



S U M M A R Y :
**Substantial Remodels and
New Construction Definitions**

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REACH CODE IMPLEMENTATION RESOURCES TEMPLATE

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Review of New Construction and Substantial Improvement Definitions

Version 1.3

The Reach Codes program has received several inquiries from jurisdictions expressing interest in including major remodels, or projects that undertake comprehensive renovations that are, for practical purposes, substantially similar to new buildings, within the scope of new construction energy ordinances.

The program completed a limited investigation with the following objectives:

- identify definitions of substantial remodels/substantial improvements and new construction used in different codes and across jurisdictions, and
- identify the trigger when a substantial improvement becomes classified as new construction.

The definitions included in this document are intended to serve as examples and staff should review any proposed language with the building official and counsel to ensure the adopted definition is consistent with the ordinance intent and with other related codes.

The program identified definitions for new construction and substantial remodel in 28 jurisdictions and seven agencies. The scope of this effort did not include requirements for additions.

As a reference, the California Building Code definition of substantial improvement is:

Substantial Improvement Any repair, reconstruction, rehabilitation, alteration, addition, or other improvement of a building 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:

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.

[Section: 2019 CBC, Title 24, Part 2, \(Volumes 1 & 2\), Chapter 2 Definitions \[BS\]](#)

Results

The project gathered data from different regions of California, with the resulting sample including 20 northern California jurisdictions, four southern California and four in the Central Valley.¹ The research revealed two main metrics for defining substantial improvement:

- Cost of work as percentage of market value
- Change to a percentage of an existing building component area (defined area varies)

¹ This work builds upon work that Marin County started for jurisdictions in that territory.

State and Regional Agency Definitions

An overview of the agencies provides a reference as to how substantial improvements are addressed in different contexts. Each agency has a definition of substantial improvement that triggers compliance requirements under their specific authority. Typically, the compliance requirements are aligned with other new construction requirements. For example, the FEMA definition of substantial improvement is used to regulate major additions and other improvements to buildings in the floodplain if the cost of the improvement exceeds 50% of the building’s value (cost of improvement divided by market value of the building is >50%). Under this rule, the floodplain regulations for new construction will apply and the building must meet the post Flood Insurance Rate Map (FIRM) for developments in the floodplain.

Table 1 provides a summary of the definition of substantial improvement used by each of the agencies included in the study.

Table 1. Definitions of Substantial Improvement that Trigger Compliance Requirements

Agency/ Code	Cost of Work (Percent of Market Value)	Existing Floor Area Changed	Regulation
CALGreen, Sec. 301.1.1	N/A	Increase in conditioned area, volume, or size.	Section 301.1.1 . Mandatory provisions of Title 24 Part 11 Chapter 4 shall apply to and/or within the specific area of the addition or alteration.
FEMA (Flood requirements)	>50%	N/A	FEMA- Substantial Improvement
CA Fire Code, Chapter 9	N/A	N/A	Chapter 9- Fire Protection and Life Safety Systems . An automatic residential fire sprinkler system shall not be required for additions or alterations to existing buildings that are not already provided with an automatic residential sprinkler system.
Wildland Urban Interface	N/A	Material specific to scope	Chapter 7A of the California Building Code and Chapter R327 of the California Residential Code
Coastal Zone Permit	N/A	Any change in structure requires permit and associated compliance	Coastal Development Permit from the Coastal Commission
Property Taxes	N/A	New square footage added or home is “like new”	California State Board of Equalization, New Construction
School/ Development Impact Fees	N/A	> 500 sq.ft increase in assessable space*	California Education Code, Section 17620(B)

* “Assessable space,” for this purpose, means all of the square footage within the perimeter of a residential structure, not including any carport, covered or uncovered walkway, garage, overhang, patio, enclosed patio, detached accessory structure, or similar area. The amount of the square footage within the perimeter of a residential structure shall be calculated by the building department of the city or county issuing the building permit, in accordance with the standard practice of that city or county in calculating structural perimeters. [California Government Code, Section 65995\(b0\(1\)\)](#)

Local Jurisdiction Definitions

Most jurisdictions use the state agency definition as a basis from which to further define substantial improvements. Overall, there is variation both between jurisdictions and even within a jurisdiction regarding how different codes define substantial improvements. Despite all jurisdictions adopting the FEMA regulations, which are based on a percentage of the market value, 75% of jurisdictions surveyed utilize an area metric in their definition of substantial improvement. This results in different thresholds defined in different sections of the code.

Table 2. Summary of Jurisdiction Definitions of Substantial Improvement

Agency	Definition		
	Cost of Work as Percent of Market value	Existing Floor Area Changed	Time Period
All Agencies/Jurisdictions (n=28)*	8 (29%)	21 (75%)	12 (43%)

*Two jurisdictions have a definition in each category.

Of those jurisdictions that use the *Cost of work* as the metric, seven out of eight referenced $\geq 50\%$ as the threshold. The majority of the jurisdictions (75%) defined substantial improvements based on a change in the existing floor/wall/roof area. While some variation exists between jurisdictions specifying the threshold at either $\geq 50\%$ or $>50\%$, for our purposes these thresholds have been combined.

The most common threshold for the 21 jurisdictions using the existing area was $>50\%$ of floor area. Five additional agencies also used 50% as the threshold level, but tied the metric to exterior wall area or roof area impacted by the project.

Within the category of *Change in/to existing area*, there were five different definitions referencing different building components:

- Either $>50\%$ or $\geq 50\%$ of the existing floor area
- Greater than or equal to 50% removal or replacement of the linear length of the walls of the building (exterior plus interior) and 50 percent of the roof
- Greater than or equal to 50% of exterior weight-bearing walls removed or demolished
- Greater than or equal to 50% exterior wall framing OR 50% of exterior wall on upper level
- Greater than or equal to 50% exterior wall OR members

Definitions of substantial improvement are applied to various code sections (i.e., fire sprinklers or green building). Substantial improvement can trigger new construction requirements in different codes and are not consistent across all codes. As the application of substantial improvement is defined within each individual code section, the project limited its focus to documenting the existence of different definitions, and did not attempt to categorize the variety of applications.

As projects that are deemed substantial improvements often trigger a significant amount of additional requirements, there is an incentive to avoid the requirements by breaking a large scope of work into smaller projects that are under the threshold. To minimize the potential of permit applicants avoiding requirements triggered by substantial improvements, 43% of jurisdictions in the analysis define a timeframe within which projects will be aggregated for this purpose. The timeframe ranges from 1 to 5 years with 3 years being the

threshold for the majority of the jurisdictions. For this to be a viable enforcement strategy, it requires strong permit tracking.

Local fire sprinkler requirements are an excellent example of the variation in the requirements. Several jurisdictions have amended the California Building Code to be more stringent, applying the requirement to install fire sprinklers to existing buildings under the following circumstances:

- additions within 3 years that exceed 50% of existing floor area,
- when a story is added,
- alterations or repairs that result in the removal of 50% of existing floor area, existing ceiling covering, or existing roof structure, or
- change in occupancy when the proposed occupancy is more hazardous based on fire and life safety evaluation.

Several examples of ordinance language defining the threshold at which “substantial improvements” trigger new construction requirements follow:

[Cloverdale Municipal Code: 15.06.030](#)

New Construction: For the purposes of enforcing the provisions of the California Fire Code, California Building Code, and the California Residential Building Code, any work, addition to, remodel, repair, renovation, or alteration of any building(s) or structure(s) may be defined as “New Construction” when 50 percent or more of the exterior weight bearing walls are removed or demolished.”

[Sunnyvale Ordinance No. 3168-20](#)

Newly Constructed Buildings: For the purposes of All-Electric Building requirements, “newly constructed buildings” shall include the buildings defined in Section 100.1 as well as newly constructed additions and improvements in existing buildings where more than 50 percent of the exterior walls are removed or 50 percent of the wall plate height is raised. The Chief Building Official shall make the final determination regarding the application of this section.

For the purposes of All-Electric Building requirements, “newly constructed buildings” shall not include newly constructed additions and tenant improvements in existing buildings except as defined above.

[Santa Barbara Natural Gas Prohibition Ordinance](#)

NEWLY CONSTRUCTED BUILDING. A new structure that has never before been used or occupied for any purpose or removal and replacement of an existing structure. An existing structure is removed and replaced for purposes of this definition when either (a) it is completely demolished and replaced with a new structure, or (b) it is partially removed and replaced and the removal and replacement involves any two of the following:

1. More than 75% of the structural elements of the roof or roof framing are removed;
2. More than 75% of the structural exterior walls (or vertical supports such as posts or columns when a structure has no walls) of a structure are removed or are no longer a necessary and integral structural component of the overall building;
3. More than 75% of the foundation system is removed, or is no longer a necessary and integral structural component of the overall structure, including, but not limited to: perimeter concrete foundation, retaining walls, post and pier foundations, or similar elements that connect a structure to the ground and transfer gravity loads from the structure to the ground.

The calculation with respect to a wall will be based on a horizontal measurement of the affected portion of the perimeter exterior wall between the structure's footings and the structure's ceiling. The calculation with respect to a roof will be based on the overall square footage of the area affected. The calculation with respect to a foundation system will be based on the lineal feet of the affected foundation system, count of post and piers, and overall square footage of the affected elements in relationship to the system as a whole.

[Burlingame Ordinance No. 1979](#)

Newly Constructed Buildings: For the purposes of All-Electric Building requirements, newly constructed buildings as defined in Section 100.1, shall include newly constructed additions and improvements in existing buildings where more than 50% of the valuation of the existing structure is being remodeled provided the remodel also includes a new heating, cooling and ventilation system. The cost calculations for the additions/improvements shall be calculated utilizing current Burlingame average construction cost as determined by the Chief Building Official.

[Santa Monica Municipal Code](#)

In the proposed [Zero Emission Building Code](#) (as of June 7, 2022): New buildings, a complete demolish and rebuild, or repair, alteration, modification, addition to, or rehabilitation of an existing structure, where a demolition will occur in accordance with [SMMC 9.25.030 \(A.1\) or \(A.2\)](#).

Demolition:

1. At any time over a 5-year period, more than 50 percent of the exterior wall elements are removed, or are no longer a necessary and integral structural component of the overall building.
 - a. Exterior wall elements include, but are not limited to, the subsurface or non-decorative cladding necessary for structural support, columns, studs, cripple walls, or similar vertical load-bearing elements and associated footings, windows, or doors.
 - b. Existing exterior walls supporting a roof that is being modified to accommodate a new floor level or roofline shall continue to be considered necessary and integral structural components, provided the existing wall elements remain in place and provide necessary structural support to the building upon completion of the roofline modifications.
 - c. The calculation for determining whether a structure has been demolished pursuant to this Section shall be based on a horizontal measurement of the perimeter exterior wall removed between the structure's footings and the ceiling of each story, as defined in Chapter [8.12](#) of the Municipal Code.
2. In commercial or industrial buildings not principally supported by exterior bearing walls, more than 50 percent of the principal support structure including columns, structural frames, and other similar primary structural elements is removed or is no longer a necessary and integral structural component of the overall building.