

	Environmental Health and Safety Manual	
	Policy Number: EH&S 5-3	
Title: Wall Penetrations		
Effective Date: 10/95	Revision: 2/97	Number of Pages: 3

POLICY: To ensure that all penetrations in smoke or fire rated walls resulting from construction, repair or other work, are sealed with approved material.

SCOPE: University wide.

PROCEDURES:

I. Requirements

1. Pipes, conduits, bus ducts, cables, wires, air ducts, pneumatic tubes and ducts, cable trays, and similar building service equipment that pass through fire and smoke barriers shall be protected as follows to prevent the passage of flame, smoke, fumes and hot gases:
 - a. The space between the penetrating item and the fire or smoke barrier shall:
 - i. Be filled with a material capable of maintaining the fire resistance of the fire barrier, or
 - ii. Be protected by an approved device (see Section I.2.) designed for the specific purpose.
 - b. Where the penetrating item uses a sleeve to penetrate the fire or smoke barrier, the sleeve shall be solidly set in the fire or smoke barrier, and the space between the item and the sleeve shall:
 - i. Be filled with a material capable of maintaining the fire resistance of the fire barriers, or
 - ii. Be protected by an approved device designed for the specific purpose.
 - c. Insulation and coverings for pipes and ducts shall not pass through the fire or smoke barrier unless:
 - i. The material is capable of maintaining the fire resistance of the fire barrier, or
 - ii. Protected by an approved device designed for the specific purpose.

2. Penetration Seals

- a. All through-penetration protection systems shall be tested and rated in accordance with ASTM E814, *Standard Test Method for Fire Tests of Through-Penetration Fire Stops*.
- b. Firestopping or fill shall be of nonflammable material which can be shaped, fitted and permanently secured in position.
- c. Concrete, mortar, or grout shall be permitted with maximum 6 inch nominal diameter steel or copper pipe, or steel conduit. Concrete, mortar, or grout shall be the thickness required to maintain the required fire resistance rating of the wall being penetrated. The maximum opening size shall be 144 square inches.
- d. One source of information on tested materials, devices and systems for protection of through-penetrations of fire resistance rated barriers is the Underwriter's Laboratories *Building Materials Directory*.

II. Responsibilities

A. Department of Environmental Health and Safety

1. All through-penetration systems or firestopping shall be approved by the Department of Environmental Health and Safety prior to use.
2. On notification, the Department of Environmental Health and Safety shall inspect penetrations other than those required to be inspected initially by the Physical Plant or Facilities Engineering Construction Inspectors.
3. Fire Alarm System maintenance personnel will report any unsealed penetrations which may be discovered during routine inspection or service.

B. Physical Plant

1. Repair, in a timely manner, all wall penetrations using approved materials.
2. Conduct regular inspections of fire and smoke walls for penetrations.
3. Inspect all penetrations made by Physical Plant, Communications personnel or their contractors.
4. Physical Plant craft workers are to repair penetrations they may find in the immediate area where they may be working.
5. Physical Plant has the responsibility of maintaining the buildings in a safe condition, and therefore, the ultimate responsibility for sealing all fire and smoke wall penetrations is with the Physical Plant.

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C. New Construction

1. All bids and contracts will include the above requirements for wall penetrations. Compliance with this policy will be a condition for selection of all contracts.
2. All construction permits will include the above requirements for wall penetrations.
3. Construction inspectors will make note of any wall penetrations being made, and reinspect for compliance with the above requirements.

D. Facilities Engineering

1. All bids and contracts must be in compliance with this policy.
2. Project Managers shall inspect all projects for wall penetrations.

E. Renovations

1. All renovations and upgrades performed by electricians, plumbers, HVAC, telephone workers, fire alarm maintenance, or other workers, whether in-house or outside contractors, shall comply with the above requirements.
2. Compliance with this policy will be a condition for selection of all contracts.

INQUIRIES/REQUESTS: Environmental Health and Safety
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RELATED FORMS:**RELATED DOCUMENTS:**

National Fire Protection Association:

- a. *Life Safety Code 101* Section 6-2.3.6
- b. *Fire Walls and Fire Barrier Walls 221* Section 6-1

New York State Uniform Fire Protection and Building Code
Title 9 Section 771.6

ASTM E814 *Standard Test Method for Fire Tests of Through-Penetration Fire Stops*

Underwriter's Laboratory *Building Materials Directory*

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