Ind 50 to 60

Filed November 19, 1974
9:00 am G.L.P.

STATE OF WISCONSIN)
) SS
DEPARTMENT OF INDUSTRY,)
LABOR AND HUMAN RELATIONS)

TO ALL TO WHOM THESE PRESENTS SHALL COME, GREETINGS:

I, Stephen J. Reilly, Executive Secretary of the Department of Industry, Labor and Human Relations, and custodian of the official records of said Department, do hereby certify that the attached rules to Wisconsin Administrative Code chapters Ind 50-60--Building and Heating, Ventilating and Air Conditioning Code, were adopted by the Department of Industry, Labor and Human Relations on November 18, 1974.

I further certify that said copy has been compared by me with the original on file in this Department and that the same is a true copy thereof and of the whole of such original.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the official seal of the Department at the Capitol, in the City of Madison, this 19 day of November, A.D., 1974.

Stephen J. Reilly, Executive Secretary

ORDER OF

DEPARTMENT OF INDUSTRY, LABOR AND HUMAN RELATIONS

Pursuant to authority vested in the Department of Industry, Labor and Human Relations by sections 101.01 to 101.20, Wis. Stats., the Department of Industry, Labor and Human Relations hereby amends, creates, repeals and recreates and adopts rules of Wisconsin Administrative Code Chapters Ind 50-60--Building and Heating, Ventilating and Air Conditioning Code.

The rules attached hereto shall become effective on the first day of the month following publication in the Wisconsin Administrative Code as provided in section 227, Wis. Stats.

Subsection Ind 50.10 (1) (e) Note (second paragraph) to be amended to read:

Every architect and every engineer submitting plans for the construction of any structure using public funds shall, prior to the letting of final bids on such structures, submit a written report, indicating whether such structure meets or does not meet federal fallout shelter engineering standards, to the contracting agency, according to subsection 101.12 (4), Wis. Stats.

Subsection Ind 50.10 (3) (m) to be created to read:

(m) Calculations shall be provided showing that the maximum average BTU per hour per square foot loss for the exterior envelope does not exceed the requirements set forth in subsection Ind 51.02 (16) for the proposed construction.

Subsection Ind 51.01 (102a) to be created to read:

(102a) PLACE OF EMPLOYMENT. The term "place of employment" includes every place, whether indoors or out or underground and the premises appurtenant thereto where either temporarily or permanently any industry, trade or business is carried on, or where any process or operation, directly or indirectly related to any industry, trade or business, is carried on, and where any person is, directly or indirectly, employed by another for direct or indirect gain or profit, but does not include any place where persons are employed in (a) private domestic service which does not involve the use of mechanical power or (b) farming.

Subsection Ind 51.01 (104a) to be created to read:

(104a) PUBLIC BUILDING. The term "public building" means and includes any structure, including exterior parts of such building, such as a porch, exterior platform or steps providing means of ingress or egress, used in whole or in part as a place of resort, assemblage, lodging, trade, traffic, occupancy, or use by the public or by 3 or more tenants.

Subsection Ind 51.01 (105a) to be created to read:

(105a) REMODELING. To remodel and/or alter means to change any building or structure which affects the structural strength, fire hazard, internal circulation, or exits of the existing building or structure. This definition does not apply to maintenance, reroofing, or alterations to the heating and ventilating or electrical systems.

Subsection Ind 51.02 (12) (intro. par.) heading to be created to read:

(12) PARAPET WALLS.

Subsections Ind 51.02 (16) and (17) to be created to read:

(16) Thermal performance standards.

(a) The design heat loss, excluding infiltration and ventilation, through above grade gross walls and roofs facing heated interiors shall not exceed 13 BTU per hour per square foot for the total building envelope.

(b) Any innovative building and mechanical system design may be used as an alternative to (a) above, provided technical data and analysis can verify that the design achieves an equivalent to (a) above.

(c) The thermal performance standards need not apply to special use buildings such as greenhouses, inflatable and similar types of designs, or any building presently exempt from the heating and ventilating requirements.

(17) Infiltration standards. All exterior windows and doors shall be designed to limit air leakage into or from the building and shall be weatherstripped.

Subsection Ind 51.03 (1) (d) 1. to be amended to read:

1. Doors leading into main public corridors other than rated exit corridors shall be noncombustible or 20-minute fire door assemblies, or equivalent, unless otherwise specified above.

Note: Public corridors are intended to include principal corridors serving a floor and leading directly to building exits, but do not include communicating passageways within a given use area.

Subsection Ind 51.03 (2) (e) 1. to be amended to read:

1. Doors leading into main public corridors other than rated exit corridors shall be noncombustible or 20-minute fire door assemblies, or equivalent, unless otherwise specified above.

Note: Public corridors are intended to include principal corridors serving a floor and leading directly to building exits, but do not include communicating passageways within a given use area.

Subsection Ind 51.042 (5) (intro. par.) Note to be amended to read:

Note: For ASTM E-119 standard adopted see Ind 51.25 (49).

Subsection Ind 51.042 (6) Note to be amended to read:

Note: For definition of owner see subsection 101.01 (2) (i), Wis. Stats.

Subsection Ind 51.044 (1) second Note under Table 1 to be amended to read:

Note: For column identification and specific standards adopted, see subsections Ind 51.25 (47)-(50) and (52)-(53).

Subsection Ind 51.045 (1) (d) Note to be amended to read:

Note: For ASTM E-119 standard adopted see Ind 51.25 (49).

Subsection Ind 51.046 (1) (a) 4. Note 1. to be amended to read:

Note: 1. For ASTM E-119 standard adopted see Ind 51.25 (49).

Subsection Ind 51.047 (1) (a) 1. d. Note to be repealed.

Subsection Ind 51.047 (1) (a) 1. e. to be created to read:

e. Where the occupancy or class of construction chapters of this code permit, fire door assemblies with a 20-minute rating, or equivalent, may be provided, without a closing device.

Note: The department will accept fire door assemblies which are time rated and labeled by an approved laboratory, and tested in accordance with ASTM E-152 standard method [Ind 51.25 (52)], or solid core door assemblies approved by the department.

Subsection Ind 51.047 (1) (b) 1. Note to be amended to read:

Note: For ASTM E-163 standard adopted see Ind 51.25 (53).

Subsection Ind 51.047 (1) (c) 1. Note to be amended to read:

Note: For ASTM E-163 standard adopted see Ind 51.25 (53).

Section Ind 51.14 to be created to read:

Ind 51.14 GLAZING.

(1) Safety glazing. All glazing material used in hazardous impact locations shall be safety glazing material.

(a) Location. Hazardous impact locations are all glazed elements such as framed or unframed interior or exterior glass doors, glazed panels adjacent to interior or exterior doors, exterior doors with glass lights, or any other glazed element which may be mistaken for a means of egress or ingress to a room or building. Other hazardous impact locations are sliding glazed doors and the adjacent glazed fixed panel(s), storm doors, shower doors, tub enclosures, and display cases in areas of human impact in schools.

(b) Material. Safety glazing means any glazing material such as tempered glass, laminated glass, wire glass, safety plastic, or safety insulating units which meet the test requirements of the American National Standards Institute (ANSI) standard Z 97.1 [Ind 51.27 (5)], or an equivalent standard, and which are so constructed, treated or combined with other materials to minimize the likelihood of cutting and piercing injuries resulting from human impact with the glazing material.

(c) Labeling. Safety glazing material shall be labeled with a permanent label by such means as etching, sand blasting, firing of ceramic material, or hot die stamping. Labels identifying safety glazing materials may be omitted provided that a notarized affidavit is submitted to the department certifying the installation of safety glazing material. The label or affidavit shall identify the seller, manufacturer, fabricator, or installer, the nominal thickness and type of safety glazing material, and the fact that the material meets the test requirements of the American National Standards Institute (ANSI) standard Z 97.1 [Ind 51.27 (5)], or other equivalent standard. The label shall be legible and visible after installation.

(2) Guarding of glazing. All interior and exterior glazed panels subject to human impact not in a hazardous impact location shall be guarded or provided with safety glazing, except that glazed panels with a sill height of more than 24 inches, or glazed panels less than 12 inches in width, are not required to be safety glazed or guarded.

(a) Guarding shall consist of a horizontal bar, rail, mullion, grille or screen at least 1-1/2 inches wide and located within 3 feet 6 inches to 4 feet 6 inches above the floor. The guard assembly shall be capable of withstanding a lateral force of 100 pounds applied at any point and installed to avoid contact with the glazing when the force is applied.

(b) Safety glazing materials shall conform with the requirements of Ind 51.14 (1) (b).

(3) Interior doors with glass lights.

(a) All interior doors with glass lights greater than 8 inches in the least dimension shall be provided with safety glazing material.

(b) All interior doors with glass lights less than 8 inches in the least dimension shall be provided with 1/4-inch glazing material.

(c) Safety glazing materials shall conform with the requirements of Ind 51.14 (1) (b).

(4) Skylights and sloped glazing.

(a) Skylights. All glazing in skylights shall be safety glazing material and shall comply with the requirements of Ind 51.02 (6).

(b) Sloped glazing. All glazing installed more than 15 degrees with the vertical shall be safety glazing material.

(5) Fire window assemblies. All glazing in fire window assemblies shall be designed and installed in accordance with the requirements of Ind 51.047 (1) (b).

(6) Structural requirement. Glazing material shall be designed and installed to safely withstand the loads specified in Chapter Ind 53 of this code.

Subsection Ind 51.15 (6) to be repealed and recreated to read:

(6)* Required aggregate width.

(a) The required aggregate width of exits from a level shall be determined by using the full occupant load of that level, plus the percentage effects of the occupant loads of adjacent levels (above and below) which exit through it as follows:

1. 50% of the occupant load of each first-adjacent level(s);

2. 25% of the occupant load of each second-adjacent level(s).

(b) The width shall be based upon the following ratios:

1. Types No. 1 through No. 4 construction unsprinklered, 40 inches per 100 persons;

2. Types No. 5 through No. 8 construction unsprinklered, 50 inches per 100 persons;

3. Types No. 1 through No. 4 construction sprinklered, 30 inches per 100 persons;

4. Types No. 5 through No. 8 construction sprinklered, 40 inches per 100 persons.

Subsection Ind 51.15 (7) to be repealed.

*See Appendix A for further explanatory material.

Section Ind 51.16 to be repealed and recreated to read:

Ind 51.16 STAIRWAYS.

(1) Definition. A stairway is one or more flights of steps, and the necessary platforms or landings connecting them, to form a continuous passage from one elevation to another, including exterior porches, platforms and steps providing means of ingress or egress.

(2) Required aggregate width.

(a) The required aggregate width of stairway exits from any level shall be as determined in accordance with the requirements of Ind 51.15 (6).

(b) In no case shall the minimum width of an exit stair be less than that specified in Ind 51.16 (3).

(c) Under no circumstances shall stairways decrease in width in the line of travel toward the exit.

(3) Minimum width.

(a) Every required exit stairway shall be not less than 3 feet 8 inches wide, except as provided in the occupancy chapters, of which not more than 4 inches on each side may be occupied by a handrail. The clear dimension between handrails, or stringers, shall not be less than 3 feet 0 inches.

(b) Nonrequired stairways need not conform to the width requirements of this code.

(4) Risers and treads. Risers and treads shall be designed and provided in accordance with the following:

(a) All stairways and steps required as exits by this code shall have a rise of not more than 7-3/4 inches and a tread not less than 9-1/2 inches, measured from tread to tread and from riser to riser. Treads and risers shall be uniform in any one flight. Winders shall not be used.

Note #1: The department recommends that steps be proportioned so the sum of 2 risers and a tread, exclusive of its nosing or projection, should be not less than 24 inches or more than 25 inches.

Note #2: The department will accept stairways not normally used by the public to be designed with uniform risers not more than 8 inches in height and a uniform tread of not less than 9 inches. Winders may be used if the tread is at least 7 inches in width at a point one foot from the narrow end.

Note #3: Round or smooth nosings are recommended as they are not difficult to negotiate for individuals with restrictions in the knee, ankle or hip, or with artificial legs or long leg braces.

(b) The edges of all treads and the edges of all stairway landings shall be finished with a nonslippery surface not less than 3 inches in width.

(c) Where an exit door leads to an outside platform or sidewalk, the level of the platform or sidewalk shall not be more than 7-3/4 inches below the doorsill.

(d) Every stairway flight shall have at least 3 risers (unless additional safety is provided which meets the approval of the department).

(e) There shall be no more than 22 risers in any one flight.

(5) Handrails. Handrails shall be designed and provided in accordance with the following:

(a) All stairways of more than 3 risers shall have one handrail on the left side as one mounts the stairs, and on the open side, if any. Stairways and steps 5 feet, or more, in width shall have a handrail on each side. One handrail shall extend at least 6 inches beyond the top and bottom riser.

Note: The handrail extension is intended for support prior to ascending or descending the stairs. The ends of the rails should not constitute a projecting hazard.

(b) Stairways which are more than 8 feet wide shall be divided by center handrails into widths of not more than 8 feet nor less than 3 feet 8 inches.

(c) Exterior stairways with more than 3 risers, and an integral part of the building, shall have a handrail on each side. Exterior stairways more than 50 feet wide shall be provided with one or more intermediate handrails.

(d) Handrails shall be not less than 2 feet 6 inches above the nose of the treads on stairways and 3 feet 6 inches above platforms, walks, balconies and mezzanines.

(e) All railings shall be designed to withstand a load of at least 200 pounds applied in any direction at any point.

(f) Railings guarding differences of elevation (i.e., open sides of stairways, elevated platforms, walks, balconies, mezzanines) shall be designed to prevent the passage of an object with a diameter larger than 9 inches.

Note: The requirement of 9 inches is not intended to apply to utility stairs, utility exit stairs, storage mezzanines and platforms. In such cases, an intermediate rail(s) at mid height, or its equivalent in safety, will be accepted.

(6) Toeboards. A toeboard shall be provided at exposed edges of all elevated platforms, walks, balconies, mezzanines, ramps and floor openings to prevent the fall of materials. The toeboard shall extend 4 inches above the finished floor. Where material is stockpiled to a height where the toeboard does not provide adequate protection, additional measures shall be taken to prevent the fall of materials.

(7) Headroom. Every stairway shall be provided with a headroom clearance of not less than 7 feet 0 inches. The clearance shall be established by measuring vertically from the edge of the tread nosing to the ceiling or soffit above the tread nosing.

(8) Stairway landings and platforms.

(a) If a door is provided at the head and/or foot of a stairway, a landing or platform shall be placed between the door and the stairway regardless of the direction of swing of the door.

(b) Every landing or platform shall be at least as wide as the stairway, measured at right angles to the direction of travel. Every landing or platform must have a length of at least 3 feet, measured in the direction of travel.

(9) Curved stairs. Interior or exterior curved stairs used as required exits shall meet all the requirements for stairways. Curved stairs shall have a radius of at least 25 feet at the interior edge of the tread.

Section Ind 51.23 to be repealed and recreated to read:

Ind 51.23 AUTOMATIC SPRINKLERS.

(1) General requirements. All required automatic sprinkler systems shall be designed and constructed in accordance with NFPA No. 13, Standard for the Installation of Sprinkler Systems [Ind 51.27 (7a)]. Reinstallation of used sprinkler heads is prohibited. Approved secondhand devices may be installed by special permission of the department.

Note: The department will accept equipment, materials and devices listed or labeled by Underwriters' Laboratories or Factory Mutual. Other testing laboratories or inspection agencies will be recognized as an approved agency if accepted in writing by the department.

(2) Water supply.

(a) Approved automatic water supplies for the sprinkler system recognized by the department are listed below:

1. City water main;

2. Gravity or pressure tank;

3. Ground storage reservoir;

4. Natural bodies of water approved by the department (lakes, rivers, streams, etc.).

(b) If the water supply has inadequate pressure, an approved fire pump or tank shall be provided. The design and installation of water supply facilities for gravity tanks, fire pumps, reservoirs or pressure tanks, and underground piping shall conform to NFPA No. 22, Standard for Water Tanks for Private Fire Protection; NFPA No. 20, Installation of Centrifugal Fire Pumps; and NFPA No. 24, Outside Protection [Ind 51.27 (7a)].

(3) Basement sprinklers. Every basement sprinkler system shall also include sprinklers in all shafts (except elevator shafts) leading to the story above.

(4) Fire department connection. Every sprinkler system shall have an approved siamese connection. The siamese connection shall be marked and readily accessible to the fire department and shall conform to the requirements of subsection Ind 51.21 (2) (e).

(5) Sprinkler alarms. Every sprinkler system shall be provided with a suitable audible alarm. In all buildings over 60 feet in height, each sprinkler system on each floor shall be equipped with a separate water flow device connected to an alarm system.

(6) Maintenance. All installed automatic sprinkler systems shall be properly maintained for efficient service. The employer or owner shall be responsible for the condition of his sprinkler system and shall use due diligence in keeping the system in good operating condition.

(7) Partial automatic sprinkler systems. The sprinkler system shall be so installed and maintained as to provide complete coverage for all portions of the building except where partial protection is specified by this code.

Subsection Ind 51.20 (3) (intro. par.) to be amended to read:

(3) DESIGN AND FABRICATION. Each part of every fire escape (except counterweights for balanced stairways) shall be designed and constructed to carry a live load of 100 pounds per square foot of horizontal area over the entire fire escape. Each part of every fire escape shall be designed and constructed in accordance with the requirements of section Ind 53.50, except that the unit stresses therein specified shall be reduced by one-fourth. The minimum sections and sizes specified below shall be increased whenever necessary so that under full load the allowable unit stresses will not be exceeded.

Section Ind 51.25 (intro. par.) Note to be created to read:

Note: Part numbers refer to 1973 set of standards.

Subsection Ind 51.27 (5) to be amended to read:

(5) American National Standards Institute, Inc., 1430 Broadway, New York, N. Y. 10018, SPECIFICATION FOR REINFORCED GYPSUM CONCRETE, ANSI A 59.1-1968; SPECIFICATION FOR VERMICULITE CONCRETE ROOFS AND SLABS ON GRADE, ANSI A 122.1-1965; PERFORMANCE SPECIFICATIONS AND METHODS OF TESTING FOR SAFETY GLAZING MATERIALS USED IN BUILDINGS, ANSI Z 97.1-1972.

Subsection Ind 51.27 (7a) to be created to read:

(7a) National Fire Protection Association, 470 Atlantic Avenue, Boston, Mass. 02210, STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS, NFPA No. 13-1974; STANDARD FOR THE INSTALLATION OF CENTRIFUGAL FIRE PUMPS, NFPA No. 20-1974; STANDARD FOR WATER TANKS FOR PRIVATE FIRE PROTECTION, NFPA No. 22-1974; STANDARD FOR OUTSIDE PROTECTION, NFPA No. 24-1973; STANDARD FOR CENTRAL STATION PROTECTIVE SIGNALING SYSTEMS, NFPA No. 71-1974; STANDARD FOR AUXILIARY PROTECTIVE SIGNALING SYSTEMS, NFPA No. 72B-1974; STANDARD FOR REMOTE STATION PROTECTIVE SIGNALING SYSTEMS, NFPA No. 72C-1974; STANDARD FOR PROPRIETARY PROTECTIVE SIGNALING SYSTEMS, NFPA No. 72D-1974; STANDARD ON AUTOMATIC FIRE DETECTORS, NFPA No. 72E-1974.

Subsection Ind 51.27 (10) to be amended to read:

(10) Truss Plate Institute, Inc., 7100 Baltimore Avenue, College Park, Maryland 20740, DESIGN SPECIFICATIONS FOR LIGHT METAL PLATE CONNECTED WOOD TRUSSES, TPI-74.

Section Ind 52.04 to be created to read:

Ind 52.04 REQUIREMENTS FOR BARRIER-FREE ENVIRONMENTS.

(1) Scope. The requirements of this section are intended to insure that all public buildings and places of employment shall be accessible and usable by all citizens, including those with functional limitations.

(2) Definitions.

(a) Access or accessible. Access or accessible means the ability of a person with a functional limitation caused by impairments of sight, hearing, incoordination, perception, semiambulatory or nonambulatory disabilities to enter and leave a public building, circulate through a public building, and use the public toilet facilities without assistance. Functional limitations may require aids such as wheelchairs, crutches, braces or canes.

(3) Site requirements. A means of access from an ancillary parking facility, street or alley to the building shall be provided.

Note: Section 66.616, Wis. Stats., requires curb ramps for persons with physical disabilities at intersection crosswalks on any city or village street, connecting street, or town road provided with curbs and sidewalks.

(a) Parking spaces. Where parking spaces are provided, accessible parking spaces shall be designated and provided at the rate of 2% of the total number of parking spaces provided, with a minimum of one.

1. Width. Parking spaces shall be at least 12 feet wide.

2. Identification and location. All accessible parking spaces shall be identified and located as close as possible to an accessible building entrance. Parking spaces in a parking ramp shall be located as close as possible to the main entrance of the parking ramp, to an adjacent accessible public walk, or to an accessible elevator.

(b) Walks. All walks leading to accessible entrances from parking facilities or public walks shall be at least 48 inches wide and shall have a gradient no more than 5%, and a nonslip surface with no side slope. Walks having a slope not greater than 2% may be constructed with a side slope, across the sidewalk, of one %. Walks with a gradient greater than 5% must conform to the requirements for ramps [Ind 52.04 (7)].

(c) Communication between buildings or properties. Walks or enclosed passageways which connect 2 or more properties or buildings and are intended for public use shall provide access to each building or property.

(4) New construction. All new public buildings and places of employment shall be designed and constructed with means of ingress and egress, interior circulation, and toilet facilities in accordance with Table 52.04 and the requirements of subsection Ind 52.04 (4). All buildings with multiple uses shall comply with the criteria established in Table 52.04 for each specific use.

Note: The footnotes in Table 52.04 designate specific exemptions and/or requirements for means of ingress and egress, interior circulation and toilet facilities for the occupancies listed.

TABLE 52.04

REQUIREMENTS FOR ACCESSIBLE CONSTRUCTION

Occupancy and Type of Construction	Means of Ingress and Egress		Interior Circulation	Toilet Facilities
	Primary Entrance	Primary Floor		
I. All public buildings and places of employment except II, V, VII and IX	Yes[1]	Yes	Yes[1]	Yes
II. Government owned or leased buildings	Yes	Yes	Yes	Yes
III. Factories, office and mercantile buildings	Yes[1]	Yes	Yes[1]	Yes
A. Offices	Yes[1]	Yes	Yes[1,2]	Yes
1. Telephone exchange (equipment)	No	No	No	No
B. Mercantile	Yes[1]	Yes	Yes[1]	Yes
1. Warehouses (storage)	No	No	No	No
C. Factories	Yes[1]	Yes	Yes[1]	Yes
1. Foundries	No	No	No	No
2. Slaughter houses	No	No	No	No
3. Saw and feed mills	No	No	No	No
IV. Theaters and assembly halls	Yes[1]	Yes	Yes[1]	Yes
A. Churches (Ch. Ind 54 and 55)				
1. Basements and balconies	N/A	N/A	No	No
2. Naves and chapels	Yes[3]	Yes	Yes	Yes
B. Funeral chapels	Yes[1]	Yes	Yes[1]	Yes
C. Auditoriums and theaters (fixed seats)	Yes	Yes[4]	Yes[4]	Yes
1. Motion picture booths	No	No	No	No
D. Stadiums and permanent bleachers	Yes	Yes[4]	Yes[4]	Yes
1. Portable bleachers	No	No	No	No
E. Recreational facilities	Yes[1]	Yes	Yes[1]	Yes
F. Night clubs, bars and dining rooms	Yes	Yes	Yes[5]	Yes
V. Schools and places of instruction	Yes	Yes	Yes	Yes
VI. Libraries, museums and art galleries	Yes[1]	Yes	Yes[1]	Yes
VII. Residential occupancies				
A. Apartments, row houses and town houses	Yes[6]	Yes[6]	Yes[7]	Yes
B. Motels, hotels and ski lodges	Yes	Yes	Yes[8]	Yes
C. Fraternities and sororities	Yes	Yes	Yes[9]	Yes
D. Residential and intermediate care facilities	Yes	Yes	Yes[10]	Yes
VIII. Day care centers[11]	Yes	Yes	Yes	Yes
IX. Hospitals, homes for the aged and infirm, nursing homes, mental hospitals, and places of detention	Yes	Yes	Yes[12]	Yes[13]
X. Garage occupancies	Yes[1]	Yes	Yes[1]	Yes
A. Service stations	Yes	Yes	Yes	Yes
B. Parking garages	Yes	Yes	Yes	No
XI. Mechanical equipment rooms, maintenance rooms, and janitor closets	No	No	No	No

N/A = Not applicable.

[1]If the total square footage of the building, including all floors, is less than 20,000 square feet, access is required to the primary floor and interior circulation is required only on the primary floor. In split-level and 2-story buildings, the primary floor shall include at least 40% of the total square footage of the building utilized by the public.

[2]All health care facilities, including medical and dental offices and clinics, are required to have interior circulation throughout, regardless of the square footage. Mechanical and storage areas do not require interior circulation.

[3]Access to the primary floor via the primary entrance is not required in remodeled church entrances if the vertical rise between the exterior grade and the primary floor is greater than 2 feet. Accessible public entry shall be provided to the primary floor, however, at some other location.

[4]Seating accommodations:

Capacity of place of assembly	No. of seating positions
1 - 300	5% of total
Over 300	15 spaces plus 2% of the total over 300 (maximum not to exceed 30)

Seating spaces must be an integral part of the seating plan and not segregated. One-half of these spaces shall be designated for patrons using wheelchairs and located on a level grade. One-half of these spaces shall be designed to accommodate patrons using braces, crutches or other aids. Interior circulation is required on the primary floor.

[5]Interior circulation is required to any level containing the only public facility of its kind in the building.

[6]All apartment buildings and living units provided with individual exterior entrances shall provide an accessible entrance(s) to a primary floor. The accessible living units shall be provided at the rate of 10% of the total number of living units, with a minimum of one.

[7]Interior circulation shall be accomplished through the use of 32-inch doors within all accessible living units. All stairways, including stairways within accessible living units, shall provide a 32-inch clear space between the handrails or between the handrail and opposing wall. Corridors shall be wide enough to permit 90° turns by a standard wheelchair into all doorways. If laundry facilities are provided, the facilities shall be accessible in buildings with more than 20 units per building.

[8]Accessible sleeping units shall be provided at a rate of 5%, with a minimum of one, of the total number of units provided. Grab bars are required in bathrooms in accessible units, and 32-inch doors are required throughout. Corridors shall be wide enough to permit 90° turns by a standard wheelchair into all doorways.

[9]Access shall be provided to the primary floor, with interior circulation on the primary floor.

[10]Common use areas and 10% of the sleeping rooms shall be accessible.

[11]This does not apply to a change of occupancy.

[12]In penal institutions, 10% of the institutional living units on the primary floor shall be accessible. Vertical transportation between tiers of cells is not required.

[13]Twenty percent of all rooms designated for patient use, and the toilet rooms provided in or for these rooms, shall be designed to permit uninterrupted use by a person confined to a wheelchair, plus ample room for an attendant.

(a) Means of ingress and egress. Access from the exterior grade to the primary entrance and the entrance nearest any on-site parking facilities of all public buildings and places of employment shall be provided to the primary floor by means of a ramp, grade level entrance, or other accessible means approved by the department.

1. Platforms. A level platform, not less than 5 feet by 5 feet, shall be provided at the exterior and interior of all entrance doors. The platform shall be designed to provide at least 12 inches of clear space on the knob side of the door.

(b) Interior circulation. Access shall be provided to all public use areas of the building, both horizontally and vertically. Interior circulation between floor levels shall be accomplished by the use of ramps, elevators, approved chair lifts, or other accessible means approved by the department.

Note: The department recommends that the elevator control buttons and the emergency call system be accessible. Raised lettering is recommended for call buttons.

(c) Toilet facilities. Public toilet facilities shall be accessible on or from the primary floor. Every floor which is accessible, and which is provided with public toilet facilities, shall be provided with accessible toilet facilities which comply with the requirements of Ind 52.04 (8), and the following distribution:

1. The number of water closets provided shall be at the rate of 10% of the total number of water closets in each toilet room, with a minimum of one for each sex.

2. Only one toilet room is required in buildings accommodating less than 5 employees and less than 25 patrons per Ind 52.51 (1) (b) and Ind 54.12 (7).

3. Accessible toilet facilities shall be evenly distributed horizontally and vertically throughout the building.

(5) Additions. All additions to existing public buildings and places of employment shall be provided with a means of ingress and egress, interior circulation between the existing building and the addition, interior circulation within the addition, and toilet facilities as specified in Table 52.04 and subsection Ind 52.04 (4). If the existing building does not have accessible toilet facilities, toilet facilities as specified in Table 52.04 and subsection Ind 52.04 (4) must be provided in either the addition or the existing facility. If the area of the addition is more than 50% of the gross interior square footage of the existing building, the entire building shall comply with the provisions of Table 52.04 and subsection Ind 52.04 (4).

(6) Existing construction. All existing public buildings or places of employment to be remodeled shall be provided with means of ingress and egress, interior circulation, and toilet facilities in accordance with the following:

(a) More than 50% remodeling. If more than 50% of the gross interior square footage of a building is remodeled, the entire building shall be provided with the requirements of Table 52.04 and subsection Ind 52.04 (4).

(b) 25% to 50% remodeling. If 25% to 50% of the gross interior square footage of a building is remodeled, the part of the building which is remodeled shall be provided with the requirements of Table 52.04 and subsection Ind 52.04 (4).

(c) Less than 25% remodeling. If less than 25% of the gross interior square footage of a building is remodeled, the requirements of Table 52.04 and subsection Ind 52.04 (4) need not be provided unless the remodeling involves an entrance or exit or toilet facilities.

(d) Remodeling in buildings with elevators. If an existing building having passenger elevators is remodeled in accordance with the percentages above, separate accessible toilet room facilities for each sex shall be provided to serve each 5 floors, or fraction thereof, and shall comply with the requirements of subsections Ind 52.04 (4) and (8).

(e) Change of usage. If the usage of an existing building presently exempt is changed to a nonexempt usage, the building shall be provided with the requirements of this section.

(f) Remodeling in stages. If the remodeling is undertaken in stages, the percentage requirements established in this subsection shall apply to the total sum of the stages.

(7) Ramp details.

(a) Ramp slope. Ramps shall have a slope of not more than one foot of rise in 12 feet of run. An interior ramp with a slope of one foot of rise in 8 feet may be used to overcome a total height not greater than 3 feet. The ramps must have a non-skid surface and shall have no side slope.

(b) Ramp width. Ramps shall be at least 4 feet wide, of which not more than 4 inches on each side may be occupied by a handrail.

(c) Ramp handrails. Ramps shall have a handrail on each side which shall be at least 2 feet 6 inches high (preferable height, 2 feet 8 inches). Handrails on unenclosed ramps shall include an intermediate parallel rail at mid height.

(d) Ramp clearance. Where ramps are provided to accessible doorways, the floor on each side of the doorway shall be level for a distance of 5 feet from the door.

(e) Ramp platforms. Ramps having a 1:8 slope shall have a 5-foot long level platform at 16-foot intervals. Ramps having a 1:12 slope shall have a level platform at 30-foot intervals. Both types of ramps shall have a level platform at least 6 feet long where they turn and at least 6 feet of level clearance at the bottom of the ramps.

(8)* Toilet facility details.

(a) Accessible toilet rooms and compartments. Accessible toilet rooms and toilet compartments shall be sized to provide ease of access, usability and uninterrupted mobility. Fixtures, doors, and other obstructions shall be arranged to insure accessibility.

(b) Water closet compartments. Water closet compartments with a front entrance approach shall be at least 36 inches by 72 inches, or at least 48 inches by 57 inches. Partitions between water closet compartments shall provide 12 inches of clear space from the floor to the bottom of the partition. The compartment door shall be outswinging and at least 32 inches wide. Sufficient clearance must be maintained to permit the door to open at least 95 degrees.

(c) Grab bars. Each grab bar shall be designed and anchored to support a weight of 250 pounds. The grab bars in a 36" x 72" compartment shall be installed on each side of the water closet at 33 inches high and parallel to the floor. The 48" x 57" compartment shall have a horizontal grab bar, 33 inches high, located on the wall nearest the water closet. The grab bars shall have a smooth finish with an approximate outside diameter between 1 to 2 inches, and with 1-1/2 inches clearance between rail and wall.

(d) Water closets. The seat height of the water closet shall be 20 inches above the floor.

(e) Lavatory. At least one lavatory, mounted at a height which allows 29 inches clear space at the bottom of the apron and a maximum rim height of 34 inches, shall be provided.

Note: It is recommended that water supply controls be single lever controls and that exposed hot water pipes be insulated.

(f) Mirror and towel dispensers. At least one mirror and towel dispenser or hand dryer, when provided, shall be mounted not more than 40 inches above the floor.

Note: The department will accept toilet rooms, individual toilet compartments and grab bars as illustrated in the Appendix.

(9) Miscellaneous details.

(a)* Door dimensions. All accessible exterior doors shall be at least 40 inches wide. All interior doors shall be at least 32 inches wide. The bottom door stile shall be at least 8 inches high. Doors in series and doors located in corridors shall be accessible. One leaf of double-leaf doors shall be at least 32 inches wide.

Note: Automatic power-operated doors are recommended at entrances. Time-delay door closures are recommended at all accessible doors. The manual pull or push of a door is recommended not to exceed 15 pounds. Lever handles or door handles are recommended over conventional door knobs.

(b) Door thresholds. If door thresholds are provided, the exterior thresholds shall not extend more than 3/4 inch above the finished floor, including the weatherstripping. All exterior thresholds shall be not less than 4

*See Appendix A for further explanatory material.

inches in width. Interior thresholds shall extend not more than 3/8 inch above the finished floor or carpeting. All thresholds shall be beveled to provide smooth, unbroken, rounded surfaces.

(c)* Identification signs.

1. The international symbol for barrier-free environments shall identify all accessible entrances, toilet facilities, drinking fountains, telephones and parking spaces.
2. The international symbol for barrier-free environments shall be placed at all entrances indicating the location of the nearest accessible entrance(s) and accessible toilet facilities. The symbol at the exterior of the building shall be legible from adjacent streets, driveways or public walks.

3. Where identification signs are provided at the interior of the building, raised letters, numbers or symbols shall be used. The signs shall be located at a height between 4 feet 6 inches to 5 feet 6 inches above the floor. Knurled hardware shall be used to identify doors leading to hazardous areas such as mechanical equipment rooms and loading docks.

(d)* Wheelchair functions. All 90-degree, 180-degree, 360-degree and S-turns shall be designed to provide ease of access, usability and uninterrupted mobility.

Note #1: The standard wheelchair dimensions are: length, including footrest and feet, 60 inches; width, including hands and knuckles, 29 inches.

Note #2: The minimum space required to turn 90-degree, 180-degree, 360-degree and S-turns is illustrated in the Appendix.

(e) Grates. All openings in gratings that will be in the path of access shall not exceed 3/8-inch in width, and shall be installed perpendicular to the direction of travel. Spacers perpendicular to the grade and flush with the top of the grate shall be provided at not more than 18-inch intervals.

(f) Water fountains. Water fountains shall be accessible and installed at or adapted to a usable height.

Note: Conventional floor-mounted water coolers can be serviceable to patrons with functional limitations if a small fountain is mounted on the side of the cooler 30 inches above the floor. Fully recessed water fountains are not recommended and should not be recessed in an alcove unless the alcove is wider than a wheelchair.

(g) Public telephones. Where coin telephone(s) are provided for public use, a minimum of one telephone shall be accessible.

Note: It is recommended that the height of the telephone coin slot be not more than 54 inches above the floor, with the dial no more than 48 inches from the floor. An adjustable volume control should be provided in areas where such service is appropriate.

*See Appendix A for further explanatory material.

Subsection Ind 52.59 (4) to be repealed.

Section Ind 52.60 to be repealed and recreated to read:

Ind 52.60 FIXTURES.

(1) Water closets. Only water closets of porcelain, vitreous china, stainless steel or other nonabsorbent materials approved by the department shall be used. Water closet seats shall be of wood or other nonheat-absorbing material and shall have a finished surface that is impervious to water or cleaning agents. In public buildings, places of employment, and all other public places except within living units of apartments, hotel and motel buildings, the water closets shall have elongated bowls. All water closets except within living units of apartment buildings shall have open-front seats without cover.

(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.

1. Men's wall-hung urinals of a type approved by the department may be installed in all buildings except service stations, schools and institutions.

Note: The department will permit the installation of wall-hung urinals in high schools and facilities for higher education.

2. In buildings where children under the age of 12 may be present, and which contain a toilet room with only one urinal, the urinal shall be a stall type. If the building contains a toilet room equipped with hung urinals, at least one urinal shall be installed at a height suitable for use by children.

Note: The department will accept wall-hung urinals for children located between 12 to 15 inches above the floor, and wall-hung urinals for adults located between 22 to 24 inches above the floor, measured from the front lip of the fixture to the floor.

3. A floor drain, located not more than 12 inches from the wall supporting wall-hanging urinals, or a stall urinal, shall be provided for each group of 4, or less, urinals.

(c) Flushing devices. The urinals shall be equipped with an effective automatic or manual foot-operated flushing device.

(d) Multiple urinals. Batteries of urinals shall be spaced not less than 24 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.

Section Ind 53.01 Note to be created to read:

Note: Wis. Adm. Code Ind 1000, Safety and Health, provides requirements for the safe assembly of materials at the construction site.

Subsection Ind 53.11 (3) (d) to be amended to read:

(d) Except for roofs, a reduction in live load of one % per 20 square feet is allowed for beams and girders which have a tributary area in excess of 150 square feet. The maximum reduction should not exceed 15% and such reduction shall not be carried into the structural members supporting these beams and girders.

Subsection Ind 53.11 (4) (a) to be amended to read:

(a) Special purpose roofs. Greenhouses shall be designed for not less than one-half the value specified for roof loads.

Subsection Ind 53.322 (5) (b) 3. to be amended to read:

3. Single wythe exterior concrete masonry walls. When units are laid in running bond, such masonry wall shall be reinforced by a continuous tie assembly, as defined in Ind 53.316 (2), at vertical intervals not exceeding 24 inches. This requirement is waived when the spacing of control joints is reduced to 80% of the values indicated in Table 53-XII, except that a spacing of less than 20 feet is not required.

Subsection Ind 53.322 (6) (c) 1. to be amended to read:

(c) Exterior non-load-bearing masonry.

1. Anchorage of masonry to the structural framework. Where masonry is dependent upon the structural framework for lateral support or transmission of lateral loads, the masonry shall be anchored to the framework on at least 2 opposite sides of the perimeter of the wall, with the equivalent of a one-inch wide by 1/8-inch thick anchor for each 18 square feet of wall surface, embedded at least 8 inches into the masonry, and spaced not more than 36 inches on center. Wedging will not be considered as an equivalent method.

Subsection Ind 53.33 (1) to be repealed.

Subsection Ind 53.33 (2) to be renumbered (1).

Subsection Ind 53.33 (3) to be renumbered (2).

Subsection Ind 53.33 (4) to be renumbered (3).

Section Ind 53.34 is incorrectly numbered 54.34. Section Ind 54.34 (which follows section Ind 53.33) to be renumbered Ind 53.34.

Subsection Ind 53.34 (1) (d) to be amended to read:

(d) Reuse of existing walls. Existing masonry may be used in the alteration or extension of a structure, provided that under the new conditions imposed it meets the requirements of this code or is made so by reasonable repairs.

Subsection Ind 53.61 (2) to be amended to read:

(2) STRUCTURAL GLUED-LAMINATED TIMBER. Structural glued-laminated timber is an engineered, stress-rated product of a timber laminating plant comprising assemblies of specially selected and prepared wood laminations securely bonded together with adhesives. The grain of all laminations is approximately parallel longitudinally. The following standards are adopted as part of this building code for the design and production of structural glued-laminated timber, except that the modification of design stresses for duration of load shall be as specified in Ind 53.61 (1) (a) 1. c.

Subsection Ind 53.62 (1) (a) 1. c. to be created to read:

c. The modification of design stresses for duration of load shall be as specified in Ind 53.61 (1) (a) 1. c.

Subsection Ind 54.03 (1) to be amended to read:

(1) At least one-half of the exits required in accordance with section Ind 54.02 shall be stairways or standard exits to grade as specified in sections Ind 51.15-51.18. The other exits shall be either stairways, standard exits, or horizontal exits as specified in section Ind 51.19, or fire escapes as specified in section Ind 51.20. A fire escape will not be accepted as a required exit for any building level more than 5 stories or 55 feet above grade. An outside wooden stairway may be used as an exit for a 2-story building.

Section Ind 54.04 (heading) to be amended to read:

Ind 54.04 Required exit width.

Subsection Ind 54.04 (1) to be repealed and recreated to read:

(1) The total required exit width from a building level shall be in accordance with the requirements of subsections Ind 51.15 (6) and Ind 51.16 (3).

Subsection Ind 54.04 (3) to be repealed and recreated to read:

(3) Horizontal exits in accordance with the requirements of section Ind 51.19 may provide up to one-half of the required exit widths for any floor, subject to the provisions of section Ind 54.02.

Subsection Ind 54.04 (4) to be repealed.

Subsection Ind 54.12 (10) Note - Ind 22.03 (4) and (5) to be repealed.

Subsection Ind 55.09 (2) to be amended to read:

(2) A room may be placed under a stairway platform landing of 2-hour fire-resistive construction or better provided such room does not have combustible materials or hazardous equipment stored or operated therein. The partitions shall be constructed of noncombustible materials. All openings shall be protected with 20-minute fire door assemblies, or equivalent.

Section Ind 55.12 (heading) to be amended to read:

Ind 55.12 Required exit width.

Subsection Ind 55.12 (1) to be amended to read:

(1) The total required exit width from a building level shall be in accordance with the requirements of subsections Ind 51.15 (6) and Ind 51.16 (3).

Subsection Ind 56.06 (1) (a) 2. to be amended to read:

2. In one-hour enclosures of corridors, all openings shall be protected with no less than 3/4-hour approved fire doors with automatic closing devices or approved fire-resistive windows satisfying requirements for moderate fire exposure.

Section Ind 56.07 (heading) to be amended to read:

Ind 56.07 Required exit width.

Subsection Ind 56.07 (1) to be repealed and recreated to read:

(1) The total required exit width from a building level shall be in accordance with the requirements of subsections Ind 51.15 (6) and Ind 51.16 (3).

Subsections Ind 56.07 (2), (3) and (4) to be repealed.

Subsection Ind 56.07 (5) to be renumbered (2).

Subsection Ind 57.04 (3) to be amended to read:

(3) Corridor and specified dividing partitions shall be provided with 20-minute fire door assemblies, or equivalent.

Note: See Ind 51.047 for standards of 20-minute door assemblies or equivalent.

Section Ind 57.08 to be amended to read:

Ind 57.08 Required exit width. The total required exit width from a building level shall be in accordance with the requirements of subsections Ind 51.15 (6) and Ind 51.16 (3).

Subsection Ind 59.20 (4) (g) 1. a. Note to be created to read:

Note: Refer to Ind 50.10 (3) (m) and Ind 51.02 (16) for further required information that must be submitted with the building plans.

Subsection Ind 59.22 (3) to be amended to read:

(3) Outside temperature design conditions. In the accompanying map, the state of Wisconsin has been divided into 4 zones. The maximum heat losses for a heating system shall be calculated on the basis of the temperatures indicated on the map with reference to location of the project in each respective zone.

Subsection Ind 59.24 (7) Note to be amended to read:

Note #1: See Wis. Adm. Code Chapter Ind 20, a supplement to the Wis. Safety and Health Code, Ind 1000.

Subsection Ind 59.24 (7) Note #2 to be created to read:

Note #2: Heat reclaim equipment for exhaust systems having more than 10,000 CFM capacity should be considered since there is a chance for energy savings.

Subsection Ind 59.24 (8) (heading) to be amended to read:

(8) TEMPERED AIR SUPPLY AND HEAT GAIN.

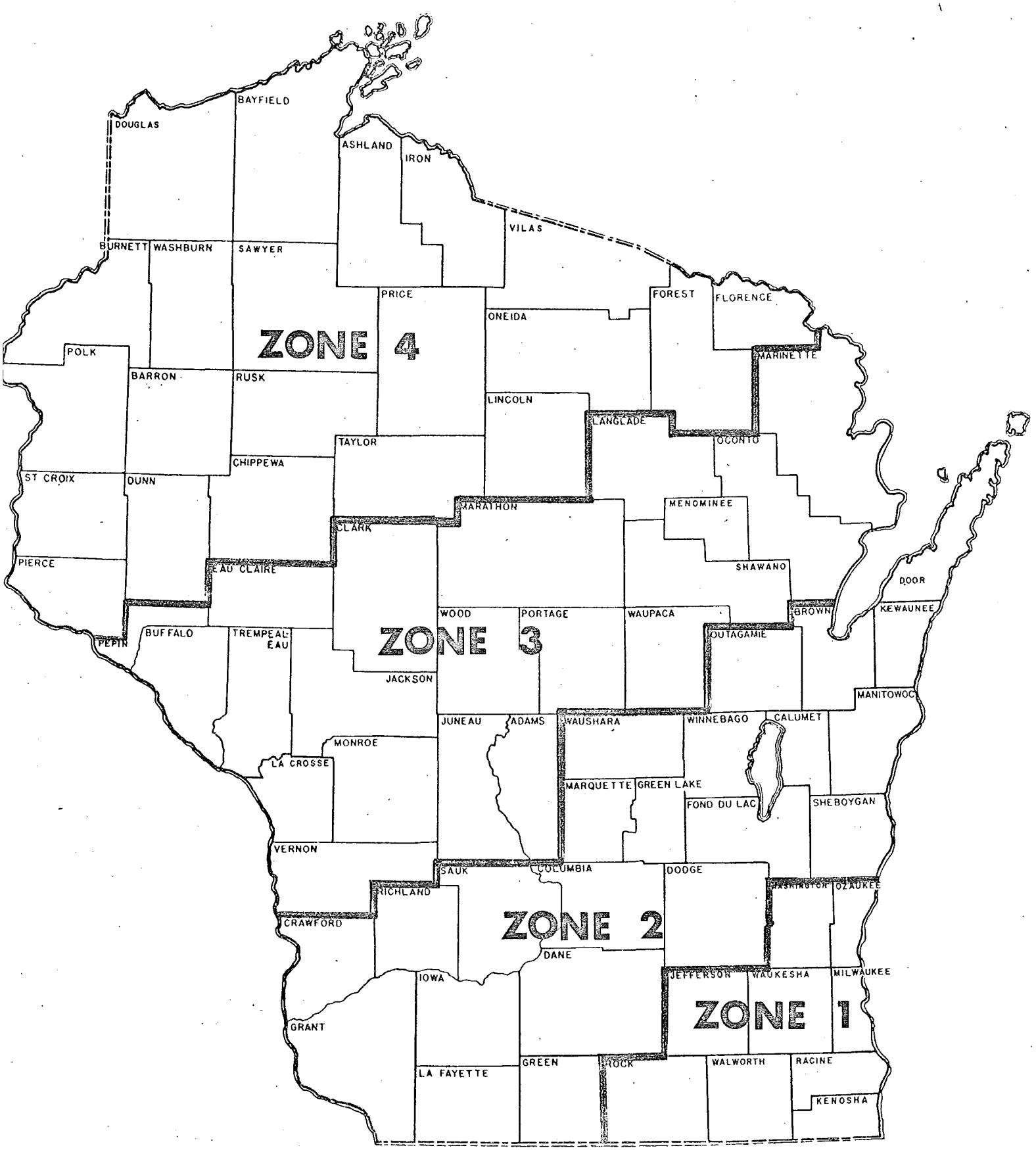
Subsection Ind 59.24 (8) (d) to be created to read:

(d) The heating system shall be designed to equal building transmission and infiltration losses during unoccupied periods. When the building is occupied, credit will be given for internal heat gains. These gains shall be demonstrated by the designer.

Section Ind 60.32 to be repealed and recreated to read:

Ind 60.32 Required exit width. The total required exit width from a building level shall be in accordance with the requirements of subsections Ind 51.15 (6) and Ind 51.16 (3).

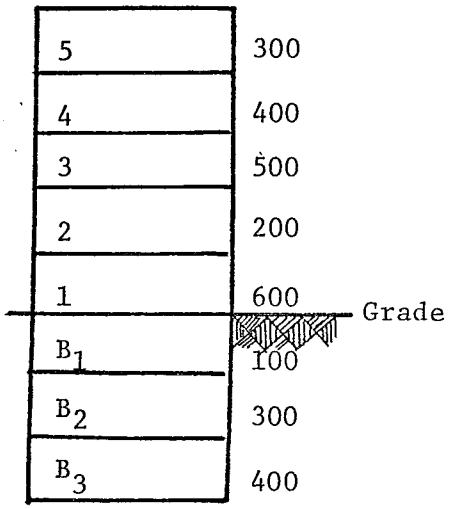
MAP OF WISCONSIN SHOWING DESIGN TEMPERATURE ZONES



Zone 1 . . . . . -25° below zero F
Zone 2 . . . . . -20° below zero F
Zone 3 . . . . . -15° below zero F
Zone 4 . . . . . -10° below zero F

APPENDIX A

A-51.15 (6) EXAMPLE TO DETERMINE TOTAL AGGREGATE EXIT WIDTH.



Type No. 1 sprinklered construction.

Aggregate exit width required from a floor into the stairwell is 30 inches per 100 people on that floor; i.e.,

5th floor to stairwell = 3 x 30 = 90"

4th floor to stairwell = 4 x 30 = 120"

3rd floor to stairwell = 5 x 30 = 150"

Stair width required:

5th to 4th - 300 persons (100%) x 30"/100 persons = 90"

4th to 3rd - [400 persons (100%) + 300 persons (50%)] 30"/100 persons = 165"

3rd to 2nd - [500 persons (100%) + 400 persons (50%) + 300 persons (25%)] 30"/100 persons = 232.5"

2nd to 1st - [200 persons (100%) + 500 persons (50%) + 400 persons (25%)] 30"/100 persons = 255"

1st to exterior - [600 persons (100%) + (200 persons + 100 persons) (50%) + (500 persons + 300 persons) (25%)] 30"/100 persons = 285"

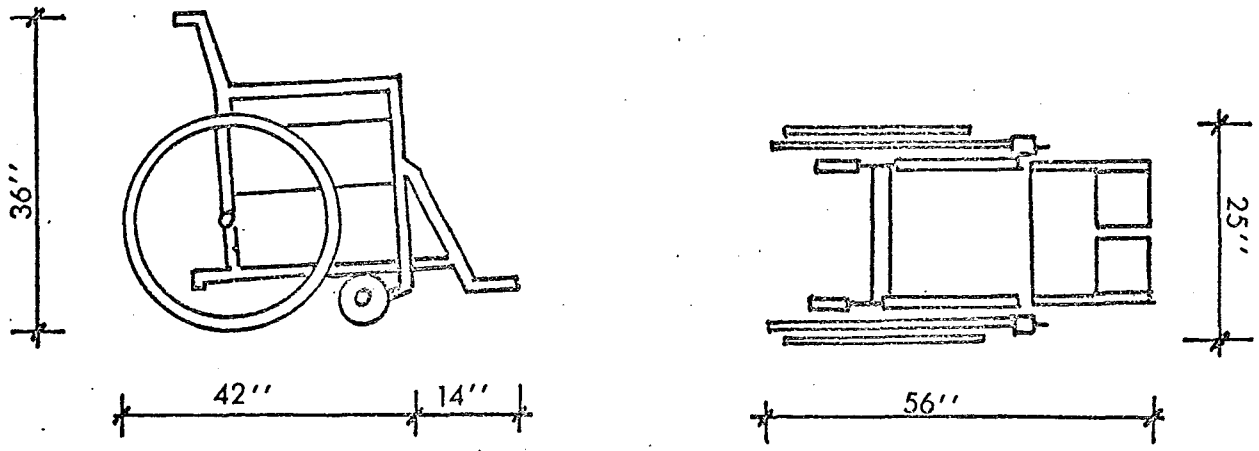
B_1 to 1st - [100 persons (100%) + 300 persons (50%) + 400 persons (25%)] 30"/100 persons = 105" (Use 150")

B_2 to B_1 - [300 persons (100%) + 400 persons (50%)] 30"/100 persons = 150"

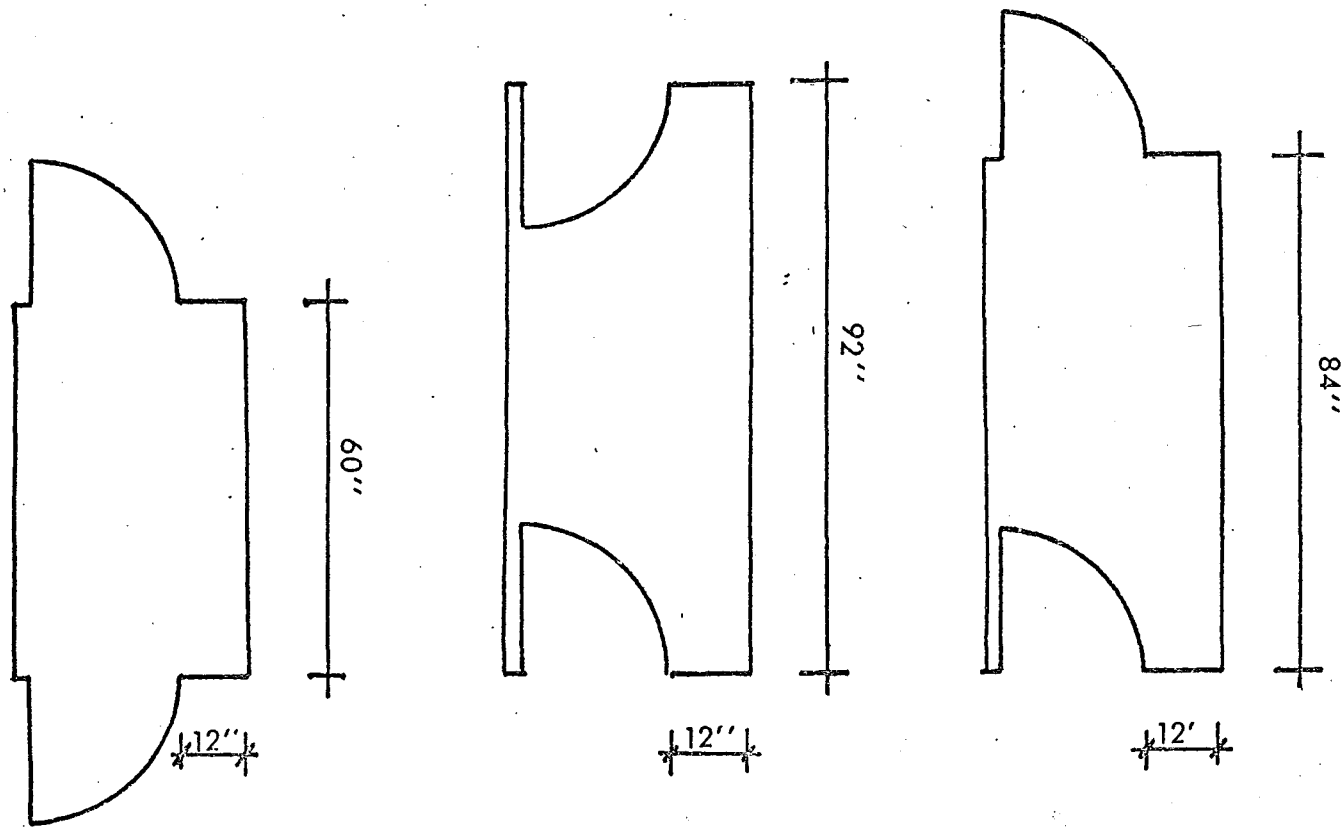
B_3 to B_2 - 400 persons (100%) x 30"/100 persons = 120"

Stair width required from B_1 to 1 is 150" as stair cannot decrease in width along path to exit [Ind 51.16 (2) (c)].

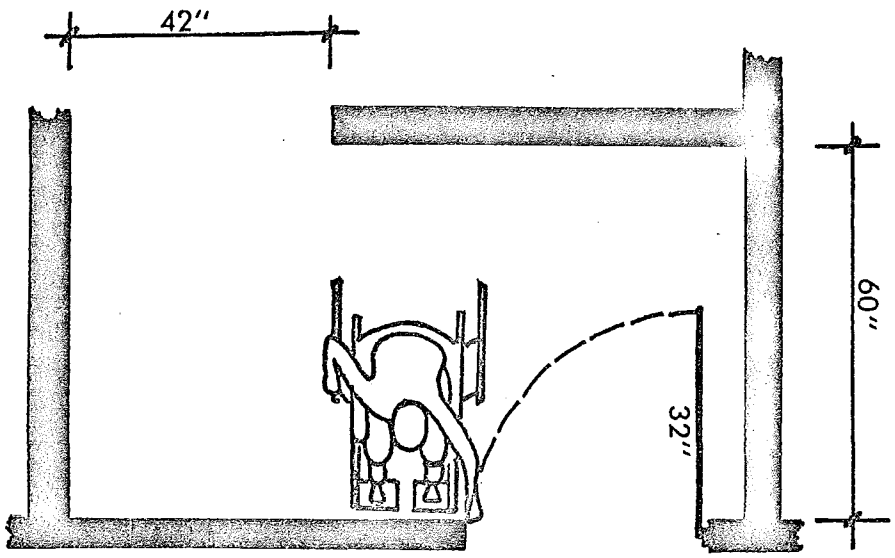
A-52.04 REQUIREMENTS FOR BARRIER-FREE ENVIRONMENTS. The following illustrations are provided to give the designer visual aids for making facilities accessible.

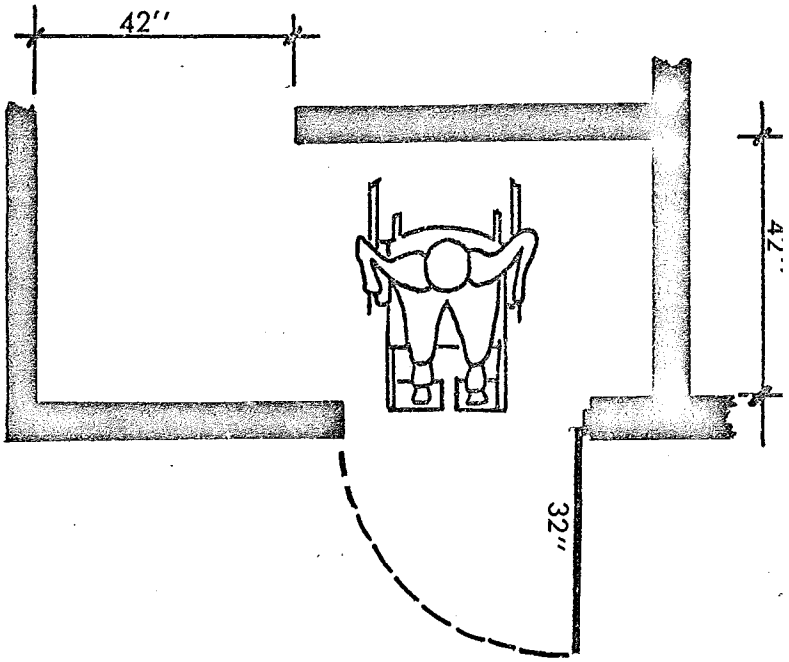


STANDARD WHEELCHAIR DIMENSIONS

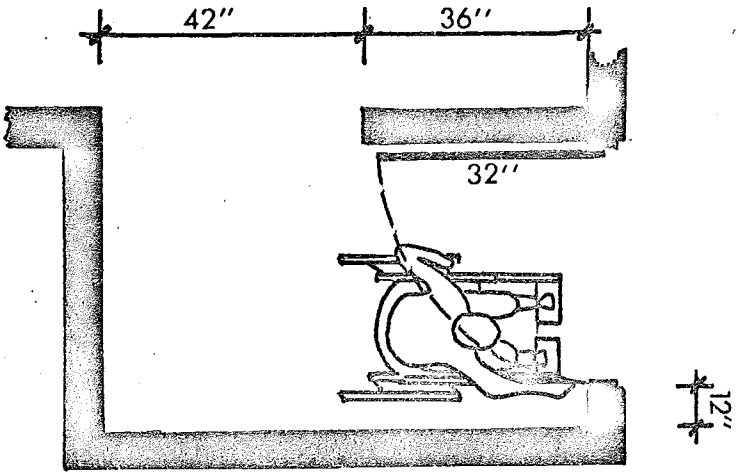


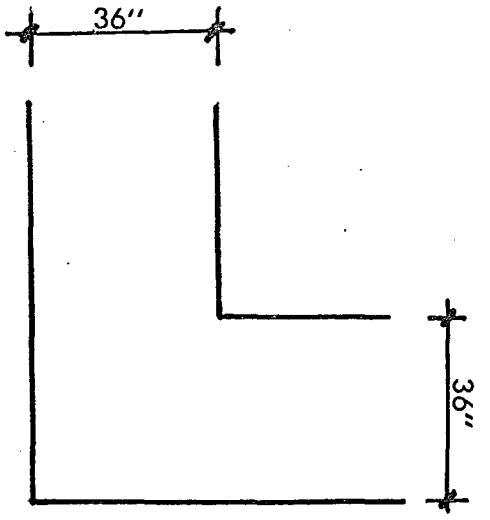
DOORS IN SERIES



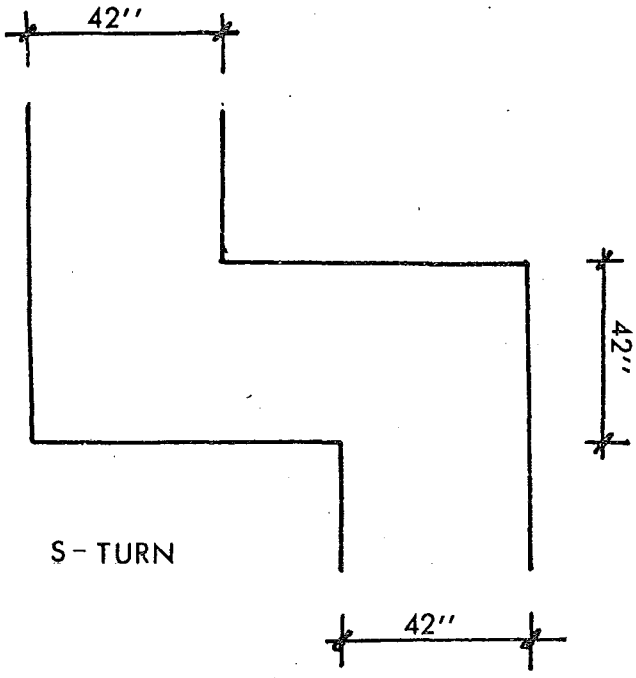


VESTIBULES

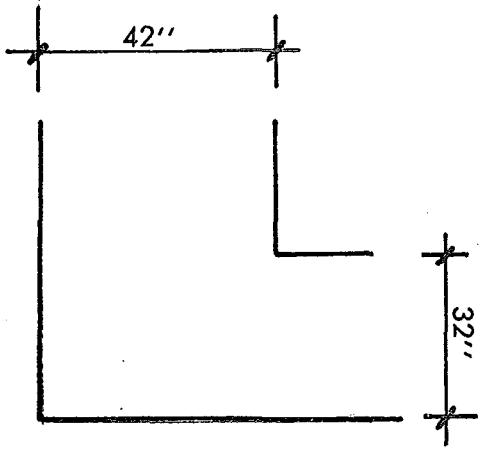




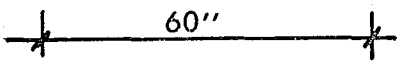
90° TURN

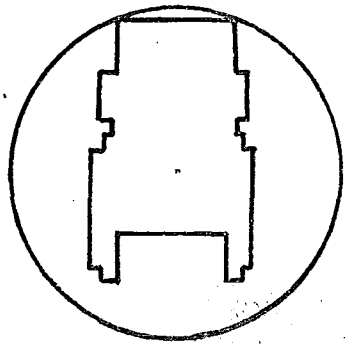


S - TURN



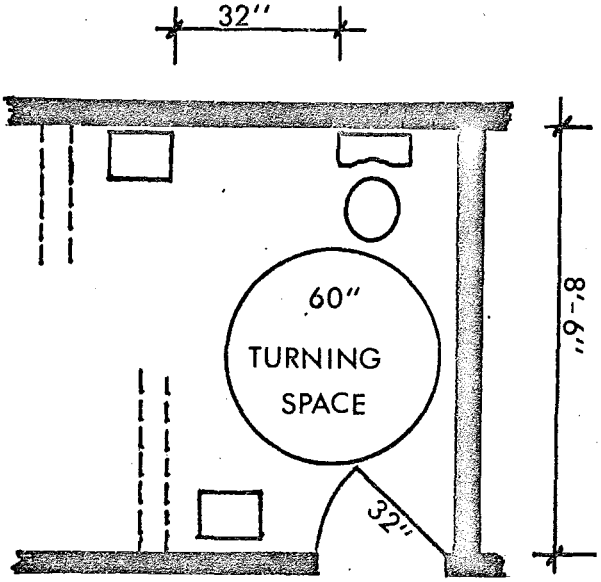
90° TURN

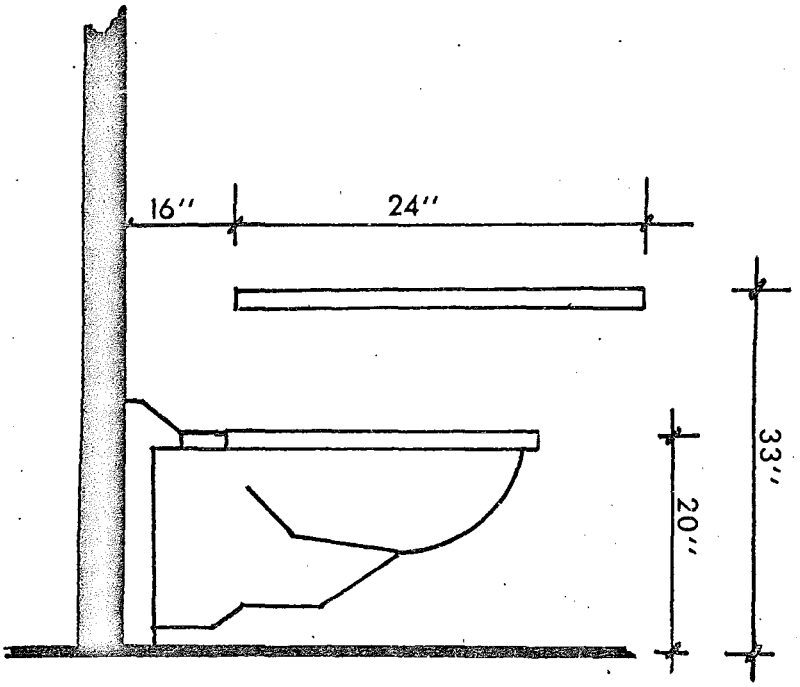




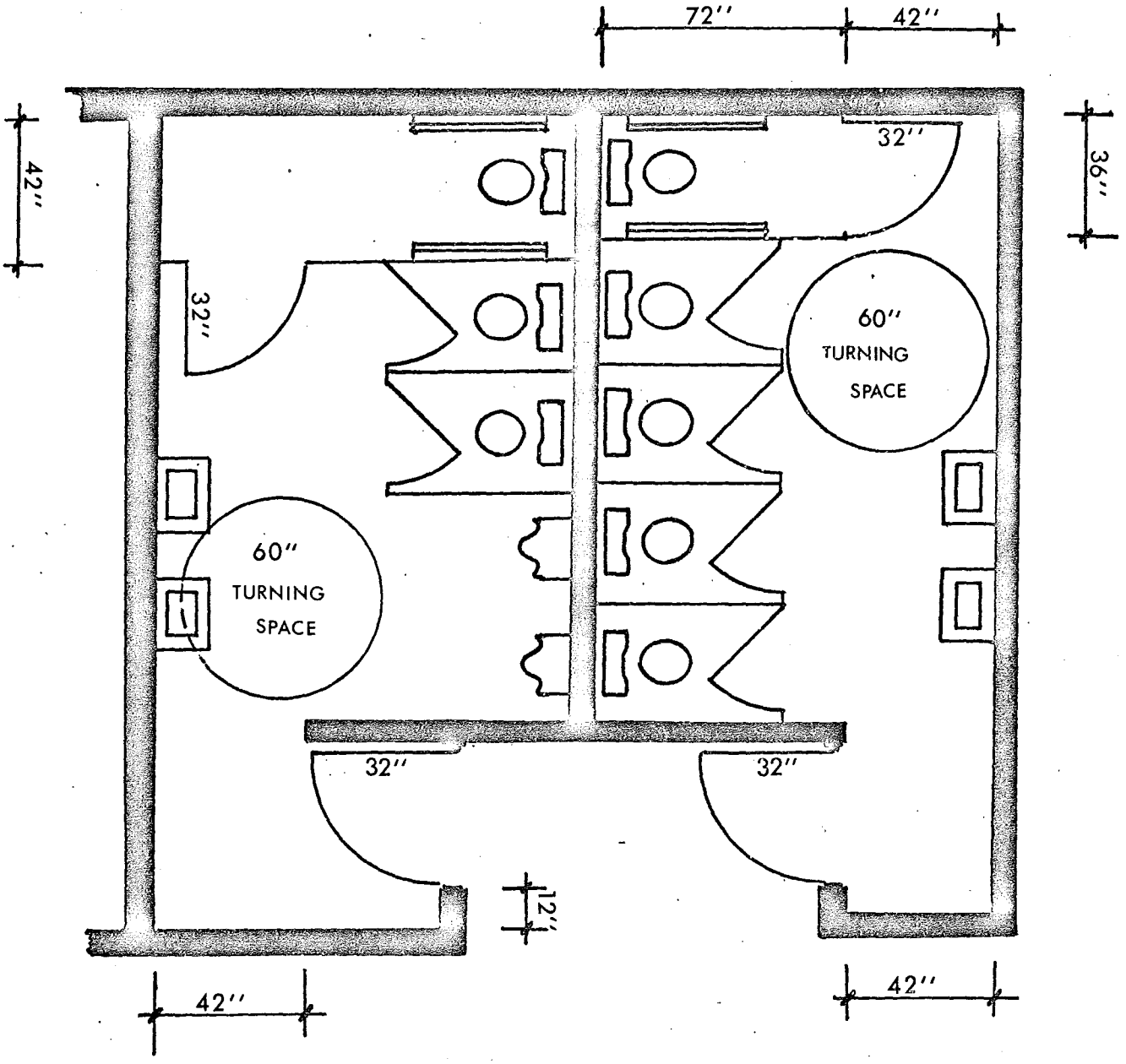
180° - 360° TURNS

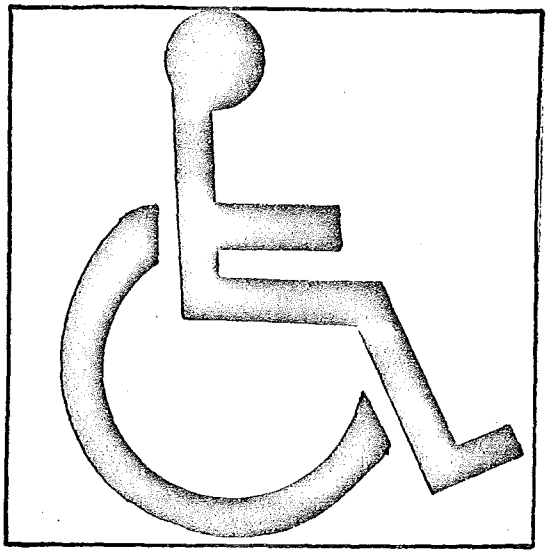
TURNING SPACE





TOILET FACILITIES


72''
42''
42''
36''
32''
32''
60''
TURNING
SPACE
60''
TURNING
SPACE
32''
32''
12''
42''
42''



INTERNATIONAL SYMBOL FOR BARRIER FREE ENVIRONMENTS