

RESIDENTIAL ADDITION/ALTERATION SUBMITTAL GUIDE

Pennsylvania Uniform Construction Code (UCC) referencing the International Residential Code

BUILDING PERMIT REQUIREMENTS: A building permit is required for residential additions, alterations or repairs as set forth in Section 403.62 of the PA Uniform Construction Code. Submit the following items for review and approval:

- **BUILDING PERMIT APPLICATION**

Complete the Application for Zoning and Building Permit. It is necessary to fill out all applicable areas of the permit application including the signature of the permit applicant. Our staff will assist applicants with questions regarding the permit application.

- **PLAN REQUIREMENTS**

Unless otherwise instructed, please submit all plans for review in a digital format. Digitally reviewed and approved plans will be emailed to you upon completion. The permit applicant is required to print and provide hard copies of the approved plans if required by the municipality.

- **ADDITIONS:** Site plan, floor plan(s), foundation plan, building cross section, energy code compliance information, and any applicable specifications and/or manufacturer's installation instructions are to be submitted for review and approval.
- **ALTERATIONS:** Floor plan(s), cross section, energy code compliance information (if applicable) and applicable specifications and/or manufacturer's installation instructions are to be submitted for review and approval.

PLAN SPECIFICATIONS Plans are to be **drawn to scale and dimensions** are to be included.

ADDITION FLOOR PLAN(S)

- Label each room specific to its use within the addition and in the room(s) adjacent to the addition.
- Location of all existing and proposed partition walls, windows, and doors.
- Location and manufacturer, model, and size of emergency escape and rescue window or door for bedroom additions or full basements. (finished and unfinished basements).
- Location of 110-volt smoke alarm(s) with 9-volt battery back-up(s), and carbon monoxide alarm(s).
- Location of tempered safety glazing. (if applicable).
- Location of stairways with stair geometry provided (riser and tread dimensions), guardrails and handrails.
- Location of stairway illumination (interior and exterior stairways).
- Location of all plumbing fixtures, clearance requirements at fixtures, and access to whirlpool tub motors.
- Location, type, manufacturer and model number of any proposed factory-built fireplaces or appliances.
- Floor and roof framing members (type, size and spacing) in all altered/added areas.
- Fireplace details and applicable dimensions (masonry and pre-manufactured/factory-built units).

Foundation Plan

- Identify basement area as finished or unfinished. If the area is to be finished, identify use of space(s).
- Location of sealed and gasketed foundation drain sump pit for fully excavated foundations.
- Location and size of footings, foundation wall type/size/reinforcing, columns, beams, pier/column footings.
- Crawl space access size and location (if applicable).
- Crawl space ventilation specifications. Provide size and location of crawl space vents if ventilated. If crawl space is unvented, provide crawl space insulation and mechanical ventilation details.
- Basement and/or crawl space floor specifications. 4" stone layer, 6 mil. poly vapor barrier and concrete.
- Location of the required 110-volt smoke alarm(s) with 9-volt battery back-up(s).

Cross Section

- Footing depth below grade, footing depth, width and reinforcing (if applicable).
- Foundation wall details and materials of construction (type and reinforcing if applicable).
- Foundation anchor bolt diameter, length and spacing. Pressure treated sill plate.
- Foundation insulation location and R-value for crawl spaces and unexcavated foundations.
- Floor framing specifications including joist size/spacing, insulation values and floor sheathing thickness.
- Exterior framed wall specifications including stud size/spacing, double top plates with 24" lap joints, insulation values, sheathing type/thickness, water resistive barrier type and veneer specifications.
- Wall bracing type and fastener type/nailing schedule.
- Roof framing specifications including framing type/size/spacing (engineered trusses or rafters), sheathing type/thickness, insulation values, ice/water shield, underlayment type, roof covering and roof ventilation.
- Ceiling heights of each unique area are to be identified. Sloped ceilings are to be illustrated and noted. Minimum ceiling heights within habitable rooms and over plumbing fixtures are to be maintained.
- Bearing and non-bearing framed wall size(s) with on center stud spacing.
- Fireplace and/or chimney section with applicable detail and dimensions.

ALTERATION PLAN(S)/SECTION(S)

- Before and after floor plans of the proposed area to be renovated and/or altered.
- Label each room specific to its use within the renovated/altered area.
- Identify location of all removed, moved and/or added partitions or bearing walls, windows, and doors.
- Location of all plumbing fixtures.
- Typical cross section illustrating methods and materials of construction as noted in the addition guidelines.
- Ceiling heights within each area to be renovated and/or altered.

(Please refer to the sample plan(s) and cross section prior to submitting your permit package.)

2018 IRC CODE REFERENCES

The following code sections are applicable for additions and alterations. This list, although not all inclusive, provides guidance on code provisions affecting basement alterations.

- **R301.1.3 Engineered design.** Where a building of otherwise conventional construction contains structural elements exceeding the limits of Section R301 or otherwise not conforming to this code, these elements shall be designed in accordance with accepted engineering practice.
- **R302.11 Fireblocking required.** Fireblocking shall be provided to cut off all concealed draft openings (both vertical and horizontal) 2-inch nominal lumber, (2) thicknesses of 1-inch nominal lumber with broken lap joints, $\frac{3}{4}$ " particleboard, $\frac{1}{2}$ " gypsum wallboard, $\frac{1}{4}$ " cement-based millboard or batts/blankets of mineral wool or glass fiber installed in such a manner as to be securely retained in place are approved fireblock materials.
- **R303.7 Stairway illumination.** All interior and exterior stairs shall be provided with a means to illuminate the stairway, including the landings and treads. Interior stairways shall be provided with an artificial light source in the immediate vicinity of each landing and at the top and bottom of the stairs.
- **R305.1 Minimum ceiling height.** Habitable space, hallways and portions of basements containing these spaces shall have a ceiling height of not less than 7 feet. Bathrooms, toilet rooms, and laundry rooms shall have a ceiling height of not less than 6 feet 8 inches.

Exceptions:

- For rooms with sloped ceilings, the required floor area of the room shall have a ceiling height of not less than 5 feet (1524 mm) and not less than 50 per-cent of the required floor area shall have a ceiling height of not less than 7 feet (2134 mm).
 - The ceiling height above bathroom and toilet room fixtures shall be such that the fixture is capable of being used for its intended purpose. A shower or tub equipped with a showerhead shall have a ceiling height of not less than 6 feet 8 inches (2032 mm) above an area of not less than 30 inches (762 mm) by 30 inches (762 mm) at the showerhead.
 - Beams, girders, ducts, or other obstructions in basements containing habitable space shall be permitted to project to within 6 feet 4 inches (1931 mm) of the finished floor.
 - **R308.4 Glazing - hazardous locations.** The locations specified in Sections R308.4.1 through R308.4.7 shall be considered to be specific hazardous locations for the purposes of glazing.
 - **R310.1 Emergency escape and rescue opening required.** Basements, habitable attics and every sleeping room shall have not less than one operable emergency escape and rescue opening. Where basements contain one or more sleeping rooms, an emergency escape and rescue opening shall be required in each sleeping room. Emergency escape and rescue openings shall open directly into a public way, or to a yard or court that opens to a public way.
 - **R310.6 Emergency Egress - alterations or repairs of existing basements.** An emergency escape and rescue opening is not required where existing basements undergo alterations or repairs.
- Exception:** New sleeping rooms created in an existing basement shall be provided with emergency escape and rescue openings in accordance with Section R310.1.
- **R311.7.2 Stairway headroom.** The headroom in stairways shall be not less than 6 feet 8 inches (2032 mm) measured vertically from the sloped line adjoining the tread nosing or from the floor surface of the landing or platform on that portion of the stairway.
 - **R311.7 per PA UCC 403.21(7)(ii) Stair treads and risers.** Stairway riser height are not to exceed $8\frac{1}{4}$ " with no more than a $\frac{3}{8}$ inch variation in riser height within a flight of stairs. The minimum tread depth is 9 inches measured from tread nosing to tread nosing. The greatest tread depth within any flight of stairs may not exceed the smallest by more than $\frac{3}{8}$ inch.

- **R311.7.8 Handrails.** Handrails having minimum and maximum heights of 34 inches and 38 inches respectively, measured vertically from the nosing of the treads, shall be provided on at least one side of the stairway of four or more risers. All required handrails shall be continuous the full length of the stairs. Where half walls or partial guardrails are installed, handrails are to remain continuous through these transition points. Ends shall be returned or shall terminate in newel posts or into the adjacent wall.

2018 IRC CODE REFERENCES

The following code sections are applicable for additions and alterations. This list, although not all inclusive, provides guidance on code provisions affecting basement alterations.

- **R314 Smoke alarms.** 110-volt, UL listed smoke alarms with 9-volt battery back-ups are to be installed within a finished basement and in any bedrooms within the basement. The remainder of the dwelling is to be provided with no less than battery alarms on each level of dwelling, outside of each sleeping area and in each bedroom.
- **R315 Carbon monoxide alarms.** Where work requiring a permit occurs in existing dwellings that have attached garages or in existing dwellings within which fuel-fired appliances exist, carbon monoxide alarms shall be provided outside of each sleeping area in the immediate vicinity of the bedrooms. Where a fuel-burning appliance is located within a bedroom or its attached bathroom, a carbon monoxide alarm shall be installed within the bedroom.
- **R319.1 (as amended) Site address.** Every new and existing structure to which a street number has been assigned shall display such numbers (numerals only) in a position easily observable and easily readable from the roadway or street fronting the property. The numbers shall be of contrasting color with their background and permanent in nature. Street numbers shall be at least 2 ³/₄" in height and shall be at least 18" above grade.
- **R403.1 Footings.** All exterior walls shall be supported on continuous solid concrete footings. Footings shall be supported on undisturbed natural soils or engineered fill. Spread footings shall be at least 8 inches in thickness. When unsuitable soil conditions are present or if blasting is required in the excavation of footings and foundation, (2) ¹/₂" diameter reinforcing bars are required to be installed in the entire footing.
- **R403.1.6 Foundation anchorage.** The wood sill plate at exterior walls shall be anchored to the foundation with anchor bolts spaced a maximum of 6 feet on center. There shall be a minimum of two bolts per plate section with one bolt located not more than 12 inches from each end of the plate section. Bolts shall be at least ¹/₂ inch diameter and shall extend a minimum of 7 inches into concrete or grouted cells of concrete masonry units. Bolts are not to be placed within the head joints between CMU's.
- **R703.2 Water-resistive barrier.** One layer of No. 15 asphalt felt, free from holes and breaks, complying with ASTM D226 for Type 1 felt or other approved water-resistive barrier shall be applied over studs or sheathing of all exterior walls.
- **N1102 Building thermal envelope.** The building thermal envelope shall meet the insulation requirements set forth in IRC Table N1102.1.2 or per the PA Alternative Energy Provisions.
- **N1103.3 Duct testing.** New forced air HVAC systems installed as part of an addition and/or alteration shall be installed and tested per the requirements of IRC Section N1103.
- **N1104.1 Lighting equipment.** A minimum of percent of the lamps in permanently installed lighting fixtures shall be high-efficacy lamps.
- **P2708.4 Shower control valves.** Individual shower and tub/shower combination valves shall be equipped with control valves of the pressure-balance/thermostatic-mixing or combination pressure-balance/thermostatic-mixing valve types with a high stop limit set to limit water temperature to a maximum of 120 degrees Fahrenheit. In-line thermostatic valves shall not be used for compliance with this section.

- **E3405.1 Electrical equipment working space and clearances.** Access and working space shall be provided and maintained around all electrical equipment to permit ready and safe operation and maintenance of such equipment in accordance with this section and Figure E3405.1.
- **E3902.16 Arc-fault circuit-interrupter protection.** Branch circuits that supply 120-volt, single-phase, 15- and 20-ampere outlets installed in kitchens, family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, rec rooms, closets, hallways, laundry areas and similar rooms or shall be AFCI protected.
- **E3902.17 Arc-fault circuit interrupter protection for branch circuit extensions or modifications.** Where branch-circuit wiring is modified, replaced, or extended in any of the areas specified in Section E3902.16, the branch circuit shall be protected by one of the following:
 - A combination-type AFCI located at the origin of the branch circuit.
 - An outlet branch-circuit type AFCI located at the first receptacle outlet of the existing branch circuit.
- **E4002.14 Tamper-resistant receptacles.** Receptacles in additions and added as part of alterations shall be listed tamper-resistant receptacles.