

Electronic Plan Standards

File Naming Standards:

Electronic plans and documents shall be named as specified in the City of Vancouver [ePLANS](https://www.cityofvancouver.us/business/permits-licenses-and-inspections/eplans/) system:
<https://www.cityofvancouver.us/business/permits-licenses-and-inspections/eplans/>



Acceptable File Types:

Plans, calculations, specifications and supporting documents shall be uploaded as a PDF file.

Plan Sheet Standards:

All plans shall be drawn to scale, as identified in the checklist, and each sheet shall state the scale and show a measurable scale on the page for measurement calibrations.

Document Orientation:

All plans must be uploaded in "Landscape" format in the horizontal position with a north indicator. All other documents can be in "Portrait" format.

Stamped:

Where documentation contains a code analysis or engineering calculations, such documents shall be stamped by the design professional.

Minimum Submittal Checklist for Upload to ePLANS

- Completed Fire Installation Permit Application – Tire Rebuilding (this document) Check all *Permit Conditions* checkboxes that are applicable to your project
- Supporting documents listed below (See *Document Details* below)
- Site plans and floor plans (see *Plan Details* below)

Document Details

HMMP Guide: <https://www.cityofvancouver.us/wp-content/uploads/2023/10/Hazardous-Materials-Management-Plan.pdf>
 See Vancouver Fire Department HMMP Guide for direction on completing required HMMP and/or supplemental forms

Does your business...	If YES, please complete document noted below	
Store more than 500 square feet, including aisles, of: <ol style="list-style-type: none"> 1. High-piled combustible storage in piles or on pallets, in racks or shelves where the material being stored exceeds twelve (12) feet in height, or, 2. Tires, Group A plastics, flammable liquids, idle pallets, or similar high hazard materials stored above six (6) feet in height. 	<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> High Piled or Rack Storage application permit separate submittal.
<input type="checkbox"/> A Fire Safety Plan, including provisions for fire department vehicle access as per WSFC 3405.5. At least one copy of the fire safety plan shall be prominently posted and maintained at the storage yard (WSFC 3404.5). <input type="checkbox"/> Listing sheets of particle collection systems. <input type="checkbox"/> Cleaning and maintenance plan document.		

Plan Details

The following is a list of information required on all plan submittals for review of a tire rebuilding plant permit. The plan shall be drawn to 1/8" = 1'-0" minimum scale. The applicant is required to submit all applicable information so an accurate and timely review may be completed:

General:

- Site plan to include a north arrow, a measurable scale for calibration purposes, fire hydrants, emergency access lanes and doors, vehicle gates, Fire Department Connection, Fire Department Access Doors, points of assembly for evacuees, setbacks

from property lines, the public way and unrelated combustibles exposures, electrical room(s), gas meters, sprinkler riser(s), fire alarm control panel, Knox Box, roof access (if provided), and any outdoor hazardous storage.

- Interior plans showing all access points, hazardous materials storage rooms and/or cabinets, hazardous equipment or operations areas, proposed areas dedicated to tire storage, and processing.
- Fire-resistance rated construction.
- Tire storage locations and pile dimensions.
- Fencing locations.
- Portable fire extinguisher types, sizes and locations per WSFC 906.

Where over 500 square feet of tire storage over 6-feet in height, provide plans showing the following:

- Floor plan of the building showing locations and dimensions of all high-piled storage areas.
- Usable storage height of each storage area.
- Number of tiers within each rack, if applicable.
- Commodity clearance between top of storage and the sprinkler deflector for each storage arrangement.
- Commodity clearance between top of storage and the ceiling or roof deck for each storage arrangement.
- Aisle dimensions between each storage array.
- Location and classification of commodities in accordance with the fire code.
- Location of commodities that are banded or encapsulated.
- Location of aerosols, flammable and combustible liquids, and hazardous materials (the storage and retail display of aerosol products, flammable and combustible liquids and hazardous materials shall also be in accordance with the fire code).
- Locations of required fire department access doors.
- Type of fire-suppression and fire-detection systems, including small hose station locations.
- Location of valves controlling the water supply for ceiling and in-rack sprinklers.
- Type, location, and specifications (including the temperature rating of fusible elements) of smoke removal systems.
- Dimension and location of transverse and longitudinal flue spaces.
- Any additional information regarding required design features, commodities, storage arrangement, and fire protection features within the high-piled storage areas.

Permit Conditions

The following is a list of WSFC requirements related to tire rebuilding plant operations. Use this form to confirm that all applicable requirements are met. Non-applicable requirements can be left blank.

General:

- Tire rebuilding plants, tire storage and tire byproduct facilities shall comply with WSFC Chapter 34, other applicable requirements of the IFC, and NFPA 13. Tire storage in buildings shall also comply with WSFC Chapter 32.
- Provide fire extinguishers in accordance with WSFC Section 906.
 - Fuel-fired vehicles operating in the storage yard shall be equipped with a minimum 2-A:20-B:C-rated portable fire extinguisher (WSFC 3408.1).

Tire Rebuilding Operations:

- Buffing operations shall be located in a room separated from the remainder of the building housing the tire rebuilding or tire recapping operations by a 1-hour fire barrier (WSFC 3403.2).

Exception: Buffing operations are not required to be separated where all of the following conditions are met

 1. Buffing operations are equipped with an approved continuous automatic water-spray system directed at the point of cutting action.
 2. Buffing machines are connected to particle-collecting systems providing a minimum air movement of 1,500 cubic feet per minute (cfm) (0.71 m³/s) in volume and 4,500 feet per minute (fpm) (23 m/s) in-line velocity.

3. The collecting system shall discharge the rubber particles to an approved outdoor noncombustible or fire-resistant container that is emptied at frequent intervals to prevent overflow.

- The buffing area shall be cleaned at frequent intervals to prevent the accumulation of rubber particles (WSFC 3403.3).
- Each spray room or spray booth where flammable or combustible solvents are applied, shall comply with Chapter 24, and requires its own separate operational permit (See *Spraying or Dipping*).

Fire Prevention:

- Open burning is prohibited in tire storage yards (WSFC 3404.1)
- Cutting, welding or heating devices shall not be operated in tire storage yards (WSFC 3404.2).
- Smoking is prohibited in tire storage yards, except in designated areas (WSFC 3404.3).
- Tire storage piles shall not be located beneath electrical power lines having a voltage more than 750 volts or that supply power to fire emergency systems (WSFC 3404.4).
- The telephone number of the fire department and location of the nearest telephone shall be posted conspicuously in attended locations (WSFC 3404.6).

Outdoor Storage (WSFC 3405):

- Tire storage shall be restricted to individual piles not exceeding 5,000 square feet of continuous area. Piles shall not exceed 50,000 cubic feet in volume or 10 feet in height.
- Individual tire storage piles shall be separated from other piles of tires or other stored products by a clear space of not less than 40 feet.
- Tire storage piles shall be located not less than 50 feet from lot lines and buildings.
- Storage yards shall be maintained free from combustible ground vegetation for a distance of 40 feet from the stored material to grass and weeds; and for a distance of 100 feet from the stored product to brush and forested areas.
- Where the bulk volume of stored product is more than 150,000 cubic feet, storage arrangement shall be in accordance with the following:
 - Individual storage piles shall comply with size and separation requirements in WSFC Sections 3405.1 through 3405.5.
 - Adjacent storage piles shall be considered to be a group, and the aggregate volume of storage piles in a group shall not exceed 150,000 cubic feet.
 - Separation between groups shall be not less than 75 feet wide.
 - Outdoor waste tire storage shall not be located under bridges, elevated trestles, elevated roadways or elevated railroads.

Indoor Storage- General (WSFC 3409):

- Where tires are stored on-tread, the dimension of the pile in the direction of the wheel hole shall be not more than 50 feet. Tires stored adjacent to or along one wall shall not extend more than 25 feet from that wall. Other piles shall be not more than 50 feet in width.

Indoor Storage over 6 feet (WSFC 3206):

- Where automatic sprinklers are required by WSFC Table 3206.2, an approved automatic sprinkler system shall be installed throughout the building or to 1-hour fire barriers constructed in accordance with Section 707 of the International Building Code. Openings in such fire barriers shall be protected by opening protectives having a 1-hour fire protection rating. The design and installation of the automatic sprinkler system and other applicable fire protection shall be in accordance with the International Building Code and NFPA 13.
- Pile dimensions, the maximum permissible storage height and pile volume shall be in accordance with WSFC Table 3206.2.
- The approved storage layout shall be verified and evaluated annually in accordance with Section 3201.3.2. Modifications or changes to the provisions of the approved storage layout shall not be made without the prior approval of the fire code official.
- Smoking shall be prohibited. Approved "No Smoking" signs shall be conspicuously posted in accordance with Section 310.

- Where smoke- and heat-removal is required by WSFC Table 3206.2 it shall be provided in accordance with WSFC Section 910.
- Where exit passageways are required by the International Building Code for egress, a Class I standpipe system shall be provided in accordance with Section 905.
- Aisles providing access to exits and fire department access doors shall be provided in high-piled storage areas exceeding 500 square feet, in accordance with WSFC Sections 3206.10.1 through 3206.10.3. Aisles separating storage piles or racks shall comply with NFPA 13. Aisles shall comply with WSFC Chapter 10.
- Exception: Where aisles are precluded by rack storage systems, alternate methods of access and protection are allowed where approved.
- Aisles crossing rack structures or storage piles, that are used only for employee access, shall be not less than 24 inches wide.
- Aisles in sprinklered buildings shall be not less than 44 inches wide. Aisles shall be not less than 96 inches wide in high-piled storage areas exceeding 2,500 square feet in area, that are accessible to the public and designated to contain high-hazard commodities. Aisles shall be not less than 96 inches wide in areas open to the public where mechanical stocking methods are used.
- Aisles providing access to exits and fire department access doors shall be provided in high-piled storage areas exceeding 500 square feet, in accordance with WSFC Sections 3206.10.1 through 3206.10.3. Aisles separating storage piles or racks shall comply with NFPA 13. Aisles shall comply with WSFC Chapter 10.
- Exceptions: (1) Aisles in high-piled storage areas exceeding 2,500 square feet (232 m²) in area, that are open to the public and designated to contain high-hazard commodities, and that are protected by a sprinkler system designed for multiple-row racks of high-hazard commodities, shall be not less than 44 inches wide, and (2) isles that are in high-piled storage areas exceeding 2,500 square feet in area, not open to the public and protected by a sprinkler system designed for multiple-row racks, shall be not less than 24 inches wide.
- Aisles in non-sprinklered buildings shall be not less than 96 inches wide.
- The required aisle width shall extend from floor to ceiling. Rack structural supports and catwalks are allowed to cross aisles at a minimum height of 6 feet 8 inches above the finished floor level, provided that such supports do not interfere with fire department hose stream trajectory.
- Dead-end aisles shall not exceed 20 feet in length in Group M occupancies. Dead-end aisles shall not exceed 50 feet in length in all other occupancies.
- Exceptions: Dead-end aisles are not limited where the length of the dead-end aisle is less than 2.5 times the least width of the dead-end aisle.
- Portable fire extinguishers shall be provided in accordance with WSFC Section 906.
- Clearance from ignition sources shall be provided in accordance with WSFC Section 305.
- Where required by the fire code official, a visual method of indicating the maximum allowable storage height shall be provided.
- The fire safety features required in WSFC Table 3206.2 shall extend to the lesser of 15 feet beyond the high-piled storage area or a full height wall. Where portions of high-piled storage areas have different fire protection requirements because of commodity, method of storage or storage height, the fire protection features required by WSFC Table 3206.2 within this area shall be based on the most restrictive design requirements.

Fire Department Access Doors (WSFC 3206.7):

- Fire department access doors are not required in an exterior wall that does not face a fire apparatus access road provided that all of the following conditions occur:
 - The opposite exterior wall faces a fire apparatus access road.
 - The opposite exterior wall is provided with fire department access doors.
 - The opposite exterior wall is provided with fire department access doors.
 - The building is equipped throughout with an automatic sprinkler system in accordance with WSFC Section 903.3.1.1.

- Where exterior walls surrounding high-piled storage areas face fire apparatus access roads, such walls shall be provided with fire department access doors.
- Fire department access doors shall be able to be accessed without the use of a ladder.
- Fire department access doors shall be labeled on the exterior side with the following sign or other approved sign:

FIRE DEPARTMENT ACCESS DOOR - DO NOT BLOCK

- The lettering shall be in a contrasting color to the background. Letters shall have a minimum height of 2 inches with a minimum stroke of 3/8 inch.
- The required fire department access doors shall be distributed such that the lineal distance between adjacent fire department access doors does not exceed 125 feet measured center to center.
- Exception: The linear distance between adjacent access doors shall not exceed 200 feet in existing buildings where change in occupancy is not proposed.
- Fire department access doors shall be not less than 3 feet in width and 6 feet 8 inches in height. Roll-up doors shall not be considered fire department access doors unless approved.
- Locking devices on fire department access doors shall be approved.
- Where fire department access doors are required, a key box shall be installed in accordance with WSFC Section 506.1. The key box shall contain keys or devices to allow for entry through the fire department access doors.

Fencing (WSFC 3407):

- Where the bulk volume of stored material is more than 20,000 cubic feet, a firmly anchored fence or other approved method of security that controls unauthorized access to the storage yard shall surround the storage yard.
- The fence shall be constructed of approved materials and shall be not less than 6 feet high and provided with gates not less than 20 feet wide.
- Gates to the storage yard shall be locked when the storage yard is not staffed.
- Gateways shall be kept clear of obstructions and be fully openable at all times.

Fire Department Access (WSFC 3406):

- New tire storage yards shall be provided with fire apparatus access roads in accordance with WSFC Section 503 and Section 3406.2. Existing tire storage yards shall be provided with fire apparatus access roads where required in WSFC Chapter 11.
- Fire apparatus access roads shall be located within all pile clearances identified in WSFC Section 3405.4 and within all fire breaks required in WSFC Section 3405.5. Access roadways shall be within 150 feet of any point in the storage yard where storage piles are located, not less than 20 feet from any storage pile.
- A public or private fire protection water supply shall be provided in accordance with WSFC Section 507. The water supply shall be arranged such that any part of the storage yard can be reached by using not more than 500 feet of hose (WSFC 3408.1).

NOTE: *This is not intended to be an all-inclusive list. The WSFC requirements listed are intended to ensure that we have adequate information to begin a review of the application. Additional information may be required.*

I understand that all applicable codes apply and that other regulatory codes may also apply. Errors and/or omissions on the plans and corrections from field inspections are the responsibility of the owner/contractor. All work is subject to compliance with City of Vancouver ordinances and laws of the State of Washington.

APPLICANT NAME: _____ APPLICATION DATE: _____

APPLICANT SIGNATURE: _____