

Chapter ILHR 52

GENERAL REQUIREMENTS

Subchapter I — Fire Prevention, Detection and Suppression for High Rise Buildings

ILHR 52.01 Fire prevention, detection and suppression for high rise buildings

Subchapter II — Automatic Fire Sprinkler Systems for Low Rise Buildings

ILHR 52.011 Purpose, scope and application

ILHR 52.012 Individual room, limited area and partial automatic fire sprinkler systems

ILHR 52.013 Specified applications by occupancy or use

Subchapter III — Windows and Fire Department Access Openings

ILHR 52.02 Windows

Subchapter IV — Barrier-Free Design for the Physically Disabled

ILHR 52.04 Requirements for barrier-free design

Subchapter V — Courts

ILHR 52.05 Size of courts

ILHR 52.06 Ventilation of courts

Subchapter VI — Atriums

ILHR 52.07 Atriums

Subchapter VII — Miscellaneous Provisions

ILHR 52.19 Gas and oil lamps; gas service

ILHR 52.20 Electrical work

ILHR 52.21 Location and maintenance of exits

ILHR 52.22 Repairs

ILHR 52.23 Cleanliness

ILHR 52.24 Recycling space

ILHR 52.25 Fire division wall or occupancy separation wall identification

Subchapter VIII — Sanitary Facilities

ILHR 52.50 Toilet rooms

ILHR 52.52 Sex designation

ILHR 52.53 Location, light and ventilation

ILHR 52.55 Artificial light

ILHR 52.56 Size

ILHR 52.57 Floor and base

ILHR 52.58 Walls and ceilings

ILHR 52.59 Enclosure of fixtures

ILHR 52.60 Sanitary facilities

ILHR 52.61 Protection from freezing

ILHR 52.62 Disposal of sewage

ILHR 52.63 Permanent and temporary outdoor toilets

ILHR 52.64 Maintenance and housekeeping

Note: Chapter Ind 52 was renumbered to be Chapter ILHR 52 effective 1-1-84.

Subchapter I — Fire Prevention, Detection and Suppression for High Rise Buildings

ILHR 52.01 Fire prevention, detection and suppression for high rise buildings. (1) AUTOMATIC FIRE SPRINKLER SYSTEM. A complete automatic sprinkler system, as specified in s. ILHR 51.23, shall be provided in every building more than 60 feet in height, the initial construction of which is commenced after July 2, 1974. The requirements of this section shall not apply to open parking structures as defined in s. ILHR 62.10 (2).

(a) *Additions to existing buildings.* Building additions more than 60 feet in height shall have an automatic sprinkler system installed. The sprinkler protection shall be provided throughout the existing building unless the addition is separated from the existing building by a fire division wall as specified in s. ILHR 51.02 (13). The requirements of this section shall not apply to open parking structures as defined in s. ILHR 62.10 (2).

(b) *Substitute suppression systems.* When approved by the department, substitute automatic suppression systems may be used in lieu of a sprinkler system in areas where the use of water could cause unusual damage to equipment, or where water may have a limited effect or may be hazardous to use because of the nature of processes involved.

Note: The department will accept design and installation in accordance with the latest edition of the national fire protection association standards for special extinguishing systems.

(c) *Alternate methods.* When approved by the department, alternate methods of fire prevention, detection and

suppression may be provided in lieu of a complete automatic sprinkler system.

Note 1: The department will request a position statement regarding the proposed method to be submitted by the fire chief of the municipality wherein the building is located.

Note 2: The department will consider alternate methods of fire prevention, detection and suppression to include, *but not limited to*, fire-resistive construction, compartmentation, automatic detection systems, interior finish restriction, and partial sprinkler protection.

(2) ADDITIONAL REQUIREMENTS FOR HIGH-RISE BUILDINGS. The following requirements apply to all buildings more than 100 feet in height or having more than 10 stories. Open parking structures and buildings used for low hazard industrial processes, including the production and distribution of gas, steam or electric power, foundries and similar uses which require unusual heights to accommodate cranes, special machinery or equipment, are exempt from the provisions of this subsection.

(a) *Smoke control.* Natural or mechanical ventilation for the removal of products of combustion shall be provided in every story and shall consist of one or more of the following methods. Controlling devices may be automatic or manual as approved by the local fire department.

1. Panels or windows in the exterior wall which can be opened from a location other than the fire floor. Such venting facilities shall be provided at the rate of at least 20 square feet per 50 lineal feet of exterior wall in each story, and distributed around the perimeter at not more than 50-foot intervals. Such panels shall be clearly identified as required by the fire department.

2. Openable windows in habitable rooms of residential units.

ILHR 52.01

3. When an automatic sprinkler system is installed in compliance with s. ILHR 51.23, the mechanical air handling equipment may be designed to assist smoke removal. Under fire conditions, the return and exhaust air shall be taken directly to the outside without recirculation to other sections of the building.

4. A mechanical ventilation system which will prevent the transfer of smoke from the fire source to other floors of the building. The design shall be substantiated by calculations or tests showing that a pressure differential of 0.10 inch of water column will be produced.

5. Any other design which will produce equivalent results.

(b) *Exit stairways.* 1. All stairways shall be pressurized. The pressure across each door shall be at least 0.15 but not more than 0.20 inch of water column with all doors closed. Pressurization shall be activated by the fire alarm system, the detection systems, and the sprinkler system. In lieu of pressurization, a smokeproof stair tower, as defined in s. ILHR 51.17, will be accepted.

Note: The department will accept alternate designs which will produce equivalent results.

2. All stairway doors which are to be locked from the stairway side shall have the capability of being unlocked without unlatching upon a signal from the central control station.

(c) *Elevators.* Every floor level of the building shall be accessible to a fire department by means of one or more elevators. If the building is not provided with an automatic sprinkler system in accordance with s. ILHR 51.23, the elevator lobby at each floor level shall be separated from the remainder of the building by an effective smoke barrier.

Note: See ch. ILHR 18 for additional requirements pertaining to elevators.

(d) *Fire alarm and detection system.* 1. A manual fire alarm box shall be located adjacent to exit doors into stairway shafts and in every elevator lobby.

2. An approved system which will provide for automatic detection of products of combustion other than heat shall be installed in every air-handling equipment room, unless sprinklered, and in the return air portion of every air conditioning and mechanical ventilation system. Approved heat detectors may be installed in boiler rooms and furnace rooms in lieu of product of combustion detectors.

a. Detectors shall be located in the main return air and supply air ducts of each ventilation system and at each opening into a vertical return air shaft or duct.

b. The detectors shall actuate an alarm or signaling system and shut down the ventilation system except where automatic smoke control is incorporated in the system.

3. The manual alarm and automatic detection system shall conform to the Wisconsin State Electrical Code, Volume 2, ch. ILHR 16 and one of the following standards:

a. NFPA 71; or

b. NFPA 72.

4. Detectors shall conform to NFPA 72E.

(e) *Alarm and communication systems.* The following alarm and communication systems shall be provided. The systems shall be supervised and exposed wiring shall be encased in a metal conduit.

1. Voice alarm system. The detection system, sprinkler water flow device and the fire alarm system shall actuate a prerecorded message or voice alarm capable of being operated from the central control station on a general as well as a selective basis to the area involved. The alarm shall be designed to be heard by all occupants within the building or designated portions.

2. Voice communication system. There shall be a voice communication system between the central control station and the following areas:

Note: The department will accept systems installed in accordance with the Standard for the Installation, Maintenance and Use of Local Protective Signaling Systems for Watchmen, Fire Alarm and Supervisory Service, NFPA No. 72A.

a. Elevators, elevator lobbies, in stairways at every fifth floor, and all manual fire alarm boxes (2-way communication system);

b. Every office area exceeding 1,000 square feet in area (one-way address system); and

c. Each dwelling unit and hotel guest room (one-way address system).

3. Fire department communication system. A system providing 2-way communication shall be provided at all floor levels, stairways, the central control station, and other locations required by the fire department.

a. The system shall be designed so the fire department communication system will override the other communication systems.

b. Wiring shall be arranged so that open circuits or short circuits on individual floors will not interfere with communications on another floor.

4. Combined system. When approved by the local fire department, the fire department communication system may be combined with the voice communication system and the voice alarm system.

(f) *Central control station.* A central control station for fire department operations shall be provided in a location approved by the fire department. It shall contain the voice communication systems panel; fire detection and alarm system panels; status indicators and controls for elevators, smoke venting and air handling systems; controls for unlocking stairway doors; a public telephone; sprinkler valve and water flow detectors; and standby power controls. All fire alarm and water flow signals shall be transmitted directly to the systems indicated in s. ILHR 52.01 (2) (d) 3.

(g) *Standby power and light.* An approved permanently installed standby power generating system shall be provided. The system shall be equipped with suitable means for automatically starting the generator set upon failure of the normal electrical service and for automatic transfer and operation of the required electrical functions at full power within 60 seconds of such normal service failure.

System supervision with manual start and transfer features shall be provided at the central control station.

1. An on-premise fuel supply sufficient for not less than 2 hours full demand operation of the system shall be provided.

2. The power requirement shall be determined so as to provide service to, but not limited to the following:

- a. Fire alarm system;
- b. Exit and other emergency lighting;
- c. Fire protection equipment;

Note: Standby power to service fire pumps may be omitted if approved by the local fire department.

- d. Mechanical ventilation required by this section;
- e. Fire department elevator; and
- f. Communication systems.

(h) *Maintenance.* All communications, fire prevention, detection and suppression systems required under this section shall be tested and maintained in an operable condition. All installed automatic sprinkler systems shall be maintained pursuant to NFPA 25. Records of inspections, tests and maintenance, as specified in NFPA 25 shall be kept and shall be made available, upon request, to the department or its authorized deputies. The local fire department shall be notified whenever the life safety systems are shut down or impaired and when placed back in service. The owner shall arrange for immediate and continual servicing or repair of the communication, fire prevention, detection and suppression systems until they are placed back in operation.

(i) *Floor level identification.* Each floor level or story shall be identified as to its number or name. Identification signs shall be posted in all elevator lobbies and in all required exit stairways.

History: Emerg. cr. eff. 1-1-75; cr. (1), Register, April, 1975, No. 232, eff. 5-1-76; cr. (2), Register, April, 1976, No. 232, eff. 1-1-76; (2), eff. 1-1-77; am. (2), Register, December, 1976, No. 252, eff. 1-1-77; am. (2) (d) 2. a. and cr. (2) (1), Register, December, 1977, No. 264, eff. 1-1-78; am. (1) (intro.), (a), (2) (intro.) and (2) (e) 2. a., Register, December, 1978, No. 276, eff. 1-1-79; am. (2) (h), Register, December, 1981, No. 312, eff. 1-1-82; am. (2) (h), Register, June, 1983, No. 330, eff. 7-1-83; emerg. am. (2) (h), eff. 9-6-86; am. (2) (h), Register, November, 1986, No. 371, eff. 12-1-86; r. and recr. (2) (c), Register, March, 1991, No. 423, eff. 4-1-91; am. (2) (d) 3. a. and b., 4 and (h), r. (2) (d) 3. c. and d., Register, January, 1994, No. 457, eff. 2-1-94.

Subchapter II — Automatic Fire Sprinkler Systems for Low Rise Buildings

ILHR 52.011 Purpose, scope and application. (1) **GENERAL.** Pursuant to s. 101.14 (4) (a), (c) and (g), Stats., created by 1983 Wis. Act 295, this subchapter establishes automatic fire sprinkler system requirements for buildings under 60 feet in height which are used as public buildings or places of employment.

(2) **GENERAL REQUIREMENT.** Except as provided in sub. (3), automatic fire sprinkler systems shall be installed in the rooms, areas, locations, and building occupancies as specified in ss. ILHR 52.012 and 52.013.

Note: Section 4-4.4.1 of NFPA 13 states: "All concealed spaces enclosed wholly or partially by exposed combustible construction shall be protected by sprinklers." The section also listed exceptions to the rule. Buildings

"completely protected" by automatic fire sprinkler systems must comply with this and related sections of NFPA 13.

(3) **ALTERNATE METHODS.** When approved by the department through the petition for variance process, alternate methods of fire protection, detection or suppression providing an equivalent degree of life safety protection may be provided.

Note: See s. ILHR 50.25 for the procedure used for submitting a petition for variance to an administrative rule.

(4) **SYSTEM DEFINITION AND STANDARD.** The automatic fire sprinkler systems specified in this subchapter shall conform to the definition specified in s. ILHR 51.01 (7a) and shall comply with the requirements specified in standards listed in s. ILHR 51.27 (7) (b), (c), (cm), (d), (e), (f), (r) and (s).

Note 1: The definition of the term "automatic fire sprinkler system" in s. ILHR 51.01 (7a) is taken from s. 145.01 (2), Stats.

Note 2: See s. A52.011 of Appendix A for additional information pertaining to fire hazard classifications, building usage, and occupancy.

(5) **AREA SEPARATION WALLS.** (a) Buildings having an area exceeding the area limitations specified in s. ILHR 52.013, may be constructed without complete automatic fire sprinkler systems provided the building is divided into areas less than the specified area limitations by at least 2-hour rated vertical fire separation walls. The fire separation wall shall extend from the foundation to the underside of the roof deck.

1. Structural framing members may continue through or over the separation wall provided the framing and supporting elements are of noncombustible or one-hour fire-resistive combustible construction.

2. All openings in the separation wall shall be protected by fire-resistive door assemblies as specified in s. ILHR 51.047.

(b) Where additions to buildings result in the area of the entire building exceeding the area limitations specified in s. ILHR 52.013, one of the following conditions shall apply:

1. The existing building and the building addition shall be completely protected by an automatic fire sprinkler system;

2. The building addition shall be separated from the existing building by a 2-hour rated vertical fire separation wall. If the area of the building addition exceeds the area limitations specified in s. ILHR 52.013, the building addition shall be completely protected by an automatic fire sprinkler system or the building addition shall be divided with 2-hour rated vertical fire separation walls as specified in par. (a); or

3. The existing building and the building addition shall be divided by 2-hour rated vertical fire separation walls as specified in par. (a).

(6) **MULTIPLE USE BUILDINGS.** Where a building contains multiple occupancies or use areas and one occupancy or use area is required by s. ILHR 52.013 to be protected by an automatic fire sprinkler system, one of the following conditions shall apply:

(a) The occupancy or use area protected by the automatic fire sprinkler system shall be separated from the

ILHR 52.011

unprotected areas by at least 1-hour fire-resistive rated construction; or

(b) The entire building shall be protected by an automatic fire sprinkler system.

Note: See ss. ILHR 55.05 and 59.22 for occupancy separation requirements mandating fire-resistive separations of more than 1-hour rating.

(7) SEPARATION OF AREAS PROTECTED BY A PARTIAL AUTOMATIC FIRE SPRINKLER SYSTEM. Where the provisions of s. ILHR 52.012 require the protection of an automatic fire sprinkler system, the protected area or room shall be enclosed with construction assemblies as specified in chs. ILHR 54 to 62 and as designated in Table 51.03-A for the class of construction.

Note: This rule is intended to require an effective fire barrier between those portions of the building protected by the automatic fire sprinkler system and the adjoining unprotected portions. The fire barrier is not required to be of fire-resistive construction unless required for the occupancy, use or class of construction.

History: Emerg. cr. eff. 9-6-86; cr. Register, November, 1986, No. 371, eff. 12-1-86.

ILHR 52.012 Individual room, limited area and partial automatic fire sprinkler systems. The rooms or areas within buildings as specified in subs. (1) to (5) shall be protected by an automatic fire sprinkler system.

(1) WINDOWLESS FLOOR LEVELS. (a) Except as permitted in pars. (b) and (c), automatic fire sprinkler system protection shall be provided in all basements and floor levels where openings as specified in s. ILHR 52.02 (2) are not provided.

(b) Automatic fire sprinkler system protection need not be provided in the following windowless floor level applications:

1. Windowless floor levels of 2500 square feet or less in total area and equipped with an approved smoke detection system which is:

a. Directly and permanently wired to a proper unswitched circuit; and

b. Interconnected to the building manual fire alarm system. If the building does not have a manual fire alarm system, the smoke detection system shall be capable of sounding an audible alarm which can be heard in all occupied areas of the building.

2. Communication equipment rooms separated from the remainder of the building by at least one-hour fire resistive construction and the room is equipped with an approved automatic fire detection and alarm system;

3. Windowless floor levels in ch. ILHR 54 occupancies classified as low hazard and not exceeding 3000 square feet in area;

4. Windowless floor levels within individual living units of ch. ILHR 57 occupancies;

5. Interior balconies and open mezzanine floors; and

6. Windowless floor levels in hospitals and nursing homes.

Note: See chs. ILHR 58 and HSS 124 and 132 for additional requirements.

Register, December, 1995, No. 480

(c) One-story buildings with no floor levels below the first floor need not be provided with exterior wall openings other than the required exits. Except as provided in par. (b), enclosed mezzanine floor levels shall be protected by an automatic fire sprinkler system or provided with exterior wall openings.

(2) LAUNDRY AND TRASH COLLECTION ROOMS AND CHUTES. Automatic fire sprinkler system protection shall be provided in all laundry and trash chutes and terminal rooms. Automatic fire sprinklers shall be installed at the top of the chute and at alternate floor levels.

(3) STORAGE AREAS. (a) Except as provided in par. (b), automatic fire sprinkler system protection shall be provided in storage areas exceeding 100 square feet in area and located in chs. ILHR 55, 56, and 57 occupancies. The areas of individual adjacent storage areas shall be considered cumulatively unless each storage area is separated from the adjacent area by at least 30 minute fire resistive rated construction with openings protected by 20 minute rated fire doors.

(b) Automatic fire sprinkler system protection need not be provided in the following storage area applications:

1. Storage areas not exceeding 1500 square feet in area which are separated from the remainder of the building by at least one-hour fire resistive construction and the area is equipped with an approved smoke detection system, which is:

a. Directly and permanently wired to a proper unswitched circuit; and

b. Interconnected with the building manual fire alarm system. If the building does not have a manual fire alarm system, the smoke detection system shall be capable of sounding an audible alarm which can be heard in all occupied areas of the building; and

2. Storage areas located within individual living units of ch. ILHR 57 occupancies.

(4) STAGE AREAS REQUIRING PROSCENIUM SEPARATIONS. Automatic fire sprinkler system protection shall be provided for all stage areas requiring proscenium separations within or behind the proscenium separation as follows:

(a) Over the stage;

(b) Under the stage gridiron with side wall sprinkler heads rated at 135° having heat baffle plates. The heads shall be installed around the entire perimeter of the stage, except above the proscenium opening, at points not more than 30 inches below the gridiron, nor more than 6 inches below the baffle plate;

(c) Under all fly galleries;

(d) Under the stage;

(e) In all basements, workrooms, dressing rooms, store rooms and property rooms; and

(f) In toilet, lounge and smoking rooms.

History: Emerg. cr. eff. 9-6-86; cr. Register, November, 1986, No. 371, eff. 12-1-86; am. (1) (a), Register, March, 1991, No. 423, eff. 4-1-91.

ILHR 52.013 Specified applications by occupancy or use. Except as provided in s. ILHR 52.011 (5), a complete auto-

matic fire sprinkler system shall be installed as specified in the following occupancies:

(1) **MERCANTILE OCCUPANCIES.** (a) Except as provided in par. (b), in mercantile occupancies where the area exceeds 15,000 sq. ft. per floor or 30,000 sq. ft. total area of all floors; or the height exceeds 3 stories;

(b) Mercantile occupancies without complete automatic fire sprinkler protection may be constructed up to the areas permitted in Table 54.01-1, but not exceeding 20,000 sq. ft. per floor provided the following conditions are satisfied:

1. The building is completely equipped with an automatic smoke detection system monitored by a fire alarm system company, proprietary or remote station service;

2. The distance to an exit does not exceed 100 feet; and

3. Street access for fire fighting vehicles is provided on at least 50% of the building perimeter.

(2) **EXHIBITION ROOMS.** In rooms having more than 12,000 sq. ft. of floor area which can be used for exhibition or display purposes.

(3) **LIBRARIES AND MUSEUMS.** In libraries and museums either of which exceed 15,000 sq. ft. area per floor.

(4) **RESTAURANTS, NIGHT CLUBS AND DANCE HALLS.** (a) In restaurants where the floor area exceeds 12,000 sq. ft. per floor or where the capacity is more than 1,000 persons.

(b) 1. In buildings with rooms primarily used for dance halls or entertaining occupants who are drinking or dining and unseparated accessory uses where the total area exceeds 5,000 sq. ft. per floor or where the capacity is more than 300 persons.

2. The area of accessory rooms such as but not limited to kitchens, storage rooms and other use areas shall be included unless the accessory rooms are separated from the remainder of the building by at least one-hour fire-resistive construction.

(5) **DETENTION AND CORRECTION FACILITIES.** In all detention and correctional facilities with a resident population of 6 or more.

(6) **STORAGE OCCUPANCIES.** (a) 1. Except as provided in par. (b), in buildings having an area exceeding 20,000 sq. ft. and used for high-piled storage of moderate hazard contents as specified in subd. 2.

2. High-piled storage shall include moderate hazard combustible materials in closely packed piles more than 15 feet in height or moderate hazard combustible materials on pallets or in racks more than 12 feet in height.

(b) 1. The automatic fire sprinkler system protection may be limited to the storage area of the building only provided the storage area is separated from the remainder of the building by at least 2-hour fire-resistive rated construction.

2. Automatic fire sprinkler system protection need not be provided in freezer warehouses.

Note: See s. ILHR 54.01 (2) (c) for additional requirements.

(c) The automatic fire sprinkler protection required by this subsection shall be in accordance with NFPA 231 and 231C.

Note: See s. A52.011 for additional information on classification of hazards.

(7) **HIGH HAZARD BUILDINGS.** (a) Except as provided in par. (b), an automatic fire sprinkler system shall be installed in all high hazard occupancies exceeding 3000 sq. ft. in floor area.

Note: See s. A52.011 of Appendix A for additional information regarding classification of hazards.

(b) When approved by the department, alternate types of fire protection or suppression systems as may be appropriate for the particular hazard may be provided.

Note: The department will request a position statement regarding the proposed method to be submitted by the fire chief of the municipality having jurisdiction.

History: Emerg. cr. eff. 9-6-86; cr. Register, November, 1986, No. 371, eff. 12-1-86; am. (4) (a) and (b) 1., Register, March, 1991, No. 423, eff. 4-1-91; am. (6) (c), Register, January, 1994, No. 467, eff. 2-1-94.

Subchapter III — Windows and Fire Department Access Openings

ILHR 52.02 Windows. (1) **NATURAL LIGHT.** (a) Every room in which one or more persons live or sleep, shall be lighted by a skylight or skylights, or a window or windows opening directly upon a street or alley or upon a court on the same lot with the building, except as permitted [in] s. ILHR 57.13 (2).

(b) Windows shall not be required in storage rooms, factories, offices, mercantile facilities, educational facilities or areas where the nature of occupancy will not permit windows provided artificial lighting as specified in ch. Ind 19 is provided.

(2) **FIRE DEPARTMENT ACCESS OPENINGS.** (a) *Application.* Any basement or any floor level which is not protected by an automatic fire sprinkler system shall be provided with at least 20 square feet of aggregate opening in each 50 lineal feet of exterior wall of that basement or floor level on at least one side of the building, except as permitted under s. ILHR 52.012 (1). For the purpose of this requirement, openings 20 square feet in area spaced 100 feet apart and no more than 50 feet from the end of a wall shall satisfy the intent of this requirement.

(b) *Dimensions.* Openings shall have minimum dimensions of not less than 22 inches by 42 inches. The bottom of the opening shall be not more than 48 inches above the floor.

(c) *Accessibility.* The openings shall be accessible to the fire department from the exterior and shall be unobstructed to allow fire-fighting and rescue operations.

1. a. A clear space not less than 5 feet in width measured perpendicular to the building wall shall be provided outside of access openings.

b. A stairway or ramp to grade not less than 3 feet in width shall be provided where the bottom of the opening is more than 4 feet below grade.

2. An interior stairway may serve as basement access if the stairway leads directly to an exterior door and is separated

ILHR 52.02

rated at the first story with one-hour fire-resistive rated construction and protected openings. The stairway may not serve any floor level above the first story.

3. A skylight or hatch may serve as a basement access opening if a ladder or stairs from the floor below is provided.

4. Access openings shall be doors, windows, glazed panels or other panels readily identifiable and openable from the outside. Access panels requiring the use of a key, special tools or devices for opening will be permitted if approved by the fire department having jurisdiction.

5. The fire department access shall open into the general area of the floor being served, where an aisle or passageway leading to the opening can be maintained clear of obstructions.

Note: An opening located within a tenant storage cubicle is not acceptable.

(d) *Number of openings required.* Except as provided in s. ILHR 52.012 (1) (c), every floor level of a building more than 75 feet deep, measuring at right angles to the openings, shall have openings in that level on at least 2 sides of the building.

(e) *Locations.* Openings in the basement shall be located so any location in the basement is within 75 feet of an opening.

History: 1-2-56; am. Register, December, 1962, No. 84, eff. 1-1-63; r. and recr. (1) (a), Register, October, 1967, No. 142, eff. 11-1-67; am. (1) (a) Register, May, 1971, No. 185, eff. 6-1-71; r. and recr., Register, September, 1973, No. 213, eff. 10-1-73; cr. (1) (b), Register, January, 1980, No. 289, eff. 2-1-80; r. and recr. Register, June, 1983, No. 330, eff. 7-1-83; r. and recr. (2), Register, February, 1984, No. 338, eff. 3-1-84; emerg. r. and recr. (2), eff. 9-6-86; r. and recr. (2), Register, November, 1986, No. 371, eff. 12-1-86; r. and recr. (1) (a) (intro.) and (2) (a), r. (1) (a) 1. and 2., (b) 2., renum. (1) (b) 1. to be (b), Register, March, 1991, No. 423, eff. 4-1-91; am. (2) (d), Register, January, 1994, No. 457, eff. 2-1-94.

Subchapter IV — Barrier-Free Design for the Physically Disabled

ILHR 52.04 Requirements for barrier-free design. (1) **PUBLIC BUILDINGS AND PLACES OF EMPLOYMENT.** Except for covered multifamily housing as specified in sub. (2), all public buildings and places of employment shall be designed to be accessible and usable by people with disabilities in accordance with the requirements of ch. ILHR 69.

(2) **MULTIFAMILY HOUSING.** All covered multifamily housing as defined in s. ILHR 57.77 (6) shall be designed and constructed in accordance with the requirements of ss. ILHR 57.70 to 57.871.

History: Cr. Register, December, 1974, No. 228, eff. 1-1-75; r. and recr. (3) (b), (4), (5) and (9) (a) and (b), am. (6), (7) (a), (7) (c), (8) (c) and (d), r. (9) (3), Register, December, 1975, No. 240, eff. 1-1-76; am. table, (4) (c) 2 and (6) (e), Register, December, 1976, No. 252, eff. 1-1-77; cr. (2) (b) and (c), (3) (a) 3, am. (3) (b) (intro.), (4) (b) and (c) 1, (5), (7) (a), (c) and (e), (8) (b) and (9) (a) 1 and 2, r. and recr. (8) (b), Register, December, 1977, No. 264, eff. 1-1-78; am. (4) (c) 2., (5) (b), (6) (a) to (c), (7) (a) and (8) (c), Register, December, 1978, No. 276, eff. 1-1-79; am. (4) table, (5) (b), (9) (a) 1., (9) (c) 1. and 2., r. and recr. (3) and (8), cr. (9) (a) 3., Register, January, 1980, No. 289, eff. 2-1-80; cr. (8) (h), Register, December, 1981, No. 312, eff. 1-1-82; am. (8) (e), Register, October, 1982, No. 322, eff. 11-1-82; r. and recr. Table 52.04, (3), (6) (c), (7) and (9), am. (4) (b), (8) (c) and (8) (h) 1., cr. (10), Register, December, 1983, No. 336, eff. 1-1-84; am. (3) (a) (intro.) and 2., (3) (c) 1. and (d) 1., (6) (a), (7) (a), Table 52.04-B and (8) (e), r. and recr. (3) (d) 3., Table 52.04-A, (7) (c), (8) (d) and (10) (d), renum. (8) (f) to (h) to be (8) (g) to (i), cr. (8) (f) and (11), r. (10) (e), Register, August, 1985, No. 356, eff. 1-1-86; reprinted to correct error in (11) (a) 3., Register, May, 1988, No. 389; r. and Register, December, 1995, No. 480

recr. (4) (b), Register, August, 1988, No. 392, eff. 9-1-88; emerg. am. Table 52.04, eff. 1-12-93; am. (4) (c) 2., Register, August, 1993, No. 452, eff. 3-1-94; corrections in (3) made under s. 13.93 (2m) (b) 1, Stats., Register, December, 1993, No. 456; r. and recr. (2) and (4) (b), cr. (4) (d) and (6) (g), Register, March, 1994, No. 459, eff. 4-1-94; am. Table 52.04, Register, April, 1994, No. 460, eff. 5-1-94; r. and recr., Register, November, 1994, No. 467, eff. 12-1-94.

Subchapter V — Courts

ILHR 52.05 Size of courts. (1) In applying the following requirements, a building from 30 to 43 feet high shall be considered as having at least 3 stories, and each additional 13 feet shall be considered an additional story.

(2) Outer lot line courts shall be not less than 5 feet wide for a court 2 stories or less in height and 40 feet or less in length, measured from the lot line to the wall of the building. For each additional story in height, the width of such court shall be increased one foot; and for each additional 15 feet or fraction thereof in length, the width of such court shall be further increased one foot.

(3) Outer courts between wings or parts of the same building, or between different buildings on the same lot, shall be not less than 6 feet wide for a court 2 stories or less in height and 40 feet or less in length. For each additional story in height, the width of such court shall be increased one foot, and for each additional 10 feet or fraction thereof in length, the width of such court shall be further increased one foot.

(4) Where outer courts or outer lot line courts open at each end to a street or other open space not less than 15 feet wide, the above lengths may be doubled.

(5) Inner lot line courts one story high shall be not less than 5 feet wide and not less than 45 square feet in area. Inner lot line courts 2 stories high shall be not less than 6 feet wide and not less than 60 square feet in area. For every additional story, every such inner lot line court shall be increased by at least one lineal foot in length and one lineal foot in its width.

(6) Inner courts shall be not less than 10 feet in width nor less than 150 square feet in area for courts 2 stories or less in the height; and for every additional story every such inner court shall be increased by at least one lineal foot in its length and one lineal foot in its width.

(7) Courts shall not be covered by a roof or skylight but the entire required area shall be open and unobstructed from the bottom thereof to the sky. No fire escape or stairway shall be constructed in any court unless the court be enlarged proportionately.

(8) Walls of inner courts whose least horizontal dimension is less than one-fourth the height, shall be faced with material with a permanent white surface or shall be painted white at least every 2 years.

(9) No buildings shall be altered or enlarged to encroach upon space reserved under this code for light and air on the lots or parcels of ground on which such building is erected.

History: 1-2-56; am. (2) and (5), Register, September, 1973, No. 213, eff. 10-1-73.

ILHR 52.06 Ventilation of courts. At the bottom of every shaft or inner court there shall be sufficient access to such

shaft or court to enable it to be properly cleaned out. Every inner court which is required under s. ILHR 52.02 and which is more than one story in height, shall have an intake for fresh air, leading from the street or other open space. The area of such intake in square feet shall equal at least .002 of the number of cubic feet contained in the court, but such area need not be more than 50 square feet. Every intake shall be of not less than 2-hour fire-resistive construction and unless the intake is used as a passageway for persons, there shall be no openings into the same other than the inlet and outlet.

History: 1-2-56; am. Register, December, 1981, No. 312, eff. 1-1-82.

Subchapter VI — Atriums

ILHR 52.07 Atriums. (1) SCOPE. (a) All buildings, except those classified as high hazard, fully protected by an automatic fire sprinkler system may have atriums complying with the provisions of this section.

Note: See s. A 52.011 for further information regarding the classification and listing of high hazard buildings.

(b) All atriums, except as provided in ss. ILHR 55.09, 58.06 (2), 60.34, 61.12 (4) and 62.27 shall comply with the provisions of this section.

(2) **MINIMUM OPENING AND AREA.** Atriums shall have a minimum opening and area as specified in Table 52.07-1.

**TABLE 52.07-1
Atrium Opening and Area**

Height in Floor Levels	Minimum Clear Opening ¹ (Ft.)	Minimum Area (Sq. Ft.)
3-4	20	400
5-7	30	900
8 or more	40	1,600

¹The specified dimensions are the diameters of inscribed circles whose centers fall on a common axis for the full height of the atrium.

(3) **SMOKE CONTROL SYSTEM.** (a) *General.* A mechanically operated air-handling system shall be installed that will exhaust smoke either entering or developed within the atrium.

(b) *Exhaust openings.* 1. Exhaust openings shall be located in the ceiling or in a smoke trap area immediately adjacent to the ceiling of the atrium.

2. The lowest level of the exhaust openings shall be located above the top of the highest portion of door openings into the atrium.

(c) *Supply openings.* Supply openings shall be sized to provide a minimum of 50% of the exhaust volume and shall be located with the bottom of the opening within 18 inches of the floor of the lowest level of the atrium.

(d) *Supply air.* 1. When the height of the atrium is 55 feet or less, supply air may be introduced by gravity, provided smoke control is accomplished.

2. When the height of the atrium is more than 55 feet, supply air shall be introduced mechanically from the floor of the atrium and be directed vertically toward the exhaust outlets.

3. In atriums over 55 feet in height or where tenant spaces above the second story are open to the atrium, supplemental supply air may be introduced at upper levels.

(e) *Systems activation and operation.* 1. The exhaust and supply system for the atrium shall operate automatically upon the actuation of either the automatic fire sprinkler system within the atrium or areas open to the atrium or by the actuation of 2 or more smoke detectors required by sub. (4), or both.

2. The exhaust and supply equipment shall also be manually operable by controls designed for fire department use.

3. The smoke-control system may be separate or integrated with other air-handling systems.

4. When the smoke-control mode is actuated, air-handling systems which would interfere with the smoke-control system shall be automatically shut down.

(f) *Smoke-control in spaces.* Spaces separated from the atrium but sharing a common wall shall be provided with a smoke-control system as follows:

1. The mechanical air-handling equipment for the tenant space may be designed to accomplish smoke removal;

2. Upon activation of the smoke detection or automatic fire sprinkler system within the space, the return and exhaust air shall be moved directly to the outside without recirculation to other sections of the building; and

3. The air handling system shall provide a minimum of 6 air changes per hour of exhaust air for the tenant space involved.

(g) *Sizing of smoke-control systems.* The atrium smoke-control system shall exhaust not less than the following quantities of air:

1. Atriums of 600,000 cubic feet or less. a. Except as provided in subpar. b., a minimum of 6 air changes per hour but not less than 40,000 CFM for atriums having a volume of 600,000 cubic feet or less including the volume of any levels not physically separated from the atrium.

b. A lesser rate of air movement shall be acceptable provided it can be shown by test that smoke will not migrate beyond the perimeter of the atrium.

2. Atriums greater than 600,000 cubic feet. A minimum of 4 air changes per hour for atriums having a volume greater than 600,000 cubic feet including the volume of any levels not physically separated from the atrium.

(4) **SMOKE DETECTION SYSTEM.** (a) 1. An interconnected smoke detection system which will automatically operate the atrium smoke-control system shall be installed at the perimeter and on the ceiling of the atrium and on the ceiling of each floor level that is open to the atrium.

2. Smoke detectors shall be located within 15 feet of the atrium on floor levels open to the atrium.

(b) Smoke detection systems and individual smoke detectors shall be located and installed in accordance with their listing from a nationally recognized testing laboratory and s. ILHR 51.245.

ILHR 52.07

(5) **ENCLOSURE OF ATRIUMS.** (a) Except as provided in par. (b), atriums shall be separated from adjacent spaces by at least one-hour fire-resistive rated construction.

(b) Open exit balconies are permitted within the atrium.

(c) The separation between the adjacent space and the atrium as specified in par. (a) may be omitted on a maximum of any 3 floor levels, provided the remaining floor levels are separated as specified in par. (a).

(6) **OPENINGS IN THE ATRIUM ENCLOSURE.** (a) *Door openings.* 1. Except as provided in subd. 2., openings in the atrium enclosure shall be protected by at least $\frac{1}{2}$ -hour, self-closing fire door assemblies as specified in s. ILHR 51.047.

2. The doors may be left open if equipped with an automatic closing device activated by products of combustion other than heat.

(b) *Fixed glazed openings.* Except as provided in subds. 1. and 2., fixed glazed openings shall be protected by at least $\frac{1}{2}$ -hour fire window assemblies as specified in s. ILHR 51.048 and the total area of the openings shall not exceed 25% of the area of the common wall between the atrium and the room into which opening is provided.

1. In ch. ILHR 57 residential occupancies, openings may be unprotected when the floor area of each guest room or living unit does not exceed 1000 square feet and each guest room or living unit has an approved exit not entering the atrium.

2. In all occupancies other than ch. ILHR 57 residential occupancies, the tenant space may be separated from the atrium by a wired, tempered or laminated glass wall, in a gasketed frame so installed that the glazing system may deflect without breaking the glass before the automatic fire sprinkler system operates.

(7) **EXITING.** (a) *Exit distance.* When a required exit enters the atrium space, the travel distance from the doorway of the tenant space to an enclosed stairway, horizontal exit, exterior door or exit corridor shall not exceed 100 feet. The maximum allowable exit distance, as required by chs. ILHR 54 to 62 shall also be met.

(b) *Prohibitions.* Sleeping rooms of ch. ILHR 58 health care facilities shall not be permitted to have required exits through the atrium.

(c) Except as provided in ss. ILHR 54.08, 55.09 and 57.08, unenclosed stairs within the atrium may not serve as required exit stairs.

(8) **OCCUPANCY SEPARATIONS.** (a) Except as provided in par. (b), at least a one-hour fire-resistive separation, as specified in s. ILHR 51.08, shall be provided between different occupancies and each and every tenant space.

(b) The vertical portion of the occupancy separation adjacent to the atrium may be omitted between:

1. Chapter ILHR 54 office and sales areas and ch. ILHR 57 guest rooms and living units located on another level;

2. Chapter ILHR 55 assembly halls without a stage and having an occupant load of less than 300 persons and ch. ILHR 57 guest rooms and living units located on another level; and

Register, December, 1995, No. 480

3. Chapter ILHR 54 office and ch. ILHR 55 assembly halls without a stage and having an occupant load of less than 300 persons.

(9) **STANDBY POWER.** The smoke-control system for the atrium and the smoke-control system for the tenant space shall be provided with emergency standby power as specified in s. ILHR 16.32.

(10) **INTERIOR FINISHES.** The interior finish of walls and ceilings of the atrium and all unseparated spaces as permitted in sub. (5) (c) shall be Class A. No reduction in class may be permitted for automatic fire sprinkler system protection.

(11) **ACCEPTANCE OF THE SMOKE-CONTROL SYSTEM.** Before occupancy, the smoke-control systems shall be tested in an approved manner and shall show compliance with the requirements of this section.

Note: See Appendix A for a reprint of an approved test procedure.

(12) **INSPECTION OF THE SMOKE-CONTROL SYSTEM.** (a) All operating parts of the smoke-control systems shall be tested by an approved inspection agency or by the owner or designated agent or the smoke control system shall be fully supervised.

(b) The tests shall be made every 3 months and a log of the tests shall be kept. Fully supervised smoke control systems shall be tested at least annually.

(c) The log shall be on the premises and available for examination by department personnel or authorized deputies of the department.

History: Cr. Register, August, 1985, No. 356, eff. 1-1-86; r. and recr. (1), Register, March, 1991, No. 423, eff. 4-1-91; r. and recr. (5), am. (8) (a) and (10), Register, January, 1994, No. 457, eff. 2-1-94.

Subchapter VII — Miscellaneous Provisions

ILHR 52.19 Gas and oil lamps. (1) Gas and oil lamps shall not be used where electricity is available, except within living units of apartment buildings.

(2) Gas and oil lamps shall be placed at least 6 feet above the floor level, at least 6 inches from any combustible partition or wall, and at least 2 feet (measured from top of flame) below any combustible ceiling unless properly protected by a metal shield with at least 2 inches of air space above. Swinging brackets shall be provided with a guard or stop so that the light cannot come nearer to the partition or wall than one foot. In aisles and public passageways, every such light shall be protected by an incombustible guard unless the light is at least 7 feet above the floor. Gas and oil lights shall be kept at least 2 feet from any drape or window curtain.

(3) Every gas supply main shall have a service cock outside of the building, so placed and maintained that it can be shut off at any time without entering the building.

History: 1-2-56; am. (1), Register, September, 1973, No. 213, eff. 10-1-73.

ILHR 52.20 Electrical work. All electrical work shall conform to the requirements of the Wisconsin State Electrical Code, Volume 2, ch. ILHR 16, of the department.

Note: For the design requirements for transformer vaults, see ch. E 450 of the Wisconsin State Electrical Code, Volume 2, ch. ILHR 16.

History: 1-2-56; am. Register, January, 1961, No. 61, eff. 2-1-61.

ILHR 52.21 Location and maintenance of exits. Every exit mentioned in ss. ILHR 51.15 to 51.20, inclusive, shall lead to a street, alley or open court connected with a street. All such exits and all passageways leading to and from the same, shall be kept in good repair and unobstructed at all times.

History: 1-2-56; am., Register, January, 1980, No. 289, eff. 2-1-80.

ILHR 52.22 Repairs. Every building shall be kept in good repair and the roof shall be maintained to prevent leakage. All rainwater shall be so drained and conveyed to prevent dampness in the walls and ceilings.

Note: Public schools are required by s. 120.12 (5), Stats., to have annual building maintenance schedules, and are required by s. 121.02 (1) (i), Stats., to be safe and healthful. The inspections conducted by the department under s. ILHR 56.21 include a review of these maintenance schedules.

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82.

ILHR 52.23 Cleanliness. Every building, including connecting yards, courts, passages, areas or alleys, shall be kept clean, and shall also be kept free from any accumulation of dirt, filth, rubbish, garbage, or other matter.

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82.

ILHR 52.24 Recycling space. (1) APPLICABILITY. All buildings under the scopes of chs. ILHR 54 to 62 shall provide a separate room or designated space within or adjacent to the building for the separation, temporary storage and collection of recyclable materials likely to be generated by the building occupants, under any of the following conditions:

(a) The construction of a new public building;

(b) An increase in the existing area of a public building which increases the gross floor area of the structure by 50% or more; or

(c) An alteration of 50% or more of the existing area of a public building that is 10,000 square feet or more in area.

Note: The collection and temporary storage of recyclable materials that are flammable or combustible is regulated by ch. ILHR 14. Storage of liquids that are flammable or combustible is regulated by ch. ILHR 10. Owners of buildings where these materials are stored should consult those chapters for isolation, removal and storage standards.

(2) DESIGNATED SPACE. Designated space for the separation, temporary storage and collection of recyclable materials shall be provided within or adjacent to all buildings under sub. (1), except where a separate trash collection room is provided. In buildings where a trash collection room is provided, a clearly designated space for recyclables shall be provided.

Note: See Appendix C for guidelines for recommended designated space.

(3) ROOMS FOR SEPARATION, COLLECTION AND STORAGE.

(a) Separate rooms provided for the separation, collection and temporary storage of recyclable materials shall comply with s. ILHR 52.012 (2).

(b) When an automatic fire sprinkler system is provided, the system shall be designed and installed in an acceptable manner, and material may not be placed closer than 18 inches below sprinkler deflectors or discharge orifices.

(c) For buildings regulated under ch. ILHR 58, rooms provided for the separation, collection and temporary storage of recyclable materials shall comply with s. ILHR 58.24 or 58.62.

Note: Structural support for safe floor loads shall be in accordance with s. ILHR 53.11 (1) (d).

(4) STORAGE HEIGHT. The height of recyclable materials temporarily stored shall be limited so that stacked material is stable and secured against sliding or collapse.

Note: See ch. ILHR 14 for more restrictive storage heights, where applicable.

(5) CLEARANCE. (a) Containers for the collection or temporary storage or the space designated as a collection or storage point may not be located so as to limit the use of exits, exit passageways, stairways, fire escapes or areas normally used for safe egress for the building occupants or in such a manner as to obstruct normal movement of employees in the performance of their duties.

(b) Where mechanical equipment is used in the collection, separation, temporary storage or removal of recyclable materials, sufficient safe clearance shall be provided for equipment turning and passage.

(6) PROHIBITIONS. Storage of recyclable materials is prohibited within furnace or mechanical rooms. If designated space is adjacent to a building, the area provided may not be within 5 feet of combustible walls, wall openings or roof eaves.

Note: See ch. ILHR 14 for more restrictive distances from storage of flammable and combustible materials to adjacent buildings and lot lines.

History: Cr. Register, October, 1992, No. 442, eff. 5-1-93; am. (3) (b), Register, January, 1994, No. 457, eff. 2-1-94.

ILHR 52.25 Fire division wall or occupancy separation wall identification. (1) PURPOSE. Pursuant to s. 101.135, Stats., the purpose of this section is to establish uniform standards for the identification of fire division walls or occupancy separation walls of 2-hour fire-resistive rating or greater on the exterior of buildings.

(2) MUNICIPAL ORDINANCE. A city, village, or town may by ordinance require owners to identify the location of a fire division wall or occupancy separation wall at the exterior walls of buildings with a sign. A sign may not be required to identify a fire division wall or occupancy separation wall:

(a) Abutting exterior walls of 2 or more buildings along streets in downtown areas;

(b) With a visible parapet from the street;

(c) Which extends above roofs and is an exterior wall of another part of a building; and

(d) In buildings more than 3 stories.

(3) DEFINITION. "Fire division wall or occupancy separation wall" means a wall extending from the lowest floor level to or through the roof and extending the full width or length of the building.

Note: See "fire division wall" as defined in s. ILHR 51.01 (144)(b); fire division wall requirements in accordance with s. ILHR 51.02 (13), or occupancy separation wall requirements in accordance with s. ILHR 51.02 (20); and occupancy separation requirements in accordance with Table 51.08.

Register, December, 1995, No. 480

(4) **SIGN REQUIREMENTS.** (a) *General.* The sign shall consist of 3 circles arranged vertically on the exterior wall marking the location of the fire division wall or occupancy separation wall and centered on the fire division wall or occupancy separation wall. The circles may be affixed directly to the surface of the building or may be placed on a background material which is affixed to the building.

(b) *Size of circle.* Each circle shall be the same size. The diameter of the circle shall be at least 1½ inches, but no greater than 2 inches.

(c) *Spacing.* The circles shall be spaced equal distance apart. The maximum distance measured from the top of the uppermost circle to the bottom of the lowermost circle shall be 12 inches.

(d) *Color.* The color of the circle shall be limited to either red, amber (orange-yellow) or white (clear) and shall be reflective. The color of the circle shall contrast with the color of the background.

(5) **LOCATION.** The top of the sign shall be located on the face of the exterior wall of the building and located no more than 12 inches below the eave, roof edge, fascia or parapet.

History: Cr. Register, January, 1994, No. 457, eff. 2-1-94.

Subchapter VIII — Sanitary Facilities

ILHR 52.50 Toilet rooms. (1) Every place of employment and public building shall be provided with toilet rooms as specified in chs. ILHR 54 to 62.

(2) Entrances for toilet rooms shall be provided with doors or mazed passageways to ensure privacy to the users of the toilet rooms, except as permitted in ss. ILHR 56.16 (1) and 60.15 (3). If mazed passageways are employed in lieu of doors:

(a) The passageways of the maze shall be at least 48 inches in width;

Note: See appendix for further explanatory materials.

(b) The walls creating the maze shall be at least 6 feet 8 inches high;

(c) The maze shall prevent a direct view of the water closet compartments or urinals from the outside entrance of the maze;

(d) The maze shall prevent an indirect view of the water closet compartments or urinals from the outside entrance of the maze by means of mirrors located within the toilet room; and

(e) The toilet room shall be provided with an exhaust fan which is to be on continuously while the building is occupied, and which is to create a negative pressure within the toilet room with respect to the area outside the toilet room.

History: 1-2-56; am. Register, December, 1962, No. 84, eff. 1-1-63; am. Register, December, 1976, No. 252, eff. 1-1-77; r. and recr. Register, March, 1991, No. 423, eff. 4-1-91; am. (2) (intro.), (c) and (d), Register, August, 1993, No. 452, eff. 3-1-94.

ILHR 52.52 Sex designation. Where separate toilet rooms are provided for each sex as required by this code, each toilet room shall be clearly marked with regard to the sex

for which it is designated. Words such as MEN or WOMEN, in letters not less than one-inch high, or appropriate symbols may be used to designate the sex for which the toilet room is designed. Where a single toilet room is provided for use by either sex, the toilet room may be marked as UNISEX.

Note: The American Disabilities Act Accessibility Guidelines may require more restrictive standards on size and arrangement of toilet rooms as published in the Federal Register, 28 CFR, Part 36.

History: 1-2-56; am. Register, September, 1973, No. 213, eff. 10-1-73; am. Register, December, 1976, No. 252, eff. 1-1-77; am. Register, August, 1993, No. 452, eff. 3-1-94.

ILHR 52.53 Location, light and ventilation. (1) Toilet rooms shall be ventilated in accordance with the provisions of s. ILHR 64.65.

(2) Toilet rooms may not have ventilation openings in an elevator shaft or inner court that has windows of habitable rooms above unless the shaft or court has an area greater than 1,250 square feet and a least dimension greater than 20 feet.

History: 1-2-56; am. Register, December, 1962, No. 84, eff. 1-1-63; r. and recr. Register, October, 1967, No. 142, eff. 11-1-67; am. (3), Register, September, 1973, No. 213, eff. 10-1-73; am. (4) (intro.), Register, December, 1976, No. 240, eff. 1-1-76; am. (4), Register, December, 1981, No. 312, eff. 1-1-82; am. (2) (intro.), Register, August, 1993, No. 452, eff. 3-1-94; r. and recr. 52.53, Register, December, 1995, No. 480, eff. 4-1-96.

ILHR 52.54 Location without outside windows; when permitted. *History:* 1-2-56; r. and recr. Register, October, 1967, No. 142, eff. 11-1-67; am. Register, December, 1976, No. 240, eff. 1-1-76; r. and recr. Register, December, 1977, No. 264, eff. 1-1-78; am. (1), Register, December, 1983, No. 336, eff. 1-1-84; r. Register, December, 1995, No. 480, eff. 4-1-96.

ILHR 52.55 Artificial light. Every toilet room, except those within living units, shall be artificially lighted during the entire period that the building is occupied, wherever and whenever adequate natural light is not available, so that all parts of the room, especially the toilet compartments, shall be provided with artificial light intensity of not less than 2.5 footcandles at the floor level.

History: 1-2-56; am. Register, September, 1973, No. 213, eff. 10-1-73.

ILHR 52.56 Size. Every toilet room shall have at least 14 square feet of floor area with a minimum width of 3 feet, and at least 100 cubic feet of air space for each water-closet and each urinal in addition to the space required for lavatories if installed within the toilet room.

ILHR 52.57 Floor and base. Every toilet room, except those within living units of apartment buildings, shall have the entire floor and the side walls to a height of not less than 4 inches of a material impervious to water.

Note: This section is also intended to prohibit the use of wall registers within 4 inches of the floor, baseboard registers and floor registers.

History: 1-2-56; am. Register, September, 1973, No. 213, eff. 10-1-73; am. Register, December, 1981, No. 312, eff. 1-1-82; am. Register, February, 1991, No. 422, eff. 3-1-91.

ILHR 52.58 Walls and ceilings. (1) The walls and ceilings of every toilet room shall be completely covered with smooth non-absorbent material.

(2) The interior surface of walls and partitions shall be of light color to improve illumination and facilitate cleaning.

History: 1-2-56; r. and recr. Register, September, 1969, No. 45, eff. 10-1-59; am. (1), Register, December, 1977, No. 264, eff. 1-1-78.

ILHR 52.59 Enclosure of fixtures. (1) PRIVACY. Water closets and urinals within a toilet room shall be arranged to ensure privacy. Water closets shall be enclosed with partitions, except as provided in ss. ILHR 58.68 (1) (a) and 60.15 (3). Urinals shall be placed against walls at least 6 feet 8 inches high and arranged individually with or without partitions.

(a) Exceptions. 1. The above requirements need not apply to toilet rooms accommodating only a single water closet or urinal or as specified in s. ILHR 52.59 (6) (b).

2. A privacy lock shall be provided for a toilet room with a single water closet and a nonregulated urinal when privacy partitions are not provided.

(2) **PARTITION DESIGN.** The partition enclosure shall provide privacy from an elevation of 12 inches above the floor to 5½ feet above the floor. All partitions and doors shall be of material and finish required for walls and ceilings under s. ILHR 52.58 and ensure privacy.

(3) **COMPARTMENT DESIGN.** The water closet compartments in toilet rooms shall be not less than 30 inches in width, and shall be not less than 54 inches in depth with a clearance of not less than 24 inches between the fixture and the compartment door when closed except as specified in s. ILHR 52.04 (8). Compartment doors which are hung to swing inward shall clear the fixture by not less than 2 inches.

(4) **PROHIBITIONS.** No admission fee shall be charged for the use of any toilet room in a public building or place of employment. Key-locking of toilet rooms is prohibited in all buildings except service stations and filling stations having exterior toilet room access.

Note: Section 146.085, Stats., prohibits charging a fee for the use of any toilet compartment and imposes a fine for violations.

History: 1-2-56; am. (3) and cr. (4), Register, November, 1963, No. 95, eff. 12-1-63; am. (2), Register, February, 1974, No. 218, eff. 3-1-74; r. (4), Register, December, 1974, No. 228, eff. 1-1-75; am. (3), Register, December, 1976, No. 240, eff. 1-1-76; cr. (4), Register, December, 1976, No. 252, eff. 1-1-77; am. (1), Register, December, 1977, No. 264, eff. 1-1-78; am. (1) (intro.), Register, March, 1991, No. 423, eff. 4-1-91; am. Register, August, 1993, No. 452, eff. 3-1-94.

ILHR 52.60 Sanitary facilities. (1) WATER CLOSETS. (a) Except as permitted in par. (b), all water closets required to be provided in public buildings and places of employment shall:

1. Be of an elongated bowl type; and
2. Provided with either:
 - a. Hinged, open-front seats without covers; or
 - b. Hinged, closed-front seats, without covers, which are encased with a continuous plastic sleeve capable of providing a clean surface for every user and for which a specific material approval under s. ILHR 50.19 has been issued.

(b) Water closets which are required to be provided in day care centers or individual living units or sleeping units of residential occupancies within the scope of either ch. ILHR 57 or 61 may be of a round-bowl type with a hinged, closed front seat with or without a cover.

Note 1: Under s. 145.25, Stats., and s. ILHR 84.20 (3) all water closets may not use more than 4 gallons of water per flush.

Note 2: The plumbing code, s. ILHR 84.20 (5) (m) 7., prescribes requirements for water closets relative to their location to partitions, side walls and other obstructions. See appendix for further explanatory material.

(2) **URINALS.** (a) *Stall type.* Stall-type urinals shall be set into the floor, and the floor shall be graded toward the fixture. Spaces between stall-type urinals, or urinals and sidewalls, shall be filled in flush with the front and top of the urinal with nonabsorbent material if the space is less than 12 inches.

(b) *Wall type.* Wall-hung urinals may be installed in all buildings except child day care facilities and elementary schools from kindergarten through 8th grade.

Note 1: The definitions and general classifications for schools are found in s. 115.01, Stats.

Note 2: The department recommends that wall-hung urinals be installed at a height between 22 inches to 24 inches above the floor.

Note 3: See s. ILHR 52.04 (8) for additional requirements dealing with making wall-hung urinals accessible for people with disabilities.

(c) *Flushing devices.* The urinals shall be equipped with an effective flushing device which limits the use of water to not more than 1.5 gallons per urinal per flush.

(d) *Multiple urinals.* Batteries of urinals shall be spaced not less than 30 inches center-to-center. The center line of a single urinal shall be at least 16 inches from the nearest sidewall or partition.

(e) *Materials.* Only individual urinals of porcelain, vitreous china, stainless steel, or other nonabsorbent materials approved by the department shall be used.

(3) **HAND-WASHING AND DRYING FACILITIES.** Hand-washing facilities shall be provided in all places of employment and public buildings as specified in the occupancy chapters of chs. ILHR 54 to 62.

(a) *Lavatories.* Except as provided in sub. (6), lavatories shall be of an approved type and shall be provided with hot and cold running water. The faucets of such lavatories shall be of a type which limits the flow of water through the faucet, after the handle is released, to not more than one gallon. Lavatories in toilet rooms of private living units shall be equipped to limit the flow of water to not more than 3 gallons per minute. The lavatories may be equipped with a hot and cold regulating device. If a multiple-use lavatory is installed, 24 lineal inches of wash sink or 20 inches measured along the edge of a circular basin will be considered equivalent to one lavatory. At least one lavatory shall be provided either in each toilet room or in a sex-designated lounge adjacent to the toilet room.

(b) *Hand-drying facilities.* Individual hand towels, sections of cloth or paper, or clean individual sections of continuous toweling, convenient to the lavatories, shall be provided. Hand-drying facilities shall be provided at the ratio of at least one unit for every 3 lavatories. Warm-air blowers may be substituted for up to one-half of the required hand-drying units. Warm-air blowers shall provide air at not less than 90° F, nor more than 140° F.

Note: The department will accept the qualified blowers listed by Underwriters' Laboratories, Inc.

(c) *Toilet soap.* Soap or similar cleansing agents shall be provided.

(d) **Receptacles.** Receptacles shall be provided for the disposal of used towels and other waste materials.

(4) **DRINKING FACILITIES.** Drinking facilities shall be provided in all buildings except in areas where food and drinks are served. Drinking facilities shall not be installed in toilet rooms, except in residential occupancies. Drinking fountains, coolers or individual cups at a potable water source may be provided. Common drinking cups are prohibited.

Note: Where running water is not available, a covered drinking water container, equipped with a faucet or bubbler, may be provided. The container should be cleaned and sanitized at frequent intervals.

(5) **BATHING FACILITIES.** Bathing facilities shall be provided for the specific occupancies outlined in the occupancy chapters of this code.

(a) All shower compartments, regardless of shape, shall have at a minimum finished interior of 900 square inches and shall be capable of encompassing a 30-inch circle. The minimum required area and dimension shall be measured at a height 24 inches above the top of the threshold and at a point tangent to its centerline. The minimum area and dimensions shall be maintained to a point 70 inches above the shower waste outlet with no protrusions other than the fixture valve or valves, showerheads, soap dishes and safety grab bars or rails. Each shower room or compartment shall be constructed of material impervious to moisture. The floor of the shower room or compartment shall be provided with a slip-resistant finish.

(b) Except as provided in sub. (6), bathing facilities shall be provided with hot and cold water and be equipped with a hot and cold water regulating device. The device shall be plainly marked. Supply or feed pipes to showers shall be placed overhead or protected to avoid the probability of a person coming in contact with the hot water pipes. Showers shall be equipped to limit the flow of water to not more than 3 gallons per minute per shower head.

(c) Employees who use showers shall be provided with soap or other appropriate cleansing agents and clean individual towels.

Note: See ch. ILHR 82 for special fixture requirements.

(6) **LAVATORIES, USE OF HOT OR TEMPERED WATER.** (a) Lavatories, wash fountains and shower heads which are not located in dwelling units or living units shall be supplied with either tempered water or hot water.

1. Tempered water shall be provided to lavatories, wash fountains and shower heads by means of tempering mixing valves.

(b) Lavatories located in park shelters and bath houses which are not open during the period from November 15 to March 15 and which are not places of employment shall not be required to be provided with hot water.

(c) Lavatories located in waysides which are not places of employment shall not be required to be provided with hot water.

Note: The exception of providing hot water under pars. (a) to (c) does not supercede the requirements of other state agencies for providing hot water.

History: 1-2-56; r. and recr., Register, September, 1959, No. 45, eff. 10-1-59; am. (1), Register, September, 1973, No. 213, eff. 10-1-73; r. and recr., Register, December, 1974, No. 228, eff. 1-1-75; am. (1) and (2) (d), r. and recr. (2) (b), cr. (2) (f), (3), (4) and (5), Register, December, 1976, No. 252, eff. Register, December, 1995, No. 480

1-1-77; am. (2) (c), Register, May, 1978, No. 269, eff. 6-1-78; am. (1), (2) (c), (3) (a) and (5) (b), Register, January, 1980, No. 289, eff. 2-1-80; r. (2) (f), r. and recr. (5) (a), Register, August, 1985, No. 356, eff. 1-1-86; am. (3) (a) and (5) (b), cr. (6), Register, May, 1988, No. 389, eff. 6-1-88; r. and recr. (1) and (3) (intro.), Register, March, 1991, No. 423, eff. 4-1-91; am. (2) (b) and (3) (a), Register, January, 1994, No. 457, eff. 2-1-94; r. (6) (a) 2. and 3., Register, October, 1994, No. 466, eff. 11-1-94.

ILHR 52.61 Protection from freezing. All water-closets and urinals and the pipes connecting therewith shall be properly protected against freezing, so that such water-closets and urinals will be in proper condition for use at all times.

ILHR 52.62 Disposal of sewage. (1) Each water-closet and urinal, and each lavatory or slop sink, located in a toilet room shall be connected with a sewer and water system, where such systems are available. In locations where a sewer system is not available, or cannot be made available, the disposal of human waste may be accomplished as follows:

(a) Sewage treatment tank and disposal system; or

Note: For detailed requirements on such systems see chs. ILHR 82 and 83.

(b) Where the local conditions make it impractical to install such system, outdoor toilets, as described in s. ILHR 52.63, or other facilities, such as septic toilets installed in accordance with the provisions of the state plumbing code, chs. ILHR 81 to 87, may be used; provided that in the case of places of employment for more than 10 persons, schools larger than 2 rooms, and apartment houses, water-flush toilets as herein described shall be provided, unless outdoor toilets or other facilities are permitted in writing by the department.

History: 1-2-56; am. (1) (b), Register, August, 1993, No. 452, eff. 3-1-94.

ILHR 52.63 Permanent and temporary outdoor toilets. (1) **PERMANENT OUTDOOR TOILETS.** Permanent outdoor toilets shall comply with ss. ILHR 52.50 to 52.59, inclusive, and in addition:

(a) No privy, with or without a seepage pit or other container as specified for use by the department, shall be erected or maintained within 50 feet of any well, 10 feet of the line of any street or other public thoroughfare, 5 feet of the property line or 25 feet of a door, window or other outdoor openings of any building;

(b) A permanent outdoor toilet shall be located on a site where the soil is well-drained, and where there is no possibility of contaminating any drinking water supply, groundwater or surface water;

Note: Refer to ch. ILHR 83 for soil and site criteria for location of outdoor toilets.

(c) A permanent outdoor toilet shall be provided with a suitable approach, such as a concrete, gravel or cinder walk;

(d) For permanent outdoor toilets the foundations shall be of concrete or other masonry;

(e) The vault of a permanent outdoor toilet shall extend at least 6 inches above ground, be impervious to light, and be proof against entrance by flies, rats, or other vermin. The upper portion shall be of concrete, or of brick or stone laid in cement mortar. If located on a site with poorly-

drained soil, the entire vault shall be of concrete, brick, or stone, or laid in cement mortar;

(f) All windows, ventilators and other openings shall be screened to prevent the entrance of flies, and all doors shall be self-closing. A separate ventilator shall be provided for the vault and shall extend from the vault to not less than one foot above the roof and be provided with an effective ventilating hood; and

(g) The entire installation shall be kept clean and sanitary. Milk of lime (freshly slaked lime) or other equally effective disinfectant shall be used in the vault and in the urinal trough in sufficient quantities, and at frequent intervals. The floors, seats and urinals shall be scrubbed as often as necessary. The vault shall be cleaned out at proper intervals.

(2) TEMPORARY OUTDOOR TOILETS. Temporary outdoor toilets shall comply with ss. ILHR 52.50 to 52.59, inclusive, and in addition:

(a) No temporary toilet may be erected or maintained within 50 feet of any well, 10 feet of the line of any street or other public thoroughfare, unless vehicular traffic has been temporarily detoured while toilets are in use, 5 feet of the property line between premises or 25 feet of a door, window or other outdoor openings of any building;

(b) A temporary outdoor toilet shall be stabilized and located on a site where the soil is well-drained, and where there is no possibility of contaminating any drinking water supply, groundwater or surface water;

(c) A temporary outdoor toilet shall be located with an approach such that access is unobstructed, and free of brush, debris and standing water;

(d) A temporary outdoor toilet shall be serviced by a licensed septage disposer and the contents disposed of properly as required by ch. NR 113;

(e) For specialty events centers without permanent sanitary fixtures in number as required by Tables 54.12-A or 54.12-B, temporary outdoor toilets shall be used to meet the number required for the event, using capacity or seating capacity.

History: 1-2-56; am. (1) (infra.) to (e), cr. (2), Register, August, 1993, No. 452, eff. 3-1-94.

ILHR 52.64 Maintenance and housekeeping. (1) MAINTENANCE OF TOILETS. Every toilet room, and every part thereof, including walls, floor, ceiling and fixture therein, shall be kept clean, efficient, and in good repair.

(2) PAPER. In every toilet room, sufficient toilet paper made of material which will not interfere with the operation of the system or obstruct the fixtures, shall be provided.

(3) DEFACEMENT. Indecent or suggestive marks, pictures, or words are forbidden in toilet rooms, and such defacement when found shall be removed at once.

(4) SERVICE CLOSETS. In buildings having 5 or more fixtures (water closets and/or urinals) a service closet shall be provided conforming with the requirements for toilet rooms.

(a) The service closet shall be supplied with mop, broom, bucket, soap, toilet paper, toweling and other equipment for sanitary upkeep of toilet rooms.

History: 1-2-56; r. and rec. (4), Register, October, 1967, No. 142, eff. 11-1-67.