Bullock Texas State History Museum

1800 Congress Ave, Austin, TX 78701, USA



Fire Protection and Suppression Systems

Name

University

Date

The installation and design of fire protection systems along with suppressions is critical for any organization. The design and structure of the fire protection system is a precise science which takes into account the use of the building, its occupancy, footprint as well as the installed systems. Systems of fire-protection are sophisticated and complicated and are always designed differently from one structure to another. The fire protection equipment and the system plays a critical role in the detecting and controlling fires before their consequences are felt in the whole organization which can cause a significant loss of property and even life. This report will explore the fire protection systems for the Bullock Texas State History Museum and ensure that the building is well protected and the employees and visitors are also safe and secure. Planning and integration of the fire protection systems and architecture entails an integrated method through which the system engineers require to examine the building elements as a whole package. In most situations, the examinations need to go beyond fundamental code compliance and standard as well as the owner’s minimum legal duties to offer protection.

General Building Description

The Bullock Texas State History Museum is a history museum located in the city of Austin, Texas State. The building is owned and managed by the Texas State Preservation Board, and it is missioned to tell Texas’s story. The building has three floors of a cooperating exhibit with each floor have its own theme. For instance, the first floor represents the theme of land while the second is the theme of identity as the third floor demonstrates the theme of opportunity. The primary lobby is about 8,000sf, and it is spacious enough for receptions as well as special events. The building is also planned around the foundation of the Museum having an impressive dome as well as a skylight. Nonetheless, the building is a 180,000sfn steel structure with pink granite painting along with a copper roof which is similar to the Texas State Capitol. One will find the administrative offices together with the SPB administrative offices and boardroom on the fourth floor. Other features found in the Museum include 400-seat IMAX Theater; 200-seat Storytelling Theater; 34,000sf permanent exhibit space; 1800sf future exhibition space among other spaces.

Fire and Life Safety

The quicker the museum occupant and fire service employees can respond, arrive, access the incident as well as safely operate the building, the sooner they can control a fire emergency incident safely and securely both for themselves and the occupants who may include the personnel and visitors. Fire protection systems and equipment are normally mounted or installed in building with the aim of protecting the employees, the public, property as well as the firefighters who will respond to the emergency. Just like other kinds of equipment, the fire protection systems along with the life safety tools require periodic assessment, examination along with maintenance to make sure that the equipment is reliable.

It is worth noting that the building is well-equipped with fire extinguishers on every floor with the classifications which are relevant to their location. The building kitchens are equipped with a Wet Chemical Extinguishing System over the gas range. There is also a fire alarm installed with each having a fire detector which is maintained and monitored by the local fire station in the county. A fire sprinkler is found throughout the exhibition rooms among other halls and offices.

Fire Sprinkler System

The galleries, showrooms and other exhibition theaters and other rooms and halls in the building are fully protected against fire through the installed wet pipe sprinkler system. The sprinklers act as the fast response type with an RTI less than 50. Nonetheless, all the sprinklers are monitored by the fire alarm system monitors at the same time connected to the Fire Brigade. It is notable that the system provides activation of both the smoke control system.

Smoke Detection System

The smoke detection system is also provided on every floor and at every theater’s extended spacing according to the OSHA rules. The smoke detection system is also provided below the ceiling. The smoke detectors are not provided in locations which are likely to create unnecessary alarms such as workshops, toilets, and tea points.

Suppression System

The Wet Chemical Extinguishing system is situated in the kitchen, and it is re-engineered. It is composed of various components including the storage tank, piping for carrying gas and agent, Nozzles as well as actuating mechanism. The system is designed to trigger when the fusible connection in the hood and the duct system melts while responding to the heat.

Conclusion

We are aware that fire is one of the most severe risks to a building since it has serious consequences such as harm to the occupants, firefighters at the same time destroy the building and all its contents. Therefore, there is a need for any building to have a well-installed system which can detect and suppress any potential risks of fire. After detecting the risk of fire, then the fire extinguishers are suitable equipment to mitigate its effects. Other systems which can be used to detect fire in the building include the smoke detector system.

Drawing

