



Project Name/Location: _____
 Meeting Date: _____
 Permit Number: _____

Project Team Name/Company Phone Email

Building Official*	_____	_____	_____
Fire Marshal*	_____	_____	_____
Building Inspector	_____	_____	_____
Electrical Inspector	_____	_____	_____
Electrical Reviewer	_____	_____	_____
Fire Inspector	_____	_____	_____
Fire Reviewer	_____	_____	_____
Mechanical Inspector	_____	_____	_____
Mechanical Reviewer	_____	_____	_____
Smoke Control Design Engineer	_____	_____	_____
Mechanical Engineer	_____	_____	_____
General Contractor	_____	_____	_____
Owner's Representative	_____	_____	_____
Electrical Contractor	_____	_____	_____
Fire Alarm Contractor	_____	_____	_____

* Attendance is optional.

The purpose of this meeting is to ensure that all parties have a clear understanding of:

- Roles and responsibilities
- Submittal requirements
- Protection and/or separation requirements for smoke control components

This meeting is intended for projects with smoke control where the owner/contractor wants to obtain "slab only" or "pre-wire" permits in advance of electrical, fire alarm and smoke control permits.

Submittals

The following submittals must be currently under review and copies on-site. City of Bellevue Submittal Requirements (CBSR) 42a, 42b, & 42c, can be found at http://www.bellevuewa.gov/numbered_description_sheets.htm

Smoke Control Concept Design
(CBSR 42a)

Electrical & Fire Alarm Plans
(CBSR 42b, section 5, 6 & 7)

Mechanical Plans
(CBSR 42b, section 5)

Generator Submittal

System Information/Other
(CBSR 42c)

EMERGENCY WIRING PROTECTION (See Figures 1 & 2)

1. Generator (Separate permits are required for generator installations)

a. Statistics

Number : _____

Locations : (If multiple generators are installed, identify location by room and floor, which generators are for emergency systems and which are for legally required systems.

Method and rating of protection:

b. Ventilation & Exhaust:

Identify how ventilation and exhaust is being installed and where terminations occur at exterior of building.

2. Automatic Transfer Equipment (See Figures 1 & 2)

a. Statistics

Number : _____

Locations: _____

Method and rating of protection:

NOTE 1: In high-rise buildings and underground buildings, per IBC 403 and 405 respectively, the emergency transfer switches where required by the IBC or this code shall be located in a separate room from the normal power source including transformers and distribution equipment and shall be enclosed in a room constructed of not less than 2-hour fire-resistive-rated fire barriers ventilated directly to and from the exterior.

NOTE 2: The emergency transfer switches, where required by the IBC or this code in other buildings or uses, shall be located in a separate room from the normal power source including transformers and distribution equipment and shall be enclosed in a room constructed of not less than 1-hour fire-resistive-rated fire barriers ventilated directly to and from the exterior. Power distribution from the two sources to the emergency transfer switches shall be by independent routes.

Exception: System components described in Article 701 (legally required) may occupy the same dedicated spaces as emergency systems.

(National Electrical Code Article 700.6 as amended by C.O.B. section 23.30.700.6)

3. Transformers (See Figure 1)
a. Statistics, Oil filled

Number: _____
Size: _____
Location (indoor, outdoor, room, floor):

Containment Method (Note location of drain):

Method and rating of protection:

NOTE: Oil filled transformer room walls, roofs, and floors must be constructed of materials meeting minimum fire resistance of 3 hours. Where sprinklers or other approved alternate protection is installed rating can be reduced to 1 hour. Oil filled transformer room reduction to 1 hour only applies where the vault is no higher than 5 floors above grade. Stud and wallboard construction is not acceptable construction. {NEC 450.42 as amended by the City of Bellevue (C.O.B.), Ordinance 23.30.450.42}

b. Statistics, Dry (Transformers over 112 1/2 kVA, 2005 NEC 450.21)

Number: _____

Size: _____

Location:

Method and rating of protection:

NOTE: Dry type transformers rated over 112 1/2 kVA shall be in rooms of 1 hr fire resistive construction. (2005 NEC 450.21)

Please list any other controls to be located in transformer room:

4. Fire Alarm Wiring (See Figures 1 & 2)

a. Statistics

b. Method of protection

5. Pressurization/Ventilation Wiring and Equipment (See Figures 1 & 2)

a. Statistics

Pressurized Shafts: _____

Stair Shafts: _____

Fan location(s): _____

Elevator Shafts: _____

Fan location(s): _____

b. Method of Protection and Separation:

Protection of power and control wiring, serving stair and/or elevator pressurization, must extend from the emergency source of power to the protected devices or equipment in accordance with International Building Code Section 909.20.6.1 as amended by the City of Bellevue.

Smokeproof enclosure ventilation systems shall be independent of other building ventilation systems (Smokeproof enclosures in this context are elevator shafts as required and pressurized stair shafts per C.O.B. Ordinance 23.10.14.2.1 & 23.10.909.20). The equipment, control wiring, power wiring and ductwork shall comply with one of the following:

- Equipment, control wiring, power wiring and ductwork shall be located exterior to the building and directly connected to the smokeproof enclosure or connected to the smokeproof enclosure by ductwork or shafts enclosed by 2-hour fire barriers.
- Equipment, control wiring, power wiring and ductwork shall be located within the smokeproof enclosure (not inside the wall) with intake or exhaust directly from and to the outside or through ductwork or shafts enclosed by 2-hour fire barriers; or
- Equipment, control wiring, power wiring and ductwork shall be located within the building if separated from the remainder of the building, including other mechanical and electrical equipment control wiring and power wiring, by 2-hour fire barriers.

Exception: Control wiring and power wiring utilizing a 2-hour rated cable or cable system. (Cable system supports require the 2-hour rated protection.)

NOTE: Two inches of concrete encasement is recognized as meeting the 2-hour-rated protection requirement. (2005 NEC 230.6)

If a combination of the above is being used, describe below:

6. Inspections (See Figure 2)

- a. Identification of Equipment & Conduit.** (National Electrical Code Article 700.9 as amended by C.O.B. Ordinance 23.30.700.9)

Prior to calling for electrical and fire department inspections of system rough-ins the following systems must be identified on site as follows:

Emergency systems:

All boxes and enclosures larger than 6 in.(150mm). by 6 in.(150mm) (including transfer switches, generators and power panels) for emergency circuits shall be permanently marked with an identification plate that is orange in color so they will be readily identified as a component of the emergency circuit or system. All other device and junction boxes for emergency systems and circuits shall be orange in color, both inside and outside.

Smoke Control Systems:

All boxes and enclosures larger than 6 in. (150 mm) by 6 in. (150 mm) (including transfer switches, generators and power panels) for smoke control power and circuits shall be permanently marked with an identification plate that is orange in color with a yellow diagonal stripe so they will be readily identified as a component of the smoke control circuit or system. All other device and junction boxes for smoke control systems and circuits shall be orange in color both inside and outside. Cover plates shall be orange in color with a yellow diagonal stripe. Raceways for stair and elevator pressurization system wiring shall be identified by labels or color coding and shall be visible at the time of inspection.

NOTE: For inspection purposes, conduit or raceway that contains emergency or smoke control wiring, must also be identified in a like manner when passing through floors, rooms, walls or areas separate from the identified boxes or enclosures of origin.

7. Inspection Coordination

a. Electrical:

The electrical inspector will check items including but not limited to wiring methods, identification of emergency wiring conduit, boxes, etc.

b. Fire:

c. Building:

The building inspector will check the construction of rated protection, including but not limited to inspection of framing for shaft and enclosure walls, concrete encasement, rated door and access ratings, fire-stopping of penetrations, etc.

8. Unusual Conditions

a. Is an Alternate Methods and Materials (AMM) submittal being considered?

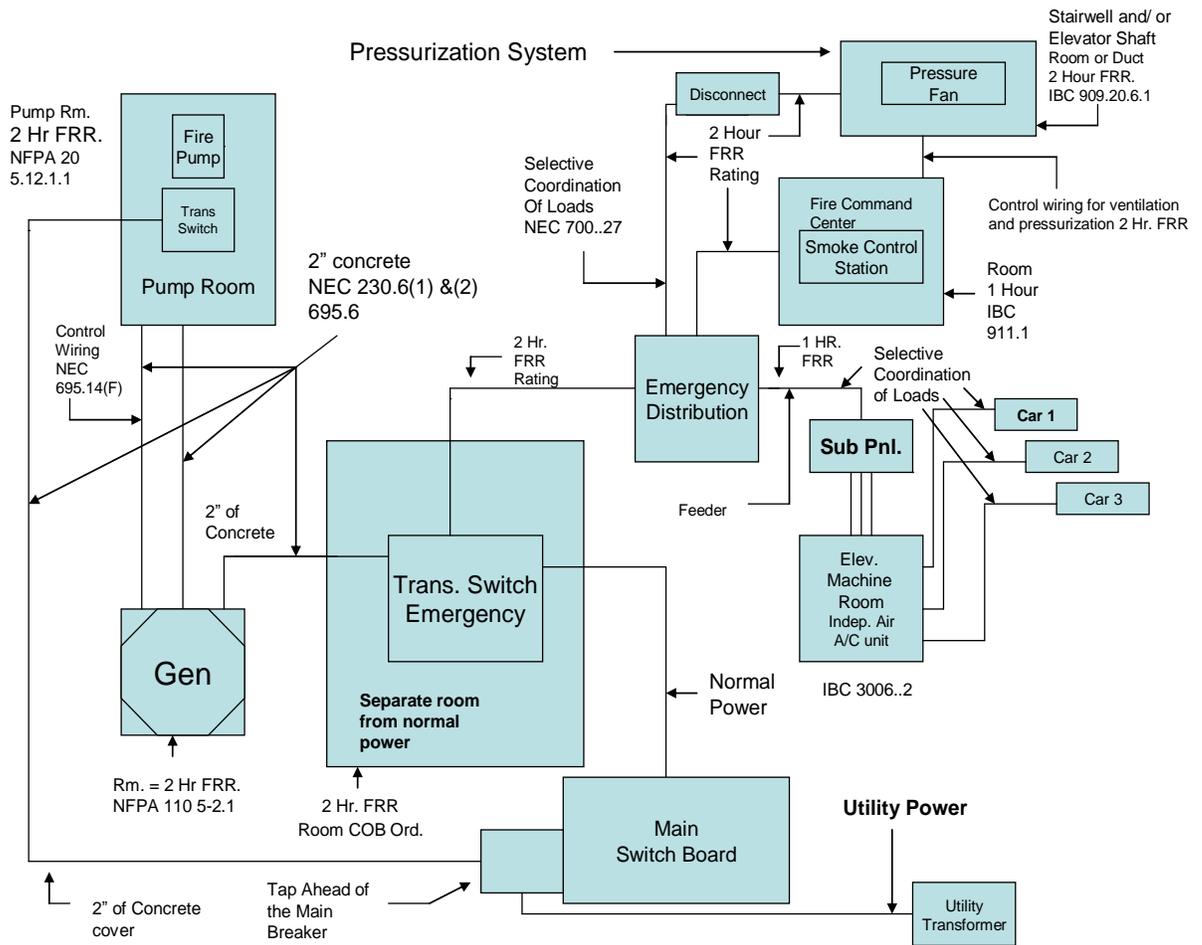
Yes

No

What is the scope of the AMM being considered? Submittal of the AMM is required prior to the issuance of a prewire permit.

b. Other:

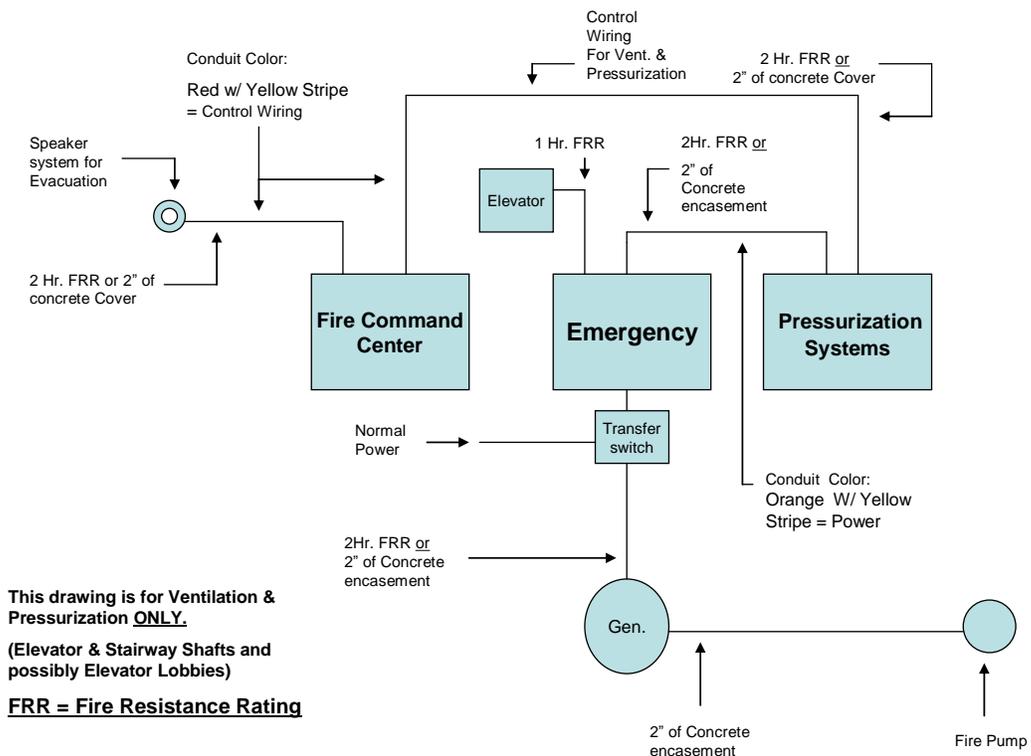
Other issues specific to this project to be considered are:



FRR = Fire Resistance Rated

Figure 1: Pressurization System

Legally Required = 60 seconds start-up
Pressurization may start up within 60 Seconds
Emergency = 10 second start-up



This drawing is for Ventilation & Pressurization ONLY.
(Elevator & Stairway Shafts and possibly Elevator Lobbies)
FRR = Fire Resistance Rating

Figure 2: Emergency Wiring and Protection

REFERENCES:

- **2006 International Building Code Section 909.20.6.1 Ventilation systems.**
- **2006 International Fire Code Section 604 Emergency and Standby Power Systems**
- **2005 National Electrical Code Article 700 Emergency Systems**
- **City of Bellevue Ordinance NO. 5750**
- **Bellevue Fire Department Development Standards – Chapter 11**
(http://www.bellevuewa.gov/pdf/Fire/DevStdSmokeControl_7-07_FINAL.pdf)

City Ordinance Amended Code Sections:

23.10.909.20.6.1 International Building Code Section 909.20.6.1 amended – Ventilation systems.

International Building Code Section 909.20.6.1 is hereby amended as follows:

909.20.6.1 Ventilation systems. Smokeproof enclosure ventilation systems shall be independent of other building ventilation systems. The equipment, control wiring, power wiring and ductwork shall comply with one of the following:

1. Equipment, control wiring, power wiring and ductwork shall be located exterior to the building and directly connected to the smokeproof enclosure or connected to the smokeproof enclosure by ductwork or shafts enclosed by 2-hour fire barriers.
2. Equipment, control wiring, power wiring and ductwork shall be located within the smokeproof enclosure with intake or exhaust directly from and to the outside or through ductwork or shafts enclosed by 2-hour fire barriers; or
3. Equipment, control wiring, power wiring and ductwork shall be located within the building if separated from the remainder of the building, including other mechanical and electrical equipment, by 2-hour fire barriers.

Exception: Control wiring and power wiring utilizing a 2-hour rated cable or cable system.

Fire Code:

23.11.604.2.16.2 International Fire Code Section 604.2.16.2 amended – Emergency power systems.

Section 604.2.16.2 of the International Fire Code as adopted by this chapter is hereby amended to read as follows:

604.2.16.2 Emergency power. An emergency power system complying with IBC Table 403 (1) and the National Electrical Code (NEC) as Emergency Standby Power, except as designated in IBC Table 403(1) shall be provided as specified in Section 604.2.16.1 for emergency power loads. Fire pumps shall comply with NEC Article 695 and NFPA 20.

If the emergency power system is a generator set inside a building, the system shall be located in a separate room enclosed with 2-hour fire barriers constructed in accordance with IBC Section 706 or horizontal assemblies constructed in accordance with IBC Section 711, or both, and shall be in a separate room from the normal power source including transformers and distribution equipment. Power distribution from the emergency source to the emergency transfer switch shall be by an independent route from the normal power source. System supervision with manual start and transfer features shall be provided at the fire command center.

Fuel-fired standby power generator sets and associated fuel storage, including optional landlord- or tenant-owned generator sets, located at a floor level more than 30 feet below the lowest level of exit discharge requires the approval of the Fire Code Official.

Electrical Code:

23.30.700.6 National Electrical Code Article 700.6 amended – Transfer equipment.

Article 700.6 of the National Electrical Code is amended and supplemented by the addition of a new subsection (E), to read as follows:

(E) Location. In high-rise buildings and underground buildings, per IBC 403 and 405 respectively, the emergency transfer switches where required by the IBC or this code shall be located in a separate room from the normal power source including transformers and distribution equipment and shall be enclosed in a room constructed of not less than 2-hour fire-resistive-rated fire barriers ventilated directly to and from the exterior. The emergency transfer switches, where required by the IBC or this code in other buildings or uses, shall be located in a separate room from the normal power source including transformers and distribution equipment and shall be enclosed in a room constructed of not less than 1-hour fire-resistive-rated fire barriers ventilated directly to and from the exterior. Power distribution from the two sources to the emergency transfer switches shall be by independent routes.

Exception: System components described in Article 701 may occupy the same dedicated spaces as emergency systems.

23.30.700.9 National Electrical Code Article 700.9 amended – Wiring – Emergency systems.

Article 700.9 of the National Electrical Code is amended and supplemented by amending Article 700.9(A), to read as follows:

(A) Identification.

(1) Emergency systems. All boxes and enclosures larger than 150 mm (6 in.) by 150 mm (6 in.) (including transfer switches, generators and power panels) for emergency circuits shall be permanently marked with an identification plate that is orange in color so they will be readily identified as a component of the emergency circuit or system. All other device and junction boxes for emergency systems and circuits shall be orange in color, both inside and outside.

(2) Smoke Control Systems. All boxes and enclosures larger than 150 mm (6 in.) by 150 mm (6 in.) (including transfer switches, generators and power panels) for smoke control power and circuits shall be permanently marked with an identification plate that is orange in color with a yellow diagonal stripe so they will be readily identified as a component of the smoke control circuit or system. All other device and junction boxes for smoke control systems and circuits shall be orange in color both inside and outside. Cover plates shall be orange in color with a yellow diagonal stripe. Raceways for stair and elevator pressurization system wiring shall be identified by labels or color coding and shall be visible at the time of inspection.

23.30.700.30 National Electrical Code Article 700.30 new – Smoke control systems, pressurization wiring and equipment.

Article 700 of the National Electrical Code is amended and supplemented by the addition of a new section to be known as Article 700.30 to read as follows:

700.30 Smoke Control Systems, Pressurization Wiring and Equipment. Where smoke control, stair pressurization and elevator pressurization are required by City of Bellevue Building Code Chapter [23.10](#), all power and control wiring and equipment, including the emergency source of power and transfer switch(s) for smoke control, stair pressurization and elevator pressurization systems shall be installed in accordance with this Article (NEC 700-Emergency Systems), and IBC Section 403 HIGH-RISE BUILDINGS, IBC Section 405 UNDERGROUND BUILDINGS and IBC Section 909 SMOKE CONTROL SYSTEMS as amended and adopted by the City of Bellevue Building Code, Chapter 23.10 BCC.

23.30.701.7 National Electrical Code Article 701.7 amended – Transfer equipment.

Article 701.7 of the National Electrical Code is amended and supplemented by the addition of a new subsection (D), to read as follows:

(D) Location. In high-rise buildings the legally required standby source of power and its transfer switches shall be located in a separate room from the normal power source including transformers and distribution equipment and shall be enclosed in a room constructed of not less than 2-hour fire-resistive-rated fire barriers ventilated directly to and from the exterior. Power distribution from the two sources shall be by independent routes.

Exception: System components described in Article 700 may occupy the same dedicated spaces as the legally required standby systems.