INSURANCE RATE COMPARISONS, WAREHOUSE[1]

This bulletin explores the differential cost of an annual insurance premium based on the type of construction of the structure.

There are many factors that go into deciding what type of structural system is best for a new building. Among these is the owner's cost of insurance. Insurance costs vary from location to location based on the local hazards and codes, by the use the building will serve, and by the structural system chosen. This bulletin explores the differential cost of an annual insurance premium based on the type of construction of the structure.

In early 2021, MBMA conducted a study to compare the rates to insure two nearly identical buildings for a warehouse; the first was a metal building system (noncombustible ISO Construction Class 3) and the second was a wood structural frame (combustible ISO Construction Class 1).

The hypothetical buildings were presented to an insurance company to obtain the cost to insure each structure. The occupancy (use), location, size and floor plans are identical (Figure 1).

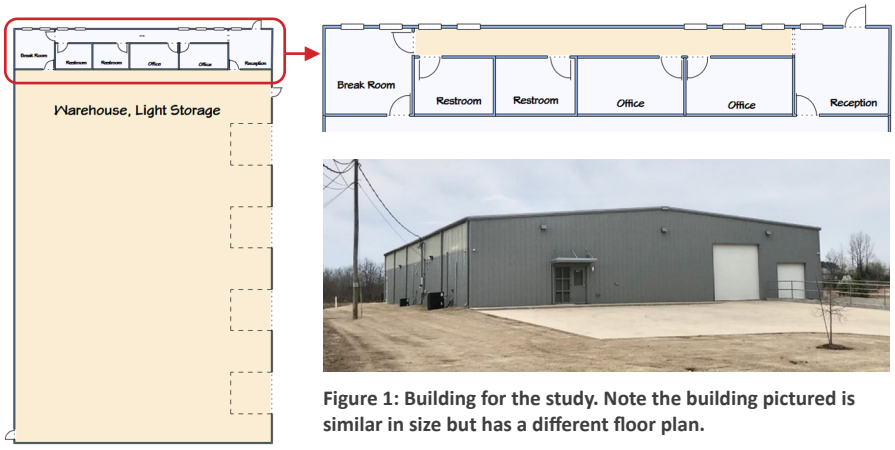

Figure 1: Building for the study. Note the building pictured is similar in size but has a different floor plan.

The subject building was configured as a 9,000-square-foot warehouse, 75 feet wide and 120 feet long with a 20-foot exterior wall height. The front 12 feet of the building contained reception, offices, restrooms and a break room. The hypothetical building was located in an eastern Colorado city to avoid hurricane, wildfire and earthquake risks, which can significantly impact insurance rates.

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[1]The Metal Building Manufacturers Association (MBMA) provides these insurance bulletins as informational guides. The information contained in these bulletins is general in nature and is not intended to serve as legal advice. Readers are advised to consult with their own counsel and/or insurance broker on matters specific to them.

Insurance Costs

Any rates used herein are for comparison purposes only and should not be treated as actual rates that might apply within any rating jurisdiction.

The rates quoted are reflective of a snapshot in time (first quarter 2021), at a specific location, and from a single insurance company.

Insurance rates are periodically adjusted to reflect the actual cost of material and labor necessary to repair or replace a damaged structure.

Premiums charged may increase if additional risks are discovered or hazards increase (e.g., the use of the building changes). They may decrease as well if, for example, the rating of the fire department improves.

Rates may also be adjusted for strategic business reasons and are influenced by the business goals of the insurer. Insurers may set rates somewhat lower for regular customers or types of buildings that they have decided to pursue as a matter of business strategy.

It is recommended that prior to construction an insurance agent or broker be contacted regarding prevailing rates for your specific project and location. Estimates for insurance costs can be provided during the initial design phase of construction.

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It should come as no surprise that flammable and combustible materials present a higher hazard and thus are more expensive to insure, as explained in **MBMA INSURANCE BULLETIN NO. 9** - **"The Impact of Wall Construction and Column Protection on Insurance Rates."** For an explanation on how location, occupancy and building contents affect insurance rates, refer to MBMA Insurance Bulletin Nos. 3, 7 and 8, respectively.

Insurers consider this building Warehouse, Light Storage while the International Building Code (IBC) considers its occupancy classification and use as Moderate-hazard storage, Group S-1.

The insurance policy requested for the comparison study was a Business Owners Policy, also known as a BOP.

Basic BOPs include:

- property insurance for buildings and contents,
- business interruption insurance, and
- liability protection.

When comparing metal building system insurance rates with the rates for other construction types, it is important to make sure that all other conditions are equal and that the same type of insurance policy and coverage limits have been selected.

Two comparison scenarios were considered in the study, one for the building without and one with an automatic fire protection system, such as sprinklers (Table 1).

Table 1: Comparison of Annual Insurance Premiums by Building Construction Type and the Presence or Absence of an Automatic Fire Protection System

	Metal Building System ISO Construction Class 3	Wood Structural Frame ISO Construction Class 1	Metal Building System Annual Insurance Savings
	Annual Insurance Premium[2]		
Non-sprinklered	$4,341.00	$5,125.00	$784.00
Sprinklered	$3,744.00	$4,378.00	$634.00

[2]Actual estimated rate quoted first quarter 2021.

The cost to insure a structure is based on the cost to rebuild it should it be destroyed. The first step in determining the premium an insurance company will charge is to determine the insurance valuation (IV) of the building, the cost to rebuild. This study showed that the insurance company calculated a slightly lower cost (1.5%) to rebuild the non-sprinklered wood structural frame building. Given that the reconstruction costs are so similar, the difference in the annual premium can be directly tied to the enhanced performance the insurer expects from the metal building system structure.

This study shows that metal building system insurance rates can be significantly lower than the rates for buildings with a wood structural frame under both scenarios: sprinklered and non-sprinklered. The savings in the annual cost of insurance is about 15% for metal building systems with and without sprinklers based on the estimate provided by the insurer in this study.

By selecting a structure using a metal building system (non-sprinklered), the owner would save $7,840 over the first 10 years of use (assuming no annual increase in premium). That's nearly two years' worth of free insurance coverage versus a comparable wood structural frame building.

ISO (formerly the Insurance Services Office) is an insurance advisory organization that provides statistical and actuarial information to insurance companies. ISO is a wholly-owned subsidiary of Verisk.

Insurance rates may be adjusted for strategic business reasons and are influenced by the business goals of the insurer, not solely by the characteristics of the building and the relevant risks. For example, insurers may set rates somewhat lower for regular customers or types of buildings that they have decided to pursue as a matter of business strategy. Any rates used herein are for comparison purposes only and should not be treated as actual rates that might apply within any rating jurisdiction.

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