

What effect does exterior wall construction or column protection have on insurance rates or loss costs?

The Specific Commercial Property Evaluation Schedule (SCPES) classifies buildings into six classifications as follows:

Construction Class	Type	Description
6	Fire Resistive	2-hour fire resistive walls, floors and roof
5	Modified Fire Resistive	1-hour fire resistive walls, floors and roof
4	Masonry Noncombustible	1-hour fire resistive walls, noncombustible or slow burning floors and roof
3	Noncombustible	Noncombustible or slow burning walls, floors and roof
2	Joisted Masonry	1-hour fire resistive walls, combustible floors and roof
1	Frame	Combustible walls, floors and roof or noncombustible or slow burning walls with combustible floors and roof

In general, the fire insurance rates or loss costs produced by the SCPES increase as you go from Class 6 to Class 1. Thus, it can be seen that the exterior walls enter into and play a big part in the classification of the building.

In general, a metal building would be expected to be in construction Class 3, but various treatments or construction methods used for the exterior walls can result in the wall being treated as combustible and thus the building being classified as construction Class 1. For example, all of the following exterior metal walls would be classified combustible:

Metal walls sheathed on interior or exterior with wood.

Composite assemblies of metal wall panels with a combustible core (having a flame spread higher than 25).

Composite assemblies of metal wall panels with unprotected and unlisted foam plastic cores (regardless of flame spread). NOTE: The foam plastic materials may be rated as Slow Burning if they have a flame spread of 25 or less and are either covered with an acceptable thermal barrier, such as ½ inch gypsum board or if the composite assembly is listed as having passed one of the acceptable wall or ceiling panel tests, thereby rated construction Class 3.

On the other hand, if the structural exterior wall supports are a minimum of one-hour fire resistive, an improved rating or loss costing can normally be obtained even though the construction class will not be modified from Class 3.

It is possible to erect exterior walls with one- or two- hour fire resistive rating, as described in Bulletin No. 16. With a rated exterior wall (either one- or two-hours) the building can be classified construction Class 4 provided you have a noncombustible or slow burning roof or construction Class 5 if you have a one-hour rated roof system described in Bulletin No. 17.

To illustrate the effect of exterior wall construction, the following are the various different loss costs produced for the same basic building varying exterior wall construction:

Exterior Wall	CFRS Class	Building Loss Cost	Contents Loss Cost
Frame	1	1.67	1.73
Concrete Block (Wood roof)	2	1.11	1.602
Metal Building system (glass fiber insulation or composite foam core assemblies meeting Slow Burning requirements)	3	1.08	1.40
Concrete block (metal roof)	4	0.364	0.67
Metal Building system (1- or 2-hour fire resistive wall construction)	4	0.39	0.692
Metal Building system (1- or 2-hour fire resistive wall construction and 1 -hour fire resistive roof construction)	5	0.21	0.484
Reinforced concrete (walls and roof)	6	0.10	0.375
Metal Building system (unprotected or unlisted composite foam core assemblies)	1	1.55	1.605

This example, of course, uses one particular schedule method, one set of conditions and one loss costing jurisdiction. However, similar comparisons should apply using other rating methods and in other jurisdictions. Several points are brought out by the example.

- (1) A metal fire resistive rated wall can obtain a competitive rating or loss cost with a concrete block wall provided both have a noncombustible or slow burning roof and superior rating if the metal building system roof is also fire resistive rated.
- (2) Unprotected or unlisted foam cores in metal panels produce rates or loss costs at the same relative level as frame walls.
- (3) Protected or listed foam cores in metal panels produce rates or loss costs at the same relative levels as metal walls with glass fiber insulation.

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