City of Bothell

DEVELOPMENT SERVICES

BUILDING • FIRE PREVENTION • ENGINEERING • PLANNING • PERMIT SERVICES • TRANSPORTATION

Go to www.MyBuildingPermit.com to submit your application online.

Select Application Type: Fire > select use type > New > Smoke Control

SMOKE CONTROL PERMIT APPLICATION 66E

Responsibility for information

Although designated Department staff members will help you with general questions about completing this form, it is ultimately your responsibility to provide detailed information about the fire systems you are installing. Since these forms will be evaluated for completeness and accuracy, you can avoid unnecessary permit delays by carefully providing all required information. Disregard items that don't address your particular building or equipment.

☐ Tenant Improvement ☐ New Construction

Applicant		Staff
☐	Smoke Control System Submittal Requirements Checklist	☐
☐	Appropriate Smoke Control System Appendixes	☐
☐	Manufacturer's data sheets for all smoke control system components including installation requirements (cut sheets)	☐
☐	2 Sets of Floor Plan(s) *independent of design plans* including:	☐

- Location of all walls and partitions
- Identify the use of each room
- Location and type of smoke control system device(s)
- All drawings and calculations should be stamped by a currently certified Washington State Sprinkler Designer.

☐ The Detailed Design Report, based on the Conceptual Design Report, including the smoke control system rational analysis, must be prepared by a Professional Engineer competent in the design of smoke control systems. This rational analysis must be stamped by the Professional Engineer. The Detailed Design Report shall address the following: ☐

- General narrative description of the building. This description will include identification of building uses and occupancies as well as passive and active fire protections features that will work together with the smoke control system.
- Narrative description of each passive and active smoke zone. Every space in a building requiring smoke control must be identified as an active or passive smoke zone, with measurable performance criteria identified.
- Description of which methods will be used for each active smoke control zone, and supporting rational analysis in accordance with IBC Section 909.4. This description will include such items as minimum required fan size, expected fire loads, ceiling heights, computer modeling, calculations, and locations of operable windows and/or doors.
- Specific description of how smoke control will be initiated in each zone and the associated system responses. A simple and clear event matrix shall be provided.
- Calculations associated with the smoke control system design and fan capacities.
- Identify anticipated system performance, especially with regard to pressurized stairwells/hoist ways, during stack effect conditions. Provide calculations demonstrating minimum and maximum pressure differentials to be observed during and in the absence of any stack effect.
- Identify anticipated system performance, especially with regard to pressurized stairwells/hoist ways, during stack effect conditions. Provide calculations demonstrating minimum and maximum pressure differentials to be observed during ad in the absence of any stack effect.
- Description of smoke dampers and fire/smoke dampers, including which dampers will be supervised for damper position, the position of unsupervised dampers when some control system is active, damper positions upon loss of power, actuation temperature of fire and fire/smoke dampers.

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- Identification of coordinated zones for sprinkler and fire alarms systems with regard to smoke control zones.
- Identify where variable frequency drives are to be used for smoke control equipment and method of control.
- Piston effect of elevators shall be addressed.
- Description of fire modeling or other performance-based analysis utilized in the design of the smoke control system. Purpose of the analysis, as well as associated assumptions and conclusions must be clearly identified.
- Any related material that supports the design of the smoke control system.
- The signature and stamp of the Professional Engineer responsible for the rational analysis.

☐ Provide a detailed event matrix that includes every fire alarm and smoke control initiating device by address down on column, and every fire alarm notification device (by zone), every smoke control device (i.e. fans, dampers, etc.), and every other event that must occur in order for proper operation of the smoke control system (i.e. HVAC shutdown, et.) across the top; with prior approval, some devices may be combined. This matrix may be divided into one matrix for smoke control devices and one matrix for non-smoke control devices. ☐

☐ The following drawings must be included with the smoke control submittal: ☐

- Smoke control zone drawings shall be prepared and provided.
- Drawings depicting the fire rating of associated smoke barriers.
- Drawings demonstrating pressurization control and power wiring routing and protection. Drawings demonstrating fire alarm wiring routing and protection.
- Smoke control mechanical equipment and ductwork drawings shall be prepared and provided.

☐ The submittal for each associated permit, including architectural, mechanical, electrical, fire alarm and fire sprinkler plans are not required to be submitted with the smoke control plan. However, each of these associated permits shall include the following: ☐

- Clear identification where passive zones and active zones are provided.
- Smoke zone boundaries shall be identified. These boundaries are required to be constructed as smoke barriers and shall be appropriately identified in the architectural plan set.
- The concise narrative description of the smoke control system for the building and any special requirements of the design.
- A letter prepared by each designer stating that their design satisfies the requirements of the smoke control system.

☐ Square Footage Information: ☐

- Gross floor area of the building:
- Gross floor area of the tenant space:
- Square footage breakdown for this project:

New: _____ Alteration: _____ Addition: _____