



FEBRUARY 2021

# IRA TOWNSHIP

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## Continuous Whole-House Mechanical Ventilation Worksheet

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#### M.R.C. Single Family Residence

To facilitate permit issuance and energy code review in accordance with the 2015 Michigan Residential code, please complete this form and submit it along with your building and mechanical permit application for a new single-family residence.

DATE: \_\_\_\_\_

PROJECT ADDRESS: \_\_\_\_\_

OWNER/CONTRACTOR: \_\_\_\_\_

OWNER/CONTRACTOR PHONE: \_\_\_\_\_

#### Section M1507

#### Mechanical Ventilation

M1507.3.1 System design. The whole-house ventilation system shall consist of one or more supply or exhaust fans or a combination of such, and associated ducts and controls. Local exhaust or supply fans are permitted to serve as such a system. Outdoor air ducts connected to the return side of an air handler shall be considered as providing supply ventilation.

M1507.3.2 System controls. The whole-house mechanical ventilation system shall be provided with controls that enable manual override.

M1507.3.3 Mechanical ventilation on rate. The whole-house mechanical ventilation system shall provide outdoor air at a continuous rate of not less than that determined in accordance with Table M1507.3.3 (1).

Exception: The whole-house mechanical ventilation system is permitted to operate intermittently where the system has controls that enable operation for not less than 25 percent of each 4-hour segment and the ventilation rate prescribed in Table M1507.3.3 (1) is multiplied by the factor determined in accordance with Table M1507.3.3 (2).

Table M1507.3.3 (1)



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### CONTINUOUS WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM AIRFLOW RATE REQUIREMENTS

DWELLING UNIT FLOOR AREA (square feet)	NUMBER OF BEDROOMS				
	0-1	2-3	4-5	6-7	>7
	<b>Airflow in CFM</b>				
>1,500	30	45	60	75	90
1,501-3,000	45	60	75	90	105
3,001-4,500	60	75	90	105	120
4,501-6,000	75	90	105	120	135
6,001-7,500	60	105	120	135	150
>7,500	105	120	135	150	165

For SF: 1 square foot = 0.0929 m<sup>2</sup>

1 cubic foot per minute – 0.0004719 m<sup>3</sup>/s

Table M1057.3.3 (2)

### INTERMITTENT WHOLE-HOUSE MECHANICAL VENTILATION RATE FACTORS

RUN TIME PERCENTAGE IN EACH 4 HOUR SEGMENT	25%	33%	60%	66%	75%	100%
FACTOR <sup>a</sup>	4	3	2	1.5	1.3	1.0

a. For ventilation system run time values between those given, the factors are permitted to be determined by interpolation.

b. Extrapolation beyond the table is prohibited.

Number of Floors \_\_\_\_\_ Square Footage (including basement) \_\_\_\_\_ SF.

What is the required continuous airflow rate for this house per Table M1507.3.3 (1)? \_\_\_\_\_ CFM

Is the system designed to be (Check One) \_\_\_\_\_ Continuous or \_\_\_\_\_ Intermittent?

Is this an intermittent system, what is the run time factor? \_\_\_\_\_

How do you propose to meet the required CFM for this system (Check One)?

\_\_\_\_\_ Outdoor air duct connected to the return duct with an ECM motor.

\_\_\_\_\_ Exhaust fans with outdoor air duct connected to the return duct.

\_\_\_\_\_ A combination of the above.

\_\_\_\_\_ ERV or air exchanger

\_\_\_\_\_ Other (Please Specify) \_\_\_\_\_