PROCEDURES FOR FIRESAFETY DURING CONSTRUCTION OR ALTERATION OF A BUILDING

1. **SCOPE.** Buildings undergoing construction or alteration shall be in accordance with the directives herein.

2. **PERMITS.** Permits are required for all construction or alteration of a building.

3. **APPROVALS.** Approval of the safety precautions required for buildings being constructed or altered required by the Authority Having Jurisdiction (AHJ) in addition to any other approvals required for specific operations or processes associated with such work.
EXCEPTION: Buildings designated as Group R, Division 3 or Group U do not require approval of safety precautions.

4. **FIRESAFETY.** Fire protection, including fire apparatus access roads and water supplies for fire protection, is required to be installed and made serviceable prior to and during the time of construction.
EXCEPTION: When alternate methods of protection, as approved, are provided, these requirements may be modified or waived.

4.1 **FIRE-PROTECTION PLAN.** A fire-protection plan shall be established. At the time of application, plans and procedures shall be submitted for review and approval prior to construction. Following approval of the application, a copy of the approved application plans shall be maintained on the premises in an approved location. The plans shall include the following:

- **4.1.1** Plans for fire apparatus access.
- **4.1.2** Plans and specifications for fire hydrants.
- **4.1.3** Plans for marking of fire apparatus access roads, addresses and fire-protection equipment.
- **4.1.4** Site Storage Plans, interior and exterior, including:
  - **4.1.4.1** Useable storage height for each storage area.
  - **4.1.4.2** Aisle dimensions between each storage array.
  - **4.1.4.3** Maximum pile volume for each storage array.
  - **4.1.4.4** Location and classification of commodities.
  - **4.1.4.5** Location of commodities which are banded or encapsulated.
  - **4.1.4.6** Floor plan of the building showing locations and dimensions of storage areas and aisles.
  - **4.1.4.7** Location of fire department access doors.
  - **4.1.4.8** Location of fire fighting equipment being maintained on site.
  - **4.1.4.9** Location of valves controlling the water supply.
  - **4.1.4.10** Location of fire walls and control areas.
  - **4.1.4.11** Hazardous Materials Management Plan.
  - **NOTE:** Additional information regarding required design features, commodities, storage arrangement and fire-protection features shall be provided at the time of permit, when required by the SJFD.

4.2 EVACUATION PLAN. An evacuation plan and a separate set of plans indicating location and width of aisles, location of exits and exit-access doors and exit signs, height of storage, and locations of hazardous materials shall be submitted at the time of the application for review and approval. Following approval of the plans, a copy of the approved plans shall be maintained on the premises in an approved location.

4.3 ACCESS ROADS. Fire department access roads shall be established and maintained in accordance with the directives herein.

4.3.1 Required access. Fire apparatus access roads shall be provided for every facility, building or portion of a building when any portion of the facility or any portion of an exterior wall of the first story of the building is located more than 150 feet from fire apparatus access as measured by an approved route around the exterior of the building or facility. More than one fire apparatus road shall be provided when it is determined by the AHJ that access by a single road might be impaired by vehicle congestion, condition of terrain, climatic conditions or other factors that could limit access.
EXCEPTION: When approved, temporary access roads of a width, vertical clearance and surface which provide access for fire department apparatus are allowed to be used until permanent roads are installed.

4.3.2 Dimensions. Fire apparatus access roads shall have an unobstructed width of not less than 20 feet and an unobstructed vertical clearance of not less than 14 feet 0 inches.

4.3.3 Surface. Fire apparatus access roads shall be designed and maintained to support the imposed loads of fire apparatus which shall be no less than 69,000 pounds and shall be provided with a surface so as to provide all-weather driving capabilities.

4.3.4 Bridges. When a bridge is required to be used as part of a fire apparatus access road, it shall be constructed and maintained in accordance with nationally recognized standards. The bridge shall be designed for a live load sufficient to carry the imposed loads of fire apparatus.

4.3.5 Turning radius. The turning radius of a fire apparatus access road shall have a minimum inside radius of 30 feet and a minimum outside radius of 50 feet.

4.3.6 Dead ends. Dead-end fire apparatus access roads in excess of 150 feet in length shall be provided with approved provisions for the turning around of fire apparatus.

4.3.7 Grade. The gradient for a fire apparatus access road shall not exceed a maximum of 15%.

4.3.8 Signs. Approved signs or other approved notices shall be provided and maintained for fire apparatus access roads to identify such roads and prohibit the obstruction thereof or both.

4.3.9 Obstruction. The required width of a fire apparatus access road shall not be obstructed in any manner, including parking of vehicles. Minimum required widths and clearances shall be maintained at all times. Entrances to roads, trails or other accessways which have been closed with gates and barriers shall not be obstructed by parked vehicles.

4.3.10 Closure of accessways. The chief is authorized to require the installation and maintenance of gates or other approved barricades across roads, trails or other accessways, not including public streets, alleys or highways. When required, gates and barricades shall be secured in an approved manner. Roads, trails and other accessways which have been closed shall not be trespassed upon or used unless authorized by the owner and the chief.
EXCEPTION: Public officers acting within their scope of duty.

4.3.10.1 Locks, gates, doors, barricades, chains, enclosures, signs, tags or seals which have been installed by the fire department or by its order or

under its control shall not be removed, unlocked, destroyed, tampered with or otherwise molested in any manner.
EXCEPTION: When authorized by the chief or performed by public officers acting within their scope of duty.

4.3.11 Gas meters and piping. Aboveground gas meters, regulators and piping exposed to vehicular damage due to proximity to alleys, driveways or parking areas shall be protected in an approved manner.

4.4 WATER SUPPLY. Water mains and hydrants shall be installed and operational in accordance with the directives herein..

4.4.1 Required Water Supply for Fire Protection. An approved water supply capable of supplying the required fire flow for fire protection shall be provided to all premises upon which facilities, buildings or portions of buildings are being work on within the jurisdiction. When any portion of the facility or building protected is in excess of 150 feet from a water supply on a public street, as measured by an approved route around the exterior of the facility or building, on-site fire hydrants and mains capable of supplying the required fire flow shall be provided.

4.4.1.1 Exposed Construction Framing and/or forms. The water supply for projects under construction or modification shall deliver the un-modified Fire Flow shown in CFC Table A-III-A-1 with hydrant locations in accord with CFC Table A-III-B-1 based on the condition of the construction site. (e.g.: A 36,000 square foot Type V-One-HR. building requires 3,500 gpm with 4 hydrants spaced at 350'. However, prior to the rated finish or protection, the exposed framing constitutes a type V-N structure. A 36,000 square foot Type V-N structure would require 5,000 gpm with 5 hydrants spaced at 300'. Type V-N is limited to 18,000 square feet if the available Fire Flow available is 3,500 gpm and hydrants are spaced accordingly. Hence, the exposed non-Rated construction is limited to 18,000 square feet until the rated finish or equivalent fixed fire suppression is complete.)

4.4.2 Protection, marking and obstruction of hydrants. Fire hydrants subject to possible vehicular damage shall be adequately protected, marked, and kept unobstructed.

4.4.2.1 Protection from vehicles. Guard posts or other approved means shall be provided to protect equipment which is subject to vehicular damage. When guard posts are installed, the posts shall be:

4.4.2.1.1 Constructed of steel not less than 4 inches in diameter and concrete filled,

4.4.2.1.2 Spaced not more than 4 feet between posts on center,

4.4.2.1.3 Set not less than 3 feet deep in a concrete footing of not less than a 15-inch diameter,

4.4.2.1.4 Set with the top of the posts not less than 3 feet above ground, and

4.4.2.1.5 Located not less than 5 feet from the tank.

4.4.2.2 Marking. Fire- protection equipment and fire hydrants shall be clearly identified in an approved manner to prevent obstruction by parking and other obstructions. Hydrant locations shall be identified by the installation of reflective markers.

4.4.2.3 Obstruction and Impairment of Fire Hydrants and Fire-protection Equipment. Posts, fences, vehicles, growth, trash, storage and other materials or things shall not be placed or kept near fire hydrants, fire department inlet connections or fire-protection system control valves in a manner that would prevent such equipment or fire hydrants from being immediately discernible. The fire department shall not be deterred or hindered from gaining immediate access to fire-protection equipment or hydrants.

4.4.2.4 Clear space around hydrants. A 3-foot clear space shall be maintained around the circumference of fire hydrants except as otherwise required or approved. The pathway to and from the Hydrants shall maintained clear at all times.
EXCEPTION: When approved, a temporary water supply for fire protection is allowed to be used until permanent fire-protection systems are installed.

4.5 FIRE PROTECTION. During the project fire protection shall be provided in accordance with the directives herein.

4.5.1 Construction Standpipe. Every building three (3) stories or more in height shall be provided with not less than one standpipe for use during construction. Such standpipe shall be provided fire department hose connections at accessible locations adjacent to usable stairs and the standpipe outlets shall be located adjacent to such usable stairs. The standpipe system(s) shall be extended as construction progresses to within one floor of the highest point of construction having secured decking or flooring.

4.5.1.1 All areas of the project shall be within 130 feet of a standpipe outlet as measured by the path of travel around obstructions.

4.5.1.2 Access to the standpipe inlet (FDC) shall be un-obstructed and meet with SJFD requirements.

4.5.1.3 Temporary standpipes are allowed to be provided in place of permanent systems if they are designed to furnish 500 gallons of water per minute at 50 pounds per square inch pressure with a standpipe size of not less than 4 inches. All outlets shall not be less than 2½ inches. Pumping equipment sufficient to provide this pressure and volume shall be available at all times when a Class III standpipe system is required.

4.5.1.4 Standpipe systems for buildings under construction shall be installed as required for permanent standpipe systems.

4.5.1.5 Where two or more standpipes are installed in the same building or section of building, they shall be inter-connected as one system. Where standpipes are supplied by a tank(s), they shall also be inter-connected to the tank(s) and check valves shall be installed to prevent circulation.

4.5.2 Automatic Sprinkler System (<AS>). During new construction, the <AS> system shall be made operational as soon as possible. During alteration, the <AS> system shall not be taken out of service without an Approved Fire-protection Plan.

4.5.3 Fire protection devices. The fire prevention program superintendent shall determine that all fire protection equipment is maintained and serviced in accordance with this code. Fire Alarm Equipment may not be taken out of service without an Approved Fire-protection Plan.

4.5.4 Fire extinguishers. Fire extinguishers shall be provided and maintained through out the project. The extinguishers shall be suitable for the type of fire associated with the hazards present. And the number shall be determined such that an extinguisher is always within a maximum 25-75 foot travel distance depending on type of extinguisher(s) per NFPA 10.

4.5.5 Fire Watch. During construction which is hazardous in nature, qualified personnel shall be provided to serve as an on-site fire watch. The sole duty of fire- watch personnel shall be to watch for the occurrence of fire.

4.5.6 Emergency Telephone. Telephone facilities shall be provided at the construction site for the purpose of emergency notification of the fire department. The street address of the construction site shall be posted adjacent to the telephone together with the fire department telephone number.

4.5.7 Fire-resistive Assemblies and Construction. During Alteration, fire- resistive assemblies and construction shall be maintained if not part of the demolition.

Permits are required through the Building Department to repair, replace or restore required fire-resistive construction.

4.6 BUILDING ACCESS. Access for the purpose of firefighting shall be provided in accordance with the directives herein. Construction material shall not block access to hydrants, fire appliances or to and through buildings.

4.6.1 Premises identification. Approved numbers or addresses shall be provided for all new and existing buildings in such a position as to be plainly visible and legible from the street or road fronting the property.

4.6.2 Street or road signs. Streets and roads shall be identified with approved signs.

4.6.3 Required access. Required exterior doors and openings shall be maintained readily accessible for emergency access by the fire department. Access doors shall be accessible without the use of a ladder. An approved access walkway leading from fire apparatus access roads to required exterior openings shall be provided.

4.6.4 Number of doors required. One or more access doors shall be provided in each 100 lineal feet, or major fraction thereof, of the exterior walls which face required access roadways.

4.6.5 Door size and type. Access doors shall not be less than 3 feet in width and 6 feet 8 inches in height. Roll-up doors shall not be used unless approved.

4.6.6 Locking devices. Only approved locking devices shall be used.

4.6.7 Maintenance of exterior doors and openings. Exterior doors or their function shall not be eliminated without prior approval by the chief. Exterior doors which have been rendered nonfunctional and which retain a functional door exterior appearance shall have a sign affixed to the exterior side of such door stating THIS DOOR BLOCKED. The sign shall consist of letters having principal stroke of not less than 3/4 inch wide and at least 6 inches high on a contrasting background. Required fire department access doors shall not be obstructed or eliminated.

4.6.8 Shaftway marking. Exterior windows in buildings which open directly on shaftways or other vertical means of communication between two or more floors shall be plainly marked with the word SHAFTWAY in red letters at least 6 inches (152.4 mm) high on a white background. Warning signs shall be easily discernible from the outside of the building. Door and window openings on such shaftways from the interior of the building shall be similarly marked with the word SHAFTWAY in a manner which is easily visible.

4.6.9 Floor Openings. Floor openings shall be surrounded by guardrails or shall have covers which are automatic closing or maintained in a closed position at all times.

4.6.10 Aisles. Aisles providing access to exits and fire department access doors shall be provided in storage areas exceeding 500 square feet in accordance with the directives herein. For aisles separating storage piles or racks, see below.

4.6.11 Aisle maintenance. Aisles shall be kept clear of storage, waste material and debris. Fire department access doors, aisles and exit doors shall not be obstructed. During construction a minimum unobstructed aisle width of 24 inches shall be maintained in 48-inch or smaller aisles, and a minimum unobstructed aisle width of one half of the required aisle width shall be maintained in aisles greater than 48 inches.

4.6.12 Means of Egress. Required means of egress components shall be provided and maintained.
EXCEPTION: Temporary means of egress system or facilities may be proposed for approval with the Fire Protection Plan.

4.6.13 Fire department hose connections. When exit passageways are required by the building code for egress, a Class I standpipe system shall be provided.

4.7 COMBUSTIBLE MATERIALS - General. Storage, accumulation, use and handling of combustible materials shall be in accordance with the directives herein.

4.7.1 Combustible Debris. Combustible debris shall not be accumulated within the site. Combustible debris, rubbish and waste material shall be removed as often as practical. Combustible debris, waste material and trash shall not be burned.

4.7.2 On site storage. Storage of materials not required for the permitted construction or alteration project shall not be allowed.

4.7.3 Required storage conditions. Combustible rubbish kept or accumulated within or adjacent to buildings or structures shall be in rooms or vaults constructed of noncombustible materials or in containers complying with the following:

4.7.3.1 General. Rubbish containers kept outside of rooms or vaults shall not exceed 40.5 cubic feet (300 gallons) capacity. Containers exceeding 5⅓ cubic feet (40 gallons) shall be provided with lids. Such containers and lids shall be constructed of noncombustible materials.

Exception. Nonmetallic rubbish containers exceeding 5⅓ cubic feet (40 gallons) capacity shall be manufactured of materials having a peak rate of heat release not exceeding 300 kW/m2 at a flux of 50 kW/m2 when tested in accordance with nationally recognized standards. Such containers shall be permanently labeled indicating capacity and peak rate of heat release.

4.7.4 Removal. Combustible rubbish stored in containers outside of noncombustible vaults or rooms including idle pallets and surplus materials shall be removed from buildings at least once each working day.

4.7.5 Rubbish within dumpsters. Dumpsters and containers with an individual capacity of 1.5 cubic yards (40.5 cubic feet) or more shall not be stored in buildings or placed within 5 feet of combustible walls, openings or combustible roof eave lines.

EXCEPTIONS: 1. Areas containing dumpsters or containers protected by an approved automatic sprinkler system.

2. Structures of Types I and II fire-resistive construction used for dumpster or container storage located not less than 10 feet from other buildings.

4.7.6 Oily rags. Oily rags and similar materials shall be stored in metal, metal-lined or other approved containers equipped with tight fitting covers.

4.7.7 Combustible vegetation. Cut or uncut weeds, grass, vines and other vegetation shall be removed when determined to be a fire hazard. When the total removal of growth is impractical due to size or environmental factors, approved fuel breaks shall be established. Designated areas shall be cleared of combustible vegetation to establish the fuel breaks.

4.7.8 Pallet Storage. Pallets shall be stored outside or in an approved storage building. Pallets shall be stored no higher than 6 feet, and each pallet pile of no more than 4 stacks shall be separated from other pallet piles by at least 8 feet of clear space. This is a further restriction to the limits set forth for exterior storage below.

4.8 EXTERIOR STORAGE. Exterior storage, accumulation, use and handling of combustible materials shall be in accordance with the directives herein.

4.8.1 Control of Exterior Combustibles. Storage of combustible materials around buildings shall be orderly. Storage areas, and portions of storage areas intended for storage of a different commodity class than adjacent areas, shall be designed and specifically designated to contain Class I, Class II, Class III, Class IV or high-hazard commodities as defined by UFC Article 23. The designation of a combustible storage area, or portion thereof intended for storage of a different commodity class, shall be based on the highest hazard commodity class stored. Any commodities that may be hazardous in combination with each other shall be stored so they cannot come into contact with each other.

Designation. The designation of a combustible storage area, or portion thereof, shall indicate the maximum storage height of the pile (or racks) and the contiguous area occupied. A Storage array shall not exceed 12 feet in height and

2,500 square feet in un-separated area, and additional areas shall be separated from other such areas by 25 feet or more.
NOTE: Higher hazard areas may be further limited in size and separation at the discretion of the chief. Hazardous materials will be subject to the requirements of the SJFD HazMat Division.

4.8.2 Location. Exterior storage of combustible materials shall not be located within 10 feet of a property line.
EXCEPTIONS: 1. The separation distance is allowed to be reduced to 3 feet for storage not exceeding 6 feet in height.
2. The separation distance is allowed to be reduced when the chief determines that no hazard to the adjoining property exists.

4.8.3 Storage beneath buildings and structures. Combustible material shall not be stored beneath a building or structure.

4.8.4 Storage beneath overhead projections from buildings. Combustible materials stored or displayed outside of buildings that are protected by automatic sprinklers shall not be stored or displayed under un-sprinklered eaves, canopies or other projections or overhangs.

4.8.5 Removal. Combustible rubbish including idle pallets and surplus materials shall be removed from the site as soon as possible but at least weekly.

4.9 INTERIOR STORAGE. Interior storage, accumulation, use and handling of combustible materials shall be in accordance with the directives herein.

4.9.1 Control of Interior Combustibles. Storage of combustible materials in buildings shall be orderly. Storage areas, and portions of storage areas intended for storage of a different commodity class than adjacent areas, shall be designed and specifically designated to contain Class I, Class II, Class III, Class IV or high-hazard commodities as defined by UFC Article 23. The designation of a combustible storage area, or portion thereof intended for storage of a different commodity class, shall be based on the highest hazard commodity class stored. Any commodities that may be hazardous in combination with each other shall be stored so they cannot come into contact with each other.
Designation. The designation of a combustible storage area, or portion thereof, shall indicate the maximum storage height of the pile (or racks) and the contiguous area occupied. A Storage array shall not exceed 12 feet in height and 500 square feet in un-separated area, and additional areas shall be separated from other such areas by 25 feet or more.
NOTE: Higher hazard areas may be further limited in size and separation at the discretion of SJFD. Hazardous materials will be subject to the requirements of the SJFD HazMat Division.

4.9.2 Floor load. Safe floor loads shall not be exceeded. For water absorbent commodities, normal floor loads shall be reduced to take into account the added weight of water that can be absorbed during fire fighting operations.

4.9.3 Ceiling clearance. Storage shall be maintained 2 feet or more below the ceiling in non-sprinklered areas of buildings. Storage shall be maintained 18 inches or more below sprinkler head deflectors in properly sprinklered areas of buildings.

4.9.4 Truss clearance. Storage shall be maintained at least 1 foot below the bottom cord of any structural member.

4.9.5 Means of egress. Combustible material shall not be stored in exits or exit enclosures.

4.9.6 Equipment rooms. Combustible material shall not be stored in boiler rooms, mechanical rooms or electrical equipment rooms.

4.9.7 Attic, under-floor and concealed spaces. Attic, under-floor and concealed spaces used for storage of combustible materials shall be protected on the storage side as required for one-hour fire-resistive construction. Openings shall be protected by assemblies that are self-closing and are of non-combustible

construction or solid wood core not less than 1¾ inch in thickness. Storage shall not be placed on exposed joists.

EXCEPTION: Areas protected by approved automatic sprinkler systems.

4.9.8 Fueled equipment. Fueled equipment, such as but not limited to motorcycles, mopeds, lawn-care equipment and portable cooking equipment, shall not be stored, operated or repaired within a building.

NOTE. The Fire Department is authorized to require removal of such equipment from any location when the presence of such equipment is determined to be hazardous.

4.10 FLAMMABLE LIQUIDS. The storage, use and handling of flammable liquids shall be in accordance with the directives herein. Ventilation shall be provided for operations utilizing the application of materials containing flammable solvents.

4.10.1 Unauthorized Discharges. Flammable and combustible liquids and petroleum waste products shall not be discharged or released on sidewalks, streets, highways, drainage canals, ditches, storm drains, sewers, flood-control channels, lakes, rivers, tidal waterways or the ground. Unauthorized discharge or release of such products shall be immediately reported.

EXCEPTIONS: 1. Materials and products intended for use in weed abatement, pest control, erosion control, paving and similar applications when applied in accordance with the manufacturer's instructions, label directions and nationally recognized standards.

2. Materials released in accordance with federal, state or local government regulations or permits of the jurisdictional air quality management board with a national pollutant discharge elimination system permit, with waste discharge requirements established by the jurisdictional water quality control board, or with local sewer pretreatment requirements for publicly owned treatment works.

4.10.2 Maintenance and operating practices. Maintenance and operating practices shall be in accordance with established procedures which will tend to control leakage and unauthorized discharge of flammable or combustible liquids. Spills shall be cleaned up promptly.

4.10.3 Leaking containers. Where flammable or combustible liquids are stored in containers, provisions shall be made and maintained for the detection of leakage. Leaking containers shall be taken to a safe location in an area not accessible to the public and the contents transferred to a liquid-tight container.

4.10.4 Site assessment. In the event of a spill, leak or discharge from a tank system, a site assessment shall be completed. Such site assessments shall be conducted to ascertain potential fire hazards and shall be completed and submitted to the fire department within a time period established by the AHJ not to exceed 60 days.

4.10.5 Waste control. Waste liquids shall be kept in a sump, tank or receptacle approved for this purpose.

4.10.6 Spill Control and Secondary Containment. When required, rooms, buildings or areas used for storage, dispensing, use, mixing, or handling of flammable and combustible liquids shall be provided with spill control and secondary containment.

4.10.7 Labeling and Signs. Warning signs for the purpose of identifying the hazards of storing or using flammable liquids are required as follows:

4.10.7.1 Style. Warning signs shall be of a durable material with red lettering on a white background and shall read DANGER- FLAMMABLE-KEEP FIRE AND FLAME AWAY. Tanks shall bear the additional marking KEEP 50 FEET FROM BUILDINGS. Letters shall not be less than 3 inches in height and ½ inch in stroke.

4.10.7.2 Location. Signs shall be posted in locations as required by the fire department. Piping containing liquids shall be identified in accordance with nationally recognized standards.

4.10.7.3 Warning labels. Warning labels shall be in accordance with the Federal Hazardous Substance Labeling Act and applicable state laws. Flammable liquids, and flammable and liquid compounds and mixtures manufactured, packaged or offered for sale shall be conspicuously marked or labeled in legible type which is in contrast by typography, layout or color with any other printed matter on the label.
EXCEPTION: Foods, drugs or cosmetics subject to the Federal Food, Drug and Cosmetic Act.

4.10.8 Storage and Dispensing of Flammable and Combustible Liquids on Construction Sites. Temporary storage and dispensing of Class I and II liquids for private use on construction sites, earth-moving projects, and gravel pits or borrow pits shall be in accordance with the directives herein.

4.10.8.1 Containers for storage and use. Metal containers used for storage of Class I or II liquids shall be in accordance with DOT requirements or shall be of an approved design. Discharge devices shall be of a type that does not develop an internal pressure on the container. Pumping devices or approved self-closing faucets used for dispensing liquids shall not leak and shall be well maintained. Individual containers shall not be interconnected and shall be kept closed when not in use.

4.10.8.2 Capacity. The capacity of temporary aboveground tanks containing Class I or II liquids shall not exceed 10,000 gallons.

4.10.8.3 Fill opening security. Fill openings shall be equipped with a locking closure device. Fill openings shall be separate from vent openings.

4.10.8.4 Vents. Tanks shall be provided with a method of normal and emergency venting. Emergency vents shall be arranged to discharge in a manner which prevents localized overheating or flame impingement on any part of the tank in the event vapors from such vents are ignited.

4.10.8.5 Location. Tanks containing Class I or II liquids shall be kept outside of and at least 50 feet from buildings and combustible storage. Additional distance shall be provided when necessary to ensure that vehicles, equipment and containers being filled directly from such tanks will not be less than 50 feet from structures, or other combustible storage.

4.10.8.6 Type of tank. Tanks shall be provided with top openings only or shall be elevated for gravity discharge. Tanks shall be of single-compartment design.

4.10.8.6.1 Tanks with top openings only. Tanks with top openings only shall be mounted as follows:

4.10.8.6.1.1 On well-constructed metal legs connected to shoes or runners designed so that the tank is stabilized and the entire tank and its supports can be moved as a unit, or

4.10.8.6.1.2 For stationary tanks, on a stable base of timbers or blocks approximately 6 inches in height which prevents the tank from contacting the ground. Tanks with top openings only shall be equipped with a tightly and permanently attached, approved pumping device having an approved hose of sufficient length for filling vehicles, equipment or containers to be served from the tank. Either the pump or the hose shall be equipped with a padlock to its hanger to prevent tampering. An effective anti-siphoning device shall be included in the pump discharge unless a self-closing nozzle is provided. Siphons or internal pressure discharge devices shall not be used.

4.10.8.6.2 Tanks for gravity discharge. Tanks with a connection in the bottom or the end for gravity dispensing liquids shall be mounted and equipped as follows:

4.10.8.6.2.1 Supports to elevate the tank for gravity discharge shall be of adequate strength and designed to provide stability, and

4.10.8.6.2.2 Bottom or end openings for gravity discharge shall be equipped with a valve located adjacent to the tank shell which will close automatically in the event of fire through the operation of an effective heat-actuated releasing device. If this valve cannot be operated manually, a second manually operated valve shall supplement it. The gravity discharge outlet shall be provided with an approved hose equipped with a self-closing valve at the discharge end of a type that can be padlocked to its hanger.

4.10.8.7 Dispensing from tank vehicles. When approved, liquids used as fuels may be transferred from tank vehicles into the tanks of motor vehicles or special equipment, provided:

4.10.8.7.1 The tank vehicle's specific function is that of supplying fuel to motor vehicle fuel tanks,

4.10.8.7.2 The dispensing line does not exceed 50 feet in length,

4.10.8.7.3 The dispensing nozzle is an approved type,

4.10.8.7.4 The dispensing hose is properly placed on the approved reel or in a compartment provided before the tank vehicle is moved,

4.10.8.7.5 Signs prohibiting smoking or open flame within 25 feet of a tank vehicle or the point of refueling are prominently posted on the tank vehicle,

4.10.8.7.6 Electrical devices and wiring in areas where fuel dispensing is conducted are in accordance with the Electrical Code,

4.10.8.7.7 Vapor-recovery systems are provided,

4.10.8.7.8 Tank vehicle dispensing equipment is operated only by designated personnel who are trained to handle and dispense motor fuels, and

4.10.8.7.9 Provisions are made for controlling and mitigating unauthorized discharges.

4.10.8.7.10 Dispensing from tank vehicles shall be conducted at least 50 feet from structures or combustible storage.

4.11 CONTROL OF SOURCES OF IGNITION. Ignition sources shall be in accordance with the directives herein.

4.11.1 Open Burning. Open burning of rubbish is prohibited.

4.11.2 Clearance from Ignition Sources. Clearance between ignition sources, such as light fixtures, heaters and flame-producing devices, and combustible storage shall be maintained in an approved manner.

4.11.3 Heating Devices. Temporary heating devices shall be of an approved type, located away from combustible materials, and attended and maintained by competent personnel.

4.11.4 Smoking. Smoking shall be prohibited, except in those areas approved. A suitable number and type of NO SMOKING signs shall be posted such that they are clearly visible.

4.11.5 Cutting and welding. Cutting and welding operations shall be in accordance with the handout for “HOT WORK PROCEDURES”.

4.11.6 Flame-producing Equipment. The use of torches or flame-producing devices shall be in accordance with the handout for “HOT WORK PROCEDURES”.

4.11.7 Open-flame Devices. Open-flame devices and other sources of ignition shall not be located in areas where flammable materials are being used.

4.11.8 Motor Equipment. Internal-combustion-powered construction equipment shall be used in accordance with the following:

4.11.8.1 Equipment shall be located so that exhausts do not discharge against combustible material,

4.11.8.2 When possible, exhausts shall be piped to the outside of the building,

4.11.8.3 Equipment shall not be refueled while in operation.

4.11.8.4 Equipment using liquid fuel or LP-gas shall be refueled outside of buildings or in areas specifically approved for that purpose.

4.11.8.5 Fuel for equipment shall be stored in an approved area outside of the building.

4.11.8.6 Battery chargers shall be of an approved type. Combustible storage shall be kept a minimum of 5 feet from battery chargers. Battery charging shall not be conducted in areas accessible to the public.

4.11.8.7 Ventilation shall be provided in an approved manner in battery-charging areas to prevent a dangerous accumulation of flammable gases.

4.11.8.8 Battery-charging areas shall be provided with a fire extinguisher having a minimum rating of 4-A-20B:C within 20 feet of the battery charger.

4.11.8.9 Repairs to fuel systems, electrical systems or repairs utilizing open flame or welding shall be done in approved locations outside of buildings or in areas specifically approved for that purpose.

4.12 TEMPORARY ELECTRICAL WIRING. Temporary electrical wiring shall be in accordance with the directives herein.

4.12.1 During Project. Temporary wiring for electrical power and lighting installations is allowed during periods of construction, remodeling, repair or demolition of buildings, structures, equipment or similar activities.

4.12.2 Temporary wiring. When temporary wiring is attached to a structure, it shall comply with this code or the Electrical Code.

4.12.3 Extension cords and flexible cords. Extension cords shall not be used as a substitute for permanent wiring.

4.12.3.1 Use with Portable Appliances. The use of extension cords shall be in accordance with the appliance manufacturer's recommendations.

4.12.3.2 Applications. Extension cords shall be used only with portable appliances.

4.12.3.3 Power supply. Extension cords shall be plugged directly into an approved receptacle, power tap or multi-plug adapter and shall, except for approved multi-plug extension cords, serve only one portable appliance.

4.12.3.4 Multi-plug adapters. Multi-plug adapters, such as multi-plug extension cords, cube adapters, strip plugs and other devices, which do not comply with this code or the Electrical Code, shall not be used.

4.12.3.5 Amp rating. The amp rating of the extension cords shall not be less than the rated capacity of the portable appliance supplied by the cord.

4.12.3.6 Maintenance. The extension cords shall be maintained in good condition without splices, deterioration or damage.

4.12.3.7 Grounding. Extension cords shall be grounded when servicing grounded portable appliances.

4.12.3.8 Installation. Extension cords and flexible cords shall not be affixed to structures; extend through walls, ceilings, and floors, under doors or floor coverings; or be subject to environmental or physical damage.

4.13 ASPHALT KETTLES. shall be in accordance with the directives herein.

4.13.1 Transporting. Asphalt kettles shall not be transported on a highway, road or street when the heat source for the kettle is operating.
EXCEPTION: Asphalt kettles in the process of patching road surfaces.

4.13.2 Use. Asphalt kettles shall not be used inside or on the roof of a building.

4.13.3 Fire Protection. A minimum 20-B:C-rated portable fire extinguisher shall be located within 30 feet of each asphalt kettle when the heat source is operating. A minimum 20-B:C-rated portable fire extinguisher shall also be located on roofs during asphalt coating operations.

4.13.4 Covers. Asphalt kettles shall be equipped with tight-fitting covers.

4.13.5 Location. Asphalt kettles shall not be located within 20 feet of any combustible material, combustible building surface or building opening.

4.13.6 Attendant. An attendant shall be within 100 feet of a kettle when the heat source is operating. Ladders or similar obstacles shall not form a part of the route between the attendant and the kettle.
EXCEPTION: Thermostatically controlled kettles.

4.14 ASBESTOS REMOVAL. Operations involving removal of asbestos or asbestos-containing materials from buildings shall be in accordance with the directives herein.
Exception: This does not apply to the removal of asbestos from:

4.6.Ex.1 Pumps, valves, gaskets and similar equipment.

4.6.Ex.2 Pipes, ducts, girders or beams, which have a length less than 21 linear feet.

4.6.Ex.3 Wall or ceiling panels which have an area of less than 10 square feet or a dimension of less than 10 linear feet.

4.6.Ex.4 Floor tiles when the duration of work can be completed in less than four hours.

4.14.1 PERMITS. Permits are required to conduct asbestos-removal.

4.14.2 APPROVALS. Approval of the safety precautions required for operations involving removal of asbestos or asbestos-containing materials from buildings being altered is required in addition to any other approvals for specific operations or processes associated with such alteration.

4.14.3 Notification. The Authority Having Jurisdiction (AHJ) shall be notified 24 hours prior to the commencement and closure of asbestos-removal operations. The permit applicant shall notify the AHJ when asbestos abatement involves the removal of materials which were used as a feature of the building's fire resistance.

4.14.4 Plastic Film. Plastic film, which is installed on building elements, shall be flame resistant.

4.14.5 Signs. Approved signs shall be posted at the entrance, exit and exit-access door, decontamination areas and waste-disposal areas for asbestos-removal operations. The signs shall state that asbestos is being removed from the area, that asbestos is a suspected carcinogen and that proper respiratory protection is required. Signs shall have a reflective surface and lettering shall be a minimum of 2 inches high.

5. <u>DOCUMENT REVISIONS</u>. If this document is in conflict with any previously published documents by the San Jose Fire Department, this document takes precedence.

5.1 This document is subject to revisions. For general information and to be sure that you are reading the most current document, please call (408) 535-7698 and ask for the current revision.