ANSI/NFPA 513 An American National Standard December 8, 1983

NFPA 513 Motor Freight Terminals 1984

National Fire Protection Association Batterymarch Park, Quincy, MA 02269

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Policy Adopted by NFPA Board of Directors on December 3, 1982

The Board of Directors reaffirms that the National Fire Protection Association recognizes that the toxicity of the products of combustion is an important factor in the loss of life from fire. NFPA has dealt with that subject in its technical committee documents for many years.

There is a concern that the growing use of synthetic materials may produce more or additional toxic products of combustion in a fire environment. The Board has, therefore, asked all NFPA technical committees to review the documents for which they are responsible to be sure that the documents respond to this current concern. To assist the committees in meeting this request, the Board has appointed an advisory committee to provide specific guidance to the technical committees on questions relating to assessing the hazards of the products of combustion.

Statement on NFPA Procedures

This material has been developed under the published procedures of the National Fire Protection Association, which are designed to assure the appointment of technically competent Committees having balanced representation. While these procedures assure the highest degree of care, neither the National Fire Protection Association, its members, nor those participating in its activities accepts any liability resulting from compliance or noncompliance with the provisions given herein, for any restrictions imposed on materials or processes, or for the completeness of the text.

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Standard for

Motor Freight Terminals

NFPA 513-1984

1984 Edition of NFPA 513

This edition of NFPA 513, *Standard for Motor Freight Terminals*, was prepared by the Technical Committee on Motor Vehicle and Highway Fire Protection, and acted on by the National Fire Protection Association, Inc. at its Fall Meeting held November 14-17, 1983 in Orlando, Florida. It was issued by the Standards Council on December 8, 1983, with an effective date of December 28, 1983, and supersedes all previous editions.

The 1978 edition of this standard was approved by the American National Standards Institute as an American National Standard. This edition has also been submitted for similar approval.

Changes other than editorial are indicated by a vertical rule in the margin of the pages on which they appear. These lines are included as an aid to the user in identifying changes from the previous edition.

Origin and Development of NFPA 513

The first edition of the standard was prepared by the NFPA Committee on Truck Transportation. It was tentatively adopted in 1958 and adopted by the Association as an official NFPA Standard in 1959. In 1967 the Committee was reorganized as the Committee on Motor Vehicle and Highway Fire Protection.

The 1973 edition was a complete revision and reorganization of the 1971 edition. The 1973 edition was partially revised in 1975, 1978, and now by this 1984 edition.

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This list represents the membership at the time the Committee was balloted on the text of this edition. Since that time, changes in the membership may have occurred.

NOTE: Membership on a Committee shall not in and of itself constitute an endorsement of the Association or any document developed by the Committee on which the member serves.

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Motor Freight Terminals

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NOTE: An asterisk (*) following the number or letter designating a paragraph indicates explanatory material on that paragraph in Appendix A.

Information on referenced publications can be found in Chapter 7 and Appendix B.

Chapter 1 General Information

1-1 Application and Scope.

1-1.1 This standard contains requirements for the prevention of loss of life and property damage from fires in motor freight terminals.

1-1.2 This standard applies to the freight transfer areas, offices, employee facilities, and to vehicle maintenance and service areas.

1-1.3 This standard applies to motor freight terminals handling freight of various types, including ordinary combustible materials and materials classified as hazardous by the US Department of Transportation regulations (49 *CFR* Parts 100-199).

1-1.3.1 Terminals for truck transportation of explosives shall be in accordance with NFPA 495, *Code for the Manufacture, Transportation, Storage, and Use of Explosive Materials*, and NFPA 498, *Standard for Explosives Motor Vehicle Terminals*.

1-1.3.2 Terminals for bulk shipments of flammable and combustible liquids shall comply with NFPA 30, *Flammable and Combustible Liquids Code*.

1-1.3.3 Terminals for bulk shipments of LP-Gas shall comply with NFPA 58, *Standard for the Storage and Handling of Liquefied Petroleum Gases*.

1-1.4 For general storage buildings see NFPA 231, *Standard for Indoor General Storage*.

1-1.5 For fire protection for property-carrying motor vehicles see NFPA 512, *Standard for Truck Fire Protection*.

1-1.6 Where existing buildings, structures and installations meet the applicable requirements of the edition of this standard in effect at the time of construction or installation, they may be continued in use provided they do not constitute a distinct hazard to life or adjoining property.

1-2 Definitions.

Approved. Acceptable to the "authority having jurisdiction."

NOTE: The National Fire Protection Association does not approve, inspect or certify any installations, procedures, equipment, or materials nor does it approve or evaluate testing laboratories. In determining the acceptability of installations or procedures, equipment or materials, the authority having jurisdiction may base acceptance on compliance with NFPA or other appropriate standards. In the absence of such standards, said authority may require evidence of proper installation, procedure or use. The authority having jurisdiction may also refer to the listings or labeling practices of an organization concerned with product evaluations which is in a position to determine compliance with appropriate standards for the current production of listed items.

Authority Having Jurisdiction. The "authority having jurisdiction" is the organization, office or individual responsible for "approving" equipment, an installation or a procedure.

NOTE: The phrase "authority having jurisdiction" is used in NFPA documents in a broad manner since jurisdictions and "approval" agencies vary as do their responsibilities. Where public safety is primary, the "authority having jurisdiction" may be a federal, state, local or other regional department or individual such as a fire chief, fire marshal, chief of a fire prevention bureau, labor department, health department, building official, electrical inspector, or others having statutory authority. For insurance purposes, an insurance inspection department, rating bureau, or other insurance company representative may be the "authority having jurisdiction." In many circumstances the property owner or his designated agent assumes the role of the "authority having jurisdiction"; at government installations, the commanding officer or departmental official may be the "authority having jurisdiction."

Class I Liquid. A liquid having a flash point below 100°F (37.8°C).

Fire Area. A portion of a building that is separated from other portions by construction with sufficient fire resistance to prevent fire of maximum anticipated severity from entering or leaving the area, and with standard protection at all openings in the surrounding walls, floor and ceiling. See NFPA 80, *Standard for Fire Doors and Windows*.

Freight Transfer Area (Freight Platform; Freight Dock). The area wherein freight is received, sorted, shipped and held for distribution.

Hazardous Material. A substance or material which has been determined by the Secretary of Transportation to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce, and which has been so designated in US Department of Transportation 49 *CFR*, Parts 100-199.

Motor Freight Terminal. The area wherein the overall operation of freight transfer, vehicle repair and service, truck parking, and administrative functions are performed. The motor freight terminal may also include facilities for repair of crates, cases, barrels, cartons or damaged goods; a storage area for undelivered freight or damaged goods pending settlement of claims; rest rooms; a dormitory for drivers; locker rooms and meal facilities.

Office Area. That part of the motor freight terminal used for administrative and general offices.

Parking Area. The lot or areas of the building used to park motor vehicles.

Vehicle Maintenance Area. The area wherein vehicles are repaired.

Vehicle Service Area. The area wherein vehicles are serviced, including refueling facilities. The area may include a lane in which vehicles are inspected before being dispatched.

Chapter 2 Construction and Building Arrangement

2-1* Freight Transfer and Administration Buildings.

2-1.1 If not in separate buildings, freight transfer and office areas shall be cut off from vehicle maintenance and service facilities by walls constructed of noncombustible materials having a fire resistance rating of not less than two hours. The requirement need not apply to small offices 600 sq ft (54 m²) or less, located within the vehicle maintenance area.

2-1.2 Walls required by 2-1.1 shall be parapeted at least 3 ft (.9 m) above the building roof, except that the parapet may be omitted where the wall fits tightly to the underside of a fire-resistive roof deck constructed of noncombustible materials.

2-1.3 Necessary door and other openings in the walls required by 2-1.1 shall be protected by fire doors having a fire protection rating of not less than 1½ hours, installed in accordance with NFPA 80, *Standard for Fire Doors and Windows*.

2-1.4 Stairways and other vertical shafts shall be enclosed with construction specified in NFPA 220, *Standard on Types of Building Construction*, or sealed off at each floor level with construction having the same fire resistance rating as the floor.

2-1.5* Exits and other life safety features of freight transfer and administration buildings and sections of buildings shall comply with the requirements of Sections 15-1 and 13-1, respectively, of NFPA *101®*, *Code for Safety to Life from Fire in Buildings and Structures*.

2-1.6 Power-operated doors that are installed in the terminals shall be arranged so that they can be operated manually from the floor in case of power failure.

2-1.7 The floor of any freight transfer area shall be constructed of noncombustible materials without cracks or openings into which trash or other combustible material can fall. This provision shall not prohibit openings for integral freight handling equipment and appurtenances such as slots for the operation of draglines and platform scales. Any open space beneath the floor shall be enclosed with noncombustible material.

2-1.8 Rooms for the storage, charging and servicing of batteries shall comply with Article 480, NFPA 70, *National Electrical Code®*. "No Smoking" signs shall be posted at the entrance.

2-2* Vehicle Maintenance and Service Buildings.

2-2.1 Service areas that are not located in separate buildings shall be separated from other terminal operations by walls and fire doors as indicated in 2-1.2 and 2-1.3.

2-2.2 Maintenance and service area floors shall be constructed of noncombustible material. Floors shall be graded and equipped with drains so as to minimize the possibility that water or fuel will stand on the floor.

2-2.3 Floor drains shall be provided in areas where vehicles are maintained and serviced. Each floor drain shall be properly trapped and shall discharge through an oil separator to the sewer or outside vented sump.

2-2.4 Pits and sub-floor work areas shall be constructed of masonry or concrete and floors and piers shall be of suitable noncombustible material.

2-2.4.1 Pits shall have adequate exits to prevent trapping of personnel in the event of fire. Steps shall be noncombustible and slip-proof and constructed with no accessible space underneath.

2-2.4.2 Ventilation and drainage of pits shall be in accordance with Chapter 5.

2-2.5* Exits from vehicle maintenance and service areas shall comply with the requirements of Section 15-2 of NFPA *101, Code for Safety to Life from Fire in Buildings and Structures*.

2-3 Employee Facilities.

2-3.1 Fire resistance ratings of walls or partitions separating the following rooms from surrounding areas shall be:

Employee locker rooms	1 hr
Recreation rooms	1 hr
Rest rooms	1 hr
Dormitories	2 hrs

2-3.1.1 Door and other openings in the walls or partitions required by 2-3.1 shall be protected by self-closing fire doors having a fire protection rating of not less than 1 hour, installed in accordance with NFPA 80, *Standard for Fire Doors and Windows*.

Exception: Door and other openings in walls or partitions separating dormitories from surrounding areas shall be protected by self-closing fire doors, having a fire protection rating of not less than 1½ hours.

2-3.2 Fire resistance ratings of floors separating employee locker rooms, recreation rooms, rest rooms, and dormitories from surrounding areas shall be the same as required for walls or partitions in 2-3.1.

2-3.2.1 Openings in floors between the separated areas shall be enclosed in shafts with enclosing walls or partitions having the same fire resistance ratings as required for the walls or partitions in 2-3.1, except that ducts for heating, ventilating, and air conditioning shall be installed in accordance with NFPA 90A, *Standard for the Installation of Air-Conditioning and Ventilating Systems*.

2-3.3 Exits and other life safety features of dormitory buildings and dormitory sections of buildings shall comply with the requirements of Section 11-4 of NFPA *101, Code for Safety to Life from Fire in Buildings and Structures.*

Chapter 3 Building Services

3-1 Electricity.

3-1.1 All electrical installations shall be in accordance with the provisions of NFPA 70, *National Electrical Code.*

3-1.2 For the purposes of determining the extent of the hazardous area where flammable liquids are stored or handled, Table 3-1.2 shall be used.

Table 3-1.2

Electrical Equipment Classified Areas
(Extracted from Flammable and Combustible Liquids Code, NFPA 30)

Location	NEC Class I, Group D Division	Extent of Classified Area
UNDERGROUND TANK		
Fill Opening	1	Any pit, box or space below grade level, any part of which is within the Division 1 or 2 classified area.
	2	Up to 18 inches above grade level within a horizontal radius of 10 feet from a loose fill connection and within a horizontal radius of 5 feet from a tight fill connection.
Vent — Discharging Upward	1	Within 3 feet of open end of vent, extending in all directions.
	2	Area between 3 feet and 5 feet of open end of vent, extending in all directions.
DISPENSING UNITS (except overhead type)		
Pits	1	Any pit, box or space below grade level, any part of which is within the Division 1 or 2 classified area.
Dispenser	1	The area within a dispenser enclosure up to 4 feet vertically above the base except that area defined as Division 2. Any area within a nozzle boot.
	2	Areas within a dispenser enclosure above the Division 1 area. Areas within a dispenser enclosure isolated from Division 1 by a solid partition or a solid nozzle boot but not completely surrounded by Division 1 area. Within 18 inches horizontally in all directions from the Division 1 area located within the dispenser enclosure. Within 18 inches horizontally in all directions from the opening of a nozzle boot not isolated by a vapor-tight partition, except that the classified area need not be extended around a 90° or greater corner.

Table 3-1.2 — *continued*

Location	NEC Class I, Group D Division	Extent of Classified Area
Outdoor	2	Up to 18 inches above grade level within 20 feet horizontally of any edge of enclosure.
INDOOR with Mechanical Ventilation	2	Up to 18 inches above grade or floor level within 20 feet horizontally of any edge of enclosure.
with Gravity Ventilation	2	Up to 18 inches above grade or floor level within 25 feet horizontally of any edge of enclosure.
DISPENSING UNITS,		
OVERHEAD TYPE	1	Within the dispenser enclosure and 18 inches in all directions from the enclosure where not suitably cut off by ceiling or wall. All electrical equipment integral with the dispensing hose or nozzle.
	2	An area extending 2 feet horizontally in all directions beyond the Division 1 area and extending to grade below this classified area.
	2	Up to 18 inches above grade level within 20 feet horizontally measured from a point vertically below the edge of any dispenser enclosure.
REMOTE PUMP — OUTDOOR	1	Any pit, box or space below grade level if any part is within a horizontal distance of 10 feet from any edge of pump.
	2	Within 3 feet of any edge of pump, extending in all directions. Also up to 18 inches above grade level within 10 feet horizontally from any edge of pump.
REMOTE PUMP — INDOOR	1	Entire area within any pit.
	2	Within 5 feet of any edge of pump, extending in all directions. Also up to 3 feet above floor or grade level within 25 feet horizontally from any edge of pump.
LUBRICATION OR SERVICE ROOM — with Dispensing	1	Any pit within any unventilated area.
	2	Any pit with ventilation.
	2	Area up to 18 inches above floor or grade level and 3 feet horizontally from a lubrication pit.
Dispenser for Class I Liquids	2	Within 3 feet of any fill or dispensing point, extending in all directions.
LUBRICATION OR SERVICE ROOM — WITHOUT DISPENSING	2	Entire area within any pit used for lubrication or similar services where Class I liquids may be released.
	2	Area up to 18 inches above any such pit, and extending a distance of 3 feet horizontally from any edge of the pit.

Table 3-1.2 — *continued*

Location	NEC Class I, Group D Division	Extent of Classified Area
SPECIAL ENCLOSURE INSIDE BUILDING PER 7-2.2 of NFPA 30	1	Entire enclosure.
SALES, STORAGE AND REST ROOMS	Non-classified	If there is any opening to these rooms within the extent of a Division 1 area, the entire room shall be classified as Division 1.
VAPOR PROCESSING SYSTEMS PITS	1	Any pit, box or space below grade level, any part of which is within a Division 1 or 2 classified area or which houses any equipment used to transport or process vapors.
VAPOR PROCESSING EQUIPMENT LOCATED WITHIN PROTECTIVE ENCLOSURES (See 7-4.5.7 of NFPA 30)	2	Within any protective enclosure housing vapor processing equipment.
VAPOR PROCESSING EQUIPMENT NOT WITHIN PROTECTIVE ENCLOSURES (excluding piping and combustion devices)	2	The space within 18 inches in all directions of equipment containing flammable vapor or liquid extending to grade level. Up to 18 inches above grade level within 10 ft. horizontally of the vapor processing equipment.
EQUIPMENT ENCLOSURES	1	Any area within the enclosure where vapor or liquid is present under normal operating conditions.
	2	The entire area within the enclosure other than Division 1.
VACUUM ASSIST BLOWERS	2	The space within 18 inches in all directions extending to grade level. Up to 18 inches above grade level within 10 feet horizontally.

SI Units: 1 in. = 25.40 mm; 1 ft = 0.3048 m.

3-2 Heat.

3-2.1 Heating equipment shall be installed to conform with the standards of the National Fire Protection Association as applicable: NFPA 90A, *Standard for Installation of Air-Conditioning and Ventilating Systems*; NFPA 31, *Standard for the Installation of Oil Burning Equipment*; NFPA 54, *National Fuel Gas Code*; NFPA 211, *Standard for Chimneys, Fireplaces and Vents*; NFPA 82, *Standard for Incinerators, Waste and Linen Handling Systems and Equipment*.

3-2.2 All heating equipment shall be of an approved type designed for the purpose. The use of makeshift or improvised heaters is prohibited.

3-2.3 Fuels used shall be of the type and quality specified by the manufacturer of the heating appliance. Crankcase drainings shall not be used in oil-fired units.

3-2.4 Heating equipment may be installed in a special room separated from an area classified as Class I, Division 1 or 2, by walls having a fire-resistive rating of at least one hour and without any openings in the wall within 8 ft (2.4 m) of the floor into the classified area. This room shall not be used for combustible storage, and all air for combustion purposes shall come from outside the building. In classifying the areas, Table 3-1.2 shall be used.

NOTE: The area classifications are defined in Article 500 of NFPA 70, *National Electrical Code*.

3-2.5 Heating equipment using gas or oil fuel may be installed in maintenance service areas in which there is no dispensing or transferring of Class I liquids, provided that the bottom of the combustion chamber is at least 18 in. (457 mm) above the floor and the heating equipment is protected from physical damage.

3-2.6 Gas or oil heating equipment approved for use in garages may be installed in the maintenance and service areas where Class I liquids are dispensed provided the equipment is installed at least 8 ft (2.4 m) above the floor.

3-2.7 Electrical heating equipment shall be installed in accordance with the provisions of Section 7-5 of NFPA 30, *Flammable and Combustible Liquids Code*.

3-3 Ventilation.

3-3.1 Vehicle Maintenance and Repair Areas. All vehicle maintenance and repair areas when in operation shall be continuously ventilated by a ventilating system having positive means for exhausting indoor air at a rate of not less than ¾ cu ft of air per minute for each sq ft of floor area. An approved means shall be provided for introducing an equal amount of outdoor air.

3-3.2 Mechanical ventilating systems shall be installed in accordance with NFPA 90A, *Standard for the Installation of Air-Conditioning and Ventilating Systems*. When blower and exhaust systems are installed for vapor removal, the system shall be installed in accordance with NFPA 91, *Standard for Blower and Exhaust Systems*.

Chapter 4 Freight Handling Operation

4-1 Freight Transfer.

4-1.1 Aisles shall be provided to keep all portions of the freight handling areas readily accessible for fire fighting and to minimize the spread of fire.

4-1.2* Hazardous materials shall be handled in accordance with the US Department of Transportation Regulations (49 *CFR* Parts 100-100).

4-1.3* Combustible contents shall not be piled in contact with columns that are not of fire-resistive construction.

4-1.4 In sprinklered buildings, at least 18 in. (457 mm) clearance between sprinkler deflectors and top of storage shall be maintained. In non-sprinklered buildings at least 36 in. (914 mm) shall be maintained between the top of the storage and underside of the roof or ceiling in order to allow sufficient space for effective use of hose streams.

4-1.5* Clearance shall be maintained between heat-producing appliances and combustible stock in accordance with NFPA 89M, *Manual on Clearances for Heat-Producing Appliances*. Adequate clearance shall be maintained between incandescent lamps and combustible stock.

4-1.6 A clearance of 24 in. (610 mm) shall be maintained around the path of travel of fire doors.

Exception: If a barricade is provided, no clearance is needed.

4-1.7 Commodities shall not be stored within 36 in. (914 mm) of a fire door opening.

4-2 Mechanical Handling Equipment.

4-2.1 Power-operated industrial trucks shall be of a type designated in Chapter 1 of NFPA 505, *Fire Safety Standard for Powered Industrial Trucks Including Type Designations, Areas of Use, Maintenance and Operation*, in accordance with the hazards of the location in which they are used.

4-2.2 Industrial trucks, powered either by liquid or gaseous fuels, or electricity, shall be inspected and maintained in accordance with Chapters 3 and 4 of NFPA 505, *Fire Safety Standard for Powered Industrial Trucks Including Type Designations, Areas of Use, Maintenance and Operation*.

4-3 Motor Vehicle at Docks.

4-3.1* Parking of vehicles in terminals shall be in compliance with applicable local, state, and federal regulations.

4-3.2 Accessibility to terminals and vehicle parking areas for fire fighting purposes shall be provided at all times. Vehicles shall be parked so that they will not block fire department access.

4-3.3 There shall be an emergency plan in effect for the removal of vehicles from the dock to a safe area to minimize fire exposure and loss, and to assure improved accessibility for the fire fighting equipment.

Chapter 5 Vehicle Maintenance and Service

5-1 General.

5-1.1 Major maintenance and servicing of motor vehicles shall not be performed on floors below grade level. This requirement shall not prohibit the use of pits.

5-2 Spray Painting and Undercoating.

5-2.1 Spray painting, drying and undercoating shall conform to NFPA 33, *Standard for Spray Finishing Using Flammable and Combustible Materials*, and to NFPA 86A, *Standard for Ovens and Furnaces*.

5-3* Inspection and Repair Pits.

5-3.1 Use of approved portable lights shall be minimized by installation of fixed lighting fixtures of the approved types in all pits in accordance with Article 511 of NFPA 70, *National Electrical Code*.

Exception: If gasoline is dispensed, Article 514 of NFPA 70 shall apply.

5-3.2 Drainage from inspection or repair pits shall not enter a storm or sanitary sewer system, unless it has passed through a separator to prevent flammable and combustible liquids from entering the sewer.

5-3.3 Smoking in pits shall be prohibited.

5-3.4 A scheduled maintenance program for the collection and removal of oil separators and traps shall be initiated to prevent it from being carried into the sewers.

5-4 Repair of Fuel Tanks.

5-4.1 Repair work on fuel tanks of vehicles shall be in accordance with NFPA 327, *Standard Procedures for Cleaning or Safeguarding Small Tanks and Containers, and NFPA 58, Standard for the Storage and Handling of Liquefied Petroleum Gases.*

5-4.2 Fuel drained from vehicle tanks and not discarded shall be stored in approved safety cans or returned to standard underground storage tanks.

5-5 Parts Cleaning.

5-5.1 Solvents, whether in pressurized equipment or at atmospheric pressure, having a flash point of less than 140°F (60°C) shall not be employed for the cleaning of parts. Adequate ventilation shall be provided.

5-6 Welding and Open Flame Operations.

5-6.1 All operations involving open flame or electric arcs, including fusion gas and electric welding, shall be restricted to the designated repair area. This provision includes, but is not limited to, fuel tank and radiator repairs. Responsibility for cutting and welding, and related fire prevention precautions shall be in accordance with requirements of NFPA 51B, *Standard for Fire Prevention in Use of Cutting and Welding Processes.*

5-6.2 Welding equipment shall conform to Article 630 of NFPA 70, *National Electrical Code*, and the welding operations shall conform to NFPA 51, *Standard for the Installation and Operation of Oxygen-Fuel Gas Systems for Welding and Cutting.*

5-7 Storage and Handling of Flammable and Combustible Liquids.

5-7.1 The storage and handling of flammable and combustible liquids shall be in accordance with NFPA 30, *Flammable and Combustible Liquids Code*. The storage and handling of liquefied petroleum gas shall be in compliance with NFPA 58, *Standard for the Storage and Handling of Liquefied Petroleum Gases.*

5-8 Fueling of Vehicles.

5-8.1* Gasoline dispensing units shall be of an approved type and shall be at least 20 ft (6 m) horizontally from any activity involving fixed sources of ignition.

5-8.2 Approved dispensing units may be located inside buildings upon specific approval of the authority having jurisdiction. The dispensing area shall be separated from other areas in a manner approved by the authority having jurisdiction. The dispensing area shall be provided with an approved mechanical or gravity ventilation system.

5-8.3 Class I liquids shall be transferred from tanks by means of fixed pumps designed and equipped to allow control of the flow and prevent leakage or accidental discharge.

5-8.4 The dispensing unit and its piping, except those attached to containers, shall be mounted on a concrete island or protected against collision damage by suitable means. If located indoors the dispenser shall also be mounted on a concrete island or protected against collision damage by suitable means and shall be located in a position where it cannot be struck by a vehicle that is out-of-control descending a ramp or other slope.

5-8.5 If dispensing of Class I liquids is to be done by a person other than the attendant, the hose nozzle valve shall be a listed automatic-closing type without a hold-open latch.

5-8.6 One or more clearly identified and easily accessible switches or circuit breakers shall be provided at a location remote from dispensing devices, including remote pumping systems, to shut off the power to all dispensing devices in the event of an emergency. Controls shall not be more than 100 ft (30 m) from dispensers.

5-8.7 Operating instructions and "No Smoking" signs shall be conspicuously posted in the dispensing area.

5-8.8 The storage and handling of flammable and combustible liquids shall be in accordance with NFPA 30, *Flammable and Combustible Liquids Code.*

5-8.9 Facilities for filling LP-Gas fuel tanks shall be located outside of any building. For requirements for LP-Gas fueling, see NFPA 58, *Standard for the Storage and Handling of Liquefied Petroleum Gases.*

Chapter 6 Fire Protection

6-1* Automatic Sprinklers.

6-1.1 Where automatic sprinklers are provided, they shall be installed in accordance with NFPA 13, *Standard for the Installation of Sprinkler Systems.*

6-2 Portable Fire Extinguishers.

6-2.1 Portable fire extinguishers shall be installed, inspected, maintained and used in accordance with NFPA 10, *Standard for Portable Fire Extinguishers.*

6-3 Standpipes.

6-3.1 Where standpipe and hose systems are provided they shall conform to NFPA 14, *Standard for the Installation of Standpipe and Hose Systems.*

6-4 Alarm Service.

6-4.1* Where alarm service is provided, it shall be installed in accordance with the appropriate NFPA standard.

6-5 Outside Protection.

6-5.1* The fire fighting needs of the terminal buildings and the requirements for fighting fires that might involve

loaded and unloaded vehicles shall be considered when determining water supply and hydrant requirements.

6-5.2 Where private underground supply mains and hydrants are necessary, they shall be installed in accordance with NFPA 24, *Standard for Private Fire Service Mains and Their Appurtenances.*

Chapter 7 Mandatory Referenced Publications

7-1 This chapter lists publications referenced within this document which, in whole or in part, are part of the requirements of this document.

7-1.1 NFPA Publications.

NFPA 10-1981, *Standard for Portable Fire Extinguishers*

NFPA 13-1983, *Standard for the Installation of Sprinkler Systems*

NFPA 14-1983, *Standard for the Installation of Standpipe and Hose Systems*

NFPA 24-1984, *Standard for Private Fire Service Mains and Their Appurtenances*

NFPA 30-1981, *Flammable and Combustible Liquids Code*

NFPA 31-1983, *Standard for the Installation of Oil Burning Equipment*

NFPA 33-1982, *Standard for Spray Application Using Flammable and Combustible Materials*

NFPA 51-1983, *Standard for the Design and Installation of Oxygen-Fuel Gas Systems for Welding and Cutting*

NFPA 51B-1984, *Standard for Fire Prevention in Use of Cutting and Welding Processes*

NFPA 54-1980, *National Fuel Gas Code*

NFPA 58-1983, *Standard for the Storage and Handling of Liquefied Petroleum Gases*

NFPA 70-1984, *National Electrical Code*

NFPA 71-1982, *Standard for the Installation, Maintenance and Use of Central Station Signaling Systems*

NFPA 72A-1979, *Standard for the Installation, Maintenance and Use of Local Protective Signaling Systems for Guard's Tour, Fire Alarm and Supervisory Service*

NFPA 72B-1979, *Standard for the Installation, Maintenance and Use of Auxiliary Protective Signaling Systems for Fire Alarm Service*

NFPA 72C-1982, *Standard for the Installation, Maintenance and Use of Remote Station Protective Signaling Systems for Fire Alarm and Supervisory Service*

NFPA 72D-1979, *Standard for the Installation, Maintenance and Use of Proprietary Protective Signaling Systems for Guard, Fire Alarm and Supervisory Service*

NFPA 80-1983, *Standard for Fire Doors and Windows*

NFPA 82-1983, *Standard on Incinerators, Waste and Linen Handling Systems and Equipment*

NFPA 86A-1977, *Standard for Ovens and Furnaces Design, Location, and Equipment*

NFPA 90A-1981, *Standard for the Installation of Air-Conditioning and Ventilating Systems*

NFPA 91-1983, *Standard for the Installation of Blower and Exhaust Systems for Dust, Stock and Vapor Removal or Conveying*

NFPA *101*-1981, *Code for Safety to Life from Fire in Buildings and Structures*

NFPA 211-1980, *Standard for Chimneys, Fireplaces and Vents*

NFPA 327-1982, *Standard Procedures for Cleaning or Safeguarding Small Tanks and Containers*

NFPA 495-1982, *Code for the Manufacture, Transportation, Storage, and Use of Explosive Materials*

NFPA 498-1982, *Standard for Explosives Motor Vehicle Terminals*

NFPA 505-1982, *Fire Safety Standard for Powered Industrial Trucks Including Type Designations, Areas of Use, Maintenance and Operation*

7-1.2 Other Publications. US Department of Transportation Regulations, 49 *CFR*, Parts 100-199, as amended.

Appendix A

This Appendix is not a part of the requirements of this NFPA document. . .but is included for information purposes only.

A-2-1 Freight transfer and administration buildings should be of fire-resistive or noncombustible construction as defined in NFPA 220, *Standard on Types of Building Construction*. Consideration should be given to limitation of undivided fire areas in freight transfer facilities.

Factors to be considered when determining maximum sizes of undivided fire areas are: (a) type of fire protection provided; (b) mechanical conveying equipment such as drag-line operations; (c) surveillance of goods to prevent possible theft.

A-2-1.5 The referenced sections of NFPA *101* include requirements for types and capacity of exits, travel distances to exits, access to exits, exit lighting and signs, protection of vertical openings, interior finish, alarms, and air-conditioning equipment.

A-2-2 Areas used for repairing and servicing vehicles should be located in separate buildings from the freight transfer building. These buildings should be of fire-resistive or noncombustible construction.

A-2-2.5 Section 15-2 of NFPA *101* includes requirements for types and capacity of exits, travel