

CHAPTER 1303
DEPARTMENT OF ADMINISTRATION
MINNESOTA PROVISIONS OF
STATE BUILDING CODE

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1303.1000 TITLE.

This chapter shall be known as “Minnesota provisions.”

Statutory Authority: *MS s 16B.59; 16B.61; 16B.64*

History: *27 SR 1478*

1303.1100 PURPOSE.

This chapter contains requirements of the code that are mandated by Minnesota Statutes, are needed to address Minnesota’s climatic conditions, or are otherwise determined necessary to provide a safe minimum level of construction in an area not appropriately regulated in the International Building Code or International Residential Code.

Statutory Authority: *MS s 16B.59; 16B.61; 16B.64*

History: *27 SR 1478*

1303.1200 RESTROOM FACILITIES IN PUBLIC ACCOMMODATIONS.

Subpart 1. **Ratio.** In a place of public accommodation subject to this part, the ratio of water closets for women to the total of water closets and urinals provided for men must be at least three to two, unless there are two or fewer fixtures for men.

Subp. 2. **Application.** This part applies only to the construction of buildings or structures of public accommodation or where the cost of alterations to an existing place of public accommodation exceeds 50 percent of the estimated replacement value of the existing facility.

Subp. 3. **Definition.** For purposes of this part, “place of public accommodation” means a publicly or privately owned sports or entertainment arena, stadium, theater, community or convention hall, special event center, amusement facility, or special event center in a public park, that is designed for occupancy by 200 or more people.

Statutory Authority: *MS s 16B.59; 16B.61; 16B.64*

History: *27 SR 1478*

1303.1300 SPACE FOR COMMUTER VANS.

Every parking ramp or other parking facility must include spaces for the parking of motor vehicles having a capacity of seven to 16 persons. The number of required spaces must be determined by two percent of the gross designed parking area with a minimum of two spaces. The minimum vertical clearance to and within required spaces is 98 inches.

Statutory Authority: *MS s 16B.59; 16B.61; 16B.64*

History: *27 SR 1478*

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1303.1400 AUTOMATIC GARAGE DOOR OPENING SYSTEMS.

All automatic garage door opening systems that are installed, serviced, or repaired for garages serving residential buildings, must comply with the provisions of Minnesota Statutes, sections 325F.82 and 325F.83.

Statutory Authority: *MS s 16B.59; 16B.61; 16B.64*

History: *27 SR 1478*

1303.1500 RECYCLING SPACE.

Subpart 1. **Requirement.** Space must be provided for the collection, separation, and temporary storage of recyclable materials within or adjacent to all new or significantly remodeled buildings or structures that contain 1,000 square feet or more.

Exception: Residential structures with fewer than four dwelling units.

Subp. 2. **Location.** Space designated for recycling shall be located so it is at least as convenient as the location where other solid waste is collected. If feasible, recycling space should be adjacent to other solid waste collection space. Recycling space must be located and designed in accordance with the provisions of this code and ordinances of the jurisdiction.

Subp. 3. **Identification on plans.** Space designated for recycling must be identified on plans submitted for a building permit.

Subp. 4. **Minimum space.** Space designated for recycling must be sufficient to contain all the recyclable materials generated from the building. The minimum amount of recycling space required must be the number of square feet determined by multiplying the gross square feet of floor areas assigned to each use within a building as set forth in subpart 5, Table 1-A, times the corresponding factor.

Subp. 5. TABLE 1-A MINIMUM RECYCLING SPACE REQUIREMENTS.

USE ¹	FACTOR
1. Aircraft hangers (no repair)	.001
2. Auction rooms	.0025
3 ² . Auditoriums, reviewing stands, stadiums, gymnasiums, public swimming pools, skating rinks	.001
4. Lodge rooms, conference rooms, lounges, stages, exhibit rooms	.0025
5. Dance floors, churches ³ and chapels, lobby	.001
6. Dining rooms	.003
7 ³ . Drinking establishments	.004
8 ³ . Bowling alleys (excluding lanes)	.0025
9 ³ . Children's homes and homes for the aged	.0025
10. Classrooms	.002
11. Courtrooms	.001
12. Dormitories	.0025

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13. Exercise rooms	.001
14. Garages, parking	.001
15 ³ . Hospitals and sanitariums, nursing homes	.0025
16 ³ . Hotels	.002
17. Apartments	.0025
18. Kitchens - commercial	.003
19 ³ . Libraries	.002
20. Locker rooms	.001
21. Malls	.0025
22. Manufacturing areas	.0025
23. Mechanical equipment rooms	.001
24 ³ . Nurseries for children (day care)	.002
25. Offices	.0025
26. School shops and vocational rooms	.0025
27. Storage and stock rooms	.0025
28. Warehouses	.001
29. All others	.0025

Footnotes:

¹ The area of a use must include all areas serving or accessory to a use (corridors, accessory use areas, etc.).

² Exclude playing areas, courts, fields, and like areas.

³ The factors for these uses are intended to include all incidental uses typical of these types of facilities.

If the provisions of Table 1-A are excessive due to a specific use, space for recycling may be considered individually by the administrative authority.

Statutory Authority: *MS s 16B.59; 16B.61; 16B.64*

History: *27 SR 1478*

1303.1600 FOOTING DEPTH FOR FROST PROTECTION.

Subpart 1. **Minimum footing depth.** In the absence of a determination by an engineer competent in soil mechanics, the minimum allowable footing depth in feet due to freezing is five feet in Zone I and 3-1/2 feet in Zone II.

Zone I includes the counties of: Aitkin, Becker, Beltrami, Carlton, Cass, Clay, Clearwater, Cook, Crow Wing, Douglas, Grant, Hubbard, Itasca, Kanabec, Kittson, Koochiching, Lake, Lake of the Woods, Mahnomen, Marshall, Mille Lacs, Morrison,

Norman, Otter Tail, Pennington, Pine, Polk, Red Lake, Roseau, St. Louis, Todd, Traverse, Wadena, and Wilkin.

Zone II shall include the counties of: Anoka, Benton, Big Stone, Blue Earth, Brown, Carver, Chippewa, Chisago, Cottonwood, Dakota, Dodge, Faribault, Fillmore, Freeborn, Goodhue, Hennepin, Houston, Isanti, Jackson, Kandiyohi, Lac qui Parle, Le Sueur, Lincoln, Lyon, McLeod, Martin, Meeker, Mower, Murray, Nicollet, Nobles, Olmsted, Pipestone, Pope, Ramsey, Redwood, Renville, Rice, Rock, Scott, Sibley, Sherburne, Stearns, Steele, Stevens, Swift, Wabasha, Waseca, Washington, Watonwan, Winona, Wright, and Yellow Medicine.

Less depths may be permitted when supporting evidence is presented by an engineer competent in soil mechanics.

Subp. 2. Soil under slab on grade construction for buildings. When soil, natural or fill, is sand or pit run sand and gravel, and of depth in accordance with minimum footing depth requirements for each zone, slab on grade construction which is structurally designed to support all applied loads is permitted. Sand must contain less than 70 percent material that will pass through a U.S. Standard No. 40 sieve and less than five percent material that will pass through a No. 200 sieve (five percent fines), or be approved by an engineer competent in soil mechanics. Footings for interior bearing walls or columns may be constructed to be integral with the slab on grade for any height building. Footings for exterior bearing walls or columns may be similarly constructed for any height building when supporting soil is as described in this subpart. Footing design must reflect eccentric loading conditions at slab edges, soil bearing capacity, and the requirements of International Building Code, chapter 19. Slab on grade construction for detached buildings of Group U occupancies may be placed on any soil except peat or muck.

Statutory Authority: *MS s 16B.59; 16B.61; 16B.64*

History: *27 SR 1478*

1303.1700 GROUND SNOW LOAD.

The ground snow load, P_g , to be used in determining the design snow loads for buildings and other structures shall be 60 pounds per square foot in the following counties: Aitkin, Becker, Beltrami, Carlton, Cass, Clay, Clearwater, Cook, Crow Wing, Hubbard, Itasca, Kanabec, Kittson, Koochiching, Lake, Lake of the Woods, Mahanomen, Marshall, Mille Lacs, Morrison, Norman, Otter Tail, Pennington, Pine, Polk, Red Lake, Roseau, St. Louis, Todd, and Wadena. The ground snow load, P_g , to be used in determining the design snow loads for buildings and other structures shall be 50 pounds per square foot in all other counties.

Statutory Authority: *MS s 16B.59; 16B.61; 16B.64*

History: *27 SR 1478*

1303.1800 RADIAL ICE ON TOWERS.

The effect of one-half inch of radial ice must be included in the design of towers including all supporting guys. This effect must include the weight of the ice and the increased profile of each such tower component so coated.

Statutory Authority: *MS s 16B.59; 16B.61; 16B.64*

History: *27 SR 1478*

1303.1900 CONVENTIONAL FOUNDATION CONSTRUCTION.

Subpart 1. Conventional foundation construction. The provisions in this part may be used for the design and construction of conventional foundations serving Group R, Division 3, and Group U occupancies subject to the approval of the building official. Other methods may be used provided a satisfactory design is submitted showing compliance with the other provisions of this code.

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TABLE 2-A

Foundation wall reinforcement requirements of 12-inch thick hollow unit masonry or eight-inch thick cast-in-place (CIP) concrete.

Height of unbalanced backfill	Size of vertical reinforcing bars required when foundation wall is constructed in soil groups I or II of Table 2-B	
	Group I Soil	Group II Soil
5 feet	No. 4 bars	No. 4 bars
6 feet	No. 4 bars	No. 5 bars
7 feet	No. 4 bars	No. 5 bars
8 feet	No. 5 bars	No. 6 bars

Notes:

1. All reinforcing is to be installed vertically a maximum of six feet on center. Vertical reinforcing bars must be placed three inches clear maximum from the inside nonpressure face of masonry walls and 1-1/2 inches clear maximum from the inside face of the CIP walls.

2. Reinforcing may be omitted in wall sections ten feet or less in length that are bounded by wall corners or by wall offsets or returns at least two feet in depth.

3. Reinforced cells of hollow unit masonry must be filled solid with grout having a specified compressive strength at 28 days of 2,000 psi. Reinforcing steel must be ASTM A615 grade 40 or grade 60.

4. Hollow masonry units must be ASTM C-90 (average unit strength = 1,900 psi) and be installed in a running bond pattern with Type M or Type S mortar.

5. Cast-in-place concrete must have a 28-day minimum strength of 3,000 psi.

6. Anchor bolts must be installed to align with vertical reinforcing in addition to the locations and in the manner specified in International Building Code, Section 2308.6 or International Residential Code, Section R403.1.6.

7. If foundation walls are parallel to floor framing, solid blocking or diagonal bracing must be installed at the anchor bolt locations in the first two joist or truss spaces.

8. Floor framing must be nailed to the sill plate in accordance with International Building Code, Table 2304.9.1 or International Residential Code, Table R602.3(1). In addition, approved metal angle clips must be used to fasten floor joists, trusses, or blocking to the sill plate at the anchor bolt locations. The clips must not be less than 18 gauge and be fastened to the plate and adjoining joists, trusses, or blocking with at least three 1-1/2 inch by 8d nails in each leg of the clip.

9. Foundation walls must not exceed a height of 8-1/2 feet, as measured from the basement floor. Height of unbalanced fill must also be measured from the basement floor.

10. Prior to backfilling, foundation walls must be laterally supported by floor construction at both top and bottom or by adequate temporary bracing.

11. A foundation drainage system must be installed, consisting of a foundation drain complying with International Building Code, Sections 1806.4.2 or 1806.4.3, International Residential Code, Section R405.1, or other approved design.

12. Foundations must also comply with the applicable construction provisions of International Building Code, Chapters 19 and 21, or International Residential Code, Chapter 6.

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Subp. 2. **Types of soils and their properties.**

TABLE 2-B
TYPES OF SOILS AND THEIR PROPERTIES

Soil group	Unified soil classification system symbol	Soil description	Drainage characteristics	Volume change potential expansion
Group I Excellent	GW	Well-graded gravels, gravel sand mixtures, little or no fines.	Good	Low
	GP	Poorly graded gravels or gravel sand mixtures, little or no fines.	Good	Low
	SW	Well-graded sands, gravelly sands, little or no fines.	Good	Low
	SP	Poorly graded sands or gravelly sands, little or no fines.	Good	Low
	GM	Silty gravels, gravel-sand-silt mixtures.	Good	Low
	SM	Silty sand, sand-silt mixtures.	Good	Low
	GC	Clayey gravels, gravel-sand-clay mixtures.	Medium	Low
Group II Fair to Good	SC	Clayey sands, sand-clay mixture. Inorganic silts and very fine sands, rock flour.	Medium	Low
	ML	Silty or clayey fine sands or clayey silts with slight plasticity.	Medium	Low
	CL	Inorganic clays of low to medium plasticity, gravelly clays, sands, clays, silty clays, lean clays.	Medium	Medium

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	CH	Inorganic clays of high plasticity, fat clays.	Poor	High
Group III				
Poor	MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts.	Poor	High
	OL	Organic silts and organic silty clays of low plasticity.	Poor	Medium
Group IV				
	OH	Organic clays of medium to high plasticity, organic silts.	Unsatisfactory	High
Unsatisfactory	Pt	Peat and other highly organic soils.	Unsatisfactory	High

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Statutory Authority: *MS s 16B.59; 16B.61; 16B.64*

History: *27 SR 1478*

1303.2000 EXTERIOR WOOD DECKS, PATIOS, AND BALCONIES.

The decking surface and upper portions of exterior wood decks, patios, and balconies may be constructed of any of the following materials:

- A. the heartwood from species of wood having natural resistance to decay or termites, including redwood and cedars;
- B. grades of lumber which contain sapwood from species of wood having natural resistance to decay or termites, including redwood and cedars; or
- C. treated wood.

The species and grades of wood products used to construct the decking surface and upper portions of exterior decks, patios, and balconies must be made available to the building official on request before final construction approval.

Statutory Authority: *MS s 16B.59; 16B.61; 16B.64*

History: *27 SR 1478*

1303.2100 BLEACHER SAFETY.

All new bleachers, manufactured, installed, sold, or distributed where the bleachers or bleacher open spaces will be over 55 inches above grade or the floor below, and all bleacher guardrails if any part of the guardrail will be over 30 inches above grade or the floor below must comply with the State Building Code in effect and the provisions of Minnesota Statutes, section 16B.616.

Statutory Authority: *MS s 16B.59; 16B.61; 16B.64*

History: *27 SR 1478*