



#### **COMMENTARY PAPER**

# Is insuring a casino a safe bet?

#### From dance halls to gaming rooms

When most people hear the word 'casino', they associate it with gambling inside a building. We envision an entertainment venue with large crowds and games of luck. Nowadays, however, many casinos also operate online, so the term has evolved.

The origin of the word casino paints a diverse picture. Casino, derived from 'casa' in Italian, is a word which refers to a small country house, villa, or social club. How much gambling, if any, went on in these houses is anyone's guess. Casinos were entertainment centers used for music and dancing. By the second half of the 19th century, casinos became known as elaborate facilities that housed a collection of gambling rooms.

Within the United States, 44 states offer some form of gambling. Casinos can be land-based or found on large vessels and riverboats. Some riverboats do not actually move; they are stationary buildings staged on water blocks because they were never designed to float. These "floating" buildings are a way to bypass local opposition to legalized gambling.



#### Common gaming establishment equipment

Most casinos are not just a gaming floor. They are part of an elaborate experience. Many of these buildings comprise of a hotel with one or more restaurants, retail stores and performance venues. The larger establishments, including those found in Las Vegas, also incorporate grand stage productions.

#### Equipment typically found in the hotel (not an exhaustive list)

 Heating ventilation and air conditioning (HVAC), boilers, electrical switchgear, elevators, fire alarm controls and suppression systems, pumps, point-of-sale terminals, laundry, emergency generators, transformers, computer systems and motors.

### Equipment typically found in the back and front of the house kitchen

- Food preparations stations, exhaust systems, storage, refrigeration, freezers, ice machines, mixers, dishwashers, ovens, warming cabinets, deep fryers, ranges, grills and broilers, some of which are protected (hopefully) with automatic chemical fire suppression systems.
- Hot buffet and refrigerated service lines.

#### Gaming and security-related equipment

- Slot machines, roulette wheels, video poker, lottery terminals, card and dice gaming tables, audio, video, lighting, signage, televisions, automatic teller machines (ATMs) and player tracking systems.
- Closed circuit television (CCTV) cameras, server computers, facial recognition biometric systems, alarm systems and radio frequency identification (RFID) transmitters that help track the location of each chip throughout the casino.

#### Loss scenarios

#### 1980 Las Vegas, NV hotel & casino

One of the most devastating hotel fires in US history happened on the Las Vegas strip. The fire originated in an unoccupied restaurant on the casino's first floor. The fire was caused by an electrical fault associated with a refrigerated pastry display case. According to the fire department report, the restaurant that housed the display case, was not sprinklered. Heat and smoke detectors were not present. In fact, that restaurant was not the only area that was not sprinklered. Protected areas included the arcade level, major portions of the casino level and part of the 26th floor. Protected areas on the casino level included convention areas, showrooms, and some restaurants. The large casino hall and the high-rise tower were not sprinklered. 85 people were killed and more than 700 were injured during this unfortunate event. Building and life safety committees rewrote fire safety codes — protecting high-rise hotels with sprinkler and alarm systems — after this blaze.



#### 2003 Paradise, NV hotel & casino

A fire was sparked by a lit cigarette in the laundry chute of a hotel. The fire department spokesman stated that "incidents of cigarettes smoldering in linens are more typically accidental than deliberate." The fire caused more water exposure than flame or smoke damage.

#### 2008 Las Vegas, NV hotel & casino

Contractors who did not have proper welding permits accidentally sparked a hotel rooftop fire with molten metal from a hand-held cutting torch. The cost of repairs and lost business were estimated at \$100M.

#### 2018 Larchwood, IA casino

Extremely cold temperatures led to fire sprinkler pipes failing. Water poured down from the third floor and exposed 18 rooms.

#### 2019 Temecula, CA resort

A fire broke out in the elevator shaft on the first floor of a resort. It was determined that the fire erupted as a contractor was performing maintenance activities. The contractor was the only person inside the shaft when the fire occurred. Neither the alarm nor sprinklers were activated during the fire. According to the resort spokesperson, "state codes do not deem it necessary to put sprinklers in elevator shafts. The shafts are built to act as a containment in case a fire breaks out inside them."

#### 2019 Everett, MA casino

A casino was evacuated due to a burst pipe after being open for only three months. Water leaked from above the ceiling onto the gaming floor below.

#### 2021 Des Plaines, IL casino

A fire broke out in the kitchen cooking ventilation system. Damage was isolated to the kitchen hood and ventilation system and a portion of the roof. Slight water exposure was also noted.



#### 2021 Las Vegas, NV hotel & casino

A fire was caused by a guest using candles near an open sliding door in a hotel room.

#### 2022 Friant, CA casino

While a contractor was installing kitchen equipment, an explosion at an under-construction casino occurred. While the investigation is ongoing, investigators suspect that the explosion was gas related. The sprinkler system prevented the fire from spreading to other parts of the building. However, the building was inundated with thousands of gallons of water.

#### 2022 Lincoln, RI casino

A mechanical/electrical issue within a slot machine caused a casino to catch fire.

#### Is insuring a casino a safe bet?

The short answer is yes — otherwise there would be no interest in underwriting these risks — but let's dive into the details. Gamers try to figure out how to increase the odds in their favor on a daily basis, and some people are not as honest as others when trying to achieve their goal. Therefore, casinos invest heavily in loss control.

As a business that typically operates 24 hours a day, casinos employ the latest security surveillance with operators that are always watching. This serves to both catch cheats and to ensure recorded footage of accidents. Slips, trips, and falls are very common in casinos. In addition to security surveillance, staff members, in most departments, are also present around the clock. This translates to someone who can act quickly in the event a loss occurs. Limiting losses is basically part of the casino's culture because losses adversely affect profits.



## Common causes of damage and equipment vulnerabilities

Since larger casinos are typically open around the clock, they are basically an underwriter's dream. As Andy Garcia playing the role of Terry Benedict said in Ocean's 11, "In my hotel, there's always somebody watching." Even though someone may always be watching, casinos experience property losses no different than every other commercial property.

#### Improper installation

The unfortunate large fire on the Las Vegas strip in 1980 is an example of improper equipment installation. The fire was ultimately caused by an electrical ground fault. A ground fault occurs when contact between an energized conductor and ground inadvertently takes place. The refrigerated display case was installed after the hotel was originally constructed. Unlike self-contained display cases whereby the cooling units are mounted at the bottom of the case, the unit at the restaurant functioned like a central air conditioning system.

The evaporator coil, otherwise known as the inside unit, was connected with a pair of copper refrigerant lines to a condensing unit located outside the building. The copper lines were run through the same wall soffit as existing electrical conduit and in physical contact with the conduit. The inside unit had a fan that was not properly secured. Vibrations ensued while the fan was operating. This meant that the copper lines within the soffit vibrated as well. As the copper lines vibrated, they rubbed against the electrical conduit. Galvanic corrosion or "dissimilar metal corrosion" occurred when the copper refrigerant lines made physical contact with the aluminum electrical conduit. Overtime this caused the conduit to erode.



Our recipe for disaster now included galvanic corrosion, vibration, jagged edges and stretched electrical wiring as a result of poor workmanship during installation. Eventually this caused the electrical wires (inside the conduit) to chafe away portions of their plastic protective insulation. The conduit was rendered un-grounded (there was no separate ground wire because the metal conduit itself was designed to function as the ground. The disintegration of the conduit rendered the system un-grounded). Bare electrical conductors inside the un-grounded metal conduit glowed red-hot and began arcing. This is what caused the fire to ignite. Had the refrigerated display case been inspected/maintained regularly, technicians would have noted and corrected the ungrounded conduit, or observed and fastened the improperly installed fan.

#### Facility maintenance/installation

In the 2019 Temecula, CA resort loss noted above, fire erupted as a worker was performing maintenance activities in the elevator shaft. Repair personnel were also responsible for the rooftop fire at the 2008 Las Vegas, NV hotel as a result of welding activities. At the 2022 Friant, CA casino, a gas related explosion occurred while service personnel were installing kitchen equipment.

It could be construed that performing some maintenance activities is quite risky. While losses do occur as a result of repair/maintenance mishaps, not performing maintenance is far riskier and for some systems would be in violation of published code.

#### **Equipment failure**

Two hotels located several blocks from the White House were evacuated following an electrical fire that broke out in an underground transformer. In Omaha, an explosion occurred in a utility vault next to a hotel, causing a fire. In Chattanooga, a hotel was evacuated because of a leaking transformer that started a fire. In Spokane, a fire in an underground transformer not only caused an outage for a hotel, but an entire eight-block area on Christmas Eve. There are countless examples of similar losses related to transformer fires. The causes of transformer fires can be related to design defects, deterioration of insulation around the internal windings, voltage surges, lightning strikes and improper maintenance.

Utility transformers are generally housed outside of the hotel. While transformer losses seem to happen quite often — causing abrupt loss of power, which translates to business interruption — there are other incidents that would cause more direct damage. Cooking equipment fires, faulty sprinkler systems, electrical and lighting, laundry equipment as well as faulty heating and cooling equipment.



#### Fire sprinkler systems

We discussed above that building and life safety committees rewrote fire safety code — protecting high-rise hotels with sprinkler and alarm systems — after the devastating 1980 blaze on the Las Vegas strip. The revised codes required casinos and hotels to install automatic fire sprinkler protection. Another requirement was to incorporate fire alarm/voice communication systems. Lastly, casinos now have dedicated fire protection staff with radio communications to the casino's fire control center.

There is no question that incorporating a fire sprinkler system saves lives and may also minimize property damage. However, water-based fire sprinkler systems can also accidentally discharge due to inadvertent overheating, freezing, mechanical damage, corrosion, manufacturing defects, as well as improper installation.

#### Commercial property claims

Adverse weather, improper installation, facility and equipment maintenance, equipment failure, fire sprinkler discharges and cooking fires all impact casinos and hotels. While recovery from losses is not that much different than other commercial facilities, the industry is unique because of the gambling floor, collaboration with the gaming commission and speed at which business interruption accrues. Retaining experts that are fully versed in casino mitigation is critical to managing the recovery scope and the carrier's overall exposure.

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#### Get in touch with an expert



#### **Paul Gilbert**

With 20 years of experience in the disaster mitigation and recovery industry, Paul Gilbert serves as director of client services. Paul effectively facilitates evaluations of high-tech electronic, electrical and mechanical equipment that was impacted as a result of fire, water or other disaster event(s). For more information, contact paul.gilbert@EFIGlobal.com.



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