



**City of Carmel-by-the-Sea  
Building Safety Division  
Standard Operating Guidance**

## **17-11 Determining Fire Sprinkler Retrofit Requirements**

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### **Background**

The City of Carmel-By-The-Sea and State of California have adopted regulations related to the installation of fire sprinkler systems in existing buildings undergoing remodeling or alterations. Because retrofit of sprinkler protection in existing buildings can be expensive, it's important that applicant's are aware of the requirements relative to their project before the building permits are issued. This SOG provides guidance on determining when retrofit of residential fire sprinkler systems is required.

### **Citations**

Carmel Municipal Code (CMC), Title 8.32  
Carmel Municipal Code, Title 15.08.130

### **Guidance**

CMC 8.32.100 (3) states that the construction and design provisions of this code shall apply to:  
“(5) Existing structures to which additions, alterations or repairs are made that involve the addition, removal or replacement of fifty percent (50%) or greater of the linear length of the walls of the existing building (exterior plus interior) within a five-year period.”

The Chapter continues with: “(24) 903.2.8 Group R. An automatic sprinkler system installed in accordance with Section 903.3 shall be provided in all buildings with a Group R fire area, including, but not limited to, one- and two-family dwellings, townhomes, and manufactured homes and mobile homes located outside of licensed mobile home parks hereafter constructed, moved into, or relocated within the jurisdiction, including all additions to buildings already equipped with automatic fire sprinkler systems.”

To verify the sprinkler requirements for remodel or addition projects applicants shall submit with their building permit application a calculation of the wall lengths as described in 8.32.100 in the form provided in Figure 1.

Applicants are required to provide the information in Figure 1 above on the cover sheet of their plans when the project involves ANY addition, removal or replacement of walls.

## City of Carmel-by-the-Sea Fire Sprinkler Calculation Form

This form shall be submitted for all projects proposing structural modifications and shall be accompanied by scalable plans that clearly show all existing walls as well as all walls being added, removed, or modified within the past 5 years, including those proposed for the project under review.

Step	Action	Linear Feet
1	Determine the total length of all interior and exterior walls of the original existing building (shared walls may only be measured once).	
2	Determine the total length of all walls to be replaced during the remodel of the building (removed drywall, wall covering, exterior siding).	
3	Determine the total length of all walls that are proposed to be removed and not replaced during the remodeling of the building.	
4	Determine the total length of all walls (shared walls measured once) from an addition that have not been already counted in Steps 2 and 3.	
5	Add results of Steps 2,3 and 4	
6	Divide total of Step 5 by total of Step 1.	
7	If step 6 is 50% or more, or if the cumulative total of projects within the past 5 years is 50% or more, automatic fire sprinklers are required to be installed.	

**I attest that the measurements and calculations stated above for this project are true and correct.**

**Completed By:**

Printed Name: \_\_\_\_\_ Date: \_\_\_\_\_

Signature: \_\_\_\_\_ Phone: \_\_\_\_\_ Email: \_\_\_\_\_

Representing Firm: \_\_\_\_\_ Certification/License #: \_\_\_\_\_

**Figure 1**

**Fire Sprinkler Calculation Sample**

Exterior of the building

10 ft.

3ft

5ft

10 ft.

5ft.

STEP	ACTION	LINEAR FEET
1	Determine the total length of all walls interior/exterior (shared walls can only be measured once) of the original <b>existing building</b> .	35 ft.
2	Determine the total length of all walls to be replaced during the remodel of the building. (removed drywall/wall covering/exterior siding)	8 ft
3	Determine the total length of all walls that are proposed to be removed and not replaced during the remodel of the building.	15 ft
4	Determine the total length of all walls (shared walls measured once) from an <b>addition</b> that have not been already counted in Steps 2 and 3. <span style="color: green;">New linear feet added to the project</span>	0 ft
5	Add results of Steps 2, 3, and 4.	
6	Divide total of Step 5 by total of Step 1.	
7	If step 5 is 50% or more then automatic fire sprinklers are required for this project. Or if the cumulative total of projects within the 5 year period is 50% or more automatic fire sprinklers are required for this project.	