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**UNIFORM DWELLING CODE COUNCIL MEETING
Room 121A, 1400 East Washington Avenue, Madison
Contact: Jeff Grothman (608) 266-2112
February 13, 2015**

The following agenda describes the issues that the Council plans to consider at the meeting. At the time of the meeting, items may be removed from the agenda. Please consult the resulting meeting minutes for a description of the recommendations of the Council.

AGENDA

10:00 A.M.

CALL TO ORDER – ROLL CALL

- A. Adoption of Agenda (1)**
- B. Approval of Minutes of May 12, 2014 (2-5)**
- C. Department Update**
- D. Election of Chairperson and Vice Chairperson**
- E. Overview of Proposed Draft Rules Based on the July 2014 Dwelling Code Council Report with Council Discussion (6-46)**
 - 1) Discussion of Natural Light Requirements
 - 2) Discussion of Make-Up Air Requirements
- F. Review Prescriptive Deck Standards Draft Rules**
- G. Public Comments**
- H. Future Business**
- I. Adjournment**

**UNIFORM DWELLING COUNCIL
MEETING MINUTES
May 12, 2014**

PRESENT: Amy Bliss, Philip Borchardt, Michael Coello, David Dolan-Wallace, Steven Gryboski, Jesse Jerabek, Peter Krabbe, Benjamin Lukens, Mike Marthaler, Brian Wert, Mary Schroeder

STAFF: Jeff Weigand, Policy Director; Sam Rockweiler, Rules Coordinator; Duane Hubeler, UDC Engineering Consultant; and Daniel Agne, Bureau Assistant

CALL TO ORDER

Michael Coello, Chair, called the meeting to order at 9:02 A.M. A quorum of ten (10) members was confirmed.

ADOPTION OF AGENDA

MOTION: Brian Wert moved, seconded by Steven Gryboski, to adopt the agenda as published. Motion carried unanimously.

APPROVAL OF MINUTES

Corrections:

- Philip Borchardt abstained from voting in the second motion under “Code Topics from Brian Wert”
- In the second motion under “Code Topics from Brian Wert” – change “sediment trap” to “sediment trap/basket”

MOTION: Jesse Jerabek moved, seconded by Amy Bliss, to approve the minutes of April 9, 2014 as corrected. Motion carried unanimously.

PRESENTATION ON INTERIOR USE OF SOLID-FUEL-FIRED WATER-HEATING APPLIANCES

Mary Schroeder joined the meeting at 9:12 A.M.

Jason Cullotta, Wisconsin Manufacturers and Commerce, and T.J. Morice, Marth Wood Shaving Supply, Inc., appeared before the Council to make a presentation on solid-fuel-fired water heating appliances used for space heating.

Warren Malwitz, Northwest Manufacturing, Inc., appeared before the Council via telephone.

Amy Bliss left the meeting at 9:33 A.M.

MOTION: Brian Wert moved, seconded by Philip Borchardt, to add to the Act 23 Report an intent to pursue approval of non-pressurized solid-fuel-fired water heating appliances for space heating for use in residential settings, pursuant to SPS 323. Motion carried unanimously.

ITEMS DEFERRED DURING PREVIOUS COUNCIL MEETINGS:

FLASHING WHERE MASONRY INTERSECTS A ROOF, WITH INPUT FROM THE INTERNATIONAL MASONRY INSTITUTE

MOTION: Mike Marthaler moved, seconded by Mary Schroeder, to add to the Act 23 Report a requirement for metal step flashing in SPS 321.24(3), such that the metal step flashing extends past the vertical wall flashing at an outside corner by a minimum of one-half inch. Motion carried unanimously.

MOTION: Steven Gryboski moved, seconded by Mary Schroeder, to add to the Act 23 Report an intent to address, at a future time, flashings where walls and masonry meet, requiring materials to be flashed on the exterior of the product and not behind, to address any other type of connection between dissimilar materials in SPS 321.24(3), and to address areas where kick-out flashings may be required. Motion carried unanimously.

MATCHING THE SCOPE OF THE UDC UP TO THE SCOPE OF THE COMMERCIAL BUILDING CODE

Amy Bliss re-joined the meeting at 11:40 A.M.

MOTION: Brian Wert moved, seconded by Philip Borchardt, to adopt revisions to SPS 320.02, as presented at the May 12, 2014 meeting, for inclusion in the Act 23 Report. Motion carried unanimously.

Mary Schroder abstained from voting in the above matter.

ALTERNATE MATERIALS AND STANDARDS

MOTION: Jesse Jerabek moved, seconded by Philip Borchardt, to adopt revisions to SPS 321.02, as presented at the May 12, 2014 meeting, with the addition of a provision for approval using engineering analysis or manufacturer specifications, for inclusion in the Act 23 Report. Motion carried unanimously.

GUARDRAILS, HANDRAILS, AND STAIRS

MOTION: Mary Schroeder moved, seconded by Jesse Jerabek, to strike the definition of “Steps,” and to define “Stair” in SPS 320.07(67) as “a unit consisting of one or more risers,” for inclusion in the Act 23 Report. Motion carried unanimously.

MOTION: Mary Schroeder moved, seconded by Amy Bliss, to request Department Staff revise SPS 320.07 to remove references to “Steps,” and to clarify definitions of “Stairs” and “Stairways,” and where handrails and guardrails are required, for inclusion in the Act 23 Report. Motion carried unanimously.

CEILING HEIGHTS

MOTION: Jesse Jerabek moved, seconded by Philip Borchardt, to adopt revisions to SPS 321.06, as presented at the May 12, 2014 meeting, and to add a paragraph (6) to address showers, and to revise paragraph (5) to include “rear- or side-walls,” for inclusion in the Act 23 Report. Motion carried unanimously.

SILL PLATES OVERHANGING FOUNDATION WALLS

MOTION: Jesse Jerabek moved, seconded by Mary Schroeder, to adopt revisions to SPS 321.22, as presented at the May 12, 2014 meeting, and to clarify the definition of “nominal thickness” as “the most narrow dimension,” for inclusion in the Act 23 Report. Motion carried unanimously.

VAPOR RETARDERS FOR WALLS WITH SPRAY-APPLIED FOAM

MOTION: Brian Wert moved, seconded by David Dolan-Wallace, to request Department staff revise SPS 322.38(2)(c)4. to “no vapor retarder is required over cavities where at least 50% of the required R-value is provided by spray-applied closed-cell foam, or spray-applied open-cell foam with appropriate Perm rating,” and to request Department staff research and determine the appropriate Perm rating, for inclusion in the Act 23 Report. Motion carried unanimously.

DISCUSS AND CONSIDER MEANS-OF-EGRESS ISSUES COMPILED BY INDUSTRY SERVICES STAFF

Steven Gryboski left the meeting at 1:37 P.M.

MOTION: Philip Borchardt moved, seconded by Jesse Jerabek, to revise SPS 321.03 to clarify that both exits from the second floor may discharge to the first floor, and that the second exit may discharge to a balcony and/or a deck, for inclusion in the Act 23 Report. Motion carried unanimously.

MOTION: Brian Wert moved, seconded by David Dolan-Wallace, to revise SPS 321.03 to clarify that exits may not discharge to enclosed courtyards, for inclusion in the Act 23 Report. Motion carried unanimously.

MOTION: Mary Schroeder moved, seconded by Jesse Jerabek, to revise SPS 321.03 to clarify that egress windows may be used as second exits from the second floor, regardless of the presence or absence of bedrooms, for inclusion in the Act 23 Report. Motion carried unanimously.

MOTION: Mary Schroeder moved, seconded by Brian Wert, to revise SPS 321.03 to clarify that there is no height requirement for egress windows on the second floor. Motion carried unanimously.

MOTION: Brian Wert moved, seconded by Mike Marthaler, to revise SPS 321.03 to clarify that egress windows may exit onto a roof. Motion carried unanimously.

MOTION: Mary Schroeder moved, seconded by Amy Bliss, to revise SPS 321.03(2)(c) to clarify that when the second floor is the lowest floor in a dwelling unit, windows may be used as second exits, and that exits cannot go through other commercial or residential units, for inclusion in the Act 23 Report. Motion carried unanimously.

MOTION: Brian Wert moved, seconded by Jesse Jerabek, to revise SPS 321.03 to clarify that egress windows under decks or porches must provide a clear path of at least 36 inches in height and 36 inches in width to a yard or open space, for inclusion in the Act 23 Report. Motion carried unanimously.

MOTION: Mary Schroeder moved, seconded by Mike Marthaler, to revise SPS 321.03 to clarify that an egress window may be used as a second exit from the first floor, for inclusion in the Act 23 Report. Motion carried unanimously.

MOTION: Jesse Jerabek moved, seconded by Philip Borchardt, to revise SPS 321.03(1)(a) to clarify that both exit doors accessible from the first floor are not required to exit directly to grade. Motion carried unanimously.

DISCUSS AND CONSIDER OTHER COUNCIL ISSUES AND CONCERNS – INCLUDING SPS 322.21 (3), PROTECTION OF FOAM INSULATION ON FOUNDATION WALLS

MOTION: Mary Schroeder moved, seconded by Mike Marthaler, to revise SPS 322.21(3) to change paragraph (b) to “a minimum of 2 inches below grade,” with an exception for no protection under brick ledges, for inclusion in the Act 23 Report. Motion carried.

Brian Wert and Philip Borchardt voted no in the above matter.

Jesse Jerabek abstained from voting in the above matter.

FUTURE BUSINESS

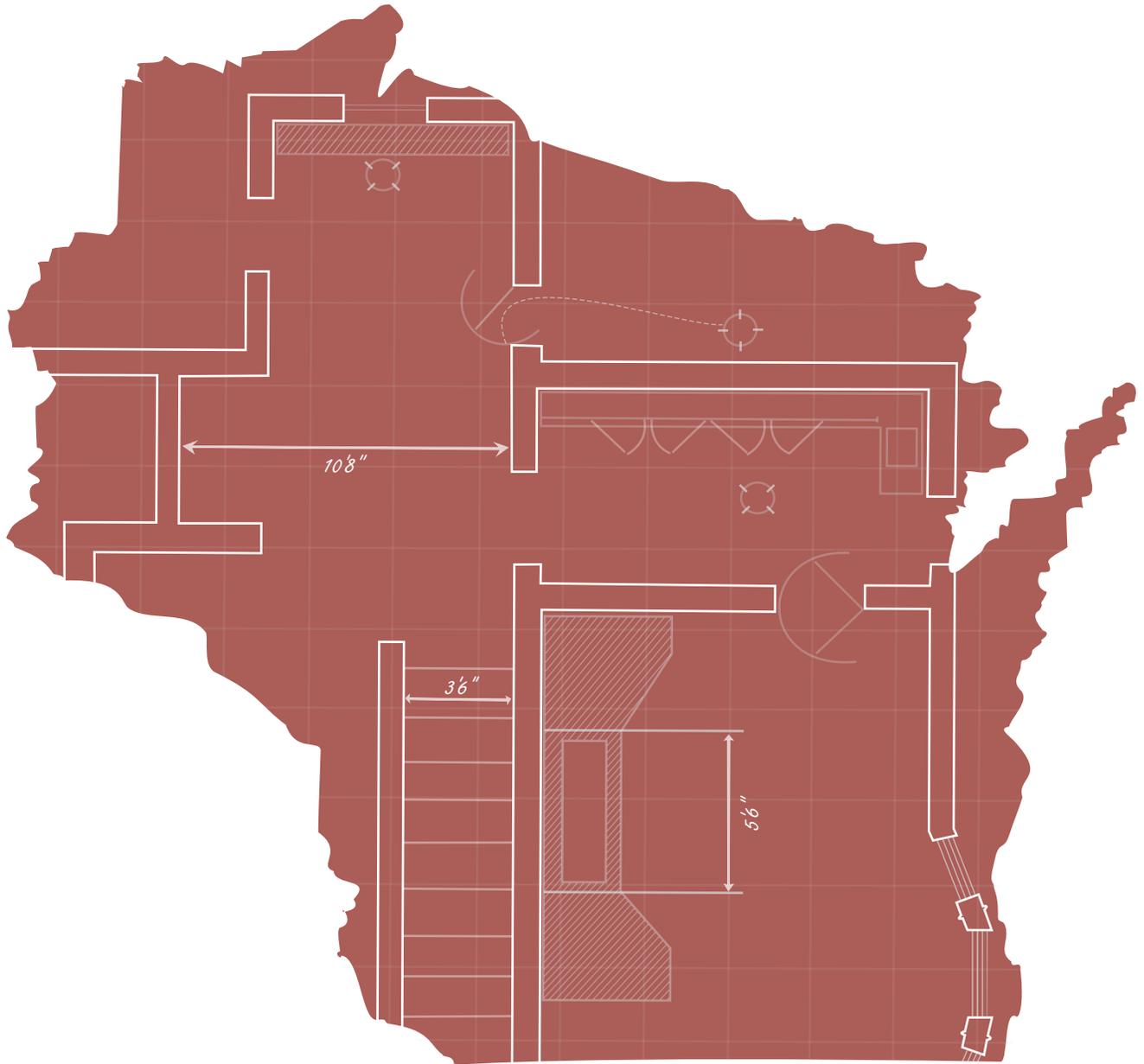
MOTION: Mary Schroeder moved, seconded by Brian Wert, that the Council recommends to the Electrical Advisory Committee addressing sump-pump electrical outlets, tamper-resistant exterior outlets, tamper-resistant outlets generally, and the arc fault. Motion carried unanimously.

Philip Borchardt abstained from voting in the above matter.

ADJOURNMENT

MOTION: Amy Bliss moved, seconded by Mary Schroeder, to adjourn the meeting. Motion carried unanimously.

The meeting adjourned at 3:01 P.M.



WISCONSIN DWELLING CODE COUNCIL

DEPARTMENT OF SAFETY AND
PROFESSIONAL SERVICES

One- and Two-Family Dwelling Code Review and Recommendations

July 2014

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INTRODUCTION

The Dwelling Code Council that is created under section 15.407 (10) of the Wisconsin Statutes advises the Department of Safety and Professional Services on construction standards for one- and two-family dwellings. These standards are contained in the *Wisconsin Uniform Dwelling Code*, which consists of chapters SPS 320 to 325 of the Wisconsin Administrative Code.

Appointed by the Governor for two-year staggered terms, each council member represents at least one of the following interest groups: building-trade labor organizations; certified building inspectors who are employed by local units of government; building contractors actively engaged in on-site construction of one- and two-family dwellings; manufacturers, retailers, or installers of manufactured or modular one- and two-family dwellings; architects, engineers, or designers who are registered under chapter 443 of the Statutes and who are actively engaged in the design or evaluation of one- and two-family dwellings; the construction-material supply industry; remodeling contractors actively engaged in the remodeling of one- and two-family dwellings; persons with disabilities, as defined in section 106.50 (1m) (g) of the Statutes; and fire-prevention professionals. An employee of the Department, as designated by the Secretary of the Department, serves as the secretary of the Dwelling Code Council but does not act as a member of the Council.

In 2013 and the first half of 2014, the Dwelling Code Council met 9 times and developed several recommendations for updating the *Wisconsin Uniform Dwelling Code*, based in part on comparisons to the 2009 and 2012 editions of the *International Residential Code*[®] (IRC[®]). This report, as required by section 101.62 of the Statutes, describes the Council's review of the *Code* during those meetings, and presents the Council's recommendations in the same sequence as the sections in chapters SPS 320 to 325. Included with many of the recommendations is an estimate of whether implementing the recommendation will result in cost savings (CS), time saving (TS), or easier use of the Code (EU) – along with reference to any other benefits, such as improvement of structural integrity, improvement of safety, or expansion of options.

SPS 320: ADMINISTRATION AND ENFORCEMENT

REVIEW

1. Small day-care, foster-home, and home-occupation operations.
2. Definitions for guardrail and handrail.
3. Definition of stairway.
4. Definition of stair and stairs.
5. Wall-bracing details on construction plans.
6. Standards adopted by reference.

RECOMMENDATIONS

1. Expand section SPS 320.02 (1) to clarify that chapters SPS 320 to 325 apply to one- and two-family dwellings which accommodate small day-care, foster-home, and home-occupation operations – and which are excluded from the Wisconsin Commercial Building Code.
2. Define “guardrail” to mean a barrier erected to prevent a person from falling to a lower level. Define “handrail” to mean a horizontal or sloping rail intended for grasping by a hand, for guidance or support.
3. Revise the definition of “stairway” in SPS 320.07 (66) to refer to one or more risers rather than one or more steps.
4. Expand the definition of “stairway” in SPS 320.07 (66) to apply the same meaning to “stair” and “stairs,” which are used in place of “stairway” in several places in chapters SPS 320 to 325.
5. Replace the requirement in section SPS 320.09 (5) (b) 2. d. for showing braced wall lines on construction plans with instead requiring a Legend that details the wall-bracing method and the lengths or number of braced wall panels – and where more than one circumscribed rectangle is used, requiring definition of them (CS, TS, EU, and provides clarification).
6. Update each of the standards that are adopted in SPS 320.24 (2), to their current editions; and adopt any new standards that would be helpful (CS, TS, EU, and reflects current engineering practices).

SPS 321: CONSTRUCTION STANDARDS

REVIEW

1. Fastening of building components.
2. Alternate materials and standards.
3. Exits to enclosed courtyards.
4. Second exit from the first floor.
5. Exits from a second floor.
6. Windows used for exiting.
7. Exits where the second floor is the lowest floor level in a dwelling unit.
8. Exits from a basement or ground floor that is used for sleeping.
9. Sliding-door openings.
10. Stairway clear width at and below a handrail.
11. Winder steps.
12. Handrails versus guardrails.
13. Baluster spacing on a stairway.
14. Openings in non-rigid guardrail material.
15. Stairway handrail height.
16. Exterior landings.
17. Guardrails for window wells, egress wells, and retaining walls.
18. Guardrails for ramps.
19. Safety glazing.
20. Room areas with a ceiling height of less than 5 feet.
21. Ceiling heights in bathrooms and other rooms that are not included in the definition of habitable room.

22. Fire-rated construction of an exterior wall for a garage adjacent to another structure.
23. Interconnection of smoke alarms.
24. Wood siding or sheathing in contact with concrete or masonry and within 6 inches of final grade.
25. Drainage of exterior grade and impervious surfaces away from a dwelling.
26. Frost protection for a ramp or landing.
27. Lateral support for a foundation wall.
28. Bridging for a wood-framed floor.
29. Sill and bottom plates on foundation walls.
30. Decks serving an exit.
31. Flashing where a roof intersects with an upper-lying head wall and rake wall.
32. Flashing where a roof intersects with upper-lying masonry.
33. Flashing where a roof eave intersects with a sidewall.
34. Wood-stud heights of more than 10 feet.
35. Wall bracing.
36. Basement sidewalls that provide wall bracing.
37. Floor levels in attics, relating to wall bracing.

RECOMMENDATIONS

1. Update the fasteners which are required by SPS 321.02 (1) (d) and which are listed in the SPS 320 to 325 Appendix, to match the fasteners which are required by Tables R602.3(1) and R802.5.1(9) in the 2012 edition of the IRC (provides consistency with current technology and products).
2. Expand 321.02 to clarify that materials or standards which are equivalent to those listed in subsection (3) can be used to carry the design loads in subsection (1), and merge the text from SPS 320.02 (5) relating to innovative dwellings with this expanded text.
3. Revise SPS 321.03 to clarify that exits may not discharge to enclosed courtyards.
4. Revise SPS 321.03 (1) (a) and (h) to allow using an egress window as a second exit from the first floor of any dwelling unit, provided each bedroom on the floor has one.
5. Revise SPS 321.03 (2) (a) to clarify that both exits from the second floor may discharge to the first floor, and that the second exit may discharge to a balcony or a deck.
6. Revise SPS 321.03 (2) (b) to clarify that egress windows may be used as second exits from the second floor regardless of whether the floor has any bedrooms.
7. Revise SPS 321.03 (2) (c) to clarify that where the second floor is the lowest floor in a dwelling unit, windows may be used as second exits, and that exits cannot go through other commercial or residential units on the first floor.
8. Revise SPS 321.03 (5) (b) to clarify that egress windows under decks or porches must discharge through a clear path of at least 36 inches in height and 36 inches in width, to a yard or open space.
9. Revise SPS 321.03 (7) (a) 4. to decrease the 30-inch-wide clear opening for a sliding exit door to 29 inches (CS, TS, EU).
10. Revise SPS 321.04 (2) (a) 1. to make it consistent with the last sentence of IRC section R311.7.1, which lists a minimum clear width of 31½ inches for a handrail on one side and 27 inches for a handrail on both sides (EU and provides clarification).
11. Revise SPS 321.04 (2) (c) 4. a. to no longer require a tread depth at any place on a winder step to match the tread depth of the rectangular steps in the stairway – and to instead require a

minimum depth of 9 inches at a distance of 12 inches from the narrow end of the tread or from the inside face of the wall, baluster or spindle at that end. Also consider whether the terminology for winder steps should more closely match the terminology in the IRC, such as the references there to the walk line on winder steps.

12. Clarify SPS 321.04 (3) (a) by separating the handrail requirements from the guardrail requirements (EU).
13. Update SPS 321.04 (3) (a) 3. by increasing the allowed opening between balusters on a stairway, from 4 inches to 4 3/8 inches, as allowed by exception 2 in IRC section R312.1.3 (CS and increases uniformity).
14. Expand SPS 321.04 (3) (a) 3. to require applying up to 4 pounds of force in determining whether a 4-inch-diameter sphere (4 3/8-inch, if recommendation 13 is adopted) will pass through an opening in any non-rigid material in a guardrail (provides clarification).
15. Revise SPS 321.04 (3) (b) 1. to include the handrail-height protrusions that are allowed by the two exceptions in IRC section R311.7.8.1 (CS, TS, EU, and provides clarification).
16. Revise SPS 321.04 (3) (c) to exempt window wells, egress wells, and retaining walls from the guardrail requirements.
17. Revise SPS 321.04 (4) (b) and (c) to differentiate exterior landings from interior landings, and to then require sloping an exterior landing to drain away from the stairs or a door, with a pitch of up to ¼ inch per foot (improves structural integrity and safety).
18. Revise SPS 321.045 (4) (c) to not require guardrails for ramps having a walking surface that is less than 24 inches above adjacent grade – if a toe-kick or side rail is provided to 4 inches above the walking surface, and a mid-rail is provided between there and the handrail (CS, TS, EU).
19. Revise SPS 321.05 (3) to recognize use of ANSI Z97.1 as a test standard for safety glazing that is required in locations which are not regulated by the US Consumer Product Safety Commission, review whether this glazing can be safely omitted in any of these locations, and consolidate the safety-glazing requirements from SPS 321.04 (3) (a) 4. c. into this section (CS, EU, and updates the rules to current national standards).
20. Revise SPS 321.06 to not count any area with a height of less than 5 feet when calculating whether at least 50% of a habitable room or corridor has a height of at least 7 feet. Also revise SPS 321.05 (1) and (2) to likewise not count this area when calculating the needed amount of natural light and ventilation for the room (CS, EU, provides clarification, and expands options).
21. Revise SPS 321.06 to allow any room to have a ceiling height of less than 7 feet if at least 50% of the room's floor area has a ceiling height of at least 7 feet; and allow reducing the ceiling height above a bathtub, shower stall, lavatory, or toilet – independent of the 50 percent limit – wherever the usual headroom is not needed, provided the fixtures are still useable for their intended purpose.
22. Revise Table 321.08 to require at least a 10-foot separation between any unprotected opening in the wall and the other structure (EU and provides clarification).
23. Update SPS 321.09 (2) (a) to allow the interconnection between smoke alarms to be wireless (CS, TS, EU, recognizes current technology, and expands options).
24. Revise SPS 321.10 (2) (f) to no longer require preservative treatment or natural decay resistance for wood siding or wood sheathing which is in contact with concrete or masonry and which is from 2 to 6 inches above final exterior grade (provides clarification, improves structural integrity, and expands longevity of buildings).
25. Expand SPS 321.12 to address (1) drainage of impervious surfaces, by applying equivalent-performance-type criteria; and (2) alternate drainage methods for both pervious and impervious

- surfaces, where a distance of 10 feet away from the dwelling is not available (provides clarification, expands options, and improves structural integrity).
26. Exempt exterior ramps from the requirement for differential-frost-movement isolation in SPS 321.15 (1) (e), apply the frost-protection requirements in SPS 321.16 (1) (a) to landings instead of to ramps, and exempt ramp posts from those frost-protection requirements. However, where a ramp abuts a frost-protected stoop or landing, that end of the ramp needs similar frost-protected support, such as bearing onto the stoop or landing, so that a tripping hazard is not created. (CS, TS, EU)
 27. Expand SPS 321.18 (1) (c) 3. a. to convey the strength that is provided by the specified anchor bolts, in order to aid use of alternates which provide equivalent strength (CS, EU, provides clarification, and expands options).
 28. Add a Note to SPS 321.22 (9) (a) explaining that the required bridging for a wood-framed floor applies to 2X10 or deeper joists (EU, provides clarification, and makes the requirement understandable).
 29. Expand SPS 321.22 and 321.25 to allow sill and bottom plates to partially extend beyond the load-bearing surface of a foundation wall in order to put the exterior surface of an upper-lying wall flush with or beyond the exterior surface of insulation that is placed on the outside of the foundation wall.
 30. Comprehensively update and clarify the requirements for decks, in SPS 321.225, preferably through an emergency rule that precedes a permanent rule (TS, EU, and improves structural integrity).
 31. For a roof that intersects with an upper-lying head wall and rake wall, such as where a dormer is provided, expand SPS 321.24 (3) to require the metal flashing along the rake wall to extend down the roof at least one-half inch past the vertical flashing on the head wall.
 32. For a roof that intersects with upper-lying masonry, consider whether further flashing requirements are needed in SPS 321.24 (3) or 321.26 (8) to prevent accumulation of moisture behind the masonry.
 33. For a roof eave that intersects with a sidewall, consider expanding SPS 321.24 (3) to require either [1] installing the end of the roof flashing so that it diverts water away from the sidewall and onto the roof or into the gutter, or [2] extending the sidewall finish material to at least 12 inches inside the intersection of the eave and the sidewall.
 34. Revise the footnotes under Table SPS 321.25–A to more clearly show that wood-stud heights of more than 10 feet must be designed by structural analysis.
 35. Comprehensively update, streamline, and clarify the wall-bracing requirements in SPS 321.25 (8) and (9), first through an emergency rule and then through a corresponding permanent rule (TS, EU).
 36. For a walk-out basement having a sidewall partially constructed with full-height studs and partially with full-height concrete, develop prescriptive parameters under SPS 321.25 (8) for including the concrete-wall portion as part of the required wall bracing (CS, TS, EU).
 37. Add a footnote to SPS 321.25 Table–J to exempt a floor (habitable or otherwise) that is contained wholly within the roof rafters or roof trusses, from being considered a floor for purposes of determining wall bracing, provided the top-of-wall-to-ridge height does not exceed 20 feet and the openings in the roof do not exceed 48 inches in height.

SPS 322: ENERGY CONSERVATION

REVIEW

1. Unheated spaces.
2. Nonessential uses of natural gas.
3. Posting R-values for insulation and U-factors for windows and doors.
4. Wind-wash protection at eaves.
5. Protection of foam insulation on the outside of foundation walls.
6. Insulation and air-sealing for an attic-access cover.
7. Insulation for skylight shafts.
8. Slab-edge insulation for unheated, attached garages.
9. Protection of vertical slab-edge insulation at garage doors for heated garages.
10. Vapor-retarder sealing at windows and doors.
11. Vapor retarders above open areas.
12. Vapor retarders over cavities with spray-applied foam.

RECOMMENDATIONS

1. Revise SPS 322.01 (3) to no longer require a vapor retarder for an unheated space, such as an attached, unheated garage (CS, TS).
2. Delete the Note under SPS 322.01, that refers to the Public Service Commission's regulation of nonessential uses of natural gas, which was discontinued by 2011 Wisconsin Act 154 (reflects statutory changes).
3. Repeal the requirements in SPS 322.20 (6) relating to posting a certificate by the electrical distribution panel, for showing the predominant R-values of the home's insulation such as in the ceilings, roofs, and walls; and the U-factors for all windows, skylights, and doors (CS, TS, EU).
4. Revise SPS 322.21 (2) to clarify that wind-wash protection is required for the vertical ends of batt insulation at eaves if the insulation is air-permeable and more than 30 degrees from horizontal.
5. Revise section SPS 322.21 (3) (b) to require extending the protective coating to at least 2 inches below finished grade, rather than 6 inches – with an exception of not requiring the protection below a brick ledge.
6. Revise SPS 322.31 to require an R-value of at least R-20 for an attic-access cover having foam insulation, and at least R-38 for a cover having fiberglass insulation (CS, TS, EU).
7. Revise SPS 322.32 (9) to clarify that the vertical surface in a skylight shaft is considered a wall for insulating purposes.
8. Revise SPS 322.33 to clarify that the foundation insulation for unheated attached garages may stop even with the inside basement wall, perpendicular to the edge of the garage.
9. Revise SPS 322.33 to require heated-garage exterior thermal breaks to be rated at least R-5, to address details at garage doors, and to remove the requirement for R-15 insulation for heated concrete slabs.
10. Revise SPS 322.38 (1) (b) to clarify that sealing a vapor retarder is not required around doors and windows, behind bathtub enclosures, and at top and bottom wall plates, except seams which are not over a framing member must be sealed or taped.

11. Revise SPS 322.38 (2) to clarify that a vapor retarder for a floor over an open area can consist of 5/8-inch tongue-and-groove oriented-strand board (OSB) or 3/4-inch tongue-and-groove CDX plywood.
12. Expand SPS 322.38 (2) (c) 4. to not require a vapor retarder over cavities that have at least 50% of the required R-value provided by spray-applied foam having a perm rating of 1.0 or less, unless required by the foam manufacturer.

SPS 323: HEATING, VENTILATING AND AIR CONDITIONING

REVIEW

1. Solid-fuel-fired water-heating appliances for space heating.
2. Clothes-dryer vent locations on plans.
3. Clearances above cooktops and ranges.
4. Supports for floor- and ground-based mechanical equipment.
5. Ceiling-mounted burners and ignition devices where compressed-natural-gas (CNG) vehicles are stored.
6. Combustion air for fireplaces and fireplace stoves.
7. Labeling of piping used in mechanical systems.
8. Exhaust venting for clothes dryers.
9. Vapor retarders and insulation for ducts in attics.

RECOMMENDATIONS

1. Under SPS 323.04 (4) and 341.49 (3), pursue allowing indoor installation of non-pressurized solid-fuel-fired water-heating appliances for space heating.
2. Expand SPS 320.09 (5) to require showing the location of venting for clothes dryers.
3. Revise Table 323.04–A to allow a vertical clearance of less than 30 inches above a cooktop or range if specified by the manufacturer of the cooktop or range hood.
4. Replace the floor- and ground-support requirements in SPS 323.04 and 323.045, such as for clearances, with a need to comply with the manufacturer's instructions, as is required by the IRC.
5. Consider expanding SPS 323.04 (6) (b) to set a minimum distance below a ceiling for a burner or ignition device in garages storing compressed-natural-gas (CNG) vehicles.
6. Clarify SPS 323.06 to show that methods of providing combustion air are not required for fireplaces and fireplace stoves.
7. Expand SPS 323.10 to require plastic pipes and fittings used in venting flue gas to bear the manufacturer's identification data.
8. Revise SPS 323.14 (2) to require all clothes-dryer venting, including for electric dryers, to be rigid and smooth-walled.
9. Expand SPS 323 and 322 to address insulation and a vapor-retarder covering for it on cooling ducts in attics.

SPS 325: PLUMBING

REVIEW

1. Tankless water heaters.
2. Non-trapped local waste piping.
3. Garage drains.

RECOMMENDATIONS

1. Expand chapter SPS 325 to include the water-heater sizing criteria contained in the Department's Alternate Approval #20090426, until chapters SPS 381 to 387 are revised to include the criteria (CS, TS, EU).
2. Expand chapter SPS 325 to include a modification of SPS 382.33 (5) (b) that would allow omitting traps in local waste piping in lengths up to 20 feet, rather than up to 30 inches.
3. Expand chapter SPS 325 to include a modification of SPS 382.34 (4) (b) that would [1] allow omitting traps for garage drains that discharge to the ground surface, [2] require the drain's sediment basket to be removable, and [3] allow the drain's cover to be nonmetallic material that can be driven over.

Proposed Draft Rules Based on the July 2014 Dwelling Code Council Report

SECTION 1. SPS 320.02 (1) (d) to (h) are renumbered SPS 320.02 (1) (g) to (k).

SECTION 2. SPS 320.02 (1) (d) to (f) and (Notes) are created to read:

SPS 320.02 (1) (d) A one- or 2-family dwelling built on or after the effective dates under s. SPS 320.03, that is used as a foster home or group home, or as a residential care center for children and youth which has a capacity for 8 or fewer children, all as defined in s. 48.02, Stats. Where such a home or center is operated in each dwelling unit of a 2-family dwelling, the capacity limit for each unit is independent of the other unit only if the two operations are independent of each other.

Note: The definitions in section 48.02 of the Statutes limit foster homes to no more than 4 children unless the children are siblings, and limit group homes to no more than 8 children. Where permitted by the Department of Children and Families, a group home or a residential care center for children and youth that has a capacity for 8 or fewer children may be located in a one- or 2-family dwelling as a community living arrangement, as defined in section 46.03 (22) of the Statutes.

(e) A one- or 2-family dwelling built on or after the effective dates under s. SPS 320.03, in which a public or private day care center for 8 or fewer children is located. Where such a day care center is operated in each dwelling unit of a 2-family dwelling, the capacity limit for each unit is independent of the other unit only if the two operations are independent of each other.

Note: Chapter DCF 250, as administered by the Department of Children and Families, defines a “family child care center” as a being “a facility where a person provides care and supervision for less than 24 hours a day for at least 4 and not more than 8 children who are not related to the provider.” Chapter DCF 250 applies various licensing and other requirements to these centers, including for fire protection and other aspects of the physical plant.

(f) 1. Any portion of or space within a one- or 2-family dwelling built on or after the effective dates under s. SPS 320.03, in which a home occupation is located.

2. In this paragraph, “home occupation” means any business, profession, trade or employment conducted in a person’s dwelling unit, that may involve the person’s immediate family or household and a maximum of one other unrelated person, but does not involve any of the following:

- a. Explosives, fireworks or repair of motor vehicles.
- b. More than 25% of the habitable floor area of the dwelling unit.

Note: See chapters SPS 361 to 366 for buildings that are beyond the scope of this code.

(From: Report recommendation SPS 320/1 – and motion 6 on 5.12.14)

SECTION 3. SPS 320.02 (5) is renumbered SPS 321.02 (4) and amended to read:

SPS 321.02 (4) ~~INNOVATIVE DWELLINGS~~ ALTERNATE MATERIALS AND STANDARDS. No part of this code is intended to prohibit or discourage use of alternate, equivalent materials or standards; or the construction of innovative dwellings such as a dwelling built below ground, a geodesic dome, a concrete house, a ~~fiber-glass~~ fiberglass house or any other nonconventional structure.

(From: Report recommendation 321/2)

SECTION 4. SPS 320.02 (6) is renumbered SPS 320.02 (5).

(From: Report recommendation 321/2)

SECTION 5. SPS 320.07 (34f) is amended to read:

SPS 320.07 (34f) “Flight” means a continuous series of ~~steps~~ risers and treads, with no intermediate landings.

SECTION 6. SPS 320.07 (34m) is repealed.

(From: Editorial clarification, moved to SPS 321.05 (1) and (2))

SECTION 7. SPS 320.07 (36r) and (37m) are created to read:

SPS 320.07 (36r) “Guardrail” means a barrier erected to prevent a person from falling to a lower level.

(37m) “Handrail” means a horizontal or sloping rail intended for grasping by a hand, for guidance or support or preventing a fall down a stair.

SECTION 8. SPS 320.07 (47), (62) (intro.), and (66) are amended to read:

SPS 320.07 (47) “Landing” means the level portion of a stairs located between flights of stairs or located at the top and ~~foot~~ base of a stairs.

(62) “Shingle” means a unit of ~~roof-covering~~ roof-covering material that has been manufactured to specific dimensions and is applied in overlapping fashion. “Shingle” includes all of the following:

(66) A “stairway” is “Stair,” “stairs” or “stairway” means ~~one or more flights of steps,~~ risers and the necessary treads, platforms or landings connecting them, to form a continuous passage from one elevation to another.

SECTION 9. SPS 320.07 (67) and (67m) are repealed.

(From: Report recommendations 320/2 to 4, motions 8 and 9 on 5.12.14, editorial correction, and repeals storm water provisions that have transferred to the Department of Natural Resources)

SECTION 10. SPS 320.085 is repealed.

(Repeals storm water provisions that have transferred to the Department of Natural Resources)

SECTION 11. SPS 320.09 (5) (b) 2. d. is amended to read:

SPS 320.09 (5) (b) 2. d. The location and construction details of wall bracing on each building side and floor level. The details shall include a legend showing which wall-bracing method is used and the lengths or number of braced wall panels – and demarcation of the circumscribed rectangles if more than one is used.

(From: Report recommendation 320/5)

SECTION 12. SPS 320.09 (5) (b) 3. is created to read:

SPS 320.09 (5) (b) 3. The location of all venting for any clothes dryers shall be shown on a floor plan or an HVAC plan.

(From: Report recommendation 323/2)

SECTION 13. SPS 320.09 (5) (d) is repealed.

SECTION 14. SPS 320.09 (6) (d) is amended to read:

SPS 320.09 (6) (d) The name of the initial downstream receiving water of the state from the dwelling shall be identified, regarding erosion and sediment control ~~and storm water management.~~

(Deletes storm water provisions that have transferred to the Department of Natural Resources)

SECTION 15. SPS 320.24 (2) (Note) is amended to read:

SPS 320.24 (2) Note: Copies of the adopted standards are on file in the offices of the department and the legislative reference bureau. Copies of the standards may be purchased, or are available for free, through the respective organizations or other information listed in Tables 320.24-1 to ~~320.14-13~~ 320.14-12.

SECTION 16. SPS 320.24 (2) Table 320.24-1 is amended to read:

SPS 320.24 (2) Table 320.24-1

ACI	American Concrete Institute P.O. Box 9094 Farmington Hills, MI 48333 www.concrete.org
Standard Reference Number	Title
1. 318-05 <u>318-11</u>	Building Code Requirements for Structural Concrete
2. 530-05 <u>530-13</u>	Building Code Requirements for Masonry Structures
3. 530.1-05 <u>530.1-13</u>	Specification for Masonry Structures

SECTION 17. SPS 320.24 (2) Tables 320.24-2 and 320.24-3 to 320.24-6 are renumbered SPS 320.24 (2) Tables 320.24-6 and 320.24-2 to 320.24-5, and SPS 320.24 (2) Tables 320.24-2, 320.24-3, 320.24-4 Heading, 320.24-5, and 320.24-6, as renumbered, are amended to read:

SPS 320.24 (2) Table 320.24-2

AISC	American Institute of Steel Construction One E. East Wacker Drive, Suite 3400 <u>700</u> Chicago, IL 60601 www.aisc.org
Standard Reference Number	Title
1. 360-05 <u>ANSI/AISC 360-10</u>	Specification for Structural Steel Buildings

Table 320.24-3

ASTM	American Society for Testing and Materials <u>ASTM International</u> 1916 Race Street Philadelphia, <u>100 Barr Harbor Drive</u> <u>PO Box C700</u> <u>West Conshohocken, PA 19103</u> <u>19428-2959</u> www.astm.org
Standard Reference Number	Title
1. C-62-01 <u>C62-13a</u>	Standard Specification for Building Brick (Solid Masonry Units Made From Clay or Shale)
2. C-90-02 <u>C90-14</u>	Standard Specification for Hollow Load-Bearing <u>Loadbearing</u> Concrete Masonry Units
3. C-216-02 <u>C216-14</u>	Standard Specification for Facing Brick (Solid Masonry Units Made From Clay or Shale)
4. C-270-01a <u>C270-14</u>	Standard Specification for Mortar for Unit Masonry
5. C-476-01 <u>C476-10</u>	Standard Specification for Grout for Masonry
6. C-652-01a <u>C652-14</u>	Standard Specification for Hollow Brick (Hollow Masonry Units Made From Clay or Shale)

7. D 225-01	Standard Specification for Asphalt Shingles (Organic Felt) Surfaced With Mineral Granules
8. D 226-97a <u>7. D226-09</u>	Standard Specification for Asphalt-Saturated Organic Felt Used In Roofing And Water Proofing
9. D 3462-02 <u>8. D3462-10a</u>	Standard Specification for Asphalt Shingles Made From Glass Felt and Surfaced With Mineral Granules
10. D 4869-02 <u>9. D4869-05(2011)e1</u>	Standard Specification for Asphalt-Saturated Organic Felt Shingle Underlayment Used in Roofing

Table 320.24-4
(Partial Table)

ASCE	American Society of Civil Engineers 1801 Alexander Bell Drive Reston, VA 20191 www.asce.org
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Table 320.24-5

ASHRAE	American Society of Heating, Refrigerating, and Air-conditioning Engineers, Inc. 1791 Tullie Circle, N.E. Atlanta, GA 30329 www.ashrae.org
Standard Reference Number	Title
1. 2005 <u>2013</u> Fundamentals	ASHRAE Handbook, – Fundamentals
2. 2003 <u>2011</u> HVAC Applications	ASHRAE <u>Handbook</u> – HVAC Applications Handbook
3. 2004 <u>2012</u> HVAC Systems & Equipment	ASHRAE <u>Handbook</u> – HVAC Systems & Equipment Handbook

Table 320.24-6

AF&PA <u>AWC</u>	American Forest & Paper Association <u>Wood Council</u> 1111 19 th Street, N.W., Suite 800 Washington, D.C. 20036 222 Catocin Circle SE Suite 201 Leesburg, VA 20175 www.americanwoodcouncil.org
Standard Reference Number	Title
1. NDS 2005 <u>ANSI/AWC NDS-2012</u>	National Design Specification For Wood Construction <u>Including 2005 Supplement</u>
2. ANSI/AF&PA <u>ANSI/AWC PWF</u> - 2007	Permanent Wood Foundation Design Specification

SECTION 18. SPS 320.24 (2) Table 320.24–7 is amended to read:

SPS 320.24 (2) Table 320.24-7

ICC	The International Code Council 500 New Jersey Avenue, NW, 6th Floor Washington, D.C. 20001 www.iccsafe.org
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Standard Reference Number	Title
ICC/ANSI 400-2007 <u>ICC 400-2012</u>	Standard on the Design and Construction of Log Structures

SECTION 19. SPS 320.24 (2) Table 320.24–8 is repealed:

SECTION 20. SPS 320.24 (2) Tables 320.24–9 to 320.24–12 are renumbered SPS 320.24 (2) Tables 320.24–8 to 320.24–11, and SPS 320.24 (2) Table 320.24–8 Heading, Table 320.24–9, and Table 320.24–10 Heading as renumbered, are amended to read:

SPS 320.24 (2) Table 320.24-8

(Partial Table)

NAIMA	North American Insulation Manufacturers Association 44 11 Canal Canter Plaza, Suite 310 <u>103</u> Alexandria, VA 22314 www.naima.org
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Table 320.24-9

NFPA	National Fire Protection Association 1 Batterymarch Park Quincy, MA 02269 www.nfpa.org
Standard Reference Number	Title
1. NFPA 13D 2002 <u>2013</u>	Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes
2. ANSI Z223.1-2009 NFPA 54-2009 <u>NFPA 54/ANSI Z223.1 2015</u>	National Fuel Gas Code

Table 320.24-10

(Partial Table)

NIST	National Institute of Standards and Technology U.S. Department of Commerce Washington, D.C. 20234 http://catalog.hathitrust.org/Record/009487395
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SECTION 21. SPS 320.24 (2) Table 320.24–11, Row 3 is created to read:

SPS 320.24 (2) Table 320.24-11

(Partial Table)

SMACNA	Sheet Metal and Air Conditioning Contractors <u>Contractors'</u> National Association 4201 Lafayette Center Drive Chantilly, VA 20151-1209 <u>20151-1219</u> www.smacna.org
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Standard Reference Number	Title
3. Third Edition, 2005	HVAC Duct Construction Standards – Metal and Flexible

SECTION 22. SPS 320.24 (2) Table 320.24–13 is renumbered SPS 320.24 (2) Table 320.24–12 and amended to read:

SPS 320.24 (2) Table 320.24-12

TPI	Truss Plate Institute, Inc. 218 North Lee Street, Suite 312 Alexandria, VA 22314 www.tpinst.org
Standard Reference Number	Title
1. TPI 1-2002 <u>ANSI/TPI 1-2007</u>	National Design Standard for Metal Plate Connected Wood Truss Construction

(From: Report recommendation 320/6 – updating the standards tables in chapter SPS 320.

SECTION 23. SPS 321.02 (1) (d), (title), and (Note) are renumbered SPS 321.02 (3) (h) (title), 1., and (Note), and SPS 321.02 (3) (h) 1. and (Note), as renumbered, are amended to read:

SPS 321.02 (3) (h) 1. All building components shall be fastened to withstand the dead load, live load, snow load, and wind load.

Note: Other fastening methods may be allowed if engineered under s. SPS 321.02 (3).

SECTION 24. SPS 321.02 (3) (h) 2. is created to read:

SPS 321.02 (3) (h) 2. Fasteners shall comply with the schedule listed in Table 321.02-2.

SECTION 25. SPS 320 to 325 Appendix, Minimum Fastener Schedule Table is renumbered SPS 321.02 (3) (h) Table 321.02-2 and amended to read:

SPS 321.02 (2) (h) Table 321.02-2
MINIMUM FASTENER SCHEDULE TABLE
(Partial Table)

Other interior and exterior panel products and finishes installed per manufacturer requirements. For engineered connectors, use manufacturer’s specified fasteners.

Description of Building Materials/Connection	Number and Type of Fastener ^{1 2 3}
Floor Framing	
Joist to joist, face nailed over support	2=12d <u>3=8d</u>
Joist to sill or girder, toe nail	2=16d , 3=8d
Wall Framing	
Stud to sole plate, toe nail	4=8d <u>3=8d</u> or 3=16d <u>2=16d</u>

Doubled studs, face nail	16d 10d at 24" o.c.
Doubled top plates, face nail	16d 10d at 16" 24" o.c.
<u>Doubled top plates, minimum 24-inch offset of end joints, face nail in lapped area</u>	8-16d
Top plates, laps and intersections, face nail	2-16d 2-10d
Built-up corner studs	16d at 30" o.c., 16d 10d at 24" o.c.
<hr/>	
Roof/Ceiling Framing	
Ceiling joists to plate, toe nail	2-16d , 3-8d
Ceiling joist, laps over partitions, face nail	3-16d 3-10d
Rafter to plate, toe nail (maximum 6 rafter span, engineered connector for longer)	2-16d, 3-8d
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(From: Report recommendation 321/1 and editorial correction)

SECTION 26. SPS 321.02 (3) (c) is amended to read:

SPS 321.02 (3) (c) Structural steel. The design, fabrication and erection of structural steel for buildings shall conform to Specification for Structural Steel Buildings, ~~Allowable Stress Design and Plastic Design~~ and the provisions of the accompanying commentary as adopted under Table ~~320.24-3~~ 320.24-2.

SECTION 27. SPS 321.02 (3) (d) (intro.) and 1. are consolidated, renumbered SPS 321.02 (3) (d), and amended to read:

SPS 321.02 (3) (d) Concrete. Plain, reinforced, or prestressed concrete construction shall conform to ~~the following standards:~~ ACI Standard 318, "Building Code Requirements for Reinforced Structural Concrete".

SECTION 28. SPS 321.02 (3) (d) 2. is repealed.

SECTION 29. SPS 321.02 (3) (g) (intro.) and 2. are consolidated, renumbered SPS 321.02 (3) (g), and amended to read:

SPS 321.02 (3) (g) Whole logs. Dwellings constructed of whole logs shall conform to ~~the following standards:~~ ICC/ANSI ICC 400, Standard on the Design and Construction of Log Structures.

SECTION 30. SPS 321.02 (3) (g) 1. is repealed.

(From: Report recommendation 320/6 – updating the standards tables in chapter SPS 320, and the subsequent references to them)

SECTION 31. SPS 321.02 (4) (Note) is created to read:

SPS 321.02 (4) Note: Examples of materials addressed by this subsection include structural insulated panels that are used in accordance with the manufacturer's instructions or structural analysis, and cold-formed steel framing complying with AISI S230 *Standard for Cold-Formed Steel Framing – Prescriptive Method for One and Two Family Dwellings*.

(From: Report recommendation 321/2)

SECTION 32. SPS 321.03 (1) (b) (Note) is created to read:

SPS 321.03 (1) (b) Note: Under this paragraph, only one of the two exit doors that are addressed in par. (a) is required to exit directly to grade.

SECTION 33. SPS 321.03 (1) (c) and (d) are amended to read:

SPS 321.03 (1) (c) ~~An additional~~ Any exit that does not comply with par. (b) may discharge to an outside balcony that complies with sub. (8).

(d) ~~An additional~~ Any exit that does not comply with par. (b) may discharge into an attached garage provided the garage has an exit door that discharges to grade. An overhead garage door may not be used as an exit door.

(From: Editorial clarification)

SECTION 34. SPS 321.03 (1) (h) 3. is created to read:

SPS 321.03 (1) (h) 3. One of the exit doors required in par. (a) may be omitted for a dwelling unit that has one or more bedrooms on first floor, if each of those bedrooms has a window which complies with sub. (6).

(From: Report recommendation 321/4)

SECTION 35. SPS 321.03 (2) (a) to (c) and (6) (d) 5. and (e) 4. and 5. a. are amended to read:

SPS 321.03 (2) (a) At least 2 exits shall be provided from the second floor. ~~One~~ At least one of the exits shall be a stairway or ramp and lead to the first floor or discharge to grade. The second exit may be via a stairway or ramp ~~which that~~ discharges to grade, or may discharge to a balcony which complies with sub. (8), or to a deck which complies with s. SPS 321.225 and which is no more than 15 feet above the grade below.

(b) ~~Except as provided in par. (c), windows~~ Windows which comply with sub. (6) may be provided in each second floor bedroom – or in another location on the second floor if there are no bedrooms on that floor – in lieu of the second exit from ~~the~~ that floor.

(c) Where the second floor of a building is the lowest floor level in a dwelling unit, as in an up-and-down duplex, ~~windows may not be provided as the second exit from the floor~~ no exit from the unit may go through another dwelling unit or other party's occupancy on first floor.

(6) (d) 5. A ~~Step~~ stair used for the sole purpose of reaching the top of the platform or fixture is exempt from the requirements of s. SPS 321.04.

(e) 4. If the bottom of the areaway is more than 46 inches below adjacent grade or the top of the areaway enclosure, the areaway shall be provided with a ladder or ~~at least one additional step~~ stair to aid egress. ~~Steps~~ Stairs used to comply with this section are exempt from the requirements of s. SPS 321.04.

5. a. Ladders or other ~~steps~~ stairs used to comply with subd. 4. may infringe on the required area of the areaway by a maximum of 6 inches.

(From: Report recommendations 321/5 to 7 and 320/3 and 4 – and motions 8 and 9 on 5.12.14)

SECTION 36. SPS 321.03 (6) (f) and (Note) are created to read:

SPS 321.03 (6) (f) An egress window under a deck or porch shall discharge through a clear path of at least 36 inches in height and 36 inches in width, and no more than 15 feet in length, to a yard or open space.

Note: Under this paragraph, there is no maximum height above grade, for an egress window. Similarly, egress windows are not prohibited from discharging to a roof, regardless of the slope of the roof.

(From: Report recommendation 321/8 and motion #16 on 5.12.14)

SECTION 37. SPS 321.03 (7) (a) 4. is amended to read:

SPS 321.03 (7) (a) 4. Where sliding doors are used as a required exit, the clear opening shall be at least ~~30~~ 29 inches wide and be at least 76 inches high.

(From: Report recommendation 321/9)

SECTION 38. SPS 321.03 (11) is created to read:

SPS 321.03 (11) EXITS TO COURTYARDS. No exit may discharge to a courtyard having a perimeter that is entirely enclosed by exterior building walls or other obstructions that prevent pedestrian passage.

(From: Report recommendation 321/3)

SECTION 39. SPS 321.04 (1) (a) 2., (2) (a) 1. and (c) 4. a. and b., and (3) (a) 1. to 3. c. are amended to read:

SPS 321.04 (1) (a) 2. Tub access ~~steps~~ stairs, unless they are an integral part of an approved plumbing product.

(From: Report recommendations 320/3 and 4 – and motions 8 and 9 on 5.12.14)

(2) (a) 1. Except for spiral staircases under subd. 2., stairways shall measure at least 36 inches in width. Handrails and associated trim may project a maximum of 4.5 inches into the required width at each side of the stairway. The minimum clear width at and below the handrail, including at treads and landings, may not be less than 31.5 inches where a handrail is installed on one side, and 27 inches where handrails are provided on both sides.

(From: Report recommendation 321/10)

(c) 4. a. An individual winder tread may be placed between rectangular treads or at the end of a flight of rectangular treads provided the tread depth is at least 9 inches, when measured at a point distance of 12 inches from the narrow end, is equal to the tread depth of the rectangular steps in the flight of the tread or from the inside face of the wall.

(From: Report recommendation 321/11)

b. There may be more than one individual winder tread in a stairway ~~or in a flight of stairs.~~

(3) (a) 1. ~~Stair flights~~ A flight of stairs with more than 3 risers shall be provided with at least one handrail for the full length of the ~~stair~~ flight.

2. ~~Handrails or guardrails~~ Guardrails shall be provided on all open sides of ~~stair flights~~ stairs consisting of more than 3 risers and on all open sides of areas that are elevated more than 24 inches above the floor or exterior grade.

3. a. Except as provided in subd. 3. b., ~~handrails and guardrails~~ shall be constructed to prevent the through-passage of a sphere with a diameter of 4 $\frac{3}{8}$ inches or larger, when applying a force of 4 pounds.

b. The triangular area formed by the tread, riser and bottom rail shall have an opening size that prevents the through-passage of a sphere with a diameter of 6 inches ~~or larger,~~ when applying a force of 4 pounds.

(From: Report recommendations 320/2 to 4 and 321/12 to 14 – and motions 8 and 9 on 5.12.14)

c. Rope, cable or similar materials used in ~~handrail~~ or guardrail infill shall be strung with maximum openings of 3½ inches with vertical supports a maximum of 4 feet apart.

(From: Report recommendations 320/2 and 321/12)

SECTION 40. SPS 321.04 (3) (b) 1. is renumbered SPS 321.04 (3) (b) 1. a and amended to read:

SPS 321.04 (3) (b) 1. a. Handrails shall be located at least 30 inches, but no more than 38 inches above the nosing of the treads, except as provided in subds. 1. b. to d. Measurement shall be taken from the hard structural surface beneath any finish material to the top of the rail. Variations in uniformity are allowed only when a rail contacts a wall or newel post or where a turnout or volute is provided at the bottom ~~step~~ tread.

SECTION 41. SPS 321.04 (3) (b) 1. b. to d. are created to read:

SPS 321.04 (3) (b) 1. b. A volute, turnout or starting easing that does not comply with subd. 1. a. may extend over the lowest tread.

c. Transition fittings on handrails may extend above the 38-inch height limit

d. Where handrail fittings or bendings are used to provide a continuous transition between flights, or at winder treads, or from a handrail to a guardrail, or at the start of a flight, the height at the fittings or bendings may exceed 38 inches.

(From: Report recommendations 320/2 and 3 and 321/15 – and motions 8 and 9 on 5.12.14)

SECTION 42. SPS 321.04 (3) (b) 3. a. and b. are amended to read:

SPS 321.04 (3) (b) 3. ‘Winders.’ a. Except as provided under subd. 3. b., the required handrail on winder ~~steps~~ stairs shall be placed on the side where the treads are wider.

b. Where all winder ~~steps~~ treads in a flight have a ~~tread~~ depth of at least 9 inches from nosing to nosing measured at a point 12 inches from the narrow end of the tread, the required handrail may be located on either side of the stairway.

(From: Report recommendations 320/3 and 4 – and motions 8 and 9 on 5.12.14)

SECTION 43. SPS 321.04 (3) (c) 1. d. is created to read:

SPS 321.04 (3) (c) 1. d. This paragraph does not apply to window wells, egress wells, and retaining walls.

(From: Report recommendation 321/16)

SECTION 44. SPS 321.04 (3) (c) 2. and 3. and (4) (a) 2. and (b) are amended to read:

SPS 321.04 (3) (c) 2. ‘Height.’ Guardrails shall ~~be located~~ extend to at least 36 inches above the floor or to the bottom of a stair handrail. Measurement shall be taken from the hard structural surface beneath any finish material to the top of the ~~rail~~ guardrail.

3. ‘Opening size.’ Guardrails shall be constructed to prevent the through-passage of a sphere with a diameter of 4 3/8 inches ~~or larger~~, when applying a force of 4 pounds.

(4) (a) 2. Intermediate landings that connect 2 or more straight flights of stairs, or 2 flights of stairs at a right angle, shall be at least as wide as the stairway treads and shall measure at least 36 inches in the direction of travel.

(b) Landings at the top and base of stairs. A level landing shall be provided at the top and base of every stairs except as provided in par (d). The landing shall be at least as wide as the stairs treads and shall measure at least 3 feet in the direction of travel.

(From: Report recommendations 320/2 to 4 and 321/13, 14 and 17 – and motions 8 and 9 on 5.12.14)

SECTION 45. SPS 321.04 (4) (c) 2. is renumbered SPS 321.04 (4) (d) 1. and amended to read:

SPS 321.04 (4) (d) 1. The exterior landing, platform or sidewalk at an exterior doorway shall be located a maximum of 8 inches below the interior floor elevation, be sloped away from the doorway at a minimal rate that ensures drainage, and ~~shall~~ have a length of at least 36 inches in the direction of travel out of the dwelling.

SECTION 46. SPS 321.04 (4) (c) 1. is renumbered SPS 321.04 (4) (c), and SPS 321.04 (4) (c) (intro.), as renumbered, is amended to read:

SPS 321.04 (4) (c) Doors at landings. Except as provided in ~~subd. subds. 1. a. to e. 3. and par. (d)~~, level landings shall be provided on each side of any door located at the top or base of a stairs, regardless of the direction of swing. In the following exceptions, stairways to a stairway between a dwelling and an attached garages garage, carports carport or porches are porch is considered to be an interior stairs:

SECTION 47. SPS 321.04 (4) (d) (title) and 2. are created to read:

SPS 321.04 (4) (d) (title) *Exterior landings.*

2. The landing at the base of an exterior stairs shall be sloped away from the stairs at a minimal rate that ensures drainage.

(From: Report recommendation 321/17)

SECTION 48. SPS 321.045 (4) (c) is renumbered SPS 321.045 (4) (c) 1. and amended to read:

SPS 321.045 (4) (c) 1. Open-sided ramps shall have the area below the handrail protected by intermediate rails or an ornamental pattern to prevent the passage of a sphere with a diameter of 4 3/8 inches or larger when applying a force of 4 pounds, except as provided in subd. 2.

SECTION 49. SPS 321.045 (4) (c) 2. is created to read:

SPS 321.045 (4) (c) 2. This paragraph does not apply to ramps having a walking surface that is less than 24 inches above adjacent grade, if a toe-kick or side rail is provided to 4 inches above the walking surface, and a mid-rail is provided between there and the handrail.

(From: Report recommendation 321/18)

SECTION 50. SPS 321.05 (1) (intro.) is amended to read:

SPS 321.05 (1) NATURAL LIGHT. ~~All~~ Each habitable ~~rooms~~ room shall be provided with natural light by means of glazed openings. The area of the glazed openings shall be at least 8% of the net floor area, except under the following circumstances:

(From: Editorial clarification)

SECTION 51. SPS 321.05 (1~~m~~) ~~(e)~~ is created to read:

SPS 321.05 (1m) NET FLOOR AREA. For the purposes of subs. (1) and (2), “net floor area” does not include any area with a ceiling height of less than 5 feet.

SECTION 52. SPS 321.05 (2) (a) is renumbered SPS 321.05 (2) (a) 1. and amended to read:

SPS 321.05 (2) (a) 1. Natural ventilation shall be provided to ~~all~~ each habitable ~~rooms~~ room by means of openable doors, skylights or windows. The net area of the openable doors, skylights or windows shall be at least 3.5% of the net floor area of the room, except as provided in subd. 2. Balanced mechanical ventilation may be provided in lieu of openable exterior doors, skylights or windows provided the system is capable of providing at least one air change per hour of fresh outside air while the room is occupied. Infiltration may not be considered as make-up air for balancing purposes.

SECTION 53. SPS 321.05 (2) (a) 2. is created to read:

SPS 321.05 (2) (a) 2. Any area with a ceiling height of less than 5 feet may be excluded from the net floor area.

(From: Report recommendation 321/20)

SECTION 54. SPS 321.05 (3) (intro.) to (d) and (e) are renumbered SPS 321.05 (3) (a) and (b), and SPS 321.05 (3) (a) (intro.) and 1. (intro.) and a., and (b), as renumbered, are amended to read:

SPS 321.05 (3) (a) Except as provided in par. ~~(e)~~ (b), glazing shall consist of safety glass meeting the requirements of ~~CPSC~~ either 16 CFR, Part 1201 or ANSI Z97.1 when installed in any of the following locations:

1. In any sidelight or glazing adjacent to a door, that meets all of the following:

a. The nearest point of the glazing is within 2 feet of the door when the door is in the closed position.

(b) Safety glass is not required where ~~the size of an individual pane of glass is 8 inches or less in the least dimension~~ glazing meets any of the following:

1. Where the size of an individual pane of glass is 8 inches or less in the least dimension.

2. The safety glass is required by subd. (3) (a) 1. and the only door within 2 feet of the glazing is the fixed panel of a patio door.

3. The safety glass is required by subd. (3) (a) 1. and there is an intervening wall or other permanent barrier between the door and the glazing.

SECTION 55. SPS 321.04 (3) (a) 4. c. is renumbered SPS 321.05 (3) (a) 5. and amended to read:

SPS 321.05 (3) (a) 5. ~~Glazing used in handrail or~~ In guardrail assemblies shall be safety glazing.

(From: Report recommendation 321/19)

SECTION 56. SPS 321.06 is amended to read:

SPS 321.06 Ceiling height. All habitable rooms, kitchens, hallways, bathrooms and corridors shall have a ceiling height of at least 7 feet. ~~Habitable rooms,~~ except as follows:

(1) (a) Rooms may have ceiling heights of less than 7 feet provided at least 50% of the room’s floor area has a ceiling height of at least 7 feet. Any area with a ceiling height of less than 5 feet may be ignored in this calculation.

(b) The 50% limit in par. (a) does not apply to subs. (3) to (6).

(2) Beams and girders or other projections ~~shall not~~ may project to no more than 8 inches below the required ceiling height.

SECTION 57. SPS 321.06 (3) to (6) are created to read:

SPS 321.06 (3) The ceiling height extending back from the front edge of a water closet may slope to below 7 feet, but may not go below 5 feet until beyond the back of the water closet.

(4) The ceiling height extending back from the front edge of a lavatory may be less than 7 feet, but may not go below 5 feet until beyond the back of the lavatory.

(5) A ceiling height of less than 7 feet may be provided between the rear rim of a bathtub and a wall of the room abutting that rim, or between the side rim and a room wall abutting that rim.

(6) A ceiling height of less than 7 feet may be provided between the rear wall of a shower stall and a wall of the room abutting that rear wall, or between the side wall of a shower and a room wall abutting that side wall.

Note: Section SPS 384.20 (5) (o) 4. establishes minimum horizontal clearances for water closets, and reads as follows: “A water closet may not be located closer than 15 inches from its center to any side wall, partition, vanity, or other obstruction, nor closer than 30 inches center to center, between water closets. There shall be at least 24 inches clearance in front of a water closet to any wall, fixture or door.”

Note: See ch. SPS 384 Appendix for further explanatory material.

(From: Report recommendations 321/20 and 21 – and motion 10 on 5.12.14)

SECTION 58. SPS 321.08 Table 321.08 is amended to read:

SPS 321.08 Table 321.08
(Partial Table)

Between Dwelling And:	Distance Between Objects¹	Fire Rated Construction^{2,5}
Detached garage, accessory building, or other dwelling on same property	5 to 10 feet	3/4-hour wall ³ No requirement on openings <u>1/3-hour door or window³</u>

(From: Report recommendation 321/22)

SECTION 59. SPS 321.08 (3) (c) is created to read:

SPS 321.08 (3) (c) *Plastic Piping*. Penetrations of a required separation by plastic pipe shall be protected by a penetration firestop system approved by the department and installed as tested in accordance with ASTM E 814 or UL 1479, with a minimum positive pressure differential of 0.01 inch of water (3 pa) and shall have an F rating of not less than the required fire-resistance rating of the assembly penetrated.

(From: Unresolved topics list dated 12/29/14, item #16)

SECTION 60. SPS 321.09 (2) (a) (Note) is created to read:

SPS 321.09 (2) (a) Note: Wireless interconnectivity is permitted under this paragraph.

(From: Report recommendation 321/23)

SECTION 61. SPS 321.10 (2) (f) is renumbered SPS 321.10 (2) (f) 1.

SECTION 62. SPS 321.10 (2) (f) 2. is created to read:

SPS 321.10 (2) (f) 2. Siding and sheathing in contact with concrete or masonry and within 2 inches above an impervious surface.

(From: Report recommendation 321/24 and motion #11 on 11/6/13)

SECTION 63. SPS 321.12 is renumbered SPS 321.12 (1) and amended to read:

SPS 321.12 (1) GRADE. The finished grade of the soil shall slope away from the dwelling at a rate of at least $\frac{1}{2}$ -inch per foot for ~~a minimum distance of at least 10 feet, or to the lot line, whichever is less~~ except as provided in subs. (2) and (3).

SECTION 64. SPS 321.12 (title), (2), and (3) are created to read:

SPS 321.12 (title) Drainage.

(2) OTHER SURFACES. Where the finished surface is impervious, it shall slope away from the dwelling for at least 10 feet at a rate that ensures equivalent drainage.

(3) OBSTRUCTIONS. Where lot lines, walls, slopes or other barriers prevent having the 10-foot distance in sub. (2) or (3), swales or other means shall be provided to ensure equivalent drainage away from the dwelling.

(From: Report recommendation 321/25)

SECTION 65. SPS 321.125 (3) (a) 2. is amended to read:

SPS 321.125 (3) (a) 2. Seven and a half tons per acre per year where silt, silty clay loam or silt loam textures are exposed.

(Adds missing word)

SECTION 66. SPS 321.125 (3) (a) 2. (Note) and (b) are repealed.

SECTION 67. SPS 321.125 (3) (c) is renumbered SPS 321.125 (3) (b).

SECTION 68. SPS 321.126 is repealed.

(Repeals erosion control and storm-water provisions that have transferred to the Department of Natural Resources)

SECTION 69. SPS 321.15 (1) (e) is renumbered SPS 321.15 (1) (e) 1. and amended to read:

SPS 321.15 (1) (e) 1. Structures supported on floating slabs or similar shallow foundations may not be physically attached to structures that are supported by footings ~~that~~ which extend below the frost line unless an isolation joint is used between the structures, except as provided in subd. 2. This isolation shall extend for the full height of the structure.

SECTION 70. SPS 321.15 (1) (e) 2. is created to read:

SPS 321.15 (1) (e) 2. Exterior ramps are not required to comply with subd. 1.

SECTION 71. SPS 321.16 (1) (a) and (2) (a) are amended to read:

SPS 321.16 (1) (a) ~~Except as allowed under sub. (2), footings~~ Footings and foundations, including those for ~~ramps~~ landings and stoops, shall be placed below the frost penetration level or at least 48 inches below adjacent grade, whichever is deeper, except as allowed under sub. (2).

(2) (a) Frost protected shallow foundations shall be designed in accordance with ASCE-32 as adopted in Table ~~320.24-5~~ 320.24-4.

SECTION 72. SPS 321.16 (2) (d) is created to read:

SPS 321.16 (2) (d) Subsection (1) (a) does not apply to the footing for a ramp and its handrail posts unless the ramp abuts a frost-protected stoop or landing, in which case only the footing for that abutting end of the ramp is required to have the frost protection under sub. (1) (a), such as by bearing onto the stoop or landing, so that a tripping hazard is not created.

(From: Report recommendation 321/26, and updating the standards tables in chapter SPS 320)

SECTION 73. SPS 321.18 (1) (c) 3. a. and (d) 1. c. are amended to read:

SPS 321.18 (1) (c) 3. a. Structural steel anchor bolts, at least ½ inch in diameter, embedded at least 7 inches into the [concrete or] grouted masonry with a maximum spacing of 72 inches and located within 18 inches of wall corners.

(d) 1. c. Fastening of the blocking or bridging shall be in accordance with structural analysis or the fastener ~~table printed schedule in the appendix to this code~~ Table 321.02-2.

(From: Editorial correction)

SECTION 74. SPS 321.18 (1) (c) 3. d. and SPS 321.18 (1) (d) 2. c. (Note) are created to read:

SPS 321.18 (1) (c) 3. d. Alternate foundation anchorage, designed and spaced in accordance with structural analysis and as required to provide equivalent anchorage to the requirements of subd. 3a. is allowable.

(From: Report recommendation 321/27)

SPS 321.18 (1) (d) 2. c. Note: The floor-framing elements required in this section are intended to provide lateral support to the top of the foundation wall. See s. SPS 321.22 (9) for further requirements relating to floor framing, including for bridging of floor framing to provide restraint against rotation or lateral displacement of the floor framing.

(From: Editorial clarification)

SECTION 75. SPS 321.18 (4) is amended to read:

SPS 321.18 (4) WOOD FOUNDATIONS. Wood foundations shall be designed and constructed in accordance with the wood-foundation standard adopted in Table ~~320.24-2~~ 320.24-6.

(From: Editorial correction, and updating the standards tables in chapter SPS 320)

SECTION 76. SPS 321.22 (9) (a) (Note) and (b) (Note) and (10) are created to read:

SPS 321.22 (9) (a) Note: This 4:1 ratio means bridging is required for wood-framed floors having nominal 2X10 or deeper solid-sawn-lumber joists, to provide restraint against rotation or lateral displacement.

(b) Note: See s. SPS 321.18 (1) (d) for further requirements relating to floor framing, including for bridging or blocking of floor framing to provide lateral support to the top of foundation walls.

(From: Report recommendation 321/28, and editorial clarifications)

(10) SILL PLATES. All of the following requirements apply to a sawn-lumber sill plate with uniform loading that is partially extended beyond the load-bearing surface of a foundation wall in order to put the exterior surface of an upper-lying wall flush with or beyond the exterior surface of insulation which is placed on the outside of the foundation wall:

(a) The center of any anchor bolt shall be set back from the side edge of the sill plate by a distance of at least 4 times the diameter of the bolt.

(b) The thickness of the concrete or mortar cover around any anchor bolt shall comply with ACI 318 section 7.7.

Note: Under ACI 318 section 7.7, the minimum cover for a 5/8-inch-diameter or smaller bolt is 1 1/2 inches.

(c) With wood floor joists that are parallel to the foundation wall, the sill plate may not extend beyond the load-bearing surface of the wall by more than one-half of the nominal thickness of the joist that bears on the sill plate.

Note: As used throughout this chapter and in the standards that the chapter incorporates by reference, the shorter side of the cross-sectional area of a wood member is the thickness of the member. The longer side of the cross-sectional area is the depth, when the longer side is vertical; and it is the width when the longer side is horizontal.

Note: Under subsection (6), wood floor joists that are perpendicular to the foundation wall can extend beyond the foundation wall by a distance of up to the depth of the joist.

Note: Subsection (1) (d) requires a full-width sill plate for floor joists over open-core masonry units.

(From: Report recommendation 321/29)

SECTION 77. SPS 321.24 (3) (e) and (Note) and (f) and (Note) are created to read:

SPS 321.24 (3) (e) For a roof that intersects with an upper-lying head wall and rake wall, such as where a dormer is provided, the vertical metal flashing along the rake wall shall extend down the roof at least one-half inch past the vertical flashing on the head wall.

Note: A head wall as addressed in this paragraph intersects a sloping roof at a horizontal line along the top of a roof segment. A rake wall intersects a sloping roof along the side of a roof segment.

(From: Report recommendation 321/31)

(f) For a roof eave that intersects with a sidewall, the end of the roof flashing shall be installed so that it diverts water away from the sidewall and onto the roof or into the gutter, unless the sidewall finish material is extended to at least 12 inches inside the intersection of the eave and the sidewall.

(From: Report recommendation 321/33)

Note: See s. SPS 321.26 (8) for further requirements relating to flashing for masonry.

(From: Editorial clarification)

SECTION 78. SPS 321.25 (2m) is created to read:

SPS 321.25 (2m) BOTTOM PLATES. (a) *Masonry foundation walls with open top course.* 1. Where a masonry foundation wall has an open top course, a bottom plate at least as wide as the foundation wall shall be fastened to the foundation.

2. Where anchor bolts are used on a masonry foundation wall with an open top course, the minimum width of an individual piece making up the bottom plate shall be at least 5.5 inches.

Note: A sill plate can be made of multiple pieces to achieve the full width.

(b) *Extension beyond the bearing surface.* All of the following requirements apply to a sawn-lumber sill plate with uniform loading that is partially extended beyond the load-bearing surface of a foundation wall in order to put the exterior surface of an upper-lying wall flush with or beyond the exterior surface of insulation which is placed on the outside of the foundation wall:

1. The center of any anchor bolt shall be set back from the side edge of the sill plate by a distance of at least 4 times the diameter of the bolt.

2. The thickness of the concrete or mortar cover around any anchor bolt shall comply with ACI 318 section 7.7.

Note: Under ACI 318 section 7.7, the minimum cover for a 5/8-inch-diameter or smaller bolt is 1 1/2 inches.

3. Where a stud wall bears directly on a double bottom plate, the plate may not extend more than 1 1/2 inches beyond the load-bearing surface of the foundation wall.

4. Where a stud wall bears directly on a single bottom plate, the plate may not extend more than 1 inch beyond the load-bearing surface of the foundation wall.

(From: Report recommendation 321/29)

SECTION 79. SPS 321.25 (3) (intro.), (a), and (b) are renumbered SPS 321.25 (3) (a) to (c).

SECTION 80. SPS 321.25 (3) (a) (title) is created to read:

SPS 321.25 (3) (a) (title) Headers.

(From: Editorial correction)

SECTION 81. SPS 321.25 Table 321.25–A footnote d and Table 321.25–J (title) are amended to read:

SPS 321.25 Table 321.25–A footnote ^dUnless supported by structural analysis, use of stud heights that range from over 10 feet to 12 feet is limited to where all of the following conditions are met: snow loads do not exceed 25 psf; tributary dimensions for floors and roofs do not exceed 6 feet; spans for floors and roofs do not exceed 12 feet; eave projections do not exceed 2 feet; the bending modulus of elasticity is at least 1,600,000 lbf per square inch; the allowable fiber stress in bending for the wood is not less than 1310 psi as determined by multiplying the ~~AF&PA~~ ANS/AWC NDS tabular base design value by the repetitive use factor, and by the size factor for all species except southern pine; utility, standard, stud, and No. 3 grade lumber of any species is not used; and the allowable deflection does not exceed whichever of the following are applicable:

Interior walls and partitions — span height/180.

Exterior walls with plaster or stucco finish — span height/360.

Exterior walls with other brittle finishes — span height/240.

Exterior walls with flexible finishes — span height/120.

Exterior walls with interior gypsum wallboard finish — span height/180.

Any manufacturer-specified limits for any included windows or doors.

Because of the limitations and complexity of the above conditions, use of stud heights taller than 10 feet is unlikely unless supported by structural analysis.

(From: Report recommendation 321/34, and updating the standards tables in chapter SPS 320)

Table 321.25–J (Title)

REQUIRED LENGTH OF CONTINUOUS BRACING ON WALLS PARALLEL TO EACH RECTANGLE SIDE AT EACH FLOOR LEVEL^{a,b,c,d,e,g,h,i}

SECTION 82. SPS 321.25 Table 321.25–J footnote j is created to read:

SPS 321.25 Table 321.25–J footnote ^jAny floor, habitable or otherwise, that is contained wholly within the roof rafters or roof trusses is exempt from being considered a floor for purposes of determining wall bracing if the top-of-wall-to-ridge height does not exceed 20 feet and if no opening in the roof exceeds 48 inches in height.

(From: Report recommendation 321/37)

SECTION 83. SPS 321.25 (8) (a) (Note) [2] is created to read:

SPS 321.25 (8) (a) (Note) [2]: For a walk-out basement where some of the walls are concrete and other walls or portions thereof are wood-framed, the Department considers a minimum 8-inch-nominal-thickness poured-in-place concrete basement wall as being equivalent in lateral load and shear resistance to any of the allowable wood-framed wall bracing materials. To determine the required bracing for a walk-out basement, first draw a rectangle

around the entire floor plan and projections as if all of the walls are wood-framed. Determine the required bracing amounts per the chosen bracing material and method and then locate the bracing to meet the requirements of Figure 321.25-C. Any required braced wall panel locations that occur on a wall or portion of a wall that is actually of poured-in-place concrete construction is considered equivalent, and that amount of bracing will count towards the minimum required amount and will not need to be provided in another location on that rectangle side.

SECTION 84. SPS 321.26 (8) (Note) is created to read:

SPS 321.26 (8) Note: See s. SPS 321.24 (3) for further requirements relating to flashing for masonry.

(From: Editorial clarifications)

SECTION 85. SPS 321.27 (4) (d) is amended to read:

SPS 321.27 (4) (d) Bearing. The required bearing for wood rafters shall be in accordance with the NDS adopted in Table ~~320.24-2~~ 320.24-6, except in no case shall the bearing be less than 1½ inches on wood or metal or less than 3 inches on masonry or concrete.

SECTION 86. SPS 321.28 (3) (a) 2. is amended to read:

SPS 321.28 (3) (a) 2. Each shingle package shall be labeled by the manufacturer to indicate conformance to the applicable ASTM standard for each type of shingle or the exception in par. ~~(e)~~ (b).

SECTION 87. SPS 321.28 (3) (a) 6. is created to read:

SPS 321.28 (3) (a) 6. All fasteners for shingles shall be corrosion-resistant.

SECTION 88. SPS 321.28 (3) (a) (Note) [2] and (b) are repealed

SECTION 89. SPS 321.28 (3) (c) is renumbered SPS 321.28 (3) (b).

(From: Updating the standards tables in chapter SPS 320, and editorial clarifications)

SECTION 90. SPS 321.28 (7) (c) is amended to read:

SPS 321.28 (7) (c) Flashing of closed valleys. Where shingles are laced or woven over the valley, the valley shall be flashed with ~~at~~ one of the following:

1. At least one layer of 50-pound roofing, at least 20 inches wide, over a layer of number 15 roofing underlayment.

2. A product labeled as meeting the requirements of ASTM D1970.

(From: Editorial update)

SECTION 91. SPS 322.01 (3) is renumbered SPS 322.01 (3) (a).

SECTION 92. SPS 322.01 (3) (b) is created to read:

SPS 322.01 (3) (b) The vapor retarder requirements under s. SPS 322.38 do not apply to an unheated space, such as an attached, unheated garage.

(From: Report recommendation 322/1)

SECTION 93. SPS 322.01 (3) (Note) is repealed.

(From: Report recommendation 322/2)

SECTION 94. SPS 322.20 (6) is repealed.

(From: Report recommendation 322/3)

SECTION 95. SPS 322.21 (2) (c) is created to read:

SPS 322.21 (2) (c) The wind-wash-protection material specified in par. (a) shall permanently cover the vertical ends of batt insulation at eaves if the insulation is air-permeable and more than 30 degrees from horizontal.

(From: Report recommendation 322/4)

SECTION 96. SPS 322.21 (3) (b) is amended to read:

SPS 322.21 (3) (b) The protective covering shall cover the exposed exterior insulation and extend a minimum of 6 2 inches below grade, except the covering is not required below a brick ledge.

(From: Report recommendation 322/5)

SECTION 97. SPS 322.31 Table 322.31–4 is amended to read:

SPS 322.31 TABLE 322.31-4

(Partial Table)

**COMPONENT DWELLING THERMAL ENVELOPE REQUIREMENTS
FOR DWELLINGS USING LOWER EFFICIENCY APPLIANCES^a**

Fenestration U-Factor	Skylight U-Factor	Ceiling R-Value	Wood Frame Wall R-Value	Mass Wall R-Value	Floor R-Value	Basement or Crawl Space Wall R-Value ^b	Heated Slab R-Value ^c	Unheated Slab R-Value ^d
Equivalent U-Factors								
0.30	0.60	0.26* 0.026	0.057	0.057	0.033	0.045	0.033	0.047

SECTION 98. SPS 322.31 Table 322.31-4 (Note) is repealed:

(From: Editorial correction)

SECTION 99. SPS 322.32 (1) is renumbered SPS 322.32 (1) (a).

SECTION 100. SPS 322.32 (1) (b) is created to read:

SPS 322.32 (1) (b) An attic-access cover shall be provided either with foam insulation having a thermal resistance of at least R-20 or with fiberglass insulation having a thermal resistance of at least R-38.

(From: Report recommendation 322/6)

SECTION 101. SPS 322.32 (9) is renumbered SPS 322.32 (9) (a).

SECTION 102. SPS 322.32 (9) (b) is created to read:

SPS 322.32 (9) (b) The vertical surface in a skylight shall meet the insulation requirements for walls.

(From: Report recommendation 322/7)

SECTION 103. SPS 322.33 (1) is renumbered SPS 322.33 (1) (a) and amended to read:

SPS 322.33 (1) (a) Any heated or unheated slab floor, the bottom of which is less than 12 inches below adjacent grade, shall be provided with perimeter insulation in accordance with Table 322.31-1 or Table 322.31-4, except as provided in par. (b).

SECTION 104. SPS 322.33 (1) (b) is created to read:

SPS 322.33 (1) (b) At the threshold or the base of any door opening that leads directly to the exterior of the structure, the vertical perimeter insulation shall be at least R-5

(From: Report recommendation 322/9)

SECTION 105. SPS 322.33 (3) (c) is created to read:

SPS 322.33 (3) (c) Insulation on a foundation wall for a basement may terminate at a junction with a foundation wall for an unheated, attached garage.

(From: Report recommendation 322/8)

SECTION 106. SPS 322.34 (2) (d) is amended to read:

SPS 322.34 (2) (d) The edges of the vapor retarder shall extend at least 6 inches up the foundation wall and shall be attached and sealed to the foundation wall or insulation.

(From: Unresolved topics list dated 12/29/14, item #14)

SECTION 107. SPS 322.38 (1) (b) is renumbered SPS 322.38 (1) (b) 1. and amended to read:

SPS 322.38 (1) (b) 1. The vapor retarder shall be continuous. All joints in a vapor retarder consisting of sheet material shall be overlapped 6 inches and taped or sealed, except as provided in subd. 2. Rips, punctures and voids in the vapor retarder shall be patched with vapor retarder materials and taped or sealed. Seams that are not over a framing member shall be sealed or taped.

SECTION 108. SPS 322.38 (1) (b) 2. is created to read:

SPS 322.38 (1) (b) 2. Taping or sealing a vapor retarder is not required around doors and windows, behind bathtub enclosures, and at top and bottom wall plates, if the retarder is held to those materials in an airtight manner by other building components, such as gypsum wallboard.

(From: Report recommendation 322/10)

SECTION 109. SPS 322.38 (2) (c) 4. is amended to read:

SPS 322.38 (2) (c) 4. No vapor retarder is required over cavities that ~~are insulated solely with~~ have at least 50% of the required R-value provided by spray-applied foam having a perm rating of 1.0 or less, unless required by the foam manufacturer.

SECTION 110. SPS 322.38 (2) (c) 4. (Note) is repealed.

(From: Report recommendation 322/12)

SECTION 111. SPS 322.38 (2) (c) 5. is created to read:

SPS 322.38 (2) (c) 5. A vapor retarder for a floor over an open, unheated area may consist of 5/8-inch tongue-and-groove oriented-strand board, or 3/4-inch tongue-and-groove CDX plywood, which is exposure-rated plywood.

(From: Report recommendation 322/11)

SECTION 112. SPS 322.42 (2) is renumbered SPS 322.42 (3).

SECTION 113. SPS 322.42 (2) is created to read.

SPS 322.42 (2) Cooling supply ducts that pass through unconditioned spaces conducive to condensation, such as attics, shall be provided with insulation having a thermal resistance of at least R-8. The exterior of that insulation shall be covered with a vapor barrier which meets the requirements in s. SPS 322.38 (1)

(From: Report recommendation 323/9)

SECTION 114. SPS 323.04 Table 323.04–A footnote 5 is amended to read:

SPS 323.04 Table 323.04–A footnote ⁵To combustible material or metal cabinets. If the underside of such combustible material or metal cabinet is protected with asbestos millboard at least 1/4-inch thick covered with sheet metal of not less than No. 28 gauge, the distance may be not less than 24 inches. Also, if the manufacturer of the range, cooktop, or cooking stove specifies a shorter clearance, that clearance may be used instead.

(From: Report recommendation 323/3)

SECTION 115. SPS 323.04 (4) (title) is renumbered SPS 323.04 (title) to (b) and, as renumbered, is amended to read::

SPS 323.04 (4) (title) BOILERS.

(a) Boilers and solid fuel-fire water-heating appliances that serve a one-or 2-family dwelling, whether located inside or outside the dwelling, shall comply with ch. SPS 341, Boilers and Pressure Vessels.

(b) Solid fuel-fired water-heating appliances installed inside one or two family dwellings are exempt from the requirements of SPS 341.49 (3).

(From: Report recommendation 323/1)

SECTION 116. SPS 323.04 (4) (Note) [2] is created to read:

Note [2]: The appliances addressed in this section include non-pressurized solid-fuel-fired water-heating appliances used for space heating.

SECTION 117. SPS 323.045 (5) (a) is renumbered SPS 323.045 (5).

(From: Editorial correction)

SECTION 118. SPS 323.045 (5m) is created to read:

SPS 323.045 (5m) MOUNTING ON THE GROUND. Ground-based solid-fuel-burning appliances shall be installed in accordance with the manufacturer's specifications.

(From: Report recommendation 323/4 and motion 7 on 4.9.14. SPS 323.045 (5) addresses mounting these appliances on combustible floors, in accordance with the manufacturer's instructions.)

SECTION 119. SPS 323.045 (6) (a) (title) is created to read:

SPS 323.045 (6) (a) (title) General.

SECTION 120. SPS 323.045 (6) (a) 1. and 2. are renumbered SPS 323.045 (6) (b) and (c).

SECTION 121. SPS 323.045 (6) (a) is amended to read:

SPS 323.045 (6) (a) Solid-fuel-burning appliances shall be installed with clearances not less than specified in Table 323.045-D, except as provided in pars. (b) and (c).

SECTION 122. SPS 323.045 (8) (intro.) is amended to read:

SPS 323.045 (8) (intro.) SUPPLEMENTAL UNITS. Supplemental solid-fuel-burning units connected to a furnace shall be connected to the warm air side of the furnace as illustrated in Figures 323.045-C to E, and shall be installed in accordance with all of the following:

(From: Editorial correction)

SECTION 123. SPS 323.06 (1) (d), (e), and (f) are created to read:

SPS 323.06 (1) (d) Listed fireplace stoves are not required to comply with this section if permitted in the manufacturer's instructions.

(e) Masonry fireplaces shall conform to the requirements of s. SPS 321.29.

(f) Listed factory-built fireplaces shall comply with the manufacturer's recommendations and shall conform with the requirements of s. SPS 321.32.

(From: Report recommendation 323/6)

SECTION 124. SPS 323.08 (5) (a) and (e) are amended to read:

SPS 323.08 (5) (a) ASHRAE Handbook – HVAC Systems and Equipment.

(e) ASHRAE Handbook – HVAC Applications ~~Handbook~~.

(From: Updating the standards tables in chapter SPS 320)

SECTION 125. SPS 323.14 (1) is renumbered SPS 323.14 (1) (a).

SECTION 126. SPS 323.14 (1) (b) is created to read:

SPS 323.14 (1) (b) Plastic pipes and fittings used in venting flue gas shall bear the manufacturer's identification data.

(From: Report recommendation 323/7)

SECTION 127. SPS 323.14 (2) (a) is renumbered SPS 323.14 (2) (a) 2. and amended to read:

SPS 323.14 (2) (a) 2. Gas-fired clothes dryers shall be provided with metal venting ~~that terminates outside the structure.~~

(Repeals duplicating a chapter SPS 322 requirement)

SECTION 128. SPS 323.14 (2) (a) 1. is created to read:

SPS 323.14 (2) (a) 1. All venting for clothes dryers, including for electric dryers, shall be rigid and smooth-walled.

(From: Report recommendation 323/8)

SECTION 129. SPS 323.16 (2) (a) is amended to read:

SPS 323.16 (2) (a) The total oil storage capacity inside any dwelling unit shall be limited to 550 gallons in one tank, or not more than 275 gallons in each of 2 tanks cross-connected to a single burner.

(From: Editorial correction)

SECTION 130. SPS 325.01 is renumbered SPS 325.01 (1) and amended to read:

SPS 325.01 (1) The design, construction and installation of plumbing shall comply with the requirements of the Wisconsin Plumbing Code, chs. SPS 382 to 387, except as provided in this section.

SECTION 131. SPS 325.01 (1) (title) and (2) to (4) are created to read:

SPS 325.01 (title) GENERAL.

(2) TANK-LESS WATER HEATERS. (a) The minimum flow rate of a tank-less type water heater may be obtained by multiplying 0.65 by the calculated hot water gallons per minute demand, as determined by SPS 382 Tables 382.40-1b and 382.40-3, provided the heater will achieve a water temperature of 110 degrees F at the terminal fitting or faucet.

(b) The sizing method in par. (a) may not be used for sizing a water heater serving a high-flow fixture, a hose bibb, a hydrant, or a fixture that is required to have a supply line with a diameter larger than one-half inch.

(c) For the purposes of this subsection, “high-flow fixture” means a fixture with a flow rate of more than 4 gallons per minute, at 80 pounds per square inch, and a water velocity not exceeding 8 feet per second.

(From: Report recommendation 325/1)

(3) LOCAL WASTE PIPING. A trap may be omitted in local waste piping having a length of up to 20 feet.

(From: Report recommendation 325/2)

(4) FLOOR DRAINS FOR GARAGES. (a) A trap may be omitted for a garage-floor drain that discharges to the ground surface.

(b) The sediment trap for a garage-floor drain shall be removable.

(c) The grate for a garage-floor drain may be nonmetallic if it has a thickness and strength that will withstand the anticipated loads.

(From: Report recommendation 325/3)

SECTION 132. EFFECTIVE DATE. The rules adopted in this order shall take effect on the first day of the month following publication in the Wisconsin administrative register, pursuant to s. 227.22 (2) (intro.), Stats.

(END OF TEXT OF RULE)

Dated _____

Agency _____

Dave Ross, Secretary of the
Department of Safety and
Professional Services

File reference: SPS 320-325/Rules From Report 5