

# **Fire Install/Operate Permit Application** Energy Storage Systems



www.cityofvancouver.us/fire-department

International Fire Code as adopted by VMC 16.04 (Washington State Fire Code)

#### **Permitting Requirements**

A WSFC installation permit is required to install an Energy Storage system regulated by section 1207. A permit is required for installation of or modification to Capacitor Energy Storage systems and related equipment. A WSFC operational permit is required for stationary and mobile energy storage systems regulated by Section 1207.

| Project Information                                    | tion  |       |            |               |         |                |                       |     |
|--|---|-------|------------|---------------|---------|----------------|-----------------------|-----|
| Site Address   |   |       |            | Business Na   | me      |                |                       |     |
| <b>Related City Permits</b>                            |   |       |            | Building Oce  | cupancy | Classification |                       |     |
| Contact Name   |   |       |            | Building Use  | ė       |                |                       |     |
| Office Phone   |   |       | Cellular   |               |         | Email          |                       |     |
| Applicant Information                                  |   |       |            |               |         |                |                       |     |
| Company Name   |   |       |            | Address       |         |                |                       |     |
| Contact Name   |   |       |            |               |         |                |                       |     |
| Office Phone   |   |       | Cellular   |               |         | Email          |                       |     |
| Contractor   |   |       |            |               |         |                |                       |     |
| Company Name   |   |       |            | Address       |         |                |                       |     |
| Contact Name   |   |       |            |               |         |                |                       |     |
| Office Phone   |   |       | Cellular   |               |         | Email          |                       |     |
| Building   |   |       |            |               |         |                |                       |     |
| Fire Sprinklers  | □Yes  | □No   | Fire       | □Yes          | □No     | Emergency      | □Yes                  | □No |
|  |   |       | Alarm      |               |         | Power          |                       |     |
| Automatic smoke or radiant heat detection per 907.2.23 |   |       |            |               |         |                | er a separate permit. |     |
| Energy Storage Quantities (ref: Table 1207.1.1)        |   |       |            |               |         |                |                       |     |
| Technology   |   |       | Energy Cap | oacity in kWh |         |                |                       |     |
| Technology   |   |       | Energy Cap | oacity in kWh |         |                |                       |     |
| Description of V                                       | ontact Name   ffice Phone   Cellular   ontractor   ompany Name   ontact Name   ffice Phone   Cellular   Email   uilding   re Sprinklers   Yes   No   Alarm   Power   Ves   No   Power   utomatic smoke or radiant heat detection per 907.2.23   Yes   No   Cenology   Energy Capacity in kWh   echnology   Energy Capacity in kWh |       |            |               |         |                |                       |     |
| System Equipment is                                    | : Station   | ary 🗌 | Mobile     |               |         |                |                       |     |

# Submittal Checklist

#### Electronic Plan Standards

#### File Naming Standards:

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

#### 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. One page per upload in plans.

City of Vancouver, Washington

**PIANS** 

#### 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. Multiple pages allowed per upload in documents.

#### 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

PLANS - Site plan to include a north directional indicator and adjacent street. Show building footprint with related accesses routes and fire protection equipment, such as fire hydrants and fire department connections.

PLANS – Scale drawings showing the equipment location within the building.

- 1. Location and layout diagram of the room or area in which the ESS is to be installed.
- 2. Details on the hourly *fire-resistance ratings* of assemblies enclosing the ESS.
- 3. The quantities and types of ESS to be installed.
- 4. Manufacturer's specifications, ratings, and listings of each ESS.
- 5. Description of energy (battery) management systems and their operation.
- 6. Location and content of required signage.

7. Details on fire suppression, smoke or fire detection, thermal management, ventilation, exhaust, and *deflagration* venting systems, if provided.

8. Support arrangement associated with the installation, including any required seismic restraint.

9. A commissioning plan complying with Section 1207.2.1.

10. A decommissioning plan complying with Section 1207.2.3.

DOCUMENTS – Completed Energy Storage System Permit Application – (this document)

DOCUMENTS – Narrative explaining the commissioning, decommissioning, operation and maintenance in accordance with 1207.2

DOCUMENTS – Equipment UL listing documents (UL 9540, UL 1741, etc.)

## **Document Details**

The following is a list of information required on all plan submittals. The plan shall be drawn to 1/8'' = 1'-0'' minimum scale. If scale drawings are not possible, all measurements shall be called out in the drawings. The applicant is required to submit all this information so an accurate and timely review may be completed:

**Hazard mitigation analysis.** A failure modes and effects analysis (FMEA) or other approved hazard mitigation analysis shall be provided in accordance with Section 104.8.2 under any of the following conditions:

1. Where ESS technologies not specifically identified in Table 1207.1 are provided.

2. More than one ESS technology is provided in a room or enclosed area where there is a potential for adverse interaction between technologies.

3. Where allowed as a basis for increasing maximum allowable quantities. See Section 1207.5.2.

4. Fault condition consequences evaluation.

**Fire Mitigation Personnel.** List names and contact information for designation fire mitigation personnel in accordance with 12.07.1.6.1.

#### Emergency response plans. Provide the documented emergency response plans and procedures.

#### **Plan Details**

The following is a list of information required on all plan submittals. The plan shall be drawn to 1/8'' = 1'-0'' minimum scale. If scale drawings are not possible, all measurements shall be called out in the drawings. The applicant is required to submit all this information so an accurate and timely review may be completed:

**Site plan/floor plan** - indicating the location of the equipment.

- 1. High-voltage areas that could be hazardous to emergency responders.
- 2. Egress paths and doors, exit hardware, separation from other means of egress.
- 3. Portable fire extinguisher types, sizes, and locations
- 4. Electrical disconnects.
- 5. Working clearances
- 6. Fire-resistance-rated separations.
- 7. Seismic and structural design.
- 8. Vehicle impact protection.
- 9. Combustible storage.
- 10. Toxic and highly toxic gases. Hazardous exhaust systems.
- 11. Enclosure dimensions.
- 12. Explosion (deflagration) venting or explosion prevention systems where required by 911.1 and 1207.6.3
- 13. Egress doors including swing and hardware per 1010.2.9.2

Signage - The signage shall include the following or equivalent:

1. "ENERGY STORAGE SYSTEM," "BATTERY STORAGE SYSTEM," "CAPACITOR ENERGY STORAGE SYSTEM" or the equivalent.

2. The identification of the electrochemical ESS technology present.

3. "ENERGIZED ELECTRICAL CIRCUITS."

4. Where water-reactive electrochemical ESS are present, the signage shall include "APPLY NO WATER."

5. Current contact information, including phone number, for personnel authorized to service the equipment and for fire mitigation personnel required by Section 1207.1.6.1.

TABLE 1207.5 MAXIMUM ALLOWABLE QUANTITIES OF

Security of installations. Method of securing installation from unauthorized personnel.

#### Maximum allowable quantities. List quantities.

| 1   | Detters to use a   | ELECTROCHE   | MICAL ESS  |  |
|---|--|--|--|--|
| 1.  | Battery types.   | TECHNOLOGY   | MAXIMUM ALLOWABLE<br>QUANTITIES *                  |  |
| 2.  | Capacitors   | STORAGE B  | ATTERIES   |  |
| з   | kW/h for each type and totals  | Flow batteries <sup>b</sup>  | 600 kWh  |  |
| 5.  | with of cach type and totals   | Lead-acid, all types   | Unlimited  |  |
| 4. Separations into groups not exceeding 50 kWh: 3 feet minim | Separations into groups not exceeding 50 kWh: 3 feet minimum clearances. | Lithium-ion  | 600 kWh  |  |
|   |  | Nickel metal hydride (Ni-MH)   | Unlimited  |  |
|   |  | Nickel-cadmium (Ni-Cd)   | Unlimited  |  |
|   |  | Other battery technologies   | 200 kWh  |  |
|   |  | CAPACITORS   |  |  |
|   |  | All types  | 20 kWh   |  |
|   |  | OTHER ELECTROCHEMICAL ESS  |  |  |
|   |  | All types  | 20 kWh   |  |
|   |  | For SI: 1 kilowatt hour = 3.6 megajoules.  |  |  |
|   |  | <ul> <li>For electrochemical ESS units rated<br/>voltage times the amp-hour rating di</li> </ul> | in amp-hours, kWh shall equal i<br>wided by 1,000. |  |
|   |  | <ul> <li>b. Shall include vanadium, zinc-bron<br/>flowing electrolyte two technologie</li> </ul> | nine, polysulfide-bromide and o                    |  |

| Indicate applicability of this section                            |  | COMPLIANCE REQUIRED® BATTERY TECHNOLOGY OTHER ESS AND BATTERY CAPACIT  |   |   |  |  |                           |  |          |  |
|---|--|--|---|---|--|--|---------------------------|--|----------|--|
| indicate applicability of this section.                           | Feature  |  | Lead-acid   | Ni-Cd and Ni-MH   | Lithium-ion  | Flow   | TECHNOLOGIES <sup>6</sup> | ESS  |          |  |
|   |  | Exhaust ventilation  | 1207.6.1  | Yes   | Yes  | No   | Yes                       | Yes  | Ye       |  |
|   |  | Explosion control  | 1207.6.3  | Yes"  | Yes"   | Yes  | No                        | Yes  | Ye       |  |
|   |  | Satety caps         1201.6.4         Yes         Yes         No           Spill control and<br>neutralization         1207.6.2         Yes <sup>c</sup> No   |   | INO   | INO  | Tes  | Yes                       |  |          |  |
|   |  |  |   | No  | Yes  | Yes  |                           |  |          |  |
|   |  | Thermal runaway  | 1207.6.5  | Yes <sup>d</sup>  | Yes  | Yes*   | No Yes <sup>e</sup>       |  | Ye       |  |
|   |  | <ul> <li>operate at less than 50 VAR.</li> <li>b) Protection shall be provide<br/>tion why the protection is no</li> <li>c) Applicable to vented-type (d. Not required for vented-type (d. Not required for vented-type (UL 1973.))</li> </ul> | and 60 VDC<br>to mecessary b<br>(i.e., flooded) :<br>te (i.e., flooded) :<br>te (i.e., flooded) : | <br>nentation acce<br>based on the te<br>nickel-cadmiu<br>d) lead-acid ba<br>tted to be part  | ptable to the fire coc<br>chnology used.<br>m and lead-acid batu<br>utteries.<br>of a battery manage | le official is prov<br>teries.<br>ment system that | vided in acco             | rdance with Section 104.8.2 that<br>aluated with the battery as part : | provides |  |
| Indoor installations  |  | TABLE 1207.7   |   |   |  |  |                           |  |          |  |
|   | 1  |  |   |   | INSTALLATIONS  |  |                           | 1  |          |  |
| Indicate applicability of this section.                           |  | Feature  |   | Section   | DEDICATE   | D-USE BUILD  | INGS <sup>a</sup>         | NONDEDICATED-USE   | BUILDI   |  |
|   | Dwelling units and s   | leeping units  | 1   | 207.7.3   | 1  | NA   |                           | Yes  |          |  |
|   | Elevation  | 1.0  | 1   | 207.5.3   | ź  | Yes  |                           | Yes  |          |  |
|   | Fire suppression sys   | ems  | 1   | 207.5.5   | 2  | Yes <sup>c</sup>                                   |                           | Yes  |          |  |
|   | Fire-resistance-rated  | separations  | 1   | 207.7.4   | 0  | Yes  |                           | Yes  |          |  |
|   | General installation   | General installation requirements 1207.4 Yes   |   | Yes   |  | Yes  |                           |  |          |  |
|   | Maximum allowable quantities   |  | 1   | 207 5 2   | No   |  |                           | Yes  |          |  |
|   | Size and separation  |  | 1   | 207.5.1   | Yes  |  |                           | Yes  |          |  |
|   | Smoke and automati   | Smoke and automatic fire detection <sup>e</sup> 1207.5.4 Yes <sup>d</sup>  |   |   | Yes  |  |                           |  |          |  |
|   | Technology specific  | Technology specific protection 1207.6 Ves  |   |   | Yes  |  |                           |  |          |  |
|   | <ul> <li>a. See Section 1207.7.1.</li> <li>b. See Section 1207.7.2.</li> <li>c. Where approved by the fire code official, fire suppression systems are permitted to be omitted in dedicated-use buildings located more than 100 fe m) from buildings, lot limes, public ways, stored combustible materials, hazardous materials, high-piled stock and other exposure hazards.</li> <li>d. Where approved by the fire code official alarm signals are not required to be transmitted to a central station, proprietary or remote station service in dance with NFPA 72, or a constantly attended location where local fire alarm annunciation is provided and trained personnel are always present.</li> <li>e. Lead-acid and nickel-cadmium battery systems installed in Group U buildings and structures less than 1,500 square feet (139 m<sup>3</sup>) under the ex control of communications utilities, and operating at less than 50 VAC and 60 VDC in accordance with NFPA 76, are not required to have an aj automatic smoke or fire detection system.</li> </ul> |  |   |   |  |  |                           |  |          |  |
|   |  |  |   |   | BLE 1207.8   | TIONS <sup>a</sup>                                 |                           |  |          |  |
| Outdoor installations.  |  |  | 011   |   |  | 5.50 M 4   | 1                         |  |          |  |
| Outdoor installations.<br>Indicate applicability of this section. | C  | OMPLIANCE REQUIRED   | OU  |   | DEMOTE INCT  | LI ATIONES   |                           |  | DOCUT    |  |
| Outdoor installations.<br>Indicate applicability of this section. | C C  | OMPLIANCE REQUIRED   | OU<br>Section   | n   | REMOTE INST  | ALLATIONS <sup>a</sup>                             | I                         | ISTALLATIONS NEAR EX   | POSUR    |  |
| Outdoor installations.<br>Indicate applicability of this section. | C<br>F<br>All ESS installation   | OMPLIANCE REQUIRED eature 15   | Section<br>1207.  | n<br>4  | REMOTE INSTA   | ALLATIONS  | n                         | Yes  | POSUR    |  |
| Outdoor installations.<br>Indicate applicability of this section. | C<br>F<br>All ESS installation<br>Clearance to expos   | OMPLIANCE REQUIRED eature 15 uures   | Section<br>1207.<br>1207.8  | n<br>4<br>.3  | REMOTE INSTA<br>Yes<br>Yes   | ALLATIONS <sup>®</sup>                             |                           | Yes<br>Yes   | POSUR    |  |
| Outdoor installations.<br>Indicate applicability of this section. | All ESS installation<br>Clearance to expos<br>Fire suppression sy  | OMPLIANCE REQUIRED<br>eature<br>IS<br>urres<br>stems   | Section<br>1207.<br>1207.8<br>1207.5  | n 4<br>.3<br>.5   | REMOTE INSTA<br>Yes<br>Yes<br>Yes  | ALLATIONS <sup>a</sup>                             |                           | Yes<br>Yes<br>Yes  | POSUF    |  |
| Outdoor installations.<br>Indicate applicability of this section. | All ESS installatio<br>Clearance to expos<br>Fire suppression sy<br>Maximum allowab  | OMPLIANCE REQUIRED<br>eature<br>15<br>ures<br>stems<br>le quantities   | Section<br>1207.<br>1207.8<br>1207.5<br>1207.5  | n<br>4<br>.3<br>.5<br>5<br>2.2  | REMOTE INSTA<br>Yes<br>Yes<br>Yes<br>No  | ALLATIONS <sup>a</sup>                             |                           | Yes<br>Yes<br>Yes<br>Yes<br>Yes  | POSUF    |  |
| Outdoor installations.<br>Indicate applicability of this section. | All ESS installatio<br>Clearance to expos<br>Fire suppression sy<br>Maximum allowab<br>Maximum enclosu   | OMPLIANCE REQUIRED eature Is stems le quantities re size   | Section<br>1207.<br>1207.8<br>1207.5<br>1207.5<br>1207.5  | n<br>4<br>.3<br>.5<br>.2<br>.6  | REMOTE INSTA<br>Yes<br>Yes<br>Yes<br>No<br>Yes   | ALLATIONS <sup>a</sup>                             |                           | Yes<br>Yes<br>Yes<br>Yes<br>Yes  | POSUF    |  |
| Outdoor installations.<br>Indicate applicability of this section. | All ESS installation<br>Clearance to expos<br>Fire suppression sy<br>Maximum allowab<br>Maximum enclosu<br>Means of egress se  | OMPLIANCE REQUIRED<br>eature<br>Is<br>ures<br>stems<br>le quantities<br>re size<br>paration  | Section<br>1207.<br>1207.8<br>1207.5<br>1207.5<br>1207.5<br>1207.5                                | n<br>4<br>.3<br>.5<br>.2<br>.6<br>.8  | REMOTE INSTA<br>Yes<br>Yes<br>No<br>Yes<br>Yes   | ALLATIONS <sup>a</sup>                             |                           | Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes                          | POSUF    |  |
| Outdoor installations.<br>Indicate applicability of this section. | All ESS installation<br>Clearance to expos<br>Fire suppression sy<br>Maximum allowab<br>Maximum enclosu<br>Means of egress se<br>Size and separation   | OMPLIANCE REQUIRED<br>eature<br>15<br>ures<br>stems<br>le quantities<br>e size<br>paration   | Section<br>1207.<br>1207.8<br>1207.5<br>1207.5<br>1207.5<br>1207.5<br>1207.5                      | n 4   | REMOTE INSTA<br>Yes<br>Yes<br>No<br>Yes<br>Yes<br>No   | ALLATIONS <sup>a</sup>                             |                           | Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes                   | POSUR    |  |
| Outdoor installations.<br>Indicate applicability of this section. | All ESS installation<br>Clearance to expos<br>Fire suppression sy<br>Maximum allowab<br>Maximum enclosu<br>Means of egress se<br>Size and separation<br>Smoke and automa   | OMPLIANCE REQUIRED<br>eature<br>15<br>ures<br>stems<br>le quantities<br>re size<br>paration<br>tic fire detection  | OU<br>Section<br>1207.5<br>1207.5<br>1207.5<br>1207.5<br>1207.5<br>1207.5<br>1207.5               | n<br>4<br>.3<br>.5<br>.2<br>.6<br>.8<br>.1<br>.4  | REMOTE INSTA<br>Yes<br>Yes<br>No<br>Yes<br>Yes<br>No<br>Yes  | ALLATIONS <sup>a</sup>                             |                           | Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes            |          |  |
| Outdoor installations.<br>Indicate applicability of this section. | All ESS installation<br>Clearance to expos<br>Fire suppression sy<br>Maximum allowab<br>Maximum enclosu<br>Means of egress se<br>Size and separation<br>Smoke and automa<br>Technology-specifi   | OMPLIANCE REQUIRED<br>eature<br>15<br>ures<br>stems<br>le quantities<br>re size<br>paration<br>tic fire detection<br>ic protection   | OU<br>Section<br>1207.8<br>1207.5<br>1207.5<br>1207.5<br>1207.5<br>1207.5<br>1207.5<br>1207.5     | n 4 3 5 5 2 6 8 1 4 6 | REMOTE INSTA<br>Yes<br>Yes<br>No<br>Yes<br>No<br>Yes<br>No<br>Yes                                    | ALLATIONS <sup>a</sup>                             |                           | Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes     | POSUF    |  |

d. In outdoor walk-in units, spacing is not required between ESS units and the walls of the enclosure.

| Special installations.                  |   | TABLE 1207.9<br>SPECIAL ESS INSTAL | LATIONS                  |                   |                  |  |
|---|---|------------------------------------|--------------------------|-------------------|------------------|--|
| Indicate applicability of this section. | COMPLIANCE REQU                                 | BOOLTOBE                           | ODEN                     |                   |                  |  |
| indicate applicability of this section. | Feature   | Section                            | ROOFTOPS                 | OPEN PARKING GARA |                  |  |
|   | All ESS installations                           | 1207.4                             | Yes                      |                   | Yes              |  |
|   | Clearance to exposures                          | 1207.9.3                           | Yes                      |                   | Yes              |  |
|   | Fire suppression systems                        | 1207.9.4                           | Yes                      |                   | Yes              |  |
|   | Maximum allowable quantities                    | 1207.5.2                           | Yes                      |                   | Yes              |  |
|   | Maximum enclosure size                          | 1207.5.6                           | Yes                      |                   | Yes              |  |
|   | Means of egress separation                      | 1207.5.8                           | Yes                      |                   | Yes              |  |
|   | Open parking garage installations               | 1207.9.6                           | No                       | 8                 | Yes              |  |
|   | Rooftop installations                           | 1207.9.5                           | 1207.9.5 Yes             |                   | No               |  |
|   | Size and separation 1207.5.1                    |                                    | Yes                      | Yes               |                  |  |
|   | Smoke and automatic fire detection 1207.5.4 Yes |                                    | Yes                      |                   |                  |  |
|   | Technology-specific protection                  | 1207.6                             | Yes                      | Yes               |                  |  |
| Indicate applicability of this section. |   |                                    | TABLE 120                | 7.10<br>GE SYSTEM | S (ESS)          |  |
|   |   | COMPL                              |                          |                   |                  |  |
|   |   | Featu                              | re                       | Section           | DEPLOYMENT       |  |
|   |   | All ESS installation               | All ESS installations    |                   | Yes <sup>b</sup> |  |
|   |   | Fire suppression sy                | Fire suppression systems |                   | Yes <sup>c</sup> |  |
|   |   | Maximum allowab                    | le quantities            | 1207.5.2          | Yes              |  |
|   |   | Maximum enclosu                    | re size                  | 1207.5.6          | Yes              |  |
|   |   | Means of egress se                 | paration                 | 1207.5.8          | Yes              |  |
|   |   | Size and separation                | 1                        | 1207.5.1          | Yes <sup>d</sup> |  |
|   |   | Smoke and automa                   | tic fire                 | 101212-12/12      |                  |  |

# **Fire detection system.** An approved automatic smoke detection system or radiant energy-sensing fire detection system complying with Section 907.2 shall be installed in rooms, indoor areas and walk-in units containing electrochemical ESS. An approved radiant energy-sensing fire detection system shall be installed to protect open parking garage and rooftop installations. Alarm signals from detection systems shall be transmitted to a central station, proprietary or remote station service in accordance with NFPA 72, or where approved, to a constantly attended location.

detection

Vegetation control

a. See Section 1207.10.2.

requirements.

of the enclosure.

Technology-specific protection

ted to use approved temporary connections.

for mobile ESS deployed 30 days or less.

1207.5.4

1207.6

1207.5.7

b. Mobile operations on wheeled vehicles and trailers shall not be required to comply with Section 1207.4.4 seismic and structural load

c. Fire suppression system connections to the water supply shall be permit-

d. In walk-in units, spacing is not required between ESS units and the walls

e. Alarm signals are not required to be transmitted to an approved location

Yese

Yes

Yes

**Fire suppression systems.** Rooms and areas within buildings and walk-in units containing electrochemical ESS shall be protected by an automatic fire suppression system designed and installed in accordance with one of the following:

1. An *automatic sprinkler system* designed and installed in accordance with Section 903.3.1.1 with a minimum density of 0.3 gpm/ft<sub>2</sub> (1.14 L/min) based on the *fire area* or 2,500 square-foot (232 m<sub>2</sub>) design area, whichever is smaller.

2. Where *approved*, an *automatic sprinkler system* designed and installed in accordance with Section 903.3.1.1 with a sprinkler hazard classification based on large-scale fire testing complying with Section 1207.1.5.

3. The following alternative automatic fire-extinguishing systems designed and installed in accordance with Section 904, provided that the installation is *approved* by the *fire code official* based on large-scale fire testing complying with Section 1207.1.5:

3.1. NFPA 12, Standard on Carbon Dioxide Extinguishing Systems.

3.2. NFPA 15, Standard for Water Spray Fixed Systems for Fire Protection.

3.3. NFPA 750, Standard on Water Mist Fire Protection Systems.

3.4. NFPA 2001, Standard on Clean Agent Fire-Extinguishing Systems.

3.5. NFPA 2010, Standard for Fixed Aerosol Fire-Extinguishing Systems.

**Exception:** Fire suppression systems for lead-acid and nickel-cadmium battery systems at facilities under the exclusive control of communications utilities that operate at less than 50 VAC and 60 VDC shall be provided where required by NFPA 76. **1207.5.5.1 Water-reactive systems.** Electrochemical ESS that utilize water-reactive materials shall be protected by an *approved* alternative automatic fire extinguishing system in accordance with Section 904, where the installation is *approved* by the *fire code official* based on large-scale fire testing complying with Section 1207.1.5.

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 SIGNAGTURE: \_