

Please review and answer the following as the Energy Code criteria is required for all new construction including additions, alterations, renovations, or repairs. [N1101.3.1]
 Chapter and Section references are from the 2015 Michigan Residential Building Code

Checkboxes at the beginning of the listings below [that apply] may be used for check off purpose (insert x in box when filling out electronically).

CHAPT 11 – Energy Efficiency *One Path of the Four listed below must be checked before a permit is issued.*

- Prescriptive Path – R-values based off of table N1102.1.1 or U factors based off table N1102.1.3 Must follow [Mandatory] and [Prescriptive] *code items.**
- Total UA Path – Based off the total UA of the home [**RES check] Must follow [Mandatory] and [Prescriptive] *code items. (Only takes thermal envelope into account.) **RES check calculations are based off International values and may be higher in some areas than the Michigan Residential Code 2015 requires.**
- Performance Path – Based off of [Simulated Performance] section N1105 REM rate approach. Must follow [Mandatory] *code items only. Would require an outside company to manage this path.**
- ERI Path – Based off an Energy Rating Index analysis per section N1106 Must follow [Mandatory] *code items only. Takes thermal envelope, performance testing, HVAC, Lighting and appliances into account.**

* Code items [Prescriptive] and [Mandatory] listed below

Compliance Pathways

	Insulation and Fenestration Table [N1102.1.1]	RESchek	Whole-House Performance Tradeoffs (REM/Rate)	Energy Rating Index Minimum (HERS)	Air Barrier & Insulation Table [N1102.4.1]	Blower Door Test (ACH < 4)	Duct Tightness Test	Duct Insulation R-8	Duct Insulation R-6	Building cavities not duct runs [N1103.2.3]	Ducts, Air Handlers and Filter Box Sealing	Hot Water Pipe Insulation R-3	Mech. Systems Pipe Insulation R-3	ManuaLJS	Whole-House Mechanical Ventilation	75% High Efficiency Lighting	
Prescriptive	x				x	x	x	x		x	x	x	x	x	x	x	x
Total UA		x			x	x	x	x		x	x	x	x	x	x	x	x
Performance			x		x	x	x		x	x	x		x	x	x	x	x
ERI	x			x	x	x	x		x	x	x		x	x	x	x	x

*** Prescriptive**

Table N1102.1.1 [Insulation and Fenestration Requirements] for Climate Zone 5A

Fenestration U-Factor	Skylight U-Factor	Ceiling R-Value	Wood Frame Wall	Mass Wall R-Value	Floor R-Value	Basement Wall R-Value	Slab R-Value &	Crawl Space Wall
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		R-Value				Depth	R-Value
0.32	0.55	38	20 or 13+5	13/17	30	10/13	10, 2 ft. 15/19

Table N1102.1.3 [Equivalent U-Factors] for Climate Zone 5A

Fenestration U-Factor	Skylight U-Factor	Ceiling U-Factor	Frame Wall U-Factor	Mass Wall U-Factor	Floor U-Factor	Basement Wall U-Factor	Crawl Space Wall U-Factor
0.32	0.55	0.030	0.057	0.082	0.033	0.059	0.055

*** Mandatory**

- N1101.16 Certificate [R401.3]** (provided by Building Official at the time of Rough-In inspection)
- N1102.4.1.1 Installation [R402.4.1.1]** (the components of the building thermal envelope [Table 1102.4.1.1] shall be installed in accordance with manufacturer's instructions.)
- N1102.4.2 Fireplaces [R402.4.2]** (wood burning masonry fireplaces shall have tight-fitting flue dampers and outdoor combustion air)
- N1102.4.3 Fenestration air leakage [R402.4.3]** (windows, skylights, and sliding doors; no more than 0.3 cfm per sf. Swinging doors no more than 0.5cfm per sf.)
- N1102.4.4 Recessed lighting [R402.4.4]** (recessed luminaires in the building envelope shall be sealed to limit air leakage between conditioned and unconditioned)
- N1102.5 Maximum fenestration U-factor and SHGG [R402.5]** (the area-weighted average maximum fenestration U-factor permitted using tradeoffs)
- N1103.1 Controls [R403.1]** (at least one thermostat per each separate heating and cooling system)
- N1103.1.2 Heat pump supplementary heat [R403.1.2]** (heat pump thermostat installed on heat pumps that limit supplemental electric-resistance heat)
- N1103.2.2 Sealing [R403.2.2]** (ducts, air handlers, and filter boxes shall be sealed)
- N1103.2.3 Building cavities [R403.2.3] *** (building cavities shall not be used as ducts or plenums)
**state of Michigan 2012 mechanical code does not recognize this change so cavities can be used as ducts or plenums*
- N1103.4.1 Circulating hot water system [R403.4.1]** (must have an automatic or readily accessible manual switch that can turn off the circulating pump when not in use)
- N1103.5 Mechanical ventilation [R403.5]** (must have a continuous whole-house mechanical ventilation system)
- N1103.6 Equipment sizing [R403.6]** (heating and cooling equipment shall be sized in accordance of ACCA Manual S or Manual J heating and cooling calculations)
- N1104.1 Lighting equipment [R404.1]** (a minimum of 75% of the lamps in permanently installed lighting fixtures shall be high-efficacy lamps)
- N1104.1.1 Lighting equipment [R404.1.1]** (fuel gas lighting systems shall not have continuously burning pilot lights)

Subject to field inspections.