# REPI 145-21

*Modify the section as follows:*

**R502.3.2 Heating and cooling systems.** HVAC ducts newly installed as part of an addition shall comply with Section R403.

**Exception:** Where ducts from an existing heating and cooling system are extended to into an addition, Sections R403.3.5 and R403.3.6 shall not be required.

*Modify the section as follows:*

**R503.1.2 Heating and cooling systems.** New heating, cooling and duct systems ~~HVAC ducts~~ newly installed as part of an alteration shall comply with Section R403. Alterations to heating, cooling and duct systems shall comply with this section.

**Exception:** Where ducts from an existing heating and cooling system are extended to an addition.

**R503.1.2.1 Duct Leakage.** Where an *alteration* includesany of the following, ducts shall be tested in accordance with Section R403.3.5 and shall have a total leakage less than or equal to 12.0 cubic feet per minute (339.9 L/min) per 100 square feet (9.29 m2) of conditioned floor area:

1. Where 25% or more of the registers that are part of the duct system are relocated*.*
2. Where 25% or more of the total length of all ducts in the system are relocated.
3. Where the total length of all ducts in the system is increased by 25% or more.

**Exception:** Duct systems located entirely inside a *conditioned space* in accordance with R403.3.2.

## Reason

This revision addresses issues brought up by the sub-committee.

**Additions:** The duct testing requirement is completely removed from C502 for additions. Instead, the language closes a loophole that allows ducts extended into the addition to avoid requirements for duct construction. It limits the exception to the requirements for duct testing and leakage.

**Alterations:** The sub-committee cited the lack of a leakage rate requirement as a major part of the reason for disapproval since the original, proposal would incur cost without ensuring energy savings. This revision introduces a leakage rate requirement of 12 CFM/sf, a very high level of allowable leakage that is three times the requirement for new construction. Additionally, the revision changes the code trigger threshold. Rather than being triggered by the installation of new heating and cooling equipment, it is triggered by extensive alterations to the duct system. This both places the requirement within scope for the IECC since only clearly altered duct systems will be subject and the requirement only needs to be met when that alteration is significant. An exception is included for ducts entirely within the conditioned space. The result is that only major alterations to terrible duct systems would trigger any kind of leakage requirement. Merely bad ductwork and terrible ductwork within conditioned space would be exempt.