Chapter ILHR 56

SCHOOLS AND OTHER PLACES OF INSTRUCTION

Note: Chapter Ind 56 was renumbered to be ch. ILHR 56, effective January 1, 1984. Sections ILHR 56.50 to 56.57 were created on emergency rules effective 7-3-89. Sections ILHR 56.60 to 56.70 were created as emergency rules effective 9-6-89.

Subchapter I — General Requirements

ILHR 56.001 Scope. The requirements of this chapter shall apply to all public and private schools, universities, colleges, academies, seminaries, libraries, museums and art galleries; including all buildings or parts of buildings used primarily for instructional purposes.

Note: Section 101.02 (15) (a), Stats., exempts rural school buildings from the provisions of this code. See s. ILHR 51.01 (114b) for definition of a rural school building.

History: 1-2-56; am. Register, May, 1971, No. 185, eff. 6-1-71; am. Register, December, 1977, No. 264, eff. 1-1-78; am. Register, January, 1980, No. 289, eff. 2-1-80.

ILHR 56.01 Maximum height. (1) Buildings occupied primarily by pupils up to and including grade 12 shall not exceed 4 stories or 48 feet in height.

(a) *Exception.* Buildings provided with complete automatic sprinkler or automatic smoke detection systems, occupied primarily by students of grades 9 through 12, shall be no more than 6 stories or 72 feet in height.

Note: Also see requirements for classes of construction.

History: 1-2-56; r. Register, May, 1971, No. 185, eff. 6-1-71; cr. Register, September, 1973, No. 213, eff. 10-1-73.

ILHR 56.02 Classes of construction. (1) Except as provided in sub. (4), every building not more than one story in height may be of type 7 or 8 construction as specified in s. ILHR 51.03.

(2) Except as provided in sub. (4), every 2-story building shall be not less than type 6 construction as specified in s. ILHR 51.03 with the exception that all floors and their supports shall be at least noncombustible one-hour fire-resistive rating.

(3) Except as provided in sub. (4), every building 3 or more stories in height shall be of type 1 or 2 construction as specified in s. ILHR 51.03.

(4) The story heights specified in subs. (1) to (3) may be increased by one story in buildings completely protected by automatic fire sprinkler system protection.

(5) Auditoriums, gymnasiums or field houses, or those parts of buildings similarly used, shall comply with the following:

(a) Limitations when occupancy is restricted to first story or ground floor only.

MAXIMUM CAPACITIES

	Without Complete Automatic Fire Sprinkler System Protection		With Complete Automatic Fire Sprinkler System Protection	
Class of Construction	With Stage	Without Stage	With Stage	Without Stage
Type 1 and 2	No limit	No limit	No limit	No limit
Type 3 and 4	750	1,500	1,000	2,000
Type 5 and 6	500	1,000	750	1,500
Type 7 and 8	300	750	500	1,000

(b) 1. Except as provided in subd. 2., one story building of Types No. 5 or 6 non-combustible construction may have unlimited capacity provided the building has no ground floors or basement floors. Heavy timber columns, roof framing and roof decking may be substituted for required non-combustible columns, roof framing and roof decking. Mezzanine floors and supports shall be not less than one-hour non-combustible construction.

2. A basement or ground floor mechanical equipment room may be provided if separated from the upper level by not less than 4-hour non-combustible construction.

History: 1-2-56; r. and recr. Register, May, 1971, No. 185, eff. 6-1-71; am. (1) and (2) and r. and recr. (3), Register, June, 1972, No. 198, eff. 1-1-73; cr. (4), Register, September, 1973, No. 213, eff. 10-1-73; r. and recr. (4) (a) 1., Register, May, 1974, No. 221, eff. 6-1-74; am. (4) (a) 1., Register, December, 1978, No. 276, eff. 1-1-79; emerg. am. (1) to (3), renum. (4) to (5) and r. and recr. (5) (a) and (b), cr. (4), eff. 9-6-86; am. (1) to (3), renum. (4) to be (5) and r. and recr. (5) (a) and (b), cr. (4), Register, November, 1986, No. 371, eff. 12-1-86.

ILHR 56.03 Protection of basement levels. (1) GENERAL REQUIREMENT. Buildings with basements shall at such levels be protected with an ap-

proved automatic sprinkler system as specified in s. ILHR 51.23 or an approved automatic smoke detection system, as specified in s. ILHR 51.245, either of which shall be electrically connected to the required fire alarm system.

Note: See s. ILHR 51.245 for additional requirements pertaining to smoke detectors.

Note: See ss. ILHR 52.012 (1) and 52.02 for additional requirements pertaining to basements.

(2) RETROACTIVITY. Existing buildings which do not conform to the requirements specified in sub. (1) on or after the effective date of this subsection shall comply with the following:

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(2) EXIT LIGHTS. Illuminated exit lights are not required in relocatable classrooms.

History: Cr. Register, December, 1978, No. 276, eff. 1-1-79.

ILHR 56.35 Class of construction separations. Relocatable classrooms connected to another building shall be separated by class of construction separations as specified in s. ILHR 51.02 (20).

History: Cr. Register, December, 1978, No. 276, eff. 1-1-79; am. Register, December, 1983, No. 336, eff. 1-1-84.

ILHR 56.36 Barrier-free requirements. Access to, interior circulation and toilet facilities for the physically disabled need not be provided for the relocatable classroom if the course taught in the relocatable classroom are available in accessible facilities at the same school site.

History: Cr. Register, December, 1978, No. 276, eff. 1-1-79.

ILHR 56.37 Sanitary fixtures. (1) Sanitary fixtures for relocatable classrooms shall be provided in accordance with the requirements of ss. ILHR 52.50 through 52.64 and 56.16.

(a) *Exception.* Sanitary fixtures within the relocatable classroom structure need not be provided if the sanitary fixtures in the main school building are available for use and the relocatable classroom structure is connected to the main school building with an enclosed passageway.

History: Cr. Register, December, 1978, No. 276, eff. 1-1-79.

ILHR 56.38 Fire alarms. Relocatable classroom structures containing more than 2 classrooms or connected to another building shall be provided with a fire alarm system as specified in s. ILHR 51.24.

History: Cr. Register, December, 1978, No. 276, eff. 1-1-79.

Subchapter III — Mobile Training Units

ILHR 56.40 Scope. This part provides the minimum requirements for mobile training units as defined in s. ILHR 56.41.

History: Cr. Register, December, 1978, No. 276, eff. 1-1-79.

ILHR 56.41 Definitions. "Mobile training units" mean trailer type units constructed and left on wheels. Mobile training units are used for education purposes at one site for a period of time no greater than 9 weeks per year.

History: Cr. Register, December, 1978, No. 276, eff. 1-1-79.

ILHR 56.42 General. Mobile training units shall comply with the applicable sections of this code except as otherwise specified in this part.

History: Cr. Register, December, 1978, No. 276, eff. 1-1-79.

ILHR 56.43 Exit doors and exit lights. (1) EXIT DOORS. Exit doors shall be at least 3 feet 0 inches wide.

(2) EXIT LIGHTS. Illuminated exit lights are not required for mobile training units.

History: Cr. Register, December, 1978, No. 276, eff. 1-1-79.

ILHR 56.44 Barrier-free requirements. Access to, interior circulation and toilet facilities for the physically disabled need not be provided for

the mobile training units if the course taught in the mobile training units are available in accessible facilities at the same school site.

History: Cr. Register, December, 1978, No. 276, eff. 1-1-79.

ILHR 56.45 Sanitary fixtures. (1) GENERAL EXEMPTION. Sanitary fixtures are not required in the mobile training units provided the sanitary fixtures in the main school building are available for use.

(2) GENERAL REQUIREMENTS. Toilet rooms within the mobile training unit shall comply with the requirements of ss. ILHR 52.50 through 52.64 and 56.16.

(a) *Exceptions.* 1. The requirements specified in s. ILHR 52.59 are not applicable provided the toilet room door is equipped with a privacy lock.

2. Accessible toilet facilities for the physically disabled need not be provided if accessible toilet facilities in the main school building are made available.

History: Cr. Register, December, 1978, No. 276, eff. 1-1-79.

ILHR 56.46 Fire alarms. Mobile training units used individually are exempt from the provisions of s. ILHR 56.19.

History: Cr. Register, December, 1978, No. 276, eff. 1-1-79.

Subchapter IV — Life-Safety Requirements for Existing Schools

ILHR 56.50 Scope. The provisions of this subchapter shall apply to all existing buildings and portions of buildings constructed prior to January 1, 1950 which are publicly owned or leased as schools and primarily used for instructional purposes for students up to and including grade 12.

History: Cr. Register, April, 1990, No. 412, eff. 5-1-90.

ILHR 56.51 Purpose. The purpose of this subchapter is to incorporate modern safety requirements in all existing schools constructed prior to January 1, 1950 to improve the life-safety of the occupants in these buildings.

History: Cr. Register, April, 1990, No. 412, eff. 5-1-90.

ILHR 56.52 Definitions. In this subchapter:

(1) "Funding is in place" means approval to fund through board approval, annual meeting approval, referendum or similar term.

(2) "Life-safety plan" means the individual plan developed for a school to improve the life-safety of the school.

(3) "Life-safety standards" means the individual plan developed for a school to improve the life-safety of the school.

(4) "Light-panel frames" means any glazed openings.

(5) "Special department inspection program" means inspections performed by the department to evaluate existing schools in accordance with life-safety standards and to establish an individual life-safety plan for each school.

(6) "Transfer grille" means an opening in a wall or door which permits air to flow from one space to another.

(7) "Written determination" means a decision by the department after reviewing plans and specifications or other information.

History: Cr. Register, April, 1990, No. 412, eff. 5-1-90.

ILHR 56.53 Schools constructed prior to 1930. Schools constructed prior to 1930 shall comply with the following requirements:

(1) PRE-1930 SCHOOLS INSPECTED PRIOR TO JANUARY 1, 1989. (a) *Codes and standards.* The recommendations specified in the individual life-safety plan for the pre-1930 schools inspected prior to January 1, 1989, shall comply with the standards specified in ss. ILHR 56.63 to 56.66.

(b) *Compliance dates.* 1. Pre-1930 schools inspected prior to January 1, 1989, shall implement on or before August 1, 1990, the recommendations of the written life-safety plan developed by the department through the special department inspection program.

2. The August 1, 1990, compliance date may be extended to those schools where an extension of time for compliance as specified in s. ILHR 56.56 has been granted in writing by the department.

Note: The department issued an emergency rule on pre-1930 schools on July 31, 1989, requiring code violations to be corrected by September 1, 1989, and a written implementation plan on the life-safety plan to be submitted to the department by December 1, 1989. Pre-1930 schools inspected prior to January 1, 1989, were evaluated using the inspection form SBD-8013.

(2) PRE-1930 SCHOOLS INSPECTED AFTER JANUARY 1, 1989. (a) *Codes and standards.* Any pre-1930 school inspected after January 1, 1989, shall be evaluated in accordance with ss. ILHR 56.63 to 56.66.

(b) *Compliance dates.* Individual compliance dates to implement the life-safety plan shall be established by the department for each school.

History: Cr. Register, April, 1990, No. 412, eff. 5-1-90.

ILHR 56.54 Schools constructed between January 1, 1930, and January 1, 1950. Schools constructed between January 1, 1930, and January 1, 1950, shall comply with the following requirements:

(1) CODES AND STANDARDS. The life-safety standards specified in ss. ILHR 56.63 to 56.66 shall be used to evaluate schools constructed between January 1, 1930, and January 1, 1950.

(2) COMPLIANCE DATES. All violations identified through the special department inspection program shall be corrected by September 1, 1991, unless an extension of time for compliance as specified in s. ILHR 56.56 has been granted by the department.

History: Cr. Register, April, 1990, No. 412, eff. 5-1-90.

ILHR 56.56 Extension of time for compliance. A school district may request in writing an extension of time to comply with any code violation or the life-safety plan. Extensions may be granted in accordance with one or more of the following:

(1) CONSTRUCTION PROBLEMS. The department may grant a reasonable extension of time in order to permit a school district to:

(a) Prepare plans for construction and issue bids for construction;

(b) Complete construction that has been delayed due to availability of materials, weather conditions, or other construction-related problems;

(c) Implement interim approved safety measures to protect the building occupants during the time of extension; or

(d) Obtain written approval of an alternate life-safety plan.

(2) FUNDING PROBLEMS. (a) A school district may request a one year extension if the school district is unable to implement the life-safety plan due to inadequate funding.

(b) Requests for extensions indicating the school district is unable to correct the code violations or implement the life-safety plan due to inadequate funds shall be submitted to the department with:

1. A written statement obtained from the department of public instruction stating that the school district is unable to borrow money or to use the school's operating reserve to implement the required life-safety standards;

2. A copy of a written plan submitted to the department of public instruction on how the school district will obtain the funds to complete the life-safety plan; and

3. An alternate life-safety plan identifying the interim measures that will be provided to protect the building occupants. The alternate life-safety plan shall be prepared by a registered engineer or architect.

(3) EXTENSION TO BUILD NEW SCHOOL OR MAJOR REMODELING. A school district may request an extension of time to comply with the life-safety plan if a school district has approval to construct a new school or additions, or to do major remodeling in the existing building.

(a) The following criteria shall be submitted to the department for a written determination on the request for extension:

1. Written notification and commitment that the funding is in place and that a new school or addition will be constructed or the existing school will undergo major remodeling; and

2. An alternate life-safety plan identifying the interim measures that will be provided to protect the building occupants. The alternate life-safety plan shall be prepared by a registered engineer or architect.

(b) Plans and specifications for any new construction, addition or major remodeling shall be submittted in accordance with s. ILHR 50.12.

(c) The department may grant a 2 year extension to complete the new construction or remodeling. The department may grant an extension longer than 2 years where the school district provides documentation from the architect or engineer and the contractor that the construction will take longer than 2 years.

History: Cr. Register, April, 1990, No. 412, eff. 5-1-90.

ILHR 56.57 Failure to comply. If the department determines that the rules or any extensions to comply with the rules have not been complied with, the department will notify the state superintendent of public instructon to review the matter under s. 115.33, Stats.

History: Cr. Register, April, 1990, No. 412, eff. 5-1-90.

ILHR 56.58 Life-safety evaluation procedures. A life-safety evaluation shall be conducted for each existing school in accordance with the following:

(1) QUALIFICATIONS OF EVALUATOR. The initial and follow-up inspection for the life-safety evaluation shall be performed by the department or a registered architect or engineer. School districts utilizing registered architects or engineers to perform the life-safety evaluation shall notify the department in writing.

(2) STANDARDS FOR EVALUATION. All life-safety evaluations shall be performed using the standards specified in ss. ILHR 56.63 to 56.66.

(3) LIFE-SAFETY EVALUATION FORM. The life-safety evaluation shall be conducted using the life-safety evaluation form which is based on ss. ILHR 56.63 to 56.66.

Note: Life-safety evaluation form (SBD-8259) is available from the Safety and Buildings Division, P.O. Box 7969, Madison, Wisconsin 53707.

(a) *Procedures.* Each school building shall be evaluated to determine compliance with the requirements specified in ss. ILHR 56.63 to 56.66, using the life-safety evaluation form as follows:

1. Complies. If the building complies, the evaluator shall check the "complies" column.

2. Does not comply. If the building does not comply, the evaluator shall check the "does not comply" column.

3. Comments. The evaluator shall specify how the building may be brought into compliance, or if other alternatives approved by the department have been utilized.

4. Not applicable. If a code section does not apply, write "NA" in each column.

(b) *Filing of life-safety evaluation form.* After completing the inspection and evaluation, the evaluator shall sign and date the life-safety evaluation form and submit the evaluation form to the department. Where a building does not comply with a specific item, the department shall issue written orders on these items and send notification to the school district.

Note: The evaluations for schools constructed between January 1, 1930, and January 1, 1950, were completed on January 1, 1990.

(4) INTERIM NOTIFICATION. On or before August 1, 1990, each school district having schools requiring compliance with life-safety plans shall notify the department in writing of what steps have been or will be taken to implement the life-safety standards.

(5) CERTIFICATE OF COMPLIANCE. Upon determination of compliance, the department shall certify in writing that the school complies with the life-safety standards. A copy of the reinspection report certificate shall be sent to the school district and the department of public instruction.

History: Cr. Register, April, 1990, No. 412, eff. 5-1-90.

ILHR 56.59 Plan of school. (1) FLOOR PLAN. The school district shall be responsible for preparing a floor plan of each school. The floor plan shall include:

(a) The size and use of all rooms;

(b) Location of all exit doors, exit lights, exit passageways and stairways;

(c) Location of toilet facilities; and

(d) Location of fire alarm horns and pull-stations.

(2) DATES OF CONSTRUCTION. The plan shall show the construction dates of the building and any additions.

History: Cr. Register, April, 1990, No. 412, eff. 5-1-90.

ILHR 56.60 Plans and specifications. Plans and specifications shall be submitted to the department in accordance with s. ILHR 50.12 for any new construction, additions, changing location of exits, structural alterations, or major alterations. A completion statement shall be filed in accordance with s. ILHR 50.10.

History: Cr. Register, April, 1990, No. 412, eff. 5-1-90.

ILHR 56.61 Approval of alternate life-safety plan. (1) TYPES OF ALTERNATIVES. (a) *Alternatives to smoke enclosures and smoke cut-offs.* Where the building configuration does not permit the installation of physical barriers to separate the stairway from the classroom and corridor areas, other alternatives approved by the department may be used. The alternatives may consist of providing a combination of the following items and shall be approved by the department:

1. Additional smoke detectors complying with NFPA 72E;

2. Smoke ventilation systems;

3. Fire suppression systems complying with s. ILHR 51.23; or other fire suppression systems not specified in s. ILHR 51.23, when approved by the local fire department;

4. Standard exits in addition to the required exits to reduce the required travel distance; or

5. Other alternatives providing an equivalency to the rule.

(b) *Other alternatives.* Alternatives to any other life-safety standard may be used, if an equivalency to the life-safety standard is provided and is approved by the department.

(2) PLAN APPROVAL. (a) *Plan submission.* Any alternative to a life-safety requirement shall be submitted to the department as a "Preliminary Design Consultation-Aging Schools" prior to preparing final plans and specifications to implement the life-safety plan.

(b) *Notification.* The department shall make a written determination on the alternate life-safety plan and return it to the school district.

History: Cr. Register, April, 1990, No. 412, eff. 5-1-90.

ILHR 56.62 Re-evaluation. Re-evaluations for all public schools shall be performed every 5 years. This inspection shall be coordinated with the department of public instruction's standard audit inspection. The re-

evaluation may be performed by the department or a registered architect or engineer.

History: Cr. Register, April, 1990, No. 412, eff. 5-1-90.

ILHR 56.63 Life-safety standards. Each existing school building as specified in this subchapter shall be surveyed and evaluated in accordance with the following minimum life-safety standards:

(1) MAXIMUM CAPACITIES. The maximum capacities for classrooms and spaces shall be determined in accordance with the following:

(a) Maximum capacities for auditoriums or gymnasiums shall comply with s. ILHR 56.02 for the class of construction requirements.

(b) Classrooms and other instructional spaces shall comply with the maximum capacities specified in s. ILHR 56.07.

(2) EXITING. The minimum exiting requirements shall be determined in accordance with the following:

(a) *Number of exits.* The total number of exits from each floor level and each building shall be determined on the basis of total aggregate exit width and distances to exit. Each building and each floor level shall be provided with at least 2 exits located as remote from each other as practical.

(b) *Type of exits.* At least 2 exits from each floor level shall lead directly to grade through standard exit doors, stairs, interior enclosed stairs, smokeproof stairtowers, fire-rated exit corridors, passageways or ramps. One-half of the remaining exits may be horizontal exits or fire escapes. Fire escapes shall be limited to buildings not more than 2 stories in height except that existing fire escapes may remain.

1. Standard exit doors. Standard exit doors shall be a minimum of 3'-0" in width.

2. Exit stairs. All new constructed stairs shall conform to the requirements of s. ILHR 51.16, except that the stairs shall have a uniform rise of not more than 7½ inches, measured from tread to tread, and a uniform tread of not less than 10 inches, measured from nosing to nosing of tread. Handrails shall be provided on both sides. An outside weather-treated wood stairway may be used as a second exit from a building not more than 2 stories in height.

3. Enclosure of interior stairways. All exit stairways shall be enclosed in accordance with s. ILHR 56.06 (2) (c) or separated from the classroom and corridor area with a stairway smoke-enclosure having a one-hour rating as specified in s. ILHR 56.68.

4. Fire-rated exit corridors. All rated exit corridors required to satisfy limitations on exit distance shall be of not less than one-hour fire-resistive construction, unless the fire-resistive ratings indicated in Table 51.03-A for required exit corridor enclosures are more restrictive.

5. Exit ramps. The minimum width of exit ramps shall be determined in accordance with the requirements of s. ILHR 56.07. The minimum width shall be not less than 3 feet 8 inches. Exit ramps, other than those required for the physically disabled, shall have a slope not exceeding 1:8.

Ramp slopes exceeding 1:12 shall be provided with handrails. Ramps shall be provided with a slip-resistant finish.

6. Fire escapes. Fire escapes shall be constructed in accordance with the requirements of s. ILHR 51.20.

(c) *Travel distance.* 1. Non-sprinklered. Travel distance to an exterior exit door, a required fire-resistive rated exit corridor, interior enclosed stairs, smokeproof stair tower, horizontal exit, or fire escape, from any point in a building accessible to the public, may not exceed 150 feet.

2. Sprinklered. Where an approved automatic fire sprinkler system is provided throughout the building, an increase in the travel distance specified in subd. 1 to 200 feet will be permitted.

(d) *Location of exits.* 1. Distribution. All exits shall be distributed to provide the best possible means of egress. The exits shall be located so that in case any exit is blocked at any point some other exit is accessible through public passageways at all times.

2. Auditoriums and gymnasiums. Exits serving auditoriums and gymnasiums which have a capacity exceeding 600 persons shall comply with s. ILHR 56.06 (3) (c).

(e) *Classroom exiting.* 1. Classrooms with 50 or less persons. At least one exit is required from a classroom or other instructional spaces with a capacity of 50 persons or less, and the exit door shall be 3'-0" wide and may swing into the classroom.

2. Classrooms with 51-100 persons. At least 2 exits are required from classrooms or other instructional spaces with a capacity of 51-100 persons, and the exit doors shall be 3'-0" wide and shall swing toward the means of egress.

3. Classrooms with greater than 100 persons. At least 2 exits shall be provided from all classrooms or other instructional spaces having a capacity of more than 100 persons. The exits shall discharge directly to grade or to a public passageway which permits 2 directions of travel to the exterior. The exit width shall comply with s. ILHR 56.06 and the doors shall swing toward the means of egress.

(f) *Exit width.* The total required exit width shall be provided in accordance with s. ILHR 56.07.

(g) *Storage under stairs.* 1. Combustible construction. Stairways constructed of combustible materials may not have any type of material or equipment stored under the stairs.

2. Noncombustible construction. Stairways constructed of noncombustible material having a 2-hour fire-rating may have storage under the stairways. All openings shall be protected with fire-rated door assemblies as specified in s. ILHR 51.047. A smoke detector shall be provided in each storage room under a stairway and the smoke detector shall activate an alarm audible in a normally occupied area or shall activate the building fire alarm.

(3) STAIRWAY HANDRAILS AND GUARDRAILS. Stairway handrails and guardrails shall be provided in accordance with the following:

(a) *Handrails.* Handrails shall be not less than 30 inches nor more than 34 inches above the nosing of the treads on stairways or above the surface of ramps, as specified in s. ILHR 51.161.

(b) *Guardrails.* Guardrails shall be provided on the open side of elevated platforms, landings, walks, balconies and mezzanines which are more than 24 inches in height. Guardrails shall not be less than 42 inches in height.

(4) EXIT SIGNS. Exit signs shall be provided in accordance with the following:

(a) Illuminated exit signs shall identify all required exits, as specified in s. ILHR 56.06.

(b) Directional exit signs shall be located to direct occupants to the exits.

(5) CORRIDORS. (a) *Corridor width.* All public corridors and passageways shall have an unobstructed width of at least 4 feet.

(b) *Dead-end corridors.* 1. Locked security gates and doors may not be placed so as to block required exit passageways or create dead-end corridors.

2. At least two directions of egress shall be provided from every room. Any room may be permitted one direction of egress provided the door setback from two directions of egress is not greater than the corridor width. The total number of persons beyond the two directions of egress may not exceed 50.

(6) FIRE DETECTION, PROTECTION AND SUPPRESSION. The manual fire alarm system, basement fire protection and portable fire extinguishers shall comply with the following:

(a) *Manual fire alarm system.* At least one fire alarm pull station shall be provided at each exit on each floor to activate the building fire alarm system. The manual fire alarm system shall be audible throughout the floor level.

(b) *Basement protection.* All basement corridors shall be protected with an automatic smoke detection system.

(c) *Portable fire extinguishers.* Portable fire extinguishers shall be located every 75 feet, or there shall be no more than 11,250 square feet per extinguisher as specified in NFPA 10. The extinguishers shall be charged or filled.

(7) CONSTRUCTION SEPARATION WALL. (a) *Openings used as standard exits.* If the opening in a construction separation wall is a required exit, the opening shall be provided with exit doors complying with s. ILHR 51.15 and the doors shall have a 3/4-hour fire-rating as specified in s. ILHR 51.047.

(b) *Existing rolling or sliding fire-doors.* Existing rolling or sliding fire-rated doors held open by a fusible link may remain as is, except as separate smoke detector shall be placed at these door locations. The smoke detector shall not be connected with the rolling or sliding fire-rated doors.

(8) ISOLATION OF HAZARDS. (a) *Rating of enclosures.* All fuel-fired heating boilers and furnaces, power boilers, fuel rooms, breeching, storage vaults for paints, oils and similar hazards, fuel-fired kilns and dryers, and other similar hazards shall be enclosed with the following:

1. The enclosures located in one story buildings shall be protected with 2-hour fire-rated construction or equivalent.

2. The enclosures located in buildings greater than one story in height shall be protected with 4-hour fire-rated construction or equivalent.

(b) *Protection of openings.* All openings in these enclosures shall be protected with self-closing doors as specified in s. ILHR 51.047.

(9) MECHANICAL EQUIPMENT. The heating and ventilating equipment shall comply with the following:

(a) Outside combustion air shall be provided as specified in s. ILHR 64.09.

(b) Air handling units servicing more than one floor level shall be provided with a smoke detection system capable of detecting products of combustion in the ductwork and a means of shutting down the system or stopping the flow of air upon activation of smoke detectors in the ducts. The smoke detectors shall comply with the following:

1. Smoke detectors approved for duct installation shall be installed at a suitable location in:

a. The main supply duct on the downstream side of the filters to automatically stop the fan; and

b. The return air stream, prior to exhausting from the building or being diluted by outside air, to automatically exhaust the smoke-laden return air or to stop the fan. The smoke detector may be omitted in the return air stream in systems of less than 15,000 cubic feet per minute.

2. Smoke detectors shall be installed in accordance with NFPA 72E. Activation of smoke detectors shall sound an alarm audible in a normally occupied area of the building or shall activate the building fire alarm system.

(10) STRUCTURAL ANALYSIS. A structural analysis will be required if any visible defects are found in:

(a) Columns;

(b) Beams and framing;

(c) Floor system;

(d) Roof deck and supports;

(e) Exterior walls; or

(f) Foundation walls.

(11) ELECTRICAL. The electrical systems shall be inspected in accordance with the following:

(a) Conductors shall be protected against physical damage;

(b) Working space in front of equipment shall be kept clear;

(c) Proper overcurrent protection shall be provided; and

(d) Flexible cords shall be properly used.

History: Cr. Register, April, 1990, No. 412, eff. 5-1-90.

ILHR 56.64 Stairway smoke-enclosure. (1) WHERE REQUIRED. (a) Where stairway smoke-enclosures are required, they shall be installed to separate all open stairways from all other areas of the building in order to limit the spread of smoke and fumes into the stairways. Stairways leading to open balconies or mazzanines may remain open.

(b) Where it is impossible to construct a one-hour fire-rated stairway smoke-enclosure to separate the open stairway, the department will consider:

1. Stairway smoke cut-offs as specified in s. ILHR 56.65; or

2. Horizontal separations as specified in s. ILHR 56.66.

(2) CONSTRUCTION. (a) *Smoke-enclosure wall.* The wall of the stairway smoke-enclosure shall extend vertically from the finished floor to the underside of a floor/ceiling deck or ceiling/roof deck and extend horizontally from wall-to-wall.

(b) *Rating of smoke-enclosure wall.* The stairway smoke-enclosure wall which is located in a building classified as type 1, 2 or 3 construction in accordance with s. ILHR 51.03 (1) to (3) shall be constructed of at least one-hour noncombustible elements. The stairway smoke-enclosure wall which is located in a building classified as type 4, 5, 6, 7 or 8 in accordance with s. ILHR 51.03 (4) to (8) shall be constructed of material having at least a one-hour fire-resistive rating.

(c) *New and replacement door assemblies in a smoke-enclosure wall.* 1. New and replacement door assemblies in a stairway smoke-enclosure wall shall have a 3/4-hour fire-rating and be self-closing. The frame, hardware, hinges, lock sets and closers shall be listed for use with fire-rated doors by U.L., Factory Mutual or other approved testing laboratories.

2. A fire-rated door shall be self-closing and shall remain closed at all times, unless the door is equipped with an automatic self-closing device activated by products of combustion other than heat, or a self-closing device activated by the building fire alarm system.

(d) *Existing doors and frames located in openings in smoke-enclosure walls.* Any framed opening in an existing wall of a stairway shall be equipped with at least a 3/4-hour rated door and the hardware specified in par. (c). Existing doors, frames and light-panel frames located in the existing stairway enclosure walls may remain as is, provided:

1. The door is solid wood core;

2. The door is equipped with self-closing and latching devices;

3. Any transfer grille located in the door is eliminated and the opening is filled with solid wood that is at least as thick as the door;

4. Any glazing in the door is wired glass;

5. Any glazed transom above the door is wired glass; and

6. The existing frame is metal or solid wood at least 3/4-inch thick.

(e) *Platform.* The stairway smoke-enclosure shall be constructed to provide a platform between the smoke-enclosure and the stairs. The platform shall be at least as wide as the stairway, measured at a right angle to the direction of travel. Every platform shall have a length of at least 3 feet, measured in the direction of travel. The swing of the exit doors may not block the required exit passageway.

(f) *Penetrations.* Any opening around a duct, pipe, conduit or wiring penetrating through a stairway smoke-enclosure wall shall be filled solidly with draft stopping material in accordance with s. ILHR 53.63 (1).

(3) SMOKE DETECTION. (a) Where a stairway smoke-enclosure does not provide direct exiting to grade, the passageway connecting the stairway smoke-enclosure to the exterior exit shall be protected with smoke detectors. The detectors shall be located in accordance with NFPA 72E.

(b) The smoke detectors shall activate alarms audible in a normally occupied area of the building or shall activate the building fire alarm system.

History: Cr. Register, April, 1990, No. 412, eff. 5-1-90.

ILHR 56.65 Stairway smoke cut-offs. (1) WHERE REQUIRED. Where stairway smoke cut-offs are required, they shall be constructed at all open stairways at the basement level and all other floor levels other than the first or ground floor.

(2) CONSTRUCTION. The construction of the stairway smoke cut-off shall comply with s. ILHR 56.64 (2).

(3) SMOKE DETECTION. (a) Where stairway smoke cut-offs are provided, at least one smoke detector shall be placed at the head of the open stairway at the uppermost floor level. Additional smoke detectors shall be placed throughout the open corridor leading to the stairway. The smoke detectors shall be located in accordance with NFPA 72E.

(b) The smoke detectors shall activate alarms audible in a normally occupied area of the building or shall activate the building fire alarm system.

History: Cr. Register, April, 1990, No. 412, eff. 5-1-90.

ILHR 56.66 Horizontal separations. (1) WHERE REQUIRED. Horizontal separations may be used to subdivide a floor into at least 2 smoke compartments, provided the building is classified as type 6 metal frame unprotected construction in accordance with s. ILHR 51.03 (6) or better construction with noncombustible floors and stairways. Horizontal separations may be used as horizontal exits.

(2) CONSTRUCTION. Horizontal separations shall have at least a one-hour fire-resistive rating. Openings in the horizontal separations shall be protected with door or window assemblies having a 3/4-hour fire-resistive rating.

History: Cr. Register, April, 1990, No. 412, eff. 5-1-90.