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FIRESAFETY

APPLICATION CRITERIA FOR GARAGES AND OTHER WORK CENTERS

CONTENTS	PAGE
1. GENERAL	1
2. FIRESAFETY PRACTICES	2

1. GENERAL

- 1.01 This section outlines application criteria for the 760-600 series firesafety practices for garages and other work centers.
- 1.02 This section is being updated to add firesafety requirements under suppression systems and detection systems for garages and/or work center buildings. Whenever this section is reissued, the reason(s) for reissue will be given in this paragraph.
- 1.03 Complete planning and design considerations for garages are outlined in Section 760-220-160 "Checking Routine—Garages and Garage Work Centers—Project Planning and Design".
- 1.04 The recommendations in this section are based, in general, on the National Fire Protection Association (NFPA) standards, the Model Building and Fire Codes, insurance and property risk management considerations, technical advice of Bellcore and consensus opinion of Company subject matter experts.

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- 1.05 Where local, state, federal or Occupational Safety and Health Act (OSHA) regulations require higher degrees of protection, the legislated criteria should be followed to the extent required. Where those provisions are in conflict with this section, a variance means should be found by seeking "equivalent protection" through alternative installation methods which will satisfy the intent of this section.
- 1.06 A garage or work center is, in general, any building constructed for usage by the installation, repair, and/or construction forces. It may also be a facility used for warehousing equipment prior to installation.
- 1.07 This section is based on Company Firesafety Policy and applies to both new and existing facilities. However, there may be cases in existing buildings where it is impractical to retrofit the building to comply with certain sections. Therefore, sound engineering judgment should be exercised in these cases to ensure the intent of the sections are achieved.

2. **FIRESAFETY PRACTICES**

- 2.01 The basic firesafety philosophy to be incorporated into the design of garage or work center buildings is to follow local code requirements except where the firesafety requirements are more stringent in the sections listed in Table A and discussed in the following paragraphs. The basic philosophy of these criteria is to provide a sound basis of fire protection for all garages or work center buildings.
- 2.02 The sections listed in Table A detail firesafety requirements for **Site Selection, Building Construction, Exposure Protection, Portable Fire Extinguishers, Suppression Systems, and Detection Systems.**
- 2.03 **Site Selection:** Construction of parking garages as part of or immediately adjacent to Central Office Buildings introduces a substantial exposure fire hazard and is not generally recommended. In those cases where there is not reasonable alternative, the following requirements should be adhered to:
 - (a) A minimum of a 3-hour fire-rated separation shall be required between the Central Office and a garage common to or located within 20 feet of a Central Office Building.

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- (b) Gasoline filling and storage facilities are not recommended, but if required, should be outside the garage area and located at least 20 feet from the nearest Central Office wall, with said wall not having other than class D 1-1/2 hour protected opening. The wall shall not have any below grade well openings because of possible gasoline vapor accumulation or seeping through. See NFPA 88A "Parking Structures" and 88B "Repair Garages" for further suggestions.
- 2.04 **Type of Construction:** Garages shall be of noncombustible construction, as a minimum. Auxiliary support facilities, such as offices, storerooms, etc, shall be separated from the garage area by partitions having a 1-hour noncombustible fire rating.
- 2.05 **Suppression Systems:** An approved automatic sprinkler system should be considered if the garage or work center is to be located in a building of other than fire-resistive construction—type B or noncombustible construction, such as a leased location. In addition, the following requirements should be adhered to:
- (a) Sprinkler systems should be installed in newly constructed or major renovations of work center buildings.
- (b) The application recommendations for standpipe and hose systems in buildings are shown in Section 760-640-310, Table 1 and generally based upon a function of building height (number of stories) and area per floor.
- 2.05 **Detection Systems:** The use of early warning fire detection system (EWFDS) is required in a garage or work center building that is physically attached to a Central Office Building. In addition, if a sprinkler system is installed, provide supervision through installation of an EWFDS. EWFDS in buildings shall be continuously monitored for alarms 24 hours a day by a control center. Monitoring indication shall include detection and trouble conditions and, where provided, sprinkler system supervisory signal operation.
- 2.07 **Storage of LP Gas (Propane, Butane Tanks):** With the increased usage of LP gas, special outdoor storage facilities should be considered. The tanks should be located in an area protected from accidental contact with moving traffic and also be held in an upright position by the use of a chain or other device. In some locations, the local building code or local fire department has regulations regarding the number and method of LP gas tank storage. Recommendations for the storage of LP gas are outlined in NFPA 58 "Storage and Handling of Liquefied Petroleum Gases" and Section 081-330-116.

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2.08 **Gasoline Tank and Pumps:**

- (a) Gasoline pumps shall be located on an elevated concrete island in the open yard at least 20 feet from buildings.

Note: Underground gasoline distribution systems with fueling "spots" are not recommended. Where such a system is desired, a special review shall be made by a Company Fire Protection Consultant.

- (b) Island should be of sufficient height and size to protect pumps.
- (c) Lubricant storage shall be in a minimum 1-hour fire-rated noncombustible room or underground.
- (d) Handling of gasolines, oils, and flammable liquids and location of storage tanks shall be in accordance with standards of the NFPA 30 "Flammable and Combustible Liquid Code."

TABLE A

SUPPORT DOCUMENTATION FOR GARAGES AND/OR WORK CENTER BUILDINGS

CATEGORY	SECTION NO.	SECTION TITLE
1. Site Selection	760-610-100	Considerations Related to Site Selection
2. Building Construction Practices	760-620-100	Fire Protection During Construction
3. Exposure Protection	760-630-100	Protection Against Exposure Fires
4. Portable Extinguisher	760-640-200	Distribution of Portable Extinguishers
5. Suppression System	760-640-300 760-640-310 760-640-320	General Considerations for Suppression Systems Standpipe and hose Systems Considerations for Pumps for Fire Service
6. Detection System	760-650-100	Fire Detection Systems

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