

# INDEX

## A

### ADDITIONS AND ALTERATIONS

Defined. . . . . 202

### AIR ECONOMIZERS

Defined. . . . . 202

Requirements . . . . . 503.3.1, 503.4.1, 503.4.5.3

### AIR INFILTRATION

Defined. . . . . 202

Requirements . . . . . 402.4.1, 402.4.2, 502.4.5

**AIR LEAKAGE** . . . . . 402.4, Table 404.5.2(1),  
502.4, 503.2.7.1.3

**AIR SYSTEM BALANCING** . . . . . 503.2.9.1

### APPROVED

Defined. . . . . 202

### AUTOMATIC

Defined. . . . . 202

## B

**BALANCING** . . . . . 503.2.9.1, 503.2.9.2

**BALLASTS** . . . . . 505.1, 505.3

### BASEMENT WALLS

Defined. . . . . 202

Requirements . . . . . Table 402.1.1, Table 402.1.3,  
402.2.6, Table 404.5.2(1),  
Table 502.2(1), 502.2.2.2, 502.2.4

### BELOW-GRADE WALLS (see BASEMENT WALLS)

**BI-LEVEL SWITCHING** . . . . . 505.2.2.1

**BOILERS** . . . . . Table 503.2.3(5), 503.4.3,  
503.4.3.5, 504.2, Table 504.2

### BUILDING ENVELOPE

Compliance documentation . . . . . 401.3

Defined. . . . . 202

Requirements . . . . . 402, 502

Performance method . . . . . Table 404.5.2(1), 506.4.3

## C

**CAULKING AND WEATHERSTRIPPING** . . . . . 402.4.1,  
502.4.1, 502.4.3

**CERTIFICATE** . . . . . 401.3

**CIRCULATING PUMPS** . . . . . 503.4.3.3, 504.6

**CIRCULATING SYSTEMS** . . . . . 403.4, 503.4.3.3,  
503.4.3.5, 504.6, 504.7.2

**CLIMATE ZONES** . . . . . 301, Figure 301.1, Table 301.1

By state or territory . . . . . Figure 301.1, Table 301.1

International climate  
zones . . . . . 301.3, Table 301.3(1), Table 301.3(2)

Warm humid. . . . . 301.2, Table 301.2, 301.3.1

## COEFFICIENT OF PERFORMANCE

(COP) . . . . . Table 503.2.3(2), Table 503.2.3(7),  
Table 503.2.3(8), Table 503.2.3(9),  
Table 503.2.3(10), Table 503.2.3(11)

## COMBINED SERVICE WATER HEATING AND

SPACE HEATING . . . . . 506.2.7

## COMMERCIAL BUILDINGS

Defined. . . . . 202

Total building performance. . . . . 506

## COMMISSIONING OF HVAC SYSTEMS

Manuals . . . . . 503.2.9.3

## CONDITIONED FLOOR AREA

Defined. . . . . 202

## CONDITIONED SPACE

Defined. . . . . 202

## CONTROLS

Capabilities . . . . . 503.2.2, 503.2.4.1, 503.2.4.3.1,  
503.2.4.3.2, 503.2.5, 503.4.3.4,  
503.4.3.5, 503.4.4, 504.3

Economizers . . . . . 503.3.1, 503.4.1

Energy recovery systems. . . . . 503.2.6

Fan speed . . . . . 503.4.4

Heat pump . . . . . 403.1.1, 503.2.4.1.1, 503.4.3.3

Heating and cooling. . . . . 403.1, 503.2.2,  
503.2.4, 503.4.5

Hot water system . . . . . 504.6

Humidity . . . . . 503.2.4.1, 503.2.6, 503.4.5

Hydronic systems . . . . . 503.2.9.2, 503.3.2, 503.4.3

Lighting . . . . . 505.2, 505.6.1, 505.6.2

Off hour. . . . . 503.2.4.3

Service water heating. . . . . 403.4, 504.3, 504.6

Shutoff dampers . . . . . 403.5, 503.2.4.4, 503.4.5

Temperature . . . . . 503.2.4.1, 503.2.4.2,  
503.2.4.3.1, 503.4.3, 504.3

Variable air volume systems . . . . . 503.4.2, 503.4.5

Ventilation . . . . . 503.2.5

## COOLING WITH OUTDOOR AIR

## CRAWL SPACE WALLS

Defined. . . . . 202

Requirements. . . . . Table 402.1.1, Table 402.1.3,  
402.2.8, Table 404.5.2(1)

## D

**DEADBAND** . . . . . 503.2.4.2, 503.4.3.2, 403.4.3.3

## DEFINITIONS

. . . . . Chapter 2

**DEGREE DAY COOLING** . . . . . Table 301.3(2)

**DEGREE DAY HEATING** . . . . . Table 301.3(2)

## DESIGN CONDITIONS

. . . . . Chapter 3, 302

**DUAL DUCT VAV** . . . . . 503.4.5.2, 503.4.5.3

**DUCTS**

- Defined. . . . . 202
- Insulation . . . . . 401.3, 403.2, 503.2.7, 503.2.7.1.2, 503.2.7.1.3
- Sealing. . . . . 503.2.7, 503.2.7.1.2, 503.2.7.1.3

**DWELLING UNIT**

- Defined. . . . . 202

**E**

**ECONOMIZER**

- Air . . . . . 503.3.1, 503.4.1
- Defined. . . . . 202
- Requirements . . . . . 503.3.1, 503.4.1, 503.4.5.3
- Water . . . . . 503.4.1

**ELECTRICAL METERS . . . . . 505.7**

**ELECTRICAL POWER AND LIGHTING . . . . . 505**

**ENERGY ANALYSIS, ANNUAL**

- Defined. . . . . 202
- Documentation . . . . . 404.4, 506.5
- Requirements . . . . . 404.3, 506

**ENERGY EFFICIENCY RATIO (EER) . . . . . 503.2.3, 503.3.1, 503.4.1**

**ENERGY RECOVERY VENTILATION SYSTEMS**

- Defined. . . . . 202
- Requirements . . . . . Table 404.5.2(1), 503.2.1, 503.2.6

**ENERGY SIMULATION TOOL**

- Defined. . . . . 202
- Requirements/Use . . . . . 404, 506, 506.2.1, 506.5.3, 506.5.4

**ENVELOPE, BUILDING THERMAL**

- Defined. . . . . 202

**ENVELOPE DESIGN**

- PROCEDURES. . . . . 402, 502, 506.4.3**

**EQUIPMENT EFFICIENCIES . . . . . 401.3, 503.2.3, 503.3.1, 503.4.1, 504.2, 506.3.1, 506.4.1**

**EQUIPMENT PERFORMANCE**

- REQUIREMENTS . . . . . 503.2.3**
- Boilers. . . . . Table 503.2.3(5)
- Chillers, nonstandard . . . . . Tables 503.2.3(8-10)
- Condensing units. . . . . Table 503.2.3(6)
- Economizer exception . . . . . Table 503.3.1(2)
- Heat rejection equipment. . . . . Table 503.2.3(11)
- Packaged terminal air conditioners and heat pump . . . . . Table 503.2.3(3)
- Unitary air conditioners and condensing units . . . . . Table 503.2.3(1)
- Unitary and applied heat pumps . . . . . Table 503.2.3(2)
- Warm air duct furnaces and unit heaters . . . . . Table 503.2.3(4)
- Warm air furnaces . . . . . Table 503.2.3(4)
- Warm air furnaces/air-conditioning units . . . . . Table 503.2.3(4)

- Water chilling packages, standard . . . . . Table 503.2.3(7)
- Water heating . . . . . 504.2

**EXTERIOR LIGHTING . . . . . 505.6**

**EXTERIOR SHADING . . . . . Table 502.3, 502.3.2**

**EXTERIOR WALLS**

- Defined. . . . . 202
- Thermal performance . . . . . 402, 402.1.1, Table 404.5.2(1), 502, 502.2.2

**F**

**FENESTRATION . . . . . 402.3, 402.4.2, 502.3, 502.4**

- Defined. . . . . 202
- Rating and labeling. . . . . 1402.1.1, 402.6, 502.1.1

**FURNACE EFFICIENCY . . . . . Table 404.5.2(1), Table 503.2.3(4)**

**G**

**GUESTROOMS (see SLEEPING UNIT)**

**GLAZING AREA**

- Requirements . . . . . 402.3.3, 402.3.5, Table 404.5.2(1)

**H**

**HEAT PUMP . . . . . 403.1.1, Tables 503.2.3(2, 3), 503.2.4.1.1, 503.4.3.3**

**HEAT TRAPS . . . . . 504.4, 504.5**  
 Defined. . . . . 202

**HEATING AND COOLING LOADS . . . . . 302.1, 403.1.1, 503.2.1, 503.2.2, 503.2.3, 503.2.4.1.1, 503.2.4.3, 503.3.1, 503.4.2, 506.2.6, 506.4.2**

**HOT WATER . . . . . 504.2**  
 Annual energy performance . . . . . 404.1, 506  
 Piping insulation . . . . . 403.4, 503.2.8, 504.5  
 System controls. . . . . 503.4.6, 504.3, 504.6

**HUMIDISTAT**

- Defined. . . . . 202
- Requirements . . . . . 503.2.4.1, 503.2.6, 503.4.5

**HYDRONIC SYSTEM BALANCING. . . . . 503.2.9.2**

**I**

**INDIRECTLY CONDITIONED SPACE (see CONDITIONED SPACE)**

**INFILTRATION, AIR LEAKAGE . . . . . 402.4, Table 404.5.2(1), 502.4**  
 Defined. . . . . 202

**INSULATION**

- Requirements . . . . . 402.1.1, 402.2, 502.1, 502.2

**INSULATING SHEATHING**

- Defined. . . . . 202

Requirements . . . . . Table 402.1.1, 402.1.2,  
Table 502.2(1), 502.2.3

**INTEGRATED PART LOAD VALUE (IPLV)** . . . . . Tables 503.2.3 (1, 2, 6, 7, 8, 9 and 10),  
503.4.1, 506.3.1

**INTERIOR LIGHTING POWER** . . . . . 505.5, 505.5.2

**L**

**LABELED**

Defined. . . . . 202

Requirements . . . . . 402.4.2, 402.4.3,  
502.4.1, 502.4.7, 503.2.7, 505.5.1.2

**LIGHTING POWER**

Design procedures . . . . . 505.5.2

Exterior connected . . . . . 505.6, 506.2.8

Interior connected . . 505.5, Table 505.5.2, 506.4.7

Manufacturer's information . . . . . 505.1.3

**LIGHTING SYSTEMS** . . . . . 505

Controls, additional . . . . . 505.2.2

Controls, exterior . . . . . 505.2.4

Controls, interior . . . . . 505.2.1

Guestrooms/Sleeping units . . . . . 505.2.3

Line voltage . . . . . 505.5.1.4

Merchandise, (highlight specific) . . . Table 505.5.2

Plug-in busway . . . . . 505.5.1.4

Track . . . . . 505.5.1.4

**LISTED**

Defined. . . . . 202

**LOADING DOCK WEATHERSEALS** . . . . . 502.4.5

**LOW-VOLTAGE LIGHTING**

Defined. . . . . 202

Requirements . . . . . 505.5.1.2

**LUMINAIRE**

Controls . . . . . 505.2.2.1, 505.2.3

Sealed . . . . . 402.4.3, 502.4.7

Tandem wiring. . . . . 505.3

Wattage . . . . . 505.5.1, 505.6.1

**M**

**MANUALS**. . . . . 503.2.9.3

**MASS**

Wall. . . 402.1.3, 402.2.3, Table 404.5.2(1), 502.2.3

Floor . . . . . 502.2.5

**MECHANICAL SYSTEMS AND EQUIPMENT**

. . . . . 403, 404.1, 503

**MECHANICAL VENTILATION** . . . . . 403.5,

Table 404.5.2(1), 503.1, 503.2.5

**METERS, ELECTRICAL**. . . . . 505.7

**MOISTURE CONTROL** . . . . . 402.5, 502.5

**MULTIPLE ZONE SYSTEMS**. . . . . 503.4.5

**N**

**NONCIRCULATING SYSTEMS**. . . . . 504.4, 504.5

**NONDEPLETABLE/RENEWABLE ENERGY SOURCES**

Requirements . . . . . 506.2.4

**O**

**OCCUPANCY**

Requirements . . . . . 503.2.9,  
503.4.5, 504.3, 506.2.5, 506.4.7

**OCCUPANCY SENSORS** . . . . . 503.2.4.3.2, 505.2.2

**OFF-HOUR, CONTROLS** . . . . . 503.2.4.3

**OPAQUE AREAS** . . . . . 402.3.4, 502,  
Table 502.2(1), 502.2.7

**ORIENTATION** . . . Table 404.5.2(1), 503.2.4.1, 506.4.4

**OVERHANG, PROJECTION FACTOR** . . . . . 502.3.2

**P**

**PACKAGED TERMINAL AIR CONDITIONER (PTAC)**

Requirements . . . . . Table 503.2.3(3), 503.3

**PACKAGED TERMINAL HEAT PUMP**

Requirements . . . . . Table 503.2.3(3), 503.3

**PARALLEL PATH CALCULATION**. . . . . 402.2.4

**PERFORMANCE ANALYSIS** . . . . . 404, 506

**PHOTOCELL** . . . . . 505.2.4

**PIPE INSULATION** . . . . . 403.3, 403.4, 503.2.8, 504.5

**POOL COVERS** . . . . . 504.7.3

**POOLS** . . . . . 504.7

**PROJECTION FACTOR**. . . . . 502.3.2

**PROPOSED DESIGN**

Defined. . . . . 202

Requirements . . . . . 404, 506

**PUMPING SYSTEMS** . . . . . 403.4, 503.2.9.2, 503.4.3,  
504.6, 504.7.2

**R**

**R-VALUE**

Defined. . . . . 202

Computation . . . . . 402.1.2

**RECOOLING** . . . . . 503.4.5

**REFERENCED STANDARDS** . . . . . Chapter 6

**REHEATING**. . . . . 503.4.5, 503.4.6

**RENEWABLE/NONDEPLETABLE ENERGY SOURCES**

. . . . . 506.2.4

**REPAIR**

Defined. . . . . 202

**RESET CONTROL** . . . . . 503.4.3.4

**RESIDENTIAL BUILDINGS**

Defined. . . . . 202

Requirements. . . . . Chapter 4

Simulated Performance Alternative . . . . . 404

**ROOF ASSEMBLY**

Defined. . . . . 202

Requirements . . . . . 402.2.2,  
Table 404.5.2(1), 502.2.1, 502.5

**S**

**SCREW LAMP HOLDERS**

Defined. . . . . 202

Requirements . . . . . 505.5.1.1

**SEASONAL ENERGY EFFICIENCY RATIO (SEER)** . . . . . 404.6.1, 503.2.3

**SERVICE WATER HEATING**

Defined. . . . . 202

Requirements . . . . . 401.3, 403.4, 404.1, 501.2,  
503.4.6, 504, 506.2.5,  
506.2.7, 506.3.1, 506.4.1

**SETBACK THERMOSTAT** . . . . . 503.2.4.3.1

**SHADING** . . . . . 506.4.4

Projection factor . . . . . 502.3.2

**SHEATHING, INSULATING**  
(see **INSULATING SHEATHING**)

**SHGC (see SOLAR HEAT GAIN COEFFICIENT)**

**SHUTOFF DAMPERS** . . . . . 403.5, 502.4.4, 503.2.4.4

**SIMULATED PERFORMANCE ALTERNATIVE** . . . . . 404, 506

**SIMULATION TOOL**  
(see **ENERGY SIMULATION TOOL**)

**SINGLE ZONE** . . . . . 404.6.1, 503.3

**SIZING**

Equipment and system. . . 403.6, 404.6.1, 503.2.2

**SKYLIGHTS** . . . . . 402.3, 402.3.5,  
402.4.1, 402.4.2, 402.6,  
Table 404.5.2(1), 502.1.1, 502.3.2, 506.4.6

Defined. . . . . 202

Maximum exempt area . . . . . 502.3.1

**SLAB-EDGE INSULATION** . . . . . 401.3,  
Table 402.1.1, 402.2.7, 502.2.6

**SLEEPING UNIT** . . . . . 505.2.2.1, 505.2.2.2, 505.2.3

**SOLAR HEAT GAIN COEFFICIENT (SHGC)** . . . . . 401.3, Table 402.1.1,  
402.1.4, 402.3.2, 402.3.3, 402.3.6,  
402.6, 404.6.1, Table 502.3, 502.3.2

Defined. . . . . 202

**STANDARD REFERENCE DESIGN**

Defined. . . . . 202

Requirements . . . . . 404, 506

**STANDARDS, REFERENCED** . . . . . Chapter 6

**STEEL FRAMING** . . . . . 402.2.4, Table 502.2(2)

**STOREFRONT** . . . . . 202, Table 502.3, 502.4.2

**SUNROOM** . . . . . 402.2.10, 402.3.5, Table 404.5.2(1)

Defined. . . . . 202

**SUSPENDED CEILINGS** . . . . . 502.2.1

**SWIMMING POOLS** . . . . . 504.7

**T**

**TANDEM WIRING** . . . . . 505.3

**TERMITE INFESTATION** . . . . . 402.2.7

**THERMAL ISOLATION** . . . . . 402.2.10, 402.3.5,  
Table 404.5.2(1)

Defined. . . . . 202

**THERMAL MASS (see MASS)**

**THERMAL RESISTANCE (see R-VALUE)**

**THERMAL TRANSMITTANCE (see U-FACTOR)**

**TOTAL BUILDING PERFORMANCE**

Commercial . . . . . 506

Residential . . . . . 404

**TOWNHOUSE (see RESIDENTIAL BUILDINGS)**

**U**

**U-FACTOR**

Alternative . . . . . 402.1.3, 402.1.4

Defined. . . . . 202

**V**

**VAPOR RETARDER** . . . . . 402.2.8, 402.5, 502.5

Defined. . . . . 202

**VARIABLE AIR VOLUME SYSTEMS (VAV)** . . 503.2.6,  
503.2.9.2, 503.4.2, 503.4.5

**VENTILATION** . . . . . 402.5, 403.5, Table 404.5.2(1),  
503.2.5, 502.5

Defined. . . . . 202

**VESTIBULES** . . . . . 502.4.6

**W**

**WALL**

Above grade, defined. . . . . 202

Basement, defined . . . . . 202

Crawlspace, defined . . . . . 202

Exterior, defined. . . . . 202

**WALLS (see EXTERIOR WALLS AND ENVELOPE, BUILDING THERMAL)**

**WALLS ADJACENT TO UNCONDITIONED SPACE (see BUILDING THERMAL ENVELOPE)**

**WATER ECONOMIZER** . . . . . 503.4.1

Defined. . . . . 202

**WATER HEATING** . . . . . 401.3, 504, 506.2.7, 506.3.1

**WINDOW AREA**  
(see **FENESTRATION and GLAZING AREA**)

**WINDOW PROJECTION FACTOR**

Requirements . . . . . 502.3.2

**WIRING, TANDEM** . . . . . 505.3

**Z**

**ZONE (see also CLIMATE ZONES)**

Defined . . . . .202

Requirements . . . . . 404.6.1, 503.2.4, 503.3,  
503.4.3.4, 503.4.5

**ZONE ISOLATION . . . . .503.4.5**

