

## BUILDER SPECIFICATION CHECKLIST

<b>Builder Name:</b> _____		<b>Job Name:</b> _____	
<b>Slab on Grade Insulation R-Value:</b> _____		<b># Feet Down:</b> _____	<b># Feet In:</b> _____
<b>Is there a THERMAL BREAK to separate the slab floor from the foundation? (ie, 45 deg bevel at foam board) Yes: No:</b>			
<b>Crawl Wall Insulation R-Value:</b> _____		<b>Full Wall?</b> _____	<b>If No, # Feet Down:</b> _____
<b>Finished Bsmt INTERIOR Insulation R-Value:</b> _____		<b>Full Wall?</b> _____	<b>If No, # Feet Down:</b> _____
<b>Unfinished Bsmt INTERIOR Insulation R-Value:</b> _____		<b>Full Wall?</b> _____	<b>If No, # Feet Down:</b> _____
<b>Found Wall Insulation R-Value (EXTERIOR):</b> _____		<b>Full Wall?</b> _____	<b>If No, # Feet Down:</b> _____
<b>Rim Joist Insulation R-Value:</b> _____			
<b>Above Grade Wall Insulation Cavity R-Value:</b> _____		<b>Sheathing Material/R-Value:</b> _____	
<b>Attic Knee Wall Insulation Cavity R-Value:</b> _____		<b>Sheathing Material/R-Value:</b> _____	
<b>Attic Insulation R-Value:</b> _____			
<b>Frame Floor Over Garage R-Value:</b> _____			
<b>Windows U-Value:</b> _____		<b>SHGC:</b> _____	
<b>Gas Furnace AFUE:</b> _____			
<b>A/C Seer:</b> _____			
<b>Heat Pump HSPF:</b> _____			
<b>Water Heater EF:</b> _____		<b>Gallons:</b> _____	
<b>LIGHTING - %CFL:</b> _____		<b>% LED:</b> _____	<b>% Incandescent:</b> _____
<b>Refrigerator kWh/year:</b> _____		<i>(If Available)</i>	
<b>Dishwasher EF:</b> _____		<i>(If Available)</i>	
<b>Air Leakage Rate (ACH50):</b> _____		<b>(We will use 5.0 air changes unless you note otherwise)</b>	
<b>% Duct Leakage Rate:</b> _____		<b>(We will use 5% leakage for slab/crawl and 4% for basement unless otherwise noted)</b>	

**What type of FRESH AIR SYSTEM is installed? System Type:** \_\_\_\_\_

**(Examples: Dampened passive duct to return trunk with ECM HVAC motor, continuously running exhaust fan, ERV systems, etc.)**

**If the home is on a crawl, is it a conditioned crawl with access located inside the home? Yes No NA**

If the home is on a conditioned crawl (with the access inside the home), we will use 4cfm/100sf for duct leakage which will help your overall performance. If you are building a conditioned crawl, make sure a dehumidifier is used during construction to reduce moisture and install the visqueen (at least temporary visqueen) AS SOON AS POSSIBLE AFTER ROOF IS INSTALLED to avoid moisture/mold problems in the crawl during construction. There is helpful information regarding conditioned crawls on our website, [www.tsienergysolutions.com](http://www.tsienergysolutions.com), in the residential section of the Links/Resources tab.

**Additional Notes to TSI**

Please sign and date below if the above information is correct regarding your current building specifications.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**TSI Energy Solutions**, P.O. BOX 705, CARMEL, IN 46082, 317-846-4655  
 energycode@tsienergysolutions.com, [www.tsienergysolutions.com](http://www.tsienergysolutions.com)

## Mechanical Ventilation Information

- Under the 2020 Indiana Residential Code, whole house ventilation is required under section N1103.6 and M1505 of the IRC. The amount of ventilation required is determined by the following chart:

TABLE M1505.4.3(1)  
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
	Airflow in CFM				
< 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	90	105	120	135	150
> 7,500	105	120	135	150	165

For SI: 1 square foot = 0.0929 m<sup>2</sup>, 1 cubic foot per minute = 0.0004719 m<sup>3</sup>/s.

TABLE M1505.4.3(2)  
INTERMITTENT WHOLE-HOUSE MECHANICAL VENTILATION RATE FACTORS<sup>a, b</sup>

RUN-TIME PERCENTAGE IN EACH 4-HOUR SEGMENT	25%	33%	50%	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.

- Some typical examples of whole house ventilation include an ERV / HRV (balanced system that pulls air into home while simultaneously exhausting air out), supply ventilation to HVAC system (creates positive pressure in home) and continuous exhaust fan (creates negative pressure in home).
- There is debate among national organizations and experts on how much ventilation is appropriate and the amount needed will vary depending on homeowner lifestyle, climate, seasons, etc. Regardless of those debates, TSI must follow the Indiana Residential Code with the Performance Path analysis.
- Under-ventilating a home may lead to indoor air quality issues, and in the winter, may lead to condensation on cold surfaces like windows.
- Over-ventilating a home may lead to excessive energy use, and in the summer, may lead to higher indoor relative humidity levels. Higher indoor humidity may cause comfort and possible biological growth issues. Supplemental dehumidification may be necessary in some cases.
- With any ventilation system it is important that it is adjustable to meet the various lifestyles and habits of the homeowners, from season to season. Homeowner education on the type of mechanical ventilation and how it can be adjusted may improve home performance.