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Understanding Commercial Property Underwriting: 'COPE' in ALL its Glory!

Christopher J. Boggs, CPCU, ARM, ALCM, LPCS, AAI, APA, CWCA, CRIS, AINS

Executive Director – Big "I" Virtual University

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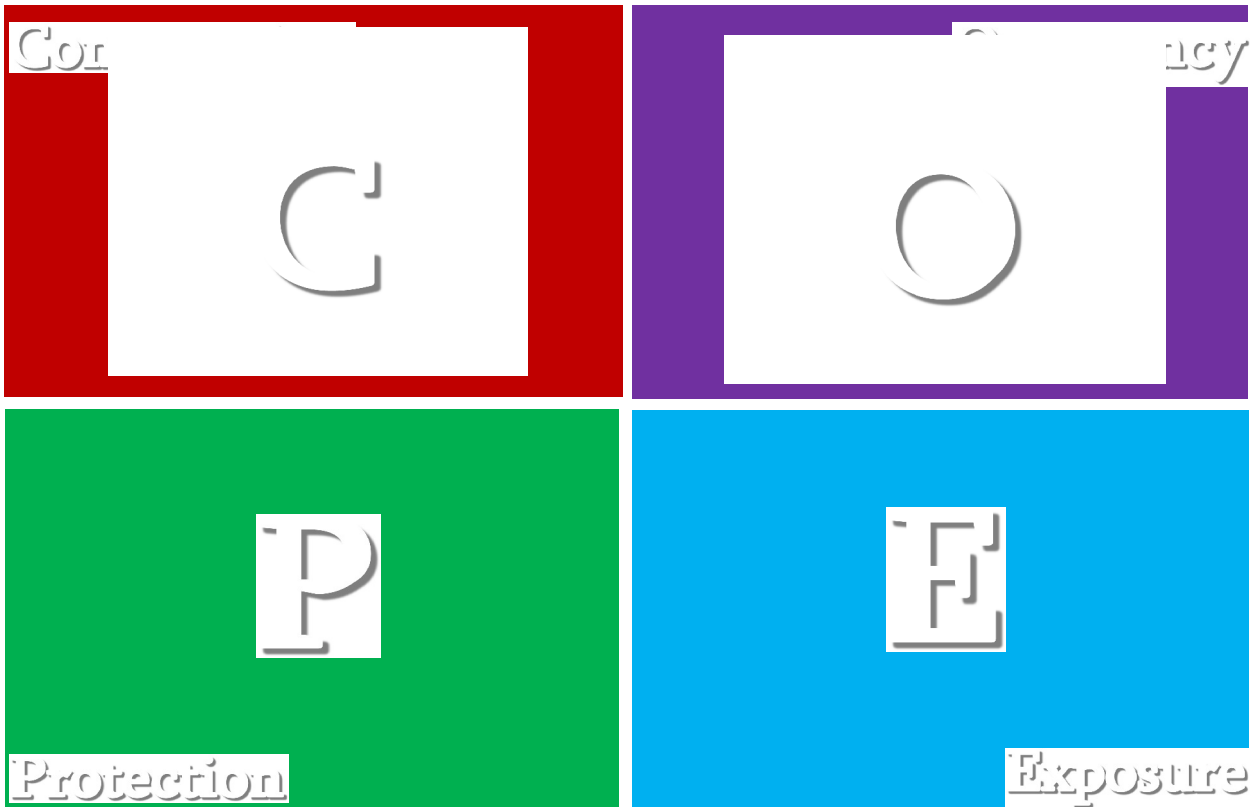

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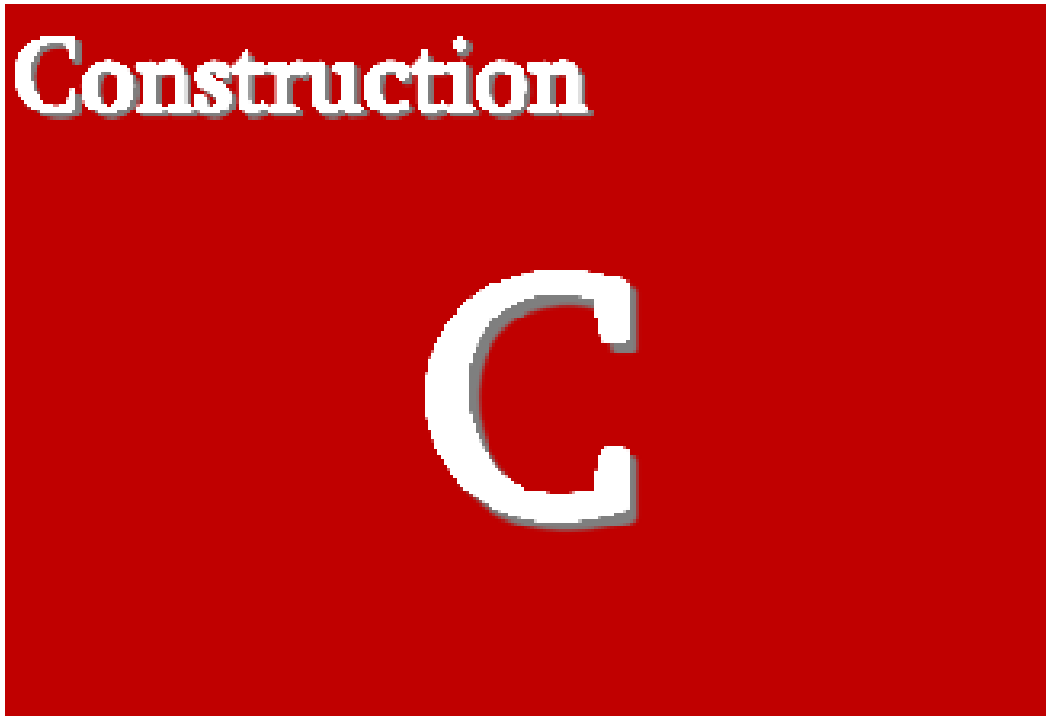
COPE Underwriting

The modern property policy can be traced back to just after the Great Fire of London in 1666

Property underwriters still use the same information to evaluate a risk:

- Construction (C)
- Occupancy (O)
- Protection (P)
- Exposure (E)


Construction
C

“C”onstruction

Three sub-parts of Construction:

- Building Materials
- Square Footage
- Age

Building Materials

ISO bases a building's construction class on the materials used.

- Combustibility
- Damageability

"Major Structural Features":

- Exterior, load-bearing walls
- Roof
- Floors

“Primary” Structural Feature - Walls

Exterior, load-bearing wall types:

- Masonry
- Fire resistive/modified fire resistive
- Non-masonry / non-fire resistive
- Combustible (i.e. wood)

“Secondary” Structural Feature – Roof/ Floors

Roof and floor types:

- Concrete
- Fire resistive/modified fire resistive
- Non-combustible/slow burning
- Wood or materials not included above

Developing the Construction Class

The lower the number, the worse the classification:

- “1” – Frame
- “2” – Joisted-Masonry
- “3” – Non-Combustible
- “4” – Masonry Non-Combustible
- “5” – Modified Fire Resistive
- “6” – Fire Resistive

Four Rules of Classification

1. If the exterior, load-bearing walls are “combustible” (wood or a combustible assemblage), the entire building is rated as construction class “1” regardless of the roof material.

2. If rule “1” does not apply and if the exterior, load-bearing wall is non-combustible or “slow burning,” the structure’s construction class is based on the roof and floor construction materials – but in no case can the construction class be better than the classification assigned to the walls.

Four Rules of Classification - Continued

3. If the load-bearing walls are masonry, fire resistive, or modified fire resistive, the construction becomes a function of the floor/roof materials.

4. “Major structural features” are often an assembly of several parts. If the walls are anything other than masonry, modified, or fire resistive material, the entire assemblage is classed using the most combustible or susceptible member of the assemblage.

Assigning the Correct Construction Class

Wall Material	Floor/Roof Material	Construction Class	Code
Wood/Combustible	Wood/Combustible[1]	Frame	1
Non-Comb./Metal	Wood/Combustible[1]	Frame	1
Wood/Combustible	Non-Comb./Slow Burning[3]	Frame	1
Wood/Combustible	Concrete, Modified Fire Resistive or Fire Resistive	Frame	1
Masonry[2]	Wood/Combustible[1]	Joisted Masonry	2
Modified Fire Resistive	Wood/Combustible[1]	Joisted Masonry	2
Fire Resistive	Wood/Combustible[1]	Joisted Masonry	2
Non-Comb./Metal	Non-Comb./Slow Burning	Non-Combustible	3
Non-Comb./Metal	Concrete, Modified Fire Resistive or Fire Resistive	Non-Combustible	3
Masonry	Non-Comb./Slow Burning	Masonry Non-Comb.	4
Modified Fire Resistive	Non-Comb./Slow Burning	Masonry Non-Comb.	4
Fire Resistive	Non-Comb./Slow Burning	Masonry Non-Comb.	4
Masonry[4]	Concrete, Modified Fire Resistive or Fire Resistive	Modified Fire Resistive[4]	5
Modified Fire Resistive	Concrete, Modified Fire Resistive or Fire Resistive	Modified Fire Resistive	5
Fire Resistive[6]	Modified Fire Resistive	Modified Fire Resistive	5
Masonry[5]	Concrete or Fire Resistive	Fire Resistive	6
Fire Resistive[6]	Concrete or Fire Resistive	Fire Resistive	6

[1]Includes a "Combustible Assembly"

[2]One layer of non-load-bearing bricks covering metal studs is not considered a masonry wall. It is a non-combustible wall with a brick façade.

[3]This includes Built-Up Tar and Gravel Roof

[4]If the masonry does not meet the requirements of footnote "5" but is at least 4" thick, then the structure is classed as modified fire resistive.

[5]To qualify, the wall must be either: 1) **solid** masonry at least 4" thick; 2) hollow masonry at least 12" thick; or 3) hollow masonry between 8" and 12" thick with a listed fire resistance rating of at least 2 hours.

[6]"Fire Resistive" is defined as a non-combustible material or assemblies with a fire resistance rating of at least 2 hours. Can be accomplished based on the material or by the application of a sprayed on cementitious mixture covering all exposed metal. If between 1 and 2 hours fire resistance rating, the member is considered "modified fire resistive."

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Mixed Construction: What Happens Now

- The walls don't match!
- The roof and floors use different materials!

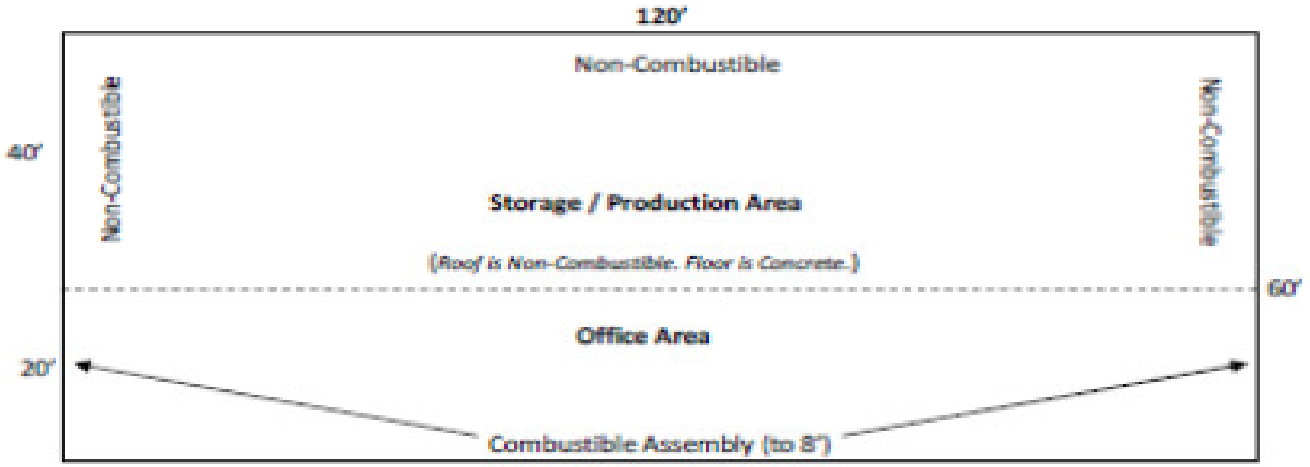
The "major structural feature" is assigned the LOWER classification…

Unless…

66 2/3% of the feature is of the superior class

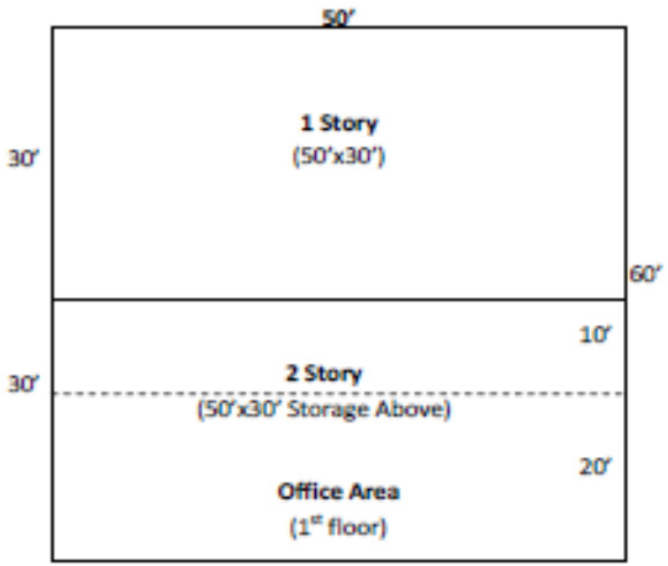
Mixed Walls (Combustible Assembly)

Total Exterior Wall Area (360' perimeter x 10 feet tall)	3,600 square feet
Combustible Assembly Wall Area (160' exterior perimeter x 8 feet high)	1,280 square feet (35.6%)
Non-Combustible Wall Area (160 ' exterior perimeter x 2 feet high) + (200 exterior perimeter x 10 feet high)	2,320 square feet (64.4%)



Floor and Roof

Total Floor and Roof Area (50′ x 60′)+(50′ x 30′)	4,500 square feet
Combustible Floor Area (50′ x 30′)	1,500 square feet (33.33%)
Non-Combustible Roof Area (50′ x 60′)	3,000 square feet (66.67%)



“Ancillary” Construction Features

- Don’t change the construction class.
- Change the characteristics.

  - ❑A large amount of combustible interior walls (including assemblies)
  - ❑Combustible flooring (bowling alleys)
  - ❑Combustible exterior attachments

Square Footage Matters

Directly impacts the difference between:

- Maximum Possible Loss (MPL)
- Probable Maximum Loss (PML)

Requires a review of the possibility of a total or constructive total loss

Affects the importance of the “Protection” (“P”) features in place

Age is More Than a State of Mind

- **Have the systems been maintained and updated as necessary?**
- **When were the last updates?**
- **What was the extent of those updates?**
- **Who did the updates?**

Ordinance or Law (Building Code) issues!


Occupancy
O

“O”ccupancy

Occupancy” has two parts:

- What the insured does
- How the insured manages the “hazards” associated with what they do (known as the “**Hazards of Occupancy**”)

What is a “Hazard”:

What They DO!

Two primary occupancy classifications:

Each class of insured presents its own “basic” risk of property loss.

The greater the basic risk of loss, the more closely the underwriter analyzes the operations/occupancy.

HOW They DO What They DO!

Similar insureds may be dissimilar in their operations.

Each insured presents its own "**hazards of occupancy.**"

“Hazards of Occupancy”

All three share the same construction classification, protection class, square footage, general methods of doing business and experience. The only difference is how flammable/ combustible liquids are stored.

Hazards of Occupancy - Again

Both share the same construction classification, protection class, square footage, general methods of doing business and experience. The only difference is the maintenance of the hood and duct system.

Other Hazards to Consider

- Housekeeping
- The amount of combustible materials within the building
- The condition of major systems (heating and wiring)
- Dust-collection systems for woodworking and like operations
- Use of spark-reduction/arresting equipment where necessary
- The amount and storage of any other potentially hazardous materials
- Cooking equipment protection
- Portable Heating Systems
- Smoking control in and around the building

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“P”rotection

Protection features LESSEN the amount of property damage!

Classed as:

- Public or Private
- Active or Passive

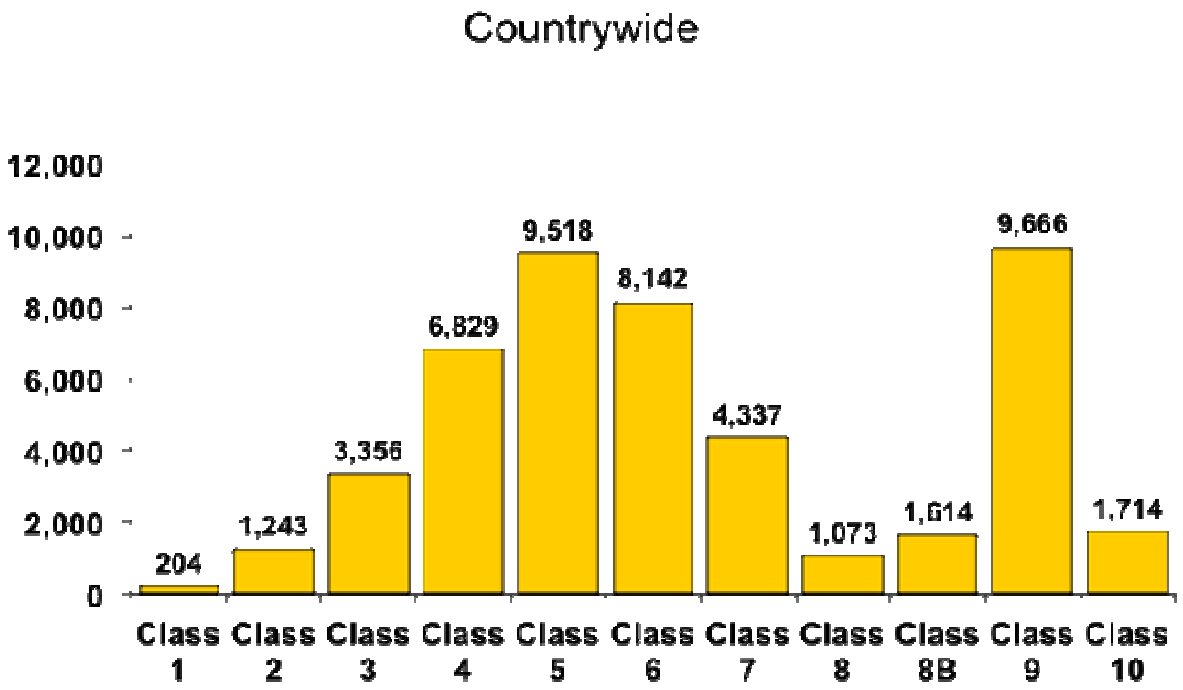
Public Fire Protection

- Fire departments are the only protection feature classified as "public."
- They are funded by local governments to protect a somewhat large area.
- Each fire department is inspected and assigned a grade – its public protection class (PPC).

Public Protection Class (PPC)

- Most fire departments are inspected and graded by ISO
- Each department is assigned a number grade ranging between 1 and 10 (and now 10W).
- The lower the number, the more effective ISO (or other jurisdictional authority) considers the department.
- Public protection grades are based on factors such as: 1) department response times, 2) water supply, 3) personnel training, 4) equipment, communications, and 5) personnel (paid versus volunteer).

Public Protection Breakdown



Split Classifications

- When a fire department is assigned two PPCs.
- A function of the structures distance from a creditable water supply:
  - Hydrant  
  - Draw point  

- Historically: 6/9 or 5/8B
- Changed in 2013:
  - X or Y

Private Protection Features

- Sprinkler Systems (Active)
- Alarm Systems (Active)
- Fire Extinguishers (Passive)
- Fire Doors / Fire Walls (Passive)

"Active": Human presence is not required for activation. However, human involvement is ultimately necessary.

"Passive": Human presence is required or it is "just there." Passive features take no action on their own.

Sprinkler Systems – Good to Have If…

- Can the system meet the demands of the current operation?
- What type of system?
- What is the system's condition?
- Is the water supply adequate?
- How much unprotected areas?
- Adequate clearance below the heads?
- Any high-rack storage?
- Has the system been properly tested?

Alarm Systems – Only As Good as the Support

- Type of system?
- Who receives the alarm?
- What type of external communication is used?
- What protection exists if the power is off?
- Are there any unprotected areas?
- Are there any special features?
- Is the system installed properly?

Fire Extinguishers – Sitting There Since 1818

- Are there an appropriate number for the building?
- Are they properly located and at eye level?
- Are they in the path of natural exit?
- Are they the correct size?
- Are the fire extinguishers the correct type:
  - Class A – Paper, wood, etc. (anything that produces “A”sh)
  - Class B – Flammable or combustible liquids (anything that “B”oils)
  - Class C – Electrical fires (anything that has a “C”harge)
  - Class D – Combustible metals such as shaved magnesium
  - Class K – Cooking oils and fats (“K”itchen)
- Are the extinguishers maintained properly?

Fire Walls and Fire Doors

- Remember, the size of a building directly affects the difference between its MPL and PML.
- To lower the PML, divide the building into "fire-containing compartments"
- Compare the benefits of "Compartmentalization" on the PML:
  - *Location 1*: A 15,000 square foot, one story building open from end to end; or
  - *Location 2*: A 15,000 square foot, one story building divided into three equal 5,000 square foot sections by fire walls and fire doors.

Fire Walls and Fire Doors

Fire WALLS must meet certain minimum standards:

- Continuous masonry wall
- At least 6” to 8” thick (based on the masonry material used)
- Must come into direct contact with fire resistive, masonry or non-combustible roof or walls
- Must pierce “slow burning,” or combustible (including assemblies) roof or walls
- HVAC ducts must be protected by at least ONE 1½ hour damper
- Any openings must be protected by proper “fire doors”

What is a “Proper Fire Door”

- Self-closing
- Listed for 3 hour protection (Class “A” by UL) or have a sprinkler curtain
- Cannot be blocked open

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“E”xposures

What external hazards directly or indirectly alter or affect the underwriting characteristics of the building?

- Located near a high-hazard operation;
- A geographically-specific hazard;
- Recent building code changes.

A BAD Exposure

Use COPE Knowledge to Your Advantage

- Allows better planning when gathering the property information.
- Knowing what to provide and why to provide specific information makes the underwriting process smoother and, hopefully, quicker
- You can better assist clients when they are planning upgrades to current structures or constructing new buildings

You Will Receive:

- A copy of the Construction Class sheet

Chris Boggs,

CPCU, ARM, ALCM, LPCS, AAI, APA, CWCA, CRIS, AINS

Executive Director, Big “I” Virtual University

Chris.boggs@iiaba.net

703-706-5380