

SUMMARY OF ENERGY CODE CHANGES

2004

The base document for Subchapter 4 (section 400, commercial building provisions) of Chapter 13 of the *Florida Building Code, Building*, has been updated to ASHRAE *STANDARD 90.1-2001*. Changes to Subchapter 6 (section 600, residential provisions) of Chapter 13 are minor.

400.0.A Method A, the Whole Building Performance Method.

- ✓ Fully flexible, includes cases where vertical fenestration exceeds 50%
- ✓ Full trade-off allowed based on *energy costs*
- ✓ Envisioned for complex buildings
- ✓ EnergyGauge Fla/Com program utilized; ASHRAE rules included in program
- ✓ This is the ASHRAE Building Envelope Tradeoff Method: the *envelope performance factor* of the proposed building must be less than the *envelope performance factor* of the budget building
- ✓ Schedules for HVAC, lighting & equipment power, and occupant density are the same for proposed & budget building.
- ✓ Envisioned for complex buildings and shell buildings
- ✓ EnergyGauge Fla/Com program utilized

400.0.C Method C, the Buildings Prescriptive Envelope Method.

- ✓ Method C is **completely revised** to the prescriptive method of ASHRAE 90.1-01.
- ✓ Requirements are listed on Form 400C for the appropriate climate zone.
- ✓ May be either nonresidential or residential >3 stories.
- ✓ Conditioned space or unconditioned space requirements.
- ✓ Extensive use of tables in Appendix B.
- ✓ Used provided that:
 - The vertical fenestration area does not exceed 50% of the gross wall area for each space-conditioning category and
 - The skylight fenestration area does not exceed 5% of the gross roof area for each space-conditioning category. Requirements are specified for the exterior building envelope, which separates conditioned space from the exterior.

Method D, Renovations and Systems Prescriptive Method Deleted. Existing buildings can use Method C for components changed.

407.1.ABC.3.5 Exhaust Air Energy Recovery for Cooling Systems.

- ✓ Individual fan systems that have both a design supply air capacity of 5000 cfm or greater and have a minimum outside air supply of 70% or greater of the design supply air quantity shall have an energy recovery system with at least 50% recovery effectiveness. Enthalpy (heat content of air) reduced to 50% of difference between outdoor air & return air at design conditions. Exceptions provided

409.1.ABC.3.5 Ventilation Controls for High-Occupancy Areas.

- ✓ Outside air capacities greater than 3000 cfm serving areas having an average design occupancy density exceeding 100 people per 1000 ft² shall include means to automatically reduce outside air intake below design rates when spaces are partially occupied.

415 LIGHTING SYSTEMS

- ✓ Lighting power densities updated to include Addenda g to ASHRAE 90.1-01
- ✓ No more lighting control credits or control points
- ✓ Programmable controls & lighting sensors encouraged
- ✓ Hotel/motel rooms require one master control
- ✓ Building area option or space-by-space options available
- ✓ Mandatory provision for tandem wired ballasts where 1 or 3 linear fluorescent lamps greater than 30 W are in the same space & on the same control device (with exceptions)
- ✓ Most exterior power requirements were replaced with minimum efficacy requirements; exception for motion sensors
- ✓ Exit signs operating at >20 W must have source efficacy ≥ 35 lumens/W

410.1.ABC.3, 610.1.ABC.3.0.3 Space provided. [around air distribution system components]

- ✓ Adds exception: Retrofit or replacement units not part of a renovation are exempt from the minimum clearance requirement.

410.1.ABC.3, 610.1.ABC.3.2.2 Fibrous Glass Duct, Rigid

- ✓ **Mechanical fastening.** Attachments of ductwork to air-handling equipment shall be by mechanical fasteners. Where access is limited, two fasteners on one side shall be acceptable when installed in accordance with Section M603.1.6.

610.1.B.2 Air handler location.

- ✓ Buildings complying with this code by Compliance Method B shall *not* have air handlers installed in attics.

610.2.A.3 Airtight Duct Credit.

- ✓ An airtight Duct Credit Multiplier of 1.0 may be taken if the duct work has been demonstrated to be '*substantially leak free*' in accordance with the provisions of Section 610.1.A.1. Definition revised.

ENERGY PROVISIONS OF THE NEW FLORIDA BUILDING CODE, RESIDENTIAL

Section 1101 of the Residential code simply references the provisions of Chapter 13 of the *Florida Building Code, Building*.