



# **Minimum Design Standards for New Construction One and Two Family Dwellings Units**

**Kentucky Housing Corporation (KHC)  
Revision 2026**



**Summary of Changes: 2025 Revision**

| <b>DATE</b> | <b>SECTION</b>              | <b>DESCRIPTION of CHANGES</b>   |
|-------------|-----------------------------|---|
| 01/27/2026: | Division 10: Specialties 1b | : specified "Wall Hung"   |
| 01/27/2026: | Division 12: Furnishings 2  | : added "and above dishwasher area if applicable."                            |
| 01/27/2026: | Division 22: Plumbing 1a    | : clarified "Tubs shall be sixty inches by thirty inches (60" x 30") minimum" |
| 01/27/2026: | Division 22: Plumbing 1b    | : added "Showers ... or sixty inches by thirty inches (60" x 30") minimum"    |
| 01/27/2026: | Division 22: Plumbing 4d    | : added "A HERS rating of less than 62 will be an acceptable target to ..."   |
| 01/27/2026: | Division 23: HVAC 4         | : added "A HERS rating of less than 62 will be an acceptable target to ..."   |
| 01/27/2026: | Division 32: Exterior 2b    | : added "or Dense-Grade-Aggregate (DGA)"                                      |

**Minor formatting or grammatical changes are not identified in this list.**

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## **KHC Minimum Design Requirements**

The following minimum design items are for all newly constructed single-family dwelling units constructed under the applicable Kentucky Residential Code (KRC) and funded through KHC's Department of Housing Contract Administration (HCA).

KHC's Minimum Design Standards (MDS) are used as a guideline to meet or exceed all applicable local, state, and national codes. These standards also serve as a vehicle to promote and enforce modern construction and design practices for builders, contractors, and design professionals who wish to utilize funding from KHC. Other methods of construction and design may be acceptable on a case by case basis. If your design does not satisfy KHC's Minimum Design Standards, please contact the Department of Design and Construction Review for further assistance.

# Acronyms and Abbreviations

Above finished floor (AFF)  
Affordable Housing Trust Fund (AHTF)  
American Concrete Institute (ACI)  
American National Standards Institute (ANSI)  
American Society for Testing and Materials (ASTM)  
American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)  
Americans with Disability Act (ADA)  
Annual Fuel Utilization Efficiency (AFUE)  
Building Performance Institute (BPI)  
Chromated-Copper-Arsenate (CCA)  
Coefficient of Performance (COP)  
Construction Specifications Institute (CSI)  
Drain/Waste/Vent (DWV)  
Dwelling Needs Evaluator (DNE)  
Energy Efficiency Ratio (EER)  
Energy Factor (EF)  
Gallons Per Flush (GPF)  
Heating Seasonal Performance Factor (HSPF)  
Heating, Ventilation, and Air Conditioning (HVAC)  
Home Energy Rating System (HERS)  
HOME Investment Partnerships Program (HOME)  
Housing Contract Administration (HCA)  
Housing, Buildings and Construction (HBC)  
International Energy Conservation Code (IECC)  
International Mechanical Code (IMC)  
Kentucky Housing Corporation (KHC)  
Kentucky Residential Code (KRC)  
Minimum Design Standards (MDS)  
Oriented Strand Board (OSB)  
Packaged Terminal Heat Pump (PTHP)  
Polyvinyl Chloride (PVC)  
Rural Housing Trust Fund (RHTF)  
Seasonal Energy Efficiency Rating (SEER)  
Ultraviolet (UV)  
Underwriters Laboratories (UL)  
Volatile Organic Compounds (VOC)  
Weatherization Assistance Program (WAP)

## Division 01: General Requirements

- 1) **Minimum Design Standards:** Minimum Design Standards shall apply when KHC funding exceeds ten percent (10%) or more of cost per unit to all new construction of single family detached homes constructed with funds from the HOME Investment Partnerships Program (HOME), Affordable Housing Trust Fund (AHTF), or Rural Housing Trust Fund (RHTF). These funds are available through KHC's Department of Housing Contract Administration (HCA).
  
- 2) **Codes:** All construction shall comply with applicable code and standards listed below:
  - a) Current version of Kentucky Residential Code (KRC) in force at permit application.
  - b) Local planning and zoning requirements.
  - c) Local authorities' rules and regulations.
  
- 3) **Plans:** The plans shall include the following illustrating KHC Minimum Design Standard compliance. All submitted plans shall be the final set.
  - a) Foundation Plan at a readable Scale shall include all typical, porches, decks, carport, walks and driveways. This may be split into multiple pages if necessary.
  - b) Floor Plan shall be at a readable Scale and include window and door locations and dimensions.
  - c) Plans shall indicate whether dimensions are from stud to stud, center to center, or finish wall to finish wall.
  - d) Plans shall include dimensions of bath vanity to determine design compliance.
  - e) Plans shall include dimensions for length and width for hallways eighteen inches (18") and longer in length.
  - f) Plans shall include bathroom dimensions illustrating design compliance.
  - g) Plans shall include Wall Section from bottom of footing up to and including roof with dimensions at readable scale.
  - h) Plans shall include the location and construction details of the required passive Radon system to be installed in the unit.
  - i) Plans shall include details on porch roofs and supporting structure.

- j) Plans shall include porch and deck details/sections with dimensions at readable scale. Include details on structural supports, floor joists, headers, girders, stair construction, guard rails, handrails.
- k) Plans shall include elevations of front, sides, and rear at readable scale to include roof slopes.
- l) Plans shall include site plan (if site specific). Include all porches, decks, carport, walks, and driveways with dimensions of setbacks at a readable scale.

**4) Specifications:** All submitted specifications shall be the final set.

- a) Submit a complete set of building and site specifications using the Construction Specifications Institute (CSI) MasterFormat for each home or a master set of specifications can be provided if labeled as “Master”. KHC Sample Specifications for Single Family Homes can be found at <https://www.kyhousing.org/Partners/Inspections-and-Compliance/Pages/Design-and-Construction.aspx>
- b) Any changes to approved plans and specifications shall be submitted to KHC for review and approval. A copy of approved plans and specifications shall be on site during construction and all inspections.
- c) Documentation from REScheck or other approved source that the building envelope meets or exceeds the 2021 International Energy Conservation Code (IECC), when KHC Minimum Design Standards apply. REScheck information, software and on-line training are available at <https://www.energycodes.gov/rescheck>

**5) Soil Treatment-Termite Protection:** An appropriate termite treatment of the property is required.

- a) The treatment shall be completed by a licensed exterminator.
- b) Documentation of the treatment applied and listing the certification / license number of the exterminator shall be provided to KHC.
- c) Provide a homeowner option to extend the treatment contract.

**6) Radon Reduction:** All KHC funded new construction units shall comply with KHC's Radon Testing and Mitigation Policy found at <https://www.kyhousing.org/Partners/Inspections-and-Compliance/Pages/Design-and-Construction.aspx>

a) A passive radon venting system is required to be installed in all KHC-funded single family new construction units to ensure all units are radon mitigation ready. The passive system shall include:

i) The passive system requires the Radon vent pipe to have a perforated collector installed under the poly sub-slab or in the crawl space then extended through the roof.

ii) The radon vent pipe shall pass through a heated portion of the structure and an accessible attic space or chase which will allow adequate working space to possibly install an inline fan.

iii) Electrical provisions shall be roughed in, in an accessible attic or chase, for possible future installation of an inline fan.

iv) The Radon vent stack shall be labeled in the crawl space/basement and in accessible attics.

**7) Energy Efficiency:** Documentation and/or calculations that the building envelope meets or exceeds the 2021 IECC requirements shall be provided from REScheck or other approved software or methodology.

a) **REScheck** is a US Department of Energy free download at: <http://www.energycodes.gov/rescheck/>

**8) Testing:** Building envelope tightness testing shall be completed in accordance with the 2021 IECC and reported to KHC. Testing shall verify compliance with the ventilation requirements of the current American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE 62.2) Standard for ventilation and acceptable indoor air quality or the current International Mechanical Code (IMC) as adopted by The Kentucky Department of Housing, Buildings and Construction (HBC).

a) **Diagnostic Testing** shall be reported by one of the following methods:

- i) Documentation from a licensed and certified Home Energy Rating System (HERS) rater.
- ii) Documentation from a Building Analyst, Energy Auditor, or Quality Control Inspector certified by the Building Performance Institute (BPI).
- iii) Documentation from a licensed Heating, Ventilation, and Air Conditioning (HVAC) contractor, qualified in pressure diagnostic testing of the duct systems and total air infiltration.
- iv) Documentation from a Weatherization Assistance Program (WAP) trained Dwelling Needs Evaluator (DNE).
- v) Other methods will be considered upon written request.

**9) Quality Assurance:** General Contractors and/or subcontractors shall furnish a written material and labor warranty on all units for a period not less than one (1) full year after occupancy.

**10) Unit Size Requirements:** The following minimum square foot measurements are required for different types of units. For purposes of this requirement, net square feet are the heated and cooled area of the unit.

- a) **One-bedroom and Efficiency units:** shall contain at least 600 net square feet
- b) **Two-bedroom units:** shall contain at least 800 net square feet
- c) **Three-bedroom units:** shall contain at least 1,000 net square feet
- d) **Four-bedroom units:** shall contain at least 1,100 net square feet.

**11) Modular (Factory Constructed) Homes:** Modular home builders shall conform to KHC Minimum Design Standards and provide documentation of factory Third Party inspections as well as complete KHC's MDS One and Two Family Dwellings Modular Inspection Checklist.

## Division 03: Concrete

### 1) Exterior Concrete:

- a) **All exterior concrete** shall have a minimum twenty-eight (28) day compressive strength of Four-Thousand pounds per square inch (4000 psi) and be entrained with five percent (5%) air.
- b) **Expansion-joint material** shall be half inch ( $\frac{1}{2}$ " ) thick asphalt-impregnated pre-molded fiber, American Society for Testing and Materials (ASTM) D1752. Follow American Concrete Institute (ACI) 318.
- c) **Concrete driveways and parking areas** shall be minimum four inches (4") thick.
- d) **Exterior concrete for walks, porches, and stoops** shall be minimum three and one half inches (3 1/2") thick.

### 2) Concrete Finishes:

- a) **Driveways and Walkways:** Provide a non-slip finish and provide one-quarter inch ( $\frac{1}{4}$ " ) per foot crown or two percent (2%) maximum cross slope in the direction of drainage.

## Division 04: Masonry

1) **Brick Veneer:** Shall be ASTM C 216, Type FBS, Grade SW, or equivalent.

2) **Artificial stone or brick:** Shall be installed to manufacturer's instructions.

## Division 05: Metals

- 1) **Steel Lintels**, when specified for openings in masonry walls, shall be primed and painted, or galvanized.
- 2) **Metal flashing** materials shall be corrosion resistant and minimum nominal thickness of nineteen-thousandths inch (0.019").
  - a) Corrosion resistant flashing in contact with pressure treated lumber, containing copper, shall not be aluminum material.

## Division 06: Wood, Plastics, and Composites

### 1) Wall Reinforcement:

- a) Wall reinforcement for the toilet, tub, and/or shower shall be installed centered thirty-three to thirty-six inches (33" to 36") above finished floor (AFF) and located behind and alongside these fixtures (where feasible) for bathrooms.
- b) Reinforcement materials shall be constructed of nominal two by ten (2" x 10") wood blocking, plywood, or other approved material capable of supporting installation of grab bars with loading of two-hundred pounds (200 lbs.) applied in any direction.
- c) Americans with Disability Act (ADA) compliant reinforced tubs may be used.

### 2) Stair Construction:

- a) **Exterior Stairs:** Primary exterior entrance stairs shall have risers not greater than seven inches (7") and a minimum tread depth of eleven inches (11").
  - i) **Exception:** If site constraints limit the size of the stairs, then the recipient may follow Section c) with KHC approval.
- b) **All Exterior Stairs:** Exterior stairs shall be a minimum of forty-two inches (42") wide. Handrails and guardrails may encroach up to four and half inches (4-1/2") either side on the required width.
- c) **All Interior Stairs:** All other stair construction shall meet the current Kentucky Residential Code regarding riser height and tread depth.

- 3) **Roof Pitch:** The minimum slope on all newly constructed roofs, except porch roofs, shall be four inch (4") vertical to twelve inch (12") horizontal.
  
- 4) **Wood Decking and Porches:** Construction of exterior wood decks shall meet current Kentucky Residential Code and/or the American Wood Council's Prescriptive Residential Wood Deck Construction Guide.
  - a) The Prescriptive Residential Wood Deck Construction Guide is available as a free download at: <https://web-media.awc.org/wp-content/uploads/2022/02/17210514/AWC-DCA62015-DeckGuide-1804.pdf>.
  
- 5) **Exterior Wood:** All exterior structural wood exposed to weathering shall consist of naturally durable hardwoods, composite materials suitable for exterior exposure, or pressure treated wood having a minimum preservative retention rate of twenty-five percent (25%) for above ground applications, and a minimum preservative retention rate of forty percent (40%) for all wood in contact with the ground.
  - a) All structural posts below grade shall have the factory treated end of the post below grade.

## Division 07: Thermal and Moisture Protection

- 1) **Weather Protection:** All exposed wood shall be protected from weathering by a minimum of one or more of the following materials or methods.
  - a) **Paint:** Cover with one coat primer and two coats of exterior enamel.
  - b) **Metal:** Nineteen-thousandths inch 0.019" minimum thickness aluminum, manufacturer's finish (coil stock).
  - c) **Naturally Durable Wood:** Redwood, Cedar, or other naturally durable woods may be exposed to weathering conditions without cladding or other protective coverings. Stain or sealing exposed wood is required.
  - d) **Composites:** Cement fiber board or other durable material may be used as approved by KHC.
  - e) **Pressure treated Lumber:** All pressure-treated wood shall have a minimum preservative retention rate of twenty-five percent (25%) for above ground

applications and a minimum preservative retention rate of forty percent (40%) for all wood in contact with the ground.

- 2) **Roof Covering:** Roof coverings shall be one of the following materials.
  - a) **Shingles:** Seal tab type over manufacturer recommended underlayment or better, with minimum twenty-five (25) year product warranty or better.
  - b) **Metal:** Twenty-nine (29) gauge minimum thickness galvalume or galvanized steel with manufacturer's finish installed over solid decking. Roof deck shall be covered with fifteen pound (15 lb.) felt or KHC approved underlayment. If purlin construction is used, then twenty-six (26) gauge minimum thickness aluminum or galvanized steel shall be used.
  
- 3) **Gutters and Downspouts:** All dwellings shall have gutters and downspouts and be appropriately designed per roof covering manufacturer with a minimum five inch (5") gutter and a minimum two inch by three inch (2"x 3") downspout.
  - a) All downspouts shall empty onto concrete or composite splash blocks or be piped to an appropriate location.
  - b) Downspouts shall not discharge directly onto sidewalks or other walking surfaces.
  
- 4) **Siding:** Exterior siding shall consist of one or more of the following materials or other materials approved by KHC.
  - a) **Composite:** Fiber cement siding, primed, with two-coat minimum finish or manufacturer's finish.
  - b) **Metal:** 26-gauge (0.0179 inches) minimum thickness aluminum or galvanized steel with manufacturer's finish.
  - c) **Vinyl:** Forty-two thousandths inch (0.042") minimum thickness, ultraviolet (UV) protected.
  - d) **Wood:** Cedar, redwood, or approved naturally durable wood stained or primed once with two (2) coat minimum finish.

- 5) Foundation Water-Management:** Exterior surface of foundation walls of basements & crawlspaces shall be finished as follows:
- a) For poured concrete, masonry, and insulated concrete forms, finish with damp-proofing coating.
- 6) Insulation:** The building thermal envelope shall be insulated to meet 2021 IECC, REScheck minimums, or better.

## **Division 08: Doors, Windows, and Glazing**

- 1) Exterior Doors:** Exterior Doors shall be one and three-quarters inch (1 ¾") thick, made of steel or other equally durable material, insulated unless of solid wood (not particleboard) and be appropriately finished as recommended by the manufacturer.
- a) **All entries** shall have a concrete, treated wood, or other hard surface exterior stoop, porch, or deck at a minimum of five foot by five foot (5' x 5').
  - b) **Primary Entry Door:**
    - i) The entry door threshold shall not project more than one-half inch (1/2") above the interior finished floor.
  - c) **Exterior door hardware:**
    - i) All entry doors shall be equipped with a brass plated, or other durable metal finished, key lock lever handle and deadbolt. (Sliding doors are exempt from lever requirement.)
    - ii) All Levers and hinges shall be metal with polished or brushed finish. Plastic levers are not acceptable.
- 2) Interior Doors:** Solid Wood, Composite or hollow core panel doors.
- a) **Interior Doorways:** All passage doors from room to room, including all bedroom doors and at least one bedroom closet door, in each bedroom, shall have a minimum net clear opening of thirty-two inches (32").

- b) **Interior Doors** shall be a minimum of one-and three-eighths (1  $\frac{3}{8}$ " ) thick.
- c) **Interior Door Hardware:** All interior doors shall be equipped with brass-plated, or other durable metal finished lever handles. (Sliding, bypass, and pocket doors are exempt from the lever handle requirement.)
  - i) All bedrooms and bathrooms shall be equipped with privacy locks.

## Division 09: Finishes

- 1) **Exterior Ceiling:** When using vinyl or aluminum material for porch ceilings, provide a rigid, solid backing such as Oriented Strand Board (OSB), plywood, or furring strips per manufacturer's instructions.
- 2) **Exterior Finishes:** Exterior building elements of the following materials shall be properly finished.
  - a) **Guardrails and Handrails:** All guardrails and handrails shall be constructed of any combination of treated lumber, approved naturally rot-resistant lumber, vinyl, metal, or composite materials. Materials shall be finished with a factory or field applied coating suitable for effective weather resistance.
  - b) **Fiber Cement Siding:** Shall be factory finished or be painted with at least two coats of exterior grade paint.
- 3) **Entry Door Floor Finish:** On the interior side of the entry door, there shall be an uncarpeted, finished floor area.
  - a) This area shall be no less than five foot by five foot (5' x 5').
- 4) **Finished Floor Treatments:** All interior floor finishes shall meet one or more of the following standards:
  - a) **Sheet Carpet:** Twenty five ounce (25 oz.) minimum, one hundred percent (100%) nylon. Other options include Berber type with blended fiber. In high traffic areas, thirty ounce (30 oz.) minimum is required.

- b) Carpet Padding:** Minimum seven-sixteenths inch (7/16") thick, six pound (6-lb.) re-bond polyurethane.
  - c) Sheet Vinyl:** Shall be minimum 10 mil (0.010 inches) wear layer.
    - i) Provide product adhesive and underlayment as recommended by the manufacturer.
    - ii) All sub surfaces shall be clean, dry, and appropriate temperature during installation.
    - iii) Vinyl sheet flooring shall conform to the requirements of ASTM F 1303, Type I.
  - d) Vinyl Tile:** Shall be Vinyl Composition Tile or other approved equal, 1/8" x 12" x 12".
    - i) Provide product adhesive and underlayment as recommended by the manufacturer.
    - ii) All sub surfaces shall be clean, dry, and appropriate temperature during installation.
    - iii) Follow manufacture's recommendation for pattern layout.
  - e) Wood Flooring:** Flooring shall be tongue and groove hardwood, factory finish or have a minimum of three coats site-applied, UV-protective polyurethane.
  - f) Other Flooring Products:** Ceramic tile and laminates shall be installed in accordance with manufacturer's specifications.
- 5) Interior Doors:** Interior doors shall be factory finished, painted, or stained as follows:
- a) Paint:** One coat factory or field applied primer, with two-coat satin or semi-gloss finish on all sides and faces.
  - b) Stain:** Stain or oil on all sides and faces, with three-coat varnish or polyurethane finish.
- 6) Moisture-Resistant Drywall:** Moisture-resistant gypsum board (commonly called "green board") or equivalent shall be used on all walls in the bathroom and within six feet in any direction of water sources, such as kitchen sink, icemaker line, next to water heater, and/or clothes washer.
- a) Water-resistant gypsum board or equivalent shall be provided behind any tub/shower unit located on an exterior wall.**

b) Water-resistant gypsum, when used on ceilings shall be rated for the span.

**7) Interior Wall Finishes:** Unless factory finished, all interior walls shall be covered with one prime coat and two coats flat or satin finish Low Volatile Organic Compounds (VOC) interior latex paint.

a) Low-VOC primer in the paint technology may be used in sufficient coats to thoroughly cover underlying colors.

b) Low-VOC Gloss and Semi-gloss finishes are acceptable for living rooms, bedrooms, hallways, and similar areas, however; the higher sheen of these paints may reveal unacceptable imperfections in the finished wall.

c) Use Low-VOC gloss, semi- gloss, or satin finish for bathrooms, laundry, and kitchens.

d) Primer and flat Low-VOC paint shall have less than 100 g/l and non-flat Low- VOC paint shall have less than 150 g/l.

## **Division 10: Specialties**

**1) Bath Accessories:** Dwelling unit bathrooms shall be equipped with the following:

a) A mirror twenty inches (20") wide by thirty inches (30") tall (minimum)

b) Wall hung toilet paper dispenser.

c) Towel Bar: Eighteen inches (18") minimum length.

d) Shower rod.

## **Division 11: Equipment**

**1) Supplied Appliances:**

a) Refrigerator: A refrigerator shall be provided in all units and shall be Energy Star qualified or approved equal.

b) Range: A range shall be provided in all units.

c) Dishwasher: A dishwasher, if provided, shall be Energy Star qualified or approved equal.

- d) Laundry: All homes shall be equipped with washer and dryer hookups.
  - i) Clothes Washers if provided, shall be Energy Star qualified or approved equal.
  - ii) All laundry facilities located above any habitable space shall be equipped with a properly installed washer overflow pan piped to carry the overflow into the drain/waste/vent (DWV), positive outside drain, or an approved floor drain.

## Division 12: Furnishings

- 1) **Cabinets and Drawers:** Cabinet fronts shall be made of solid wood (not particleboard); doors, drawers, and fronts shall be factory finished.
  - a) **Cabinet doors and drawers** shall incorporate milled edges for a hand hold or pulls or handles to aid in operating the door or drawer. Accessible pulls or handles are required in all accessible units.
  - b) **Cabinet ends** shall be finished with appropriate veneer.
  - c) **All cabinets** shall be tested for compliance and certified as complying with American National Standards Institute (ANSI) A161.1 standards. Each sink base and vanity base shall be marked with:
    - i) The manufacturer's name or registered trademark.
    - ii) The certifying entity's certification mark.
- 2) **Countertops:** Laminated countertops shall be molded with a minimum four inch (4") integrated splash where feasible, with finished ends and moisture sealed at the cut out for sink and above dishwasher area if applicable.
  - a) **Other appropriate materials** may be used such as ceramic, recycled glass, or similar as approved by consulting with the KHC Department of Design and Construction Review.
- 3) **Closet Storage/Accessories:** Clothes closets shall contain a twelve inch (12") deep shelf, including a coat rod. Shelves with integrated hangar hooks may also be used.

## Division 13: Special Construction

- 1) **Hallways:** All grade floor hallways shall have a net clear (finish wall to finish wall) opening width of forty two inches (42"). Definition of hallway is any passageway that is eighteen inches (18") or greater in depth.
  
- 2) **Bathroom & Bedroom:** All dwellings shall have a minimum of one (1) full bathroom, one (1) bedroom, and laundry located on the grade level.
  
- 3) **Entry Door:** The primary entry door shall meet the following requirements:
  - a) An exterior level platform with a minimum of five foot by five foot (5' x 5') clear floor space.
    - i) Structural and decorative supports may encroach the perimeter of the clear floor space.
    - ii) The five foot by five foot (5' x 5') platform shall be within a half inch (1/2") of the interior finished floor at the point of entrance.
    - iii) Threshold rise of maximum one and one-quarter inch (1-1/4") when approaching from the exterior platform.
  - b) The main entry shall have a roof over the entry area.
    - i) Only one entry is required to have a roof which shall cover at least a five foot by five foot (5' x 5') area.
  - c) Provide an interior five foot by five foot (5' x 5') clear floor space free of (constructed) obstructions such as walls or railings.
  
- 4) **Storage Areas:** Storage areas shall be provided by one of the following methods.
  - a) A **free-standing building** architecturally similar to the house.
    - i) All storage structures shall match or complement exterior building veneer of the primary structure and/or trim and have similar roof covering material.
      - **Example:** Wood buildings with T1-11, or equivalent plywood siding painted the same color as the siding or soffit of the primary structure are acceptable. The roof covering of the house is metal and the roof of the storage shed is similar in color and type.

- ii) The storage area shall be a minimum of twenty-five (25) square feet.
- iii) Prefabricated metal or plastic structures are prohibited.
- iv) Structures shall satisfy applicable building code requirements.

**b) Attached to the unit:** Exterior storage structures.

- i) Structures shall match exterior building veneer and/or trim and possess identical shingles.
- ii) Attached storage structures shall be finished with a minimum twenty (20) minute fire rated finish on all walls and ceiling.
- iii) Attached storage structures shall be provided with a switched light fixture.
- iv) Attached storage structures shall be provided with adequate natural ventilation within twelve (12") of the top and bottom of the wall to prevent buildup of hazardous or explosive fumes.

**c) Unfinished crawl space** for storage.

- i) Crawl space storage areas shall create an appropriately sized finished room with a concrete floor.
- ii) Crawl space storage areas shall be finished with a minimum 20-minute fire rated finish on all walls and ceiling.
- iii) Crawl space storage areas shall be provided with a switched light fixture.
- iv) Crawl space storage areas shall be provided with adequate natural or mechanical ventilation to prevent buildup of hazardous or explosive fumes.

**5) Ramps:** All newly constructed residential ramps shall meet the following specifications:

- a) Ramps shall be constructed a minimum of forty-two inches (42") wide. Handrails and guardrails may encroach up to four and one-half inches (4-1/2") either side on the required width.
- b) Ramps with a rise greater than six inches (6") shall have a handrail on both sides of ramp.
- c) Each landing shall have five foot (5') turning areas at change of direction.
- d) Ramps shall not exceed a maximum slope of 1:12 and a maximum rise of thirty inches (30").

- e)** Ramps and landings shall have a minimum load capacity of three hundred pounds (300 lbs.) concentrated load applied in a four (4) square inch area and a uniform live load of one-hundred pounds (100 lbs.) per square foot.
- f)** Ramps may be constructed of the following materials:
  - i)** Composite: Polyvinyl Chloride (PVC) or other with non-skid surface.
  - ii)** Concrete: with non-skid surface.
  - iii)** Metal: galvanized steel, or aluminum with non-skid surface.
  - iv)** Posts, guard and handrails shall meet the finish requirements of Division 6.
  - v)** Wood: All exposed exterior structural wood shall meet the finish requirements of Division 6. Use of chromated-copper-arsenate (CCA) treated lumber is prohibited.

## Division 22: Plumbing

1) **Minimum Grade of Fixtures:** The following specifications shall be the minimum size and/or quality for plumbing fixtures.

a) **Bathtub:** Tubs shall be sixty inches by thirty inches (60" x 30") minimum; made of fiberglass, acrylic, porcelain, or cultured marble.

b) **Shower:** Showers shall be thirty-six inches by thirty-six inches (36" x 36") or sixty inches by thirty inches (60" x 30") minimum; made of fiberglass, acrylic, ceramic, or cultured marble.

c) **Water Closets:** Water closets shall be maximum one and twenty-eight hundredths' Gallons Per Flush (1.28 GPF) and made of porcelain.

i) Toilets shall be centered per code from any sidewall finish.

ii) Toilets shall be centered a minimum eighteen inches (18") from any base cabinet, or tub.

d) **Faucets:** Single-lever faucets or ADA-compliant faucets shall be installed at all sinks, showers and tubs. Faucets containing plastic material for exterior housing are prohibited.

e) **Lavatories:** Sinks shall be fifteen inches (15") minimum diameter; made of fiberglass, acrylic, porcelain, or cultured marble.

i) A minimum of one lavatory located on grade level shall have a thirty by forty-eight inch (30" x 48") clear floor space. The clear floor space may be rotated or angled, depending upon approach and design. In a side approach, the forty-eight inch (48") dimension shall be parallel to the lavatory. In a forward approach, the forty-eight inch (48") dimension shall be perpendicular to the lavatory. The bowl shall be centered in either the thirty inch (30") or forty-eight inch (48") dimension. The clear area shall be free from all wall projections, tub, shower, toilet or the lavatory base. If a wall-hung, "breakaway-style" base or pedestal lavatory is used, the clear space may encroach a maximum of nineteen inches (19") underneath the base in a forward approach design.

ii) Where vanity tops sit against side or back wall, install a matching side/back splash.

2) **Water Supply Piping:** Water Supply Lines shall be of approved material.

- a) Installation in exterior walls or ceilings except for hose bibs is prohibited.
  - i) Where necessary to install water supply lines on an outside wall the lines may be stubbed up from the floor near the wall or other required location in the floor to serve the fixture.
- b) Lines located in all unconditioned crawl areas shall be insulated equal to or greater than R-3.

**3) Overflow Protection Accessories:** Water heaters located above any habitable space shall have an overflow pan properly plumbed into DWV, positive drain to exterior, or an approved floor drain.

**4) Water Heater Efficiency:**

- a) **Electric water heaters** shall have a minimum Energy Factor (EF) equal to or greater than two (2.0).
- b) **Gas fired water heaters** shall an EF equal to or greater than 0.67.
- c) **Instantaneous gas water heaters** shall have an EF equal to or greater than 0.82.
- d) A HERS rating of less than 62 will be an acceptable target to meet this requirement.

## **Division 23: Heating Ventilating and Air Conditioning**

**1) Heating Ventilating and Air Conditioning Equipment:** All Heating and Cooling equipment shall meet the following requirements:

- a) **Heat pump systems** shall have a minimum Seasonal Energy Efficiency Rating (SEER2) rating of 15.2 with a minimum Heating Seasonal Performance Factor (HSPF2) rating of 7.8.
- b) **Fuel oil, gas fired furnaces and boilers** shall have an Annual Fuel Utilization Efficiency (AFUE) equal to or greater than ninety-five percent (95%).
- c) **Central Air Conditioning** systems shall have a minimum SEER2 rating of 15.2
- d) **Electric-resistance-only** heat systems are prohibited.

- e) **Packaged Terminal Heat Pump (PTHP)** units shall have a minimum eleven Energy Efficiency Ratio (11 EER) rating and a minimum of three Coefficient of Performance (3.0 COP) rating.
  - f) Alternative HVAC systems may be considered for approval by KHC.
- 2) Duct Insulation:** All supply air, return air, and exhaust air ducts installed in unconditioned spaces shall be sealed and insulated with a minimum R-8 insulation wrap and installed free of restrictions.
- 3) Programmable Thermostats:** All HVAC systems shall be controlled by a programmable thermostat as required by Kentucky Residential Code.
- a) Thermostats shall be located on the floor of the home which contains the central living area.
  - b) Thermostats shall have a maximum height of forty-eight inches (48") to the top of the thermostat.
- 4) Range Hoods:** All dwelling units shall be equipped with an Energy Star qualified or approved equal, minimum one-hundred-fifty cubic feet per minute (150 CFM) range hood vented to the exterior. (A HERS rating of less than 62 will be an acceptable target to meet this requirement.)
- a) Use ducting sized and ducting material per manufacturer recommendation.
  - b) Exposed ducting is prohibited and where installed above cabinets, ducts shall have a finished cover.
  - c) In circumstances where whole house ventilation is provided by other means and a recirculating range hood is used, recirculation hoods shall be equipped with an activated charcoal filter.
- 5) Exhaust and Ceiling Paddle Fans:** All ventilation and paddle fans shall be Energy Star qualified or approved equal.

## **Division 26: Electrical**

- 1) **Common Area Lighting:** Luminaries shall be located at all entrances.
  
- 2) **Dwelling Unit Lighting:** Each room, hall, stair, and walk in closet shall have a minimum of one (1) switch-operated overhead light.
  - a) Kitchens shall include adequate switch-operated lighting over the cooking area, sink and the general or dining area.
  - b) Bathrooms shall be equipped with switch-operated lighting over the lavatory area and the general area.
  
- 3) **Electrical Device and Control Mounting heights:**
  - a) Light switches, fan switches, and thermostats shall have a maximum height of forty eight inches (48") to the top of the switch or thermostat.
  - b) Mounting heights or electrical outlets shall have minimum height of fifteen inches (15") AFF from the bottom outlet or a maximum height of forty-eight inches (48") from the top outlet. Note: If an outlet or switch is obstructed by a base cabinet or countertop, then the maximum height for a switch or outlet shall be forty-six inches (46") AFF.

## **Division 28: Electronic Safety and Security**

- 1) **Fire Detection and Alarm:** Installation of smoke alarms is required in all new construction projects.
  - a) Smoke alarms shall be Hardwired with a ten (10) year battery backup.
  - b) All local ordinances shall be observed.
  - c) Written manufacturer specifications for the proper installation of individual alarms shall be observed and maintained on site throughout construction.
    - i) Manufacturer's installation instructions for specific locations and other installation details shall be strictly observed.

ii) Individual smoke alarms shall be installed on all habitable floors, within all bedrooms, and hallways no more than eight (8) feet from any bedroom door within the dwelling unit.

2) **Carbon Monoxide Alarms:** Underwriters Laboratories (UL) listed carbon monoxide alarm(s) shall be installed outside each sleeping area no more than eight (8) feet from any bedroom door within the dwelling unit if the unit contains fuel burning appliances or has an attached garage. A combination Hardwired Smoke & Carbon Monoxide Detector with ten (10) year Battery Backup may be used.

3) **Security system controls:** If provided, security system controls shall be located on the floor of the home which contains the central living area.

## **Division 31: Earthwork**

1) **Final Grade:** Final grade shall be completed before final draw and before occupancy. Grade shall provide minimum six inch (6") in ten foot (10') [five percent (5%)] fall from the structure and divert surface drainage away from the structure to the nearest drainage easement or natural drain.

## Division 32: Exterior Improvements

### 1) Landscaping:

- a) **Turf:** All lawn areas shall be seeded with the seed variety, lime, and fertilizer, and covered with straw or straw-blanket, which is appropriate for soil conditions to establish a good lawn cover.
- b) **All slopes more than 33.3% (1:3)** shall receive sod or other approved erosion control materials which will enhance the establishment of a permanent ground cover.

### 2) Parking/Driveways: All units shall have a minimum of one paved or gravel parking space per unit.

- a) Homes located in a subdivision, required by zoning regulation or subdivision restrictions to have a paved driveway, shall have driveways provided by one of the following minimum standards.
  - i) **Asphalt parking/driveways:** Asphalt shall consist of a hot mix asphaltic concrete pavement, manufactured by plants and be placed a minimum of two inch (2") thick over a compacted four inch (4") crushed stone base.
  - ii) **Concrete parking/driveways:** Minimum concrete thickness shall be four inch (4") and placed over a minimum four inch (4") thick compacted crushed stone base.
  - iii) **Pervious concrete parking surfaces** shall be properly drained to prevent accumulation of water.
- b) **Gravel parking/driveways** shall be constructed with four inch (4") thick compacted crushed #57 or Dense-Grade-Aggregate (DGA) limestone gravel.
- c) **Exterior Access:** Access from the vehicular parking to the entry door shall be considered in the site design unless it is impractical to do so because of terrain or unusual characteristics of the site. The walkway from the parking area to the entry door shall be forty-two inch (42") wide and made of concrete, asphalt, wood or other hard surface material approved by KHC.
  - i) Provide a maximum two percent (2%) cross slope or a crown sloped to edges to allow proper drainage.

## **Division 33: Utilities Services**

- 1) **Availability:** Required building utility services shall be available before construction begins at the building site in sufficient size to adequately provide sufficient power, flow, volume, pressure, and drainage during and after construction to allow for safe, dependable service of construction equipment, appliances, and fixtures.
  - a) **Septic or sewage treatment systems** may be constructed onsite as construction progresses and shall be capable of performing intended functions prior to occupancy.
  - b) **Provide temporary onsite sanitary facilities during construction.**