

April 1, 2009 Changes to the Uniform Dwelling Code

The following is a summary of changes in the revised Uniform Dwelling Code (UDC), SPS 320-325, **effective April 1, 2009**. The UDC is generally applicable to one- and two-family dwellings originally built after June 1, 1980, except for energy requirements that began December 1, 1978. (Municipalities may adopt the UDC or some other code to apply to alterations and additions to older dwellings.) These changes have been reviewed and approved by the Dwelling Code Council, a governor-appointed advisory council composed of builders, designers, code officials, labor representatives, subcontractors and others. Refer to the official code for details of the code. That code will be free online after it is revised electronically, <http://www.dsps.wi.gov/sb/sb-divcodeslisting.html>, or can be purchased from state Document Sales, <http://dsps.wi.gov/SB/SB-DivCodesObtain.html>

These code changes are applicable to permits applied for on, or after, **April 1, 2009**. Previously-permitted ongoing projects and existing dwellings not undergoing changes are **not** subject to these code revisions. To be a valid permit application, any prerequisite approvals such as zoning or sanitary must first be obtained and proper building plans and specifications must be provided to the municipal building inspector. For further information, contact the local UDC inspector: (See a PDF report for all Wisconsin municipalities and their status as to enforcement of the UDC. This includes note of the contracted inspection agency, if there is state enforcement (some agencies have not yet returned the signed contracts). There is an instruction page for abbreviations used in the report.

In April 2009, the Safety and Buildings Division will be offering for sale a "UDC Commentary" with explanatory and illustrative material for users to better understand the code. Check the website www.dsps.wi.gov/SB/SB-UDCProgram.html for ordering information.

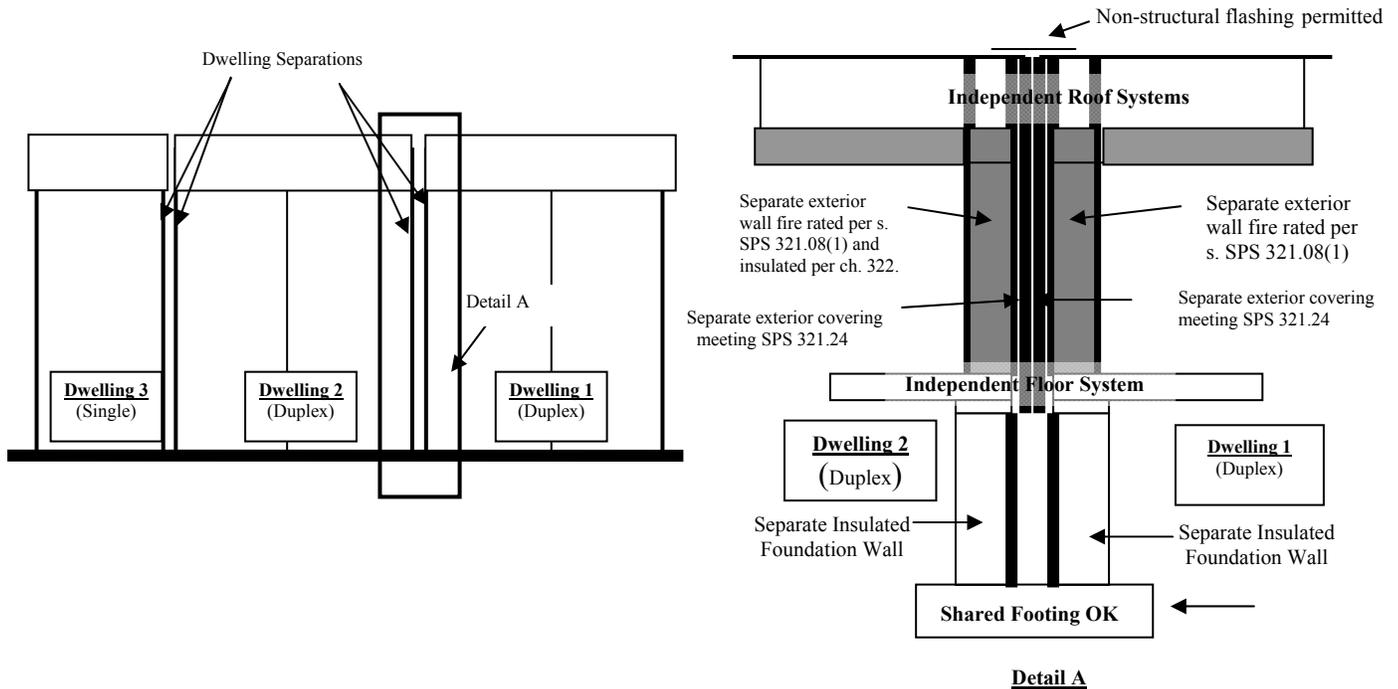
Notice of New Credentialing Requirement - The Safety and Buildings Division has adopted an emergency rule with an effective date of July 1, 2009 that requires most construction contractors and subcontractors to hold a registration issued by our agency, **unless the business already holds a business credential issued by S&B, such as the Dwelling Contractor credential**. For further information: www.dsps.wi.gov/SB/SB-BuildingContractorProgram.html

Please share this information with customers, staff, suppliers, and subcontractors.

"Major" code changes are bolded.

Chapter SPS 320 – Administration and Enforcement

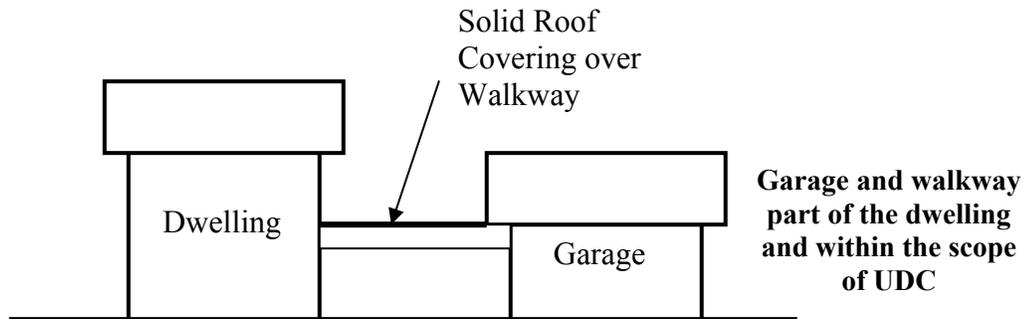
1. **320.02(1)(h)** – Clarifies that the UDC applies to adjacent, unattached structures that serve as an exit from a UDC-covered dwelling. Note that this is not applicable past the point where the occupant has a code-compliant egress path to exterior grade.
2. 320.04(5)(a) – Clarifies that the applicability of the UDC to a new foundation provided to an existing dwelling is dependent on the original date of construction of the dwelling being after June 1, 1980.
3. 320.04(5)(b) – Clarifies that the current UDC applies to an existing foundation upon which a new dwelling is placed.
4. **320.04(6)** – Clarifies that in order for two dwellings to be considered separate buildings, they may not share more than footings and each dwelling shall have facing walls with their own code-compliant insulation, exterior finish and fire-rating.



5. 320.05(6) – Clarifies that only those farm buildings not used for habitation are exempt from the UDC.
6. **320.05(9)** - Exempts from the UDC, those motor homes and recreational vehicles that are, or have been, titled by the Wisconsin Department of Transportation (DOT). Note that in order to be titled by DOT, recreational vehicles require a towbar (hitch), chassis, axles and wheels for transportation. At the installation site, the chassis and axles shall remain on the unit, with the towbar (hitch) and wheels left at the site. Otherwise the unit, including a so-called park model, is subject to the UDC.

Additionally, any additions, with a roof, to a motor home or recreational vehicle are considered dwellings that shall comply with the UDC.

7. **320.065 - Codifies the Safety and Buildings Division's authority to monitor general municipal enforcement and to audit municipal erosion control enforcement. The division may review the municipal building inspection records required by SPS 320.10(6) and report on their findings to the municipality.**
8. **320.07(5m) – Defines "attached", as applied to two structures, when there is either a continuous weatherproof roof, continuous structural floor system or continuous foundation between them.**



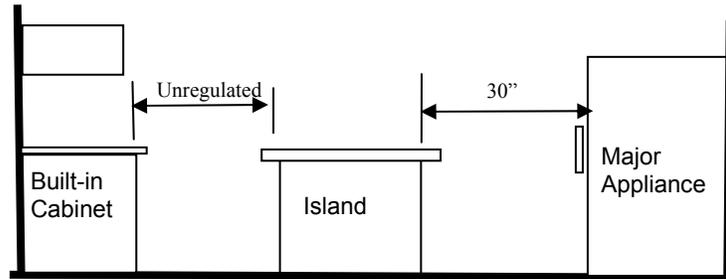
9. 320.07(18) – Defines "common use area" to be kitchens, hallways, basements, garages and all habitable rooms (bedrooms, dining rooms and living rooms) . Common use areas are required by SPS 321.03(8) to have at least a 30" net clear opening or a 32" door leaf leading to it.
10. 320.07(53f) – Creates new definition of "modular home" to replace the previous "manufactured dwelling" term. This applies to factory-built homes that comply with the UDC, rather than the federal HUD standards that are applicable to "manufactured homes".
11. 320.09(5)(b) – Requires that a heating distribution layout be provided on the floor plans. This includes the location of the supply and return ducts in each space provided.
12. **320.09(5)(b) – Requires that the location and construction details of the braced wall lines be shown on the floor plans.**
13. **320.10(b)3. – Clarifies that construction may proceed without inspection after two business days after the day of inspection request. Note that as before, the work must be in a completed, ready-for-inspection condition at the time of inspection request or at a stated later time, in which case, the clock begins at that later time.**
14. **320.10(3)(c) – Requires an inspection after excavation and placement of any footing forms, required footing reinforcement or required drain tile bleeders, but prior to placing of any concrete.**
15. **320.10(3)(d) – Requires that any required foundation reinforcement shall be inspected prior to being covered, including, window headers, reinforced masonry walls and foundation stepdowns. This is not applicable to reinforcement that is non-required reinforcement, such as for shrinkage crack control. Note that some short-span foundation stepdowns, where the foundation is unsupported by the earth for only several feet may not require reinforcement based on arching action.**

16. **320.10(3)(f)1.a. – Requires a basement floor inspection after installation of the vapor retarder and any required drain tiles or granular materials, but prior to pouring. Any underfloor plumbing, electrical or HVAC work or insulation would also need to be inspected prior to pour as required for rough or other inspections of those elements.**
17. 320.10(3)(h)2. – Clarifies that occupancy may take place without a final UDC inspection after the fifth business day following the day of inspection request. Note that this ability to occupy without a UDC inspection does not waive any other pre-occupancy requirements imposed by local zoning, municipal utilities or other similar regulations.
18. **320.21(1)(intro) – Clarifies appeals to the Safety and Buildings Division of municipal actions shall first have exhausted municipal appeal procedures in order for the division to order the reversal of such a local action.**
19. 320.24 – Updates a number of adopted national technical standards to current editions.

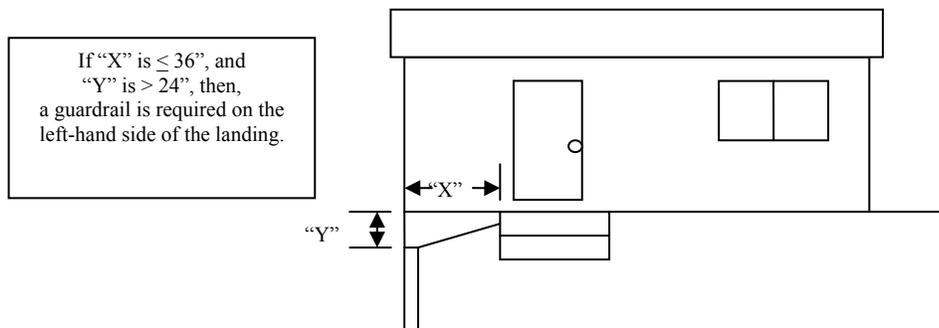
Chapter 321 – Construction Standards

20. 321.02(3)(a) Clarifies that all aspects of construction, including design and analysis, shall follow the applicable national standards.
21. 321.02(3)(b)3. Incorporates language from the UDC Commentary permitting the use of specified default grades for ungraded lumber for certain types of lumber uses. For example, the code default for studs is No. 3 and No. 3 is better than stud grade required by code. Therefore, an ungraded 2 by 6 may be used as a wall stud.
22. 321.02(3)(e). Replaces reference from Concrete Masonry Handbook for Architects, Engineers, Builders to masonry standards ACI 530 and 530.1 as adopted in Table 320.24-1.
23. 321.02(3)(g) Addresses log home construction with two adopted national standards. (The ICC standard is generally applicable to log structures, while the ILBA standard applies only to construction using handcrafted, interlocking, scribe fit construction.)
24. 321.03(1)(b) Clarifies that at least one exit must discharge to grade and cannot pass through a garage. (At least one additional exit is required, but it can be a balcony or go through a garage, etc.)
25. 321.03(3)(b) Allows a single exit and egress window exiting from a small third floor non-sleeping "lookout room".
26. 321.03(3)(c) Adds the option of sprinkler protection in lieu of a second exit from a third floor.
27. **321.03(6)(e)5. Adds specifications for ladders in basement exit areaways (window wells).**
28. 321.035(1)(c)1. Clarifies that minimum doorway width applies to access to all fixtures of at least one full bathroom. This includes the door of the bedroom if the bathroom is located within the bedroom.
29. 321.035(1)(c)2. Requires that if there is a full bathroom on the first floor, then it shall have the minimum doorway widths per this section.
30. 231.035(2) Clarifies that you may infringe 4.5 inches on both sides into the 36" minimum width of a hallway. Higher than that, infringements are unlimited.

31. **321.035(3)** Adds a requirement for 30 inches of clearance between major appliances and islands, walls or built-in cabinets. This is measured to the face of the cabinets, not including countertop nosing.

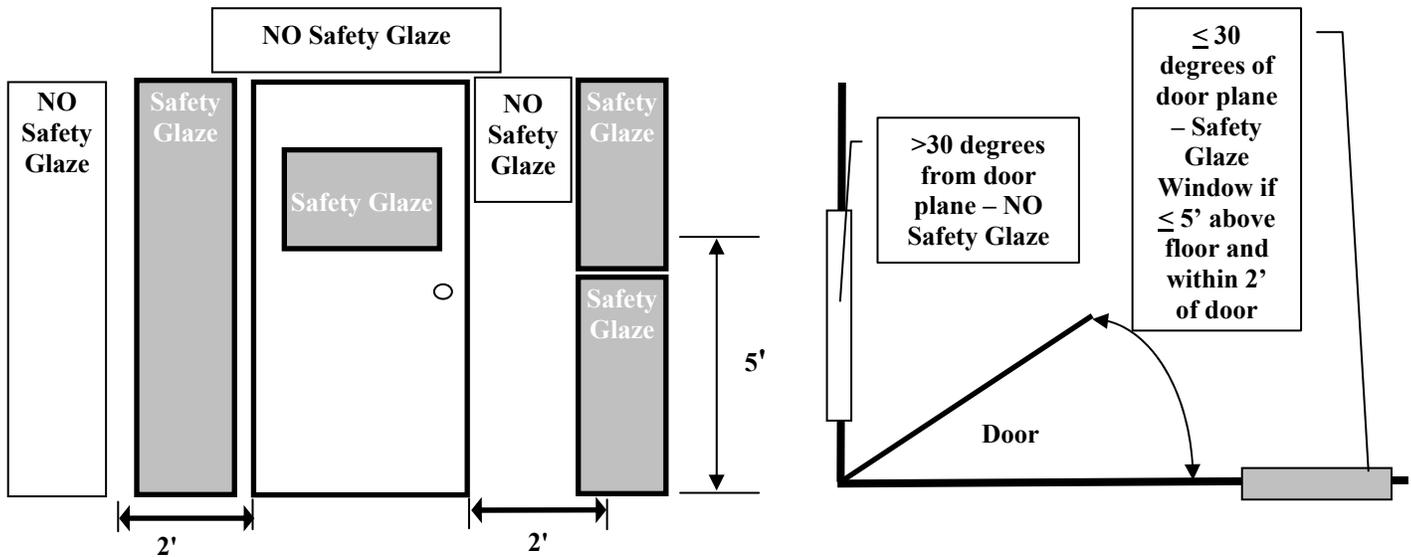


32. 321.04(2)(c) Clarifies that a winder tread cannot be inserted into a straight stairway unless there is a change in direction.
33. **321.04(2)(e)1.** Changes the stairway uniformity requirement so the largest tread and riser measurements cannot vary from the smallest measurements by more than 3/8 inch within a flight. (A flight is a series of steps with landings at both ends.)
34. 321.04(2)(g) Requires the walking surface of stair treads and landings to be free of excessive lips and protrusions.
35. 321.04(3)(a)2. Adds a note to clarify that on an open-sided stairway, a handrail at 30-38 inches above the nosing meets the height requirements for a guardrail.
36. 321.04(3)(a)3.c. Requires non-rigid (cable and rope) handrail and guardrail infill to be strung with maximum openings of 3.5 inches to address the flexibility of the infill.
37. **321.04(3)(c)1.b.** Clarifies that guardrails, including structural infill, are required where insect screens are the only means of fall protection.
38. **321.04(3)(c)1.c.** Clarifies that the 24 inch vertical drop-off measurement that triggers guardrails is taken from the lowest point within 3 feet horizontally of the edge of the landing, deck, porch, etc.

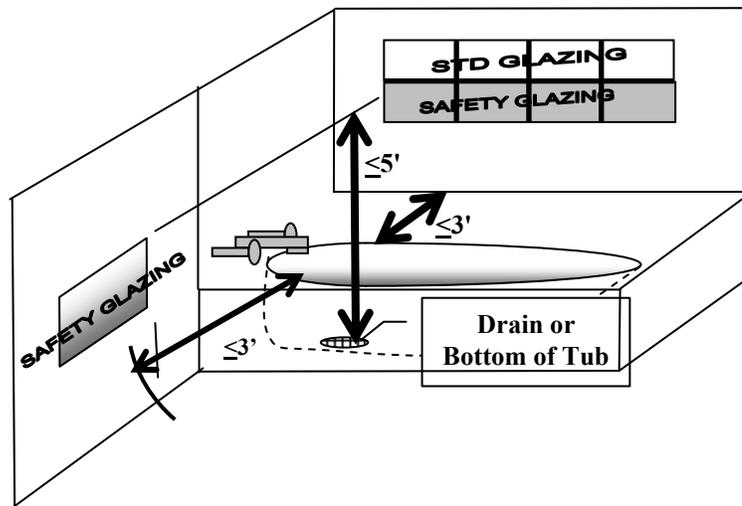


39. **321.05(3) (intro)** Modifies this section to reference the latest standard for safety glazing – CPSC 16 CFR, part 1201, which means that most wired glass will not meet safety glazing standards.

40. 321.05 (3) (a) Modifies the safety glazing requirements so that it is required for a sidelight or glazing that is within 2 feet horizontally of the door and is within 5 feet of the floor and is in a plane within 30 degrees of the plane of the closed door.

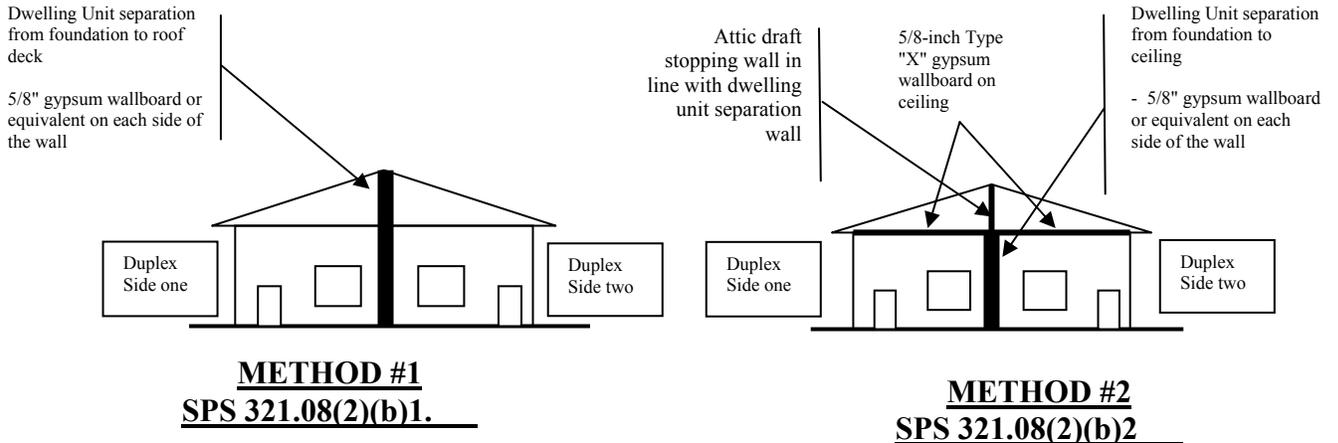


41. 321.05(3)(b) Expands the safety glazing requirement beyond the "tub or shower enclosure" for any glazing within 3 feet of the inner rim of the tub or shower and 5 feet vertically from the drain.



42. 321.08(1) (intro. & Table) Changes fire separation requirements for zero-lot line dwellings to only require one shared wall rated for the equivalent of one hour.
43. 321.08(1)(a)4. Repeals the statement that adjoining garage units are not required to be separated from each other. (In most cases this will still be acceptable, except where the dwelling unit separation in a duplex is placed between adjoining garage units.)

44. 321.08(1)(c) Adds requirements for glazing to be fire-rating listed when installed in the wall between an attached garage and a dwelling.
45. 321.08(1)(d)1. Allows attic access openings in garages to be protected with a material with a finish rating of 20 minutes or more. As before, it shall have hinges and a latch but not necessarily a self-closer.
46. 321.08(2)(b) Clarifies different types of attic separation.

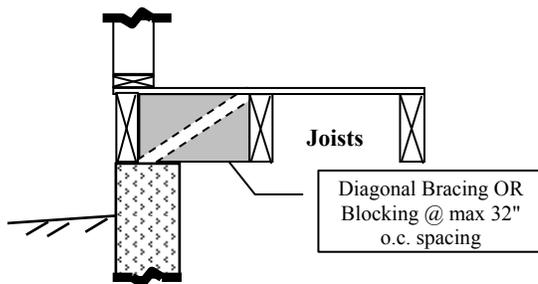


47. **321.08(2)(d) Strengthens the wall separation requirements between dwelling units to typically 5/8" drywall on both sides of the wall.**
48. 321.08(f) The list of acceptable attic draft stopping materials has been changed to include 3/8-inch wood structural panels or 1/2-inch gypsum board. Fiberglass insulation is no longer listed as an acceptable attic draft stopping material.
49. 321.09(1)(b) Clarifies that hallway smoke detectors have to be within 21 feet of the centerlines of the served bedroom doors and have to be in the exit path.
50. 231.09(2) Allows non-interconnected, battery-powered smoke detectors for dwellings with no electrical service.
51. 321.095 Requires automatic fire sprinklers, if installed, to meet the NFPA 13D standard and adds a state amendment allowing partial coverage, unless NFPA 13R sprinklers are provided per SPS 321.03(3)(c)1.
52. 321.10(1) to (4) Adds and clarifies requirements for treated wood.
53. **321.10(5) Adds requirements for corrosion resistance of fasteners used with treated wood.**

54. 321.15(2)(a) Expands the note in this section to clarify the properties of an unstable soil for purposes of unformed footings.

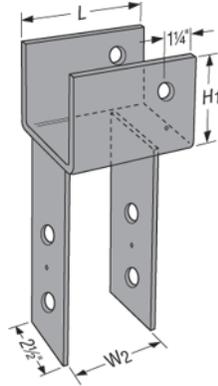


55. 321.16. Adds an exception to allow the use of a frost protected shallow foundation that is installed in accordance with ASCE -32 as adopted in table SPS 320.24-5. The division also accepts designs in accordance with the U.S. HUD “Design Guide for Frost-Protected Shallow Foundations” available for free download from www.huduser.org/publications/destech/desguide.html .
56. **321.17(1)(b)2. Adds a requirement that if a partial drain tile system is provided, it must have a means to discharge water from the tile or pipe to a sump pit, a crock or daylight.**
57. **321.17(3)(d)1. Adds an exception for not providing exterior drain tiles around foundations serving walkout basements.**
58. 321.18(1)(d)2.b. Includes floor joist bridging, along with solid blocking, as a bracing means for foundation walls that are parallel with the floor joists.

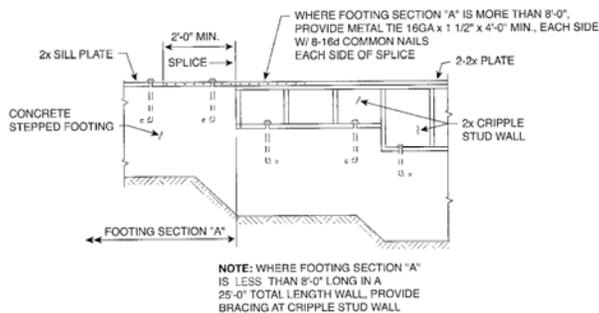


59. **321.18(3)(a). Requires an additional coat of dampproofing material over portland cement parging option or equivalent system for masonry foundation walls.**
60. 321.18(4). Modifies this section to require wood foundations be designed to the latest AF&PA standard as adopted in Table 320.24-2.
61. 321.18(4). Adds a note that permits the use of the Permanent Wood Foundations Design and Construction Guide published by the Southern Forest Products Association. This may be downloaded at no charge at www.southernpine.com

62. **321.22(3)(d).** Clarifies that lateral restraint with a saddle or rigid connection is required for beams that pass over columns if the beam is > 11.25” deep or is not restrained from rotation on both ends. Also see SPS 321.25(6)(a)4. for positive connection requirements between all beams and columns. This requirement also applies to decks that serve the dwelling.



63. 321.22(8)(b). Removes Table 321.22-C relating to plywood underlayment.
64. **321.24(2).** Codifies the requirement that doors and windows be in place prior to installation of insulation during construction and adds that at least roof underlayment must also be in place.
65. 321.24(3)(c). Adds minimum lap of 6” for vertical and 2” for horizontal flashing and minimum specifications for the sealant on the lap.
66. **321.24(4).** Adds minimum uniform requirements for a water resistive barrier on the exterior walls of wood or metal frame construction from the highest point to the bottom of the exterior weather-resistant covering, including gable ends. Manufacturers of exterior coverings may have additional requirements.
67. **321.25(6)(a)4.** Adds a new section requiring a positive connection between columns and beams by means of clips, straps or saddles. If a rigid connection is not required by SPS 321.22 (3) (d), then clips, straps, screws or nails may be used to meet the positive connection requirement of this section.
68. 321.25 (7). Adds a new section for the sizing and bracing of foundation cripple walls.



69. **321.25(8) and (9).** Expands bracing requirement for dwellings. In addition to requiring bracing at the corners, bracing will be required at no more than 25 foot intervals in the braced wall line and braced wall lines will need to be provided and spaced no more than 35 feet o.c. An exception is provided to permit the walls to be spaced up to 50 feet

- o.c. This section also includes a note permitting the alternative use of wall bracing provisions, s. R602.10, of the 2009 International Residential Code (IRC).**
70. 321.26(1). Specifies that cold weather work on masonry walls must conform to adopted standard ACI 530.1.
 71. 321.26(3)(a) and Tables 321.26-B1 and B. Adopts the requirements of ASTM C-270 for mortar properties.
 72. 321.26(5)(a). Repeals and recreates this section to require corbels to be constructed in accordance with ACI 530.
 73. **321.26(7)(a)2. Adds a requirement that a minimum one-inch air space be provided between masonry veneer and the sheathing unless a manufactured offset material is used.**
 74. **321.26(7)(a)5. Adds a requirement that ventilation openings be provided at the top of masonry veneer walls.**
 75. **321.26(7)(a)6. Adds a requirement that studs and sheathing behind masonry veneer shall be covered with a water-resistive barrier meeting SPS 321.24(4).**
 76. **321.26(7)(a)7. Adds a requirement that masonry or brick veneer be placed above grade unless other provisions specified in this section are met.**
 77. 321.26(7)(c). Adds a requirement that masonry veneers be anchored in accordance with ACI 530 and ACI 30.1.
 78. **321.26(8). Adds new flashing and weep hole requirements including: Open joint or weep hole spacing reduced from 3 feet to 2 feet. More clearly specifies the required location and type of flashing. Requires that rope or similar material used to form the weep hole be removed as soon as the mortar sets.**
 79. 321.26(12). Modifies this section requiring joints in masonry construction to be constructed in accordance with ACI 530.1.
 80. 321.27. Adds a requirement, 321.27(1)(b), that joist and rafter tables in the appendix are valid for roof with a minimum slope of 3 in 12. Lesser slopes require engineering analysis or shall be provided with a ridge beam. Anchorage requirements of old 21.02(1)(c)2. and 3 relocated to 321.27(3)(b).
 81. **321.28(6). After reroofing, codifies a maximum of 2 layers of roofing.**
 82. 321.28(7)(d)3. Increases the flashing height requirements at the intersection of crickets and chimneys from 4 inches to 6 inches.
 83. 321.40(2). Adds a minimum thickness of 4 inches for solid concrete cap blocks for manufactured home piers.

Chapter SPS 322 – Energy Conservation

84. 322.01 – Clarifies that UDC energy provisions apply to equipment efficiency in all UDC dwellings, even those with renewable energy and that vapor retarder and moisture control apply when any insulation is present.
85. **322.20(6) – Requires that a permanent certificate of insulation R-values and fenestration U-factors be provided on or next to the electrical distribution panel. This should be in place at the time of the insulation inspection.**
86. 322.21(2) – Adds cold-in-winter side windwash protection of air-permeable wall insulation where exterior sheathing is not present, thus keeping insulation in place and maintaining insulation R-value.

87. 322.30 – Requires that a garage be insulated if heated, unless limited to 50° maximum temperature.
88. **322.31(1) and (3) – Adds new Tables 322.31-1 and 322.31-4 with revised R-values and U-factors. Use Table 322.31-1 if higher efficiency HVAC equipment is used and Table 322.31-4, with higher insulation levels, if normal efficiency HVAC equipment is used. Insulation is now required under the entire slab where the slab is heated.**
89. **322.31(2)(b) – Specifies edition of the REScheck software program to be version 4.1.0 or newer, as earlier versions were based on less insulation and lower energy compliance standards than the current code.**
90. 322.35 – Reduces envelope insulation requirements for thermally isolated sunrooms.
91. 322.36 – Exempts small amounts of fenestrations from minimum insulation requirements.
92. 322.37(4) – Adds maximum air leakage rates for recessed lighting.
93. 322.38 – Prohibits interior vapor retarders of 0.1 perm or less on concrete or masonry basement walls.
94. 322.39 – Vented attics and condition attics are clarified. Dampers that close are needed on outdoor intakes & exhausts for when the ventilation system is not operating. Clothes dryers shall be vented outside the structure.
95. 322.42 – Requires duct system insulation of R-8 for areas outside of envelope.
96. 322.45 – Adds air conditioners and heat pumps minimum efficiencies.
97. 322.52 – Adds new documentation provisions, including the inspection checklist of the components of that system, for simulated performance software programs.

Chapter SPS 323 – HVAC Standards

98. 323.02(3)(a)2. – Adds requirement for back-draft dampers on exterior intakes & exhausts.
99. 323.04(5) – Adds section regarding water heaters used for space heating purposes.
100. 323.08 – Table 323.08-B clarifies support of rigid ducts, including hanger options.
101. 323.09(1)(b) – Requires permanent access to the volume duct dampers for adjustment at a later time.

Chapter SPS 324 – Electrical Standards

102. 2008 NEC will become effective in Wisconsin March 1, 2009. The requirements for the arc-fault circuit-interrupter protection and tamper-resistant receptacles in dwelling units have a delayed effective date of January 1, 2010.
103. **If footing or foundation rebar is provided, it must be used as a grounding means for the electrical service. Foundation installers should provide grounding means such as an exposed rebar stub.**

Chapter SPS 325 – Plumbing Standards

104. New plumbing code effective March 1, 2009