

.26 Physical Plant General Requirements.

Unless otherwise indicated, all general requirements apply to both new construction and existing facilities.

A. Construction—New Facilities. Facilities shall be constructed, equipped, and maintained to protect the health and safety of patients, personnel, and the public.

B. Construction of New Facilities. New facilities shall be defined as facilities for which plans have been submitted and approved subsequent to the adoption of these regulations and shall meet the following criteria:

(1) Building shall be a completely detached structure.

(2) A facility desiring to provide services other than those licensed shall obtain prior approval from the Department. The facility also shall obtain prior approval from the Department for any part of the premises to be used for tenant occupancy or for unrelated business purposes. Any such usage shall require the facility to follow guidelines to be established by the Department.

(3) All facilities shall be constructed in accordance with the provisions of the NFPA 101-Life Safety Code, as promulgated by the State Fire Prevention Commission, as are applicable to nursing homes.

(4) Facilities constructed after July 1, 1977 which will house 50 or more occupants needing evacuation assistance (as enforced by the State Fire Marshal) shall be protected throughout the entire building by an automatic fire extinguishing system. (This requirement does not apply to Washington County. See Washington County local building code.)

(5) Basements—New Facility Construction. On new construction of one-story or multi-story facilities scheduled to have basements, the following requirements shall be met: In basements of fire resistive buildings where special fire hazards are identified by fire authorities' review of plans, automatic sprinkler protection shall be required as indicated by the fire authority.

(6) The facility shall be in compliance with all applicable State and local governing laws, regulations, standards, ordinances, and codes.

(7) The facility shall be constructed to comply with ANSI A117.1-1961, (Reaffirmed 1971) American National Standard Institute Specifications for making buildings accessible to, and usable by, the physically handicapped.

(8) Securely anchored handrails shall be provided on each side of all corridors in patient areas and shall be 36 inches high, measured from the floor to the top of the handrail.

Agency Note: In existing structures, the Department will entertain requests for waivers on items which will not endanger the health and safety of persons using the facility; patients and visitors; and for those items, if corrected, which will result in an unreasonable hardship upon the facility, that is, cause substantial financial burden.

C. Conversion of an Existing Structure. When an owner plans to convert an existing structure which has not been licensed as a nursing or care home to a comprehensive care facility or an extended care facility the owner shall be required to meet all conditions set forth in "New Facility Construction Requirements."

Agency Note: This would, for example, relate to hotels, apartment houses, private homes, and other types of institutions.

D. Elevators—New Construction. Elevators shall meet the requirements for elevators in long-term care facilities as set forth in the "Minimum Requirements of Construction and Equipment for Hospital and Medical Facilities, DHEW Publication No. (HRA) 76-4000, or as amended".

E. Elevators—Existing Facilities. In existing facilities all local codes and standards for safety and maintenance of institutional elevators shall be met.

F. Emergency Electrical Power—New Construction and Existing Facilities. Emergency electrical power shall be provided as detailed in this section:

(1) Emergency power for the purpose of egress lighting and protection shall be as required by the Maryland State Fire ...state.md.us/.../10.07.02.26.htm

Prevention Code and Life Safety Code 101 as adopted by the State Fire Marshal's Office.

(2) Other emergency lighting shall be as follows:

- (a) Nursing station;
- (b) Drug distribution station or unit dose storage;
- (c) A lighted area for emergency telephone use;
- (d) Boiler or mechanical room;
- (e) Kitchen;
- (f) Generator set location and switch gear location;
- (g) Elevator, if operable on emergency power;
- (h) Areas where life support equipment is used;
- (i) If applicable, lighting for common area of refuge;
- (j) If applicable, lighting in toilet rooms of common area of refuge;

(3) Emergency power shall be provided for the following:

(a) Nurses' call system.

(b) Duplex receptacles installed 50 feet apart in all corridors in patient areas, or appropriately located duplex receptacles in the common area of refuge, if applicable.

(c) Telephone service. At least one telephone shall be available for incoming and outgoing calls.

(d) Fire pump.

(e) Sewerage pump and sump pump.

(f) Elevator, if required for evacuation. If the facility's evacuation plan requires the use of the elevator or elevators, emergency power shall be provided in accordance with ANSI standards as enforced by the Division of Labor and Industry, Elevator Safety Section. If there is more than one elevator, there shall be switchover facilities to operate one elevator at a time.

(g) Necessary heating equipment to maintain a minimum temperature of 70°F (24°C) in all common areas of refuge, if applicable.

(h) Life support equipment.

(i) Nonflammable medical gas systems.

(4) Common Area or Areas of Refuge. If all patient rooms and toilet rooms are not tied into the emergency generator to provide heat in an emergency situation, the facility shall provide common area or areas of refuge for all patients as described below:

(a) An area of not less than 30 square feet per bed (2.79 square meters), exclusive of corridors, shall be designated by the facility as the common area or areas of refuge.

(b) The 30 square feet (2.79 square meters) per bed shall include a minimum of 5 percent of the patient bedrooms. A minimum temperature of 70°F (24°C) shall be maintained in this area.

(c) Heated toilet rooms adjacent to the common areas of refuge shall be provided. These toilet rooms are not reflected in the 30 square feet (2.79 square meters) per bed.

(d) The facility shall provide to the Department for approval a written plan which defines the specified area or areas of

refuge, and outlines paths of egress from the common areas of refuge, the provision for light, heat, food service, and the washing and toileting of patients.

(5) Emergency Power Source. The emergency power source shall be a generating set and prime mover located on the premises with automatic transfer. The following are required as part of the emergency power system:

- (a) In the event of failure of the normal electrical service, the emergency power shall be activated immediately.
- (b) The emergency generator set shall come to full speed and load acceptance within 10 seconds.
- (c) The emergency generator shall have a capability of 48 hours of operation from fuel stored onsite.

(d) The emergency power system shall be tested once a month. The system shall be exercised for a minimum of 30 minutes under normal emergency facility connected load and recorded in a permanent log book maintained for that purpose.

(6) Applicability of Emergency Power Requirements.

(a) Within 12 months of the effective date of these requirements, existing facilities of 150 beds or more shall complete the installation and acceptance of a working system as required in this section.

(b) Within 18 months of the effective date of these requirements, existing facilities of 50 to 149 beds shall complete the installation and acceptance of a working system.

(c) Existing facilities of 49 beds or less shall have the option to:

(i) Install an acceptable system within 18 months of the effective date of these requirements; or

(ii) Provide a written evacuation/relocation plan for patients which shall be approved by the Department. There shall be a signed agreement between the nursing facility and the facility which agrees to accept the patients for the duration of the emergency. The agreement shall specify that there is sufficient emergency electrical power coverage to provide the care and services required by the patients admitted. A facility which opts to evacuate patients during an emergency shall be in compliance with requirements for emergency power for the purpose of egress as required by the Maryland State Fire Prevention Code and the Life Safety Code 101, as adopted by the State Fire Marshal's Office.

G.—H. (Repealed)

I. Lighting—New Construction and Existing Facilities. Each patient's room shall be lighted by outside windows and also shall have artificial light adequate for reading and other uses as required. All entrances, hallways, stairways, inclines, ramps, basements, attics, storerooms, kitchens, laundries, and service units shall have sufficient artificial lighting to prevent accidents and promote efficiency of service.

J. Minimally Maintained Lighting Levels—New Construction and Existing Facilities. Lighting shall be adequate for activities conducted in given areas:

Area	Minimum Lighting
(1) Administrative areas	30 foot candles
(2) Dining areas	30 foot candles
(3) Recreation areas	100 foot candles
(4) Patient's room	10 foot candles
(5) Patient's reading lamps	30 foot candles
(6) Nurses' station	20 foot candles
(7) Medicine storage and preparation area	100 foot candles
(8) Stairways	20 foot candles
(9) Corridors	20 foot candles

K. Night Lights-New Construction and Existing Facilities. There shall be sufficient lighting at night in selected areas of the

facility (hallways, stairs and designated toilets) for the safety of the patient who must get up during the night. There also shall be one night light in each bedroom for patients. In new construction the night light shall be switched at the patient room door.

L. Heating System. All facilities shall be equipped with a properly maintained and operative central heating system capable of maintaining 75°F throughout the patients' section of the building with the outside temperature defined by ASHRAE, American Society of Heating, Refrigerating and Air Conditioning Engineers, winter median of extreme temperature.

M. Approved Heating System. The heating system shall be in compliance with NFPA Code and all State and local codes.

N. Humidity. The humidity shall be controlled according to ASHRAE recommendations.

O. Auxiliary Heat—New Construction and Existing Facilities. Appropriate provisions shall be made for emergency auxiliary heat by means of alternate sources of electric power, alternate fuels, or standby equipment.

P. Space Heaters. Space heaters and portable heaters may not be used.

Q. Ventilation—New and Existing Facilities. Existing facilities shall provide for adequate ventilation through windows or mechanical means or or a combination of both. New facilities shall meet the following requirements:

(1) Temperatures. A minimum design temperature of 75°F (24°C) at winter design conditions shall be provided for all occupied areas.

(2) Ventilation System Details. All air-supply and air-exhaust systems shall be mechanically operated. All fans serving exhaust systems shall be located at the discharge end of the system. The ventilation rates shown in Table 1, §Q, below, shall be considered as a minimum acceptable rates and may not be construed as precluding the use of higher ventilation rates.

(a) Outdoor air intakes shall be located as far as practical but not less than 25 feet (7.62m) from exhaust outlets of ventilating systems, combustion equipment stacks, medical-surgical vacuum systems, plumbing vent stacks, or from areas which may collect vehicular exhaust and other noxious fumes. The bottom of outdoor air intakes serving central systems shall be located as high as practical but not less than 6 feet (1.83m) above ground level, or if installed above the roof, 3 feet (91 cm) above roof level.

(b) The ventilation systems shall be designed and balanced to provide the pressure relationship as shown in Table 1.

(c) The bottoms of ventilation openings shall be not less than 3 inches (7.6 cm) above the floor of any room.

(d) Corridors may not be used to supply air to or exhaust air from any room, except that air from corridors may be used to ventilate bathrooms, toilet rooms, janitors' closets, and small electrical or telephone closets opening directly on corridors.

(e) All central ventilation or air conditioning systems shall be equipped with filters having efficiencies no less than those specified in Table 2. The filter bed shall be located upstream of the air conditioning equipment, unless a prefilter is employed. In this case, the prefilter shall be upstream of the equipment and the main filter bed may be located further downstream.

(f) All filter or filters efficiencies shall be average atmospheric dust spot efficiencies tested in accordance with ASHRAE Standard 52-68. Filter frames shall be durable and carefully dimensioned and shall provide an airtight fit with the enclosing duct work. All joints between filter segments and the enclosing duct work shall be gasketed or sealed to provide a positive seal against air leakage. A manometer shall be installed across each filter bed serving central air systems.

(g) Air handling duct systems shall meet the requirements of NFPA Standard 90A, 1976 Edition.

(h) Fire and smoke dampers shall be constructed, located, and installed in accordance with the requirements of NFPA Standard 90A, 1976 Edition. Return, supply, and exhaust ducts which pass through a required smoke barrier, through which smoke can be transferred to another zone shall be provided with smoke dampers at the barrier, controlled to close automatically to prevent flow of air-laden smoke in either direction. Smoke dampers shall be equipped with automatic remote control reset devices except that manual reopening will be permitted if smoke dampers are conveniently located. All air ducts which pass through a required smoke barrier shall be provided with smoke damper at the barrier, actuated by smoke or products of combustion (other than heat) detectors. Smoke dampers shall actuate by smoke detectors located in the ducts at the smoke barrier, or by the smoke detectors used to close smoke barrier doors. All devices shall be interlocked with the fire alarm system. Reference should be made to the Life Safety Code, Chapter 10, NFPA 101.

Table 1

Pressure Relationships and Ventilation of Certain Areas of Long-Term Care Facilities Other Than Chronic Disease Hospitals					
Area Designation	Pressure Relationship To Adjacent Areas	Minimum Air Changes of Outdoor Air Per Hour Supplied To Room	Minimum Total Air Changes Per Hour Supplied To Room	All Air Exhausted Directly To Outdoors	Recirculated Within Room Units
Patient Room	E	2	2	Optional	Optional
Patient Area Corridor	E	2	4	Optional	Optional
Examination and Treatment Room	E	2	6	Optional	Optional
Physical Therapy	N	2	6	Optional	Optional
Occupational Therapy	N	2	6	Optional	Optional
Soiled Workroom or Soiled Holding	N	2	10	Yes	No
Clean Workroom or Clean Holding	P	2	4	Optional	Optional
Toilet Room	N	Optional	10	Yes	No
Bathroom	N	Optional	10	Yes	No
Janitors' Closet(s)	N	Optional	10	Yes	No
Sterilizer Equipment Room	N	Optional	10	Yes	No
Linen and Trash Chute Room	N	Optional	10	Yes	No
Food Preparation Center	E	2	10	Yes	No
Warewashing Room	N	Optional	10	Yes	No
Dietary Day Storage	E	Optional	10	Yes	No
Laundry, General	E	2	10	Yes	No
Soiled Linen Sorting and Storage	N	Optional	10	Yes	No
Clean Linen Storage	P	2	2	Optional	Optional

P = Positive N = Negative E = Equal

Table 2

Filter Efficiencies for Central Ventilation and Air Conditioning Systems in Long-Term Care Facilities Other Than Chronic Disease Hospitals		
Area Designation	Minimum Number of Filter Beds	Filter Efficiencies (Percent) Main Filter Bed
Patient Care, Treatment, Diagnostic, and Related Areas	1	80*
Food Preparation Areas and Laundries	1	80
Administrative, Bulk Storage and Soiled Holding Areas	1	25

*May be reduced to 35 percent for all-outdoor air systems.

(i) In new construction and existing facilities, exhaust hoods in food preparation centers shall have an air movement exhaust rate of not less than 50 feet per minute in the direction of the exhaust as measured at the front edge of the cooking surface. All hoods over cooking surfaces shall be in compliance with NFPA, #96, 1973 Edition, Standard for the Installation of Equipment for the Removal of Smoke and Grease-laden Vapors from Commercial Cooking Equipment.

(j) New Construction and Existing Facilities. Boiler rooms shall be provided with sufficient outdoor air to maintain combustion rates of equipment and to limit temperatures in working stations to 97°F (36°C) effective temperature as defined by ASHRAE Handbook of Fundamentals.

R. Air Conditioning. All new facilities shall be equipped with a properly maintained air conditioning system capable of maintaining 75° throughout the patients' section of the building. The system shall be in compliance with ASHRAE and NFPA Code and all State and local codes.

S. Screens, New Construction and Existing Facilities.

(1) Health care facilities shall be protected effectively to prevent the entrance and harborage of rodents and insects. Screening, rat-proofing devices, or other approved deterrents shall be installed and effectively maintained.

(2) All openings to the outside air shall be protected effectively against the entrance of insects by closed doors, closed windows, or other means.

(3) Openings for which the intended use is to provide for the normal flow of ingress and egress of traffic shall be protected by self-closing doors.

(4) Doors and windows normally operated in the open position to provide ventilation shall be screened with wire screen or its equal, not less than 16 meshes per linear inch.

(5) All screened doors shall be equipped with self-closing devices and when closed shall fit tightly enough to prevent entrance of rodents and insects.

(6) Window screens shall fit closely enough to keep out rodents and insects and shall be adjusted easily.

(7) Screened doors and windows shall be installed and maintained in accordance with applicable fire and safety codes and COMAR 10.15.03 Food Service Facilities. Maintenance and installation may not be in conflict with other applicable laws, regulations, codes, or ordinances.

T. Garbage Disposal. Garbage shall be stored in water-tight containers with tight-fitting covers, and shall be emptied at frequent intervals. Containers shall be thoroughly scoured and aired before using again.

U. Storage Space-Garbage. Storage space shall be provided for garbage and trash awaiting pickup.

V. Burning. If burning is the method used for disposal when no satisfactory garbage collection service is available for the purpose, an approved incinerator shall be used. The method of incinerator installation shall be approved by the local environmental representative of the county health department.

W. Medical Wastes. Disposal of medical wastes shall be accomplished in accordance with regulations promulgated by the Department or other State or federal agencies.

X. Plumbing. All plumbing shall be installed in conformance with existing building and sanitary regulations except that, in existing facilities, a nonconforming installation which is not an immediate hazard shall be corrected upon replacement.

Y. Sewage. The facility shall be serviced by a public sewage disposal system if available.

Z. Private Sewage Disposal Approval. If no approved public sewerage system is available, a private sewage disposal may be accepted, if approved by the Department. Private systems shall comply with COMAR 26.04.02.

AA. Water Supply. Facilities shall be served by water from a safe public water supply, if available, as determined by the Department.

BB. Approval of Private Water Supply. If a safe public water supply is not available, a private water supply may be used if it is approved by the Department.

CC. Emergency Procedures. Emergency procedures shall be established and documented which enable the facility to provide water in all essential areas in the event of the loss of the normal water supply.

DD. Adequacy of Pressure. The water supply shall be adequate in quantity and delivered under sufficient pressure to satisfactorily serve fixtures in the facility. A minimum pressure of 15 psi is required at top floor fixtures during demand period.

EE. Temperature. The water heating equipment shall supply adequate amounts of water according to the following temperature guidelines for:

- (1) Washing, bathing, and other personal use, not more than 120°F or less than 100°F;
- (2) Food preparation use, in conformance with COMAR 10.15.03; and
- (3) Laundry use, in conformance with the water supply standards of the American Laundry Institute.

FF. Smoking. Each patient who must be confined to a bed for the greater part of the day shall be asked about his sensitivity or objection to smoking. Insofar as possible, non-smokers shall be housed with other non-smokers. Smoking areas shall be designated and ash trays of non-combustible material and safe design shall be provided. Patients may not smoke in bed except when confined to bed and supervised by a competent employee during the entire period of smoking.

Agency Note: In developing the facility's policy regarding smoking, refer to Health-General Article, §24-205, Annotated Code of Maryland.