



Fire Installation Permit Application



SITE LOCATION

Site address: _____
Project name/Tenant: _____
Associated Permits: _____
Property owner: _____

Office Use Only

PROJ: _____ DATE: _____
BLDG: _____ APP EXPIRES: _____
FIRE: _____ ACCEPTED BY: _____
PAYMENT METHOD: _____ TYPE: _____

APPLICANT INFORMATION

Contact Person: _____ Address: _____
Company Name: _____ City: _____
Phone: _____ Fax: _____ State: _____ Zip: _____
E-mail: _____

CONTRACTOR

Contractor Name: _____ State Contractors License #: _____
Contact Person: _____ Expiration Date: _____
Business address: _____ Redmond Business License #: _____
City: _____ Phone: _____ Fax: _____
State: _____ Zip: _____ E-mail: _____

DESCRIPTION OF WORK

TYPE OF PERMIT

Note: Check the appropriate scope of work to determine which permit you are applying for. **ONLY ONE PERMIT TYPE IS ALLOWED PER APPLICATION.** BOTH A PERMIT APPLICATION AND ASSOCIATED SUBMITTAL CHECKLIST WHERE APPLICABLE ARE REQUIRED AT TIME OF PERMIT APPLICATION. (Submittal Checklists for each Permit Type can be found at www.redmond.gov/prevention under "Quick Links", Forms and Fire Codes/Standards)

Battery Systems:

Quantity: _____

Cryogenic Fluids:

Quantity: _____

Industrial Ovens:

Quantity: _____

Emergency Responder Radio:

Quantity: _____

Solar Photovoltaic Power Systems:

Quantity: _____

HPM Facilities (check only one):

No submittal checklist required. See Deputy Fire Marshal.

Level 1: 1 to 4 ct. specialized equipment

Level 2: 5 to 8 ct. specialized equipment

Level 3: Any new facility

Compressed Gases:

No submittal checklist required.

Quantity: _____

Private Fire Hydrants:

No submittal checklist required.

Quantity: _____

TYPE OF PERMIT (CONTINUED)

LP gas Store/Handle/Use/Dispense *(check only one):*

- Level 1: $\leq 1,000$ # aggregate
- Level 2: $> 1,000 \leq 4,000$ # aggregate
- Level 3: $> 4,000$ # aggregate

Places of Assembly *(check only one):*

- Level 1: $> 50 \leq 100$ occupant load
- Level 2: $> 100 \leq 500$ occupant load
- Level 3: > 500 occupant load

Refrigeration Equipment *(check only one):*

- Level 1: Min. 220# Group A1; 30# other refrigerant not level 2 or 3
- Level 2: Refrigerant machinery room
- Level 3: Equipped with treatment/flaring/ammonia diffusion system

Spraying and Dipping *(check only one):*

- Level 1: 1 spray area, dip tank, powder coating ops/fire area
- Level 2: $> 1 \leq 3$ spray areas, dip tanks, powder coating ops/fire areas
- Level 3: > 3 spray area, dip tanks, powder coating ops/fire areas

Flammable/Combustible Liquids *(check only one):*

(To install, alter, remove, or abandon a tank storing flammable/combustible liquids)

- Level 1: $>$ Permit amount & ≤ 500 gallons
- Level 2: > 500 gallons $\leq 1,000$ gallons
- Level 3: $> 1,000$ gallons

Hazardous Materials *(check only one):*

- Level 1: $>$ Permit amount of 1 to 5 materials
- Level 2: $>$ Permit amount of 6 to 10 materials
- Level 3: $>$ Permit amount of more than 10 materials

High Piled Storage *(check only one):*

- Level 1: $>$ Permit amount to 2,500 sf
- Level 2: $> 2,500$ sf to 12,000 sf
- Level 3: $> 12,000$ sf

Smoke Control Systems *(check only one):*

- Level 1: Modify Existing
- Level 2: Prescriptive System
- Level 3: Performance-Based Design

I understand that all applicable codes 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 Redmond ordinances and laws of the State of Washington.

APPLICANT NAME

SIGNATURE



Emergency Responder Radio Submittal Checklist

Updated Feb. 1, 2018



Electronic Plan Standards

File Naming Standards:

Electronic plans and documents shall be named as specified in **bold type** under "Permitting Requirements". For example, the seating plan must be named **"Seating Plan"**.

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.

Document Orientation:

All **plans** must be uploaded in **"Landscape"** format in the horizontal position. All other documents can be in "Portrait" format.

PROJECT INFO

Site Address: _____ Associated Permits: _____
Project Name/Tenant: _____ Property Owner: _____

PERMITTING REQUIREMENTS

An IFC fire installation permit is required to install an emergency responder radio system in a building or space. A permit is required for installation of or modification to emergency responder radio coverage systems and related equipment. In new buildings, all buildings shall have approved radio coverage for emergency responders.

The following information is required at time of application for the fire installation permit:

- Completed **fire installation permit application**
- Completed **emergency responder radio submittal checklist**. Check all checkboxes that are applicable to your project.
- Site plan**
- Eastside Public Safety Communication Agency (EPSCA) authorization letter (contact 425-556-2516)**
- Manufacturer's **cut sheets** for a National Electrical Manufacturer's Association (NEMA) 4 cabinet, battery backup (if using battery back up as standby power), and other equipment being installed.
- Proof of a valid FCC-issued general radio operator's license (2015 International Fire Code 510.5.2)
- A certification of in-building system training issued by a nationally recognized organization/school or by the manufacturer of the equipment being installed. (2015 IFC 510.5.2)

PLANS

The following is a list of information required on all plan submittals for review of an **emergency responder radio** system. The plan shall be drawn to 1/8"= 1'-0" minimum scale. The applicant is required to submit all of the following information so an accurate and timely review may be done:

- Location of signal booster shall be installed in a NEMA 4 waterproof cabinet
- Location of backup battery system, if being used
- Location of antennas
- Floor diagrams for each floor with current signal strengths

INSTALLATION REQUIREMENTS

General Requirements

Acceptance testing for emergency responder radio systems is required upon completion of installation. It is the building owner's responsibility to have the radio system tested by qualified personnel to ensure a minimum of 95% two-way coverage on each floor of the building.

A report shall be submitted to the Redmond Fire Prevention Division at the conclusion of acceptance testing. It shall contain a site plan, signal strengths at each location tested, and other relevant information.

A representative of the Redmond Fire Prevention Division may oversee the acceptance test. Acceptance testing is also required whenever changes occur to the building that would materially change the original field performance test. This floor plan shall be laminated and posted near the NEMA 4 cabinet.

Minimum signal strength of -95 dBm shall be available in 95% of all areas of the building and 99% in elevators (measured at the primary recall floor), stair shafts, and fire command centers when transmitted from the closest regional 800 MHz radio system.

Standby Power Supply

Emergency responder radio coverage systems shall be provided with standby power in accordance with 2015 IFC, section 604. The standby power supply shall be capable of operating the emergency responder radio system for a duration of not less than 24 hours.

Cabinet Signal Booster Requirements

If used, signal boosters shall meet the following requirements:

1. All signal booster components shall be contained in a NEMA 4-type waterproof cabinet.
2. Battery systems used for the emergency power source shall be contained in a NEMA 4-type waterproof cabinet.
3. Equipment shall have FCC certification prior to installation.
4. A low voltage electrical permit is required, and shall be signed off by an electrical inspector, prior to requesting a fire department fire alarm final inspection.

Identification

Doors into rooms or buildings containing emergency responder radio systems shall be provided with approved signs stating **"Emergency Responder Radio System"**

Buildings equipped with emergency responder radio systems shall have signage at fire alarm panel that states, "This building is equipped with an emergency responder radio coverage system."

Fire Alarm Monitoring

The system shall be supervised by the building fire alarm system to provide automatic alarming for the following trouble conditions:

1. Malfunction of the RF signal booster
2. Antenna malfunctions
3. Loss of AC power
4. Backup battery charger failure
5. The signal booster system and battery system shall be electrically supervised and monitored by a supervisory service, or when approved by the fire code official, shall sound an audible signal at a constantly attended location.

These conditions can all be grouped into one trouble signal that is annunciated at the fire alarm panel and at central station. The signal shall be identified as an "emergency responder radio" trouble signal. They will be tested by a RFD inspector at the time of final inspection of this permit.

TESTING REQUIREMENTS

Upon completion of the installation, the building owner shall have the radio system tested to verify that two-way coverage on each floor of the building is not less than 95 percent to comply with the 2015 IFC, section 510.

1. Each floor of the building shall be divided into a grid of a minimum of 20 approximately equal test areas.
2. The test shall be conducted using a calibrated portable radio of the latest brand and model used by the agency communicating through the agency's radio communications system.
3. Failure of not more than two nonadjacent test areas shall not result in failure of the test.
4. In the event that 3 or more of the test areas fail the test, see IFC section 5.10.5.3, items 4–7 for additional testing information.

FINAL INSPECTION CHECKLIST

1. Confirmation of NEMA 4 installation
2. Confirmation of 24-hour backup power
3. Proper paperwork for minimum of 20-grid testing for both 95% and 99% areas within the building
4. Final EPSCA paperwork, to include uplink and downlink
5. Proper signage near fire alarm panel and on doorway to equipment
6. Site plan posted near fire alarm control panel
7. Alarm signals confirmed with central station
8. The signal booster plug is secured in a way that it does not accidentally fall out of the electrical outlet