CHAPTER 7670
DEPARTMENT OF PUBLIC SERVICE
ENERGY DIVISION
MODEL ENERGY CODE AMENDMENTS

7670.0100 AUTHORITY; SCOPE.

This chapter is adopted pursuant to Minnesota Statutes, section 216C.19, subdivision 8 and constitute amendments to the State Building Code. In cases of conflict with the State Building Code, this chapter governs in all cases not affecting safety and health requirements.

Additionally, this chapter is intended to serve as standards for conducting maxi audits of existing buildings owned by the state, the University of Minnesota, cities, counties, and school districts as specified in Minnesota Statutes, section 216C.20.

Statutory Authority: *MS s 216C.19 subd 8*

History: *8 SR 1229; L 1987 c 312 art 1 s 9,10 subd 1*

7670.0110 DEFINITIONS.

As used in this chapter, "State Building Code" means parts 1300.1200 to 1300.2000, 1325.1000 to 1325.9500, and chapters 1305, 1310, 1315, 1320, 1330, 1335, 1340, 1345, 1355, 1360, and 1365, and "this code" or "the code" means the Model Energy Code incorporated by reference in part 7670.0130.

Statutory Authority: *MS s 216C.19 subd 8*

History: *8 SR 1229; L 1987 c 312 art 1 s 9*

7670.0120 EFFECTIVE DATE.

The effective date of this chapter is January 1, 1984.

Statutory Authority: *MS s 216C.19 subd 8*

History: *8 SR 1229; L 1987 c 312 art 1 s 9*

7670.0130 ADOPTION BY REFERENCE OF THE MODEL ENERGY CODE WITH AMENDMENTS.

The Model Energy Code, 1983 Edition, as published by the Council of American Building Officials (Falls Church, Virginia), is incorporated by reference and made a part of the State Building Code, subject to the amendments in this chapter.

Statutory Authority: *MS s 216C.19 subd 8*

History: *8 SR 1229; L 1987 c 312 art 1 s 9*

ADMINISTRATION AND ENFORCEMENT

7670.0200 AMENDMENT TO 101.3.

On page 1 of the code, 101.3 is amended to read:

101.3 Scope.

This code sets forth minimum requirements for the design and evaluation of new buildings, additions, and remodeled elements of buildings and standards for certain existing public buildings by regulating their exterior envelopes and the selection of their HVAC, service water heating, electrical distribution, and illuminating systems and equipment for effective use of energy. Buildings which must comply with this code are the same as those which must comply with the State Building Code.

Buildings must be designed to comply with the requirements of chapter 4, 5, or 6 of this code.

Statutory Authority: *MS s 216C.19 subd 8*

History: *8 SR 1229; L 1987 c 312 art 1 s 9*

7670.0210 AMENDMENT TO 101.3.2.

On page 2 of the code, 101.3.2 is amended by adding a paragraph to read:

101.3.2.4 Remodeled elements of buildings. The requirements of parts 1305.0100 to 1305.4300 apply in determining how remodeled elements of buildings are required to comply with this code.

Statutory Authority: *MS s 216C.19 subd 8*

History: *8 SR 1229; L 1987 c 312 art 1 s 9*

7670.0220 AMENDMENT TO 105.1.

On page 3 of the code, 105.1 is amended to read:

105.1 General.

Construction of work for which a permit is required is subject to inspection by the building official. Inspections shall be as required by parts 1305.0100 to 1305.4300.

Statutory Authority: *MS s 216C.19 subd 8*

History: *8 SR 1229; L 1987 c 312 art 1 s 9*

DEFINITIONS

7670.0300 AMENDMENT TO SECTION 201: BUILDING.

On page 4 of the code, section 201 is amended by adding a new definition to read:

BUILDING. "Building" means a new building at the time of application for

a building permit, an addition or remodeled element of a building, a moved building, and an existing building heated by oil, gas, or electric units which is owned by the state, the University of Minnesota, a city, a county, or a school district.

Statutory Authority: *MS s 216C.19 subd 8*

History: *8 SR 1229; L 1987 c 312 art 1 s 9*

7670.0310 AMENDMENT TO SECTION 201: COMMERCIAL PARKING FACILITY.

On page 5 of the code, section 201 is amended by adding a new definition to read:

COMMERCIAL PARKING FACILITY. Any enclosed parking facility except one which is appurtenant to or a part of a residential building, whether the individual dwelling units are rented or owned by the occupants, and which is used primarily by the occupants and their guests.

Statutory Authority: *MS s 216C.19 subd 8*

History: *8 SR 1229; L 1987 c 312 art 1 s 9*

7670.0320 AMENDMENT TO SECTION 201: HEATED SPACE.

On page 6 of the code, section 201 the definition of "Heated Space" is amended to read:

HEATED SPACE. Space within a building which is provided with a positive heat supply to maintain air temperature of 50 degrees Fahrenheit (10 degrees Celsius) or higher.

Statutory Authority: *MS s 216C.19 subd 8*

History: *8 SR 1229; L 1987 c 312 art 1 s 9*

7670.0330 AMENDMENT TO SECTION 201: RENEWABLE ENERGY SOURCES.

On page 7 of the code, section 201 the definition of "Nondepletable Energy Sources" is amended to read:

RENEWABLE ENERGY SOURCES. Sources of energy which are replaced within a matter of days, months, or years (but no more than 50 years) by new or additional supplies of the energy source. Renewable energy sources include forestry products and forest harvest residues, agricultural wastes, solar radiation, including natural daylighting, phenomena resulting from solar radiation and celestial movements, including wind, waves, tides, and lake or pond thermal differences, and nocturnal thermal exchanges.

All references to "Nondepletable Energy Sources" in this code mean "Renewable Energy Sources."

Statutory Authority: *MS s 216C.19 subd 8*

History: *8 SR 1229; L 1987 c 312 art 1 s 9*

7670.0340 AMENDMENT TO SECTION 201: VAPOR BARRIER.

On page 10 of the code, section 201 is amended by adding a new definition to read:

VAPOR BARRIER. A material to retard air and water vapor passage designed to meet a maximum perm rating of 0.1 grain per hour per ft^2 per inch Hg pressure differential. Polyethylene material that is not cross laminated which is used to meet the requirements of this paragraph must be designed to have a minimum thickness of four mills.

Statutory Authority: *MS s 216C.10; 216C.19 subd 8*

History: *8 SR 1229; 10 SR 1687; L 1987 c 312 art 1 s 9*

DESIGN CONDITIONS

7670.0400 AMENDMENT TO 302.1: FOOTNOTE 1.

On page 12 of the code, footnote 1 to 302.1 is amended to read:

[1]The outdoor design temperature shall be selected from the columns of 99 percent values for winter and one percent values for summer from tables in Standard RS-1. Degree days heating shall be selected from Standard RS-22. Adjustments may be made to reflect local climates which differ from the tabulated temperatures or local weather experience as determined by the building official.

Statutory Authority: *MS s 216C.19 subd 8*

History: *8 SR 1229; L 1987 c 312 art 1 s 9*

BUILDING ENVELOPE REQUIREMENTS

7670.0500 AMENDMENT TO 502.2.1.4: SLAB ON GRADE FLOORS.

On page 19 of the code, 502.2.1.4 is amended to read:

502.2.1.4 Slab on grade floors. For slab on grade floors, the thermal resistance of the insulation around the perimeter of the floor must be not less than the value given in Table No. 5-1. The insulation must extend downward from the top of the slab to the design frost line or downward to the bottom of the slab then horizontally beneath the slab for an equivalent distance, and must be an approved type.

Statutory Authority: *MS s 216C.19 subd 8*

History: *8 SR 1229; L 1987 c 312 art 1 s 9*

7670.0510 AMENDMENT TO 502.2.1: FOUNDATION WALLS.

On page 19 of the code, 502.2.1 is amended by adding a paragraph to read:

502.2.1.6 Foundation walls. Foundation walls enclosing heated or conditioned spaces must be insulated.

Either the thermal resistance (R) of the insulation on the entire opaque foundation wall must be not less than R-5, or the thermal resistance (R) of the insulation on the opaque foundation wall must be not less than R-10 from the top of the wall down to the design frost line. If the top of the footing is at or above the design frost line, the thermal resistance (R) of the insulation on the wall must not be less than R-5 from the top of the wall to the top of the footing.

All insulation used in or on foundation walls must be approved for the intended use. The insulation must be installed in accordance with the approved manufacturer's specifications.

Statutory Authority: *MS s 216C.10; 216C.19 subd 8*

History: *8 SR 1229; 10 SR 1687; L 1987 c 312 art 1 s 9*

7670.0520 AMENDMENT TO 502.2.1: VAPOR BARRIERS.

On page 19 of the code, 502.2.1 is amended by adding a paragraph to read:

502.2.1.7 Vapor barriers. Vapor barriers are required to maintain the thermal performance of required insulation and the integrity of building materials against cold weather water vapor condensation. A vapor barrier must be installed between the interior surface and the winter design condition dew point location within each building envelope surface. The vapor barrier must be continuous and uninterrupted. Rips in the vapor barrier must be patched with vapor barrier materials and sealed. The vapor barrier need not be continuous at electrical, mechanical, or plumbing penetrations.

EXCEPTIONS: A vapor barrier need not be installed on the rim joist insulation.

Statutory Authority: *MS s 216C.10; 216C.19 subd 8*

History: *8 SR 1229; 10 SR 1687; L 1987 c 312 art 1 s 9*

7670.0530 AMENDMENT TO 502.3.1.4: SLAB ON GRADE FLOORS.

On page 19 of the code, 502.3.1.4 is amended to read:

502.3.1.4 Slab on grade floors. For slab on grade floors, the thermal resistance of the insulation around the perimeter of the floor may not be less than the value given in Table No. 5-2. The insulation must extend downward from the top of the slab to the design frost line or downward to the bottom of the slab then horizontally beneath the slab for an equivalent distance, and must be of an approved type.

Statutory Authority: *MS s 216C.19 subd 8*

History: *8 SR 1229; L 1987 c 312 art 1 s 9*

7670.0540 AMENDMENT TO TABLE NO. 5-1.

On page 20 of the code, Table No. 5-1 is amended to read:

TABLE NO. 5-1

Element	Mode	Type A-1 Buildings U_o	Type A-2 Buildings U_o[1]
Walls	Heating or cooling	0.11	
Roof/ceiling	Heating or cooling	0.026	
Floors over unheated spaces	Heating or cooling	0.05	
Heated slab on grade	Heating	R Value[1]	R Value[1]
Unheated slab on grade	Heating	R Value[1]	R Value[1]

[1]Values shall be determined by using the graphs (Figures Nos. 1, 2, 3, and 6) contained in Chapter 7 (based on Standard RS-9) using heating degree days as specified in Section 302.

Statutory Authority: *MS s 216C.19 subd 8*

History: *8 SR 1229; L 1987 c 312 art 1 s 9*

7670.0550 AMENDMENT TO 502.4.3.

On page 23 of the code, 502.4.3 is amended as follows:

502.4.3.1 Exterior joints in the building envelope that are sources of air leakage, such as around window and door frames, between wall cavities and window or door frames, between walls and foundations, between walls and roofs or ceilings and between wall panels, openings at penetrations of utility services through walls, floors, and roofs, and all other similar openings in the building envelope must be caulked, gasketed, or otherwise sealed in an approved manner. A continuous air barrier must be provided at all electrical, mechanical, and plumbing penetrations.

Statutory Authority: *MS s 216C.10; 216C.19 subd 8*

History: *10 SR 1687; L 1987 c 312 art 1 s 9*

BUILDING MECHANICAL SYSTEMS

7670.0600 AMENDMENT TO 503.1.

On page 24 of the code, 503.1 is amended by adding a paragraph to read:

503.1.1 Heated parking garages. An enclosed structure or portion of an enclosed structure constructed after January 1, 1978, and used primarily as a commercial parking facility for three or more motor vehicles may not be heated. Incidental heating resulting from building exhaust air passing through a parking facility is not prohibited if substantially all useful heat has previously been removed from the air.

Statutory Authority: *MS s 216C.19 subd 8*

History: *8 SR 1229; L 1987 c 312 art 1 s 9*

7670.0610 AMENDMENT TO 503.2.

On page 24 of the code, 503.2 is amended by adding a paragraph to read:

503.2.3 System design heating and cooling capacity. The rated capacity of the heating and cooling system at design conditions may not be greater than 115 percent for heating, 100 percent for cooling at design output load calculated in accordance with 503.2, whenever appropriate equipment is available.

Exceptions:
1. Equipment designed for standby purposes.
2. Cooling capacity of heat pumps.
3. Systems designed for pick up after automatic temperature setback when a registered professional engineer shows that the extra system design heating and cooling capacity is needed for pick up.

Statutory Authority: *MS s 216C.19 subd 8*

History: *8 SR 1229; L 1987 c 312 art 1 s 9*

7670.0620 AMENDMENT TO TABLE NO. 5-4.

On page 26 of the code, Table No. 5-4 is amended to read:

Table No. 5-4 — Minimum COP for Heat Pumps, Heating Mode[1]

Source and Outdoor Temperature (F)	Minimum COP
Air Source - 47DB/43WB	2.7
Air Source - 17DB/15WB	1.8
Water Source - 60 Entering	3.0

[1]When tested at the standard rating specified in Table 5-10A.

Statutory Authority: *MS s 216C.19 subd 8*

History: *8 SR 1229; L 1987 c 312 art 1 s 9*

7670.0630 AMENDMENT TO 503.4.5.1.

On page 27 of the code, section 503.4.5.1 is amended to read:

These requirements apply to, but are not limited to, unitary (central) cooling equipment (air cooled, water cooled, and evaporatively cooled), the cooling mode of unitary (central) and packaged terminal heat pumps (air source and water source), and packaged terminal air conditioners.

Statutory Authority: *MS s 216C.10; 216C.19 subd 8*

History: *10 SR 1687; L 1987 c 312 art 1 s 9*

7670.0640 AMENDMENT TO TABLE NO. 5-5.

On page 28 of the code, Table No. 5-5 is amended to read:

Table No. 5-5
HVAC System Heating Equipment
Gas and Oil fired
Minimum Steady State Combustion Efficiency

Types of equipment	Furnaces of Capacities of 225,000 BTU/H and Less Boilers of Capacities of 300,000 BTU/H and Less Percent[1]	All Other Commercial/ Industrial Furnaces and Boilers Percent[2]
Forced-air furnaces and low-pressure steam or hot-water boilers	74	80
Gravity central furnaces	69	—
All other vented heating equipment	69	—

[1]Combustion efficiency for furnaces of capacities of 225,000 Btu/h and less and boilers of capacities of 300,000 Btu/h and less shall be tested in accordance with the applicable U.S. Department of Energy furnace test procedures.

[2]Combustion efficiency of commercial/industrial furnaces and boilers is defined as 100 percent minus stack losses in percent of heat input. Stack losses are:

Loss due to sensible heat in dry flue gas.

Loss due to incomplete combustion.

Loss due to sensible and latent heat in moisture formed by combustion of hydrogen in the fuel.

Statutory Authority: *MS s 216C.19 subd 8*

History: *8 SR 1229; L 1987 c 312 art 1 s 9*

7670.0650 AMENDMENT TO TABLE NO. 5-6.

On page 28 of the code, Table No. 5-6 is amended to read:

Table No. 5-6 — Minimum EER and COP for Electrically Driven HVAC-System Equipment — Cooling[1] [2]

Standard Rating Capacity	Air-cooled EER	Air-cooled COP	Evaporator or Water cooled EER	Evaporator or Water cooled COP
Under 65,000 Btu/h (19,050 watts)	7.8	2.28	8.8	2.58
65,000 Btu/h (19,050 watts) and over	8.2[3]	2.40[3]	9.2	2.69

[1]When tested at the standard rating conditions specified in Table No. 5-10B.

[2]The Department of Energy has established required test procedures for single phase air cooled residential central air conditioners under 19 kW (65,000 Btu/h) in capacity, which have been incorporated into ARI Standard 210-79. EER and COP values in Table No. 5-6 are based on Test A of the DOE Test Procedures.

[3]Applies when return air fans are not included under the manufacturer's model No. When return air fans are included, the required minimum values are 2.34 (8.0).

Statutory Authority: *MS s 216C.19 subd 8*

History: *8 SR 1229; L 1987 c 312 art 1 s 9*

7670.0660 AMENDMENT TO TABLE NO. 5-7.

On page 29 of the code, Table No. 5-7 is amended to read:

Table No. 5-7 — Minimum EER and COP for Electrically Driven HVAC-System Components[1]

		Condensing Means					
		Air		Water		Evaporative	
Component	Type of Compressor	EER	COP	EER	COP	EER	COP
Self-contained water chillers	Centrifugal	8.00	2.34	13.80	4.04		
	Positive displacement	8.40	2.46	12.00	3.51		
Condenserless water chillers	Positive displacement	9.90	2.9	12.00	3.51		
Compressor and condenser units 65,000 Btu/h (19,050 watts) and over[2]	Positive displacement	9.50	2.78	12.50	3.66	12.50	3.66

Water Source Hydronic Heat Pump	Size	under 19 kW (65,000 Btu/h)		19 kW (65,000 Btu/h) and over	
		EER	COP	EER	COP
	Centrifugal	9.0	2.64	9.4	2.75

[1]When tested at the standard rating conditions specified in Table No. 5-10C.

[2]Ratings in accordance with Standard RS-14 as applicable. COP based on condensing unit standard rating capacity and energy input to the unit, all at sea level.

Statutory Authority: *MS s 216C.19 subd 8*

History: *8 SR 1229; L 1987 c 312 art 1 s 9*

7670.0670 AMENDMENT TO 503.10.2.

On page 33 of the code, 503.10.2 is amended to read:

503.10.2. For low pressure supply and return air ducts located outside of the conditioned space, all transverse joints must be sealed using mastic, tape, or mastic plus tape. For fibrous glass ductwork, pressure sensitive tape may be used.

Statutory Authority: *MS s 216C.19 subd 8*

History: *8 SR 1229; L 1987 c 312 art 1 s 9*

SERVICE WATER HEATING

7670.0700 AMENDMENT TO 504.5.2.

On page 38 of the code, 504.5.2 is amended to read:

504.5.2 Pool covers. Heated outdoor swimming pools must be equipped with pool covers.

Statutory Authority: *MS s 216C.19 subd 8*

History: *8 SR 1229; L 1987 c 312 art 1 s 9*

7670.0710 DELETION OF 504.5.3.

On page 38 of the code, 504.5.3 is deleted.

Statutory Authority: *MS s 216C.19 subd 8*

History: *8 SR 1229; L 1987 c 312 art 1 s 9*

7670.0720 AMENDMENT TO 504.7.

On page 38 of the code, 504.7 is amended by deleting the exception.

Statutory Authority: *MS s 216C.19 subd 8*

History: *8 SR 1229; L 1987 c 312 art 1 s 9*

7670.0730 DELETION OF 504.8.2.2.

On page 39 of the code, 504.8.2.2 is deleted.

Statutory Authority: *MS s 216C.19 subd 8*

History: *8 SR 1229; L 1987 c 312 art 1 s 9*

ELECTRICAL POWER AND LIGHTING

7670.0800 AMENDMENT OF 505.2.

On page 39 of the code, 505.2 is amended to read:

505.2 Electric energy determination.

In any multi tenant residential building, provisions shall be made to separately determine the electric energy consumed by each tenant. Electrical service to individual dwelling units in buildings containing two or more units shall be separately metered, with individual metering readily accessible to the individual occupants.

EXCEPTION: Motels, hotels, college dormitories, other transient facilities, and buildings intended for occupancy primarily by persons who are 62 years of age or older or handicapped, or which contain a majority of units not equipped with complete kitchen facilities.

Statutory Authority: *MS s 216C.19 subd 8*

History: *8 SR 1229; L 1987 c 312 art 1 s 9*

BUILDING DESIGN BY ACCEPTABLE PRACTICE

7670.0900 AMENDMENT TO 602.2.

On page 44 of the code, 602.2 is amended to read:

602.2 Criteria - Heating and Cooling.

For type A-1 buildings, criteria for ceiling, wall, and floor sections listed in Table No. 6-11 may be used in lieu of the criteria specified in sections 602.2.1, 602.2.2, and 602.2.3. Appropriate U_o values may be determined by using Appendix Table No. 6-1, 6-2, or 6-3 and Chart 6-A or 6-B.

Statutory Authority: *MS s 216C.19 subd 8*

History: *8 SR 1229; L 1987 c 312 art 1 s 9*

7670.0910 AMENDMENT TO 602.2.4.

On page 44 of the code, 602.2.4 is amended to read:

602.2.4 Slab on grade floors. For slab on grade floors, thermal resistance (R) of the insulation around the perimeter of the floor must be at least the value given in Table No. 5-1 or 5-2 as appropriate for the building type.

The insulation shall extend downward from the top of the slab to the design frost line or downward to the bottom of the slab then horizontally beneath the slab for an equivalent distance.

Statutory Authority: *MS s 216C.19 subd 8*

History: *8 SR 1229; L 1987 c 312 art 1 s 9*

7670.0920 AMENDMENT TO 602.2.6.

On page 45 of the code, 602.2 is amended by adding a paragraph to read:

602.2.6 Foundation walls. Foundation walls enclosing heated or conditioned spaces in Group R buildings must be insulated as required in Section 502.2.1.6.

Statutory Authority: *MS s 216C.10; 216C.19 subd 8*

History: *8 SR 1229; 10 SR 1687; L 1987 c 312 art 1 s 9*

7670.0930 AMENDMENT TO 602.2.7.

On page 45 of the code, 602.2 is amended by adding a paragraph to read:

602.2.7 Vapor barriers. A vapor barrier must be installed in all Group R buildings as required in Section 502.2.1.7.

Statutory Authority: *MS s 216C.19 subd 8*

History: *8 SR 1229; L 1987 c 312 art 1 s 9*

7670.0940 ADDITION OF TABLE NO. 6-11.

On page 50 of the code, insert Table No. 6-11 to read as follows:

Table No. 6-11

Minimum R Values for Ceiling, Wall, and Floor Sections of Type A-1 Buildings

Ceilings (1)	Walls (2)	Floors (3)	Windows See Note 4	Sliding Glass Doors See Note 5	Doors See Note 6
38	20	20			

Notes to Table 6-11:

(1) Ceilings which meet one of the following criteria satisfy this requirement:

A. R-38 throughout the entire ceiling.

B. If a portion of the ceiling is less than R-38, the insulation in the remainder of the ceiling must be increased to yield an overall average thermal resistance of not less than R-38 using the following equation.

$$R_r = (A_o - A_l) / (A_o/38 - A_l/R_l)$$

where:

R_r = R value of the insulation in the remainder of the ceiling.

A_o = total area of the ceiling, ft^2.

A_l = area of the ceiling with less than R-38.

R_l = R value of the ceiling which is less than R-38.

C. Where the roof at the perimeter of the ceiling prevents installation of insu-

lation to full depth, the insulation in the remainder of the ceiling must be increased to reduce the overall ceiling heat loss to no more than if R-38 had been installed throughout the entire ceiling.

(2) For the insulated cavity of opaque wall and rim joists, but not foundation walls.

(3) For the insulated cavity of floors of heated spaces over unheated spaces.

(4) Maximum glass area may not exceed 12 percent of the area of exterior walls not including foundation walls. All windows shall be double glazed or have storm windows.

(5) Maximum glass area may not exceed ten percent of the area of exterior walls, not including foundation walls, when a sliding glass door is installed. All glass shall be double glazed or have storm windows.

(6) A 1-3/4 inch metal faced door system with an insulated core providing an R value equal to or greater than 3.0 or a conventional door and storm door. All primary doors must have durable weatherstripping.

Statutory Authority: *MS s 216C.19 subd 8*

History: *8 SR 1229; L 1987 c 312 art 1 s 9*

7670.0950 AMENDMENT TO 603.1.

On page 45 of the code, section 603.1 is amended to read:

HVAC devices, components, and their elements must conform to the requirements of this section.

Systems other than combustion heating equipment and unitary cooling and heating equipment regulated from a single point of control must be designed in accordance with the requirements of chapter 5 of this code.

System heating and cooling capacity must meet the requirements of section 503.2.3 of the code.

Statutory Authority: *MS s 216C.10; 216C.19 subd 8*

History: *10 SR 1687; L 1987 c 312 art 1 s 9*

7670.0960 AMENDMENT TO 604.1.2.3.

On page 49 of the code, 604.1.2.3 is amended to read:

604.1.2.3 Swimming pools.

Pool heaters must be equipped with an ON OFF switch mounted for easy access to allow shutting off the operation of the heater without adjusting the thermostat setting and to allow restarting without relighting the pilot light.

Active solar heating systems should be used to supply a portion of the pool heating requirements when conditions permit their cost effective installation.

Heated outdoor swimming pools must be equipped with a pool cover.

Statutory Authority: *MS s 216C.19 subd 8*

History: *8 SR 1229; L 1987 c 312 art 1 s 9*

7670.0970 AMENDMENT TO 604.3.

On page 49 of the code, 604.3 is amended by deleting the exception.

Statutory Authority: *MS s 216C.19 subd 8*

History: *8 SR 1229; L 1987 c 312 art 1 s 9*

STANDARDS

7670.1000 AMENDMENT TO 701.1.

On page 54 of the code, 701.1, Code Standard No. RS-4, is amended to read:

RS-4 ASHRAE Standard 55-1981 Thermal Environment Conditions for Human Occupancy.

Statutory Authority: *MS s 216C.19 subd 8*

History: *8 SR 1229; L 1987 c 312 art 1 s 9*

7670.1010 AMENDMENT TO 701.1.

On page 54 of the code, 701.1, Code Standard No. RS-8, is amended to read:

RS-8 IES Lighting Handbook, 1981 Application Volume and 1981 Reference Volume, Illuminating Engineering Society.

Statutory Authority: *MS s 216C.19 subd 8*

History: *8 SR 1229; L 1987 c 312 art 1 s 9*

7670.1020 AMENDMENT TO 701.1.

On page 55 of the code, 701.1 is amended by adding a Code Standard No. RS-22 to read:

RS-22 Monthly Normals of Temperature, Precipitation, and Heating and Cooling Degree Days 1951-80 Minnesota. National Oceanic and Atmospheric Administration September, 1982.

Statutory Authority: *MS s 216C.19 subd 8*

History: *8 SR 1229; L 1987 c 312 art 1 s 9*

7670.1030 AMENDMENT TO LIST OF ACCREDITED AUTHORITATIVE AGENCIES.

On page 56 of the code, the references to ASHRAE and NWMA are amended to read:

ASHRAE refers to the American Society of Heating, Refrigerating and Air Conditioning Engineers, Inc., 1791 Tellie Circle N.E., Atlanta, GA 30329.

NWMA refers to the National Woodwork Manufacturers Association, Inc., 205 W. Touhy Ave., Park Ridge, IL 60068.

Statutory Authority: *MS s 216C.19 subd 8*

History: *8 SR 1229; L 1987 c 312 art 1 s 9*

FIGURES AND APPENDIXES

7670.1100 AMENDMENT TO FIGURE NO. 1.

On page 57 of the code, Figure No. 1 is amended by deleting the line marked A1 and by amending the title to read:

"U_o WALLS - TYPE A_2 BUILDINGS - HEATING"

Statutory Authority: *MS s 216C.19 subd 8*

History: *8 SR 1229; L 1987 c 312 art 1 s 9*

7670.1110 AMENDMENT TO FIGURE NO. 2.

On page 58 of the code, Figure No. 2 is amended by amending the title to read:

"ROOF/CEILINGS TYPE A_2 BUILDINGS"

Statutory Authority: *MS s 216C.19 subd 8*

History: *8 SR 1229; L 1987 c 312 art 1 s 9*