



**Footing Inspection Checklist 2018 KRC 2015 IRC (Rev 10-22-2019)**  
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These requirements come from the following adopted codes and ordinances in Hardin County: *2018 Kentucky Residential Code, Second Edition, April 2019*; Hardin County, KY Development Guidance System Zoning Ordinance; and the Storm Water Management Ordinances. Refer to these codes for more detailed information as needed.

**Disclaimer:** This listing of code sections involving building or utilities that involve this subject is not complete but only covers the sections most often questioned. Refer to the *2018 Kentucky Residential Code for One- and Two-Family Dwellings* book for information not listed in this handout and for other requirements of the building code. Additionally read all of the most current Kentucky Amendments.

At the request of owners and builders, the following is a basic listing of requirements the building inspector looks for at time of Footing Inspection. Owners and builders should use this checklist to be sure they are ready for the inspection and prior to calling to request the footing inspection.

1. The bottom of the footing dug at 24 inches below finished grade minimum. backfill is to be added to obtain the 24 inch depth, the footing has been minimum of 12 inches into solid subgrade soil. (R403.1.4). Measure the frost-protection depth (MFPD) from the proposed finish grade to the bottom footing. (Table R403.1.4)
2. Frost Protection. If solid rock is exposed during the preparation of the prepared site grade then the footing and foundation systems may bear on rock and shall not be required to extend below the frost line specified in R403.1.4.(KY Amendments)
3. The "finished prepared site grade" shall be defined as the area exposed clearing, grubbing, topsoil removal, and grading of the building pad, stable ground. R403.1.4.(KY Amendments)
4. Footings and foundation systems may be formed on top of the finished prepared site grade of the cut side of the excavation when the excavation cut exceeds 28 inches (711 mm) and the MFPD may be achieved by backfilling the cut slope. R403.1.4.(KY Amendments) See Figure 3-1.
5. Remove all loose dirt fill and debris from the interior of the footing. Compacted footing soil is free of vegetation, roots and branches. The footing is clear of water. (R403.1.4 Amendments)
6. The footing is not bearing on frozen soil. (R403.1.4.1 Frost Protection).
7. The width of the footing is no less than 12 inches (if one-story) and no less than 16 inches (if two-story) and as established by Table R403.1(1) and Figure R403.1(1). Spread footings shall be at least 6 inches thick. Footing projections, (t), shall be at least 2 inches. See (Figure R403.1 (1)).
8. The top surface of the footings is level. The bottom surface of the footings shall not have a slope exceeding one unit vertical in 10 units horizontal (10 percent slope). Footings shall be stepped where it is necessary to change the elevation of the top surface of the footings or where the slope of the bottom surface of the footings will exceed one unit vertical in 10 units horizontal. (10-percent slope). (R403.1.5)
9. Place all footings on undisturbed natural soils or engineered fill. (R403.1).
10. **Termite pretreatment is required** prior to backfilling the foundation. documentation of this termite treatment is required prior to requesting a final inspection.

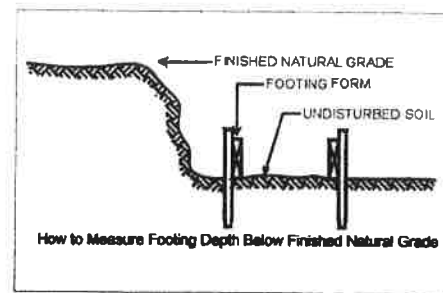
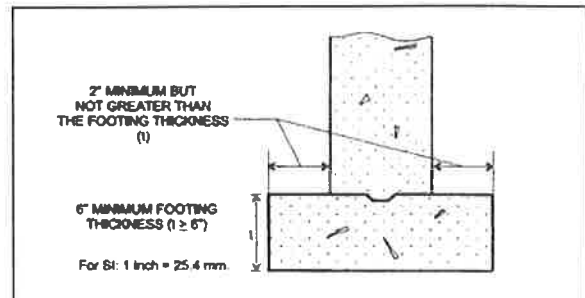


Figure 3-1

Where dug a minimum of the finished solid Table after exposing



(Figure R403.1 (1)). Footing Thickness & Projections

Written

Footings: Depth, Protection, and other related information:

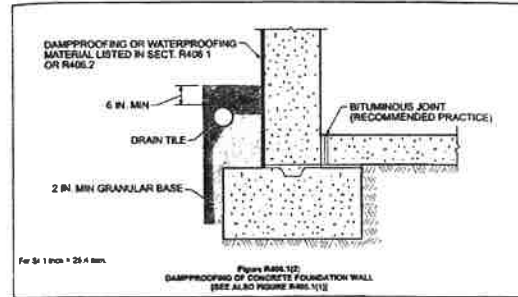
11. **Frost protection** (R403.1.4.1) Except where otherwise protected from frost, foundation walls, piers, and other permanent supports of buildings and structures shall be protected from frost by one or more of the following methods:
  - a. Extended below the frost line specified in Table R301.2 (1). [24" deep in Hardin Co. & Larue Co.]
  - b. Constructed in accordance with Section R403.3, frost protected shallow foundations;
  - c. Constructed in accordance with ASCE 32; or
  - d. Erected on solid rock.

**Exceptions:**

1. Frost Protection of **freestanding accessory structures with an area of 600 square feet or less**, of light-framed construction, with an eave height of 10 feet or less shall not be required.
2. Frost Protection of **freestanding accessory structures with an area of 400 square feet or less**, of *other than* light-framed construction, with an eave height of 10 feet or less shall not be required.
3. Decks not supported by a dwelling need not be provided with footings that extend below the frost line. (R403.1.4.1 Exception 3) *Note: These decks with no footings cannot be attached to the dwelling.*

[Footings shall not bear on frozen soil unless the frozen condition is permanent.]

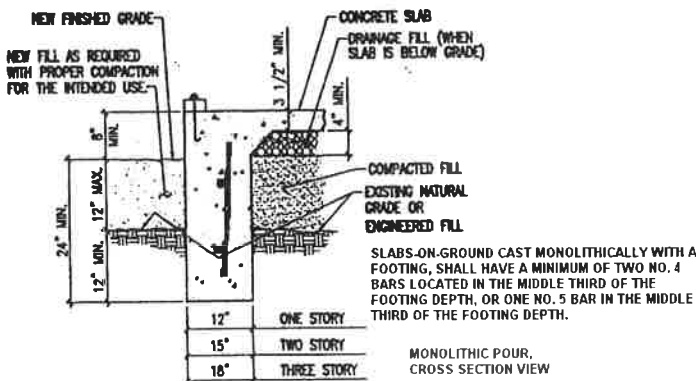
12. At least two runs of ½" dia. #4 reinforcing steel rebar shall be placed in the bottom 1/3 of the footing and be placed on steel rebar supports. Ends are to be overlapped and tied together with wire; minimum concrete coverage shall be 3" around the steel. (Optional in Seismic Design Category, "B", Hardin County, Larue County, (R301.2.(2))
13. Concrete shall have a minimum compressive strength of 2500 psi or better, and as established in Table R402.2, Weathering Potential "Severe". (Applies to basement walls, footings and foundations, and other concrete not exposed to the weather). Concrete in these locations may be subject to freezing and thawing during construction shall be air-entrained concrete. Concrete total air content (percent by volume of concrete) shall be not less than 5% or more than 7%. (Table R402.2).
14. The foundation drainage system has been installed. Drains shall be installed around all concrete or masonry foundations that retain earth enclose habitable or usable spaces located below grade, and shall be installed per the requirements of (R405.1). These foundation drains shall be covered with an *approved* filter membrane or the filter membrane shall cover the washed gravel or crushed rock covering the drain.
15. Footings on or adjacent to slopes. The placement of buildings on or adjacent to slopes steeper than 1 unit vertical in 3 units horizontal (33.3 percent slope) shall conform to (Sections R403.1.7.1 through R403.1.7.4).
16. Wood Sill plate bolting to concrete/masonry = ½" diameter bolts at 6' o.c. and within 12" but not less than 7 bolt diameters (typically 3.5") from corner, and from the ends of each plate, bolt shall have a 7" embedment. (R404.3) Attached to plate with washer & nut tightened down to plate. (R403.1.6 and R602.11).
17. Concrete foundation walls shall be designed and constructed with rebar reinforcing in compliance with Table R404.1.2 (8). (Page 28, 29, 30 of 2018 KRC Amendments).
18. Basement floor slabs shall be installed a minimum of 3 ½" thick. (Figure R404.1.5.(2))
19. Slabs on ground with turned-down footings shall have a minimum of one #4 bar at the top and one #4 at the bottom of the footing. Two total minimum. (*This is in the vertical concrete foundation area of the tumdown footing.*) (R403.1.3.2)



that  
and

**NOTE:**

1. ENGINEERED FILL SHALL BE PLACED AND COMPACTED PER ENGINEER'S SPECIFICATION AND UNDER THEIR CONTROL.
2. BOTTOM OF EXTERIOR WALL, COLUMN AND PORCH FOOTINGS SHALL BE LOCATED AT LEAST 24" BELOW FINISHED GRADE.
3. FOOTING SHALL NOT BE PLACED ON EXISTING VEGETATION OR ORGANIC FILL AND SHALL BE FOUNDED AT LEAST 12" BELOW EXISTING NATURAL GRADE OR ENGINEERED FILL.
4. FOR ANCHOR BOLT REQUIREMENTS SEE R403.1.6 FOUNDATION ANCHORAGE. BOLTS SHALL BE AT LEAST 1/2 IN. DIA. AND EXTEND A MINIMUM OF 7 INCHES INTO MASONRY OR CONCRETE. A NUT & WASHER ON EACH BOLT SHALL BE TIGHTENED TO THE PLATE. BOLT SPACING MAX. OF 6 FEET.



**Bibliography**

- Page 1, Figure 3-1, Origin: 2003 IRC, Performing Residential Building Inspections, Page 22  
 Page 2, Footing Thickness & Projections, Origin: 2006 IRC Performing Residential Plan Reviews, Page 89  
 Page 2, Figure R406.1(2), Origin: 2006 IRC Code and Commentary, Volume 1, Page 4-45  
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