

New Jersey ENERGY STAR Homes 2008 Field Guide Errata/Clarifications to the First Edition May 2008

### Ch 1, p. 17, Wall and rim/band insulation with metal framing

A thermal break consisting of at least an R-3 should be installed on the exterior side of all metal framed wall assemblies. Although the thermal break has always been recommended and evaluated as part of the overall wall system performance, a minimum level of R-3 assures that the cavity wall insulation installed between the studs achieves at least a moderate level of performance. Without a thermal break, a wall with metal studs will perform at an overall R-value significantly less than the product's rated value.

# Ch 1, p. 21, Controls

Although not a requirement, programmable thermostats should be installed in all NJ ENERGY STAR Homes.

#### Ch 5, p. 58, Foundation moisture control

Many of the lower case "L's in the diagram of foundation moisture control have been cut off, making the text difficult to read. A corrected version appears in the on-line copy available from this web site.

#### Ch 5, p. 65, Slab on grade with exterior insulation

In the exterior slab insulation diagram, the caption states that the insulation extends horizontally or vertically. As shown in the diagram, exterior insulation is typically installed vertically along the exterior face of the footing. Shallow "frost-free" foundations may contain horizontal insulation on the exterior of the footing.

## Ch 8, p. 97, Sealing duct runs within unconditioned spaces

The statement "duct sealing is not required in conditioned spaces" is incorrect. The New Jersey ENERGY STAR Homes program requires that ALL ducts be sealed with mastic compound.

#### Ch 8, p. 98, Depressurization and backdrafting

This section, which addresses building depressurization and backdrafting of combustion appliances, is particularly pertinent to natural draft water heaters that utilize type "B" venting. These water heaters utilize the natural buoyancy of the warm combustion exhaust to exit the home and may be susceptible to backdrafting at relatively low levels of depressurization.

The best way to avoid potential backdrafting issues is to install only sealed combustion or power vented equipment (furnaces, boilers and water heaters). Note that the higher efficiency water heaters typically used in ENERGY STAR Homes may be available with atmospheric venting, but that at a minimum a power vented option is recommended. A power vented upgrade may even be price neutral: Although equipment cost is typically higher, installation of a dedicated B-Vent is avoided with the less expensive installation of a PVC vent.

If atmospheric equipment is used in the NJ ENERGY STAR Homes program, a test should be performed to determine adequate draft under "worst case" depressurization conditions. If a program field inspector .performs this test and the potential for flue gas spillage or backdrafting is identified, corrective action will be necessary up to and including retrofit or replacement.

#### Ch 9, p. 104, Return makeup air

The statement "The operating cost can be reduced by using an electronically commutated motor (ECM)" implies that an ECM is optional. The use of an ECM is required for ventilation systems that use return makeup air to comply with NJ ENERGY STAR Homes ventilation requirements.