the structure’s continued designation as a historic structure. |

**Step 3. Amend Part 10 (existing buildings).** Add a section to the ordinance that adopts local technical amendments to Part 10. To make the changes discernable, maintain strikethrough and underlining.

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| *CCR Title 24, Part 10, Section 104.2.1 is hereby amended as follows:*  **104.2.1 Determination of substantially improved or substantially damaged existing buildings and structures in flood hazard areas.** 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 where the proposed work constitutes substantial improvement or repair of substantial damage. The substantial improvement determination requires evaluation of previous permits issued for improvements and repairs as specified in the definition of “substantial improvement.” 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 of the *California Building Code*.  *CCR Title 24, Part 10, Section 202 is hereby amended as follows:*  **SUBSTANTIAL IMPROVEMENT.** Any one or more or any combination of repair, reconstruction, rehabilitation, alteration, addition or other improvement of a building or structure taking place during a **{see Notes}**–year period, the cumulative cost of which equals or exceeds 50 percent of the market value of the structure before the improvement or repair is started. For each building or structure, the **{see Notes}**–year period begins on the date of the first permit issued for improvement or repair of that building or structure subsequent to **{see Notes}**. 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:   1. 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. 2. Any alteration of a historic structure provided that the alteration will not preclude the structure’s continued designation as a historic structure. |

**Step 4.** **Amend Part 2.5 (1- and 2-family dwellings and townhouses less than three stories).** Add a section to the ordinance that adopts local technical amendments to the Part 2.5. To make the changes discernable, maintain strikethrough and underlining.

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| *CCR Title 24, Part 2.5, Section R104.3.1.1 is hereby amended as follows:*  **R105.3.1.1 Determination of substantially improved or substantially damaged existing buildings in flood hazard areas.** For applications for reconstruction, rehabilitation, addition, alteration, repair or other improvement of existing buildings or structures located in a flood hazard area as established by Table R301.2(1), the *building official* shall examine or cause to be examined the *construction documents* and shall make a determination with regard to the value of the proposed work. The substantial improvement determination requires evaluation of previous permits issued for improvements and repairs as specified in the definition of “substantial improvement.” For buildings that have sustained damage of any origin, the value of the proposed work shall include the cost to repair the building or structure to its predamaged condition. If the *building official* finds that the value of proposed work equals or exceeds 50 percent of the market value of the building or structure before the damage has occurred or the improvement is started, the proposed work is a substantial improvement or repair of substantial damage and the building official shall require existing portions of the entire building or structure to meet the requirements of Section R322. |

**Step 5.** **Amend local floodplain management regulations.** In the floodplain management regulations, add (or modify) the section specifying how SI/SD determinations are made and modify a definition.

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| **Sec. 103-5. - Substantial improvement and substantial damage determinations.** For applications for building permits to improve buildings and structures, including alterations, movement, enlargement, replacement, repair, additions, rehabilitations, renovations, substantial improvements, repairs of substantial damage, and any other improvement of or work on such buildings and structures, the Floodplain Administrator, in coordination with the Building Official, shall:   1. Estimate the market value, or require the applicant to obtain an appraisal of the market value prepared by a qualified independent appraiser, of the building or structure before the start of construction of the proposed work; in the case of repair, the market value of the building or structure shall be the market value before the damage occurred and before any repairs are made. 2. Compare the cost to perform the improvement, the cost to repair the damaged building to its pre-damaged condition, or the combined costs of improvements and repairs, when applicable, to the market value of the building or structure. 3. Determine and document whether the proposed work constitutes substantial improvement or repair of substantial damage; the determination requires evaluation of previous permits issued for improvements and repairs as specified in the definition of “substantial improvement”; and 4. Notify the applicant when it is determined that the work constitutes substantial improvement or repair of substantial damage and that compliance with the flood resistant construction requirements of the building code is required and notify the applicant when it is determined that work does not constitute substantial improvement or repair of substantial damage. |
| **“Substantial improvement”** means any combination of repair, reconstruction, rehabilitation, alteration, addition or other improvement of a building or structure, taking place during a **{see Notes}**–year period, the cumulative cost of which equals or exceeds 50 percent of the market value of the structure before the improvement or repair is started. The period of accumulation begins when the first improvement or repair of each building is permitted subsequent to **{see Note}**. When 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:   1. 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. 2. Any alteration of a historic structure provided that the alteration will not preclude the structure’s continued designation as a historic structure. |

1. Reference: [*Reducing Flood Losses Through the International Codes: Coordinating Building Codes and Floodplain Management Regulations*](http://www.fema.gov/media-library/assets/documents/96634)(5th Edition, 2019), International Code Council and FEMA. [↑](#footnote-ref-1)