STANDARD WORK SPECIFICATIONS: HOME ENERGY UPGRADES FOR EXISTING MANUFACTURED HOMES

COMPARISON TO 2009 -2012 IRC Mechanical Gas and Energy REQUIREMENTS

Section 3 Exhaust, Whole house ventilation, HVAC

Section 5 Forced Air, refrigerant, duct sealing, duct insulation, replacement thermostat

Section 6 Belly, Walls and Roof/ceiling Thermal Envelope

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Indoor Air Quality Standard fo	r low rise
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ventilation needs of the whol	etermining the
suggest that they talk about t	•
the IRC related to how tight t	e house,
is, and what the size of the dv	e house, nese issues in
3.1.2 Selection Fan type will be capable of continuous 2012 IRC Sections R303.4 req	e house, nese issues in ne construction

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Section	Title	Requirements	ICC Notes
		operation and selected in accordance with ASHRAE 62.2 for: • Sizing • Climate considerations • Control strategy • Sone rating • Durability	house ventilation; IRC Section M1507 gives the required air flow rates for ventilation. This does the same thing that ASHRAE 62.2 does. Recommend both should be referenced.
3.1.4	Climate considerations	ASHRAE 62.2 will be referenced for climate considerations • Note: Whole house mechanical net exhaust flow for hot-humid climate will not exceed 7.5 cubic feet per minute/100 square feet	2012 IRC Section M1507 gives the required air flow rates for ventilation. The requirements are similar to those in ASHRAE 62.2
3.7.1	Forced air system requirements	Forced air system leakage will be less than 10% of the air handler flow when measured at 25 Pascals (Pa)	2012 IRC Section N1103.2.2 post construction tests limits total leakage to 4 cfm per 100 square feet measured at 25 Pascals (Pa)
5.1.1	Work Assessment	Assessment will be performed to identify problems with air, refrigerant, electrical, load, safety, indoor environmental quality (IEQ) and/or other needed repairs If new installation or replacement is necessary, see ACCA Manual J	2012 IRC Section M1401.3 requires sizing according to ACCA Manual S based on loads calculated in accordance with ACCA Manual J or other approved heating and cooling calculation methodologies.
5.8.1	Gas system: Cavity	Cavity size will be chosen based on the design input and fuel type and in accordance with the heating system manufacturer equipment input rating	The 2012 IRC Section R315.3 requires Carbon Monoxide detectors when repairs are made to a dwelling which has fuel fired appliances.

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Section	Title	Requirements	ICC Notes
5.10.6	Thermostat selection Heat pump	A thermostat with supplementary heat lockout that can interface with an outdoor temperature sensor will be selected	There is no reference to thermostat selection for forced air furnaces. 2012 IRC Section N1103.1.1 requires a programmable thermostat.
5.15.9	Duct board to flex	Metal take-off collar with a hip and an internal metal backer will be used Take-offs will be in accordance with the ICC Standard Mechanical Code and all local code requirements	Reference should be to the International Residential Code©
6.2.4	Materials	Selected material will be of minimal water absorbency Selected material will be noncorrosive	The workforce guidelines should also specify the following: IRC Section R302.10 requires insulation to meet a flame spread rating of 25 or less and a smoke development rating of 450 or less when tested in accordance with ASTM E84. IRC Section R316 requires foam plastic insulation to meet Section R316 for thermal barriers, etc.
6.3.3	Insulate floors	A rigid air barrier will be installed in contact with the bottom of the joists	The 2012 IECC Section C402.4.1.2.1 gives a performance criteria for material used as an air barrier (0.004 cfm/ft² under a pressure of 75 Pa when tested in accordance with ASTM E2178) and lists 15 materials that are deemed to comply. The guidelines would do well to incorporate a list of air barrier material.
6.3.4	Materials	Insulation materials will be of minimal water absorbency Fasteners will be corrosion resistant	The workforce guidelines should also specify the following: IRC Section R302.10 requires insulation to meet a flame spread rating of 25 or less and a smoke development rating of 450 or less when tested in accordance

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And GENERAL COMMENTS

Section	Title	Requirements	ICC Notes
			with ASTM E84. IRC Section R316 requires foam plastic insulation to meet Section R316 for thermal barriers, etc.
6.4.5	Materials	Insulation will be installed in accordance with manufacturer specifications	The workforce guidelines should also specify the following: IRC Section R302.10 requires insulation to meet a flame spread rating of 25 or less and a smoke development rating of 450 or less when tested in accordance with ASTM E84. IRC Section R316 requires foam plastic insulation to meet Section R316 for thermal barriers, etc.
6.6.4	Fiberglass blown Insulation installation	Insulation will be installed to a density of 1.5 to- 1.6 pounds per cubic foot Using fill tube, 100% of each cavity will be filled to a consistent density Special precaution will be taken not to overfill the bottom of the cavity Fill tube will be inserted from the bottom of the wall cavity within 6" of the top of the cavity between the interior paneling and any existing insulation	The workforce guidelines should also specify the following: IRC Section R302.10 requires insulation to meet a flame spread rating of 25 or less and a smoke development rating of 450 or less when tested in accordance with ASTM E84.
6.7.4	Fiberglass blown Insulation installation	Insulation will be installed to a density of 1.5 to 1.6 pounds per cubic foot	The workforce guidelines should also specify the following: IRC Section R302.10 requires insulation to meet a flame spread rating of 25 or less and a smoke development rating of 450 or less when tested in accordance with ASTM E84.
6.8.3	Insulation installation (Foam	Two-part foam selection will be based on regional considerations 100% of	The workforce guidelines should also specify the following: IRC Section R302.10 requires

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Section	Title	Requirements	ICC Notes
	Plastic)	each cavity will be filled to a consistent density without bulging of panels or siding	insulation to meet a flame spread rating of 25 or less and a smoke development rating of 450 or less when tested in accordance with ASTM E84. IRC Section R316 requires foam plastic insulation to meet Section R316 for thermal barriers, etc.
6.10.1	Attic, Ceiling and Roof verification	Non-IC rated light fixtures will be replaced with airtight IC-rated fixtures	2012 IRC Section N1102.4.4 requires new IC-rated recessed luminaires to be labeled as having an air leakage rate not more than 2.00 cfm when tested at 75 Pa in accordance with ASTM E283.
6.11.1	Attic, Ceiling and Roof verification	Non-IC rated light fixtures will be replaced with airtight IC-rated fixtures	Same as above.