	APPLICATION FOR CONSTRUCTION PERMIT									
HIGH PILED STORAGE & IN-RACK SPRINKLER SYSTEMS										
SAN BERNARDINO COUNTY FIRE PROTECTION DISTRICT COMMUNITY SAFETY DIVISION										
San Bernardino Office 385 N. Arrowhead Ave., 1 st Floor San Bernardino, CA 92415-0187 Phone (909) 386-8400 Fax (909) 387-3249 Hours: 8:00 am – 5:00 pm M-F	<u>Office</u> Tree St. Suite 131 92345-3222 95-8190 8205 m – 5:00 pm M-F	East Valley Office 200 East Third Street San Bernardino, CA 92410 Phone (909) 918-2201 Fax (909) 381-0071 Hours: 8:00 am – 5:00 pm M-Th		t 92410 1 0 pm M-Th	South Desert Office 58928 Business Center Dr. Yucca Valley, CA 92284 Phone (760) 995-8190 Fax (760) 995-8205 h Hours: 9:00 am to 12:00 pm Wed					
			WW.Sbcfire	e.org						
Pursuant to Business and Professions Code §7031.5, and San Bernardino County Fire Protection District Ordinance (SBCFPDO) §12, only a contractor, licensed by the State of California to perform the type of work proposed in the permit application, may apply for and be issued, a construction permit required pursuant to Section 105.7 et seq. of the California Fire Code. Any change of contractor named to conduct the permitted work shall require that a new permit be issued. CONTRACTOR MAILING ADDRESS CITY STATE ZIP CODE										
PHONE NUMBER	EMAIL ADDRESS			_			LICENSE NUMBER			
		PROJECT	INFORMATI	ON						
PROJECT NAME	ADDRESS			C	CITY / COMMUNITY			ZIP CODE		
ASSESSOR'S PARCEL NUMBER (APN) TO	TAL SQ. FOOTAGE	MAX. HEIGHT MAX. VOLUN	IE HIGHEST (COMM. CLASS	CONTRACTOR PRO	DJECT # CONTAC	T NAME			
1. Three sets of plans 2. Project address on plans	Ē	Plans will not be accer 4. Square footage of a 5. Signed architect/co	oted without rea to be po ntractor/en	t the followi ermitted gineer's star	n <u>g:</u> 7. Storage mp 8. Commo	e Questionnairo	e (Attach	ed)		
3. Assessor's parcel number(s) on	plans	6. Contractors license	and phone	number						
	Please not	HIGH PILE STORAG e that a separate subr	E/COMMOD nittal is requ	DITY REVIEW uired for the	actual racks					
1 to 50,000 sq. ft.		\$ 631.00								
50,001 to 100,000	sq. ft.	\$ 686.00								
Each additional 1 t	o 100,000 sq.	ft \$ 546.00 x	:	= \$						
Commodity Analysi	s/Opinion Rep	oort \$ 632.00								
			TOTAL FEE	= \$	This f	ee includes	2 insp	ections		
1 to 10 000 sg. ft	ner commodit		SPRINKLE	3						
class		\$ 1,214.00								
10,001 to 50,000 s commodity class	q. ft, per	\$ 1,551.00								
50,001 to 100,000 commodity class	sq. ft, per	\$ 1,888.00								
Each additional 1 t per commodity clas	o 50,000 sq. f ss	t, \$ 1,128.00 x	:	= \$						
			TOTAL FEE	= \$	This f	ee includes	2 insp	ections		
REVISIONS / AS-BUILTS / RESUBMITTALS RESUBMITTAL (Each subsequent submittal after 2 nd review) \$155.00/per hour REVISION / AS-BUILT \$427.00										
Make check or money order payable to <u>S.B.C.F.D.</u>										
Pursuant to Business and Professions Code §7031.5, and SBCFPDO §12, I certify that I, the Applicant, Am licensed by the State of California to perform the work proposed in this application under the Contractor License Number listed above and that my license is in full force and effect or Am exempt from these contractor licensure and submittal requirements pursuant to Business and Professions Code §7040 – 7054.5. SUBMITTED BY (please print)										
		FOR SBCF	D USE ONI	Y						
PAYMENT RECEIVED PAYMENT TYPE DATE RECEIVED RECEIVED BY										
\$ CHECK			CARD							

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High-Piled storage plans are required for all high-pile storage buildings or arrangements within buildings when storage meets or exceeds 501 square feet of Class 1 through IV commodities and any quantity of High-Hazard commodities.

It is important to note that all storage areas within the building contribute to the square footage regardless of separation of areas.

For example: A building has four high-pile storage areas, each being 700 square feet of Class IV commodities. The aggregate square footage would be 2,800 square feet.

High-piled combustible storage shall comply with the requirements of the SBCFPD Code, Chapter 32 of the California Fire Code and NFPA 13. All submitted plans shall indicate the following information:

- 1. Scaled floor plan of building showing locations and dimensions of high-piled storage areas, fire access lanes, fire hydrants, fire department connections and fire sprinkler risers.
- 2. Maximum useable storage height for each storage area. Height to be measured from finished floor to the highest point of the commodity
- 3. Number of tiers within each rack.
- 4. Clearance between top of commodity storage and sprinkler deflector for each storage arrangement.
- 5. Aisle dimensions between each storage array. Aisles to be measured from the actual edge of the commodity to commodity NOT rack to rack.
- 6. Maximum pile volume for each storage array.
- 7. Location and classification of commodities in accordance with CFC Section 3203.
- 8. Location of commodities which are banded or encapsulated.
- 9. Location of required fire department access doors.
- Type(s) of fire suppression and fire detection system(s) including system design calculations based upon commodity type, aisle width and sprinkler temperature ratings pursuant to NFPA 13 (eg., .45/3000 with 286° heads). A complete sprinkler design shall be submitted under a separate permit application by a licensed C16 contractor.
- 11. Location of valves controlling water supply of ceiling and in-rack sprinklers.
- 12. The location, make, model, type and automatic link temperature of the automatic/manual release smoke vents. In sprinklered buildings, the fusible links for smoke and heat vents shall operate at a temperature no less than 100° and no more than 200° above the sprinkler rating. In non-sprinklered buildings, the fusible link shall operate between 100° and 200° above **ambient** temperature pursuant to CFC 910.3.2.3. Gravity-operated drop-out vents shall operate at 500° within 5 minutes.

NOTE: New construction shall only use approved/labeled smoke vents in accordance with CFC Section 3206.7. Required smoke vents in existing structures shall be inspected for proper operation and link temperature by a qualified contractor. Non-required existing vents shall either be treated as a required vent or shall be rendered inoperable.

- **13.** Dimensions and locations of transverse and longitudinal flue spaces.
- 14. The location of all steel columns in relationship to the racks. All steel columns located within a rack flue space or immediately adjacent to a rack in an aisle will require protection. See 2010 NFPA 13, Section 16.1.4.
- **15.** Additional information regarding required design features, commodities, storage arrangements, and fire protection features required by CFC Chapter 32.

		HIGH PIL	ED ST	ror,	AGE QUE	STIC	ONNAI	RE		
The purpose of th "High piled Comb NFPA 13. The fo required for High	nis questionn oustible Stock ollowing infor Piled Combu THIS Ol	aire is to assist " at your facili mation should stible Stock e.g	the Fire Pr ty. These r be filled or J., Code Co	reventic require ut and nsultar	on Office in deter ments will be ba signed by a qua nt, Insurance Uno ACE A COMMOD	rmining sed on alified p derwrite	the Fire Co the 2013 C erson havi or Fire Pro IALYSIS IF	ode requirem alifornia Fire ng the nece otection Eng REQUIRED	ents for the Code, Cha ssary code ineer.	e storage of pter 32 and knowledge
APPLICANT INFORMATION										
PROJECTBUSINESS NAM	E		ADDRESS				COMML	JNITY		ZIP CODE
			DESC	CRIPTIC	ON OF STORA	GE				
			COMM	IODITY	CLASSIFICAT	ION				
			STO	RAGE	INFORMATION	11				
Solid Piles	Racks w/ So	olid Shelves		KS W/O SC	AGE (Check all that	it apply)	Boxes [Wood Palle	ts 🗌 Plas	stic Pallets
Encapsulated		n-encapsulated	C)ther:						
			STO	RAGE	INFORMATION	2				
FLOOR AREA OF STORAGE (including aisles) STORAGE HEIGHT DIMENSIONS			AISLE WIDTH RACK TYPE RACK				RACK STOR	RACK DEPTH	RACK WIDTH	AISLE WIDTH
			- DOI			<u> </u>				
Emergency venicle a			of the exterio	or walls ?		5 [] 1	O Distance	Detween ext. a	cess doors:	
Smoke and Heat Ver	nts? 🛛 YES		raft Curtains?	? Цү	ES 🗌 NO	Auto	matic?	Manua	?	Both?
Flue Spaces – Trans	verse:	Inches.	Longitudi	nal:	Inches.	Ceili	ng Height:		Feet.	
			S	PRINK	LER SYSTEM					
Discharge Density:	In-	-Rack Sprinklers?	□ YES	□ NO	Distance from	top of sto	orage to sprin	kler deflector:		
K-Factor:	Temperatu	e Rating:	Head Typ	be:	Addt'l Info	o.:				
Hose Stations?	□ YES □	NO Hose Lengt	hs: 🗌 50'	1	00' 🗌 150'					
			ADDI	ITIONA	L INFORMATIC	DN				
PLAN KEVIEW INFORIVIATION REVIEWED BY DATE COMMUNITY FILE NUMBER										
					YES		NO			

INSTRUCTIONS

- 1. DESCRIPTION OF STORAGE Provide an accurate and detailed description of all storage which will be kept within the warehouse. If possible, classify these items into the commodity classifications the items would fall into, and also provide us with adequate documentation to substantiate your determination.
- 2. COMMODITY CLASS By utilizing the attached listings of the commodity classifications, please provide us with the correct determination that best describes the commodity classifications of the high piled items. Adequate information must accompany the submitted plans to insure the Fire Department will be able to verifying the commodity classification(s) are accurate. The attached list was copied from the International Fire Code. The National Fire Protection Association also has a commodity listing which is somewhat different than the IFC. Please indicate which code you have obtained the information from.
- 3. METHOD OF STORAGE Provide us with the method(s) in which you plan on storing, and indicate all that may apply. A lot of customers also include the actual specification sheet(s), pictures, and information from the manufacture supplying the racks, which is very helpful to us.
- 4. FLOOR AREA OF THE HIGH-PILED STORAGE AREAS ONLY Provide the square footage of the high -pile storage area. This must include aisles between and around the storage area.
- 5. PILE STORAGE High-piled combustible storage includes materials that are stacked in piles on the floor in addition to storage on racks. Provide specific responses to each field if storage is not on racks or shelves.
- 6. RACK STORAGE This information must be detailed and specific.

TYPE OF RACKS – We need to know if the racks will be made of steel or wood, solid shelves or slatted, portable or fixed racks, etc. It is also important for us to know the proposed rack configuration (single- or double- or multiple-row racks). Your rack supplier will be able to assist you in this, and will be the contact for the detailed specification sheets you will need to provide us in your submittal packet along with your plans.

HEIGHT OF RACKS – How high will the racks be? Are the racks going to be 15 feet high in one area and 35 feet in another? Provide good details, and specification sheets (if available) from your supplier, with your submittals.

DEPTH OF RACKS - How deep will your racks be from the front aisle to the rear of the rack?

WIDTH OF RACKS - How wide are the racks going to be from side to side?

AISLE WIDTH BETWEEN RACKS – We need the aisle width you will be providing. If some areas will be 4 ft wide, while other areas will be 8 ft wide, this type of information is critical for us to know.

At no time shall any aisle be less than 44 inches wide throughout the warehouse.

7. BUILDING COMPONENTS – Provide as much detail as possible for these items.

EMERGENCY VEHICLE ACCESS – The International Fire Code requires emergency vehicle access to within 150 feet of all exterior portions of the first floor of the building. Some older buildings may not meet this requirement.

SMOKE AND HEAT VENTS – These roof mounted assemblies are designed and installed to aid in the removal of heat and smoke in the event of a fire.

DRAFT CURTAINS – Draft curtains are structures arranged to limit the spread of smoke and heat along the underside of the ceiling or roof. Draft curtains are typically constructed of gypsum board attached to framing members, extend 4 feet or 6 feet down from the ceiling and divide the area into segments.

CLEAR CEILING HEIGHT – Provide the height of the warehouse as measured from the finished floor level (FFL) to the bottom of the roof decking.

8. FIRE SPRINKLER SYSTEM – A fire sprinkler system is critical for the control of potential fires in storage facilities. Provide as much information as possible for the system in the building. The fire sprinkler system maintenance contractor should be able to assist you with obtaining the required information.

CEILING DISCHARGE DENSITY – Fire sprinkler systems are hydraulically engineered to provide a specified minimum discharge of water in case of a fire. The discharge density is expressed in gallons per minute per square foot of floor area, i.e. 3/2,000.

IN RACK SPRINKLERS – Storage of some materials can require the installation of sprinkler heads in the storage racks. If in rack sprinklers are present or proposed, then answer affirmatively.

HEAD TYPE, TEMPERATURE RATING AND K-FACTOR – This is specific information that is essential for an accurate review of the proposal. Please include information for each of the three items.

ADDITIONAL INFORMATION – Provide any additional information that you have related to this proposal that is not requested on the questionnaire.

The bottom of the form is for fire department use only. Submit the completed form for a review by the Fire Department Fire Prevention Division.

COMMODITY CLASSIFICATIONS

Classification of Commodities:

Commodities shall be classified as Class I, II, III, IV, or high-hazard. The materials listed within each of these commodity classifications are assumed to be unmodified for improved combustibility characteristics. The use of flame-retarding modifiers, or the physical form of the material could change the classifications.

Class I Commodities:

Class I commodities are essentially noncombustible products on wooden or nonexpendable polyethylene solid deck pallets, in ordinary corrugated cartons with or without single-thickness dividers, or in ordinary paper wrappings with or without pallets. Class I commodities are allowed to contain a limited amount of Group A plastics in accordance with the Fire Code. Examples of Class I commodities include, but are not limited to, the following:

Alcoholic beverages not exceeding 20% alcohol Appliances-noncombustible, electrical

Cement in bags Ceramics

Dairy products in nonwax-coated containers (excluding bottles) Dry insecticides

Foods in noncombustible containers

Fresh fruits and vegetables in non-plastic trays or containers Frozen foods

Glass

Glycol in metal cans Gypsum board

Inert materials, bagged Insulation, noncombustible

Non-combustible liquids in plastic containers having less than a 5-gallon capacity Non-combustible metal products

Class II Commodities:

Class II commodities are Class I products in slatted wooden crates, solid wooden boxes, multiple-thickness paperboard cartons or equivalent combustible packaging material with or without pallets. Class II commodities are allowed to contain a limited amount of Group A plastics in accordance with the Fire Code. Examples of Class II commodities include, but are not limited to the following:

Alcoholic beverages not exceeding 20% alcohol, in combustible containers;

Foods I combustible containers;

Incandescent or fluorescent light bulbs in cartons;

thinly coated fine fire on reels or in cartons

Class III Commodities:

Class III Commodities are commodities of wood, paper, natural fiber cloth, or Group C plastics or products thereof, with or without pallets. Products are allowed to contain limited amounts of Group A or B plastics, such as metal bicycles with plastic handles, pedals, seats, and tires. Group A plastics shall be limited in accordance with the Fire Code. Examples of Class III commodities include, but are not limited to, the following:

Aerosol Level 1 (See Chapter 51 of Fire Code)

Combustible fiberboard

Cork, baled Feed, bagged

Food in plastic containers

Furniture: wood, natural fiber, upholstered, non-plastic, wood or metal with plastic-padded and covered arm rests

Glycol in combustible containers not exceeding 25%

Lubricating or hydraulic fluid in metal cans

Lumber

Mattresses, excluding foam rubber and foamed plastics

Non-combustible liquids in plastic containers having a capacity of more than 5 gallons

Paints, oil base, in metal cans

Paper and pulp, horizontal storage

Paper, waster, baled

Paper and pulp, horizontal storage, or vertical storage that is banded or protected with approved wrap

Paper in cardboard boxes

Pillows, excluding foamed rubber and foamed plastics

Plastic coated paper food containers

Plywood

Rags, baled

Rugs, without foamed backing

Sugar, bagged

Wood, baled

Wood doors, frames and cabinets

Yarns of natural fiber

Class IV Commodities:

Class IV commodities are Class I, II, III products containing Group A plastics in ordinary corrugated cartons and Classes I, II, III products, with Group A plastic packaging, with or without pallets. Group B plastics and free-flowing Group A plastics are also included in this class. The total amount of non-freeflowing Group A plastics shall be in accordance with the Fire Code. Examples of Class IV commodities include, but are not limited to, the following:

Aerosol, Level 2 (see Chapter 51 of the Fire Code)

Alcoholic beverages, exceeding 20% but less than 80% alcohol, in cans or bottles in cartons Clothing,

synthetic or non-viscous

Combustible metal products (solid)

Furniture, plastic upholstered

Furniture, wood or metal with plastic covering and padding

Glycol in combustible containers (greater that 25% and less than 50%) Linoleum

products

Paints, oil base in combustible containers

Pharmaceuticals, alcoholic elixirs, tonics, etc. Rugs,

foamed back

Shingles, asphalt

Thread or yarn, synthetic or non-viscous

High-hazard – Commodities:

High-hazard commodities are high-hazard products presenting special fire hazards beyond those of Class I, II, III, or IV. Group A plastics not otherwise classified are included in this class. Examples of high-hazard commodities include, but are not limited to, the following:

Aerosol, Level 3 (see Chapter 51 of the Fire Code)

Alcoholic beverages, exceeding 80% alcohol, in bottles in cartons

Commodities of any class in plastic containers in carousel storage

Flammable solids (except solid combustible metals)

Glycol in combustible containers (50% or greater)

Mattresses, foamed rubber or foamed plastic

Pallets and flats which are idle combustible Paper,

asphalt, rolled, horizontal storage

Paper, asphalt, rolled, vertical storage

Paper and pulp, rolled, in vertical storage which is unbanded or not protected with approved wrap

Pillows, foamed rubber and foamed plastics

Pyroxylin

Rubber tires

Vegetable oil and butter in plastic containers