

# Worcester County Building Permit Required Submittals for Review of Permit Application v11/2/18

## List of Building Applicable Codes :

Building plan permit application submissions are reviewed with reference to but not limited the following:

- 2015 International Residential Code
- 2015 International Energy Code
- 2017 National Electric Code
- Worcester County Floodplain Management Code BR 2-301 effective 7/16/15- If located in a Special Flood Hazard Area special construction requirements will apply.

## Building Plans - Residential Requirements

Submit (3 stick built, 4 modular) Sets of Construction Plan Drawings showing the following:

1. Proposed Structure Construction method:
  - a. Site built
  - b. Pre-engineered
  - c. Manufactured – Requires manufacture information including installation details, floor plans, elevations, dimensions, etc.
  - d. Modular – Requires State of Maryland approved drawings with any site details necessary for construction (foundation, decks, additions, etc.). Provide set-up manual including drawings ( ¼ inch to 1 foot scale).
2. Contractor Information:
  - a. Primary Contractor contact information and license number (MHB for new structures and MHIC for improvements/additions) – On permit application. License credentials will be verified with State of Maryland database.
  - b. Electrical Contractor – contact and license credentials are required at application for electrical permit which will supplement the building permit.
  - c. HVAC Contractor – Credentials required at framing inspections.
  - d. Building Performance Contractor – Certified Professional (as approved by Worcester County) listed but not required at permit application on Worcester County 2015 IECC form. Final building performance testing is required to pass by a certified test agency to receive Certificate of Use and Occupancy.
3. Beginning July 1, 2015 automatic fire sprinkler systems are required in all dwellings. This includes stick built, modular and manufactured homes. Additions or alterations to existing residential dwellings, where an automatic fire sprinkler system is not already

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provided, shall not require the installation of an automatic fire sprinkler system. The DRP office will provide notification to the Worcester County Fire Marshal when a new permit application is received for a new residential dwelling unit. It will be the contractor or owner's responsibility to independently coordinate with the Fire Marshal's Office for review requirements and inspections. Fire Marshal's inspections and approval of installed systems is required to be complete prior to scheduling a final inspection with the building inspector.

4. Foundation Plan:
  - a. Outside Foundation Dimensions
  - b. Pier Size and Spacing
  - c. Foundation Vents and locations – Note if flood designed.
  - d. Foundation wall thickness
  - e. Footing dimensions including depth
  - f. Framing details, joist size and on-center spacing and beam size and spacing.
  - g. If using existing foundation, the same information is required.
  - h. The department may require engineered foundation for special circumstances and/or soil tests/certifications.
  - i. If the project is determined to be in a flood zone, existing elevation information may be required to determine additional construction requirements.
5. First Floor Plan
  - a. Show and dimension all proposed interior and exterior rooms and spaces. Label each room for purpose.
  - b. Floor plans for interior renovations and additions, show existing room sizes and proposed new room/addition dimensions. Where connecting an addition to an existing structure, show connecting details.
  - c. All kitchen and bathroom details for major plumbing and appliances.
  - d. Doors and dimensions and attic access.
  - e. Beams, headers and girders if any. Roof construction details depending on truss or frame design.
  - f. Stairs, stairwells and handrails. Stair width, ascent/decent direction, number of risers and treads and riser heights.
6. Upper Floor plans (Same as first floor plans plus):
  - a. Attic access and ceiling break lines, if applicable. Provide ceiling height at break line.
  - b. Label spaces open to below.
7. Building Sections
  - a. Footer to ridge cross section of new structure showing construction detail.
  - b. For additions, include cross section of existing condition and structural attachment method to new addition.

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- c. Show all materials including but not limited to - gypsum board, insulation, wall sheathing, and siding including the thickness, type and R value rating of the insulation.
8. Elevations
  - a. Include elevation drawings of at least front, rear and side appropriate to determine major features and dimensions.
  - b. Label height of structure and highest roof peak from existing grade.
  - c. Dimension the height of each story.
  - d. Chimney or ornamental roof design feature height
  - e. Roof pitch and material of construction.
  - f. Roof and crawl space ventilation if applicable.
  - g. Siding material.
  - h. Doors and windows locations with schedule showing sizes, location, R, U and solar heat transfer coefficients (SHTC).
9. Energy Code
  - a. Completion of Worcester County 2015 IECC Energy Code requirements signed by owner and contractor (see attached). All residential building projects, except open deck additions, require the completion of the Worcester County 2015 IECC Energy Code requirements form.
  - b. If using the prescriptive UA Alternative RESCHECK model then this information must be supplied with plan permit application. Plans must include insulation values per the RESCHECK model to be approved. If changes occur during construction, a new RESCHECK model must be submitted and approved to complete the project which shows all changes.
  - c. Construction documentation is required including details on insulation material, windows/doors, and mechanical systems with the depiction of the building thermal envelope.
  - d. Final documentation submitted for Certificate or Use and Occupancy must include the proper compliance information – Prescriptive, Rescheck or Performance. Building envelope R-Values must match the method of compliance.
  - e. If using the performance option to comply, additional information is required to be submitted by a design professionals, certified performance professional or professional engineer for review and approval by Worcester County.
  - f. Final Blower Door building envelope leakage testing and duct leakage testing is required. These tests must be performed by a County Approved test contractor having training/certifications to perform tests per the 2015 IECC. Test companies are generally holding BPI or RESNET certifications.

## Worcester County 2015 International Residential Energy Code

By adoption of the Maryland Building Performance Standards and specifically the International Energy Code 2015 Edition (IECC 2015), Worcester County and State of Maryland Building Code requires all new construction and additions to residential dwellings to meet IECC 2015. All new residential one and two family dwellings and additions to existing one and two family dwellings must comply with the residential provisions of the 2015 IECC.

### Mandatory IECC 2015 Requirements:

1. Certificate of Compliance – R401.3 – Builder or Design Professional must post all energy compliance cert. on elect. Panel.
2. Thermal Envelope – R402 – Insulation, Fenestration, required prescriptive or performance – Exceptions below for alterations.
3. Air Leakage – R402.4 – Building Envelope must limit air exchanges 3 per hour (at 50 Pascals) by Certified Tightness Test. <sup>1</sup>
4. HVAC Controls – R403.1 – Programmable t-stat for furnaces and supplemental heat controls for heat pumps.
5. Duct Insulation – R 403.3.1 – Outside thermal envelope required. R-8 ducts>3inches, R-6 ducts 3 to 6 inches, R-4.2 <3 inches.
6. Duct Sealing – R 403.3.2 – HVAC ducts must be sealed and tested – Test report is required. Max leakage 4 CFM/100 SF.
7. Building Cavities – R 403.3.5 – Cavities shall not be used as ducts or plenums.
8. Mechanical System Pipe Insulation – R403.4 – R-3 minimum if fluid above 105 degrees F.
9. Circulating Hot Water Systems – R403.5.1 – Controls and insulation required.
10. Mechanical Ventilation – R403.6 – Whole house ventilation is required per IRC – see section M 1507.
11. Equipment Sizing – R403.6 – HVAC equipment sized per Air Conditioning Contractors of America (ACCA) Standards.
12. Snow Melt System Controls – R403.9- Special controls required if system installed.
13. Pools and Spas – R403.10 – Controls to minimize energy usage required. Covers required on heated pools and spas.
- 14 – Lighting Equipment – R404.1 – 75 % of installed lighting shall utilize high efficacy lamps (CFL, T-8 fluorescent, LED)

### Notes:

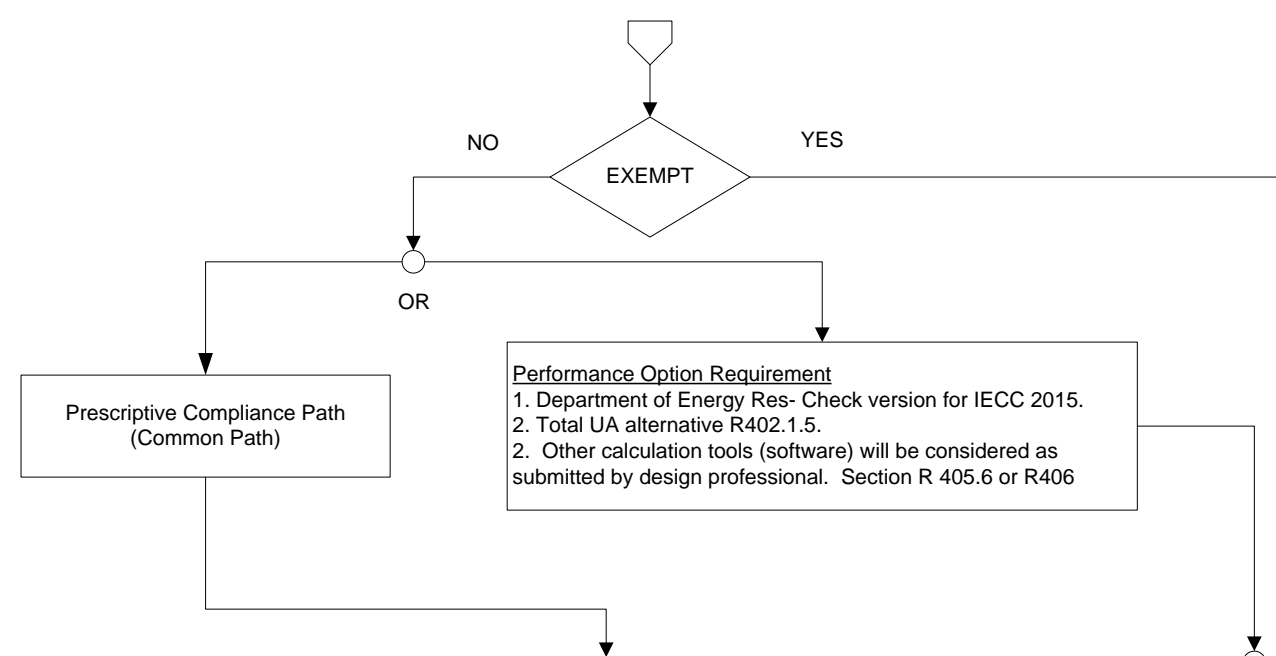
1. Attention must be given to sealing the entire building envelope during construction to attain certified passing results. Consult your Certified Building Envelope Test Contractor. A passing test report by a certified contractor/inspector must be provided to Worcester County to obtain final building Certificate of Occupancy.
2. Construction Documentation is required per R103.2 including Insulation, Fenestration and Mechanical Systems (sizes and efficiencies).

### Building Envelope Exceptions - Alterations (only applies if building energy use is not increased by the repairs/renovations):

1. Storm Window installed over existing windows.
2. Existing ceiling, wall or floor cavities exposed provided these cavities are filled with insulation.
3. Construction where existing roof, wall or floor cavity is not exposed.
4. Roof re-cover.
5. Roofs without insulation in the cavity and where the sheathing or insulation exposed during re-roofing shall be insulated either above or below the sheathing.
6. Surface applied window film installed on existing single pane fenestration assemblies to reduce the solar heat gain performance provided the glazing is not replaced.
7. Repairs/Renovations will not increase the building energy use (e.g., NO HVAC, NO Lights, NO hot water) – NON- Conversion Agreement Required.

Note : If repairs/renovations are limited to items 1-7 above, then there is no building envelope specific requirements.

See  
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**Performance Option Requirement**  
 1. Department of Energy Res- Check version for IECC 2015.  
 2. Total UA alternative R402.1.5.  
 2. Other calculation tools (software) will be considered as submitted by design professional. Section R 405.6 or R406

Prescriptive R and/or U value (Table R402.1.2)									
Climate Zone 4									
Fenestration U	Skylight U	Glazed Fenestration SHGC max	Ceiling R	Wood Frame Wall R	Mass Wall R	Floor R	Basement Wall R	Slab R-val,depth	Crawl Space Wall R
0.35	0.055	0.4	49	20 or 13+5	8/13	19	10/13	10, 2 ft	10/13

- Inspections:**
1. Insulation Building Envelope – Required during construction by Worcester County Inspector.
  2. Air Leakage – Blower Door Test by Certified Contractor/Inspector – Based on Building Performance Institute (BPI, Resnet) accreditation. Passing report due at final inspection and required for Certificate of Occupancy from Worcester County.
  3. Certificate of Compliance (By Builder or Design Professional with checks at final inspection by Local Jurisdiction)
    - A. HVAC Controls
    - B. Duct Insulation/Duct Sealing
    - C. Pipe Insulation/Circ. Hot Water Controls
    - D. Mechanical Ventilation
    - E. HVAC Equipment Sizing
    - F. Pools and Spas Controls/Covers
    - G. Lighting Equipment

Complete Application Information

Owner/Contractor/Project Information: Permit No. \_\_\_\_\_

Owner Name (print): \_\_\_\_\_ Date: \_\_\_\_\_ Owner Signature: \_\_\_\_\_

Contractor Name (print): \_\_\_\_\_ Date: \_\_\_\_\_ Contractor Signature: \_\_\_\_\_

Building Tightness Test Contractor: \_\_\_\_\_ Phone: \_\_\_\_\_

Building Reviewer ( DRP Office Use ): \_\_\_\_\_