NIH Policy Manual

1361 - Corridor Utilization

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Transmittal Notice

1. **Explanation of Material Transmitted:** This Manual Chapter updates the policy and procedures for the safe use of corridors, alcoves and elevator lobbies that are open to egress corridor systems in buildings located on the National Institutes of Health (NIH) Bethesda, MD, Campus; Rocky Mountain Laboratories (RML), Hamilton, MT; the National Institute of Environmental Health Sciences (NIEHS), Research Triangle Park, NC; and the NIH Animal Center (NIHAC), Poolesville, MD campuses.
2. **Filing Instructions:**

   Remove: NIH Policy Manual, Chapter 1361, dated 10/23/2013

   Insert: NIH Policy Manual, Chapter 1361, dated 03/21/2019

   PLEASE NOTE: For information on:

   - Content of this chapter, contact the issuing office listed above.
   - NIH Policy Manual, contact the Division of Management Support, OMA on 301-496-4606, or enter this URL:https://oma.od.nih.gov/DMS/Pages/Manual-Chapters.aspx

A. Purpose

This chapter establishes policy on the allowable uses of corridors, alcoves and elevator lobbies that are open to egress corridor systems in order to accommodate both Institute/Center needs and emergency egress requirements by providing for: (1) a clearly defined, safe and adequate means for occupants to exit a building or relocate to a safe area in the event of a fire or other emergency; (2) adequate access and use by emergency personnel; (3) the safe movement of people during normal/daily use of the building; (4) the safe transportation of goods and materials to support the NIH mission; and (5) safe location of equipment and other items used by NIH personnel.

B. Scope

This chapter applies to NIH-owned facilities within the jurisdiction of the NIH Division of the Fire Marshal (DFM) which includes the Bethesda, Rocky Mountain Laboratories (RML) in Hamilton, MT; the National Institute of Environmental Health Sciences (NIEHS) in Research Triangle Park, NC; and the NIH Animal Center (NIHAC) in Poolesville, MD campuses. In addition to this policy, the NIEHS complies with Durham County, NC, requirements, as allowed by USC Title 40.

Leased facilities occupied by NIH employees located outside DFM's jurisdiction are subject to the requirements of the local and/or state authority having jurisdiction. Employees in these facilities with fire safety concerns should contact the Office of Research Facilities and Development Operations (ORF) Facility Manager.

This chapter does not apply to main entrance lobbies, reception areas, atriums, or corridors within laboratories and suites of any building.

The DFM will evaluate and provide direction for unique situations not addressed by this chapter, such as displays, furniture, recreation and welfare sales, and blood pressure stations. The DFM will only consider temporary exceptions from specific provisions of this chapter provided the occupant submits a credible written justification. Inquiries regarding existing spaces, construction, or renovation projects may be directed to the "Fire Marshal" global email address (nihfirepv-l@mail.nih.gov). The DFM's general office number is (301) 496-0487.

C. Background

This chapter details specific requirements, restrictions, and allowances for corridor use to implement the purpose above. It represents the combined effort of the DFM, NIH management, the NIH Division of Occupational Health and Safety (DOHS) and the occupants of various NIH buildings. This chapter's policy is based on the judgment that certain uses for the corridor, in addition to the safe movement of people, can be accommodated without compromising safe and code compliant occupant emergency egress and emergency personnel access.

D. Policy

Buildings and wings constructed or renovated after 1993 shall be designed with clear and unobstructed corridors. Corridor storage and other uses shall not be permitted in these buildings and wings.

Utilization of corridors, alcoves that open to corridors, and elevator lobbies in buildings and wings existing as of 1993 and not renovated shall be subject to the requirements and restrictions of this chapter.

1. **Corridor Width**

   a. **Patient Care Areas.** Corridors required for emergency evacuation or relocation in patient care areas of the Building 10 complex shall be at least eight feet in clear and unobstructed width. This requirement of the National Fire Protection Association's Life Safety Code (NFPA 101) is based on the need to provide for the routine and emergency transport of patients. This applies to Health Care and Ambulatory Health Care occupancies as per the NIH Statement of Conditions documents. The restriction is not intended to prohibit medical equipment and carts in use, emergency medical equipment on standby, and patient lift and transport equipment, as long as (1) five feet of clear width is maintained and (2) the fire safety plan addresses their relocation during emergencies. The DFM must approve all fixed furniture installations in corridors for compliance with NFPA 101.

   b. **Other Areas in the Building 10 Complex.** Other corridors of the Building 10 Complex, including the Ambulatory Care Research Facilities (ACRF) outpatient clinics, shall be at least five feet (60 inches) in clear and unobstructed width. In portions of Building 10 where constructed corridors are **five feet or less** in width, the entire width must be maintained free of any material or equipment.

   c. **Other NIH-Owned Buildings.** A minimum 54 inch (width) of clear and unobstructed egress must be maintained in all corridors. No exceptions to reduce the corridor width shall be permitted.

   d. **General Allowances for all Areas.** Based on current allowances in the NFPA *Life Safety Code*, handrails, chair rails, bulletin boards, chalkboards, television screens and similar items may extend into any of the above-specified clear widths. However, protrusions into the clear space of more than 4 inches are prohibited by the Americans with Disabilities Act, which is more restrictive than NFPA 101. The DFM will consider reasonable allowances for the evacuation of personnel with physical disabilities at passenger elevator lobbies, and for the movement of materials from freight elevator lobbies.

   e. **Allowances for Non-Patient Care Areas.** At the DFM's discretion, momentary placement of construction material, equipment scheduled for installation, supplies pending movement into laboratories or offices, surplus materials, or similar items is allowed if occupants can pass around them. Water coolers and common NIH recycling and general waste containers may be placed in corridors within the required width. The *NIH Waste Disposal Guide* describes specific procedures for segregating, staging and collection the following types of waste: general, medical, pathological, chemical, radioactive and mixed. Mixed wastes are not permitted to be staged, even temporarily in corridors.

   f. **Loading docks.** Maintain a clear and unobstructed path through the loading dock where corridor egress discharges. The path must be at least as wide as the door(s) between the corridor and the dock. The use of floor striping, railing, signage, and/or other designations is recommended to help remind dock users to keep the path clear and unobstructed. Loading docks are intended for items in transit. Material and equipment must not be abandoned (left for longer than two

weeks) on the loading dock.

2. **Corridor Use**

The use of corridors for storage, copy machines, and similar equipment is prohibited in buildings and wings constructed or renovated after 1993. In corridors of other buildings and areas, materials and equipment may be located in a corridor provided that:

a. **The minimum prescribed width is maintained clear and unobstructed.** This requirement is not intended to prohibit the temporary parking of an occasional laboratory cart which may be quickly moved by the occupants in order to provide full access. Locations for such equipment shall be provided on the side of the corridor authorized for equipment or storage (see Section D.2.b) and maintained clear of other equipment and storage.
b. **Such use is restricted to one side of the corridor.** Where exit stairway entrances are on one long side of a corridor, such use should be on the side of the corridor opposite the stairway door to provide occupants with the most direct path to the stairways during emergency conditions. However, in some corridors, utility modifications have resulted in enclosed chases projecting from the side of the corridor normally preferred as the "clear" side. Where this condition exists, utilization is limited to the side with the projecting utility chases. In buildings where access to a stairway or exit passageway is in the end wall of the corridor, the primary or lead ICO shall establish which side will be used for materials or equipment. The selected side should be uniform throughout the building to enable the occupants to become familiar with a clear path pattern regardless of the floor they occupy at the time of an emergency. This uniformity assists the NIH Division of Emergency Management (DEM) in the planning of emergency response procedures.
c. **Break Areas are permitted to be open to a corridor, within alcoves, recessed areas or rooms with cased openings.** These areas may include provisions for small appliances, such as coffee pots, microwave ovens, and refrigerators. Approval must be obtained from the DFM with confirmation from ORF Division of Facilities Operations and Maintenance (DFOM) that there is adequate electrical service. Any small appliances located in break areas shall be listed by a Nationally Recognized Testing Laboratory.
d. **Location of material or equipment should not prevent emergency access to exit doorways, emergency equipment or utility panels. An adequate clear space is provided on one or both sides of all doorways serving occupied space.** All emergency equipment; including safety showers, eyewashes, sprinkler heads and fire extinguishers, must be maintained with full and unobstructed access at all times. Storage or equipment placement shall not block fire alarm system equipment (fire alarm pull stations, audible/visual alarm notification devices, alarm panels, etc.), medical gas zone shut-off valves, utility panels or closets. A 36-inch clear space must be provided in front of and on each side of each electrical panel or device. All exit doors, including ones leading to stairs, shall be clear of material and equipment to a distance of five feet on either side of

the door.

e. **All storage shall be contained within suitable metal cabinets or lockers with metal doors. Material storage outside of metal cabinets/lockers or on open shelves is prohibited.** All furniture shall be constructed of noncombustible or factory-applied fire retardant treated materials. This requirement also permits storage in standard file cabinets, lockers, and similar metal furnishings. Storage on top of cabinets and lockers is not allowed in order to eliminate potential injury from material or equipment that may become accidentally dislodged. Combustible materials (e.g., paper, wood, plastic or similar materials) shall be stored within the metal cabinets and lockers, since they constitute a fuel source which would serve to spread fire through the corridor. Combustible furniture itself can also serve as a fuel source and shall not be stored or used in the corridor. Glass-fronted refrigerators having impact resistant tempered glass doors are permitted. The requirement for metal doors is intended to eliminate the risk of personal injury should someone fall against a glass door. Refrigerators having glass doors may be located in a corridor, provided that the manufacturer certifies in writing that the glass is tempered.
f. **Electrical service to authorized equipment shall be provided from a permanent installation of an easily accessible outlet adjacent to the equipment. Extension cords shall not be used.** The use of extension cords or equipment power cords passing through doorways or walls is prohibited. Modifying a fire barrier component (wall, door, or door frame) so that a cord, hose, or other equipment will pass through negates the fire rating of the component. The user should request that ORF's Division of Facilities Operations and Maintenance (DFOM) determines the availability of additional power and whether the additional heat load generated by the equipment can be accommodated. Since the cooling capacity for corridors is limited, elevated ambient temperatures may adversely affect equipment operation.
g. **Such use does not involve the storage, manipulation, or use of restricted items below.** Incidental use of the corridor for delivery of restricted materials or the movement of such items between rooms is allowed.

    1. *Flammable or combustible liquids (except as noted)*

       The restriction on the storage or use of flammable and combustible liquids in corridors is intended to eliminate fuel sources which, if ignited, could involve a large area and would be difficult to contain. With the presence of liquid materials, there also is the potential for the accumulation of flammable vapors since ventilation rates in corridors are substantially lower than those in laboratories. This restriction does not prohibit the use of properly located equipment in corridors in which a flammable solvent is confined in sealed vials.
    2. *Hazardous chemicals*

       The manipulation (weighing, processing, etc.) or storage of the following types of chemicals in the corridor is prohibited: (1) chemicals that are

reactive (e.g., sodium or potassium) or may become reactive (e.g., picric acid); (2) explosive compounds (e.g., tetranitromethane); (3) compounds that are capable of creating a single, acute toxic exposure if released (e.g., phosgene or nitrogen mustard); (4) highly corrosive or strong oxidizers that may react violently with other materials; (5) known chemical carcinogens that could easily contaminate an area or unnecessarily expose personnel; (6) temperature sensitive compounds (e.g., acrolein); and (7) waste chemicals of any nature because of the hazards noted above, but also the impossibility of identifying unknown compounds, or obtaining information once such material leaves the laboratory.

3. *Compressed gas cylinders - all sizes*

   Cylinders containing compressed gases present a particular hazard because of their high pressure. A single cylinder can reach a speed of 35 mph in 1/10th of a second if the valve mechanism breaks. In addition, some cylinders are not provided with a means of venting the contents if the internal pressure exceeds the design limits of the cylinder. While the same hazards exist within a laboratory, the consequences are more likely to be confined. Guidelines for acceptable storage of compressed gases in authorized locations, outside individual laboratories or work areas, are specified in Section5 below, Compressed and Liquefied Gas Cylinder Storage Locations.

4. *Liquefied gases (except as noted as follows)*

   Typical laboratory equipment using liquid nitrogen as a freezer supply or serving as a refrigerator backup is considered to represent minimal risk and would be permitted if properly located in the corridor. Other liquefied gases (e.g., cryogenic liquids) are prohibited.

5. *Radioactive materials (except as noted as follows)*

   Use or storage of radioactive materials in corridors is specifically prohibited, except for the amount of radioactive material in actual use in a liquid scintillation counter or the locked storage of DRS-approved quantities of radiolabeled gels, tissues, cells or reference standards contained on slides or in imaging cassettes. Radioactive wastes are not to be placed in corridors in preparation for pick up by disposal personnel. Nothing in this section would preclude the transportation of sources or radioactive specimens through the corridors; however, such activities are to be conducted in a manner which minimizes the chances of contamination through spillage or breakage and maintains radiation levels within acceptable limits. Failure to adhere to these provisions may compromise the NIH license to use radionuclides issued by the U.S. Nuclear Regulatory Commission. Users found in violation of these provisions are subject to temporary or permanent loss of their authority to use radioactive materials. Further information is available from the Division of Radiation Safety

(DRS), (301) 496-5774.

6. *Potentially Hazardous Biological Material*

   The restriction includes recombinant and synthetic nucleic acids, human blood and body fluids, toxins, human, animal, and plant pathogens or any other biological material which could be designated at or above Biological Safety Level 2 (BSL-2) or those requiring higher level of containment.

7. *Equipment which, by design or use, would present significant hazards under routine or emergency conditions*

   Some classes of equipment may be safely operated in the corridor. The intent of this chapter is to restrict equipment which, by design, operation or use, may present undue risk. For example, centrifuges normally are designed to safely contain the physical hazard associated with a disintegrating rotor. However, they are not normally designed to contain chemical or biological agents. Centrifuges used for procedures with non-hazardous materials are permitted. Refrigerators or freezers containing only non-restricted material do not present any unique hazards and are permitted. However, the user should consider the potential risk associated with the material stored, the frequency of access (regular and frequent access increases the probability of accidental breakage) and the consequences of electrical or equipment failure (e.g., internal temperature rise resulting in vapor overpressure, exothermic reaction, etc.). Equipment designed to operate under either positive or negative pressure shall be located in the laboratory. There is a clear risk of pressure-related explosions or implosions in addition to the risks that may be associated with the agents or compounds used in such equipment. Incubators, used in compliance with this Section, are permitted in corridors since their normal operating temperatures do not pose undue risks. However, drying ovens, which operate at far higher temperatures, are not permitted in the corridor. Other types of equipment not permitted in corridors are those utilizing high voltage (e.g., some equipment used for electrophoresis) or those posing mechanical hazards such as unguarded belts, pulleys or gears. Normally, duplicating or copy machines which do not utilize flammable liquids are permitted, provided that excess paper stock is not stored in the open corridor.

8. *Live Animals*
9. *Construction Materials*

   Construction materials may be stored *temporarily* in the corridor upon prior approval from project officer (PO) during the workday, as long as the minimum prescribed clear corridor width is maintained. Construction materials shall not remain in the corridor overnight. Equipment and supplies shall not, under any circumstances, be stored in stairways.

10. *Surplus Property*

Equipment and supplies cannot be abandoned in corridors, exit passageways, designated safe areas or stairways. Dispose of unneeded property by contacting the appropriate IC Property Custodial Officer. Refer to the NIH Personal Property Management Guide (NIH Manual 26101-25-2) for additional information.

3. **Exit Passageways**

   Materials and equipment not required for emergency response are prohibited in stairways and exit passageways by NFPA 101. Certain corridors, known as "exit passageways," have requirements similar to stairways because they are essentially horizontal extensions of vertical stairways. Typically, they are provided to meet the maximum travel distance requirements of the codes or to extend stairways to discharge to the exterior. Exit passageways are separated from the balance of the building by rated fire walls and doors that provide protection similar to a stairway.
4. **Designated Marshaling Areas**

   Institute-specific use of the space as well as equipment, material, and storage are prohibited within Marshaling Areas. These areas are intended to serve as locations for controlled evacuation of personnel. At NIH they are provided in Building 10. In patient care areas, Marshaling Areas for staging patients during an evacuation include the atrium and elevator lobbies on the east and west end of each patient care unit, respectively, in the Building 10 Complex. In addition, the East, West and Center elevator lobbies are considered as Marshaling Areas for the evacuation of the non-patient care areas of Building 10.
5. **Compressed and Liquefied Gas Cylinder Storage Locations**

   Authorized locations for full and empty cylinders have been identified for all buildings. All stored cylinders shall conform to the restrictions posted at each location, shall be chained in the racks, shall not exceed the capacity of these chain racks, shall have protective caps in place, and shall identify the responsible investigator. Posted restrictions prohibit the storage of flammable and oxidizing gases adjacent to one another and restrict toxic or corrosive gases to specific laboratories or work areas. Other restrictions may be posted in specific buildings due to the nature of the occupancy.
6. **Local Policies and Restrictions**

   An Institute/Center (IC) that occupies an entire building, or the lead IC in a multi-IC building, may establish additional policies and restrictions for corridor use in buildings under its control, providing such policies and restrictions do not conflict with this chapter. A draft copy of local policies and restrictions must be forwarded to the DFM for review and approval.

E. Responsibilities

1. **Each NIH Institute/Center (IC) is responsible for ensuring compliance with this chapter in building areas that it occupies.** In research buildings, it is anticipated that such direction will be provided by individual Scientific Directors who may choose to utilize their internal safety committees to monitor compliance, inform new staff members and/or provide advice to IC management. In administrative buildings, the IC Executive Officers will work with the administrative staff to achieve compliance with this chapter.
2. **NIH personnel** are responsible for understanding both the need for maintaining a readily apparent and adequate means by which personnel may safely exit a building in the event of an emergency and the needs related to the daily use of the corridor. All staff members are expected to become familiar with this chapter and to adhere to its provisions. ORF Facility Managers often play a key role in compliance with this chapter.
3. **The Division of the Fire Marshal (DFM)/SER/ORS** is responsible for providing additional guidance or interpretation of the provisions of this chapter; conducting periodic inspections of NIH corridors; advising each IC of conditions requiring corrective action; immediately notifying the appropriate IC Lead Administrative Officer, with copies to the Scientific Director and Executive Officer, to bring about the removal of items that would prevent safe egress of building occupants. The DFM, the NIH (fire safety) Authority-Having-Jurisdiction (AHJ), will assess compliance with this chapter through annual fire protection and life safety surveys of all worksites, including corridors, in buildings located at the NIH Bethesda Campus, Rocky Mountain Laboratories (RML) Hamilton, MT, the NIH Animal Center (NIHAC) Poolesville, MD and the NIEHS in Research Triangle Park, NC. Reports of noncompliance will be forwarded to ORF DFOM Facility Manager and the Lead Administrative Officer (AO) for the responsible Institute/Center (IC), requiring corrective action within 30 days. After 30 days, the DFM will reevaluate the area. If the condition persists, a notification will be made to the Executive Officer (EO) and/or Scientific Director (SD) (if a laboratory building) requiring corrective action within 15 days.

F. References

1. The Joint Commission
2. Life Safety and Environment of Care Standards (requires paid subscription)
3. National Fire Protection Association – Life Safety Code (NFPA 101)
4. NIH Personal Property Management Guide (NIH Manual 26101-25-2)
5. NIH Waste Disposal Guide

G. Definitions

1. **Alcove** - A recessed space within a corridor that is of sufficient size to be used for the storage of materials.

2. **Authority Having Jurisdiction (AHJ)** - The organization, office, or individual responsible for approving equipment, materials, an installation, or a procedure. At the NIH, the AHJ has been designated as the DFM.
3. **Biosafety Level 2** - A level of protection (personal protective equipment and engineering controls) that is suitable for work involving agents that pose moderate hazards to personnel and the environment.
4. **Corridor** – An enclosed passageway within a building into which rooms or compartments open.
5. **Egress** – A continuous and unobstructed way of travel from any point in a building to a safe exterior location.
6. **Marshaling Area** - A protected designated area within a building which is used as a primary temporary refuge location for building occupants.
7. **Nationally Recognized Testing Laboratory** - A private sector organization acceptable to DFM and concerned with product evaluation that maintains periodic inspection of production of labeled equipment or materials, and by whose labeling the manufacturer indicates compliance with appropriate standards or performance in a specified manner.