

Basement Finish Code Checklist

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This checklist is designed to assist you (whether you're the homeowner or contractor) with your basement project. Please read through the information. If an area is identified and it pertains to your project you will need to follow all items listed for that area. If you have a unique situation or an item is not listed in the checklist please contact your inspector. This checklist is not intended to cover every aspect of the construction process. Some items may need to be addressed during the project by our field inspectors.

GENERAL INFORMATION:

- A Building Permit is required. The following shall be submitted in order to obtain a building permit: 1) Floor plan with finish dimensions, 2) Rooms labeled with dimensions and type of use, 3) any egress window(s) labeled
- All electrical work requires a permit obtained by an electrical contractor, licensed with the State of Iowa. State of Iowa licensed electricians shall perform all electrical work. A homeowner may perform the work if he/she can demonstrate competency by passing the City of Altoona homeowner's exam.
- All plumbing work requires a permit. A licensed plumber shall perform the work. A homeowner may perform the work if he/she can demonstrate competency in plumbing work.
- All mechanical work, including fireplaces, requires a permit. A licensed mechanical contractor shall perform the work. A homeowner may perform the work if he/she can demonstrate competency in mechanical work.
- Existing dwellings shall, at a minimum, install battery-operated smoke detectors in each bedroom, outside of all bedrooms, and one on each floor level. The one located outside of bedrooms may serve as the one required for the floor level. All new smoke detectors shall be of the dual sensor type.
- Existing dwellings with unfinished basements shall have an egress window and window well if the basement is being finished. This is required whether a bedroom is located in the basement or not. This must meet egress code requirements. (*See separate egress handout*)
- Inspections require 24-hour notice and can be scheduled by calling the inspector identified on your sign off placard.
- All rough in work shall pass a code inspection prior to covering with insulation and sheetrock.
- A final inspection is required prior to occupying any room.

FAMILY ROOM/PLAYROOM/OFFICE/DEN/OTHER SIMILAR SPACES:

- Illumination shall be provided to the room, any artificial lighting shall be switched.
- Receptacles shall be installed so they are placed at no more than 6' from any door or wall opening and 12' on center thereafter. Any wall length greater than 2' between doors or wall openings shall have at least one receptacle.

- ❑ Heating must be provided to the room capable of maintaining at least 68 degrees at a point 3 feet above the floor and 2 feet from the wall. Portable heaters are not viewed as meeting this requirement.
- ❑ Must have a ceiling height of at least 7 feet, measured from finish floor to underside of ceiling membrane.
- ❑ Minimum room size is 7' in length and 7' in width and at least 70 square feet without counting any closet.
- ❑ All electrical circuits serving the new habitable space must have AFCI protection.

BEDROOMS:

- ❑ Any room which has a permanent built-in closet, whether with a door or not, is considered a "Bedroom".
- ❑ Any room considered a bedroom must have an egress window and window well. This must meet egress code requirements. (*See separate egress handout*)
- ❑ Smoke detectors shall be installed in each bedroom and one directly adjacent to the outside of the bedrooms. The detectors shall be 110-volt and wired into the existing detectors so that the actuation of one will signal all of the others in the house. Smoke detectors shall be "Dual Sensor" (means detector contains both ionization sensor and a photoelectric sensor which is designed to detect and trigger an alarm in response to slow, smoldering fires and fast, flaming fires).
- ❑ Electrical circuits serving new bedrooms must have AFCI protection. This includes lighting, receptacles, smoke detectors and baseboard heaters (if installed and operating at 120V).
- ❑ Illumination shall be provided to the room, any artificial lighting shall be switched.
- ❑ Receptacles shall be installed so that they are placed no more than 6' from any door or wall opening and 12' on center thereafter. Any wall length greater than 2' between doors or wall openings shall have at least one receptacle.
- ❑ Heating must be provided to the room capable of maintaining at least 68 degrees at a point 3 feet above the floor and 2 feet from the wall. Portable heaters are not viewed as meeting this requirement.
- ❑ Must have a ceiling height of at least 7 feet, measured from finish floor to underside of ceiling membrane.
- ❑ Minimum room size is 7' in length and 7' in width and at least 70 square feet without counting any closet.

BATHROOMS:

- ❑ Inspection of bathroom plumbing under concrete slab is required prior to pouring concrete, if applicable.
- ❑ Any new bathroom receptacles must have GFCI protection. If the existing bathroom GFCI circuit complies with the current electrical code, the new bathroom receptacle(s) may be tied to the existing GFCI circuit, OR a 20 amp dedicated circuit shall serve the new bathroom(s) with GFCI protection that may *only* serve new bathroom electrical fixtures.
- ❑ Window or exhaust fan with hose to outside flapper shall be provided.
- ❑ Wall switch and illumination shall be provided in each bathroom.
- ❑ Sink/lavatory requires one GFCI receptacle within 36".
- ❑ Toilet/water closet requires 21" clear space in front and 15" from center of toilet to any side obstruction.
- ❑ Showers or tubs with showerheads shall have a minimum dimension of 30" by 30" below the showerhead. The showerhead shall be at least 6'- 8" above the shower/tub surface.
- ❑ Showers shall have a minimum 24" clearance in front of stall opening.
- ❑ Tubs shall have a minimum 21" clearance in front of tub.
- ❑ Lavatories/sinks shall have a minimum 21" clearance in front of the lavatory/sink.

- ❑ Must have a ceiling height of at least 7 feet, measured from finish floor to underside of ceiling membrane. EXCEPTION – at least 6'-8" shall be provided over and in front of all plumbing fixtures.
- ❑ Any glass installed above the tub/shower floor surface that is less than 60" above such surface shall be safety glazed.

STAIRWAYS:

- ❑ Landings at bottom of stairways shall be a minimum of 36" in travel distance and at least the width of the stairway served, but not less than 36". (i.e. a minimum of 36" X 36", larger if stairway is wider than 36")
- ❑ Headroom shall be minimum of 6'-8" measured vertically from outer edge of bull nose. The 6'-8" headroom shall apply at any point above the sloped bullnose plane along the entire stairway.
- ❑ Handrail on one-side 34"-38" in height measured from outer edges of bull nose to top of rail and must extend the full length of the stairway. Handrail shall maintain a minimum 1 1/2" distance from wall or other obstructions.
- ❑ Handrail must be grippable per code, and all ends shall terminate into wall or newel posts. Please contact inspector for dimensional requirements.
- ❑ Guard is required if stairs are over 30" off of finished floor. Required guards installed along the stairs shall not be less than 34" in height measured from the nosing of stairs and a 4 1/2" sphere shall not pass through at any point. Guards around the open perimeter of stairs shall be 36" in height and a sphere of 4" shall not pass through at any point.
- ❑ Handrails and guardrails shall be designed/installed to withstand 200# in any direction at any point along the top.
- ❑ Enclosed accessible space under stairs shall have walls, the under-stair surface, and any soffits protected on the enclosed side with 1/2" gypsum board.
- ❑ A 3-way switch at the top and bottom of landings is required to control illumination that is required over the entire stairway if there are 6 or more risers.

MECHANICAL ROOM:

- ❑ Proper combustion air shall be provided, may need to add Hi/Low grills into hallway. If required, each grill shall be a minimum of 8"x 12". Fully louvered doors are also acceptable instead of the Hi/Low grills.
- ❑ Combustion air for heating and cooling equipment/water heaters cannot be accessed through the bedroom.
- ❑ Illumination shall be provided to the room.
- ❑ Return air sources shall not be withdrawn from bathrooms or closets.
- ❑ Proper clearances around the mechanical equipment shall be maintained.
- ❑ Fireplace shall be UL listed and is to be installed according to manufacturer's instructions. Instructions are to be on site and available to inspector.
- ❑ Gas fired appliances shall not be located in a bedroom or in a space that only opens to a bedroom.
- ❑ Gas piping that contains unions, tubing fittings, right and left couplings, bushings, compression couplings, and swing joints shall not be in a concealed location unless the fittings are listed for such concealment or tubing is joined by brazing.
- ❑ One GFCI receptacle is required within 25' of, or within the mechanical room.

GENERAL REQUIREMENTS:

- ❑ Any wood in direct contact with concrete/masonry shall be treated lumber or wood that is naturally resistant to decay and termites. Non-treated lumber may be used if an impervious moisture barrier is installed between the wood and concrete/masonry.
- ❑ All constructed walls and partitions are to be secured/anchored to the floor properly.
- ❑ A vapor retarder is required to be installed on the warm-in-winter side of the wall insulation.
- ❑ Any foam plastic insulation shall have a thermal barrier installed over it. This typically is 1/2" sheet rock.

- ❑ Any gypsum board used as a backer or base for tile shall be of the water resistant type. Water resistant gypsum board shall not be installed over a vapor barrier.
- ❑ If removing load-bearing elements please first verify with a Structural Engineer or this department to determine if allowed and what will replace the removed elements.
- ❑ Any 110-volt or larger wires that are exposed on the backside of wall framing require protection by conduit, sheetrock, or sheathing. Junction boxes cannot be concealed.
- ❑ All unfinished portions of the basement must have a GFCI protection on all receptacle outlets.
- ❑ All newly installed receptacle outlets shall be of the tamper resistant type.
- ❑ Any new electrical circuits are to be properly labeled at the electrical panel. New circuit breakers shall be listed/labeled for use in the panel.
- ❑ A carbon monoxide detector is required to be installed in the home
- ❑ Hallways shall be no less than 36" wide. If hallways are 10' or more in length, then at least one electrical receptacle shall be installed.
- ❑ If floor finishes are other than carpet, vinyl, wood flooring, sealed concrete, or tile, please contact inspector for approval.
- ❑ If ceiling and wall finishes are other than concrete, sheetrock, paint, paneling, tile, wallpaper or wood trim, please contact inspector for approval.